



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 11, 2025 – 08:02 pm GMT

PDB ID : 6QNR  
Title : 70S ribosome elongation complex (EC) with experimentally assigned potassium ions  
Authors : Rozov, A.; Khusainov, I.; Yusupov, M.; Yusupova, G.  
Deposited on : 2019-02-11  
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.41

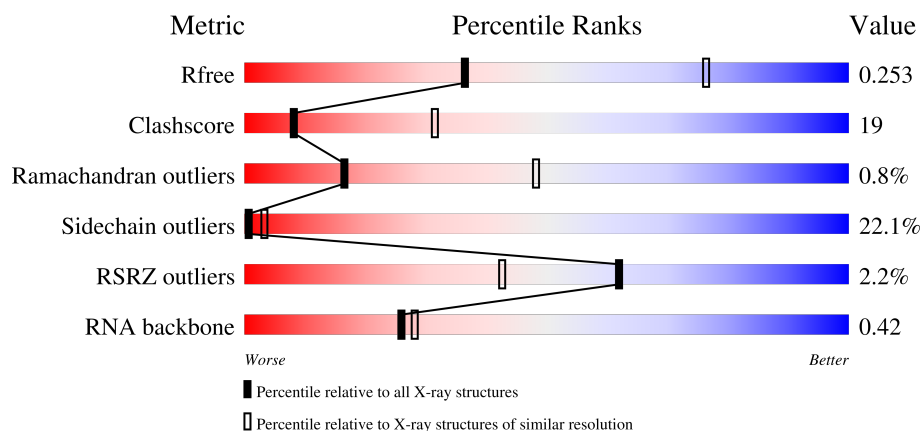
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.10 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



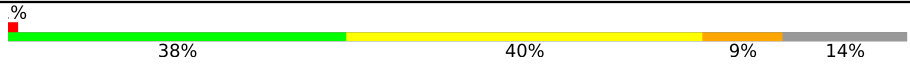


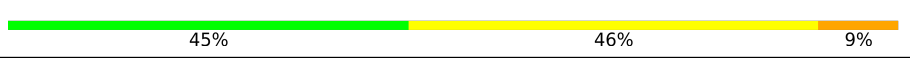
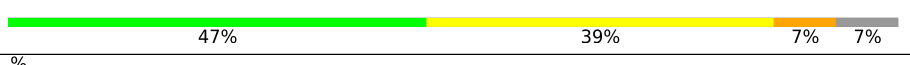
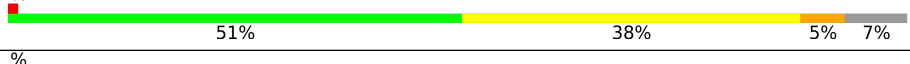
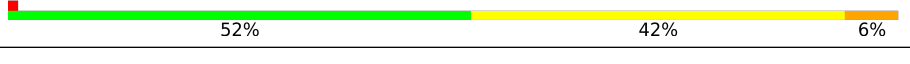
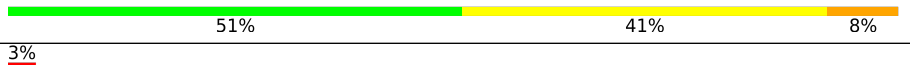
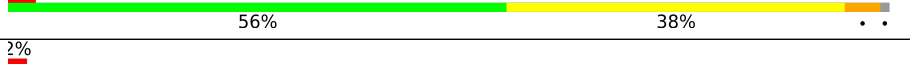


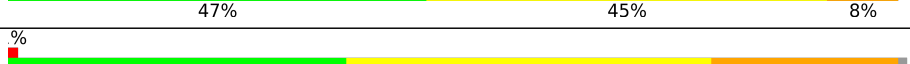
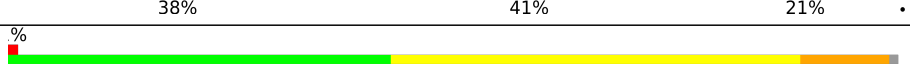
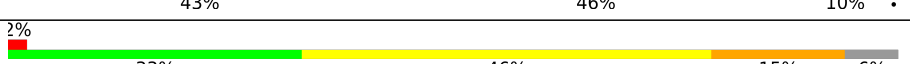
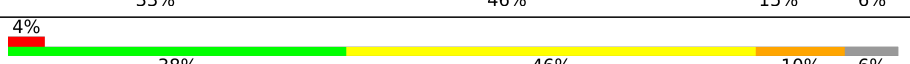



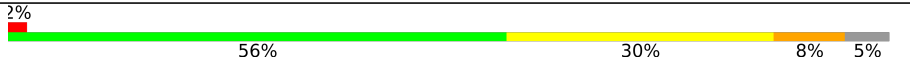

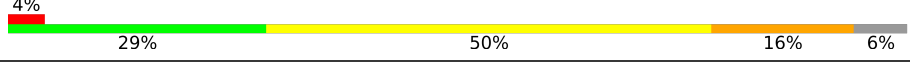
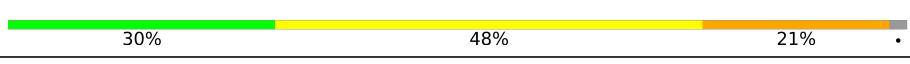



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	164625	1351 (3.10-3.10)
Clashscore	180529	1454 (3.10-3.10)
Ramachandran outliers	177936	1391 (3.10-3.10)
Sidechain outliers	177891	1391 (3.10-3.10)
RSRZ outliers	164620	1351 (3.10-3.10)
RNA backbone	3690	1021 (3.36-2.84)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	13	1522	
1	1G	1522	
2	12	256	
2	1E	256	

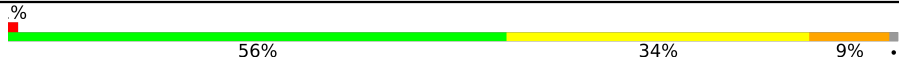


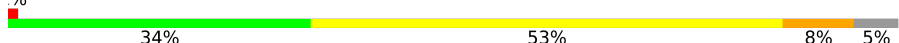




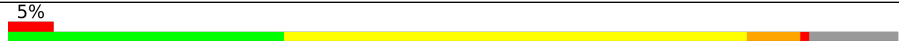

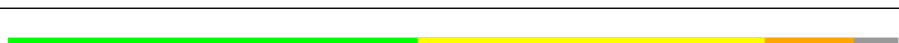
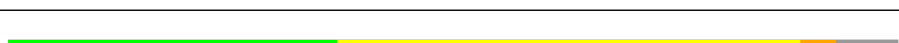

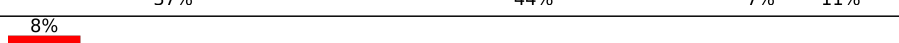
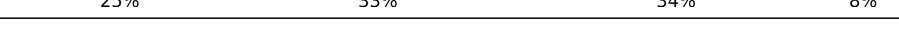
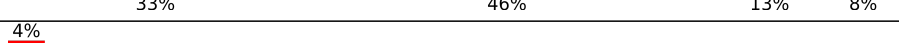
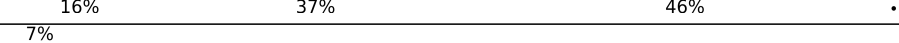
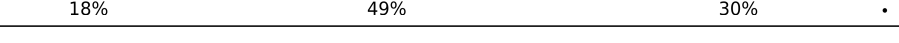


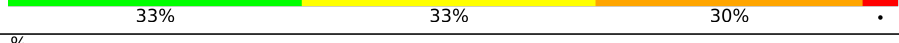
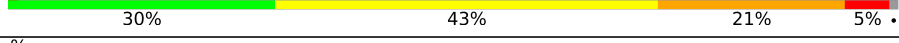


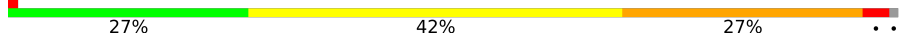
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Mol	Chain	Length	Quality of chain
3	22	239	
3	2E	239	
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
11	2A	129	
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126	
13	4I	126	
14	5A	61	
14	5I	61	
15	6A	89	

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Mol	Chain	Length	Quality of chain
15	6I	89	
16	7A	88	
16	7I	88	
17	8A	105	
17	8I	105	
18	9A	88	
18	9I	88	
19	AA	93	
19	AI	93	
20	BA	106	
20	BI	106	
21	1B	27	
21	1F	27	
22	1K	76	
23	2K	76	
24	3K	76	
24	3L	76	
25	4K	60	
25	4L	60	
26	5K	76	
27	14	2917	
27	1H	2917	
28	16	122	
28	1J	122	
29	7I	229	

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Mol	Chain	Length	Quality of chain
29	79	229	
30	11	276	
30	19	276	
31	21	206	
31	29	206	
32	31	210	
32	39	210	
33	41	182	
33	49	182	
34	51	180	
34	59	180	
35	61	148	
35	69	148	
36	38	173	
37	15	140	
37	58	140	
38	25	122	
38	68	122	
39	35	150	
39	78	150	
40	45	141	
40	88	141	
41	55	118	
41	98	118	
42	65	112	

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Mol	Chain	Length	Quality of chain
42	A8	112	
43	75	146	
43	B8	146	
44	85	118	
44	C8	118	
45	95	101	
45	D8	101	
46	A5	113	
46	E8	113	
47	B5	96	
47	F8	96	
48	C5	110	
48	G8	110	
49	D5	206	
49	H8	206	
50	E5	85	
50	I8	85	
51	F5	98	
51	J8	98	
52	G5	72	
52	K8	72	
53	H5	60	
53	L8	60	
54	I5	71	
54	M8	71	

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Mol	Chain	Length	Quality of chain
55	J5	60	
55	N8	60	
56	K5	54	
56	O8	54	
57	L5	49	
57	P8	49	
58	M5	65	
58	Q8	65	
59	1L	76	
60	2L	76	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
62	MG	13	1709[A]	-	-	-	X
62	MG	13	1709[B]	-	-	-	X
62	MG	14	3175[A]	-	-	-	X
62	MG	14	3175[B]	-	-	-	X
62	MG	1G	1683[A]	-	-	-	X
62	MG	1G	1683[B]	-	-	-	X
62	MG	1H	3343[A]	-	-	-	X
62	MG	1H	3343[B]	-	-	-	X
63	SF4	3E	302	-	-	X	-

## 2 Entry composition

There are 65 unique types of molecules in this entry. The entry contains 305753 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	13	1516	Total	C	N	O	P	0	0	0
			32589	14514	6024	10535	1516			
1	1G	1513	Total	C	N	O	P	0	0	0
			32526	14487	6018	10509	1512			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	12	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
4	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	42	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
6	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			
7	62	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
8	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1004	636	195	173			
9	82	127	Total	C	N	O	0	0	0
			1004	636	195	173			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	1A	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	2I	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			
11	2A	117	Total	C	N	O	S	0	0	0
			873	543	166	161	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	3I	125	Total	C	N	O	S	0	0	0
			977	615	196	164	2			
12	3A	125	Total	C	N	O	S	0	0	0
			977	615	196	164	2			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	4I	119	Total	C	N	O	S	0	0	0
			946	585	195	164	2			
13	4A	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
14	5A	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			
15	6A	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	7I	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
16	7A	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	8A	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	9I	71	Total	C	N	O	0	0	0
			584	373	116	95			
18	9A	70	Total	C	N	O	0	0	0
			573	367	112	94			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	AA	86	Total	C	N	O	S	0	0	0
			684	436	126	120	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	BI	101	Total	C	N	O	S	0	0	0
			766	473	161	130	2			
20	BA	103	Total	C	N	O	S	0	0	0
			776	479	163	132	2			

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1F	24	Total	C	N	O	0	0	0
			208	128	50	30			
21	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	1K	76	Total	C	N	O	P	S	0	0	0
			1628	731	290	530	75	2			

- Molecule 23 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	2K	76	Total	C	N	O	P	S	0	0	0
			1635	735	291	532	75	2			

- Molecule 24 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	3K	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			
24	3L	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			

- Molecule 25 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	4K	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			
25	4L	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			

- Molecule 26 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	5K	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			

- Molecule 27 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1H	2890	Total	C	N	O	P	0	0	0
			62245	27709	11634	20013	2889			
27	14	2876	Total	C	N	O	P	0	0	0
			61946	27576	11583	19912	2875			

- Molecule 28 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
28	1J	121	Total	C	N	O	P	0	0	0
			2598	1156	481	840	121			

- Molecule 29 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	71	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			
29	79	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			

- Molecule 30 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
30	19	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 31 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	21	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
31	29	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 32 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	39	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

- Molecule 33 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			
33	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 34 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
34	59	173	Total	C	N	O	S	0	0	0
			1327	842	249	235	1			

- Molecule 35 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	61	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			
35	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 36 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	38	84	Total	C	N	O	0	0	0
			635	399	118	118			

- Molecule 37 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
37	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 38 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
38	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 39 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			
39	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 40 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	88	141	Total	C	N	O	S	0	5	0
			1150	732	218	193	7			
40	45	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			

- Molecule 41 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
41	55	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			

- Molecule 42 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	A8	112	Total	C	N	O	S	0	0	0
			889	561	177	150	1			
42	65	111	Total	C	N	O	S	0	0	0
			881	556	176	149				

- Molecule 43 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 44 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
44	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 45 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
45	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 46 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
46	A5	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 47 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	F8	95	Total	C	N	O	S	0	0	0
			747	485	135	126	1			
47	B5	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 48 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	G8	109	Total	C	N	O	S	0	0	0
			825	528	153	139	5			
48	C5	107	Total	C	N	O	S	0	0	0
			776	494	147	130	5			



- Molecule 49 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	H8	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			
49	D5	176	Total	C	N	O	S	0	0	0
			1404	897	252	252	3			

- Molecule 50 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	I8	84	Total	C	N	O	S	0	0	0
			661	410	140	110	1			
50	E5	84	Total	C	N	O	S	0	0	0
			657	407	139	110	1			

- Molecule 51 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	J8	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			
51	F5	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

- Molecule 52 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	K8	72	Total	C	N	O	S	0	0	0
			598	372	120	104	2			
52	G5	71	Total	C	N	O	S	0	0	0
			590	367	119	103	1			

- Molecule 53 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	L8	59	Total	C	N	O	0	0	0
			468	298	90	80			
53	H5	59	Total	C	N	O	0	0	0
			468	298	90	80			

- Molecule 54 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	M8	71	Total	C	N	O	S	0	0	0
			580	364	108	103	5			
54	I5	71	Total	C	N	O	S	0	0	0
			580	364	108	103	5			

- Molecule 55 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	N8	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			
55	J5	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			

- Molecule 56 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	O8	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			
56	K5	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 57 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	P8	49	Total	C	N	O	S	0	0	0
			419	257	104	56	2			
57	L5	49	Total	C	N	O	S	0	0	0
			429	263	108	56	2			

- Molecule 58 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	Q8	64	Total	C	N	O	S	0	0	0
			506	326	99	79	2			
58	M5	64	Total	C	N	O	S	0	0	0
			506	326	99	79	2			

- Molecule 59 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	1L	76	Total	C	N	O	P	S	0	0
			1627	730	290	531	75	1		

- Molecule 60 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
60	2L	76	Total	C	N	O	P	S	0	0	0
			1635	735	291	532	75	2			

- Molecule 61 is POTASSIUM ION (three-letter code: K) (formula: K) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	13	51	Total	K	0	0
			51	51		
61	5E	1	Total	K	0	0
			1	1		
61	4I	1	Total	K	0	0
			1	1		
61	BI	1	Total	K	0	0
			1	1		
61	1K	1	Total	K	0	0
			1	1		
61	2K	3	Total	K	0	0
			3	3		
61	1H	144	Total	K	0	1
			145	145		
61	16	3	Total	K	0	0
			3	3		
61	11	1	Total	K	0	0
			1	1		
61	21	1	Total	K	0	0
			1	1		
61	31	2	Total	K	0	0
			2	2		
61	41	1	Total	K	0	0
			1	1		
61	88	1	Total	K	0	0
			1	1		
61	1G	36	Total	K	0	0
			36	36		
61	32	1	Total	K	0	0
			1	1		
61	52	1	Total	K	0	0
			1	1		
61	2A	1	Total	K	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	4A	1	Total K 1 1	0	0
61	5A	1	Total K 1 1	0	0
61	BA	1	Total K 1 1	0	0
61	14	106	Total K 106 106	0	0
61	1J	1	Total K 1 1	0	0
61	19	1	Total K 1 1	0	0
61	29	1	Total K 1 1	0	0
61	39	2	Total K 2 2	0	0
61	49	1	Total K 1 1	0	0
61	45	1	Total K 1 1	0	0

- Molecule 62 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	13	119	Total Mg 120 120	0	1
62	3E	1	Total Mg 1 1	0	0
62	6E	1	Total Mg 1 1	0	0
62	7I	1	Total Mg 1 1	0	0
62	2K	2	Total Mg 2 2	0	0
62	1H	433	Total Mg 439 439	0	6
62	16	12	Total Mg 12 12	0	0
62	11	1	Total Mg 1 1	0	0
62	21	2	Total Mg 2 2	0	0

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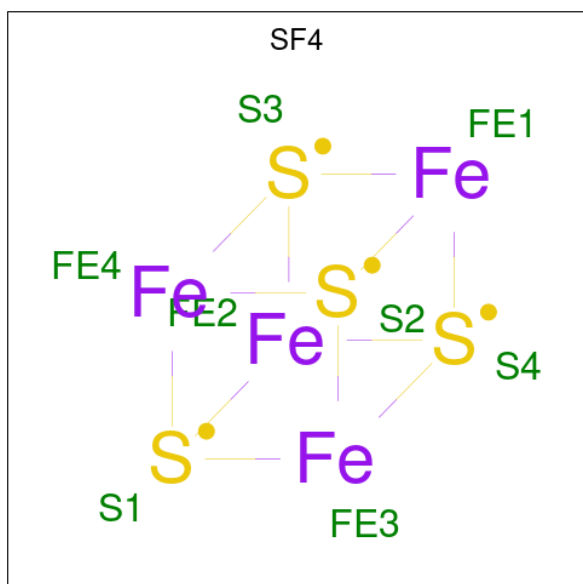
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	31	1	Total 1	Mg 1	0	0
62	41	1	Total 1	Mg 1	0	0
62	78	2	Total 2	Mg 2	0	0
62	C8	1	Total 1	Mg 1	0	0
62	F8	1	Total 1	Mg 1	0	0
62	I8	1	Total 1	Mg 1	0	0
62	J8	1	Total 1	Mg 1	0	0
62	L8	1	Total 1	Mg 1	0	0
62	N8	1	Total 1	Mg 1	0	0
62	O8	1	Total 1	Mg 1	0	0
62	P8	1	Total 1	Mg 1	0	0
62	Q8	1	Total 2	Mg 2	0	1
62	1G	100	Total 102	Mg 102	0	2
62	32	1	Total 1	Mg 1	0	0
62	42	1	Total 1	Mg 1	0	0
62	2L	3	Total 3	Mg 3	0	0
62	4L	1	Total 1	Mg 1	0	0
62	14	294	Total 295	Mg 295	0	1
62	1J	4	Total 4	Mg 4	0	0
62	29	2	Total 2	Mg 2	0	0
62	39	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	M5	2	Total	Mg	0	0
			2	2		

- Molecule 63 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
63	3E	1	Total	Fe	S	0	0
			8	4	4		
63	32	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 64 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
64	5I	1	Total	Zn	0	0
			1	1		
64	5A	1	Total	Zn	0	0
			1	1		

- Molecule 65 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
65	13	233	Total	O	0	0
			233	233		
65	3E	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
65	4E	1	Total 1	O 1	0	0
65	3I	3	Total 3	O 3	0	0
65	4I	1	Total 1	O 1	0	0
65	5I	1	Total 1	O 1	0	0
65	7I	1	Total 1	O 1	0	0
65	BI	1	Total 1	O 1	0	0
65	1F	3	Total 3	O 3	0	0
65	2K	8	Total 8	O 8	0	0
65	3K	1	Total 1	O 1	0	0
65	4K	2	Total 2	O 2	0	0
65	1H	1009	Total 1009	O 1009	0	0
65	16	26	Total 26	O 26	0	0
65	11	11	Total 11	O 11	0	0
65	21	10	Total 10	O 10	0	0
65	31	10	Total 10	O 10	0	0
65	78	9	Total 9	O 9	0	0
65	88	1	Total 1	O 1	0	0
65	A8	2	Total 2	O 2	0	0
65	B8	2	Total 2	O 2	0	0
65	D8	1	Total 1	O 1	0	0
65	F8	1	Total 1	O 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
65	I8	2	Total 2	O 2	0	0
65	L8	2	Total 2	O 2	0	0
65	P8	1	Total 1	O 1	0	0
65	Q8	1	Total 1	O 1	0	0
65	1G	194	Total 194	O 194	0	0
65	32	4	Total 4	O 4	0	0
65	82	1	Total 1	O 1	0	0
65	3A	2	Total 2	O 2	0	0
65	5A	1	Total 1	O 1	0	0
65	4L	4	Total 4	O 4	0	0
65	14	602	Total 602	O 602	0	0
65	1J	5	Total 5	O 5	0	0
65	19	12	Total 12	O 12	0	0
65	29	7	Total 7	O 7	0	0
65	39	2	Total 2	O 2	0	0
65	35	7	Total 7	O 7	0	0
65	75	2	Total 2	O 2	0	0
65	C5	1	Total 1	O 1	0	0
65	E5	1	Total 1	O 1	0	0
65	H5	2	Total 2	O 2	0	0
65	L5	1	Total 1	O 1	0	0

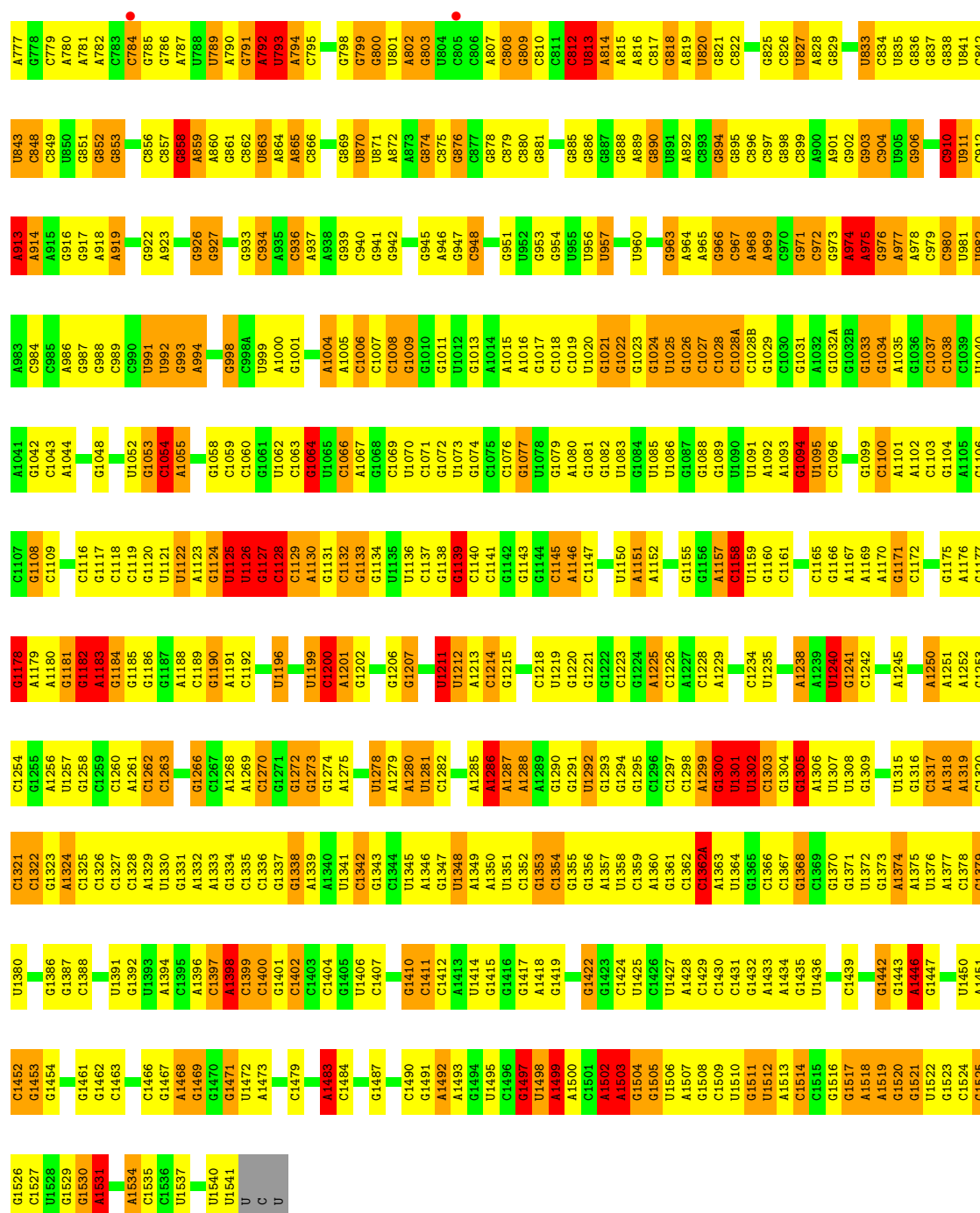
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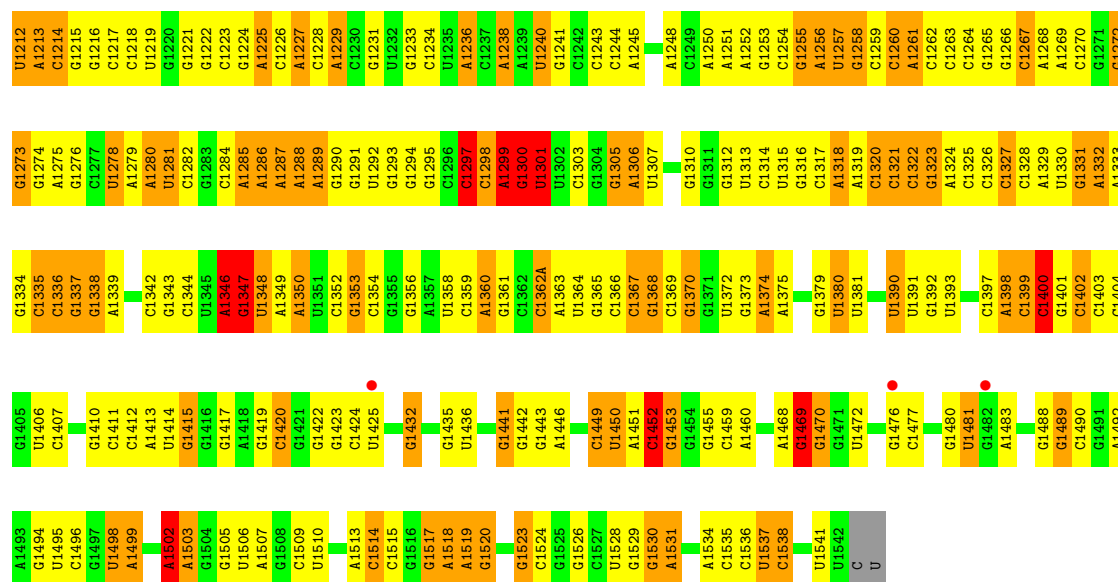
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
65	M5	6	Total	O	0	0
			6	6		

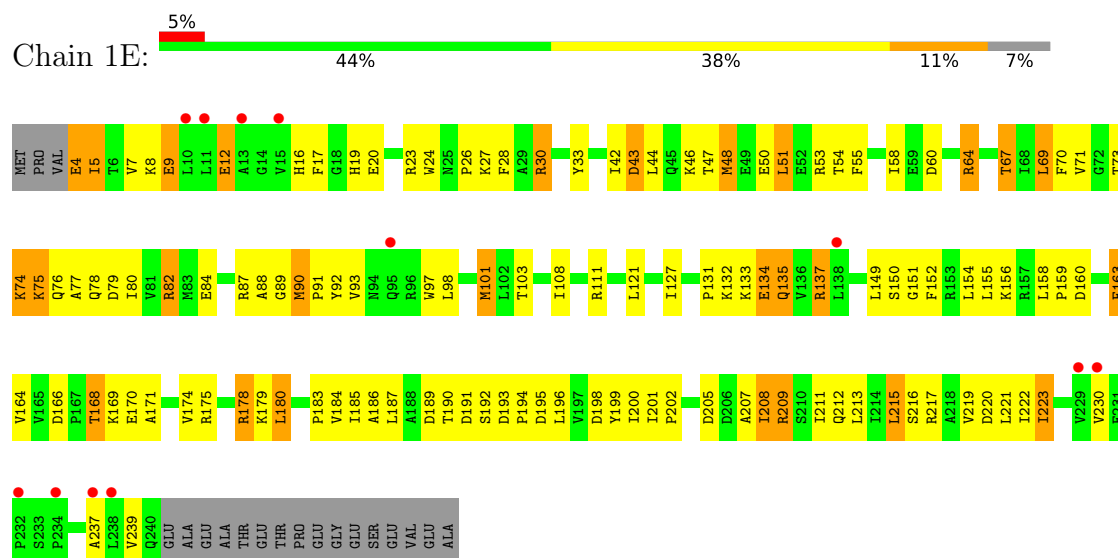




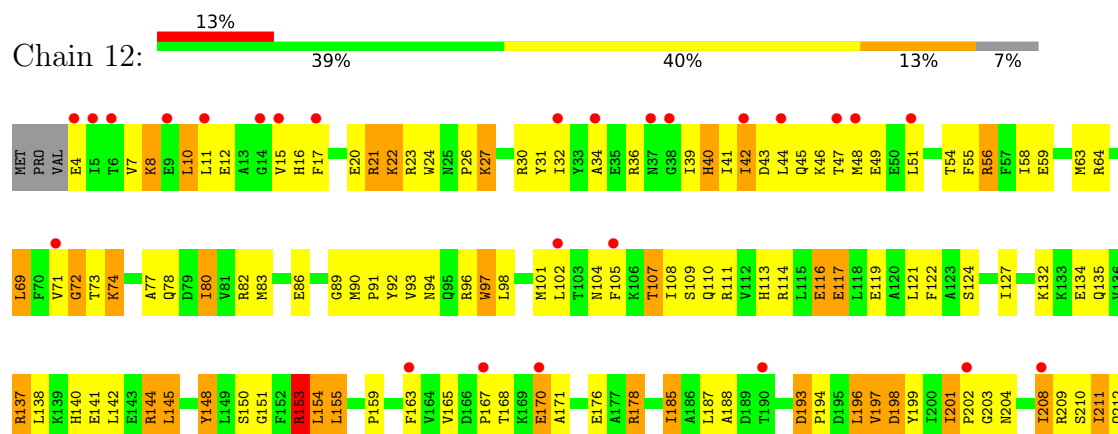


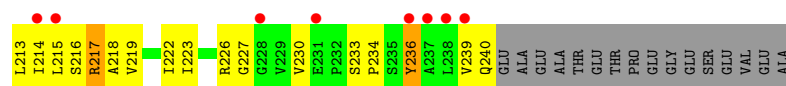


### • Molecule 2: 30S ribosomal protein S2

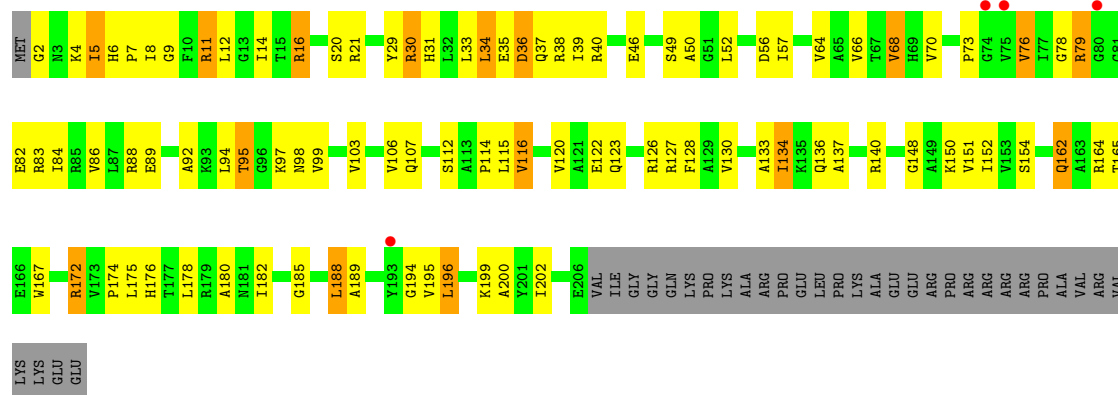


### • Molecule 2: 30S ribosomal protein S2

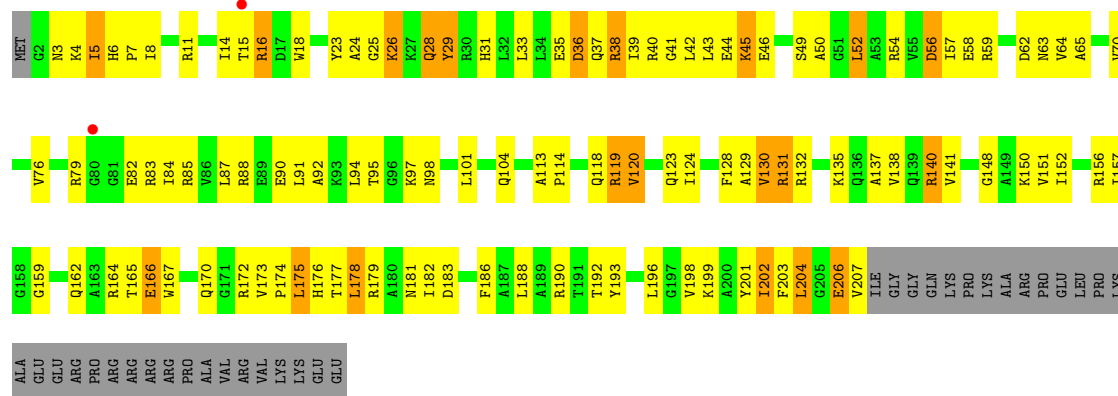




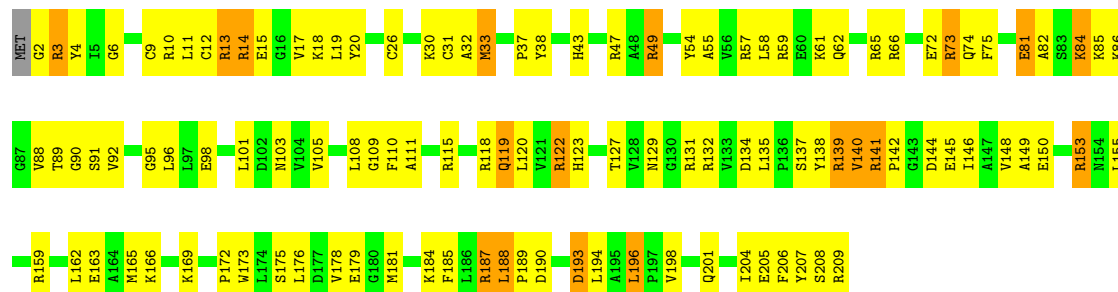
• Molecule 3: 30S ribosomal protein S3



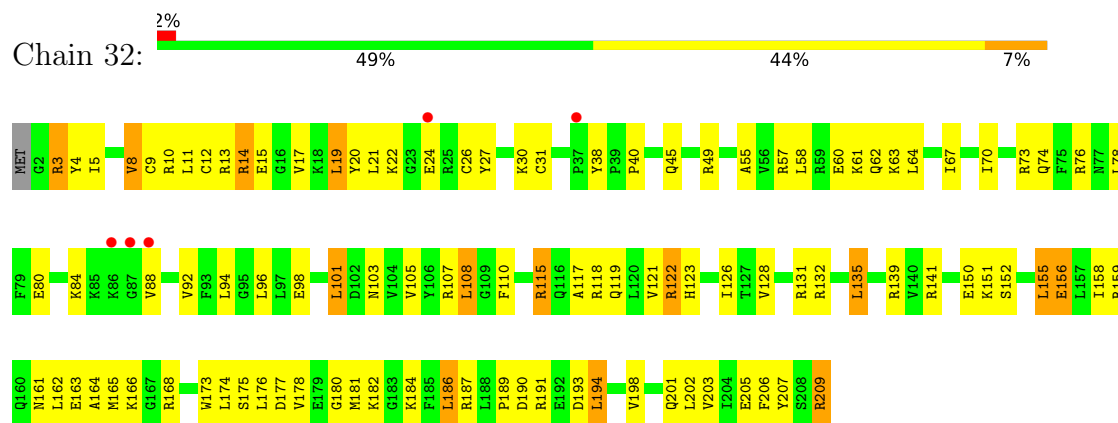
• Molecule 3: 30S ribosomal protein S3



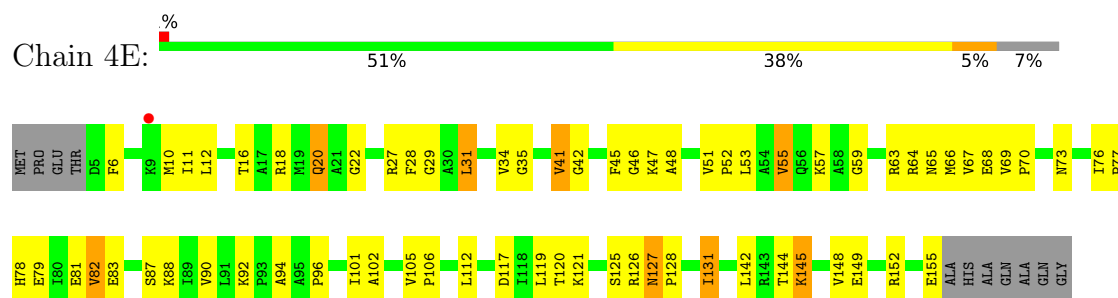
• Molecule 4: 30S ribosomal protein S4

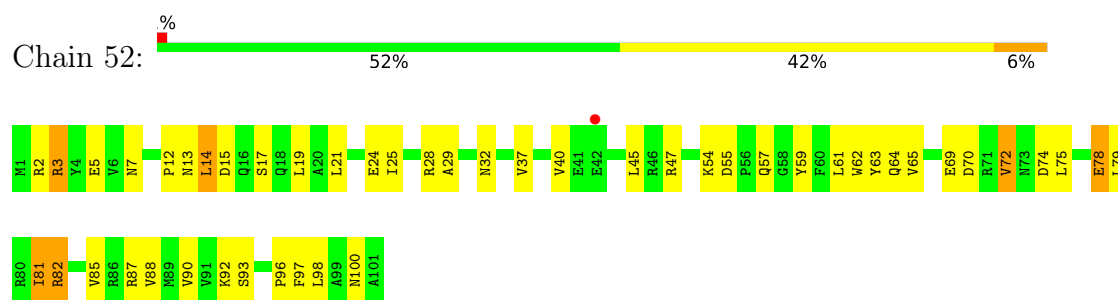


- Molecule 4: 30S ribosomal protein S4

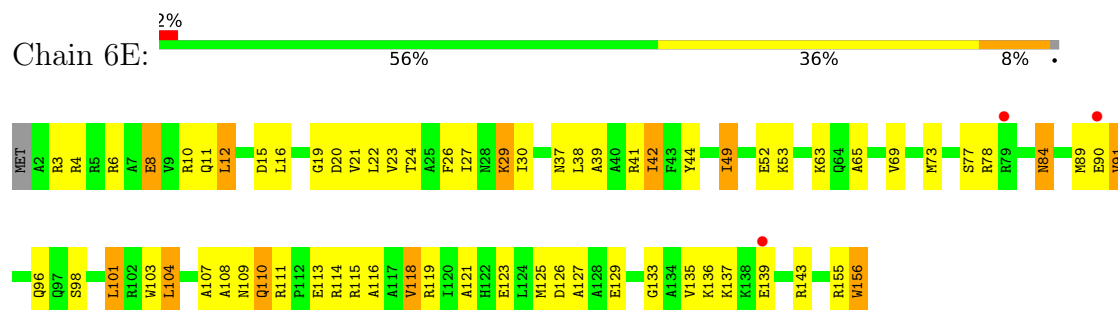


- Molecule 5: 30S ribosomal protein S5

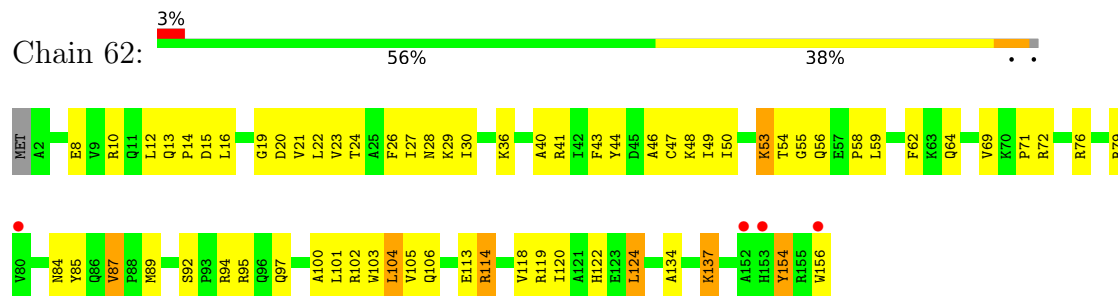




- Molecule 7: 30S ribosomal protein S7



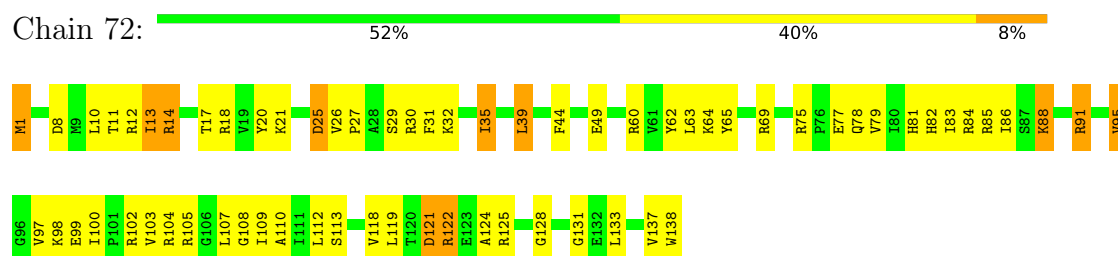
- Molecule 7: 30S ribosomal protein S7



- Molecule 8: 30S ribosomal protein S8

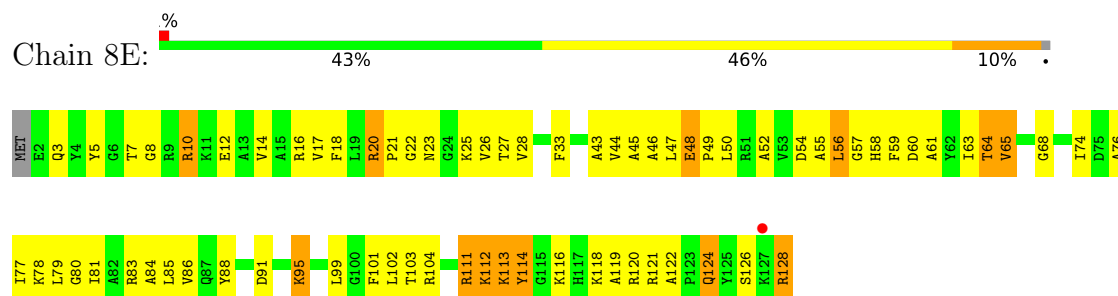


- Molecule 8: 30S ribosomal protein S8

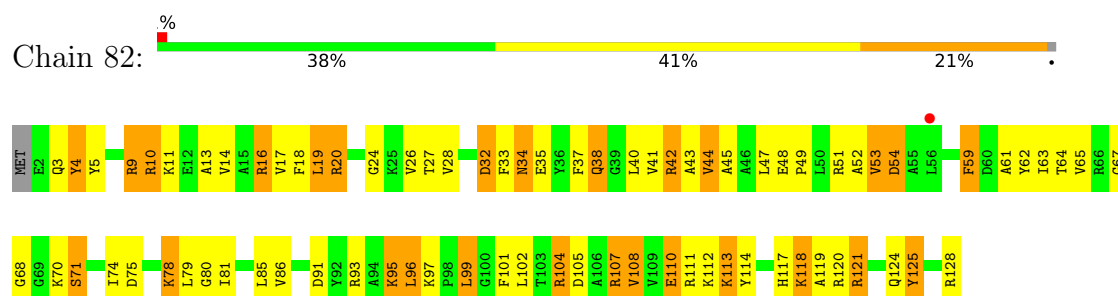




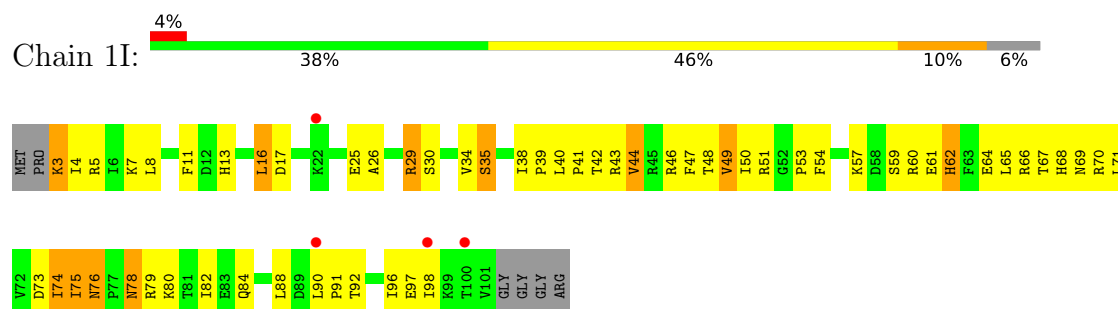
- Molecule 9: 30S ribosomal protein S9



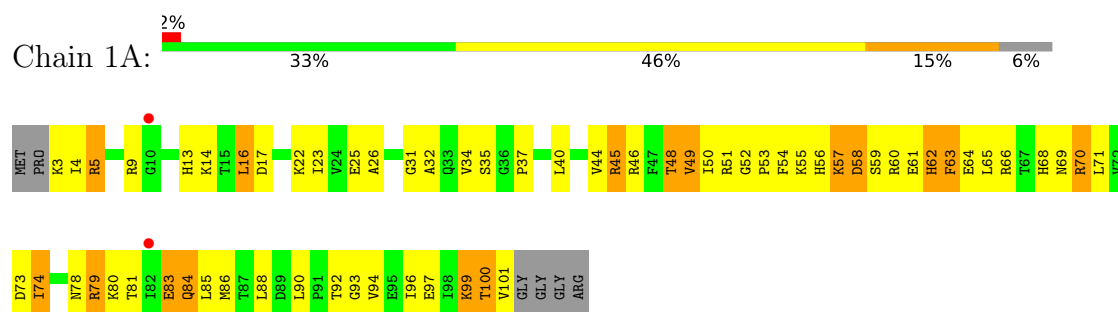
- Molecule 9: 30S ribosomal protein S9



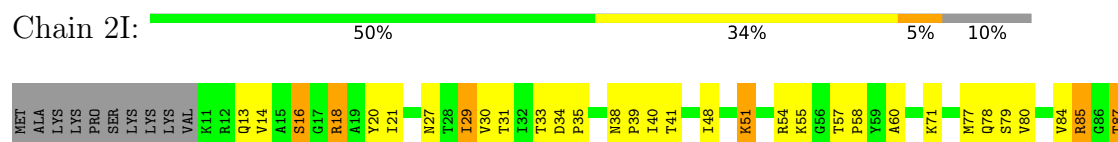
- Molecule 10: 30S ribosomal protein S10



- Molecule 10: 30S ribosomal protein S10



- Molecule 11: 30S ribosomal protein S11





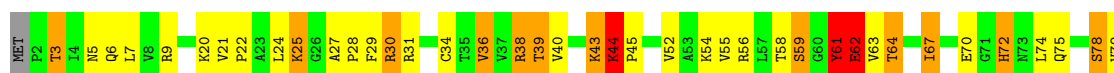
- Molecule 11: 30S ribosomal protein S11



- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

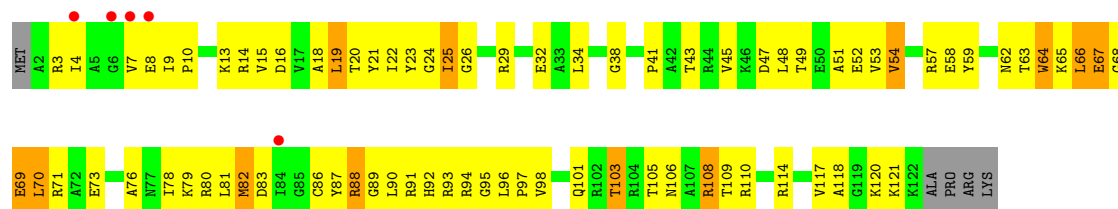


- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13

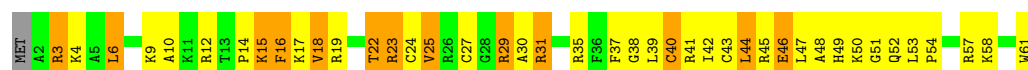
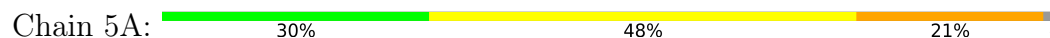




- Molecule 14: 30S ribosomal protein S14 type Z



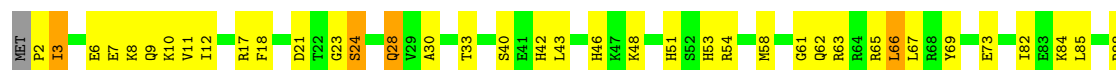
- Molecule 14: 30S ribosomal protein S14 type Z



- Molecule 15: 30S ribosomal protein S15



- Molecule 15: 30S ribosomal protein S15



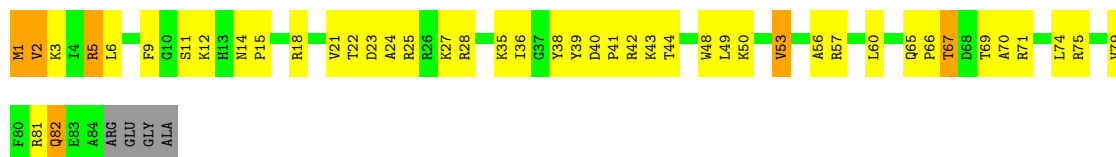
- Molecule 16: 30S ribosomal protein S16





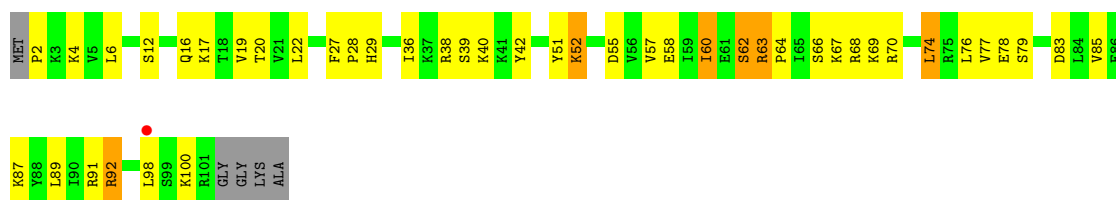
- Molecule 16: 30S ribosomal protein S16

Chain 7A: 44% 44% 7% 5%



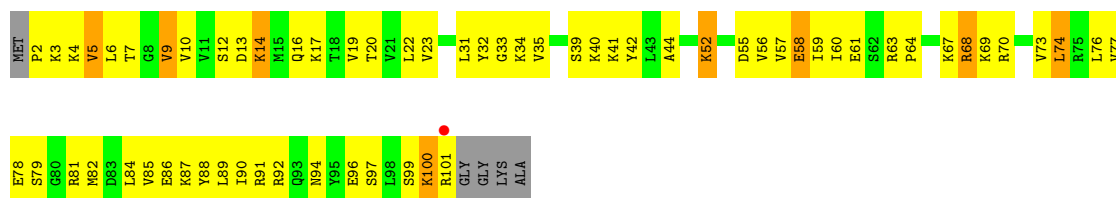
- Molecule 17: 30S ribosomal protein S17

Chain 8I: 53% 36% 6% 5%



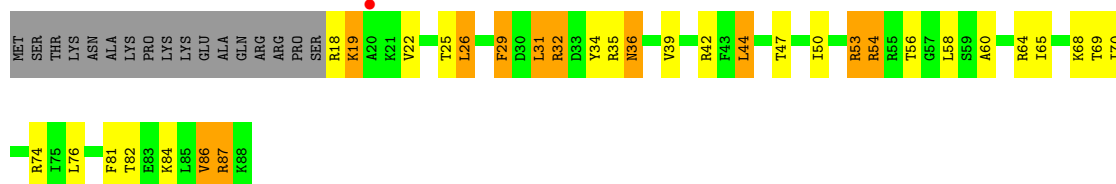
- Molecule 17: 30S ribosomal protein S17

Chain 8A: 34% 53% 8% 5%



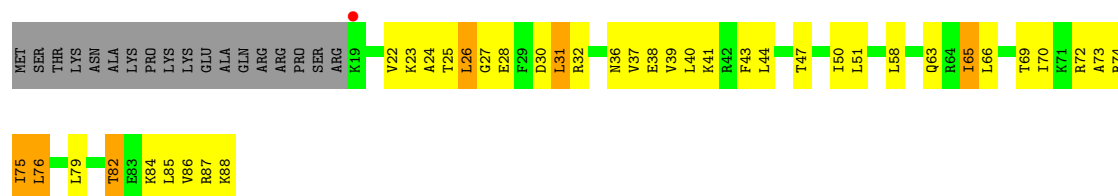
- Molecule 18: 30S ribosomal protein S18

Chain 9I: 43% 25% 13% 19%

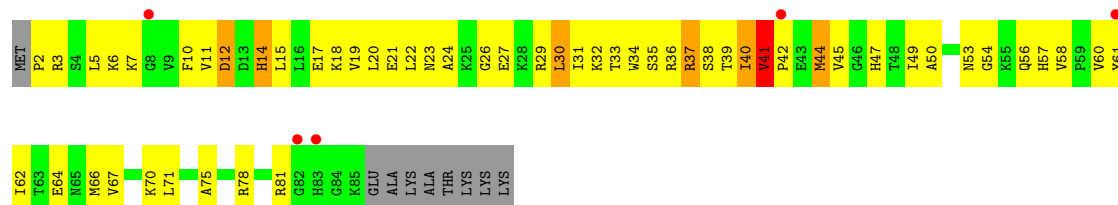


- Molecule 18: 30S ribosomal protein S18

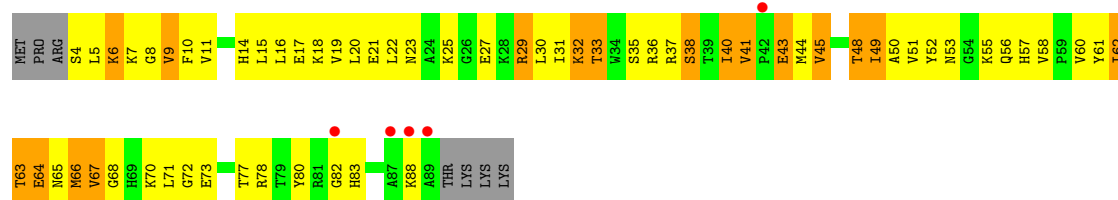
Chain 9A: 35% 38% 7% 20%



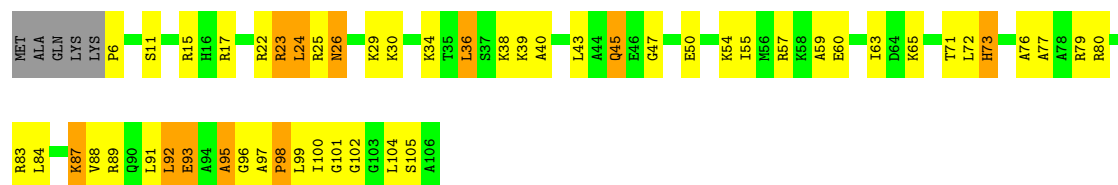
- Molecule 19: 30S ribosomal protein S19



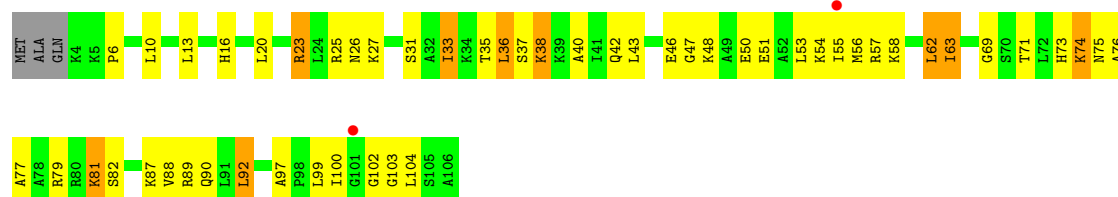
- Molecule 19: 30S ribosomal protein S19



- Molecule 20: 30S ribosomal protein S20

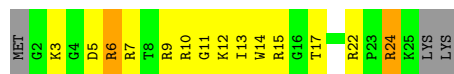


- Molecule 20: 30S ribosomal protein S20



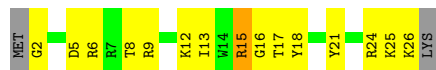
- Molecule 21: 30S ribosomal protein Thx

Chain 1F:  37% 44% 7% 11%




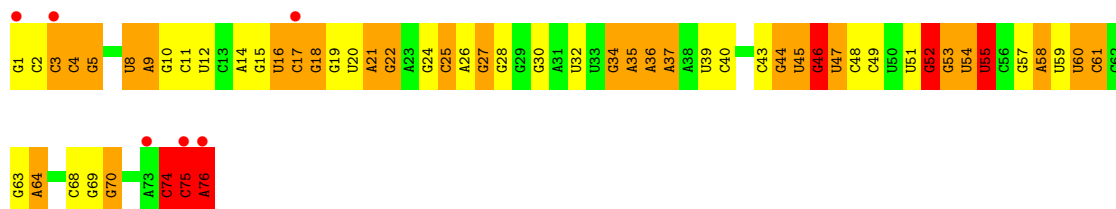
- Molecule 21: 30S ribosomal protein Thx

Chain 1B:  37% 52% 7%



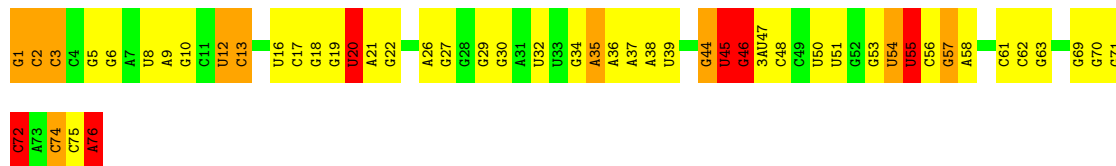
- Molecule 22: E. coli tRNAPhe

Chain 1K:  8% 25% 33% 34% 8%




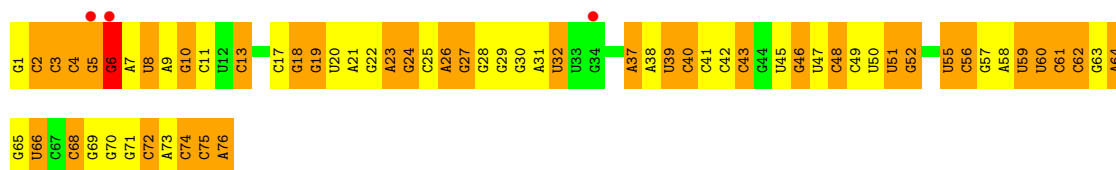
- Molecule 23: E. coli tRNAPhe

Chain 2K:  33% 46% 13% 8%




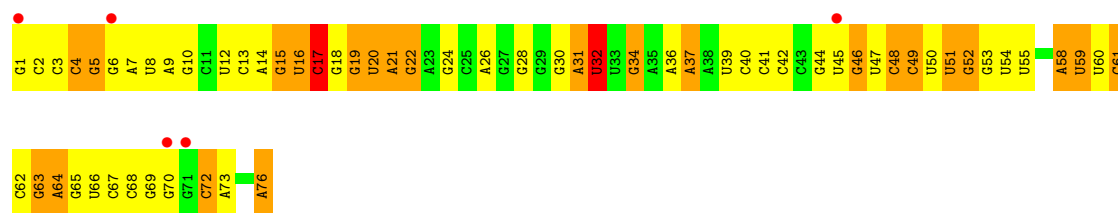
- Molecule 24: E. coli tRNAPhe

Chain 3K:  4% 16% 37% 46%



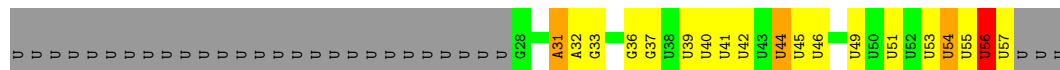
- Molecule 24: E. coli tRNAPhe

Chain 3L:  7% 18% 49% 30%



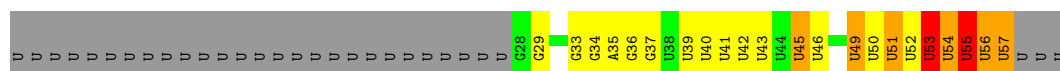
• Molecule 25: mRNA

Chain 4K: 18% 25% 5% 50%



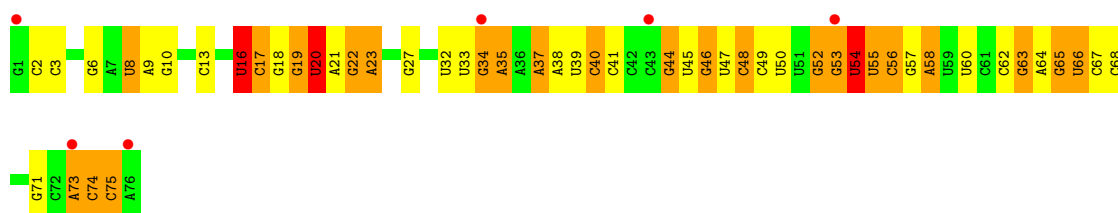
• Molecule 25: mRNA

Chain 4L: 13% 23% 10% 50%



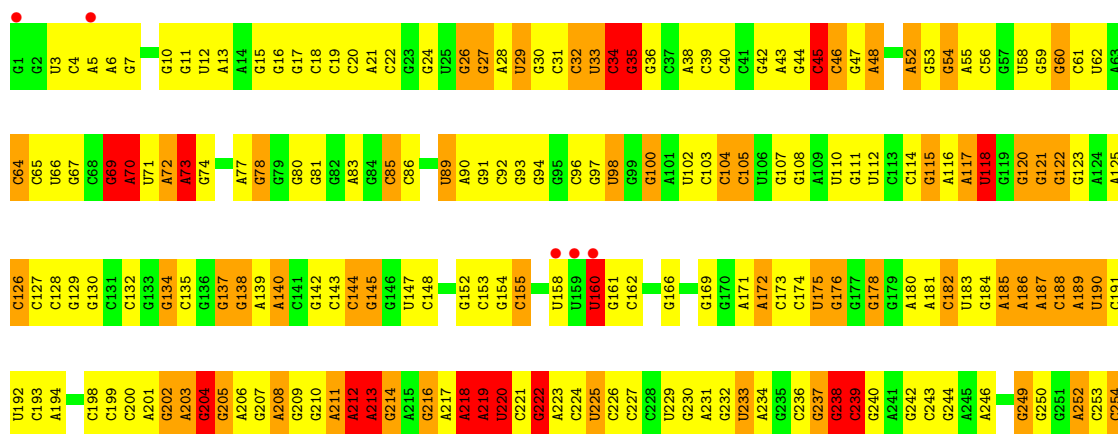
• Molecule 26: E. coli tRNAPhe

Chain 5K: 8% 33% 33% 30%



• Molecule 27: 23S ribosomal RNA

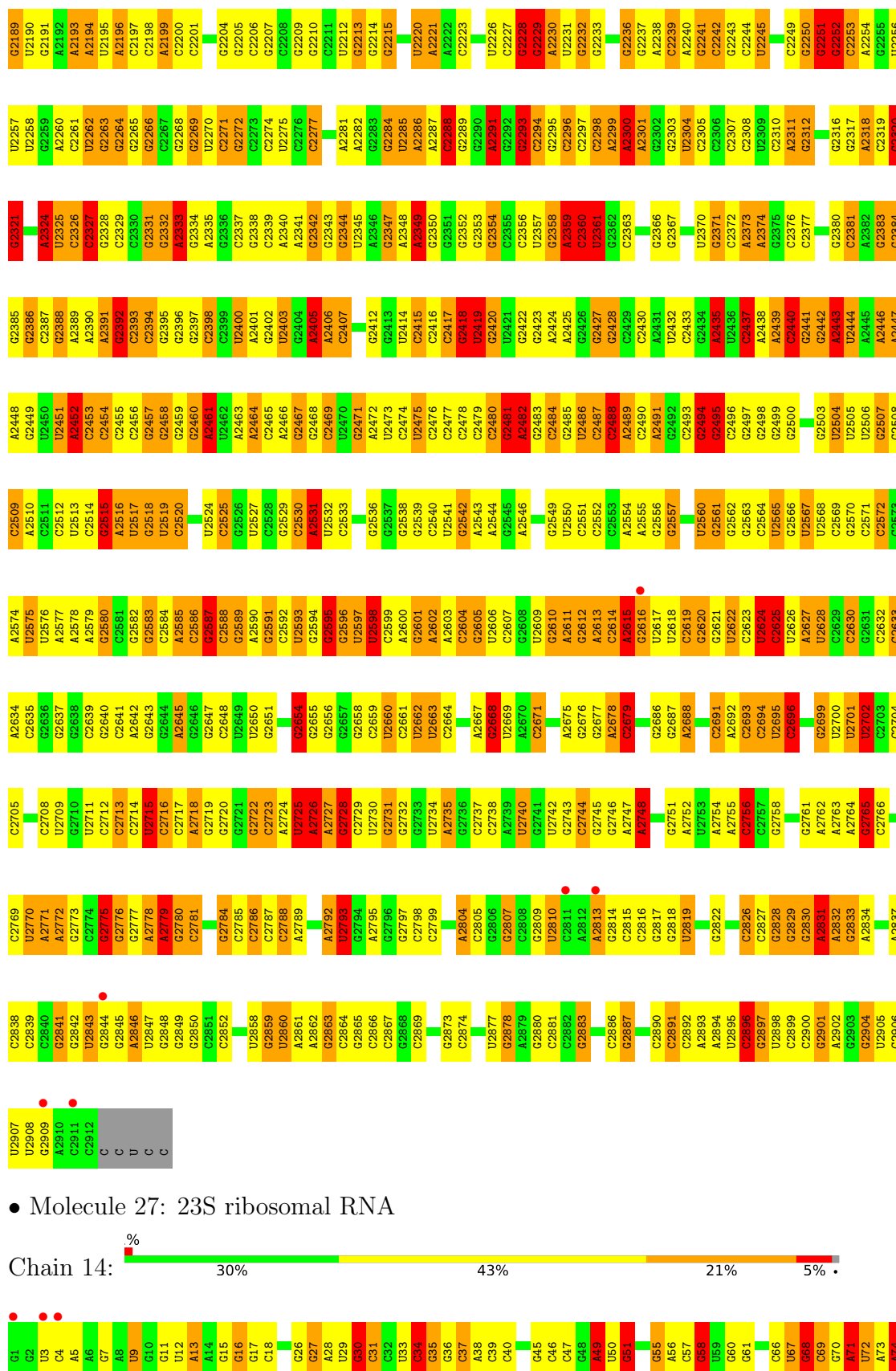
Chain 1H: 23% 43% 25% 7%



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U1160	A1100	A1037	G903	C839	C779	U715	A653	U590	U530	G489	C399	U330	
G1161	A1101	C1038	C904	G840	C780	U716	G654	A591	A531	A470	G400	U331	U259
	G1102	C1039	C905	A841	G781	G717	G655	U592	Q532	C471	U401	G332	A260
G1168	G1103	G1040	U906	G842	A782	A718	G656	U593	A533	C472	G407	G333	A261
G1169	A1104	G1041	G907	C943	A783	C719	A657	G594	G584	G473		G334	A262
C1170	U1105	C1042	U908	C844	C784	G720	C660	A595	C536	A474	U412	A336	G265
A1171	G1106	A1043	A909	G845	C785	C721	C661	A596	C537	A475	U413	A337	U266
G1172	U1107	G1044	G910	G846	G786	G722	G662	G597	U537	A476	C413	U267	C267
A1173	U1108	C1045	A911	G847	G787	A723	G663	C598	G538	A477	C414	G340	C268
A1174	G1109	U1046	G912	A848	U788	A724	A664	A599	A539	C478	U415	G341	G269
A1175	A1110	A1047	C913	G849	G789	A725	G665	U600	A540	G479	U416	C341	G270
U1176	C	A1048	G916	A850	G790	C726	U666	G601	A541	C480	C417	G342	
G1177	U	G1049	U917		G791	G727	C667	A602	C542	A481	A418	C343	C271
U1178	U	G1050	G918	G853	G792	G728	C668	G603	C543	C482	A419	C344	U272
	A	C1051	A918	C854	G793	G729	G669	C604	Q544	C483	C345	U273	
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U1188	G1122	G994	G928	C862	C901		C676	U612	A552	U491	G428	G354	G284
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G1191	U1125	G1063	G931	G866	C804	C741	A680	C615	A555	A494	U431	A357	
C1192	C1126	G1064	C932	A867	U805	U742	A681	G616	G556	G495	C432	U289	
C1193	A1127	C1065	C933	A868	C806	G743	G682	G617	C557	C496	U433	G359	G290
C1194	U1128	U1066	C934	A869	G807	G744	G683	U618	A558	A497	G434	C360	G291
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G1196	U1130	A1068	C936	G871	A809	C746	C	G620	U560	A499	G436	C362	
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G1198	U1070	A1075	A943	G877	G816	G748	C	G622	A562	G501	G438	U364	G299
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C1200	A1133	G1077	C945	G879	G818	G750	C	G624	C564	G503	A440	G366	A
G1201	G1134	G1072	A946	G880	G819	G751	A	C625	G565	A504	C441	C367	C
G1202	A1135	U1073	A947	U881	C820	U752	C	G626	C566	A505	C442	C368	A303
A1203	U1136	A1074	C948	C882	U821	G753	G	A627	C567	A506	A443	C369	C304
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G1210	U1144	U1082	C952	C886	G829	G763	G700	C635	G575	C514	A451	G381	A315
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G1218	U1152	A1092	C959	U895	A832	G708	C708	G646	G583	A523		G389	G323
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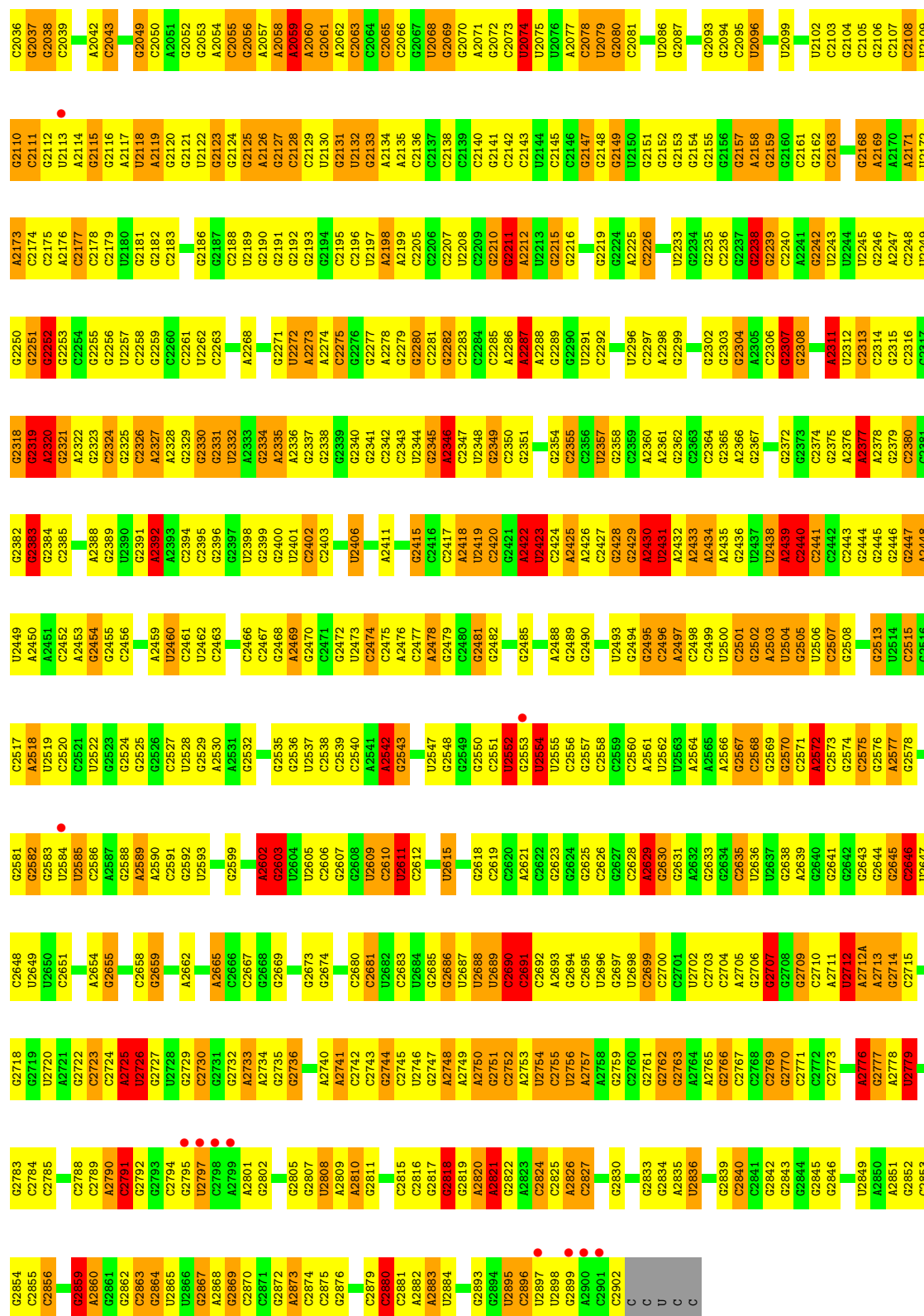


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G1272	U1341	U1341	U1403	U1467	G1531	G1600	C1663	C1722	U1790	U1850	A1912	A1983	A2043	C2107	U2173
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C1284	C1352	C1352	A1417	C1478	G1549	C1613	G1675	U1736	G1802	G1862	G1929	A1994	A2055	G2118	G2184
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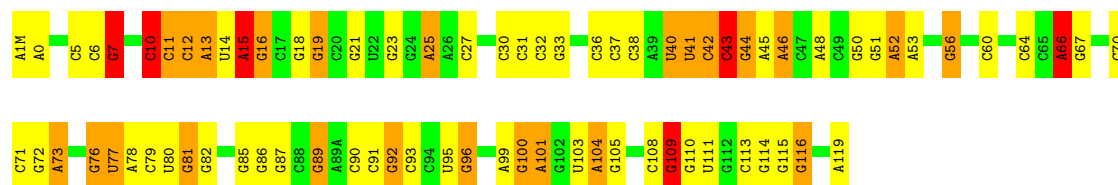
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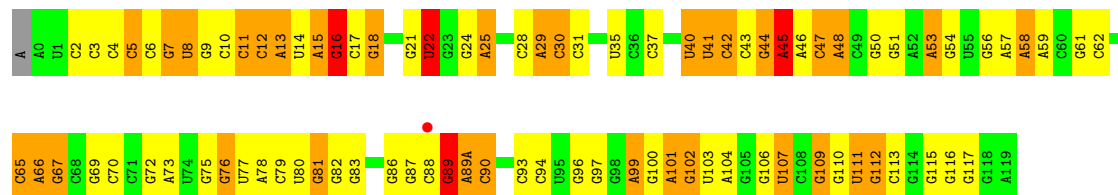


- Molecule 28: 5S ribosomal RNA

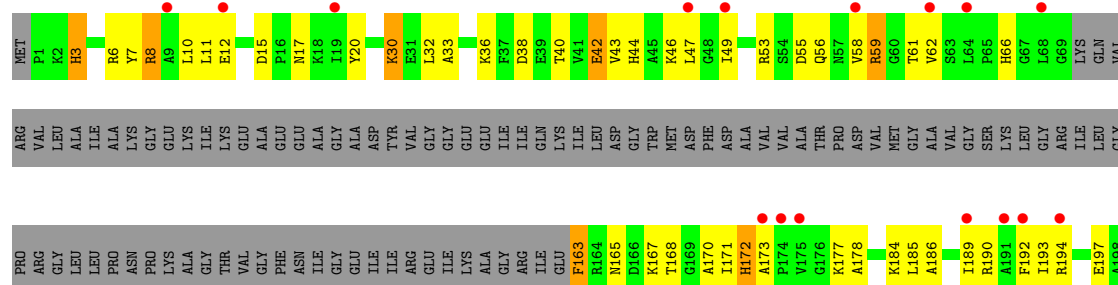
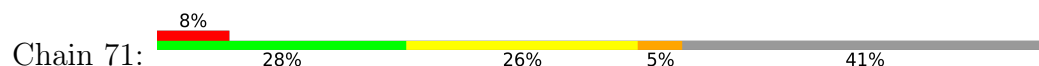
Chain 16:  36% 39% 20% 5%



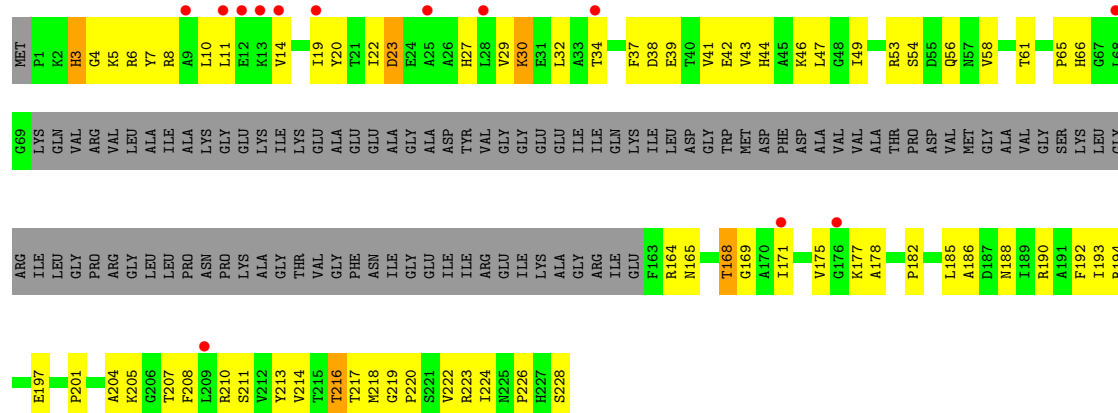
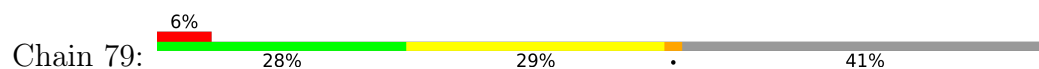
- Molecule 28: 5S ribosomal RNA



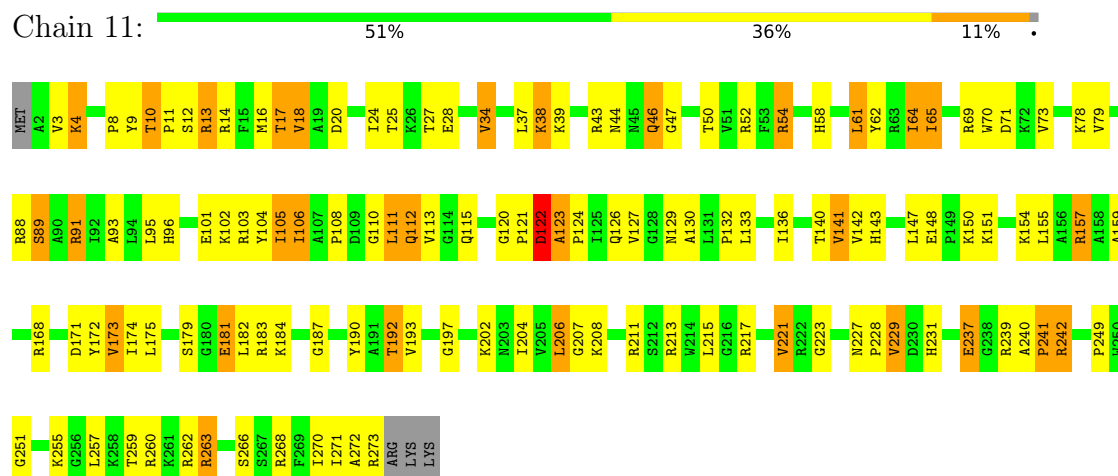
- Molecule 29: 50S ribosomal protein L1



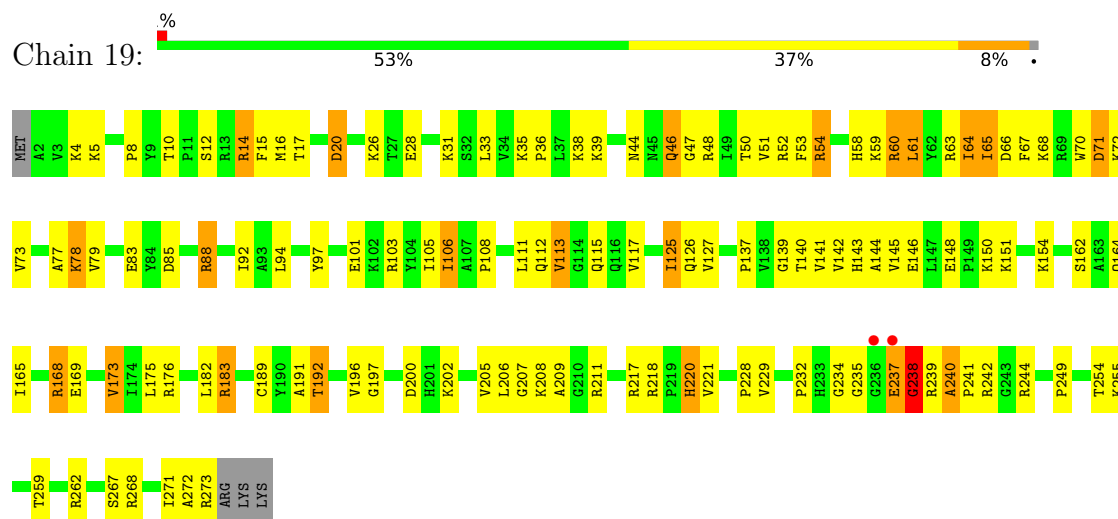
- Molecule 29: 50S ribosomal protein L1



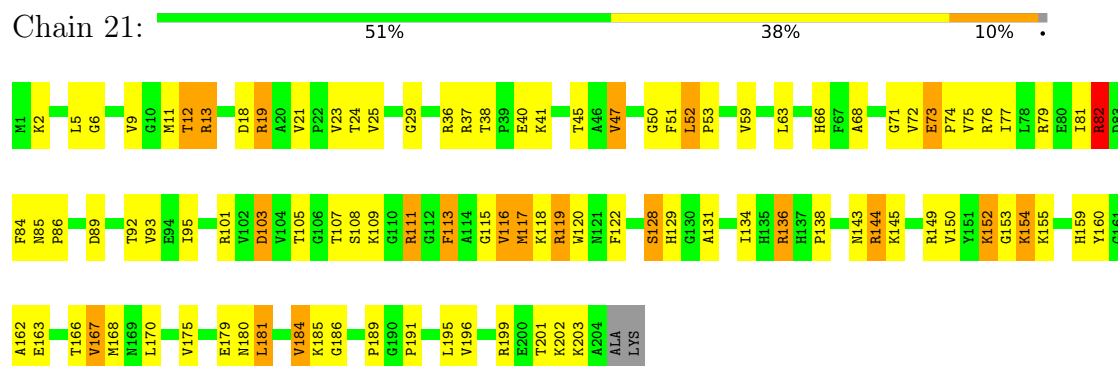
- Molecule 30: 50S ribosomal protein L2



- Molecule 30: 50S ribosomal protein L2

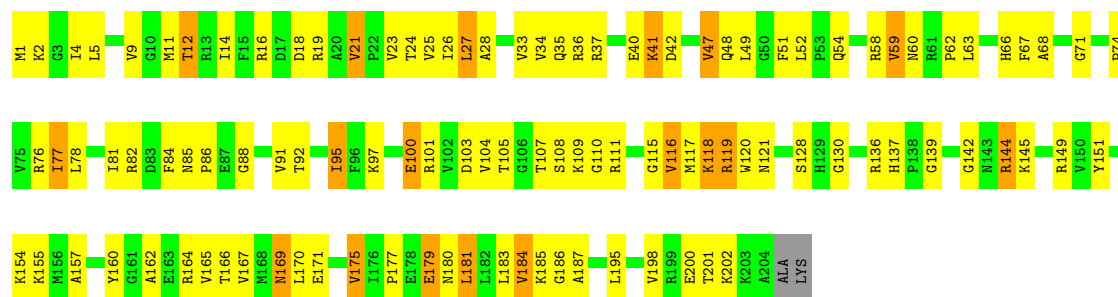


- Molecule 31: 50S ribosomal protein L3



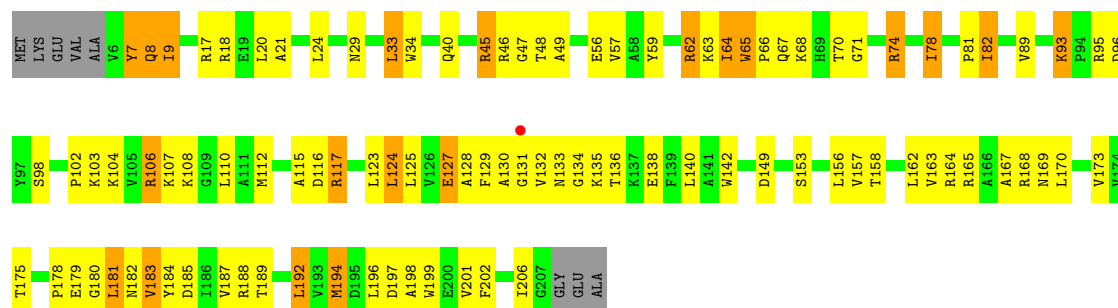
- Molecule 31: 50S ribosomal protein L3





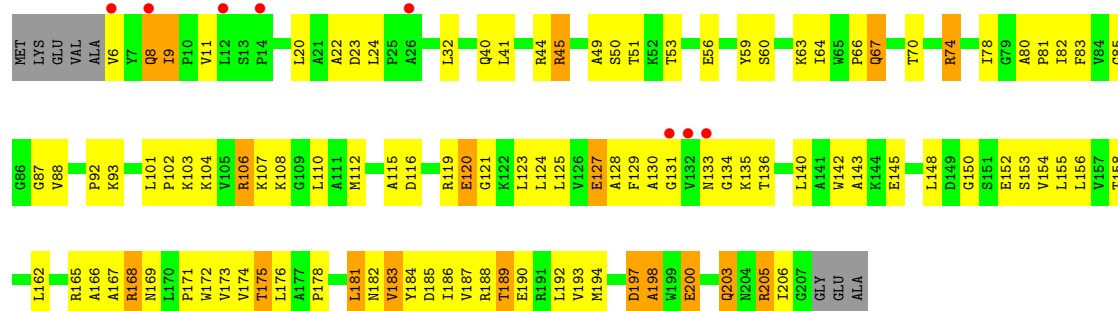
• Molecule 32: 50S ribosomal protein L4

Chain 31: 49% 38% 10% .



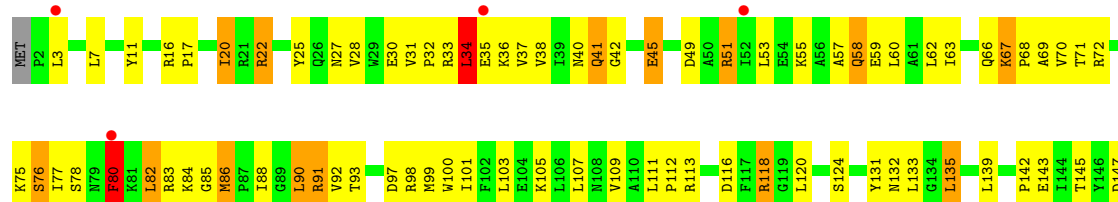
• Molecule 32: 50S ribosomal protein L4

Chain 39: 4% 46% 42% 9% .

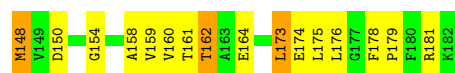


• Molecule 33: 50S ribosomal protein L5

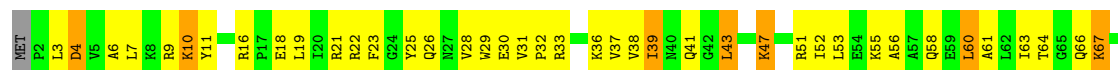
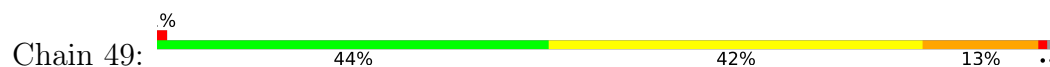
Chain 41: 2% 47% 42% 9% ..



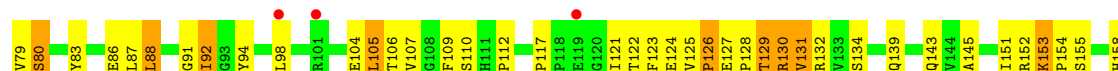
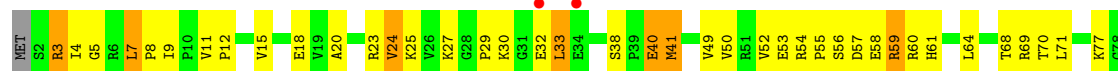




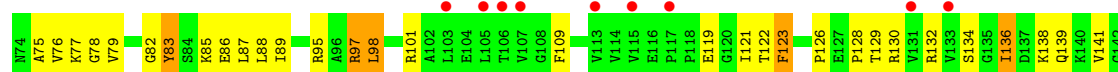
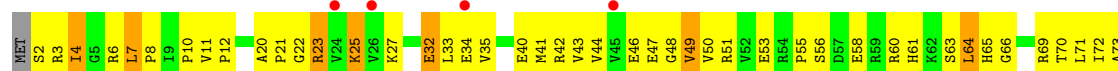
• Molecule 33: 50S ribosomal protein L5



• Molecule 34: 50S ribosomal protein L6



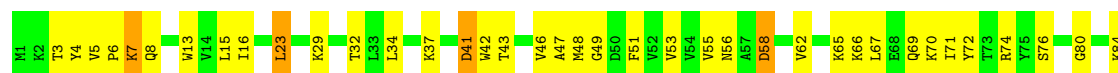
• Molecule 34: 50S ribosomal protein L6



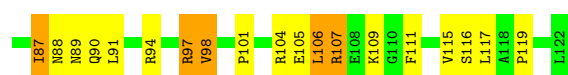
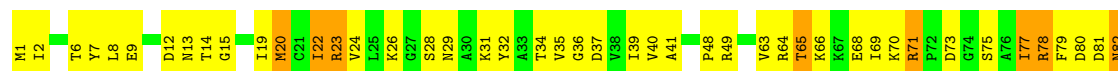
• Molecule 35: 50S ribosomal protein L9



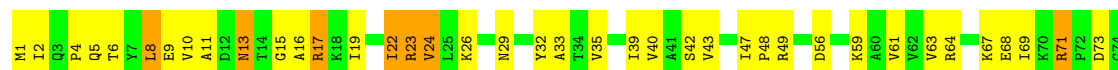




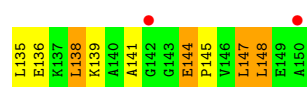
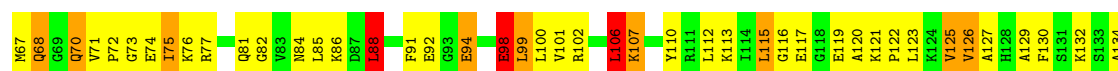
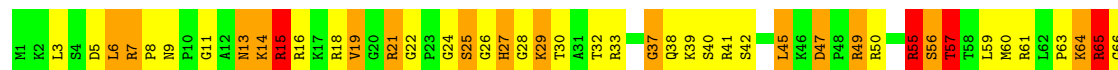
• Molecule 38: 50S ribosomal protein L14



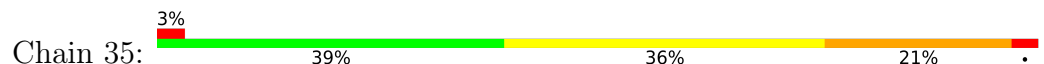
• Molecule 38: 50S ribosomal protein L14

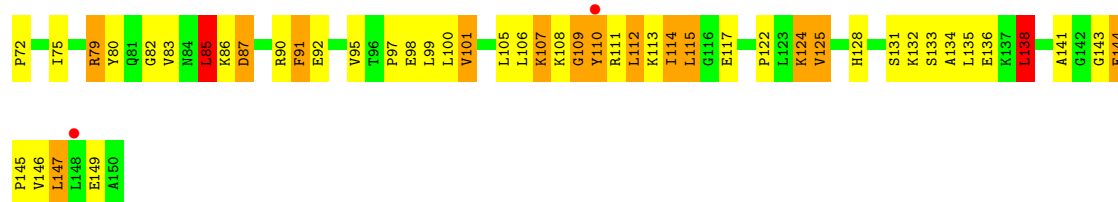


• Molecule 39: 50S ribosomal protein L15

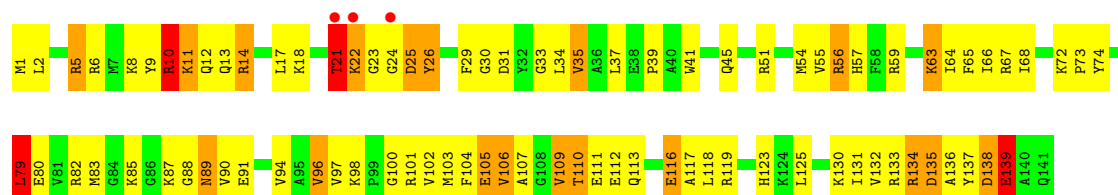


• Molecule 39: 50S ribosomal protein L15

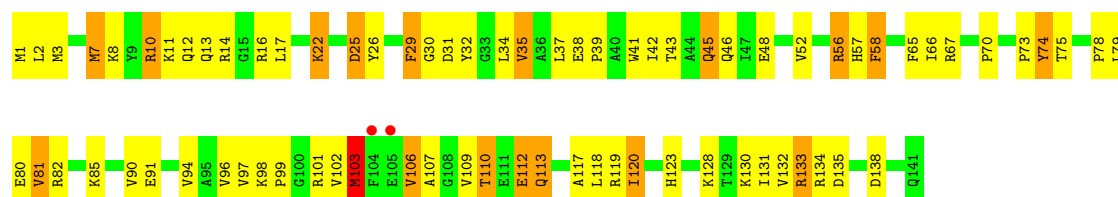




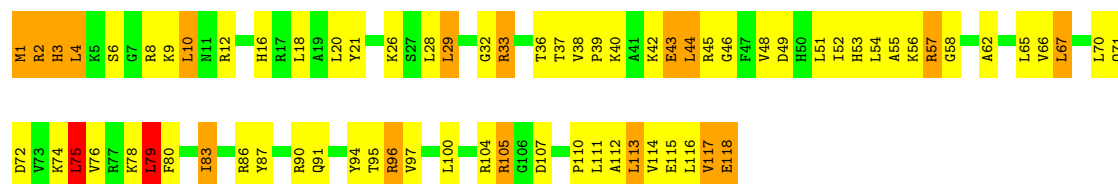
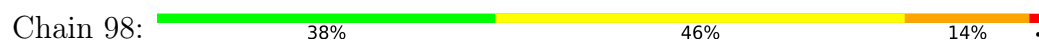
• Molecule 40: 50S ribosomal protein L16



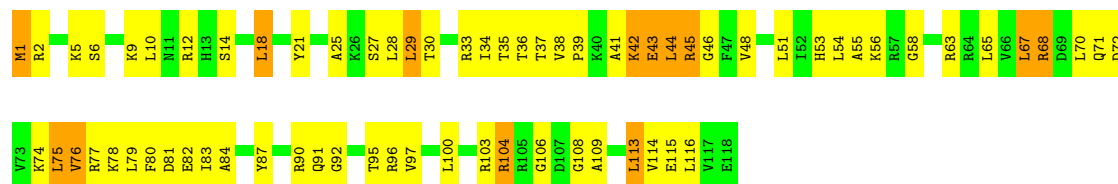
• Molecule 40: 50S ribosomal protein L16



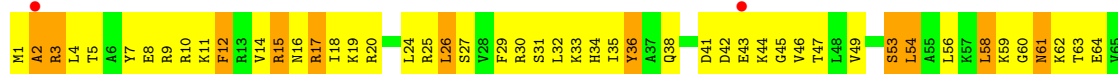
• Molecule 41: 50S ribosomal protein L17



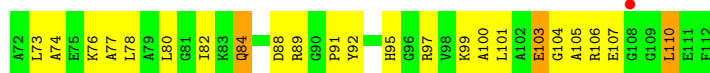
• Molecule 41: 50S ribosomal protein L17



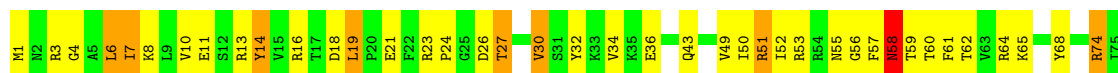
• Molecule 42: 50S ribosomal protein L18



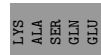
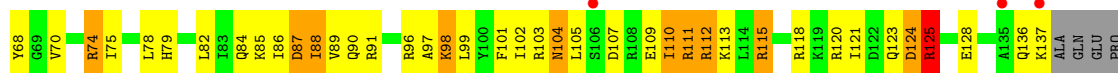
• Molecule 42: 50S ribosomal protein L18



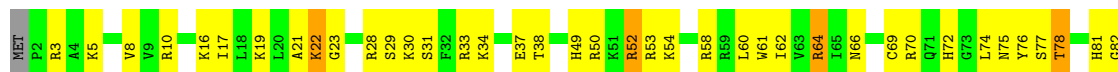
• Molecule 43: 50S ribosomal protein L19



• Molecule 43: 50S ribosomal protein L19

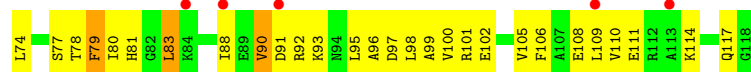
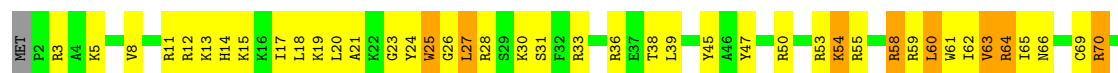


• Molecule 44: 50S ribosomal protein L20

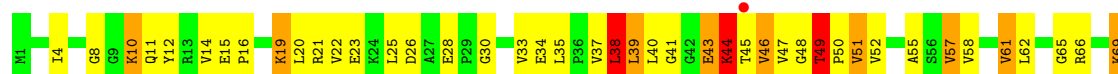




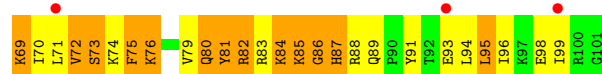
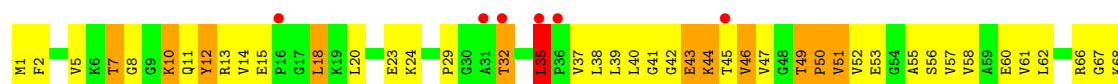
- Molecule 44: 50S ribosomal protein L20



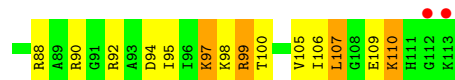
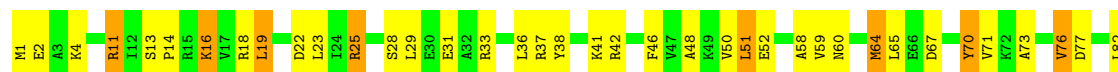
- Molecule 45: 50S ribosomal protein L21



- Molecule 45: 50S ribosomal protein L21

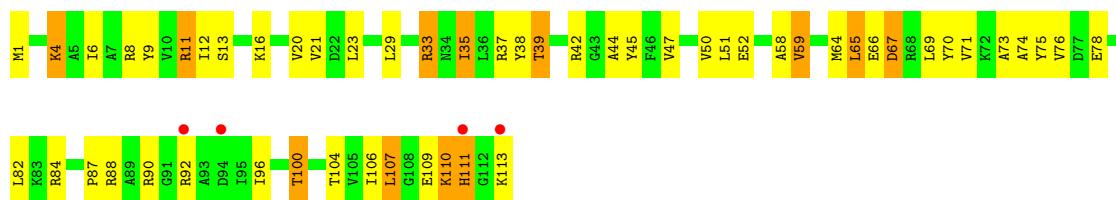


- Molecule 46: 50S ribosomal protein L22



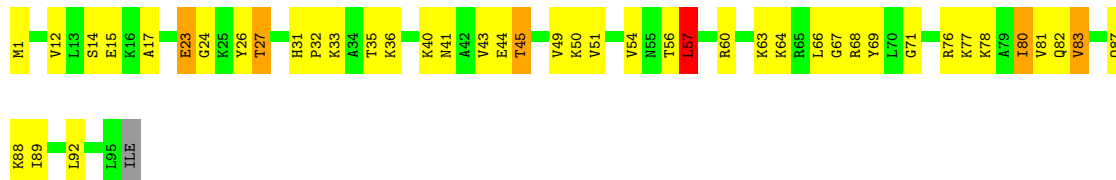
- Molecule 46: 50S ribosomal protein L22





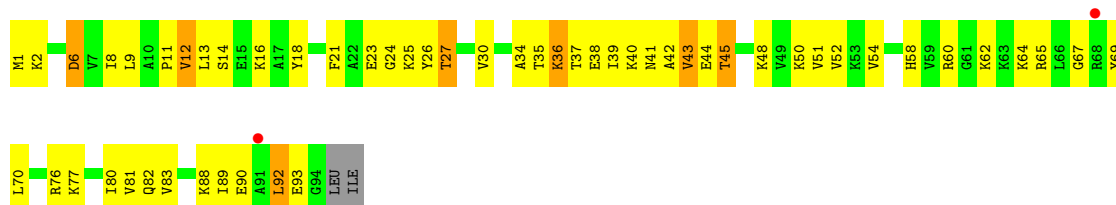
- Molecule 47: 50S ribosomal protein L23

Chain F8: 53% 40% 5% ..



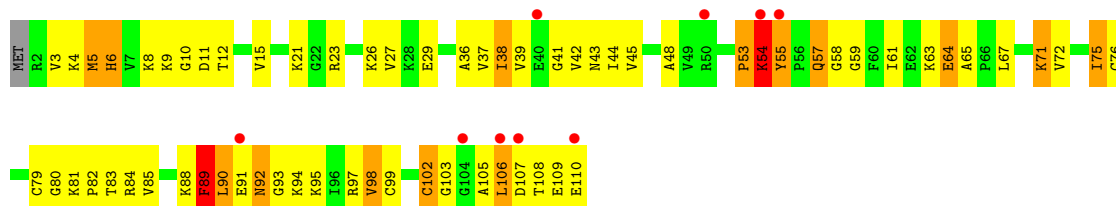
- Molecule 47: 50S ribosomal protein L23

Chain B5: 2% 42% 49% 7% .



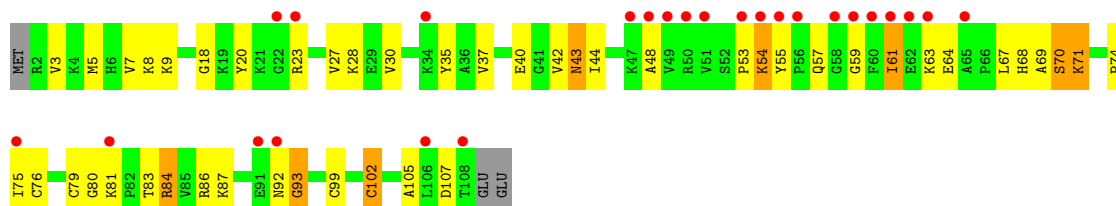
- Molecule 48: 50S ribosomal protein L24

Chain G8: 8% 39% 45% 13% ..

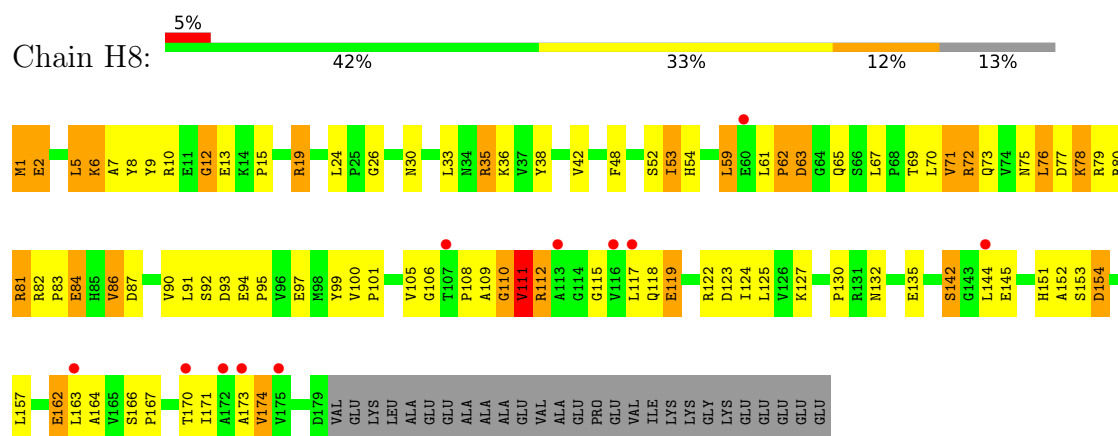


- Molecule 48: 50S ribosomal protein L24

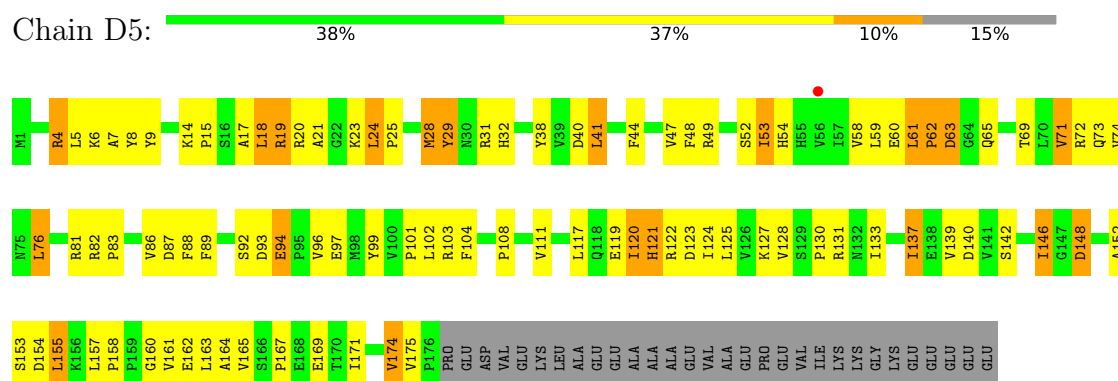
Chain C5: 23% 55% 35% 7% .



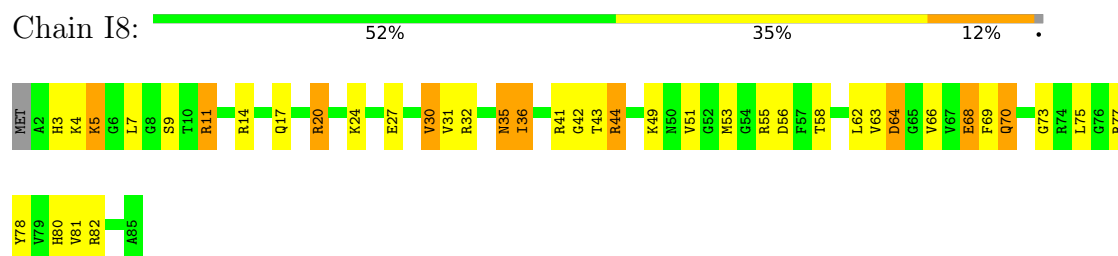
- Molecule 49: 50S ribosomal protein L25



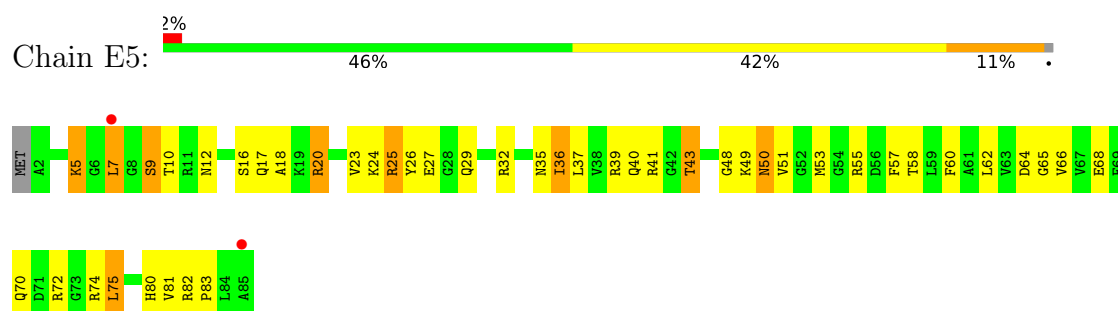
- Molecule 49: 50S ribosomal protein L25



- Molecule 50: 50S ribosomal protein L27



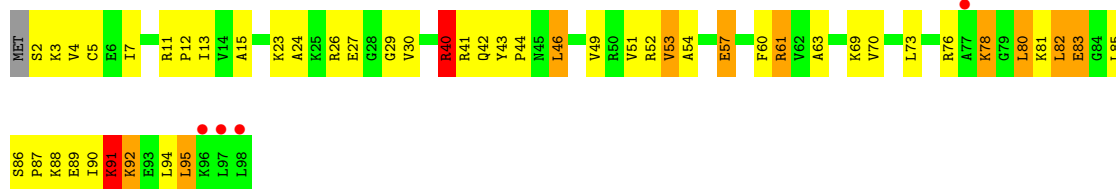
- Molecule 50: 50S ribosomal protein L27



- Molecule 51: 50S ribosomal protein L28

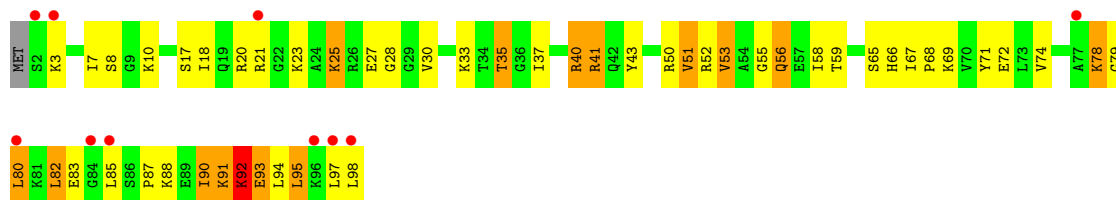


Chain J8: 




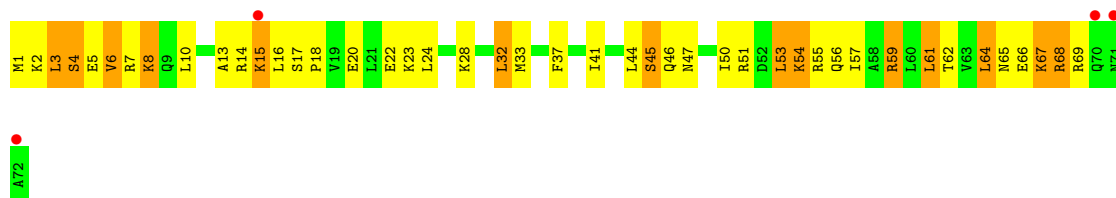
- Molecule 51: 50S ribosomal protein L28

Chain F5: 




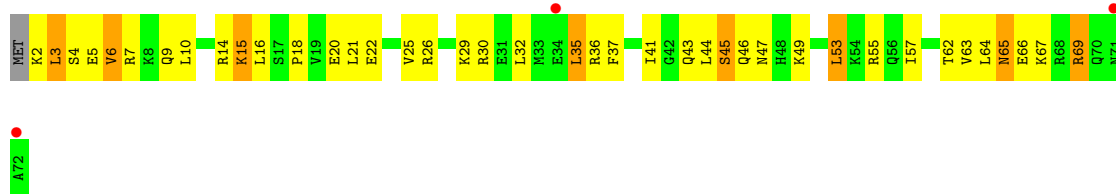
- Molecule 52: 50S ribosomal protein L29

Chain K8: 



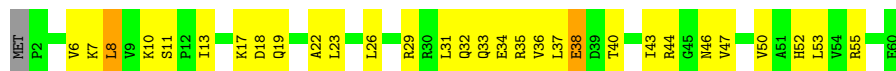
- Molecule 52: 50S ribosomal protein L29

Chain G5: 

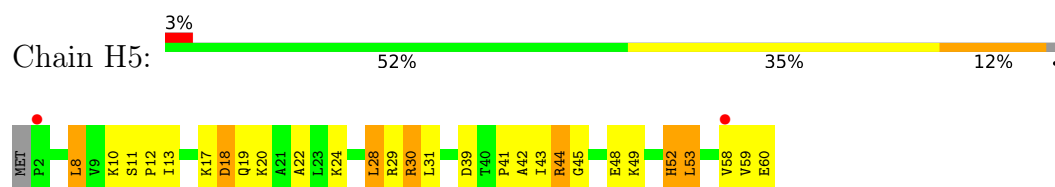


- Molecule 53: 50S ribosomal protein L30

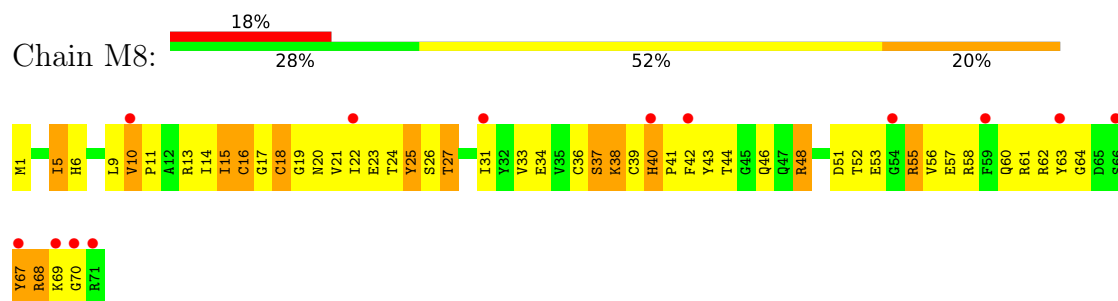
Chain L8: 



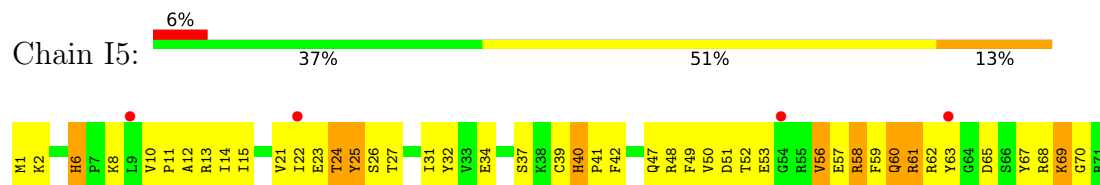
- Molecule 53: 50S ribosomal protein L30



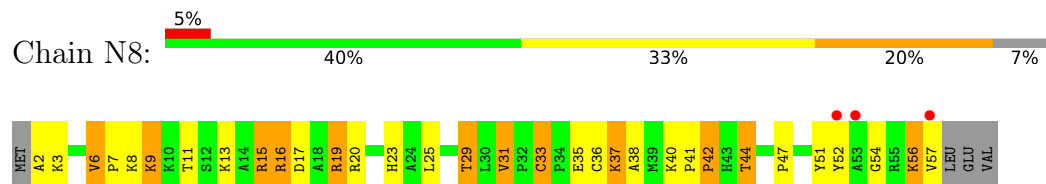
- Molecule 54: 50S ribosomal protein L31



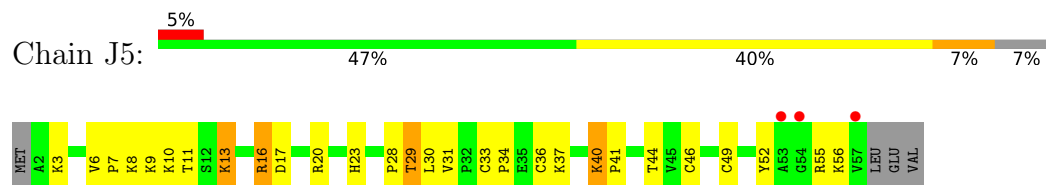
- Molecule 54: 50S ribosomal protein L31



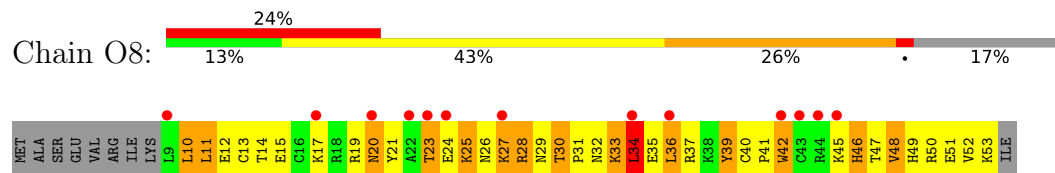
- Molecule 55: 50S ribosomal protein L32



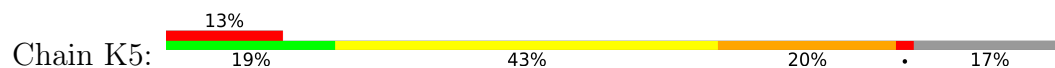
- Molecule 55: 50S ribosomal protein L32

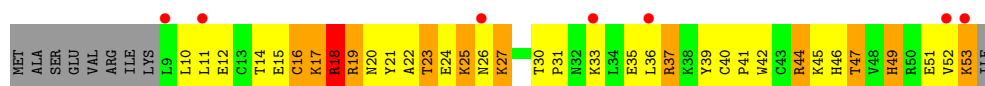


- Molecule 56: 50S ribosomal protein L33



- Molecule 56: 50S ribosomal protein L33





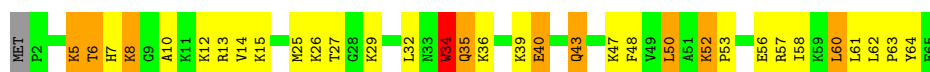
- Molecule 57: 50S ribosomal protein L34



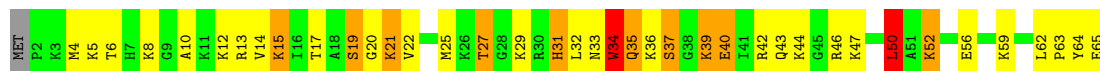
- Molecule 57: 50S ribosomal protein L34



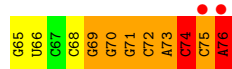
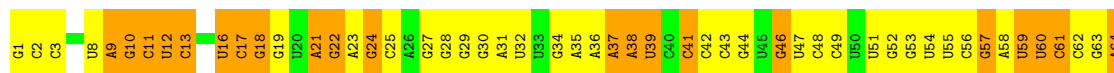
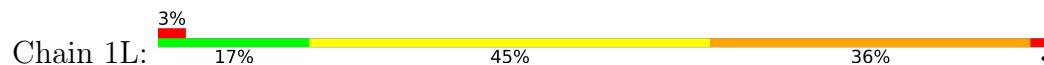
- Molecule 58: 50S ribosomal protein L35



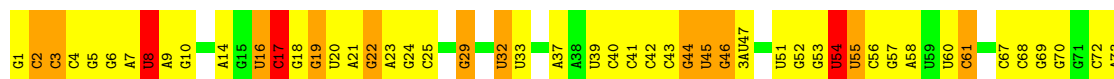
- Molecule 58: 50S ribosomal protein L35



- Molecule 59: E. coli tRNAPhe



- Molecule 60: E. coli tRNAPhe



C74  
C75  
A76

## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.46Å 446.20Å 623.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	223.10 – 3.10 223.10 – 3.10	Depositor EDS
% Data completeness (in resolution range)	99.7 (223.10-3.10) 99.7 (223.10-3.10)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.72 (at 3.01Å)	Xtriage
Refinement program	PHENIX 1.13_2998	Depositor
R, $R_{free}$	0.196 , 0.253 0.196 , 0.253	Depositor DCC
$R_{free}$ test set	31126 reflections (2.99%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	61.5	Xtriage
Anisotropy	0.212	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 65.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.43$ , $\langle L^2 \rangle = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	305753	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	75.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.45% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 3AU, 0TD, OMU, MA6, MG, 5MC, M2G, K, 7MG, 2MG, ZN, 4OC, 5MU, H2U, OMG, UR3, 4SU, MIA, OMC, SF4, 2MA, PSU

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	13	0.79	8/36175 (0.0%)	1.40	445/56452 (0.8%)
1	1G	0.69	1/36106 (0.0%)	1.30	264/56346 (0.5%)
2	12	0.36	0/1959	0.61	1/2642 (0.0%)
2	1E	0.38	0/1959	0.59	1/2642 (0.0%)
3	22	0.37	0/1636	0.60	0/2205
3	2E	0.44	0/1629	0.61	0/2195
4	32	0.48	0/1732	0.62	1/2318 (0.0%)
4	3E	0.49	0/1732	0.64	0/2318
5	42	0.46	0/1171	0.64	0/1576
5	4E	0.54	1/1171 (0.1%)	0.64	0/1576
6	52	0.47	0/855	0.65	0/1154
6	5E	0.49	0/855	0.62	0/1154
7	62	0.43	0/1275	0.54	0/1709
7	6E	0.47	0/1275	0.57	0/1709
8	72	0.39	0/1135	0.62	0/1527
8	7E	0.49	0/1135	0.67	0/1527
9	82	0.36	0/1022	0.56	0/1371
9	8E	0.44	0/1022	0.58	0/1371
10	1A	0.41	0/814	0.63	0/1095
10	1I	0.43	0/814	0.64	0/1095
11	2A	0.42	0/888	0.58	0/1198
11	2I	0.48	0/879	0.62	0/1187
12	3A	0.50	0/982	0.71	1/1313 (0.1%)
12	3I	0.61	0/982	0.80	1/1313 (0.1%)
13	4A	0.38	0/974	0.59	0/1303
13	4I	0.44	0/956	0.65	0/1281
14	5A	0.43	0/500	0.65	0/664
14	5I	0.51	0/500	0.66	0/664
15	6A	0.44	0/744	0.56	0/992
15	6I	0.49	0/744	0.65	0/992
16	7A	0.50	0/721	0.63	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
16	7I	0.43	0/716	0.66	0/963
17	8A	0.46	0/847	0.62	0/1131
17	8I	0.49	0/847	0.65	0/1131
18	9A	0.47	0/578	0.72	0/768
18	9I	0.48	0/589	0.73	0/782
19	AA	0.38	0/698	0.60	0/938
19	AI	0.44	0/689	0.71	0/926
20	BA	0.43	0/778	0.62	1/1028 (0.1%)
20	BI	0.38	0/768	0.61	1/1014 (0.1%)
21	1B	0.36	0/221	0.52	0/288
21	1F	0.37	0/212	0.57	0/277
22	1K	0.60	1/1647 (0.1%)	1.23	10/2565 (0.4%)
23	2K	0.90	0/1580	1.61	29/2459 (1.2%)
24	3K	0.53	1/1739 (0.1%)	1.20	10/2708 (0.4%)
24	3L	0.52	0/1739	1.17	12/2708 (0.4%)
25	4K	0.63	0/689	1.18	4/1069 (0.4%)
25	4L	0.59	0/689	1.25	9/1069 (0.8%)
26	5K	0.47	0/1629	1.05	1/2538 (0.0%)
27	14	0.87	47/69120 (0.1%)	1.52	1139/107900 (1.1%)
27	1H	1.18	189/69453 (0.3%)	1.87	2698/108417 (2.5%)
28	16	0.90	1/2928 (0.0%)	1.60	59/4568 (1.3%)
28	1J	0.65	0/2906	1.29	15/4533 (0.3%)
29	7I	0.27	0/1072	0.51	0/1447
29	79	0.30	0/1072	0.51	0/1447
30	11	0.75	2/2165 (0.1%)	0.95	4/2919 (0.1%)
30	19	0.64	1/2165 (0.0%)	0.81	3/2919 (0.1%)
31	21	0.65	0/1592	0.77	2/2149 (0.1%)
31	29	0.46	0/1592	0.66	0/2149
32	31	0.75	1/1620 (0.1%)	0.84	0/2194
32	39	0.53	0/1620	0.72	1/2194 (0.0%)
33	41	0.51	0/1498	0.71	1/2016 (0.0%)
33	49	0.38	0/1498	0.61	1/2016 (0.0%)
34	51	0.49	0/1362	0.69	0/1841
34	59	0.32	0/1353	0.56	0/1830
35	61	0.47	0/1146	0.80	5/1551 (0.3%)
35	69	0.45	0/1151	0.64	0/1558
36	38	0.36	0/636	0.75	2/847 (0.2%)
37	15	0.41	0/1131	0.63	0/1525
37	58	0.65	0/1131	0.84	1/1525 (0.1%)
38	25	0.54	0/942	0.72	2/1269 (0.2%)
38	68	0.66	0/942	0.78	0/1269
39	35	0.54	0/1161	0.92	5/1544 (0.3%)
39	78	0.65	0/1161	0.99	2/1544 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
40	45	0.49	0/1142	0.66	0/1527
40	88	0.69	0/1171	0.85	3/1565 (0.2%)
41	55	0.47	0/981	0.69	0/1312
41	98	0.56	0/981	0.88	2/1312 (0.2%)
42	65	0.47	0/891	0.71	0/1187
42	A8	0.57	0/899	0.89	2/1197 (0.2%)
43	75	0.47	0/1155	0.63	0/1542
43	B8	0.63	0/1155	0.77	1/1542 (0.1%)
44	85	0.48	0/981	0.65	0/1306
44	C8	0.67	0/981	0.85	1/1306 (0.1%)
45	95	0.50	0/789	0.76	1/1057 (0.1%)
45	D8	0.61	0/789	0.84	3/1057 (0.3%)
46	A5	0.55	0/910	0.66	0/1220
46	E8	0.68	0/910	0.84	2/1220 (0.2%)
47	B5	0.60	0/756	0.71	1/1014 (0.1%)
47	F8	0.76	1/761 (0.1%)	0.88	3/1021 (0.3%)
48	C5	0.49	0/788	0.77	0/1059
48	G8	0.58	0/838	0.77	1/1121 (0.1%)
49	D5	0.35	0/1435	0.59	0/1947
49	H8	0.48	0/1460	0.68	1/1982 (0.1%)
50	E5	0.49	0/666	0.69	0/888
50	I8	0.75	1/670 (0.1%)	0.88	0/892
51	F5	0.55	0/769	0.76	0/1022
51	J8	0.69	0/769	0.89	1/1022 (0.1%)
52	G5	0.53	0/592	0.66	0/784
52	K8	0.65	0/600	0.73	0/794
53	H5	0.40	0/473	0.61	0/635
53	L8	0.58	0/473	0.79	0/635
54	I5	0.39	0/593	0.64	0/795
54	M8	0.46	0/593	0.66	0/795
55	J5	0.52	0/448	0.76	0/606
55	N8	0.56	0/448	0.81	1/606 (0.2%)
56	K5	0.45	0/396	0.76	0/529
56	O8	0.64	0/396	0.80	1/529 (0.2%)
57	L5	0.59	0/437	0.75	0/575
57	P8	0.76	0/427	0.99	2/564 (0.4%)
58	M5	0.52	0/514	0.79	1/679 (0.1%)
58	Q8	0.66	0/514	0.86	1/679 (0.1%)
59	1L	0.43	0/1717	1.06	3/2674 (0.1%)
60	2L	0.67	0/1602	1.28	8/2493 (0.3%)
All	All	0.83	255/326284 (0.1%)	1.39	4770/488082 (1.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if



the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	12	0	2
3	22	0	1
3	2E	0	1
5	4E	0	1
9	82	0	1
12	3A	0	2
12	3I	0	3
13	4A	0	1
13	4I	0	1
14	5I	0	1
19	AA	0	2
19	AI	0	1
20	BI	0	1
30	11	0	1
30	19	0	2
32	31	0	3
32	39	0	2
33	41	0	2
34	51	0	2
34	59	0	1
35	61	0	4
36	38	0	3
37	58	0	2
39	35	0	4
39	78	0	10
40	45	0	2
40	88	0	2
41	55	0	1
41	98	0	1
42	A8	0	2
43	75	0	3
43	B8	0	1
44	85	0	1
44	C8	0	2
45	95	0	3
45	D8	0	3
46	E8	0	1
48	C5	0	5
48	G8	0	4
49	D5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
49	H8	0	3
50	E5	0	1
50	I8	0	1
51	F5	0	2
51	J8	0	1
52	G5	0	1
52	K8	0	1
54	M8	0	1
56	K5	0	3
56	O8	0	1
58	M5	0	3
58	Q8	0	1
All	All	0	105

All (255) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	831	A	N9-C4	-14.30	1.29	1.37
27	1H	1818	A	N9-C4	-12.52	1.30	1.37
27	1H	822	A	N9-C4	-12.46	1.30	1.37
27	1H	1189	A	N9-C4	-11.38	1.31	1.37
27	1H	70	A	N9-C4	-11.34	1.31	1.37
27	1H	2300	A	N9-C4	-11.18	1.31	1.37
27	1H	991	A	N7-C5	-10.91	1.32	1.39
27	1H	73	A	N9-C4	-10.44	1.31	1.37
27	1H	1922	G	N9-C4	-9.37	1.30	1.38
27	1H	2359	A	N3-C4	-9.31	1.29	1.34
27	1H	991	A	C5-C6	-9.21	1.32	1.41
27	1H	831	A	N3-C4	-9.19	1.29	1.34
27	1H	2443	A	N9-C4	-9.10	1.32	1.37
27	1H	1818	A	N3-C4	-9.01	1.29	1.34
27	1H	355	A	N9-C4	-8.72	1.32	1.37
27	14	1786	A	N9-C4	-8.47	1.32	1.37
27	1H	831	A	N7-C5	-8.28	1.34	1.39
27	1H	1019	A	N3-C4	-8.15	1.29	1.34
27	1H	1973	G	N9-C8	8.02	1.43	1.37
27	1H	822	A	N3-C4	-7.88	1.30	1.34
27	1H	831	A	C5-C6	-7.88	1.33	1.41
27	1H	964	A	C2-N3	-7.81	1.26	1.33
27	1H	2359	A	N9-C4	-7.72	1.33	1.37
27	14	1899	G	N9-C4	-7.69	1.31	1.38
27	1H	554	A	N9-C4	-7.49	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	886	C	N1-C6	-7.49	1.32	1.37
27	14	783	A	N9-C4	-7.48	1.33	1.37
27	1H	2443	A	C5-C6	-7.45	1.34	1.41
27	1H	1068	A	N9-C4	-7.40	1.33	1.37
27	1H	1726	G	N9-C4	-7.30	1.32	1.38
27	1H	1068	A	N3-C4	-7.26	1.30	1.34
27	1H	2405	A	C5-C6	-7.25	1.34	1.41
27	1H	991	A	N3-C4	-7.21	1.30	1.34
27	1H	2606	U	C2-N3	-7.21	1.32	1.37
1	13	792	A	N9-C4	-7.19	1.33	1.37
27	1H	1818	A	C5-C4	7.19	1.43	1.38
27	14	774	A	N9-C4	-7.13	1.33	1.37
27	1H	2090	G	N3-C4	-7.06	1.30	1.35
27	1H	1746	A	N9-C4	-7.04	1.33	1.37
27	1H	826	G	N1-C2	-7.03	1.32	1.37
27	1H	826	G	C6-N1	-6.97	1.34	1.39
27	14	1786	A	C5-C6	-6.95	1.34	1.41
27	1H	2613	A	N9-C4	-6.91	1.33	1.37
27	1H	1859	C	N3-C4	-6.91	1.29	1.33
27	14	2500	U	C2-N3	-6.83	1.32	1.37
27	1H	1816	A	N9-C4	-6.82	1.33	1.37
27	14	1342	A	N3-C4	-6.81	1.30	1.34
27	1H	991	A	N9-C4	-6.74	1.33	1.37
27	1H	964	A	N9-C4	-6.73	1.33	1.37
27	1H	140	A	N9-C4	-6.72	1.33	1.37
27	14	1890	A	N9-C4	-6.70	1.33	1.37
27	14	835	A	N3-C4	-6.69	1.30	1.34
27	1H	1953	G	C5-C6	-6.67	1.35	1.42
27	1H	1922	G	C2-N3	-6.65	1.27	1.32
27	1H	591	A	N9-C4	-6.62	1.33	1.37
27	1H	1294	A	N3-C4	-6.54	1.30	1.34
27	1H	1813	C	N3-C4	6.51	1.38	1.33
27	14	2589	A	N9-C4	-6.48	1.33	1.37
27	14	586	A	N3-C4	-6.48	1.30	1.34
27	1H	2465	C	N1-C6	-6.48	1.33	1.37
27	1H	2229	G	N7-C5	-6.47	1.35	1.39
27	1H	733	A	N9-C4	-6.41	1.34	1.37
27	1H	2727	A	N9-C4	-6.41	1.34	1.37
27	1H	2300	A	N3-C4	-6.40	1.31	1.34
32	31	59	TYR	CD1-CE1	-6.38	1.29	1.39
27	1H	2578	A	N9-C4	-6.37	1.34	1.37
27	1H	2591	G	N1-C2	-6.36	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	822	A	N9-C8	6.33	1.42	1.37
27	1H	1019	A	N9-C4	-6.33	1.34	1.37
27	14	2346	A	N9-C4	-6.33	1.34	1.37
27	1H	499	A	N7-C5	-6.32	1.35	1.39
27	1H	1922	G	N9-C8	6.30	1.42	1.37
27	1H	2084	G	C6-N1	-6.30	1.35	1.39
27	1H	1355	A	N3-C4	-6.25	1.31	1.34
27	1H	782	A	N3-C4	-6.25	1.31	1.34
27	14	2287	A	N9-C4	-6.25	1.34	1.37
27	1H	122	G	C5-C6	-6.24	1.36	1.42
27	1H	1926	G	N7-C5	-6.24	1.35	1.39
47	F8	83	VAL	CB-CG1	-6.17	1.39	1.52
27	1H	2051	U	C4-O4	-6.16	1.18	1.23
27	1H	784	C	N1-C2	-6.16	1.33	1.40
27	1H	246	A	N9-C4	-6.14	1.34	1.37
27	1H	979	A	N9-C4	-6.14	1.34	1.37
27	1H	591	A	N3-C4	-6.13	1.31	1.34
27	1H	1659	C	N1-C6	-6.13	1.33	1.37
27	14	1379	A	C5-C6	-6.13	1.35	1.41
27	1H	2443	A	N3-C4	-6.09	1.31	1.34
27	1H	355	A	N3-C4	-6.08	1.31	1.34
27	14	2490	G	C5-C4	6.06	1.42	1.38
27	1H	2085	A	N9-C4	6.06	1.41	1.37
27	1H	2073	C	N1-C6	-6.05	1.33	1.37
27	1H	1685	A	C6-N1	-6.04	1.31	1.35
27	14	664	C	N1-C6	-6.04	1.33	1.37
27	1H	2089	C	N1-C6	-6.02	1.33	1.37
27	1H	996	G	C6-N1	-6.01	1.35	1.39
27	1H	822	A	C2-N3	-6.00	1.28	1.33
27	1H	842	G	C5-C4	-5.99	1.34	1.38
27	1H	2262	U	C2-N3	-5.97	1.33	1.37
27	1H	2405	A	N9-C8	5.95	1.42	1.37
27	14	1332	G	N3-C4	-5.94	1.31	1.35
27	1H	1307	G	N7-C5	-5.90	1.35	1.39
27	1H	883	A	N3-C4	-5.89	1.31	1.34
27	1H	1006	A	N9-C4	-5.89	1.34	1.37
27	14	828	U	N3-C4	-5.89	1.33	1.38
27	1H	841	A	C6-N6	-5.88	1.29	1.33
27	14	1342	A	N9-C4	-5.86	1.34	1.37
27	1H	1379	G	C2-N3	5.85	1.37	1.32
27	1H	580	G	N9-C8	-5.84	1.33	1.37
22	1K	76	A	N9-C4	5.83	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	14	795	C	N3-C4	-5.80	1.29	1.33
27	1H	1256	A	N9-C4	-5.80	1.34	1.37
27	1H	1989	A	N9-C4	-5.80	1.34	1.37
27	14	1899	G	N3-C4	-5.79	1.31	1.35
27	1H	1960	A	C6-N1	-5.78	1.31	1.35
27	1H	1926	G	C8-N7	-5.77	1.27	1.30
27	1H	1682	A	N9-C4	-5.76	1.34	1.37
27	1H	964	A	C5-C6	-5.76	1.35	1.41
27	1H	786	G	N7-C5	-5.74	1.35	1.39
27	1H	724	A	C5-C4	5.73	1.42	1.38
27	1H	1712	A	N3-C4	-5.70	1.31	1.34
27	1H	480	C	N1-C6	-5.70	1.33	1.37
27	1H	2725	U	N3-C4	-5.69	1.33	1.38
27	1H	118	U	N3-C4	-5.68	1.33	1.38
27	1H	841	A	C6-N1	-5.68	1.31	1.35
27	14	472	A	N9-C4	-5.67	1.34	1.37
27	14	1678	G	C2-N3	5.65	1.37	1.32
27	1H	2602	A	N9-C4	-5.65	1.34	1.37
27	1H	836	A	N7-C5	-5.65	1.35	1.39
27	1H	594	G	C6-N1	-5.64	1.35	1.39
27	14	1241	A	N9-C4	-5.64	1.34	1.37
27	1H	1953	G	C5-C4	-5.64	1.34	1.38
27	1H	2284	G	C5-C4	-5.64	1.34	1.38
27	1H	2602	A	C5-C6	-5.63	1.35	1.41
27	14	668	G	N9-C4	-5.63	1.33	1.38
1	13	1499	A	N7-C5	-5.61	1.35	1.39
27	1H	1312	A	N3-C4	-5.61	1.31	1.34
27	1H	1663	A	N9-C4	-5.61	1.34	1.37
27	14	2490	G	C5-C6	5.60	1.48	1.42
27	1H	1661	A	N9-C4	-5.59	1.34	1.37
27	14	1786	A	N3-C4	-5.58	1.31	1.34
27	1H	137	G	N9-C8	5.58	1.41	1.37
30	11	28	GLU	CG-CD	5.57	1.60	1.51
27	1H	2039	U	N3-C4	-5.56	1.33	1.38
1	13	889	A	N9-C4	-5.55	1.34	1.37
27	1H	781	G	N7-C5	-5.55	1.35	1.39
27	1H	2583	G	N3-C4	-5.54	1.31	1.35
27	1H	2023	G	C8-N7	5.53	1.34	1.30
27	14	1854	A	N9-C4	-5.52	1.34	1.37
27	1H	2376	C	N1-C6	-5.52	1.33	1.37
27	1H	180	A	C5-C6	-5.50	1.36	1.41
27	14	2431	U	N1-C2	-5.50	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	19	28	GLU	CG-CD	5.47	1.60	1.51
27	1H	2105	A	N3-C4	-5.46	1.31	1.34
27	1H	1201	G	N3-C4	-5.46	1.31	1.35
27	1H	2105	A	N9-C4	-5.46	1.34	1.37
27	1H	893	G	C2-N3	5.45	1.37	1.32
27	14	2490	G	C2-N3	5.44	1.37	1.32
28	16	46	A	N9-C4	-5.43	1.34	1.37
27	1H	208	A	N3-C4	-5.43	1.31	1.34
27	1H	866	G	N3-C4	-5.43	1.31	1.35
27	1H	1620	A	N9-C4	-5.43	1.34	1.37
27	1H	2727	A	N7-C5	-5.42	1.35	1.39
27	1H	1726	G	N3-C4	-5.42	1.31	1.35
27	1H	2098	U	C2-O2	-5.41	1.17	1.22
27	14	1308	A	N3-C4	-5.41	1.31	1.34
27	1H	1851	A	N9-C4	-5.41	1.34	1.37
27	1H	1338	C	N3-C4	-5.41	1.30	1.33
27	1H	2727	A	C5-C6	-5.41	1.36	1.41
27	1H	754	A	N9-C4	-5.40	1.34	1.37
27	14	1378	A	N9-C4	-5.39	1.34	1.37
27	1H	2406	A	N7-C5	-5.38	1.36	1.39
27	1H	724	A	N9-C4	-5.38	1.34	1.37
27	1H	869	A	N3-C4	-5.38	1.31	1.34
27	14	751	A	N9-C4	-5.36	1.34	1.37
27	1H	2300	A	C5-C6	-5.36	1.36	1.41
27	1H	834	C	C4-N4	-5.36	1.29	1.33
27	1H	991	A	N1-C2	5.36	1.39	1.34
27	1H	1742	C	N3-C4	-5.35	1.30	1.33
27	1H	499	A	N9-C4	-5.35	1.34	1.37
27	1H	2240	A	C5-C6	-5.35	1.36	1.41
27	1H	485	G	C5-C4	-5.35	1.34	1.38
27	1H	1712	A	N9-C4	-5.33	1.34	1.37
1	13	799	G	C6-N1	-5.32	1.35	1.39
27	1H	2265	G	C5-C4	-5.32	1.34	1.38
27	1H	867	A	N9-C4	-5.31	1.34	1.37
27	1H	841	A	C5-C6	-5.30	1.36	1.41
27	1H	2081	A	N3-C4	-5.30	1.31	1.34
27	1H	1355	A	N9-C4	-5.29	1.34	1.37
27	14	1786	A	N7-C5	-5.29	1.36	1.39
27	14	2448	A	C6-N1	5.28	1.39	1.35
27	1H	1748	A	N9-C4	-5.27	1.34	1.37
27	1H	1995	A	C5-C4	-5.27	1.35	1.38
27	1H	562	A	N3-C4	-5.26	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	2359	A	C6-N1	-5.25	1.31	1.35
30	11	122	ASP	CB-CG	5.24	1.62	1.51
27	1H	1027	A	C5-C6	-5.23	1.36	1.41
27	1H	1350	G	N7-C5	-5.23	1.36	1.39
27	1H	477	G	C5-C4	-5.23	1.34	1.38
27	14	775	G	C6-N1	-5.22	1.35	1.39
27	1H	723	A	C5-C4	-5.21	1.35	1.38
27	1H	458	G	N9-C4	-5.20	1.33	1.38
27	1H	711	G	C6-N1	-5.20	1.35	1.39
27	14	676	A	N9-C4	-5.20	1.34	1.37
27	1H	1819	A	N9-C4	-5.19	1.34	1.37
27	1H	2459	G	N9-C8	-5.19	1.34	1.37
27	14	734	A	N9-C4	-5.19	1.34	1.37
27	14	945	A	N3-C4	-5.18	1.31	1.34
50	I8	68	GLU	CG-CD	5.18	1.59	1.51
27	1H	1859	C	N1-C6	-5.17	1.34	1.37
27	1H	2089	C	N3-C4	-5.17	1.30	1.33
27	1H	1189	A	C5-C6	-5.16	1.36	1.41
27	1H	724	A	N9-C8	5.15	1.41	1.37
27	1H	1726	G	N9-C8	5.15	1.41	1.37
27	1H	1360	U	N1-C2	-5.15	1.33	1.38
27	1H	2575	U	C2-N3	-5.14	1.34	1.37
1	1G	908	A	N9-C4	-5.14	1.34	1.37
27	14	209	C	N1-C6	-5.14	1.34	1.37
27	1H	2451	U	O3'-P	-5.14	1.54	1.61
27	1H	238	G	C5-C4	-5.13	1.34	1.38
27	1H	534	G	N9-C8	5.13	1.41	1.37
5	4E	83	GLU	CB-CG	5.13	1.61	1.52
27	1H	2602	A	N3-C4	-5.13	1.31	1.34
27	14	420	C	N3-C4	-5.12	1.30	1.33
1	13	810	C	N1-C6	-5.12	1.34	1.37
1	13	1473	A	N9-C4	-5.12	1.34	1.37
27	1H	2598	U	N1-C2	5.12	1.43	1.38
27	1H	70	A	N3-C4	-5.12	1.31	1.34
27	14	733	G	C8-N7	-5.12	1.27	1.30
27	1H	1821	A	N9-C4	-5.11	1.34	1.37
27	1H	107	G	C5-C6	5.11	1.47	1.42
27	1H	2265	G	C6-N1	-5.11	1.35	1.39
27	14	332	A	N9-C4	-5.10	1.34	1.37
27	14	2575	C	N3-C4	-5.10	1.30	1.33
27	1H	1989	A	C6-N1	-5.10	1.31	1.35
27	1H	2508	G	N3-C4	-5.10	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	596	A	C6-N1	-5.10	1.31	1.35
27	1H	832	A	N3-C4	-5.09	1.31	1.34
27	1H	1986	U	N1-C2	5.09	1.43	1.38
27	1H	2090	G	C5-C4	-5.08	1.34	1.38
27	1H	1922	G	N3-C4	-5.08	1.31	1.35
27	1H	1804	G	N9-C8	-5.07	1.34	1.37
27	1H	2461	A	N3-C4	-5.07	1.31	1.34
27	1H	1824	G	C6-N1	-5.06	1.36	1.39
27	1H	606	G	C6-N1	-5.06	1.36	1.39
27	14	1332	G	N9-C4	-5.05	1.33	1.38
27	1H	1351	C	N1-C6	-5.05	1.34	1.37
27	1H	2600	A	N7-C5	-5.05	1.36	1.39
1	13	865	A	N9-C4	-5.04	1.34	1.37
1	13	757	U	C2-N3	-5.04	1.34	1.37
24	3K	76	A	C5-C6	-5.04	1.36	1.41
27	1H	1746	A	N3-C4	-5.03	1.31	1.34
27	1H	1673	G	C2-N3	-5.03	1.28	1.32
27	14	2392	A	C5-C4	5.02	1.42	1.38
27	1H	2503	G	N9-C8	5.00	1.41	1.37
27	14	1612	C	N1-C6	-5.00	1.34	1.37

All (4770) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2150	G	O5'-P-OP2	-30.77	73.78	110.70
27	1H	2150	G	OP1-P-OP2	-27.63	78.15	119.60
27	1H	991	A	N1-C6-N6	23.99	133.00	118.60
27	1H	991	A	C6-C5-N7	-22.83	116.32	132.30
27	1H	1922	G	N3-C4-N9	-22.27	112.64	126.00
27	1H	1818	A	N7-C8-N9	21.09	124.34	113.80
27	1H	1818	A	C5-N7-C8	-20.70	93.55	103.90
27	1H	1922	G	N3-C4-C5	19.47	138.34	128.60
27	1H	908	U	C5-C6-N1	-18.59	113.40	122.70
27	14	1899	G	N3-C4-N9	-18.39	114.96	126.00
27	1H	822	A	N3-C4-N9	-17.87	113.10	127.40
27	1H	2443	A	C2-N3-C4	-17.73	101.73	110.60
27	1H	724	A	C2-N3-C4	-17.20	102.00	110.60
27	1H	991	A	C5-N7-C8	-16.98	95.41	103.90
27	1H	1818	A	C2-N3-C4	-16.61	102.29	110.60
27	1H	70	A	C2-N3-C4	-16.31	102.45	110.60
27	1H	1818	A	C8-N9-C4	-16.19	99.33	105.80
27	1H	991	A	C4-C5-C6	16.08	125.04	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	991	A	C4-C5-N7	15.87	118.64	110.70
27	1H	2149	A	OP2-P-O3'	15.86	140.09	105.20
27	1H	822	A	N3-C4-C5	15.58	137.71	126.80
27	1H	2443	A	N1-C6-N6	15.28	127.77	118.60
27	14	1786	A	C2-N3-C4	-15.21	103.00	110.60
27	1H	822	A	C2-N3-C4	-14.90	103.15	110.60
27	1H	1813	C	C6-N1-C2	14.90	126.26	120.30
27	1H	908	U	C4-C5-C6	14.90	128.64	119.70
27	1H	1922	G	N3-C2-N2	-14.68	109.62	119.90
27	14	1786	A	C5-N7-C8	-14.68	96.56	103.90
27	1H	554	A	C2-N3-C4	-14.51	103.35	110.60
27	1H	2503	G	C5-N7-C8	-14.36	97.12	104.30
27	1H	1973	G	C5-N7-C8	-14.28	97.16	104.30
27	1H	538	G	O4'-C1'-N9	14.23	119.58	108.20
27	1H	1973	G	C4-C5-N7	14.18	116.47	110.80
27	1H	355	A	C2-N3-C4	-14.05	103.57	110.60
27	14	1899	G	N3-C4-C5	14.02	135.61	128.60
27	1H	118	U	C5-C6-N1	-13.97	115.72	122.70
27	1H	1746	A	C2-N3-C4	-13.94	103.63	110.60
27	1H	1818	A	C5-C6-N1	-13.93	110.74	117.70
27	1H	647	A	C2-N3-C4	-13.91	103.65	110.60
27	1H	991	A	N7-C8-N9	13.86	120.73	113.80
1	13	766	A	O5'-P-OP2	-13.68	93.39	105.70
27	1H	2727	A	N1-C6-N6	13.65	126.79	118.60
27	1H	2359	A	C2-N3-C4	-13.64	103.78	110.60
27	1H	1726	G	C4-C5-N7	13.59	116.24	110.80
27	1H	1189	A	C2-N3-C4	-13.56	103.82	110.60
27	1H	2405	A	C5-N7-C8	-13.53	97.13	103.90
27	1H	2150	G	O5'-P-OP1	13.52	126.93	110.70
27	1H	1726	G	C2-N3-C4	-13.51	105.14	111.90
27	14	1786	A	N1-C6-N6	13.50	126.70	118.60
27	1H	822	A	C5-C6-N1	-13.47	110.96	117.70
27	1H	2300	A	C2-N3-C4	-13.46	103.87	110.60
27	1H	1663	A	C5-N7-C8	-13.40	97.20	103.90
27	1H	1726	G	C5-N7-C8	-13.37	97.62	104.30
27	1H	964	A	C2-N3-C4	-13.35	103.92	110.60
27	1H	817	G	C8-N9-C4	13.21	111.69	106.40
27	1H	1658	C	C6-N1-C2	13.17	125.57	120.30
27	1H	73	A	C2-N3-C4	-13.14	104.03	110.60
27	1H	831	A	N1-C6-N6	13.11	126.47	118.60
27	1H	2405	A	N1-C6-N6	12.98	126.39	118.60
27	1H	1795	G	O5'-P-OP2	-12.95	94.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	831	A	C2-N3-C4	-12.81	104.19	110.60
27	1H	2503	G	C4-C5-N7	12.81	115.92	110.80
27	1H	831	A	C5-N7-C8	-12.74	97.53	103.90
27	14	1332	G	C2-N3-C4	-12.56	105.62	111.90
27	1H	826	G	N1-C6-O6	-12.53	112.38	119.90
27	14	1899	G	N3-C2-N2	-12.47	111.17	119.90
27	14	1786	A	C6-C5-N7	-12.46	123.57	132.30
27	1H	1922	G	C2-N3-C4	-12.46	105.67	111.90
27	1H	1808	G	O5'-P-OP2	-12.44	94.50	105.70
27	1H	991	A	C2-N3-C4	-12.36	104.42	110.60
27	14	1786	A	N7-C8-N9	12.32	119.96	113.80
27	1H	2405	A	C2-N3-C4	-12.29	104.46	110.60
27	1H	2405	A	C4-C5-N7	12.26	116.83	110.70
27	1H	2344	G	C8-N9-C4	12.11	111.24	106.40
27	1H	2149	A	OP1-P-O3'	-12.07	78.64	105.20
27	1H	785	C	C6-N1-C2	12.05	125.12	120.30
27	1H	122	G	N1-C6-O6	12.02	127.11	119.90
27	14	1899	G	C8-N9-C1'	11.88	142.44	127.00
27	1H	1663	A	N7-C8-N9	11.85	119.73	113.80
27	1H	1068	A	C2-N3-C4	-11.78	104.71	110.60
27	1H	2443	A	C5-C6-N1	-11.77	111.81	117.70
27	1H	1027	A	N1-C6-N6	11.76	125.66	118.60
27	1H	1973	G	N7-C8-N9	11.71	118.96	113.10
27	1H	2262	U	O5'-P-OP1	-11.65	95.22	105.70
27	1H	1475	C	O5'-P-OP2	11.60	124.61	110.70
1	13	573	A	O5'-P-OP2	-11.58	95.28	105.70
27	1H	842	G	C8-N9-C4	11.51	111.00	106.40
27	1H	1986	U	N1-C2-O2	11.50	130.85	122.80
27	1H	2320	G	C4-N9-C1'	11.49	141.44	126.50
27	14	1899	G	C2-N3-C4	-11.48	106.16	111.90
27	14	566	U	C5-C6-N1	-11.46	116.97	122.70
27	1H	2503	G	N7-C8-N9	11.42	118.81	113.10
27	14	739	G	O5'-P-OP1	-11.41	95.43	105.70
27	1H	255	A	O4'-C1'-N9	11.38	117.31	108.20
1	13	1054	C	C2-N1-C1'	11.38	131.32	118.80
27	1H	1993	A	O5'-P-OP1	-11.38	95.46	105.70
27	1H	2320	G	O4'-C1'-N9	11.35	117.28	108.20
27	1H	1726	G	C6-C5-N7	-11.28	123.63	130.40
27	1H	1013	C	C6-N1-C2	11.26	124.81	120.30
27	1H	2792	A	O5'-P-OP2	-11.20	95.62	105.70
27	1H	1182	G	C8-N9-C4	11.19	110.87	106.40
27	1H	437	C	C6-N1-C2	11.18	124.77	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1027	A	O5'-P-OP2	-11.16	95.66	105.70
27	1H	1822	C	C5-C6-N1	-11.16	115.42	121.00
27	1H	991	A	C5-C6-N6	-11.12	114.80	123.70
27	1H	2833	G	N1-C6-O6	11.12	126.58	119.90
27	14	1379	A	N1-C6-N6	11.11	125.27	118.60
27	1H	118	U	C4-C5-C6	11.03	126.32	119.70
27	1H	726	C	C6-N1-C2	11.02	124.71	120.30
27	1H	1618	A	C8-N9-C4	11.01	110.20	105.80
27	1H	554	A	N1-C2-N3	11.00	134.80	129.30
27	1H	991	A	C5-C6-N1	-10.99	112.20	117.70
27	1H	1543	A	N7-C8-N9	10.97	119.29	113.80
23	2K	12	U	O5'-P-OP2	-10.97	95.83	105.70
27	14	1786	A	C4-C5-N7	10.97	116.18	110.70
27	1H	2020	G	O5'-P-OP2	-10.90	95.89	105.70
27	1H	831	A	C4-C5-N7	10.89	116.15	110.70
27	1H	726	C	N3-C4-C5	10.84	126.23	121.90
27	1H	837	A	O5'-P-OP1	-10.84	95.95	105.70
27	14	1899	G	C4-N9-C1'	-10.83	112.42	126.50
1	1G	770	C	O5'-P-OP2	-10.82	95.96	105.70
27	1H	1543	A	C8-N9-C4	-10.80	101.48	105.80
27	1H	2531	A	C2-N3-C4	-10.78	105.21	110.60
27	1H	1823	A	O5'-P-OP1	-10.76	96.02	105.70
27	1H	2702	U	C5-C4-O4	10.75	132.35	125.90
27	1H	2359	A	C5-C6-N1	-10.73	112.33	117.70
27	1H	111	G	N1-C6-O6	10.71	126.33	119.90
27	14	188	G	C8-N9-C4	10.71	110.68	106.40
27	1H	1651	C	O5'-P-OP1	-10.69	96.08	105.70
27	1H	2229	G	C6-C5-N7	-10.69	123.99	130.40
27	1H	1379	G	N7-C8-N9	10.67	118.43	113.10
24	3L	17	C	C2-N1-C1'	10.61	130.47	118.80
27	1H	1256	A	C5-N7-C8	-10.59	98.60	103.90
27	1H	2229	G	N1-C6-O6	10.55	126.23	119.90
27	1H	831	A	C6-C5-N7	-10.53	124.93	132.30
27	14	774	A	C2-N3-C4	-10.53	105.34	110.60
27	14	678	C	C6-N1-C2	10.51	124.50	120.30
27	1H	1396	A	N1-C6-N6	10.47	124.88	118.60
27	1H	594	G	N1-C6-O6	-10.44	113.64	119.90
27	1H	986	G	C5-C6-O6	-10.44	122.34	128.60
27	1H	554	A	N1-C6-N6	10.43	124.86	118.60
27	1H	1475	C	C5-C6-N1	-10.43	115.79	121.00
27	1H	1818	A	N3-C4-N9	-10.41	119.07	127.40
25	4L	56	U	C2-N1-C1'	10.39	130.17	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2063	C	O5'-P-OP2	-10.39	96.34	105.70
27	14	1301	A	O5'-P-OP1	-10.39	96.35	105.70
27	14	2307	G	O4'-C1'-N9	10.36	116.49	108.20
27	1H	976	U	C5-C4-O4	10.34	132.10	125.90
27	14	188	G	N9-C4-C5	-10.32	101.27	105.40
27	14	2490	G	N1-C6-O6	-10.30	113.72	119.90
27	1H	2701	U	C5-C4-O4	10.30	132.08	125.90
27	1H	1250	A	N1-C2-N3	10.28	134.44	129.30
27	1H	1986	U	N3-C2-O2	-10.26	115.02	122.20
27	1H	2098	U	N3-C2-O2	-10.25	115.03	122.20
27	1H	437	C	O5'-P-OP1	-10.24	96.48	105.70
27	1H	2084	G	C5-C6-O6	10.24	134.75	128.60
27	1H	2525	C	C6-N1-C2	10.22	124.39	120.30
27	1H	2833	G	C5-C6-O6	-10.20	122.48	128.60
27	1H	2320	G	C6-C5-N7	-10.20	124.28	130.40
27	1H	603	G	O5'-P-OP1	-10.17	96.55	105.70
27	1H	1189	A	C5-N7-C8	-10.15	98.83	103.90
27	1H	1973	G	N3-C2-N2	10.13	126.99	119.90
27	1H	556	G	C8-N9-C4	-10.12	102.35	106.40
28	16	30	C	N1-C2-O2	-10.11	112.83	118.90
27	1H	70	A	N3-C4-C5	10.10	133.87	126.80
27	1H	976	U	N3-C4-O4	-10.09	112.34	119.40
27	1H	2320	G	N7-C8-N9	10.08	118.14	113.10
27	1H	2727	A	C5-N7-C8	-10.08	98.86	103.90
27	1H	822	A	C8-N9-C4	-10.08	101.77	105.80
27	1H	1663	A	C4-C5-N7	10.07	115.73	110.70
27	1H	1246	C	O5'-P-OP2	-10.06	96.65	105.70
27	14	1899	G	N9-C4-C5	10.06	109.42	105.40
27	1H	556	G	N3-C4-N9	-10.05	119.97	126.00
27	1H	1189	A	N3-C4-C5	10.05	133.83	126.80
27	14	1204	A	C2-N3-C4	-10.03	105.58	110.60
27	1H	593	U	N1-C2-O2	-10.03	115.78	122.80
27	14	2490	G	C8-N9-C4	-10.03	102.39	106.40
27	14	577	G	N1-C6-O6	10.01	125.90	119.90
1	13	577	G	C8-N9-C4	9.99	110.40	106.40
27	1H	842	G	N7-C8-N9	-9.99	108.10	113.10
27	1H	1922	G	N1-C2-N2	9.98	125.18	116.20
27	14	797	C	C6-N1-C2	9.98	124.29	120.30
27	1H	1726	G	N3-C4-C5	9.97	133.59	128.60
27	1H	192	U	C6-N1-C2	9.96	126.98	121.00
27	1H	724	A	N3-C4-C5	9.96	133.77	126.80
27	1H	986	G	C4-C5-N7	9.95	114.78	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1818	A	N3-C4-C5	9.95	133.76	126.80
27	1H	1256	A	N7-C8-N9	9.93	118.76	113.80
27	1H	1189	A	N1-C6-N6	9.91	124.55	118.60
27	1H	1321	A	N1-C6-N6	9.90	124.54	118.60
27	14	828	U	C5-C4-O4	9.89	131.83	125.90
23	2K	1	G	C4-N9-C1'	9.87	139.33	126.50
27	1H	72	A	C8-N9-C4	9.86	109.75	105.80
28	16	81	G	C2-N3-C4	-9.85	106.98	111.90
27	14	783	A	N1-C6-N6	9.83	124.50	118.60
27	14	676	A	C2-N3-C4	-9.83	105.69	110.60
27	1H	534	G	C4-C5-N7	9.82	114.73	110.80
1	1G	1417	G	C5-C6-O6	-9.80	122.72	128.60
27	1H	1818	A	C4-C5-N7	9.79	115.60	110.70
27	1H	964	A	N3-C4-C5	9.79	133.65	126.80
27	1H	2036	A	C8-N9-C4	9.77	109.71	105.80
27	1H	1701	G	N3-C4-C5	-9.77	123.72	128.60
27	1H	1853	A	C8-N9-C4	-9.74	101.91	105.80
27	1H	2727	A	C6-C5-N7	-9.74	125.48	132.30
1	13	792	A	C5-N7-C8	-9.72	99.04	103.90
1	13	1054	C	C6-N1-C1'	-9.72	109.14	120.80
27	1H	246	A	C8-N9-C4	9.71	109.69	105.80
27	1H	2415	C	C6-N1-C2	-9.71	116.42	120.30
27	14	753	C	O5'-P-OP2	-9.71	96.96	105.70
27	1H	2443	A	N3-C4-C5	9.69	133.58	126.80
27	1H	2625	C	O5'-P-OP1	-9.69	96.98	105.70
27	1H	2623	C	N1-C2-O2	9.68	124.71	118.90
27	1H	2727	A	C4-C5-N7	9.68	115.54	110.70
27	1H	1922	G	C8-N9-C1'	9.68	139.58	127.00
27	1H	841	A	C2-N3-C4	-9.67	105.76	110.60
27	1H	20	C	C5-C6-N1	-9.67	116.17	121.00
27	1H	1379	G	C6-C5-N7	-9.67	124.60	130.40
24	3K	76	A	C5-N7-C8	-9.66	99.07	103.90
27	1H	1989	A	N1-C6-N6	-9.66	112.80	118.60
27	14	1342	A	C2-N3-C4	-9.65	105.78	110.60
27	1H	2552	C	C6-N1-C2	9.64	124.16	120.30
27	1H	2623	C	N3-C2-O2	-9.63	115.16	121.90
27	1H	724	A	O4'-C1'-N9	9.62	115.90	108.20
23	2K	76	A	C8-N9-C4	9.62	109.65	105.80
27	1H	2561	G	O5'-P-OP2	-9.62	97.05	105.70
27	14	1303	G	O5'-P-OP2	-9.61	97.05	105.70
27	1H	500	G	C8-N9-C4	9.61	110.24	106.40
27	1H	355	A	N1-C2-N3	9.60	134.10	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	964	A	C5-C6-N1	-9.59	112.91	117.70
1	13	108	G	C4-C5-N7	9.59	114.63	110.80
27	1H	591	A	C2-N3-C4	-9.59	105.81	110.60
27	14	783	A	C5-N7-C8	-9.58	99.11	103.90
27	1H	1250	A	C2-N3-C4	-9.58	105.81	110.60
27	1H	1027	A	C5-C6-N6	-9.57	116.04	123.70
27	1H	822	A	C5-N7-C8	-9.56	99.12	103.90
1	13	892	A	C8-N9-C4	9.54	109.62	105.80
27	1H	1068	A	C8-N9-C4	-9.54	101.98	105.80
27	1H	2405	A	N7-C8-N9	9.54	118.57	113.80
27	1H	817	G	N7-C8-N9	-9.50	108.35	113.10
27	1H	2726	A	N7-C8-N9	9.48	118.54	113.80
27	14	664	C	C6-N1-C2	9.47	124.09	120.30
27	1H	122	G	C8-N9-C4	9.47	110.19	106.40
27	14	2430	A	O5'-P-OP2	-9.47	97.18	105.70
27	1H	2509	C	C5-C6-N1	-9.46	116.27	121.00
27	14	801	G	O5'-P-OP2	-9.45	97.19	105.70
27	1H	720	C	N1-C2-O2	-9.45	113.23	118.90
27	1H	227	C	C6-N1-C2	9.44	124.08	120.30
27	14	1379	A	C2-N3-C4	-9.44	105.88	110.60
27	1H	1663	A	O4'-C1'-N9	9.43	115.75	108.20
27	1H	2419	U	OP1-P-OP2	-9.41	105.48	119.60
27	1H	895	U	C5-C6-N1	-9.40	118.00	122.70
27	1H	2415	C	C5-C6-N1	9.40	125.70	121.00
27	1H	2661	C	C6-N1-C2	9.39	124.06	120.30
27	1H	48	A	O5'-P-OP2	-9.39	97.25	105.70
27	1H	189	A	N1-C6-N6	-9.39	112.97	118.60
27	1H	725	A	O5'-P-OP2	-9.38	97.26	105.70
28	16	81	G	C4-C5-N7	9.38	114.55	110.80
27	14	2430	A	N1-C2-N3	9.37	133.98	129.30
42	A8	110	LEU	CA-CB-CG	9.36	136.83	115.30
27	1H	1475	C	C2-N3-C4	-9.36	115.22	119.90
27	1H	907	G	C8-N9-C4	9.35	110.14	106.40
27	1H	556	G	N7-C8-N9	9.34	117.77	113.10
27	1H	2701	U	C4-C5-C6	9.34	125.31	119.70
27	1H	647	A	N1-C2-N3	9.33	133.97	129.30
27	1H	820	C	C5-C6-N1	-9.33	116.33	121.00
27	14	2713	A	N1-C6-N6	9.32	124.19	118.60
27	14	1698	A	C2-N3-C4	-9.32	105.94	110.60
23	2K	1	G	N3-C4-N9	9.32	131.59	126.00
27	14	786	C	C6-N1-C2	9.28	124.01	120.30
27	1H	1822	C	C2-N3-C4	-9.28	115.26	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	2K	1	G	N3-C4-C5	-9.27	123.97	128.60
27	1H	1000	G	C8-N9-C4	-9.27	102.69	106.40
27	1H	2701	U	N3-C2-O2	-9.26	115.72	122.20
27	1H	2702	U	N3-C4-O4	-9.25	112.93	119.40
27	1H	2320	G	C8-N9-C4	-9.22	102.71	106.40
27	1H	726	C	C2-N3-C4	-9.22	115.29	119.90
27	14	612	G	C8-N9-C4	-9.22	102.71	106.40
27	1H	180	A	C8-N9-C4	9.21	109.48	105.80
27	1H	2694	C	N3-C2-O2	-9.20	115.46	121.90
23	2K	45	U	O4'-C1'-N1	9.20	115.56	108.20
27	1H	211	A	N1-C2-N3	9.20	133.90	129.30
27	1H	964	A	C5-N7-C8	-9.20	99.30	103.90
27	1H	724	A	C5-N7-C8	-9.20	99.30	103.90
27	1H	831	A	N3-C4-C5	9.19	133.23	126.80
27	1H	1366	G	O5'-P-OP1	-9.18	97.44	105.70
27	1H	2610	G	C4-C5-N7	9.18	114.47	110.80
27	1H	862	C	O5'-P-OP2	-9.18	97.44	105.70
27	14	1950	G	N7-C8-N9	9.17	117.69	113.10
1	13	690	G	C8-N9-C4	-9.16	102.73	106.40
27	1H	2443	A	C6-C5-N7	-9.16	125.89	132.30
27	14	768	G	O5'-P-OP2	-9.16	97.46	105.70
27	1H	2701	U	C5-C6-N1	-9.16	118.12	122.70
28	16	81	G	C5-N7-C8	-9.15	99.72	104.30
27	1H	2296	C	N3-C2-O2	9.14	128.30	121.90
27	1H	1726	G	N1-C6-O6	9.13	125.38	119.90
27	14	447	A	C8-N9-C4	9.13	109.45	105.80
27	1H	556	G	C5-N7-C8	-9.13	99.74	104.30
27	1H	2488	C	C2-N1-C1'	9.13	128.84	118.80
27	1H	1839	G	C8-N9-C4	9.12	110.05	106.40
27	1H	2793	U	C5-C6-N1	-9.12	118.14	122.70
27	1H	862	C	C5-C6-N1	-9.09	116.46	121.00
27	1H	831	A	C5-C6-N1	-9.08	113.16	117.70
27	14	1332	G	N1-C6-O6	9.08	125.35	119.90
27	14	1975	G	C8-N9-C4	9.08	110.03	106.40
27	1H	1019	A	N1-C2-N3	9.07	133.84	129.30
27	1H	1250	A	O4'-C1'-N9	9.07	115.46	108.20
27	1H	111	G	C5-C6-O6	-9.07	123.16	128.60
24	3K	76	A	N1-C6-N6	9.07	124.04	118.60
27	1H	212	A	O5'-P-OP1	-9.07	97.54	105.70
27	1H	2331	G	N7-C8-N9	9.03	117.61	113.10
27	1H	1922	G	N9-C4-C5	9.03	109.01	105.40
1	13	890	G	O4'-C1'-N9	9.02	115.42	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2527	U	O5'-P-OP2	9.02	121.52	110.70
27	14	1379	A	C4-C5-N7	9.01	115.20	110.70
27	14	2500	U	C5-C6-N1	-9.01	118.20	122.70
27	1H	2509	C	C2-N3-C4	-9.01	115.40	119.90
27	14	528	A	C2-N3-C4	-9.01	106.10	110.60
27	1H	822	A	C6-N1-C2	9.00	124.00	118.60
27	1H	1078	G	C6-C5-N7	-9.00	125.00	130.40
27	1H	1379	G	C4-N9-C1'	9.00	138.21	126.50
27	1H	820	C	C6-N1-C2	8.99	123.90	120.30
27	1H	1543	A	C5-N7-C8	-8.97	99.41	103.90
27	14	774	A	N3-C4-C5	8.97	133.08	126.80
27	14	1291	C	C6-N1-C2	8.97	123.89	120.30
1	13	372	C	C2-N1-C1'	8.95	128.65	118.80
27	14	1332	G	C5-N7-C8	-8.95	99.83	104.30
27	1H	2702	U	C2-N1-C1'	-8.94	106.97	117.70
27	14	828	U	N1-C2-O2	8.94	129.06	122.80
27	1H	148	C	N1-C2-O2	-8.93	113.54	118.90
27	1H	1403	G	O5'-P-OP1	-8.91	97.68	105.70
27	1H	249	G	C8-N9-C4	8.90	109.96	106.40
27	1H	1379	G	C8-N9-C4	-8.89	102.84	106.40
27	14	2851	A	O5'-P-OP1	-8.89	97.70	105.70
27	1H	2331	G	C8-N9-C4	-8.88	102.85	106.40
27	14	1678	G	N7-C8-N9	8.87	117.54	113.10
27	1H	991	A	C8-N9-C4	-8.87	102.25	105.80
27	1H	2488	C	N1-C2-O2	8.86	124.22	118.90
27	1H	180	A	N9-C4-C5	-8.86	102.26	105.80
27	14	672	C	O5'-P-OP2	-8.86	97.73	105.70
27	14	2005	A	O5'-P-OP2	-8.86	97.73	105.70
27	1H	400	G	C8-N9-C4	8.85	109.94	106.40
1	13	1394	A	C8-N9-C4	8.85	109.34	105.80
27	14	783	A	C4-C5-N7	8.84	115.12	110.70
24	3K	76	A	N7-C8-N9	8.84	118.22	113.80
27	1H	845	C	C6-N1-C2	8.84	123.84	120.30
27	1H	1954	U	N3-C2-O2	-8.84	116.01	122.20
1	1G	908	A	C8-N9-C4	8.84	109.34	105.80
27	14	676	A	C5-N7-C8	-8.83	99.48	103.90
27	14	1342	A	N1-C2-N3	8.83	133.71	129.30
27	1H	2620	G	N9-C4-C5	-8.81	101.88	105.40
27	14	1950	G	C8-N9-C4	-8.81	102.88	106.40
24	3K	76	A	C6-C5-N7	-8.80	126.14	132.30
27	1H	2296	C	N1-C2-O2	-8.79	113.62	118.90
27	14	1934	C	N1-C2-O2	8.79	124.17	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	127	C	C6-N1-C2	8.79	123.81	120.30
27	1H	2519	U	N1-C2-O2	8.78	128.94	122.80
27	1H	239	C	N3-C2-O2	-8.77	115.76	121.90
27	1H	192	U	N1-C2-N3	-8.77	109.64	114.90
27	1H	2531	A	N7-C8-N9	8.77	118.18	113.80
27	1H	1809	U	C5-C6-N1	-8.76	118.32	122.70
27	1H	2839	C	C6-N1-C2	8.75	123.80	120.30
27	1H	1801	G	O5'-P-OP2	-8.74	97.83	105.70
27	14	2059	A	C8-N9-C4	-8.73	102.31	105.80
27	14	2592	G	O5'-P-OP2	-8.73	97.84	105.70
27	14	1785	A	O5'-P-OP1	-8.71	97.86	105.70
27	14	74	A	C2-N3-C4	-8.70	106.25	110.60
27	1H	784	C	N3-C2-O2	8.70	127.99	121.90
27	14	2346	A	C2-N3-C4	-8.70	106.25	110.60
27	1H	1486	A	O5'-P-OP1	-8.70	97.87	105.70
27	1H	1309	A	N1-C6-N6	-8.69	113.39	118.60
1	1G	1200	C	N1-C2-O2	8.69	124.11	118.90
27	1H	236	C	O5'-P-OP2	-8.69	97.88	105.70
27	1H	2576	U	C5-C6-N1	-8.69	118.36	122.70
27	1H	1726	G	N7-C8-N9	8.68	117.44	113.10
27	14	1585	C	N1-C2-O2	8.68	124.11	118.90
27	14	1786	A	N1-C2-N3	8.68	133.64	129.30
27	1H	2443	A	C4-C5-N7	8.68	115.04	110.70
27	14	1291	C	O5'-P-OP2	-8.67	97.90	105.70
27	1H	616	G	O5'-P-OP2	-8.66	97.91	105.70
27	1H	536	C	O5'-P-OP2	-8.65	97.92	105.70
27	1H	1833	G	C5-C6-O6	-8.64	123.42	128.60
27	14	1984	G	O5'-P-OP2	-8.64	97.92	105.70
27	1H	727	C	N1-C2-O2	8.64	124.08	118.90
27	14	2448	A	C6-N1-C2	-8.63	113.42	118.60
27	1H	1256	A	C8-N9-C4	-8.62	102.35	105.80
27	1H	1213	C	N3-C4-C5	8.60	125.34	121.90
27	14	1678	G	C8-N9-C4	-8.60	102.96	106.40
27	14	1786	A	C5-C6-N1	-8.60	113.40	117.70
27	1H	2262	U	N3-C4-O4	-8.60	113.38	119.40
27	14	2277	G	N1-C6-O6	-8.60	114.74	119.90
1	13	1502	A	C5-N7-C8	-8.60	99.60	103.90
27	1H	2320	G	C8-N9-C1'	-8.59	115.83	127.00
27	1H	236	C	C6-N1-C2	8.58	123.73	120.30
27	1H	249	G	N9-C4-C5	-8.58	101.97	105.40
27	1H	823	G	N3-C4-N9	8.58	131.15	126.00
27	1H	1068	A	C5-N7-C8	-8.57	99.61	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2405	A	C6-C5-N7	-8.56	126.31	132.30
23	2K	1	G	C8-N9-C1'	-8.56	115.87	127.00
27	14	566	U	C6-N1-C2	8.56	126.14	121.00
27	1H	826	G	N3-C2-N2	8.56	125.89	119.90
27	1H	2052	G	N9-C4-C5	-8.56	101.98	105.40
27	1H	2443	A	C5-N7-C8	-8.55	99.62	103.90
27	1H	1663	A	C6-C5-N7	-8.55	126.31	132.30
27	1H	1648	G	C8-N9-C4	8.55	109.82	106.40
27	1H	735	C	C6-N1-C2	-8.55	116.88	120.30
27	1H	1345	C	O5'-P-OP2	8.55	120.96	110.70
27	1H	2756	C	C6-N1-C2	8.54	123.72	120.30
27	1H	561	C	C5-C6-N1	-8.54	116.73	121.00
27	14	1332	G	C6-C5-N7	-8.54	125.28	130.40
27	1H	445	C	C6-N1-C2	8.53	123.71	120.30
1	13	792	A	C4-C5-N7	8.53	114.96	110.70
27	1H	2727	A	C2-N3-C4	-8.53	106.34	110.60
27	1H	2245	U	C5-C6-N1	-8.52	118.44	122.70
28	16	31	C	N1-C2-O2	8.52	124.01	118.90
27	1H	726	C	C5-C6-N1	-8.51	116.74	121.00
27	1H	1663	A	C8-N9-C4	-8.51	102.39	105.80
27	1H	122	G	C5-C6-O6	-8.49	123.50	128.60
27	1H	777	G	N3-C2-N2	-8.49	113.95	119.90
27	1H	1849	G	C5-C6-O6	8.49	133.69	128.60
27	14	1802	A	O5'-P-OP1	-8.49	98.06	105.70
1	13	690	G	N3-C4-N9	-8.48	120.91	126.00
27	1H	444	C	C6-N1-C2	8.48	123.69	120.30
27	14	691	C	C6-N1-C2	8.48	123.69	120.30
27	1H	2725	U	N3-C4-O4	-8.47	113.47	119.40
27	14	664	C	C5-C6-N1	-8.47	116.76	121.00
27	1H	2300	A	N3-C4-C5	8.47	132.73	126.80
27	14	2079	U	O5'-P-OP1	-8.46	98.08	105.70
27	1H	2026	G	C5-C6-N1	8.46	115.73	111.50
27	1H	2285	U	O5'-P-OP2	-8.45	98.09	105.70
27	14	1210	A	C2-N3-C4	-8.45	106.38	110.60
27	14	1567	A	N1-C6-N6	-8.45	113.53	118.60
27	1H	193	C	C6-N1-C2	8.45	123.68	120.30
27	1H	2029	C	C5-C4-N4	-8.44	114.29	120.20
27	1H	733	A	C2-N3-C4	-8.43	106.38	110.60
59	1L	76	A	N1-C6-N6	-8.43	113.54	118.60
27	1H	1818	A	C6-C5-N7	-8.43	126.40	132.30
1	1G	900	A	O5'-P-OP1	-8.43	98.11	105.70
27	14	2429	G	OP1-P-OP2	-8.43	106.96	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1321	A	C5-C6-N6	-8.41	116.97	123.70
27	14	2012	G	N3-C4-N9	8.40	131.04	126.00
27	1H	1746	A	C5-N7-C8	-8.40	99.70	103.90
27	1H	2531	A	C8-N9-C4	-8.40	102.44	105.80
27	1H	1858	G	O5'-P-OP2	8.40	120.78	110.70
27	1H	211	A	N9-C4-C5	8.39	109.16	105.80
27	14	392	C	O5'-P-OP1	-8.39	98.15	105.70
27	1H	2488	C	C6-N1-C2	-8.39	116.94	120.30
27	1H	2833	G	C6-C5-N7	-8.39	125.37	130.40
1	13	1302	U	C2-N1-C1'	8.38	127.76	117.70
27	1H	2498	G	C8-N9-C4	8.38	109.75	106.40
27	1H	576	G	N1-C6-O6	-8.37	114.88	119.90
27	1H	822	A	N9-C4-C5	8.37	109.15	105.80
27	1H	2625	C	N1-C2-O2	8.36	123.92	118.90
27	1H	2005	C	O5'-P-OP2	-8.36	98.17	105.70
27	14	945	A	N1-C6-N6	8.35	123.61	118.60
27	14	51	G	O5'-P-OP2	-8.35	98.18	105.70
27	1H	70	A	C5-N7-C8	-8.35	99.73	103.90
27	1H	734	G	N9-C4-C5	-8.35	102.06	105.40
1	1G	690	G	C2-N3-C4	-8.35	107.73	111.90
27	1H	2481	G	O4'-C1'-N9	8.34	114.87	108.20
27	1H	964	A	C4-C5-N7	8.33	114.86	110.70
27	1H	2395	G	N3-C4-C5	-8.32	124.44	128.60
27	1H	534	G	C5-C6-O6	-8.32	123.61	128.60
27	1H	2393	C	C5-C6-N1	-8.32	116.84	121.00
27	14	2331	G	C8-N9-C4	8.32	109.73	106.40
1	1G	129	U	C5-C4-O4	8.32	130.89	125.90
27	1H	1746	A	N1-C2-N3	8.31	133.46	129.30
27	1H	107	G	C4-C5-N7	-8.30	107.48	110.80
27	1H	1618	A	N7-C8-N9	-8.31	109.65	113.80
27	1H	1658	C	N3-C4-C5	8.30	125.22	121.90
27	1H	1073	U	O5'-P-OP2	-8.30	98.23	105.70
1	1G	1481	U	O5'-P-OP1	-8.28	98.25	105.70
27	14	1914	C	N3-C2-O2	-8.28	116.10	121.90
27	14	1528	A	C8-N9-C4	-8.28	102.49	105.80
27	1H	348	G	O5'-P-OP2	-8.28	98.25	105.70
27	1H	908	U	C2-N3-C4	-8.28	122.03	127.00
27	1H	1993	A	O4'-C1'-N9	-8.27	101.58	108.20
27	14	1905	C	O5'-P-OP2	-8.27	98.26	105.70
27	1H	107	G	C5-C6-O6	8.27	133.56	128.60
27	1H	1344	C	OP1-P-O3'	8.27	123.39	105.20
27	1H	1443	U	N3-C2-O2	-8.27	116.41	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	35	138	LEU	CA-CB-CG	8.27	134.31	115.30
27	14	31	C	O5'-P-OP1	-8.26	98.26	105.70
27	14	2447	G	C8-N9-C4	-8.26	103.09	106.40
27	14	577	G	C5-C6-O6	-8.26	123.64	128.60
27	1H	910	G	N1-C6-O6	-8.26	114.94	119.90
27	1H	2503	G	C8-N9-C4	-8.25	103.10	106.40
27	1H	822	A	C8-N9-C1'	8.25	142.55	127.70
27	14	2014	A	C8-N9-C4	8.25	109.10	105.80
27	1H	2045	U	C5-C6-N1	-8.24	118.58	122.70
27	1H	2439	A	N1-C6-N6	8.24	123.55	118.60
27	14	1528	A	N7-C8-N9	8.24	117.92	113.80
1	13	1302	U	N1-C2-O2	8.23	128.56	122.80
27	1H	876	U	N3-C2-O2	-8.23	116.44	122.20
27	1H	786	G	N9-C4-C5	-8.22	102.11	105.40
27	1H	2726	A	C5-N7-C8	-8.22	99.79	103.90
27	1H	320	G	C5-C6-O6	-8.22	123.67	128.60
28	16	56	G	C4-N9-C1'	8.21	137.18	126.50
27	14	774	A	N3-C4-N9	-8.21	120.83	127.40
27	1H	2096	C	C6-N1-C2	-8.20	117.02	120.30
27	14	1314	C	N1-C2-O2	8.20	123.82	118.90
27	14	1950	G	C4-N9-C1'	8.20	137.16	126.50
27	14	470	A	O5'-P-OP1	-8.19	98.33	105.70
27	14	2490	G	N7-C8-N9	8.19	117.19	113.10
1	13	288	A	N1-C6-N6	8.19	123.51	118.60
28	16	18	G	N1-C6-O6	8.19	124.81	119.90
27	1H	2006	C	C5-C6-N1	-8.18	116.91	121.00
27	1H	2337	C	C6-N1-C2	8.18	123.57	120.30
27	1H	1312	A	N1-C2-N3	8.17	133.39	129.30
27	1H	1701	G	C8-N9-C4	-8.17	103.13	106.40
27	1H	1617	A	N1-C6-N6	-8.17	113.70	118.60
27	14	783	A	O5'-P-OP2	-8.17	98.35	105.70
1	1G	701	C	N1-C2-O2	8.17	123.80	118.90
27	1H	186	A	O5'-P-OP2	-8.16	98.35	105.70
27	1H	2531	A	C6-C5-N7	-8.16	126.59	132.30
27	1H	2628	U	N3-C2-O2	-8.16	116.49	122.20
28	16	66	A	C8-N9-C4	-8.16	102.54	105.80
27	1H	2578	A	C8-N9-C4	8.16	109.06	105.80
27	14	1308	A	O5'-P-OP2	-8.16	98.36	105.70
27	14	2447	G	P-O3'-C3'	8.16	129.49	119.70
27	1H	775	A	O5'-P-OP1	-8.14	98.37	105.70
27	1H	1807	U	C5-C6-N1	-8.14	118.63	122.70
27	1H	2405	A	N3-C4-C5	8.14	132.50	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2251	G	O5'-P-OP2	-8.13	98.38	105.70
27	1H	122	G	N3-C4-C5	8.13	132.66	128.60
27	1H	893	G	N3-C2-N2	8.13	125.59	119.90
31	21	136	ARG	NE-CZ-NH1	-8.12	116.24	120.30
27	1H	561	C	C6-N1-C2	8.12	123.55	120.30
27	1H	1853	A	N7-C8-N9	8.12	117.86	113.80
27	1H	2080	A	C5-C6-N1	8.12	121.76	117.70
27	14	603	A	P-O3'-C3'	8.12	129.45	119.70
27	14	945	A	O4'-C1'-N9	8.12	114.69	108.20
27	1H	70	A	N1-C6-N6	8.12	123.47	118.60
27	1H	1068	A	N7-C8-N9	8.12	117.86	113.80
28	16	81	G	C6-C5-N7	-8.11	125.53	130.40
27	1H	991	A	N1-C2-N3	8.11	133.36	129.30
27	1H	1973	G	C8-N9-C4	-8.11	103.16	106.40
27	1H	140	A	C5-N7-C8	-8.10	99.85	103.90
27	1H	1308	C	C6-N1-C2	8.10	123.54	120.30
27	14	1332	G	N1-C2-N3	8.09	128.75	123.90
27	1H	823	G	N1-C2-N2	-8.08	108.93	116.20
27	14	612	G	N7-C8-N9	8.08	117.14	113.10
27	1H	1664	C	N1-C2-O2	-8.08	114.05	118.90
27	14	1955	U	P-O3'-C3'	8.08	129.40	119.70
27	1H	138	G	N1-C6-O6	-8.07	115.06	119.90
27	14	560	C	N3-C2-O2	8.07	127.55	121.90
27	14	676	A	O4'-C1'-N9	8.07	114.65	108.20
27	14	1496	A	N7-C8-N9	8.07	117.83	113.80
27	14	2296	U	C6-N1-C2	-8.06	116.16	121.00
27	1H	2503	G	C6-C5-N7	-8.06	125.57	130.40
27	14	395	U	O4'-C1'-N1	8.06	114.65	108.20
27	14	2392	A	C2-N3-C4	-8.06	106.57	110.60
27	1H	2488	C	C5-C6-N1	8.05	125.03	121.00
27	1H	73	A	N1-C6-N6	8.05	123.43	118.60
27	1H	811	G	N1-C2-N2	-8.05	108.96	116.20
27	1H	2702	U	C5-C6-N1	-8.04	118.68	122.70
27	1H	1816	A	O4'-C1'-N9	-8.03	101.78	108.20
1	13	1417	G	C6-C5-N7	-8.02	125.59	130.40
27	1H	2527	U	O5'-P-OP1	-8.02	98.48	105.70
1	1G	1126	U	C2-N1-C1'	8.02	127.33	117.70
27	1H	594	G	C5-C6-O6	8.02	133.41	128.60
27	1H	2588	C	N1-C2-O2	8.02	123.71	118.90
27	1H	137	G	C4-C5-N7	8.01	114.00	110.80
27	1H	2098	U	N1-C2-N3	8.01	119.70	114.90
27	1H	203	A	N1-C6-N6	8.00	123.40	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	783	A	C2-N3-C4	-8.00	106.60	110.60
27	1H	2437	C	N3-C4-C5	7.99	125.10	121.90
27	1H	199	C	C5-C6-N1	-7.99	117.01	121.00
28	1J	5	C	C6-N1-C2	7.98	123.49	120.30
28	16	12	C	C6-N1-C2	7.97	123.49	120.30
27	1H	73	A	C5-N7-C8	-7.97	99.91	103.90
27	14	1794	U	C5-C6-N1	-7.97	118.71	122.70
27	1H	2229	G	C4-C5-C6	7.96	123.58	118.80
27	14	621	A	C2-N3-C4	-7.96	106.62	110.60
27	1H	2480	C	C6-N1-C2	7.96	123.48	120.30
27	1H	1396	A	C2-N3-C4	-7.95	106.62	110.60
1	1G	887	G	C8-N9-C4	7.95	109.58	106.40
28	16	31	C	N3-C2-O2	-7.95	116.34	121.90
1	13	792	A	C2-N3-C4	-7.95	106.63	110.60
1	1G	583	A	N1-C6-N6	7.95	123.37	118.60
27	14	1142(A)	A	N1-C2-N3	7.95	133.27	129.30
27	1H	563	C	N1-C2-O2	7.94	123.66	118.90
27	1H	1189	A	C4-C5-N7	7.94	114.67	110.70
27	1H	2359	A	N1-C2-N3	7.93	133.27	129.30
27	14	2490	G	N3-C4-C5	-7.93	124.63	128.60
27	1H	2435	A	C5-C6-N6	-7.93	117.36	123.70
27	14	1614	A	N7-C8-N9	7.93	117.76	113.80
27	1H	2442	G	O5'-P-OP2	-7.92	98.57	105.70
1	1G	1398	A	C8-N9-C4	7.92	108.97	105.80
27	1H	2405	A	C5-C6-N1	-7.92	113.74	117.70
27	1H	2288	C	O5'-P-OP2	-7.91	98.58	105.70
27	1H	1822	C	C6-N1-C2	7.91	123.46	120.30
27	1H	1986	U	C5-C4-O4	7.91	130.65	125.90
27	1H	657	A	C8-N9-C4	7.90	108.96	105.80
27	1H	2531	A	OP1-P-OP2	-7.89	107.76	119.60
27	1H	724	A	C4-C5-N7	7.89	114.65	110.70
27	1H	2605	G	N3-C4-N9	7.89	130.74	126.00
27	1H	2084	G	N3-C2-N2	7.89	125.42	119.90
27	1H	2829	G	C5-C6-O6	-7.89	123.87	128.60
27	1H	1603	G	O5'-P-OP1	-7.88	98.60	105.70
27	1H	2503	G	O4'-C1'-N9	7.88	114.51	108.20
27	1H	2344	G	N9-C4-C5	-7.88	102.25	105.40
27	1H	869	A	N1-C2-N3	7.88	133.24	129.30
27	1H	1313	G	C8-N9-C4	7.88	109.55	106.40
1	13	251	G	N1-C6-O6	7.88	124.62	119.90
27	1H	1973	G	O4'-C1'-N9	7.88	114.50	108.20
1	13	792	A	N3-C4-C5	7.87	132.31	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1709	G	N7-C8-N9	-7.87	109.17	113.10
27	1H	2449	G	N3-C2-N2	-7.87	114.39	119.90
1	13	536	C	O5'-P-OP2	-7.87	98.62	105.70
27	1H	1973	G	C6-C5-N7	-7.86	125.68	130.40
28	16	113	C	C6-N1-C2	7.86	123.45	120.30
27	1H	1922	G	C4-N9-C1'	-7.86	116.28	126.50
27	1H	784	C	N1-C2-O2	-7.86	114.19	118.90
27	1H	2052	G	N1-C6-O6	7.86	124.61	119.90
27	1H	617	G	N1-C2-N2	-7.86	109.13	116.20
27	14	447	A	N1-C6-N6	7.85	123.31	118.60
27	1H	1068	A	N3-C4-N9	-7.84	121.13	127.40
27	1H	1651	C	N3-C4-C5	7.84	125.04	121.90
27	1H	2625	C	C6-N1-C2	7.84	123.44	120.30
27	1H	212	A	O4'-C1'-N9	-7.84	101.93	108.20
1	13	1240	U	N1-C2-O2	7.84	128.28	122.80
1	1G	965	A	C8-N9-C4	7.83	108.93	105.80
27	14	2726	U	O5'-P-OP2	-7.83	98.65	105.70
27	1H	722	G	C5-C6-O6	-7.83	123.90	128.60
27	1H	1937	C	N3-C2-O2	-7.82	116.42	121.90
27	1H	2454	C	C4-C5-C6	7.82	121.31	117.40
27	14	265	A	O4'-C1'-N9	7.81	114.45	108.20
1	13	791	G	N1-C6-O6	-7.81	115.21	119.90
1	13	979	C	N3-C4-C5	-7.81	118.78	121.90
27	14	1187	G	C8-N9-C4	-7.81	103.28	106.40
27	14	1244	G	N1-C6-O6	7.81	124.58	119.90
27	1H	962	C	N1-C2-O2	7.80	123.58	118.90
27	1H	2474	C	N3-C4-C5	-7.80	118.78	121.90
27	14	2490	G	C5-C6-O6	7.80	133.28	128.60
27	14	2335	A	O4'-C1'-N9	7.80	114.44	108.20
27	1H	1954	U	OP1-P-OP2	-7.79	107.91	119.60
27	1H	2372	C	N3-C4-N4	-7.79	112.55	118.00
27	1H	2727	A	C5-C6-N6	-7.79	117.47	123.70
27	14	471	A	C2-N3-C4	-7.79	106.70	110.60
27	14	974(A)	C	N3-C2-O2	-7.79	116.44	121.90
27	14	1241	A	C2-N3-C4	-7.79	106.70	110.60
27	1H	1701	G	C4-N9-C1'	7.79	136.62	126.50
27	14	945	A	C6-C5-N7	-7.78	126.85	132.30
27	14	1934	C	C6-N1-C2	7.78	123.41	120.30
27	14	1284	A	O5'-P-OP2	-7.77	98.70	105.70
27	14	2588	G	O5'-P-OP1	-7.77	98.71	105.70
27	1H	1342	C	N3-C4-C5	7.76	125.01	121.90
27	1H	627	A	N1-C6-N6	-7.76	113.94	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2740	U	N3-C4-O4	-7.76	113.97	119.40
27	14	528	A	N1-C2-N3	7.76	133.18	129.30
27	14	1781	C	O4'-C1'-N1	7.75	114.40	108.20
1	13	35	G	N9-C4-C5	7.75	108.50	105.40
27	1H	320	G	N3-C4-N9	7.75	130.65	126.00
27	1H	2439	A	P-O3'-C3'	7.74	128.99	119.70
27	1H	1386	G	C5-C6-O6	-7.74	123.96	128.60
27	1H	647	A	O4'-C1'-N9	7.74	114.39	108.20
27	1H	1078	G	C4-C5-N7	7.74	113.89	110.80
2	1E	89	GLY	C-N-CA	7.73	141.04	121.70
27	1H	1231	C	C6-N1-C2	7.73	123.39	120.30
27	1H	73	A	C5-C6-N1	-7.73	113.83	117.70
24	3K	76	A	C4-C5-N7	7.73	114.56	110.70
27	1H	966	G	O5'-P-OP2	-7.72	98.75	105.70
27	1H	1304	C	N3-C4-C5	-7.72	118.81	121.90
27	1H	1236	G	C6-C5-N7	-7.72	125.77	130.40
27	1H	2043	A	C8-N9-C4	7.72	108.89	105.80
27	1H	19	C	C6-N1-C2	7.72	123.39	120.30
27	1H	1379	G	C5-N7-C8	-7.72	100.44	104.30
30	11	155	LEU	CA-CB-CG	7.72	133.05	115.30
27	1H	2312	G	C5-C6-O6	-7.71	123.97	128.60
27	14	568	U	O5'-P-OP1	-7.71	98.76	105.70
27	14	1653	G	N3-C4-C5	-7.71	124.75	128.60
27	1H	1372	G	C5-C6-O6	-7.71	123.98	128.60
1	13	108	G	C5-N7-C8	-7.71	100.45	104.30
1	13	372	C	C6-N1-C1'	-7.71	111.55	120.80
27	1H	601	G	C8-N9-C4	-7.70	103.32	106.40
27	14	769	G	C8-N9-C4	7.70	109.48	106.40
1	13	690	G	N7-C8-N9	7.70	116.95	113.10
27	1H	1828	U	C6-N1-C2	7.70	125.62	121.00
27	1H	2779	A	N1-C6-N6	-7.70	113.98	118.60
27	14	530	G	C4-C5-N7	7.70	113.88	110.80
1	13	791	G	C5-C6-N1	7.69	115.35	111.50
27	1H	2381	C	C6-N1-C2	-7.69	117.22	120.30
27	1H	2591	G	N9-C4-C5	-7.69	102.32	105.40
27	1H	894	C	P-O3'-C3'	7.69	128.93	119.70
27	1H	989	U	N1-C2-O2	-7.69	117.42	122.80
27	1H	1262	G	C6-C5-N7	-7.69	125.79	130.40
27	1H	2439	A	OP2-P-O3'	7.68	122.11	105.20
27	1H	2585	A	C8-N9-C4	7.68	108.87	105.80
27	1H	55	A	N1-C6-N6	7.68	123.21	118.60
27	1H	734	G	C8-N9-C4	7.68	109.47	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2829	G	C8-N9-C4	7.68	109.47	106.40
27	14	1379	A	N9-C4-C5	-7.68	102.73	105.80
27	1H	741	C	N3-C4-C5	-7.68	118.83	121.90
27	1H	2100	A	N1-C6-N6	-7.68	113.99	118.60
27	1H	2531	A	C5-N7-C8	-7.68	100.06	103.90
1	13	578	C	N1-C2-O2	-7.67	114.30	118.90
27	14	1496	A	C8-N9-C4	-7.67	102.73	105.80
27	1H	2331	G	C5-N7-C8	-7.67	100.47	104.30
27	1H	1796	G	C5-C6-O6	7.67	133.20	128.60
60	2L	75	C	C2-N1-C1'	-7.66	110.37	118.80
27	14	2060	A	N1-C6-N6	-7.66	114.00	118.60
27	1H	734	G	N3-C4-N9	7.66	130.59	126.00
27	1H	919	U	N1-C2-O2	-7.65	117.44	122.80
27	1H	2515	G	O5'-P-OP2	-7.65	98.82	105.70
27	14	447	A	N9-C4-C5	-7.65	102.74	105.80
27	1H	832	A	O4'-C1'-N9	7.64	114.31	108.20
27	1H	928	G	N3-C4-N9	-7.64	121.42	126.00
27	1H	1256	A	C2-N3-C4	-7.63	106.78	110.60
27	14	786	C	C5-C6-N1	-7.63	117.18	121.00
22	1K	74	C	N1-C2-O2	7.63	123.48	118.90
27	14	2867	G	C4-N9-C1'	-7.62	116.60	126.50
27	1H	605	C	C5-C6-N1	-7.62	117.19	121.00
27	1H	1647	C	N3-C4-N4	-7.62	112.67	118.00
1	13	812	C	P-O3'-C3'	7.61	128.83	119.70
27	1H	1818	A	N9-C1'-C2'	7.61	123.89	114.00
27	1H	1833	G	N1-C6-O6	7.61	124.46	119.90
27	1H	400	G	C4-N9-C1'	-7.60	116.62	126.50
27	1H	2272	G	C5-C6-O6	-7.60	124.04	128.60
27	1H	1182	G	N7-C8-N9	-7.59	109.30	113.10
27	14	2490	G	C4-N9-C1'	7.59	136.37	126.50
27	1H	400	G	O4'-C1'-N9	7.58	114.27	108.20
27	1H	1871	G	C5-C6-O6	-7.58	124.05	128.60
27	1H	2604	C	N1-C2-O2	-7.58	114.35	118.90
27	14	512	G	O5'-P-OP1	-7.58	98.88	105.70
27	1H	1288	A	C5-N7-C8	-7.58	100.11	103.90
27	1H	2830	G	N1-C6-O6	7.58	124.45	119.90
27	1H	1702	A	O5'-P-OP2	-7.58	98.88	105.70
1	1G	1200	C	C2-N1-C1'	7.57	127.13	118.80
27	1H	1692	C	N1-C2-O2	7.57	123.44	118.90
27	14	1379	A	C5-N7-C8	-7.56	100.12	103.90
27	1H	1237	G	N1-C6-O6	-7.56	115.36	119.90
27	14	1416	G	N3-C4-C5	7.56	132.38	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1361	C	C2-N1-C1'	7.55	127.11	118.80
27	1H	657	A	N7-C8-N9	-7.55	110.02	113.80
27	1H	1078	G	N1-C6-O6	7.55	124.43	119.90
27	1H	2052	G	C4-C5-N7	7.55	113.82	110.80
27	1H	107	G	N9-C4-C5	7.54	108.42	105.40
27	1H	849	G	OP2-P-O3'	7.54	121.79	105.20
27	14	2392	A	N7-C8-N9	7.54	117.57	113.80
27	1H	357	A	C2-N3-C4	-7.54	106.83	110.60
27	1H	508	G	O5'-P-OP2	-7.53	98.92	105.70
27	1H	1866	U	C5-C4-O4	-7.53	121.38	125.90
27	1H	2718	A	N1-C6-N6	7.53	123.12	118.60
1	1G	1301	U	C2-N1-C1'	7.53	126.73	117.70
27	1H	829	A	C8-N9-C4	7.52	108.81	105.80
27	1H	1663	A	N1-C6-N6	7.52	123.11	118.60
27	1H	255	A	C8-N9-C4	-7.52	102.79	105.80
27	1H	473	G	C8-N9-C4	7.52	109.41	106.40
27	1H	728	G	C5-C6-N1	7.52	115.26	111.50
27	1H	978	G	C5-C6-O6	7.51	133.11	128.60
27	14	209	C	N3-C4-N4	7.51	123.26	118.00
27	1H	1621	G	N1-C6-O6	7.51	124.41	119.90
27	14	1012	U	N1-C2-O2	7.51	128.06	122.80
27	1H	193	C	C2-N3-C4	-7.51	116.15	119.90
27	1H	919	U	N3-C2-O2	7.51	127.45	122.20
25	4L	56	U	C6-N1-C1'	-7.51	110.69	121.20
27	14	791	C	C6-N1-C2	7.50	123.30	120.30
27	14	2065	C	N1-C2-O2	7.50	123.40	118.90
27	14	2430	A	C2-N3-C4	-7.50	106.85	110.60
27	1H	826	G	N1-C2-N2	-7.50	109.45	116.20
27	1H	876	U	C5-C4-O4	7.50	130.40	125.90
27	1H	1996	G	C8-N9-C4	7.50	109.40	106.40
27	1H	73	A	N3-C4-C5	7.50	132.05	126.80
27	1H	52	A	N1-C2-N3	7.49	133.05	129.30
27	1H	1647	C	N3-C4-C5	7.49	124.90	121.90
27	1H	204	G	O4'-C1'-N9	7.49	114.19	108.20
27	1H	2284	G	C2-N3-C4	7.49	115.65	111.90
27	1H	2039	U	C5-C4-O4	7.49	130.39	125.90
27	14	682	G	C8-N9-C4	7.49	109.39	106.40
27	1H	910	G	C5-C6-O6	7.49	133.09	128.60
27	1H	1027	A	C4-C5-N7	7.49	114.44	110.70
27	1H	2269	G	O5'-P-OP2	-7.48	98.97	105.70
27	1H	773	G	C8-N9-C4	7.48	109.39	106.40
27	1H	2641	C	C5-C6-N1	-7.47	117.26	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	945	A	N1-C2-N3	7.47	133.04	129.30
27	14	803	U	C5-C6-N1	-7.47	118.97	122.70
1	13	1502	A	C4-C5-N7	7.47	114.44	110.70
27	14	982	C	C6-N1-C2	-7.47	117.31	120.30
27	1H	1288	A	C6-N1-C2	7.47	123.08	118.60
27	14	1396	U	O5'-P-OP1	-7.47	98.98	105.70
27	1H	1443	U	N1-C2-O2	7.46	128.02	122.80
27	1H	716	G	N3-C4-C5	7.46	132.33	128.60
27	1H	1027	A	C6-C5-N7	-7.46	127.08	132.30
27	1H	1233	G	N1-C6-O6	7.46	124.38	119.90
27	1H	2480	C	C5-C6-N1	-7.46	117.27	121.00
27	1H	2113	G	O5'-P-OP1	-7.46	98.99	105.70
1	13	35	G	C8-N9-C4	-7.46	103.42	106.40
27	1H	964	A	C6-N1-C2	7.46	123.08	118.60
27	1H	182	C	C6-N1-C2	7.46	123.28	120.30
27	1H	928	G	N3-C2-N2	-7.46	114.68	119.90
27	1H	1068	A	N1-C2-N3	7.46	133.03	129.30
27	1H	1746	A	N7-C8-N9	7.46	117.53	113.80
27	1H	2026	G	N1-C6-O6	-7.46	115.43	119.90
27	1H	2013	C	N1-C2-O2	7.45	123.37	118.90
27	1H	1234	U	N3-C2-O2	-7.45	116.98	122.20
27	1H	1658	C	C5-C6-N1	-7.45	117.28	121.00
24	3L	17	C	C6-N1-C1'	-7.45	111.86	120.80
27	1H	1475	C	C6-N1-C2	7.45	123.28	120.30
27	1H	486	U	C5-C4-O4	7.45	130.37	125.90
27	14	2548	G	N1-C6-O6	7.45	124.37	119.90
1	1G	328	C	P-O3'-C3'	7.44	128.63	119.70
27	14	949	C	C5-C6-N1	-7.44	117.28	121.00
27	1H	2108	C	C5-C6-N1	-7.44	117.28	121.00
27	1H	1871	G	N9-C4-C5	-7.44	102.42	105.40
27	1H	976	U	N3-C2-O2	-7.44	116.99	122.20
27	1H	2701	U	N1-C2-N3	7.44	119.36	114.90
27	1H	2725	U	O4'-C1'-N1	7.44	114.15	108.20
27	1H	227	C	C2-N3-C4	-7.44	116.18	119.90
27	1H	589	C	C2-N3-C4	7.43	123.62	119.90
27	1H	1957	C	C6-N1-C2	7.43	123.27	120.30
27	14	794	G	N1-C6-O6	-7.43	115.44	119.90
27	14	945	A	C2-N3-C4	-7.43	106.89	110.60
24	3L	4	C	C6-N1-C2	-7.43	117.33	120.30
27	14	574	C	C6-N1-C2	7.43	123.27	120.30
27	1H	2616	G	C5-C6-O6	-7.43	124.14	128.60
27	1H	473	G	N1-C6-O6	7.42	124.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	660	C	N3-C2-O2	-7.42	116.70	121.90
27	14	678	C	N3-C4-C5	7.42	124.87	121.90
27	14	800	A	O5'-P-OP1	-7.42	99.02	105.70
27	1H	557	C	N3-C4-C5	-7.42	118.93	121.90
27	1H	831	A	N7-C8-N9	7.42	117.51	113.80
27	14	725	G	N1-C6-O6	7.42	124.35	119.90
27	14	1332	G	N7-C8-N9	7.42	116.81	113.10
27	14	1950	G	O4'-C1'-N9	7.42	114.13	108.20
27	1H	2509	C	C6-N1-C2	7.41	123.27	120.30
27	1H	2591	G	C5-C6-N1	7.41	115.20	111.50
27	1H	712	C	C6-N1-C2	7.41	123.26	120.30
27	1H	1304	C	C6-N1-C2	-7.41	117.34	120.30
27	14	2326	C	O5'-P-OP1	-7.41	99.03	105.70
27	1H	252	A	C8-N9-C4	7.40	108.76	105.80
27	1H	186	A	OP1-P-OP2	7.39	130.69	119.60
27	1H	1259	A	C2-N3-C4	-7.39	106.90	110.60
27	1H	2284	G	C5-N7-C8	7.39	108.00	104.30
27	1H	122	G	C2-N3-C4	-7.39	108.21	111.90
27	14	205	G	O4'-C1'-N9	7.39	114.11	108.20
1	1G	690	G	O4'-C1'-N9	7.38	114.11	108.20
27	14	945	A	N9-C1'-C2'	7.38	123.60	114.00
27	1H	233	U	C5-C6-N1	7.38	126.39	122.70
27	1H	720	C	C6-N1-C2	-7.38	117.35	120.30
27	1H	2833	G	C4-C5-N7	7.38	113.75	110.80
27	1H	1621	G	C8-N9-C4	7.37	109.35	106.40
27	1H	64	C	N1-C2-O2	7.37	123.32	118.90
27	1H	1709	G	C8-N9-C4	7.37	109.35	106.40
27	1H	1700	A	P-O3'-C3'	7.37	128.54	119.70
27	14	2430	A	C8-N9-C4	-7.37	102.85	105.80
27	1H	536	C	N3-C2-O2	-7.36	116.75	121.90
1	13	1240	U	C2-N1-C1'	7.36	126.53	117.70
27	1H	227	C	C5-C6-N1	-7.36	117.32	121.00
27	1H	73	A	O4'-C1'-N9	-7.36	102.31	108.20
27	1H	2578	A	N3-C4-C5	7.35	131.95	126.80
1	13	888	G	N3-C4-C5	7.35	132.27	128.60
27	1H	20	C	C2-N3-C4	-7.35	116.23	119.90
27	1H	118	U	C2-N3-C4	-7.35	122.59	127.00
27	1H	2619	C	C5-C6-N1	-7.35	117.33	121.00
27	1H	1745	G	C8-N9-C4	7.34	109.34	106.40
27	14	1858	G	N3-C4-C5	-7.34	124.93	128.60
27	14	2577	A	O5'-P-OP1	-7.34	99.09	105.70
27	1H	863	C	C6-N1-C2	7.34	123.23	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1978	U	C5-C6-N1	-7.34	119.03	122.70
27	14	731	C	N3-C4-N4	7.33	123.13	118.00
27	1H	1233	G	O5'-P-OP2	-7.33	99.10	105.70
1	13	827	U	N3-C2-O2	-7.33	117.07	122.20
27	14	2591	C	N1-C2-O2	-7.33	114.50	118.90
27	1H	2300	A	N3-C4-N9	-7.33	121.54	127.40
27	14	828	U	N3-C2-O2	-7.33	117.07	122.20
27	14	2548	G	C5-C6-O6	-7.32	124.21	128.60
27	1H	1613	C	C5-C6-N1	-7.31	117.34	121.00
27	1H	2702	U	C6-N1-C1'	7.31	131.44	121.20
27	1H	1308	C	C5-C6-N1	-7.31	117.34	121.00
27	1H	2282	A	C8-N9-C4	7.31	108.72	105.80
27	1H	1851	A	C2-N3-C4	-7.31	106.95	110.60
27	1H	2081	A	C8-N9-C4	7.31	108.72	105.80
27	14	949	C	C6-N1-C2	7.31	123.22	120.30
27	14	2433	A	O5'-P-OP2	7.30	119.46	110.70
27	14	1914	C	C6-N1-C2	-7.30	117.38	120.30
27	14	2287	A	C2-N3-C4	-7.30	106.95	110.60
27	14	189	G	C8-N9-C4	7.30	109.32	106.40
27	1H	2359	A	N3-C4-N9	-7.28	121.57	127.40
27	1H	2015	G	P-O3'-C3'	7.28	128.44	119.70
27	14	1318	C	C2-N1-C1'	7.28	126.81	118.80
27	1H	978	G	C4-C5-N7	-7.28	107.89	110.80
27	1H	1692	C	N3-C2-O2	-7.28	116.81	121.90
27	1H	500	G	N7-C8-N9	-7.28	109.46	113.10
1	13	812	C	C2-N1-C1'	7.27	126.80	118.80
27	1H	211	A	C8-N9-C4	-7.27	102.89	105.80
1	13	1524	C	N1-C2-O2	-7.27	114.54	118.90
27	1H	1298	C	C6-N1-C2	7.27	123.21	120.30
27	1H	1236	G	C2-N3-C4	-7.27	108.27	111.90
27	1H	1300	A	C5-C6-N6	-7.27	117.89	123.70
27	1H	1875	C	C6-N1-C2	7.27	123.21	120.30
27	14	528	A	N7-C8-N9	7.26	117.43	113.80
38	25	91	LEU	CA-CB-CG	7.26	132.01	115.30
27	1H	70	A	C5-C6-N1	-7.26	114.07	117.70
27	1H	2331	G	O4'-C1'-N9	7.26	114.01	108.20
1	1G	481	G	C6-C5-N7	-7.26	126.04	130.40
1	1G	1060	C	C5-C6-N1	7.26	124.63	121.00
1	13	1200	C	P-O3'-C3'	7.25	128.40	119.70
27	1H	2529	G	OP2-P-O3'	7.25	121.16	105.20
1	1G	130	A	N1-C6-N6	7.25	122.95	118.60
27	14	668	G	N3-C4-C5	7.25	132.23	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	107	G	N1-C6-O6	-7.25	115.55	119.90
27	14	106	C	C6-N1-C2	-7.25	117.40	120.30
27	1H	1321	A	C4-C5-N7	7.24	114.32	110.70
27	14	1602	U	N1-C2-O2	-7.24	117.73	122.80
27	1H	1858	G	O5'-P-OP1	-7.23	99.19	105.70
27	1H	1344	C	OP2-P-O3'	-7.23	89.29	105.20
27	1H	1654	C	C5-C4-N4	-7.23	115.14	120.20
27	1H	2300	A	C5-N7-C8	-7.23	100.28	103.90
1	1G	190	G	O4'-C1'-N9	7.23	113.99	108.20
27	1H	2694	C	C6-N1-C2	-7.23	117.41	120.30
27	14	2618	G	N7-C8-N9	-7.23	109.49	113.10
27	1H	127	C	N3-C4-C5	7.22	124.79	121.90
27	1H	2576	U	O5'-P-OP2	-7.22	99.20	105.70
27	1H	2679	C	C6-N1-C2	-7.22	117.41	120.30
27	1H	2324	A	C2-N3-C4	-7.22	106.99	110.60
27	1H	70	A	N3-C4-N9	-7.22	121.63	127.40
27	1H	1009	U	C5-C4-O4	-7.22	121.57	125.90
27	1H	2507	G	C4-C5-N7	-7.22	107.91	110.80
27	14	1602	U	O5'-P-OP1	-7.22	99.21	105.70
27	14	1817	G	C5-C6-O6	7.21	132.93	128.60
1	1G	1496	C	O5'-P-OP2	-7.21	99.21	105.70
27	14	2713	A	C4-C5-N7	7.21	114.31	110.70
27	1H	246	A	N1-C6-N6	7.21	122.93	118.60
27	14	865	C	C6-N1-C2	-7.21	117.42	120.30
22	1K	74	C	C2-N1-C1'	7.21	126.73	118.80
1	13	690	G	O4'-C1'-N9	7.21	113.96	108.20
27	1H	189	A	C6-C5-N7	7.20	137.34	132.30
27	1H	777	G	N1-C2-N2	7.20	122.68	116.20
27	14	528	A	C5-N7-C8	-7.20	100.30	103.90
27	1H	2765	G	N7-C8-N9	7.20	116.70	113.10
27	14	1142	U	C2-N1-C1'	7.20	126.34	117.70
1	13	577	G	N9-C4-C5	-7.20	102.52	105.40
27	1H	2251	G	OP1-P-OP2	7.20	130.40	119.60
1	13	523	A	N1-C6-N6	7.20	122.92	118.60
27	14	837	C	C6-N1-C2	-7.20	117.42	120.30
27	14	1828	G	C5-C6-O6	-7.20	124.28	128.60
28	16	76	G	O5'-P-OP1	-7.19	99.22	105.70
35	61	114	LEU	CA-CB-CG	7.19	131.85	115.30
27	1H	781	G	C4-N9-C1'	7.19	135.85	126.50
28	16	56	G	C8-N9-C1'	-7.19	117.65	127.00
27	14	204	A	O5'-P-OP2	-7.19	99.23	105.70
27	1H	2014	U	O5'-P-OP2	-7.19	99.23	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2250	G	C8-N9-C4	7.18	109.27	106.40
27	1H	724	A	N1-C6-N6	7.18	122.91	118.60
27	1H	1013	C	C5-C6-N1	-7.18	117.41	121.00
27	14	2497	A	N1-C2-N3	7.18	132.89	129.30
27	1H	1729	G	C4-C5-N7	7.18	113.67	110.80
27	14	783	A	C6-C5-N7	-7.18	127.27	132.30
27	14	1956	U	N3-C2-O2	-7.18	117.18	122.20
1	13	862	C	C6-N1-C2	7.17	123.17	120.30
27	1H	991	A	C4-N9-C1'	7.17	139.21	126.30
27	1H	621	U	O5'-P-OP1	-7.17	99.24	105.70
27	14	1931	U	O5'-P-OP1	-7.17	99.25	105.70
27	1H	1257	U	OP1-P-OP2	-7.17	108.84	119.60
1	13	362	G	O5'-P-OP1	-7.17	99.25	105.70
27	14	447	A	C5-C6-N6	-7.17	117.97	123.70
27	1H	1746	A	C6-C5-N7	-7.17	127.28	132.30
27	14	2453	A	C8-N9-C4	7.16	108.67	105.80
27	1H	1607	G	N1-C6-O6	7.16	124.20	119.90
27	1H	800	A	N1-C6-N6	7.16	122.89	118.60
27	1H	845	C	N3-C4-C5	7.16	124.76	121.90
27	14	706	A	C8-N9-C4	7.16	108.66	105.80
27	14	865	C	C5-C6-N1	7.16	124.58	121.00
27	1H	2443	A	N1-C2-N3	7.16	132.88	129.30
27	1H	2053	A	N9-C4-C5	7.16	108.66	105.80
27	14	2377	A	C8-N9-C4	7.16	108.66	105.80
27	1H	346	G	N3-C4-N9	7.15	130.29	126.00
27	1H	2015	G	O4'-C1'-N9	-7.15	102.48	108.20
27	14	1902	C	N1-C2-O2	7.15	123.19	118.90
27	14	530	G	N9-C4-C5	-7.15	102.54	105.40
27	14	828	U	N3-C4-O4	-7.15	114.40	119.40
27	14	1210	A	N1-C6-N6	7.15	122.89	118.60
27	14	1342	A	C5-N7-C8	-7.15	100.33	103.90
27	1H	1973	G	N1-C2-N2	-7.14	109.77	116.20
1	13	880	C	N3-C2-O2	7.14	126.90	121.90
23	2K	6	G	C8-N9-C4	7.14	109.26	106.40
27	14	2618	G	C5-N7-C8	7.14	107.87	104.30
1	13	266	G	N3-C4-C5	7.14	132.17	128.60
27	1H	128	C	C6-N1-C2	7.13	123.15	120.30
27	1H	869	A	N9-C4-C5	7.13	108.65	105.80
27	1H	2509	C	N3-C4-C5	7.13	124.75	121.90
27	14	1675	C	O5'-P-OP2	7.13	119.25	110.70
27	1H	2837	A	N1-C2-N3	7.12	132.86	129.30
27	1H	623	G	C8-N9-C4	7.12	109.25	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2793	U	N1-C2-N3	7.12	119.17	114.90
27	14	568	U	C5-C4-O4	-7.12	121.63	125.90
27	1H	721	C	C5-C4-N4	-7.12	115.22	120.20
27	1H	1621	G	C5-C6-O6	-7.12	124.33	128.60
27	1H	1663	A	C2-N3-C4	-7.12	107.04	110.60
27	1H	1768	A	O4'-C1'-N9	7.12	113.90	108.20
27	1H	2793	U	N3-C2-O2	-7.12	117.22	122.20
1	13	1054	C	N1-C2-O2	7.12	123.17	118.90
1	1G	960	U	C2-N1-C1'	7.12	126.24	117.70
27	1H	2641	C	C2-N3-C4	-7.12	116.34	119.90
60	2L	17	C	C6-N1-C2	-7.12	117.45	120.30
27	1H	907	G	N7-C8-N9	-7.11	109.54	113.10
1	1G	766	A	O5'-P-OP2	-7.11	99.30	105.70
27	1H	1312	A	C5-C6-N1	-7.11	114.15	117.70
27	1H	36	G	O5'-P-OP2	-7.11	99.31	105.70
27	1H	2651	G	N1-C6-O6	-7.11	115.64	119.90
27	1H	991	A	N9-C4-C5	-7.10	102.96	105.80
27	1H	1822	C	N3-C4-N4	-7.10	113.03	118.00
24	3K	76	A	C2-N3-C4	-7.10	107.05	110.60
24	3K	76	A	C8-N9-C4	-7.10	102.96	105.80
27	1H	2453	C	N1-C2-O2	7.10	123.16	118.90
27	1H	1027	A	N9-C4-C5	-7.10	102.96	105.80
27	1H	798	A	OP2-P-O3'	7.10	120.81	105.20
27	1H	2371	G	C8-N9-C4	-7.09	103.56	106.40
27	1H	2244	C	O5'-P-OP2	-7.09	99.32	105.70
27	1H	2610	G	N1-C6-O6	7.08	124.15	119.90
27	14	488	G	C8-N9-C4	7.08	109.23	106.40
27	14	974	G	C8-N9-C1'	7.08	136.21	127.00
1	13	793	U	C5-C6-N1	-7.08	119.16	122.70
27	1H	1694	C	OP1-P-O3'	7.08	120.77	105.20
27	1H	2481	G	C4-C5-N7	7.08	113.63	110.80
27	14	621	A	C5-C6-N1	-7.08	114.16	117.70
27	14	1619	G	O5'-P-OP2	-7.08	99.33	105.70
27	1H	2069	G	O5'-P-OP2	-7.08	99.33	105.70
27	14	678	C	C5-C6-N1	-7.08	117.46	121.00
27	1H	1047	A	C8-N9-C4	7.08	108.63	105.80
27	1H	1822	C	C2-N1-C1'	-7.08	111.02	118.80
28	16	111	U	C5-C6-N1	-7.08	119.16	122.70
1	1G	690	G	N1-C6-O6	7.07	124.14	119.90
27	1H	2229	G	C5-C6-N1	-7.07	107.97	111.50
27	1H	1875	C	C5-C6-N1	-7.07	117.47	121.00
1	1G	1420	C	C6-N1-C2	-7.07	117.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	724	A	N7-C8-N9	7.07	117.33	113.80
27	1H	786	G	C4-C5-N7	7.07	113.63	110.80
27	14	794	G	C4-C5-N7	-7.07	107.97	110.80
27	14	573	G	C8-N9-C4	7.06	109.23	106.40
24	3L	17	C	N1-C2-O2	7.06	123.14	118.90
27	1H	54	G	C2-N3-C4	7.06	115.43	111.90
1	13	814	A	C2-N3-C4	-7.06	107.07	110.60
27	1H	724	A	N1-C2-N3	7.06	132.83	129.30
27	14	2713	A	C5-N7-C8	-7.06	100.37	103.90
27	14	1253	A	C8-N9-C4	7.06	108.62	105.80
27	1H	180	A	N1-C6-N6	7.05	122.83	118.60
27	1H	657	A	O5'-P-OP1	-7.05	99.35	105.70
27	1H	838	C	C6-N1-C2	7.05	123.12	120.30
27	1H	897	A	N9-C4-C5	-7.05	102.98	105.80
27	1H	2006	C	N3-C2-O2	-7.05	116.96	121.90
27	1H	1575	A	N7-C8-N9	7.05	117.32	113.80
27	1H	2084	G	N1-C6-O6	-7.05	115.67	119.90
27	1H	2266	G	N1-C6-O6	7.05	124.13	119.90
27	14	249	C	O5'-P-OP1	-7.04	99.36	105.70
1	13	1301	U	C2-N1-C1'	7.04	126.15	117.70
27	1H	976	U	C5-C6-N1	-7.04	119.18	122.70
27	14	209	C	C5-C4-N4	-7.04	115.27	120.20
27	1H	1210	G	C8-N9-C4	7.04	109.22	106.40
27	1H	823	G	N3-C2-N2	7.03	124.82	119.90
27	14	1585	C	C2-N1-C1'	7.03	126.54	118.80
27	1H	1379	G	N1-C2-N2	-7.03	109.87	116.20
1	1G	1417	G	N1-C6-O6	7.03	124.12	119.90
27	14	530	G	N1-C6-O6	7.03	124.12	119.90
27	14	1635	G	N1-C6-O6	7.03	124.12	119.90
27	1H	473	G	C5-C6-O6	-7.03	124.38	128.60
27	14	2439	A	N7-C8-N9	7.03	117.31	113.80
27	1H	1079	A	C8-N9-C4	7.03	108.61	105.80
27	1H	1591	C	C2-N1-C1'	7.02	126.53	118.80
27	1H	1742	C	P-O3'-C3'	7.02	128.13	119.70
45	D8	38	LEU	CA-CB-CG	7.02	131.46	115.30
27	1H	2593	U	C5-C4-O4	7.02	130.11	125.90
27	1H	2726	A	C2-N3-C4	-7.02	107.09	110.60
27	14	34	C	O5'-P-OP1	-7.02	99.38	105.70
27	1H	1355	A	O5'-P-OP2	-7.02	99.38	105.70
27	14	1012	U	N3-C2-O2	-7.02	117.29	122.20
27	14	1332	G	N3-C2-N2	-7.02	114.99	119.90
27	1H	2030	C	N1-C2-O2	7.01	123.11	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2605	G	N3-C4-C5	-7.01	125.09	128.60
27	14	1639	U	C5-C6-N1	-7.01	119.19	122.70
27	14	2392	A	C5-N7-C8	-7.01	100.39	103.90
1	13	799	G	N1-C6-O6	-7.01	115.69	119.90
27	1H	186	A	N9-C4-C5	-7.01	103.00	105.80
27	1H	896	G	C5-C6-N1	7.01	115.01	111.50
27	14	672	C	C6-N1-C2	7.01	123.11	120.30
27	14	2824	C	N3-C4-C5	7.01	124.70	121.90
27	1H	72	A	N7-C8-N9	-7.00	110.30	113.80
27	1H	501	G	C8-N9-C4	-7.00	103.60	106.40
27	1H	2073	C	O5'-P-OP2	-7.00	99.40	105.70
27	1H	2433	C	O5'-P-OP1	-7.00	99.40	105.70
27	1H	1312	A	C2-N3-C4	-7.00	107.10	110.60
27	1H	1442	A	C8-N9-C4	7.00	108.60	105.80
27	14	452	G	N1-C6-O6	-7.00	115.70	119.90
27	1H	214	G	O5'-P-OP2	-7.00	99.40	105.70
23	2K	1	G	C6-C5-N7	-7.00	126.20	130.40
45	D8	82	ARG	NE-CZ-NH1	-7.00	116.80	120.30
27	14	1210	A	C5-N7-C8	-7.00	100.40	103.90
27	1H	1348	A	N9-C4-C5	-6.99	103.00	105.80
27	1H	603	G	N3-C4-C5	-6.99	125.10	128.60
27	14	528	A	N1-C6-N6	6.99	122.80	118.60
27	14	1349	A	N1-C6-N6	6.99	122.80	118.60
27	14	2235	G	C8-N9-C4	-6.99	103.60	106.40
27	14	74	A	N1-C6-N6	6.99	122.79	118.60
1	1G	108	G	C4-C5-N7	6.99	113.59	110.80
27	1H	553	C	O5'-P-OP2	6.99	119.08	110.70
27	1H	826	G	C5-C6-O6	6.99	132.79	128.60
27	1H	2052	G	C6-C5-N7	-6.99	126.21	130.40
27	1H	2607	C	C6-N1-C2	6.99	123.09	120.30
27	1H	1038	C	C5-C6-N1	6.98	124.49	121.00
27	1H	1606	A	C2-N3-C4	-6.98	107.11	110.60
27	1H	118	U	N1-C2-N3	6.98	119.09	114.90
27	1H	2007	G	O5'-P-OP2	-6.98	99.42	105.70
28	16	6	C	C6-N1-C2	6.98	123.09	120.30
27	14	1835	G	N3-C4-C5	-6.98	125.11	128.60
27	14	2439	A	C8-N9-C4	-6.98	103.01	105.80
27	1H	811	G	N3-C2-N2	6.98	124.78	119.90
27	14	735	A	C8-N9-C4	6.98	108.59	105.80
27	1H	730	G	C8-N9-C4	6.98	109.19	106.40
27	1H	1363	U	C5-C4-O4	-6.98	121.72	125.90
27	1H	139	A	N1-C6-N6	6.97	122.78	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	582	G	O5'-P-OP2	-6.97	99.42	105.70
27	1H	964	A	N3-C4-N9	-6.97	121.82	127.40
27	1H	2312	G	N1-C6-O6	6.97	124.08	119.90
27	1H	2088	C	N3-C4-C5	6.97	124.69	121.90
27	14	1890	A	C8-N9-C4	6.97	108.59	105.80
27	1H	1722	G	N3-C2-N2	6.96	124.78	119.90
27	1H	193	C	C5-C6-N1	-6.96	117.52	121.00
27	14	1496	A	C5-N7-C8	-6.96	100.42	103.90
1	13	573	A	O5'-P-OP1	6.96	119.05	110.70
27	1H	1441	U	O5'-P-OP2	6.96	119.05	110.70
27	14	1614	A	C8-N9-C4	-6.96	103.02	105.80
27	1H	825	A	N1-C6-N6	-6.96	114.43	118.60
27	1H	2049	C	N3-C4-C5	-6.96	119.12	121.90
27	14	2572	A	OP1-P-OP2	6.96	130.04	119.60
27	1H	2435	A	N1-C6-N6	6.96	122.77	118.60
27	1H	2728	G	O5'-P-OP2	-6.96	99.44	105.70
28	1J	72	G	C8-N9-C4	6.96	109.18	106.40
27	1H	59	G	C5-C6-O6	-6.95	124.43	128.60
27	1H	2519	U	C2-N1-C1'	6.95	126.04	117.70
27	14	1392	A	N1-C6-N6	-6.95	114.43	118.60
27	1H	897	A	C5-C6-N6	-6.95	118.14	123.70
27	1H	1575	A	C5-N7-C8	-6.95	100.43	103.90
27	1H	2655	G	N1-C6-O6	-6.95	115.73	119.90
27	14	554	U	O5'-P-OP1	-6.95	99.45	105.70
27	14	2446	G	O5'-P-OP2	-6.95	99.45	105.70
27	1H	553	C	N1-C2-O2	6.94	123.07	118.90
27	1H	1822	C	O5'-P-OP2	-6.94	99.45	105.70
1	13	1531	A	O5'-P-OP1	-6.94	99.45	105.70
27	1H	1236	G	N1-C2-N3	6.94	128.06	123.90
27	1H	2090	G	C2-N3-C4	6.94	115.37	111.90
27	1H	1308	C	N3-C4-C5	6.93	124.67	121.90
1	1G	244	U	N3-C2-O2	-6.93	117.35	122.20
27	14	1379	A	C6-C5-N7	-6.93	127.44	132.30
27	1H	1698	G	N1-C6-O6	6.93	124.06	119.90
27	14	945	A	C4-C5-C6	6.93	120.46	117.00
27	1H	593	U	C2-N3-C4	-6.92	122.84	127.00
1	13	690	G	C5-N7-C8	-6.92	100.84	104.30
27	1H	1922	G	C4-C5-C6	-6.92	114.65	118.80
27	1H	2604	C	N3-C4-C5	6.92	124.67	121.90
27	1H	591	A	O5'-P-OP2	-6.92	99.47	105.70
27	14	1407	C	C5-C6-N1	6.92	124.46	121.00
27	1H	817	G	N9-C4-C5	-6.92	102.63	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2012	G	N9-C4-C5	-6.92	102.63	105.40
27	1H	1543	A	C4-C5-N7	6.91	114.16	110.70
27	1H	1922	G	OP2-P-O3'	6.91	120.41	105.20
27	1H	823	G	N9-C4-C5	-6.91	102.64	105.40
27	1H	601	G	N3-C4-C5	-6.91	125.14	128.60
27	1H	2252	G	N9-C4-C5	-6.91	102.64	105.40
27	1H	2262	U	C4-C5-C6	-6.91	115.55	119.70
27	14	2589	A	C8-N9-C4	6.91	108.56	105.80
27	1H	2464	A	N9-C4-C5	6.91	108.56	105.80
27	1H	2514	C	C2-N3-C4	-6.91	116.45	119.90
27	1H	781	G	C4-C5-C6	6.91	122.94	118.80
27	1H	246	A	N9-C4-C5	-6.91	103.04	105.80
27	1H	2372	C	N1-C2-O2	6.91	123.04	118.90
27	14	1844	C	C6-N1-C2	6.90	123.06	120.30
27	1H	1711	C	C6-N1-C2	6.90	123.06	120.30
27	1H	2458	G	N3-C2-N2	-6.90	115.07	119.90
27	14	1333	C	C5-C4-N4	-6.90	115.37	120.20
1	13	233	C	C6-N1-C2	-6.90	117.54	120.30
27	1H	46	C	N3-C4-C5	6.90	124.66	121.90
27	1H	2536	G	C8-N9-C4	6.90	109.16	106.40
1	1G	1417	G	N9-C4-C5	-6.90	102.64	105.40
27	1H	212	A	O5'-P-OP2	6.89	118.97	110.70
27	1H	1818	A	C6-N1-C2	6.89	122.74	118.60
27	1H	713	C	C6-N1-C2	6.89	123.06	120.30
27	1H	2372	C	N3-C2-O2	-6.89	117.08	121.90
60	2L	72	C	O5'-P-OP2	-6.89	99.50	105.70
27	14	2725	A	P-O3'-C3'	6.89	127.97	119.70
1	13	723	U	C2-N1-C1'	6.89	125.97	117.70
1	1G	1374	A	O4'-C1'-N9	6.89	113.71	108.20
27	1H	867	A	C2-N3-C4	-6.89	107.16	110.60
27	1H	1603	G	N1-C6-O6	6.89	124.03	119.90
27	1H	2320	G	C5-N7-C8	-6.89	100.86	104.30
1	1G	1469	G	N1-C6-O6	6.89	124.03	119.90
27	14	2713	A	C6-C5-N7	-6.89	127.48	132.30
27	1H	2637	G	N3-C4-C5	-6.88	125.16	128.60
27	1H	355	A	N3-C4-C5	6.88	131.62	126.80
27	1H	667	C	C6-N1-C2	-6.88	117.55	120.30
27	14	1614	A	C5-N7-C8	-6.88	100.46	103.90
1	13	701	C	N1-C2-O2	6.88	123.03	118.90
27	14	1940	U	C5-C6-N1	-6.88	119.26	122.70
27	1H	26	G	N3-C4-N9	6.88	130.13	126.00
1	13	560	U	C5-C6-N1	6.88	126.14	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	16	30	C	N3-C2-O2	6.88	126.71	121.90
27	1H	978	G	N1-C6-O6	-6.88	115.78	119.90
27	1H	556	G	N3-C4-C5	6.87	132.04	128.60
27	14	1614	A	O4'-C1'-N9	6.87	113.70	108.20
27	1H	557	C	O5'-P-OP1	-6.87	99.52	105.70
27	1H	1954	U	O5'-P-OP1	6.87	118.94	110.70
27	1H	2555	A	N1-C2-N3	-6.87	125.87	129.30
27	1H	1413	A	C8-N9-C4	6.87	108.55	105.80
28	16	56	G	N3-C4-N9	6.87	130.12	126.00
27	1H	856	G	N1-C2-N3	6.87	128.02	123.90
27	1H	2439	A	C5-C6-N6	-6.86	118.21	123.70
24	3L	17	C	C5-C6-N1	6.86	124.43	121.00
27	1H	1807	U	C6-N1-C2	6.86	125.11	121.00
27	1H	1958	G	C5-N7-C8	-6.86	100.87	104.30
27	1H	1648	G	N9-C4-C5	-6.86	102.66	105.40
27	1H	183	U	N1-C2-O2	-6.85	118.00	122.80
27	1H	2612	G	O5'-P-OP2	-6.85	99.53	105.70
1	1G	912	C	C6-N1-C2	6.85	123.04	120.30
1	13	1108	G	C4-C5-N7	-6.85	108.06	110.80
27	1H	724	A	N3-C4-N9	-6.85	121.92	127.40
1	13	1300	G	C4-N9-C1'	-6.85	117.60	126.50
27	1H	1871	G	N1-C6-O6	6.85	124.01	119.90
27	14	49	A	P-O3'-C3'	6.84	127.91	119.70
27	1H	213	A	N1-C6-N6	6.84	122.70	118.60
27	1H	1009	U	O5'-P-OP2	6.84	118.91	110.70
27	14	808	G	C5-N7-C8	6.84	107.72	104.30
27	1H	227	C	N3-C4-C5	6.84	124.64	121.90
27	1H	876	U	N1-C2-O2	6.84	127.59	122.80
27	1H	1543	A	N1-C6-N6	6.84	122.70	118.60
27	1H	2252	G	C8-N9-C4	6.84	109.14	106.40
27	1H	2641	C	C2-N1-C1'	-6.84	111.28	118.80
27	1H	2598	U	N1-C2-O2	6.83	127.58	122.80
27	1H	2533	C	N3-C4-N4	-6.83	113.22	118.00
27	1H	591	A	N1-C2-N3	6.83	132.71	129.30
27	1H	895	U	N1-C2-O2	-6.83	118.02	122.80
27	1H	978	G	O4'-C1'-N9	6.83	113.66	108.20
1	1G	582	U	C5-C6-N1	-6.83	119.28	122.70
27	14	491	G	N3-C2-N2	-6.83	115.12	119.90
27	1H	112	U	C2-N1-C1'	6.83	125.89	117.70
27	1H	2454	C	N3-C2-O2	-6.83	117.12	121.90
27	1H	829	A	O5'-P-OP1	-6.83	99.56	105.70
27	14	1678	G	N1-C2-N2	-6.83	110.06	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	244	U	C5-C4-O4	-6.82	121.81	125.90
27	14	1216	G	C6-C5-N7	-6.82	126.31	130.40
27	1H	52	A	C2-N3-C4	-6.82	107.19	110.60
27	1H	2488	C	N3-C2-O2	-6.81	117.13	121.90
27	1H	607	G	C8-N9-C4	6.81	109.12	106.40
27	1H	2262	U	C2-N1-C1'	-6.81	109.53	117.70
1	13	1411	C	C6-N1-C2	6.81	123.02	120.30
23	2K	29	G	C8-N9-C4	6.81	109.12	106.40
27	1H	48	A	C5-N7-C8	6.81	107.31	103.90
27	1H	2077	A	O5'-P-OP2	-6.81	99.57	105.70
27	14	1204	A	C5-C6-N1	-6.81	114.30	117.70
27	14	2429	G	N3-C4-N9	-6.81	121.92	126.00
27	1H	200	C	C5-C6-N1	-6.80	117.60	121.00
27	14	1950	G	C6-C5-N7	-6.80	126.32	130.40
1	13	757	U	C6-N1-C2	6.80	125.08	121.00
27	1H	414	G	C8-N9-C4	6.80	109.12	106.40
27	1H	1396	A	C6-C5-N7	-6.80	127.54	132.30
27	1H	1922	G	C5-N7-C8	-6.80	100.90	104.30
27	14	1429	G	C8-N9-C4	-6.80	103.68	106.40
27	1H	1011	C	C5-C4-N4	-6.79	115.44	120.20
27	14	2712	U	N3-C4-O4	-6.79	114.64	119.40
27	1H	862	C	C4-C5-C6	6.79	120.80	117.40
27	1H	1923	A	OP1-P-OP2	-6.79	109.41	119.60
1	1G	1200	C	C6-N1-C1'	-6.79	112.65	120.80
27	1H	896	G	O5'-P-OP2	-6.79	99.59	105.70
27	1H	1471	G	C8-N9-C4	6.79	109.11	106.40
27	1H	2099	U	C5-C6-N1	6.79	126.09	122.70
27	1H	2089	C	O5'-P-OP1	-6.78	99.59	105.70
27	14	676	A	N7-C8-N9	6.78	117.19	113.80
1	13	1417	G	C4-N9-C1'	6.78	135.32	126.50
23	2K	70	G	N1-C6-O6	6.78	123.97	119.90
27	1H	1371	G	O5'-P-OP1	-6.78	99.60	105.70
27	1H	735	C	N3-C4-C5	-6.78	119.19	121.90
1	13	888	G	N3-C4-N9	-6.78	121.93	126.00
27	1H	20	C	C6-N1-C2	6.78	123.01	120.30
27	14	1332	G	C4-C5-N7	6.78	113.51	110.80
27	1H	1954	U	N1-C2-N3	6.78	118.97	114.90
27	1H	2620	G	C6-C5-N7	-6.78	126.33	130.40
27	14	2059	A	N9-C4-C5	6.77	108.51	105.80
27	14	2441	C	N3-C2-O2	-6.77	117.16	121.90
27	1H	784	C	C2-N1-C1'	-6.77	111.35	118.80
27	1H	1867	G	N1-C6-O6	6.77	123.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2277	G	C4-C5-N7	-6.77	108.09	110.80
27	1H	1647	C	C5-C6-N1	-6.77	117.62	121.00
27	1H	2524	U	N3-C2-O2	6.77	126.94	122.20
27	1H	2454	C	C5-C6-N1	-6.77	117.62	121.00
27	1H	2604	C	O5'-P-OP2	6.77	118.82	110.70
27	14	1828	G	N1-C6-O6	6.77	123.96	119.90
27	1H	59	G	N1-C6-O6	6.76	123.96	119.90
1	1G	1398	A	N7-C8-N9	-6.76	110.42	113.80
1	13	189	U	P-O3'-C3'	6.76	127.81	119.70
27	1H	2623	C	C5-C4-N4	6.76	124.93	120.20
1	13	572	A	O5'-P-OP2	-6.76	99.62	105.70
27	1H	1990	C	OP1-P-O3'	-6.76	90.33	105.20
27	14	2726	U	O4'-C1'-N1	6.76	113.61	108.20
27	1H	1685	A	N1-C6-N6	-6.76	114.55	118.60
27	1H	2253	C	C4-C5-C6	-6.76	114.02	117.40
27	1H	112	U	C5-C6-N1	6.76	126.08	122.70
27	1H	188	C	C6-N1-C2	-6.76	117.60	120.30
27	1H	1853	A	C5-N7-C8	-6.76	100.52	103.90
27	14	2050	C	C6-N1-C2	-6.76	117.60	120.30
27	1H	1986	U	C2-N3-C4	6.75	131.05	127.00
27	14	1784	A	O5'-P-OP2	-6.75	99.62	105.70
1	13	1054	C	C5-C6-N1	6.75	124.38	121.00
27	1H	2344	G	N7-C8-N9	-6.75	109.72	113.10
27	14	2068	U	O5'-P-OP1	-6.75	99.62	105.70
27	1H	2051	U	N3-C4-C5	6.75	118.65	114.60
27	1H	2229	G	C8-N9-C1'	-6.75	118.23	127.00
27	14	1781	C	C2-N1-C1'	6.75	126.22	118.80
27	1H	563	C	N3-C2-O2	-6.75	117.18	121.90
27	1H	673	G	C4-N9-C1'	6.75	135.27	126.50
27	1H	1370	U	OP1-P-O3'	6.75	120.04	105.20
27	1H	1475	C	OP1-P-OP2	-6.75	109.48	119.60
27	1H	1822	C	OP1-P-O3'	6.75	120.04	105.20
27	1H	137	G	O4'-C1'-N9	6.75	113.60	108.20
27	14	464	U	C4-C5-C6	6.74	123.75	119.70
27	1H	1561	U	C5-C6-N1	6.74	126.07	122.70
27	1H	1451	C	N3-C4-N4	-6.74	113.28	118.00
27	1H	2533	C	C5-C4-N4	6.74	124.92	120.20
27	1H	122	G	N9-C4-C5	-6.74	102.70	105.40
47	F8	76	ARG	NE-CZ-NH2	-6.74	116.93	120.30
27	1H	202	G	C5-C6-O6	-6.74	124.56	128.60
27	14	611	C	C6-N1-C2	6.74	123.00	120.30
27	1H	1019	A	C2-N3-C4	-6.73	107.23	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2501	C	N3-C4-C5	6.73	124.59	121.90
27	14	530	G	C6-C5-N7	-6.73	126.36	130.40
27	14	775	G	N1-C2-N2	-6.73	110.14	116.20
27	14	1244	G	C5-C6-O6	-6.73	124.56	128.60
27	1H	118	U	N3-C2-O2	-6.73	117.49	122.20
27	14	1204	A	N1-C6-N6	6.73	122.64	118.60
27	14	2690	C	N3-C4-C5	6.73	124.59	121.90
27	1H	1701	G	N3-C4-N9	6.73	130.04	126.00
27	1H	2613	A	C2-N3-C4	-6.73	107.24	110.60
1	13	1394	A	N9-C4-C5	-6.72	103.11	105.80
27	1H	2373	A	C8-N9-C4	6.72	108.49	105.80
1	1G	1470	G	O5'-P-OP1	-6.72	99.65	105.70
27	14	943	U	N1-C2-O2	-6.72	118.09	122.80
1	13	284	G	N1-C6-O6	6.72	123.93	119.90
28	16	56	G	N3-C4-C5	-6.72	125.24	128.60
30	11	27	THR	C-N-CA	-6.72	104.91	121.70
27	1H	2107	C	C6-N1-C2	6.72	122.99	120.30
27	14	453	C	C5-C6-N1	-6.72	117.64	121.00
27	14	569	U	N1-C2-O2	-6.72	118.10	122.80
1	13	1260	C	C6-N1-C2	-6.71	117.61	120.30
27	1H	2361	U	O5'-P-OP1	-6.71	99.66	105.70
27	1H	1543	A	C6-C5-N7	-6.71	127.60	132.30
27	1H	2266	G	C5-C6-O6	-6.71	124.57	128.60
27	14	1375	C	N1-C2-O2	6.71	122.93	118.90
1	13	1125	U	P-O3'-C3'	6.71	127.75	119.70
27	1H	1617	A	N9-C4-C5	6.71	108.48	105.80
24	3L	17	C	C6-N1-C2	-6.71	117.62	120.30
27	1H	2005	C	C6-N1-C2	-6.71	117.62	120.30
27	1H	2229	G	C4-N9-C1'	6.70	135.21	126.50
27	1H	255	A	P-O3'-C3'	6.70	127.74	119.70
27	1H	1606	A	N1-C2-N3	6.70	132.65	129.30
27	14	1644	C	N1-C2-O2	6.70	122.92	118.90
27	1H	1871	G	C8-N9-C4	6.70	109.08	106.40
27	14	1980	G	O5'-P-OP1	-6.70	99.67	105.70
27	1H	1370	U	C6-N1-C2	-6.70	116.98	121.00
27	1H	2507	G	C5-C6-O6	6.70	132.62	128.60
27	1H	878	G	N3-C2-N2	6.69	124.59	119.90
27	1H	853	G	C8-N9-C4	-6.69	103.72	106.40
27	1H	2453	C	O5'-P-OP1	-6.69	99.68	105.70
1	13	108	G	N7-C8-N9	6.69	116.44	113.10
27	1H	341	C	C6-N1-C2	-6.69	117.62	120.30
27	14	2060	A	N9-C4-C5	6.69	108.48	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2423	U	O5'-P-OP2	-6.69	99.68	105.70
1	13	108	G	C5-C6-O6	-6.69	124.59	128.60
27	1H	1661	A	O5'-P-OP1	-6.69	99.68	105.70
27	1H	786	G	C6-C5-N7	-6.68	126.39	130.40
27	1H	1613	C	C6-N1-C2	6.68	122.97	120.30
27	1H	2713	C	C6-N1-C2	6.68	122.97	120.30
27	1H	127	C	C5-C6-N1	-6.67	117.66	121.00
27	1H	98	U	O4'-C1'-N1	6.67	113.54	108.20
27	1H	1189	A	N3-C4-N9	-6.67	122.06	127.40
27	1H	262	A	N1-C6-N6	6.67	122.60	118.60
27	1H	593	U	N1-C2-N3	6.67	118.90	114.90
27	1H	785	C	N3-C4-C5	6.67	124.57	121.90
27	1H	2286	A	O5'-P-OP2	-6.67	99.70	105.70
27	14	2430	A	N7-C8-N9	6.67	117.14	113.80
27	1H	907	G	O5'-P-OP1	6.67	118.70	110.70
27	1H	1989	A	C6-C5-N7	6.67	136.97	132.30
27	1H	2464	A	C5-C6-N1	-6.67	114.37	117.70
1	13	769	G	N3-C4-C5	-6.66	125.27	128.60
27	1H	1378	A	C2-N3-C4	-6.66	107.27	110.60
27	1H	1667	G	C8-N9-C4	6.66	109.06	106.40
27	1H	2591	G	N3-C4-N9	6.66	130.00	126.00
36	38	9	LEU	CA-CB-CG	6.66	130.62	115.30
27	1H	818	G	C4-C5-N7	6.66	113.46	110.80
27	1H	978	G	N9-C4-C5	6.66	108.06	105.40
44	C8	98	LEU	CA-CB-CG	6.66	130.61	115.30
27	14	1899	G	C6-C5-N7	6.66	134.40	130.40
27	1H	2452	A	P-O3'-C3'	6.66	127.69	119.70
27	1H	729	G	C8-N9-C4	6.65	109.06	106.40
27	1H	1189	A	C5-C6-N1	-6.65	114.37	117.70
27	1H	70	A	N1-C2-N3	6.65	132.62	129.30
27	1H	826	G	C5-C6-N1	6.65	114.83	111.50
27	1H	189	A	N7-C8-N9	-6.64	110.48	113.80
27	1H	1928	C	O5'-P-OP2	-6.64	99.72	105.70
1	1G	481	G	C4-N9-C1'	6.64	135.14	126.50
27	14	2867	G	C8-N9-C1'	6.64	135.64	127.00
27	14	1831	G	N3-C4-N9	6.64	129.99	126.00
27	1H	1348	A	N1-C6-N6	6.64	122.58	118.60
27	1H	2620	G	C8-N9-C4	6.64	109.06	106.40
27	1H	606	G	N1-C6-O6	-6.64	115.92	119.90
27	1H	2635	C	C5-C6-N1	-6.64	117.68	121.00
27	1H	148	C	N3-C2-O2	6.63	126.54	121.90
27	14	2590	A	N1-C6-N6	-6.63	114.62	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2034	U	C5-C4-O4	6.63	129.88	125.90
27	14	1544	C	N1-C2-O2	6.63	122.88	118.90
27	1H	577	G	N3-C4-C5	6.63	131.91	128.60
1	1G	428	G	N3-C4-N9	-6.63	122.02	126.00
30	19	46	GLN	C-N-CA	-6.63	108.38	122.30
27	1H	216	G	O4'-C1'-N9	6.63	113.50	108.20
27	1H	2748	A	C8-N9-C4	-6.63	103.15	105.80
27	14	2327	A	N1-C6-N6	-6.63	114.62	118.60
27	1H	1804	G	C8-N9-C4	6.62	109.05	106.40
27	1H	1411	G	C8-N9-C4	6.62	109.05	106.40
27	14	2010	G	C5-N7-C8	-6.62	100.99	104.30
27	1H	249	G	C5-C6-O6	-6.62	124.63	128.60
27	14	1371	G	C8-N9-C4	6.62	109.05	106.40
27	1H	424	G	C5-C6-O6	-6.62	124.63	128.60
27	1H	1318	G	N3-C4-N9	-6.62	122.03	126.00
1	13	741	G	C6-C5-N7	-6.62	126.43	130.40
27	14	591	C	N1-C2-O2	-6.62	114.93	118.90
27	14	2277	G	C5-C6-O6	6.62	132.57	128.60
27	1H	2091	U	N3-C4-O4	-6.61	114.77	119.40
27	14	1416	G	C4-N9-C1'	-6.61	117.91	126.50
1	13	498	A	N1-C6-N6	-6.61	114.64	118.60
27	1H	1709	G	C4-C5-N7	-6.61	108.16	110.80
1	13	372	C	C5-C6-N1	6.61	124.30	121.00
1	1G	397	A	N1-C6-N6	-6.61	114.64	118.60
27	1H	534	G	C5-N7-C8	-6.60	101.00	104.30
27	1H	192	U	N1-C2-O2	6.60	127.42	122.80
27	1H	955	C	OP2-P-O3'	6.60	119.72	105.20
1	13	757	U	N3-C4-C5	6.60	118.56	114.60
27	1H	1980	C	N1-C2-O2	-6.60	114.94	118.90
1	13	913	A	C8-N9-C4	-6.59	103.16	105.80
27	1H	1250	A	OP2-P-O3'	6.59	119.71	105.20
27	1H	1362	C	N3-C2-O2	-6.59	117.28	121.90
27	14	2699	C	C6-N1-C2	6.59	122.94	120.30
27	1H	1935	A	C5-C6-N6	-6.59	118.43	123.70
27	14	373	U	O5'-P-OP2	-6.59	99.77	105.70
27	14	1798	U	O5'-P-OP2	-6.59	99.77	105.70
27	1H	1954	U	C5-C4-O4	6.59	129.85	125.90
27	1H	2894	A	C8-N9-C4	-6.59	103.16	105.80
30	11	111	LEU	CA-CB-CG	6.59	130.46	115.30
27	14	141	A	N7-C8-N9	6.59	117.09	113.80
27	1H	1078	G	C5-C6-O6	-6.59	124.65	128.60
27	1H	2598	U	N3-C2-O2	-6.59	117.59	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	535	C	O5'-P-OP1	-6.58	99.77	105.70
27	1H	2467	G	C5-C6-O6	6.58	132.55	128.60
27	14	607	U	O5'-P-OP2	-6.58	99.77	105.70
27	14	1562	A	C8-N9-C4	6.58	108.43	105.80
27	1H	2048	C	C6-N1-C2	-6.58	117.67	120.30
27	14	806	C	O5'-P-OP1	-6.58	99.78	105.70
1	13	892	A	N7-C8-N9	-6.58	110.51	113.80
27	1H	2263	G	C5-C6-N1	-6.58	108.21	111.50
27	1H	2393	C	C6-N1-C2	6.58	122.93	120.30
27	1H	2531	A	C5-C6-N1	-6.58	114.41	117.70
27	14	528	A	C8-N9-C4	-6.58	103.17	105.80
1	13	280	C	C6-N1-C2	6.57	122.93	120.30
27	1H	239	C	O5'-P-OP2	6.57	118.58	110.70
27	1H	2392	G	N9-C4-C5	-6.57	102.77	105.40
27	1H	554	A	N3-C4-C5	6.57	131.40	126.80
1	1G	397	A	C8-N9-C4	-6.57	103.17	105.80
27	1H	1085	C	N1-C2-O2	6.57	122.84	118.90
27	1H	2482	A	O5'-P-OP1	-6.57	99.79	105.70
1	13	801	U	N3-C2-O2	-6.57	117.60	122.20
27	1H	1002	G	N1-C6-O6	6.57	123.84	119.90
27	1H	1828	U	C5-C6-N1	-6.56	119.42	122.70
27	1H	811	G	C6-C5-N7	-6.56	126.46	130.40
1	1G	897	C	C2-N1-C1'	-6.56	111.58	118.80
27	1H	70	A	C4-C5-N7	6.56	113.98	110.70
27	1H	1742	C	N3-C2-O2	-6.56	117.31	121.90
27	1H	1821	A	N9-C4-C5	6.56	108.42	105.80
27	1H	2241	G	N1-C6-O6	-6.56	115.97	119.90
27	14	865	C	N1-C2-O2	6.56	122.83	118.90
27	14	1992	G	P-O3'-C3'	6.56	127.57	119.70
27	1H	989	U	N3-C2-O2	6.56	126.79	122.20
27	14	1950	G	C5-N7-C8	-6.55	101.02	104.30
27	1H	976	U	N1-C2-N3	6.55	118.83	114.90
27	1H	2828	G	C5-C6-O6	-6.55	124.67	128.60
27	1H	1019	A	N9-C4-C5	6.55	108.42	105.80
27	1H	2536	G	N7-C8-N9	-6.55	109.82	113.10
27	1H	2635	C	N3-C2-O2	-6.55	117.31	121.90
1	13	1266	G	N3-C4-N9	-6.55	122.07	126.00
1	13	741	G	C2-N3-C4	-6.55	108.63	111.90
27	1H	138	G	N9-C4-C5	6.55	108.02	105.40
27	1H	2371	G	N9-C4-C5	6.55	108.02	105.40
27	1H	2609	U	C5-C6-N1	-6.55	119.43	122.70
27	14	74	A	C6-C5-N7	-6.55	127.72	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2079	G	N1-C6-O6	6.54	123.83	119.90
1	13	1512	U	N3-C2-O2	-6.54	117.62	122.20
27	1H	222	G	O5'-P-OP1	-6.54	99.81	105.70
27	1H	536	C	N1-C2-O2	6.54	122.83	118.90
1	1G	1523	G	C8-N9-C4	-6.54	103.78	106.40
27	14	2440	C	C5-C6-N1	-6.54	117.73	121.00
27	14	2560	C	O5'-P-OP1	-6.54	99.81	105.70
27	1H	897	A	N1-C6-N6	6.54	122.53	118.60
27	14	530	G	C5-C6-O6	-6.54	124.67	128.60
27	14	1331	A	O5'-P-OP1	-6.54	99.81	105.70
1	13	910	C	N1-C2-O2	-6.54	114.98	118.90
27	1H	2108	C	C6-N1-C2	6.54	122.92	120.30
27	1H	252	A	C2-N3-C4	-6.54	107.33	110.60
27	1H	1678	C	N1-C2-O2	-6.54	114.98	118.90
1	13	1521	G	O5'-P-OP1	-6.53	99.82	105.70
27	1H	2080	A	C6-N1-C2	-6.53	114.68	118.60
27	14	1914	C	C2-N1-C1'	6.53	125.99	118.80
27	1H	579	U	C2-N1-C1'	-6.53	109.86	117.70
27	14	994	C	C6-N1-C2	-6.53	117.69	120.30
1	13	1094	G	OP2-P-O3'	6.53	119.57	105.20
27	1H	105	C	N3-C2-O2	6.53	126.47	121.90
27	1H	1764	G	C6-C5-N7	-6.53	126.48	130.40
27	1H	2226	U	N3-C2-O2	6.53	126.77	122.20
1	1G	796	C	C6-N1-C2	6.53	122.91	120.30
27	1H	2524	U	C5-C4-O4	-6.53	121.98	125.90
27	14	1210	A	C4-C5-N7	6.53	113.96	110.70
27	1H	26	G	C5-C6-O6	-6.53	124.69	128.60
27	1H	908	U	N3-C2-O2	-6.53	117.63	122.20
27	1H	963	G	C8-N9-C4	-6.53	103.79	106.40
1	1G	183	G	N1-C6-O6	6.53	123.82	119.90
1	1G	1081	G	C8-N9-C4	6.53	109.01	106.40
27	1H	127	C	N3-C4-N4	-6.52	113.43	118.00
27	1H	208	A	N1-C2-N3	6.52	132.56	129.30
27	1H	810	U	C2-N1-C1'	6.52	125.53	117.70
27	1H	2284	G	N3-C4-C5	-6.52	125.34	128.60
27	14	982	C	C5-C6-N1	6.52	124.26	121.00
1	13	757	U	N3-C4-O4	-6.52	114.83	119.40
27	1H	475	U	C5-C6-N1	-6.52	119.44	122.70
27	1H	1746	A	O4'-C1'-N9	6.52	113.42	108.20
27	1H	1954	U	C5-C6-N1	-6.52	119.44	122.70
27	14	1616	A	C8-N9-C4	-6.52	103.19	105.80
23	2K	35	A	N9-C4-C5	-6.52	103.19	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2096	C	N1-C2-N3	6.52	123.76	119.20
27	1H	1475	C	N1-C2-O2	-6.52	114.99	118.90
27	1H	1905	C	C5-C6-N1	6.52	124.26	121.00
27	1H	1922	G	P-O3'-C3'	6.52	127.52	119.70
27	1H	495	G	N1-C2-N2	-6.51	110.34	116.20
27	14	1762	A	OP2-P-O3'	6.51	119.53	105.20
1	1G	796	C	N3-C4-C5	6.51	124.50	121.90
27	1H	219	A	O4'-C1'-N9	6.51	113.41	108.20
27	1H	2512	C	N1-C2-O2	-6.51	114.99	118.90
23	2K	35	A	N1-C6-N6	6.51	122.50	118.60
1	13	530	G	P-O3'-C3'	6.51	127.51	119.70
27	1H	1441	U	C5-C4-O4	6.51	129.80	125.90
27	1H	2623	C	O5'-P-OP2	-6.51	99.84	105.70
36	38	40	LEU	CA-CB-CG	6.51	130.27	115.30
1	1G	507	C	C6-N1-C2	6.51	122.90	120.30
27	1H	840	G	N1-C6-O6	6.50	123.80	119.90
28	16	30	C	C6-N1-C2	-6.50	117.70	120.30
27	1H	138	G	C4-C5-N7	-6.50	108.20	110.80
1	1G	670	G	OP2-P-O3'	6.50	119.51	105.20
27	14	1616	A	N7-C8-N9	6.50	117.05	113.80
27	1H	180	A	C2-N3-C4	-6.50	107.35	110.60
27	14	229	A	O4'-C1'-N9	6.50	113.40	108.20
27	14	1639	U	O5'-P-OP1	6.50	118.50	110.70
1	1G	729	A	N1-C6-N6	-6.50	114.70	118.60
1	13	758	G	N1-C6-O6	6.50	123.80	119.90
27	1H	2880	G	N3-C4-N9	-6.50	122.10	126.00
1	13	1500	A	N1-C2-N3	-6.50	126.05	129.30
27	14	1426	G	N3-C4-N9	6.50	129.90	126.00
27	1H	549	C	C5-C6-N1	6.49	124.25	121.00
27	1H	2476	C	C6-N1-C2	6.49	122.90	120.30
1	1G	906	G	C8-N9-C4	6.49	109.00	106.40
27	14	1678	G	N1-C6-O6	-6.49	116.00	119.90
27	1H	1388	U	N3-C2-O2	6.49	126.74	122.20
27	14	1416	G	C8-N9-C4	6.49	109.00	106.40
27	1H	556	G	N9-C4-C5	6.49	108.00	105.40
27	1H	2415	C	C6-N1-C1'	6.49	128.59	120.80
27	1H	2464	A	C5-C6-N6	6.49	128.89	123.70
1	13	268	C	N3-C4-C5	6.49	124.50	121.90
27	1H	647	A	C5-N7-C8	-6.49	100.66	103.90
27	1H	1647	C	C2-N3-C4	-6.49	116.66	119.90
27	1H	2619	C	C2-N3-C4	-6.49	116.66	119.90
27	1H	501	G	N7-C8-N9	6.48	116.34	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2610	G	N9-C4-C5	-6.48	102.81	105.40
27	1H	2713	C	C5-C6-N1	-6.48	117.76	121.00
27	14	621	A	O4'-C1'-N9	6.48	113.39	108.20
27	1H	2610	G	O5'-P-OP1	6.48	118.48	110.70
27	14	1786	A	C4-C5-C6	6.48	120.24	117.00
27	1H	239	C	C6-N1-C2	-6.48	117.71	120.30
27	1H	414	G	N3-C2-N2	6.48	124.44	119.90
27	14	865	C	C2-N1-C1'	6.48	125.92	118.80
27	1H	723	A	C5-C6-N6	-6.48	118.52	123.70
27	14	530	G	C2-N3-C4	-6.48	108.66	111.90
27	1H	535	C	N1-C2-O2	6.47	122.78	118.90
27	1H	782	A	N9-C4-C5	6.47	108.39	105.80
27	1H	2030	C	N3-C2-O2	-6.47	117.37	121.90
27	14	195	A	OP2-P-O3'	6.47	119.44	105.20
27	14	1615	C	C6-N1-C2	6.47	122.89	120.30
27	14	1660	C	N3-C2-O2	-6.47	117.37	121.90
27	1H	553	C	O5'-P-OP1	-6.47	99.88	105.70
27	1H	1607	G	N3-C4-C5	6.47	131.84	128.60
1	1G	1502	A	C2-N3-C4	-6.47	107.37	110.60
1	13	108	G	N1-C6-O6	6.47	123.78	119.90
1	13	529	G	N1-C6-O6	6.47	123.78	119.90
27	1H	831	A	N3-C4-N9	-6.47	122.23	127.40
27	1H	2041	G	C8-N9-C4	-6.47	103.81	106.40
27	14	528	A	C6-C5-N7	-6.47	127.77	132.30
1	13	1125	U	C5-C4-O4	-6.46	122.02	125.90
27	1H	1722	G	N1-C6-O6	-6.46	116.02	119.90
23	2K	3	C	C5-C6-N1	6.46	124.23	121.00
27	1H	147	U	C6-N1-C2	6.46	124.88	121.00
27	1H	473	G	N9-C4-C5	-6.46	102.82	105.40
27	1H	1955	A	N1-C2-N3	6.46	132.53	129.30
27	1H	1958	G	N3-C4-N9	-6.46	122.13	126.00
27	14	1355	G	C4-C5-N7	6.46	113.38	110.80
27	14	1956	U	N1-C2-O2	6.46	127.32	122.80
1	13	1417	G	C8-N9-C1'	-6.46	118.61	127.00
27	1H	777	G	N9-C4-C5	6.45	107.98	105.40
1	1G	311	C	C6-N1-C2	-6.45	117.72	120.30
1	13	629	G	N3-C4-C5	6.45	131.82	128.60
1	13	1512	U	N1-C2-N3	6.45	118.77	114.90
1	1G	299	G	C5-C6-O6	-6.45	124.73	128.60
27	1H	734	G	C6-C5-N7	-6.45	126.53	130.40
27	1H	1618	A	C4-C5-C6	-6.45	113.78	117.00
1	1G	915	A	N9-C4-C5	6.45	108.38	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2440	C	C6-N1-C2	6.45	122.88	120.30
1	13	858	G	C5-C6-O6	6.44	132.47	128.60
27	1H	176	G	C6-C5-N7	-6.44	126.53	130.40
27	1H	1575	A	O4'-C1'-N9	6.44	113.35	108.20
27	1H	2337	C	N3-C4-C5	6.44	124.48	121.90
1	1G	1301	U	N1-C2-O2	6.44	127.31	122.80
27	14	1276	A	C8-N9-C4	6.44	108.38	105.80
27	1H	2610	G	O5'-P-OP2	-6.44	99.91	105.70
27	1H	137	G	C5-N7-C8	-6.44	101.08	104.30
27	1H	2457	G	C2-N3-C4	-6.44	108.68	111.90
27	1H	126	C	C4-C5-C6	6.43	120.62	117.40
27	1H	210	G	N1-C6-O6	6.43	123.76	119.90
27	1H	2076	G	C5-N7-C8	6.43	107.52	104.30
27	14	202	U	C5-C6-N1	-6.43	119.48	122.70
1	13	974	A	O4'-C1'-N9	6.43	113.34	108.20
1	13	1302	U	C6-N1-C1'	-6.43	112.20	121.20
27	1H	786	G	C5-C6-O6	-6.43	124.74	128.60
27	1H	1047	A	N1-C6-N6	6.43	122.46	118.60
27	1H	1262	G	N1-C6-O6	6.43	123.76	119.90
27	1H	1321	A	C5-N7-C8	-6.43	100.69	103.90
27	1H	1999	U	O5'-P-OP2	-6.42	99.92	105.70
27	1H	1823	A	O5'-P-OP2	6.42	118.41	110.70
27	14	2439	A	P-O3'-C3'	6.42	127.41	119.70
27	14	2713	A	C2-N3-C4	-6.42	107.39	110.60
27	14	2821	A	C2-N3-C4	-6.42	107.39	110.60
22	1K	75	C	C6-N1-C2	-6.42	117.73	120.30
1	13	886	G	N3-C4-N9	-6.42	122.15	126.00
27	1H	710	G	N1-C2-N2	-6.42	110.42	116.20
27	1H	1323	A	C5-N7-C8	-6.42	100.69	103.90
27	14	1020	A	C8-N9-C4	6.42	108.37	105.80
27	1H	2566	G	C8-N9-C4	6.42	108.97	106.40
27	14	211	A	N1-C6-N6	6.42	122.45	118.60
35	61	123	LEU	CA-CB-CG	6.42	130.05	115.30
27	14	1619	G	C5-C6-O6	-6.42	124.75	128.60
27	1H	608	C	C5-C4-N4	-6.41	115.71	120.20
1	1G	422	C	O4'-C1'-N1	6.41	113.33	108.20
27	14	2591	C	C4-C5-C6	6.41	120.61	117.40
27	1H	1715	G	O5'-P-OP1	-6.41	99.93	105.70
1	13	913	A	P-O3'-C3'	6.41	127.39	119.70
27	1H	2432	U	OP1-P-O3'	6.41	119.30	105.20
27	14	1264	G	C5-C6-O6	6.41	132.45	128.60
1	13	268	C	C6-N1-C2	6.41	122.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	809	G	C8-N9-C4	-6.41	103.84	106.40
27	1H	189	A	C5-C6-N1	6.41	120.91	117.70
27	1H	513	C	C6-N1-C2	6.41	122.86	120.30
27	1H	908	U	C6-N1-C2	6.41	124.84	121.00
27	1H	1288	A	C5-C6-N1	-6.41	114.50	117.70
28	16	100	G	C4-C5-N7	6.41	113.36	110.80
27	1H	2635	C	N3-C4-N4	-6.41	113.52	118.00
27	1H	585	G	C5-C6-O6	6.40	132.44	128.60
27	1H	1300	A	N1-C6-N6	6.40	122.44	118.60
1	13	117	G	C4-C5-N7	6.40	113.36	110.80
27	1H	905	C	O5'-P-OP2	-6.40	99.94	105.70
27	1H	2325	U	O5'-P-OP1	-6.40	99.94	105.70
27	14	1661	G	C8-N9-C4	6.40	108.96	106.40
27	1H	1419	U	C5-C4-O4	-6.40	122.06	125.90
27	1H	2253	C	N3-C4-C5	6.40	124.46	121.90
1	1G	345	C	C2-N1-C1'	6.40	125.83	118.80
27	1H	828	G	C8-N9-C4	6.39	108.96	106.40
57	P8	9	ARG	NE-CZ-NH1	6.39	123.50	120.30
27	14	1253	A	N1-C6-N6	6.39	122.44	118.60
1	13	505	G	C4-C5-N7	6.39	113.36	110.80
1	13	1495	U	O5'-P-OP2	-6.39	99.95	105.70
1	1G	1060	C	C6-N1-C2	-6.39	117.74	120.30
27	14	1925	C	C6-N1-C2	-6.39	117.74	120.30
27	1H	1002	G	N9-C4-C5	-6.39	102.84	105.40
27	1H	2475	U	C5-C6-N1	-6.39	119.50	122.70
27	14	208	C	N3-C4-C5	6.39	124.46	121.90
27	14	1678	G	N3-C2-N2	6.39	124.37	119.90
27	14	491	G	C5-C6-O6	-6.39	124.77	128.60
27	1H	72	A	O5'-P-OP1	-6.39	99.95	105.70
27	1H	2083	A	N1-C2-N3	-6.39	126.11	129.30
27	14	1678	G	C5-N7-C8	-6.39	101.11	104.30
27	14	1831	G	N3-C4-C5	-6.39	125.41	128.60
27	1H	2039	U	N3-C4-O4	-6.38	114.93	119.40
27	1H	2519	U	C6-N1-C1'	-6.38	112.26	121.20
27	1H	2744	C	C6-N1-C2	-6.38	117.75	120.30
27	14	2495	G	N1-C6-O6	6.38	123.73	119.90
23	2K	76	A	N7-C8-N9	-6.38	110.61	113.80
28	16	81	G	N7-C8-N9	6.38	116.29	113.10
1	13	1182	G	C4-N9-C1'	-6.38	118.21	126.50
27	1H	822	A	N7-C8-N9	6.38	116.99	113.80
27	1H	1807	U	C2-N1-C1'	-6.38	110.05	117.70
1	1G	701	C	C2-N1-C1'	6.38	125.81	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1636	C	C2-N1-C1'	-6.38	111.79	118.80
27	14	1653	G	N3-C4-N9	6.38	129.83	126.00
1	1G	264	U	C5-C4-O4	-6.38	122.08	125.90
27	1H	2285	U	O5'-P-OP1	6.37	118.34	110.70
27	1H	1591	C	C6-N1-C1'	-6.37	113.16	120.80
27	1H	180	A	C4-C5-N7	6.36	113.88	110.70
27	1H	1813	C	N3-C2-O2	6.36	126.35	121.90
27	1H	455	U	N1-C2-O2	6.36	127.25	122.80
1	13	1500	A	C8-N9-C4	6.36	108.34	105.80
27	1H	534	G	N9-C4-C5	-6.36	102.86	105.40
27	1H	1429	G	C4-N9-C1'	-6.36	118.24	126.50
27	1H	1607	G	C2-N3-C4	-6.36	108.72	111.90
27	1H	2829	G	N1-C6-O6	6.36	123.71	119.90
27	14	1641	A	C5-C6-N6	-6.36	118.61	123.70
27	14	1784	A	OP1-P-OP2	6.36	129.14	119.60
27	1H	735	C	C2-N3-C4	6.36	123.08	119.90
27	1H	139	A	N9-C4-C5	-6.35	103.26	105.80
27	1H	239	C	C4-C5-C6	6.35	120.58	117.40
27	1H	1210	G	C4-N9-C1'	-6.35	118.24	126.50
1	1G	115	G	P-O3'-C3'	6.35	127.32	119.70
27	1H	649	G	C8-N9-C4	6.35	108.94	106.40
28	16	114	G	N3-C4-N9	-6.35	122.19	126.00
27	1H	800	A	O5'-P-OP1	-6.35	99.99	105.70
27	1H	1582	U	N1-C2-O2	6.35	127.24	122.80
27	14	2873	A	C2-N3-C4	-6.35	107.43	110.60
27	1H	2601	G	N1-C6-O6	-6.35	116.09	119.90
1	13	1524	C	C2-N3-C4	-6.34	116.73	119.90
27	1H	2395	G	N3-C4-N9	6.34	129.81	126.00
27	14	2488	A	C8-N9-C4	6.34	108.34	105.80
27	1H	880	G	N1-C6-O6	6.34	123.71	119.90
27	1H	1818	A	N1-C2-N3	6.34	132.47	129.30
27	14	1339	G	O5'-P-OP2	6.34	118.31	110.70
27	1H	963	G	N7-C8-N9	6.34	116.27	113.10
27	1H	1746	A	N9-C1'-C2'	6.34	122.24	114.00
27	14	491	G	N1-C6-O6	6.34	123.70	119.90
27	1H	73	A	N1-C2-N3	6.34	132.47	129.30
27	1H	139	A	C8-N9-C4	6.34	108.33	105.80
1	1G	397	A	N9-C4-C5	6.34	108.33	105.80
27	1H	1000	G	N7-C8-N9	6.33	116.27	113.10
27	1H	1083	G	C8-N9-C4	6.33	108.93	106.40
27	1H	1809	U	C4-C5-C6	6.33	123.50	119.70
27	1H	1861	A	N1-C6-N6	-6.33	114.80	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	428	G	N3-C2-N2	-6.33	115.47	119.90
27	1H	465	G	C4-C5-N7	6.33	113.33	110.80
27	1H	2106	G	N3-C2-N2	-6.33	115.47	119.90
27	14	1653	G	P-O3'-C3'	6.33	127.30	119.70
27	14	1763	G	O5'-P-OP2	-6.33	100.00	105.70
27	14	297	C	C6-N1-C2	-6.33	117.77	120.30
27	1H	617	G	N3-C2-N2	6.33	124.33	119.90
27	1H	1831	G	P-O3'-C3'	6.33	127.30	119.70
1	1G	1336	C	P-O3'-C3'	6.33	127.29	119.70
27	1H	1654	C	N1-C2-O2	-6.33	115.10	118.90
27	14	179	G	N1-C6-O6	-6.33	116.10	119.90
27	1H	120	G	C8-N9-C4	6.33	108.93	106.40
1	13	1335	C	N1-C2-O2	6.32	122.69	118.90
27	1H	620	G	N1-C6-O6	6.32	123.69	119.90
27	1H	2508	G	C5-C6-N1	-6.32	108.34	111.50
1	13	505	G	C5-C6-O6	-6.32	124.81	128.60
27	1H	830	A	N1-C6-N6	6.32	122.39	118.60
27	1H	907	G	N3-C4-C5	6.32	131.76	128.60
27	1H	1266	A	N9-C4-C5	6.32	108.33	105.80
27	1H	1600	G	N9-C4-C5	6.32	107.93	105.40
27	1H	1896	U	OP1-P-O3'	6.32	119.11	105.20
27	14	1440	G	C8-N9-C4	6.32	108.93	106.40
27	1H	2576	U	OP1-P-OP2	6.32	129.08	119.60
27	1H	175	U	C5-C6-N1	-6.32	119.54	122.70
27	1H	724	A	C5-C6-N1	-6.32	114.54	117.70
27	1H	2084	G	N1-C2-N2	-6.32	110.52	116.20
27	14	1993	U	O5'-P-OP1	-6.32	100.01	105.70
27	1H	1855	G	N3-C2-N2	-6.32	115.48	119.90
27	1H	2034	U	N3-C4-C5	-6.32	110.81	114.60
27	14	1253	A	N9-C4-C5	-6.32	103.27	105.80
27	1H	1000	G	N9-C4-C5	6.31	107.93	105.40
27	1H	1565	C	C5-C6-N1	-6.31	117.84	121.00
27	1H	1708	C	O5'-P-OP2	-6.31	100.02	105.70
27	1H	2079	G	O4'-C1'-N9	-6.31	103.15	108.20
27	14	1426	G	C6-C5-N7	-6.31	126.61	130.40
27	1H	98	U	C2-N1-C1'	6.31	125.28	117.70
35	61	9	LEU	CA-CB-CG	6.31	129.82	115.30
27	1H	2715	U	N3-C2-O2	-6.31	117.78	122.20
27	1H	343	C	C6-N1-C2	-6.31	117.78	120.30
27	1H	475	U	N1-C2-O2	-6.31	118.38	122.80
27	1H	2090	G	N9-C4-C5	6.31	107.92	105.40
27	14	1757	U	C2-N1-C1'	-6.31	110.13	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	928	G	C8-N9-C1'	6.31	135.20	127.00
27	1H	2694	C	N1-C2-O2	6.31	122.68	118.90
27	14	1204	A	P-O3'-C3'	6.31	127.27	119.70
27	14	1516	U	N3-C2-O2	-6.31	117.78	122.20
27	1H	1158	A	O4'-C1'-N9	6.31	113.25	108.20
1	13	521	G	O5'-P-OP2	-6.30	100.03	105.70
1	13	1300	G	N3-C4-C5	6.30	131.75	128.60
1	1G	690	G	C6-C5-N7	-6.30	126.62	130.40
27	14	188	G	N3-C4-N9	6.30	129.78	126.00
1	13	770	C	OP1-P-OP2	-6.30	110.14	119.60
27	1H	1622	C	C2-N3-C4	-6.30	116.75	119.90
27	1H	2718	A	C5-C6-N6	-6.30	118.66	123.70
1	1G	1301	U	N3-C2-O2	-6.30	117.79	122.20
27	14	247	G	C5-C6-O6	-6.30	124.82	128.60
1	13	974	A	N1-C6-N6	6.30	122.38	118.60
27	1H	673	G	C8-N9-C4	-6.30	103.88	106.40
27	1H	1862	C	N3-C4-C5	6.30	124.42	121.90
27	1H	2242	C	N3-C4-N4	-6.30	113.59	118.00
1	1G	1297	C	P-O3'-C3'	6.30	127.26	119.70
27	14	2392	A	C8-N9-C4	-6.30	103.28	105.80
27	1H	2635	C	C5-C4-N4	6.30	124.61	120.20
27	14	2272	U	O5'-P-OP2	-6.30	100.03	105.70
27	1H	722	G	C5-C6-N1	6.30	114.65	111.50
27	1H	778	C	N3-C4-C5	6.30	124.42	121.90
27	1H	2592	C	O5'-P-OP2	-6.30	100.03	105.70
27	1H	2624	U	N3-C2-O2	-6.30	117.79	122.20
27	1H	2508	G	N1-C6-O6	6.29	123.68	119.90
27	1H	2610	G	C6-C5-N7	-6.29	126.62	130.40
27	14	1309	G	O5'-P-OP2	-6.29	100.04	105.70
1	13	108	G	C6-C5-N7	-6.29	126.62	130.40
27	1H	218	A	P-O3'-C3'	6.29	127.25	119.70
27	1H	734	G	C5-C6-O6	-6.29	124.83	128.60
27	1H	2627	A	N1-C6-N6	6.29	122.38	118.60
27	14	1614	A	C6-C5-N7	-6.29	127.90	132.30
27	1H	1292	G	C5-C6-O6	6.29	132.37	128.60
27	1H	521	G	N3-C2-N2	-6.29	115.50	119.90
27	1H	140	A	C2-N3-C4	-6.28	107.46	110.60
27	14	120	U	O5'-P-OP2	6.28	118.24	110.70
27	14	1255	U	O5'-P-OP1	6.28	118.24	110.70
27	14	1616	A	C5-N7-C8	-6.28	100.76	103.90
27	14	1835	G	C4-N9-C1'	6.28	134.67	126.50
1	13	673	G	C5-C6-O6	-6.28	124.83	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1419	U	N3-C4-O4	6.28	123.80	119.40
27	1H	1804	G	N1-C6-O6	-6.28	116.13	119.90
27	1H	2702	U	N1-C2-N3	6.28	118.67	114.90
1	13	330	C	N1-C2-O2	6.28	122.67	118.90
27	1H	2606	U	N3-C2-O2	-6.28	117.81	122.20
27	1H	1379	G	C8-N9-C1'	-6.28	118.84	127.00
25	4L	45	U	C5-C4-O4	6.28	129.67	125.90
1	13	701	C	N3-C2-O2	-6.28	117.51	121.90
27	1H	856	G	C6-N1-C2	-6.28	121.33	125.10
27	1H	1708	C	C2-N3-C4	-6.28	116.76	119.90
27	14	2059	A	OP2-P-O3'	6.28	119.00	105.20
27	14	2791	C	C6-N1-C2	-6.28	117.79	120.30
1	13	1483	A	N1-C6-N6	-6.27	114.84	118.60
27	1H	2010	G	N7-C8-N9	-6.27	109.96	113.10
27	1H	140	A	N7-C8-N9	6.27	116.94	113.80
27	1H	1746	A	C5-C6-N1	-6.27	114.56	117.70
27	1H	2052	G	C5-C6-O6	-6.27	124.84	128.60
27	1H	1485	U	N3-C2-O2	-6.27	117.81	122.20
1	1G	20	U	C6-N1-C2	6.27	124.76	121.00
27	14	666	G	O5'-P-OP1	6.27	118.22	110.70
1	1G	1417	G	C4-C5-N7	6.27	113.31	110.80
20	BA	6	PRO	N-CA-CB	6.27	110.82	103.30
27	1H	723	A	C4-C5-N7	6.26	113.83	110.70
27	1H	1844	A	OP1-P-OP2	6.26	129.00	119.60
27	1H	580	G	C4-N9-C1'	6.26	134.64	126.50
27	14	451	C	N1-C2-O2	-6.26	115.14	118.90
27	1H	801	C	O5'-P-OP2	-6.26	100.06	105.70
28	16	5	C	C6-N1-C2	6.26	122.81	120.30
27	1H	1471	G	OP1-P-OP2	6.26	128.99	119.60
2	12	27	LYS	C-N-CA	6.26	137.35	121.70
27	14	1269	A	C2-N3-C4	-6.26	107.47	110.60
27	1H	48	A	C4-C5-C6	6.26	120.13	117.00
27	1H	1833	G	C4-C5-N7	6.26	113.30	110.80
57	P8	42	LEU	CB-CG-CD1	-6.25	100.37	111.00
27	1H	2531	A	N1-C6-N6	6.25	122.35	118.60
27	14	186	G	C8-N9-C4	6.25	108.90	106.40
27	14	1831	G	C8-N9-C1'	-6.25	118.87	127.00
27	14	2012	G	C8-N9-C1'	-6.25	118.87	127.00
27	1H	1409	C	O5'-P-OP1	-6.25	100.07	105.70
27	1H	1872	G	N1-C6-O6	6.25	123.65	119.90
27	1H	2464	A	C8-N9-C4	-6.25	103.30	105.80
27	1H	2830	G	N9-C4-C5	-6.25	102.90	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	2L	17	C	C5-C6-N1	6.25	124.12	121.00
27	1H	2291	A	C2-N3-C4	6.25	113.72	110.60
27	1H	2456	C	C5-C6-N1	-6.25	117.88	121.00
27	14	1568	G	C6-C5-N7	6.25	134.15	130.40
27	1H	1395	G	N3-C2-N2	-6.25	115.53	119.90
27	14	759	G	C8-N9-C4	6.25	108.90	106.40
1	13	1260	C	C2-N1-C1'	6.24	125.67	118.80
27	1H	830	A	C5-C6-N6	-6.24	118.71	123.70
27	1H	897	A	C8-N9-C4	6.24	108.30	105.80
27	1H	2387	C	N3-C4-C5	6.24	124.40	121.90
1	1G	1346	A	P-O3'-C3'	6.24	127.19	119.70
27	1H	2619	C	C6-N1-C2	6.24	122.80	120.30
27	1H	112	U	N1-C2-N3	-6.24	111.16	114.90
27	1H	2562	G	N3-C4-C5	-6.24	125.48	128.60
27	1H	2624	U	N1-C2-O2	6.24	127.17	122.80
27	14	577	G	C6-C5-N7	-6.24	126.66	130.40
27	14	2239	G	N1-C6-O6	-6.24	116.16	119.90
27	14	827	U	C2-N1-C1'	-6.23	110.22	117.70
27	1H	1620	A	C8-N9-C4	6.23	108.29	105.80
1	1G	1129	C	C2-N1-C1'	6.23	125.66	118.80
27	14	1277	G	C8-N9-C4	6.23	108.89	106.40
27	1H	986	G	C5-N7-C8	-6.23	101.19	104.30
27	1H	1303	G	C5-C6-O6	-6.23	124.86	128.60
1	1G	890	G	O4'-C1'-N9	6.23	113.18	108.20
27	1H	2029	C	N3-C4-N4	6.23	122.36	118.00
27	1H	2366	G	N3-C4-N9	-6.23	122.26	126.00
27	1H	2623	C	N3-C4-N4	-6.23	113.64	118.00
1	13	1511	G	O5'-P-OP2	-6.23	100.10	105.70
27	1H	2393	C	C2-N3-C4	-6.23	116.79	119.90
27	1H	524	G	N3-C2-N2	-6.22	115.54	119.90
27	1H	1867	G	C5-C6-O6	-6.22	124.86	128.60
27	1H	2562	G	C4-N9-C1'	6.22	134.59	126.50
27	14	831	G	N1-C6-O6	6.22	123.63	119.90
1	13	784	C	C6-N1-C2	6.22	122.79	120.30
27	1H	1845	G	C8-N9-C4	6.22	108.89	106.40
27	14	603	A	C8-N9-C4	-6.22	103.31	105.80
27	1H	2333	A	O4'-C1'-N9	6.21	113.17	108.20
27	14	783	A	N7-C8-N9	6.21	116.91	113.80
27	1H	354	G	O5'-P-OP2	-6.21	100.11	105.70
27	14	947	G	N3-C4-C5	6.21	131.71	128.60
27	1H	180	A	N3-C4-C5	6.21	131.15	126.80
27	1H	463	C	C6-N1-C2	6.21	122.78	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2345	U	C6-N1-C2	6.21	124.73	121.00
27	1H	497	A	N1-C2-N3	6.21	132.40	129.30
27	14	974	G	C5-N7-C8	-6.21	101.20	104.30
1	1G	1502	A	N1-C2-N3	6.21	132.40	129.30
25	4L	45	U	O4'-C1'-N1	6.21	113.16	108.20
27	1H	1488	G	C8-N9-C4	6.20	108.88	106.40
27	1H	2320	G	C4-C5-N7	6.20	113.28	110.80
27	1H	1078	G	C8-N9-C4	-6.20	103.92	106.40
27	14	2436	G	N3-C2-N2	-6.20	115.56	119.90
27	1H	2740	U	C5-C4-O4	6.20	129.62	125.90
27	14	189	G	N3-C4-C5	6.20	131.70	128.60
1	13	791	G	N3-C2-N2	6.20	124.24	119.90
1	13	812	C	C6-N1-C2	-6.20	117.82	120.30
27	14	1574	C	O5'-P-OP2	-6.20	100.12	105.70
27	1H	1073	U	N1-C2-O2	-6.20	118.46	122.80
27	1H	1619	A	C4-C5-C6	6.20	120.10	117.00
27	14	1636	C	N1-C2-O2	-6.20	115.18	118.90
27	1H	1925	C	C2-N1-C1'	6.19	125.61	118.80
27	1H	189	A	C5-N7-C8	6.19	107.00	103.90
27	1H	839	C	C6-N1-C2	6.19	122.78	120.30
27	1H	2507	G	N1-C6-O6	-6.19	116.18	119.90
27	14	834	C	O5'-P-OP2	-6.19	100.13	105.70
27	1H	1813	C	N1-C2-N3	-6.19	114.87	119.20
27	1H	2453	C	N3-C4-C5	-6.19	119.42	121.90
27	1H	2641	C	N3-C4-N4	-6.19	113.67	118.00
27	14	2619	C	C6-N1-C2	6.19	122.78	120.30
27	1H	2324	A	N1-C2-N3	6.19	132.40	129.30
27	1H	796	G	C8-N9-C4	6.19	108.88	106.40
1	13	741	G	N1-C6-O6	6.18	123.61	119.90
27	1H	556	G	C8-N9-C1'	6.18	135.04	127.00
27	1H	1250	A	N1-C6-N6	6.18	122.31	118.60
27	14	976	C	C2-N1-C1'	6.18	125.60	118.80
1	13	690	G	N9-C4-C5	6.18	107.87	105.40
27	1H	2386	G	C8-N9-C4	6.18	108.87	106.40
27	1H	2284	G	N7-C8-N9	-6.18	110.01	113.10
1	13	529	G	N3-C2-N2	-6.18	115.58	119.90
27	14	1614	A	C2-N3-C4	-6.18	107.51	110.60
1	13	1411	C	N3-C4-C5	6.18	124.37	121.90
27	1H	1742	C	C6-N1-C2	-6.18	117.83	120.30
27	1H	2050	G	N1-C6-O6	-6.17	116.19	119.90
27	1H	2765	G	C8-N9-C4	-6.17	103.93	106.40
27	14	974	G	C4-N9-C1'	-6.17	118.47	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2000	G	N1-C6-O6	-6.17	116.19	119.90
27	1H	603	G	C5-N7-C8	6.17	107.39	104.30
27	1H	2530	C	N1-C2-O2	-6.17	115.20	118.90
27	14	2873	A	O4'-C1'-N9	6.17	113.14	108.20
1	13	963	G	N3-C4-N9	6.17	129.70	126.00
27	1H	186	A	C8-N9-C4	6.17	108.27	105.80
27	1H	2896	C	N1-C2-O2	6.17	122.60	118.90
1	1G	1381	U	N3-C2-O2	-6.17	117.88	122.20
27	1H	841	A	N1-C6-N6	6.17	122.30	118.60
27	1H	432	C	P-O3'-C3'	6.17	127.10	119.70
27	1H	524	G	N1-C2-N2	6.17	121.75	116.20
27	1H	762	U	C5-C6-N1	-6.16	119.62	122.70
27	14	621	A	N7-C8-N9	6.16	116.88	113.80
1	13	5	U	P-O3'-C3'	6.16	127.09	119.70
27	1H	1211	G	C5-C6-O6	6.16	132.30	128.60
27	1H	2042	A	P-O3'-C3'	6.16	127.09	119.70
27	1H	1002	G	C8-N9-C4	6.16	108.86	106.40
27	1H	1295	G	C8-N9-C4	6.16	108.86	106.40
27	14	2440	C	C2-N1-C1'	-6.16	112.03	118.80
27	1H	2244	C	N1-C2-O2	-6.16	115.21	118.90
27	14	2287	A	O5'-P-OP2	-6.16	100.16	105.70
27	1H	2044	C	C6-N1-C2	6.16	122.76	120.30
1	1G	197	A	N7-C8-N9	6.16	116.88	113.80
24	3L	76	A	C5-N7-C8	-6.16	100.82	103.90
27	14	2539	C	C6-N1-C2	6.16	122.76	120.30
1	13	898	G	C5-C6-O6	-6.15	124.91	128.60
27	1H	2504	U	C6-N1-C2	6.15	124.69	121.00
27	14	2355	C	C6-N1-C2	6.15	122.76	120.30
27	1H	735	C	C5-C4-N4	6.15	124.51	120.20
27	1H	781	G	C8-N9-C1'	-6.15	119.00	127.00
27	1H	868	A	N1-C6-N6	6.15	122.29	118.60
27	1H	1314	U	O5'-P-OP1	-6.15	100.16	105.70
27	14	2554	U	O5'-P-OP2	-6.15	100.16	105.70
1	13	339	C	O5'-P-OP2	-6.15	100.17	105.70
27	1H	1701	G	C6-C5-N7	-6.15	126.71	130.40
1	1G	530	G	C8-N9-C4	6.15	108.86	106.40
27	14	1777	U	C5-C6-N1	-6.15	119.62	122.70
27	1H	662	G	N1-C6-O6	6.15	123.59	119.90
27	14	1639	U	O5'-P-OP2	-6.15	100.17	105.70
27	1H	474	A	C5-N7-C8	-6.15	100.83	103.90
27	1H	1701	G	N7-C8-N9	6.15	116.17	113.10
27	1H	2578	A	C4-C5-C6	-6.15	113.93	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2619	C	N3-C4-C5	6.15	124.36	121.90
1	13	1498	UR3	P-O3'-C3'	6.15	127.08	119.70
27	1H	1187	U	N1-C2-O2	-6.14	118.50	122.80
27	1H	2090	G	N1-C2-N2	6.14	121.73	116.20
27	1H	2505	U	C5-C6-N1	6.14	125.77	122.70
27	14	943	U	N3-C2-O2	6.14	126.50	122.20
27	14	1653	G	C4-N9-C1'	6.14	134.49	126.50
27	1H	2531	A	C4-C5-C6	6.14	120.07	117.00
27	1H	2291	A	N1-C6-N6	-6.14	114.92	118.60
27	1H	2394	C	N1-C2-O2	-6.14	115.22	118.90
27	1H	2718	A	C4-C5-N7	6.14	113.77	110.70
27	14	1328	G	O5'-P-OP1	6.14	118.07	110.70
27	1H	2587	G	N1-C6-O6	-6.14	116.22	119.90
27	1H	420	C	C6-N1-C2	6.14	122.75	120.30
27	1H	983	U	C5-C6-N1	-6.14	119.63	122.70
27	1H	1796	G	N1-C6-O6	-6.14	116.22	119.90
27	14	2252	G	OP1-P-OP2	6.14	128.81	119.60
27	1H	2081	A	N7-C8-N9	-6.13	110.73	113.80
1	13	1158	C	C2-N1-C1'	6.13	125.55	118.80
27	1H	2793	U	C2-N3-C4	-6.13	123.32	127.00
27	1H	2727	A	N7-C8-N9	6.13	116.87	113.80
28	16	56	G	C6-C5-N7	-6.13	126.72	130.40
27	14	1285	G	C6-C5-N7	-6.13	126.72	130.40
27	1H	85	C	N3-C4-N4	-6.13	113.71	118.00
27	1H	1396	A	C4-C5-N7	6.13	113.76	110.70
27	1H	1833	G	N9-C4-C5	-6.13	102.95	105.40
27	1H	2601	G	OP1-P-OP2	-6.12	110.41	119.60
27	1H	2457	G	N3-C4-N9	-6.12	122.33	126.00
27	1H	2595	G	N3-C4-N9	6.12	129.67	126.00
27	1H	46	C	C2-N3-C4	-6.12	116.84	119.90
27	1H	710	G	N1-C2-N3	6.12	127.57	123.90
27	1H	1986	U	C2-N1-C1'	6.12	125.05	117.70
27	1H	2427	G	C6-C5-N7	-6.12	126.73	130.40
47	B5	70	LEU	CA-CB-CG	6.12	129.38	115.30
27	1H	2609	U	N1-C2-O2	-6.12	118.52	122.80
27	14	2646	C	O5'-P-OP1	6.12	118.04	110.70
27	1H	1991	G	O5'-P-OP2	6.12	118.04	110.70
27	1H	617	G	C2-N3-C4	-6.11	108.84	111.90
27	1H	2578	A	C6-N1-C2	6.11	122.27	118.60
23	2K	5	G	C8-N9-C4	6.11	108.84	106.40
27	1H	1348	A	C5-C6-N6	-6.11	118.81	123.70
27	14	2296	U	N1-C2-N3	6.11	118.56	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	676	A	N3-C4-C5	6.11	131.07	126.80
27	14	1226	G	N1-C6-O6	-6.11	116.23	119.90
27	1H	731	C	O5'-P-OP2	-6.11	100.20	105.70
27	1H	1307	G	C6-C5-N7	-6.11	126.74	130.40
27	1H	1420	A	N7-C8-N9	-6.11	110.75	113.80
27	1H	1856	G	N3-C2-N2	-6.10	115.63	119.90
27	1H	205	G	C2-N3-C4	-6.10	108.85	111.90
27	1H	1467	U	P-O3'-C3'	6.10	127.02	119.70
27	1H	2398	C	N3-C4-C5	6.10	124.34	121.90
1	1G	1127	G	C2-N3-C4	-6.10	108.85	111.90
27	14	2429	G	N3-C4-C5	6.10	131.65	128.60
27	14	2542	A	C8-N9-C4	6.10	108.24	105.80
27	1H	130	G	N1-C2-N2	-6.10	110.71	116.20
27	1H	137	G	C5-C6-N1	6.10	114.55	111.50
27	1H	928	G	C4-N9-C1'	-6.10	118.57	126.50
27	1H	2095	G	N1-C6-O6	6.10	123.56	119.90
28	16	64	C	N1-C2-O2	6.10	122.56	118.90
27	14	1982	C	C6-N1-C2	6.10	122.74	120.30
27	1H	1564	G	OP1-P-O3'	6.10	118.61	105.20
27	1H	2443	A	OP1-P-OP2	-6.10	110.46	119.60
27	1H	1815	A	O5'-P-OP2	6.09	118.01	110.70
1	13	812	C	O5'-P-OP2	6.09	118.01	110.70
27	1H	359	C	P-O3'-C3'	6.09	127.01	119.70
27	1H	563	C	O5'-P-OP2	-6.09	100.22	105.70
27	1H	1871	G	C4-C5-N7	6.09	113.24	110.80
27	1H	2342	G	C8-N9-C4	6.09	108.84	106.40
27	14	1300	U	P-O3'-C3'	6.09	127.01	119.70
27	14	288	C	N1-C2-O2	6.09	122.55	118.90
27	14	1192	G	N1-C6-O6	6.09	123.55	119.90
27	14	2723	C	N1-C2-O2	-6.09	115.25	118.90
1	13	1305	G	O5'-P-OP1	-6.09	100.22	105.70
27	14	1895	C	C2-N1-C1'	6.09	125.49	118.80
27	1H	122	G	N7-C8-N9	-6.08	110.06	113.10
1	13	247	G	N3-C4-C5	-6.08	125.56	128.60
27	1H	782	A	C8-N9-C4	-6.08	103.37	105.80
27	1H	1194	C	N1-C2-O2	-6.08	115.25	118.90
27	1H	1206	U	C5-C6-N1	-6.08	119.66	122.70
24	3L	72	C	C6-N1-C2	-6.08	117.87	120.30
27	14	464	U	N1-C2-N3	6.08	118.55	114.90
27	14	1429	G	N7-C8-N9	6.08	116.14	113.10
27	14	2429	G	C4-N9-C1'	-6.08	118.59	126.50
27	14	2500	U	N3-C4-O4	-6.08	115.14	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	324	A	OP2-P-O3'	6.08	118.58	105.20
27	1H	1361	C	C6-N1-C1'	-6.08	113.50	120.80
1	1G	908	A	N7-C8-N9	-6.08	110.76	113.80
27	14	795	C	O5'-P-OP2	-6.08	100.23	105.70
27	14	1771	C	C2-N3-C4	-6.08	116.86	119.90
27	1H	202	G	O5'-P-OP1	6.08	118.00	110.70
1	1G	353	A	C5-N7-C8	-6.08	100.86	103.90
27	1H	593	U	C5-C6-N1	-6.08	119.66	122.70
27	1H	1528	G	C8-N9-C4	-6.08	103.97	106.40
27	1H	1622	C	C6-N1-C2	6.08	122.73	120.30
27	1H	1856	G	C5-C6-O6	-6.08	124.95	128.60
27	1H	2507	G	N9-C4-C5	6.08	107.83	105.40
27	1H	2591	G	C4-C5-N7	6.08	113.23	110.80
27	14	974(A)	C	N3-C4-N4	-6.08	113.75	118.00
1	13	1497	G	O5'-P-OP2	-6.08	100.23	105.70
27	1H	984	G	O5'-P-OP1	6.08	117.99	110.70
27	1H	2376	C	C5-C6-N1	-6.08	117.96	121.00
30	11	46	GLN	C-N-CA	-6.08	109.54	122.30
27	14	2712	U	C5-C4-O4	6.08	129.54	125.90
1	1G	686	U	C5-C6-N1	-6.07	119.66	122.70
27	14	2688	U	N3-C2-O2	-6.07	117.95	122.20
1	13	1502	A	C2-N3-C4	-6.07	107.56	110.60
27	1H	490	G	C8-N9-C4	6.07	108.83	106.40
1	13	1514	C	C4-C5-C6	6.07	120.44	117.40
27	1H	213	A	O5'-P-OP2	6.07	117.98	110.70
27	1H	218	A	OP1-P-O3'	6.07	118.55	105.20
27	1H	615	C	C5-C6-N1	-6.07	117.97	121.00
27	1H	2087	C	O5'-P-OP2	-6.07	100.24	105.70
27	14	1809	A	OP1-P-O3'	6.07	118.56	105.20
27	1H	2620	G	N3-C2-N2	6.07	124.15	119.90
27	14	1379	A	N3-C4-C5	6.07	131.05	126.80
27	1H	1233	G	C6-C5-N7	-6.07	126.76	130.40
27	1H	528	A	C8-N9-C4	6.07	108.23	105.80
27	1H	1649	U	O5'-P-OP2	6.07	117.98	110.70
27	1H	2252	G	C5-C6-O6	-6.07	124.96	128.60
27	14	148	C	C6-N1-C2	6.07	122.73	120.30
27	14	188	G	N1-C2-N2	-6.07	110.74	116.20
27	1H	982	C	C5-C6-N1	-6.06	117.97	121.00
1	13	266	G	C5-N7-C8	-6.06	101.27	104.30
27	1H	1606	A	P-O3'-C3'	6.06	126.97	119.70
27	1H	1989	A	N7-C8-N9	-6.06	110.77	113.80
27	1H	2531	A	N1-C2-N3	6.06	132.33	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2606	U	C5-C4-O4	6.06	129.54	125.90
27	14	386	G	O5'-P-OP1	-6.06	100.24	105.70
27	14	445	C	N3-C4-C5	-6.06	119.47	121.90
27	14	1940	U	C2-N3-C4	-6.06	123.36	127.00
27	1H	2320	G	C4-C5-C6	6.06	122.44	118.80
1	13	765	G	C8-N9-C4	6.06	108.82	106.40
27	1H	1317	C	N3-C4-C5	6.06	124.32	121.90
27	1H	2620	G	N1-C2-N2	-6.06	110.75	116.20
27	14	492	A	O5'-P-OP2	-6.06	100.25	105.70
27	14	535	C	O5'-P-OP2	-6.06	100.25	105.70
27	14	1328	G	O5'-P-OP2	-6.06	100.25	105.70
27	1H	555	A	C8-N9-C4	-6.06	103.38	105.80
27	1H	2481	G	C5-N7-C8	-6.06	101.27	104.30
27	1H	782	A	N1-C2-N3	6.05	132.33	129.30
27	1H	1822	C	N1-C2-O2	-6.05	115.27	118.90
27	14	1672	C	C6-N1-C2	6.05	122.72	120.30
27	1H	2008	G	C4-C5-N7	-6.05	108.38	110.80
27	1H	2036	A	N7-C8-N9	-6.05	110.77	113.80
27	1H	607	G	C5-C6-O6	-6.05	124.97	128.60
27	1H	721	C	N3-C4-N4	6.05	122.24	118.00
27	1H	1925	C	N1-C2-O2	6.05	122.53	118.90
27	1H	1963	U	C5-C4-O4	-6.05	122.27	125.90
28	16	21	G	C8-N9-C4	-6.05	103.98	106.40
1	13	813	U	OP1-P-OP2	-6.05	110.53	119.60
1	13	1397	C	N1-C2-O2	6.05	122.53	118.90
27	1H	649	G	O5'-P-OP2	-6.05	100.26	105.70
27	1H	2113	G	N1-C6-O6	6.05	123.53	119.90
27	1H	2630	C	C6-N1-C2	6.05	122.72	120.30
28	16	109	G	C8-N9-C4	-6.05	103.98	106.40
27	14	1679	U	O5'-P-OP1	-6.05	100.25	105.70
1	13	968	A	N1-C6-N6	6.05	122.23	118.60
27	1H	868	A	O5'-P-OP1	-6.05	100.26	105.70
27	1H	2006	C	C4-C5-C6	6.05	120.42	117.40
27	1H	2398	C	C6-N1-C2	6.05	122.72	120.30
27	14	1404	C	N1-C2-O2	6.05	122.53	118.90
27	14	2016	U	C5-C6-N1	-6.05	119.68	122.70
27	1H	789	G	N3-C4-C5	-6.04	125.58	128.60
27	1H	2220	U	N3-C2-O2	-6.04	117.97	122.20
27	14	2032	G	C5-N7-C8	6.04	107.32	104.30
27	1H	869	A	N1-C6-N6	-6.04	114.97	118.60
27	1H	2007	G	C5-C6-O6	6.04	132.23	128.60
1	1G	690	G	C4-C5-N7	6.04	113.22	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1835	G	N1-C2-N2	-6.04	110.76	116.20
27	1H	838	C	N3-C2-O2	6.04	126.13	121.90
1	1G	87	A	P-O3'-C3'	6.04	126.95	119.70
27	14	2599	G	N1-C6-O6	-6.04	116.28	119.90
27	1H	1078	G	N7-C8-N9	6.04	116.12	113.10
27	1H	1729	G	N9-C4-C5	-6.04	102.98	105.40
27	1H	2226	U	C2-N1-C1'	-6.04	110.45	117.70
1	13	1354	C	C6-N1-C2	-6.04	117.89	120.30
27	1H	424	G	N1-C6-O6	6.04	123.52	119.90
27	1H	723	A	N1-C6-N6	6.04	122.22	118.60
27	1H	734	G	C4-C5-N7	6.04	113.21	110.80
27	1H	2398	C	N1-C2-O2	-6.04	115.28	118.90
27	1H	2617	U	N1-C2-N3	-6.04	111.28	114.90
46	E8	19	LEU	CA-CB-CG	-6.04	101.42	115.30
27	14	1558	A	N1-C2-N3	6.04	132.32	129.30
27	1H	712	C	N3-C4-C5	6.03	124.31	121.90
27	14	1249	U	O5'-P-OP1	-6.03	100.27	105.70
27	14	2430	A	C5-C6-N1	-6.03	114.68	117.70
1	1G	701	C	OP2-P-O3'	6.03	118.47	105.20
27	14	2776	A	C8-N9-C4	-6.03	103.39	105.80
1	13	352	C	O5'-P-OP2	-6.03	100.27	105.70
27	1H	1836	C	N1-C2-O2	6.03	122.52	118.90
28	1J	43	C	N3-C2-O2	-6.03	117.68	121.90
1	1G	690	G	C5-N7-C8	-6.03	101.28	104.30
27	14	2032	G	P-O3'-C3'	6.03	126.94	119.70
27	14	58	G	C6-C5-N7	-6.03	126.78	130.40
27	14	2713	A	O4'-C1'-N9	-6.03	103.38	108.20
27	14	1644	C	N3-C2-O2	-6.03	117.68	121.90
27	1H	2034	U	C4-C5-C6	6.02	123.31	119.70
27	1H	480	C	N1-C2-O2	-6.02	115.29	118.90
27	1H	727	C	N3-C2-O2	-6.02	117.68	121.90
27	1H	1494	C	C6-N1-C2	-6.02	117.89	120.30
27	1H	2628	U	N1-C2-O2	6.02	127.01	122.80
27	14	2645	G	C6-C5-N7	-6.02	126.79	130.40
27	1H	2427	G	N1-C2-N2	-6.02	110.78	116.20
27	1H	2641	C	O5'-P-OP2	-6.02	100.28	105.70
27	1H	2359	A	N3-C4-C5	6.02	131.01	126.80
27	1H	2611	A	N7-C8-N9	-6.02	110.79	113.80
27	1H	869	A	C6-N1-C2	-6.01	114.99	118.60
27	1H	2443	A	N9-C4-C5	-6.01	103.39	105.80
27	1H	2826	C	N1-C2-O2	-6.01	115.29	118.90
27	1H	184	G	C8-N9-C4	6.01	108.80	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1796	G	C8-N9-C4	-6.01	104.00	106.40
27	1H	1844	A	O5'-P-OP2	-6.01	100.29	105.70
1	13	1511	G	O5'-P-OP1	6.01	117.91	110.70
27	1H	734	G	C8-N9-C1'	-6.01	119.19	127.00
27	1H	800	A	C4-C5-N7	6.01	113.70	110.70
27	1H	1572	G	N1-C6-O6	-6.01	116.30	119.90
27	1H	2352	G	N1-C6-O6	-6.01	116.29	119.90
27	1H	2793	U	C4-C5-C6	6.01	123.31	119.70
1	13	800	G	N1-C6-O6	6.01	123.50	119.90
27	14	1333	C	N3-C4-C5	6.01	124.30	121.90
27	14	2473	U	C2-N1-C1'	6.01	124.91	117.70
27	1H	438	G	N1-C6-O6	6.01	123.50	119.90
27	1H	2029	C	C2-N3-C4	-6.01	116.90	119.90
27	1H	2731	G	C8-N9-C4	6.01	108.80	106.40
1	1G	960	U	C5-C6-N1	6.00	125.70	122.70
27	1H	2597	U	C2-N1-C1'	6.00	124.90	117.70
1	13	45	U	C5-C6-N1	-6.00	119.70	122.70
1	13	521	G	OP1-P-OP2	6.00	128.60	119.60
27	1H	64	C	N3-C2-O2	-6.00	117.70	121.90
27	1H	145	G	C5-C6-N1	-6.00	108.50	111.50
27	14	782	A	N1-C6-N6	6.00	122.20	118.60
27	14	1562	A	N9-C4-C5	-6.00	103.40	105.80
1	13	880	C	C6-N1-C2	6.00	122.70	120.30
1	13	1139	G	P-O3'-C3'	6.00	126.90	119.70
27	1H	1691	G	N1-C6-O6	-6.00	116.30	119.90
27	1H	2400	U	OP2-P-O3'	6.00	118.39	105.20
27	1H	2456	C	C6-N1-C2	6.00	122.70	120.30
27	14	306	U	O5'-P-OP1	-5.99	100.31	105.70
27	14	2453	A	N9-C4-C5	-5.99	103.40	105.80
27	1H	112	U	N1-C2-O2	5.99	126.99	122.80
27	14	74	A	C5-C6-N1	-5.99	114.70	117.70
27	1H	2512	C	N3-C2-O2	5.99	126.09	121.90
1	1G	138	G	N3-C4-C5	5.99	131.59	128.60
27	14	1210	A	C6-C5-N7	-5.99	128.11	132.30
1	13	863	U	C2-N1-C1'	-5.99	110.51	117.70
27	1H	1701	G	C4-C5-C6	5.99	122.39	118.80
27	1H	129	G	O5'-P-OP2	-5.99	100.31	105.70
27	1H	799	A	N1-C6-N6	5.99	122.19	118.60
27	14	2477	C	C2-N1-C1'	5.99	125.39	118.80
27	1H	477	G	O5'-P-OP1	-5.99	100.31	105.70
27	1H	1922	G	C6-C5-N7	5.99	133.99	130.40
27	14	1844	C	N3-C4-C5	5.99	124.30	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1899	G	N1-C2-N3	5.99	127.49	123.90
1	13	1412	C	C6-N1-C2	5.98	122.69	120.30
1	1G	1406	U	N1-C2-N3	5.98	118.49	114.90
27	1H	178	G	N3-C2-N2	-5.98	115.71	119.90
27	1H	2096	C	N3-C2-O2	-5.98	117.71	121.90
27	14	1227	A	C8-N9-C4	5.98	108.19	105.80
27	14	2690	C	C6-N1-C2	5.98	122.69	120.30
1	13	372	C	N1-C2-O2	5.98	122.49	118.90
27	1H	1907	A	C8-N9-C4	5.98	108.19	105.80
1	1G	828	A	C8-N9-C4	5.98	108.19	105.80
27	1H	2530	C	N3-C2-O2	5.98	126.09	121.90
27	1H	576	G	C5-C6-O6	5.98	132.19	128.60
27	1H	742	U	N3-C2-O2	-5.98	118.02	122.20
27	1H	913	C	O5'-P-OP1	-5.98	100.32	105.70
27	14	698	C	C4-C5-C6	5.98	120.39	117.40
27	14	999	U	N1-C2-O2	5.98	126.98	122.80
1	13	1469	G	N1-C6-O6	5.98	123.48	119.90
27	1H	1719	U	OP1-P-OP2	5.98	128.56	119.60
1	1G	915	A	N1-C6-N6	-5.98	115.01	118.60
22	1K	75	C	C5-C6-N1	5.97	123.99	121.00
27	1H	1817	A	C6-N1-C2	-5.97	115.02	118.60
27	1H	2392	G	C8-N9-C4	5.97	108.79	106.40
1	1G	1452	C	P-O3'-C3'	5.97	126.87	119.70
27	14	783	A	N3-C4-C5	5.97	130.98	126.80
27	1H	407	G	N3-C4-C5	5.97	131.59	128.60
27	1H	426	G	C8-N9-C4	5.97	108.79	106.40
27	1H	2497	G	O5'-P-OP2	-5.97	100.33	105.70
25	4L	53	U	P-O3'-C3'	5.97	126.87	119.70
27	14	2730	C	N1-C2-O2	5.97	122.48	118.90
28	1J	22	U	C5-C6-N1	5.97	125.69	122.70
1	1G	701	C	N3-C2-O2	-5.97	117.72	121.90
27	14	784	A	O4'-C1'-N9	5.97	112.98	108.20
27	1H	956	A	C2-N3-C4	5.97	113.58	110.60
27	1H	1575	A	C8-N9-C4	-5.97	103.41	105.80
27	1H	1851	A	P-O3'-C3'	5.97	126.86	119.70
27	1H	1953	G	N1-C6-O6	5.97	123.48	119.90
27	1H	2562	G	C8-N9-C4	-5.97	104.01	106.40
25	4K	56	U	C2-N1-C1'	5.97	124.86	117.70
27	1H	575	G	N1-C6-O6	-5.97	116.32	119.90
27	1H	820	C	C2-N1-C1'	-5.97	112.24	118.80
27	1H	1007	C	N3-C4-C5	-5.97	119.51	121.90
27	1H	2311	A	N1-C6-N6	-5.97	115.02	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2377	C	N1-C2-O2	-5.97	115.32	118.90
1	1G	1126	U	N1-C2-O2	5.97	126.98	122.80
27	1H	2633	C	C6-N1-C2	5.96	122.69	120.30
27	14	621	A	C5-N7-C8	-5.96	100.92	103.90
27	14	1794	U	C2-N3-C4	-5.96	123.42	127.00
27	1H	2419	U	P-O3'-C3'	5.96	126.86	119.70
1	13	522	C	C5-C6-N1	-5.96	118.02	121.00
27	1H	2611	A	C5-N7-C8	5.96	106.88	103.90
27	1H	2694	C	P-O3'-C3'	5.96	126.85	119.70
27	14	453	C	C2-N1-C1'	-5.96	112.24	118.80
27	1H	820	C	C2-N3-C4	-5.96	116.92	119.90
27	1H	928	G	C6-C5-N7	5.96	133.98	130.40
27	14	1264	G	C8-N9-C4	-5.96	104.02	106.40
27	1H	595	A	C8-N9-C4	5.96	108.18	105.80
27	14	672	C	O5'-P-OP1	5.96	117.85	110.70
22	1K	74	C	C6-N1-C1'	-5.96	113.65	120.80
27	14	2430	A	C4-C5-C6	5.96	119.98	117.00
27	14	1355	G	C6-C5-N7	-5.96	126.83	130.40
1	13	1025	U	P-O3'-C3'	5.95	126.84	119.70
27	1H	56	C	O5'-P-OP2	-5.95	100.34	105.70
27	1H	1973	G	N3-C4-C5	5.95	131.58	128.60
27	1H	900	G	O5'-P-OP2	-5.95	100.34	105.70
27	1H	2395	G	C4-N9-C1'	5.95	134.24	126.50
27	14	2628	C	C6-N1-C2	5.95	122.68	120.30
27	1H	1878	G	C8-N9-C4	-5.95	104.02	106.40
27	1H	2258	U	N3-C4-O4	5.95	123.57	119.40
39	78	65	ARG	NE-CZ-NH2	-5.95	117.33	120.30
27	1H	980	G	C8-N9-C4	5.95	108.78	106.40
27	1H	1776	C	C6-N1-C2	-5.95	117.92	120.30
27	1H	2738	C	OP2-P-O3'	5.95	118.29	105.20
27	14	1455	G	C8-N9-C4	-5.95	104.02	106.40
27	1H	1967	U	N3-C2-O2	5.95	126.36	122.20
27	1H	2085	A	O5'-P-OP2	-5.94	100.35	105.70
1	1G	1285	A	P-O3'-C3'	5.94	126.83	119.70
1	1G	1498	UR3	P-O3'-C3'	5.94	126.83	119.70
27	1H	910	G	C5-N7-C8	5.94	107.27	104.30
27	1H	1386	G	N1-C6-O6	5.94	123.46	119.90
28	16	81	G	O4'-C1'-N9	5.94	112.95	108.20
28	1J	65	C	N1-C2-O2	5.94	122.46	118.90
27	1H	67	G	O5'-P-OP1	-5.94	100.36	105.70
27	1H	780	C	C5-C4-N4	-5.94	116.05	120.20
27	1H	1428	G	N1-C2-N3	5.93	127.46	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1565	C	C6-N1-C2	5.93	122.67	120.30
23	2K	57	G	N3-C4-N9	5.93	129.56	126.00
27	1H	2092	G	OP1-P-OP2	5.93	128.50	119.60
27	1H	2503	G	C2-N3-C4	-5.93	108.93	111.90
27	14	689	A	C8-N9-C4	5.93	108.17	105.80
27	1H	818	G	N1-C6-O6	5.93	123.46	119.90
27	1H	1027	A	C5-N7-C8	-5.93	100.94	103.90
27	1H	1783	C	C6-N1-C2	5.93	122.67	120.30
27	1H	1922	G	C8-N9-C4	-5.93	104.03	106.40
27	1H	2056	A	C8-N9-C4	-5.93	103.43	105.80
1	1G	269	C	C6-N1-C2	5.93	122.67	120.30
27	1H	1308	C	C2-N3-C4	-5.93	116.94	119.90
27	1H	1372	G	N1-C6-O6	5.93	123.46	119.90
27	1H	1688	C	O5'-P-OP1	5.93	117.81	110.70
27	1H	2041	G	N7-C8-N9	5.93	116.06	113.10
27	1H	2634	A	C8-N9-C4	5.93	108.17	105.80
1	13	428	G	P-O3'-C3'	5.92	126.81	119.70
27	1H	2098	U	C2-N3-C4	-5.92	123.45	127.00
27	14	777	A	N1-C2-N3	5.92	132.26	129.30
27	1H	561	C	C2-N3-C4	-5.92	116.94	119.90
27	1H	1068	A	C5-C6-N1	-5.92	114.74	117.70
47	F8	57	LEU	CA-CB-CG	5.92	128.92	115.30
27	14	668	G	C2-N3-C4	-5.92	108.94	111.90
1	13	802	A	C2-N3-C4	-5.92	107.64	110.60
27	1H	140	A	N3-C4-C5	5.92	130.95	126.80
27	1H	285	G	C8-N9-C4	-5.92	104.03	106.40
27	14	381	G	C8-N9-C4	5.92	108.77	106.40
27	1H	2748	A	N7-C8-N9	5.92	116.76	113.80
27	14	1348	G	C5-C6-O6	-5.92	125.05	128.60
1	13	567	G	O5'-P-OP1	-5.92	100.37	105.70
27	1H	148	C	C2-N1-C1'	-5.92	112.29	118.80
27	1H	1451	C	O5'-P-OP1	-5.92	100.37	105.70
48	G8	106	LEU	CA-CB-CG	5.92	128.91	115.30
27	1H	2288	C	O4'-C1'-N1	-5.92	103.47	108.20
27	14	2026	C	C6-N1-C2	5.92	122.67	120.30
27	14	2560	C	N3-C4-C5	5.92	124.27	121.90
1	1G	1260	C	C6-N1-C2	-5.92	117.93	120.30
27	14	618(A)	C	C6-N1-C2	5.92	122.67	120.30
1	13	1502	A	N7-C8-N9	5.91	116.76	113.80
27	1H	837	A	O4'-C1'-N9	-5.91	103.47	108.20
27	1H	888	C	N3-C4-C5	5.91	124.27	121.90
27	1H	1063	G	C6-C5-N7	5.91	133.95	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	16	113	C	C5-C6-N1	-5.91	118.04	121.00
39	78	88	LEU	CA-CB-CG	5.91	128.90	115.30
27	14	83	G	C8-N9-C1'	5.91	134.69	127.00
1	13	1523	G	N1-C6-O6	-5.91	116.35	119.90
27	1H	1429	G	C5-C6-N1	5.91	114.45	111.50
27	1H	1610	A	C5-C6-N1	5.91	120.66	117.70
27	1H	2010	G	C8-N9-C4	5.91	108.76	106.40
27	1H	2244	C	C5-C6-N1	-5.91	118.05	121.00
27	1H	723	A	N9-C4-C5	-5.91	103.44	105.80
27	1H	2852	C	N3-C2-O2	5.91	126.04	121.90
27	1H	2878	G	N3-C2-N2	-5.91	115.77	119.90
1	1G	1514	C	C6-N1-C2	-5.91	117.94	120.30
28	1J	29	A	N1-C6-N6	5.91	122.14	118.60
1	1G	428	G	N9-C4-C5	5.91	107.76	105.40
27	1H	2055	G	C8-N9-C4	5.90	108.76	106.40
27	14	512	G	C4-C5-N7	-5.90	108.44	110.80
27	14	676	A	C4-C5-N7	5.90	113.65	110.70
27	1H	986	G	N9-C4-C5	-5.90	103.04	105.40
27	1H	1096	C	N1-C2-O2	5.90	122.44	118.90
27	14	1171	G	P-O3'-C3'	5.90	126.78	119.70
27	14	1260	G	C6-C5-N7	-5.90	126.86	130.40
1	13	532	A	O4'-C1'-N9	5.90	112.92	108.20
27	1H	822	A	C4-N9-C1'	-5.90	115.68	126.30
27	1H	1475	C	N3-C4-C5	5.90	124.26	121.90
27	1H	1959	A	N9-C4-C5	-5.90	103.44	105.80
27	14	672	C	N3-C4-N4	-5.90	113.87	118.00
27	14	2238	G	OP1-P-OP2	5.90	128.44	119.60
1	13	1286	A	C8-N9-C4	-5.90	103.44	105.80
27	1H	492	G	O5'-P-OP2	-5.90	100.39	105.70
27	14	2032	G	C4-C5-N7	-5.90	108.44	110.80
1	13	60	A	P-O3'-C3'	5.89	126.77	119.70
27	1H	427	G	C8-N9-C4	5.89	108.76	106.40
27	1H	616	G	OP2-P-O3'	5.89	118.17	105.20
27	1H	1322	A	C5-C6-N1	-5.89	114.75	117.70
25	4L	55	U	C2-N1-C1'	5.89	124.77	117.70
27	14	356	G	N3-C4-C5	-5.89	125.65	128.60
27	14	1284	A	OP1-P-OP2	5.89	128.44	119.60
27	14	1648	C	C2-N3-C4	-5.89	116.95	119.90
1	13	668	G	C8-N9-C4	-5.89	104.04	106.40
27	1H	160	U	C2-N1-C1'	5.89	124.77	117.70
27	1H	654	G	N1-C2-N3	5.89	127.44	123.90
27	1H	1068	A	N3-C4-C5	5.89	130.92	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1037	A	OP2-P-O3'	5.89	118.16	105.20
27	1H	2600	A	C8-N9-C4	-5.89	103.44	105.80
27	1H	612	U	O5'-P-OP2	5.89	117.77	110.70
27	1H	2076	G	C4-C5-N7	-5.89	108.44	110.80
27	1H	2481	G	C4-N9-C1'	5.89	134.16	126.50
27	14	2856	C	C5-C6-N1	5.89	123.94	121.00
1	13	1342	C	N1-C2-O2	-5.89	115.37	118.90
27	1H	720	C	N1-C2-N3	5.89	123.32	119.20
51	J8	40	ARG	NE-CZ-NH2	-5.89	117.36	120.30
27	1H	1298	C	N3-C2-O2	5.88	126.02	121.90
27	1H	1387	U	N3-C2-O2	5.88	126.32	122.20
27	14	222	A	C8-N9-C4	5.88	108.15	105.80
27	14	1142(A)	A	C2-N3-C4	-5.88	107.66	110.60
27	1H	647	A	C4-C5-N7	5.88	113.64	110.70
27	1H	1009	U	N1-C2-O2	-5.88	118.68	122.80
27	1H	1379	G	C4-C5-C6	5.88	122.33	118.80
27	1H	2725	U	C5-C4-O4	5.88	129.43	125.90
27	14	1528	A	C5-N7-C8	-5.88	100.96	103.90
1	13	11	G	O5'-P-OP2	5.88	117.76	110.70
27	1H	193	C	N1-C2-O2	-5.88	115.37	118.90
27	14	195	A	P-O3'-C3'	5.88	126.76	119.70
27	1H	1836	C	OP1-P-OP2	-5.88	110.78	119.60
27	1H	2266	G	N9-C4-C5	-5.88	103.05	105.40
27	1H	2453	C	N3-C2-O2	-5.88	117.79	121.90
27	1H	2830	G	C5-C6-O6	-5.88	125.07	128.60
27	14	1846	G	C8-N9-C4	-5.88	104.05	106.40
27	1H	1986	U	C6-N1-C2	-5.88	117.47	121.00
27	14	2242	G	C6-C5-N7	5.88	133.93	130.40
27	1H	787	G	C5-C6-O6	-5.88	125.08	128.60
1	13	741	G	C5-C6-N1	-5.87	108.56	111.50
1	13	1300	G	C8-N9-C4	5.87	108.75	106.40
27	1H	492	G	N7-C8-N9	5.87	116.04	113.10
27	1H	1002	G	C5-C6-O6	-5.87	125.08	128.60
27	14	445	C	C6-N1-C2	-5.87	117.95	120.30
27	14	947	G	N3-C4-N9	-5.87	122.47	126.00
27	14	1698	A	N1-C2-N3	5.87	132.24	129.30
1	13	1158	C	C6-N1-C2	-5.87	117.95	120.30
27	1H	20	C	C4-C5-C6	5.87	120.34	117.40
27	1H	1303	G	N3-C2-N2	-5.87	115.79	119.90
27	1H	2049	C	C4-C5-C6	5.87	120.34	117.40
27	14	771	G	N1-C6-O6	5.87	123.42	119.90
27	14	2282	G	O5'-P-OP2	5.87	117.75	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	233	C	N3-C2-O2	-5.87	117.79	121.90
27	1H	499	A	N1-C6-N6	5.87	122.12	118.60
27	1H	1234	U	N1-C2-O2	5.87	126.91	122.80
27	1H	1253	C	N3-C4-C5	5.87	124.25	121.90
27	1H	2372	C	C5-C4-N4	5.87	124.31	120.20
27	14	1644	C	C6-N1-C2	-5.87	117.95	120.30
27	14	2255	G	O5'-P-OP1	5.87	117.74	110.70
1	13	280	C	N3-C4-C5	5.87	124.25	121.90
27	1H	1443	U	C5-C4-O4	5.87	129.42	125.90
27	14	1393	A	OP1-P-O3'	5.87	118.10	105.20
27	14	1602	U	N3-C2-O2	5.86	126.31	122.20
27	14	2219	G	C2-N3-C4	-5.86	108.97	111.90
27	1H	2605	G	OP1-P-OP2	5.86	128.39	119.60
27	14	240	G	N3-C2-N2	-5.86	115.80	119.90
27	1H	786	G	N3-C4-N9	5.86	129.52	126.00
27	1H	2294	C	N3-C4-C5	5.86	124.24	121.90
27	1H	2654	G	N3-C4-N9	5.86	129.52	126.00
27	1H	2880	G	N3-C4-C5	5.86	131.53	128.60
27	14	125	G	OP2-P-O3'	5.86	118.09	105.20
28	1J	76	G	N1-C6-O6	5.86	123.42	119.90
27	1H	1695	G	O4'-C1'-N9	-5.86	103.51	108.20
27	1H	2371	G	N3-C2-N2	-5.86	115.80	119.90
1	1G	481	G	C8-N9-C1'	-5.86	119.38	127.00
1	13	48	C	C6-N1-C2	5.86	122.64	120.30
27	1H	1350	G	N1-C6-O6	5.86	123.42	119.90
27	14	1828	G	C6-C5-N7	-5.86	126.89	130.40
1	13	367	U	N3-C2-O2	-5.86	118.10	122.20
1	1G	1432	G	C5-C6-N1	-5.86	108.57	111.50
27	14	560	C	N1-C2-O2	-5.86	115.39	118.90
27	1H	1442	A	N7-C8-N9	-5.85	110.87	113.80
27	1H	29	U	C5-C6-N1	-5.85	119.77	122.70
27	14	188	G	C5-C6-O6	-5.85	125.09	128.60
27	1H	591	A	N3-C4-N9	-5.85	122.72	127.40
27	1H	1429	G	N1-C6-O6	-5.85	116.39	119.90
27	14	1671	U	C6-N1-C2	5.85	124.51	121.00
27	1H	2349	A	C8-N9-C4	5.85	108.14	105.80
27	1H	2359	A	C5-C6-N6	5.85	128.38	123.70
27	1H	2831	A	N1-C2-N3	5.85	132.22	129.30
27	14	570	G	N3-C4-N9	5.85	129.51	126.00
1	1G	1415	G	O5'-P-OP2	-5.85	100.44	105.70
27	14	1204	A	C4-C5-N7	5.85	113.62	110.70
1	13	809	G	N9-C4-C5	5.84	107.74	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	16	43	C	OP2-P-O3'	5.84	118.06	105.20
27	14	1786	A	N9-C1'-C2'	5.84	121.60	114.00
27	1H	1256	A	OP1-P-OP2	-5.84	110.84	119.60
27	1H	2370	U	N1-C2-O2	5.84	126.89	122.80
27	1H	2797	G	C8-N9-C4	5.84	108.74	106.40
27	1H	2842	G	N3-C2-N2	-5.84	115.81	119.90
27	14	2392	A	C6-C5-N7	-5.84	128.21	132.30
27	1H	2610	G	C2-N3-C4	-5.84	108.98	111.90
27	1H	2740	U	C5-C6-N1	-5.84	119.78	122.70
27	14	566	U	C2-N3-C4	-5.84	123.50	127.00
1	13	1178	G	N3-C2-N2	-5.83	115.82	119.90
27	1H	1799	C	C4-C5-C6	5.83	120.32	117.40
27	1H	2288	C	N1-C2-O2	-5.83	115.40	118.90
27	1H	2718	A	O5'-P-OP2	5.83	117.70	110.70
28	16	66	A	N7-C8-N9	5.83	116.72	113.80
27	14	1633	G	N3-C4-N9	-5.83	122.50	126.00
27	1H	351	G	N1-C6-O6	-5.83	116.40	119.90
27	1H	2080	A	C8-N9-C4	5.83	108.13	105.80
27	1H	2303	G	C5-C6-O6	5.83	132.10	128.60
27	1H	2744	C	N3-C2-O2	-5.83	117.82	121.90
1	13	766	A	N3-C4-C5	5.83	130.88	126.80
27	1H	112	U	C6-N1-C1'	-5.83	113.04	121.20
27	1H	1724	A	N1-C6-N6	-5.83	115.10	118.60
27	1H	2606	U	N1-C2-O2	5.83	126.88	122.80
27	14	451	C	N3-C2-O2	5.83	125.98	121.90
27	14	769	G	N7-C8-N9	-5.83	110.19	113.10
1	13	1417	G	N1-C6-O6	5.83	123.40	119.90
27	1H	825	A	N1-C2-N3	5.83	132.21	129.30
27	1H	1381	G	C8-N9-C4	5.83	108.73	106.40
27	1H	1664	C	O5'-P-OP1	-5.83	100.45	105.70
27	1H	1723	C	N1-C2-O2	-5.83	115.40	118.90
27	14	102	G	O4'-C1'-N9	5.83	112.86	108.20
27	14	149	A	N1-C6-N6	5.83	122.10	118.60
1	13	1240	U	C6-N1-C1'	-5.83	113.04	121.20
27	1H	1250	A	C6-C5-N7	-5.83	128.22	132.30
27	1H	2088	C	N3-C4-N4	-5.83	113.92	118.00
1	1G	687	A	P-O3'-C3'	5.83	126.69	119.70
27	14	1831	G	C4-N9-C1'	5.83	134.07	126.50
27	14	2074	U	C6-N1-C2	-5.83	117.50	121.00
27	14	2859	G	C8-N9-C4	-5.83	104.07	106.40
27	1H	2245	U	N3-C4-O4	-5.82	115.32	119.40
28	16	18	G	C5-C6-O6	-5.82	125.11	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1422	G	C8-N9-C4	5.82	108.73	106.40
27	1H	640	G	O4'-C1'-N9	5.82	112.86	108.20
27	1H	2723	C	C5-C6-N1	-5.82	118.09	121.00
27	1H	187	A	OP2-P-O3'	5.82	118.00	105.20
27	14	1204	A	C5-N7-C8	-5.82	100.99	103.90
27	1H	855	U	N1-C2-O2	-5.82	118.73	122.80
1	1G	557	G	N3-C4-C5	5.82	131.51	128.60
1	13	899	C	C6-N1-C2	5.81	122.62	120.30
27	1H	1323	A	C2-N3-C4	-5.81	107.69	110.60
27	1H	1720	C	N3-C2-O2	5.81	125.97	121.90
27	1H	114	C	N1-C2-O2	-5.81	115.41	118.90
27	1H	1355	A	N3-C4-N9	-5.81	122.75	127.40
27	1H	2304	U	O5'-P-OP2	-5.81	100.47	105.70
27	1H	2609	U	C2-N3-C4	-5.81	123.51	127.00
27	14	672	C	C5-C6-N1	-5.81	118.09	121.00
27	14	2049	G	C2-N3-C4	-5.81	108.99	111.90
23	2K	72	C	O4'-C1'-N1	5.81	112.85	108.20
27	1H	2320	G	N3-C4-C5	-5.81	125.69	128.60
27	1H	2367	G	N1-C6-O6	-5.81	116.42	119.90
27	14	1204	A	N3-C4-C5	5.81	130.87	126.80
1	13	644	G	N3-C4-C5	5.81	131.50	128.60
27	1H	2321	G	N1-C6-O6	5.81	123.39	119.90
27	14	247	G	N9-C4-C5	-5.81	103.08	105.40
27	1H	986	G	C5-C6-N1	5.81	114.40	111.50
27	1H	2006	C	C2-N3-C4	-5.81	117.00	119.90
28	16	15	A	O4'-C1'-N9	5.80	112.84	108.20
27	14	1835	G	N3-C4-N9	5.80	129.48	126.00
1	13	827	U	N1-C2-N3	5.80	118.38	114.90
27	1H	853	G	N7-C8-N9	5.80	116.00	113.10
1	13	1374	A	C2-N3-C4	-5.80	107.70	110.60
27	1H	1018	G	N3-C4-C5	-5.80	125.70	128.60
27	1H	1241	G	N3-C2-N2	-5.80	115.84	119.90
27	14	1513	C	C6-N1-C2	-5.80	117.98	120.30
1	13	546	G	C8-N9-C4	5.80	108.72	106.40
27	1H	1582	U	C2-N1-C1'	5.80	124.66	117.70
27	1H	1937	C	C6-N1-C2	-5.80	117.98	120.30
40	88	10	ARG	NE-CZ-NH1	5.80	123.20	120.30
27	14	126	A	OP2-P-O3'	5.80	117.95	105.20
27	1H	412	U	C5-C6-N1	-5.79	119.80	122.70
27	1H	1851	A	N3-C4-C5	5.79	130.86	126.80
27	1H	2514	C	C2-N1-C1'	-5.79	112.43	118.80
27	14	1951	U	N3-C2-O2	-5.79	118.14	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	767	A	C5-C6-N6	5.79	128.33	123.70
27	1H	657	A	C5-N7-C8	5.79	106.80	103.90
1	1G	511	C	C2-N1-C1'	-5.79	112.43	118.80
27	14	1698	A	C6-C5-N7	-5.79	128.25	132.30
27	14	2645	G	C4-N9-C1'	5.79	134.03	126.50
39	35	85	LEU	CA-CB-CG	5.79	128.62	115.30
27	1H	2327	C	C5-C6-N1	-5.79	118.11	121.00
27	1H	2586	C	N3-C2-O2	-5.79	117.85	121.90
1	13	481	G	P-O3'-C3'	5.79	126.65	119.70
1	13	904	C	C6-N1-C2	5.79	122.62	120.30
1	13	1502	A	O5'-P-OP2	-5.79	100.49	105.70
27	1H	744	G	C2-N3-C4	-5.79	109.01	111.90
27	1H	1182	G	N9-C4-C5	-5.79	103.08	105.40
27	14	1698	A	C5-N7-C8	-5.79	101.00	103.90
27	1H	869	A	C8-N9-C4	-5.79	103.48	105.80
27	14	1502	C	C5-C6-N1	5.79	123.89	121.00
27	14	2070	G	N1-C6-O6	-5.79	116.43	119.90
27	1H	593	U	O5'-P-OP2	-5.79	100.49	105.70
27	14	1204	A	OP2-P-O3'	5.79	117.93	105.20
27	14	1799	G	N1-C6-O6	-5.79	116.43	119.90
1	13	880	C	N1-C2-O2	-5.78	115.43	118.90
27	1H	917	G	N1-C6-O6	-5.78	116.43	119.90
27	1H	1204	G	C4-N9-C1'	5.78	134.02	126.50
27	1H	2578	A	N9-C4-C5	-5.78	103.49	105.80
1	1G	882	C	O5'-P-OP1	-5.78	100.49	105.70
27	1H	1835	A	N9-C4-C5	5.78	108.11	105.80
27	1H	2342	G	N9-C4-C5	-5.78	103.09	105.40
12	3I	57	LEU	CA-CB-CG	5.78	128.59	115.30
1	1G	403	C	N1-C2-O2	5.78	122.37	118.90
27	14	205	G	C6-C5-N7	-5.78	126.93	130.40
27	14	1187	G	N7-C8-N9	5.78	115.99	113.10
1	13	869	G	N3-C4-C5	5.78	131.49	128.60
27	1H	1035	A	N1-C6-N6	-5.78	115.13	118.60
27	1H	2481	G	C6-C5-N7	-5.78	126.93	130.40
27	1H	2481	G	N7-C8-N9	5.78	115.99	113.10
1	1G	754	C	C2-N1-C1'	5.78	125.16	118.80
27	14	602	G	N9-C4-C5	-5.78	103.09	105.40
27	14	1762	A	C2-N3-C4	-5.78	107.71	110.60
27	14	1846	G	N7-C8-N9	5.78	115.99	113.10
1	13	1348	U	C5-C4-O4	5.78	129.37	125.90
27	1H	120	G	N9-C4-C5	-5.78	103.09	105.40
27	1H	542	C	C6-N1-C2	-5.78	117.99	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1722	G	N3-C4-N9	5.78	129.47	126.00
25	4K	56	U	N1-C2-O2	5.77	126.84	122.80
27	1H	1238	G	O5'-P-OP1	5.77	117.63	110.70
27	1H	579	U	C5-C6-N1	-5.77	119.81	122.70
27	14	448	U	N1-C2-O2	5.77	126.84	122.80
27	14	1332	G	N3-C4-C5	5.77	131.49	128.60
27	14	1404	C	N3-C2-O2	-5.77	117.86	121.90
27	1H	1960	A	OP2-P-O3'	5.77	117.90	105.20
1	13	1054	C	N3-C4-N4	5.77	122.04	118.00
27	1H	1047	A	N9-C4-C5	-5.77	103.49	105.80
27	1H	2289	G	N3-C4-N9	5.77	129.46	126.00
1	1G	1157	A	P-O3'-C3'	5.77	126.62	119.70
27	1H	795	U	O5'-P-OP1	-5.77	100.51	105.70
27	1H	1709	G	C5-N7-C8	5.77	107.18	104.30
27	1H	2416	C	N1-C2-O2	-5.77	115.44	118.90
1	1G	766	A	OP1-P-OP2	5.77	128.25	119.60
1	1G	1347	G	P-O3'-C3'	5.77	126.62	119.70
1	1G	1489	G	C8-N9-C4	5.77	108.71	106.40
27	14	1318	C	C6-N1-C2	-5.77	117.99	120.30
27	1H	1350	G	C6-C5-N7	-5.77	126.94	130.40
1	1G	1528	U	N3-C2-O2	5.77	126.24	122.20
27	1H	2013	C	C2-N1-C1'	5.76	125.14	118.80
1	1G	1189	C	N1-C2-O2	5.76	122.36	118.90
27	14	188	G	C4-C5-N7	5.76	113.11	110.80
27	14	800	A	C8-N9-C4	5.76	108.11	105.80
27	1H	2498	G	N9-C4-C5	-5.76	103.09	105.40
1	1G	691	G	N1-C6-O6	5.76	123.36	119.90
27	14	1307	A	C5-C6-N6	-5.76	119.09	123.70
27	14	1426	G	C4-N9-C1'	5.76	133.99	126.50
27	14	1786	A	N9-C4-C5	-5.76	103.50	105.80
27	1H	126	C	O5'-P-OP2	-5.76	100.52	105.70
27	1H	427	G	N1-C6-O6	-5.76	116.44	119.90
27	14	2012	G	C6-C5-N7	-5.76	126.94	130.40
1	13	1502	A	N9-C1'-C2'	5.76	121.48	114.00
27	1H	730	G	N7-C8-N9	-5.76	110.22	113.10
27	1H	70	A	O4'-C1'-N9	-5.75	103.60	108.20
27	1H	2606	U	N3-C4-O4	-5.75	115.37	119.40
27	14	974(A)	C	C5-C4-N4	5.75	124.23	120.20
27	1H	660	C	N1-C2-O2	5.75	122.35	118.90
27	1H	1580	C	C2-N1-C1'	5.75	125.13	118.80
1	13	752	G	N3-C4-C5	-5.75	125.72	128.60
22	1K	35	A	N1-C6-N6	-5.75	115.15	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	418	A	C8-N9-C4	5.75	108.10	105.80
27	1H	603	G	N3-C4-N9	5.75	129.45	126.00
1	1G	353	A	N7-C8-N9	5.75	116.68	113.80
22	1K	74	C	O4'-C1'-N1	5.75	112.80	108.20
27	1H	671	C	P-O3'-C3'	5.75	126.60	119.70
27	1H	1171	C	O5'-P-OP1	-5.75	100.53	105.70
1	1G	812	C	O5'-P-OP2	-5.75	100.53	105.70
27	14	1142	U	C6-N1-C1'	-5.75	113.15	121.20
27	1H	438	G	N3-C4-C5	5.75	131.47	128.60
27	1H	1372	G	N3-C4-N9	5.75	129.45	126.00
27	14	1397	U	O5'-P-OP1	-5.75	100.53	105.70
27	14	2060	A	C5-C6-N6	5.75	128.30	123.70
1	13	495	A	C8-N9-C4	5.75	108.10	105.80
1	13	673	G	N9-C4-C5	-5.74	103.10	105.40
27	1H	144	C	C6-N1-C2	5.74	122.60	120.30
27	14	1888	G	C2-N3-C4	5.74	114.77	111.90
27	1H	1390	G	N1-C6-O6	-5.74	116.45	119.90
27	1H	2596	G	N3-C2-N2	-5.74	115.88	119.90
27	14	94	G	N1-C6-O6	5.74	123.34	119.90
27	1H	733	A	C5-C6-N1	-5.74	114.83	117.70
27	1H	1001	C	C5-C6-N1	-5.74	118.13	121.00
27	1H	1847	A	C6-N1-C2	-5.74	115.16	118.60
27	1H	1925	C	C6-N1-C1'	-5.74	113.91	120.80
27	1H	2281	A	C8-N9-C4	5.74	108.10	105.80
27	1H	2508	G	N3-C2-N2	-5.74	115.88	119.90
27	14	149	A	C2-N3-C4	-5.74	107.73	110.60
27	14	621	A	C8-N9-C4	-5.74	103.50	105.80
27	14	1369	G	O5'-P-OP2	-5.74	100.53	105.70
27	1H	1429	G	C8-N9-C1'	5.74	134.46	127.00
28	16	64	C	N3-C2-O2	-5.74	117.88	121.90
27	14	146	G	N1-C6-O6	5.74	123.34	119.90
27	14	1440	G	O5'-P-OP2	-5.74	100.54	105.70
39	35	61	ARG	NE-CZ-NH1	5.74	123.17	120.30
27	1H	905	C	C2-N3-C4	-5.74	117.03	119.90
27	1H	1726	G	C5-C6-N1	-5.74	108.63	111.50
27	1H	647	A	C6-C5-N7	-5.74	128.28	132.30
27	14	2422	A	P-O3'-C3'	5.74	126.58	119.70
27	1H	2435	A	C6-N1-C2	-5.73	115.16	118.60
27	1H	554	A	C5-N7-C8	-5.73	101.03	103.90
27	1H	777	G	C8-N9-C4	-5.73	104.11	106.40
27	1H	870	U	O5'-P-OP2	-5.73	100.54	105.70
27	1H	1009	U	N3-C2-O2	5.73	126.21	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	583	A	C4-C5-N7	5.73	113.57	110.70
27	1H	554	A	C5-C6-N1	-5.73	114.83	117.70
27	1H	1411	G	N7-C8-N9	-5.73	110.23	113.10
27	1H	1726	G	O4'-C1'-N9	-5.73	103.61	108.20
27	1H	2045	U	C4-C5-C6	5.73	123.14	119.70
45	D8	25	LEU	CA-CB-CG	-5.73	102.12	115.30
27	1H	478	C	C2-N1-C1'	-5.73	112.50	118.80
27	1H	888	C	C2-N3-C4	-5.73	117.03	119.90
27	1H	2349	A	N9-C4-C5	-5.73	103.51	105.80
27	1H	781	G	C4-C5-N7	-5.73	108.51	110.80
27	1H	2456	C	C2-N3-C4	-5.73	117.04	119.90
1	1G	181	G	C4-N9-C1'	5.73	133.94	126.50
1	1G	887	G	N7-C8-N9	-5.73	110.24	113.10
27	14	2415	G	N1-C6-O6	5.73	123.34	119.90
27	1H	191	C	C5-C4-N4	-5.73	116.19	120.20
27	1H	239	C	N1-C2-O2	5.73	122.33	118.90
27	1H	1313	G	C5-C6-O6	-5.73	125.16	128.60
27	14	2429	G	C8-N9-C1'	5.73	134.44	127.00
1	13	690	G	C2-N3-C4	-5.72	109.04	111.90
27	1H	895	U	C2-N3-C4	-5.72	123.57	127.00
1	1G	481	G	N1-C6-O6	5.72	123.33	119.90
28	1J	45	A	N7-C8-N9	5.72	116.66	113.80
1	13	1514	C	N1-C2-O2	-5.72	115.47	118.90
27	1H	928	G	N9-C4-C5	5.72	107.69	105.40
27	1H	2331	G	N3-C4-N9	-5.72	122.57	126.00
27	14	1895	C	C6-N1-C2	-5.72	118.01	120.30
27	1H	2427	G	N9-C4-C5	-5.72	103.11	105.40
27	1H	2699	G	O5'-P-OP2	-5.72	100.55	105.70
27	1H	2830	G	C8-N9-C4	5.72	108.69	106.40
27	1H	2842	G	N1-C6-O6	5.72	123.33	119.90
60	2L	75	C	C6-N1-C1'	5.72	127.66	120.80
27	1H	1313	G	N9-C4-C5	-5.72	103.11	105.40
27	1H	120	G	N3-C2-N2	5.72	123.90	119.90
27	1H	446	G	N9-C4-C5	-5.72	103.11	105.40
27	1H	800	A	C2-N3-C4	-5.72	107.74	110.60
27	14	1426	G	C4-C5-N7	5.72	113.09	110.80
27	1H	488	C	C5-C4-N4	5.71	124.20	120.20
1	1G	908	A	C2-N3-C4	-5.71	107.74	110.60
1	13	515	G	C8-N9-C4	-5.71	104.11	106.40
27	1H	339	A	N1-C6-N6	-5.71	115.17	118.60
27	1H	1262	G	C4-C5-N7	5.71	113.08	110.80
27	14	1612	C	C5-C6-N1	-5.71	118.14	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	906	G	C5-C6-N1	5.71	114.36	111.50
1	13	1410	G	C8-N9-C4	5.71	108.69	106.40
27	1H	888	C	N1-C2-O2	-5.71	115.47	118.90
27	14	1899	G	N1-C2-N2	5.71	121.34	116.20
27	1H	34	C	O4'-C1'-N1	5.71	112.77	108.20
27	1H	1033	C	N1-C2-O2	-5.71	115.47	118.90
27	1H	1304	C	N3-C2-O2	-5.71	117.90	121.90
27	14	1301	A	O5'-P-OP2	5.71	117.55	110.70
27	14	1771	C	N3-C4-C5	5.71	124.18	121.90
27	1H	320	G	N9-C4-C5	-5.71	103.12	105.40
27	1H	817	G	C5-N7-C8	5.71	107.15	104.30
27	1H	1793	C	N1-C2-O2	-5.71	115.48	118.90
27	14	2875	C	N1-C2-O2	-5.71	115.48	118.90
27	1H	1484	C	C6-N1-C2	-5.71	118.02	120.30
27	1H	2391	A	C8-N9-C4	5.71	108.08	105.80
27	1H	2593	U	C2-N1-C1'	-5.70	110.86	117.70
27	14	1558	A	P-O3'-C3'	5.70	126.54	119.70
27	1H	2701	U	N3-C4-O4	-5.70	115.41	119.40
27	14	1216	G	C4-N9-C1'	5.70	133.91	126.50
27	1H	105	C	N1-C2-O2	-5.70	115.48	118.90
1	1G	1049	U	C6-N1-C2	-5.70	117.58	121.00
27	14	1612	C	C2-N3-C4	-5.70	117.05	119.90
27	1H	126	C	C2-N3-C4	-5.70	117.05	119.90
27	1H	1194	C	N3-C2-O2	5.70	125.89	121.90
27	14	84	A	C5-C6-N6	-5.70	119.14	123.70
27	14	1210	A	C5-C6-N1	-5.70	114.85	117.70
27	14	1337	G	OP1-P-O3'	5.70	117.74	105.20
27	14	2645	G	N7-C8-N9	5.70	115.95	113.10
1	13	644	G	N3-C4-N9	-5.70	122.58	126.00
1	13	812	C	N1-C2-O2	5.70	122.32	118.90
27	1H	140	A	O4'-C1'-N9	5.70	112.76	108.20
27	1H	781	G	N3-C4-C5	-5.70	125.75	128.60
27	1H	2620	G	C4-C5-N7	5.70	113.08	110.80
27	14	1986	A	C8-N9-C4	5.70	108.08	105.80
27	14	2836	U	N3-C2-O2	-5.70	118.21	122.20
27	1H	47	G	OP2-P-O3'	5.69	117.73	105.20
1	1G	687	A	C8-N9-C4	-5.69	103.52	105.80
27	14	83	G	N3-C4-N9	-5.69	122.58	126.00
27	14	1213	A	C8-N9-C4	5.69	108.08	105.80
27	1H	907	G	C4-N9-C1'	-5.69	119.10	126.50
27	1H	1955	A	O5'-P-OP1	-5.69	100.58	105.70
27	14	430	G	N1-C6-O6	5.69	123.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1781	C	C6-N1-C1'	-5.69	113.97	120.80
27	1H	2331	G	C2-N3-C4	-5.69	109.06	111.90
27	1H	1729	G	C5-C6-O6	-5.69	125.19	128.60
27	1H	1746	A	C8-N9-C4	-5.69	103.53	105.80
27	1H	2266	G	C4-C5-N7	5.69	113.08	110.80
1	1G	1127	G	N3-C4-C5	5.69	131.44	128.60
27	1H	2039	U	C5-C6-N1	-5.69	119.86	122.70
27	1H	2583	G	N3-C4-N9	-5.69	122.59	126.00
1	13	1446	A	O4'-C1'-N9	5.68	112.75	108.20
27	1H	1445	C	N1-C2-O2	5.68	122.31	118.90
1	1G	108	G	C5-N7-C8	-5.68	101.46	104.30
27	14	1914	C	N1-C2-O2	5.68	122.31	118.90
27	1H	2106	G	N3-C4-N9	-5.68	122.59	126.00
27	14	791	C	O4'-C1'-N1	5.68	112.75	108.20
27	14	570	G	N9-C4-C5	-5.68	103.13	105.40
27	1H	26	G	C5-C6-N1	5.68	114.34	111.50
49	H8	59	LEU	CA-CB-CG	5.68	128.36	115.30
27	14	141	A	C8-N9-C4	-5.68	103.53	105.80
27	1H	1973	G	C2-N3-C4	-5.68	109.06	111.90
27	1H	2073	C	C2-N3-C4	-5.68	117.06	119.90
1	1G	1053	G	N3-C4-C5	5.68	131.44	128.60
1	13	190	G	P-O3'-C3'	5.68	126.51	119.70
27	1H	1688	C	N3-C4-C5	5.68	124.17	121.90
27	1H	2293	G	C2-N3-C4	5.68	114.74	111.90
27	14	1253	A	O4'-C1'-N9	-5.68	103.66	108.20
1	13	574	A	OP2-P-O3'	5.67	117.69	105.20
27	1H	810	U	C6-N1-C1'	-5.67	113.26	121.20
27	1H	1840	U	C6-N1-C2	5.67	124.41	121.00
1	1G	718	G	C5-C6-N1	-5.67	108.66	111.50
27	14	1657	C	C6-N1-C2	5.67	122.57	120.30
1	13	767	A	C2-N3-C4	-5.67	107.76	110.60
27	1H	190	U	C2-N1-C1'	-5.67	110.89	117.70
27	1H	617	G	C8-N9-C4	5.67	108.67	106.40
27	1H	744	G	C8-N9-C4	5.67	108.67	106.40
27	1H	2552	C	C5-C6-N1	-5.67	118.16	121.00
27	1H	626	G	C2-N3-C4	-5.67	109.06	111.90
1	1G	575	G	OP1-P-O3'	5.67	117.67	105.20
27	1H	111	G	C6-C5-N7	-5.67	127.00	130.40
27	1H	1678	C	N3-C2-O2	5.67	125.87	121.90
27	14	2330	G	C5-C6-O6	-5.67	125.20	128.60
1	13	629	G	N3-C4-N9	-5.67	122.60	126.00
1	13	1324	A	O5'-P-OP1	-5.67	100.60	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1514	G	OP2-P-O3'	5.67	117.67	105.20
27	1H	2831	A	N1-C6-N6	5.67	122.00	118.60
27	1H	781	G	C5-N7-C8	5.67	107.13	104.30
27	14	16	G	C8-N9-C4	-5.67	104.13	106.40
27	1H	1272	G	N3-C4-C5	-5.66	125.77	128.60
27	1H	2418	G	OP2-P-O3'	5.66	117.66	105.20
27	1H	321	C	N3-C2-O2	5.66	125.86	121.90
27	14	2873	A	C5-N7-C8	-5.66	101.07	103.90
27	1H	1329	U	O5'-P-OP1	-5.66	100.61	105.70
1	1G	438	G	C4-N9-C1'	5.66	133.86	126.50
27	14	1698	A	N1-C6-N6	5.66	122.00	118.60
27	14	2712	U	N3-C2-O2	-5.66	118.24	122.20
28	1J	22	U	C2-N1-C1'	5.66	124.49	117.70
1	13	418	C	N1-C2-O2	5.66	122.30	118.90
1	13	607	A	C8-N9-C4	5.66	108.06	105.80
27	1H	139	A	C5-C6-N6	-5.66	119.17	123.70
27	1H	618	U	N1-C2-O2	-5.66	118.84	122.80
27	1H	1584	C	C6-N1-C2	-5.66	118.04	120.30
27	1H	1672	C	N3-C4-N4	-5.66	114.04	118.00
27	1H	1816	A	OP1-P-OP2	5.66	128.09	119.60
27	1H	1989	A	C8-N9-C4	5.66	108.06	105.80
27	1H	2384	G	C5-C6-N1	-5.66	108.67	111.50
27	1H	1366	G	C2-N3-C4	-5.66	109.07	111.90
27	14	569	U	C5-C6-N1	-5.66	119.87	122.70
27	1H	1832	C	O5'-P-OP2	-5.65	100.61	105.70
1	1G	1077	G	O5'-P-OP2	-5.65	100.61	105.70
27	14	845	G	P-O3'-C3'	5.65	126.48	119.70
27	14	2572	A	C8-N9-C4	5.65	108.06	105.80
1	13	792	A	N1-C6-N6	5.65	121.99	118.60
1	1G	1126	U	N3-C2-O2	-5.65	118.24	122.20
1	13	792	A	N9-C4-C5	-5.65	103.54	105.80
1	13	975	A	C5-N7-C8	-5.65	101.07	103.90
27	1H	204	G	C4-N9-C1'	-5.65	119.16	126.50
27	1H	2085	A	C2-N3-C4	5.65	113.42	110.60
27	14	1946	U	N3-C2-O2	5.65	126.16	122.20
27	1H	1725	A	C2-N3-C4	-5.65	107.78	110.60
1	13	241	C	C5-C6-N1	-5.65	118.18	121.00
1	13	251	G	C5-C6-O6	-5.65	125.21	128.60
1	13	975	A	O4'-C1'-N9	-5.65	103.68	108.20
27	1H	211	A	C6-N1-C2	-5.65	115.21	118.60
27	1H	635	C	C6-N1-C2	5.65	122.56	120.30
27	1H	825	A	C4-C5-N7	-5.65	107.88	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1386	G	O5'-P-OP1	-5.65	100.62	105.70
27	1H	2084	G	C6-N1-C2	5.65	128.49	125.10
27	1H	2310	C	O5'-P-OP1	-5.65	100.62	105.70
28	16	66	A	P-O3'-C3'	5.65	126.48	119.70
27	14	1241	A	C5-C6-N1	-5.65	114.88	117.70
27	1H	2389	A	C8-N9-C4	5.65	108.06	105.80
27	1H	226	C	C5-C6-N1	-5.64	118.18	121.00
27	1H	896	G	O5'-P-OP1	5.64	117.47	110.70
1	1G	258	G	N1-C6-O6	5.64	123.28	119.90
27	14	2867	G	N3-C4-C5	5.64	131.42	128.60
27	14	208	C	C2-N3-C4	-5.64	117.08	119.90
27	1H	126	C	C5-C6-N1	-5.64	118.18	121.00
27	1H	831	A	N9-C1'-C2'	-5.64	105.80	112.00
27	1H	1354	A	C8-N9-C4	-5.64	103.54	105.80
27	1H	1379	G	C4-C5-N7	5.64	113.06	110.80
27	1H	2830	G	C6-C5-N7	-5.64	127.02	130.40
27	14	128	C	N1-C2-O2	-5.64	115.52	118.90
27	14	1843	C	C4-C5-C6	5.64	120.22	117.40
1	13	331	G	C5-C6-O6	-5.64	125.22	128.60
27	1H	1458	C	C5-C6-N1	5.64	123.82	121.00
27	14	1342	A	O4'-C1'-N9	5.64	112.71	108.20
1	1G	1299	A	C8-N9-C4	-5.63	103.55	105.80
27	14	2311	A	C2-N3-C4	-5.63	107.78	110.60
27	14	2645	G	C8-N9-C4	-5.63	104.15	106.40
27	14	2726	U	C2-N1-C1'	5.63	124.46	117.70
27	14	2726	U	C6-N1-C1'	-5.63	113.31	121.20
1	13	1128	C	C6-N1-C2	-5.63	118.05	120.30
27	1H	2435	A	C6-C5-N7	-5.63	128.36	132.30
27	14	2307	G	C6-C5-N7	-5.63	127.02	130.40
27	1H	944	C	C5-C6-N1	5.63	123.82	121.00
27	1H	2107	C	N3-C4-C5	5.63	124.15	121.90
27	14	1209	G	C5-C6-O6	5.63	131.98	128.60
27	14	1833	U	C5-C4-O4	5.63	129.28	125.90
27	14	1930	G	C6-C5-N7	5.63	133.78	130.40
28	1J	111	U	C6-N1-C2	-5.63	117.62	121.00
27	1H	650	C	C5-C6-N1	5.63	123.81	121.00
27	1H	2374	A	C8-N9-C4	5.63	108.05	105.80
1	1G	906	G	N1-C6-O6	5.63	123.28	119.90
1	13	505	G	N9-C4-C5	-5.63	103.15	105.40
27	1H	78	G	C5-C6-O6	-5.63	125.22	128.60
27	1H	1824	G	N1-C6-O6	-5.63	116.52	119.90
27	14	1547	C	C6-N1-C2	5.63	122.55	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2060	A	C4-C5-N7	-5.63	107.89	110.70
1	13	302	G	N1-C6-O6	-5.63	116.53	119.90
1	13	1512	U	C4-C5-C6	5.63	123.08	119.70
27	1H	55	A	C6-C5-N7	-5.63	128.36	132.30
27	1H	249	G	N1-C6-O6	5.63	123.28	119.90
27	1H	2079	G	N9-C4-C5	-5.63	103.15	105.40
27	1H	895	U	C2-N1-C1'	-5.62	110.95	117.70
27	14	1602	U	N3-C4-C5	-5.62	111.22	114.60
27	1H	12	U	N1-C2-O2	-5.62	118.86	122.80
27	1H	1654	C	N3-C2-O2	5.62	125.84	121.90
27	1H	2524	U	N1-C2-O2	-5.62	118.86	122.80
27	1H	2765	G	C5-N7-C8	-5.62	101.49	104.30
27	14	1786	A	N3-C4-C5	5.62	130.74	126.80
27	1H	2062	C	C6-N1-C2	5.62	122.55	120.30
27	1H	2484	C	C6-N1-C2	-5.62	118.05	120.30
37	58	76	SER	C-N-CA	-5.62	110.49	122.30
27	14	1931	U	C2-N1-C1'	5.62	124.45	117.70
27	1H	2427	G	C4-C5-N7	5.62	113.05	110.80
1	13	795	C	C5-C6-N1	-5.62	118.19	121.00
1	13	1418	A	C8-N9-C4	-5.62	103.55	105.80
27	1H	400	G	N7-C8-N9	-5.62	110.29	113.10
27	1H	628	G	N1-C6-O6	5.62	123.27	119.90
27	1H	1989	A	C4-C5-C6	-5.62	114.19	117.00
28	16	60	C	C5-C6-N1	5.62	123.81	121.00
60	2L	74	C	N1-C2-O2	5.62	122.27	118.90
27	14	205	G	P-O3'-C3'	5.62	126.44	119.70
27	14	1635	G	C5-C6-O6	-5.62	125.23	128.60
27	14	1833	U	N3-C2-O2	-5.62	118.27	122.20
27	1H	522	G	C8-N9-C4	5.62	108.65	106.40
27	1H	202	G	C4-C5-N7	5.62	113.05	110.80
27	14	396	G	N1-C6-O6	5.62	123.27	119.90
27	14	682	G	N9-C4-C5	-5.62	103.15	105.40
27	1H	539	A	C5-C6-N1	5.61	120.51	117.70
27	14	2422	A	OP1-P-O3'	5.61	117.55	105.20
27	1H	191	C	OP1-P-OP2	5.61	128.02	119.60
27	14	2012	G	O5'-P-OP2	-5.61	100.65	105.70
27	1H	1278	G	N1-C6-O6	5.61	123.27	119.90
27	1H	1954	U	C4-C5-C6	5.61	123.07	119.70
27	1H	2393	C	C2-N1-C1'	-5.61	112.63	118.80
1	1G	46	G	C8-N9-C4	5.61	108.64	106.40
27	1H	1071	G	C6-C5-N7	-5.61	127.03	130.40
27	1H	1967	U	C2-N1-C1'	-5.61	110.97	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	858	G	N1-C6-O6	-5.61	116.53	119.90
27	1H	2117	G	O5'-P-OP2	-5.61	100.65	105.70
41	98	79	LEU	CA-CB-CG	5.61	128.20	115.30
27	1H	1362	C	N1-C2-N3	5.61	123.12	119.20
27	1H	1658	C	C2-N1-C1'	-5.61	112.63	118.80
27	14	2448	A	C5-C6-N6	-5.61	119.22	123.70
27	14	2474	C	C6-N1-C2	-5.60	118.06	120.30
28	1J	16	G	N1-C6-O6	5.60	123.26	119.90
27	1H	795	U	C5-C6-N1	-5.60	119.90	122.70
27	1H	1294	A	C6-N1-C2	-5.60	115.24	118.60
27	1H	1582	U	N3-C2-O2	-5.60	118.28	122.20
27	14	182	A	C8-N9-C4	-5.60	103.56	105.80
27	14	1930	G	O4'-C1'-N9	5.60	112.68	108.20
27	14	2501	C	OP1-P-O3'	5.60	117.53	105.20
27	1H	1320	U	C2-N3-C4	-5.60	123.64	127.00
1	1G	915	A	C4-C5-N7	-5.60	107.90	110.70
27	14	55	G	N1-C6-O6	5.60	123.26	119.90
27	1H	209	G	N1-C2-N2	-5.60	111.16	116.20
27	1H	804	C	C5-C6-N1	5.60	123.80	121.00
1	1G	511	C	C6-N1-C1'	5.60	127.52	120.80
27	14	71	A	O4'-C1'-N9	-5.60	103.72	108.20
27	14	288	C	C2-N1-C1'	5.60	124.96	118.80
1	13	1523	G	N9-C4-C5	5.60	107.64	105.40
27	1H	986	G	N1-C6-O6	5.60	123.26	119.90
27	1H	2617	U	N3-C4-C5	5.60	117.96	114.60
27	14	733	G	N3-C4-N9	5.60	129.36	126.00
27	14	2077	A	C8-N9-C4	-5.60	103.56	105.80
27	1H	1036	G	N3-C4-C5	5.60	131.40	128.60
27	1H	729	G	N1-C2-N2	-5.59	111.17	116.20
27	1H	1236	G	C4-C5-C6	5.59	122.16	118.80
27	1H	1799	C	N3-C2-O2	-5.59	117.98	121.90
27	1H	1989	A	C5-C6-N6	5.59	128.18	123.70
27	1H	1990	C	OP2-P-O3'	5.59	117.51	105.20
27	1H	2592	C	C2-N1-C1'	-5.59	112.65	118.80
27	14	1310	G	O5'-P-OP2	5.59	117.42	110.70
38	25	8	LEU	CA-CB-CG	5.59	128.17	115.30
27	1H	840	G	C6-C5-N7	-5.59	127.04	130.40
1	13	812	C	OP2-P-O3'	5.59	117.50	105.20
1	13	1499	A	C4-C5-C6	5.59	119.80	117.00
27	1H	980	G	N9-C4-C5	-5.59	103.16	105.40
27	1H	1959	A	C8-N9-C4	5.59	108.04	105.80
27	1H	2076	G	N7-C8-N9	-5.59	110.30	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2383	G	C8-N9-C1'	-5.59	119.73	127.00
1	13	542	G	O5'-P-OP1	-5.59	100.67	105.70
27	1H	1615	A	C5-C6-N6	5.59	128.17	123.70
27	1H	2360	C	C6-N1-C2	5.59	122.54	120.30
27	14	188	G	N7-C8-N9	-5.59	110.31	113.10
27	14	2867	G	N3-C4-N9	-5.59	122.65	126.00
1	13	974	A	C5-N7-C8	-5.59	101.11	103.90
27	1H	2092	G	C8-N9-C4	5.59	108.64	106.40
1	13	789	U	C5-C4-O4	5.59	129.25	125.90
1	13	968	A	C5-C6-N6	-5.59	119.23	123.70
27	1H	1857	A	C5-N7-C8	5.59	106.69	103.90
27	1H	2105	A	C8-N9-C4	5.59	108.03	105.80
27	1H	2663	U	N3-C2-O2	-5.59	118.29	122.20
1	13	913	A	N7-C8-N9	5.58	116.59	113.80
27	1H	2388	G	C5-C6-O6	-5.58	125.25	128.60
27	1H	2471	G	N3-C4-C5	-5.58	125.81	128.60
27	1H	2474	C	C4-C5-C6	5.58	120.19	117.40
27	14	1757	U	C5-C6-N1	-5.58	119.91	122.70
1	13	522	C	C2-N1-C1'	-5.58	112.66	118.80
27	1H	719	C	O5'-P-OP1	-5.58	100.67	105.70
27	1H	2079	G	C8-N9-C1'	-5.58	119.74	127.00
27	14	141	A	C5-N7-C8	-5.58	101.11	103.90
1	1G	438	G	C6-C5-N7	-5.58	127.05	130.40
27	14	1997	G	N1-C6-O6	5.58	123.25	119.90
27	1H	1649	U	C6-N1-C2	-5.58	117.65	121.00
27	1H	1658	C	N3-C2-O2	5.58	125.81	121.90
1	1G	353	A	N1-C6-N6	5.58	121.95	118.60
27	14	945	A	C4-N9-C1'	5.58	136.34	126.30
27	14	1426	G	C8-N9-C1'	-5.58	119.75	127.00
27	14	30	G	C8-N9-C4	-5.58	104.17	106.40
27	14	1616	A	O4'-C1'-N9	5.58	112.66	108.20
27	14	1944	U	O5'-P-OP2	-5.58	100.68	105.70
1	13	858	G	N3-C4-C5	-5.58	125.81	128.60
27	1H	2065	A	O5'-P-OP2	-5.58	100.68	105.70
27	14	2338	G	O5'-P-OP1	-5.58	100.68	105.70
27	1H	583	G	N3-C2-N2	-5.57	116.00	119.90
27	1H	2439	A	N9-C4-C5	-5.57	103.57	105.80
27	1H	2668	G	O4'-C1'-N9	5.57	112.66	108.20
27	14	2454	G	N1-C6-O6	-5.57	116.56	119.90
39	35	46	LYS	C-N-CA	-5.57	107.77	121.70
27	1H	2726	A	OP1-P-OP2	-5.57	111.24	119.60
1	13	511	C	C6-N1-C2	5.57	122.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	873	C	C5-C4-N4	-5.57	116.30	120.20
27	1H	991	A	P-O3'-C3'	5.57	126.38	119.70
27	1H	1311	G	OP1-P-O3'	5.57	117.46	105.20
27	1H	1833	G	O5'-P-OP1	-5.57	100.69	105.70
27	1H	2376	C	C6-N1-C2	5.57	122.53	120.30
27	1H	2591	G	C5-C6-O6	-5.57	125.26	128.60
1	1G	1119	C	C6-N1-C2	-5.57	118.07	120.30
27	14	945	A	C5-C6-N1	-5.57	114.91	117.70
27	14	2066	C	N1-C2-O2	5.57	122.24	118.90
27	14	2707	G	O5'-P-OP2	-5.57	100.69	105.70
27	1H	1739	C	C4-C5-C6	5.57	120.18	117.40
27	14	731	C	C5-C4-N4	-5.57	116.30	120.20
27	14	2028	U	N3-C4-O4	5.57	123.30	119.40
1	13	701	C	OP2-P-O3'	5.57	117.45	105.20
27	1H	1232	G	OP1-P-OP2	5.57	127.95	119.60
27	1H	1498	G	N1-C6-O6	5.57	123.24	119.90
27	1H	2725	U	C5-C6-N1	-5.57	119.92	122.70
27	14	1265	A	C8-N9-C4	-5.57	103.57	105.80
27	1H	857	G	C2-N3-C4	-5.57	109.12	111.90
27	1H	1699	G	C5-C6-O6	-5.57	125.26	128.60
27	14	581	C	C6-N1-C2	-5.57	118.07	120.30
27	14	2074	U	N1-C2-N3	5.57	118.24	114.90
27	1H	891	G	N3-C2-N2	-5.56	116.01	119.90
27	1H	1718	C	C2-N3-C4	-5.56	117.12	119.90
27	1H	2595	G	N3-C4-C5	-5.56	125.82	128.60
27	14	1641	A	C4-C5-N7	5.56	113.48	110.70
27	14	1902	C	C2-N1-C1'	5.56	124.92	118.80
27	14	2320	A	C2-N3-C4	-5.56	107.82	110.60
27	1H	1443	U	C2-N1-C1'	5.56	124.37	117.70
35	61	116	LEU	CA-CB-CG	5.56	128.09	115.30
27	14	613	U	N3-C2-O2	-5.56	118.31	122.20
27	1H	219	A	P-O3'-C3'	5.56	126.37	119.70
27	1H	492	G	C4-C5-N7	5.56	113.02	110.80
27	1H	589	C	N3-C4-C5	-5.56	119.68	121.90
27	1H	1804	G	C4-C5-N7	-5.56	108.58	110.80
28	16	7	G	C2-N3-C4	-5.56	109.12	111.90
1	1G	1523	G	N9-C4-C5	5.56	107.62	105.40
27	14	122	G	C8-N9-C4	5.56	108.62	106.40
1	13	38	G	N1-C6-O6	5.56	123.23	119.90
27	1H	96	C	C6-N1-C2	5.56	122.52	120.30
27	1H	1379	G	N3-C4-C5	-5.56	125.82	128.60
27	14	2443	C	N1-C2-O2	5.56	122.23	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	194	A	C6-N1-C2	-5.56	115.27	118.60
27	1H	631	U	C5-C4-O4	5.56	129.23	125.90
1	13	288	A	N9-C4-C5	-5.55	103.58	105.80
27	1H	490	G	C5-C6-N1	5.55	114.28	111.50
27	1H	555	A	N7-C8-N9	5.55	116.58	113.80
27	1H	2456	C	N1-C2-O2	-5.55	115.57	118.90
1	1G	1126	U	C5-C6-N1	5.55	125.48	122.70
27	14	954	G	N7-C8-N9	5.55	115.88	113.10
27	1H	1243	G	C4-C5-N7	-5.55	108.58	110.80
27	1H	1379	G	O4'-C1'-N9	-5.55	103.76	108.20
27	1H	1621	G	N3-C4-C5	5.55	131.38	128.60
27	14	2570	G	N1-C6-O6	5.55	123.23	119.90
1	13	1196	U	O5'-P-OP1	-5.55	100.70	105.70
27	1H	1244	U	C5-C6-N1	-5.55	119.92	122.70
27	1H	2242	C	N3-C4-C5	5.55	124.12	121.90
1	13	1214	C	N1-C2-O2	5.55	122.23	118.90
27	1H	1355	A	C5-C6-N6	5.55	128.14	123.70
1	1G	25	C	N1-C2-O2	5.55	122.23	118.90
27	14	248	G	N1-C6-O6	-5.55	116.57	119.90
27	14	983	A	OP2-P-O3'	5.55	117.40	105.20
27	1H	442	C	C4-C5-C6	5.54	120.17	117.40
27	1H	478	C	C5-C6-N1	-5.54	118.23	121.00
27	14	1999	C	OP2-P-O3'	5.54	117.40	105.20
1	13	582	U	N3-C2-O2	-5.54	118.32	122.20
27	1H	492	G	C8-N9-C4	-5.54	104.18	106.40
27	1H	1237	G	C5-C6-N1	5.54	114.27	111.50
27	1H	1463	G	C4-N9-C1'	-5.54	119.29	126.50
27	1H	2253	C	C6-N1-C2	5.54	122.52	120.30
27	14	570	G	C8-N9-C1'	-5.54	119.79	127.00
27	14	2014	A	C2-N3-C4	-5.54	107.83	110.60
27	14	2645	G	P-O3'-C3'	5.54	126.35	119.70
1	13	575	G	OP1-P-O3'	5.54	117.39	105.20
1	13	1183	A	P-O3'-C3'	5.54	126.35	119.70
25	4K	44	U	C5-C6-N1	5.54	125.47	122.70
27	1H	754	A	C2-N3-C4	-5.54	107.83	110.60
1	1G	1049	U	P-O3'-C3'	5.54	126.35	119.70
27	14	1975	G	N9-C4-C5	-5.54	103.18	105.40
27	1H	789	G	N1-C6-O6	-5.54	116.58	119.90
27	1H	2045	U	N1-C2-O2	-5.54	118.92	122.80
1	13	123	C	C5-C6-N1	-5.54	118.23	121.00
22	1K	57	G	O4'-C1'-N9	5.54	112.63	108.20
23	2K	44	G	N3-C4-N9	-5.54	122.68	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	615	C	C5-C4-N4	5.54	124.08	120.20
27	1H	970	C	C6-N1-C2	-5.54	118.09	120.30
27	1H	1156	C	P-O3'-C3'	5.54	126.34	119.70
27	1H	2252	G	N7-C8-N9	-5.54	110.33	113.10
1	1G	912	C	C5-C6-N1	-5.54	118.23	121.00
27	14	1615	C	N3-C2-O2	5.54	125.77	121.90
1	13	18	C	C5-C6-N1	5.53	123.77	121.00
1	13	833	U	C5-C4-O4	5.53	129.22	125.90
1	13	1503	A	P-O3'-C3'	5.53	126.34	119.70
27	1H	1443	U	OP1-P-OP2	5.53	127.90	119.60
27	1H	2455	C	C2-N3-C4	-5.53	117.13	119.90
27	14	2430	A	C6-C5-N7	-5.53	128.43	132.30
1	13	917	G	O5'-P-OP2	5.53	117.34	110.70
1	1G	138	G	C4-N9-C1'	-5.53	119.31	126.50
27	14	1327	C	N1-C2-O2	-5.53	115.58	118.90
27	14	2058	A	OP2-P-O3'	5.53	117.37	105.20
27	1H	1935	A	N1-C6-N6	5.53	121.92	118.60
27	1H	2358	G	N1-C6-O6	-5.53	116.58	119.90
27	1H	2405	A	C8-N9-C4	-5.53	103.59	105.80
27	1H	2440	C	O5'-P-OP1	-5.53	100.72	105.70
27	14	2199	A	N1-C6-N6	5.53	121.92	118.60
27	1H	209	G	N3-C4-N9	5.53	129.32	126.00
27	1H	1382	U	N3-C2-O2	-5.53	118.33	122.20
27	1H	2442	G	OP2-P-O3'	5.53	117.36	105.20
27	1H	182	C	C5-C6-N1	-5.53	118.24	121.00
27	1H	673	G	N3-C4-C5	-5.53	125.84	128.60
27	1H	1236	G	N1-C6-O6	5.53	123.22	119.90
27	1H	1288	A	N7-C8-N9	5.53	116.56	113.80
27	1H	1995	A	C5-C6-N1	5.53	120.46	117.70
27	1H	2601	G	C5-C6-O6	5.53	131.92	128.60
28	16	10	C	O5'-P-OP1	5.53	117.33	110.70
28	16	76	G	C8-N9-C4	5.53	108.61	106.40
1	13	634	C	C6-N1-C2	-5.53	118.09	120.30
27	1H	749	G	N7-C8-N9	5.53	115.86	113.10
25	4L	45	U	C6-N1-C1'	5.53	128.94	121.20
27	1H	456	A	O5'-P-OP2	5.52	117.33	110.70
27	1H	478	C	O4'-C1'-N1	5.52	112.62	108.20
27	1H	1424	G	N3-C4-N9	5.52	129.31	126.00
27	1H	2713	C	N3-C4-C5	5.52	124.11	121.90
27	14	2163	C	C6-N1-C2	-5.52	118.09	120.30
27	14	2430	A	N1-C6-N6	5.52	121.91	118.60
27	14	2438	U	O5'-P-OP2	-5.52	100.73	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1127	G	C4-N9-C1'	5.52	133.68	126.50
27	14	1347	G	N3-C4-C5	5.52	131.36	128.60
1	13	244	U	N3-C4-O4	5.52	123.26	119.40
1	13	1504	G	O4'-C1'-N9	5.52	112.62	108.20
27	1H	36	G	C5-C6-O6	5.52	131.91	128.60
27	1H	1007	C	O4'-C1'-N1	5.52	112.62	108.20
27	1H	2228	G	C4-N9-C1'	5.52	133.68	126.50
27	14	2607	G	C6-C5-N7	-5.52	127.09	130.40
27	14	2880	C	N3-C2-O2	-5.52	118.04	121.90
1	13	808	C	N3-C4-N4	5.52	121.86	118.00
27	1H	199	C	C4-C5-C6	5.52	120.16	117.40
27	1H	893	G	N1-C2-N2	-5.52	111.23	116.20
27	1H	1426	A	N1-C6-N6	5.52	121.91	118.60
27	1H	2578	A	N1-C2-N3	-5.52	126.54	129.30
27	1H	2621	G	C8-N9-C4	-5.52	104.19	106.40
1	1G	250	A	P-O3'-C3'	5.52	126.32	119.70
27	1H	2395	G	N1-C2-N2	-5.52	111.23	116.20
27	14	1698	A	O4'-C1'-N9	5.52	112.61	108.20
27	1H	1668	U	N1-C2-O2	-5.51	118.94	122.80
27	1H	1694	C	N1-C2-O2	-5.51	115.59	118.90
27	1H	1875	C	N1-C2-O2	-5.51	115.59	118.90
27	1H	2407	C	C2-N3-C4	-5.51	117.14	119.90
27	1H	2775	G	C5-C6-O6	5.51	131.91	128.60
25	4L	56	U	N1-C2-O2	5.51	126.66	122.80
27	14	58	G	C4-N9-C1'	5.51	133.67	126.50
1	13	449	C	C6-N1-C2	-5.51	118.09	120.30
1	13	1054	C	C5-C4-N4	-5.51	116.34	120.20
27	1H	188	C	OP1-P-OP2	-5.51	111.33	119.60
27	1H	2387	C	C2-N3-C4	-5.51	117.14	119.90
1	1G	22	G	N1-C6-O6	5.51	123.21	119.90
27	1H	1399	U	N1-C2-N3	5.51	118.21	114.90
27	1H	2826	C	O5'-P-OP1	-5.51	100.74	105.70
27	1H	2883	G	C4-C5-N7	-5.51	108.60	110.80
27	14	1471	A	C8-N9-C4	-5.51	103.60	105.80
27	1H	608	C	OP1-P-OP2	-5.51	111.34	119.60
27	1H	964	A	N1-C6-N6	5.51	121.91	118.60
27	14	1273	U	C5-C6-N1	-5.51	119.95	122.70
27	14	2500	U	C2-N3-C4	-5.51	123.69	127.00
24	3K	4	C	C6-N1-C2	-5.51	118.10	120.30
27	14	1528	A	O4'-C1'-N9	5.51	112.61	108.20
27	14	2518	A	N1-C6-N6	5.51	121.90	118.60
27	1H	928	G	N1-C2-N2	5.50	121.16	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1399	U	N3-C2-O2	-5.50	118.35	122.20
1	1G	1495	U	N3-C2-O2	-5.50	118.35	122.20
27	14	388	G	N3-C4-C5	5.50	131.35	128.60
27	14	1365	A	C8-N9-C4	-5.50	103.60	105.80
27	14	2332	U	C5-C4-O4	5.50	129.20	125.90
1	13	137	C	O5'-P-OP2	-5.50	100.75	105.70
27	1H	115	G	C5-C6-O6	-5.50	125.30	128.60
27	1H	220	U	O5'-P-OP2	-5.50	100.75	105.70
27	1H	2513	U	N3-C4-O4	-5.50	115.55	119.40
27	1H	335	A	O5'-P-OP1	-5.50	100.75	105.70
27	1H	1991	G	N1-C6-O6	5.50	123.20	119.90
1	1G	138	G	C8-N9-C1'	5.50	134.15	127.00
27	14	1946	U	N1-C2-O2	-5.50	118.95	122.80
1	13	55	A	C8-N9-C4	5.50	108.00	105.80
1	13	117	G	C6-C5-N7	-5.50	127.10	130.40
27	1H	64	C	C2-N1-C1'	5.50	124.85	118.80
27	1H	1019	A	N3-C4-N9	-5.50	123.00	127.40
27	1H	321	C	C6-N1-C2	5.50	122.50	120.30
27	14	725	G	C6-C5-N7	-5.50	127.10	130.40
27	14	1444(A)	A	O4'-C1'-N9	5.50	112.60	108.20
27	14	1542	G	N3-C4-C5	-5.50	125.85	128.60
27	14	1790	C	OP1-P-O3'	5.50	117.30	105.20
27	1H	416	G	C5-C6-O6	-5.50	125.30	128.60
27	1H	673	G	C4-C5-C6	5.50	122.10	118.80
1	1G	119	A	C8-N9-C4	-5.50	103.60	105.80
27	14	2522	U	C5-C6-N1	-5.50	119.95	122.70
1	13	1199	U	O5'-P-OP1	-5.50	100.75	105.70
27	1H	2430	C	C5-C6-N1	-5.50	118.25	121.00
1	1G	913	A	P-O3'-C3'	5.50	126.29	119.70
27	1H	739	C	C5-C4-N4	-5.49	116.36	120.20
27	1H	783	A	N7-C8-N9	-5.49	111.05	113.80
27	1H	1193	C	C6-N1-C2	5.49	122.50	120.30
27	1H	1831	G	OP1-P-OP2	5.49	127.84	119.60
27	1H	2383	G	N1-C6-O6	-5.49	116.60	119.90
27	1H	2615	A	N1-C6-N6	-5.49	115.30	118.60
42	A8	110	LEU	CB-CG-CD1	5.49	120.34	111.00
27	14	1308	A	N9-C4-C5	5.49	108.00	105.80
1	13	792	A	O4'-C1'-N9	5.49	112.59	108.20
27	1H	1746	A	C4-C5-N7	5.49	113.45	110.70
27	1H	2602	A	C2-N3-C4	-5.49	107.85	110.60
27	1H	1204	G	C6-C5-N7	-5.49	127.11	130.40
27	1H	1816	A	OP1-P-O3'	5.49	117.28	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	397	A	N3-C4-C5	-5.49	122.96	126.80
27	14	75	G	N3-C4-N9	5.49	129.29	126.00
1	13	894	G	C4-C5-N7	5.49	113.00	110.80
27	1H	2320	G	N3-C4-N9	5.49	129.29	126.00
27	1H	2443	A	N3-C4-N9	-5.49	123.01	127.40
27	1H	2480	C	C2-N3-C4	-5.49	117.16	119.90
27	1H	2488	C	C6-N1-C1'	-5.49	114.21	120.80
1	1G	264	U	C2-N1-C1'	5.49	124.29	117.70
1	1G	428	G	C4-C5-N7	-5.49	108.60	110.80
27	14	146	G	C5-C6-O6	-5.49	125.31	128.60
27	14	188	G	N3-C2-N2	5.49	123.74	119.90
27	14	1799	G	C5-C6-O6	5.49	131.89	128.60
27	14	2027	G	N3-C4-N9	5.49	129.29	126.00
27	14	2602	A	N1-C6-N6	5.49	121.89	118.60
27	14	2629	A	O4'-C1'-N9	5.49	112.59	108.20
27	14	1347	G	C8-N9-C4	5.49	108.59	106.40
1	13	1083	U	O5'-P-OP1	-5.49	100.76	105.70
1	13	1260	C	N3-C2-O2	-5.49	118.06	121.90
27	1H	720	C	C2-N3-C4	-5.49	117.16	119.90
27	1H	2395	G	C8-N9-C1'	-5.49	119.87	127.00
27	1H	2053	A	N1-C6-N6	-5.48	115.31	118.60
27	1H	594	G	C5-N7-C8	5.48	107.04	104.30
27	1H	787	G	OP2-P-O3'	-5.48	93.14	105.20
27	14	2710	C	C6-N1-C2	5.48	122.49	120.30
27	1H	203	A	N9-C4-C5	-5.48	103.61	105.80
27	1H	554	A	O4'-C1'-N9	-5.48	103.82	108.20
27	1H	642	G	N3-C4-C5	-5.48	125.86	128.60
27	1H	1475	C	C4-C5-C6	5.48	120.14	117.40
27	1H	2704	C	N3-C4-C5	5.48	124.09	121.90
27	14	2038	G	C8-N9-C4	5.48	108.59	106.40
1	1G	1472	U	O5'-P-OP2	-5.48	100.77	105.70
27	14	2709	G	O5'-P-OP1	5.48	117.28	110.70
27	14	2779	U	C2-N1-C1'	5.48	124.28	117.70
1	13	266	G	C4-C5-N7	5.48	112.99	110.80
1	13	916	G	N7-C8-N9	5.48	115.84	113.10
27	1H	1458	C	C6-N1-C2	-5.48	118.11	120.30
27	1H	1709	G	N3-C2-N2	-5.48	116.06	119.90
27	1H	1967	U	C6-N1-C2	5.48	124.29	121.00
1	1G	690	G	N3-C4-C5	5.48	131.34	128.60
27	14	2050	C	N1-C2-N3	5.48	123.03	119.20
27	1H	490	G	N1-C6-O6	-5.48	116.61	119.90
27	1H	1233	G	C5-C6-N1	-5.48	108.76	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1620	G	O5'-P-OP2	5.48	117.27	110.70
27	14	2392	A	C4-C5-N7	5.48	113.44	110.70
27	1H	2688	A	C6-N1-C2	-5.47	115.31	118.60
27	1H	2715	U	C5'-C4'-O4'	5.47	115.67	109.10
27	14	246	C	C6-N1-C2	5.47	122.49	120.30
27	14	664	C	C4-C5-C6	5.47	120.14	117.40
27	1H	140	A	C6-N1-C2	5.47	121.88	118.60
27	1H	975	G	C4-C5-N7	5.47	112.99	110.80
27	1H	2303	G	N1-C6-O6	-5.47	116.62	119.90
27	1H	2459	G	C5-C6-O6	-5.47	125.32	128.60
1	1G	894	G	C5-C6-O6	5.47	131.88	128.60
27	14	671	C	N1-C2-O2	-5.47	115.62	118.90
27	14	1596	A	OP2-P-O3'	5.47	117.24	105.20
1	13	914	A	O5'-P-OP1	-5.47	100.78	105.70
27	1H	1024	G	C8-N9-C4	-5.47	104.21	106.40
27	1H	2745	G	N1-C6-O6	-5.47	116.62	119.90
1	13	1266	G	N3-C4-C5	5.47	131.34	128.60
27	1H	1621	G	N7-C8-N9	-5.47	110.36	113.10
27	1H	1664	C	C2-N3-C4	-5.47	117.17	119.90
27	1H	1740	U	C2-N3-C4	-5.47	123.72	127.00
27	14	2618	G	C4-C5-N7	-5.47	108.61	110.80
27	14	461	C	O5'-P-OP1	-5.47	100.78	105.70
1	13	321	A	C4-C5-C6	-5.47	114.27	117.00
1	13	963	G	OP1-P-O3'	5.47	117.23	105.20
27	1H	2056	A	C5-C6-N1	5.47	120.43	117.70
27	1H	2481	G	P-O3'-C3'	5.47	126.26	119.70
27	14	1342	A	N7-C8-N9	5.47	116.53	113.80
27	14	2078	C	C6-N1-C2	-5.47	118.11	120.30
27	14	2699	C	C2-N1-C1'	-5.47	112.79	118.80
1	13	532	A	OP1-P-O3'	5.46	117.22	105.20
1	13	715	A	N1-C6-N6	-5.46	115.32	118.60
1	13	766	A	C4-C5-C6	-5.46	114.27	117.00
27	14	1488	G	N7-C8-N9	5.46	115.83	113.10
27	14	2548	G	OP1-P-O3'	5.46	117.22	105.20
1	13	268	C	C2-N1-C1'	-5.46	112.79	118.80
27	1H	535	C	N3-C2-O2	-5.46	118.08	121.90
27	1H	615	C	N3-C4-N4	-5.46	114.18	118.00
27	1H	1366	G	N1-C2-N3	5.46	127.18	123.90
28	16	104	A	C2-N3-C4	5.46	113.33	110.60
43	B8	6	LEU	CA-CB-CG	-5.46	102.74	115.30
27	14	707	G	N1-C6-O6	5.46	123.18	119.90
27	14	1028	A	N1-C6-N6	-5.46	115.32	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1294	U	N3-C2-O2	5.46	126.02	122.20
27	14	2593	U	N3-C4-O4	5.46	123.22	119.40
1	13	46	G	C8-N9-C4	5.46	108.58	106.40
27	1H	2508	G	N3-C4-N9	-5.46	122.72	126.00
1	13	784	C	OP1-P-O3'	5.46	117.21	105.20
23	2K	13	C	C5-C4-N4	-5.46	116.38	120.20
27	1H	2693	C	C4-C5-C6	5.46	120.13	117.40
27	1H	2788	C	N3-C4-C5	5.46	124.08	121.90
27	1H	2828	G	C4-C5-N7	5.46	112.98	110.80
27	1H	461	C	C6-N1-C2	-5.46	118.12	120.30
27	1H	2271	C	C2-N1-C1'	5.46	124.80	118.80
27	14	777	A	OP1-P-OP2	5.46	127.78	119.60
27	14	1332	G	C5-C6-N1	-5.46	108.77	111.50
27	14	2863	C	C2-N1-C1'	5.46	124.80	118.80
1	13	974	A	C6-C5-N7	-5.46	128.48	132.30
27	1H	137	G	C5-C6-O6	-5.46	125.33	128.60
27	1H	2786	C	N3-C2-O2	-5.46	118.08	121.90
27	14	2026	C	N3-C4-C5	5.46	124.08	121.90
27	1H	320	G	C6-C5-N7	-5.45	127.13	130.40
27	1H	523	A	C8-N9-C4	5.45	107.98	105.80
27	1H	1038	C	C6-N1-C2	-5.45	118.12	120.30
27	1H	2564	C	C6-N1-C2	5.45	122.48	120.30
27	14	1938	A	C8-N9-C4	5.45	107.98	105.80
27	1H	2113	G	C5-C6-O6	-5.45	125.33	128.60
1	1G	1225	A	N7-C8-N9	5.45	116.53	113.80
27	14	556	G	N7-C8-N9	5.45	115.83	113.10
27	14	1544	C	C2-N1-C1'	5.45	124.80	118.80
55	N8	19	ARG	NE-CZ-NH1	-5.45	117.58	120.30
1	1G	811	C	N1-C2-O2	-5.45	115.63	118.90
27	1H	1020	G	C4-N9-C1'	-5.45	119.42	126.50
27	1H	1831	G	C5-N7-C8	5.45	107.02	104.30
27	1H	2585	A	N1-C6-N6	5.45	121.87	118.60
1	1G	729	A	C8-N9-C4	-5.45	103.62	105.80
27	14	2496	C	P-O3'-C3'	5.45	126.24	119.70
24	3K	6	G	O4'-C1'-N9	5.45	112.56	108.20
27	1H	183	U	N3-C2-O2	5.45	126.01	122.20
27	1H	138	G	C5-C6-O6	5.45	131.87	128.60
27	1H	1355	A	C2-N3-C4	-5.45	107.88	110.60
27	14	1614	A	C5-C6-N1	-5.45	114.98	117.70
27	14	1786	A	C4-N9-C1'	5.45	136.10	126.30
27	14	2383	G	C4-N9-C1'	5.45	133.58	126.50
27	14	578	A	OP2-P-O3'	5.44	117.18	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1991	G	C5-C6-N1	-5.44	108.78	111.50
27	1H	2508	G	C2-N3-C4	-5.44	109.18	111.90
27	14	1235	G	C8-N9-C4	-5.44	104.22	106.40
27	14	1276	A	O4'-C1'-N9	-5.44	103.85	108.20
1	13	1301	U	P-O3'-C3'	5.44	126.23	119.70
27	1H	232	G	N3-C4-C5	5.44	131.32	128.60
27	1H	485	G	C8-N9-C4	5.44	108.58	106.40
27	1H	876	U	C5-C6-N1	-5.44	119.98	122.70
27	1H	1553	C	C6-N1-C2	-5.44	118.12	120.30
27	1H	2715	U	O4'-C1'-N1	5.44	112.55	108.20
27	1H	507	A	C8-N9-C4	-5.44	103.62	105.80
27	1H	611	C	O5'-P-OP1	5.44	117.23	110.70
27	14	403	U	N3-C2-O2	-5.44	118.39	122.20
27	14	1544	C	C6-N1-C1'	-5.44	114.28	120.80
1	13	822	C	C6-N1-C2	5.44	122.47	120.30
27	1H	428	G	N1-C6-O6	5.44	123.16	119.90
27	14	2235	G	N7-C8-N9	5.44	115.82	113.10
27	14	2358	G	C5-C6-O6	5.44	131.86	128.60
27	1H	178	G	N1-C6-O6	5.43	123.16	119.90
27	1H	249	G	C4-C5-N7	5.43	112.97	110.80
27	1H	672	A	C4-C5-N7	5.43	113.42	110.70
27	1H	1937	C	N1-C2-N3	5.43	123.00	119.20
27	1H	2599	C	N3-C2-O2	5.43	125.70	121.90
27	1H	2616	G	N3-C2-N2	-5.43	116.10	119.90
47	F8	23	GLU	C-N-CA	-5.43	110.89	122.30
27	14	512	G	C5-C6-O6	5.43	131.86	128.60
1	13	189	U	N3-C2-O2	-5.43	118.40	122.20
27	1H	427	G	C5-C6-N1	5.43	114.22	111.50
27	1H	798	A	OP1-P-O3'	-5.43	93.25	105.20
27	14	1559	G	N9-C1'-C2'	5.43	121.06	114.00
27	1H	246	A	N3-C4-C5	5.43	130.60	126.80
27	1H	857	G	C8-N9-C4	5.43	108.57	106.40
27	1H	876	U	N3-C4-O4	-5.43	115.60	119.40
27	1H	1078	G	C5-N7-C8	-5.43	101.58	104.30
27	1H	1651	C	O5'-P-OP2	5.43	117.22	110.70
27	1H	1808	G	O5'-P-OP1	5.43	117.22	110.70
27	1H	2050	G	N3-C4-C5	-5.43	125.89	128.60
1	1G	774	G	N1-C6-O6	5.43	123.16	119.90
27	14	2392	A	C5-C6-N1	-5.43	114.98	117.70
27	14	2447	G	N9-C4-C5	5.43	107.57	105.40
27	1H	320	G	C4-C5-N7	5.43	112.97	110.80
27	1H	839	C	N1-C2-O2	-5.43	115.64	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1657	C	OP2-P-O3'	5.43	117.14	105.20
1	13	1126	U	N3-C2-O2	-5.43	118.40	122.20
27	1H	2441	G	P-O3'-C3'	5.43	126.21	119.70
27	14	1950	G	C8-N9-C1'	-5.43	119.95	127.00
27	1H	69	G	N1-C6-O6	-5.42	116.64	119.90
27	1H	189	A	C4-C5-N7	-5.42	107.99	110.70
27	1H	416	G	C4-C5-N7	5.42	112.97	110.80
27	1H	982	C	O5'-P-OP2	-5.42	100.82	105.70
27	14	319	C	N1-C2-O2	5.42	122.15	118.90
27	14	1902	C	C6-N1-C1'	-5.42	114.29	120.80
22	1K	4	C	C6-N1-C2	-5.42	118.13	120.30
1	13	1469	G	C2-N3-C4	-5.42	109.19	111.90
27	1H	1241	G	N1-C6-O6	5.42	123.15	119.90
27	1H	1839	G	N7-C8-N9	-5.42	110.39	113.10
27	1H	2304	U	OP2-P-O3'	5.42	117.13	105.20
27	14	1654	A	O5'-P-OP1	-5.42	100.82	105.70
27	14	2700	C	C6-N1-C2	5.42	122.47	120.30
27	1H	137	G	C2-N3-C4	5.42	114.61	111.90
1	1G	701	C	P-O3'-C3'	5.42	126.20	119.70
27	14	479	A	P-O3'-C3'	5.42	126.20	119.70
1	13	1190	G	N1-C6-O6	5.42	123.15	119.90
23	2K	57	G	N3-C4-C5	-5.42	125.89	128.60
27	1H	120	G	N1-C2-N2	-5.42	111.32	116.20
27	1H	198	C	OP1-P-OP2	5.42	127.73	119.60
27	1H	209	G	N3-C4-C5	-5.42	125.89	128.60
27	1H	910	G	C4-C5-N7	-5.42	108.63	110.80
27	1H	2090	G	N1-C2-N3	-5.42	120.65	123.90
27	14	1314	C	C2-N1-C1'	5.42	124.76	118.80
1	13	127	G	C5-C6-O6	-5.42	125.35	128.60
27	1H	34	C	C6-N1-C2	-5.42	118.13	120.30
27	1H	735	C	C5-C6-N1	5.42	123.71	121.00
27	1H	2388	G	N1-C6-O6	5.42	123.15	119.90
27	1H	2616	G	N1-C2-N2	5.42	121.08	116.20
1	1G	397	A	C6-N1-C2	-5.42	115.35	118.60
1	13	523	A	C6-C5-N7	-5.42	128.51	132.30
27	1H	286	U	O4'-C1'-N1	5.42	112.53	108.20
27	1H	1177	U	N3-C2-O2	-5.42	118.41	122.20
27	1H	2236	G	C8-N9-C4	5.42	108.57	106.40
27	1H	2656	G	C2-N3-C4	-5.42	109.19	111.90
27	14	671	C	N3-C4-C5	-5.42	119.73	121.90
27	1H	1476	G	N1-C2-N3	5.41	127.15	123.90
27	1H	1743	G	C4-C5-N7	5.41	112.97	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1960	A	N1-C6-N6	-5.41	115.35	118.60
27	1H	2457	G	C5-C6-N1	-5.41	108.79	111.50
27	1H	2878	G	N1-C2-N2	5.41	121.07	116.20
1	1G	1528	U	N1-C2-O2	-5.41	119.01	122.80
27	14	1355	G	N3-C4-N9	5.41	129.25	126.00
27	14	1858	G	N3-C4-N9	5.41	129.25	126.00
28	1J	111	U	N3-C2-O2	-5.41	118.41	122.20
1	13	1125	U	N1-C2-N3	-5.41	111.65	114.90
1	13	1530	G	O4'-C1'-N9	5.41	112.53	108.20
27	1H	422	A	C5-C6-N1	5.41	120.41	117.70
27	1H	730	G	C5-C6-O6	-5.41	125.35	128.60
27	1H	1667	G	N7-C8-N9	-5.41	110.39	113.10
27	1H	2427	G	C8-N9-C1'	-5.41	119.97	127.00
27	14	690	G	OP1-P-O3'	5.41	117.10	105.20
1	13	1362(A)	C	C6-N1-C2	-5.41	118.14	120.30
24	3K	74	C	C5-C6-N1	5.41	123.70	121.00
27	1H	1271	C	C6-N1-C2	5.41	122.46	120.30
27	1H	1683	G	O5'-P-OP1	-5.41	100.83	105.70
27	14	1363	C	N3-C2-O2	-5.41	118.11	121.90
23	2K	35	A	C8-N9-C4	5.41	107.96	105.80
27	1H	2863	G	N1-C6-O6	-5.41	116.66	119.90
1	1G	897	C	C5-C6-N1	-5.41	118.30	121.00
39	35	147	LEU	CA-CB-CG	5.41	127.73	115.30
1	13	130	A	O4'-C1'-N9	5.40	112.52	108.20
27	1H	1958	G	N3-C4-C5	5.40	131.30	128.60
27	1H	2839	C	N3-C2-O2	5.40	125.68	121.90
1	1G	130	A	P-O3'-C3'	5.40	126.18	119.70
27	14	767	U	N3-C2-O2	-5.40	118.42	122.20
1	13	532	A	C2-N3-C4	-5.40	107.90	110.60
1	13	589	C	C6-N1-C2	-5.40	118.14	120.30
27	1H	754	A	C8-N9-C4	5.40	107.96	105.80
27	1H	1872	G	C4-C5-N7	5.40	112.96	110.80
27	1H	2887	G	C5-C6-O6	-5.40	125.36	128.60
1	1G	429	U	C2-N1-C1'	-5.40	111.22	117.70
1	1G	960	U	C6-N1-C1'	-5.40	113.64	121.20
27	1H	592	U	N3-C4-O4	5.40	123.18	119.40
27	1H	1264	C	N3-C2-O2	5.40	125.68	121.90
27	1H	1624	U	N3-C2-O2	-5.40	118.42	122.20
27	1H	1874	G	N7-C8-N9	-5.40	110.40	113.10
27	1H	2574	A	C8-N9-C4	5.40	107.96	105.80
27	1H	577	G	C2-N3-C4	-5.40	109.20	111.90
1	13	523	A	C4-C5-N7	5.40	113.40	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1622	C	O5'-P-OP1	5.40	117.18	110.70
27	1H	2880	G	N3-C2-N2	-5.40	116.12	119.90
27	14	2235	G	C4-N9-C1'	5.40	133.52	126.50
27	1H	2597	U	O4'-C1'-N1	5.39	112.52	108.20
1	1G	1240	U	P-O3'-C3'	5.39	126.17	119.70
27	14	591	C	C2-N3-C4	-5.39	117.20	119.90
27	14	2367	G	C5-C6-O6	-5.39	125.36	128.60
1	13	812	C	O5'-P-OP1	-5.39	100.85	105.70
27	1H	825	A	C6-N1-C2	-5.39	115.36	118.60
27	1H	872	A	N1-C6-N6	-5.39	115.36	118.60
27	1H	1804	G	N7-C8-N9	-5.39	110.40	113.10
28	16	109	G	N7-C8-N9	5.39	115.80	113.10
1	1G	1335	C	C6-N1-C2	5.39	122.46	120.30
27	14	1951	U	N1-C2-O2	5.39	126.58	122.80
27	14	667	U	N1-C2-O2	-5.39	119.03	122.80
1	13	968	A	N1-C2-N3	-5.39	126.61	129.30
27	1H	1300	A	C4-C5-N7	5.39	113.39	110.70
28	16	115	G	N1-C6-O6	5.39	123.13	119.90
1	13	1240	U	N3-C2-O2	-5.39	118.43	122.20
27	1H	426	G	OP2-P-O3'	5.39	117.05	105.20
1	13	974	A	C4-C5-N7	5.39	113.39	110.70
27	1H	1241	G	C5-C6-O6	-5.39	125.37	128.60
27	1H	2091	U	O4'-C1'-N1	-5.39	103.89	108.20
27	1H	2327	C	C2-N1-C1'	-5.39	112.88	118.80
28	16	96	G	C6-C5-N7	5.39	133.63	130.40
1	1G	800	G	N1-C6-O6	5.39	123.13	119.90
25	4L	56	U	C5-C6-N1	5.39	125.39	122.70
27	14	1379	A	C5-C6-N6	-5.39	119.39	123.70
27	14	1837	C	O5'-P-OP2	5.39	117.16	110.70
27	14	1937	A	C5-C6-N1	-5.39	115.01	117.70
27	14	2551	C	C5-C6-N1	-5.39	118.31	121.00
27	1H	672	A	C5-N7-C8	-5.38	101.21	103.90
1	1G	1390	U	C5-C6-N1	-5.38	120.01	122.70
1	13	533	A	P-O3'-C3'	5.38	126.16	119.70
27	1H	1212	U	C5-C6-N1	5.38	125.39	122.70
45	95	35	LEU	CA-CB-CG	5.38	127.68	115.30
1	13	497	U	N3-C2-O2	-5.38	118.43	122.20
27	1H	841	A	N1-C2-N3	5.38	131.99	129.30
27	1H	2718	A	C6-C5-N7	-5.38	128.53	132.30
27	14	2593	U	N3-C4-C5	-5.38	111.37	114.60
1	13	578	C	N3-C2-O2	5.38	125.67	121.90
27	1H	627	A	N9-C4-C5	5.38	107.95	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2011	C	C5-C4-N4	5.38	123.97	120.20
27	14	1372	U	N3-C4-O4	5.38	123.17	119.40
1	13	1125	U	C6-N1-C1'	-5.38	113.67	121.20
27	1H	1311	G	OP1-P-OP2	5.38	127.67	119.60
27	1H	1396	A	N9-C4-C5	-5.38	103.65	105.80
27	1H	1446	C	C6-N1-C2	-5.38	118.15	120.30
27	1H	1849	G	C4-C5-N7	-5.38	108.65	110.80
28	16	18	G	C6-C5-N7	-5.38	127.17	130.40
27	1H	2010	G	N1-C6-O6	-5.38	116.67	119.90
27	1H	2384	G	C2-N3-C4	-5.38	109.21	111.90
27	1H	2398	C	N3-C2-O2	5.38	125.66	121.90
27	1H	2637	G	N1-C2-N3	5.38	127.13	123.90
27	14	816	C	N3-C4-C5	5.38	124.05	121.90
27	14	1839	G	C5-C6-O6	-5.38	125.38	128.60
27	1H	1818	A	C4-N9-C1'	5.38	135.97	126.30
27	1H	2091	U	C5-C4-O4	5.38	129.12	125.90
27	14	1973	G	O5'-P-OP2	-5.38	100.86	105.70
27	1H	834	C	N3-C4-N4	-5.37	114.24	118.00
27	1H	1035	A	OP2-P-O3'	5.37	117.02	105.20
27	14	448	U	N3-C2-O2	-5.37	118.44	122.20
27	14	1900	A	N1-C6-N6	-5.37	115.38	118.60
27	14	2818	G	C8-N9-C4	5.37	108.55	106.40
27	1H	1405	G	N1-C6-O6	5.37	123.12	119.90
27	1H	1804	G	C5-N7-C8	5.37	106.99	104.30
27	1H	1822	C	N3-C4-C5	5.37	124.05	121.90
1	1G	984	C	C6-N1-C2	-5.37	118.15	120.30
27	1H	1342	C	C6-N1-C2	5.37	122.45	120.30
27	1H	1878	G	N7-C8-N9	5.37	115.78	113.10
27	14	1857	G	N9-C4-C5	-5.37	103.25	105.40
27	1H	85	C	N3-C2-O2	-5.37	118.14	121.90
27	1H	186	A	N1-C6-N6	5.37	121.82	118.60
27	1H	321	C	N3-C4-C5	5.37	124.05	121.90
27	1H	585	G	N3-C2-N2	5.37	123.66	119.90
27	1H	1215	G	C8-N9-C4	-5.37	104.25	106.40
27	1H	1823	A	N1-C6-N6	5.37	121.82	118.60
27	1H	2288	C	N3-C4-C5	-5.37	119.75	121.90
27	1H	2723	C	C2-N3-C4	-5.37	117.22	119.90
27	14	2037	G	N1-C6-O6	-5.37	116.68	119.90
27	1H	872	A	C5-C6-N1	5.37	120.38	117.70
1	1G	1346	A	OP2-P-O3'	5.37	117.01	105.20
27	14	1652	A	P-O3'-C3'	5.37	126.14	119.70
1	13	1214	C	C6-N1-C1'	-5.37	114.36	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	112	U	C5-C4-O4	-5.37	122.68	125.90
27	1H	1068	A	N9-C4-C5	5.37	107.95	105.80
27	1H	2755	A	C8-N9-C4	5.37	107.95	105.80
1	1G	481	G	C4-C5-C6	5.37	122.02	118.80
27	14	460	A	OP1-P-O3'	5.37	117.00	105.20
27	1H	793	G	C5-C6-O6	-5.36	125.38	128.60
27	1H	1054	C	C6-N1-C2	5.36	122.44	120.30
27	1H	1338	C	C5-C6-N1	-5.36	118.32	121.00
27	1H	1348	A	C4-C5-N7	5.36	113.38	110.70
27	1H	1648	G	N7-C8-N9	-5.36	110.42	113.10
27	14	2377	A	N7-C8-N9	-5.36	111.12	113.80
27	1H	861	U	N1-C2-N3	5.36	118.12	114.90
27	1H	2252	G	C4-C5-N7	5.36	112.94	110.80
27	14	1641	A	N1-C6-N6	5.36	121.82	118.60
27	14	1657	C	C5-C6-N1	-5.36	118.32	121.00
27	1H	209	G	C6-N1-C2	-5.36	121.88	125.10
27	1H	716	G	C4-N9-C1'	-5.36	119.53	126.50
27	1H	1987	G	C8-N9-C4	5.36	108.54	106.40
27	1H	2079	G	C5-C6-O6	-5.36	125.38	128.60
27	1H	2617	U	N1-C2-O2	5.36	126.55	122.80
27	14	1254	A	N1-C6-N6	5.36	121.82	118.60
27	14	1767	C	C5-C6-N1	-5.36	118.32	121.00
1	13	353	A	OP2-P-O3'	5.36	116.99	105.20
27	1H	1013	C	C2-N1-C1'	-5.36	112.91	118.80
27	1H	1797	C	O5'-P-OP2	-5.36	100.88	105.70
27	14	453	C	C4-C5-C6	5.36	120.08	117.40
27	14	1758	G	C5-C6-O6	-5.36	125.39	128.60
27	14	2073	C	OP1-P-OP2	-5.36	111.56	119.60
27	14	2448	A	C5-C6-N1	5.36	120.38	117.70
27	1H	647	A	N3-C4-C5	5.36	130.55	126.80
27	1H	672	A	C8-N9-C4	-5.36	103.66	105.80
27	1H	783	A	C8-N9-C4	5.36	107.94	105.80
27	1H	787	G	C8-N9-C4	5.36	108.54	106.40
27	14	498	G	C5-C6-N1	5.36	114.18	111.50
27	14	1821	A	C6-N1-C2	-5.36	115.39	118.60
27	1H	2498	G	C2-N3-C4	-5.35	109.22	111.90
27	14	2709	G	C5-C6-O6	5.35	131.81	128.60
27	1H	791	G	O5'-P-OP1	-5.35	100.88	105.70
27	1H	833	G	C2-N3-C4	-5.35	109.22	111.90
27	1H	983	U	C2-N1-C1'	-5.35	111.28	117.70
27	1H	1211	G	N1-C6-O6	-5.35	116.69	119.90
27	1H	1262	G	C8-N9-C1'	-5.35	120.04	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1741	U	C5-C4-O4	5.35	129.11	125.90
1	1G	1158	C	N1-C2-O2	5.35	122.11	118.90
27	14	2818	G	N3-C2-N2	5.35	123.65	119.90
1	13	130	A	N1-C2-N3	-5.35	126.62	129.30
27	1H	843	C	C2-N3-C4	-5.35	117.22	119.90
27	1H	911	A	C5-C6-N1	5.35	120.38	117.70
27	1H	2604	C	N3-C2-O2	5.35	125.64	121.90
1	13	243	A	OP1-P-O3'	5.35	116.97	105.20
1	13	563	A	N1-C6-N6	-5.35	115.39	118.60
27	1H	395	C	O4'-C1'-N1	-5.35	103.92	108.20
27	1H	657	A	N1-C6-N6	-5.35	115.39	118.60
27	1H	1439	A	O5'-P-OP1	-5.35	100.89	105.70
1	1G	219	C	C6-N1-C2	-5.35	118.16	120.30
27	14	808	G	N7-C8-N9	-5.35	110.43	113.10
1	13	572	A	N7-C8-N9	-5.35	111.13	113.80
27	1H	2530	C	O4'-C1'-N1	5.35	112.48	108.20
27	14	2688	U	C5-C4-O4	5.35	129.11	125.90
27	1H	811	G	C2-N3-C4	-5.34	109.23	111.90
27	14	621	A	C6-C5-N7	-5.34	128.56	132.30
27	14	2856	C	C6-N1-C2	-5.34	118.16	120.30
27	14	1662	C	O5'-P-OP2	-5.34	100.89	105.70
27	1H	214	G	N1-C2-N3	5.34	127.11	123.90
27	1H	249	G	C6-C5-N7	-5.34	127.19	130.40
27	1H	1292	G	N1-C6-O6	-5.34	116.69	119.90
27	14	2691	C	N1-C2-O2	-5.34	115.69	118.90
1	13	1530	G	P-O3'-C3'	5.34	126.11	119.70
27	1H	73	A	C4-C5-N7	5.34	113.37	110.70
27	1H	2514	C	N3-C4-C5	5.34	124.04	121.90
27	14	1318	C	N1-C2-O2	5.34	122.10	118.90
1	13	35	G	N3-C2-N2	-5.34	116.16	119.90
27	1H	2015	G	C2'-C3'-O3'	5.34	122.24	113.70
1	13	903	G	N9-C4-C5	-5.34	103.27	105.40
27	1H	842	G	C5-N7-C8	5.34	106.97	104.30
27	1H	847	G	C8-N9-C4	5.34	108.53	106.40
27	1H	2428	G	N3-C2-N2	-5.34	116.16	119.90
1	1G	908	A	N3-C4-C5	5.34	130.54	126.80
1	1G	1094	G	OP2-P-O3'	5.34	116.94	105.20
27	14	288	C	N3-C2-O2	-5.34	118.16	121.90
27	14	307	G	N9-C4-C5	-5.34	103.27	105.40
27	1H	2250	G	C5-C6-O6	-5.33	125.40	128.60
1	13	792	A	N9-C1'-C2'	5.33	120.93	114.00
27	1H	210	G	OP1-P-O3'	5.33	116.93	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	492	G	C5-N7-C8	-5.33	101.63	104.30
27	1H	777	G	C2-N3-C4	5.33	114.57	111.90
27	1H	1627	A	N1-C6-N6	5.33	121.80	118.60
27	1H	2407	C	N1-C2-O2	-5.33	115.70	118.90
1	1G	1027	C	OP1-P-O3'	5.33	116.94	105.20
1	13	975	A	N1-C6-N6	5.33	121.80	118.60
27	1H	1706	C	O5'-P-OP1	5.33	117.10	110.70
27	1H	1753	G	N9-C4-C5	5.33	107.53	105.40
27	1H	1955	A	C2-N3-C4	-5.33	107.93	110.60
27	1H	2244	C	C6-N1-C2	5.33	122.43	120.30
27	1H	2440	C	OP1-P-OP2	5.33	127.60	119.60
1	13	366	C	O5'-P-OP1	-5.33	100.90	105.70
27	1H	674	G	N3-C4-C5	5.33	131.26	128.60
27	1H	1617	A	OP1-P-O3'	5.33	116.92	105.20
24	3L	76	A	N1-C6-N6	5.33	121.80	118.60
27	1H	833	G	N1-C2-N3	5.33	127.10	123.90
27	1H	839	C	C2-N1-C1'	-5.33	112.94	118.80
27	1H	2068	C	C6-N1-C2	5.33	122.43	120.30
27	1H	2324	A	OP2-P-O3'	5.33	116.92	105.20
27	1H	2359	A	P-O3'-C3'	5.33	126.09	119.70
27	1H	2536	G	N1-C6-O6	-5.33	116.70	119.90
27	1H	960	U	C6-N1-C2	5.33	124.20	121.00
27	14	205	G	C4-C5-N7	5.33	112.93	110.80
1	13	520	A	N1-C6-N6	5.33	121.80	118.60
27	1H	580	G	C8-N9-C1'	-5.33	120.08	127.00
27	1H	710	G	C8-N9-C4	-5.33	104.27	106.40
27	1H	823	G	O4'-C1'-N9	5.33	112.46	108.20
27	1H	1752	G	N3-C2-N2	-5.33	116.17	119.90
27	1H	2655	G	C5-C6-O6	5.33	131.79	128.60
27	1H	2724	A	C8-N9-C4	5.33	107.93	105.80
27	14	1969	A	O5'-P-OP2	5.33	117.09	110.70
27	14	2686	G	OP2-P-O3'	5.33	116.92	105.20
27	1H	579	U	C6-N1-C1'	5.32	128.65	121.20
27	1H	1425	A	C4-C5-C6	-5.32	114.34	117.00
27	1H	1866	U	N3-C4-C5	5.32	117.79	114.60
27	14	2014	A	N7-C8-N9	-5.32	111.14	113.80
27	14	2375	G	O5'-P-OP2	-5.32	100.91	105.70
27	14	462	C	C4-C5-C6	5.32	120.06	117.40
27	14	1388	G	C8-N9-C4	5.32	108.53	106.40
27	1H	1045	C	O5'-P-OP1	-5.32	100.91	105.70
27	1H	1396	A	C5-C6-N6	-5.32	119.44	123.70
27	1H	2562	G	N7-C8-N9	5.32	115.76	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1960	A	O5'-P-OP1	5.32	117.08	110.70
1	13	1178	G	N3-C4-N9	-5.32	122.81	126.00
27	1H	1329	U	C5-C6-N1	-5.32	120.04	122.70
27	1H	2013	C	N3-C2-O2	-5.32	118.18	121.90
27	14	2501	C	P-O3'-C3'	5.32	126.08	119.70
27	1H	1264	C	N1-C2-O2	-5.32	115.71	118.90
27	1H	137	G	N7-C8-N9	5.32	115.76	113.10
27	1H	673	G	N7-C8-N9	5.32	115.76	113.10
27	1H	2756	C	C5-C6-N1	-5.32	118.34	121.00
27	14	1353	A	N1-C6-N6	5.32	121.79	118.60
27	14	2551	C	C6-N1-C2	5.32	122.43	120.30
27	1H	166	G	N3-C4-N9	5.31	129.19	126.00
27	1H	743	G	N1-C6-O6	-5.31	116.71	119.90
27	1H	1602	A	C4-C5-C6	5.31	119.66	117.00
27	1H	2097	U	C2-N1-C1'	5.31	124.08	117.70
27	1H	2258	U	OP1-P-O3'	5.31	116.89	105.20
27	1H	2455	C	C5-C6-N1	-5.31	118.34	121.00
27	14	1562	A	N1-C6-N6	5.31	121.79	118.60
27	14	1568	G	C4-N9-C1'	-5.31	119.59	126.50
27	14	1897	G	C4-C5-N7	-5.31	108.67	110.80
27	14	2755	C	C5-C6-N1	5.31	123.66	121.00
27	1H	191	C	N3-C2-O2	5.31	125.62	121.90
27	1H	255	A	N9-C4-C5	5.31	107.92	105.80
27	1H	982	C	C2-N3-C4	-5.31	117.24	119.90
27	1H	1384	G	N9-C4-C5	5.31	107.53	105.40
27	1H	1711	C	C5-C6-N1	-5.31	118.34	121.00
27	14	1332	G	C4-N9-C1'	5.31	133.41	126.50
27	14	2278	A	O4'-C1'-N9	5.31	112.45	108.20
27	1H	1868	C	OP1-P-O3'	5.31	116.88	105.20
27	14	84	A	C4-C5-N7	5.31	113.36	110.70
27	14	733	G	C8-N9-C1'	-5.31	120.10	127.00
27	1H	123	G	N3-C4-N9	5.31	129.19	126.00
27	1H	850	A	C5-N7-C8	-5.31	101.25	103.90
27	1H	1835	A	N1-C2-N3	5.31	131.96	129.30
27	1H	2651	G	C5-C6-O6	5.31	131.79	128.60
1	1G	14	U	C5-C6-N1	5.31	125.35	122.70
1	1G	853	G	N9-C4-C5	5.31	107.52	105.40
27	14	945	A	C8-N9-C1'	-5.31	118.14	127.70
27	14	2821	A	N1-C2-N3	5.31	131.96	129.30
33	49	94	LEU	CA-CB-CG	5.31	127.51	115.30
1	13	790	A	N1-C6-N6	-5.31	115.42	118.60
1	13	1511	G	N3-C2-N2	-5.31	116.19	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1984	C	C2-N3-C4	-5.31	117.25	119.90
27	1H	2458	G	C8-N9-C4	-5.31	104.28	106.40
27	1H	2515	G	C6-N1-C2	-5.31	121.92	125.10
27	14	189	G	N7-C8-N9	-5.31	110.45	113.10
27	14	678	C	C2-N3-C4	-5.31	117.25	119.90
1	13	934	C	O4'-C1'-N1	5.31	112.44	108.20
27	1H	1203	A	N1-C6-N6	5.31	121.78	118.60
27	1H	1954	U	N3-C4-O4	-5.31	115.69	119.40
27	1H	1171	C	OP1-P-OP2	5.30	127.56	119.60
27	1H	1426	A	C5-C6-N6	-5.30	119.46	123.70
27	1H	1896	U	O5'-P-OP1	-5.30	100.93	105.70
27	1H	1996	G	N7-C8-N9	-5.30	110.45	113.10
27	1H	2059	C	C6-N1-C2	-5.30	118.18	120.30
27	1H	2843	U	P-O3'-C3'	5.30	126.06	119.70
1	1G	557	G	N3-C4-N9	-5.30	122.82	126.00
27	14	82	G	N1-C6-O6	5.30	123.08	119.90
27	14	1347	G	N9-C1'-C2'	-5.30	106.17	112.00
27	14	1543	A	O4'-C1'-N9	5.30	112.44	108.20
1	13	55	A	N9-C4-C5	-5.30	103.68	105.80
1	13	1064	G	C6-C5-N7	5.30	133.58	130.40
27	1H	598	C	O5'-P-OP2	-5.30	100.93	105.70
27	1H	905	C	C6-N1-C2	5.30	122.42	120.30
27	1H	2262	U	C6-N1-C2	5.30	124.18	121.00
27	1H	1400	A	N1-C2-N3	5.30	131.95	129.30
27	1H	2883	G	C5-C6-O6	5.30	131.78	128.60
27	14	288	C	C6-N1-C2	-5.30	118.18	120.30
27	14	573	G	N9-C4-C5	-5.30	103.28	105.40
27	14	963	U	O5'-P-OP1	-5.30	100.93	105.70
27	14	1839	G	C6-C5-N7	-5.30	127.22	130.40
27	1H	891	G	N1-C6-O6	5.30	123.08	119.90
27	1H	1451	C	C5-C4-N4	5.30	123.91	120.20
27	1H	1451	C	N3-C2-O2	-5.30	118.19	121.90
27	14	992	C	OP1-P-O3'	5.30	116.86	105.20
27	14	1728	G	N3-C4-N9	5.30	129.18	126.00
27	1H	479	G	O5'-P-OP2	-5.30	100.93	105.70
1	13	237	C	C6-N1-C2	5.30	122.42	120.30
1	13	284	G	C5-C6-O6	-5.30	125.42	128.60
27	1H	667	C	N1-C2-O2	-5.30	115.72	118.90
27	1H	672	A	N7-C8-N9	5.30	116.45	113.80
27	1H	853	G	OP1-P-O3'	5.30	116.85	105.20
27	1H	855	U	N3-C4-O4	5.30	123.11	119.40
27	1H	2610	G	C5-C6-O6	-5.30	125.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1304	C	C2-N1-C1'	5.29	124.62	118.80
27	1H	2079	G	N3-C2-N2	-5.29	116.19	119.90
1	1G	787	A	N1-C6-N6	5.29	121.78	118.60
1	13	1260	C	N1-C2-O2	5.29	122.08	118.90
1	13	1479	C	N3-C4-C5	-5.29	119.78	121.90
27	1H	580	G	N7-C8-N9	5.29	115.75	113.10
27	1H	1256	A	P-O3'-C3'	5.29	126.05	119.70
27	1H	1993	A	O5'-P-OP2	-5.29	100.94	105.70
27	1H	2504	U	N1-C2-N3	-5.29	111.72	114.90
27	1H	2887	G	C4-C5-N7	5.29	112.92	110.80
28	16	92	G	N3-C4-C5	5.29	131.25	128.60
1	1G	748	C	P-O3'-C3'	5.29	126.05	119.70
27	14	1516	U	N1-C2-O2	5.29	126.51	122.80
27	14	1798	U	OP1-P-OP2	5.29	127.54	119.60
27	1H	1233	G	P-O3'-C3'	5.29	126.05	119.70
27	1H	1699	G	C6-N1-C2	-5.29	121.92	125.10
27	1H	2477	C	C5-C6-N1	-5.29	118.35	121.00
1	1G	1503	A	O5'-P-OP1	-5.29	100.94	105.70
27	14	111	A	N1-C2-N3	5.29	131.95	129.30
27	1H	16	G	N9-C4-C5	5.29	107.52	105.40
27	14	1349	A	C5-C6-N6	-5.29	119.47	123.70
27	1H	73	A	C6-C5-N7	-5.29	128.60	132.30
27	1H	715	U	N1-C2-O2	-5.29	119.10	122.80
27	14	397	G	N1-C2-N3	5.29	127.07	123.90
27	14	1216	G	N1-C6-O6	5.29	123.07	119.90
27	1H	990	G	N9-C4-C5	-5.29	103.28	105.40
1	1G	244	U	N1-C2-O2	5.29	126.50	122.80
27	14	2554	U	O5'-P-OP1	5.29	117.04	110.70
27	1H	506	A	N7-C8-N9	-5.29	111.16	113.80
27	1H	594	G	C4-C5-N7	-5.29	108.69	110.80
27	1H	1802	G	C8-N9-C4	5.29	108.51	106.40
1	13	1079	G	C5-C6-O6	5.28	131.77	128.60
1	13	1417	G	N3-C4-N9	5.28	129.17	126.00
1	13	1491	G	OP2-P-O3'	5.28	116.82	105.20
27	1H	786	G	N1-C6-O6	5.28	123.07	119.90
27	1H	848	A	OP1-P-OP2	-5.28	111.67	119.60
27	1H	2781	C	C2-N1-C1'	5.28	124.61	118.80
28	16	5	C	N3-C4-C5	5.28	124.01	121.90
59	1L	76	A	C5-C6-N1	5.28	120.34	117.70
27	14	1772	G	C8-N9-C4	5.28	108.51	106.40
27	14	2311	A	C5-C6-N1	-5.28	115.06	117.70
27	1H	201	A	N1-C2-N3	5.28	131.94	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	412	A	P-O3'-C3'	5.28	126.04	119.70
27	1H	799	A	N9-C4-C5	-5.28	103.69	105.80
27	1H	2634	A	N7-C8-N9	-5.28	111.16	113.80
1	1G	729	A	N9-C4-C5	5.28	107.91	105.80
27	14	585	G	OP1-P-O3'	5.28	116.82	105.20
27	1H	400	G	OP2-P-O3'	5.28	116.81	105.20
27	1H	758	G	C6-C5-N7	-5.28	127.23	130.40
27	1H	2531	A	C4-C5-N7	5.28	113.34	110.70
1	13	1341	U	C5-C6-N1	-5.28	120.06	122.70
27	1H	506	A	N1-C6-N6	-5.28	115.44	118.60
27	1H	913	C	C2-N3-C4	5.28	122.54	119.90
27	14	2776	A	N1-C6-N6	-5.28	115.44	118.60
27	14	2236	C	C5-C4-N4	-5.27	116.51	120.20
27	1H	1704	C	O5'-P-OP1	5.27	117.03	110.70
1	13	278	G	N1-C6-O6	-5.27	116.74	119.90
1	13	317	G	N3-C4-N9	5.27	129.16	126.00
27	1H	539	A	O5'-P-OP2	5.27	117.03	110.70
27	1H	774	G	O4'-C1'-N9	5.27	112.42	108.20
33	41	34	LEU	CA-CB-CG	5.27	127.42	115.30
1	13	123	C	C6-N1-C2	5.27	122.41	120.30
27	1H	111	G	N9-C4-C5	-5.27	103.29	105.40
27	1H	246	A	N7-C8-N9	-5.27	111.17	113.80
27	1H	474	A	O5'-P-OP1	-5.27	100.96	105.70
27	1H	2576	U	C2-N1-C1'	-5.27	111.38	117.70
27	1H	2620	G	N3-C4-N9	5.27	129.16	126.00
27	1H	2671	C	N3-C2-O2	-5.27	118.21	121.90
1	1G	1367	C	C6-N1-C2	-5.27	118.19	120.30
1	13	764	C	OP1-P-O3'	5.27	116.79	105.20
20	BI	6	PRO	N-CA-CB	5.27	109.62	103.30
27	1H	830	A	N9-C4-C5	-5.27	103.69	105.80
27	1H	2506	U	O5'-P-OP1	-5.27	100.96	105.70
27	1H	2779	A	OP1-P-OP2	5.27	127.50	119.60
1	1G	768	A	N1-C2-N3	5.27	131.93	129.30
27	14	205	G	C8-N9-C4	-5.27	104.29	106.40
27	1H	1238	G	OP2-P-O3'	5.27	116.78	105.20
1	13	1126	U	C6-N1-C2	-5.26	117.84	121.00
27	1H	132	C	C6-N1-C2	5.26	122.41	120.30
27	1H	672	A	N1-C6-N6	5.26	121.76	118.60
27	1H	1247	C	C5-C4-N4	-5.26	116.51	120.20
27	1H	2046	G	OP2-P-O3'	5.26	116.78	105.20
27	1H	2053	A	C5-C6-N6	5.26	127.91	123.70
27	1H	2312	G	C4-C5-N7	5.26	112.91	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	574	C	C5-C6-N1	-5.26	118.37	121.00
27	14	1835	G	C8-N9-C1'	-5.26	120.16	127.00
27	14	2000	G	C5-C6-O6	5.26	131.76	128.60
1	13	331	G	N1-C6-O6	5.26	123.06	119.90
27	1H	2694	C	O4'-C1'-N1	-5.26	103.99	108.20
27	14	521	G	N3-C4-C5	5.26	131.23	128.60
27	1H	111	G	C4-C5-N7	5.26	112.90	110.80
27	1H	1829	C	C6-N1-C2	5.26	122.40	120.30
58	Q8	50	LEU	CB-CG-CD1	-5.26	102.06	111.00
27	14	396	G	C6-C5-N7	-5.26	127.24	130.40
27	1H	539	A	OP2-P-O3'	5.26	116.77	105.20
27	1H	617	G	N9-C4-C5	-5.26	103.30	105.40
27	1H	2400	U	OP1-P-O3'	-5.26	93.63	105.20
27	14	689	A	N7-C8-N9	-5.26	111.17	113.80
27	14	1585	C	C6-N1-C1'	-5.26	114.49	120.80
27	14	1887	C	C6-N1-C2	5.26	122.40	120.30
30	19	196	VAL	C-N-CA	-5.26	111.25	122.30
1	13	766	A	C6-N1-C2	5.26	121.75	118.60
27	1H	1272	G	N1-C6-O6	-5.26	116.75	119.90
27	14	1394	U	OP2-P-O3'	5.26	116.77	105.20
1	13	1108	G	C5-C6-O6	5.26	131.75	128.60
27	1H	211	A	O4'-C1'-N9	5.26	112.41	108.20
27	1H	990	G	N3-C4-N9	5.26	129.15	126.00
27	1H	1431	A	O5'-P-OP2	-5.26	100.97	105.70
27	1H	1853	A	N1-C2-N3	5.26	131.93	129.30
27	1H	2287	A	OP2-P-O3'	5.26	116.76	105.20
27	14	16	G	N7-C8-N9	5.26	115.73	113.10
27	14	186	G	N1-C6-O6	5.26	123.05	119.90
27	14	307	G	N3-C4-N9	5.26	129.15	126.00
27	1H	474	A	C5-C6-N6	-5.25	119.50	123.70
27	1H	814	C	N3-C2-O2	-5.25	118.22	121.90
27	1H	2060	G	N1-C2-N2	-5.25	111.47	116.20
1	1G	353	A	C4-C5-N7	5.25	113.33	110.70
27	14	1614	A	C4-C5-C6	5.25	119.63	117.00
1	13	1499	A	C6-C5-N7	-5.25	128.62	132.30
60	2L	75	C	N1-C2-O2	-5.25	115.75	118.90
27	14	457	A	C5-N7-C8	-5.25	101.27	103.90
27	14	733	G	N9-C4-C5	-5.25	103.30	105.40
27	1H	1701	G	C8-N9-C1'	-5.25	120.17	127.00
27	1H	1809	U	C2-N3-C4	-5.25	123.85	127.00
27	14	1298	C	N3-C4-N4	-5.25	114.33	118.00
1	13	117	G	N3-C4-N9	5.25	129.15	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1324	G	OP1-P-O3'	5.25	116.75	105.20
1	1G	130	A	N9-C4-C5	-5.25	103.70	105.80
27	14	2826	A	N1-C6-N6	5.25	121.75	118.60
1	13	1446	A	O5'-P-OP1	5.25	117.00	110.70
27	1H	122	G	C4-C5-N7	5.25	112.90	110.80
27	1H	1311	G	O5'-P-OP1	-5.25	100.98	105.70
27	1H	1874	G	C8-N9-C4	5.25	108.50	106.40
27	1H	2572	C	C6-N1-C2	5.25	122.40	120.30
28	16	114	G	N3-C4-C5	5.25	131.22	128.60
1	1G	530	G	C4-N9-C1'	-5.25	119.68	126.50
27	1H	54	G	N1-C6-O6	-5.25	116.75	119.90
27	1H	2633	C	C5-C6-N1	-5.25	118.38	121.00
1	13	1514	C	C5-C6-N1	-5.24	118.38	121.00
27	1H	775	A	C8-N9-C4	5.24	107.90	105.80
27	1H	883	A	C6-N1-C2	-5.24	115.45	118.60
27	1H	1204	G	C8-N9-C1'	-5.24	120.18	127.00
27	1H	2082	A	C8-N9-C4	5.24	107.90	105.80
28	16	56	G	C4-C5-C6	5.24	121.95	118.80
41	98	75	LEU	CA-CB-CG	5.24	127.36	115.30
27	14	1836	C	C6-N1-C2	5.24	122.40	120.30
27	1H	777	G	OP2-P-O3'	5.24	116.73	105.20
27	1H	2495	G	C6-C5-N7	-5.24	127.25	130.40
27	14	1578	U	N3-C2-O2	-5.24	118.53	122.20
1	13	643	C	C6-N1-C2	5.24	122.40	120.30
1	13	856	C	C6-N1-C2	-5.24	118.20	120.30
27	1H	1623	C	OP2-P-O3'	5.24	116.73	105.20
27	1H	1694	C	C4-C5-C6	5.24	120.02	117.40
27	14	1700	A	C2-N3-C4	-5.24	107.98	110.60
27	1H	736	U	N1-C2-N3	5.24	118.04	114.90
27	1H	1262	G	C4-N9-C1'	5.24	133.31	126.50
27	1H	1312	A	C4-C5-C6	5.24	119.62	117.00
27	1H	1321	A	N9-C4-C5	-5.24	103.70	105.80
27	1H	1342	C	N3-C4-N4	-5.24	114.33	118.00
27	1H	1837	U	N3-C2-O2	-5.24	118.53	122.20
28	16	115	G	C4-C5-N7	5.24	112.89	110.80
27	14	2242	G	N3-C4-N9	-5.24	122.86	126.00
27	1H	246	A	C5-C6-N6	-5.24	119.51	123.70
27	1H	2765	G	C4-N9-C1'	5.24	133.31	126.50
1	13	247	G	C4-N9-C1'	5.24	133.31	126.50
1	13	1211	U	P-O3'-C3'	5.24	125.98	119.70
1	13	1503	A	O5'-P-OP1	-5.24	100.99	105.70
27	1H	1451	C	N1-C2-O2	5.24	122.04	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1687	U	O5'-P-OP1	5.24	116.98	110.70
27	14	2357	U	N3-C4-O4	-5.24	115.73	119.40
1	13	690	G	N3-C4-C5	5.23	131.22	128.60
27	1H	225	U	N1-C2-N3	5.23	118.04	114.90
27	1H	1444	U	N3-C4-O4	-5.23	115.74	119.40
22	1K	52	G	C4-N9-C1'	5.23	133.30	126.50
23	2K	27	G	C8-N9-C4	5.23	108.49	106.40
27	1H	813	G	C5-C6-N1	-5.23	108.88	111.50
27	1H	1191	G	C4-C5-N7	5.23	112.89	110.80
27	1H	1463	G	O4'-C1'-N9	5.23	112.39	108.20
27	1H	1680	A	C5-N7-C8	-5.23	101.28	103.90
27	1H	2277	C	C6-N1-C2	-5.23	118.21	120.30
1	1G	1195	C	C5-C6-N1	5.23	123.62	121.00
27	14	30	G	N9-C4-C5	5.23	107.49	105.40
27	14	1678	G	C4-N9-C1'	5.23	133.30	126.50
1	13	532	A	C4-C5-N7	5.23	113.32	110.70
25	4K	56	U	N3-C2-O2	-5.23	118.54	122.20
27	1H	1004	U	C6-N1-C2	-5.23	117.86	121.00
27	1H	1607	G	C4-C5-N7	5.23	112.89	110.80
27	1H	1698	G	C6-C5-N7	-5.23	127.26	130.40
27	1H	1724	A	C4-C5-C6	-5.23	114.39	117.00
1	1G	138	G	N3-C4-N9	-5.23	122.86	126.00
27	1H	1710	C	C4-C5-C6	5.23	120.02	117.40
27	1H	1808	G	OP1-P-O3'	5.23	116.70	105.20
27	1H	1968	G	C5-C6-N1	5.23	114.11	111.50
59	1L	74	C	O4'-C1'-N1	5.23	112.38	108.20
27	14	933	A	C8-N9-C4	-5.23	103.71	105.80
27	1H	606	G	C5-C6-O6	5.23	131.74	128.60
27	1H	782	A	C6-N1-C2	-5.23	115.46	118.60
27	1H	2079	G	N3-C4-N9	5.23	129.14	126.00
27	1H	2086	C	O5'-P-OP2	-5.23	100.99	105.70
27	1H	2449	G	C5-C6-O6	-5.23	125.46	128.60
27	1H	2651	G	N3-C2-N2	5.23	123.56	119.90
1	1G	730	G	O5'-P-OP1	-5.23	101.00	105.70
27	14	194	G	N1-C6-O6	5.23	123.04	119.90
27	14	1318	C	C5-C6-N1	5.23	123.61	121.00
1	13	1094	G	P-O3'-C3'	5.23	125.97	119.70
27	1H	739	C	N3-C4-C5	5.22	123.99	121.90
27	1H	1600	G	C8-N9-C4	-5.22	104.31	106.40
27	1H	1818	A	C5-C6-N6	5.22	127.88	123.70
1	1G	119	A	P-O3'-C3'	5.22	125.97	119.70
27	1H	1007	C	N3-C4-N4	5.22	121.66	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1192	C	O5'-P-OP1	-5.22	101.00	105.70
27	1H	1388	U	C6-N1-C2	5.22	124.13	121.00
27	1H	2289	G	N3-C4-C5	-5.22	125.99	128.60
27	1H	2468	G	N1-C2-N3	5.22	127.03	123.90
27	1H	2592	C	C5-C6-N1	-5.22	118.39	121.00
27	1H	2843	U	OP2-P-O3'	5.22	116.69	105.20
1	13	449	C	N3-C2-O2	-5.22	118.25	121.90
27	1H	176	G	N1-C6-O6	5.22	123.03	119.90
27	1H	534	G	N1-C6-O6	5.22	123.03	119.90
27	1H	1157	G	C4-N9-C1'	-5.22	119.72	126.50
27	1H	2043	A	C2-N3-C4	-5.22	107.99	110.60
27	1H	2722	G	C8-N9-C1'	-5.22	120.21	127.00
1	1G	1374	A	N7-C8-N9	5.22	116.41	113.80
27	14	188	G	C6-C5-N7	-5.22	127.27	130.40
27	14	1488	G	C4-N9-C1'	5.22	133.28	126.50
27	14	2012	G	C4-N9-C1'	5.22	133.28	126.50
27	1H	474	A	N1-C6-N6	5.22	121.73	118.60
27	1H	2384	G	C6-C5-N7	-5.22	127.27	130.40
27	1H	2596	G	N1-C2-N3	5.22	127.03	123.90
46	E8	90	ARG	NE-CZ-NH1	-5.22	117.69	120.30
1	1G	1225	A	C8-N9-C4	-5.22	103.71	105.80
27	1H	1726	G	N3-C4-N9	-5.22	122.87	126.00
27	1H	2546	A	OP1-P-OP2	5.22	127.42	119.60
27	1H	2589	G	OP2-P-O3'	5.22	116.67	105.20
27	14	49	A	OP2-P-O3'	5.22	116.68	105.20
27	14	2722	G	O5'-P-OP1	-5.22	101.00	105.70
27	1H	61	C	N1-C2-O2	-5.21	115.77	118.90
27	1H	1600	G	C4-C5-N7	-5.21	108.71	110.80
27	1H	1719	U	O5'-P-OP1	-5.21	101.01	105.70
27	14	1778	U	C5-C6-N1	-5.21	120.09	122.70
27	14	2498	C	OP1-P-OP2	-5.21	111.78	119.60
27	1H	1312	A	C8-N9-C4	-5.21	103.72	105.80
27	1H	2860	U	N3-C4-O4	-5.21	115.75	119.40
1	1G	791	G	OP2-P-O3'	5.21	116.67	105.20
1	13	693	G	C8-N9-C4	5.21	108.48	106.40
1	13	765	G	C5-N7-C8	5.21	106.91	104.30
27	1H	423	U	C5-C6-N1	-5.21	120.09	122.70
27	1H	2059	C	OP2-P-O3'	5.21	116.67	105.20
27	1H	2112	U	C5-C6-N1	-5.21	120.09	122.70
27	1H	2370	U	C5-C6-N1	5.21	125.31	122.70
27	1H	2591	G	C8-N9-C4	5.21	108.48	106.40
1	1G	264	U	N3-C4-O4	5.21	123.05	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	452	G	C5-C6-O6	5.21	131.73	128.60
27	14	740	U	OP1-P-O3'	5.21	116.66	105.20
1	1G	545	C	N1-C2-O2	5.21	122.03	118.90
27	14	74	A	N1-C2-N3	5.21	131.91	129.30
27	14	888	C	OP2-P-O3'	5.21	116.66	105.20
1	13	1530	G	C4-N9-C1'	-5.21	119.73	126.50
27	1H	501	G	C5-N7-C8	-5.21	101.70	104.30
27	1H	2651	G	N1-C2-N2	-5.21	111.51	116.20
27	14	774	A	OP2-P-O3'	5.21	116.66	105.20
27	14	791	C	N3-C4-C5	5.21	123.98	121.90
27	14	1314	C	C5-C6-N1	5.21	123.61	121.00
1	13	1463	C	N1-C2-O2	5.21	122.02	118.90
27	1H	414	G	N9-C4-C5	-5.21	103.32	105.40
27	1H	639	U	OP1-P-O3'	5.21	116.65	105.20
27	1H	710	G	N7-C8-N9	5.21	115.70	113.10
27	1H	1069	G	P-O3'-C3'	5.21	125.95	119.70
27	1H	1398	C	C5-C6-N1	-5.21	118.40	121.00
27	1H	2694	C	C2-N1-C1'	5.21	124.53	118.80
40	88	10	ARG	NE-CZ-NH2	-5.21	117.70	120.30
1	1G	532	A	O4'-C1'-N9	5.21	112.36	108.20
27	14	2296	U	N3-C4-C5	-5.21	111.48	114.60
27	1H	1939	A	C8-N9-C4	-5.21	103.72	105.80
1	13	791	G	C8-N9-C4	5.20	108.48	106.40
1	13	1252	A	N9-C4-C5	5.20	107.88	105.80
27	1H	822	A	C4-C5-C6	-5.20	114.40	117.00
35	61	77	LEU	CA-CB-CG	5.20	127.27	115.30
1	1G	1300	G	C4-N9-C1'	-5.20	119.73	126.50
27	14	1835	G	N3-C2-N2	5.20	123.54	119.90
27	14	2016	U	N3-C4-C5	5.20	117.72	114.60
27	14	2515	C	C6-N1-C2	5.20	122.38	120.30
27	14	2715	C	O5'-P-OP1	5.20	116.94	110.70
27	1H	1925	C	C4-C5-C6	5.20	120.00	117.40
27	1H	2022	C	OP2-P-O3'	5.20	116.64	105.20
27	1H	2599	C	N1-C2-O2	-5.20	115.78	118.90
27	14	2439	A	C5-N7-C8	-5.20	101.30	103.90
1	13	266	G	P-O3'-C3'	5.20	125.94	119.70
1	13	715	A	C5-C6-N6	5.20	127.86	123.70
23	2K	1	G	N1-C2-N2	-5.20	111.52	116.20
27	1H	793	G	N3-C2-N2	-5.20	116.26	119.90
27	1H	1081	G	C8-N9-C4	5.20	108.48	106.40
27	1H	1717	A	N9-C4-C5	-5.20	103.72	105.80
27	1H	1843	G	O5'-P-OP2	-5.20	101.02	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1963	U	O5'-P-OP2	-5.20	101.02	105.70
27	14	307	G	O5'-P-OP2	-5.20	101.02	105.70
27	14	1619	G	OP1-P-O3'	5.20	116.64	105.20
1	13	523	A	C5-N7-C8	-5.20	101.30	103.90
1	13	541	G	C4-N9-C1'	-5.20	119.74	126.50
1	13	673	G	N1-C6-O6	5.20	123.02	119.90
1	13	1500	A	C6-N1-C2	5.20	121.72	118.60
27	1H	855	U	C5-C4-O4	-5.20	122.78	125.90
27	1H	1204	G	N1-C2-N2	-5.20	111.52	116.20
27	1H	1621	G	C4-N9-C1'	-5.20	119.74	126.50
27	1H	2106	G	N1-C2-N2	5.20	120.88	116.20
27	1H	2300	A	C5-C6-N1	-5.20	115.10	117.70
27	1H	2536	G	C5-N7-C8	5.20	106.90	104.30
1	1G	506	G	O5'-P-OP1	-5.20	101.02	105.70
27	14	954	G	C8-N9-C4	-5.20	104.32	106.40
27	14	1802	A	OP1-P-O3'	5.20	116.64	105.20
27	14	2542	A	N7-C8-N9	-5.20	111.20	113.80
27	1H	120	G	N3-C4-N9	5.20	129.12	126.00
27	1H	172	A	N1-C6-N6	5.20	121.72	118.60
27	1H	1018	G	C4-N9-C1'	5.20	133.26	126.50
27	1H	2497	G	N3-C4-C5	-5.20	126.00	128.60
1	13	545	C	N3-C2-O2	-5.20	118.26	121.90
27	1H	594	G	O5'-P-OP1	5.20	116.94	110.70
27	14	798	G	C2-N3-C4	-5.20	109.30	111.90
27	14	1142	U	C5-C6-N1	5.20	125.30	122.70
27	14	1930	G	C4-N9-C1'	-5.20	119.75	126.50
27	14	2840	C	N3-C2-O2	-5.20	118.26	121.90
27	1H	213	A	OP2-P-O3'	5.19	116.63	105.20
1	1G	939	G	C8-N9-C4	5.19	108.48	106.40
27	14	645	C	O4'-C1'-N1	5.19	112.36	108.20
27	14	1606	G	C5-C6-O6	5.19	131.72	128.60
27	1H	255	A	C1'-O4'-C4'	-5.19	105.75	109.90
27	1H	355	A	N3-C4-N9	-5.19	123.25	127.40
27	1H	499	A	C6-C5-N7	-5.19	128.66	132.30
27	14	323	G	N3-C4-N9	5.19	129.12	126.00
27	14	1928	A	N1-C6-N6	5.19	121.72	118.60
27	1H	108	G	C8-N9-C4	5.19	108.48	106.40
27	1H	877	A	O5'-P-OP2	-5.19	101.03	105.70
27	1H	1157	G	C8-N9-C1'	5.19	133.75	127.00
27	1H	2092	G	C5-C6-N1	5.19	114.09	111.50
27	1H	2838	C	N1-C2-O2	-5.19	115.79	118.90
1	1G	741	G	O5'-P-OP2	-5.19	101.03	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1833	U	N3-C4-O4	-5.19	115.77	119.40
27	14	2406	U	C5-C6-N1	-5.19	120.11	122.70
1	1G	561	U	P-O3'-C3'	5.19	125.93	119.70
27	14	1692	U	OP2-P-O3'	5.19	116.62	105.20
28	1J	89	G	C4-N9-C1'	5.19	133.25	126.50
27	1H	147	U	C5-C6-N1	-5.19	120.11	122.70
27	1H	554	A	C6-C5-N7	-5.19	128.67	132.30
27	1H	1818	A	O5'-P-OP1	-5.19	101.03	105.70
27	1H	2058	G	C4-N9-C1'	-5.19	119.76	126.50
1	1G	25	C	N3-C2-O2	-5.19	118.27	121.90
27	14	2420	C	O5'-P-OP2	5.19	116.92	110.70
27	1H	1615	A	N1-C6-N6	-5.19	115.49	118.60
1	1G	197	A	C8-N9-C4	-5.19	103.73	105.80
1	13	644	G	C4-N9-C1'	-5.18	119.76	126.50
1	1G	353	A	OP2-P-O3'	5.18	116.61	105.20
27	14	451	C	OP2-P-O3'	5.18	116.61	105.20
1	13	1151	A	O4'-C1'-N9	5.18	112.35	108.20
27	1H	822	A	N1-C6-N6	5.18	121.71	118.60
27	1H	1694	C	O4'-C1'-N1	5.18	112.34	108.20
27	1H	1856	G	N1-C6-O6	5.18	123.01	119.90
27	1H	2471	G	C6-N1-C2	-5.18	121.99	125.10
27	14	217	G	C4-C5-N7	5.18	112.87	110.80
28	1J	48	A	O5'-P-OP1	-5.18	101.03	105.70
1	13	766	A	N1-C2-N3	-5.18	126.71	129.30
27	14	1259	G	O5'-P-OP2	-5.18	101.04	105.70
1	13	1507	A	C2-N3-C4	-5.18	108.01	110.60
27	1H	1269	C	C6-N1-C2	5.18	122.37	120.30
27	1H	1721	U	N1-C2-O2	-5.18	119.17	122.80
27	14	972	G	OP1-P-O3'	5.18	116.59	105.20
27	14	2247	A	C4-C5-C6	5.18	119.59	117.00
27	1H	237	G	C8-N9-C4	5.18	108.47	106.40
27	1H	960	U	C6-N1-C1'	-5.18	113.95	121.20
27	1H	1838	C	OP2-P-O3'	5.18	116.59	105.20
27	1H	2614	C	N3-C4-C5	5.18	123.97	121.90
27	14	798	G	N1-C6-O6	5.18	123.01	119.90
27	14	1162	G	C8-N9-C4	5.18	108.47	106.40
27	14	2618	G	C8-N9-C4	5.18	108.47	106.40
1	13	792	A	C6-N1-C2	5.17	121.70	118.60
27	1H	1458	C	OP2-P-O3'	5.17	116.58	105.20
27	1H	1668	U	C5-C6-N1	-5.17	120.11	122.70
27	1H	2605	G	C8-N9-C1'	-5.17	120.27	127.00
24	3L	4	C	C5-C6-N1	5.17	123.59	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2002	G	N3-C2-N2	5.17	123.52	119.90
27	14	1790	C	N3-C4-C5	5.17	123.97	121.90
27	1H	239	C	N1-C1'-C2'	5.17	120.72	114.00
27	1H	1291	G	C5-C6-N1	-5.17	108.91	111.50
27	1H	1721	U	N3-C2-O2	5.17	125.82	122.20
27	1H	1801	G	N3-C4-N9	5.17	129.10	126.00
27	1H	2228	G	C8-N9-C4	-5.17	104.33	106.40
27	1H	2359	A	O4'-C1'-N9	5.17	112.34	108.20
27	1H	2440	C	OP1-P-O3'	5.17	116.58	105.20
27	1H	2837	A	C6-N1-C2	-5.17	115.50	118.60
1	1G	674	G	N1-C6-O6	5.17	123.00	119.90
1	1G	1347	G	C4-N9-C1'	5.17	133.22	126.50
27	14	403	U	P-O3'-C3'	5.17	125.91	119.70
27	14	2318	G	O4'-C1'-N9	5.17	112.34	108.20
27	14	472	A	N1-C6-N6	5.17	121.70	118.60
27	14	2080	G	O5'-P-OP1	-5.17	101.05	105.70
27	1H	1407	A	N1-C6-N6	5.17	121.70	118.60
27	1H	2381	C	N3-C4-C5	-5.17	119.83	121.90
27	1H	2660	U	C5-C6-N1	-5.17	120.12	122.70
28	16	36	C	C6-N1-C2	5.17	122.37	120.30
1	1G	345	C	N1-C2-O2	5.17	122.00	118.90
27	14	1829	A	C6-N1-C2	-5.17	115.50	118.60
1	13	412	A	P-O3'-C3'	5.17	125.90	119.70
27	1H	1712	A	O5'-P-OP2	-5.17	101.05	105.70
27	1H	2262	U	N3-C4-C5	5.17	117.70	114.60
27	1H	2482	A	C2-N3-C4	-5.17	108.02	110.60
27	1H	2508	G	N3-C4-C5	5.17	131.18	128.60
1	1G	458	C	C6-N1-C2	-5.17	118.23	120.30
27	1H	2300	A	N1-C2-N3	5.17	131.88	129.30
27	1H	554	A	P-O3'-C3'	5.16	125.90	119.70
27	1H	1617	A	C5-C6-N6	5.16	127.83	123.70
27	1H	2291	A	C6-N1-C2	-5.16	115.50	118.60
27	14	1572	A	N1-C6-N6	5.16	121.70	118.60
27	14	2591	C	N3-C4-C5	-5.16	119.83	121.90
1	13	668	G	N9-C4-C5	5.16	107.47	105.40
27	1H	873	C	N1-C2-O2	-5.16	115.80	118.90
27	1H	2745	G	N9-C4-C5	5.16	107.47	105.40
1	13	1417	G	C4-C5-C6	5.16	121.90	118.80
27	1H	608	C	N3-C4-N4	5.16	121.61	118.00
27	1H	1924	A	C8-N9-C4	5.16	107.86	105.80
1	1G	896	C	N3-C4-C5	5.16	123.96	121.90
27	14	1585	C	N3-C2-O2	-5.16	118.29	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2610	C	C6-N1-C2	5.16	122.36	120.30
1	13	968	A	C8-N9-C4	5.16	107.86	105.80
27	1H	35	G	O5'-P-OP1	-5.16	101.06	105.70
27	1H	1309	A	OP1-P-O3'	5.16	116.55	105.20
27	1H	2510	A	C6-N1-C2	-5.16	115.50	118.60
27	1H	804	C	C6-N1-C2	-5.16	118.24	120.30
27	1H	1012	G	N1-C2-N2	-5.16	111.56	116.20
27	1H	1901	G	N1-C6-O6	5.16	122.99	119.90
27	1H	2457	G	O5'-P-OP2	-5.16	101.06	105.70
27	14	668	G	C8-N9-C4	5.16	108.46	106.40
27	14	774	A	C5-C6-N1	-5.16	115.12	117.70
1	13	917	G	O5'-P-OP1	-5.16	101.06	105.70
27	1H	818	G	C6-C5-N7	-5.16	127.31	130.40
27	1H	1444	U	N3-C4-C5	5.16	117.69	114.60
27	1H	1817	A	C5-C6-N1	5.16	120.28	117.70
27	1H	2554	A	N1-C2-N3	5.16	131.88	129.30
56	O8	34	LEU	CA-CB-CG	5.16	127.16	115.30
27	14	396	G	N7-C8-N9	5.16	115.68	113.10
27	14	1800	C	N3-C4-C5	5.16	123.96	121.90
27	1H	885	C	C2-N3-C4	-5.15	117.32	119.90
27	1H	893	G	OP1-P-O3'	5.15	116.54	105.20
27	14	1982	C	N3-C4-C5	5.15	123.96	121.90
27	14	2699	C	C5-C6-N1	-5.15	118.42	121.00
27	1H	1233	G	C4-C5-C6	5.15	121.89	118.80
27	1H	2829	G	N9-C4-C5	-5.15	103.34	105.40
27	1H	32	C	N1-C2-N3	5.15	122.81	119.20
27	1H	663	A	C2-N3-C4	-5.15	108.03	110.60
27	1H	870	U	N3-C2-O2	-5.15	118.59	122.20
27	1H	2551	C	C6-N1-C2	5.15	122.36	120.30
27	14	767	U	N1-C2-O2	5.15	126.41	122.80
27	14	1648	C	N3-C4-N4	-5.15	114.39	118.00
1	13	948	C	N3-C4-C5	5.15	123.96	121.90
27	1H	1157	G	N3-C4-N9	-5.15	122.91	126.00
27	1H	326	G	N1-C6-O6	-5.15	116.81	119.90
27	1H	1357	G	C8-N9-C4	5.15	108.46	106.40
27	1H	2352	G	C8-N9-C4	5.15	108.46	106.40
27	1H	2735	A	C4-C5-N7	5.15	113.27	110.70
27	14	1251	C	C5-C4-N4	-5.15	116.60	120.20
27	14	2689	U	N3-C2-O2	-5.15	118.60	122.20
27	14	2863	C	N1-C2-O2	5.15	121.99	118.90
27	14	2207	C	N1-C2-O2	-5.15	115.81	118.90
1	13	765	G	N7-C8-N9	-5.14	110.53	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1622	C	N3-C4-C5	5.14	123.96	121.90
27	1H	1846	G	C8-N9-C4	5.14	108.46	106.40
27	14	1332	G	O4'-C1'-N9	-5.14	104.08	108.20
1	13	31	G	P-O3'-C3'	5.14	125.87	119.70
1	13	792	A	C4-C5-C6	-5.14	114.43	117.00
27	1H	1742	C	N1-C2-O2	5.14	121.99	118.90
27	1H	2560	U	C5-C6-N1	-5.14	120.13	122.70
24	3L	76	A	N7-C8-N9	5.14	116.37	113.80
27	14	2712	U	N1-C2-N3	5.14	117.98	114.90
27	1H	1746	A	N3-C4-C5	5.14	130.40	126.80
27	1H	2494	G	P-O3'-C3'	5.14	125.87	119.70
27	14	1598	C	O5'-P-OP1	-5.14	101.07	105.70
27	1H	559	G	O5'-P-OP2	5.14	116.87	110.70
27	1H	1033	C	N3-C4-N4	5.14	121.60	118.00
27	1H	1036	G	O5'-P-OP1	-5.14	101.08	105.70
27	14	125	G	N3-C2-N2	5.14	123.50	119.90
1	13	1412	C	C5-C6-N1	-5.14	118.43	121.00
27	1H	1418	G	N3-C4-C5	5.14	131.17	128.60
1	13	904	C	C5-C6-N1	-5.14	118.43	121.00
27	1H	448	C	C6-N1-C2	5.14	122.35	120.30
27	1H	611	C	P-O3'-C3'	5.14	125.86	119.70
27	1H	652	U	C5-C4-O4	5.14	128.98	125.90
27	1H	1370	U	C2-N1-C1'	5.14	123.86	117.70
27	14	808	G	C4-C5-N7	-5.14	108.75	110.80
1	13	582	U	N1-C2-O2	5.13	126.39	122.80
27	1H	1321	A	C6-C5-N7	-5.13	128.71	132.30
1	1G	289	G	C8-N9-C4	-5.13	104.35	106.40
1	1G	686	U	C6-N1-C2	5.13	124.08	121.00
1	1G	794	A	N1-C6-N6	5.13	121.68	118.60
27	14	1310	G	C5-C6-O6	-5.13	125.52	128.60
27	14	2319	G	N3-C4-N9	5.13	129.08	126.00
27	1H	2469	C	OP2-P-O3'	5.13	116.49	105.20
27	1H	1485	U	N1-C2-O2	5.13	126.39	122.80
1	13	1302	U	N3-C2-O2	-5.13	118.61	122.20
27	1H	122	G	C6-C5-N7	-5.13	127.32	130.40
27	1H	256	G	OP1-P-OP2	-5.13	111.90	119.60
27	1H	660	C	N3-C4-N4	-5.13	114.41	118.00
27	1H	1366	G	N7-C8-N9	5.13	115.67	113.10
27	1H	2028	A	C4-C5-N7	5.13	113.27	110.70
27	14	1648	C	C5-C6-N1	-5.13	118.44	121.00
26	5K	48	C	C6-N1-C2	-5.13	118.25	120.30
27	1H	1429	G	C6-C5-N7	5.13	133.48	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2878	G	N1-C6-O6	5.13	122.98	119.90
1	1G	577	G	N1-C6-O6	5.13	122.98	119.90
60	2L	70	G	N3-C4-C5	5.13	131.16	128.60
1	13	328	C	O5'-P-OP2	-5.13	101.09	105.70
1	13	723	U	N1-C2-O2	5.13	126.39	122.80
1	13	1301	U	N1-C2-O2	5.13	126.39	122.80
27	1H	474	A	C4-C5-N7	5.13	113.26	110.70
27	1H	554	A	C4-C5-N7	5.13	113.26	110.70
27	1H	991	A	C8-N9-C1'	-5.13	118.47	127.70
27	1H	1795	G	C5-C6-O6	5.13	131.68	128.60
27	1H	2108	C	N3-C4-C5	5.13	123.95	121.90
27	1H	2484	C	C2-N1-C1'	5.13	124.44	118.80
1	1G	558	G	C5-C6-O6	5.13	131.68	128.60
1	1G	885	G	C8-N9-C4	5.13	108.45	106.40
27	1H	1271	C	N3-C4-N4	-5.12	114.41	118.00
27	1H	1704	C	O5'-P-OP2	-5.12	101.09	105.70
4	32	194	LEU	CA-CB-CG	5.12	127.09	115.30
1	13	911	U	C5-C4-O4	-5.12	122.83	125.90
27	1H	838	C	C2-N1-C1'	-5.12	113.17	118.80
27	1H	895	U	C4-C5-C6	5.12	122.77	119.70
27	14	1342	A	N1-C6-N6	5.12	121.67	118.60
27	14	1975	G	N7-C8-N9	-5.12	110.54	113.10
27	1H	576	G	N9-C4-C5	5.12	107.45	105.40
27	1H	1693	G	C4-N9-C1'	5.12	133.16	126.50
28	16	13	A	N1-C6-N6	-5.12	115.53	118.60
27	14	592	G	C4-N9-C1'	5.12	133.16	126.50
27	14	2313	C	C6-N1-C2	-5.12	118.25	120.30
27	14	47	C	OP2-P-O3'	5.12	116.47	105.20
27	1H	744	G	N3-C4-C5	5.12	131.16	128.60
27	1H	1424	G	N9-C4-C5	-5.12	103.35	105.40
27	1H	2089	C	C5-C6-N1	-5.12	118.44	121.00
1	1G	129	U	N3-C4-C5	-5.12	111.53	114.60
1	1G	809	G	O5'-P-OP2	-5.12	101.09	105.70
27	1H	576	G	C6-C5-N7	5.12	133.47	130.40
27	1H	674	G	C2-N3-C4	-5.12	109.34	111.90
27	1H	1256	A	C4-C5-N7	5.12	113.26	110.70
27	1H	1339	U	C4-C5-C6	-5.12	116.63	119.70
27	1H	1350	G	C5-C6-N1	-5.12	108.94	111.50
27	14	833	U	N3-C4-C5	-5.12	111.53	114.60
1	13	792	A	P-O3'-C3'	5.12	125.84	119.70
27	1H	42	G	N3-C4-C5	5.12	131.16	128.60
27	1H	212	A	C8-N9-C4	5.12	107.85	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	534	G	P-O3'-C3'	5.12	125.84	119.70
27	1H	2616	G	N1-C6-O6	5.12	122.97	119.90
27	1H	2818	G	C6-C5-N7	-5.12	127.33	130.40
27	14	733	G	C8-N9-C4	5.12	108.45	106.40
27	14	1950	G	C4-C5-N7	5.12	112.85	110.80
27	14	2869	G	C8-N9-C4	-5.12	104.35	106.40
1	13	361	G	N9-C4-C5	-5.11	103.35	105.40
27	1H	896	G	C6-N1-C2	-5.11	122.03	125.10
27	1H	1442	A	O5'-P-OP1	5.11	116.84	110.70
27	1H	2457	G	N3-C2-N2	-5.11	116.32	119.90
27	1H	2514	C	N3-C4-N4	-5.11	114.42	118.00
1	1G	808	C	N3-C4-C5	5.11	123.94	121.90
27	14	445	C	OP1-P-O3'	5.11	116.45	105.20
27	14	2776	A	N9-C4-C5	5.11	107.85	105.80
1	13	1417	G	C5-C6-N1	-5.11	108.94	111.50
27	1H	1224	C	P-O3'-C3'	5.11	125.83	119.70
27	1H	1949	U	N1-C2-N3	5.11	117.97	114.90
1	1G	1531	A	C8-N9-C4	-5.11	103.75	105.80
27	14	180	G	C8-N9-C4	5.11	108.44	106.40
27	1H	631	U	C5-C6-N1	-5.11	120.14	122.70
27	1H	846	G	N3-C2-N2	-5.11	116.32	119.90
27	1H	1380	C	C5-C6-N1	5.11	123.56	121.00
27	1H	2286	A	N1-C6-N6	5.11	121.67	118.60
1	1G	5	U	P-O3'-C3'	5.11	125.83	119.70
27	14	2836	U	N1-C2-O2	5.11	126.38	122.80
1	13	278	G	C5-C6-O6	5.11	131.67	128.60
27	1H	121	G	OP1-P-OP2	5.11	127.26	119.60
27	1H	1292	G	N9-C4-C5	5.11	107.44	105.40
27	1H	862	C	N3-C2-O2	-5.11	118.33	121.90
27	1H	140	A	C4-C5-N7	5.11	113.25	110.70
27	1H	346	G	N3-C4-C5	-5.11	126.05	128.60
27	1H	976	U	C2-N3-C4	-5.11	123.94	127.00
27	1H	1418	G	C2-N3-C4	-5.11	109.35	111.90
27	1H	1659	C	C6-N1-C2	5.11	122.34	120.30
27	1H	2326	C	C2-N3-C4	-5.11	117.35	119.90
27	1H	2588	C	N3-C2-O2	-5.11	118.33	121.90
27	14	781	A	OP2-P-O3'	5.11	116.43	105.20
27	14	1567	A	O5'-P-OP2	-5.11	101.11	105.70
27	14	1992	G	C2'-C3'-O3'	5.11	121.87	113.70
27	1H	2420	G	C8-N9-C1'	-5.10	120.36	127.00
27	14	1253	A	C5-C6-N6	-5.10	119.62	123.70
27	14	1426	G	C5-C6-O6	-5.10	125.54	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	548	G	N3-C4-C5	5.10	131.15	128.60
27	1H	850	A	C4-C5-N7	5.10	113.25	110.70
27	1H	1020	G	N3-C2-N2	-5.10	116.33	119.90
27	1H	2243	G	C8-N9-C4	-5.10	104.36	106.40
27	1H	2245	U	C6-N1-C2	5.10	124.06	121.00
27	1H	2833	G	C5-N7-C8	-5.10	101.75	104.30
1	1G	1301	U	C6-N1-C1'	-5.10	114.06	121.20
27	1H	1455	C	C6-N1-C2	-5.10	118.26	120.30
27	1H	1603	G	C6-C5-N7	-5.10	127.34	130.40
1	13	328	C	P-O3'-C3'	5.10	125.82	119.70
27	1H	733	A	N3-C4-C5	5.10	130.37	126.80
27	1H	776	G	OP2-P-O3'	5.10	116.42	105.20
27	1H	953	G	C5-C6-O6	5.10	131.66	128.60
27	1H	2530	C	C5-C4-N4	-5.10	116.63	120.20
1	1G	827	U	N1-C2-O2	5.10	126.37	122.80
1	1G	1158	C	C2-N1-C1'	5.10	124.41	118.80
27	14	806	C	O5'-P-OP2	5.10	116.82	110.70
27	14	1348	G	N1-C6-O6	5.10	122.96	119.90
27	14	2273	A	C2-N3-C4	5.10	113.15	110.60
27	14	2447	G	N7-C8-N9	5.10	115.65	113.10
27	14	2611	U	O5'-P-OP1	-5.10	101.11	105.70
27	14	2818	G	N9-C4-C5	-5.10	103.36	105.40
1	13	85	U	C2-N1-C1'	5.10	123.82	117.70
1	13	221	C	C6-N1-C2	-5.10	118.26	120.30
1	13	1300	G	C8-N9-C1'	5.10	133.63	127.00
1	13	1468	A	C5-C6-N1	5.10	120.25	117.70
27	1H	2617	U	C5-C4-O4	-5.10	122.84	125.90
28	16	7	G	N1-C6-O6	5.10	122.96	119.90
1	1G	801	U	N1-C2-O2	5.10	126.37	122.80
1	1G	1526	G	OP1-P-OP2	5.10	127.25	119.60
27	1H	1931	C	C6-N1-C2	-5.10	118.26	120.30
27	1H	2731	G	N1-C2-N3	5.10	126.96	123.90
1	13	809	G	C5-C6-O6	5.09	131.66	128.60
1	13	1025	U	OP2-P-O3'	5.09	116.41	105.20
1	13	1182	G	C8-N9-C1'	5.09	133.62	127.00
27	1H	790	G	N1-C2-N3	5.09	126.96	123.90
27	1H	794	A	C2-N3-C4	-5.09	108.05	110.60
27	1H	1346	G	C8-N9-C4	-5.09	104.36	106.40
27	1H	1618	A	N9-C4-C5	-5.09	103.76	105.80
27	1H	1720	C	N1-C2-O2	-5.09	115.84	118.90
1	1G	1417	G	C8-N9-C4	5.09	108.44	106.40
27	14	27	G	C2-N3-C4	-5.09	109.35	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	203	C	C6-N1-C2	5.09	122.34	120.30
27	14	1790	C	C2-N3-C4	-5.09	117.35	119.90
23	2K	1	G	OP1-P-O3'	5.09	116.41	105.20
27	1H	514	C	N1-C2-O2	-5.09	115.84	118.90
27	1H	740	C	C6-N1-C2	5.09	122.34	120.30
27	1H	911	A	O5'-P-OP1	5.09	116.81	110.70
27	14	573	G	N7-C8-N9	-5.09	110.55	113.10
27	14	1506	C	C6-N1-C2	-5.09	118.26	120.30
27	14	2211	G	P-O3'-C3'	5.09	125.81	119.70
27	14	2518	A	O4'-C1'-N9	-5.09	104.13	108.20
27	1H	27	G	OP1-P-O3'	5.09	116.40	105.20
27	1H	398	G	N3-C4-C5	-5.09	126.06	128.60
27	1H	2272	G	N1-C6-O6	5.09	122.95	119.90
27	1H	2894	A	N7-C8-N9	5.09	116.34	113.80
1	1G	718	G	C6-C5-N7	-5.09	127.34	130.40
27	14	690	G	O5'-P-OP1	-5.09	101.12	105.70
1	13	521	G	C5-C6-O6	-5.09	125.55	128.60
1	13	586	C	C5-C6-N1	-5.09	118.45	121.00
1	13	1500	A	N9-C4-C5	-5.09	103.76	105.80
27	1H	937	C	C5-C6-N1	5.09	123.55	121.00
27	1H	1256	A	C3'-C2'-C1'	5.09	105.57	101.50
27	1H	1354	A	N7-C8-N9	5.09	116.34	113.80
27	1H	1953	G	C5-C6-O6	-5.09	125.55	128.60
27	14	37	C	N3-C4-C5	5.09	123.94	121.90
27	1H	59	G	OP2-P-O3'	5.09	116.39	105.20
27	14	808	G	C8-N9-C4	5.09	108.44	106.40
1	13	108	G	N9-C4-C5	-5.09	103.36	105.40
27	1H	54	G	C6-C5-N7	5.09	133.45	130.40
27	1H	595	A	N1-C2-N3	5.09	131.84	129.30
27	1H	1388	U	C5-C4-O4	-5.09	122.85	125.90
28	16	10	C	O5'-P-OP2	-5.09	101.12	105.70
27	14	1206	G	C5-C6-O6	5.09	131.65	128.60
27	14	2239	G	N3-C2-N2	5.09	123.46	119.90
27	14	2564	A	C8-N9-C4	5.09	107.83	105.80
27	1H	33	U	N3-C4-C5	5.08	117.65	114.60
27	1H	805	U	N3-C4-O4	-5.08	115.84	119.40
27	1H	2531	A	O5'-P-OP2	5.08	116.80	110.70
27	1H	2833	G	N9-C4-C5	-5.08	103.37	105.40
1	13	522	C	N3-C4-N4	-5.08	114.44	118.00
1	13	728	A	C8-N9-C4	-5.08	103.77	105.80
27	14	138	G	OP1-P-O3'	5.08	116.38	105.20
27	14	1573	G	OP2-P-O3'	5.08	116.38	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2730	C	C2-N1-C1'	5.08	124.39	118.80
27	1H	104	C	C6-N1-C2	5.08	122.33	120.30
27	1H	503	G	C5-N7-C8	5.08	106.84	104.30
27	1H	727	C	N3-C4-N4	-5.08	114.44	118.00
27	1H	1272	G	N3-C4-N9	5.08	129.05	126.00
1	1G	586	C	C2-N1-C1'	-5.08	113.21	118.80
24	3L	5	G	C8-N9-C4	-5.08	104.37	106.40
27	14	2873	A	N7-C8-N9	5.08	116.34	113.80
1	13	546	G	N3-C4-C5	5.08	131.14	128.60
27	1H	454	C	C5-C6-N1	-5.08	118.46	121.00
27	1H	2435	A	C4-C5-N7	5.08	113.24	110.70
27	1H	2604	C	C2-N3-C4	-5.08	117.36	119.90
27	1H	1011	C	N3-C4-C5	5.08	123.93	121.90
27	1H	1872	G	C5-C6-O6	-5.08	125.55	128.60
27	1H	2406	A	N1-C6-N6	5.08	121.65	118.60
27	1H	2464	A	N3-C4-N9	-5.08	123.34	127.40
27	1H	2515	G	OP1-P-OP2	5.08	127.22	119.60
27	1H	2557	G	C8-N9-C4	5.08	108.43	106.40
27	1H	2607	C	C5-C4-N4	-5.08	116.64	120.20
40	88	79	LEU	CA-CB-CG	5.08	126.98	115.30
1	1G	190	G	N9-C1'-C2'	5.08	120.60	114.00
27	14	866	A	N9-C4-C5	-5.08	103.77	105.80
27	14	1648	C	N1-C2-N3	5.08	122.76	119.20
27	14	1698	A	C5-C6-N1	-5.08	115.16	117.70
27	14	1803	A	C2-N3-C4	5.08	113.14	110.60
27	14	2607	G	N1-C6-O6	5.08	122.95	119.90
27	1H	1477	C	N1-C2-O2	5.08	121.95	118.90
27	14	1426	G	N9-C4-C5	-5.08	103.37	105.40
27	14	2548	G	C4-C5-N7	5.08	112.83	110.80
23	2K	13	C	N3-C4-C5	5.08	123.93	121.90
27	1H	799	A	C5-C6-N6	-5.08	119.64	123.70
27	1H	867	A	C5-C6-N1	-5.08	115.16	117.70
27	1H	1256	A	OP2-P-O3'	5.08	116.37	105.20
27	1H	1819	A	C2-N3-C4	-5.08	108.06	110.60
27	1H	2250	G	N7-C8-N9	-5.08	110.56	113.10
27	14	75	G	N3-C4-C5	-5.08	126.06	128.60
27	1H	38	A	C2-N3-C4	5.07	113.14	110.60
27	1H	485	G	C6-N1-C2	-5.07	122.06	125.10
27	1H	794	A	N1-C2-N3	5.07	131.84	129.30
27	1H	2417	C	C5-C4-N4	-5.07	116.65	120.20
1	1G	310	G	N1-C6-O6	5.07	122.94	119.90
1	13	820	U	C6-N1-C2	5.07	124.04	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	827	U	C2-N1-C1'	5.07	123.79	117.70
27	1H	2260	A	OP1-P-O3'	5.07	116.36	105.20
1	1G	181	G	N3-C4-C5	-5.07	126.06	128.60
1	13	1490	C	C2-N3-C4	-5.07	117.36	119.90
27	1H	717	G	C8-N9-C4	-5.07	104.37	106.40
27	1H	893	G	C4-C5-N7	5.07	112.83	110.80
27	1H	1210	G	N7-C8-N9	-5.07	110.56	113.10
27	1H	2519	U	N1-C2-N3	-5.07	111.86	114.90
1	1G	86	U	P-O3'-C3'	5.07	125.78	119.70
1	1G	653	A	O4'-C1'-N9	5.07	112.26	108.20
27	14	1786	A	C8-N9-C4	-5.07	103.77	105.80
27	14	1926	U	O5'-P-OP2	-5.07	101.14	105.70
32	39	176	LEU	CA-CB-CG	5.07	126.96	115.30
27	1H	2053	A	C4-C5-N7	-5.07	108.17	110.70
27	1H	2591	G	N3-C2-N2	5.07	123.45	119.90
27	14	1823	G	N7-C8-N9	5.07	115.63	113.10
1	13	975	A	N7-C8-N9	5.07	116.33	113.80
27	14	68	G	N1-C6-O6	5.07	122.94	119.90
27	14	447	A	N7-C8-N9	-5.07	111.27	113.80
1	13	562	C	C6-N1-C2	5.07	122.33	120.30
1	13	757	U	C5-C6-N1	-5.07	120.17	122.70
27	1H	594	G	N3-C4-C5	-5.07	126.07	128.60
27	1H	2595	G	N3-C2-N2	5.07	123.44	119.90
27	14	1427	A	N1-C6-N6	-5.07	115.56	118.60
27	14	1931	U	OP2-P-O3'	5.07	116.34	105.20
27	14	2502	G	C8-N9-C4	-5.07	104.37	106.40
1	13	254	G	O5'-P-OP1	-5.06	101.14	105.70
27	1H	1191	G	N3-C2-N2	5.06	123.44	119.90
27	1H	1379	G	N3-C2-N2	5.06	123.44	119.90
27	1H	1851	A	C8-N9-C4	5.06	107.83	105.80
27	14	1342	A	C6-C5-N7	-5.06	128.76	132.30
27	14	1567	A	N9-C4-C5	5.06	107.83	105.80
27	1H	810	U	N3-C2-O2	-5.06	118.66	122.20
27	1H	1304	C	C4-C5-C6	5.06	119.93	117.40
27	1H	2344	G	N3-C4-C5	5.06	131.13	128.60
28	16	101	A	C8-N9-C4	5.06	107.82	105.80
1	1G	545	C	N3-C2-O2	-5.06	118.36	121.90
27	14	775	G	N1-C2-N3	5.06	126.94	123.90
27	14	832	G	N1-C6-O6	-5.06	116.86	119.90
1	13	725	G	OP1-P-O3'	5.06	116.33	105.20
27	1H	561	C	C2-N1-C1'	-5.06	113.23	118.80
1	1G	782	A	C2-N3-C4	5.06	113.13	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1060	C	C4-C5-C6	-5.06	114.87	117.40
1	13	572	A	C8-N9-C4	5.06	107.82	105.80
1	13	577	G	N7-C8-N9	-5.06	110.57	113.10
27	1H	491	U	C4-C5-C6	5.06	122.73	119.70
27	1H	873	C	N3-C2-O2	5.06	125.44	121.90
27	1H	1291	G	C2-N3-C4	-5.06	109.37	111.90
27	1H	1764	G	C4-C5-N7	5.06	112.82	110.80
27	14	707	G	C5-C6-N1	-5.06	108.97	111.50
27	14	1488	G	C8-N9-C4	-5.06	104.38	106.40
27	14	2235	G	N3-C4-C5	-5.06	126.07	128.60
27	14	2603	G	N1-C6-O6	-5.06	116.86	119.90
27	1H	2830	G	C2-N3-C4	-5.06	109.37	111.90
27	14	2699	C	N1-C2-O2	-5.06	115.87	118.90
1	13	754	C	C2-N1-C1'	5.05	124.36	118.80
1	13	768	A	N7-C8-N9	-5.05	111.27	113.80
1	13	901	A	C5-N7-C8	-5.05	101.37	103.90
23	2K	26	A	N1-C2-N3	5.05	131.83	129.30
27	1H	414	G	N1-C6-O6	-5.05	116.87	119.90
27	1H	2662	U	C6-N1-C2	5.05	124.03	121.00
28	16	96	G	C4-N9-C1'	-5.05	119.93	126.50
27	14	590	A	O5'-P-OP2	5.05	116.77	110.70
27	14	1342	A	C8-N9-C4	-5.05	103.78	105.80
27	14	2006	C	C6-N1-C2	5.05	122.32	120.30
27	14	2242	G	C4-N9-C1'	-5.05	119.93	126.50
27	14	2380	C	N1-C2-O2	-5.05	115.87	118.90
1	13	564	C	O5'-P-OP1	-5.05	101.15	105.70
27	1H	716	G	N1-C6-O6	5.05	122.93	119.90
27	1H	1717	A	C8-N9-C4	5.05	107.82	105.80
31	21	82	ARG	NE-CZ-NH2	-5.05	117.77	120.30
1	1G	582	U	C6-N1-C2	5.05	124.03	121.00
27	14	2769	C	O4'-C1'-N1	5.05	112.24	108.20
27	1H	1009	U	C2-N3-C4	-5.05	123.97	127.00
27	1H	1799	C	N1-C2-N3	5.05	122.74	119.20
27	1H	2605	G	C4-N9-C1'	5.05	133.07	126.50
27	14	196	A	C5-N7-C8	-5.05	101.37	103.90
27	14	1231	G	N1-C6-O6	5.05	122.93	119.90
28	1J	18	G	N1-C6-O6	5.05	122.93	119.90
27	1H	2287	A	O5'-P-OP2	5.05	116.76	110.70
27	1H	2735	A	N3-C4-C5	5.05	130.33	126.80
27	1H	2775	G	N1-C6-O6	-5.05	116.87	119.90
27	14	439	G	C8-N9-C4	-5.05	104.38	106.40
27	14	654(Q)	C	C6-N1-C2	-5.05	118.28	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2609	U	O5'-P-OP2	-5.05	101.16	105.70
27	1H	645	G	N1-C6-O6	5.05	122.93	119.90
27	1H	2097	U	C5-C6-N1	5.05	125.22	122.70
27	1H	2405	A	C6-N1-C2	5.05	121.63	118.60
27	1H	2464	A	C2-N3-C4	-5.05	108.08	110.60
27	1H	255	A	N9-C1'-C2'	5.05	120.56	114.00
27	1H	316	C	O5'-P-OP1	-5.05	101.16	105.70
27	1H	458	G	C2-N3-C4	-5.05	109.38	111.90
27	1H	626	G	C5-C6-N1	-5.05	108.98	111.50
27	1H	2846	A	O5'-P-OP2	-5.05	101.16	105.70
1	1G	518	C	N1-C2-O2	5.05	121.93	118.90
1	1G	853	G	N3-C4-N9	-5.05	122.97	126.00
27	14	1796	U	N3-C4-C5	5.04	117.63	114.60
27	1H	48	A	N7-C8-N9	-5.04	111.28	113.80
27	1H	1990	C	C2-N1-C1'	5.04	124.35	118.80
27	1H	2004	A	O4'-C1'-N9	-5.04	104.16	108.20
27	1H	2437	C	N3-C4-N4	-5.04	114.47	118.00
27	1H	2580	G	N3-C2-N2	-5.04	116.37	119.90
28	16	81	G	N3-C4-C5	5.04	131.12	128.60
1	1G	911	U	C5-C4-O4	5.04	128.93	125.90
27	14	688	U	OP2-P-O3'	5.04	116.30	105.20
27	14	794	G	C5-C6-O6	5.04	131.63	128.60
27	14	942	G	OP1-P-O3'	5.04	116.30	105.20
27	14	1325	G	N3-C4-N9	5.04	129.03	126.00
27	14	1833	U	C5-C6-N1	-5.04	120.18	122.70
27	14	2473	U	N3-C2-O2	-5.04	118.67	122.20
27	14	2646	C	O5'-P-OP2	-5.04	101.16	105.70
1	13	576	G	C6-C5-N7	-5.04	127.38	130.40
1	13	1064	G	C4-C5-N7	-5.04	108.78	110.80
27	1H	335	A	C8-N9-C4	5.04	107.82	105.80
27	1H	1688	C	C6-N1-C2	5.04	122.32	120.30
27	1H	1796	G	N9-C4-C5	5.04	107.42	105.40
27	1H	2454	C	C2-N3-C4	-5.04	117.38	119.90
27	1H	2859	G	O4'-C1'-N9	5.04	112.23	108.20
27	14	782	A	C5-C6-N6	-5.04	119.67	123.70
27	14	794	G	C6-C5-N7	5.04	133.43	130.40
27	14	1488	G	C6-C5-N7	-5.04	127.38	130.40
27	14	1629	U	OP1-P-OP2	-5.04	112.04	119.60
27	14	2419	U	OP1-P-O3'	5.04	116.29	105.20
1	13	759	A	C2-N3-C4	5.04	113.12	110.60
27	1H	524	G	C5-C6-O6	-5.04	125.58	128.60
27	1H	544	G	C8-N9-C4	5.04	108.42	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	545	U	OP2-P-O3'	5.04	116.29	105.20
27	1H	1621	G	OP2-P-O3'	5.04	116.29	105.20
1	13	406	G	N1-C6-O6	5.04	122.92	119.90
12	3A	61	TYR	C-N-CA	5.04	134.30	121.70
27	14	249	C	N1-C2-O2	-5.04	115.88	118.90
27	14	1964	G	N3-C2-N2	5.04	123.43	119.90
27	1H	187	A	O5'-P-OP2	-5.04	101.17	105.70
1	13	1079	G	N3-C4-N9	-5.04	122.98	126.00
27	1H	72	A	N9-C4-C5	-5.04	103.78	105.80
27	1H	374	G	N3-C2-N2	-5.04	116.38	119.90
27	1H	2463	A	N1-C6-N6	5.04	121.62	118.60
1	1G	752	G	P-O3'-C3'	5.04	125.74	119.70
27	14	83	G	C5-N7-C8	-5.04	101.78	104.30
27	14	1310	G	C4-C5-N7	5.04	112.81	110.80
27	1H	239	C	C2-N1-C1'	5.03	124.34	118.80
27	1H	448	C	N1-C2-O2	-5.03	115.88	118.90
27	1H	564	G	C8-N9-C4	-5.03	104.39	106.40
27	1H	650	C	N3-C2-O2	5.03	125.42	121.90
1	1G	279	A	P-O3'-C3'	5.03	125.74	119.70
27	14	1987	G	N3-C4-N9	-5.03	122.98	126.00
27	1H	415	U	N1-C2-O2	5.03	126.32	122.80
27	1H	1001	C	C5-C4-N4	5.03	123.72	120.20
1	1G	327	A	N1-C6-N6	-5.03	115.58	118.60
1	1G	1381	U	C2-N1-C1'	5.03	123.74	117.70
27	14	1254	A	C5-C6-N6	-5.03	119.67	123.70
1	13	890	G	C4-N9-C1'	-5.03	119.96	126.50
27	1H	2262	U	C5-C4-O4	5.03	128.92	125.90
27	1H	2637	G	C6-N1-C2	-5.03	122.08	125.10
27	1H	2696	C	N1-C2-O2	5.03	121.92	118.90
27	14	128	C	C6-N1-C1'	5.03	126.84	120.80
27	14	186	G	C5-C6-O6	-5.03	125.58	128.60
27	14	1633	G	N3-C4-C5	5.03	131.12	128.60
27	14	1912	A	OP2-P-O3'	5.03	116.27	105.20
27	1H	905	C	C5-C6-N1	-5.03	118.48	121.00
27	1H	1830	U	O5'-P-OP2	-5.03	101.17	105.70
1	1G	530	G	N7-C8-N9	-5.03	110.59	113.10
1	13	550	G	N9-C4-C5	-5.03	103.39	105.40
27	1H	1619	A	N1-C2-N3	5.03	131.81	129.30
27	1H	1809	U	N1-C2-O2	-5.03	119.28	122.80
27	14	1474	C	N1-C2-O2	5.03	121.92	118.90
1	13	1398	A	C8-N9-C4	-5.03	103.79	105.80
23	2K	76	A	N9-C4-C5	-5.03	103.79	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	186	A	O4'-C1'-N9	5.03	112.22	108.20
27	1H	1207	G	N3-C2-N2	5.03	123.42	119.90
27	1H	1609	G	OP1-P-O3'	5.03	116.25	105.20
27	1H	1816	A	C5-N7-C8	-5.02	101.39	103.90
23	2K	1	G	C4-C5-C6	5.02	121.81	118.80
27	1H	45	C	OP2-P-O3'	5.02	116.25	105.20
27	1H	647	A	N1-C6-N6	5.02	121.61	118.60
27	1H	2453	C	C5-C4-N4	5.02	123.72	120.20
27	1H	2560	U	C4-C5-C6	5.02	122.71	119.70
1	1G	913	A	OP2-P-O3'	5.02	116.25	105.20
27	14	2864	G	C8-N9-C4	5.02	108.41	106.40
58	M5	50	LEU	CA-CB-CG	5.02	126.85	115.30
1	13	73	G	O4'-C1'-N9	5.02	112.22	108.20
27	1H	876	U	C4-C5-C6	5.02	122.71	119.70
27	1H	1288	A	N3-C4-C5	5.02	130.31	126.80
27	1H	2609	U	N1-C2-N3	5.02	117.91	114.90
28	16	101	A	N7-C8-N9	-5.02	111.29	113.80
27	14	2681	C	C5-C4-N4	5.02	123.72	120.20
27	14	2713	A	C5-C6-N6	-5.02	119.68	123.70
1	13	911	U	N3-C4-O4	5.02	122.91	119.40
1	13	1054	C	C2-N3-C4	5.02	122.41	119.90
27	1H	58	U	C2-N1-C1'	5.02	123.72	117.70
27	1H	1607	G	C5-C6-N1	-5.02	108.99	111.50
27	1H	2481	G	C8-N9-C1'	-5.02	120.48	127.00
27	1H	867	A	N3-C4-C5	5.02	130.31	126.80
27	1H	1295	G	OP2-P-O3'	5.02	116.24	105.20
27	1H	1925	C	N3-C2-O2	-5.02	118.39	121.90
27	1H	2883	G	N1-C6-O6	-5.02	116.89	119.90
1	1G	583	A	N9-C4-C5	-5.02	103.79	105.80
27	1H	365	A	C8-N9-C4	5.02	107.81	105.80
27	1H	1256	A	N1-C2-N3	5.02	131.81	129.30
27	1H	2099	U	C4-C5-C6	-5.02	116.69	119.70
27	1H	2110	G	N9-C4-C5	-5.02	103.39	105.40
27	1H	2582	G	OP1-P-OP2	5.02	127.12	119.60
1	1G	592	G	N3-C4-N9	-5.02	122.99	126.00
27	14	769	G	OP1-P-O3'	5.02	116.23	105.20
1	13	752	G	N3-C4-N9	5.01	129.01	126.00
1	13	852	G	O5'-P-OP2	-5.01	101.19	105.70
27	1H	540	A	C5-C6-N1	5.01	120.21	117.70
27	1H	1670	G	N9-C4-C5	5.01	107.41	105.40
27	1H	1705	C	C4-C5-C6	5.01	119.91	117.40
27	14	149	A	C6-C5-N7	-5.01	128.79	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	323	G	N3-C4-C5	-5.01	126.09	128.60
27	14	2591	C	N3-C4-N4	5.01	121.51	118.00
27	1H	806	C	N3-C4-C5	5.01	123.91	121.90
27	1H	452	G	N1-C2-N3	5.01	126.91	123.90
27	1H	491	U	N1-C2-N3	5.01	117.91	114.90
27	1H	1048	A	C2-N3-C4	-5.01	108.09	110.60
27	1H	1603	G	N9-C4-C5	-5.01	103.39	105.40
27	1H	2427	G	N3-C2-N2	5.01	123.41	119.90
1	1G	1027	C	P-O3'-C3'	5.01	125.72	119.70
1	1G	1129	C	C5-C6-N1	5.01	123.51	121.00
1	13	897	C	C5-C4-N4	-5.01	116.69	120.20
27	1H	988	G	C2-N3-C4	-5.01	109.39	111.90
27	1H	1650	A	N1-C6-N6	5.01	121.61	118.60
27	1H	1752	G	N1-C6-O6	5.01	122.91	119.90
27	1H	1849	G	N1-C6-O6	-5.01	116.89	119.90
27	1H	2244	C	C2-N3-C4	-5.01	117.39	119.90
27	1H	2510	A	C5-C6-N1	5.01	120.20	117.70
28	16	115	G	C5-N7-C8	-5.01	101.80	104.30
1	1G	1381	U	N1-C2-O2	5.01	126.31	122.80
27	14	1699	G	C4-N9-C1'	-5.01	119.99	126.50
27	14	2025	C	C5-C4-N4	-5.01	116.69	120.20
27	14	2351	G	O5'-P-OP2	-5.01	101.19	105.70
27	14	455	C	C6-N1-C2	5.01	122.30	120.30
27	14	676	A	N1-C6-N6	5.01	121.61	118.60
1	13	1399	C	N3-C4-N4	5.01	121.50	118.00
27	1H	2056	A	C6-N1-C2	-5.01	115.60	118.60
27	1H	2591	G	N1-C2-N2	-5.01	111.69	116.20
1	1G	197	A	C5-N7-C8	-5.01	101.40	103.90
1	1G	1129	C	C6-N1-C1'	-5.01	114.79	120.80
27	14	244	A	N1-C6-N6	5.01	121.60	118.60
27	14	2249	U	N3-C4-C5	-5.01	111.60	114.60
30	19	217	ARG	NE-CZ-NH1	-5.01	117.80	120.30
27	1H	250	G	C8-N9-C4	5.00	108.40	106.40
27	1H	2260	A	N1-C6-N6	5.00	121.60	118.60
27	14	2077	A	N7-C8-N9	5.00	116.30	113.80
27	14	2285	C	N1-C2-O2	5.00	121.90	118.90
1	13	1069	C	N3-C4-C5	-5.00	119.90	121.90
27	1H	36	G	C8-N9-C4	-5.00	104.40	106.40
27	1H	46	C	C5-C6-N1	-5.00	118.50	121.00
27	1H	650	C	N1-C2-O2	-5.00	115.90	118.90
27	1H	2507	G	C6-C5-N7	5.00	133.40	130.40
27	14	2211	G	OP2-P-O3'	5.00	116.21	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	550	G	C8-N9-C4	5.00	108.40	106.40
1	13	1502	A	C6-C5-N7	-5.00	128.80	132.30
27	1H	497	A	N1-C6-N6	5.00	121.60	118.60
27	1H	673	G	C6-C5-N7	-5.00	127.40	130.40
27	1H	784	C	C6-N1-C1'	5.00	126.80	120.80
27	14	92	G	C8-N9-C4	-5.00	104.40	106.40

There are no chirality outliers.

All (105) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	11	197	GLY	Peptide
2	12	153	ARG	Peptide
2	12	72	GLY	Peptide
30	19	197	GLY	Peptide
30	19	238	GLY	Peptide
3	22	166	GLU	Peptide
3	2E	11	ARG	Peptide
32	31	132	VAL	Peptide
32	31	47	GLY	Peptide
32	31	65	TRP	Peptide
39	35	109	GLY	Peptide
39	35	35	HIS	Peptide
39	35	65	ARG	Peptide
39	35	70	GLN	Peptide
36	38	107	VAL	Peptide
36	38	35	LYS	Peptide
36	38	38	HIS	Peptide
32	39	198	ALA	Peptide
32	39	6	VAL	Peptide
12	3A	101	VAL	Peptide
12	3A	44	LYS	Peptide
12	3I	101	VAL	Peptide
12	3I	115	SER	Peptide
12	3I	44	LYS	Peptide
33	41	80	PHE	Peptide
33	41	85	GLY	Peptide
40	45	103	MET	Peptide
40	45	58	PHE	Peptide
13	4A	105	THR	Peptide
5	4E	20	GLN	Peptide
13	4I	100	GLY	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
34	51	126	PRO	Peptide
34	51	172	LYS	Peptide
41	55	106	GLY	Peptide
37	58	129	PRO	Peptide
37	58	96	GLU	Peptide
34	59	11	VAL	Peptide
14	5I	13	THR	Peptide
35	61	11	ASN	Peptide
35	61	114	LEU	Peptide
35	61	133	HIS	Peptide
35	61	134	PRO	Peptide
43	75	124	ASP	Peptide
43	75	125	ARG	Peptide
43	75	58	ASN	Peptide
39	78	11	GLY	Peptide
39	78	115	LEU	Peptide
39	78	15	ARG	Peptide
39	78	24	GLY	Peptide
39	78	37	GLY	Peptide
39	78	55	ARG	Peptide
39	78	56	SER	Peptide
39	78	65	ARG	Peptide
39	78	9	ASN	Peptide
39	78	98	GLU	Peptide
9	82	53	VAL	Peptide
44	85	90	VAL	Peptide
40	88	139	GLU	Peptide
40	88	89	ASN	Peptide
45	95	43	GLU	Peptide
45	95	49	THR	Peptide
45	95	86	GLY	Peptide
41	98	2	ARG	Peptide
42	A8	106	ARG	Peptide
42	A8	2	ALA	Peptide
19	AA	41	VAL	Peptide
19	AA	9	VAL	Peptide
19	AI	41	VAL	Peptide
43	B8	58	ASN	Peptide
20	BI	95	ALA	Peptide
48	C5	3	VAL	Peptide
48	C5	53	PRO	Peptide
48	C5	54	LYS	Peptide

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Mol	Chain	Res	Type	Group
48	C5	92	ASN	Peptide
48	C5	93	GLY	Peptide
44	C8	95	LEU	Peptide
44	C8	96	ALA	Peptide
49	D5	62	PRO	Peptide
45	D8	43	GLU	Peptide
45	D8	44	LYS	Peptide
45	D8	49	THR	Peptide
50	E5	9	SER	Peptide
46	E8	64	MET	Peptide
51	F5	53	VAL	Peptide
51	F5	92	LYS	Peptide
52	G5	15	LYS	Peptide
48	G8	3	VAL	Peptide
48	G8	53	PRO	Peptide
48	G8	54	LYS	Peptide
48	G8	89	PHE	Peptide
49	H8	110	GLY	Peptide
49	H8	12	GLY	Peptide
49	H8	62	PRO	Peptide
50	I8	9	SER	Peptide
51	J8	53	VAL	Peptide
56	K5	18	ARG	Peptide
56	K5	22	ALA	Peptide
56	K5	23	THR	Peptide
52	K8	15	LYS	Peptide
58	M5	27	THR	Peptide
58	M5	34	TRP	Peptide
58	M5	35	GLN	Peptide
54	M8	40	HIS	Peptide
56	O8	28	ARG	Peptide
58	Q8	34	TRP	Peptide

## 5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32589	0	16470	898	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1G	32526	0	16442	922	0
2	12	1924	0	1975	99	0
2	1E	1924	0	1975	96	0
3	22	1612	0	1677	92	0
3	2E	1605	0	1668	59	0
4	32	1702	0	1762	71	0
4	3E	1702	0	1764	89	0
5	42	1155	0	1212	55	0
5	4E	1155	0	1213	40	0
6	52	842	0	857	33	0
6	5E	842	0	857	33	0
7	62	1256	0	1296	48	0
7	6E	1256	0	1296	54	0
8	72	1115	0	1177	49	0
8	7E	1115	0	1177	53	0
9	82	1004	0	1032	80	0
9	8E	1004	0	1032	55	0
10	1A	801	0	849	59	0
10	1I	801	0	849	47	0
11	2A	873	0	894	38	0
11	2I	864	0	881	32	0
12	3A	977	0	1064	49	0
12	3I	977	0	1061	40	0
13	4A	964	0	1034	61	0
13	4I	946	0	1008	75	0
14	5A	491	0	530	50	0
14	5I	491	0	529	33	0
15	6A	733	0	771	26	0
15	6I	733	0	771	28	0
16	7A	705	0	725	37	0
16	7I	700	0	720	57	0
17	8A	834	0	904	53	0
17	8I	834	0	904	36	0
18	9A	573	0	644	30	0
18	9I	584	0	657	31	0
19	AA	684	0	707	64	0
19	AI	674	0	699	32	0
20	BA	776	0	856	48	0
20	BI	766	0	854	44	0
21	1B	217	0	234	12	0
21	1F	208	0	221	14	0
22	1K	1628	0	839	53	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	2K	1635	0	850	32	0
24	3K	1626	0	832	68	0
24	3L	1626	0	834	48	0
25	4K	621	0	311	15	0
25	4L	621	0	311	20	0
26	5K	1627	0	840	34	1
27	14	61946	0	31226	1510	0
27	1H	62245	0	31354	1477	1
28	16	2617	0	1327	63	0
28	1J	2598	0	1316	81	0
29	71	1049	0	1071	61	0
29	79	1049	0	1071	59	0
30	11	2115	0	2195	106	0
30	19	2115	0	2195	94	0
31	21	1559	0	1618	78	0
31	29	1559	0	1618	92	0
32	31	1585	0	1632	89	0
32	39	1585	0	1632	85	0
33	41	1473	0	1535	75	0
33	49	1473	0	1535	75	0
34	51	1336	0	1418	69	0
34	59	1327	0	1405	71	0
35	61	1131	0	1218	72	0
35	69	1136	0	1223	60	0
36	38	635	0	677	26	0
37	15	1104	0	1180	46	0
37	58	1104	0	1180	58	0
38	25	932	0	996	50	0
38	68	932	0	996	46	0
39	35	1144	0	1228	80	0
39	78	1144	0	1228	111	0
40	45	1121	0	1179	71	0
40	88	1150	0	1209	87	0
41	55	967	0	1033	62	0
41	98	967	0	1033	63	0
42	65	881	0	943	63	0
42	A8	889	0	955	63	0
43	75	1141	0	1202	67	0
43	B8	1141	0	1202	64	0
44	85	963	0	1022	65	0
44	C8	963	0	1022	55	0
45	95	778	0	852	65	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	D8	778	0	852	39	0
46	A5	899	0	964	34	0
46	E8	899	0	964	37	0
47	B5	742	0	803	39	0
47	F8	747	0	805	33	0
48	C5	776	0	820	29	0
48	G8	825	0	898	39	0
49	D5	1404	0	1437	75	0
49	H8	1428	0	1454	72	0
50	E5	657	0	677	40	0
50	I8	661	0	688	36	0
51	F5	762	0	848	37	0
51	J8	762	0	848	42	0
52	G5	590	0	643	35	0
52	K8	598	0	655	35	0
53	H5	468	0	518	31	0
53	L8	468	0	518	16	0
54	I5	580	0	577	41	0
54	M8	580	0	577	50	0
55	J5	434	0	454	25	0
55	N8	434	0	454	29	0
56	K5	389	0	404	31	0
56	O8	389	0	404	33	0
57	L5	429	0	480	17	0
57	P8	419	0	458	17	0
58	M5	506	0	567	50	0
58	Q8	506	0	567	34	0
59	1L	1627	0	836	63	0
60	2L	1635	0	847	34	0
61	11	1	0	0	0	0
61	13	51	0	0	0	0
61	14	106	0	0	0	0
61	16	3	0	0	0	0
61	19	1	0	0	0	0
61	1G	36	0	0	0	0
61	1H	145	0	0	0	0
61	1J	1	0	0	0	0
61	1K	1	0	0	0	0
61	21	1	0	0	0	0
61	29	1	0	0	0	0
61	2A	1	0	0	0	0
61	2K	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	31	2	0	0	0	0
61	32	1	0	0	0	0
61	39	2	0	0	0	0
61	41	1	0	0	0	0
61	45	1	0	0	0	0
61	49	1	0	0	0	0
61	4A	1	0	0	0	0
61	4I	1	0	0	0	0
61	52	1	0	0	0	0
61	5A	1	0	0	0	0
61	5E	1	0	0	0	0
61	88	1	0	0	0	0
61	BA	1	0	0	0	0
61	BI	1	0	0	0	0
62	11	1	0	0	0	0
62	13	120	0	0	0	0
62	14	295	0	0	0	0
62	16	12	0	0	0	0
62	1G	102	0	0	0	0
62	1H	439	0	0	0	0
62	1J	4	0	0	0	0
62	21	2	0	0	0	0
62	29	2	0	0	0	0
62	2K	2	0	0	0	0
62	2L	3	0	0	0	0
62	31	1	0	0	0	0
62	32	1	0	0	0	0
62	39	1	0	0	0	0
62	3E	1	0	0	0	0
62	41	1	0	0	0	0
62	42	1	0	0	0	0
62	4L	1	0	0	0	0
62	6E	1	0	0	0	0
62	78	2	0	0	0	0
62	7I	1	0	0	0	0
62	C8	1	0	0	0	0
62	F8	1	0	0	0	0
62	I8	1	0	0	0	0
62	J8	1	0	0	0	0
62	L8	1	0	0	0	0
62	M5	2	0	0	0	0
62	N8	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	O8	1	0	0	0	0
62	P8	1	0	0	0	0
62	Q8	2	0	0	0	0
63	32	8	0	0	1	0
63	3E	8	0	0	3	0
64	5A	1	0	0	0	0
64	5I	1	0	0	0	0
65	11	11	0	0	1	0
65	13	233	0	0	31	0
65	14	602	0	0	66	0
65	16	26	0	0	4	0
65	19	12	0	0	2	0
65	1F	3	0	0	0	0
65	1G	194	0	0	21	0
65	1H	1009	0	0	134	0
65	1J	5	0	0	1	0
65	21	10	0	0	0	0
65	29	7	0	0	0	0
65	2K	8	0	0	1	0
65	31	10	0	0	0	0
65	32	4	0	0	1	0
65	35	7	0	0	1	0
65	39	2	0	0	0	0
65	3A	2	0	0	0	0
65	3E	2	0	0	0	0
65	3I	3	0	0	0	0
65	3K	1	0	0	0	0
65	4E	1	0	0	0	0
65	4I	1	0	0	0	0
65	4K	2	0	0	0	0
65	4L	4	0	0	0	0
65	5A	1	0	0	0	0
65	5I	1	0	0	0	0
65	75	2	0	0	1	0
65	78	9	0	0	1	0
65	7I	1	0	0	0	0
65	82	1	0	0	0	0
65	88	1	0	0	0	0
65	A8	2	0	0	1	0
65	B8	2	0	0	0	0
65	BI	1	0	0	0	0
65	C5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
65	D8	1	0	0	0	0
65	E5	1	0	0	0	0
65	F8	1	0	0	0	0
65	H5	2	0	0	0	0
65	I8	2	0	0	0	0
65	L5	1	0	0	0	0
65	L8	2	0	0	0	0
65	M5	6	0	0	1	0
65	P8	1	0	0	0	0
65	Q8	1	0	0	0	0
All	All	305753	0	204808	9273	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 19.

All (9273) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1780:A:OP1	65:14:3511:HOH:O	1.75	1.02
27:14:676:A:H8	27:14:2069:G:H21	1.08	1.02
27:1H:1066:U:HO2'	27:1H:1068:A:H2	1.07	1.00
27:14:249:C:OP1	65:14:3512:HOH:O	1.80	1.00
1:13:1422:G:H5''	38:68:48:PRO:HB3	1.43	0.99
1:1G:1142:G:H3'	1:1G:1143:G:H8	1.27	0.98
27:14:1225:C:O3'	45:95:85:LYS:HB2	1.61	0.98
34:51:86:GLU:HG3	34:51:165:ALA:H	1.30	0.97
41:98:72:ASP:HB3	41:98:75:LEU:HD12	1.47	0.97
27:14:1496:A:H8	27:14:1577:C:HO2'	1.01	0.96
42:65:59:LYS:HD3	42:65:60:GLY:H	1.28	0.96
27:1H:826:G:O6	65:1H:3613:HOH:O	1.84	0.95
27:1H:724:A:H8	27:1H:2092:G:H21	1.13	0.95
27:14:84:A:N6	27:14:102:G:O2'	1.99	0.95
27:1H:2601:G:OP2	65:1H:3614:HOH:O	1.85	0.94
1:1G:448:A:OP2	1:1G:485:G:N2	2.00	0.94
27:14:517:C:OP1	55:J5:16:ARG:NH2	2.00	0.94
27:14:2513:G:O2'	31:29:151:TYR:OH	1.85	0.94
27:1H:2482:A:H2	27:1H:2494:G:H21	1.16	0.93
14:5A:12:ARG:HG2	14:5A:14:PRO:HD3	1.50	0.93
41:55:34:ILE:HG22	41:55:114:VAL:HB	1.49	0.93
27:1H:928:G:H22	27:1H:944:C:H42	1.08	0.93
27:1H:991:A:OP2	65:1H:3615:HOH:O	1.87	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2798:C:H1'	31:21:37:ARG:HH12	1.34	0.93
27:14:1771:C:HO2'	27:14:1786:A:H8	1.00	0.93
22:1K:74:C:H1'	22:1K:75:C:H5'	1.51	0.92
27:14:611:C:H2'	27:14:612:G:H5''	1.51	0.92
1:1G:376:G:H5''	16:7A:5:ARG:HB2	1.52	0.91
46:A5:4:LYS:HB3	46:A5:106:ILE:HG22	1.52	0.91
54:M8:16:CYS:SG	54:M8:17:GLY:N	2.42	0.91
27:14:1016:G:H1	27:14:1146:C:H42	1.18	0.91
27:1H:631:U:H3	27:1H:647:A:H2	1.13	0.91
27:14:2747:G:H21	27:14:2757:A:H62	1.19	0.91
53:H5:39:ASP:O	53:H5:44:ARG:NH2	2.03	0.91
30:11:10:THR:HG23	30:11:13:ARG:HB2	1.54	0.90
14:5A:29:ARG:HG2	14:5A:40:CYS:HB2	1.53	0.90
27:14:67:U:H3	27:14:74:A:H2	1.16	0.90
27:14:2261:C:OP1	50:E5:17:GLN:NE2	2.04	0.90
30:19:17:THR:HG22	30:19:205:VAL:H	1.35	0.90
27:1H:808:G:OP1	65:1H:3616:HOH:O	1.89	0.90
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.05	0.90
27:14:994:C:OP1	44:85:53:ARG:NH2	2.04	0.90
1:13:992:U:H3	1:13:1044:A:H62	1.19	0.90
1:13:1086:U:H3	1:13:1099:G:H22	1.10	0.90
27:1H:2392:G:O2'	42:A8:17:ARG:NH1	2.03	0.89
27:1H:2461:A:N1	65:1H:3649:HOH:O	2.06	0.89
39:78:47:ASP:OD2	39:78:50:ARG:NH2	2.05	0.89
50:E5:40:GLN:HE21	50:E5:57:PHE:HB3	1.37	0.89
27:14:1980:G:O2'	27:14:1982:C:OP2	1.90	0.89
1:13:951:G:OP1	65:13:1806:HOH:O	1.91	0.89
27:1H:2228:G:H3'	27:1H:2229:G:C8	2.08	0.89
27:14:662:G:H5'	39:35:15:ARG:HA	1.51	0.89
35:69:4:ILE:HG12	35:69:18:VAL:HG22	1.52	0.89
27:1H:2047:G:O6	65:1H:3617:HOH:O	1.91	0.88
41:98:79:LEU:HA	41:98:83:ILE:HG13	1.51	0.88
1:1G:1106:G:H5''	3:22:172:ARG:HG2	1.56	0.88
38:25:2:ILE:HD12	38:25:6:THR:HG21	1.53	0.88
1:13:861:G:OP2	65:13:1807:HOH:O	1.91	0.88
27:1H:122:G:N7	65:1H:3650:HOH:O	2.06	0.88
27:14:511:U:OP2	65:14:3514:HOH:O	1.92	0.88
41:55:97:VAL:HG22	41:55:114:VAL:HG22	1.55	0.88
27:1H:1803:C:HO2'	27:1H:1818:A:H8	0.91	0.88
50:I8:32:ARG:O	50:I8:35:ASN:ND2	2.06	0.88
27:14:511:U:OP2	65:14:3513:HOH:O	1.91	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:137:G:N2	47:F8:44:GLU:OE2	2.06	0.87
27:1H:1737:A:H62	27:1H:1746:A:H2	1.22	0.87
53:H5:41:PRO:HA	53:H5:44:ARG:HH12	1.39	0.87
1:1G:1053:G:HO2'	1:1G:1199:U:H5	1.16	0.87
47:B5:40:LYS:HG3	47:B5:51:VAL:HB	1.54	0.87
49:H8:110:GLY:HA2	49:H8:145:GLU:HA	1.57	0.87
1:1G:1502:A:H2	1:1G:1505:G:H1	1.22	0.87
39:35:71:VAL:HG13	39:35:72:PRO:HD3	1.56	0.87
27:1H:811:G:OP1	65:1H:3618:HOH:O	1.93	0.87
28:1J:101:A:N7	65:1J:301:HOH:O	2.08	0.87
27:14:31:C:OP1	65:14:3515:HOH:O	1.93	0.87
27:14:443:A:H3'	32:39:45:ARG:HH12	1.39	0.87
27:1H:66:U:H3	27:1H:73:A:H2	1.22	0.86
11:2A:41:THR:HG21	11:2A:71:LYS:HB2	1.57	0.86
27:14:2178:C:HO2'	29:79:168:THR:HG1	1.16	0.86
27:1H:928:G:H22	27:1H:944:C:N4	1.72	0.86
1:13:511:C:OP2	4:3E:49:ARG:NH2	2.09	0.86
27:1H:2187:C:OP2	27:1H:2189:G:N2	2.07	0.86
1:1G:660:G:H1	1:1G:745:C:H42	1.24	0.86
1:1G:1538:C:H42	25:4L:34:G:H1	1.20	0.86
23:2K:45:U:H1'	23:2K:46:7MG:H5'	1.55	0.86
46:A5:88:ARG:HB2	46:A5:92:ARG:HB3	1.56	0.86
1:1G:1342:C:H1'	9:82:124:GLN:HE22	1.40	0.86
27:14:1332:G:N2	27:14:1609:A:O2'	2.09	0.86
27:14:2287:A:H62	27:14:2344:U:H3	1.24	0.86
27:1H:1041:C:OP2	44:C8:54:LYS:NZ	2.09	0.86
27:1H:1056:A:OP2	37:58:37:LYS:NZ	2.08	0.85
27:1H:1687:U:OP1	65:1H:3619:HOH:O	1.93	0.85
27:1H:2263:G:OP1	40:88:85:LYS:NZ	2.09	0.85
24:3L:54:U:H3	24:3L:58:A:H62	1.21	0.85
27:14:1305:C:N4	27:14:1623:G:O6	2.08	0.85
16:7A:9:PHE:HE2	16:7A:18:ARG:HD2	1.41	0.85
27:14:453:C:OP1	65:14:3516:HOH:O	1.95	0.85
27:14:1689:A:H62	27:14:1698:A:H2	1.22	0.85
11:2I:34:ASP:HB3	11:2I:40:ILE:HD11	1.59	0.85
27:1H:960:U:O4	65:1H:3620:HOH:O	1.95	0.85
45:D8:44:LYS:O	45:D8:46:VAL:N	2.10	0.85
28:1J:15:A:H5'	28:1J:16:G:H8	1.40	0.85
51:J8:83:GLU:HG2	51:J8:85:LEU:H	1.42	0.85
27:1H:2601:G:OP1	65:1H:3623:HOH:O	1.95	0.84
27:14:1728:G:N7	27:14:1731:G:N2	2.25	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:185:ASP:HA	32:39:188:ARG:HD3	1.58	0.84
24:3K:1:G:O6	24:3K:72:C:N4	2.09	0.84
40:45:25:ASP:HB3	40:45:102:VAL:HG23	1.59	0.84
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.59	0.84
1:1G:1298:C:OP2	7:62:114:ARG:NH2	2.11	0.84
1:13:81:G:H1	1:13:88:C:H42	1.22	0.84
1:13:964:A:N6	65:13:1814:HOH:O	2.10	0.84
31:21:105:THR:OG1	31:21:199:ARG:NH2	2.10	0.84
24:3K:11:C:H42	24:3K:24:G:H1	1.25	0.84
30:11:182:LEU:H	30:11:272:ALA:HB3	1.41	0.84
40:88:35:VAL:HG13	40:88:130:LYS:HB3	1.60	0.84
1:13:1535:C:H42	25:4K:37:G:H1	1.25	0.84
27:1H:336:A:OP2	65:1H:3621:HOH:O	1.95	0.84
24:3L:51:U:O4	24:3L:62:C:N4	2.10	0.84
27:1H:2830:G:OP1	65:1H:3624:HOH:O	1.96	0.84
27:14:1725:G:H1	27:14:1735:C:H42	1.21	0.83
27:1H:911:A:N6	65:1H:3620:HOH:O	2.10	0.83
27:1H:2311:A:H62	27:1H:2331:G:H8	1.23	0.83
9:8E:21:PRO:HA	9:8E:59:PHE:HA	1.60	0.83
27:1H:1654:C:OP1	65:1H:3626:HOH:O	1.97	0.83
27:14:2256:G:H4'	50:E5:9:SER:HB2	1.60	0.83
27:1H:2405:A:H8	39:78:61:ARG:HG2	1.43	0.83
20:BI:22:ARG:O	20:BI:26:ASN:ND2	2.11	0.83
27:1H:1922:G:H22	27:1H:1925:C:H5	1.26	0.83
27:1H:2300:A:H62	27:1H:2357:U:H3	1.21	0.83
39:78:126:VAL:HG13	39:78:145:PRO:HG2	1.60	0.83
27:14:2348:U:H2'	27:14:2349:G:H5''	1.61	0.83
20:BI:54:LYS:HE2	20:BI:57:ARG:HH22	1.42	0.83
1:13:587:G:N7	65:13:1815:HOH:O	2.10	0.83
29:79:58:VAL:HB	29:79:165:ASN:HB3	1.59	0.83
41:55:37:THR:HG22	41:55:39:PRO:HD2	1.59	0.83
27:1H:473:G:OP2	65:1H:3622:HOH:O	1.95	0.82
27:1H:1649:U:O4	65:1H:3629:HOH:O	1.97	0.82
1:13:377:G:OP1	16:7I:3:LYS:NZ	2.11	0.82
27:1H:48:A:N7	27:1H:118:U:H5	1.77	0.82
27:1H:1374:C:OP2	65:1H:3627:HOH:O	1.97	0.82
28:1J:14:U:O2'	28:1J:107:U:O2'	1.96	0.82
1:13:677:U:H3	1:13:713:G:H22	1.26	0.82
27:1H:2040:U:OP1	65:1H:3631:HOH:O	1.97	0.82
28:16:76:G:N7	65:16:302:HOH:O	2.13	0.82
9:82:3:GLN:OE1	9:82:20:ARG:NH1	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.60	0.82
27:1H:1860:G:OP1	65:1H:3630:HOH:O	1.97	0.82
27:14:819:A:OP2	27:14:1187:G:N2	2.12	0.82
32:39:185:ASP:OD1	32:39:188:ARG:NH1	2.11	0.82
27:1H:848:A:OP1	65:1H:3628:HOH:O	1.97	0.82
45:95:79:VAL:O	45:95:80:GLN:NE2	2.12	0.82
30:11:242:ARG:O	65:11:401:HOH:O	1.97	0.82
32:31:133:ASN:HA	32:31:162:LEU:HD22	1.62	0.82
1:1G:40:C:H42	1:1G:402:G:H1	1.28	0.82
27:1H:1312:A:OP2	65:1H:3625:HOH:O	1.96	0.82
39:78:57:THR:HG22	39:78:60:MET:H	1.46	0.81
27:1H:469:G:H4'	32:31:46:ARG:HG3	1.63	0.81
43:B8:16:ARG:NH2	43:B8:83:ILE:O	2.13	0.81
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.60	0.81
27:14:2431:U:OP1	65:14:3518:HOH:O	1.99	0.81
27:14:1568:G:H5'	30:19:60:ARG:HA	1.62	0.81
27:14:2111:C:OP2	27:14:2145:C:N4	2.13	0.81
1:1G:1330:U:H4'	13:4A:23:TYR:HE1	1.45	0.81
27:14:468:G:N7	57:L5:39:ARG:NH2	2.28	0.81
27:14:654(B):C:H2'	27:14:654(C):G:H8	1.44	0.81
27:1H:417:G:H22	39:78:72:PRO:HD3	1.46	0.81
17:8A:13:ASP:H	17:8A:14:LYS:HE3	1.44	0.81
27:14:1171:G:H1	27:14:1178:C:H42	1.29	0.81
27:1H:31:C:OP1	65:1H:3633:HOH:O	1.99	0.81
27:14:450:G:O6	65:14:3517:HOH:O	1.98	0.81
27:14:848:G:H2'	27:14:849:A:C8	2.16	0.81
1:13:339:C:OP2	38:68:97:ARG:NH1	2.14	0.81
27:1H:2725:U:O2'	27:1H:2726:A:OP1	1.99	0.81
1:1G:768:A:N7	65:1G:1816:HOH:O	2.14	0.81
27:14:1058:U:O2	27:14:1080:A:N6	2.14	0.81
27:14:2655:G:N2	27:14:2665:A:OP2	2.14	0.81
39:35:19:VAL:HG13	39:35:21:ARG:H	1.45	0.81
27:1H:1218:G:H3'	27:1H:1219:G:H5''	1.60	0.81
27:1H:2458:G:OP1	32:31:74:ARG:NH2	2.13	0.81
39:78:75:ILE:HD13	39:78:75:ILE:H	1.46	0.81
19:AI:20:LEU:HA	19:AI:23:ASN:HB2	1.61	0.80
28:16:52:A:H62	42:A8:33:LYS:HG3	1.45	0.80
30:11:69:ARG:HD3	30:11:105:ILE:HD11	1.62	0.80
27:14:2693:A:H2'	27:14:2694:G:H8	1.46	0.80
34:51:154:PRO:HB3	34:51:163:TYR:CZ	2.16	0.80
2:1E:7:VAL:HA	2:1E:217:ARG:HH21	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2146:G:H1	27:1H:2198:C:H42	1.26	0.80
27:14:2111:C:H5''	27:14:2145:C:H42	1.45	0.80
49:D5:76:LEU:HA	49:D5:83:PRO:HA	1.63	0.80
52:K8:13:ALA:HA	52:K8:16:LEU:HD23	1.62	0.80
55:N8:36:CYS:SG	55:N8:37:LYS:N	2.52	0.80
27:14:1970:A:OP1	65:14:3519:HOH:O	1.99	0.80
2:12:132:LYS:HA	2:12:135:GLN:HB2	1.62	0.80
27:14:192:C:OP1	65:14:3520:HOH:O	1.99	0.80
50:I8:32:ARG:H	50:I8:35:ASN:HD21	1.28	0.80
32:39:101:LEU:O	32:39:106:ARG:NH1	2.14	0.80
32:31:185:ASP:OD1	32:31:188:ARG:NH1	2.15	0.80
52:K8:10:LEU:HD21	52:K8:59:ARG:HG2	1.61	0.80
19:A1:7:LYS:HB3	54:M8:67:TYR:HB2	1.63	0.80
35:61:2:LYS:HE3	35:61:20:ASP:HB3	1.63	0.80
1:1G:36:C:OP1	12:3A:120:LYS:NZ	2.14	0.80
27:1H:140:A:H8	27:1H:1642:G:H21	1.24	0.79
27:1H:601:G:O6	65:1H:3632:HOH:O	1.99	0.79
27:1H:1581:G:H2'	27:1H:1582:U:H4'	1.64	0.79
40:88:68:ILE:HD13	40:88:103:MET:HE2	1.64	0.79
1:13:396:G:O2'	1:13:398:C:OP1	2.00	0.79
1:13:803:G:OP1	65:13:1809:HOH:O	2.00	0.79
27:1H:908:U:H5	27:1H:964:A:C2	2.00	0.79
1:13:829:G:O6	65:13:1808:HOH:O	2.00	0.79
27:14:2651:C:H42	27:14:2669:G:H1	1.24	0.79
27:14:2683:C:OP1	43:75:53:ARG:NH2	2.14	0.79
55:J5:49:CYS:HA	55:J5:56:LYS:HB2	1.64	0.79
1:13:543:C:OP1	4:3E:14:ARG:NH1	2.15	0.79
27:1H:2725:U:HO2'	27:1H:2726:A:H8	1.31	0.79
54:M8:61:ARG:HH21	54:M8:64:GLY:HA3	1.48	0.79
27:14:2131:G:N2	27:14:2158:A:N7	2.30	0.79
27:1H:684:G:N2	27:1H:697:C:O2	2.14	0.79
1:1G:200:G:H1	1:1G:217:C:H42	1.31	0.79
42:65:71:ARG:HH21	42:65:106:ARG:HH22	1.31	0.79
51:F5:51:VAL:HG11	51:F5:74:VAL:HG21	1.64	0.79
49:H8:19:ARG:NH1	49:H8:84:GLU:O	2.15	0.79
27:14:2292:C:OP1	42:65:17:ARG:NH2	2.16	0.79
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.16	0.79
20:BI:100:ILE:HG12	20:BI:102:GLY:H	1.46	0.79
27:1H:1043:A:H4'	44:C8:92:ARG:HE	1.46	0.79
2:12:153:ARG:O	2:12:155:LEU:N	2.14	0.79
27:14:1542:G:O6	27:14:1543:A:N6	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1935:G:H3'	27:14:1962:5MC:HN41	1.47	0.79
1:1G:651:C:N4	1:1G:753:A:OP2	2.15	0.79
8:72:17:THR:O	8:72:78:GLN:NE2	2.14	0.79
13:4I:36:LYS:NZ	13:4I:59:TYR:OH	2.15	0.78
27:1H:722:G:OP2	65:1H:3634:HOH:O	1.99	0.78
27:1H:2356:C:O2'	27:1H:2386:G:O2'	1.97	0.78
28:16:43:C:H5'	54:M8:1:MET:HG2	1.65	0.78
19:AA:40:ILE:HG23	19:AA:41:VAL:HG23	1.63	0.78
27:14:848:G:H2'	27:14:849:A:H8	1.46	0.78
34:59:27:LYS:HA	34:59:32:GLU:HB3	1.65	0.78
27:1H:794:A:N7	65:1H:3683:HOH:O	2.17	0.78
27:1H:1296:U:OP1	65:1H:3636:HOH:O	2.01	0.78
1:1G:979:C:H3'	1:1G:980:C:H5''	1.65	0.78
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.18	0.78
27:14:453:C:OP1	65:14:3521:HOH:O	2.00	0.78
28:1J:15:A:H5'	28:1J:16:G:C8	2.18	0.78
1:13:1461:G:N7	65:13:1821:HOH:O	2.16	0.78
27:1H:600:U:OP1	65:1H:3635:HOH:O	2.01	0.78
27:14:1055:G:N2	27:14:1085:A:N3	2.29	0.78
37:15:133:GLN:HG2	37:15:135:PRO:HD3	1.63	0.78
45:95:73:SER:HB2	45:95:83:ARG:HA	1.66	0.78
39:78:38:GLN:H	39:78:41:ARG:HG3	1.49	0.78
1:1G:978:A:OP2	1:1G:1362(A):C:N4	2.17	0.78
27:14:270(K):C:H42	27:14:270(N):G:H1	1.30	0.78
27:14:2017:U:OP1	65:14:3522:HOH:O	2.00	0.78
1:13:362:G:N7	65:13:1820:HOH:O	2.15	0.78
1:13:452:A:H62	1:13:480:U:H3	1.30	0.78
13:4I:14:ARG:H	13:4I:44:ARG:HD2	1.47	0.78
27:1H:1177:U:O2	31:21:149:ARG:NH2	2.15	0.78
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.66	0.78
13:4I:84:ILE:HD11	19:AI:66:MET:HG2	1.65	0.78
28:16:80:U:H2'	28:16:81:G:H21	1.49	0.78
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.15	0.78
13:4A:58:GLU:O	13:4A:62:ASN:ND2	2.17	0.78
2:1E:51:LEU:HA	2:1E:54:THR:HB	1.66	0.78
28:1J:15:A:H1'	28:1J:109:G:C5	2.18	0.78
1:1G:854:G:O6	65:1G:1806:HOH:O	2.00	0.78
41:98:97:VAL:HG22	41:98:114:VAL:HG22	1.65	0.78
30:11:96:HIS:CD2	30:11:102:LYS:HG2	2.19	0.78
27:14:142:G:H4'	47:B5:35:THR:HG21	1.67	0.77
43:75:112:ARG:HA	43:75:115:ARG:HH11	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:458:C:N3	1:1G:474:G:N2	2.32	0.77
27:14:1416:G:H1	27:14:1582:C:H42	1.31	0.77
27:1H:656:G:OP2	58:Q8:15:LYS:NZ	2.16	0.77
32:31:66:PRO:O	32:31:67:GLN:HB3	1.83	0.77
1:1G:79:G:N2	1:1G:90:C:O2	2.17	0.77
27:14:654(B):C:H2'	27:14:654(C):G:C8	2.19	0.77
28:1J:87:G:N2	28:1J:89(A):A:OP2	2.17	0.77
7:6E:16:LEU:HD11	9:8E:45:ALA:HB2	1.65	0.77
23:2K:2:C:H2'	23:2K:3:C:C6	2.19	0.77
34:51:7:LEU:HD23	34:51:8:PRO:HD2	1.65	0.77
27:14:1756:G:OP2	65:14:3523:HOH:O	2.02	0.77
31:29:11:MET:HG2	31:29:24:THR:HG22	1.64	0.77
27:1H:1066:U:H3	27:1H:1189:A:H62	1.30	0.77
44:C8:91:ASP:HA	44:C8:95:LEU:HB2	1.66	0.77
27:1H:1325:A:N7	65:1H:3685:HOH:O	2.17	0.77
27:1H:2223:C:N4	27:1H:2236:G:O6	2.15	0.77
1:1G:257:G:H1	1:1G:269:C:H42	1.31	0.77
27:1H:1054:C:OP1	37:58:35:ARG:NH1	2.17	0.77
27:1H:2831:A:OP1	41:98:2:ARG:NH1	2.14	0.77
49:H8:82:ARG:HB2	49:H8:82:ARG:HH11	1.49	0.77
14:5A:27:CYS:SG	14:5A:29:ARG:HB2	2.25	0.77
1:13:890:G:O2'	1:13:906:G:O6	2.01	0.77
27:1H:602:A:OP2	65:1H:3637:HOH:O	2.01	0.77
28:16:25:A:OP1	65:16:301:HOH:O	2.03	0.77
35:61:93:THR:HA	35:61:119:PRO:HB3	1.67	0.77
1:1G:362:G:O3'	12:3A:30:ARG:NH2	2.17	0.77
2:12:236:TYR:HB3	2:12:239:VAL:HB	1.67	0.77
5:42:101:ILE:HG13	5:42:119:LEU:HD23	1.67	0.77
34:59:77:LYS:HE2	34:59:138:LYS:HB2	1.67	0.77
44:85:110:VAL:HG12	44:85:114:LYS:HD2	1.66	0.77
45:95:85:LYS:HG2	45:95:87:HIS:H	1.50	0.77
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.66	0.77
15:6I:74:ASP:HB3	15:6I:77:ARG:HB3	1.66	0.77
24:3K:55:U:H3	24:3K:58:A:H62	1.30	0.77
27:1H:1684:C:OP2	65:1H:3641:HOH:O	2.02	0.77
27:1H:2321:G:H22	27:1H:2324:A:H2	1.30	0.77
45:D8:41:GLY:HA2	45:D8:44:LYS:HA	1.66	0.77
27:14:1779:U:OP2	65:14:3524:HOH:O	2.03	0.77
1:13:233:C:H2'	1:13:234:C:H6	1.48	0.76
1:13:651:C:N4	1:13:753:A:OP2	2.17	0.76
30:11:112:GLN:OE1	30:11:115:GLN:NE2	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:119:GLU:HA	2:12:122:PHE:HB2	1.67	0.76
7:62:23:VAL:HG13	7:62:43:PHE:HE2	1.50	0.76
27:14:259:G:H21	27:14:621:A:H8	1.31	0.76
27:14:1090:U:O4	27:14:1101:U:N3	2.13	0.76
27:14:2119:A:H61	27:14:2171:A:H1'	1.51	0.76
27:14:2571:C:H5'	27:14:2572:A:H5''	1.67	0.76
28:1J:11:C:OP2	28:1J:12:C:N4	2.16	0.76
1:13:1129:C:H5'	9:8E:16:ARG:HH22	1.51	0.76
15:6I:82:ILE:HG13	15:6I:87:ILE:HB	1.68	0.76
27:1H:543:C:OP1	55:N8:16:ARG:NH2	2.18	0.76
27:1H:2091:U:H3	27:1H:2443:A:H2	1.29	0.76
27:1H:2405:A:C8	39:78:61:ARG:HG2	2.19	0.76
1:13:35:G:O2'	12:3I:115:SER:O	2.02	0.76
27:1H:832:A:OP2	65:1H:3638:HOH:O	2.01	0.76
27:14:1314:C:OP1	65:14:3525:HOH:O	2.03	0.76
27:14:2140:C:O2	27:14:2151:G:N2	2.18	0.76
1:1G:1318:A:H5''	19:AA:10:PHE:HB3	1.67	0.76
27:14:1899:G:H22	27:14:1902:C:H41	1.33	0.76
27:14:1934:C:O2	27:14:1964:G:N2	2.14	0.76
37:15:42:TRP:O	44:85:64:ARG:NH2	2.18	0.76
28:16:11:C:OP2	28:16:12:C:N4	2.19	0.76
32:31:107:LYS:HE3	32:31:206:ILE:HD12	1.68	0.76
1:1G:1142:G:H3'	1:1G:1143:G:C8	2.16	0.76
60:2L:5:G:N2	60:2L:68:C:O2	2.12	0.76
1:13:107:G:N7	20:BI:15:ARG:NH1	2.34	0.76
1:13:1300:G:O2'	1:13:1301:U:O5'	2.03	0.76
60:2L:60:U:H5''	60:2L:61:C:H5	1.50	0.76
38:25:23:ARG:HG3	38:25:24:VAL:H	1.51	0.76
46:A5:13:SER:HB3	46:A5:16:LYS:HD2	1.67	0.76
13:4I:49:THR:HB	13:4I:52:GLU:H	1.49	0.76
1:13:1442:G:H1	1:13:1461:G:H21	1.33	0.76
8:7E:29:SER:HB3	8:7E:32:LYS:HG3	1.67	0.76
1:1G:132:C:O2	1:1G:230:G:N2	2.18	0.76
27:14:581:C:N4	27:14:1259:G:O6	2.19	0.76
27:14:998:C:OP2	44:85:58:ARG:NH2	2.17	0.76
27:14:2032:G:O6	65:14:3527:HOH:O	2.04	0.76
27:1H:572:A:H2'	27:1H:573:A:C8	2.21	0.76
27:1H:1922:G:H1	27:1H:1925:C:H41	1.33	0.76
27:1H:2590:A:OP1	65:1H:3639:HOH:O	2.02	0.76
29:71:32:LEU:HD13	29:71:220:PRO:HD2	1.68	0.76
27:14:993:G:OP1	44:85:50:ARG:NH2	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2840:C:H5''	41:55:53:HIS:HD2	1.49	0.76
32:39:143:ALA:HB1	32:39:148:LEU:HB2	1.66	0.76
41:55:103:ARG:NH1	41:55:108:GLY:O	2.17	0.76
1:13:664:G:H22	1:13:741:G:H22	1.34	0.75
1:13:973:G:OP1	10:11:57:LYS:NZ	2.19	0.75
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.18	0.75
59:1L:29:G:H1	59:1L:41:C:H42	1.32	0.75
45:95:69:LYS:HD3	45:95:85:LYS:HG3	1.67	0.75
27:1H:957:A:OP2	65:1H:3644:HOH:O	2.04	0.75
51:J8:78:LYS:HE2	51:J8:94:LEU:HD12	1.68	0.75
54:M8:14:ILE:HG23	54:M8:21:VAL:HB	1.67	0.75
1:1G:542:G:OP1	4:32:10:ARG:NH2	2.18	0.75
2:12:137:ARG:HH12	2:12:141:GLU:H	1.33	0.75
5:42:79:GLU:HG3	5:42:93:PRO:HD2	1.66	0.75
27:14:1754:C:OP1	43:75:96:ARG:NH1	2.18	0.75
27:14:2499:C:OP1	65:14:3526:HOH:O	2.04	0.75
1:13:578:C:OP1	65:13:1810:HOH:O	2.05	0.75
2:1E:132:LYS:HA	2:1E:135:GLN:HB2	1.66	0.75
1:1G:1011:G:N1	1:1G:1019:C:O2	2.19	0.75
27:14:2304:G:N7	65:14:3550:HOH:O	2.19	0.75
45:95:41:GLY:HA3	45:95:46:VAL:HG13	1.68	0.75
27:1H:2300:A:N6	27:1H:2357:U:H3	1.84	0.75
1:1G:1028:C:H42	1:1G:1033:G:H1	1.34	0.75
27:14:2712:U:H1'	27:14:2712(A):A:C8	2.22	0.75
35:69:82:ARG:N	35:69:143:SER:OG	2.16	0.75
4:3E:153:ARG:NE	4:3E:181:MET:SD	2.58	0.75
19:AI:40:ILE:HG21	19:AI:67:VAL:HA	1.66	0.75
27:14:138:G:N2	47:B5:44:GLU:OE2	2.16	0.75
27:1H:2006:C:OP1	65:1H:3640:HOH:O	2.02	0.75
53:L8:43:ILE:O	53:L8:47:VAL:HG23	1.86	0.75
33:49:6:ALA:HB2	54:I5:23:GLU:HG3	1.67	0.75
42:65:10:ARG:NH2	42:65:91:PRO:O	2.20	0.75
1:1G:1224:G:OP1	65:1G:1807:HOH:O	2.05	0.75
2:12:127:ILE:O	2:12:135:GLN:NE2	2.19	0.75
51:F5:92:LYS:HA	51:F5:95:LEU:H	1.52	0.75
27:1H:587:G:OP2	65:1H:3643:HOH:O	2.04	0.75
27:1H:928:G:N2	27:1H:944:C:H42	1.84	0.75
41:98:100:LEU:HD21	41:98:113:LEU:HD13	1.66	0.75
48:G8:90:LEU:HD12	48:G8:91:GLU:H	1.51	0.75
27:14:907:U:O2'	40:45:101:ARG:NH2	2.20	0.75
27:14:1130:U:O2	31:29:149:ARG:NH2	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:38:6:ASN:O	36:38:10:LEU:N	2.20	0.75
27:14:851:U:H5'	53:H5:49:LYS:HD2	1.68	0.75
27:14:1525:G:H2'	27:14:1526:G:H8	1.51	0.75
32:39:23:ASP:OD1	32:39:203:GLN:NE2	2.20	0.75
20:BI:26:ASN:HD22	20:BI:26:ASN:H	1.34	0.74
47:B5:1:MET:O	52:G5:29:LYS:NZ	2.20	0.74
22:1K:5:G:O2'	22:1K:69:G:N2	2.18	0.74
27:1H:1002:G:OP2	40:88:14:ARG:NH2	2.19	0.74
27:1H:2085:A:OP1	65:1H:3642:HOH:O	2.02	0.74
39:78:19:VAL:HG13	39:78:21:ARG:H	1.52	0.74
1:1G:1152:A:H5'	10:1A:13:HIS:HD2	1.52	0.74
27:14:1817:G:OP1	30:19:88:ARG:NH2	2.19	0.74
58:M5:33:ASN:HA	58:M5:36:LYS:HD2	1.70	0.74
1:13:143:A:H2	1:13:220:G:H1	1.35	0.74
1:13:1368:G:OP1	9:8E:111:ARG:NH2	2.20	0.74
24:3K:19:G:H4'	24:3K:57:G:H21	1.51	0.74
4:32:191:ARG:NH1	4:32:191:ARG:O	2.20	0.74
42:65:103:GLU:OE1	42:65:103:GLU:N	2.19	0.74
1:13:1127:G:O2'	1:13:1128:C:O4'	2.05	0.74
27:1H:881:U:O2	39:78:55:ARG:NH1	2.20	0.74
60:2L:75:C:O2	27:14:2251:OMG:N2	2.17	0.74
27:1H:579:U:HO2'	27:1H:580:G:H8	1.34	0.74
27:1H:2016:U:OP2	65:1H:3648:HOH:O	2.05	0.74
27:1H:2773:G:OP2	65:1H:3645:HOH:O	2.05	0.74
30:11:136:ILE:O	30:11:168:ARG:NH2	2.20	0.74
32:39:167:ALA:HB1	32:39:173:VAL:HG11	1.70	0.74
16:7A:9:PHE:CE2	16:7A:18:ARG:HD2	2.22	0.74
27:14:664:C:OP1	39:35:18:ARG:NH2	2.13	0.74
1:13:588:G:OP1	65:13:1812:HOH:O	2.06	0.74
45:95:37:VAL:HG21	45:95:57:VAL:H	1.51	0.74
45:95:62:LEU:HD22	45:95:95:LEU:HB2	1.70	0.74
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.21	0.74
27:1H:1890:G:O2'	27:1H:1907:A:N6	2.20	0.74
40:88:104:PHE:HE2	40:88:125:LEU:HD11	1.51	0.74
7:62:79:ARG:HG2	7:62:84:ASN:HB2	1.67	0.74
20:BA:53:LEU:HB3	20:BA:102:GLY:HA3	1.70	0.74
27:14:2552:OMU:OP2	27:14:2552:OMU:H6	1.88	0.74
1:13:1366:C:O2'	10:1I:60:ARG:NH2	2.21	0.74
27:1H:779:C:OP2	65:1H:3646:HOH:O	2.05	0.74
27:1H:908:U:H5	27:1H:964:A:N1	1.86	0.74
44:C8:108:GLU:OE1	44:C8:112:ARG:NH1	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1650:G:N2	27:14:2007:C:O2	2.15	0.74
45:95:43:GLU:OE2	45:95:44:LYS:NZ	2.20	0.74
9:82:74:ILE:O	9:82:78:LYS:NZ	2.21	0.74
51:F5:23:LYS:HD3	51:F5:28:GLY:HA3	1.68	0.74
27:1H:828:G:H21	27:1H:831:A:H62	1.35	0.73
28:16:41:U:C5	33:41:69:ALA:HB1	2.23	0.73
1:1G:1077:G:N2	1:1G:1080:A:OP2	2.20	0.73
1:13:256:U:OP1	17:8I:17:LYS:NZ	2.21	0.73
43:B8:23:ARG:HG3	43:B8:120:ARG:NH1	2.03	0.73
1:1G:1081:G:H5''	5:42:18:ARG:HG3	1.69	0.73
27:14:1162:G:H2'	27:14:1163:G:H8	1.52	0.73
37:15:49:GLY:O	37:15:119:ARG:NH1	2.21	0.73
41:55:33:ARG:HG2	41:55:115:GLU:HG2	1.70	0.73
1:13:1362(A):C:O2	65:13:1813:HOH:O	2.06	0.73
22:1K:5:G:HO2'	22:1K:69:G:N2	1.84	0.73
27:1H:479:G:OP2	65:1H:3652:HOH:O	2.07	0.73
46:E8:82:LEU:HB2	46:E8:98:LYS:HB2	1.69	0.73
27:14:1316:U:H2'	27:14:1317:A:C8	2.24	0.73
1:13:130:A:O2'	1:13:263:A:O2'	2.05	0.73
1:13:567:G:N3	65:13:1824:HOH:O	2.21	0.73
2:1E:60:ASP:OD1	2:1E:64:ARG:NH2	2.20	0.73
7:6E:15:ASP:H	7:6E:20:ASP:H	1.35	0.73
22:1K:5:G:HO2'	22:1K:69:G:H22	1.35	0.73
46:E8:18:ARG:HG2	46:E8:76:VAL:HG13	1.70	0.73
54:M8:37:SER:HA	54:M8:41:PRO:HD2	1.70	0.73
1:1G:256:U:OP1	17:8A:17:LYS:NZ	2.20	0.73
1:1G:1203:C:H2'	1:1G:1204:A:H8	1.54	0.73
1:1G:1330:U:H4'	13:4A:23:TYR:CE1	2.22	0.73
1:1G:1348:U:OP1	65:1G:1808:HOH:O	2.07	0.73
27:14:1342:A:H2	27:14:1602:U:H3	1.34	0.73
27:14:2120:G:H2'	27:14:2121:G:C8	2.24	0.73
54:I5:57:GLU:HA	54:I5:60:GLN:HB2	1.68	0.73
1:13:73:G:O6	1:13:97:U:N3	2.19	0.73
27:1H:255:A:O2'	27:1H:256:G:H4'	1.89	0.73
27:1H:992:G:OP2	65:1H:3615:HOH:O	2.06	0.73
27:1H:1068:A:H62	27:1H:1187:U:H3	1.37	0.73
27:1H:1758:C:O2'	27:1H:2869:C:N3	2.22	0.73
33:49:151:ALA:O	33:49:153:ARG:NH1	2.21	0.73
53:H5:41:PRO:HA	53:H5:44:ARG:NH1	2.03	0.73
1:13:1133:G:H2'	1:13:1134:G:H8	1.53	0.73
5:4E:48:ALA:HB2	5:4E:57:LYS:HD3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:53:ARG:HH21	18:9I:60:ALA:N	1.85	0.73
24:3K:28:G:N2	24:3K:43:C:N3	2.34	0.73
27:1H:2878:G:OP2	43:B8:119:LYS:NZ	2.22	0.73
44:C8:83:LEU:HD13	44:C8:113:ALA:HB2	1.70	0.73
4:32:152:SER:HA	4:32:155:LEU:HD23	1.70	0.73
27:14:2334:G:O6	50:E5:74:ARG:NH2	2.21	0.73
35:69:73:GLU:O	35:69:139:GLN:NE2	2.22	0.73
23:2K:12:U:OP2	65:2K:201:HOH:O	2.06	0.73
27:1H:2770:U:O4	27:1H:2772:A:N6	2.20	0.73
27:1H:1357:G:H1'	27:1H:1658:C:H5''	1.71	0.73
29:71:213:TYR:OH	29:71:223:ARG:NH1	2.20	0.73
27:1H:926:A:N6	27:1H:946:A:O2'	2.21	0.73
27:1H:2531:A:O5'	65:1H:3647:HOH:O	2.05	0.73
35:61:69:LYS:HG3	35:61:136:VAL:HB	1.68	0.73
1:1G:261:U:OP2	20:BA:79:ARG:NH2	2.22	0.73
1:1G:1530:G:OP1	65:1G:1809:HOH:O	2.07	0.73
27:14:265:A:O2'	27:14:266:G:H4'	1.87	0.73
27:14:2791:C:H2'	27:14:2792:G:C8	2.24	0.73
29:79:11:LEU:HD13	29:79:220:PRO:HB2	1.70	0.73
40:45:109:VAL:HG12	40:45:110:THR:H	1.54	0.73
1:13:974:A:OP2	14:5I:29:ARG:NH2	2.21	0.73
3:2E:57:ILE:HG12	3:2E:66:VAL:HG22	1.71	0.73
10:1I:30:SER:HB2	10:1I:80:LYS:HB3	1.70	0.73
35:61:128:LEU:HD13	35:61:129:THR:H	1.53	0.73
12:3A:36:VAL:HB	12:3A:38:ARG:HG3	1.70	0.73
27:14:2550:G:OP1	65:14:3529:HOH:O	2.07	0.73
38:25:17:ARG:HE	38:25:47:ILE:HD13	1.54	0.73
1:13:578:C:OP1	65:13:1811:HOH:O	2.05	0.72
27:1H:1256:A:H5'	27:1H:1256:A:H8	1.53	0.72
27:1H:2185:G:O2'	27:1H:2196:A:OP2	2.06	0.72
1:1G:1452:C:H4'	1:1G:1453:G:O5'	1.89	0.72
27:14:1347:G:H21	57:L5:49:ARG:HH22	1.37	0.72
27:14:1439:A:OP1	65:14:3528:HOH:O	2.05	0.72
1:13:547:A:OP1	4:3E:73:ARG:NH2	2.22	0.72
3:2E:20:SER:HB3	3:2E:40:ARG:HH22	1.54	0.72
5:4E:68:GLU:HG2	5:4E:70:PRO:HD3	1.70	0.72
34:51:7:LEU:HD22	34:51:69:ARG:HH21	1.53	0.72
52:K8:50:ILE:HD12	52:K8:51:ARG:N	2.04	0.72
60:2L:19:G:N2	33:49:78:SER:OG	2.22	0.72
27:1H:1543:A:H8	27:1H:1625:C:HO2'	1.33	0.72
33:41:142:PRO:HB2	54:M8:31:ILE:HD13	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:78:37:GLY:HA3	39:78:39:LYS:H	1.54	0.72
39:78:59:LEU:HD23	58:Q8:58:ILE:HD13	1.70	0.72
46:E8:4:LYS:HB3	46:E8:106:ILE:HG22	1.71	0.72
1:1G:1370:G:N7	65:1G:1820:HOH:O	2.21	0.72
27:14:792:G:OP2	65:14:3531:HOH:O	2.07	0.72
27:1H:792:G:OP1	65:1H:3656:HOH:O	2.08	0.72
27:1H:1429:G:N7	65:1H:3708:HOH:O	2.22	0.72
27:14:1315:C:OP2	65:14:3525:HOH:O	2.08	0.72
27:14:2320:A:H1'	27:14:2321:G:C6	2.25	0.72
27:1H:816:G:O2'	27:1H:1426:A:N6	2.22	0.72
29:71:186:ALA:O	29:71:190:ARG:NH1	2.22	0.72
42:A8:27:SER:HA	42:A8:88:ASP:HB3	1.71	0.72
46:E8:88:ARG:HB2	46:E8:92:ARG:HB3	1.72	0.72
1:1G:823:G:H21	8:72:1:MET:HE3	1.53	0.72
27:1H:554:A:C2	27:1H:2065:A:H2'	2.24	0.72
27:1H:2804:A:H2	27:1H:2904:G:H5''	1.54	0.72
34:51:87:LEU:HB2	34:51:131:VAL:HG12	1.71	0.72
52:K8:44:LEU:O	52:K8:46:GLN:N	2.20	0.72
9:82:28:VAL:HA	9:82:63:ILE:O	1.89	0.72
27:14:2807:G:N1	27:14:2893:G:O6	2.19	0.72
27:1H:233:U:OP2	58:Q8:8:LYS:NZ	2.22	0.72
56:O8:27:LYS:HE3	56:O8:27:LYS:H	1.55	0.72
1:1G:1147:C:O2	9:82:16:ARG:NE	2.23	0.72
27:14:630:G:N2	27:14:633:A:OP2	2.19	0.72
1:13:690:G:H22	11:2I:55:LYS:NZ	1.86	0.72
27:1H:1053:C:H1'	37:58:106:MET:HG2	1.70	0.72
27:1H:1681:G:OP2	65:1H:3655:HOH:O	2.08	0.72
27:1H:1810:U:H2'	27:1H:1816:A:N6	2.05	0.72
27:1H:2163:C:O2	27:1H:2174:G:N2	2.20	0.72
27:1H:2428:G:H4'	39:78:67:MET:H	1.53	0.72
27:14:783:A:OP2	65:14:3533:HOH:O	2.08	0.72
39:78:14:LYS:O	39:78:16:ARG:N	2.22	0.72
2:12:114:ARG:HA	2:12:117:GLU:HG3	1.72	0.72
27:14:2681:C:H5	27:14:2725:A:H62	1.35	0.72
27:1H:48:A:N7	27:1H:118:U:C5	2.57	0.72
27:1H:2029:C:OP1	65:1H:3651:HOH:O	2.07	0.72
47:F8:24:GLY:HA3	47:F8:82:GLN:HE22	1.55	0.72
7:62:16:LEU:HD11	9:82:42:ARG:HA	1.71	0.72
42:65:110:LEU:HD22	42:65:110:LEU:H	1.55	0.72
1:13:650:G:N7	65:13:1826:HOH:O	2.23	0.71
7:6E:143:ARG:NH1	24:3K:41:C:O2'	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2034:U:OP1	46:E8:42:ARG:NH1	2.23	0.71
27:1H:2028:A:OP1	65:1H:3653:HOH:O	2.08	0.71
27:1H:2601:G:OP2	65:1H:3654:HOH:O	2.08	0.71
30:11:93:ALA:HB3	30:11:105:ILE:HG22	1.72	0.71
40:88:31:ASP:H	40:88:107:ALA:HB2	1.55	0.71
45:D8:30:GLY:H	45:D8:61:VAL:HG13	1.54	0.71
46:E8:13:SER:HB3	46:E8:16:LYS:HD3	1.72	0.71
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.26	0.71
1:1G:1319:A:OP1	19:AA:70:LYS:NZ	2.23	0.71
2:12:47:THR:HG23	2:12:202:PRO:HG2	1.71	0.71
27:14:2635:C:H5''	31:29:78:LEU:O	1.90	0.71
1:13:1348:U:H3	1:13:1374:A:H2	1.38	0.71
9:8E:46:ALA:HA	9:8E:78:LYS:HB2	1.72	0.71
27:1H:1092:A:H1'	27:1H:1094:G:N3	2.05	0.71
27:1H:2077:A:H5''	27:1H:2078:C:O5'	1.89	0.71
27:1H:2714:C:H3'	27:1H:2715:U:H5''	1.71	0.71
27:1H:2886:C:OP1	43:B8:3:ARG:NH2	2.23	0.71
40:88:17:LEU:HD13	40:88:39:PRO:HB2	1.71	0.71
59:1L:13:C:O2	59:1L:22:G:N2	2.17	0.71
27:14:1434:A:H61	27:14:1558:A:H62	1.38	0.71
4:3E:105:VAL:HG13	4:3E:110:PHE:HB2	1.71	0.71
17:8I:58:GLU:HB2	17:8I:74:LEU:HB3	1.71	0.71
26:5K:22:G:H5''	26:5K:44:G:H21	1.55	0.71
2:12:165:VAL:HA	2:12:187:LEU:HB3	1.71	0.71
1:13:429:U:H1'	1:13:430:A:H5''	1.72	0.71
2:1E:77:ALA:HA	2:1E:80:ILE:HD12	1.72	0.71
17:8I:66:SER:O	17:8I:70:ARG:NH1	2.23	0.71
27:1H:1754:U:O2	27:1H:1789:U:H5'	1.90	0.71
27:14:882:G:H1	27:14:894:C:H42	1.37	0.71
27:14:578:A:OP2	65:14:3534:HOH:O	2.08	0.71
27:14:1316:U:H2'	27:14:1317:A:H8	1.56	0.71
27:14:2210:G:H3'	27:14:2211:G:C5	2.26	0.71
27:14:2271:G:H5''	50:E5:20:ARG:HE	1.56	0.71
1:13:690:G:H22	11:2I:55:LYS:HZ2	1.35	0.71
4:3E:98:GLU:OE2	4:3E:103:ASN:ND2	2.23	0.71
39:78:84:ASN:HA	39:78:115:LEU:O	1.90	0.71
47:F8:40:LYS:HG3	47:F8:51:VAL:HB	1.73	0.71
3:22:50:ALA:HB1	3:22:70:VAL:HG11	1.73	0.71
27:14:2111:C:N4	27:14:2147:G:N3	2.39	0.71
40:45:22:LYS:HD2	40:45:98:LYS:HB2	1.71	0.71
49:H8:108:PRO:HA	49:H8:142:SER:HA	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:971:C:OP2	65:14:3530:HOH:O	2.07	0.71
28:1J:14:U:OP2	28:1J:70:C:O2'	2.03	0.71
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.20	0.71
27:1H:1922:G:N2	27:1H:1925:C:H5	1.89	0.71
27:1H:2359:A:O3'	56:O8:39:TYR:OH	2.09	0.71
27:1H:2809:G:O2'	27:1H:2814:G:N2	2.22	0.71
43:B8:107:ASP:O	43:B8:111:ARG:NH1	2.23	0.71
16:7I:28:ARG:HG2	16:7I:28:ARG:HH11	1.56	0.71
23:2K:2:C:H2'	23:2K:3:C:H6	1.55	0.71
10:1A:51:ARG:HB2	10:1A:60:ARG:HA	1.73	0.71
27:14:527:C:N4	27:14:2779:U:OP2	2.24	0.71
27:14:2151:G:H2'	27:14:2152:G:H8	1.54	0.71
27:1H:2725:U:O2'	27:1H:2726:A:H8	1.74	0.70
1:13:316:G:OP2	1:13:351:G:O2'	2.09	0.70
27:1H:2159:C:H42	27:1H:2178:G:H22	1.36	0.70
47:F8:49:VAL:HG11	47:F8:83:VAL:HG22	1.73	0.70
1:1G:128:G:H4'	17:8A:3:LYS:HG2	1.72	0.70
1:1G:533:A:O2'	1:1G:535:A:OP2	2.08	0.70
1:1G:800:G:N7	65:1G:1822:HOH:O	2.23	0.70
1:1G:1432:G:OP1	43:75:107:ASP:HB2	1.91	0.70
40:45:7:MET:HG3	40:45:10:ARG:HH12	1.55	0.70
35:61:3:VAL:HG12	35:61:38:LEU:HA	1.73	0.70
27:14:1022:G:H22	27:14:1142(A):A:H2	1.39	0.70
34:59:41:MET:HG2	34:59:55:PRO:HD3	1.72	0.70
49:D5:59:LEU:O	49:D5:61:LEU:N	2.24	0.70
1:13:233:C:H2'	1:13:234:C:C6	2.26	0.70
1:1G:1127:G:O2'	1:1G:1128:C:O5'	2.09	0.70
19:AA:36:ARG:HE	19:AA:72:GLY:HA3	1.57	0.70
2:12:34:ALA:HB1	2:12:36:ARG:HG3	1.73	0.70
11:2A:18:ARG:NH1	11:2A:35:PRO:O	2.25	0.70
20:BA:33:ILE:O	20:BA:37:SER:OG	2.09	0.70
27:14:2873:A:H8	41:55:6:SER:N	1.88	0.70
29:79:14:VAL:HG11	29:79:222:VAL:HA	1.73	0.70
13:4I:79:LYS:HD3	27:1H:936:C:H41	1.56	0.70
22:1K:3:C:N4	22:1K:70:G:O6	2.25	0.70
4:32:119:GLN:HG3	4:32:123:HIS:CD2	2.27	0.70
27:14:2334:G:H5'	42:65:9:ARG:HG2	1.74	0.70
46:A5:35:ILE:HG12	55:J5:28:PRO:HD2	1.73	0.70
24:3K:76:A:H8	27:1H:2407:C:H42	1.39	0.70
27:1H:120:G:N7	65:1H:3718:HOH:O	2.24	0.70
27:1H:2003:G:O2'	27:1H:2005:C:OP2	2.10	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:98:56:LYS:NZ	41:98:90:ARG:O	2.25	0.70
27:14:620:G:H4'	27:14:621:A:H5''	1.74	0.70
27:1H:2610:G:O3'	65:1H:3662:HOH:O	2.10	0.70
27:1H:2659:C:OP2	27:1H:2746:G:O2'	2.10	0.70
2:12:208:ILE:HA	2:12:211:ILE:HD12	1.73	0.70
17:8A:88:TYR:OH	17:8A:92:ARG:NH1	2.23	0.70
60:2L:23:A:H2'	60:2L:24:G:C8	2.27	0.70
34:59:87:LEU:HD22	34:59:149:ARG:HG3	1.74	0.70
1:13:768:A:OP2	65:13:1816:HOH:O	2.10	0.70
1:13:975:A:H4'	1:13:976:G:H5''	1.74	0.70
1:13:1250:A:H2'	1:13:1251:A:C8	2.27	0.70
2:1E:82:ARG:NH2	2:1E:92:TYR:OH	2.19	0.70
20:BI:71:THR:HG22	20:BI:72:LEU:HD12	1.74	0.70
27:1H:249:G:H21	27:1H:647:A:H8	1.39	0.70
27:1H:2142:A:N6	27:1H:2193:A:H62	1.90	0.70
43:B8:60:THR:HG22	43:B8:77:PRO:HA	1.74	0.70
50:I8:32:ARG:N	50:I8:35:ASN:HD21	1.88	0.70
2:12:16:HIS:HB3	2:12:210:SER:HB2	1.72	0.70
12:3A:38:ARG:HH21	12:3A:40:VAL:HG12	1.55	0.70
29:79:47:LEU:N	29:79:169:GLY:O	2.25	0.70
27:1H:1477:C:H2'	27:1H:1478:U:C6	2.27	0.70
27:1H:2268:G:OP2	65:1H:3657:HOH:O	2.09	0.70
34:51:127:GLU:O	34:51:129:THR:N	2.25	0.70
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.27	0.70
27:14:733:G:OP2	65:14:3535:HOH:O	2.09	0.70
51:F5:8:SER:HB3	51:F5:66:HIS:CD2	2.27	0.70
1:13:748:C:H4'	1:13:749:C:O5'	1.92	0.69
1:13:1318:A:H5''	19:AI:10:PHE:HB3	1.73	0.69
4:3E:149:ALA:O	4:3E:153:ARG:HG2	1.92	0.69
8:7E:39:LEU:HB3	8:7E:45:ILE:HG12	1.74	0.69
22:1K:18:G:H1	22:1K:55:PSU:H1'	1.57	0.69
30:11:17:THR:HG22	30:11:204:ILE:HA	1.74	0.69
27:14:2250:G:O2'	27:14:2496:C:OP1	2.09	0.69
38:25:13:ASN:O	38:25:13:ASN:ND2	2.17	0.69
1:13:343:U:H1'	1:13:347:G:H22	1.57	0.69
1:13:1147:C:O2	9:8E:16:ARG:NH2	2.25	0.69
2:1E:178:ARG:HH22	8:7E:68:ARG:HH22	1.39	0.69
27:1H:989:U:OP2	65:1H:3659:HOH:O	2.09	0.69
52:K8:44:LEU:C	52:K8:46:GLN:H	1.96	0.69
1:1G:1221:G:OP1	1:1G:1321:C:N4	2.24	0.69
27:14:1899:G:H22	27:14:1902:C:N4	1.89	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:67:C:H2'	1:13:68:G:C8	2.27	0.69
1:13:1023:G:H3'	1:13:1024:G:H5''	1.74	0.69
27:14:974:G:O6	65:14:3532:HOH:O	2.08	0.69
27:14:2693:A:H2'	27:14:2694:G:C8	2.27	0.69
30:19:148:GLU:HB2	30:19:151:LYS:HD2	1.74	0.69
43:75:58:ASN:C	43:75:58:ASN:HD22	1.96	0.69
1:13:1095:U:P	1:13:1108:G:H1	2.15	0.69
1:13:1305:G:O2'	1:13:1306:A:H8	1.75	0.69
27:1H:1233:G:H5''	45:D8:81:TYR:CE2	2.27	0.69
56:O8:25:LYS:HE2	56:O8:27:LYS:HD3	1.74	0.69
1:1G:934:C:OP1	65:1G:1810:HOH:O	2.09	0.69
27:14:859:G:O2'	27:14:916:G:O6	2.08	0.69
2:1E:87:ARG:HH11	2:1E:219:VAL:HB	1.57	0.69
12:3I:114:ARG:HB3	12:3I:119:THR:HB	1.74	0.69
39:78:125:VAL:H	39:78:144:GLU:HB3	1.58	0.69
1:1G:1502:A:H2	1:1G:1505:G:N1	1.91	0.69
17:8A:57:VAL:HG12	17:8A:76:LEU:HA	1.75	0.69
27:14:533:G:H5'	44:85:24:TYR:CE1	2.28	0.69
45:95:35:LEU:HB2	45:95:37:VAL:HG13	1.73	0.69
22:1K:75:C:H2'	22:1K:76:A:C4	2.28	0.69
27:1H:2611:A:OP1	65:1H:3661:HOH:O	2.10	0.69
34:51:86:GLU:HG2	34:51:87:LEU:H	1.56	0.69
1:1G:1498:UR3:O5'	1:1G:1498:UR3:H6	1.91	0.69
27:14:1620:G:O4'	57:L5:1:MET:N	2.26	0.69
1:13:1263:C:N4	1:13:1272:G:O6	2.15	0.69
24:3K:56:C:H42	27:1H:2135:G:H22	1.38	0.69
27:1H:2444:U:OP2	65:1H:3660:HOH:O	2.09	0.69
1:1G:686:U:O2'	1:1G:687:A:O5'	2.09	0.69
1:1G:766:A:OP2	65:1G:1811:HOH:O	2.10	0.69
27:14:922:U:H2'	27:14:923:C:C6	2.28	0.69
1:13:160:A:H1'	1:13:344:A:C8	2.27	0.69
1:13:261:U:OP2	20:BI:79:ARG:NH2	2.24	0.69
1:13:1347:G:N7	9:8E:10:ARG:NH2	2.40	0.69
27:1H:2725:U:O2'	27:1H:2726:A:P	2.51	0.69
13:4A:68:GLY:HA2	13:4A:71:ARG:HB3	1.75	0.69
59:1L:1:G:N2	59:1L:72:C:O2	2.25	0.69
27:14:2250:G:OP1	40:45:85:LYS:NZ	2.17	0.69
28:1J:89:G:N2	28:1J:89(A):A:N1	2.33	0.69
32:39:123:LEU:HD12	32:39:124:LEU:H	1.57	0.69
1:13:1422:G:O3'	38:68:49:ARG:NH2	2.26	0.69
27:1H:840:G:H5''	27:1H:841:A:H5'	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1223:C:OP2	45:95:88:ARG:NH1	2.23	0.69
27:14:1681:G:N3	65:14:3573:HOH:O	2.26	0.69
1:13:1077:G:N2	1:13:1080:A:OP2	2.26	0.69
1:13:1147:C:H4'	9:8E:5:TYR:HE2	1.57	0.69
26:5K:22:G:H5''	26:5K:44:G:N2	2.08	0.69
27:1H:1314:U:O3'	65:1H:3666:HOH:O	2.11	0.69
1:1G:1224:G:OP1	65:1G:1812:HOH:O	2.10	0.69
27:14:873:G:N2	27:14:905:U:O2	2.26	0.69
38:25:24:VAL:HG12	38:25:33:ALA:HB2	1.74	0.69
45:95:2:PHE:H	45:95:42:GLY:HA3	1.57	0.69
45:95:5:VAL:HB	45:95:37:VAL:HG12	1.74	0.69
49:D5:99:TYR:HB3	49:D5:123:ASP:HB3	1.75	0.69
1:13:701:C:O2	1:13:703:G:N1	2.27	0.68
51:J8:23:LYS:HB3	51:J8:29:GLY:HA3	1.75	0.68
1:1G:1127:G:N2	1:1G:1148:U:H3	1.91	0.68
1:1G:1268:A:H2'	1:1G:1269:A:C8	2.29	0.68
3:22:152:ILE:HB	3:22:199:LYS:HB2	1.75	0.68
27:14:443:A:H3'	32:39:45:ARG:NH1	2.09	0.68
27:14:1754:C:P	43:75:96:ARG:HH12	2.16	0.68
27:14:2820:A:OP1	41:55:2:ARG:NH1	2.26	0.68
56:K5:25:LYS:HD2	58:M5:35:GLN:HB2	1.74	0.68
1:13:8:A:N6	4:3E:205:GLU:O	2.27	0.68
1:13:501:C:H2'	1:13:502:G:H8	1.57	0.68
1:13:1028:C:H42	1:13:1033:G:H1	1.40	0.68
1:13:1133:G:H2'	1:13:1134:G:C8	2.28	0.68
1:13:1358:U:OP2	1:13:1359:C:N4	2.26	0.68
27:1H:748:G:H2'	27:1H:749:G:H5''	1.75	0.68
27:1H:1815:A:N7	65:1H:3732:HOH:O	2.26	0.68
34:51:86:GLU:HG3	34:51:165:ALA:N	2.05	0.68
35:61:77:LEU:HD23	35:61:101:LEU:HD13	1.76	0.68
38:68:75:SER:HB2	43:B8:74:ARG:HH12	1.59	0.68
1:1G:1288:A:N3	1:1G:1352:C:O2'	2.24	0.68
2:12:92:TYR:CE1	2:12:151:GLY:HA3	2.28	0.68
4:32:176:LEU:HG	4:32:178:VAL:HG22	1.75	0.68
19:AA:16:LEU:O	19:AA:20:LEU:N	2.21	0.68
59:1L:11:C:H42	59:1L:25:C:H42	1.38	0.68
60:2L:5:G:H2'	60:2L:6:G:C8	2.28	0.68
31:21:9:VAL:HG13	31:21:25:VAL:O	1.92	0.68
39:78:107:LYS:HB3	39:78:110:TYR:HD2	1.57	0.68
44:C8:92:ARG:O	44:C8:94:ASN:N	2.26	0.68
1:1G:8:A:N6	4:32:205:GLU:O	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:54:THR:HG23	2:12:199:TYR:HB3	1.76	0.68
3:22:156:ARG:NH1	3:22:193:TYR:O	2.26	0.68
1:13:953:G:H5'	1:13:965:A:H61	1.58	0.68
20:BI:26:ASN:ND2	20:BI:26:ASN:H	1.89	0.68
27:1H:1238:G:OP2	65:1H:3658:HOH:O	2.09	0.68
27:1H:2046:G:H5'	27:1H:2630:C:H4'	1.75	0.68
37:58:7:LYS:H	37:58:7:LYS:HZ3	1.42	0.68
9:82:63:ILE:HD11	9:82:81:ILE:HD11	1.75	0.68
10:1A:79:ARG:H	10:1A:79:ARG:HD3	1.57	0.68
24:3L:7:A:O2'	24:3L:49:C:OP2	2.11	0.68
1:13:999:U:H2'	1:13:1000:A:C8	2.28	0.68
1:13:1498:UR3:H6	1:13:1498:UR3:O5'	1.94	0.68
22:1K:69:G:H3'	22:1K:70:G:H5''	1.73	0.68
27:1H:809:A:OP1	65:1H:3664:HOH:O	2.10	0.68
27:1H:880:G:OP1	65:1H:3663:HOH:O	2.10	0.68
27:1H:1664:C:OP1	65:1H:3665:HOH:O	2.11	0.68
35:61:60:GLU:HG3	35:61:61:ARG:HH22	1.58	0.68
46:E8:22:ASP:HA	46:E8:25:ARG:HH12	1.57	0.68
50:I8:4:LYS:HE3	50:I8:5:LYS:O	1.94	0.68
1:1G:503:C:OP2	12:3A:113:SER:HB3	1.93	0.68
11:2A:29:ILE:HB	11:2A:44:SER:HB3	1.74	0.68
27:14:1532:C:H42	27:14:1539:G:H1	1.40	0.68
27:14:1543:A:H1'	27:14:1545:A:O4'	1.92	0.68
49:D5:17:ALA:HA	49:D5:20:ARG:HB2	1.75	0.68
27:1H:470:A:H1'	27:1H:1247:C:O4'	1.93	0.68
34:51:64:LEU:O	34:51:68:THR:OG1	2.11	0.68
35:61:92:VAL:HG13	35:61:120:ILE:HG23	1.76	0.68
43:B8:91:ARG:HB2	43:B8:121:ILE:HG13	1.75	0.68
5:42:122:GLU:O	5:42:126:ARG:NH1	2.27	0.68
7:62:113:GLU:HB2	7:62:119:ARG:HG3	1.76	0.68
28:1J:66:A:O2'	28:1J:67:G:OP2	2.10	0.68
46:A5:73:ALA:HB3	46:A5:106:ILE:HG12	1.76	0.68
4:3E:187:ARG:NH2	4:3E:190:ASP:OD2	2.26	0.68
27:1H:1064:G:N7	65:1H:3735:HOH:O	2.27	0.68
41:98:52:ILE:O	41:98:55:ALA:N	2.27	0.68
1:1G:692:U:OP1	11:2A:124:LYS:NZ	2.22	0.68
10:1A:3:LYS:N	10:1A:74:ILE:O	2.26	0.68
27:14:74:A:H5''	27:14:75:G:O4'	1.93	0.68
27:14:220:G:O2'	27:14:233:A:N3	2.24	0.68
27:14:1166:C:H42	27:14:1183:G:H1	1.40	0.68
27:14:1800:C:OP2	30:19:183:ARG:NH2	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:38:LEU:HD12	7:6E:41:ARG:HD2	1.76	0.68
31:21:111:ARG:HG3	31:21:160:TYR:CD2	2.29	0.68
53:L8:38:GLU:HB3	53:L8:40:THR:HG23	1.75	0.68
12:3A:54:LYS:HE3	12:3A:64:THR:HB	1.76	0.68
27:14:2208:U:H4'	30:19:151:LYS:HG2	1.75	0.68
43:75:125:ARG:HA	43:75:128:GLU:HB3	1.76	0.68
1:13:567:G:N7	12:3I:12:ARG:NH2	2.40	0.68
2:1E:5:ILE:HG13	2:1E:221:LEU:HD23	1.76	0.68
27:1H:923:G:H4'	49:H8:170:THR:HG21	1.76	0.68
27:1H:1040:G:OP1	44:C8:50:ARG:NH2	2.26	0.68
27:14:414:C:O2	27:14:1864:U:O2'	2.11	0.68
27:14:1934:C:N3	27:14:1964:G:N1	2.39	0.68
27:14:2785:C:OP1	31:29:41:LYS:NZ	2.23	0.68
1:13:445:G:H1	1:13:489:C:H42	1.41	0.67
1:13:975:A:H5'	1:13:975:A:H8	1.56	0.67
54:M8:46:GLN:HE21	54:M8:48:ARG:HG2	1.60	0.67
1:1G:560:U:OP1	65:1G:1813:HOH:O	2.11	0.67
20:BA:33:ILE:HD12	20:BA:63:ILE:HG13	1.76	0.67
27:14:2528:U:H4'	27:14:2529:G:H21	1.59	0.67
20:BI:26:ASN:HD22	20:BI:26:ASN:N	1.91	0.67
27:1H:70:A:H2	47:F8:31:HIS:HE2	1.40	0.67
27:1H:1043:A:OP2	44:C8:92:ARG:NH2	2.27	0.67
36:38:32:LEU:HB2	36:38:33:PRO:HD3	1.77	0.67
1:1G:1187:G:H3'	1:1G:1188:A:H8	1.59	0.67
4:32:10:ARG:HB2	4:32:40:PRO:HG3	1.74	0.67
21:1B:6:ARG:NH2	21:1B:15:ARG:HE	1.92	0.67
27:14:1784:A:OP1	65:14:3539:HOH:O	2.12	0.67
27:14:2611:U:OP1	65:14:3537:HOH:O	2.11	0.67
38:25:71:ARG:NH2	38:25:122:LEU:O	2.27	0.67
40:45:38:GLU:OE2	40:45:128:LYS:N	2.15	0.67
1:13:501:C:H2'	1:13:502:G:C8	2.29	0.67
26:5K:33:U:H2'	26:5K:34:G:H3'	1.77	0.67
27:1H:1152:U:H2'	27:1H:1153:G:C8	2.30	0.67
27:1H:2414:U:H2'	27:1H:2415:C:C2	2.30	0.67
27:1H:2789:A:N7	65:1H:3730:HOH:O	2.26	0.67
49:H8:73:GLN:HB3	49:H8:87:ASP:HB2	1.76	0.67
1:1G:1218:C:OP2	14:5A:9:LYS:NZ	2.23	0.67
1:1G:1278:U:H5''	1:1G:1279:A:O4'	1.94	0.67
27:14:449:A:N7	65:14:3578:HOH:O	2.27	0.67
54:I5:65:ASP:HA	54:I5:70:GLY:HA3	1.75	0.67
1:13:1157:A:H62	1:13:1178:G:N2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:869:A:H2'	27:1H:992:G:H5''	1.76	0.67
27:1H:2228:G:H3'	27:1H:2229:G:N7	2.09	0.67
39:78:120:ALA:HB1	39:78:138:LEU:HB3	1.74	0.67
1:1G:668:G:HO2'	15:6A:46:HIS:HD1	1.40	0.67
59:1L:70:G:C5	59:1L:71:G:H1'	2.30	0.67
27:14:880:G:H22	27:14:897:C:H42	1.43	0.67
27:14:958:U:O2	28:1J:89(A):A:O2'	2.11	0.67
30:19:70:TRP:CH2	30:19:150:LYS:HA	2.30	0.67
45:95:1:MET:HG3	45:95:43:GLU:H	1.59	0.67
3:22:174:PRO:HB2	3:22:177:THR:HB	1.76	0.67
60:2L:73:A:O2'	50:E5:5:LYS:HD2	1.94	0.67
27:14:885:C:O2	27:14:889:C:N4	2.26	0.67
27:14:1019:U:H2'	27:14:1020:A:C8	2.30	0.67
30:19:71:ASP:N	30:19:71:ASP:OD1	2.26	0.67
27:1H:908:U:C5	27:1H:964:A:C2	2.82	0.67
34:51:58:GLU:HB2	34:51:61:HIS:H	1.60	0.67
1:1G:652:U:H1'	1:1G:653:A:C2	2.30	0.67
1:1G:652:U:H1'	1:1G:653:A:H2	1.60	0.67
1:1G:1259:C:N4	1:1G:1260:C:O2	2.28	0.67
4:32:64:LEU:HD22	4:32:198:VAL:HG11	1.76	0.67
4:32:119:GLN:HG3	4:32:123:HIS:HD2	1.59	0.67
60:2L:23:A:H2'	60:2L:24:G:H8	1.58	0.67
27:14:2461:C:H2'	27:14:2462:U:C6	2.30	0.67
33:49:83:ARG:HB2	33:49:86:MET:HB2	1.76	0.67
1:13:62:U:O2'	1:13:379:C:O2	2.12	0.67
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.76	0.67
4:3E:108:LEU:HB3	4:3E:110:PHE:CE1	2.29	0.67
27:1H:85:C:O2'	27:1H:102:U:O2'	1.99	0.67
27:1H:579:U:O2'	27:1H:580:G:H8	1.77	0.67
31:21:128:SER:OG	31:21:129:HIS:N	2.26	0.67
32:31:33:LEU:HD13	32:31:112:MET:HE2	1.77	0.67
4:32:13:ARG:NH1	4:32:38:TYR:O	2.27	0.67
1:13:581:G:N7	65:13:1833:HOH:O	2.28	0.67
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.12	0.67
24:3K:18:G:O2'	24:3K:60:U:N3	2.23	0.67
27:1H:304:C:H42	27:1H:386:G:H1	1.43	0.67
39:78:71:VAL:O	39:78:73:GLY:N	2.28	0.67
51:J8:90:ILE:HD13	51:J8:94:LEU:HD13	1.76	0.67
1:1G:734:G:H21	18:9A:75:ILE:HD11	1.58	0.67
1:1G:1200:C:H4'	1:1G:1201:A:H5'	1.76	0.67
27:14:747:U:O2	27:14:2014:A:H1'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1342:A:H2	27:14:1602:U:N3	1.92	0.67
27:14:1997:G:OP2	65:14:3538:HOH:O	2.12	0.67
1:13:1316:G:H22	1:13:1319:A:H5''	1.60	0.67
8:7E:9:MET:HG3	8:7E:26:VAL:HG11	1.74	0.67
27:1H:2284:G:N7	65:1H:3736:HOH:O	2.27	0.67
30:11:71:ASP:OD1	30:11:103:ARG:NH2	2.28	0.67
27:14:1728:G:N1	27:14:1730:U:OP2	2.28	0.67
32:39:136:THR:O	32:39:140:LEU:HB2	1.95	0.67
45:95:71:LEU:N	45:95:86:GLY:HA3	2.10	0.67
1:13:601:C:H2'	1:13:602:A:C8	2.30	0.67
1:13:601:C:H2'	1:13:602:A:H8	1.59	0.67
4:3E:138:TYR:OH	4:3E:141:ARG:NH2	2.28	0.67
35:61:86:THR:H	35:61:123:LEU:HD12	1.60	0.67
1:1G:660:G:N2	1:1G:745:C:N3	2.40	0.67
1:1G:983:A:N1	1:1G:1222:G:N2	2.43	0.67
3:22:58:GLU:HB3	3:22:65:ALA:HB3	1.77	0.67
10:1A:44:VAL:HG22	10:1A:66:ARG:HG2	1.77	0.67
27:14:1530:G:O6	27:14:1542:G:N2	2.28	0.67
27:14:2744:G:N2	34:59:143:GLN:OE1	2.28	0.67
30:19:146:GLU:HB2	30:19:189:CYS:HB3	1.77	0.67
19:AI:19:VAL:HG11	19:AI:44:MET:HB3	1.75	0.66
27:1H:60:G:H1'	52:K8:47:ASN:HB2	1.77	0.66
27:1H:778:C:H3'	65:1H:3646:HOH:O	1.93	0.66
32:31:103:LYS:O	32:31:106:ARG:HG2	1.94	0.66
8:72:64:LYS:HD2	8:72:79:VAL:HG11	1.77	0.66
1:13:102:G:O6	65:13:1818:HOH:O	2.11	0.66
1:13:156:G:H1	1:13:165:C:H42	1.43	0.66
43:B8:24:PRO:HA	43:B8:49:VAL:HG13	1.77	0.66
27:14:751:A:H5'	46:A5:90:ARG:HG2	1.76	0.66
27:14:2243:U:OP1	65:14:3520:HOH:O	2.11	0.66
28:1J:58:A:H3'	28:1J:59:A:H8	1.60	0.66
27:1H:1701:G:C6	41:98:9:LYS:HG3	2.30	0.66
34:51:98:LEU:HD22	34:51:125:VAL:HB	1.77	0.66
32:39:127:GLU:O	32:39:129:PHE:N	2.29	0.66
1:13:1073:U:H3	1:13:1102:A:H61	1.42	0.66
1:13:1321:C:H5''	1:13:1322:C:H5''	1.77	0.66
15:6I:4:THR:OG1	15:6I:7:GLU:HG3	1.95	0.66
27:1H:330:U:O4	65:1H:3667:HOH:O	2.11	0.66
27:1H:2321:G:N2	27:1H:2324:A:H2	1.93	0.66
31:21:68:ALA:O	31:21:71:GLY:N	2.26	0.66
34:51:87:LEU:HA	34:51:163:TYR:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1279:A:O2'	1:1G:1281:U:OP2	2.12	0.66
1:1G:1322:C:HO2'	1:1G:1323:G:P	2.18	0.66
27:14:1992:G:N7	65:14:3583:HOH:O	2.28	0.66
32:39:66:PRO:O	32:39:67:GLN:HB3	1.94	0.66
47:B5:9:LEU:HA	52:G5:36:ARG:HH21	1.59	0.66
55:J5:41:PRO:O	55:J5:44:THR:OG1	2.14	0.66
13:4I:5:ALA:HB2	13:4I:61:GLU:HG2	1.78	0.66
27:1H:347:A:P	32:31:168:ARG:HH21	2.17	0.66
27:1H:802:C:H2'	27:1H:803:C:H6	1.59	0.66
27:1H:1250:A:H2	27:1H:1288:A:N1	1.93	0.66
1:1G:652:U:O2'	1:1G:653:A:O5'	2.13	0.66
31:29:2:LYS:NZ	31:29:95:ILE:O	2.29	0.66
33:49:38:VAL:HG22	33:49:93:THR:HA	1.78	0.66
27:1H:2645:A:HO2'	27:1H:2822:G:HO2'	1.40	0.66
40:88:90:VAL:HG13	40:88:91:GLU:H	1.59	0.66
3:22:166:GLU:HG3	3:22:167:TRP:H	1.60	0.66
27:14:1024:G:H5''	27:14:1025:G:H5''	1.78	0.66
32:39:181:LEU:HD22	32:39:186:ILE:HD11	1.77	0.66
49:D5:97:GLU:HB3	49:D5:125:LEU:HD11	1.77	0.66
53:H5:39:ASP:OD1	53:H5:44:ARG:NE	2.29	0.66
1:13:1132:C:H2'	1:13:1133:G:C8	2.30	0.66
12:3I:21:VAL:HG22	12:3I:24:LEU:HD23	1.77	0.66
27:1H:1339:U:H2'	27:1H:1340:C:C6	2.31	0.66
33:41:22:ARG:HH22	33:41:175:LEU:HD21	1.60	0.66
42:A8:26:LEU:HD13	42:A8:87:PHE:HD1	1.58	0.66
1:1G:375:U:O2	16:7A:28:ARG:NH1	2.28	0.66
27:14:1151:G:H5''	44:85:81:HIS:NE2	2.11	0.66
27:14:1329:U:H5''	27:14:1330:C:H5	1.60	0.66
1:13:342:C:H2'	1:13:343:U:O4'	1.96	0.66
2:1E:53:ARG:NH2	2:1E:198:ASP:O	2.27	0.66
26:5K:16:H2U:H4'	26:5K:17:C:OP2	1.94	0.66
27:1H:52:A:OP2	65:1H:3668:HOH:O	2.13	0.66
27:1H:1200:C:OP1	44:C8:76:TYR:OH	2.12	0.66
1:1G:1251:A:H2'	1:1G:1252:A:C8	2.30	0.66
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.61	0.66
27:14:34:C:O2'	27:14:35:G:O5'	2.13	0.66
27:14:1786:A:H2	27:14:2606:C:H1'	1.61	0.66
30:19:182:LEU:H	30:19:272:ALA:HB3	1.60	0.66
42:65:18:ILE:O	42:65:21:THR:OG1	2.14	0.66
47:B5:18:TYR:HA	47:B5:21:PHE:CD1	2.30	0.66
34:51:106:THR:HG22	34:51:112:PRO:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1857:G:N7	65:14:3585:HOH:O	2.29	0.66
27:14:2454:G:N7	65:14:3577:HOH:O	2.27	0.66
29:79:39:GLU:HB2	29:79:178:ALA:HB3	1.77	0.66
31:29:9:VAL:HA	43:75:3:ARG:HD3	1.78	0.66
56:K5:31:PRO:HG2	56:K5:33:LYS:HB2	1.77	0.66
58:M5:29:LYS:HG3	58:M5:29:LYS:O	1.95	0.66
3:2E:73:PRO:HA	3:2E:76:VAL:HG13	1.78	0.66
27:1H:1463:G:HO2'	27:1H:1464:C:H6	1.44	0.66
51:J8:80:LEU:O	51:J8:81:LYS:NZ	2.22	0.66
10:1A:23:ILE:HG23	10:1A:85:LEU:HD13	1.78	0.66
27:14:141:A:C8	27:14:1408:C:H1'	2.31	0.66
27:14:2109:U:O2	27:14:2181:G:N2	2.29	0.66
27:14:2391:G:O6	27:14:2425:A:H8	1.79	0.66
43:75:136:GLN:HG3	43:75:137:LYS:HD2	1.78	0.66
46:A5:82:LEU:HD22	46:A5:84:ARG:HH22	1.59	0.66
1:13:1435:G:H2'	1:13:1436:U:C6	2.32	0.65
13:4I:107:ALA:HB3	13:4I:111:LYS:HD3	1.78	0.65
23:2K:9:A:O2'	23:2K:10:G:N7	2.28	0.65
27:1H:787:G:OP1	65:1H:3669:HOH:O	2.13	0.65
27:1H:2460:G:OP2	65:1H:3672:HOH:O	2.14	0.65
39:78:56:SER:O	39:78:57:THR:HB	1.96	0.65
40:88:31:ASP:N	40:88:107:ALA:HB2	2.10	0.65
3:22:8:ILE:O	3:22:11:ARG:N	2.24	0.65
8:72:29:SER:HB3	8:72:32:LYS:HG3	1.78	0.65
25:4L:33:G:H2'	25:4L:34:G:C8	2.31	0.65
27:14:1428:C:N4	27:14:1570:A:OP2	2.29	0.65
27:14:1728:G:H8	27:14:1732:A:H62	1.44	0.65
30:19:79:VAL:HG12	30:19:113:VAL:HA	1.78	0.65
50:E5:49:LYS:HB2	50:E5:80:HIS:HB3	1.78	0.65
27:1H:2451:U:O3'	27:1H:2452:A:H3'	1.96	0.65
1:1G:1307:U:OP1	13:4A:101:GLN:NE2	2.29	0.65
10:1A:5:ARG:N	10:1A:99:LYS:O	2.24	0.65
11:2A:27:ASN:OD1	11:2A:28:THR:N	2.29	0.65
19:AA:31:ILE:HG23	19:AA:49:ILE:HG23	1.78	0.65
27:14:674:G:H1'	32:39:74:ARG:HD3	1.78	0.65
27:14:1317:A:H2'	27:14:1318:C:H6	1.60	0.65
32:39:197:ASP:HA	32:39:200:GLU:HB2	1.78	0.65
42:65:20:ARG:NE	42:65:20:ARG:O	2.29	0.65
49:D5:121:HIS:ND1	49:D5:123:ASP:O	2.28	0.65
1:13:588:G:OP2	65:13:1819:HOH:O	2.15	0.65
1:13:826:C:H2'	1:13:827:U:O2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1912:A:H2'	27:1H:1913:A:C8	2.32	0.65
1:1G:323:U:H5'	20:BA:23:ARG:HB2	1.76	0.65
1:1G:1292:U:H2'	1:1G:1293:G:C8	2.32	0.65
2:12:137:ARG:HH12	2:12:141:GLU:N	1.94	0.65
32:39:116:ASP:OD1	32:39:119:ARG:NH2	2.25	0.65
39:35:13:ASN:C	39:35:15:ARG:H	1.99	0.65
1:13:490:G:OP2	4:3E:132:ARG:NH2	2.29	0.65
27:1H:400:G:O2'	27:1H:401:U:P	2.54	0.65
27:1H:1960:A:O2'	27:1H:1962:5MU:OP2	2.12	0.65
27:1H:2179:G:H2'	27:1H:2180:G:C4	2.31	0.65
27:1H:2695:U:H5'	27:1H:2695:U:H6	1.62	0.65
1:1G:513:C:H42	1:1G:538:G:H1	1.44	0.65
1:1G:1238:A:H62	1:1G:1301:U:H3	1.42	0.65
31:29:5:LEU:HD21	31:29:81:ILE:HD11	1.76	0.65
39:35:61:ARG:CB	39:35:61:ARG:HH11	2.09	0.65
39:35:80:TYR:CD1	39:35:111:ARG:HB3	2.32	0.65
51:F5:82:LEU:HD12	51:F5:83:GLU:HB3	1.78	0.65
1:13:1279:A:O2'	1:13:1281:U:OP2	2.15	0.65
11:2I:34:ASP:OD1	11:2I:38:ASN:N	2.30	0.65
27:1H:795:U:O2	27:1H:2037:A:H1'	1.97	0.65
8:72:21:LYS:O	8:72:65:TYR:OH	2.06	0.65
11:2A:13:GLN:HG3	11:2A:76:GLY:HA3	1.78	0.65
20:BA:23:ARG:HH21	20:BA:27:LYS:HZ1	1.44	0.65
27:14:307:G:H21	27:14:330:A:N6	1.94	0.65
27:14:1931:U:H5''	27:14:1932:A:OP2	1.96	0.65
27:14:2120:G:H2'	27:14:2121:G:H8	1.60	0.65
39:35:125:VAL:HG13	39:35:144:GLU:HB3	1.77	0.65
47:B5:23:GLU:HG3	47:B5:24:GLY:H	1.60	0.65
1:13:108:G:OP2	1:13:326:G:N1	2.23	0.65
1:13:1503:A:H5'	1:13:1531:A:H1'	1.78	0.65
26:5K:54:5MU:HN3	26:5K:58:A:H62	1.42	0.65
27:1H:456:A:OP1	65:1H:3674:HOH:O	2.15	0.65
27:1H:1158:A:O2'	27:1H:1159:G:H4'	1.97	0.65
7:62:44:TYR:HA	7:62:47:CYS:HB3	1.79	0.65
10:1A:4:ILE:HB	10:1A:74:ILE:HG12	1.79	0.65
1:13:1048:G:H5''	14:5I:3:ARG:HB3	1.78	0.65
8:7E:64:LYS:HG2	8:7E:79:VAL:HG21	1.78	0.65
27:1H:626:G:O2'	27:1H:703:A:N6	2.30	0.65
27:1H:2201:C:O2'	29:7I:168:THR:O	2.14	0.65
31:21:116:VAL:HG13	31:21:122:PHE:HB2	1.79	0.65
1:1G:134:A:H61	16:7A:25:ARG:NH1	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:403:C:O2'	4:32:122:ARG:NH2	2.24	0.65
1:1G:986:A:N3	19:AA:52:TYR:OH	2.30	0.65
27:14:1022:G:N2	27:14:1142(A):A:H2	1.94	0.65
31:29:97:LYS:N	31:29:100:GLU:OE2	2.26	0.65
38:25:47:ILE:HG13	38:25:48:PRO:HD2	1.78	0.65
43:75:62:THR:HB	43:75:75:ILE:HG12	1.78	0.65
58:M5:39:LYS:O	58:M5:43:GLN:N	2.29	0.65
1:13:1125:U:O2'	1:13:1126:U:H5''	1.97	0.65
1:13:1379:G:H4'	7:6E:156:TRP:HH2	1.61	0.65
27:1H:994:G:OP1	65:1H:3670:HOH:O	2.14	0.65
32:31:63:LYS:HE3	32:31:67:GLN:HB2	1.77	0.65
32:31:127:GLU:O	32:31:129:PHE:N	2.29	0.65
32:31:178:PRO:HB3	32:31:198:ALA:HB1	1.79	0.65
40:88:135:ASP:N	40:88:135:ASP:OD1	2.30	0.65
43:B8:16:ARG:NH1	43:B8:80:SER:O	2.27	0.65
1:1G:56:U:H2'	1:1G:57:G:C8	2.32	0.65
1:1G:1399:C:O2	65:1G:1814:HOH:O	2.12	0.65
40:45:34:LEU:HB2	40:45:118:LEU:HD22	1.79	0.65
40:45:90:VAL:HG13	40:45:91:GLU:H	1.62	0.65
1:13:114:U:H2'	1:13:115:G:C8	2.31	0.65
5:4E:126:ARG:HG3	5:4E:126:ARG:HH11	1.60	0.65
27:1H:2595:G:OP2	65:1H:3675:HOH:O	2.15	0.65
47:F8:15:GLU:OE1	47:F8:15:GLU:N	2.30	0.65
8:72:124:ALA:O	8:72:128:GLY:N	2.29	0.65
27:14:531:C:OP1	27:14:561:G:N2	2.30	0.65
27:14:1795:C:O2	30:19:255:LYS:HE3	1.97	0.65
1:13:434:U:H2'	1:13:435:C:H6	1.62	0.65
1:13:624:C:H2'	1:13:625:G:H8	1.62	0.65
1:13:878:G:H5'	8:7E:89:PRO:HG2	1.78	0.65
27:1H:918:A:OP1	40:88:6:ARG:HD3	1.97	0.65
27:1H:1533:A:H2'	27:1H:1534:G:H8	1.62	0.65
36:38:23:SER:OG	36:38:114:GLY:O	2.15	0.65
40:88:21[B]:THR:HB	40:88:98:LYS:HB2	1.79	0.65
1:1G:153:C:H2'	1:1G:154:C:H6	1.62	0.65
1:1G:346:G:OP1	43:75:41:ARG:NH2	2.28	0.65
28:1J:44:G:H1'	28:1J:47:C:H42	1.61	0.65
43:75:111:ARG:C	43:75:113:LYS:H	2.00	0.65
45:95:69:LYS:HB3	45:95:88:ARG:HG3	1.79	0.65
1:13:1126:U:H5'	1:13:1127:G:C8	2.32	0.64
21:1F:10:ARG:HA	21:1F:13:ILE:HD12	1.79	0.64
27:1H:724:A:H8	27:1H:2092:G:N2	1.93	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2668:G:O2'	27:1H:2669:U:OP2	2.15	0.64
37:58:42:TRP:O	44:C8:64:ARG:NH2	2.25	0.64
1:1G:1033:G:H2'	1:1G:1034:G:H8	1.63	0.64
9:82:19:LEU:HA	9:82:61:ALA:HA	1.78	0.64
27:14:322:A:H3'	32:39:169:ASN:HD21	1.62	0.64
48:C5:28:LYS:NZ	48:C5:64:GLU:OE2	2.21	0.64
27:1H:778:C:OP2	65:1H:3646:HOH:O	2.14	0.64
27:1H:1684:C:P	65:1H:3641:HOH:O	2.54	0.64
1:1G:407:G:H1	1:1G:435:C:H42	1.45	0.64
1:1G:661:G:H1	1:1G:744:C:H42	1.43	0.64
16:7A:70:ALA:O	16:7A:74:LEU:HD12	1.97	0.64
27:14:1100:C:H2'	27:14:1101:U:C6	2.32	0.64
27:14:2315:G:OP1	33:49:36:LYS:NZ	2.27	0.64
38:25:11:ALA:HB3	38:25:85:VAL:HG23	1.78	0.64
47:B5:6:ASP:OD1	47:B5:6:ASP:N	2.27	0.64
52:G5:2:LYS:O	52:G5:5:GLU:N	2.29	0.64
27:1H:631:U:N3	27:1H:647:A:H2	1.92	0.64
27:1H:1427:G:OP2	65:1H:3678:HOH:O	2.15	0.64
52:K8:44:LEU:HD23	52:K8:47:ASN:HA	1.80	0.64
1:1G:110:C:O2'	16:7A:25:ARG:O	2.14	0.64
2:12:178:ARG:NH1	2:12:196:LEU:O	2.23	0.64
5:42:142:LEU:O	5:42:143:ARG:NH1	2.30	0.64
59:1L:34:G:H2'	59:1L:35:A:C8	2.33	0.64
24:3L:30:G:H1	24:3L:40:C:H42	1.44	0.64
27:14:107:C:H2'	27:14:108:U:H6	1.63	0.64
27:14:479:A:N3	27:14:481:G:H5''	2.12	0.64
27:14:589:C:H2'	27:14:590:A:C8	2.32	0.64
29:79:22:ILE:HG21	29:79:190:ARG:HG2	1.78	0.64
30:19:72:LYS:NZ	30:19:101:GLU:OE1	2.28	0.64
39:35:14:LYS:O	39:35:16:ARG:N	2.31	0.64
1:13:148:G:H2'	1:13:149:A:H8	1.61	0.64
7:6E:108:ALA:O	7:6E:111:ARG:HG3	1.97	0.64
24:3K:56:C:N4	27:1H:2135:G:H22	1.95	0.64
27:1H:1886:A:H62	27:1H:1911:G:H8	1.45	0.64
27:1H:2452:A:H5'	27:1H:2452:A:C8	2.32	0.64
44:C8:92:ARG:HH11	44:C8:95:LEU:HD11	1.60	0.64
1:1G:1342:C:H1'	9:82:124:GLN:NE2	2.12	0.64
10:1A:22:LYS:HE2	10:1A:90:LEU:HD13	1.79	0.64
13:4A:65:LYS:HD3	54:I5:50:VAL:HG11	1.78	0.64
60:2L:54:5MU:H6	60:2L:54:5MU:H5'	1.62	0.64
35:69:76:THR:HA	35:69:139:GLN:HB2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:F5:87:PRO:HA	51:F5:90:ILE:HG23	1.78	0.64
56:K5:16:CYS:O	56:K5:44:ARG:NH2	2.30	0.64
1:13:1228:C:OP1	13:4I:108:ARG:NH2	2.25	0.64
3:2E:116:VAL:HG21	3:2E:202:ILE:HD11	1.78	0.64
8:7E:97:VAL:HA	8:7E:100:ILE:HG13	1.79	0.64
27:1H:1255:G:H21	27:1H:1256:A:H62	1.44	0.64
29:71:201:PRO:HD2	29:71:208:PHE:HZ	1.61	0.64
1:1G:1200:C:OP1	65:1G:1817:HOH:O	2.15	0.64
27:14:71:A:H4'	27:14:72:U:H5''	1.80	0.64
27:14:1168:G:O6	27:14:1181:C:N4	2.20	0.64
32:39:183:VAL:O	32:39:187:VAL:HG23	1.98	0.64
34:59:157:TYR:HA	34:59:171:LEU:HG	1.79	0.64
16:7I:49:LEU:HD22	16:7I:73:LEU:HD22	1.80	0.64
27:1H:989:U:P	65:1H:3659:HOH:O	2.56	0.64
27:1H:1785:G:O6	65:1H:3671:HOH:O	2.14	0.64
40:88:12:GLN:HG2	40:88:73:PRO:HD2	1.80	0.64
1:1G:200:G:H1	1:1G:217:C:N4	1.95	0.64
1:1G:809:G:OP2	15:6A:48:LYS:NZ	2.27	0.64
27:14:2589:A:OP1	65:14:3540:HOH:O	2.15	0.64
27:14:2791:C:H2'	27:14:2792:G:H8	1.63	0.64
1:13:1391:U:H2'	1:13:1392:G:C8	2.32	0.64
1:13:1499:A:H1'	1:13:1520:G:H5'	1.79	0.64
8:7E:42:GLU:HG3	8:7E:109:ILE:HD12	1.78	0.64
27:1H:182:C:OP1	65:1H:3673:HOH:O	2.15	0.64
27:1H:2148:G:N2	27:1H:2195:U:OP1	2.31	0.64
52:K8:14:ARG:NH1	52:K8:66:GLU:OE1	2.31	0.64
10:1A:34:VAL:HG13	10:1A:74:ILE:HA	1.78	0.64
24:3L:40:C:H2'	24:3L:41:C:H6	1.62	0.64
27:14:795:C:H2'	27:14:796:C:H6	1.62	0.64
1:13:328:C:H4'	1:13:329:A:H5'	1.79	0.64
1:13:690:G:H2'	1:13:691:G:O4'	1.97	0.64
32:31:117:ARG:NH2	32:31:189:THR:O	2.31	0.64
32:31:178:PRO:HG2	32:31:179:GLU:OE2	1.97	0.64
1:13:1323:G:H2'	1:13:1324:A:C8	2.32	0.64
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.78	0.64
11:2I:16:SER:OG	11:2I:79:SER:OG	2.16	0.64
16:7I:53:VAL:HG12	16:7I:79:VAL:HG22	1.79	0.64
28:16:116:G:H4'	42:A8:54:LEU:HD12	1.79	0.64
45:D8:15:GLU:HG3	45:D8:16:PRO:HD2	1.80	0.64
56:O8:20:ASN:HB2	56:O8:42:TRP:HZ3	1.62	0.64
10:1A:35:SER:OG	10:1A:73:ASP:O	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:995:C:O2	37:15:3:THR:OG1	2.14	0.64
27:14:2130:U:O2'	27:14:2133:G:O2'	2.15	0.64
27:14:2773:C:OP1	31:29:166:THR:OG1	2.14	0.64
1:13:164:U:H2'	1:13:165:C:C6	2.33	0.64
24:3K:4:C:H2'	24:3K:5:G:O4'	1.97	0.64
27:1H:2288:C:H6	27:1H:2288:C:H5'	1.61	0.64
40:88:22[B]:LYS:HB3	49:H8:78:LYS:HD2	1.78	0.64
44:C8:95:LEU:HD22	45:D8:4:ILE:HD12	1.80	0.64
1:1G:1392:G:H21	1:1G:1502:A:H8	1.46	0.64
3:22:88:ARG:HA	3:22:91:LEU:HD12	1.79	0.64
42:65:61:ASN:HB3	42:65:64:GLU:HB2	1.79	0.64
1:13:1127:G:C8	1:13:1280:A:C5	2.86	0.63
24:3K:28:G:H2'	24:3K:29:G:H8	1.63	0.63
27:1H:1312:A:OP2	65:1H:3677:HOH:O	2.15	0.63
27:1H:2654:G:OP1	37:58:74:ARG:NE	2.20	0.63
41:98:33:ARG:HB2	41:98:115:GLU:HB3	1.80	0.63
27:14:698:C:O2'	27:14:734:A:N6	2.31	0.63
27:14:1360:A:H5''	27:14:1360:A:H8	1.62	0.63
39:35:87:ASP:OD1	39:35:87:ASP:N	2.28	0.63
9:8E:8:GLY:HA2	9:8E:79:LEU:HD12	1.80	0.63
28:16:90:C:H5'	40:88:18:LYS:HA	1.81	0.63
39:78:56:SER:OG	39:78:61:ARG:HD2	1.98	0.63
1:1G:701:C:H1'	1:1G:703:G:C6	2.34	0.63
2:12:27:LYS:HB2	2:12:193:ASP:HB2	1.80	0.63
27:14:1616:A:O2'	65:14:3536:HOH:O	2.10	0.63
27:14:2396:G:H1'	51:F5:30:VAL:HG12	1.79	0.63
30:19:228:PRO:O	65:19:402:HOH:O	2.14	0.63
42:65:70:GLY:HA3	42:65:104:GLY:HA3	1.80	0.63
53:H5:10:LYS:HB3	53:H5:53:LEU:HB3	1.79	0.63
55:J5:33:CYS:SG	55:J5:36:CYS:N	2.72	0.63
1:13:28:G:O2'	1:13:296:U:OP1	2.15	0.63
3:2E:189:ALA:HB3	3:2E:196:LEU:HB3	1.79	0.63
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.80	0.63
27:1H:1108:U:H4'	27:1H:1117:A:H1'	1.80	0.63
27:1H:1389:A:OP2	65:1H:3629:HOH:O	2.15	0.63
27:1H:2719:G:O6	65:1H:3681:HOH:O	2.16	0.63
1:1G:1348:U:N3	1:1G:1374:A:H2	1.97	0.63
59:1L:29:G:H1	59:1L:41:C:N4	1.95	0.63
39:35:52:GLU:O	39:35:54:GLY:N	2.28	0.63
32:31:129:PHE:O	32:31:131:GLY:N	2.31	0.63
35:61:132:PRO:O	35:61:133:HIS:ND1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G8:91:GLU:HG3	48:G8:92:ASN:HB3	1.80	0.63
56:O8:34:LEU:HD23	56:O8:36:LEU:HD22	1.80	0.63
6:52:82:ARG:HB2	6:52:85:VAL:HG23	1.81	0.63
9:82:18:PHE:O	9:82:62:TYR:N	2.29	0.63
10:1A:50:ILE:HG22	10:1A:52:GLY:H	1.63	0.63
38:25:75:SER:HB2	43:75:74:ARG:HH12	1.64	0.63
1:13:352:C:O2'	1:13:354:G:OP1	2.15	0.63
1:13:1070:U:H2'	1:13:1071:C:H6	1.63	0.63
27:1H:709:C:H4'	39:78:13:ASN:ND2	2.14	0.63
27:1H:1726:G:N2	27:1H:2012:G:H22	1.97	0.63
38:68:64:ARG:NH1	38:68:81:ASP:OD1	2.32	0.63
42:A8:76:LYS:O	42:A8:80:LEU:HD23	1.98	0.63
27:14:2557:G:H2'	27:14:2558:C:C6	2.33	0.63
30:19:144:ALA:HB3	30:19:192:THR:HG23	1.80	0.63
33:49:112:PRO:HG2	54:I5:37:SER:HB3	1.80	0.63
1:13:32:A:H2'	1:13:33:A:C8	2.34	0.63
1:13:380:G:N2	1:13:383:A:OP2	2.32	0.63
1:13:1380:U:O2	7:6E:3:ARG:NH1	2.32	0.63
4:3E:95:GLY:HA3	4:3E:188:LEU:HD11	1.80	0.63
14:5I:21:TYR:HE1	14:5I:23:ARG:HE	1.46	0.63
27:1H:495:G:N7	57:P8:39:ARG:NH2	2.40	0.63
27:1H:1687:U:OP1	65:1H:3680:HOH:O	2.15	0.63
27:1H:1716:A:N6	27:1H:1724:A:H61	1.96	0.63
27:1H:2457:G:OP2	32:31:68:LYS:NZ	2.30	0.63
1:1G:682:G:O6	65:1G:1815:HOH:O	2.12	0.63
27:14:2210:G:H3'	27:14:2211:G:C4	2.34	0.63
35:69:27:ARG:HD2	51:F5:71:TYR:CE1	2.33	0.63
35:69:78:THR:C	35:69:80:PRO:HD3	2.19	0.63
49:D5:69:THR:HA	49:D5:89:PHE:O	1.99	0.63
1:13:105:G:H2'	1:13:106:C:C6	2.34	0.63
27:1H:70:A:H2	47:F8:31:HIS:NE2	1.97	0.63
27:1H:2139:G:OP2	27:1H:2188:G:N2	2.31	0.63
47:F8:44:GLU:HB2	47:F8:49:VAL:O	1.98	0.63
1:1G:191(F):U:H2'	1:1G:191:G:H8	1.64	0.63
1:1G:1095:U:OP1	1:1G:1108:G:N2	2.30	0.63
4:32:12:CYS:SG	4:32:19:LEU:HB2	2.39	0.63
12:3A:59:SER:HB2	12:3A:61:TYR:HD1	1.62	0.63
33:49:19:LEU:HA	33:49:22:ARG:HB2	1.80	0.63
35:69:20:ASP:N	35:69:20:ASP:OD1	2.32	0.63
1:13:792:A:H4'	1:13:793:U:O5'	1.98	0.63
1:13:1118:C:H1'	1:13:1179:A:C4	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1220:A:N7	27:1H:1222:G:O2'	2.31	0.63
27:1H:1543:A:H8	27:1H:1625:C:O2'	1.82	0.63
27:1H:2157:A:H2'	27:1H:2158:A:C8	2.33	0.63
42:A8:88:ASP:OD1	42:A8:90:GLY:N	2.32	0.63
43:B8:105:LEU:O	43:B8:107:ASP:N	2.32	0.63
54:M8:64:GLY:HA2	54:M8:69:LYS:HB3	1.80	0.63
1:1G:1310:G:H1	1:1G:1327:C:H42	1.45	0.63
1:1G:1333:A:H2'	1:1G:1334:G:O4'	1.99	0.63
12:3A:67:ILE:HD12	12:3A:74:LEU:HD12	1.80	0.63
19:AA:48:THR:HB	19:AA:61:TYR:HA	1.79	0.63
27:14:639:U:H2'	27:14:640:C:C6	2.33	0.63
27:14:2380:C:OP1	42:65:20:ARG:NH1	2.32	0.63
27:14:2691:C:H2'	27:14:2692:C:H6	1.63	0.63
30:19:68:LYS:HD2	30:19:70:TRP:CZ2	2.34	0.63
25:4K:39:U:H2'	25:4K:40:U:H6	1.62	0.63
27:1H:777:G:OP2	30:11:13:ARG:NH1	2.32	0.63
35:61:61:ARG:NH2	35:61:64:GLU:OE2	2.32	0.63
44:C8:92:ARG:C	44:C8:94:ASN:H	2.01	0.63
1:1G:1187:G:O2'	9:82:111:ARG:NH1	2.32	0.63
1:1G:1326:C:H2'	1:1G:1327:C:C6	2.34	0.63
3:22:44:GLU:HA	3:22:52:LEU:HD11	1.81	0.63
18:9A:70:ILE:HG23	18:9A:79:LEU:HD13	1.80	0.63
20:BA:50:GLU:HA	20:BA:100:ILE:HG12	1.80	0.63
28:1J:83:G:H5''	53:H5:52:HIS:CE1	2.33	0.63
40:45:26:TYR:O	40:45:67:ARG:NH1	2.31	0.63
42:65:76:LYS:HG3	42:65:77:ALA:H	1.64	0.63
1:13:951:G:OP2	13:4I:102:ARG:NH2	2.32	0.62
8:7E:25:ASP:HA	8:7E:59:LEU:O	1.99	0.62
24:3K:1:G:H1	24:3K:72:C:H42	1.46	0.62
42:A8:59:LYS:HG2	42:A8:60:GLY:H	1.64	0.62
1:1G:1004:A:O2'	1:1G:1036:G:N2	2.32	0.62
9:82:44:VAL:O	9:82:51:ARG:NH2	2.23	0.62
10:1A:58:ASP:N	10:1A:58:ASP:OD1	2.31	0.62
15:6A:82:ILE:HD11	15:6A:88:ARG:HB2	1.80	0.62
27:14:1210:A:H5''	27:14:1211:U:H3'	1.80	0.62
1:13:837:G:H1	1:13:849:C:H42	1.44	0.62
11:2I:41:THR:HG21	11:2I:71:LYS:HB2	1.80	0.62
24:3K:11:C:N4	24:3K:24:G:H1	1.96	0.62
1:1G:920:U:H2'	1:1G:921:U:C6	2.34	0.62
1:1G:953:G:H5'	1:1G:965:A:H61	1.64	0.62
19:AA:16:LEU:HA	19:AA:19:VAL:HB	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:49:67:LYS:HG3	54:I5:6:HIS:HB3	1.81	0.62
1:13:838:G:H1	1:13:848:C:H42	1.45	0.62
2:1E:92:TYR:CZ	2:1E:151:GLY:HA3	2.34	0.62
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.65	0.62
13:4I:10:PRO:HB3	13:4I:18:ALA:HB1	1.81	0.62
14:5I:3:ARG:HD3	14:5I:6:LEU:HD12	1.81	0.62
27:1H:70:A:H5'	27:1H:72:A:C8	2.35	0.62
27:1H:469:G:C4'	32:31:46:ARG:HG3	2.30	0.62
45:D8:37:VAL:HG13	45:D8:52:VAL:HG13	1.82	0.62
47:F8:27:THR:HB	47:F8:80:ILE:HB	1.81	0.62
54:M8:10:VAL:HG22	54:M8:11:PRO:HD2	1.80	0.62
54:M8:23:GLU:O	54:M8:25:TYR:N	2.33	0.62
1:1G:56:U:H2'	1:1G:57:G:H8	1.63	0.62
1:1G:554:C:H2'	1:1G:555:C:H6	1.62	0.62
46:A5:82:LEU:HD22	46:A5:84:ARG:NH2	2.14	0.62
58:M5:22:VAL:HG12	58:M5:50:LEU:HG	1.81	0.62
1:13:624:C:H2'	1:13:625:G:C8	2.35	0.62
27:1H:1057:A:OP1	65:1H:3682:HOH:O	2.16	0.62
27:1H:1452:U:H2'	27:1H:1453:U:C6	2.35	0.62
27:1H:1849:G:OP1	30:11:88:ARG:NH2	2.28	0.62
31:21:109:LYS:HE2	31:21:191:PRO:HA	1.81	0.62
37:58:42:TRP:HA	37:58:48:MET:HE1	1.80	0.62
1:1G:1203:C:H2'	1:1G:1204:A:C8	2.34	0.62
2:12:73:THR:HB	2:12:96:ARG:H	1.64	0.62
2:12:167:PRO:O	2:12:171:ALA:HB2	1.99	0.62
5:42:129:ILE:H	5:42:129:ILE:HD12	1.64	0.62
27:14:279:C:N4	27:14:361:G:H1	1.97	0.62
1:13:222:U:H2'	1:13:223:U:C6	2.35	0.62
1:13:280:C:N3	17:8I:39:SER:N	2.45	0.62
1:13:1325:C:H4'	21:1F:17:THR:HG21	1.80	0.62
2:1E:168:THR:HG21	2:1E:191:ASP:HB3	1.80	0.62
27:1H:273:U:O2'	27:1H:274:G:O5'	2.18	0.62
27:1H:355:A:H2	27:1H:1256:A:HO2'	1.45	0.62
27:1H:934:C:O2	27:1H:935:A:N6	2.33	0.62
27:1H:1645:C:H5'	47:F8:36:LYS:HB2	1.82	0.62
27:1H:2121:U:H2'	27:1H:2122:U:O4'	1.99	0.62
40:88:57:HIS:NE2	40:88:116:GLU:HG2	2.15	0.62
1:1G:401:C:H2'	1:1G:402:G:C8	2.35	0.62
11:2A:108:ILE:HD11	18:9A:87:ARG:HD3	1.81	0.62
27:14:270:A:OP2	27:14:270(Y):G:N2	2.20	0.62
27:14:554:U:O2'	27:14:556:G:O5'	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1310:G:OP2	57:L5:9:ARG:NH1	2.31	0.62
28:1J:31:C:N3	28:1J:51:G:N1	2.42	0.62
29:79:20:TYR:N	29:79:223:ARG:O	2.32	0.62
37:15:53:VAL:HG11	37:15:128:HIS:HB2	1.81	0.62
40:45:31:ASP:N	40:45:106:VAL:O	2.32	0.62
47:B5:41:ASN:O	47:B5:45:THR:HG23	1.98	0.62
1:13:814:A:N7	1:13:816:A:C4	2.68	0.62
1:13:1281:U:H5''	1:13:1282:C:H5	1.64	0.62
27:1H:417:G:N1	39:78:71:VAL:HG12	2.14	0.62
27:1H:1096:C:H1'	27:1H:1160:U:H4'	1.80	0.62
34:51:56:SER:OG	34:51:58:GLU:HG2	1.99	0.62
35:61:6:LEU:H	35:61:36:ALA:HA	1.65	0.62
35:61:25:TYR:HE1	35:61:29:TYR:CD2	2.16	0.62
35:61:134:PRO:HA	35:61:135:GLU:HG3	1.81	0.62
41:98:12:ARG:HG3	41:98:12:ARG:HH11	1.62	0.62
3:22:129:ALA:HB3	3:22:132:ARG:HB3	1.82	0.62
19:AA:80:TYR:CZ	19:AA:82:GLY:HA2	2.35	0.62
27:14:973:A:H8	27:14:973:A:OP1	1.83	0.62
27:14:1138:G:H21	37:15:106:MET:HE3	1.65	0.62
27:14:1223:C:P	45:95:88:ARG:HH12	2.22	0.62
39:35:13:ASN:OD1	39:35:15:ARG:HB3	1.99	0.62
47:B5:25:LYS:NZ	47:B5:82:GLN:OE1	2.32	0.62
1:13:531:U:OP2	22:1K:35:A:H4'	1.99	0.62
1:13:1240:U:H5	7:6E:30:ILE:HG22	1.64	0.62
16:7I:56:ALA:HB3	16:7I:79:VAL:HG11	1.80	0.62
18:9I:50:ILE:HD12	18:9I:50:ILE:H	1.64	0.62
27:1H:69:G:H21	27:1H:70:A:H62	1.47	0.62
27:1H:909:A:N3	28:16:79:C:O2'	2.33	0.62
34:51:20:ALA:HB3	34:51:23:ARG:HG3	1.81	0.62
54:M8:18:CYS:SG	54:M8:19:GLY:N	2.72	0.62
1:1G:257:G:N2	1:1G:269:C:N3	2.36	0.62
1:1G:1422:G:O3'	38:25:49:ARG:NH2	2.33	0.62
19:AA:62:ILE:HA	19:AA:66:MET:HE2	1.81	0.62
25:4L:35:A:H2'	25:4L:36:G:H8	1.62	0.62
27:14:554:U:HO2'	27:14:556:G:H8	1.46	0.62
27:14:2129:C:H5''	29:79:4:GLY:HA3	1.79	0.62
28:1J:28:C:H2'	28:1J:29:A:H8	1.65	0.62
1:13:1316:G:N2	1:13:1319:A:OP2	2.32	0.62
10:1I:38:ILE:HD11	10:1I:71:LEU:HD23	1.82	0.62
22:1K:9:A:O2'	22:1K:45:U:O2	2.15	0.62
23:2K:76:A:O2'	27:1H:2615:A:N7	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:34:C:H1'	27:1H:35:G:OP2	2.00	0.62
27:1H:2263:G:O2'	27:1H:2509:C:OP1	2.16	0.62
40:88:14:ARG:HG2	40:88:41:TRP:HH2	1.64	0.62
27:14:105:C:H2'	27:14:106:C:H6	1.64	0.62
42:65:105:ALA:HB1	42:65:110:LEU:HG	1.80	0.62
1:13:1071:C:H2'	1:13:1072:G:H8	1.65	0.62
26:5K:6:G:N2	26:5K:68:C:O2	2.33	0.62
27:1H:597:G:O2'	27:1H:598:C:H3'	2.00	0.62
27:1H:1379:G:H21	27:1H:1657:A:H8	1.46	0.62
44:C8:49:HIS:HA	44:C8:52:ARG:HG2	1.81	0.62
1:1G:628:G:H2'	1:1G:629:G:C8	2.35	0.62
1:1G:872:A:O2'	1:1G:873:A:O5'	2.15	0.62
13:4A:10:PRO:HB2	13:4A:18:ALA:HB1	1.82	0.62
29:79:23:ASP:OD1	29:79:190:ARG:NH2	2.27	0.62
33:49:135:LEU:HD21	33:49:157:ILE:HD11	1.81	0.62
39:35:29:LYS:HD2	39:35:30:THR:HG23	1.82	0.62
1:13:976:G:H5'	1:13:1358:U:O2'	1.99	0.62
2:1E:48:MET:HA	2:1E:51:LEU:HD11	1.81	0.62
39:78:45:LEU:H	39:78:45:LEU:HD22	1.64	0.62
43:B8:27:THR:HG23	43:B8:90:GLN:HB3	1.82	0.62
49:H8:63:ASP:OD2	49:H8:65:GLN:HG2	1.99	0.62
3:22:33:LEU:HA	3:22:36:ASP:HB2	1.80	0.62
10:1A:61:GLU:OE2	14:5A:45:ARG:NH1	2.33	0.62
27:14:1794:U:H2'	27:14:1795:C:H6	1.64	0.62
27:14:2735:G:H2'	27:14:2736:G:H8	1.64	0.62
47:B5:35:THR:HG22	47:B5:37:THR:H	1.64	0.62
1:13:926:G:O6	65:13:1817:HOH:O	2.11	0.61
1:13:1321:C:H3'	1:13:1322:C:H5''	1.82	0.61
4:3E:33:MET:HE2	4:3E:37:PRO:HA	1.82	0.61
27:1H:1156:C:O2'	27:1H:1157:G:OP1	2.15	0.61
47:F8:12:VAL:HG12	47:F8:27:THR:O	2.00	0.61
1:1G:192:U:O4'	20:BA:103:GLY:HA2	1.99	0.61
1:1G:235:C:H5'	17:8A:70:ARG:HG2	1.81	0.61
1:1G:659:U:H2'	1:1G:660:G:C8	2.35	0.61
2:12:78:GLN:O	2:12:94:ASN:ND2	2.27	0.61
27:14:322:A:H5'	27:14:340:A:H1'	1.80	0.61
27:14:969:U:OP1	53:H5:17:LYS:HG2	1.98	0.61
27:14:2557:G:H2'	27:14:2558:C:H6	1.65	0.61
27:14:2818:G:OP2	41:55:42:LYS:NZ	2.32	0.61
40:45:29:PHE:HB2	40:45:65:PHE:CE2	2.35	0.61
42:65:74:ALA:HB1	42:65:107:GLU:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:95:35:LEU:O	45:95:37:VAL:HG22	1.99	0.61
1:13:1117:G:O3'	9:8E:104:ARG:HD3	1.98	0.61
1:13:1497:G:H2'	1:13:1498:UR3:H5'	1.82	0.61
4:3E:119:GLN:HG3	4:3E:123:HIS:CD2	2.35	0.61
4:3E:166:LYS:HG3	4:3E:178:VAL:HG11	1.81	0.61
14:5I:21:TYR:HE1	14:5I:23:ARG:NE	1.97	0.61
27:1H:672:A:H2'	27:1H:673:G:O4'	1.99	0.61
27:1H:2737:C:H5''	41:98:1:MET:HE2	1.82	0.61
56:O8:34:LEU:O	56:O8:36:LEU:N	2.33	0.61
1:1G:539:A:H2'	1:1G:540:G:C8	2.34	0.61
1:1G:589:C:H42	1:1G:650:G:H1	1.48	0.61
1:1G:701:C:H1'	1:1G:703:G:C5	2.35	0.61
13:4A:15:VAL:HG12	13:4A:45:VAL:HG22	1.82	0.61
24:3L:54:U:H3	24:3L:58:A:N6	1.96	0.61
27:14:141:A:H1'	27:14:1408:C:O4'	1.99	0.61
27:14:574:C:N3	31:29:145:LYS:NZ	2.45	0.61
27:14:729:G:C5	30:19:208:LYS:HB2	2.35	0.61
5:4E:81:GLU:HG3	5:4E:90:VAL:HA	1.82	0.61
22:1K:74:C:O2'	22:1K:75:C:OP2	2.12	0.61
26:5K:16:H2U:H3'	26:5K:17:C:H5'	1.82	0.61
27:1H:2136:U:H5'	27:1H:2137:A:C8	2.35	0.61
1:1G:189:U:O2	17:8A:63:ARG:NH2	2.32	0.61
1:1G:718:G:H5'	11:2A:117:ASN:HB2	1.83	0.61
1:1G:1050:G:H1'	1:1G:1214:C:O2	2.00	0.61
15:6A:17:ARG:N	15:6A:21:ASP:OD2	2.33	0.61
27:14:1264:G:H3'	27:14:1265:A:H5''	1.82	0.61
27:14:2801:A:OP1	27:14:2895:U:O2'	2.19	0.61
37:15:15:LEU:HB2	37:15:134:ARG:HG2	1.82	0.61
52:G5:65:ASN:HB3	52:G5:69:ARG:HH22	1.65	0.61
1:13:1008:C:H42	1:13:1021:G:H1	1.48	0.61
1:13:1126:U:H2'	1:13:1280:A:H2'	1.83	0.61
1:13:1268:A:N3	1:13:1326:C:O2'	2.32	0.61
4:3E:173:TRP:HZ3	4:3E:193:ASP:HB2	1.65	0.61
12:3I:35:THR:HG21	12:3I:62:GLU:OE2	2.01	0.61
26:5K:19:G:H8	28:16:0:A:H61	1.48	0.61
27:1H:2042:A:OP2	55:N8:9:LYS:NZ	2.33	0.61
27:1H:2078:C:H5'	27:1H:2079:G:OP1	2.01	0.61
43:B8:34:VAL:HG21	43:B8:43:GLN:HG2	1.82	0.61
1:1G:1226:C:OP1	13:4A:91:ARG:NH1	2.29	0.61
24:3L:53:G:N1	24:3L:61:C:N3	2.46	0.61
27:14:7:G:H1	27:14:2896:C:H42	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:38:G:C2	1:13:397:A:C2	2.88	0.61
1:13:1179:A:H5''	9:8E:102:LEU:O	2.00	0.61
13:4I:102:ARG:HH11	13:4I:105:THR:HG23	1.65	0.61
18:9I:22:VAL:HB	18:9I:56:THR:HA	1.81	0.61
27:1H:926:A:N6	27:1H:946:A:HO2'	1.98	0.61
27:1H:2139:G:P	27:1H:2188:G:H22	2.24	0.61
34:51:54:ARG:NE	34:51:57:ASP:OD1	2.31	0.61
54:M8:18:CYS:HB3	54:M8:39:CYS:SG	2.40	0.61
1:1G:1469:G:N7	65:1G:1829:HOH:O	2.31	0.61
7:62:50:ILE:HB	7:62:58:PRO:HG3	1.82	0.61
20:BA:74:LYS:HA	20:BA:77:ALA:HB3	1.83	0.61
27:14:101:G:H4'	27:14:101:G:OP2	2.00	0.61
27:14:226:G:H21	27:14:228:A:H62	1.48	0.61
27:14:1047:G:H2'	27:14:1110:G:H22	1.64	0.61
29:79:213:TYR:OH	29:79:223:ARG:NH2	2.34	0.61
31:29:181:LEU:HD21	43:75:6:LEU:HD21	1.83	0.61
1:13:1179:A:H2'	1:13:1180:A:O4'	2.00	0.61
5:4E:34:VAL:HG11	5:4E:63:ARG:HG2	1.81	0.61
11:2I:99:GLN:HG2	11:2I:105:VAL:HG21	1.83	0.61
29:71:201:PRO:HD2	29:71:208:PHE:CZ	2.35	0.61
52:K8:22:GLU:OE2	52:K8:68:ARG:NH2	2.29	0.61
1:1G:1014:A:H4'	19:AA:14:HIS:CD2	2.36	0.61
1:1G:1422:G:H5''	38:25:48:PRO:HB3	1.81	0.61
27:14:946:G:H2'	27:14:947:G:C8	2.36	0.61
27:14:2741:A:OP2	27:14:2741:A:H8	1.82	0.61
1:13:7:G:H5'	1:13:298:A:O4'	2.01	0.61
2:1E:71:VAL:HG12	2:1E:93:VAL:HB	1.80	0.61
21:1F:6:ARG:HE	21:1F:15:ARG:CZ	2.13	0.61
27:1H:80:G:O6	65:1H:3679:HOH:O	2.15	0.61
27:1H:390:G:H2'	27:1H:391:G:H8	1.64	0.61
27:1H:613:C:H2'	27:1H:614:A:C8	2.36	0.61
35:61:37:VAL:HG22	35:61:38:LEU:HD12	1.83	0.61
43:B8:106:SER:HA	43:B8:110:ILE:HD11	1.83	0.61
48:G8:88:LYS:HB2	48:G8:98:VAL:HG11	1.82	0.61
1:1G:87:A:O2'	1:1G:88:C:OP2	2.18	0.61
1:1G:445:G:H1	1:1G:489:C:H42	1.49	0.61
1:1G:1306:A:H61	1:1G:1331:G:H1'	1.65	0.61
1:1G:1342:C:H4'	9:82:125:TYR:HB3	1.81	0.61
13:4A:67:GLU:H	13:4A:70:LEU:HB3	1.66	0.61
59:1L:74:C:O2'	59:1L:75:C:O5'	2.16	0.61
27:14:1653:G:C6	41:55:9:LYS:HB2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2313:C:H4'	33:49:91:ARG:HG3	1.83	0.61
1:13:975:A:H5'	1:13:975:A:C8	2.35	0.61
34:51:88:LEU:HG	34:51:130:ARG:HG2	1.83	0.61
41:98:8:ARG:HH11	41:98:39:PRO:HB3	1.65	0.61
1:1G:1132:C:H2'	1:1G:1133:G:H8	1.66	0.61
13:4A:92:HIS:CE1	13:4A:98:VAL:HG21	2.36	0.61
27:14:952:G:P	40:45:16:ARG:HH22	2.23	0.61
27:14:2348:U:O2'	56:K5:42:TRP:NE1	2.31	0.61
27:14:2540:C:O2'	27:14:2740:A:N3	2.30	0.61
41:55:45:ARG:HA	41:55:95:THR:HG21	1.83	0.61
50:E5:48:GLY:HA3	50:E5:80:HIS:HD1	1.64	0.61
2:1E:47:THR:O	2:1E:51:LEU:HG	2.01	0.61
3:2E:64:VAL:HB	3:2E:99:VAL:HG12	1.82	0.61
8:7E:13:ILE:O	8:7E:17:THR:HG23	2.00	0.61
24:3K:75:C:H5''	24:3K:76:A:OP1	2.00	0.61
27:1H:2157:A:O5'	27:1H:2180:G:N2	2.34	0.61
32:31:134:GLY:H	32:31:162:LEU:HB3	1.65	0.61
36:38:6:ASN:OD1	36:38:6:ASN:N	2.32	0.61
1:1G:87:A:N7	65:1G:1801:HOH:O	2.33	0.61
1:1G:980:C:H5'	1:1G:981:U:C5	2.36	0.61
1:1G:1298:C:H4'	1:1G:1299:A:C8	2.35	0.61
13:4A:118:ALA:HB3	60:2L:29:G:H5''	1.83	0.61
27:14:1332:G:H21	27:14:1610:A:H8	1.48	0.61
27:14:2795:G:H3'	27:14:2797:U:C5'	2.31	0.61
1:13:532:A:H2	1:13:1206:G:H21	1.49	0.61
1:13:1316:G:N2	1:13:1319:A:H5''	2.16	0.61
1:13:1321:C:H5''	1:13:1322:C:C5'	2.31	0.61
32:31:65:TRP:HB2	32:31:66:PRO:HD3	1.82	0.61
47:F8:32:PRO:HA	47:F8:77:LYS:HB2	1.83	0.61
49:H8:8:TYR:HB2	49:H8:38:TYR:CE1	2.36	0.61
27:14:676:A:H2	27:14:802:A:H61	1.49	0.61
27:14:954:G:H5''	40:45:13:GLN:HB3	1.82	0.61
35:69:2:LYS:HA	35:69:20:ASP:HA	1.82	0.61
50:E5:68:GLU:OE2	50:E5:82:ARG:NH2	2.31	0.61
1:13:1298:C:OP2	7:6E:114:ARG:NH2	2.30	0.60
1:13:1321:C:OP2	1:13:1322:C:H2'	2.01	0.60
27:1H:233:U:OP1	58:Q8:6:THR:OG1	2.17	0.60
27:1H:1102:G:H1	27:1H:1151:C:H42	1.49	0.60
27:1H:2729:C:H2'	27:1H:2730:U:H6	1.65	0.60
39:78:49:ARG:HA	58:Q8:57:ARG:HD2	1.84	0.60
41:98:57:ARG:HD3	41:98:62:ALA:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1014:A:H5'	19:AA:15:LEU:HD23	1.83	0.60
1:1G:1262:C:N3	1:1G:1273:G:N2	2.46	0.60
3:22:29:TYR:HE1	3:22:33:LEU:HD22	1.66	0.60
24:3L:46:G:N2	24:3L:48:C:O2	2.34	0.60
27:14:315:G:H2'	27:14:316:C:C6	2.35	0.60
27:14:932:G:OP1	53:H5:29:ARG:NH1	2.25	0.60
27:14:1019:U:OP1	27:14:1035:U:O2'	2.13	0.60
27:14:2176:A:H2'	27:14:2177:C:C6	2.35	0.60
27:14:2611:U:H6	27:14:2611:U:H5'	1.66	0.60
27:14:2788:C:O2'	27:14:2809:A:N3	2.33	0.60
32:39:63:LYS:NZ	32:39:67:GLN:HB2	2.16	0.60
32:39:197:ASP:OD1	32:39:197:ASP:N	2.32	0.60
34:59:87:LEU:HB3	34:59:162:ILE:HG22	1.83	0.60
43:75:24:PRO:HA	43:75:49:VAL:HG13	1.83	0.60
1:13:714:G:H2'	1:13:715:A:C8	2.35	0.60
7:6E:101:LEU:HA	7:6E:104:LEU:HB2	1.83	0.60
20:BI:23:ARG:HA	20:BI:26:ASN:HD21	1.65	0.60
27:1H:1406:A:C2	27:1H:1419:U:O4	2.53	0.60
46:E8:92:ARG:NH1	46:E8:94:ASP:OD1	2.34	0.60
49:H8:52:SER:O	49:H8:54:HIS:N	2.33	0.60
1:1G:155:C:H42	1:1G:166:G:H1	1.48	0.60
27:14:2685:G:O2'	27:14:2726:U:O4	2.18	0.60
27:14:2815:C:H5'	55:J5:29:THR:HG21	1.82	0.60
32:39:178:PRO:HB3	32:39:198:ALA:CB	2.31	0.60
54:I5:48:ARG:HH21	54:I5:51:ASP:HB3	1.65	0.60
1:13:79:G:H22	1:13:89:U:H3	1.46	0.60
1:13:1355:G:H2'	1:13:1356:G:C8	2.36	0.60
10:II:40:LEU:HB2	10:II:69:ASN:HB2	1.83	0.60
27:1H:710:G:H5'	39:78:15:ARG:H	1.65	0.60
27:1H:2230:A:H4'	27:1H:2230:A:OP1	2.01	0.60
27:1H:2575:U:O2'	38:68:23:ARG:NH1	2.34	0.60
51:J8:76:ARG:HB2	51:J8:94:LEU:HD21	1.82	0.60
56:O8:52:VAL:HG22	56:O8:53:LYS:HG3	1.82	0.60
1:1G:317:G:H1	1:1G:336:C:H42	1.47	0.60
1:1G:601:C:H42	1:1G:637:G:H1	1.49	0.60
1:1G:736:C:H2'	1:1G:737:A:C8	2.36	0.60
13:4A:90:LEU:HD13	19:AA:78:ARG:HH12	1.65	0.60
27:14:662:G:H5''	39:35:17:LYS:HG2	1.83	0.60
27:14:1405:U:H2'	27:14:1406:U:H6	1.66	0.60
39:35:61:ARG:HH11	39:35:61:ARG:HB3	1.65	0.60
45:95:1:MET:HG3	45:95:43:GLU:N	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B5:11:PRO:HG2	47:B5:13:LEU:HD21	1.82	0.60
1:13:1070:U:H2'	1:13:1071:C:C6	2.36	0.60
27:1H:613:C:H2'	27:1H:614:A:H8	1.66	0.60
27:1H:916:U:C4	27:1H:917:G:N7	2.69	0.60
27:1H:1453:U:H2'	27:1H:1454:C:C6	2.36	0.60
27:1H:2648:C:OP1	31:21:79:ARG:NH1	2.34	0.60
43:B8:58:ASN:C	43:B8:58:ASN:HD22	2.05	0.60
51:J8:46:LEU:HD23	51:J8:61:ARG:HG2	1.83	0.60
1:1G:298:A:O5'	1:1G:298:A:H8	1.85	0.60
5:42:15:ARG:NH1	25:4L:55:U:OP2	2.32	0.60
24:3L:1:G:H2'	24:3L:1:G:N3	2.16	0.60
27:14:2124:G:N2	29:79:218:MET:SD	2.75	0.60
38:25:63:VAL:HB	38:25:102:VAL:HG12	1.82	0.60
1:13:198:G:H2'	1:13:199:G:C8	2.36	0.60
1:13:1352:C:H2'	1:13:1353:G:C8	2.37	0.60
1:13:1502:A:H2	1:13:1505:G:H1	1.50	0.60
6:5E:62:TRP:C	6:5E:63:TYR:HD1	2.04	0.60
26:5K:40:C:H2'	26:5K:41:C:C6	2.37	0.60
27:1H:606:G:H2'	27:1H:607:G:C8	2.36	0.60
1:1G:92:G:H2'	1:1G:93:U:H5'	1.84	0.60
27:14:816:C:OP1	27:14:1185:C:O2'	2.19	0.60
27:14:1899:G:N2	27:14:1902:C:H41	2.00	0.60
27:14:2124:G:H3'	27:14:2125:G:H8	1.66	0.60
40:45:42:ILE:HD13	40:45:97:VAL:HB	1.84	0.60
43:75:84:GLN:HE21	43:75:85:LYS:HD3	1.66	0.60
49:D5:152:ALA:HB3	49:D5:167:PRO:HA	1.82	0.60
1:13:980:C:H5'	1:13:981:U:OP2	2.01	0.60
2:1E:54:THR:HG21	2:1E:201:ILE:HD11	1.83	0.60
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.30	0.60
16:7I:39:TYR:HD1	16:7I:49:LEU:HB2	1.66	0.60
27:1H:26:G:C6	27:1H:27:G:N1	2.69	0.60
27:1H:533:A:H5''	27:1H:534:G:H3'	1.82	0.60
27:1H:561:C:O3'	44:C8:53:ARG:NH1	2.34	0.60
27:1H:1020:G:O2'	27:1H:1022:G:N7	2.30	0.60
30:11:16:MET:HG3	30:11:207:GLY:HA3	1.84	0.60
39:78:37:GLY:HA3	39:78:40:SER:H	1.65	0.60
48:G8:108:THR:HG22	48:G8:110:GLU:HG2	1.84	0.60
49:H8:69:THR:HG22	49:H8:90:VAL:HA	1.83	0.60
51:J8:80:LEU:HB2	51:J8:82:LEU:HD21	1.82	0.60
1:1G:673:G:H2'	1:1G:674:G:C8	2.36	0.60
1:1G:1002:G:H1	1:1G:1038:C:H42	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1316:G:N2	1:1G:1319:A:OP2	2.32	0.60
1:1G:1348:U:H4'	9:82:120:ARG:HD2	1.84	0.60
27:14:2439:A:H5'	27:14:2439:A:C8	2.37	0.60
27:14:2467:C:H4'	40:45:123:HIS:ND1	2.16	0.60
33:49:102:PHE:HE1	33:49:141:PHE:HE1	1.50	0.60
43:75:87:ASP:N	43:75:87:ASP:OD1	2.33	0.60
56:K5:15:GLU:OE2	56:K5:41:PRO:HB2	2.02	0.60
1:13:1034:G:H2'	1:13:1035:A:H8	1.67	0.60
1:13:1054:C:O2'	1:13:1055:A:O5'	2.17	0.60
1:13:1094:G:O2'	1:13:1095:U:OP2	2.17	0.60
24:3K:24:G:N2	24:3K:25:C:N3	2.49	0.60
27:1H:1068:A:C8	27:1H:1068:A:H3'	2.36	0.60
27:1H:1729:G:HO2'	27:1H:1794:A:HO2'	1.33	0.60
27:1H:2798:C:H1'	31:21:37:ARG:NH1	2.13	0.60
35:61:144:VAL:HG22	35:61:145:VAL:HG23	1.81	0.60
56:O8:11:LEU:HD23	56:O8:26:ASN:HB3	1.83	0.60
1:1G:280:C:H3'	1:1G:281:G:H5'	1.84	0.60
1:1G:303:A:HO2'	1:1G:555:C:HO2'	1.50	0.60
1:1G:353:A:H5'	1:1G:353:A:H8	1.67	0.60
1:1G:1348:U:H2'	1:1G:1349:A:H8	1.66	0.60
1:1G:1392:G:N2	1:1G:1502:A:H8	1.98	0.60
2:12:82:ARG:NH2	2:12:150:SER:OG	2.34	0.60
7:62:87:VAL:HG11	7:62:154:TYR:HB2	1.82	0.60
12:3A:38:ARG:NH2	12:3A:39:THR:O	2.35	0.60
13:4A:88:ARG:NH2	19:AA:73:GLU:OE2	2.34	0.60
27:14:811:U:O4	39:35:21:ARG:NH2	2.34	0.60
27:14:2438:U:O3'	27:14:2439:A:H3'	2.02	0.60
29:79:38:ASP:OD2	29:79:177:LYS:NZ	2.33	0.60
44:85:60:LEU:HA	44:85:63:VAL:HG23	1.83	0.60
1:13:587:G:H3'	65:13:1819:HOH:O	2.01	0.60
1:13:986:A:H1'	19:AI:54:GLY:O	2.01	0.60
3:2E:150:LYS:HE2	3:2E:152:ILE:HD11	1.84	0.60
27:1H:493:A:H4'	57:P8:30:VAL:CG2	2.31	0.60
27:1H:538:G:OP2	65:1H:3684:HOH:O	2.17	0.60
27:1H:936:C:O2'	27:1H:937:C:O4'	2.19	0.60
27:1H:2144:G:H4'	29:71:167:LYS:HD2	1.84	0.60
28:16:14:U:H4'	28:16:15:A:OP2	2.00	0.60
1:1G:151:A:H2'	1:1G:152:A:O4'	2.01	0.60
1:1G:342:C:N4	1:1G:343:U:O4	2.34	0.60
1:1G:625:G:H2'	1:1G:626:U:C6	2.36	0.60
2:12:137:ARG:NH1	2:12:137:ARG:O	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:52:12:PRO:HG3	6:52:57:GLN:HG3	1.83	0.60
60:2L:4:C:H42	60:2L:69:G:H1	1.49	0.60
27:14:1502:C:H6	27:14:1502:C:H5''	1.66	0.60
54:I5:57:GLU:H	54:I5:60:GLN:NE2	2.00	0.60
1:13:691:G:H2'	1:13:692:U:C6	2.37	0.60
18:9I:26:LEU:HB3	18:9I:42:ARG:NH2	2.16	0.60
27:1H:1887:G:N7	65:1H:3763:HOH:O	2.32	0.60
27:1H:2084:G:H5''	27:1H:2516:2MA:C2	2.32	0.60
27:1H:2347:G:H5'	42:A8:9:ARG:HG2	1.84	0.60
46:E8:28:SER:OG	46:E8:31:GLU:HB2	2.02	0.60
1:1G:57:G:H2'	1:1G:58:C:C6	2.36	0.60
1:1G:75:C:H2'	1:1G:76:G:O4'	2.02	0.60
1:1G:632:A:OP1	8:72:98:LYS:NZ	2.31	0.60
1:1G:1072:G:H2'	1:1G:1073:U:C6	2.36	0.60
2:12:215:LEU:HA	2:12:218:ALA:HB3	1.83	0.60
2:12:223:ILE:HA	2:12:226:ARG:HG2	1.83	0.60
13:4A:49:THR:HG22	13:4A:51:ALA:H	1.67	0.60
15:6A:23:GLY:O	15:6A:28:GLN:NE2	2.35	0.60
27:14:654(C):G:H1	27:14:654(R):C:H42	1.48	0.60
27:14:2128:C:H5'	29:79:6:ARG:HD3	1.83	0.60
38:25:68:GLU:OE2	38:25:78:ARG:NH1	2.35	0.60
1:13:452:A:H2'	1:13:453:A:C8	2.37	0.60
13:4I:84:ILE:HG23	13:4I:86:CYS:H	1.66	0.60
21:1F:12:LYS:HG2	21:1F:22:ARG:HB3	1.84	0.60
22:1K:18:G:N1	22:1K:55:PSU:H1'	2.16	0.60
27:1H:706:C:H2'	27:1H:707:C:C6	2.36	0.60
27:1H:1648:G:N7	65:1H:3758:HOH:O	2.31	0.60
27:1H:2229:G:H2'	27:1H:2229:G:OP2	2.01	0.60
44:C8:90:VAL:HG12	44:C8:91:ASP:N	2.17	0.60
1:1G:474:G:H2'	1:1G:475:G:C8	2.37	0.60
13:4A:76:ALA:HA	13:4A:79:LYS:HD2	1.83	0.60
27:14:38:A:H2'	27:14:39:C:C6	2.37	0.60
27:14:827:U:H2'	27:14:2430:A:C2	2.36	0.60
27:14:1252:G:O4'	44:85:33:ARG:HD3	2.01	0.60
27:14:2537:U:H2'	27:14:2538:C:C6	2.37	0.60
27:14:2571:C:C5'	27:14:2572:A:H5''	2.32	0.60
27:14:2572:A:OP1	31:29:144:ARG:HB2	2.02	0.60
33:49:66:GLN:NE2	33:49:93:THR:O	2.34	0.60
1:13:181:G:HO2'	1:13:182:U:H6	1.49	0.59
1:13:434:U:H2'	1:13:435:C:C6	2.36	0.59
13:4I:57:ARG:HB2	13:4I:57:ARG:HH11	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:607:G:OP2	44:C8:10:ARG:HD2	2.01	0.59
27:1H:1476:G:H2'	27:1H:1477:C:C6	2.37	0.59
27:1H:2304:U:H2'	27:1H:2305:C:C6	2.37	0.59
27:1H:2627:A:H3'	65:1H:3873:HOH:O	2.01	0.59
34:51:172:LYS:O	34:51:174:GLY:N	2.35	0.59
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.37	0.59
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.37	0.59
1:1G:1223:C:H5''	1:1G:1224:G:H5''	1.82	0.59
2:12:223:ILE:O	2:12:227:GLY:N	2.35	0.59
3:22:16:ARG:NH2	3:22:183:ASP:OD1	2.34	0.59
5:42:110:LEU:HD21	5:42:139:LEU:HD21	1.84	0.59
27:14:443:A:C5	32:39:45:ARG:HD2	2.37	0.59
27:14:992:C:H2'	27:14:993:G:H8	1.66	0.59
27:14:1525:G:H2'	27:14:1526:G:C8	2.36	0.59
27:14:2754:U:H5'	27:14:2755:C:OP2	2.01	0.59
30:19:238:GLY:O	30:19:240:ALA:N	2.34	0.59
34:59:23:ARG:HD3	34:59:25:LYS:HE3	1.84	0.59
46:A5:12:ILE:HD12	46:A5:42:ARG:HD3	1.84	0.59
54:I5:23:GLU:HB3	54:I5:25:TYR:HE1	1.67	0.59
4:3E:33:MET:CE	4:3E:37:PRO:HA	2.32	0.59
7:6E:103:TRP:O	7:6E:107:ALA:N	2.34	0.59
27:1H:182:C:N3	65:1H:3753:HOH:O	2.30	0.59
27:1H:625:C:O2'	27:1H:629:C:OP1	2.11	0.59
27:1H:957:A:C5	40:88:13:GLN:HG3	2.36	0.59
27:1H:1110:G:O6	27:1H:1122:C:N4	2.33	0.59
27:1H:1406:A:H2	27:1H:1419:U:O4	1.85	0.59
27:1H:2701:U:H5	27:1H:2734:U:OP2	1.84	0.59
56:O8:47:THR:HG22	56:O8:48:VAL:H	1.67	0.59
59:1L:76:A:H3'	27:14:2602:A:H61	1.66	0.59
27:14:96:G:OP1	52:G5:46:GLN:NE2	2.34	0.59
29:79:22:ILE:HD13	29:79:190:ARG:HG2	1.84	0.59
33:49:97:ASP:O	33:49:101:ILE:HG23	2.02	0.59
40:45:109:VAL:HG12	40:45:110:THR:HG23	1.84	0.59
51:F5:87:PRO:O	51:F5:91:LYS:N	2.33	0.59
1:13:1266:G:N2	1:13:1270:C:N3	2.49	0.59
6:5E:16:GLN:CD	6:5E:16:GLN:H	2.05	0.59
27:1H:1533:A:H2'	27:1H:1534:G:C8	2.37	0.59
31:21:18:ASP:HA	43:B8:82:LEU:HD11	1.84	0.59
1:1G:576:G:O6	1:1G:880:C:O2'	2.16	0.59
1:1G:1213:A:N6	1:1G:1215:G:N3	2.50	0.59
5:42:52:PRO:HB3	25:4L:57:U:H3'	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:5A:47:LEU:O	14:5A:51:GLY:N	2.31	0.59
27:14:780:G:OP1	30:19:218:ARG:NH2	2.35	0.59
27:14:1030:G:HO2'	27:14:2466:C:HO2'	1.51	0.59
27:14:1363:C:O2'	27:14:1809:A:N3	2.31	0.59
27:14:1697:G:OP2	27:14:1698:A:O2'	2.15	0.59
29:79:65:PRO:O	29:79:66:HIS:ND1	2.35	0.59
15:6I:8:LYS:O	15:6I:12:ILE:HG13	2.02	0.59
27:1H:1803:C:O2'	27:1H:1818:A:H8	1.73	0.59
53:L8:26:LEU:HD21	53:L8:46:ASN:HB2	1.83	0.59
1:1G:617:G:H1	1:1G:623:C:H42	1.49	0.59
19:AA:9:VAL:HB	54:I5:63:TYR:HE1	1.68	0.59
60:2L:76:A:H5'	60:2L:76:A:H8	1.67	0.59
27:14:832:G:H5'	39:35:45:LEU:HD11	1.83	0.59
27:14:2355:C:O3'	50:E5:24:LYS:NZ	2.30	0.59
30:19:65:ILE:HD11	30:19:67:PHE:CE1	2.37	0.59
48:C5:30:VAL:HG13	48:C5:37:VAL:HG12	1.84	0.59
14:5I:40:CYS:HB3	14:5I:42:ILE:H	1.67	0.59
16:7I:4:ILE:HD11	16:7I:64:ALA:HB1	1.85	0.59
27:1H:1299:G:N3	44:C8:33:ARG:HD2	2.17	0.59
27:1H:1492:A:H4'	27:1H:1508:A:O2'	2.02	0.59
27:1H:1766:U:H2'	27:1H:1767:G:O4'	2.02	0.59
27:1H:2748:A:H8	27:1H:2748:A:H5''	1.67	0.59
31:21:19:ARG:HA	38:68:73:ASP:HA	1.84	0.59
1:1G:518:C:H4'	1:1G:519:C:O5'	2.01	0.59
1:1G:1254:C:OP1	10:1A:45:ARG:NH1	2.36	0.59
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.37	0.59
7:62:27:ILE:HA	7:62:30:ILE:HD12	1.84	0.59
11:2A:121:PRO:HG2	11:2A:126:ARG:HG2	1.85	0.59
27:14:1405:U:H2'	27:14:1406:U:C6	2.37	0.59
27:14:2415:G:H4'	39:35:67:MET:H	1.68	0.59
27:14:2674:G:H5'	38:25:26:LYS:HD2	1.84	0.59
1:13:618:C:N4	1:13:621:A:OP2	2.34	0.59
7:6E:49:ILE:O	7:6E:53:LYS:HB3	2.03	0.59
27:1H:966:G:H5'	28:16:81:G:H1'	1.84	0.59
27:1H:2604:C:P	30:11:239:ARG:HG3	2.43	0.59
52:K8:50:ILE:HD12	52:K8:51:ARG:H	1.68	0.59
1:1G:181:G:O2'	1:1G:182:U:OP2	2.21	0.59
1:1G:811:C:O2'	1:1G:901:A:N1	2.35	0.59
1:1G:1189:C:H5''	3:22:5:ILE:HD12	1.83	0.59
20:BA:33:ILE:CD1	20:BA:63:ILE:HG13	2.33	0.59
27:14:2840:C:H5''	41:55:53:HIS:CD2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:I5:23:GLU:HB3	54:I5:25:TYR:CE1	2.37	0.59
1:13:487:A:H2'	1:13:488:C:O4'	2.03	0.59
1:13:1054:C:HO2'	1:13:1055:A:P	2.26	0.59
3:2E:151:VAL:HG13	3:2E:200:ALA:HB2	1.84	0.59
4:3E:111:ALA:HB2	4:3E:120:LEU:HD11	1.84	0.59
42:A8:15:ARG:HD2	42:A8:88:ASP:OD2	2.03	0.59
45:D8:34:GLU:HG2	45:D8:58:VAL:HG22	1.84	0.59
47:F8:41:ASN:O	47:F8:45:THR:HG23	2.02	0.59
1:1G:92:G:C2'	1:1G:93:U:H5'	2.33	0.59
1:1G:179:A:H2'	1:1G:180:U:C6	2.38	0.59
1:1G:1368:G:OP2	9:82:112:LYS:HD2	2.02	0.59
4:32:57:ARG:HH22	5:42:107:ARG:HD3	1.67	0.59
27:14:208:C:H2'	27:14:209:C:C6	2.37	0.59
27:14:653:A:H4'	27:14:654:A:OP2	2.01	0.59
27:14:1224:G:H5'	27:14:1225:C:OP2	2.02	0.59
27:14:1278:A:O2'	41:55:34:ILE:HD11	2.02	0.59
27:14:1786:A:C2	27:14:2606:C:H1'	2.37	0.59
27:14:2748:A:N6	27:14:2749:A:N1	2.51	0.59
40:45:66:ILE:HG13	40:45:67:ARG:H	1.67	0.59
56:K5:41:PRO:HG3	56:K5:47:THR:HG22	1.83	0.59
1:13:107:G:C2	1:13:108:G:H1'	2.38	0.59
1:13:1007:C:N3	1:13:1023:G:N2	2.51	0.59
1:13:1125:U:H3'	10:1I:38:ILE:HD13	1.85	0.59
5:4E:78:HIS:HB2	8:7E:104:ARG:HG3	1.84	0.59
27:1H:153:C:OP2	51:J8:88:LYS:HE2	2.03	0.59
27:1H:1109:G:H1'	27:1H:1124:A:H61	1.68	0.59
27:1H:2288:C:H5'	27:1H:2288:C:C6	2.38	0.59
29:71:58:VAL:HG13	29:71:199:HIS:CD2	2.37	0.59
32:31:110:LEU:HD11	32:31:181:LEU:HD13	1.84	0.59
33:41:27:ASN:HB3	33:41:30:GLU:HG3	1.84	0.59
37:58:7:LYS:H	37:58:7:LYS:NZ	2.00	0.59
40:88:138:ASP:OD1	40:88:138:ASP:N	2.35	0.59
43:B8:51:ARG:HG3	43:B8:98:LYS:HE3	1.83	0.59
1:1G:411:A:C5	1:1G:413:G:H1'	2.38	0.59
1:1G:1123:A:H4'	10:1A:37:PRO:HD2	1.84	0.59
27:14:611:C:C2'	27:14:612:G:H5''	2.31	0.59
27:14:2472:G:N2	27:14:2529:G:O6	2.36	0.59
30:19:17:THR:CG2	30:19:205:VAL:H	2.10	0.59
41:55:87:TYR:HD1	41:55:90:ARG:HD2	1.67	0.59
54:I5:8:LYS:HD2	54:I5:10:VAL:HG23	1.83	0.59
1:13:134:A:H61	16:7I:25:ARG:NH1	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1355:G:H2'	1:13:1356:G:H8	1.68	0.59
27:1H:802:C:H2'	27:1H:803:C:C6	2.36	0.59
27:1H:1083:G:OP1	34:51:59:ARG:HB2	2.02	0.59
27:1H:1395:G:H2'	27:1H:1396:A:H5''	1.84	0.59
27:1H:2711:U:H2'	27:1H:2712:C:C6	2.38	0.59
38:68:34:THR:HG22	38:68:37:ASP:OD2	2.03	0.59
51:J8:52:ARG:HA	51:J8:57:GLU:HA	1.84	0.59
9:82:54:ASP:OD1	9:82:54:ASP:N	2.35	0.59
27:14:886:C:O2'	27:14:887:A:O5'	2.18	0.59
27:14:2052:G:O4'	31:29:142:GLY:HA3	2.02	0.59
27:14:2577:A:O4'	55:J5:3:LYS:HB2	2.03	0.59
27:14:2776:A:OP1	27:14:2776:A:H3'	2.03	0.59
28:1J:45:A:OP2	33:49:96:ARG:NH1	2.36	0.59
30:19:12:SER:HB2	30:19:208:LYS:HB3	1.83	0.59
30:19:228:PRO:HD3	30:19:235:GLY:CA	2.33	0.59
34:59:7:LEU:HB3	34:59:65:HIS:HE1	1.66	0.59
45:95:60:GLU:HB2	45:95:95:LEU:HB3	1.85	0.59
2:1E:67:THR:HG21	2:1E:155:LEU:HD11	1.85	0.59
11:2I:57:THR:HG23	11:2I:60:ALA:H	1.67	0.59
27:1H:155:C:H42	27:1H:161:G:H1	1.50	0.59
27:1H:1433:C:H2'	27:1H:1434:C:C6	2.38	0.59
27:1H:1979:U:H1'	27:1H:2565:OMU:OP1	2.03	0.59
27:1H:2487:C:C2	27:1H:2488:C:H1'	2.37	0.59
29:71:46:LYS:HE3	29:71:210:ARG:HB3	1.84	0.59
40:88:31:ASP:OD1	40:88:134:ARG:NH1	2.35	0.59
1:1G:540:G:H2'	1:1G:541:G:O4'	2.02	0.59
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.18	0.59
27:14:670:A:H5'	39:35:43:GLY:HA2	1.85	0.59
27:14:1930:G:H2'	27:14:1968:G:H1	1.68	0.59
27:14:2103:C:H42	27:14:2186:G:H1	1.51	0.59
33:49:67:LYS:H	33:49:67:LYS:CE	2.16	0.59
44:85:25:TRP:O	44:85:28:ARG:HB2	2.03	0.59
1:13:506:G:OP1	65:13:1822:HOH:O	2.16	0.58
1:13:1434:A:H2'	1:13:1435:G:O4'	2.02	0.58
27:1H:388:G:H2'	27:1H:389:A:H8	1.67	0.58
27:1H:951:C:H5'	27:1H:952:U:OP2	2.03	0.58
28:16:11:C:H3'	28:16:12:C:H6	1.68	0.58
31:21:119:ARG:HD3	31:21:160:TYR:HB2	1.84	0.58
32:31:157:VAL:HB	32:31:194:MET:HB3	1.84	0.58
35:61:5:LEU:HD13	35:61:13:GLY:O	2.03	0.58
51:J8:92:LYS:HA	51:J8:95:LEU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:O8:14:THR:OG1	56:O8:19:ARG:NH1	2.36	0.58
12:3A:81:LEU:HD22	12:3A:82:ILE:H	1.67	0.58
14:5A:40:CYS:SG	14:5A:42:ILE:N	2.75	0.58
60:2L:53:G:H2'	60:2L:54:5MU:H5'	1.85	0.58
27:14:2261:C:C6	50:E5:16:SER:HB3	2.37	0.58
27:14:2306:C:H3'	27:14:2307:G:H5''	1.85	0.58
27:14:2801:A:H2'	27:14:2802:G:O4'	2.03	0.58
32:39:51:THR:HB	32:39:88:VAL:HG21	1.85	0.58
34:59:33:LEU:HD11	34:59:136:ILE:HB	1.84	0.58
40:45:110:THR:HG1	40:45:113:GLN:H	1.50	0.58
43:75:98:LYS:N	43:75:98:LYS:HD2	2.18	0.58
9:8E:43:ALA:HA	9:8E:74:ILE:HD13	1.85	0.58
17:8I:55:ASP:HA	17:8I:79:SER:HA	1.85	0.58
27:1H:1073:U:H4'	27:1H:1074:A:OP1	2.02	0.58
27:1H:2422:G:H2'	27:1H:2423:G:O4'	2.03	0.58
33:41:67:LYS:NZ	54:M8:5:ILE:HB	2.17	0.58
39:78:122:PRO:HB3	39:78:141:ALA:HB1	1.84	0.58
49:H8:151:HIS:HB2	49:H8:154:ASP:OD1	2.03	0.58
1:1G:697:U:H3'	1:1G:698:G:H8	1.68	0.58
2:12:8:LYS:NZ	2:12:217:ARG:HH21	2.00	0.58
13:4A:97:PRO:HA	13:4A:110:ARG:HD3	1.85	0.58
24:3L:52:G:N1	24:3L:62:C:N3	2.51	0.58
27:14:1442:G:H5'	27:14:1628:G:H5''	1.84	0.58
27:14:2723:C:H4'	41:55:1:MET:HG3	1.85	0.58
1:13:1054:C:N3	22:1K:34:G:H1'	2.18	0.58
2:1E:127:ILE:O	2:1E:135:GLN:NE2	2.35	0.58
6:5E:62:TRP:CH2	6:5E:64:GLN:HB2	2.38	0.58
20:BI:36:LEU:HB3	20:BI:59:ALA:HB2	1.85	0.58
27:1H:400:G:O2'	27:1H:401:U:OP2	2.20	0.58
27:1H:594:G:H2'	27:1H:2053:A:N7	2.18	0.58
27:1H:2605:G:OP1	65:1H:3689:HOH:O	2.17	0.58
1:1G:160:A:H1'	1:1G:344:A:N7	2.18	0.58
3:22:119:ARG:HH12	3:22:140:ARG:HD2	1.68	0.58
27:14:2103:C:N3	27:14:2186:G:N2	2.43	0.58
27:14:2303:G:O2'	27:14:2304:G:H5'	2.03	0.58
8:7E:119:LEU:HB3	8:7E:123:GLU:HB3	1.85	0.58
27:1H:821:U:H5'	30:11:47:GLY:HA3	1.85	0.58
27:1H:1811:U:H2'	65:1H:3732:HOH:O	2.03	0.58
39:78:70:GLN:CD	39:78:70:GLN:N	2.56	0.58
48:G8:102:CYS:SG	48:G8:103:GLY:N	2.77	0.58
1:1G:457:C:H2'	1:1G:458:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:554:C:H2'	1:1G:555:C:C6	2.38	0.58
1:1G:1101:A:N6	2:12:176:GLU:OE2	2.36	0.58
27:14:636:G:O2'	27:14:638:G:O2'	2.16	0.58
27:14:857:C:H4'	50:E5:23:VAL:HG21	1.85	0.58
27:14:2327:A:H2'	27:14:2328:A:C8	2.39	0.58
33:49:47:LYS:HG3	33:49:81:LYS:HB2	1.86	0.58
40:45:43:THR:HA	40:45:94:VAL:HG12	1.84	0.58
43:75:58:ASN:ND2	43:75:58:ASN:O	2.35	0.58
54:I5:23:GLU:O	54:I5:25:TYR:N	2.31	0.58
1:13:933:G:OP2	7:6E:3:ARG:HB2	2.04	0.58
13:4I:12:ASN:HB3	13:4I:46:LYS:HB2	1.85	0.58
27:1H:1481:A:H61	27:1H:1606:A:N6	2.02	0.58
27:1H:1767:G:N2	27:1H:1769:U:OP2	2.37	0.58
27:1H:1850:U:O4	30:11:154:LYS:HD3	2.04	0.58
27:1H:2014:U:H2'	27:1H:2015:G:H5''	1.84	0.58
27:1H:2788:C:H2'	27:1H:2789:A:O4'	2.03	0.58
49:H8:110:GLY:O	49:H8:115:GLY:HA3	2.04	0.58
1:1G:1090:U:H2'	1:1G:1091:U:H6	1.69	0.58
1:1G:1288:A:H2'	1:1G:1289:A:O4'	2.03	0.58
20:BA:89:ARG:HE	20:BA:104:LEU:HD12	1.68	0.58
27:14:107:C:H2'	27:14:108:U:C6	2.38	0.58
27:14:956:G:N2	27:14:959:A:H3'	2.18	0.58
27:14:2651:C:N4	27:14:2669:G:H1	1.99	0.58
30:19:8:PRO:HB3	30:19:14:ARG:HB2	1.86	0.58
1:13:57:G:H2'	1:13:58:C:C6	2.39	0.58
1:13:144:G:H1	1:13:178:C:H42	1.51	0.58
27:1H:1477:C:H2'	27:1H:1478:U:H6	1.68	0.58
33:41:142:PRO:HB2	54:M8:31:ILE:HG21	1.84	0.58
43:B8:124:ASP:HA	43:B8:127:ALA:HB3	1.85	0.58
1:1G:1151:A:O2'	1:1G:1152:A:O5'	2.20	0.58
2:12:34:ALA:O	2:12:41:ILE:HB	2.04	0.58
8:72:97:VAL:HA	8:72:100:ILE:HD11	1.84	0.58
8:72:103:VAL:HG21	8:72:110:ALA:HB2	1.84	0.58
28:1J:104:A:OP1	49:D5:72:ARG:NH2	2.33	0.58
30:19:234:GLY:O	65:19:403:HOH:O	2.17	0.58
39:35:23:PRO:O	39:35:25:SER:N	2.36	0.58
44:85:81:HIS:HD2	44:85:117:GLN:HE21	1.49	0.58
1:13:755:G:OP2	15:6I:65:ARG:HD2	2.03	0.58
4:3E:172:PRO:HB2	4:3E:187:ARG:HH12	1.68	0.58
13:4I:3:ARG:HH12	13:4I:7:VAL:HG12	1.67	0.58
27:1H:2223:C:O2	27:1H:2239:C:N4	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2742:U:H2'	27:1H:2743:G:C8	2.39	0.58
29:71:8:ARG:NH1	29:71:12:GLU:OE2	2.37	0.58
30:11:11:PRO:O	30:11:12:SER:OG	2.18	0.58
30:11:70:TRP:CD1	30:11:70:TRP:C	2.75	0.58
40:88:51:ARG:O	40:88:55:VAL:HG13	2.04	0.58
41:98:57:ARG:CD	41:98:62:ALA:HB2	2.34	0.58
46:E8:18:ARG:NH1	46:E8:76:VAL:O	2.36	0.58
49:H8:10:ARG:NH2	49:H8:26:GLY:O	2.36	0.58
1:1G:800:G:H8	1:1G:800:G:O5'	1.86	0.58
9:82:95:LYS:HD3	9:82:96:LEU:HD22	1.85	0.58
12:3A:38:ARG:HB3	12:3A:38:ARG:CZ	2.32	0.58
18:9A:73:ALA:HA	18:9A:76:LEU:HD12	1.85	0.58
27:14:1162:G:H2'	27:14:1163:G:C8	2.38	0.58
27:14:1360:A:H5'	27:14:1361:G:OP2	2.04	0.58
27:14:1653:G:OP1	27:14:2822:G:N2	2.36	0.58
27:14:1675:C:OP2	65:14:3541:HOH:O	2.17	0.58
45:95:71:LEU:H	45:95:86:GLY:HA3	1.67	0.58
1:13:991:U:O4	1:13:1212:U:O2'	2.16	0.58
1:13:1157:A:O2'	1:13:1158:C:O4'	2.22	0.58
1:13:1399:C:C2	1:13:1502:A:N6	2.71	0.58
2:1E:209:ARG:HH21	2:1E:213:LEU:HD21	1.68	0.58
4:3E:108:LEU:HB3	4:3E:110:PHE:HE1	1.68	0.58
9:8E:25:LYS:HB2	9:8E:60:ASP:OD2	2.03	0.58
27:1H:346:G:O3'	32:31:168:ARG:NH2	2.36	0.58
27:1H:683:G:H1	27:1H:698:C:H42	1.52	0.58
27:1H:1038:C:H2'	27:1H:1039:C:H6	1.69	0.58
27:1H:1922:G:H1	27:1H:1925:C:N4	1.99	0.58
27:1H:2058:G:OP1	65:1H:3688:HOH:O	2.17	0.58
46:E8:38:TYR:OH	55:N8:47:PRO:HG2	2.04	0.58
50:I8:24:LYS:HG3	50:I8:36:ILE:HD11	1.85	0.58
1:1G:646:U:H2'	1:1G:647:C:C6	2.39	0.58
1:1G:760:G:N2	17:8A:94:ASN:HB3	2.18	0.58
1:1G:862:C:H1'	1:1G:874:G:H5''	1.84	0.58
20:BA:26:ASN:HB2	20:BA:71:THR:HG23	1.85	0.58
27:14:805:G:OP1	65:14:3543:HOH:O	2.17	0.58
29:79:42:GLU:HB2	29:79:44:HIS:CE1	2.39	0.58
30:19:54:ARG:O	30:19:218:ARG:NH1	2.37	0.58
34:59:10:PRO:HB2	34:59:50:VAL:HG13	1.85	0.58
48:C5:55:TYR:OH	48:C5:61:ILE:HG13	2.03	0.58
49:D5:5:LEU:HB3	49:D5:59:LEU:HA	1.84	0.58
4:3E:57:ARG:HD3	4:3E:205:GLU:C	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:90:VAL:O	5:4E:120:THR:HA	2.04	0.58
9:8E:7:THR:O	9:8E:83:ARG:HD2	2.04	0.58
10:1I:78:ASN:HD22	10:1I:79:ARG:H	1.52	0.58
27:1H:208:A:H2	27:1H:225:U:H4'	1.68	0.58
27:1H:706:C:H2'	27:1H:707:C:H6	1.69	0.58
27:1H:1249:G:H5'	39:78:3:LEU:HD12	1.86	0.58
34:51:3:ARG:HA	34:51:3:ARG:HE	1.68	0.58
38:68:63:VAL:HG12	38:68:106:LEU:HD11	1.85	0.58
39:78:106:LEU:O	39:78:107:LYS:HB2	2.03	0.58
39:78:113:LYS:HA	39:78:129:ALA:O	2.04	0.58
1:1G:926:G:C6	25:4L:45:U:H2'	2.39	0.58
11:2A:59:TYR:CE1	11:2A:63:LEU:HD21	2.39	0.58
20:BA:53:LEU:HA	20:BA:56:MET:HB2	1.86	0.58
27:14:646:A:H2'	27:14:647:G:O4'	2.02	0.58
27:14:708:C:H42	27:14:723:G:H1	1.52	0.58
27:14:851:U:OP1	53:H5:49:LYS:NZ	2.31	0.58
27:14:1686:C:H6	27:14:1686:C:H5''	1.69	0.58
34:59:122:THR:HG22	34:59:123:PHE:H	1.69	0.58
10:1I:51:ARG:NE	10:1I:60:ARG:O	2.34	0.58
27:1H:895:U:H5'	65:1H:4045:HOH:O	2.04	0.58
27:1H:908:U:C5	27:1H:964:A:H2	2.22	0.58
1:1G:1117:G:N2	1:1G:1180:A:O2'	2.37	0.58
4:32:117:ALA:O	4:32:121:VAL:HG23	2.03	0.58
4:32:152:SER:O	4:32:155:LEU:HB2	2.03	0.58
16:7A:48:TRP:CE3	16:7A:49:LEU:HB2	2.39	0.58
27:14:2280:G:O2'	27:14:2388:A:N1	2.36	0.58
38:25:98:VAL:HG12	38:25:117:LEU:HD12	1.86	0.58
44:85:66:ASN:O	44:85:70:ARG:HB2	2.04	0.58
1:13:413:G:H2'	1:13:428:G:N2	2.18	0.57
1:13:562:C:H1'	12:3I:12:ARG:HB3	1.86	0.57
1:13:1157:A:H61	1:13:1180:A:H2'	1.69	0.57
1:13:1241:G:H2'	1:13:1242:C:C6	2.38	0.57
1:13:1305:G:O2'	1:13:1306:A:C8	2.52	0.57
2:1E:69:LEU:HD23	2:1E:159:PRO:HG3	1.86	0.57
13:4I:4:ILE:HG22	13:4I:5:ALA:H	1.69	0.57
24:3K:40:C:H2'	24:3K:41:C:C6	2.39	0.57
27:1H:254:C:C2'	27:1H:255:A:H5''	2.34	0.57
27:1H:1459:A:H2'	27:1H:1460:G:C8	2.38	0.57
27:1H:2039:U:O2	55:N8:7:PRO:HG2	2.04	0.57
27:1H:2136:U:H5'	27:1H:2137:A:H8	1.69	0.57
32:31:123:LEU:HD13	32:31:192:LEU:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:51:41:MET:HA	34:51:53:GLU:O	2.04	0.57
35:61:25:TYR:HE1	35:61:29:TYR:HD2	1.52	0.57
46:E8:29:LEU:HD21	46:E8:33:ARG:NH2	2.18	0.57
49:H8:35:ARG:HB3	49:H8:35:ARG:HH11	1.69	0.57
1:1G:371:G:O2'	1:1G:373:A:N7	2.37	0.57
8:72:100:ILE:HD12	8:72:125:ARG:HG3	1.86	0.57
27:14:2819:G:H1	27:14:2827:C:H42	1.51	0.57
28:1J:102:G:N3	49:D5:73:GLN:NE2	2.43	0.57
51:F5:85:LEU:HD12	51:F5:87:PRO:HD2	1.86	0.57
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.40	0.57
5:4E:152:ARG:NH2	8:7E:107:LEU:O	2.37	0.57
27:1H:66:U:N3	27:1H:73:A:H2	1.99	0.57
27:1H:808:G:H5''	65:1H:4171:HOH:O	2.04	0.57
33:41:67:LYS:HG3	54:M8:6:HIS:ND1	2.18	0.57
43:B8:99:LEU:O	43:B8:102:ILE:HG23	2.04	0.57
49:H8:54:HIS:NE2	49:H8:123:ASP:OD1	2.30	0.57
13:4A:80:ARG:NH1	19:AA:65:ASN:O	2.37	0.57
16:7A:1:MET:HE1	16:7A:65:GLN:HB2	1.86	0.57
27:14:1894:C:O2'	27:14:1895:C:H5'	2.04	0.57
28:1J:21:G:H2'	28:1J:22:U:O4'	2.04	0.57
28:1J:45:A:H8	28:1J:45:A:OP1	1.86	0.57
41:55:41:ALA:O	41:55:43:GLU:N	2.37	0.57
44:85:20:LEU:HB3	44:85:39:LEU:HD11	1.85	0.57
22:1K:55:PSU:H4'	27:1H:944:C:H4'	1.87	0.57
24:3K:5:G:N2	24:3K:68:C:H42	2.02	0.57
27:1H:598:C:OP2	65:1H:3687:HOH:O	2.17	0.57
32:31:56:GLU:OE1	32:31:93:LYS:NZ	2.37	0.57
1:1G:1348:U:H3	1:1G:1374:A:H2	1.50	0.57
19:AA:7:LYS:HB3	54:I5:67:TYR:CE1	2.39	0.57
27:14:996:A:N6	27:14:1160:G:C6	2.72	0.57
27:14:1252:G:N3	44:85:33:ARG:HD2	2.19	0.57
27:14:1991:U:H2'	27:14:1992:G:H5''	1.87	0.57
1:13:62:U:N3	1:13:105:G:O6	2.20	0.57
1:13:1152:A:H5''	10:1I:13:HIS:CD2	2.39	0.57
1:13:1270:C:OP2	21:1F:24:ARG:NH2	2.36	0.57
1:13:1315:U:H2'	1:13:1316:G:O4'	2.02	0.57
7:6E:109:ASN:HA	7:6E:119:ARG:HE	1.68	0.57
12:3I:4:ILE:O	12:3I:8:VAL:HG23	2.03	0.57
12:3I:101:VAL:HG12	12:3I:102:TYR:H	1.70	0.57
13:4I:88:ARG:HH22	19:AI:2:PRO:HG2	1.69	0.57
17:8I:4:LYS:HE3	17:8I:6:LEU:HD21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:536:C:C2'	27:1H:537:U:H5'	2.34	0.57
27:1H:2157:A:N7	27:1H:2180:G:H1'	2.20	0.57
27:1H:2318:A:H2'	27:1H:2319:C:O4'	2.04	0.57
27:1H:2813:A:H5''	27:1H:2905:U:H1'	1.86	0.57
29:71:40:THR:HG23	29:71:177:LYS:HA	1.87	0.57
32:31:164:ARG:HG2	32:31:175:THR:OG1	2.04	0.57
35:61:29:TYR:O	35:61:33:ARG:HB2	2.04	0.57
37:58:36:GLY:H	37:58:42:TRP:HZ3	1.50	0.57
41:98:51:LEU:HD22	41:98:66:VAL:HG13	1.86	0.57
1:1G:532:A:N6	1:1G:1206:G:O2'	2.36	0.57
1:1G:664:G:H22	1:1G:741:G:H1	1.51	0.57
19:AA:45:VAL:HG12	19:AA:64:GLU:HA	1.86	0.57
59:1L:30:G:H2'	59:1L:31:A:H8	1.69	0.57
27:14:28:A:H61	27:14:512:G:H1'	1.70	0.57
27:14:589:C:H2'	27:14:590:A:H8	1.69	0.57
27:14:2749:A:H62	27:14:2750:A:H62	1.53	0.57
31:29:105:THR:HG21	31:29:164:ARG:CZ	2.34	0.57
43:75:15:VAL:HG12	43:75:57:PHE:HB2	1.87	0.57
1:13:511:C:P	4:3E:49:ARG:HH22	2.27	0.57
1:13:673:G:H2'	1:13:674:G:C8	2.40	0.57
4:3E:61:LYS:HE3	4:3E:65:ARG:HD3	1.86	0.57
27:1H:663:A:P	39:78:116:GLY:HA2	2.44	0.57
27:1H:1073:U:H1'	27:1H:1074:A:O5'	2.04	0.57
27:1H:1109:G:H2'	27:1H:1110:G:C8	2.39	0.57
27:1H:1968:G:H2'	27:1H:1969:U:C6	2.40	0.57
43:B8:51:ARG:CG	43:B8:98:LYS:HE3	2.35	0.57
43:B8:118:ARG:HH21	43:B8:121:ILE:HG21	1.69	0.57
1:1G:142:G:H2'	1:1G:143:A:C8	2.40	0.57
1:1G:375:U:O2'	16:7A:6:LEU:O	2.23	0.57
1:1G:1178:G:H5''	9:82:93:ARG:NH2	2.19	0.57
1:1G:1236:A:OP1	21:1B:2:GLY:N	2.37	0.57
1:1G:1449:C:H1'	1:1G:1455:G:N2	2.19	0.57
5:42:100:VAL:O	5:42:107:ARG:NH2	2.37	0.57
12:3A:38:ARG:NH2	12:3A:40:VAL:HG12	2.19	0.57
27:14:2433:A:H5''	27:14:2434:A:OP1	2.04	0.57
27:14:2461:C:H2'	27:14:2462:U:H6	1.68	0.57
27:14:2468:G:OP1	40:45:119:ARG:NH2	2.37	0.57
29:79:3:HIS:HB3	29:79:7:TYR:HB3	1.87	0.57
40:45:12:GLN:HG2	40:45:73:PRO:HD2	1.86	0.57
43:75:55:ASN:H	43:75:59:THR:HB	1.68	0.57
49:D5:23:LYS:HD3	49:D5:40:ASP:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:22:G:H2'	1:13:23:C:C6	2.40	0.57
1:13:1320:C:H5'	19:AI:70:LYS:HG3	1.86	0.57
27:1H:417:G:H1	39:78:71:VAL:HG12	1.68	0.57
27:1H:550:U:H2'	27:1H:551:U:C6	2.39	0.57
27:1H:579:U:O2'	27:1H:580:G:O5'	2.23	0.57
27:1H:948:A:H2'	27:1H:949:C:O4'	2.04	0.57
27:1H:1598:C:OP1	27:1H:1766:U:O2'	2.17	0.57
27:1H:2144:G:H2'	27:1H:2145:U:C6	2.40	0.57
32:31:103:LYS:HA	32:31:106:ARG:HD3	1.86	0.57
1:1G:45:U:H2'	1:1G:46:G:C8	2.39	0.57
1:1G:626:U:H2'	1:1G:627:G:H8	1.69	0.57
3:22:56:ASP:N	3:22:56:ASP:OD1	2.38	0.57
3:22:141:VAL:HG11	3:22:202:ILE:HD13	1.85	0.57
7:62:22:LEU:HD11	7:62:101:LEU:HD21	1.85	0.57
12:3A:87:VAL:O	12:3A:89:OTD:N	2.25	0.57
27:14:171:G:H2'	27:14:172:C:C6	2.39	0.57
27:14:330:A:H2	27:14:1210:A:HO2'	1.53	0.57
27:14:1019:U:H2'	27:14:1020:A:H8	1.67	0.57
27:14:1166:C:N3	27:14:1183:G:N2	2.42	0.57
28:1J:50:G:H2'	28:1J:51:G:O4'	2.05	0.57
30:19:35:LYS:HG3	30:19:36:PRO:HD2	1.87	0.57
32:39:9:ILE:HD13	32:39:20:LEU:HB3	1.86	0.57
35:69:70:GLU:O	35:69:74:ASN:ND2	2.36	0.57
42:65:23:ARG:NH1	42:65:84:GLN:OE1	2.37	0.57
45:95:14:VAL:HA	45:95:18:LEU:HD13	1.86	0.57
47:B5:8:ILE:HD11	47:B5:43:VAL:HG12	1.86	0.57
47:B5:44:GLU:HG3	47:B5:51:VAL:HG23	1.85	0.57
49:D5:18:LEU:HD12	49:D5:23:LYS:HB2	1.87	0.57
52:G5:44:LEU:O	52:G5:46:GLN:N	2.38	0.57
1:13:1129:C:H42	1:13:1143:G:H1	1.53	0.57
1:13:1414:U:H2'	1:13:1415:G:H8	1.70	0.57
22:1K:68:C:H2'	22:1K:69:G:O4'	2.04	0.57
27:1H:271:C:O2	27:1H:274:G:N2	2.36	0.57
27:1H:2620:G:O3'	65:1H:3690:HOH:O	2.17	0.57
37:58:71:ILE:HG22	37:58:73:THR:HG22	1.87	0.57
37:58:97:ARG:HA	37:58:100:GLU:HB3	1.87	0.57
49:H8:15:PRO:O	49:H8:19:ARG:HB2	2.05	0.57
1:1G:939:G:H1	1:1G:1344:C:H42	1.51	0.57
1:1G:977:A:C2'	1:1G:978:A:H5'	2.34	0.57
1:1G:986:A:H4'	19:AA:55:LYS:HG3	1.86	0.57
1:1G:1366:C:H2'	1:1G:1367:C:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2115:G:H1'	27:14:2171:A:H61	1.70	0.57
27:14:2615:U:C2	55:J5:7:PRO:HA	2.39	0.57
29:79:10:LEU:HD23	29:79:219:GLY:HA2	1.87	0.57
55:J5:40:LYS:HG2	55:J5:46:CYS:HA	1.86	0.57
1:13:324:G:N2	1:13:326:G:H3'	2.19	0.57
1:13:1273:G:C2	1:13:1274:G:H1'	2.39	0.57
16:7I:50:LYS:NZ	16:7I:51:VAL:O	2.37	0.57
26:5K:56:C:H2'	26:5K:57:G:H8	1.68	0.57
27:1H:1223:A:H5'	27:1H:1224:C:H6	1.70	0.57
27:1H:1250:A:H1'	27:1H:1252:G:C4	2.39	0.57
27:1H:1892:G:H1	27:1H:1905:C:H42	1.53	0.57
27:1H:2705:C:H42	27:1H:2731:G:H1	1.52	0.57
30:11:79:VAL:HG21	30:11:111:LEU:HD21	1.86	0.57
38:68:7:TYR:CE1	38:68:20:MET:HE3	2.40	0.57
44:C8:82:GLY:HA3	44:C8:113:ALA:HB1	1.87	0.57
47:F8:31:HIS:CE1	47:F8:33:LYS:HB2	2.40	0.57
2:12:54:THR:O	2:12:58:ILE:HG12	2.03	0.57
4:32:15:GLU:HG2	4:32:63:LYS:HB2	1.87	0.57
24:3L:18:G:O2'	24:3L:60:U:O4	2.19	0.57
27:14:335:C:H5''	48:C5:84:ARG:HD3	1.84	0.57
27:14:773:U:C4'	30:19:47:GLY:HA3	2.34	0.57
27:14:1681:G:H8	27:14:1681:G:OP2	1.86	0.57
43:75:91:ARG:HD2	43:75:120:ARG:NH1	2.20	0.57
45:95:35:LEU:HB2	45:95:37:VAL:CG1	2.33	0.57
1:13:148:G:H2'	1:13:149:A:C8	2.39	0.57
1:13:1297:C:O2'	7:6E:114:ARG:NH2	2.38	0.57
4:3E:11:LEU:HD13	4:3E:66:ARG:HG2	1.85	0.57
4:3E:188:LEU:HD22	4:3E:189:PRO:HD2	1.87	0.57
8:7E:87:SER:HB2	8:7E:93:VAL:HB	1.85	0.57
16:7I:71:ARG:HA	16:7I:74:LEU:HD12	1.87	0.57
27:1H:29:U:H2'	27:1H:30:G:C8	2.40	0.57
35:61:122:GLU:O	35:61:126:TYR:OH	2.20	0.57
1:1G:646:U:H2'	1:1G:647:C:H6	1.70	0.57
1:1G:939:G:H5''	7:62:102:ARG:HH22	1.69	0.57
1:1G:1129:C:O2'	1:1G:1146:A:N6	2.36	0.57
20:BA:43:LEU:HD13	20:BA:51:GLU:HB3	1.86	0.57
27:14:664:C:P	39:35:18:ARG:HH21	2.27	0.57
27:14:2151:G:H2'	27:14:2152:G:C8	2.39	0.57
27:14:2648:C:H2'	27:14:2649:U:C6	2.40	0.57
47:B5:24:GLY:O	47:B5:82:GLN:HA	2.05	0.57
47:B5:34:ALA:HB1	47:B5:39:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1305:G:N2	1:13:1331:G:H1'	2.20	0.57
1:13:1452:C:H4'	1:13:1453:G:O5'	2.05	0.57
7:6E:107:ALA:O	7:6E:110:GLN:HG2	2.05	0.57
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.38	0.57
16:7I:40:ASP:OD2	16:7I:44:THR:OG1	2.19	0.57
27:1H:595:A:H1'	27:1H:597:G:H5''	1.86	0.57
27:1H:1008:G:OP1	65:1H:3670:HOH:O	2.18	0.57
27:1H:1095:A:OP2	27:1H:1157:G:N2	2.37	0.57
27:1H:1693:G:O2'	27:1H:1694:C:OP2	2.23	0.57
27:1H:2353:G:O2'	27:1H:2354:G:H5'	2.04	0.57
30:11:182:LEU:N	30:11:272:ALA:HB3	2.15	0.57
45:D8:19:LYS:HA	45:D8:94:LEU:O	2.04	0.57
2:12:104:ASN:OD1	2:12:107:THR:OG1	2.21	0.57
10:1A:4:ILE:HA	10:1A:100:THR:HA	1.86	0.57
60:2L:9:A:O2'	60:2L:10:G:N7	2.38	0.57
1:13:1062:U:H2'	1:13:1063:C:C6	2.40	0.56
25:4K:39:U:H2'	25:4K:40:U:C6	2.39	0.56
27:1H:579:U:O2'	27:1H:580:G:C8	2.55	0.56
27:1H:657:A:OP1	39:78:65:ARG:HD3	2.05	0.56
34:51:153:LYS:HE2	34:51:153:LYS:H	1.70	0.56
40:88:2:LEU:HD11	40:88:66:ILE:HD12	1.87	0.56
40:88:39:PRO:HA	40:88:97:VAL:O	2.05	0.56
1:1G:720:C:O2'	18:9A:63:GLN:NE2	2.37	0.56
1:1G:1226:C:P	13:4A:91:ARG:HH12	2.27	0.56
27:14:872:A:H4'	40:45:66:ILE:HD11	1.87	0.56
27:14:1024:G:C5'	27:14:1025:G:H5''	2.35	0.56
27:14:1416:G:HO2'	27:14:1417:C:H6	1.53	0.56
27:14:1569:A:H5'	30:19:61:LEU:HD21	1.87	0.56
28:1J:50:G:OP1	42:65:63:THR:HG23	2.04	0.56
51:F5:78:LYS:HE2	51:F5:80:LEU:HD21	1.86	0.56
56:K5:24:GLU:HG3	56:K5:25:LYS:H	1.70	0.56
1:13:108:G:N2	1:13:326:G:O6	2.38	0.56
1:13:1179:A:H4'	9:8E:103:THR:HA	1.87	0.56
4:3E:13:ARG:NH1	4:3E:38:TYR:O	2.38	0.56
24:3K:2:C:H2'	24:3K:3:C:C6	2.40	0.56
27:1H:684:G:N2	27:1H:698:C:N3	2.53	0.56
27:1H:822:A:N1	27:1H:835:U:O2'	2.34	0.56
32:31:34:TRP:NE1	39:78:8:PRO:HD3	2.20	0.56
42:A8:110:LEU:HB2	42:A8:112:PHE:CE1	2.41	0.56
48:G8:15:VAL:HG21	48:G8:42:VAL:HG21	1.85	0.56
1:1G:677:U:H3	1:1G:713:G:H22	1.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:865:A:H5'	1:1G:1078:U:C5	2.40	0.56
1:1G:1274:G:N2	1:1G:1275:A:H62	2.02	0.56
3:22:25:GLY:HA3	3:22:28:GLN:HE22	1.70	0.56
27:14:105:C:H2'	27:14:106:C:C6	2.40	0.56
27:14:880:G:N2	27:14:897:C:H42	2.03	0.56
27:14:1101:U:H2'	27:14:1102:C:O4'	2.04	0.56
27:14:1364:G:OP1	51:F5:3:LYS:HD3	2.04	0.56
27:14:1992:G:OP2	65:14:3544:HOH:O	2.18	0.56
27:14:2175:C:O2'	29:79:219:GLY:O	2.23	0.56
28:1J:58:A:H5'	28:1J:59:A:OP2	2.05	0.56
30:19:182:LEU:N	30:19:272:ALA:HB3	2.18	0.56
42:65:67:ARG:HG2	42:65:71:ARG:NH1	2.21	0.56
1:13:474:G:H2'	1:13:475:G:H8	1.69	0.56
1:13:1250:A:H4'	9:8E:68:GLY:H	1.71	0.56
4:3E:18:LYS:HG2	63:3E:302:SF4:S4	2.45	0.56
8:7E:51:VAL:HG21	8:7E:60:ARG:HG2	1.86	0.56
9:8E:8:GLY:HA3	9:8E:76:ALA:O	2.05	0.56
15:6I:25:THR:HG21	15:6I:70:LEU:HD13	1.86	0.56
24:3K:7:A:H5'	24:3K:8:U:OP2	2.05	0.56
26:5K:58:A:H1'	26:5K:60:U:H5	1.71	0.56
27:1H:1198:G:H5''	44:C8:81:HIS:CE1	2.39	0.56
27:1H:1616:G:H5''	30:11:61:LEU:HD22	1.87	0.56
32:31:198:ALA:HA	32:31:201:VAL:HB	1.88	0.56
38:68:104:ARG:HD3	43:B8:36:GLU:HG3	1.87	0.56
53:L8:18:ASP:N	53:L8:18:ASP:OD1	2.37	0.56
56:O8:11:LEU:HG	56:O8:51:GLU:HG3	1.88	0.56
56:O8:20:ASN:OD1	56:O8:20:ASN:N	2.27	0.56
1:1G:26:A:N6	1:1G:558:G:O2'	2.36	0.56
1:1G:1319:A:H2'	1:1G:1323:G:N7	2.20	0.56
1:1G:1328:C:H2'	1:1G:1329:A:H8	1.70	0.56
2:12:10:LEU:H	2:12:10:LEU:HD22	1.69	0.56
2:12:17:PHE:HB3	2:12:42:ILE:HG23	1.87	0.56
3:22:44:GLU:HA	3:22:52:LEU:HD21	1.87	0.56
5:42:48:ALA:HB1	5:42:49:PRO:HD2	1.86	0.56
19:AA:33:THR:OG1	19:AA:35:SER:O	2.23	0.56
59:1L:36:A:H62	59:1L:37:MIA:H152	1.68	0.56
27:14:34:C:HO2'	27:14:35:G:P	2.28	0.56
27:14:84:A:OP2	48:C5:8:LYS:NZ	2.33	0.56
27:14:1024:G:H3'	27:14:1025:G:H5''	1.86	0.56
27:14:2575:C:H5'	31:29:144:ARG:HG2	1.86	0.56
34:59:69:ARG:NH1	34:59:73:ALA:HB2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:69:75:LEU:HD21	35:69:105:HIS:CE1	2.40	0.56
42:65:11:LYS:HE3	42:65:15:ARG:NH2	2.19	0.56
42:65:11:LYS:O	42:65:15:ARG:HB2	2.05	0.56
45:95:20:LEU:O	45:95:94:LEU:N	2.37	0.56
51:F5:98:LEU:HD23	51:F5:98:LEU:H	1.71	0.56
1:13:280:C:C2	17:8I:38:ARG:HG3	2.40	0.56
23:2K:20:H2U:H5''	23:2K:20:H2U:O2	2.05	0.56
27:1H:330:U:H2'	27:1H:331:U:C6	2.40	0.56
27:1H:1484:C:H2'	27:1H:1485:U:H6	1.70	0.56
27:1H:1593:A:H2'	27:1H:1594:C:O4'	2.05	0.56
27:1H:2170:G:C5	27:1H:2171:G:H1'	2.41	0.56
31:21:5:LEU:HD12	31:21:51:PHE:HB2	1.87	0.56
39:78:85:LEU:HA	39:78:88:LEU:HD22	1.86	0.56
49:H8:7:ALA:O	49:H8:61:LEU:HA	2.06	0.56
49:H8:75:ASN:O	49:H8:84:GLU:HG3	2.05	0.56
1:1G:1095:U:P	1:1G:1108:G:H1	2.28	0.56
1:1G:1125:U:H2'	1:1G:1126:U:O4'	2.05	0.56
7:62:113:GLU:HG3	7:62:119:ARG:HA	1.88	0.56
27:14:401:A:H2'	27:14:402:A:C8	2.40	0.56
27:14:2086:U:H2'	27:14:2087:G:C8	2.40	0.56
27:14:2602:A:H4'	27:14:2603:G:C5'	2.35	0.56
29:79:193:ILE:HD13	29:79:226:PRO:HA	1.88	0.56
31:29:18:ASP:HB3	43:75:82:LEU:HD21	1.88	0.56
37:15:58:ASP:OD1	37:15:58:ASP:N	2.35	0.56
41:55:28:LEU:HD11	41:55:116:LEU:HD21	1.87	0.56
43:75:105:LEU:O	43:75:107:ASP:N	2.39	0.56
54:I5:11:PRO:HA	54:I5:25:TYR:HA	1.87	0.56
1:13:67:C:H2'	1:13:68:G:H8	1.67	0.56
7:6E:69:VAL:HG22	7:6E:135:VAL:HG22	1.88	0.56
10:1I:90:LEU:N	10:1I:91:PRO:HD3	2.20	0.56
27:1H:328:U:H2'	27:1H:329:G:C8	2.41	0.56
27:1H:470:A:C5	32:31:45:ARG:HD2	2.41	0.56
27:1H:1212:U:H2'	27:1H:1213:C:C6	2.40	0.56
27:1H:2035:G:OP1	46:E8:11:ARG:NH2	2.39	0.56
27:1H:2613:A:H2'	27:1H:2614:C:C6	2.41	0.56
33:41:107:LEU:O	54:M8:38:LYS:HE2	2.05	0.56
34:51:30:LYS:HE3	34:51:80:SER:HA	1.87	0.56
1:1G:17:U:H2'	1:1G:18:C:C6	2.41	0.56
1:1G:148:G:H2'	1:1G:149:A:H8	1.70	0.56
1:1G:464:G:H1'	1:1G:468:A:H61	1.71	0.56
1:1G:1372:U:H5''	9:82:71:SER:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:7:VAL:HG22	2:12:8:LYS:H	1.70	0.56
13:4A:34:LEU:O	13:4A:38:GLY:N	2.38	0.56
27:14:67:U:H2'	27:14:68:G:H8	1.69	0.56
27:14:1894:C:H2'	27:14:1895:C:C6	2.41	0.56
44:85:90:VAL:O	44:85:92:ARG:HD3	2.05	0.56
1:13:8:A:H5'	5:4E:101:ILE:HG22	1.88	0.56
1:13:91:C:N4	1:13:92:G:O6	2.38	0.56
1:13:372:C:O2'	1:13:373:A:O5'	2.24	0.56
1:13:1020:U:H2'	1:13:1021:G:C8	2.40	0.56
4:3E:57:ARG:HG2	4:3E:206:PHE:HB2	1.86	0.56
27:1H:571:C:H3'	27:1H:572:A:C8	2.41	0.56
27:1H:957:A:H62	40:88:12:GLN:HA	1.70	0.56
27:1H:2285:U:O4	65:1H:3676:HOH:O	2.15	0.56
27:1H:2405:A:H2	27:1H:2437:C:H42	1.54	0.56
27:1H:2565:OMU:H6	27:1H:2565:OMU:O5'	2.06	0.56
27:1H:2718:A:N7	65:1H:3765:HOH:O	2.32	0.56
32:31:9:ILE:HG23	32:31:20:LEU:O	2.06	0.56
1:1G:468:A:O2'	16:7A:82:GLN:HG2	2.05	0.56
7:62:21:VAL:O	7:62:24:THR:OG1	2.24	0.56
14:5A:23:ARG:HH21	14:5A:30:ALA:HB2	1.70	0.56
60:2L:44:G:H4'	60:2L:45:U:H5'	1.87	0.56
27:14:34:C:O2'	27:14:35:G:H8	1.88	0.56
27:14:162:U:H4'	27:14:171:G:C4	2.41	0.56
27:14:1043:C:H42	27:14:1112:G:H22	1.53	0.56
27:14:1171:G:O2'	27:14:1173:G:O4'	2.22	0.56
27:14:1716:U:H1'	27:14:1746:G:N2	2.20	0.56
27:14:2720:U:H3	27:14:2873:A:H2	1.49	0.56
33:49:4:ASP:OD2	33:49:9:ARG:NH1	2.38	0.56
37:15:128:HIS:NE2	37:15:130:HIS:HA	2.21	0.56
38:25:2:ILE:HG23	38:25:6:THR:HB	1.87	0.56
7:6E:15:ASP:HB3	7:6E:19:GLY:N	2.19	0.56
8:7E:94:TYR:HE1	8:7E:132:GLU:HB2	1.71	0.56
16:7I:17:TYR:HE2	16:7I:41:PRO:HG3	1.71	0.56
27:1H:710:G:OP1	39:78:15:ARG:NE	2.38	0.56
27:1H:752:G:O2'	27:1H:774:G:N1	2.34	0.56
33:41:34:LEU:HD12	33:41:100:TRP:CH2	2.41	0.56
33:41:112:PRO:HB3	54:M8:37:SER:H	1.70	0.56
35:61:25:TYR:CE1	35:61:29:TYR:HD2	2.24	0.56
39:78:136:GLU:HA	39:78:139:LYS:HE3	1.88	0.56
45:D8:37:VAL:HG13	45:D8:38:LEU:H	1.71	0.56
1:1G:304:U:H2'	1:1G:305:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:474:G:H2'	1:1G:475:G:H8	1.71	0.56
1:1G:1254:C:H5''	10:1A:45:ARG:HH12	1.71	0.56
1:1G:1392:G:O2'	1:1G:1503:A:OP2	2.23	0.56
6:52:45:LEU:HG	6:52:59:TYR:HD1	1.71	0.56
16:7A:66:PRO:HD2	16:7A:71:ARG:HH21	1.71	0.56
24:3L:40:C:H2'	24:3L:41:C:C6	2.40	0.56
27:14:1305:C:N3	27:14:1623:G:N1	2.46	0.56
31:29:11:MET:CG	31:29:24:THR:HG22	2.34	0.56
1:13:191:G:O2'	20:BI:101:GLY:O	2.24	0.56
5:4E:28:PHE:O	5:4E:47:LYS:HA	2.06	0.56
5:4E:41:VAL:O	5:4E:66:MET:HA	2.05	0.56
22:1K:27:G:N2	22:1K:45:U:O4	2.39	0.56
24:3K:48:C:OP2	24:3K:59:U:O2'	2.24	0.56
27:1H:388:G:H2'	27:1H:389:A:C8	2.40	0.56
27:1H:1211:G:H2'	27:1H:1212:U:C6	2.40	0.56
27:1H:2326:C:H4'	33:41:91:ARG:HG3	1.86	0.56
27:1H:2344:G:H4'	50:I8:42:GLY:HA3	1.86	0.56
27:1H:2597:U:H2'	27:1H:2598:U:C6	2.41	0.56
28:16:50:G:OP1	42:A8:63:THR:HG23	2.05	0.56
31:21:12:THR:HG22	43:B8:58:ASN:OD1	2.04	0.56
31:21:120:TRP:CD2	31:21:155:LYS:HD3	2.41	0.56
42:A8:14:VAL:O	42:A8:18:ILE:HG12	2.06	0.56
5:42:31:LEU:HD11	5:42:43:LEU:HD11	1.87	0.56
19:AA:67:VAL:HG11	54:I5:56:VAL:HG13	1.88	0.56
60:2L:32:PSU:C2	60:2L:33:U:C5	2.94	0.56
27:14:528:A:H8	27:14:528:A:H3'	1.70	0.56
27:14:956:G:H2'	27:14:957:A:H2'	1.87	0.56
27:14:1418:G:OP1	27:14:1588:C:O2'	2.22	0.56
34:59:8:PRO:HG2	34:59:69:ARG:HG2	1.86	0.56
35:69:124:GLY:H	35:69:142:VAL:HG21	1.71	0.56
43:75:45:PHE:CE2	43:75:74:ARG:HB2	2.41	0.56
1:13:1027:C:H2'	1:13:1028:C:C6	2.41	0.56
1:13:1288:A:N3	1:13:1352:C:O2'	2.33	0.56
4:3E:49:ARG:H	4:3E:49:ARG:HD3	1.71	0.56
7:6E:20:ASP:OD2	7:6E:23:VAL:N	2.39	0.56
27:1H:2628:U:OP1	65:1H:3677:HOH:O	2.18	0.56
35:61:127:VAL:HG13	35:61:139:GLN:HG3	1.87	0.56
36:38:60:ARG:HA	36:38:60:ARG:HE	1.71	0.56
5:42:69:VAL:O	5:42:71:LEU:HG	2.06	0.56
27:14:243:U:OP2	58:M5:8:LYS:NZ	2.38	0.56
35:69:144:VAL:HG22	35:69:145:VAL:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:35:55:ARG:HG2	39:35:56:SER:N	2.21	0.56
44:85:90:VAL:HG22	45:95:39:LEU:HD23	1.87	0.56
1:13:986:A:H2'	1:13:987:G:O4'	2.05	0.56
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.70	0.56
1:13:1446:A:OP1	1:13:1446:A:H4'	2.05	0.56
1:13:1541:U:O4	25:4K:31:A:N6	2.39	0.56
2:1E:92:TYR:CE1	2:1E:151:GLY:HA3	2.41	0.56
13:4I:81:LEU:HD22	13:4I:86:CYS:SG	2.45	0.56
27:1H:355:A:HO2'	27:1H:356:A:H8	1.54	0.56
29:71:30:LYS:NZ	29:71:178:ALA:O	2.33	0.56
30:11:181:GLU:HA	30:11:272:ALA:HB3	1.86	0.56
37:58:95:PRO:O	37:58:96:GLU:HB3	2.06	0.56
40:88:37:LEU:HD11	40:88:130:LYS:HB2	1.87	0.56
58:Q8:6:THR:HG23	58:Q8:64:TYR:HD2	1.71	0.56
1:1G:90:C:H2'	1:1G:91:C:C6	2.40	0.56
13:4A:95:GLY:O	13:4A:110:ARG:HB3	2.06	0.56
14:5A:42:ILE:O	14:5A:46:GLU:N	2.38	0.56
21:1B:5:ASP:OD1	21:1B:6:ARG:N	2.38	0.56
59:1L:51:U:H3	59:1L:63:G:H1	1.54	0.56
25:4L:39:U:H2'	25:4L:40:U:C5	2.41	0.56
27:14:552:G:H2'	27:14:553:U:O4'	2.06	0.56
27:14:1204:A:H1'	27:14:1205:U:OP2	2.06	0.56
27:14:1550:C:OP1	27:14:1727:U:O2'	2.20	0.56
27:14:1930:G:O2'	27:14:1931:U:P	2.64	0.56
27:14:2055:C:O2	65:14:3542:HOH:O	2.17	0.56
37:15:13:TRP:O	37:15:135:PRO:HD2	2.06	0.56
39:35:82:GLY:HA2	39:35:113:LYS:O	2.06	0.56
1:13:381:C:H2'	1:13:382:A:O4'	2.06	0.55
1:13:1175:G:H2'	1:13:1176:A:C8	2.41	0.55
27:1H:2319:C:N4	33:41:42:GLY:O	2.35	0.55
28:16:42:C:O2	33:41:93:THR:N	2.37	0.55
54:M8:23:GLU:C	54:M8:25:TYR:H	2.10	0.55
1:1G:652:U:HO2'	1:1G:653:A:P	2.29	0.55
1:1G:1398:A:H5''	1:1G:1401:G:H4'	1.86	0.55
60:2L:8:4SU:H6	60:2L:8:4SU:H5''	1.88	0.55
45:95:70:ILE:HG22	45:95:72:VAL:HB	1.87	0.55
48:C5:99:CYS:SG	48:C5:105:ALA:HB3	2.46	0.55
49:D5:92:SER:O	49:D5:94:GLU:N	2.39	0.55
50:E5:32:ARG:HB2	50:E5:35:ASN:HD21	1.70	0.55
53:H5:42:ALA:O	53:H5:45:GLY:N	2.39	0.55
1:13:266:G:H5''	1:13:267:C:C5	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:980:C:H5''	1:13:981:U:C5	2.41	0.55
1:13:1200:C:H4'	1:13:1201:A:H5''	1.88	0.55
1:13:1295:G:O3'	13:4I:14:ARG:NH1	2.39	0.55
7:6E:15:ASP:HB3	7:6E:19:GLY:H	1.71	0.55
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.86	0.55
14:5I:40:CYS:CB	14:5I:43:CYS:H	2.19	0.55
22:1K:63:G:H2'	22:1K:64:A:C8	2.42	0.55
23:2K:56:C:H42	33:4I:83:ARG:HH22	1.53	0.55
27:1H:2725:U:H1'	27:1H:2726:A:N7	2.21	0.55
29:71:30:LYS:HA	29:71:33:ALA:HB3	1.89	0.55
34:51:60:ARG:HB3	34:51:60:ARG:NH1	2.21	0.55
40:88:90:VAL:HG13	40:88:91:GLU:N	2.21	0.55
51:J8:2:SER:O	51:J8:61:ARG:NH2	2.36	0.55
1:1G:1226:C:H2'	13:4A:103:THR:HB	1.88	0.55
2:12:121:LEU:HA	2:12:124:SER:HB3	1.88	0.55
24:3L:53:G:N2	24:3L:61:C:O2	2.35	0.55
27:14:270(K):C:N3	27:14:270(N):G:N2	2.35	0.55
27:14:1809:A:H2'	27:14:1810:A:C8	2.41	0.55
27:14:2002:G:O6	65:14:3546:HOH:O	2.18	0.55
32:39:153:SER:HB2	32:39:189:THR:HG22	1.88	0.55
32:39:178:PRO:HB3	32:39:198:ALA:HB2	1.88	0.55
47:B5:18:TYR:HA	47:B5:21:PHE:HD1	1.71	0.55
54:I5:12:ALA:O	54:I5:24:THR:OG1	2.24	0.55
1:13:973:G:H3'	1:13:974:A:H5''	1.88	0.55
2:1E:20:GLU:HB3	2:1E:23:ARG:HG3	1.87	0.55
6:5E:98:LEU:HB2	6:5E:101:ALA:HB2	1.89	0.55
7:6E:73:MET:HG2	7:6E:90:GLU:HA	1.87	0.55
16:7I:28:ARG:NH1	16:7I:29:ASP:OD1	2.39	0.55
24:3K:76:A:H8	27:1H:2407:C:N4	2.02	0.55
27:1H:833:G:O2'	27:1H:1811:U:H5''	2.06	0.55
27:1H:1246:C:P	65:1H:3795:HOH:O	2.64	0.55
27:1H:2040:U:OP2	65:1H:3686:HOH:O	2.17	0.55
28:16:7:G:H4'	42:A8:29:PHE:CD2	2.41	0.55
35:61:87:LYS:HA	35:61:122:GLU:HA	1.88	0.55
37:58:89:LYS:O	37:58:93:THR:OG1	2.22	0.55
39:78:125:VAL:O	39:78:144:GLU:HB2	2.06	0.55
56:O8:13:CYS:O	56:O8:21:TYR:HA	2.06	0.55
57:P8:25:PRO:HB3	57:P8:28:ARG:NH2	2.22	0.55
1:1G:35:G:O2'	12:3A:115:SER:O	2.20	0.55
1:1G:1109:C:H2'	1:1G:1110:A:O4'	2.06	0.55
1:1G:1181:G:H8	1:1G:1182:G:H21	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1313:U:O5'	19:AA:6:LYS:HB3	2.06	0.55
6:52:45:LEU:H	6:52:45:LEU:HD12	1.71	0.55
9:82:71:SER:HA	9:82:74:ILE:HD12	1.88	0.55
17:8A:57:VAL:HA	17:8A:77:VAL:HG23	1.87	0.55
25:4L:35:A:H2'	25:4L:36:G:C8	2.40	0.55
27:14:528:A:H3'	27:14:528:A:C8	2.41	0.55
27:14:1028:A:N6	27:14:1125:G:H2'	2.21	0.55
27:14:1344:G:H4'	27:14:1384:A:C5	2.41	0.55
27:14:1502:C:H5'	27:14:1503:U:OP2	2.06	0.55
27:14:2128:C:H4'	27:14:2173:A:C6	2.42	0.55
27:14:2377:A:H2'	27:14:2378:A:C8	2.41	0.55
27:14:2469:A:H2	27:14:2481:G:N3	2.04	0.55
28:1J:11:C:H3'	28:1J:12:C:C5	2.41	0.55
42:65:42:ASP:C	42:65:44:LYS:H	2.09	0.55
56:K5:23:THR:O	56:K5:24:GLU:HB2	2.06	0.55
3:2E:16:ARG:HH11	3:2E:16:ARG:HB2	1.72	0.55
5:4E:81:GLU:HG2	5:4E:90:VAL:HG22	1.88	0.55
19:AI:12:ASP:C	19:AI:14:HIS:H	2.10	0.55
27:1H:115:G:OP2	27:1H:117:A:O2'	2.19	0.55
27:1H:580:G:H2'	27:1H:581:U:C6	2.41	0.55
27:1H:1101:A:H2'	27:1H:1102:G:C8	2.41	0.55
27:1H:2157:A:H2'	27:1H:2158:A:H8	1.71	0.55
35:61:79:ILE:HG23	35:61:81:VAL:HG13	1.87	0.55
42:A8:11:LYS:HD2	42:A8:15:ARG:HH21	1.71	0.55
54:M8:36:CYS:O	54:M8:38:LYS:N	2.39	0.55
1:1G:174:C:H2'	1:1G:175:C:H6	1.70	0.55
1:1G:760:G:N2	17:8A:97:SER:OG	2.39	0.55
1:1G:827:U:H3	1:1G:872:A:N6	2.04	0.55
5:42:78:HIS:HB2	8:72:104:ARG:HD2	1.88	0.55
10:1A:45:ARG:HB3	10:1A:65:LEU:HB3	1.88	0.55
27:14:928:G:H2'	27:14:929:G:O4'	2.05	0.55
27:14:1708:C:H2'	27:14:1709:U:H6	1.72	0.55
27:14:1814:G:H2'	27:14:1815:A:C8	2.41	0.55
27:14:2291:U:H2'	27:14:2292:C:C6	2.42	0.55
33:49:113:ARG:NH1	33:49:141:PHE:O	2.39	0.55
40:45:138:ASP:N	40:45:138:ASP:OD1	2.39	0.55
49:D5:108:PRO:HA	49:D5:142:SER:OG	2.06	0.55
1:13:403:C:OP2	4:3E:74:GLN:NE2	2.40	0.55
1:13:791:G:C6	1:13:792:A:N1	2.74	0.55
1:13:1085:U:H3'	1:13:1086:U:C5	2.42	0.55
3:2E:120:VAL:HG13	3:2E:133:ALA:HB1	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7E:94:TYR:CE1	8:7E:132:GLU:HB2	2.42	0.55
10:1I:5:ARG:HA	10:1I:73:ASP:OD1	2.06	0.55
27:1H:2822:G:H1	27:1H:2900:C:H42	1.55	0.55
28:16:91:C:OP1	49:H8:79:ARG:NH2	2.37	0.55
42:A8:12:PHE:O	42:A8:16:ASN:ND2	2.39	0.55
51:J8:90:ILE:O	51:J8:94:LEU:HB3	2.07	0.55
55:N8:33:CYS:HB2	55:N8:40:LYS:HG2	1.89	0.55
1:1G:628:G:H2'	1:1G:629:G:H8	1.71	0.55
1:1G:1129:C:N3	1:1G:1143:G:N2	2.54	0.55
1:1G:1263:C:H2'	1:1G:1264:C:O4'	2.07	0.55
2:12:43:ASP:OD1	2:12:44:LEU:N	2.39	0.55
8:72:122:ARG:HG3	8:72:125:ARG:HH21	1.72	0.55
9:82:24:GLY:HA2	9:82:59:PHE:O	2.05	0.55
19:AA:8:GLY:HA2	54:I5:69:LYS:HG2	1.87	0.55
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.89	0.55
27:14:528:A:C2	27:14:2042:A:H2'	2.41	0.55
27:14:1028:A:H62	27:14:1125:G:H2'	1.72	0.55
27:14:1899:G:N2	27:14:1902:C:C5	2.74	0.55
27:14:2366:A:OP2	65:14:3547:HOH:O	2.18	0.55
29:79:186:ALA:O	29:79:190:ARG:NH1	2.39	0.55
1:13:1181:G:O2'	1:13:1184:G:H5'	2.07	0.55
2:1E:168:THR:OG1	2:1E:169:LYS:N	2.38	0.55
3:2E:12:LEU:HD23	3:2E:16:ARG:HG3	1.88	0.55
5:4E:35:GLY:HA3	5:4E:112:LEU:HB3	1.87	0.55
5:4E:53:LEU:O	5:4E:57:LYS:HG2	2.06	0.55
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.89	0.55
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.07	0.55
16:7I:21:VAL:HG23	16:7I:33:ILE:HB	1.88	0.55
27:1H:1543:A:H5'	27:1H:1544:U:OP1	2.07	0.55
35:6I:110:ASP:HB2	35:6I:112:LYS:H	1.71	0.55
46:E8:73:ALA:HB3	46:E8:106:ILE:HD11	1.87	0.55
49:H8:62:PRO:O	49:H8:63:ASP:HB3	2.07	0.55
52:K8:32:LEU:HD12	52:K8:57:ILE:HD12	1.89	0.55
7:62:16:LEU:HD12	9:82:41:VAL:HG12	1.89	0.55
17:8A:40:LYS:HD3	17:8A:42:TYR:CZ	2.41	0.55
60:2L:53:G:H2'	60:2L:54:5MU:H6	1.71	0.55
27:14:263:C:H2'	27:14:264:C:O4'	2.06	0.55
27:14:1210:A:H5''	27:14:1212:G:H5'	1.87	0.55
27:14:1657:C:H2'	27:14:1658:C:C6	2.41	0.55
27:14:1899:G:N2	27:14:1902:C:H5	2.05	0.55
43:75:18:ASP:OD1	43:75:18:ASP:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A5:6:ILE:HG12	46:A5:104:THR:OG1	2.07	0.55
1:13:501:C:OP2	12:3I:121:LYS:NZ	2.33	0.55
2:1E:30:ARG:HD3	2:1E:30:ARG:H	1.71	0.55
3:2E:84:ILE:HD11	3:2E:88:ARG:HH21	1.69	0.55
10:1I:46:ARG:HA	10:1I:64:GLU:HA	1.89	0.55
17:8I:76:LEU:HD21	17:8I:79:SER:HB2	1.89	0.55
27:1H:699:G:O2'	27:1H:700:A:OP1	2.20	0.55
27:1H:2266:G:H1	50:I8:5:LYS:NZ	2.05	0.55
27:1H:2701:U:H1'	27:1H:2735:A:N6	2.22	0.55
39:78:5:ASP:HA	39:78:7:ARG:NH2	2.21	0.55
40:88:97:VAL:HG11	40:88:103:MET:HE1	1.88	0.55
41:98:42:LYS:HA	41:98:45:ARG:HH11	1.72	0.55
49:H8:54:HIS:HB3	49:H8:101:PRO:HD3	1.89	0.55
50:I8:56:ASP:OD2	50:I8:58:THR:OG1	2.23	0.55
1:1G:737:A:H2'	1:1G:738:C:C6	2.42	0.55
7:62:26:PHE:CD2	7:62:30:ILE:HD11	2.41	0.55
8:72:20:TYR:HA	8:72:65:TYR:CE2	2.41	0.55
13:4A:86:CYS:O	13:4A:89:GLY:N	2.36	0.55
27:14:1058:U:H2'	27:14:1059:G:C8	2.42	0.55
27:14:1993:U:H4'	31:29:128:SER:OG	2.07	0.55
27:14:2732:G:H3'	27:14:2733:A:H5'	1.88	0.55
30:19:140:THR:HG22	30:19:141:VAL:O	2.07	0.55
43:75:31:SER:HB3	43:75:42:ILE:HD12	1.89	0.55
48:C5:35:TYR:CD2	48:C5:69:ALA:HB3	2.42	0.55
1:13:835:U:H3	1:13:851:G:H1	1.55	0.55
1:13:1157:A:H62	1:13:1178:G:H21	1.54	0.55
27:1H:185:A:H2'	27:1H:188:C:N4	2.22	0.55
27:1H:219:A:H4'	27:1H:220:U:H5'	1.89	0.55
27:1H:1474:A:H4'	27:1H:1475:C:O5'	2.06	0.55
27:1H:1626:U:H2'	27:1H:1627:A:H5'	1.87	0.55
37:58:36:GLY:O	37:58:39:ARG:HG3	2.06	0.55
43:B8:16:ARG:HD3	43:B8:19:LEU:HD11	1.88	0.55
49:H8:12:GLY:N	49:H8:13:GLU:HG2	2.22	0.55
49:H8:76:LEU:H	49:H8:76:LEU:HD22	1.70	0.55
55:N8:41:PRO:HG2	55:N8:44:THR:HG21	1.89	0.55
56:O8:21:TYR:CE1	56:O8:52:VAL:HG11	2.42	0.55
1:1G:433:C:H2'	1:1G:434:U:H6	1.70	0.55
1:1G:617:G:H4'	16:7A:44:THR:HB	1.88	0.55
27:14:795:C:H2'	27:14:796:C:C6	2.40	0.55
27:14:1171:G:O2'	27:14:1173:G:O5'	2.25	0.55
27:14:2215:G:O2'	27:14:2216:G:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2215:G:H2'	27:14:2216:G:H8	1.71	0.55
27:14:2734:A:H5'	27:14:2735:G:OP2	2.06	0.55
28:1J:80:U:H2'	28:1J:81:G:H21	1.72	0.55
28:1J:83:G:H5''	53:H5:52:HIS:ND1	2.22	0.55
38:25:43:VAL:HG23	38:25:56:ASP:O	2.07	0.55
1:13:939:G:H2'	1:13:940:C:C6	2.41	0.55
1:13:977:A:H2'	1:13:978:A:H5''	1.88	0.55
1:13:1452:C:O2'	1:13:1453:G:OP2	2.21	0.55
22:1K:76:A:H2'	27:1H:2598:U:O4	2.07	0.55
27:1H:1741:U:O2'	30:11:14:ARG:NH2	2.39	0.55
31:21:2:LYS:HA	31:21:84:PHE:CD1	2.42	0.55
31:21:181:LEU:HD11	43:B8:6:LEU:HD22	1.87	0.55
41:98:38:VAL:HG12	41:98:42:LYS:HE3	1.88	0.55
42:A8:42:ASP:C	42:A8:44:LYS:H	2.11	0.55
1:1G:452:A:HO2'	1:1G:453:A:H8	1.55	0.55
1:1G:1393:U:H5'	65:1G:1847:HOH:O	2.06	0.55
2:12:187:LEU:HD11	2:12:204:ASN:N	2.21	0.55
3:22:156:ARG:HD2	3:22:193:TYR:CD1	2.41	0.55
14:5A:40:CYS:SG	14:5A:43:CYS:N	2.66	0.55
27:14:197:A:N6	27:14:2430:A:H2'	2.22	0.55
27:14:1488:G:H5'	27:14:1489:U:OP2	2.07	0.55
27:14:1657:C:OP1	31:29:136:ARG:N	2.38	0.55
27:14:1930:G:H2'	27:14:1968:G:N1	2.22	0.55
27:14:2550:G:H1	27:14:2558:C:H42	1.54	0.55
30:19:68:LYS:HB2	30:19:70:TRP:CH2	2.42	0.55
37:15:62:VAL:HG22	37:15:66:LYS:HG3	1.89	0.55
45:95:69:LYS:HD2	45:95:71:LEU:HG	1.89	0.55
51:F5:41:ARG:HG3	51:F5:43:TYR:CZ	2.42	0.55
1:13:510:A:N7	65:13:1836:HOH:O	2.33	0.55
1:13:520:A:N1	1:13:536:C:H1'	2.22	0.55
22:1K:74:C:C1'	22:1K:75:C:H5'	2.31	0.55
27:1H:470:A:H3'	32:31:45:ARG:NH1	2.22	0.55
27:1H:896:G:H2'	27:1H:897:A:C8	2.41	0.55
27:1H:1154:G:H2'	27:1H:1155:U:C6	2.41	0.55
27:1H:1768:A:O2'	27:1H:1769:U:H5''	2.06	0.55
27:1H:2138:G:N2	27:1H:2140:A:N7	2.55	0.55
27:1H:2157:A:O2'	27:1H:2182:G:N2	2.39	0.55
27:1H:2893:A:H5'	41:98:96:ARG:HB2	1.89	0.55
31:21:117:MET:HG3	31:21:136:ARG:NH2	2.22	0.55
36:38:23:SER:HB2	36:38:68:LEU:HB2	1.88	0.55
39:78:37:GLY:H	39:78:40:SER:CB	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G8:43:ASN:OD1	48:G8:65:ALA:HB3	2.07	0.55
51:J8:49:VAL:HG11	51:J8:70:VAL:HG11	1.89	0.55
55:N8:20:ARG:HA	55:N8:23:HIS:CE1	2.42	0.55
1:1G:721:G:H4'	1:1G:722:A:O4'	2.07	0.55
1:1G:953:G:H2'	1:1G:954:G:O4'	2.07	0.55
1:1G:1238:A:N7	1:1G:1303:C:H1'	2.21	0.55
3:22:18:TRP:CD1	14:5A:54:PRO:HA	2.41	0.55
8:72:64:LYS:HG2	8:72:79:VAL:HG21	1.87	0.55
9:82:99:LEU:HB3	9:82:101:PHE:CE2	2.42	0.55
59:1L:16:U:O2	59:1L:18:G:H5''	2.07	0.55
25:4L:39:U:H2'	25:4L:40:U:H5	1.71	0.55
27:14:33:U:H4'	27:14:34:C:OP1	2.05	0.55
27:14:142:G:H1'	47:B5:37:THR:HG21	1.89	0.55
27:14:1815:A:OP2	30:19:54:ARG:NH2	2.34	0.55
27:14:2734:A:C8	27:14:2735:G:C8	2.95	0.55
27:14:2839:G:C5'	41:55:46:GLY:HA2	2.36	0.55
28:1J:100:G:H2'	28:1J:101:A:C8	2.41	0.55
35:69:82:ARG:NH1	35:69:96:ASP:OD2	2.40	0.55
39:35:85:LEU:HB3	39:35:114:ILE:HD11	1.87	0.55
49:D5:102:LEU:HD13	49:D5:139:VAL:HG21	1.88	0.55
56:K5:40:CYS:SG	56:K5:45:LYS:HE3	2.47	0.55
1:13:636:U:H2'	1:13:637:G:H8	1.72	0.54
1:13:785:G:N2	1:13:798:G:C4	2.74	0.54
16:7I:3:LYS:HD2	16:7I:65:GLN:O	2.08	0.54
27:1H:554:A:H2	27:1H:2066:C:H5'	1.72	0.54
27:1H:611:C:N3	39:78:33:ARG:NH1	2.55	0.54
27:1H:2013:C:OP2	65:1H:3693:HOH:O	2.18	0.54
27:1H:2229:G:H4'	27:1H:2230:A:O5'	2.06	0.54
27:1H:2602:A:OP1	65:1H:3638:HOH:O	2.18	0.54
27:1H:2799:C:O2'	31:21:66:HIS:ND1	2.34	0.54
29:71:15:ASP:OD1	29:71:17:ASN:ND2	2.34	0.54
30:11:12:SER:HB2	30:11:208:LYS:HB3	1.89	0.54
37:58:18:ALA:HB3	37:58:55:VAL:O	2.07	0.54
43:B8:4:GLY:O	43:B8:7:ILE:HD13	2.06	0.54
1:1G:631:G:H2'	1:1G:632:A:C8	2.42	0.54
1:1G:1073:U:H2'	1:1G:1074:G:H8	1.72	0.54
1:1G:1228:C:H2'	1:1G:1229:A:H8	1.71	0.54
1:1G:1286:A:H5'	21:1B:25:LYS:HD2	1.88	0.54
5:42:8:GLU:OE2	5:42:63:ARG:NH1	2.36	0.54
16:7A:23:ASP:OD1	16:7A:25:ARG:N	2.38	0.54
20:BA:57:ARG:HD3	20:BA:102:GLY:HA2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:239:U:H2'	27:14:240:G:O4'	2.07	0.54
27:14:510:C:H5''	65:14:3513:HOH:O	2.07	0.54
27:14:526:A:O2'	27:14:2043:C:O2	2.25	0.54
27:14:1151:G:H5''	44:85:81:HIS:CE1	2.42	0.54
27:14:1257:C:H4'	32:39:83:PHE:CE1	2.41	0.54
49:D5:93:ASP:HA	49:D5:130:PRO:HD2	1.89	0.54
1:13:953:G:H2'	1:13:954:G:O4'	2.06	0.54
1:13:1118:C:H42	1:13:1155:G:H1	1.54	0.54
1:13:1250:A:H4'	9:8E:68:GLY:N	2.22	0.54
7:6E:111:ARG:HD2	7:6E:123:GLU:HB2	1.88	0.54
27:1H:265:G:H2'	27:1H:266:U:O4'	2.07	0.54
27:1H:719:C:OP1	39:78:42:SER:O	2.25	0.54
27:1H:1019:A:H8	27:1H:1019:A:OP1	1.89	0.54
31:21:103:ASP:OD2	31:21:202:LYS:HG2	2.08	0.54
32:31:24:LEU:HD23	32:31:115:ALA:HA	1.87	0.54
37:58:15:LEU:HB2	37:58:134:ARG:HB2	1.88	0.54
48:G8:12:THR:O	48:G8:75:ILE:HB	2.07	0.54
50:I8:32:ARG:H	50:I8:35:ASN:ND2	2.03	0.54
51:J8:87:PRO:O	51:J8:91:LYS:N	2.39	0.54
1:1G:216:G:H2'	1:1G:217:C:C6	2.42	0.54
1:1G:1066:C:H2'	1:1G:1067:A:C8	2.42	0.54
6:52:98:LEU:HG	18:9A:30:ASP:HA	1.90	0.54
18:9A:36:ASN:HD22	18:9A:39:VAL:HG21	1.72	0.54
27:14:252:G:OP2	39:35:50:ARG:NH2	2.40	0.54
27:14:483:A:O4'	48:C5:48:ALA:HB1	2.07	0.54
27:14:2037:G:H2'	27:14:2038:G:C8	2.43	0.54
31:29:77:ILE:HG13	31:29:195:LEU:HD22	1.88	0.54
33:49:101:ILE:HD12	33:49:105:LYS:HE2	1.89	0.54
42:65:15:ARG:HH11	42:65:25:ARG:HH21	1.53	0.54
49:D5:15:PRO:HB2	49:D5:19:ARG:NH2	2.22	0.54
50:E5:50:ASN:HA	50:E5:62:LEU:HD12	1.87	0.54
1:13:760:G:O2'	17:8I:98:LEU:HD23	2.07	0.54
10:1I:34:VAL:HG13	10:1I:74:ILE:HG22	1.90	0.54
19:AI:35:SER:OG	19:AI:38:SER:HB3	2.07	0.54
26:5K:22:G:O2'	26:5K:23:A:H8	1.90	0.54
27:1H:2220:U:H1'	27:1H:2221:A:C8	2.43	0.54
33:41:105:LYS:HD3	54:M8:26:SER:HB2	1.88	0.54
42:A8:43:GLU:HG3	50:I8:49:LYS:HE2	1.87	0.54
1:1G:1250:A:OP1	9:82:67:GLY:N	2.34	0.54
1:1G:1257:U:H5'	1:1G:1258:G:C8	2.43	0.54
27:14:776:G:N7	27:14:793:A:O2'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:958:U:OP2	40:45:14:ARG:NH1	2.41	0.54
27:14:2020:A:O2'	27:14:2021:C:H5'	2.07	0.54
27:14:2747:G:N2	27:14:2757:A:H62	1.98	0.54
34:59:73:ALA:O	34:59:77:LYS:N	2.38	0.54
51:F5:53:VAL:HG22	51:F5:74:VAL:HG13	1.89	0.54
1:13:443:C:H2'	1:13:444:C:H6	1.72	0.54
1:13:444:C:O2	1:13:490:G:N2	2.33	0.54
1:13:546:G:P	4:3E:72:GLU:HB3	2.46	0.54
1:13:659:U:H2'	1:13:660:G:C8	2.43	0.54
1:13:765:G:N2	1:13:813:U:OP2	2.39	0.54
1:13:1286:A:C8	1:13:1287:A:H4'	2.42	0.54
7:6E:16:LEU:HD22	9:8E:44:VAL:HG23	1.90	0.54
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.41	0.54
24:3K:7:A:H2	24:3K:66:U:H3	1.53	0.54
27:1H:72:A:OP1	52:K8:54:LYS:NZ	2.38	0.54
27:1H:550:U:H4'	27:1H:579:U:H4'	1.89	0.54
27:1H:1587:G:H2'	27:1H:1588:U:O4'	2.08	0.54
32:31:129:PHE:HA	32:31:142:TRP:NE1	2.23	0.54
37:58:39:ARG:HB2	37:58:41:ASP:OD1	2.08	0.54
46:E8:60:ASN:N	46:E8:60:ASN:OD1	2.37	0.54
1:1G:328:C:H4'	1:1G:329:A:H5'	1.90	0.54
1:1G:664:G:N2	1:1G:741:G:H1	2.04	0.54
1:1G:1200:C:H4'	1:1G:1201:A:C5'	2.37	0.54
9:82:42:ARG:HH11	9:82:71:SER:HB2	1.72	0.54
13:4A:3:ARG:HD2	13:4A:9:ILE:HD11	1.90	0.54
20:BA:33:ILE:HD11	20:BA:63:ILE:N	2.21	0.54
27:14:5:A:H61	27:14:2898:U:H3	1.55	0.54
27:14:1342:A:C2	27:14:1602:U:N3	2.71	0.54
27:14:1824:G:OP1	30:19:52:ARG:NH1	2.41	0.54
27:14:2031:A:O2'	27:14:2454:G:N2	2.40	0.54
27:14:2147:G:H2'	27:14:2148:G:O4'	2.07	0.54
35:69:110:ASP:N	35:69:130:TYR:OH	2.27	0.54
35:69:132:PRO:HD2	35:69:134:PRO:HG2	1.89	0.54
46:A5:106:ILE:O	46:A5:106:ILE:HG13	2.06	0.54
52:G5:32:LEU:HD23	52:G5:53:LEU:HB3	1.90	0.54
1:13:701:C:H1'	1:13:703:G:C2	2.42	0.54
1:13:765:G:H5''	1:13:766:A:OP1	2.07	0.54
6:5E:17:SER:O	6:5E:21:LEU:HB2	2.08	0.54
21:1F:12:LYS:HG3	21:1F:17:THR:O	2.08	0.54
27:1H:1160:U:H2'	27:1H:1161:G:C8	2.42	0.54
27:1H:2481:G:OP1	40:88:119:ARG:NH2	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2696:C:H4'	31:21:13:ARG:NH2	2.22	0.54
33:41:143:GLU:HG3	54:M8:31:ILE:HD11	1.90	0.54
1:1G:477:G:H2'	1:1G:478:A:H8	1.71	0.54
1:1G:1518:MA6:H93	1:1G:1519:MA6:H102	1.90	0.54
2:12:44:LEU:O	2:12:47:THR:HB	2.06	0.54
18:9A:41:LYS:HA	18:9A:44:LEU:HD13	1.88	0.54
59:1L:55:U:H2'	59:1L:57:G:OP2	2.07	0.54
27:14:34:C:O2'	27:14:35:G:P	2.65	0.54
27:14:1142(A):A:O2'	27:14:1143:A:H2'	2.08	0.54
27:14:1535:U:H3'	27:14:1536:A:H8	1.72	0.54
27:14:2094:G:H5'	35:69:25:TYR:CD1	2.43	0.54
27:14:2415:G:O3'	39:35:66:GLY:HA2	2.08	0.54
27:14:2882:A:H5'	41:55:96:ARG:HG3	1.88	0.54
33:49:7:LEU:HA	33:49:10:LYS:HB3	1.89	0.54
39:35:131:SER:HB3	39:35:134:ALA:H	1.73	0.54
56:K5:39:TYR:HD2	56:K5:49:HIS:CD2	2.25	0.54
1:13:129(A):G:C2	1:13:188:U:O2'	2.60	0.54
3:2E:9:GLY:HA2	3:2E:12:LEU:HG	1.88	0.54
8:7E:49:GLU:HG2	8:7E:62:TYR:HE2	1.71	0.54
9:8E:22:GLY:O	9:8E:23:ASN:ND2	2.40	0.54
13:4I:39:ILE:HG12	13:4I:52:GLU:HG2	1.88	0.54
27:1H:605:C:H2'	27:1H:606:G:C8	2.43	0.54
27:1H:795:U:C4	27:1H:2626:U:C4	2.96	0.54
27:1H:1249:G:N1	27:1H:1288:A:OP2	2.37	0.54
27:1H:1374:C:O2'	41:98:105:ARG:NH2	2.41	0.54
27:1H:1472:G:H2'	27:1H:1473:G:O4'	2.08	0.54
27:1H:1714:G:H4'	38:68:6:THR:HG23	1.90	0.54
27:1H:1941:A:O2'	27:1H:1943:OMC:N4	2.41	0.54
27:1H:2826:C:H5'	55:N8:29:THR:HG21	1.90	0.54
1:1G:1276:G:N2	1:1G:1282:C:O2	2.40	0.54
3:22:82:GLU:H	3:22:85:ARG:NH1	2.06	0.54
27:14:309:G:H4'	48:C5:18:GLY:HA2	1.89	0.54
27:14:635:C:O2'	27:14:639:U:OP1	2.26	0.54
27:14:2392:A:H2	27:14:2424:C:H42	1.55	0.54
42:65:3:ARG:CZ	42:65:4:LEU:H	2.20	0.54
51:F5:35:THR:O	51:F5:35:THR:OG1	2.25	0.54
1:13:254:G:O3'	17:8I:69:LYS:NZ	2.33	0.54
14:5I:40:CYS:HB2	14:5I:43:CYS:H	1.73	0.54
20:BI:89:ARG:NH2	20:BI:104:LEU:HD13	2.23	0.54
21:1F:5:ASP:O	21:1F:11:GLY:HA3	2.07	0.54
27:1H:334:G:N3	27:1H:354:G:O2'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:587:G:OP2	65:1H:3695:HOH:O	2.19	0.54
27:1H:1719:U:H2'	27:1H:1721:U:OP2	2.07	0.54
27:1H:2087:C:H2'	27:1H:2088:C:C6	2.43	0.54
27:1H:2178:G:H2'	27:1H:2179:G:O4'	2.08	0.54
27:1H:2518:G:O6	27:1H:2589:G:H2'	2.08	0.54
27:1H:2813:A:OP1	27:1H:2905:U:O2'	2.26	0.54
40:88:33:GLY:HA2	40:88:105:GLU:HA	1.88	0.54
44:C8:91:ASP:O	44:C8:93:LYS:N	2.40	0.54
48:G8:10:GLY:O	48:G8:26:LYS:NZ	2.19	0.54
52:K8:18:PRO:HD3	52:K8:67:LYS:HG2	1.89	0.54
1:1G:587:G:N7	65:1G:1833:HOH:O	2.33	0.54
1:1G:601:C:H2'	1:1G:602:A:H8	1.72	0.54
4:32:13:ARG:HB2	4:32:40:PRO:HD3	1.90	0.54
9:82:75:ASP:HA	9:82:78:LYS:HD2	1.90	0.54
24:3L:58:A:H4'	24:3L:59:U:OP1	2.08	0.54
25:4L:49:U:O2'	25:4L:50:U:H5'	2.08	0.54
27:14:117:G:OP2	27:14:119:A:O2'	2.24	0.54
27:14:1283:G:H22	27:14:1286:A:H5'	1.73	0.54
27:14:1416:G:H1	27:14:1582:C:N4	2.04	0.54
27:14:1728:G:H8	27:14:1732:A:N6	2.05	0.54
27:14:1991:U:C2'	27:14:1992:G:H5''	2.37	0.54
27:14:2197:U:H1'	27:14:2198:A:C8	2.43	0.54
28:1J:58:A:H3'	28:1J:59:A:C8	2.41	0.54
30:19:77:ALA:HA	30:19:97:TYR:HA	1.89	0.54
32:39:63:LYS:HZ1	32:39:67:GLN:HB2	1.71	0.54
39:35:71:VAL:CG1	39:35:72:PRO:HD3	2.35	0.54
45:95:76:LYS:HD2	45:95:80:GLN:O	2.07	0.54
49:D5:130:PRO:HA	49:D5:133:ILE:HD11	1.89	0.54
5:4E:11:ILE:HG13	5:4E:31:LEU:HB3	1.88	0.54
27:1H:1160:U:H2'	27:1H:1161:G:H8	1.71	0.54
27:1H:1256:A:H5'	27:1H:1256:A:C8	2.39	0.54
27:1H:1651:C:OP2	65:1H:3692:HOH:O	2.18	0.54
27:1H:2160:C:N3	27:1H:2178:G:N2	2.55	0.54
27:1H:2405:A:H2	27:1H:2437:C:N4	2.06	0.54
27:1H:2830:G:H2'	27:1H:2832:A:N7	2.23	0.54
29:71:43:VAL:HA	29:71:214:VAL:HG13	1.88	0.54
31:21:195:LEU:HD12	31:21:196:VAL:H	1.71	0.54
34:51:126:PRO:HG2	34:51:130:ARG:HH12	1.73	0.54
44:C8:75:ASN:HB2	44:C8:78:THR:OG1	2.08	0.54
49:H8:52:SER:C	49:H8:54:HIS:H	2.11	0.54
1:1G:413:G:H2'	1:1G:428:G:H22	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:706:A:O2'	11:2A:29:ILE:HD11	2.07	0.54
1:1G:1322:C:O2'	1:1G:1323:G:O5'	2.25	0.54
1:1G:1502:A:OP1	65:1G:1818:HOH:O	2.18	0.54
2:12:219:VAL:HG23	2:12:222:ILE:HD12	1.89	0.54
19:AA:63:THR:OG1	19:AA:64:GLU:N	2.39	0.54
27:14:15:G:H1	27:14:525:U:H3	1.56	0.54
27:14:662:G:OP1	39:35:15:ARG:NE	2.39	0.54
27:14:2392:A:OP2	58:M5:31:HIS:HD2	1.91	0.54
27:14:2532:G:N2	27:14:2662:A:N1	2.56	0.54
27:14:2542:A:H4'	27:14:2543:G:C8	2.43	0.54
37:15:91:LEU:O	37:15:95:PRO:HB3	2.08	0.54
50:E5:65:GLY:HA3	50:E5:81:VAL:HG13	1.90	0.54
1:13:1367:C:OP1	9:8E:114:TYR:HA	2.08	0.54
27:1H:329:G:H2'	27:1H:330:U:C6	2.42	0.54
27:1H:546:G:N7	65:1H:3773:HOH:O	2.33	0.54
27:1H:1250:A:C2	27:1H:1288:A:N1	2.75	0.54
27:1H:1447:G:H2'	27:1H:1448:G:C8	2.42	0.54
40:88:104:PHE:CE2	40:88:125:LEU:HD11	2.39	0.54
1:1G:26:A:O2'	4:32:209:ARG:NH1	2.41	0.54
1:1G:1073:U:H2'	1:1G:1074:G:C8	2.43	0.54
1:1G:1305:G:N2	1:1G:1331:G:H2'	2.23	0.54
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	1.89	0.54
20:BA:10:LEU:H	20:BA:10:LEU:HD12	1.72	0.54
20:BA:13:LEU:H	20:BA:13:LEU:HD12	1.71	0.54
24:3L:63:G:H3'	24:3L:64:A:H8	1.73	0.54
27:14:568:U:OP1	65:14:3548:HOH:O	2.18	0.54
27:14:1858:G:C6	27:14:1883:G:C6	2.96	0.54
50:E5:53:MET:HA	50:E5:58:THR:O	2.08	0.54
58:M5:40:GLU:O	58:M5:42:ARG:N	2.40	0.54
1:13:51:A:OP2	1:13:52:G:H8	1.90	0.54
1:13:1399:C:H4'	1:13:1400:5MC:O5'	2.07	0.54
5:4E:96:PRO:HA	5:4E:117:ASP:OD2	2.08	0.54
16:7I:36:ILE:O	16:7I:52:ASP:N	2.40	0.54
27:1H:1038:C:H6	27:1H:1038:C:H5'	1.73	0.54
27:1H:1044:G:OP1	44:C8:93:LYS:HD2	2.08	0.54
27:1H:1321:A:N1	27:1H:1693:G:H5'	2.23	0.54
27:1H:1383:A:H2'	27:1H:1384:G:C8	2.43	0.54
27:1H:2560:U:H2'	27:1H:2561:G:C8	2.43	0.54
30:11:70:TRP:CH2	30:11:150:LYS:HA	2.43	0.54
34:51:91:GLY:HA3	34:51:94:TYR:CD2	2.43	0.54
35:61:79:ILE:HD13	35:61:80:PRO:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:61:97:ILE:HA	35:61:100:ALA:HB3	1.90	0.54
45:D8:52:VAL:HG22	45:D8:55:ALA:HB3	1.90	0.54
56:O8:25:LYS:HE2	56:O8:27:LYS:CD	2.38	0.54
1:1G:130:A:O2'	1:1G:131:C:OP1	2.25	0.54
1:1G:256:U:H3	1:1G:270:A:H61	1.54	0.54
1:1G:530:G:O6	25:4L:51:U:H1'	2.08	0.54
1:1G:1298:C:H41	7:62:114:ARG:HB3	1.73	0.54
27:14:51:G:N3	27:14:119:A:C2	2.76	0.54
27:14:332:A:O2'	27:14:334:C:OP2	2.19	0.54
27:14:1448:G:H2'	27:14:1449:A:C8	2.42	0.54
31:29:120:TRP:CE3	31:29:155:LYS:HD3	2.42	0.54
42:65:10:ARG:O	42:65:14:VAL:HG12	2.07	0.54
47:B5:26:TYR:HE2	47:B5:83:VAL:HG11	1.72	0.54
1:13:197:A:H4'	1:13:198:G:O5'	2.08	0.53
1:13:947:G:O3'	13:4I:109:THR:OG1	2.26	0.53
1:13:1118:C:P	9:8E:104:ARG:HH11	2.32	0.53
8:7E:121:ASP:OD1	8:7E:122:ARG:N	2.41	0.53
10:1I:49:VAL:HG22	14:5I:41:ARG:HB2	1.90	0.53
13:4I:34:LEU:HD13	13:4I:41:PRO:HA	1.89	0.53
22:1K:43:C:O3'	22:1K:44:G:H4'	2.08	0.53
27:1H:238:G:H5'	27:1H:240:G:N7	2.23	0.53
27:1H:328:U:H2'	27:1H:329:G:H8	1.73	0.53
27:1H:1200:C:H2'	27:1H:1201:G:O4'	2.08	0.53
27:1H:1481:A:H61	27:1H:1606:A:H62	1.53	0.53
27:1H:2320:G:N2	33:41:45:GLU:OE2	2.37	0.53
28:16:15:A:H1'	28:16:109:G:C8	2.43	0.53
38:68:71:ARG:NH2	38:68:105:GLU:OE1	2.36	0.53
42:A8:108:GLY:O	42:A8:110:LEU:HD13	2.07	0.53
56:O8:40:CYS:HB2	56:O8:46:HIS:CE1	2.43	0.53
1:1G:736:C:OP1	18:9A:72:ARG:NH2	2.42	0.53
1:1G:1125:U:OP2	1:1G:1125:U:H4'	2.06	0.53
5:42:67:VAL:HG21	5:42:140:ARG:HA	1.90	0.53
15:6A:69:TYR:CZ	15:6A:73:GLU:HG3	2.43	0.53
19:AA:36:ARG:C	19:AA:38:SER:H	2.11	0.53
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.07	0.53
59:1L:70:G:C6	59:1L:71:G:H1'	2.43	0.53
27:14:28:A:N6	27:14:512:G:H1'	2.21	0.53
27:14:438:G:H2'	27:14:439:G:C8	2.44	0.53
27:14:1859:A:N6	27:14:1883:G:O2'	2.41	0.53
28:1J:41:U:C4	33:49:70:VAL:HG23	2.42	0.53
28:1J:78:A:H2'	28:1J:79:C:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:59:150:ALA:HA	34:59:153:LYS:HB3	1.90	0.53
38:25:119:PRO:HB2	43:75:68:TYR:CE2	2.43	0.53
43:75:2:ASN:O	43:75:2:ASN:ND2	2.40	0.53
43:75:57:PHE:O	43:75:58:ASN:ND2	2.40	0.53
1:13:142:G:H2'	1:13:143:A:C8	2.43	0.53
1:13:545:C:O2'	1:13:549:C:OP1	2.18	0.53
1:13:1321:C:H5'	13:4I:87:TYR:CE2	2.43	0.53
2:1E:9:GLU:OE1	2:1E:9:GLU:N	2.42	0.53
3:2E:34:LEU:HD23	3:2E:35:GLU:HG3	1.89	0.53
4:3E:122:ARG:NH1	4:3E:134:ASP:OD2	2.41	0.53
9:8E:26:VAL:HA	9:8E:61:ALA:HB3	1.90	0.53
11:2I:112:THR:O	11:2I:114:VAL:HG12	2.08	0.53
27:1H:237:G:H4'	27:1H:414:G:C5	2.43	0.53
27:1H:626:G:N2	27:1H:703:A:C8	2.71	0.53
27:1H:1234:U:H4'	45:D8:79:VAL:HG22	1.90	0.53
27:1H:1562:C:H2'	27:1H:1563:U:H6	1.73	0.53
56:O8:42:TRP:CD2	56:O8:42:TRP:N	2.76	0.53
1:1G:186:C:H1'	20:BA:81:LYS:NZ	2.24	0.53
13:4A:29:ARG:HD3	13:4A:64:TRP:CE3	2.43	0.53
27:14:1083:U:H2'	27:14:1085:A:OP2	2.09	0.53
27:14:1695:G:H2'	27:14:1696:G:O4'	2.08	0.53
27:14:2319:G:N7	42:65:3:ARG:HG2	2.23	0.53
27:14:2432:A:H2'	27:14:2433:A:C8	2.43	0.53
27:14:2468:G:H5'	40:45:120:ILE:HD11	1.89	0.53
27:14:2795:G:H1'	27:14:2802:G:H22	1.72	0.53
37:15:128:HIS:CD2	37:15:130:HIS:HA	2.43	0.53
39:35:106:LEU:O	39:35:108:LYS:N	2.40	0.53
48:C5:79:CYS:SG	48:C5:102:CYS:HB2	2.49	0.53
1:13:793:U:H5'	1:13:794:A:H5''	1.89	0.53
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.24	0.53
20:BI:63:ILE:HG22	20:BI:77:ALA:HB1	1.89	0.53
20:BI:97:ALA:O	20:BI:99:LEU:N	2.41	0.53
24:3K:2:C:H2'	24:3K:3:C:H6	1.73	0.53
27:1H:746:C:O2'	27:1H:782:A:N6	2.41	0.53
27:1H:1223:A:H5'	27:1H:1224:C:C6	2.42	0.53
27:1H:2126:C:O2	27:1H:2210:G:N2	2.41	0.53
27:1H:2531:A:H5'	27:1H:2531:A:C8	2.43	0.53
27:1H:2761:G:O6	27:1H:2769:C:H5''	2.08	0.53
33:41:33:ARG:O	33:41:162:THR:HG23	2.08	0.53
49:H8:152:ALA:HB3	49:H8:167:PRO:HA	1.90	0.53
50:I8:68:GLU:OE1	50:I8:82:ARG:HB2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:843:U:H3'	1:1G:848:C:O4'	2.08	0.53
1:1G:1306:A:H1'	1:1G:1332:A:C2	2.44	0.53
6:52:97:PHE:O	18:9A:31:LEU:HD23	2.08	0.53
9:82:17:VAL:HG22	9:82:63:ILE:HG23	1.89	0.53
11:2A:99:GLN:CD	11:2A:105:VAL:HG21	2.29	0.53
20:BA:33:ILE:HG12	20:BA:62:LEU:HB3	1.90	0.53
27:14:38:A:H2'	27:14:39:C:H6	1.74	0.53
27:14:1624:G:O6	65:14:3549:HOH:O	2.18	0.53
29:79:19:ILE:HA	29:79:223:ARG:HG2	1.89	0.53
32:39:11:VAL:HG22	32:39:125:LEU:HB2	1.91	0.53
38:25:71:ARG:HD3	38:25:105:GLU:OE2	2.08	0.53
43:75:39:ARG:HG2	43:75:40:THR:H	1.73	0.53
47:B5:36:LYS:HG2	47:B5:54:VAL:HB	1.90	0.53
1:13:859:A:H2'	1:13:860:A:O4'	2.09	0.53
1:13:1122:U:O4	1:13:1123:A:N6	2.41	0.53
1:13:1280:A:C8	10:1I:41:PRO:HD3	2.43	0.53
1:13:1453:G:OP2	1:13:1453:G:H4'	2.08	0.53
5:4E:77:PRO:HB3	5:4E:144:THR:HG22	1.88	0.53
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.23	0.53
18:9I:32:ARG:HA	18:9I:69:THR:HG21	1.90	0.53
27:1H:495:G:H4'	32:31:62:ARG:HH12	1.73	0.53
27:1H:629:C:H1'	27:1H:705:U:O2'	2.08	0.53
27:1H:853:G:H4'	27:1H:854:C:OP2	2.08	0.53
27:1H:1432:G:H4'	27:1H:1433:C:OP1	2.08	0.53
27:1H:1551:C:H5'	27:1H:1552:C:OP2	2.08	0.53
27:1H:2045:U:O2'	27:1H:2630:C:H5'	2.09	0.53
27:1H:2565:OMU:H2'	27:1H:2567:U:OP2	2.08	0.53
28:16:103:U:O2'	49:H8:72:ARG:HG2	2.08	0.53
31:21:29:GLY:H	31:21:180:ASN:HB3	1.74	0.53
35:61:7:GLU:HA	35:61:15:VAL:HG12	1.91	0.53
38:68:79:PHE:HE2	38:68:101:PRO:HB2	1.73	0.53
43:B8:91:ARG:O	43:B8:116:ALA:HA	2.08	0.53
47:F8:44:GLU:HB3	47:F8:51:VAL:HG23	1.88	0.53
54:M8:61:ARG:NH2	54:M8:64:GLY:HA3	2.20	0.53
1:1G:22:G:H5''	1:1G:561:U:C2	2.44	0.53
1:1G:137:C:H42	1:1G:226:G:H1	1.55	0.53
1:1G:157:G:H2'	1:1G:158:G:H8	1.72	0.53
1:1G:417:C:O2'	1:1G:418:C:H5'	2.08	0.53
1:1G:1129:C:O2	1:1G:1130:A:N6	2.42	0.53
7:62:27:ILE:HD13	7:62:40:ALA:HA	1.90	0.53
9:82:10:ARG:HD2	9:82:105:ASP:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:70:ILE:O	18:9A:74:ARG:HG3	2.07	0.53
27:14:184:C:H2'	27:14:185:U:C6	2.43	0.53
27:14:620:G:N3	27:14:620:G:H5'	2.23	0.53
27:14:2056:G:O2'	55:J5:8:LYS:HD2	2.08	0.53
28:1J:4:C:H42	28:1J:116:G:H1	1.54	0.53
34:59:6:ARG:O	34:59:8:PRO:HD3	2.09	0.53
40:45:2:LEU:O	40:45:70:PRO:HG2	2.09	0.53
47:B5:9:LEU:HA	52:G5:36:ARG:NH2	2.24	0.53
50:E5:36:ILE:HG13	50:E5:58:THR:HG23	1.89	0.53
3:2E:11:ARG:HH21	3:2E:180:ALA:HB3	1.73	0.53
14:5I:15:LYS:HD2	14:5I:16:PHE:CE2	2.43	0.53
22:1K:51:U:H3	22:1K:63:G:H1	1.56	0.53
29:71:212:VAL:HG21	29:71:226:PRO:HB3	1.91	0.53
30:11:263:ARG:HH11	30:11:263:ARG:HB2	1.74	0.53
31:21:36:ARG:NH1	31:21:85:ASN:OD1	2.42	0.53
37:58:14:VAL:HG12	37:58:135:PRO:O	2.08	0.53
53:L8:7:LYS:HG3	53:L8:34:GLU:HG3	1.89	0.53
56:O8:23:THR:OG1	56:O8:24:GLU:N	2.42	0.53
1:1G:392:G:H2'	1:1G:393:A:C8	2.43	0.53
1:1G:413:G:C2'	1:1G:428:G:H22	2.21	0.53
1:1G:1119:C:OP2	9:82:9:ARG:NH2	2.40	0.53
1:1G:1179:A:OP2	9:82:93:ARG:NH1	2.41	0.53
2:12:194:PRO:O	2:12:197:VAL:N	2.41	0.53
11:2A:59:TYR:O	11:2A:62:GLN:HB3	2.08	0.53
27:14:297:C:OP1	48:C5:87:LYS:HD2	2.09	0.53
27:14:1210:A:C5'	27:14:1212:G:H5'	2.39	0.53
27:14:2422:A:H4'	27:14:2423:U:OP1	2.09	0.53
41:55:41:ALA:O	41:55:44:LEU:N	2.41	0.53
43:75:42:ILE:HG21	43:75:84:GLN:OE1	2.08	0.53
45:95:38:LEU:HD12	45:95:56:SER:N	2.24	0.53
45:95:50:PRO:HB2	45:95:51:VAL:HG22	1.91	0.53
49:D5:5:LEU:HB3	49:D5:59:LEU:HD23	1.90	0.53
16:7I:23:ASP:O	16:7I:26:ARG:HB2	2.08	0.53
27:1H:17:G:H2'	27:1H:18:C:H6	1.74	0.53
27:1H:1512:C:HO2'	27:1H:1575:A:H8	1.57	0.53
27:1H:2039:U:H1'	55:N8:6:VAL:HG13	1.91	0.53
27:1H:2549:G:C6	27:1H:2550:U:C4	2.97	0.53
30:11:182:LEU:H	30:11:272:ALA:CB	2.17	0.53
35:61:23:PRO:HB2	35:61:27:ARG:NH1	2.24	0.53
37:58:75:TYR:HA	37:58:81:GLY:O	2.09	0.53
46:E8:19:LEU:HB3	55:N8:25:LEU:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H8:109:ALA:N	49:H8:142:SER:O	2.41	0.53
8:72:25:ASP:OD1	8:72:25:ASP:N	2.41	0.53
16:7A:48:TRP:CZ3	16:7A:49:LEU:HB2	2.44	0.53
27:14:459:U:H2'	27:14:460:A:H8	1.73	0.53
27:14:463:G:N2	27:14:466:A:OP2	2.39	0.53
27:14:1024:G:C6	27:14:1025:G:C6	2.97	0.53
27:14:2485:G:H5''	40:45:46:GLN:HE21	1.73	0.53
34:59:82:GLY:O	34:59:134:SER:HB2	2.08	0.53
34:59:138:LYS:HA	34:59:141:VAL:HG12	1.91	0.53
37:15:15:LEU:HG	37:15:134:ARG:CZ	2.39	0.53
49:D5:103:ARG:N	49:D5:137:ILE:O	2.42	0.53
52:G5:44:LEU:C	52:G5:46:GLN:H	2.12	0.53
1:13:80:G:O6	1:13:81:G:N2	2.42	0.53
1:13:375:U:OP1	16:7I:69:THR:HG21	2.09	0.53
20:BI:26:ASN:HB3	20:BI:71:THR:OG1	2.08	0.53
27:1H:348:G:O6	27:1H:358:G:C5	2.62	0.53
27:1H:400:G:HO2'	27:1H:428:G:H1	1.46	0.53
27:1H:605:C:H2'	27:1H:606:G:H8	1.73	0.53
27:1H:1082:U:H2'	27:1H:1083:G:C8	2.43	0.53
27:1H:1448:G:H2'	27:1H:1449:C:O4'	2.08	0.53
27:1H:1743:G:H1'	30:11:8:PRO:O	2.07	0.53
27:1H:2082:A:OP2	65:1H:3691:HOH:O	2.18	0.53
27:1H:2787:C:OP1	31:21:166:THR:OG1	2.26	0.53
31:21:51:PHE:O	31:21:75:VAL:HB	2.09	0.53
36:38:44:LEU:HD23	36:38:45:LYS:HE2	1.91	0.53
36:38:63:LEU:HB2	36:38:65:GLU:HG3	1.91	0.53
1:1G:1300:G:HO2'	1:1G:1301:U:P	2.32	0.53
1:1G:1455:G:H5''	20:BA:31:SER:HB2	1.91	0.53
3:22:6:HIS:HB3	14:5A:49:HIS:HB3	1.90	0.53
19:AA:40:ILE:CG2	19:AA:41:VAL:HG23	2.38	0.53
59:1L:72:C:H2'	59:1L:73:A:N3	2.24	0.53
27:14:279:C:H42	27:14:361:G:H1	1.57	0.53
27:14:450:G:N7	65:14:3521:HOH:O	2.34	0.53
27:14:946:G:H2'	27:14:947:G:H8	1.73	0.53
27:14:1429:G:H2'	27:14:1430:C:C6	2.44	0.53
27:14:1535:U:H3'	27:14:1536:A:C8	2.43	0.53
27:14:1942:5MC:OP2	27:14:1943:U:O2'	2.15	0.53
27:14:2680:C:H1'	31:29:187:ALA:HB1	1.91	0.53
32:39:22:ALA:HB1	32:39:24:LEU:HD13	1.90	0.53
32:39:41:LEU:O	32:39:44:ARG:HG2	2.09	0.53
43:75:16:ARG:HD3	43:75:79:HIS:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:95:7:THR:OG1	45:95:8:GLY:N	2.41	0.53
1:13:328:C:H4'	1:13:329:A:C5'	2.39	0.53
1:13:438:G:H4'	4:3E:123:HIS:CE1	2.44	0.53
1:13:1327:C:H2'	1:13:1328:C:C6	2.43	0.53
15:6I:4:THR:HG23	15:6I:7:GLU:OE2	2.09	0.53
24:3K:3:C:H42	24:3K:70:G:H1	1.57	0.53
24:3K:18:G:H2'	24:3K:57:G:H22	1.74	0.53
27:1H:631:U:OP1	32:31:102:PRO:HA	2.08	0.53
27:1H:2228:G:H5'	27:1H:2229:G:C5	2.44	0.53
27:1H:2679:C:H42	34:51:109:PHE:HA	1.74	0.53
27:1H:2847:U:H2'	27:1H:2848:G:C8	2.44	0.53
27:1H:2848:G:H2'	27:1H:2849:G:H8	1.74	0.53
28:16:80:U:O2'	28:16:81:G:H5'	2.09	0.53
53:L8:19:GLN:OE1	53:L8:52:HIS:NE2	2.39	0.53
56:O8:27:LYS:H	56:O8:27:LYS:CE	2.20	0.53
1:1G:977:A:H2'	1:1G:978:A:H5'	1.91	0.53
1:1G:991:U:O2	1:1G:993:G:H8	1.91	0.53
1:1G:1313:U:P	19:AA:6:LYS:HB3	2.49	0.53
1:1G:1347:G:H3'	9:82:108:VAL:O	2.09	0.53
3:22:36:ASP:HA	3:22:39:ILE:HD12	1.90	0.53
4:32:3:ARG:NH2	4:32:5:ILE:HG13	2.23	0.53
20:BA:23:ARG:HH21	20:BA:27:LYS:NZ	2.06	0.53
20:BA:43:LEU:HD22	20:BA:48:LYS:HD2	1.90	0.53
25:4L:53:U:O2'	25:4L:54:U:H5''	2.09	0.53
27:14:654(S):G:O2'	27:14:654(T):A:O5'	2.24	0.53
27:14:774:A:H2	27:14:787:U:HO2'	1.56	0.53
27:14:1678:G:N2	27:14:1989:G:H22	2.07	0.53
27:14:2061:G:H5''	27:14:2503:2MA:C2	2.39	0.53
27:14:2714:G:H8	27:14:2714:G:OP1	1.92	0.53
27:14:2735:G:H22	27:14:2770:G:H1'	1.74	0.53
31:29:68:ALA:O	31:29:71:GLY:N	2.41	0.53
32:39:129:PHE:O	32:39:131:GLY:N	2.41	0.53
42:65:71:ARG:NH2	42:65:106:ARG:HH22	2.04	0.53
44:85:27:LEU:HA	44:85:30:LYS:HB2	1.91	0.53
1:13:323:U:H5'	20:BI:23:ARG:HB2	1.91	0.53
1:13:1537:U:O2	25:4K:36:G:N1	2.41	0.53
3:2E:84:ILE:O	3:2E:88:ARG:HG3	2.09	0.53
7:6E:115:ARG:O	7:6E:118:VAL:HG13	2.08	0.53
8:7E:112:LEU:HA	8:7E:134:ILE:HG12	1.91	0.53
27:1H:992:G:OP2	65:1H:3697:HOH:O	2.19	0.53
27:1H:2428:G:O3'	39:78:66:GLY:HA2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2701:U:C5	27:1H:2734:U:OP2	2.62	0.53
32:31:34:TRP:CH2	39:78:8:PRO:HB3	2.44	0.53
44:C8:95:LEU:O	44:C8:98:LEU:HD22	2.09	0.53
58:Q8:39:LYS:O	58:Q8:43:GLN:HB2	2.09	0.53
1:1G:192:U:H2'	1:1G:193:C:C6	2.44	0.53
1:1G:1350:A:OP2	9:82:118:LYS:HE3	2.09	0.53
1:1G:1519:MA6:H92	1:1G:1520:G:O2'	2.09	0.53
10:1A:22:LYS:O	10:1A:26:ALA:N	2.42	0.53
27:14:262:A:H2'	27:14:263:C:O4'	2.08	0.53
27:14:1129:A:O2'	27:14:2515:C:O2	2.22	0.53
27:14:2162:G:H2'	27:14:2163:C:H6	1.74	0.53
27:14:2528:U:H4'	27:14:2529:G:N2	2.24	0.53
27:14:2735:G:H2'	27:14:2736:G:C8	2.44	0.53
27:14:2776:A:H4'	27:14:2777:G:O5'	2.09	0.53
28:1J:8:U:OP1	42:65:11:LYS:NZ	2.29	0.53
28:1J:13:A:N1	28:1J:69:G:O2'	2.33	0.53
31:29:101:ARG:CZ	31:29:171:GLU:HB2	2.38	0.53
32:39:129:PHE:O	32:39:142:TRP:CD1	2.62	0.53
1:13:137:C:H1'	16:7I:63:GLY:HA2	1.91	0.53
1:13:376:G:H5''	16:7I:5:ARG:HB2	1.89	0.53
1:13:971:G:N1	1:13:1363:A:OP2	2.35	0.53
1:13:1018:C:O5'	1:13:1018:C:H6	1.92	0.53
13:4I:81:LEU:O	13:4I:84:ILE:HG22	2.09	0.53
23:2K:1:G:N3	23:2K:2:C:C5	2.77	0.53
27:1H:614:A:OP1	32:31:95:ARG:NH1	2.42	0.53
27:1H:1828:U:H2'	27:1H:1829:C:C6	2.44	0.53
34:51:7:LEU:HB3	34:51:69:ARG:HE	1.74	0.53
1:1G:438:G:H4'	4:32:123:HIS:ND1	2.23	0.53
1:1G:513:C:N4	1:1G:538:G:H1	2.07	0.53
1:1G:807:A:H2'	1:1G:808:C:C6	2.44	0.53
1:1G:830:G:H2'	1:1G:831:U:O4'	2.08	0.53
1:1G:859:A:H2'	1:1G:860:A:O4'	2.09	0.53
8:72:91:ARG:NH1	17:8A:33:GLY:HA3	2.23	0.53
17:8A:13:ASP:N	17:8A:14:LYS:HE3	2.21	0.53
24:3L:30:G:H2'	24:3L:31:A:H8	1.74	0.53
27:14:415:A:H2'	27:14:416:C:C6	2.44	0.53
27:14:492:A:H2'	27:14:493:G:O4'	2.08	0.53
27:14:996:A:H4'	44:85:92:ARG:HG3	1.90	0.53
27:14:1657:C:H2'	27:14:1658:C:H6	1.73	0.53
27:14:1753:G:N1	27:14:1756:G:C2	2.77	0.53
27:14:2623:G:H4'	27:14:2825:C:O2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2808:U:H2'	27:14:2809:A:H8	1.74	0.53
27:14:2873:A:H8	41:55:6:SER:H	1.56	0.53
31:29:9:VAL:HG13	31:29:25:VAL:O	2.09	0.53
31:29:119:ARG:HG2	31:29:160:TYR:HB2	1.90	0.53
32:39:153:SER:OG	32:39:190:GLU:HG3	2.09	0.53
35:69:85:GLU:HG3	35:69:86:THR:N	2.24	0.53
49:D5:9:TYR:HE2	49:D5:63:ASP:HB3	1.72	0.53
1:13:443:C:H2'	1:13:444:C:C6	2.44	0.52
39:78:26:GLY:HA3	65:78:303:HOH:O	2.09	0.52
40:88:24[B]:GLY:O	40:88:26:TYR:N	2.41	0.52
40:88:79:LEU:HD23	40:88:80:GLU:H	1.73	0.52
49:H8:119:GLU:OE1	49:H8:122:ARG:NH1	2.41	0.52
50:I8:68:GLU:HG2	50:I8:80:HIS:HB2	1.90	0.52
1:1G:901:A:C5	1:1G:902:G:H1'	2.44	0.52
1:1G:1326:C:O2'	1:1G:1327:C:H5'	2.08	0.52
10:1A:46:ARG:HG2	10:1A:64:GLU:HB3	1.90	0.52
10:1A:84:GLN:O	10:1A:88:LEU:HB2	2.09	0.52
24:3L:52:G:N2	24:3L:62:C:O2	2.41	0.52
27:14:654(C):G:H1	27:14:654(R):C:N4	2.06	0.52
27:14:1423:G:H2'	27:14:1424:G:H8	1.73	0.52
27:14:1515:C:H2'	27:14:1516:U:H6	1.74	0.52
27:14:1568:G:P	30:19:63:ARG:HH12	2.31	0.52
27:14:1637:A:OP2	65:14:3545:HOH:O	2.18	0.52
27:14:2427:C:H5''	27:14:2428:G:OP1	2.09	0.52
33:49:60:LEU:O	33:49:63:ILE:N	2.42	0.52
54:I5:57:GLU:HG3	54:I5:60:GLN:OE1	2.09	0.52
56:K5:10:LEU:HD11	56:K5:25:LYS:HB2	1.91	0.52
1:13:530:G:O2'	1:13:531:U:OP1	2.25	0.52
1:13:639:G:H2'	1:13:640:A:H8	1.73	0.52
1:13:789:U:H1'	1:13:792:A:H2	1.74	0.52
1:13:821:G:H4'	65:13:1975:HOH:O	2.09	0.52
1:13:1396:A:H4'	1:13:1397:C:H5''	1.91	0.52
3:2E:78:GLY:HA3	3:2E:79:ARG:HH11	1.73	0.52
24:3K:3:C:H3'	24:3K:4:C:C6	2.45	0.52
27:1H:395:C:C6	27:1H:395:C:H5''	2.44	0.52
27:1H:1173:A:H4'	27:1H:1174:A:H5''	1.91	0.52
27:1H:1908:A:H5'	27:1H:1909:C:OP2	2.08	0.52
31:21:168:MET:HE2	31:21:203:LYS:HE2	1.92	0.52
33:41:37:VAL:HG22	33:41:159:VAL:HG12	1.90	0.52
34:51:18:GLU:HB2	34:51:25:LYS:HB2	1.91	0.52
52:K8:2:LYS:HB2	52:K8:5:GLU:HG3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:132:C:H5'	1:1G:262:A:O2'	2.09	0.52
1:1G:1141:C:H2'	1:1G:1142:G:H8	1.74	0.52
2:12:56:ARG:NH1	2:12:56:ARG:HB3	2.24	0.52
12:3A:34:CYS:HA	12:3A:55:VAL:HG12	1.91	0.52
12:3A:80:VAL:HG21	12:3A:97:ILE:HD13	1.91	0.52
27:14:7:G:H22	27:14:2896:C:H42	1.57	0.52
27:14:602:G:O2'	27:14:604:G:O2'	2.07	0.52
27:14:1100:C:H2'	27:14:1101:U:H6	1.75	0.52
27:14:1625:C:H2'	27:14:1626:G:O4'	2.09	0.52
27:14:2398:U:H2'	27:14:2399:G:H8	1.73	0.52
38:25:98:VAL:HG11	38:25:117:LEU:HB3	1.91	0.52
56:K5:39:TYR:HD2	56:K5:49:HIS:HD2	1.56	0.52
1:13:89:U:O2'	1:13:90:C:O5'	2.25	0.52
1:13:432:A:H2'	1:13:433:C:O4'	2.09	0.52
3:2E:8:ILE:HG23	3:2E:16:ARG:HG2	1.90	0.52
7:6E:24:THR:HA	7:6E:27:ILE:HD12	1.90	0.52
13:4I:99:ARG:HB3	19:AI:3:ARG:HH12	1.74	0.52
18:9I:50:ILE:HD11	18:9I:74:ARG:NH1	2.25	0.52
18:9I:74:ARG:HB3	18:9I:81:PHE:CZ	2.45	0.52
23:2K:74:C:N4	50:I8:5:LYS:HD2	2.24	0.52
24:3K:23:A:H2'	24:3K:24:G:H8	1.74	0.52
27:1H:18:C:H4'	44:C8:23:GLY:O	2.08	0.52
27:1H:327:C:H2'	27:1H:328:U:C6	2.45	0.52
27:1H:554:A:H2	27:1H:2065:A:H2'	1.72	0.52
27:1H:808:G:H2'	27:1H:809:A:O4'	2.09	0.52
27:1H:2380:G:H2'	27:1H:2381:C:H6	1.73	0.52
27:1H:2475:U:H1'	27:1H:2504:U:O4	2.10	0.52
27:1H:2831:A:P	41:98:2:ARG:HH12	2.29	0.52
27:1H:2841:G:H5''	27:1H:2841:G:H8	1.74	0.52
29:71:62:VAL:HG12	29:71:163:PHE:CE1	2.44	0.52
37:58:46:VAL:HG13	37:58:48:MET:HG3	1.91	0.52
44:C8:33:ARG:O	44:C8:37:GLU:HG3	2.10	0.52
55:N8:16:ARG:HG3	55:N8:17:ASP:N	2.24	0.52
1:1G:1145:C:H4'	1:1G:1146:A:H5'	1.90	0.52
1:1G:1206:G:O2'	3:22:193:TYR:HA	2.10	0.52
3:22:33:LEU:HD12	3:22:36:ASP:HB3	1.91	0.52
27:14:277:C:H2'	27:14:277:C:OP2	2.10	0.52
27:14:861:A:N3	28:1J:79:C:O2'	2.42	0.52
27:14:1259:G:H2'	27:14:1260:G:C8	2.44	0.52
27:14:1297:C:H2'	27:14:1298:C:H6	1.74	0.52
27:14:1313:U:H4'	27:14:1332:G:H4'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1562:A:H2'	27:14:1563:G:O4'	2.09	0.52
27:14:2505:G:H2'	27:14:2576:G:O6	2.09	0.52
29:79:58:VAL:N	29:79:165:ASN:OD1	2.35	0.52
32:39:8:GLN:CD	32:39:8:GLN:H	2.12	0.52
1:13:47:C:C6	1:13:365:U:H2'	2.45	0.52
1:13:1034:G:H8	1:13:1034:G:O5'	1.93	0.52
1:13:1202:G:C2	14:5I:42:ILE:HG21	2.44	0.52
1:13:1302:U:OP1	13:4I:21:TYR:OH	2.27	0.52
27:1H:304:C:N4	27:1H:386:G:H1	2.08	0.52
27:1H:486:U:H2'	27:1H:487:A:H8	1.75	0.52
27:1H:1826:U:H1'	27:1H:1923:A:N3	2.25	0.52
27:1H:2105:A:H2'	27:1H:2106:G:O4'	2.09	0.52
27:1H:2341:A:H2'	27:1H:2342:G:O4'	2.09	0.52
39:78:119:GLU:OE1	39:78:119:GLU:HA	2.08	0.52
49:H8:82:ARG:HB2	49:H8:82:ARG:NH1	2.22	0.52
1:1G:130:A:HO2'	1:1G:131:C:P	2.32	0.52
1:1G:1262:C:H42	1:1G:1273:G:H1	1.57	0.52
1:1G:1367:C:H4'	10:1A:48:THR:HG21	1.91	0.52
1:1G:1538:C:N3	25:4L:34:G:N2	2.58	0.52
4:32:191:ARG:HA	4:32:194:LEU:HD23	1.90	0.52
10:1A:92:THR:OG1	10:1A:93:GLY:N	2.43	0.52
13:4A:3:ARG:HA	13:4A:9:ILE:HG12	1.92	0.52
13:4A:32:GLU:OE2	13:4A:59:TYR:OH	2.26	0.52
60:2L:40:C:H2'	60:2L:41:C:H6	1.75	0.52
27:14:588:U:H2'	27:14:589:C:C6	2.45	0.52
27:14:1285:G:N2	27:14:1329:U:OP1	2.25	0.52
27:14:1857:G:O2'	27:14:1885:A:N6	2.41	0.52
27:14:2134:A:N6	27:14:2157:G:O4'	2.42	0.52
42:65:26:LEU:O	42:65:26:LEU:HD23	2.09	0.52
1:13:865:A:H2	1:13:918:A:H4'	1.75	0.52
1:13:911:U:H2'	1:13:912:C:C6	2.43	0.52
1:13:1211:U:H5''	1:13:1212:U:OP1	2.09	0.52
1:13:1225:A:H2'	1:13:1225:A:N3	2.25	0.52
3:2E:6:HIS:HB2	14:5I:49:HIS:ND1	2.25	0.52
7:6E:109:ASN:OD1	7:6E:119:ARG:NH2	2.40	0.52
9:8E:26:VAL:HB	9:8E:33:PHE:HB2	1.91	0.52
9:8E:28:VAL:HA	9:8E:63:ILE:HG22	1.90	0.52
15:6I:39:LEU:HD22	15:6I:43:LEU:HG	1.92	0.52
24:3K:56:C:H42	27:1H:2135:G:N2	2.07	0.52
27:1H:172:A:H2'	27:1H:173:C:O4'	2.10	0.52
27:1H:590:U:H2'	27:1H:591:A:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1095:A:P	27:1H:1157:G:H22	2.33	0.52
27:1H:2311:A:N6	27:1H:2331:G:H8	2.01	0.52
27:1H:2415:C:O5'	27:1H:2415:C:H6	1.92	0.52
39:78:82:GLY:HA2	39:78:113:LYS:O	2.09	0.52
41:98:75:LEU:HA	41:98:78:LYS:HB3	1.92	0.52
44:C8:92:ARG:HB3	45:D8:11:GLN:OE1	2.09	0.52
44:C8:105:VAL:HG22	45:D8:44:LYS:HB3	1.91	0.52
50:I8:30:VAL:HG23	50:I8:66:VAL:HG12	1.92	0.52
55:N8:40:LYS:HD2	55:N8:41:PRO:O	2.09	0.52
1:1G:142:G:O2'	1:1G:196:A:N1	2.39	0.52
1:1G:148:G:H2'	1:1G:149:A:C8	2.44	0.52
1:1G:1148:U:H2'	1:1G:1149:C:O4'	2.09	0.52
1:1G:1262:C:H2'	1:1G:1263:C:C6	2.44	0.52
2:12:178:ARG:HH12	2:12:196:LEU:C	2.11	0.52
5:42:107:ARG:O	5:42:110:LEU:N	2.40	0.52
24:3L:5:G:H1	24:3L:68:C:H42	1.56	0.52
27:14:270(V):G:H2'	27:14:270(W):G:H8	1.74	0.52
27:14:313:C:H2'	27:14:314:A:H8	1.75	0.52
27:14:1520:U:H2'	27:14:1521:G:O4'	2.10	0.52
27:14:2815:C:C5'	55:J5:29:THR:HG21	2.38	0.52
31:29:103:ASP:OD2	31:29:202:LYS:HG3	2.10	0.52
44:85:83:LEU:HG	44:85:88:ILE:HD12	1.91	0.52
49:D5:124:ILE:HD11	49:D5:165:VAL:HG21	1.92	0.52
51:F5:50:ARG:HA	51:F5:58:ILE:O	2.10	0.52
1:13:1492:A:OP1	12:3I:44:LYS:N	2.43	0.52
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.91	0.52
27:1H:1120:A:OP2	27:1H:1141:U:N3	2.27	0.52
27:1H:1404:U:H2'	27:1H:1405:G:C8	2.45	0.52
27:1H:1467:U:HO2'	27:1H:1468:G:P	2.33	0.52
27:1H:2266:G:H1	50:I8:5:LYS:HZ1	1.57	0.52
31:21:59:VAL:HG21	31:21:74:PRO:HB2	1.91	0.52
40:88:68:ILE:CD1	40:88:103:MET:HE2	2.37	0.52
43:B8:50:ILE:HD11	43:B8:102:ILE:CD1	2.39	0.52
49:H8:7:ALA:O	49:H8:62:PRO:HD2	2.10	0.52
56:O8:29:ASN:OD1	56:O8:30:THR:N	2.35	0.52
1:1G:12:U:H4'	1:1G:526:C:O2'	2.10	0.52
1:1G:539:A:H2'	1:1G:540:G:H8	1.71	0.52
1:1G:703:G:O2'	1:1G:704:A:P	2.68	0.52
1:1G:723:U:O4	1:1G:1537:U:O2'	2.25	0.52
1:1G:1117:G:H4'	9:82:104:ARG:HH11	1.74	0.52
1:1G:1137:C:O2	1:1G:1138:G:N2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1190:G:H5'	3:22:176:HIS:NE2	2.25	0.52
1:1G:1286:A:H8	1:1G:1287:A:H4'	1.71	0.52
7:62:20:ASP:OD2	7:62:23:VAL:HG23	2.10	0.52
7:62:76:ARG:HD3	7:62:89:MET:HG3	1.91	0.52
9:82:17:VAL:HG21	9:82:80:GLY:HA3	1.91	0.52
27:14:932:G:P	53:H5:29:ARG:HH12	2.32	0.52
27:14:953:A:C4	27:14:954:G:C8	2.98	0.52
27:14:2335:A:C8	27:14:2337:G:C5	2.97	0.52
31:29:24:THR:HG23	31:29:186:GLY:O	2.09	0.52
33:49:6:ALA:HB2	54:I5:23:GLU:CG	2.37	0.52
42:65:29:PHE:HA	42:65:92:TYR:HE2	1.74	0.52
45:95:10:LYS:NZ	45:95:23:GLU:HB2	2.24	0.52
49:D5:24:LEU:HD23	49:D5:41:LEU:HG	1.90	0.52
1:13:1305:G:H22	1:13:1331:G:H1'	1.75	0.52
4:3E:90:GLY:HA3	4:3E:204:ILE:HD11	1.90	0.52
20:BI:93:GLU:C	20:BI:95:ALA:H	2.11	0.52
24:3K:11:C:N3	24:3K:24:G:N2	2.47	0.52
27:1H:181:A:N1	65:1H:3781:HOH:O	2.34	0.52
27:1H:806:C:O2	27:1H:2004:A:H2	1.93	0.52
27:1H:1299:G:C2	27:1H:1300:A:C2	2.97	0.52
27:1H:1897:G:N2	27:1H:1900:A:OP2	2.41	0.52
27:1H:2344:G:OP1	50:I8:44:ARG:NH1	2.43	0.52
27:1H:2402:G:H5''	27:1H:2403:U:O4'	2.10	0.52
29:71:200:LYS:HE3	29:71:204:ALA:HB3	1.92	0.52
40:88:23[A]:GLY:HA3	40:88:101:ARG:HD2	1.92	0.52
48:G8:106:LEU:C	48:G8:108:THR:H	2.13	0.52
1:1G:978:A:C6	1:1G:1318:A:C6	2.98	0.52
27:14:1085:A:O2'	27:14:1086:A:OP1	2.27	0.52
27:14:2128:C:H4'	27:14:2173:A:N6	2.24	0.52
27:14:2306:C:O5'	27:14:2307:G:H5''	2.10	0.52
28:1J:17:C:H2'	28:1J:18:G:O4'	2.09	0.52
35:69:127:VAL:HA	35:69:138:ILE:O	2.09	0.52
40:45:98:LYS:HB3	40:45:99:PRO:HD2	1.91	0.52
1:13:142:G:H2'	1:13:143:A:H8	1.74	0.52
1:13:1406:U:O2	1:13:1517:G:N2	2.40	0.52
12:3I:8:VAL:HG13	17:8I:29:HIS:CD2	2.44	0.52
23:2K:1:G:H1	23:2K:72:C:H42	1.56	0.52
24:3K:19:G:H4'	24:3K:57:G:N2	2.24	0.52
27:1H:581:U:O3'	37:58:111:PRO:HG2	2.09	0.52
27:1H:2015:G:OP2	65:1H:3696:HOH:O	2.19	0.52
27:1H:2359:A:H4'	27:1H:2360:C:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A8:25:ARG:HA	42:A8:86:ALA:HB3	1.92	0.52
1:1G:1350:A:OP1	9:82:121:ARG:HG3	2.10	0.52
2:12:72:GLY:O	2:12:74:LYS:N	2.43	0.52
13:4A:3:ARG:HH12	33:49:113:ARG:HG2	1.74	0.52
27:14:844:C:H2'	27:14:845:G:O4'	2.10	0.52
27:14:1252:G:N7	44:85:36:ARG:NH1	2.56	0.52
27:14:2128:C:H2'	27:14:2129:C:C6	2.45	0.52
27:14:2168:G:H2'	27:14:2169:A:C8	2.45	0.52
27:14:2704:C:H2'	27:14:2705:A:O4'	2.09	0.52
27:14:2795:G:H21	27:14:2801:A:H62	1.56	0.52
31:29:47:VAL:HG11	31:29:86:PRO:HD2	1.92	0.52
32:39:40:GLN:NE2	32:39:182:ASN:HB2	2.25	0.52
33:49:139:LEU:HA	33:49:144:ILE:HG22	1.90	0.52
40:45:66:ILE:HG13	40:45:67:ARG:N	2.24	0.52
43:75:50:ILE:HD11	43:75:102:ILE:HG12	1.92	0.52
1:13:706:A:H1'	11:2I:29:ILE:HD11	1.90	0.52
1:13:1053:G:N7	1:13:1199:U:H3'	2.24	0.52
1:13:1466:C:H2'	1:13:1467:G:O4'	2.10	0.52
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.92	0.52
6:5E:69:GLU:O	6:5E:72:VAL:HG12	2.10	0.52
8:7E:124:ALA:O	8:7E:128:GLY:N	2.42	0.52
16:7I:28:ARG:HG2	16:7I:29:ASP:OD1	2.10	0.52
22:1K:30:G:H1	22:1K:40:C:H42	1.57	0.52
23:2K:56:C:N4	33:41:83:ARG:HH22	2.08	0.52
27:1H:244:G:N7	58:Q8:5:LYS:HE2	2.25	0.52
27:1H:355:A:O2'	27:1H:356:A:C8	2.63	0.52
27:1H:471:C:H4'	32:31:49:ALA:HB2	1.91	0.52
27:1H:1573:G:H2'	27:1H:1574:G:O4'	2.09	0.52
27:1H:2185:G:H2'	27:1H:2186:C:O4'	2.10	0.52
27:1H:2742:U:H2'	27:1H:2743:G:H8	1.73	0.52
27:1H:2826:C:H2'	27:1H:2827:C:H6	1.75	0.52
30:11:183:ARG:HG3	30:11:184:LYS:O	2.09	0.52
35:61:21:VAL:HG21	35:61:25:TYR:HD2	1.75	0.52
42:A8:85:VAL:HG22	42:A8:110:LEU:HG	1.92	0.52
50:I8:11:ARG:NH1	50:I8:11:ARG:HB2	2.24	0.52
1:1G:637:G:H2'	1:1G:638:G:H8	1.75	0.52
1:1G:1126:U:H2'	1:1G:1281:U:O4'	2.10	0.52
3:22:8:ILE:HG23	3:22:16:ARG:HG2	1.91	0.52
3:22:179:ARG:NE	3:22:206:GLU:HG2	2.24	0.52
14:5A:29:ARG:HG3	14:5A:31:ARG:O	2.10	0.52
59:1L:68:C:H2'	59:1L:69:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:3L:17:C:N3	27:14:2111:C:H5'	2.25	0.52
24:3L:50:U:H2'	24:3L:51:U:O4'	2.10	0.52
27:14:606:U:H4'	27:14:658:C:H4'	1.92	0.52
27:14:1180:C:H2'	27:14:1181:C:C6	2.45	0.52
27:14:1225:C:O2'	45:95:84:LYS:HA	2.10	0.52
27:14:1283:G:N2	27:14:1286:A:H5'	2.25	0.52
31:29:108:SER:HB3	31:29:165:VAL:HG21	1.92	0.52
38:25:71:ARG:HB2	38:25:73:ASP:OD1	2.10	0.52
39:35:63:PRO:HD3	58:M5:27:THR:HG22	1.90	0.52
40:45:97:VAL:HG11	40:45:103:MET:HE3	1.92	0.52
1:13:474:G:H2'	1:13:475:G:C8	2.45	0.52
1:13:664:G:N2	1:13:741:G:H22	2.05	0.52
1:13:736:C:H2'	1:13:737:A:C8	2.44	0.52
8:7E:69:ARG:HD3	8:7E:75:ARG:O	2.10	0.52
10:1I:25:GLU:O	10:1I:29:ARG:HB3	2.10	0.52
12:3I:51:LYS:HD3	12:3I:51:LYS:N	2.25	0.52
16:7I:53:VAL:HG12	16:7I:79:VAL:HG13	1.92	0.52
27:1H:243:C:OP2	58:Q8:5:LYS:NZ	2.43	0.52
27:1H:1094:G:H2'	27:1H:1157:G:C2	2.45	0.52
27:1H:2272:G:H1'	27:1H:2440:C:C2	2.45	0.52
35:61:124:GLY:O	35:61:142:VAL:HG23	2.09	0.52
42:A8:34:HIS:HB3	42:A8:53:SER:HB3	1.92	0.52
50:I8:51:VAL:HG23	50:I8:81:VAL:HG23	1.92	0.52
51:J8:80:LEU:HB2	51:J8:82:LEU:CD2	2.39	0.52
1:1G:1084:G:C5	1:1G:1085:U:C4	2.98	0.52
3:22:6:HIS:HE1	14:5A:50:LYS:HE2	1.74	0.52
10:1A:9:ARG:NH2	10:1A:97:GLU:OE2	2.43	0.52
27:14:580:C:H2'	27:14:581:C:H6	1.74	0.52
27:14:1471:A:C2	27:14:1472:A:C4	2.98	0.52
27:14:1798:U:H5'	30:19:259:THR:OG1	2.10	0.52
27:14:2211:G:H3'	27:14:2212:A:N3	2.25	0.52
27:14:2287:A:N6	27:14:2344:U:H3	2.02	0.52
32:39:53:THR:HG23	32:39:56:GLU:OE1	2.10	0.52
34:59:161:GLY:C	34:59:162:ILE:HG12	2.30	0.52
39:35:52:GLU:HB2	39:35:55:ARG:HD2	1.92	0.52
52:G5:63:VAL:HA	52:G5:66:GLU:HG3	1.91	0.52
1:13:1:U:OP2	1:13:631:G:N2	2.43	0.51
1:13:199:G:H1	1:13:218:C:H42	1.58	0.51
1:13:664:G:H1	1:13:741:G:H1	1.58	0.51
1:13:1442:G:H1	1:13:1461:G:N2	2.06	0.51
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:106:GLY:HA3	12:3I:118:GLY:O	2.09	0.51
13:4I:81:LEU:HD13	13:4I:88:ARG:HB3	1.92	0.51
16:7I:52:ASP:OD1	16:7I:54:GLU:HB2	2.09	0.51
27:1H:1189:A:C4	27:1H:1191:G:C8	2.97	0.51
27:1H:1700:A:H3'	27:1H:1701:G:C8	2.44	0.51
31:21:120:TRP:CE3	31:21:155:LYS:HD3	2.45	0.51
41:98:3:HIS:O	41:98:4:LEU:HD13	2.10	0.51
42:A8:25:ARG:HG3	42:A8:88:ASP:HB2	1.91	0.51
56:O8:28:ARG:HB3	56:O8:30:THR:C	2.31	0.51
1:1G:538:G:H3'	12:3A:112:LYS:NZ	2.26	0.51
1:1G:696:A:H1'	1:1G:786:G:O2'	2.10	0.51
1:1G:1107:C:OP1	3:22:173:VAL:N	2.43	0.51
1:1G:1320:C:H2'	1:1G:1321:C:C6	2.46	0.51
3:22:36:ASP:OD1	3:22:57:ILE:HG21	2.09	0.51
4:32:156:GLU:O	4:32:159:ARG:HG2	2.09	0.51
13:4A:16:ASP:HB3	13:4A:41:PRO:HB3	1.92	0.51
13:4A:23:TYR:HE2	13:4A:71:ARG:HB2	1.74	0.51
17:8A:5:VAL:HG13	17:8A:60:ILE:HD13	1.91	0.51
27:14:149:A:H2'	27:14:150:C:O4'	2.09	0.51
27:14:662:G:H5'	39:35:15:ARG:CA	2.33	0.51
27:14:827:U:H2'	27:14:2430:A:H2	1.73	0.51
27:14:952:G:C6	27:14:966:G:C6	2.98	0.51
27:14:1179:C:H2'	27:14:1180:C:H6	1.74	0.51
27:14:1409:C:O2	27:14:1594:G:N2	2.43	0.51
27:14:1542:G:H5''	27:14:1543:A:OP2	2.10	0.51
27:14:2329:G:H2'	27:14:2330:G:C8	2.45	0.51
27:14:2839:G:H5''	41:55:46:GLY:HA2	1.90	0.51
30:19:26:LYS:HE3	30:19:83:GLU:OE2	2.09	0.51
32:39:142:TRP:O	32:39:145:GLU:HB3	2.10	0.51
33:49:111:LEU:HB3	33:49:117:PHE:CE2	2.45	0.51
44:85:92:ARG:O	44:85:95:LEU:N	2.39	0.51
1:13:90:C:H3'	1:13:91:C:H5''	1.90	0.51
1:13:1376:U:H2'	1:13:1377:A:C8	2.45	0.51
2:1E:208:ILE:HA	2:1E:211:ILE:HD12	1.92	0.51
6:5E:99:ALA:HB3	18:9I:29:PHE:CE1	2.45	0.51
27:1H:900:G:O2'	27:1H:901:G:H5'	2.11	0.51
27:1H:1272:G:OP1	45:D8:69:LYS:NZ	2.36	0.51
27:1H:1396:A:N6	27:1H:1645:C:N4	2.58	0.51
27:1H:2418:G:O2'	27:1H:2419:U:OP2	2.25	0.51
27:1H:2482:A:O2'	40:88:56:ARG:HG3	2.10	0.51
27:1H:2804:A:C2	27:1H:2904:G:H5''	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:16:15:A:H1'	28:16:109:G:N9	2.25	0.51
29:71:20:TYR:HB2	29:71:224:ILE:HG22	1.91	0.51
39:78:70:GLN:N	39:78:70:GLN:OE1	2.43	0.51
39:78:121:LYS:HG2	39:78:123:LEU:HD23	1.91	0.51
1:1G:193:C:H2'	1:1G:194:C:H6	1.75	0.51
1:1G:370:C:H42	1:1G:391:G:H1	1.56	0.51
1:1G:881:G:OP2	12:3A:9:ARG:NH1	2.39	0.51
1:1G:1213:A:C6	1:1G:1215:G:C4	2.98	0.51
1:1G:1243:C:O2	1:1G:1295:G:N2	2.43	0.51
27:14:1030:G:OP2	40:45:128:LYS:NZ	2.29	0.51
27:14:1708:C:H2'	27:14:1709:U:C6	2.45	0.51
27:14:1814:G:H4'	30:19:51:VAL:HG21	1.92	0.51
27:14:2418:A:P	58:M5:29:LYS:HZ1	2.33	0.51
40:45:135:ASP:OD1	49:D5:81:ARG:NH1	2.43	0.51
41:55:21:TYR:OH	41:55:43:GLU:HG2	2.09	0.51
54:I5:56:VAL:HG12	54:I5:60:GLN:OE1	2.10	0.51
1:13:22:G:H4'	1:13:885:G:C8	2.45	0.51
1:13:186(E):C:N3	1:13:191(C):G:C2	2.79	0.51
1:13:652:U:O2'	1:13:653:A:O5'	2.27	0.51
2:1E:74:LYS:O	2:1E:77:ALA:N	2.43	0.51
27:1H:377:G:H3'	27:1H:378:G:H8	1.75	0.51
27:1H:2022:C:H4'	27:1H:2737:C:O2	2.11	0.51
27:1H:2691:C:H42	27:1H:2743:G:H1	1.58	0.51
27:1H:2693:C:H5'	31:21:189:PRO:HA	1.92	0.51
34:51:58:GLU:C	34:51:60:ARG:H	2.13	0.51
35:61:23:PRO:O	35:61:27:ARG:HG2	2.10	0.51
35:61:85:GLU:OE1	35:61:86:THR:OG1	2.26	0.51
41:98:28:LEU:HD12	41:98:48:VAL:HG21	1.92	0.51
42:A8:109:GLY:O	42:A8:110:LEU:HD22	2.10	0.51
51:J8:89:GLU:O	51:J8:94:LEU:HB2	2.10	0.51
54:M8:53:GLU:O	54:M8:55:ARG:N	2.42	0.51
1:1G:166:G:H2'	1:1G:167:G:H8	1.75	0.51
1:1G:407:G:O4'	4:32:119:GLN:NE2	2.43	0.51
1:1G:939:G:O3'	7:62:102:ARG:NH2	2.44	0.51
2:12:7:VAL:O	2:12:8:LYS:HB2	2.10	0.51
13:4A:29:ARG:HD3	13:4A:64:TRP:CD2	2.45	0.51
13:4A:49:THR:HG22	13:4A:51:ALA:N	2.24	0.51
14:5A:23:ARG:NH2	14:5A:30:ALA:HB2	2.25	0.51
59:1L:63:G:H2'	59:1L:64:A:O4'	2.10	0.51
60:2L:40:C:H2'	60:2L:41:C:C6	2.44	0.51
27:14:618:G:H2'	27:14:618(A):C:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:654:A:H2'	27:14:654(A):A:C8	2.45	0.51
27:14:774:A:O2'	27:14:775:G:O5'	2.29	0.51
29:79:27:HIS:CD2	29:79:182:PRO:HB2	2.46	0.51
30:19:165:ILE:HA	30:19:175:LEU:HD23	1.92	0.51
34:59:22:GLY:H	34:59:23:ARG:NH1	2.08	0.51
34:59:33:LEU:HD21	34:59:136:ILE:HG22	1.92	0.51
35:69:45:LYS:HA	35:69:48:GLU:HB3	1.92	0.51
46:A5:110:LYS:HG3	46:A5:111:HIS:CD2	2.46	0.51
49:D5:53:ILE:HG22	49:D5:71:VAL:HG13	1.92	0.51
54:I5:1:MET:HB3	54:I5:6:HIS:NE2	2.25	0.51
55:J5:40:LYS:NZ	55:J5:46:CYS:HB3	2.26	0.51
1:13:251:G:H4'	1:13:252:U:O5'	2.10	0.51
1:13:895:G:H2'	1:13:896:C:C6	2.45	0.51
1:13:1171:G:H2'	1:13:1172:C:C6	2.45	0.51
8:7E:98:LYS:H	8:7E:98:LYS:NZ	2.08	0.51
14:5I:51:GLY:O	14:5I:53:LEU:N	2.43	0.51
27:1H:912:G:C6	27:1H:913:C:N4	2.78	0.51
27:1H:952:U:H2'	27:1H:953:G:H5''	1.91	0.51
27:1H:1222:G:H3'	27:1H:1223:A:H8	1.75	0.51
27:1H:1645:C:O3'	47:F8:35:THR:OG1	2.27	0.51
27:1H:2159:C:H2'	27:1H:2160:C:O4'	2.10	0.51
31:21:72:VAL:HG12	31:21:73:GLU:O	2.11	0.51
34:51:38:SER:OG	34:51:40:GLU:HG3	2.10	0.51
34:51:159:GLU:HG3	34:51:169:VAL:HG21	1.93	0.51
38:68:7:TYR:C	38:68:8:LEU:HD22	2.30	0.51
52:K8:44:LEU:C	52:K8:46:GLN:N	2.63	0.51
1:1G:309:G:H1'	1:1G:608:A:C2	2.46	0.51
1:1G:340:U:H2'	1:1G:341:C:C6	2.45	0.51
9:82:28:VAL:HG13	9:82:64:THR:HA	1.92	0.51
10:1A:63:PHE:HB3	14:5A:57:ARG:O	2.11	0.51
17:8A:78:GLU:CD	17:8A:81:ARG:HD2	2.30	0.51
27:14:265:A:N6	27:14:427:U:O2'	2.43	0.51
27:14:489:G:O6	46:A5:45:TYR:OH	2.23	0.51
27:14:2298:A:H2'	27:14:2299:G:O4'	2.11	0.51
27:14:2602:A:H4'	27:14:2603:G:O5'	2.10	0.51
28:1J:113:C:O2'	42:65:46:VAL:HG13	2.10	0.51
32:39:24:LEU:HB3	32:39:115:ALA:HB2	1.92	0.51
32:39:162:LEU:H	32:39:162:LEU:HD12	1.74	0.51
32:39:181:LEU:O	32:39:205:ARG:NH2	2.44	0.51
57:L5:16:HIS:HB2	57:L5:44:PRO:HG2	1.92	0.51
1:13:81:G:H1	1:13:88:C:N4	2.01	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:26:PHE:O	7:6E:30:ILE:HG13	2.11	0.51
27:1H:485:G:O2'	27:1H:496:G:O6	2.18	0.51
27:1H:777:G:C6	30:11:208:LYS:HB2	2.45	0.51
1:1G:131:C:OP1	1:1G:190:G:N2	2.44	0.51
1:1G:477:G:H2'	1:1G:478:A:C8	2.45	0.51
1:1G:1126:U:H4'	1:1G:1127:G:OP2	2.11	0.51
1:1G:1352:C:H2'	1:1G:1353:G:C8	2.46	0.51
3:22:16:ARG:HH22	3:22:183:ASP:HA	1.75	0.51
3:22:131:ARG:NH2	3:22:166:GLU:OE2	2.44	0.51
4:32:8:VAL:HG13	4:32:21:LEU:HD12	1.93	0.51
5:42:60:TYR:O	5:42:64:ARG:HG3	2.11	0.51
11:2A:29:ILE:CB	11:2A:44:SER:HB3	2.40	0.51
27:14:1149:G:H2'	27:14:1150:C:C6	2.46	0.51
27:14:1652:A:C2'	27:14:1653:G:H5'	2.40	0.51
27:14:2279:G:N2	27:14:2280:G:H1'	2.25	0.51
27:14:2291:U:H5''	27:14:2380:C:O2'	2.11	0.51
55:J5:20:ARG:HG2	55:J5:23:HIS:ND1	2.25	0.51
58:M5:6:THR:HG23	58:M5:64:TYR:HD2	1.76	0.51
1:13:324:G:N1	1:13:327:A:OP2	2.43	0.51
1:13:1190:G:OP1	3:2E:4:LYS:HA	2.10	0.51
3:2E:83:ARG:O	3:2E:86:VAL:HG22	2.11	0.51
9:8E:50:LEU:HB3	9:8E:55:ALA:O	2.10	0.51
10:1I:53:PRO:HA	14:5I:42:ILE:HD11	1.91	0.51
15:6I:51:HIS:O	15:6I:54:ARG:HB3	2.11	0.51
23:2K:74:C:H41	50:I8:5:LYS:HD2	1.74	0.51
27:1H:361:C:H5''	48:G8:6:HIS:CD2	2.46	0.51
27:1H:1038:C:H2'	27:1H:1039:C:C6	2.45	0.51
27:1H:1374:C:OP2	65:1H:3694:HOH:O	2.19	0.51
27:1H:1458:C:H5'	27:1H:1459:A:OP2	2.11	0.51
27:1H:1848:G:H8	30:11:62:TYR:CZ	2.28	0.51
27:1H:2024:A:OP1	41:98:9:LYS:NZ	2.43	0.51
27:1H:2245:U:P	51:J8:40:ARG:HH12	2.33	0.51
27:1H:2334:G:H5''	27:1H:2335:A:OP2	2.10	0.51
27:1H:2348:A:C8	27:1H:2350:G:C5	2.99	0.51
27:1H:2486:U:N3	27:1H:2487:C:H5	2.09	0.51
27:1H:2708:C:H2'	27:1H:2709:U:H6	1.75	0.51
38:68:12:ASP:OD1	38:68:14:THR:OG1	2.22	0.51
39:78:25:SER:HB2	39:78:27:HIS:O	2.11	0.51
1:1G:128:G:H1	1:1G:233:C:H42	1.58	0.51
1:1G:692:U:O2'	1:1G:694:A:N7	2.34	0.51
1:1G:1449:C:H3'	1:1G:1450:U:H4'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6A:18:PHE:CZ	15:6A:21:ASP:HB3	2.46	0.51
27:14:85:G:OP2	48:C5:9:LYS:HB2	2.11	0.51
27:14:219:G:H2'	27:14:220:G:O4'	2.10	0.51
27:14:603:A:O2'	27:14:604:G:OP2	2.20	0.51
27:14:839:U:H2'	27:14:840:C:H6	1.75	0.51
27:14:864:G:N2	27:14:913:U:C2	2.79	0.51
27:14:959:A:C6	27:14:960:A:N1	2.79	0.51
27:14:1557:C:H5''	27:14:1558:A:OP2	2.10	0.51
27:14:1681:G:C4	65:14:3573:HOH:O	2.63	0.51
27:14:1796:U:H2'	27:14:1797:C:C6	2.45	0.51
27:14:2122:U:H2'	27:14:2123:G:C8	2.45	0.51
37:15:69:GLN:O	37:15:71:ILE:HG23	2.11	0.51
42:65:77:ALA:HB1	42:65:82:ILE:HB	1.93	0.51
1:13:502:G:C2	1:13:503:C:C2	2.99	0.51
1:13:726:C:H2'	1:13:727:G:C8	2.45	0.51
23:2K:53:G:H2'	23:2K:54:5MU:H6	1.75	0.51
24:3K:8:U:H2'	24:3K:13:C:H5	1.75	0.51
27:1H:473:G:OP1	44:C8:3:ARG:NH1	2.44	0.51
27:1H:821:U:C4'	30:11:47:GLY:HA3	2.40	0.51
27:1H:1760:C:H42	27:1H:1778:G:H1	1.58	0.51
33:41:51:ARG:HB2	33:41:51:ARG:HH11	1.75	0.51
33:41:80:PHE:O	33:41:82:LEU:HB2	2.11	0.51
35:61:133:HIS:CG	35:61:133:HIS:O	2.63	0.51
40:88:34:LEU:HD23	40:88:104:PHE:HD2	1.75	0.51
42:A8:11:LYS:HD3	42:A8:91:PRO:HD3	1.93	0.51
43:B8:102:ILE:HB	43:B8:110:ILE:HD13	1.91	0.51
1:1G:884:U:H4'	1:1G:885:G:H5''	1.92	0.51
1:1G:939:G:H5''	7:62:102:ARG:NH2	2.26	0.51
2:12:167:PRO:C	2:12:171:ALA:HB2	2.31	0.51
3:22:182:ILE:HA	3:22:202:ILE:O	2.11	0.51
4:32:76:ARG:HD3	4:32:207:TYR:CE1	2.46	0.51
8:72:69:ARG:NH1	8:72:75:ARG:O	2.44	0.51
9:82:78:LYS:NZ	9:82:78:LYS:HB3	2.24	0.51
27:14:195:A:H61	27:14:198:C:H3'	1.76	0.51
27:14:247:G:H4'	27:14:386:G:C5	2.45	0.51
27:14:918:A:C5	27:14:919:G:H1'	2.46	0.51
27:14:1020:A:N1	27:14:1141:U:H2'	2.25	0.51
27:14:1157:G:O2'	27:14:1158:C:H5'	2.11	0.51
27:14:2362:G:OP1	58:M5:44:LYS:NZ	2.37	0.51
27:14:2820:A:O2'	27:14:2821:A:OP1	2.28	0.51
30:19:71:ASP:CG	30:19:103:ARG:HH22	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:59:89:ILE:HG12	34:59:162:ILE:HG23	1.92	0.51
49:D5:7:ALA:HB2	49:D5:59:LEU:HD22	1.92	0.51
56:K5:11:LEU:HD12	56:K5:53:LYS:HA	1.93	0.51
1:13:1191:A:H5''	3:2E:4:LYS:HZ2	1.76	0.51
1:13:1228:C:P	13:4I:108:ARG:HH22	2.34	0.51
1:13:1298:C:H4'	1:13:1299:A:C4	2.46	0.51
1:13:1483:A:H5''	1:13:1484:C:OP2	2.11	0.51
10:1I:64:GLU:HB3	14:5I:59:ALA:HB2	1.93	0.51
15:6I:21:ASP:OD1	15:6I:24:SER:HB3	2.09	0.51
16:7I:43:LYS:HG3	16:7I:48:TRP:HE3	1.75	0.51
25:4K:53:U:H2'	25:4K:54:U:H5'	1.92	0.51
27:1H:665:U:H2'	27:1H:666:C:C6	2.45	0.51
27:1H:991:A:P	65:1H:3615:HOH:O	2.65	0.51
27:1H:2022:C:H2'	27:1H:2023:G:O4'	2.11	0.51
27:1H:2725:U:O2'	27:1H:2726:A:C8	2.57	0.51
27:1H:2881:C:OP1	41:98:57:ARG:NH2	2.42	0.51
29:71:193:ILE:O	29:71:197:GLU:N	2.44	0.51
33:41:38:VAL:HG22	33:41:93:THR:HA	1.93	0.51
1:1G:15:G:H1'	5:42:19:MET:HE3	1.92	0.51
1:1G:392:G:H2'	1:1G:393:A:H8	1.74	0.51
1:1G:490:G:OP2	4:32:132:ARG:NH2	2.22	0.51
1:1G:617:G:OP2	65:1G:1819:HOH:O	2.19	0.51
6:52:29:ALA:HA	6:52:32:ASN:HB2	1.91	0.51
9:82:34:ASN:OD1	9:82:34:ASN:N	2.43	0.51
13:4A:13:LYS:NZ	13:4A:21:TYR:OH	2.44	0.51
13:4A:22:ILE:HB	13:4A:25:ILE:HG12	1.92	0.51
59:1L:8:U:H3'	59:1L:13:C:N4	2.26	0.51
59:1L:75:C:O2	27:14:2507:C:O2'	2.29	0.51
27:14:516:C:OP1	55:J5:13:LYS:NZ	2.43	0.51
27:14:557:U:H2'	27:14:558:G:C8	2.45	0.51
27:14:587:C:O2	39:35:33:ARG:NH1	2.40	0.51
27:14:918:A:N6	27:14:919:G:N3	2.59	0.51
27:14:991:C:H42	27:14:1163:G:H1	1.58	0.51
27:14:1040:C:H2'	27:14:1041:C:C6	2.45	0.51
27:14:1191:G:H2'	27:14:1192:G:H8	1.75	0.51
27:14:2141:G:H2'	27:14:2142:C:O4'	2.11	0.51
33:49:43:LEU:O	33:49:88:ILE:HG12	2.11	0.51
39:35:101:VAL:CG2	39:35:108:LYS:H	2.24	0.51
41:55:77:ARG:O	41:55:80:PHE:N	2.43	0.51
43:75:26:ASP:O	43:75:49:VAL:HG12	2.10	0.51
49:D5:28:MET:HA	49:D5:88:PHE:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D5:74:VAL:HG22	49:D5:86:VAL:HG13	1.93	0.51
53:H5:18:ASP:OD1	53:H5:18:ASP:N	2.38	0.51
1:13:557:G:H2'	1:13:558:G:C8	2.45	0.51
1:13:1095:U:OP1	1:13:1108:G:N1	2.44	0.51
1:13:1240:U:C5	7:6E:30:ILE:HG22	2.43	0.51
27:1H:355:A:H2	27:1H:1256:A:O2'	1.92	0.51
27:1H:722:G:H1'	32:31:74:ARG:HD3	1.92	0.51
27:1H:1278:G:H2'	27:1H:1279:G:C8	2.46	0.51
27:1H:2201:C:OP1	29:71:46:LYS:NZ	2.24	0.51
30:11:38:LYS:HE2	30:11:39:LYS:O	2.11	0.51
33:41:179:PRO:HG3	54:M8:38:LYS:NZ	2.26	0.51
35:61:29:TYR:CE1	35:61:33:ARG:NE	2.79	0.51
35:61:81:VAL:HG21	35:61:88:ILE:HD12	1.93	0.51
36:38:73:GLY:HA2	36:38:119:ALA:O	2.11	0.51
42:A8:26:LEU:HB3	42:A8:87:PHE:HA	1.93	0.51
42:A8:85:VAL:HG22	42:A8:110:LEU:HB3	1.93	0.51
48:G8:83:THR:HG21	48:G8:99:CYS:SG	2.51	0.51
54:M8:39:CYS:SG	54:M8:41:PRO:HD3	2.51	0.51
1:1G:164:U:H2'	1:1G:165:C:C6	2.46	0.51
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.46	0.51
4:32:201:GLN:HE21	5:42:116:THR:HG22	1.76	0.51
6:52:78:GLU:HA	6:52:81:ILE:HD11	1.93	0.51
12:3A:3:THR:HG23	12:3A:6:GLN:HG3	1.93	0.51
12:3A:56:ARG:HA	12:3A:62:GLU:HG2	1.93	0.51
14:5A:3:ARG:HD3	14:5A:6:LEU:HB2	1.93	0.51
17:8A:85:VAL:O	17:8A:89:LEU:HD12	2.11	0.51
18:9A:50:ILE:HD11	18:9A:70:ILE:HG21	1.92	0.51
24:3L:53:G:O6	24:3L:61:C:N4	2.43	0.51
24:3L:76:A:H8	27:14:2394:C:H42	1.58	0.51
27:14:28:A:C2	27:14:513:A:C8	2.99	0.51
27:14:800:A:H8	27:14:800:A:OP1	1.93	0.51
27:14:1256:G:H5'	27:14:1257:C:OP2	2.11	0.51
27:14:1274:A:N3	27:14:1297:C:H1'	2.26	0.51
27:14:2746:U:H5''	34:59:138:LYS:NZ	2.26	0.51
31:29:101:ARG:NH1	31:29:169:ASN:O	2.44	0.51
33:49:80:PHE:O	33:49:82:LEU:HB2	2.10	0.51
57:L5:19:ARG:HG2	57:L5:19:ARG:HH11	1.75	0.51
58:M5:40:GLU:O	58:M5:43:GLN:N	2.44	0.51
1:13:774:G:OP1	30:11:202:LYS:NZ	2.44	0.51
1:13:816:A:OP1	1:13:1526:G:O2'	2.28	0.51
1:13:1516:G:H2'	1:13:1518:MA6:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:65:ARG:HG2	4:3E:75:PHE:CE2	2.46	0.51
10:1I:35:SER:OG	10:1I:73:ASP:O	2.28	0.51
12:3I:81:LEU:HD22	12:3I:101:VAL:HG11	1.93	0.51
13:4I:15:VAL:O	13:4I:19:LEU:HD22	2.11	0.51
27:1H:1102:G:O2'	27:1H:1132:A:N1	2.27	0.51
27:1H:2019:C:H4'	27:1H:2020:G:O5'	2.10	0.51
27:1H:2088:C:H4'	27:1H:2264:OMG:HM22	1.93	0.51
27:1H:2146:G:H1'	29:71:172:HIS:CD2	2.46	0.51
29:71:47:LEU:HD21	29:71:171:ILE:HG22	1.92	0.51
30:11:108:PRO:HG3	30:11:143:HIS:CE1	2.46	0.51
39:78:98:GLU:HA	39:78:101:VAL:HB	1.93	0.51
42:A8:49:VAL:HG21	42:A8:77:ALA:HA	1.93	0.51
43:B8:124:ASP:O	43:B8:128:GLU:HB3	2.10	0.51
56:O8:15:GLU:HB2	56:O8:20:ASN:OD1	2.11	0.51
1:1G:1519:MA6:H8	1:1G:1519:MA6:O5'	2.11	0.51
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.94	0.51
7:62:46:ALA:HA	7:62:49:ILE:HG13	1.93	0.51
9:82:4:TYR:HB2	9:82:19:LEU:HG	1.93	0.51
17:8A:12:SER:HB3	17:8A:20:THR:HB	1.92	0.51
20:BA:36:LEU:HD13	20:BA:55:ILE:HG23	1.93	0.51
59:1L:2:C:N3	59:1L:72:C:H1'	2.26	0.51
27:14:117:G:C6	27:14:119:A:C6	2.98	0.51
27:14:533:G:H5'	44:85:24:TYR:CD1	2.46	0.51
27:14:1494:A:H2'	27:14:1495:A:C8	2.45	0.51
27:14:1729:A:N6	27:14:1731:G:N7	2.59	0.51
34:59:46:GLU:OE1	34:59:51:ARG:NH1	2.44	0.51
35:69:113:ARG:HD2	35:69:131:LYS:HD2	1.93	0.51
41:55:38:VAL:HB	41:55:39:PRO:HD3	1.92	0.51
47:B5:48:LYS:NZ	52:G5:30:ARG:HH22	2.08	0.51
53:H5:59:VAL:HG12	53:H5:60:GLU:H	1.75	0.51
1:13:343:U:O2'	1:13:347:G:N2	2.45	0.50
1:13:600:C:OP1	8:7E:97:VAL:HG12	2.11	0.50
1:13:1300:G:HO2'	1:13:1301:U:P	2.33	0.50
2:1E:200:ILE:HG22	2:1E:202:PRO:HD3	1.92	0.50
3:2E:162:GLN:HB3	25:4K:54:U:C2	2.47	0.50
27:1H:944:C:O5'	27:1H:944:C:H6	1.94	0.50
27:1H:2253:C:O2'	27:1H:2254:A:H5'	2.11	0.50
27:1H:2417:C:O3'	39:78:77:ARG:NH2	2.44	0.50
33:41:142:PRO:HG2	33:41:143:GLU:OE2	2.10	0.50
35:61:78:THR:HA	35:61:141:LYS:HB2	1.92	0.50
37:58:28:THR:HG22	37:58:29:LYS:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:B8:55:ASN:H	43:B8:59:THR:HB	1.77	0.50
48:G8:79:CYS:HB3	48:G8:80:GLY:O	2.12	0.50
1:1G:186(C):G:H2'	1:1G:186(D):C:C6	2.46	0.50
1:1G:1118:C:OP1	9:82:9:ARG:HD2	2.11	0.50
8:72:13:ILE:O	8:72:17:THR:HG23	2.11	0.50
8:72:122:ARG:CZ	8:72:122:ARG:HB2	2.40	0.50
9:82:17:VAL:HG13	9:82:63:ILE:HG12	1.92	0.50
27:14:729:G:O5'	30:19:208:LYS:NZ	2.44	0.50
27:14:1053:C:C2	27:14:1054:A:H1'	2.46	0.50
27:14:1317:A:H2'	27:14:1318:C:C6	2.43	0.50
27:14:1341:U:O4	47:B5:16:LYS:HE2	2.11	0.50
27:14:1662:C:O2'	27:14:2687:U:OP1	2.23	0.50
27:14:1894:C:H2'	27:14:1895:C:H6	1.75	0.50
27:14:2096:U:H3	27:14:2193:G:H1	1.59	0.50
31:29:12:THR:HG21	43:75:11:GLU:OE2	2.12	0.50
31:29:110:GLY:HA2	31:29:162:ALA:N	2.26	0.50
49:D5:137:ILE:HG22	49:D5:139:VAL:HG23	1.93	0.50
51:F5:92:LYS:O	51:F5:93:GLU:HB2	2.10	0.50
1:13:1349:A:OP2	9:8E:118:LYS:NZ	2.45	0.50
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.11	0.50
5:4E:67:VAL:O	5:4E:69:VAL:HG23	2.11	0.50
6:5E:1:MET:HG2	6:5E:68:PRO:HA	1.92	0.50
13:4I:88:ARG:HH12	19:AI:2:PRO:HD2	1.75	0.50
27:1H:1048:A:H2'	27:1H:1049:G:O4'	2.10	0.50
27:1H:1135:A:H5'	27:1H:1136:G:H5'	1.92	0.50
27:1H:1845:G:H4'	30:11:43:ARG:O	2.10	0.50
35:61:98:ALA:HA	35:61:109:ILE:HD11	1.93	0.50
37:58:15:LEU:O	37:58:136:GLU:HB3	2.11	0.50
41:98:117:VAL:HG13	41:98:118:GLU:N	2.26	0.50
44:C8:62:ILE:HG23	44:C8:76:TYR:CE2	2.47	0.50
44:C8:92:ARG:NH1	45:D8:11:GLN:O	2.44	0.50
54:M8:68:ARG:NH1	54:M8:70:GLY:H	2.10	0.50
1:1G:376:G:P	16:7A:67:THR:HG21	2.51	0.50
1:1G:601:C:H2'	1:1G:602:A:C8	2.46	0.50
1:1G:1118:C:H1'	1:1G:1179:A:C4	2.46	0.50
14:5A:16:PHE:O	14:5A:18:VAL:N	2.45	0.50
59:1L:11:C:H42	59:1L:25:C:N4	2.06	0.50
27:14:26:G:C6	27:14:27:G:N1	2.80	0.50
27:14:74:A:H4'	27:14:75:G:O5'	2.11	0.50
27:14:253:C:OP2	58:M5:5:LYS:NZ	2.37	0.50
27:14:270(Q):C:H5''	35:69:45:LYS:NZ	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:674:G:O2'	32:39:74:ARG:HG3	2.10	0.50
27:14:1110:G:O2'	27:14:1111:A:O4'	2.16	0.50
27:14:1248:G:O5'	32:39:92:PRO:HD3	2.12	0.50
27:14:1998:G:H4'	27:14:2724:C:O2'	2.10	0.50
27:14:2157:G:O2'	27:14:2158:A:O4'	2.29	0.50
27:14:2181:G:H2'	27:14:2182:G:H8	1.75	0.50
27:14:2503:2MA:H4'	27:14:2504:U:OP1	2.11	0.50
32:39:67:GLN:O	32:39:67:GLN:HG3	2.11	0.50
39:35:59:LEU:HD21	58:M5:10:ALA:HA	1.93	0.50
45:95:57:VAL:HG12	45:95:99:ILE:HG23	1.93	0.50
49:D5:140:ASP:OD1	49:D5:140:ASP:N	2.44	0.50
1:13:196:A:O2'	1:13:197:A:H2'	2.11	0.50
1:13:1008:C:H3'	1:13:1009:G:H5''	1.94	0.50
1:13:1151:A:H2'	1:13:1152:A:H8	1.75	0.50
1:13:1510:U:H2'	1:13:1511:G:C8	2.46	0.50
3:2E:92:ALA:HA	3:2E:95:THR:O	2.11	0.50
8:7E:103:VAL:CG2	8:7E:110:ALA:HB2	2.41	0.50
11:2I:54:ARG:O	11:2I:57:THR:HG22	2.10	0.50
12:3I:21:VAL:HG13	12:3I:21:VAL:O	2.11	0.50
24:3K:8:U:H2'	24:3K:13:C:C5	2.47	0.50
26:5K:58:A:H1'	26:5K:60:U:C5	2.46	0.50
27:1H:928:G:C2	27:1H:929:G:C8	2.99	0.50
27:1H:1069:G:N2	27:1H:1070:U:O4	2.42	0.50
27:1H:1344:C:OP1	27:1H:2723:C:H4'	2.11	0.50
27:1H:1625:C:H2'	27:1H:1626:U:C6	2.46	0.50
27:1H:2675:A:H2'	27:1H:2676:G:O4'	2.11	0.50
27:1H:2826:C:H2'	27:1H:2827:C:C6	2.46	0.50
27:1H:2863:G:C6	27:1H:2864:C:C4	2.99	0.50
28:16:32:C:C2	28:16:51:G:N2	2.79	0.50
30:11:17:THR:CG2	30:11:204:ILE:HA	2.41	0.50
40:88:134:ARG:HH21	49:H8:122:ARG:HH12	1.60	0.50
51:J8:3:LYS:HA	51:J8:61:ARG:NH2	2.26	0.50
58:Q8:63:PRO:HG2	58:Q8:64:TYR:CE2	2.46	0.50
1:1G:176:C:H2'	1:1G:177:C:H6	1.76	0.50
1:1G:363:A:C6	12:3A:28:PRO:HD2	2.47	0.50
1:1G:922:G:N3	1:1G:1398:A:H2	2.10	0.50
2:12:69:LEU:HD13	2:12:159:PRO:HG3	1.93	0.50
2:12:92:TYR:CZ	2:12:151:GLY:HA3	2.46	0.50
12:3A:5:ASN:O	12:3A:9:ARG:HG3	2.12	0.50
20:BA:47:GLY:HA2	20:BA:92:LEU:HD11	1.93	0.50
27:14:98:G:H5''	52:G5:3:LEU:HD12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:403:U:H4'	27:14:404:C:O5'	2.12	0.50
27:14:443:A:H5''	27:14:444:C:OP1	2.12	0.50
27:14:1766:U:H3	27:14:1986:A:H61	1.60	0.50
27:14:1794:U:H2'	27:14:1795:C:C6	2.46	0.50
27:14:1878:G:H2'	27:14:1879:C:C6	2.46	0.50
37:15:15:LEU:O	37:15:16:ILE:HD13	2.11	0.50
38:25:24:VAL:HA	38:25:39:ILE:HG22	1.92	0.50
38:25:111:PHE:O	38:25:115:VAL:HG23	2.11	0.50
44:85:62:ILE:HD11	44:85:93:LYS:HE2	1.93	0.50
50:E5:36:ILE:HD11	50:E5:39:ARG:HG2	1.92	0.50
51:F5:20:ARG:HA	51:F5:33:LYS:O	2.11	0.50
55:J5:16:ARG:HG3	55:J5:17:ASP:N	2.26	0.50
1:13:160:A:H1'	1:13:344:A:H8	1.76	0.50
1:13:200:G:H2'	1:13:201:C:O4'	2.10	0.50
1:13:260:G:H2'	1:13:261:U:C6	2.47	0.50
1:13:510:A:P	65:13:1837:HOH:O	2.69	0.50
1:13:767:A:H2'	1:13:768:A:O4'	2.10	0.50
1:13:1254:C:N4	10:11:43:ARG:HH12	2.09	0.50
1:13:1497:G:C2'	1:13:1498:UR3:H5'	2.42	0.50
27:1H:1954:U:H5	27:1H:1992:A:N7	2.08	0.50
27:1H:2157:A:N3	27:1H:2182:G:H1'	2.27	0.50
32:31:67:GLN:HG3	32:31:67:GLN:O	2.10	0.50
32:31:123:LEU:CD1	32:31:192:LEU:HB3	2.40	0.50
37:58:41:ASP:OD1	37:58:41:ASP:N	2.40	0.50
1:1G:1028(A):C:O2	1:1G:1033:G:N2	2.36	0.50
1:1G:1325:C:H5'	21:1B:17:THR:HG21	1.92	0.50
1:1G:1347:G:N2	1:1G:1373:G:H2'	2.26	0.50
1:1G:1498:UR3:O2'	1:1G:1499:A:OP2	2.22	0.50
27:14:839:U:H2'	27:14:840:C:C6	2.46	0.50
27:14:1414:G:H1	27:14:1588:C:H42	1.58	0.50
27:14:1425:G:H2'	27:14:1426:G:C8	2.46	0.50
27:14:2364:C:H2'	27:14:2365:G:O4'	2.11	0.50
27:14:2415:G:H4'	39:35:67:MET:N	2.26	0.50
27:14:2667:C:H1'	34:59:109:PHE:HD2	1.75	0.50
27:14:2873:A:O4'	41:55:6:SER:HB2	2.11	0.50
28:1J:12:C:O2'	50:E5:74:ARG:HG2	2.11	0.50
39:35:97:PRO:C	39:35:99:LEU:H	2.13	0.50
45:95:20:LEU:HB3	45:95:94:LEU:HB2	1.94	0.50
1:13:115:G:C2	1:13:313:A:C2	2.99	0.50
1:13:262:A:C6	1:13:263:A:C6	2.99	0.50
1:13:793:U:O4	1:13:1517:G:H8	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:164:VAL:O	2:1E:186:ALA:HA	2.11	0.50
12:3I:4:ILE:HD13	12:3I:7:LEU:HD12	1.92	0.50
24:3K:64:A:H2'	24:3K:65:G:C4	2.46	0.50
27:1H:17:G:H2'	27:1H:18:C:C6	2.46	0.50
27:1H:253:C:H1'	27:1H:458:G:H1'	1.93	0.50
27:1H:906:U:OP2	50:I8:77:ARG:NH2	2.30	0.50
27:1H:1107:U:O2	27:1H:1135:A:H8	1.94	0.50
27:1H:1249:G:H3'	27:1H:1250:A:H5''	1.92	0.50
27:1H:1716:A:H61	27:1H:1724:A:H61	1.59	0.50
27:1H:1826:U:H2'	27:1H:1827:C:H6	1.77	0.50
27:1H:2139:G:O6	27:1H:2185:G:H5''	2.11	0.50
28:16:11:C:H3'	28:16:12:C:C6	2.47	0.50
31:21:116:VAL:HG21	31:21:138:PRO:HB3	1.94	0.50
33:41:173:LEU:HD22	33:41:178:PHE:CE1	2.46	0.50
1:1G:130:A:O2'	1:1G:131:C:P	2.69	0.50
1:1G:390:C:H2'	1:1G:391:G:C8	2.47	0.50
1:1G:474:G:H5'	16:7A:81:ARG:HG3	1.92	0.50
1:1G:501:C:H2'	1:1G:502:G:H8	1.77	0.50
1:1G:582:U:H2'	1:1G:583:A:C8	2.46	0.50
1:1G:626:U:C2	1:1G:627:G:C8	2.99	0.50
1:1G:636:U:H5'	17:8A:2:PRO:HG3	1.93	0.50
1:1G:1318:A:O2'	19:AA:37:ARG:HB3	2.11	0.50
1:1G:1321:C:N4	1:1G:1322:C:H41	2.10	0.50
2:12:21:ARG:HA	2:12:39:ILE:HA	1.93	0.50
13:4A:10:PRO:HG2	13:4A:45:VAL:HG11	1.93	0.50
15:6A:33:THR:HA	15:6A:63:ARG:HH11	1.76	0.50
20:BA:54:LYS:HA	20:BA:57:ARG:HH21	1.76	0.50
27:14:191:A:H2'	27:14:192:C:C6	2.47	0.50
27:14:1203:G:O2'	27:14:1242:A:N6	2.44	0.50
27:14:2056:G:C2	27:14:2057:A:C8	2.99	0.50
27:14:2108:C:H2'	27:14:2109:U:O4'	2.11	0.50
27:14:2303:G:H1	27:14:2313:C:N4	2.10	0.50
31:29:115:GLY:O	31:29:119:ARG:HB2	2.12	0.50
33:49:11:TYR:OH	33:49:32:PRO:O	2.28	0.50
45:95:87:HIS:CE1	45:95:89:GLN:HA	2.47	0.50
1:13:358:U:OP1	35:69:121:LYS:HE3	2.10	0.50
1:13:449:C:H2'	1:13:450:G:O4'	2.11	0.50
1:13:913:A:OP1	12:3I:43:LYS:NZ	2.33	0.50
1:13:1037:C:H2'	1:13:1038:C:C5	2.46	0.50
1:13:1085:U:H3'	1:13:1086:U:H5	1.75	0.50
1:13:1427:U:H2'	1:13:1428:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:220:ASP:HA	2:1E:223:ILE:HG13	1.93	0.50
3:2E:68:VAL:HG12	3:2E:103:VAL:HA	1.93	0.50
24:3K:23:A:H2'	24:3K:24:G:C8	2.46	0.50
26:5K:56:C:H2'	26:5K:57:G:C8	2.46	0.50
27:1H:1094:G:H2'	27:1H:1157:G:N2	2.26	0.50
27:1H:2155:U:H3	29:71:8:ARG:HG3	1.77	0.50
27:1H:2590:A:O4'	55:N8:3:LYS:HB2	2.11	0.50
44:C8:92:ARG:HD2	45:D8:11:GLN:HB2	1.93	0.50
49:H8:95:PRO:HB2	49:H8:127:LYS:HG2	1.94	0.50
1:1G:273:A:H1'	17:8A:16:GLN:HE21	1.76	0.50
9:82:11:LYS:HG3	9:82:108:VAL:HG12	1.94	0.50
9:82:96:LEU:HD12	9:82:101:PHE:HB2	1.94	0.50
10:1A:40:LEU:O	10:1A:70:ARG:NH2	2.44	0.50
20:BA:73:HIS:ND1	20:BA:75:ASN:HB2	2.27	0.50
27:14:16:G:H2'	27:14:17:G:H8	1.76	0.50
27:14:654(C):G:H22	27:14:654(R):C:N4	2.08	0.50
27:14:896:A:C6	27:14:897:C:H1'	2.46	0.50
27:14:1085:A:H5'	27:14:1105:U:H1'	1.93	0.50
27:14:1210:A:H5'	27:14:1212:G:O4'	2.12	0.50
34:59:25:LYS:HG3	34:59:34:GLU:HG3	1.93	0.50
47:B5:21:PHE:HE2	47:B5:92:LEU:HB3	1.77	0.50
1:13:21:G:H2'	1:13:22:G:C8	2.46	0.50
1:13:45:U:H2'	1:13:46:G:C8	2.47	0.50
1:13:278:G:OP2	17:8I:92:ARG:NH1	2.44	0.50
1:13:607:A:H2'	1:13:608:A:O4'	2.12	0.50
1:13:881:G:P	12:3I:9:ARG:HH22	2.35	0.50
1:13:976:G:OP1	14:5I:32:SER:N	2.44	0.50
2:1E:24:TRP:HB2	2:1E:190:THR:HB	1.94	0.50
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.93	0.50
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.29	0.50
23:2K:75:C:H5''	23:2K:76:A:OP2	2.12	0.50
27:1H:844:C:H2'	27:1H:845:C:C6	2.47	0.50
27:1H:1050:G:C2	27:1H:1200:C:C2	3.00	0.50
27:1H:1446:C:H5	65:1H:4294:HOH:O	1.94	0.50
27:1H:2695:U:H5''	31:21:11:MET:HB2	1.94	0.50
34:51:12:PRO:HG2	34:51:15:VAL:HG13	1.94	0.50
43:B8:51:ARG:HD3	43:B8:53:ARG:HB2	1.94	0.50
54:M8:58:ARG:HG2	54:M8:62:ARG:HB2	1.94	0.50
56:O8:10:LEU:HG	58:Q8:34:TRP:HD1	1.76	0.50
1:1G:360:A:H2'	1:1G:361:G:O4'	2.11	0.50
1:1G:1291:G:O2'	9:82:38:GLN:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:63:ASN:HB3	3:22:98:ASN:HB3	1.93	0.50
9:82:14:VAL:O	9:82:65:VAL:HG23	2.12	0.50
13:4A:49:THR:HB	13:4A:52:GLU:HG3	1.94	0.50
18:9A:37:VAL:O	18:9A:40:LEU:N	2.44	0.50
19:AA:32:LYS:HB3	19:AA:50:ALA:HB3	1.93	0.50
59:1L:2:C:H42	59:1L:72:C:H1'	1.77	0.50
27:14:865:C:H4'	27:14:866:A:OP1	2.11	0.50
27:14:1846:G:H8	27:14:1846:G:H5''	1.77	0.50
27:14:2162:G:H2'	27:14:2163:C:C6	2.47	0.50
27:14:2256:G:C5	27:14:2257:U:C5	2.99	0.50
27:14:2493:U:H2'	27:14:2494:G:O4'	2.11	0.50
27:14:2698:U:H2'	27:14:2699:C:C6	2.46	0.50
29:79:7:TYR:O	29:79:10:LEU:N	2.42	0.50
33:49:106:LEU:HD12	33:49:110:ALA:HB3	1.92	0.50
40:45:132:VAL:HG12	40:45:134:ARG:H	1.75	0.50
51:F5:79:GLY:O	51:F5:80:LEU:HD13	2.11	0.50
1:13:60:A:P	1:13:60:A:H8	2.35	0.50
1:13:91:C:H2'	1:13:92:G:C8	2.47	0.50
1:13:1008:C:H42	1:13:1021:G:H22	1.60	0.50
10:1I:76:ASN:OD1	10:1I:78:ASN:HB2	2.11	0.50
24:3K:8:U:H1'	24:3K:48:C:C2	2.46	0.50
26:5K:19:G:H1'	28:16:0:A:N6	2.26	0.50
27:1H:2182:G:H2'	27:1H:2183:G:O4'	2.12	0.50
27:1H:2662:U:H2'	27:1H:2663:U:C6	2.46	0.50
27:1H:2779:A:H2	27:1H:2780:G:O4'	1.95	0.50
31:21:50:GLY:HA3	31:21:75:VAL:HG21	1.93	0.50
35:61:1:MET:C	35:61:20:ASP:HB2	2.32	0.50
40:88:74:TYR:O	40:88:90:VAL:O	2.30	0.50
43:B8:43:GLN:O	43:B8:43:GLN:HG3	2.11	0.50
43:B8:87:ASP:OD1	43:B8:87:ASP:N	2.44	0.50
43:B8:108:ARG:O	43:B8:111:ARG:HG2	2.12	0.50
49:H8:118:GLN:HG2	49:H8:173:ALA:HB3	1.93	0.50
51:J8:83:GLU:HG2	51:J8:85:LEU:N	2.19	0.50
1:1G:6:G:O2'	1:1G:7:G:O5'	2.26	0.50
1:1G:109:A:H2'	1:1G:326:G:N2	2.26	0.50
1:1G:876:G:O5'	8:72:14:ARG:NH1	2.45	0.50
1:1G:1099:G:OP1	2:12:96:ARG:NH1	2.45	0.50
3:22:45:LYS:HG3	3:22:46:GLU:HG3	1.93	0.50
4:32:173:TRP:O	4:32:186:LEU:HB2	2.12	0.50
12:3A:79:VAL:O	12:3A:103:ASP:HB2	2.12	0.50
59:1L:16:U:H2'	59:1L:17:C:H5''	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:444:C:H4'	32:39:49:ALA:HB2	1.94	0.50
27:14:572:A:H2'	27:14:573:G:O4'	2.12	0.50
27:14:603:A:H1'	27:14:604:G:O4'	2.11	0.50
27:14:729:G:C6	30:19:208:LYS:HB2	2.46	0.50
27:14:792:G:O2'	27:14:2440:C:N3	2.39	0.50
27:14:833:U:H2'	27:14:834:C:C6	2.47	0.50
27:14:858:U:O2	27:14:2268:A:H2'	2.11	0.50
27:14:952:G:OP2	40:45:16:ARG:NH2	2.44	0.50
27:14:2750:A:H5''	27:14:2751:G:OP2	2.12	0.50
32:39:168:ARG:HA	32:39:175:THR:HG21	1.94	0.50
32:39:184:TYR:CE2	32:39:188:ARG:HD2	2.47	0.50
35:69:81:VAL:HG13	35:69:144:VAL:H	1.77	0.50
40:45:37:LEU:HD12	40:45:128:LYS:HB2	1.94	0.50
46:A5:64:MET:HG2	46:A5:109:GLU:HG3	1.93	0.50
1:13:918:A:H2'	1:13:919:A:C8	2.47	0.50
1:13:1024:G:H4'	1:13:1024:G:OP1	2.11	0.50
1:13:1106:G:H5''	3:2E:172:ARG:HG2	1.93	0.50
1:13:1167:A:H8	1:13:1167:A:OP1	1.94	0.50
2:1E:178:ARG:HH22	8:7E:68:ARG:NH2	2.08	0.50
8:7E:103:VAL:HG21	8:7E:110:ALA:HB2	1.93	0.50
8:7E:104:ARG:HD3	8:7E:138:TRP:CD1	2.47	0.50
13:4I:3:ARG:HH21	13:4I:9:ILE:HD11	1.76	0.50
14:5I:40:CYS:HB2	14:5I:43:CYS:HB2	1.94	0.50
20:BI:92:LEU:HD22	20:BI:96:GLY:HA2	1.94	0.50
24:3K:40:C:H2'	24:3K:41:C:H6	1.76	0.50
27:1H:511:C:H2'	27:1H:512:C:C6	2.46	0.50
27:1H:555:A:H8	27:1H:556:G:C6	2.29	0.50
27:1H:1478:U:H2'	27:1H:1479:C:C6	2.47	0.50
27:1H:1605:C:OP2	27:1H:1606:A:O2'	2.15	0.50
27:1H:2122:U:H3	27:1H:2213:G:H1	1.59	0.50
32:31:9:ILE:HD11	32:31:125:LEU:HG	1.94	0.50
32:31:124:LEU:HD12	32:31:125:LEU:N	2.27	0.50
33:41:83:ARG:N	33:41:86:MET:SD	2.84	0.50
40:88:14:ARG:HG2	40:88:41:TRP:CH2	2.46	0.50
40:88:72:LYS:HB3	40:88:94:VAL:HG23	1.94	0.50
48:G8:91:GLU:O	48:G8:93:GLY:N	2.45	0.50
55:N8:31:VAL:HB	55:N8:42:PRO:HD3	1.94	0.50
1:1G:97:U:H2'	1:1G:99:C:C6	2.46	0.50
1:1G:269:C:H2'	1:1G:270:A:C8	2.47	0.50
1:1G:1179:A:H2'	1:1G:1180:A:O4'	2.12	0.50
1:1G:1423:G:H2'	1:1G:1424:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:119:ARG:NH2	3:22:137:ALA:HA	2.27	0.50
3:22:138:VAL:HG23	3:22:151:VAL:HG23	1.94	0.50
8:72:20:TYR:HE2	8:72:75:ARG:HD2	1.77	0.50
27:14:192:C:O2'	27:14:802:A:N3	2.35	0.50
27:14:483:A:O2'	48:C5:59:GLY:HA2	2.12	0.50
27:14:780:G:H21	27:14:783:A:H62	1.60	0.50
27:14:1018:C:H2'	27:14:1019:U:H6	1.77	0.50
27:14:2348:U:C2'	27:14:2349:G:H5''	2.38	0.50
27:14:2695:C:H2'	27:14:2696:U:C6	2.47	0.50
29:79:201:PRO:HD2	29:79:208:PHE:HE2	1.76	0.50
31:29:49:LEU:O	31:29:78:LEU:HD12	2.12	0.50
32:39:81:PRO:HB3	32:39:87:GLY:O	2.12	0.50
32:39:136:THR:HG22	32:39:166:ALA:O	2.11	0.50
52:G5:14:ARG:C	52:G5:16:LEU:H	2.14	0.50
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.45	0.49
1:13:411:A:N3	1:13:413:G:O2'	2.40	0.49
2:1E:170:GLU:O	2:1E:174:VAL:HG23	2.12	0.49
24:3K:51:U:H2'	24:3K:52:G:C4	2.47	0.49
27:1H:412:U:H2'	27:1H:413:C:H6	1.77	0.49
27:1H:486:U:H2'	27:1H:487:A:C8	2.47	0.49
27:1H:2205:G:H2'	27:1H:2206:C:C6	2.47	0.49
31:21:116:VAL:HG13	31:21:122:PHE:CB	2.41	0.49
32:31:167:ALA:HB1	32:31:173:VAL:HG11	1.94	0.49
39:78:39:LYS:HG3	39:78:45:LEU:HD21	1.93	0.49
42:A8:102:ALA:HB1	42:A8:112:PHE:HD2	1.77	0.49
1:1G:230:G:H2'	1:1G:231:G:O4'	2.12	0.49
1:1G:1256:A:N6	1:1G:1278:U:OP2	2.32	0.49
2:12:80:ILE:HG21	2:12:211:ILE:HG21	1.93	0.49
4:32:108:LEU:HB3	4:32:110:PHE:CE1	2.47	0.49
7:62:120:ILE:O	7:62:124:LEU:HB2	2.11	0.49
17:8A:94:ASN:O	17:8A:97:SER:OG	2.28	0.49
27:14:260:G:O4'	27:14:621:A:H1'	2.12	0.49
27:14:451:C:H5'	65:14:3706:HOH:O	2.12	0.49
27:14:568:U:OP1	39:35:36:LYS:HE3	2.12	0.49
27:14:857:C:C2	27:14:858:U:C5	2.99	0.49
27:14:1022:G:O2'	27:14:1024:G:O6	2.29	0.49
27:14:1169:G:H2'	27:14:1170:G:O4'	2.12	0.49
27:14:1239:G:H2'	27:14:1240:U:O4'	2.11	0.49
27:14:2210:G:H2'	27:14:2210:G:N3	2.26	0.49
27:14:2790:A:H4'	27:14:2791:C:O5'	2.12	0.49
27:14:2843:G:H1	27:14:2874:C:H42	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:79:43:VAL:HG22	29:79:214:VAL:HG13	1.94	0.49
32:39:155:LEU:HD23	32:39:186:ILE:HG12	1.93	0.49
37:15:129:PRO:O	37:15:131:GLN:N	2.45	0.49
42:65:26:LEU:HD12	42:65:39:ILE:HD11	1.93	0.49
43:75:7:ILE:O	43:75:10:VAL:HG22	2.11	0.49
48:C5:43:ASN:O	48:C5:64:GLU:HA	2.11	0.49
50:E5:68:GLU:CD	50:E5:82:ARG:HH21	2.15	0.49
1:13:113:G:H2'	1:13:114:U:C6	2.47	0.49
1:13:421:U:O4	3:2E:127:ARG:NH1	2.45	0.49
1:13:642:A:H2'	1:13:643:C:C6	2.47	0.49
1:13:663:A:H2'	1:13:664:G:O4'	2.12	0.49
6:5E:82:ARG:HB2	6:5E:85:VAL:HG23	1.93	0.49
9:8E:49:PRO:HD3	9:8E:78:LYS:HG3	1.94	0.49
13:4I:40:ASN:HB3	13:4I:43:THR:HG23	1.94	0.49
18:9I:53:ARG:HG2	18:9I:58:LEU:O	2.12	0.49
27:1H:53:G:O2'	57:P8:35:ARG:HD3	2.11	0.49
27:1H:144:C:H2'	27:1H:145:G:C8	2.47	0.49
27:1H:556:G:O4'	27:1H:556:G:N3	2.41	0.49
27:1H:867:A:OP2	27:1H:1233:G:N2	2.41	0.49
27:1H:1726:G:N2	27:1H:2012:G:H1	2.09	0.49
27:1H:2667:A:H8	27:1H:2667:A:OP1	1.94	0.49
27:1H:2754:A:C6	27:1H:2778:A:C8	2.99	0.49
38:68:2:ILE:HG23	38:68:6:THR:HB	1.95	0.49
41:98:10:LEU:O	41:98:12:ARG:HG3	2.12	0.49
43:B8:118:ARG:NH2	43:B8:121:ILE:HG21	2.27	0.49
58:Q8:29:LYS:O	58:Q8:29:LYS:HG2	2.11	0.49
1:1G:123:C:OP1	1:1G:312:C:H5'	2.12	0.49
1:1G:728:A:N1	1:1G:729:A:C6	2.80	0.49
1:1G:938:A:H2'	1:1G:939:G:O4'	2.11	0.49
1:1G:1251:A:HO2'	1:1G:1369:C:HO2'	1.57	0.49
2:12:22:LYS:NZ	2:12:40:HIS:ND1	2.60	0.49
3:22:64:VAL:HG22	3:22:65:ALA:H	1.76	0.49
5:42:19:MET:HE1	5:42:24:ARG:HH11	1.77	0.49
6:52:13:ASN:OD1	6:52:13:ASN:N	2.43	0.49
6:52:79:LEU:O	6:52:85:VAL:HG11	2.12	0.49
8:72:12:ARG:NH1	8:72:25:ASP:O	2.44	0.49
8:72:86:ILE:HG21	8:72:133:LEU:HD22	1.94	0.49
11:2A:20:TYR:HB2	11:2A:31:THR:HG22	1.94	0.49
14:5A:3:ARG:HD2	14:5A:6:LEU:HD12	1.94	0.49
17:8A:4:LYS:N	17:8A:61:GLU:OE2	2.34	0.49
19:AA:9:VAL:H	54:I5:69:LYS:HD2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:250:G:H2'	27:14:251:A:C8	2.47	0.49
27:14:736:C:H42	27:14:760:G:H1	1.60	0.49
27:14:857:C:H2'	27:14:858:U:C6	2.48	0.49
27:14:2789:C:H2'	27:14:2790:A:C8	2.47	0.49
27:14:2815:C:H2'	27:14:2816:C:H6	1.75	0.49
28:1J:100:G:H2'	28:1J:101:A:H8	1.76	0.49
30:19:53:PHE:CD1	30:19:220:HIS:HA	2.47	0.49
35:69:83:ALA:HB1	35:69:89:TYR:CD1	2.47	0.49
39:35:64:LYS:HE3	58:M5:12:LYS:HD3	1.95	0.49
41:55:80:PHE:O	41:55:84:ALA:HB3	2.12	0.49
42:65:9:ARG:O	42:65:12:PHE:N	2.43	0.49
49:D5:102:LEU:HG	49:D5:122:ARG:O	2.12	0.49
49:D5:125:LEU:HG	49:D5:164:ALA:HB3	1.94	0.49
1:13:372:C:HO2'	1:13:373:A:P	2.35	0.49
1:13:407:G:OP1	4:3E:115:ARG:NH1	2.44	0.49
1:13:837:G:H1	1:13:849:C:N4	2.09	0.49
1:13:1262:C:H2'	1:13:1263:C:C6	2.48	0.49
4:3E:57:ARG:HB2	4:3E:57:ARG:HH11	1.77	0.49
9:8E:46:ALA:HB2	9:8E:74:ILE:HG23	1.94	0.49
19:AI:30:LEU:HD22	19:AI:30:LEU:H	1.76	0.49
19:AI:64:GLU:O	19:AI:67:VAL:HG23	2.13	0.49
27:1H:557:C:OP1	27:1H:585:G:N2	2.45	0.49
27:1H:784:C:H42	27:1H:808:G:H1	1.59	0.49
27:1H:1100:C:H5'	27:1H:1101:A:OP2	2.12	0.49
27:1H:1939:A:H2'	27:1H:1940:PSU:O4'	2.12	0.49
27:1H:2300:A:O2'	27:1H:2301:A:H5''	2.12	0.49
27:1H:2457:G:OP1	32:31:67:GLN:NE2	2.43	0.49
38:68:98:VAL:HG13	38:68:117:LEU:CB	2.42	0.49
39:78:126:VAL:HA	39:78:145:PRO:HD2	1.93	0.49
47:F8:31:HIS:HE1	47:F8:33:LYS:HB2	1.75	0.49
47:F8:32:PRO:O	47:F8:77:LYS:NZ	2.42	0.49
54:M8:46:GLN:NE2	54:M8:48:ARG:HG2	2.27	0.49
55:N8:16:ARG:HH11	55:N8:17:ASP:CG	2.16	0.49
1:1G:109:A:C6	1:1G:326:G:C6	3.00	0.49
1:1G:201:C:O2'	1:1G:208:U:O5'	2.21	0.49
1:1G:303:A:O2'	1:1G:555:C:O2'	2.27	0.49
1:1G:737:A:H5'	6:52:90:VAL:O	2.13	0.49
1:1G:1186:G:N2	14:5A:61:TRP:O	2.34	0.49
1:1G:1399:C:H4'	1:1G:1400:5MC:O5'	2.10	0.49
10:1A:22:LYS:HD2	10:1A:26:ALA:HB2	1.94	0.49
17:8A:81:ARG:HE	17:8A:84:LEU:HD21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:51:VAL:O	19:AA:58:VAL:HG22	2.11	0.49
59:1L:42:C:H2'	59:1L:43:C:C6	2.48	0.49
27:14:144:C:H5'	47:B5:2:LYS:HD2	1.94	0.49
27:14:877:U:O2'	27:14:878:A:OP1	2.27	0.49
27:14:937:U:H2'	27:14:938:G:O4'	2.12	0.49
27:14:1151:G:N2	27:14:1152:C:O2	2.45	0.49
27:14:1152:C:H5'	44:85:80:ILE:HG21	1.94	0.49
27:14:1652:A:O2'	27:14:1653:G:H5'	2.12	0.49
28:1J:42:C:O2'	33:49:67:LYS:O	2.20	0.49
29:79:213:TYR:HA	29:79:222:VAL:O	2.13	0.49
32:39:78:ILE:HA	32:39:83:PHE:CD2	2.47	0.49
35:69:124:GLY:N	35:69:142:VAL:HG21	2.27	0.49
38:25:102:VAL:HB	38:25:106:LEU:HD12	1.94	0.49
42:65:95:HIS:C	42:65:99:LYS:HB2	2.33	0.49
46:A5:33:ARG:NE	46:A5:52:GLU:OE1	2.33	0.49
46:A5:75:TYR:CZ	46:A5:104:THR:HG21	2.46	0.49
1:13:728:A:O5'	1:13:728:A:H8	1.95	0.49
1:13:1015:A:H8	1:13:1015:A:O5'	1.95	0.49
1:13:1034:G:H2'	1:13:1035:A:C8	2.46	0.49
1:13:1129:C:H4'	9:8E:16:ARG:HH12	1.77	0.49
2:1E:53:ARG:NH2	2:1E:199:TYR:HA	2.26	0.49
26:5K:19:G:H5''	26:5K:60:U:O4	2.12	0.49
27:1H:237:G:OP1	27:1H:416:G:N2	2.38	0.49
27:1H:1058:G:OP1	44:C8:75:ASN:HB3	2.12	0.49
27:1H:2374:A:OP2	58:Q8:26:LYS:NZ	2.44	0.49
27:1H:2481:G:O2'	27:1H:2482:A:O5'	2.30	0.49
39:78:92:GLU:HG2	39:78:121:LYS:HD2	1.94	0.49
47:F8:60:ARG:HH22	57:P8:47:ARG:HH21	1.60	0.49
50:I8:63:VAL:HG23	50:I8:64:ASP:O	2.12	0.49
1:1G:6:G:H4'	1:1G:298:A:H4'	1.95	0.49
1:1G:32:A:H3'	1:1G:33:A:H8	1.78	0.49
1:1G:186:C:H1'	20:BA:81:LYS:HZ1	1.76	0.49
1:1G:273:A:H1'	17:8A:16:GLN:NE2	2.27	0.49
1:1G:677:U:H1'	11:2A:119:CYS:SG	2.52	0.49
1:1G:1022:G:C6	1:1G:1023:G:C8	3.01	0.49
1:1G:1096:C:HO2'	1:1G:1170:A:HO2'	1.48	0.49
1:1G:1228:C:H2'	1:1G:1229:A:C8	2.46	0.49
2:12:134:GLU:O	2:12:138:LEU:HG	2.12	0.49
3:22:95:THR:HG22	3:22:97:LYS:HG2	1.94	0.49
9:82:42:ARG:NH1	9:82:75:ASP:OD1	2.32	0.49
20:BA:56:MET:HG3	20:BA:88:VAL:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:92:G:H8	27:14:92:G:O5'	1.95	0.49
27:14:363(A):A:H2'	27:14:363(B):G:H5''	1.93	0.49
27:14:1915:5MU:H2'	27:14:1916:A:O4'	2.11	0.49
27:14:2175:C:H1'	29:79:218:MET:HA	1.94	0.49
27:14:2179:C:O4'	29:79:168:THR:HB	2.12	0.49
29:79:49:ILE:HB	29:79:56:GLN:HB3	1.93	0.49
31:29:103:ASP:CG	31:29:201:THR:HA	2.32	0.49
32:39:187:VAL:HG13	39:35:1:MET:O	2.13	0.49
35:69:93:THR:O	35:69:97:ILE:HG13	2.12	0.49
35:69:142:VAL:HG23	35:69:143:SER:H	1.78	0.49
50:E5:48:GLY:H	50:E5:51:VAL:HB	1.78	0.49
53:H5:19:GLN:HE22	53:H5:52:HIS:CE1	2.30	0.49
54:I5:26:SER:OG	54:I5:27:THR:N	2.44	0.49
1:13:300:A:H1'	1:13:565:U:O2	2.13	0.49
1:13:372:C:H42	1:13:389:A:H62	1.61	0.49
1:13:562:C:C2	12:3I:13:GLU:HG2	2.48	0.49
1:13:1066:C:H2'	1:13:1067:A:C8	2.47	0.49
3:2E:70:VAL:O	3:2E:106:VAL:N	2.45	0.49
6:5E:80:ARG:HA	6:5E:85:VAL:HG11	1.95	0.49
22:1K:18:G:H5'	22:1K:58:A:C2	2.48	0.49
27:1H:823:G:O5'	27:1H:825:A:H1'	2.13	0.49
27:1H:903:G:O2'	50:I8:27:GLU:OE2	2.24	0.49
27:1H:966:G:H4'	28:16:81:G:H4'	1.95	0.49
27:1H:1147:C:H2'	27:1H:1148:U:C6	2.47	0.49
27:1H:1224:C:H2'	27:1H:1225:C:C6	2.48	0.49
27:1H:1463:G:O2'	27:1H:1464:C:P	2.71	0.49
27:1H:1541:A:H2'	27:1H:1542:A:C8	2.47	0.49
27:1H:1818:A:C2	27:1H:2619:C:H1'	2.47	0.49
50:I8:35:ASN:ND2	50:I8:35:ASN:H	2.10	0.49
1:1G:509:A:H5''	4:32:55:ALA:HB2	1.94	0.49
1:1G:593:G:H2'	1:1G:594:G:O4'	2.13	0.49
1:1G:714:G:H2'	1:1G:715:A:C8	2.47	0.49
1:1G:1198:G:H2'	1:1G:1199:U:C6	2.47	0.49
1:1G:1343:G:H2'	1:1G:1344:C:C6	2.47	0.49
1:1G:1535:C:H2'	1:1G:1536:C:O4'	2.13	0.49
9:82:114:TYR:HE1	10:1A:59:SER:HA	1.78	0.49
14:5A:6:LEU:HD13	14:5A:23:ARG:HH22	1.76	0.49
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.11	0.49
16:7A:43:LYS:HA	16:7A:48:TRP:CD1	2.48	0.49
27:14:315:G:H2'	27:14:316:C:H6	1.78	0.49
27:14:581:C:H2'	27:14:582:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1057:A:C2	27:14:1058:U:H1'	2.48	0.49
27:14:1955:U:O2'	27:14:1956:U:H5'	2.13	0.49
27:14:2478:A:H3'	27:14:2479:G:C8	2.47	0.49
27:14:2508:G:HO2'	27:14:2554:U:HO2'	1.61	0.49
27:14:2694:G:C6	27:14:2695:C:C4	2.99	0.49
29:79:41:VAL:HB	29:79:175:VAL:HG22	1.94	0.49
31:29:179:GLU:HB3	31:29:181:LEU:HD22	1.95	0.49
34:59:42:ARG:HG2	34:59:43:VAL:N	2.26	0.49
41:55:72:ASP:OD2	41:55:75:LEU:HB2	2.13	0.49
44:85:58:ARG:HA	44:85:61:TRP:CE3	2.47	0.49
49:D5:59:LEU:C	49:D5:61:LEU:H	2.13	0.49
1:13:5:U:C2	4:3E:86:LYS:HE3	2.48	0.49
1:13:726:C:H2'	1:13:727:G:H8	1.78	0.49
1:13:1126:U:O2'	1:13:1281:U:O4'	2.31	0.49
1:13:1332:A:C2	1:13:1333:A:C4	3.01	0.49
2:1E:76:GLN:O	2:1E:208:ILE:HG12	2.12	0.49
2:1E:82:ARG:NH2	2:1E:150:SER:OG	2.45	0.49
3:2E:122:GLU:O	3:2E:126:ARG:HG2	2.12	0.49
6:5E:98:LEU:HA	18:9I:29:PHE:O	2.12	0.49
13:4I:47:ASP:OD1	13:4I:47:ASP:N	2.41	0.49
20:BI:50:GLU:HG3	20:BI:100:ILE:HB	1.93	0.49
27:1H:138:G:N3	27:1H:140:A:N1	2.60	0.49
27:1H:161:G:H2'	27:1H:162:C:O4'	2.13	0.49
27:1H:345:A:H2'	32:31:136:THR:HG21	1.95	0.49
27:1H:355:A:O2'	27:1H:356:A:H8	1.94	0.49
27:1H:1050:G:N2	27:1H:1200:C:C2	2.81	0.49
27:1H:2028:A:H5''	65:1H:3705:HOH:O	2.13	0.49
33:41:97:ASP:HA	33:41:100:TRP:HB2	1.93	0.49
39:78:99:LEU:HD13	39:78:102:ARG:HE	1.77	0.49
45:D8:98:GLU:OE2	45:D8:100:ARG:NH1	2.46	0.49
49:H8:53:ILE:HA	49:H8:71:VAL:HG13	1.94	0.49
1:1G:272:C:H2'	1:1G:273:A:C8	2.47	0.49
4:32:141:ARG:NH2	65:32:402:HOH:O	2.46	0.49
15:6A:6:GLU:HA	15:6A:9:GLN:HG2	1.95	0.49
19:AA:43:GLU:HG3	19:AA:43:GLU:O	2.12	0.49
27:14:324:A:C2	27:14:325:G:H1'	2.48	0.49
27:14:1297:C:H2'	27:14:1298:C:C6	2.48	0.49
27:14:1358:G:N1	27:14:1372:U:OP2	2.29	0.49
27:14:2075:U:H2'	27:14:2238:G:N2	2.27	0.49
27:14:2126:A:O2'	27:14:2127:G:H5''	2.12	0.49
27:14:2547:U:O2	38:25:23:ARG:NH2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2880:C:H1'	41:55:92:GLY:HA3	1.95	0.49
28:1J:50:G:OP1	42:65:62:LYS:HB2	2.12	0.49
29:79:186:ALA:HB1	29:79:190:ARG:NH2	2.28	0.49
56:K5:33:LYS:NZ	56:K5:36:LEU:HD12	2.28	0.49
1:13:102:G:C6	1:13:103:C:C4	3.00	0.49
1:13:147:G:H1	1:13:175:C:H42	1.60	0.49
1:13:1342:C:O2'	9:8E:124:GLN:HG2	2.13	0.49
1:13:1350:A:C6	1:13:1351:U:C4	3.00	0.49
4:3E:155:LEU:O	4:3E:159:ARG:HG2	2.13	0.49
4:3E:169:LYS:NZ	6:52:25:ILE:HD11	2.27	0.49
5:4E:94:ALA:HB2	5:4E:119:LEU:HG	1.93	0.49
22:1K:16:U:O2'	22:1K:17:C:H5''	2.13	0.49
27:1H:97:G:H5''	52:K8:3:LEU:HB2	1.94	0.49
27:1H:766:A:H3'	27:1H:767:C:H6	1.76	0.49
27:1H:773:G:C6	27:1H:774:G:N1	2.81	0.49
27:1H:1133:A:H61	36:38:41:ARG:HE	1.60	0.49
27:1H:1387:U:H4'	27:1H:1388:U:OP2	2.13	0.49
27:1H:1975:A:C6	27:1H:1976:A:C6	3.00	0.49
27:1H:2169:C:H4'	27:1H:2170:G:C8	2.48	0.49
27:1H:2543:A:N7	34:51:172:LYS:HE3	2.27	0.49
31:21:47:VAL:HG11	31:21:86:PRO:HD2	1.95	0.49
33:41:49:ASP:OD1	33:41:51:ARG:HG3	2.13	0.49
42:A8:87:PHE:CE1	42:A8:102:ALA:HB2	2.47	0.49
1:1G:663:A:H5'	1:1G:836:G:OP1	2.13	0.49
1:1G:827:U:H5''	1:1G:828:A:OP2	2.12	0.49
1:1G:1211:U:O2'	1:1G:1213:A:N3	2.39	0.49
1:1G:1534:A:H2'	1:1G:1535:C:C6	2.46	0.49
3:22:150:LYS:HE2	3:22:152:ILE:HD11	1.94	0.49
7:62:14:PRO:HG3	7:62:21:VAL:HG13	1.94	0.49
9:82:47:LEU:H	9:82:47:LEU:HD12	1.77	0.49
27:14:953:A:OP2	40:45:16:ARG:NH1	2.45	0.49
27:14:2578:G:H1'	31:29:139:GLY:HA2	1.95	0.49
27:14:2854:G:C2	27:14:2864:G:C2	3.00	0.49
43:75:88:ILE:HG12	43:75:91:ARG:CZ	2.43	0.49
1:13:119:A:H4'	1:13:120:A:O5'	2.13	0.49
1:13:254:G:OP1	17:8I:67:LYS:O	2.31	0.49
16:7I:71:ARG:O	16:7I:74:LEU:N	2.42	0.49
22:1K:9:A:N6	22:1K:22:G:N7	2.61	0.49
23:2K:19:G:N2	23:2K:57:G:H1'	2.28	0.49
27:1H:234:A:O3'	39:78:74:GLU:HB3	2.13	0.49
27:1H:368:C:H5'	27:1H:369:G:OP2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:580:G:H2'	27:1H:581:U:H6	1.78	0.49
27:1H:589:C:H4'	27:1H:1300:A:C6	2.47	0.49
27:1H:1757:U:H2'	27:1H:1758:C:C6	2.48	0.49
27:1H:2148:G:H1	27:1H:2195:U:P	2.36	0.49
27:1H:2270:U:O2'	27:1H:2271:C:H5'	2.12	0.49
33:41:34:LEU:HD21	33:41:99:MET:HE1	1.94	0.49
34:51:130:ARG:HH11	34:51:130:ARG:HB3	1.77	0.49
37:58:22:THR:HG22	37:58:23:LEU:N	2.28	0.49
38:68:68:GLU:OE2	38:68:78:ARG:NH1	2.46	0.49
1:1G:559:A:OP1	5:42:126:ARG:NH2	2.46	0.49
1:1G:727:G:N2	1:1G:730:G:OP2	2.43	0.49
1:1G:756:C:H2'	1:1G:757:U:O4'	2.13	0.49
1:1G:1122:U:O4	1:1G:1123:A:N6	2.45	0.49
1:1G:1513:A:H2'	1:1G:1514:C:H6	1.75	0.49
5:42:48:ALA:HB2	5:42:57:LYS:HD3	1.95	0.49
15:6A:62:GLN:O	15:6A:66:LEU:HD22	2.13	0.49
16:7A:53:VAL:HG23	16:7A:79:VAL:HG13	1.94	0.49
27:14:966:G:C6	27:14:967:C:N4	2.81	0.49
27:14:1154:G:OP2	44:85:58:ARG:NH1	2.46	0.49
27:14:1331:A:O2'	27:14:1332:G:H8	1.95	0.49
27:14:1897:G:H2'	27:14:1898:U:O4'	2.12	0.49
27:14:1962:5MC:O2'	27:14:1964:G:OP2	2.31	0.49
27:14:2392:A:H2	27:14:2424:C:N4	2.10	0.49
27:14:2820:A:P	41:55:2:ARG:HH12	2.35	0.49
28:1J:28:C:H2'	28:1J:29:A:C8	2.46	0.49
40:45:45:GLN:H	40:45:45:GLN:HG2	1.39	0.49
41:55:67:LEU:HD13	41:55:76:VAL:HG21	1.95	0.49
56:K5:39:TYR:O	56:K5:46:HIS:HA	2.13	0.49
1:13:1461:G:H2'	1:13:1462:G:O4'	2.12	0.49
1:13:1540:U:O2	25:4K:33:G:N2	2.45	0.49
2:1E:69:LEU:HA	2:1E:91:PRO:HG2	1.93	0.49
2:1E:237:ALA:O	2:1E:239:VAL:HG23	2.13	0.49
7:6E:121:ALA:O	7:6E:125:MET:HG3	2.12	0.49
13:4I:37:THR:O	13:4I:55:ARG:NH2	2.23	0.49
18:9I:18:ARG:O	18:9I:19:LYS:HG2	2.13	0.49
27:1H:125:A:H5''	27:1H:126:C:C6	2.48	0.49
27:1H:268:C:H42	27:1H:278:G:H1	1.59	0.49
27:1H:1615:A:H5'	30:11:58:HIS:CG	2.47	0.49
27:1H:1829:C:O2'	30:11:259:THR:OG1	2.27	0.49
29:71:216:THR:OG1	29:71:217:THR:N	2.46	0.49
32:31:129:PHE:C	32:31:131:GLY:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:68:69:ILE:H	38:68:69:ILE:HD12	1.77	0.49
41:98:53:HIS:HB2	41:98:94:TYR:HE2	1.78	0.49
50:I8:11:ARG:HB2	50:I8:11:ARG:HH11	1.78	0.49
54:M8:39:CYS:C	54:M8:41:PRO:HD3	2.33	0.49
1:1G:46:G:H2'	1:1G:366:C:C5	2.48	0.49
1:1G:693:G:H2'	1:1G:694:A:C8	2.47	0.49
1:1G:1014:A:H2	1:1G:1219:U:H1'	1.77	0.49
1:1G:1181:G:O2'	1:1G:1184:G:H5'	2.13	0.49
1:1G:1315:U:H2'	1:1G:1316:G:O4'	2.13	0.49
14:5A:24:CYS:SG	14:5A:25:VAL:N	2.86	0.49
14:5A:40:CYS:O	14:5A:44:LEU:HB3	2.12	0.49
14:5A:47:LEU:O	14:5A:50:LYS:N	2.46	0.49
17:8A:58:GLU:HB3	17:8A:74:LEU:HB3	1.93	0.49
27:14:120:U:H4'	27:14:121:G:H5''	1.93	0.49
27:14:419:C:H2'	27:14:420:C:O4'	2.12	0.49
27:14:869:G:O2'	27:14:870:A:H5'	2.13	0.49
27:14:1169:G:C5	27:14:1170:G:C8	3.00	0.49
34:59:153:LYS:HB2	34:59:154:PRO:HD2	1.95	0.49
38:25:35:VAL:HG11	38:25:103:ALA:HB3	1.94	0.49
38:25:64:ARG:NH1	38:25:81:ASP:OD1	2.45	0.49
49:D5:4:ARG:HA	49:D5:58:VAL:HB	1.93	0.49
50:E5:48:GLY:HA3	50:E5:80:HIS:ND1	2.27	0.49
58:M5:44:LYS:C	58:M5:46:ARG:H	2.14	0.49
1:13:521:G:H4'	12:3I:70:GLU:HG3	1.94	0.49
1:13:807:A:H2'	1:13:808:C:C6	2.48	0.49
2:1E:74:LYS:NZ	2:1E:205:ASP:O	2.34	0.49
9:8E:5:TYR:HA	9:8E:17:VAL:O	2.13	0.49
20:BI:45:GLN:HA	20:BI:91:LEU:HD22	1.94	0.49
24:3K:1:G:C6	24:3K:72:C:N4	2.80	0.49
27:1H:140:A:C8	27:1H:1455:C:H1'	2.48	0.49
27:1H:517:G:H2'	27:1H:518:A:C8	2.47	0.49
27:1H:1043:A:H4'	44:C8:92:ARG:NE	2.23	0.49
27:1H:2079:G:O2'	55:N8:8:LYS:HD2	2.13	0.49
34:51:83:TYR:HD2	34:51:132:ARG:HH22	1.61	0.49
40:88:25:ASP:HA	40:88:100:GLY:O	2.12	0.49
42:A8:24:LEU:HD12	42:A8:41:ASP:HB2	1.95	0.49
43:B8:96:ARG:CZ	43:B8:96:ARG:HB3	2.43	0.49
46:E8:106:ILE:HG13	46:E8:106:ILE:O	2.13	0.49
50:I8:51:VAL:N	50:I8:62:LEU:HD12	2.27	0.49
1:1G:1152:A:H5'	10:1A:13:HIS:CD2	2.41	0.49
1:1G:1390:U:H2'	1:1G:1391:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:17:PHE:CE2	2:12:44:LEU:HB3	2.47	0.49
2:12:212:GLN:O	2:12:216:SER:N	2.30	0.49
4:32:203:VAL:O	4:32:206:PHE:HB3	2.12	0.49
6:52:3:ARG:HB3	6:52:3:ARG:CZ	2.43	0.49
10:1A:31:GLY:O	10:1A:78:ASN:ND2	2.45	0.49
12:3A:72:HIS:CD2	12:3A:74:LEU:HB2	2.48	0.49
12:3A:75:GLN:O	12:3A:78:SER:OG	2.31	0.49
59:1L:12:U:H3	59:1L:24:G:H1	1.60	0.49
27:14:141:A:N6	27:14:1595:G:O2'	2.46	0.49
27:14:464:U:H2'	27:14:465:G:O4'	2.13	0.49
27:14:657:U:H2'	27:14:658:C:C6	2.47	0.49
27:14:910:A:C5	40:45:13:GLN:HG3	2.48	0.49
27:14:1310:G:OP2	57:L5:9:ARG:HD2	2.13	0.49
27:14:1640:C:H2'	27:14:1641:A:O4'	2.12	0.49
27:14:2419:U:O5'	58:M5:33:ASN:HB2	2.13	0.49
27:14:2770:G:H5''	27:14:2771:C:OP2	2.12	0.49
34:59:46:GLU:HB3	34:59:49:VAL:HG23	1.94	0.49
35:69:98:ALA:HA	35:69:109:ILE:HD11	1.95	0.49
41:55:100:LEU:HD21	41:55:113:LEU:HD22	1.95	0.49
58:M5:17:THR:O	58:M5:20:GLY:N	2.46	0.49
1:13:130:A:C8	17:8I:63:ARG:HG3	2.48	0.48
1:13:186(C):G:H2'	1:13:186(D):C:O4'	2.13	0.48
1:13:413:G:H2'	1:13:428:G:H22	1.78	0.48
1:13:626:U:C2	1:13:627:G:C8	3.01	0.48
1:13:1073:U:H3	1:13:1102:A:N6	2.11	0.48
1:13:1080:A:H5''	1:13:1081:G:OP2	2.13	0.48
8:7E:49:GLU:HG3	8:7E:60:ARG:HB2	1.95	0.48
23:2K:19:G:O6	33:41:83:ARG:NH2	2.39	0.48
24:3K:50:U:H2'	24:3K:51:U:O4'	2.12	0.48
25:4K:32:A:H2'	25:4K:33:G:O4'	2.12	0.48
27:1H:231:A:O4'	27:1H:233:U:C6	2.66	0.48
27:1H:1031:A:H5''	27:1H:1032:C:H5	1.77	0.48
27:1H:2128:C:H2'	27:1H:2129:G:C8	2.48	0.48
27:1H:2189:G:N2	27:1H:2194:A:H62	2.11	0.48
27:1H:2764:A:H4'	27:1H:2765:G:OP2	2.13	0.48
28:16:41:U:N3	33:41:70:VAL:O	2.45	0.48
30:11:8:PRO:HB3	30:11:14:ARG:HG2	1.95	0.48
31:21:115:GLY:O	31:21:119:ARG:HB2	2.13	0.48
32:31:34:TRP:CE2	39:78:8:PRO:HD3	2.48	0.48
33:41:16:ARG:HB3	33:41:17:PRO:HD3	1.95	0.48
35:61:73:GLU:HG3	35:61:136:VAL:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:58:57:ALA:O	37:58:60:ILE:HD12	2.12	0.48
38:68:36:GLY:HA3	38:68:109:LYS:HG3	1.95	0.48
40:88:24[B]:GLY:C	40:88:26:TYR:H	2.15	0.48
40:88:29:PHE:N	40:88:105:GLU:OE2	2.44	0.48
40:88:111:GLU:OE1	40:88:133:ARG:NH2	2.46	0.48
1:1G:155:C:N4	1:1G:166:G:H1	2.11	0.48
1:1G:502:G:H2'	1:1G:503:C:O4'	2.13	0.48
1:1G:525:C:OP1	12:3A:88:LYS:HG3	2.13	0.48
1:1G:625:G:H2'	1:1G:626:U:H6	1.78	0.48
1:1G:741:G:H2'	1:1G:742:G:O4'	2.13	0.48
1:1G:818:G:HO2'	1:1G:820:U:H6	1.55	0.48
1:1G:997:U:H2'	1:1G:998:G:C8	2.48	0.48
1:1G:1233:G:H2'	1:1G:1234:C:C6	2.48	0.48
1:1G:1243:C:H42	1:1G:1294:G:H1	1.60	0.48
17:8A:10:VAL:HG13	17:8A:19:VAL:HB	1.94	0.48
59:1L:28:G:H2'	59:1L:29:G:C8	2.48	0.48
24:3L:65:G:P	24:3L:65:G:H8	2.36	0.48
27:14:304:G:H2'	27:14:305:U:C6	2.48	0.48
27:14:1316:U:O2'	27:14:1317:A:H5'	2.13	0.48
27:14:1784:A:H4'	27:14:1785:A:O5'	2.13	0.48
27:14:1999:C:H4'	27:14:2723:C:O2	2.13	0.48
27:14:2376:A:H2'	27:14:2377:A:O4'	2.13	0.48
27:14:2431:U:O2	27:14:2433:A:C8	2.66	0.48
27:14:2621:A:P	31:29:119:ARG:HH22	2.36	0.48
27:14:2853:C:H2'	27:14:2854:G:H8	1.77	0.48
31:29:21:VAL:HG23	31:29:185:LYS:HD3	1.94	0.48
39:35:124:LYS:HA	39:35:143:GLY:O	2.13	0.48
40:45:39:PRO:HA	40:45:97:VAL:O	2.13	0.48
46:A5:20:VAL:HG23	46:A5:47:VAL:HG21	1.94	0.48
47:B5:34:ALA:O	47:B5:77:LYS:NZ	2.36	0.48
52:G5:35:LEU:HD21	52:G5:49:LYS:HD3	1.94	0.48
53:H5:12:PRO:HB2	53:H5:20:LYS:HG2	1.94	0.48
1:13:418:C:H2'	1:13:419:C:C6	2.49	0.48
1:13:722:A:H2'	1:13:724:G:C8	2.48	0.48
10:1I:50:ILE:HD11	10:1I:57:LYS:HE3	1.95	0.48
18:9I:86:VAL:HB	18:9I:87:ARG:HG2	1.95	0.48
27:1H:778:C:H5'	65:1H:3646:HOH:O	2.14	0.48
27:1H:1075:A:N3	27:1H:2499:G:O2'	2.39	0.48
27:1H:1433:C:H2'	27:1H:1434:C:H6	1.78	0.48
27:1H:2227:C:H42	27:1H:2232:G:H1	1.60	0.48
27:1H:2251:G:H2'	27:1H:2251:G:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:61:40:THR:HB	35:61:43:ASN:H	1.78	0.48
54:M8:48:ARG:CZ	54:M8:51:ASP:HA	2.43	0.48
54:M8:58:ARG:O	54:M8:62:ARG:N	2.45	0.48
1:1G:153:C:H2'	1:1G:154:C:C6	2.45	0.48
1:1G:958:A:N3	1:1G:985:C:O2'	2.41	0.48
1:1G:992:U:H6	1:1G:992:U:H5''	1.78	0.48
1:1G:1305:G:H22	1:1G:1331:G:H2'	1.77	0.48
1:1G:1323:G:H2'	1:1G:1324:A:C8	2.48	0.48
2:12:97:TRP:HH2	2:12:176:GLU:OE1	1.96	0.48
3:22:37:GLN:O	3:22:41:GLY:N	2.46	0.48
4:32:158:ILE:O	4:32:162:LEU:HD12	2.13	0.48
13:4A:121:LYS:H	13:4A:121:LYS:HD2	1.77	0.48
18:9A:65:ILE:O	18:9A:69:THR:OG1	2.26	0.48
19:AA:17:GLU:O	19:AA:21:GLU:HG2	2.13	0.48
20:BA:87:LYS:HA	20:BA:90:GLN:HB2	1.95	0.48
60:2L:19:G:C4	60:2L:57:G:N2	2.81	0.48
27:14:286:C:H42	27:14:355:G:H1	1.60	0.48
27:14:440:G:H2'	27:14:441:U:C6	2.48	0.48
27:14:523:C:H2'	27:14:524:U:O4'	2.13	0.48
27:14:566:U:H2'	27:14:567:A:O4'	2.13	0.48
27:14:607:U:OP1	32:39:103:LYS:N	2.35	0.48
27:14:1184:G:OP1	53:H5:30:ARG:NE	2.47	0.48
27:14:2037:G:N7	65:14:3602:HOH:O	2.35	0.48
27:14:2133:G:H21	27:14:2158:A:H61	1.61	0.48
27:14:2690:C:OP2	41:55:14:SER:HB3	2.12	0.48
27:14:2734:A:H8	27:14:2734:A:H5''	1.76	0.48
31:29:11:MET:SD	31:29:24:THR:HG22	2.53	0.48
39:35:64:LYS:HA	58:M5:13:ARG:HB2	1.95	0.48
45:95:62:LEU:HB3	45:95:93:GLU:O	2.13	0.48
45:95:69:LYS:NZ	45:95:85:LYS:HD2	2.28	0.48
1:13:411:A:N7	1:13:413:G:N3	2.60	0.48
1:13:440:A:H3'	1:13:442:C:H6	1.76	0.48
1:13:1165:C:H2'	1:13:1166:G:C8	2.49	0.48
2:1E:98:LEU:O	2:1E:101:MET:HB2	2.13	0.48
7:6E:12:LEU:HD22	7:6E:12:LEU:H	1.78	0.48
11:2I:21:ILE:HG12	11:2I:30:VAL:HG12	1.96	0.48
13:4I:20:THR:HG22	13:4I:26:GLY:HA2	1.95	0.48
26:5K:16:H2U:C3'	26:5K:17:C:H5'	2.43	0.48
27:1H:260:A:N1	27:1H:397:C:H4'	2.28	0.48
27:1H:422:A:N6	27:1H:423:U:O4	2.46	0.48
27:1H:1395:G:C2'	27:1H:1396:A:H5''	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1582:U:H5'	27:1H:1584:C:N3	2.28	0.48
27:1H:1697:G:C6	27:1H:2032:G:C6	3.01	0.48
27:1H:1741:U:H1'	30:11:14:ARG:NH2	2.27	0.48
27:1H:2232:G:H2'	27:1H:2233:G:H8	1.78	0.48
27:1H:2332:G:N2	27:1H:2347:G:OP1	2.30	0.48
27:1H:2615:A:OP2	27:1H:2616:G:H5''	2.13	0.48
27:1H:2809:G:N3	27:1H:2814:G:N1	2.60	0.48
34:51:154:PRO:HD3	34:51:162:ILE:O	2.12	0.48
36:38:37:THR:HB	36:38:102:LYS:NZ	2.28	0.48
37:58:4:TYR:O	37:58:6:PRO:HD3	2.13	0.48
38:68:87:ILE:H	38:68:87:ILE:HD13	1.77	0.48
39:78:14:LYS:C	39:78:16:ARG:H	2.15	0.48
40:88:110:THR:HG22	40:88:112:GLU:OE2	2.13	0.48
42:A8:110:LEU:HD23	42:A8:112:PHE:CZ	2.48	0.48
1:1G:115:G:H1'	1:1G:116:A:N7	2.28	0.48
1:1G:488:C:O5'	1:1G:488:C:H6	1.94	0.48
1:1G:637:G:H2'	1:1G:638:G:C8	2.49	0.48
1:1G:1121:U:C2'	1:1G:1122:U:H5'	2.44	0.48
1:1G:1401:G:C2	1:1G:1402:4OC:H1'	2.48	0.48
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.94	0.48
13:4A:20:THR:HG23	13:4A:26:GLY:HA2	1.95	0.48
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.93	0.48
24:3L:53:G:H2'	24:3L:54:U:C6	2.47	0.48
27:14:301:G:HO2'	27:14:302:C:H6	1.62	0.48
27:14:1300:U:H4'	27:14:1301:A:C5'	2.43	0.48
27:14:1747:G:O2'	27:14:1748:G:H5'	2.13	0.48
27:14:2127:G:H1	27:14:2161:C:N4	2.10	0.48
27:14:2154:G:H2'	27:14:2155:G:O4'	2.13	0.48
27:14:2439:A:C8	27:14:2439:A:C5'	2.96	0.48
35:69:133:HIS:ND1	35:69:134:PRO:HD3	2.29	0.48
41:55:104:ARG:NH1	41:55:109:ALA:HB3	2.28	0.48
1:13:184:G:H2'	1:13:185:A:H8	1.79	0.48
1:13:339:C:OP2	38:68:97:ARG:HD3	2.13	0.48
1:13:502:G:OP1	12:3I:115:SER:HB2	2.13	0.48
1:13:802:A:H2'	1:13:803:G:O4'	2.13	0.48
1:13:1262:C:H2'	1:13:1263:C:H6	1.78	0.48
1:13:1295:G:H21	1:13:1302:U:H3	1.62	0.48
1:13:1330:U:H4'	13:4I:23:TYR:CE1	2.48	0.48
15:6I:80:ALA:O	15:6I:84:LYS:HG2	2.12	0.48
22:1K:1:G:H2'	22:1K:1:G:N3	2.29	0.48
23:2K:50:U:H2'	23:2K:51:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:65:C:H2'	27:1H:66:U:H6	1.78	0.48
27:1H:103:C:H2'	27:1H:104:C:C6	2.48	0.48
27:1H:1110:G:H1	27:1H:1123:C:H1'	1.77	0.48
27:1H:1368:A:H2'	27:1H:1369:A:O4'	2.14	0.48
27:1H:2390:A:H2'	27:1H:2391:A:C8	2.48	0.48
27:1H:2624:U:C4	55:N8:3:LYS:HG2	2.48	0.48
37:58:114:ARG:O	37:58:116:LEU:N	2.43	0.48
40:88:24[A]:GLY:O	40:88:26:TYR:N	2.47	0.48
43:B8:26:ASP:O	43:B8:49:VAL:HG12	2.13	0.48
56:O8:25:LYS:HZ2	58:Q8:34:TRP:HZ2	1.62	0.48
1:1G:1233:G:H2'	1:1G:1234:C:H6	1.78	0.48
1:1G:1410:G:H2'	1:1G:1411:C:C6	2.48	0.48
1:1G:1494:G:H4'	27:14:1913:A:N7	2.28	0.48
4:32:4:TYR:CE2	4:32:11:LEU:HD11	2.48	0.48
15:6A:7:GLU:O	15:6A:11:VAL:HG23	2.13	0.48
59:1L:1:G:H2'	59:1L:2:C:H5	1.78	0.48
59:1L:30:G:H2'	59:1L:31:A:C8	2.47	0.48
59:1L:36:A:H2'	59:1L:37:MIA:H8	1.94	0.48
27:14:11:G:H2'	27:14:12:U:H6	1.79	0.48
27:14:323:G:H2'	32:39:169:ASN:OD1	2.12	0.48
27:14:1058:U:H2'	27:14:1059:G:H8	1.77	0.48
27:14:2853:C:H2'	27:14:2854:G:C8	2.48	0.48
29:79:42:GLU:OE2	29:79:217:THR:HA	2.14	0.48
34:59:83:TYR:HB2	34:59:132:ARG:HH21	1.78	0.48
1:13:447:G:H21	1:13:487:A:H62	1.61	0.48
4:3E:92:VAL:O	4:3E:96:LEU:HD13	2.14	0.48
5:4E:59:GLY:O	5:4E:63:ARG:HG3	2.14	0.48
5:4E:82:VAL:O	5:4E:88:LYS:HA	2.13	0.48
12:3I:35:THR:HG23	12:3I:54:LYS:HB3	1.95	0.48
16:7I:26:ARG:HE	16:7I:31:LYS:H	1.62	0.48
18:9I:31:LEU:H	18:9I:31:LEU:HD23	1.78	0.48
24:3K:70:G:H8	24:3K:70:G:O5'	1.96	0.48
26:5K:34:G:H2'	26:5K:35:A:C8	2.48	0.48
27:1H:4:C:H42	27:1H:2909:G:H1	1.60	0.48
27:1H:239:C:O2	58:Q8:12:LYS:NZ	2.37	0.48
27:1H:590:U:OP1	39:78:29:LYS:HE2	2.13	0.48
27:1H:1785:G:H5'	43:B8:95:ARG:HG2	1.93	0.48
27:1H:1927:G:O2'	27:1H:1928:C:H5'	2.12	0.48
27:1H:2293:G:O2'	27:1H:2401:A:N1	2.36	0.48
27:1H:2659:C:O5'	27:1H:2659:C:H6	1.96	0.48
27:1H:2688:A:H4'	38:68:29:ASN:ND2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:61:110:ASP:HB2	35:61:112:LYS:N	2.28	0.48
1:1G:137:C:N4	1:1G:226:G:H1	2.12	0.48
1:1G:345:C:H1'	1:1G:346:G:C2	2.48	0.48
1:1G:892:A:N6	1:1G:906:G:O2'	2.44	0.48
1:1G:954:G:H4'	13:4A:120:LYS:HG2	1.95	0.48
1:1G:991:U:O4	1:1G:1212:U:O2'	2.31	0.48
1:1G:1244:C:C2	1:1G:1294:G:N2	2.82	0.48
1:1G:1366:C:H2'	1:1G:1367:C:C6	2.48	0.48
1:1G:1374:A:OP1	7:62:36:LYS:NZ	2.47	0.48
3:22:59:ARG:HG2	3:22:64:VAL:HG23	1.95	0.48
6:52:96:PRO:HB3	18:9A:30:ASP:OD2	2.14	0.48
21:1B:15:ARG:HD3	21:1B:15:ARG:HA	1.67	0.48
29:79:194:ARG:HA	29:79:197:GLU:HG3	1.94	0.48
32:39:80:ALA:O	32:39:83:PHE:HB2	2.13	0.48
32:39:123:LEU:HD12	32:39:124:LEU:N	2.28	0.48
34:59:33:LEU:HB2	34:59:75:ALA:HB1	1.96	0.48
38:25:88:ASN:O	38:25:90:GLN:N	2.46	0.48
48:C5:7:VAL:HG12	48:C5:74:PRO:HG3	1.95	0.48
56:K5:18:ARG:H	56:K5:19:ARG:NE	2.11	0.48
1:13:258:G:H1	1:13:268:C:H42	1.61	0.48
1:13:945:G:H2'	1:13:945:G:N3	2.28	0.48
2:1E:27:LYS:HB3	2:1E:194:PRO:HD2	1.96	0.48
2:1E:185:ILE:HA	2:1E:199:TYR:O	2.13	0.48
4:3E:88:VAL:HG12	4:3E:90:GLY:H	1.77	0.48
10:1I:11:PHE:HA	10:1I:66:ARG:O	2.14	0.48
21:1F:14:TRP:CE3	21:1F:15:ARG:HD3	2.47	0.48
23:2K:62:C:H2'	23:2K:63:G:H8	1.79	0.48
27:1H:160:U:N3	27:1H:161:G:N7	2.61	0.48
27:1H:450:A:C6	27:1H:451:A:C6	3.02	0.48
27:1H:1816:A:H4'	27:1H:1817:A:C5'	2.43	0.48
27:1H:1817:A:H2'	27:1H:1819:A:N7	2.29	0.48
30:11:71:ASP:CG	30:11:103:ARG:HH22	2.17	0.48
31:21:170:LEU:HG	31:21:185:LYS:O	2.14	0.48
31:21:181:LEU:HD12	31:21:181:LEU:HA	1.69	0.48
35:61:130:TYR:C	35:61:131:LYS:HD2	2.34	0.48
41:98:8:ARG:HG2	41:98:43:GLU:CD	2.34	0.48
41:98:58:GLY:HA2	41:98:80:PHE:CE2	2.49	0.48
43:B8:123:GLN:O	43:B8:125:ARG:N	2.40	0.48
44:C8:90:VAL:HG22	45:D8:38:LEU:HG	1.96	0.48
47:F8:26:TYR:HB3	47:F8:92:LEU:HD12	1.95	0.48
49:H8:30:ASN:HB3	49:H8:90:VAL:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1424:C:H2'	1:1G:1425:U:O4'	2.13	0.48
9:82:43:ALA:HA	9:82:74:ILE:HG21	1.95	0.48
27:14:1006:C:C2	27:14:1138:G:N2	2.80	0.48
27:14:1280:G:H5''	27:14:1280:G:H8	1.78	0.48
27:14:1473:G:H2'	27:14:1474:C:O4'	2.12	0.48
27:14:2111:C:O2	27:14:2118:U:O2'	2.32	0.48
44:85:99:ALA:HB2	44:85:106:PHE:CD1	2.49	0.48
1:13:799:G:C6	1:13:800:G:C4	3.02	0.48
1:13:857:C:OP2	65:13:1823:HOH:O	2.20	0.48
1:13:1171:G:H2'	1:13:1172:C:H6	1.77	0.48
1:13:1356:G:H2'	1:13:1357:A:C8	2.49	0.48
8:7E:83:ILE:HG13	8:7E:137:VAL:HG22	1.95	0.48
9:8E:16:ARG:HB2	9:8E:64:THR:HB	1.95	0.48
11:2I:77:MET:CE	11:2I:80:VAL:HG12	2.42	0.48
15:6I:70:LEU:HD12	15:6I:70:LEU:HA	1.73	0.48
22:1K:25:C:H2'	22:1K:26:A:N3	2.29	0.48
22:1K:64:A:O2'	27:1H:2496:C:OP1	2.32	0.48
27:1H:39:C:H2'	27:1H:40:C:C6	2.48	0.48
27:1H:377:G:H4'	27:1H:378:G:OP2	2.12	0.48
27:1H:380:G:H2'	27:1H:381:G:O4'	2.14	0.48
27:1H:1404:U:H2'	27:1H:1405:G:O4'	2.13	0.48
27:1H:1464:C:O2'	27:1H:1634:A:N3	2.36	0.48
27:1H:1703:A:C2	27:1H:1704:C:H1'	2.48	0.48
27:1H:2304:U:H5''	27:1H:2393:C:O2	2.13	0.48
32:31:127:GLU:OE2	32:31:127:GLU:HA	2.09	0.48
43:B8:50:ILE:HD11	43:B8:102:ILE:HD13	1.96	0.48
1:1G:147:G:N2	1:1G:148:G:C4	2.82	0.48
1:1G:450:G:N7	1:1G:481:G:C6	2.82	0.48
1:1G:835:U:H3	1:1G:851:G:H1	1.60	0.48
1:1G:1531:A:H2	25:4L:41:U:H3	1.60	0.48
4:32:110:PHE:N	4:32:110:PHE:CD1	2.81	0.48
5:42:18:ARG:HH22	5:42:25:ARG:HG2	1.78	0.48
5:42:68:GLU:HG3	5:42:70:PRO:HD3	1.95	0.48
8:72:25:ASP:OD2	8:72:60:ARG:NH2	2.46	0.48
17:8A:7:THR:O	17:8A:23:VAL:HG13	2.13	0.48
59:1L:75:C:H2'	59:1L:76:A:N3	2.28	0.48
27:14:270(M):U:H4'	27:14:270(N):G:C6	2.49	0.48
27:14:328:U:H4'	48:C5:68:HIS:ND1	2.29	0.48
27:14:651:G:OP1	58:M5:19:SER:HB3	2.13	0.48
27:14:855:G:O2'	50:E5:27:GLU:OE2	2.30	0.48
27:14:1018:C:H2'	27:14:1019:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1952:A:C6	27:14:1953:A:N1	2.82	0.48
27:14:2108:C:H42	27:14:2181:G:H1	1.62	0.48
27:14:2291:U:OP1	27:14:2380:C:O2'	2.29	0.48
29:79:47:LEU:HA	29:79:47:LEU:HD23	1.71	0.48
31:29:37:ARG:HA	31:29:42:ASP:OD2	2.14	0.48
34:59:6:ARG:C	34:59:8:PRO:HD3	2.34	0.48
38:25:23:ARG:HG3	38:25:24:VAL:N	2.25	0.48
47:B5:23:GLU:HG3	47:B5:24:GLY:N	2.27	0.48
47:B5:67:GLY:C	47:B5:69:TYR:H	2.16	0.48
49:D5:158:PRO:O	49:D5:161:VAL:HB	2.13	0.48
1:13:452:A:H2'	1:13:453:A:H8	1.77	0.48
1:13:842:C:H4'	1:13:843:U:OP1	2.13	0.48
1:13:1347:G:N2	1:13:1373:G:H2'	2.29	0.48
27:1H:175:U:H2'	27:1H:176:G:H8	1.78	0.48
27:1H:631:U:N3	27:1H:647:A:C2	2.75	0.48
27:1H:1124:A:H3'	27:1H:1125:U:C5'	2.42	0.48
27:1H:1518:G:H5''	27:1H:1519:A:OP1	2.13	0.48
27:1H:1547:G:H2'	27:1H:1548:C:C6	2.49	0.48
27:1H:1845:G:H1'	30:11:50:THR:OG1	2.14	0.48
27:1H:2669:U:H3	27:1H:2678:A:H2	1.59	0.48
28:16:40:U:H3'	28:16:41:U:H5''	1.96	0.48
30:11:148:GLU:HB2	30:11:151:LYS:HD2	1.96	0.48
31:21:37:ARG:O	31:21:45:THR:HA	2.14	0.48
32:31:65:TRP:HB2	32:31:66:PRO:CD	2.44	0.48
32:31:196:LEU:HD23	32:31:196:LEU:HA	1.74	0.48
39:78:13:ASN:ND2	39:78:15:ARG:HB2	2.28	0.48
39:78:59:LEU:HD11	58:Q8:10:ALA:HA	1.94	0.48
41:98:38:VAL:HG22	41:98:112:ALA:HB2	1.95	0.48
43:B8:128:GLU:HG2	43:B8:129:ARG:N	2.29	0.48
46:E8:58:ALA:HB1	46:E8:64:MET:HB3	1.94	0.48
48:G8:55:TYR:CZ	48:G8:61:ILE:HD11	2.49	0.48
55:N8:16:ARG:NH1	55:N8:17:ASP:OD2	2.46	0.48
1:1G:24:U:H2'	1:1G:25:C:C6	2.49	0.48
1:1G:438:G:N2	1:1G:495:A:OP2	2.38	0.48
1:1G:474:G:N1	1:1G:475:G:O6	2.46	0.48
1:1G:560:U:O2'	1:1G:561:U:OP2	2.31	0.48
1:1G:1017:G:H2'	1:1G:1018:C:C6	2.49	0.48
1:1G:1128:C:H3'	1:1G:1129:C:O4'	2.13	0.48
3:22:6:HIS:CD2	3:22:7:PRO:HD2	2.49	0.48
7:62:113:GLU:HB3	7:62:118:VAL:HG23	1.95	0.48
13:4A:87:TYR:O	13:4A:91:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:207:A:H2'	27:14:208:C:O4'	2.14	0.48
27:14:1430:C:H2'	27:14:1431:U:C6	2.48	0.48
34:59:4:ILE:HD13	34:59:4:ILE:H	1.79	0.48
34:59:78:GLY:HA3	34:59:136:ILE:O	2.14	0.48
40:45:17:LEU:HD21	40:45:41:TRP:HE1	1.78	0.48
40:45:22:LYS:HZ1	40:45:96:VAL:HG12	1.79	0.48
42:65:3:ARG:NH1	42:65:4:LEU:HB2	2.29	0.48
44:85:92:ARG:HB2	45:95:11:GLN:OE1	2.14	0.48
49:D5:29:TYR:O	49:D5:89:PHE:HD1	1.97	0.48
53:H5:39:ASP:CG	53:H5:44:ARG:HE	2.17	0.48
1:13:89:U:HO2'	1:13:90:C:C5'	2.27	0.48
1:13:191:G:H1'	20:BI:105:SER:HA	1.95	0.48
3:2E:114:PRO:HA	3:2E:185:GLY:HA3	1.95	0.48
4:3E:20:TYR:HD1	4:3E:26:CYS:HB3	1.77	0.48
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.95	0.48
9:8E:116:LYS:NZ	9:8E:122:ALA:HB2	2.29	0.48
13:4I:3:ARG:CZ	13:4I:3:ARG:HA	2.44	0.48
19:AI:41:VAL:HG12	19:AI:44:MET:CG	2.43	0.48
22:1K:18:G:H4'	22:1K:60:U:C2	2.49	0.48
27:1H:69:G:H5''	27:1H:110:U:O2	2.14	0.48
27:1H:895:U:H5	27:1H:979:A:C2	2.30	0.48
27:1H:1075:A:N6	27:1H:1172:G:H2'	2.29	0.48
27:1H:1856:G:OP1	30:11:52:ARG:HD3	2.13	0.48
27:1H:2125:U:H2'	27:1H:2126:C:C6	2.49	0.48
27:1H:2173:U:H2'	27:1H:2174:G:C8	2.49	0.48
27:1H:2307:C:H2'	27:1H:2308:C:H6	1.79	0.48
27:1H:2348:A:C8	27:1H:2350:G:N7	2.82	0.48
27:1H:2419:U:H5''	65:1H:3937:HOH:O	2.13	0.48
27:1H:2509:C:OP1	40:88:82:ARG:HB3	2.14	0.48
27:1H:2542:G:H5''	27:1H:2543:A:H5''	1.95	0.48
27:1H:2831:A:P	41:98:2:ARG:NH1	2.85	0.48
30:11:61:LEU:HD12	30:11:61:LEU:HA	1.73	0.48
30:11:206:LEU:O	30:11:211:ARG:HD3	2.13	0.48
36:38:119:ALA:O	36:38:121:ASP:HB3	2.14	0.48
39:78:37:GLY:CA	39:78:39:LYS:H	2.23	0.48
41:98:21:TYR:OH	41:98:43:GLU:HG2	2.12	0.48
1:1G:174:C:H2'	1:1G:175:C:C6	2.46	0.48
1:1G:255:G:H1'	17:8A:16:GLN:OE1	2.13	0.48
1:1G:1316:G:H2'	1:1G:1318:A:OP2	2.14	0.48
2:12:46:LYS:HA	2:12:49:GLU:HG2	1.96	0.48
2:12:105:PHE:O	2:12:109:SER:OG	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:113:HIS:O	2:12:116:GLU:HG2	2.14	0.48
7:62:62:PHE:HA	7:62:124:LEU:CD2	2.43	0.48
10:1A:54:PHE:HD2	10:1A:56:HIS:CE1	2.32	0.48
27:14:84:A:H3'	48:C5:8:LYS:HB2	1.96	0.48
27:14:297:C:H2'	27:14:298:G:O4'	2.13	0.48
27:14:612:G:C5'	27:14:612:G:H8	2.27	0.48
27:14:1539:G:C2	27:14:1540:G:C4	3.02	0.48
27:14:2058:A:H5''	27:14:2059:A:OP2	2.14	0.48
27:14:2318:G:H22	42:65:3:ARG:HB2	1.79	0.48
28:1J:11:C:H3'	28:1J:12:C:C6	2.49	0.48
28:1J:22:U:H3	28:1J:61:G:H1	1.61	0.48
29:79:201:PRO:HG2	29:79:204:ALA:HB2	1.96	0.48
30:19:232:PRO:HB3	30:19:244:ARG:CZ	2.44	0.48
31:29:167:VAL:HG11	31:29:170:LEU:HD13	1.96	0.48
33:49:37:VAL:O	33:49:94:LEU:HD23	2.14	0.48
37:15:127:ASP:O	37:15:128:HIS:HB3	2.14	0.48
45:95:35:LEU:C	45:95:37:VAL:HG13	2.34	0.48
49:D5:24:LEU:HD12	49:D5:25:PRO:O	2.14	0.48
1:13:411:A:C8	1:13:413:G:H1'	2.49	0.48
1:13:440:A:H3'	1:13:442:C:C6	2.49	0.48
1:13:450:G:N7	1:13:481:G:C6	2.82	0.48
1:13:652:U:H1'	1:13:653:A:C2	2.48	0.48
1:13:728:A:C6	15:6I:54:ARG:HD2	2.49	0.48
1:13:1245:A:OP2	21:1F:9:ARG:NH2	2.47	0.48
27:1H:422:A:C6	27:1H:423:U:C4	3.01	0.48
27:1H:1209:G:H1'	45:D8:23:GLU:OE2	2.13	0.48
27:1H:1338:C:H2'	27:1H:1339:U:C6	2.49	0.48
27:1H:2328:G:H2'	27:1H:2329:C:C6	2.48	0.48
27:1H:2525:C:H4'	31:21:122:PHE:CE2	2.49	0.48
27:1H:2713:C:C2'	27:1H:2714:C:H5'	2.43	0.48
28:16:10:C:H4'	65:16:325:HOH:O	2.13	0.48
30:11:54:ARG:HH11	30:11:54:ARG:CG	2.27	0.48
30:11:110:GLY:O	30:11:112:GLN:HG3	2.13	0.48
30:11:132:PRO:HD3	30:11:190:TYR:CZ	2.48	0.48
39:78:147:LEU:O	39:78:148:LEU:HB2	2.14	0.48
41:98:12:ARG:HD3	41:98:16:HIS:CD2	2.49	0.48
43:B8:105:LEU:C	43:B8:107:ASP:H	2.16	0.48
1:1G:10:A:O2'	1:1G:11:G:H5'	2.14	0.48
1:1G:701:C:H4'	1:1G:702:A:H5''	1.96	0.48
1:1G:1218:C:H2'	1:1G:1219:U:C6	2.49	0.48
3:22:156:ARG:HD3	3:22:159:GLY:HA2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:49:ILE:O	7:62:53:LYS:HB2	2.14	0.48
13:4A:7:VAL:HG23	13:4A:8:GLU:HG3	1.96	0.48
59:1L:34:G:H2'	59:1L:35:A:H8	1.76	0.48
27:14:248:G:H2'	65:14:3512:HOH:O	2.13	0.48
27:14:438:G:H2'	27:14:439:G:H8	1.78	0.48
27:14:807:U:OP1	39:35:36:LYS:NZ	2.36	0.48
27:14:854:G:H2'	27:14:855:G:C8	2.49	0.48
27:14:1024:G:C3'	27:14:1025:G:H5''	2.43	0.48
27:14:1278:A:OP1	41:55:36:THR:HG22	2.14	0.48
27:14:2398:U:H2'	27:14:2399:G:C8	2.49	0.48
27:14:2496:C:OP1	40:45:82:ARG:HB3	2.14	0.48
27:14:2572:A:OP1	27:14:2574:G:O2'	2.26	0.48
28:1J:42:C:O2	33:49:93:THR:N	2.26	0.48
31:29:170:LEU:HD23	31:29:184:VAL:HB	1.96	0.48
35:69:63:ALA:O	35:69:67:ARG:HG3	2.14	0.48
42:65:11:LYS:HE3	42:65:15:ARG:HH22	1.78	0.48
49:D5:76:LEU:HD12	49:D5:81:ARG:HA	1.96	0.48
1:13:232:G:H2'	1:13:233:C:C6	2.48	0.47
1:13:468:A:H4'	16:7I:80:PHE:O	2.14	0.47
1:13:532:A:HO2'	1:13:533:A:P	2.36	0.47
1:13:629:G:H5''	1:13:630:G:OP2	2.14	0.47
1:13:1058:G:H2'	1:13:1059:C:C6	2.49	0.47
1:13:1286:A:H2'	1:13:1287:A:H4'	1.96	0.47
1:13:1471:G:H2'	1:13:1472:U:C6	2.49	0.47
1:13:1518:MA6:H102	1:13:1519:MA6:H93	1.95	0.47
9:8E:112:LYS:HD2	9:8E:113:LYS:N	2.29	0.47
15:6I:43:LEU:HD12	15:6I:56:LEU:HD22	1.96	0.47
19:AI:17:GLU:O	19:AI:21:GLU:HB2	2.13	0.47
22:1K:9:A:C8	22:1K:46:7MG:C2	3.02	0.47
27:1H:260:A:H1'	27:1H:398:G:C2	2.49	0.47
27:1H:506:A:N3	27:1H:508:G:H5''	2.29	0.47
27:1H:597:G:N1	27:1H:2054:A:OP2	2.33	0.47
27:1H:672:A:H2'	27:1H:673:G:C8	2.48	0.47
27:1H:2162:C:H2'	27:1H:2163:C:O4'	2.14	0.47
28:16:80:U:C2	28:16:81:G:N2	2.82	0.47
34:51:56:SER:HG	34:51:61:HIS:CE1	2.28	0.47
52:K8:1:MET:HE2	52:K8:56:GLN:HG2	1.96	0.47
1:1G:191:G:H1'	20:BA:104:LEU:O	2.13	0.47
1:1G:269:C:H2'	1:1G:270:A:H8	1.79	0.47
1:1G:409:G:H3'	1:1G:410:G:H8	1.79	0.47
1:1G:558:G:H5''	1:1G:559:A:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:675:A:O2'	11:2A:114:VAL:O	2.26	0.47
1:1G:1090:U:H2'	1:1G:1091:U:C6	2.49	0.47
1:1G:1206:G:C6	1:1G:1207:2MG:C6	3.02	0.47
2:12:73:THR:N	2:12:170:GLU:OE2	2.46	0.47
3:22:18:TRP:NE1	14:5A:53:LEU:O	2.40	0.47
4:32:101:LEU:HD23	4:32:135:LEU:O	2.14	0.47
5:42:147:ASP:O	5:42:151:LEU:HD23	2.14	0.47
6:52:100:ASN:ND2	18:9A:27:GLY:O	2.46	0.47
8:72:121:ASP:HB2	8:72:125:ARG:NH2	2.29	0.47
12:3A:67:ILE:HG21	12:3A:72:HIS:HD2	1.79	0.47
59:1L:29:G:H2'	59:1L:30:G:H8	1.79	0.47
27:14:83:G:N1	27:14:102:G:H2'	2.29	0.47
27:14:426:C:C2'	27:14:427:U:H5'	2.44	0.47
27:14:546:C:H2'	27:14:547:A:O4'	2.14	0.47
27:14:587:C:H4'	27:14:588:U:OP2	2.13	0.47
27:14:1156:A:OP1	44:85:55:ARG:NH1	2.47	0.47
27:14:1191:G:H2'	27:14:1192:G:C8	2.49	0.47
27:14:2392:A:H1'	39:35:61:ARG:HD2	1.96	0.47
30:19:168:ARG:HA	30:19:173:VAL:HA	1.95	0.47
31:29:23:VAL:HA	31:29:184:VAL:O	2.14	0.47
32:39:154:VAL:HG12	32:39:156:LEU:N	2.29	0.47
32:39:182:ASN:O	32:39:186:ILE:HG13	2.14	0.47
33:49:111:LEU:HB2	33:49:112:PRO:HD3	1.96	0.47
35:69:124:GLY:H	35:69:142:VAL:CG2	2.26	0.47
52:G5:37:PHE:O	52:G5:41:ILE:HG13	2.14	0.47
1:13:522:C:H41	12:3I:50:ARG:HH12	1.62	0.47
1:13:553:A:H5''	12:3I:21:VAL:HG11	1.96	0.47
1:13:966:M2G:HM22	23:2K:34:G:H5'	1.96	0.47
1:13:1342:C:H2'	1:13:1343:G:H8	1.79	0.47
7:6E:90:GLU:OE2	7:6E:90:GLU:N	2.47	0.47
16:7I:9:PHE:CE2	16:7I:18:ARG:HD2	2.49	0.47
23:2K:50:U:H2'	23:2K:51:U:H6	1.78	0.47
27:1H:430:A:N1	27:1H:450:A:N6	2.61	0.47
27:1H:461:C:H2'	27:1H:462:U:C6	2.50	0.47
27:1H:488:C:H42	27:1H:495:G:H1	1.61	0.47
27:1H:557:C:H4'	27:1H:558:A:H5''	1.95	0.47
27:1H:1127:A:C2	27:1H:1128:U:H1'	2.49	0.47
27:1H:2148:G:N1	27:1H:2195:U:OP1	2.46	0.47
32:31:168:ARG:HG3	32:31:175:THR:HG21	1.96	0.47
33:41:173:LEU:O	33:41:178:PHE:HB2	2.14	0.47
34:51:87:LEU:HD11	34:51:145:ALA:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:38:41:ARG:HB3	36:38:41:ARG:HH11	1.78	0.47
55:N8:33:CYS:SG	55:N8:36:CYS:HB3	2.54	0.47
1:1G:332:G:H2'	1:1G:333:G:H8	1.78	0.47
1:1G:393:A:OP2	16:7A:12:LYS:NZ	2.37	0.47
1:1G:429:U:H3'	4:32:9:CYS:SG	2.53	0.47
1:1G:438:G:O2'	1:1G:494:U:O4	2.31	0.47
1:1G:1171:G:H2'	1:1G:1172:C:C6	2.49	0.47
3:22:181:ASN:O	3:22:204:LEU:HD12	2.14	0.47
9:82:3:GLN:HB3	9:82:20:ARG:HG3	1.95	0.47
16:7A:39:TYR:CE2	16:7A:41:PRO:HB3	2.49	0.47
27:14:654(V):A:H2	27:14:655:A:C2	2.31	0.47
27:14:918:A:C6	27:14:919:G:H1'	2.49	0.47
27:14:2291:U:O2'	27:14:2374:C:O2	2.27	0.47
27:14:2308:G:O6	27:14:2311:A:N1	2.46	0.47
27:14:2811:G:H5'	31:29:60:ASN:ND2	2.29	0.47
35:69:56:LYS:HE2	35:69:57:ARG:HA	1.95	0.47
39:35:2:LYS:H	39:35:2:LYS:HD3	1.79	0.47
44:85:25:TRP:CD1	44:85:25:TRP:C	2.87	0.47
45:95:73:SER:HB2	45:95:82:ARG:O	2.14	0.47
48:C5:79:CYS:H	48:C5:80:GLY:HA2	1.78	0.47
52:G5:22:GLU:O	52:G5:26:ARG:HG3	2.13	0.47
53:H5:22:ALA:HB2	53:H5:49:LYS:HD3	1.96	0.47
54:I5:13:ARG:HG2	54:I5:22:ILE:O	2.14	0.47
1:13:1254:C:H41	10:1I:43:ARG:HH12	1.61	0.47
6:5E:37:VAL:HG12	6:5E:39:LYS:O	2.13	0.47
7:6E:84:ASN:H	24:3K:37:MIA:H152	1.77	0.47
7:6E:101:LEU:H	7:6E:101:LEU:HG	1.48	0.47
13:4I:19:LEU:HD12	13:4I:22:ILE:HD11	1.95	0.47
18:9I:44:LEU:HD11	18:9I:70:ILE:HG21	1.96	0.47
26:5K:55:PSU:H5'	26:5K:56:C:OP2	2.14	0.47
27:1H:935:A:O2'	27:1H:936:C:OP2	2.26	0.47
27:1H:1813:C:H41	57:P8:1:MET:HE1	1.79	0.47
27:1H:2295:G:H4'	27:1H:2402:G:O2'	2.14	0.47
27:1H:2419:U:C4	39:78:72:PRO:HG2	2.49	0.47
27:1H:2540:C:C4	27:1H:2541:U:C4	3.02	0.47
27:1H:2725:U:H1'	27:1H:2726:A:C8	2.49	0.47
27:1H:2907:U:H2'	27:1H:2908:U:O4'	2.14	0.47
32:31:183:VAL:O	32:31:187:VAL:HG23	2.14	0.47
42:A8:34:HIS:HB2	42:A8:36:TYR:CE1	2.49	0.47
45:D8:8:GLY:O	45:D8:10:LYS:HE2	2.15	0.47
1:1G:338:A:C6	1:1G:339:C:N3	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:411:A:H62	1:1G:413:G:H21	1.62	0.47
1:1G:1218:C:P	14:5A:9:LYS:HZ3	2.37	0.47
5:42:12:LEU:O	5:42:30:ALA:HA	2.14	0.47
5:42:90:VAL:HG23	5:42:121:LYS:H	1.79	0.47
6:52:17:SER:O	6:52:21:LEU:HD23	2.14	0.47
7:62:13:GLN:HG2	7:62:14:PRO:HD2	1.97	0.47
59:1L:21:A:C6	59:1L:46:G:C2	3.02	0.47
60:2L:54:5MU:H5'	60:2L:54:5MU:C6	2.48	0.47
27:14:305:U:H2'	27:14:306:U:C6	2.49	0.47
27:14:459:U:H5''	57:L5:40:TRP:CD2	2.49	0.47
27:14:2068:U:N3	27:14:2430:A:H2	2.11	0.47
27:14:2105:C:H2'	27:14:2106:G:H8	1.79	0.47
27:14:2378:A:H4'	42:65:23:ARG:HD2	1.94	0.47
27:14:2584:U:C5	27:14:2585:U:C5	3.02	0.47
27:14:2735:G:N2	27:14:2770:G:H1'	2.28	0.47
34:59:150:ALA:O	34:59:153:LYS:N	2.47	0.47
56:K5:27:LYS:HE2	56:K5:27:LYS:HB2	1.59	0.47
1:13:105:G:N2	1:13:379:C:O3'	2.48	0.47
1:13:582:U:H2'	1:13:583:A:C8	2.50	0.47
1:13:674:G:H2'	1:13:675:A:C8	2.49	0.47
1:13:1534:A:H2'	1:13:1535:C:C6	2.49	0.47
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.96	0.47
3:2E:148:GLY:HA3	3:2E:172:ARG:O	2.15	0.47
24:3K:76:A:C8	27:1H:2407:C:N4	2.77	0.47
27:1H:69:G:H4'	27:1H:70:A:OP1	2.14	0.47
27:1H:776:G:C2	27:1H:778:C:C2	3.02	0.47
27:1H:1716:A:O4'	27:1H:1717:A:C2	2.67	0.47
27:1H:1958:G:H3'	27:1H:1985:5MC:HN41	1.79	0.47
27:1H:2583:G:H2'	27:1H:2584:C:C6	2.49	0.47
45:D8:49:THR:OG1	45:D8:50:PRO:HD2	2.13	0.47
53:L8:8:LEU:HD13	53:L8:31:LEU:HD23	1.96	0.47
54:M8:56:VAL:O	54:M8:60:GLN:HG3	2.14	0.47
58:Q8:52:LYS:N	58:Q8:53:PRO:HD2	2.30	0.47
1:1G:277:C:OP1	17:8A:41:LYS:HE3	2.15	0.47
1:1G:591:U:OP2	8:72:30:ARG:NH1	2.47	0.47
1:1G:860:A:H2'	1:1G:861:G:O4'	2.15	0.47
1:1G:1317:C:C2'	1:1G:1318:A:H5'	2.45	0.47
2:12:8:LYS:HG2	2:12:11:LEU:HD22	1.96	0.47
8:72:49:GLU:HG2	8:72:62:TYR:HE2	1.78	0.47
11:2A:56:GLY:O	11:2A:89:ALA:HB3	2.14	0.47
13:4A:108:ARG:NH2	13:4A:114:ARG:HA	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:18:LYS:HB3	19:AA:31:ILE:HD12	1.96	0.47
20:BA:42:GLN:O	20:BA:46:GLU:HG3	2.13	0.47
27:14:30:G:H2'	27:14:31:C:C6	2.49	0.47
27:14:479:A:H4'	27:14:480:A:OP1	2.13	0.47
27:14:749:C:C4	27:14:1618:A:C2	3.03	0.47
27:14:1187:G:H8	27:14:1187:G:O5'	1.97	0.47
27:14:2031:A:H1'	27:14:2455:G:O2'	2.15	0.47
27:14:2273:A:H2'	27:14:2274:A:C8	2.49	0.47
27:14:2346:A:C2	27:14:2383:G:C2	3.02	0.47
27:14:2419:U:H2'	27:14:2420:C:C6	2.50	0.47
27:14:2762:G:H5'	27:14:2763:G:OP2	2.14	0.47
27:14:2849:U:H4'	27:14:2868:A:C2	2.50	0.47
27:14:2855:C:H2'	27:14:2856:C:C6	2.50	0.47
28:1J:30:C:H2'	28:1J:31:C:H5'	1.96	0.47
30:19:4:LYS:HG3	30:19:20:ASP:HB2	1.97	0.47
33:49:67:LYS:H	33:49:67:LYS:HE3	1.78	0.47
40:45:25:ASP:HB2	40:45:101:ARG:HD2	1.96	0.47
40:45:97:VAL:HG11	40:45:103:MET:CE	2.44	0.47
46:A5:38:TYR:O	55:J5:28:PRO:HB3	2.14	0.47
58:M5:34:TRP:CE3	58:M5:35:GLN:N	2.81	0.47
1:13:109:A:H2'	1:13:326:G:N2	2.29	0.47
1:13:411:A:C5	1:13:413:G:H1'	2.50	0.47
1:13:456:C:H1'	1:13:477:G:N2	2.30	0.47
1:13:1071:C:H2'	1:13:1072:G:C8	2.48	0.47
1:13:1206:G:C6	1:13:1207:2MG:C5	3.02	0.47
2:1E:103:THR:HA	2:1E:180:LEU:HD21	1.97	0.47
3:2E:188:LEU:HD22	3:2E:188:LEU:HA	1.49	0.47
13:4I:76:ALA:HA	13:4I:79:LYS:HB3	1.95	0.47
27:1H:26:G:H1'	27:1H:540:A:N6	2.29	0.47
27:1H:344:C:C2	27:1H:358:G:N2	2.83	0.47
27:1H:769:C:H2'	27:1H:770:A:C8	2.49	0.47
27:1H:1234:U:O2'	27:1H:1235:A:H5'	2.15	0.47
27:1H:1857:A:OP1	30:11:249:PRO:HD3	2.14	0.47
29:71:209:LEU:HD13	29:71:226:PRO:HG2	1.96	0.47
34:51:3:ARG:HD2	34:51:54:ARG:HH12	1.79	0.47
34:51:4:ILE:O	34:51:69:ARG:HG2	2.15	0.47
37:58:53:VAL:HA	37:58:121:LYS:O	2.14	0.47
39:78:71:VAL:HG13	39:78:72:PRO:HD3	1.96	0.47
39:78:86:LYS:HD3	39:78:117:GLU:HG3	1.95	0.47
42:A8:11:LYS:O	42:A8:15:ARG:HD3	2.15	0.47
42:A8:94:TYR:CE1	42:A8:99:LYS:HG3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G8:90:LEU:H	48:G8:90:LEU:HG	1.55	0.47
53:L8:7:LYS:HE2	53:L8:32:GLN:O	2.15	0.47
1:1G:926:G:N1	25:4L:45:U:H2'	2.29	0.47
1:1G:1015:A:H8	1:1G:1015:A:O5'	1.97	0.47
1:1G:1129:C:C4	1:1G:1139:G:C4	3.03	0.47
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.48	0.47
24:3L:31:A:C2'	24:3L:32:PSU:H5''	2.45	0.47
27:14:1003:G:N2	27:14:1153:C:C2	2.82	0.47
27:14:1285:G:N2	27:14:1328:G:H5''	2.28	0.47
27:14:2271:G:C5'	50:E5:20:ARG:HE	2.24	0.47
27:14:2507:C:H5''	27:14:2573:C:N4	2.30	0.47
27:14:2773:C:H5''	31:29:164:ARG:HG2	1.96	0.47
28:1J:37:C:N3	28:1J:48:A:O2'	2.43	0.47
29:79:58:VAL:HG11	29:79:171:ILE:HD12	1.97	0.47
45:95:1:MET:HG2	45:95:2:PHE:N	2.29	0.47
2:1E:12:GLU:O	2:1E:16:HIS:HB2	2.13	0.47
2:1E:75:LYS:HA	2:1E:78:GLN:HB2	1.96	0.47
4:3E:49:ARG:HD3	4:3E:49:ARG:N	2.29	0.47
7:6E:23:VAL:O	7:6E:27:ILE:HG13	2.15	0.47
7:6E:116:ALA:HA	7:6E:119:ARG:HG3	1.96	0.47
23:2K:76:A:H4'	27:1H:2615:A:C6	2.50	0.47
26:5K:22:G:O2'	26:5K:23:A:O5'	2.25	0.47
27:1H:306:G:H1'	27:1H:385:G:N2	2.29	0.47
27:1H:322:C:H2'	27:1H:323:G:O4'	2.13	0.47
27:1H:1068:A:H8	27:1H:1069:G:O5'	1.98	0.47
27:1H:1348:A:C8	27:1H:1350:G:C8	3.02	0.47
27:1H:1687:U:O2'	27:1H:1688:C:H5'	2.14	0.47
27:1H:1850:U:H2'	30:11:157:ARG:HG3	1.97	0.47
27:1H:1988:C:H3'	27:1H:1989:A:H2'	1.96	0.47
27:1H:2195:U:H5'	27:1H:2196:A:OP2	2.15	0.47
27:1H:2415:C:H3'	27:1H:2415:C:C6	2.50	0.47
27:1H:2488:C:H42	27:1H:2542:G:H1	1.62	0.47
27:1H:2544:A:H2	27:1H:2671:C:O2	1.98	0.47
27:1H:2650:U:H5''	31:21:82:ARG:HH21	1.80	0.47
30:11:130:ALA:HA	30:11:192:THR:HA	1.97	0.47
32:31:149:ASP:OD1	32:31:149:ASP:N	2.38	0.47
33:41:75:LYS:HE3	33:41:77:ILE:HD11	1.95	0.47
34:51:3:ARG:HA	34:51:3:ARG:NE	2.30	0.47
36:38:15:GLU:HG2	36:38:16:ASN:N	2.30	0.47
44:C8:69:CYS:HB2	44:C8:74:LEU:HD11	1.95	0.47
45:D8:37:VAL:HG11	45:D8:52:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D8:65:GLY:HA3	45:D8:91:TYR:CZ	2.49	0.47
46:E8:71:VAL:HA	46:E8:107:LEU:HD12	1.97	0.47
55:N8:40:LYS:HE2	55:N8:44:THR:O	2.14	0.47
56:O8:34:LEU:HD13	56:O8:34:LEU:H	1.79	0.47
1:1G:270:A:H2'	1:1G:271:C:O4'	2.14	0.47
1:1G:957:U:H1'	1:1G:960:U:C5	2.49	0.47
1:1G:1151:A:HO2'	1:1G:1152:A:C5'	2.27	0.47
3:22:120:VAL:HA	3:22:123:GLN:HB2	1.95	0.47
3:22:148:GLY:HA3	3:22:172:ARG:O	2.15	0.47
4:32:173:TRP:CD2	4:32:189:PRO:HB3	2.50	0.47
5:42:100:VAL:HG22	5:42:116:THR:HG23	1.97	0.47
8:72:109:ILE:HG22	8:72:137:VAL:O	2.15	0.47
9:82:32:ASP:OD1	9:82:33:PHE:N	2.46	0.47
11:2A:62:GLN:HG2	11:2A:63:LEU:HD23	1.96	0.47
27:14:1771:C:H1'	27:14:1786:A:C8	2.49	0.47
27:14:2068:U:N3	27:14:2430:A:C2	2.82	0.47
27:14:2303:G:C2'	27:14:2304:G:H5'	2.44	0.47
27:14:2552:OMU:HM23	27:14:2554:U:C6	2.49	0.47
27:14:2707:G:H4'	41:55:68:ARG:NH2	2.30	0.47
27:14:2763:G:H5''	27:14:2763:G:H8	1.79	0.47
28:1J:80:U:H2'	28:1J:81:G:N2	2.29	0.47
30:19:79:VAL:CG2	30:19:115:GLN:HB3	2.44	0.47
32:39:134:GLY:H	32:39:162:LEU:HB3	1.80	0.47
35:69:29:TYR:HD1	35:69:30:LEU:HD23	1.80	0.47
37:15:120:LEU:HD21	37:15:122:VAL:HG23	1.96	0.47
44:85:65:ILE:HD11	44:85:96:ALA:O	2.14	0.47
44:85:95:LEU:CD1	45:95:11:GLN:HB3	2.45	0.47
56:K5:17:LYS:O	56:K5:18:ARG:HB3	2.14	0.47
1:13:232:G:H1'	1:13:262:A:N1	2.30	0.47
1:13:405:U:O4	4:3E:2:GLY:N	2.47	0.47
1:13:536:C:H2'	1:13:537:G:C8	2.49	0.47
1:13:728:A:H2'	1:13:729:A:C8	2.49	0.47
1:13:784:C:H4'	27:1H:1869:C:OP1	2.15	0.47
1:13:865:A:H2'	1:13:866:C:C6	2.50	0.47
1:13:998:G:H1	1:13:1043:C:H42	1.62	0.47
1:13:1052:U:O2'	1:13:1055:A:OP2	2.32	0.47
1:13:1145:C:H4'	1:13:1146:A:O5'	2.14	0.47
1:13:1471:G:H2'	1:13:1472:U:H6	1.80	0.47
2:1E:53:ARG:HH22	2:1E:200:ILE:HD12	1.79	0.47
3:2E:112:SER:O	3:2E:115:LEU:N	2.44	0.47
3:2E:189:ALA:HB3	3:2E:196:LEU:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:61:LYS:HD2	4:3E:207:TYR:CZ	2.50	0.47
9:8E:99:LEU:HB3	9:8E:101:PHE:CE2	2.50	0.47
10:1I:84:GLN:O	10:1I:88:LEU:N	2.48	0.47
12:3I:16:ARG:HA	12:3I:16:ARG:HH11	1.80	0.47
16:7I:74:LEU:O	16:7I:79:VAL:HG23	2.15	0.47
17:8I:27:PHE:HD1	17:8I:28:PRO:O	1.97	0.47
18:9I:84:LYS:H	18:9I:84:LYS:HG2	1.41	0.47
24:3K:50:U:C2	24:3K:65:G:N2	2.82	0.47
27:1H:71:U:H3	52:K8:62:THR:HG22	1.79	0.47
27:1H:212:A:N6	27:1H:222:G:H1'	2.29	0.47
27:1H:344:C:H2'	27:1H:345:A:O4'	2.15	0.47
27:1H:477:G:OP2	65:1H:3698:HOH:O	2.19	0.47
27:1H:1133:A:N6	36:38:41:ARG:HE	2.12	0.47
27:1H:1138:G:N1	27:1H:1148:U:C2	2.83	0.47
27:1H:1277:C:H2'	27:1H:1278:G:C8	2.50	0.47
27:1H:1476:G:H2'	27:1H:1477:C:H6	1.79	0.47
27:1H:1629:G:H2'	27:1H:1630:C:O4'	2.14	0.47
27:1H:1700:A:O3'	27:1H:1701:G:C8	2.67	0.47
27:1H:1701:G:C5	41:98:9:LYS:HG3	2.48	0.47
27:1H:2018:U:H3'	27:1H:2019:C:H2'	1.97	0.47
27:1H:2371:G:H22	39:78:55:ARG:HH22	1.63	0.47
27:1H:2639:C:H2'	27:1H:2640:G:O4'	2.14	0.47
29:71:186:ALA:HA	29:71:189:ILE:HD12	1.96	0.47
33:41:118:ARG:O	33:41:181:ARG:HG3	2.14	0.47
34:51:3:ARG:HG3	34:51:5:GLY:H	1.79	0.47
35:61:40:THR:HG22	35:61:41:GLU:CD	2.34	0.47
39:78:19:VAL:HG22	39:78:21:ARG:HD2	1.96	0.47
39:78:135:LEU:O	39:78:138:LEU:HD12	2.15	0.47
40:88:22[B]:LYS:H	40:88:22[B]:LYS:HD2	1.78	0.47
40:88:104:PHE:O	40:88:105:GLU:C	2.52	0.47
40:88:136:ALA:HB1	49:H8:52:SER:HB2	1.96	0.47
43:B8:13:ARG:HE	43:B8:13:ARG:HB3	1.46	0.47
46:E8:25:ARG:HB2	46:E8:25:ARG:HH11	1.80	0.47
48:G8:41:GLY:HA2	48:G8:64:GLU:OE1	2.15	0.47
50:I8:31:VAL:HB	50:I8:35:ASN:ND2	2.29	0.47
55:N8:33:CYS:HB3	55:N8:38:ALA:O	2.15	0.47
58:Q8:34:TRP:CG	58:Q8:35:GLN:N	2.83	0.47
1:1G:141:A:H1'	1:1G:182:U:O2	2.14	0.47
1:1G:181:G:O2'	1:1G:183:G:O6	2.27	0.47
1:1G:516:PSU:C2	1:1G:517:G:C6	3.02	0.47
1:1G:735:C:H2'	1:1G:736:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:750:G:N3	15:6A:23:GLY:HA3	2.29	0.47
1:1G:757:U:H2'	1:1G:758:G:O4'	2.15	0.47
1:1G:779:C:H2'	1:1G:780:A:O4'	2.15	0.47
1:1G:838:G:N2	1:1G:849:C:C2	2.83	0.47
1:1G:872:A:C4	1:1G:874:G:C8	3.03	0.47
1:1G:1058:G:H2'	1:1G:1059:C:C6	2.49	0.47
1:1G:1293:G:H2'	1:1G:1294:G:C8	2.50	0.47
1:1G:1301:U:O2	1:1G:1301:U:H2'	2.15	0.47
1:1G:1326:C:H2'	1:1G:1327:C:H6	1.80	0.47
2:12:74:LYS:HD3	2:12:77:ALA:HB3	1.95	0.47
2:12:187:LEU:HD22	2:12:201:ILE:O	2.14	0.47
3:22:113:ALA:HA	3:22:202:ILE:HD11	1.96	0.47
3:22:186:PHE:HD1	3:22:198:VAL:O	1.97	0.47
4:32:121:VAL:HG22	4:32:126:ILE:HG13	1.96	0.47
4:32:175:SER:HB3	4:32:184:LYS:HB2	1.96	0.47
12:3A:59:SER:HB2	12:3A:61:TYR:CD1	2.46	0.47
13:4A:53:VAL:O	13:4A:57:ARG:N	2.34	0.47
13:4A:94:ARG:HB3	13:4A:96:LEU:HG	1.96	0.47
14:5A:15:LYS:HG3	14:5A:16:PHE:HB2	1.96	0.47
15:6A:54:ARG:HG2	15:6A:58:MET:HE2	1.96	0.47
19:AA:20:LEU:HA	19:AA:23:ASN:HD21	1.79	0.47
19:AA:40:ILE:HG12	19:AA:44:MET:SD	2.55	0.47
19:AA:41:VAL:HG13	19:AA:45:VAL:HG13	1.96	0.47
27:14:71:A:OP2	27:14:71:A:H3'	2.15	0.47
27:14:440:G:H2'	27:14:441:U:H6	1.78	0.47
27:14:532:A:N3	27:14:532:A:H2'	2.30	0.47
27:14:573:G:O2'	27:14:574:C:H3'	2.14	0.47
27:14:1002:G:H2'	27:14:1003:G:O4'	2.15	0.47
27:14:1510:A:H2'	27:14:1511:A:O4'	2.15	0.47
27:14:1599:C:H2'	27:14:1600:C:H6	1.79	0.47
27:14:1815:A:P	30:19:54:ARG:HH22	2.37	0.47
27:14:1945:G:H2'	27:14:1946:U:C6	2.50	0.47
27:14:2111:C:H5''	27:14:2145:C:N4	2.21	0.47
27:14:2394:C:H2'	27:14:2395:C:H6	1.79	0.47
27:14:2704:C:C4	27:14:2705:A:C5	3.03	0.47
28:1J:54:G:H21	33:49:29:TRP:HE1	1.61	0.47
28:1J:103:U:O2'	49:D5:72:ARG:HG2	2.14	0.47
31:29:67:PHE:CD1	31:29:74:PRO:HA	2.50	0.47
37:15:37:LYS:HE2	37:15:37:LYS:HB3	1.63	0.47
38:25:120:GLU:OE2	38:25:122:LEU:HD21	2.15	0.47
51:F5:10:LYS:NZ	51:F5:65:SER:OG	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:K5:52:VAL:HG22	56:K5:53:LYS:H	1.80	0.47
58:M5:62:LEU:O	58:M5:65:GLU:HG2	2.15	0.47
1:13:134:A:H1'	1:13:325:A:C5	2.50	0.47
1:13:323:U:H2'	1:13:324:G:O4'	2.15	0.47
1:13:833:U:H2'	1:13:834:C:C6	2.49	0.47
1:13:1076:C:OP1	2:1E:179:LYS:NZ	2.44	0.47
1:13:1118:C:H1'	1:13:1179:A:C5	2.50	0.47
1:13:1521:G:H2'	1:13:1522:U:C6	2.50	0.47
2:1E:209:ARG:O	2:1E:213:LEU:HG	2.15	0.47
3:2E:35:GLU:HA	3:2E:38:ARG:HG3	1.97	0.47
4:3E:88:VAL:C	4:3E:90:GLY:H	2.18	0.47
5:4E:51:VAL:HG21	25:4K:56:U:H3'	1.96	0.47
15:6I:64:ARG:HB2	15:6I:64:ARG:NH1	2.29	0.47
27:1H:346:G:O2'	27:1H:365:A:N3	2.45	0.47
27:1H:1104:A:N7	27:1H:1133:A:H2'	2.29	0.47
27:1H:1705:C:H2'	27:1H:1706:C:C6	2.50	0.47
27:1H:2098:U:C4	27:1H:2251:G:C6	3.03	0.47
31:21:52:LEU:O	31:21:76:ARG:HG3	2.15	0.47
33:41:76:SER:OG	33:41:83:ARG:HA	2.15	0.47
35:61:110:ASP:CG	35:61:130:TYR:HH	2.18	0.47
35:61:135:GLU:OE2	35:61:135:GLU:N	2.44	0.47
46:E8:65:LEU:HB2	46:E8:109:GLU:OE1	2.15	0.47
51:J8:83:GLU:C	51:J8:85:LEU:H	2.18	0.47
58:Q8:36:LYS:HB3	58:Q8:40:GLU:HG2	1.95	0.47
1:1G:15:G:H1'	5:42:19:MET:CE	2.45	0.47
1:1G:538:G:H2'	1:1G:539:A:C8	2.50	0.47
1:1G:814:A:H2'	1:1G:816:A:H5''	1.97	0.47
1:1G:861:G:C6	1:1G:862:C:C4	3.03	0.47
1:1G:976:G:C8	1:1G:1358:U:C2	3.03	0.47
1:1G:999:U:H2'	1:1G:1000:A:H8	1.80	0.47
1:1G:1051:C:H2'	1:1G:1052:U:C6	2.50	0.47
1:1G:1349:A:H2'	1:1G:1350:A:H8	1.79	0.47
7:62:118:VAL:O	7:62:122:HIS:ND1	2.48	0.47
59:1L:3:C:N4	59:1L:70:G:O6	2.48	0.47
59:1L:22:G:H2'	59:1L:23:A:H8	1.80	0.47
24:3L:41:C:H2'	24:3L:42:C:C6	2.50	0.47
27:14:141(A):C:H2'	27:14:142:G:O4'	2.15	0.47
27:14:1242:A:H2'	27:14:1243:G:O4'	2.15	0.47
27:14:1413:G:N2	27:14:1590:U:O2	2.48	0.47
27:14:1766:U:H3	27:14:1986:A:N6	2.13	0.47
37:15:53:VAL:HG11	37:15:128:HIS:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:25:2:ILE:HG23	38:25:6:THR:CB	2.44	0.47
39:35:63:PRO:HG2	58:M5:25:MET:HB2	1.96	0.47
46:A5:71:VAL:HA	46:A5:107:LEU:HD12	1.96	0.47
52:G5:18:PRO:HA	52:G5:21:LEU:HD12	1.95	0.47
1:13:221:C:H2'	1:13:222:U:H6	1.79	0.47
1:13:1305:G:H8	1:13:1305:G:OP2	1.97	0.47
3:2E:140:ARG:CZ	3:2E:140:ARG:HB2	2.40	0.47
4:3E:62:GLN:O	4:3E:66:ARG:HD2	2.15	0.47
6:5E:20:ALA:HA	6:5E:23:LYS:HD3	1.97	0.47
10:1I:62:HIS:H	10:1I:62:HIS:CD2	2.33	0.47
13:4I:68:GLY:HA3	33:41:116:ASP:CG	2.35	0.47
22:1K:74:C:O2'	22:1K:75:C:H6	1.97	0.47
24:3K:19:G:O2'	24:3K:56:C:N4	2.47	0.47
27:1H:401:U:O2	27:1H:451:A:H2	1.98	0.47
27:1H:517:G:H2'	27:1H:518:A:H8	1.80	0.47
27:1H:755:G:H2'	27:1H:756:C:O4'	2.15	0.47
27:1H:1168:C:H2'	27:1H:1169:G:O4'	2.15	0.47
27:1H:2091:U:N3	27:1H:2443:A:H2	2.04	0.47
27:1H:2751:G:H2'	27:1H:2752:A:C8	2.50	0.47
27:1H:2848:G:H21	41:98:45:ARG:HH21	1.62	0.47
29:71:10:LEU:HG	29:71:32:LEU:HA	1.97	0.47
32:31:178:PRO:HB3	32:31:198:ALA:CB	2.44	0.47
33:41:111:LEU:HD13	33:41:120:LEU:HD21	1.96	0.47
36:38:14:LYS:HE2	36:38:14:LYS:HA	1.97	0.47
37:58:12:ARG:HH12	37:58:38:HIS:HE2	1.62	0.47
38:68:64:ARG:O	38:68:82:ASN:HA	2.15	0.47
42:A8:15:ARG:NH1	42:A8:88:ASP:OD2	2.48	0.47
45:D8:82:ARG:N	45:D8:82:ARG:HD2	2.30	0.47
49:H8:19:ARG:NH1	49:H8:84:GLU:HB2	2.30	0.47
1:1G:35:G:C2	1:1G:550:G:N3	2.83	0.47
1:1G:909:A:H2'	1:1G:910:C:O4'	2.15	0.47
1:1G:982:U:OP1	1:1G:982:U:H6	1.97	0.47
1:1G:1128:C:C2	1:1G:1147:C:N4	2.82	0.47
10:1A:4:ILE:H	10:1A:74:ILE:HG12	1.79	0.47
19:AA:67:VAL:HG23	19:AA:68:GLY:H	1.80	0.47
59:1L:75:C:H42	27:14:2553:G:H1	1.62	0.47
27:14:197:A:H62	27:14:2430:A:H2'	1.80	0.47
27:14:448:U:O4	27:14:583:G:H1'	2.15	0.47
27:14:2331:G:O3'	50:E5:43:THR:HG22	2.15	0.47
27:14:2341:G:H2'	27:14:2342:C:C6	2.49	0.47
27:14:2360:A:C2	27:14:2361:A:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2567:G:H2'	27:14:2568:C:C6	2.50	0.47
27:14:2822:G:O5'	27:14:2822:G:H8	1.96	0.47
35:69:73:GLU:OE2	35:69:137:PRO:HD2	2.14	0.47
45:95:14:VAL:HB	45:95:96:ILE:HG13	1.97	0.47
45:95:85:LYS:HG2	45:95:87:HIS:N	2.26	0.47
1:13:1100:C:H2'	1:13:1102:A:O5'	2.15	0.47
10:1I:48:THR:HG23	10:1I:62:HIS:ND1	2.30	0.47
24:3K:58:A:H1'	24:3K:60:U:H5	1.80	0.47
27:1H:312:C:H2'	27:1H:313:C:C6	2.50	0.47
27:1H:822:A:C2	27:1H:835:U:O2'	2.64	0.47
27:1H:953:G:H5'	27:1H:953:G:H8	1.80	0.47
27:1H:1829:C:HO2'	30:11:259:THR:HG1	1.53	0.47
27:1H:2022:C:H5''	27:1H:2737:C:O2'	2.14	0.47
27:1H:2331:G:H22	42:A8:1:MET:C	2.19	0.47
28:16:78:A:C2	28:16:99:A:C4	3.02	0.47
29:71:66:HIS:NE2	29:71:184:LYS:HD2	2.30	0.47
31:21:179:GLU:HB3	31:21:181:LEU:HD22	1.97	0.47
33:41:20:ILE:HG23	33:41:25:TYR:HB2	1.96	0.47
33:41:97:ASP:O	33:41:101:ILE:HG23	2.14	0.47
39:78:50:ARG:HE	58:Q8:7:HIS:HD2	1.62	0.47
44:C8:92:ARG:O	44:C8:92:ARG:HG2	2.14	0.47
45:D8:39:LEU:HA	45:D8:47:VAL:HA	1.97	0.47
51:J8:52:ARG:HG2	51:J8:57:GLU:HB2	1.97	0.47
51:J8:91:LYS:O	51:J8:95:LEU:N	2.48	0.47
54:M8:57:GLU:HA	54:M8:60:GLN:CD	2.34	0.47
1:1G:779:C:H5''	11:2A:122:LYS:HG2	1.97	0.47
1:1G:1261:A:H5'	1:1G:1284:C:OP1	2.15	0.47
2:12:187:LEU:HD21	2:12:203:GLY:HA3	1.97	0.47
5:42:93:PRO:HG2	8:72:105:ARG:HE	1.80	0.47
10:1A:51:ARG:CZ	10:1A:61:GLU:HB2	2.45	0.47
10:1A:54:PHE:CG	10:1A:55:LYS:N	2.81	0.47
60:2L:2:C:H2'	60:2L:3:C:C6	2.50	0.47
24:3L:63:G:H2'	24:3L:64:A:O4'	2.15	0.47
27:14:536:A:H2'	27:14:537:C:O4'	2.15	0.47
27:14:959:A:N6	27:14:960:A:N1	2.63	0.47
27:14:1186:G:H2'	27:14:1187:G:O4'	2.15	0.47
27:14:1243:G:O2'	39:35:4:SER:O	2.30	0.47
27:14:1380:G:N2	27:14:1570:A:C2	2.83	0.47
27:14:1604:C:OP1	65:14:3553:HOH:O	2.20	0.47
27:14:2323:G:H1	27:14:2332:U:H3	1.63	0.47
27:14:2898:U:H2'	27:14:2899:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:79:11:LEU:HA	29:79:220:PRO:HG3	1.97	0.47
34:59:144:VAL:O	34:59:147:ASN:HB2	2.15	0.47
35:69:138:ILE:HG12	35:69:139:GLN:H	1.80	0.47
42:65:15:ARG:NH1	42:65:25:ARG:HH21	2.12	0.47
45:95:32:THR:HG22	45:95:58:VAL:HG12	1.97	0.47
47:B5:65:ARG:HG3	47:B5:67:GLY:H	1.80	0.47
56:K5:18:ARG:H	56:K5:19:ARG:HE	1.63	0.47
1:13:159:G:N2	1:13:162:A:OP2	2.48	0.46
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.96	0.46
1:13:1513:A:H2'	1:13:1514:C:C6	2.50	0.46
2:1E:168:THR:HG22	2:1E:192:SER:HB3	1.97	0.46
8:7E:4:ASP:OD2	8:7E:85:ARG:NH1	2.48	0.46
13:4I:78:ILE:O	13:4I:81:LEU:N	2.48	0.46
20:BI:63:ILE:HD13	20:BI:80:ARG:HB2	1.96	0.46
24:3K:23:A:H8	24:3K:23:A:OP2	1.98	0.46
27:1H:89:U:O3'	27:1H:90:A:H8	1.98	0.46
27:1H:252:A:H2'	27:1H:253:C:O4'	2.15	0.46
27:1H:352:G:H2'	27:1H:353:U:C6	2.50	0.46
27:1H:1618:A:H2'	27:1H:1619:A:C8	2.49	0.46
27:1H:1753:G:C6	27:1H:1754:U:C4	3.04	0.46
27:1H:1831:G:N7	30:11:179:SER:OG	2.46	0.46
27:1H:2159:C:N4	27:1H:2178:G:H22	2.08	0.46
27:1H:2291:A:OP1	40:88:11:LYS:HD3	2.15	0.46
27:1H:2344:G:C4'	50:I8:42:GLY:HA3	2.46	0.46
27:1H:2863:G:H2'	27:1H:2864:C:C6	2.50	0.46
29:71:170:ALA:HB1	29:71:172:HIS:CE1	2.50	0.46
31:21:103:ASP:OD1	31:21:201:THR:HA	2.15	0.46
34:51:87:LEU:HB2	34:51:131:VAL:CG1	2.43	0.46
38:68:88:ASN:OD1	38:68:90:GLN:N	2.46	0.46
40:88:24[A]:GLY:C	40:88:26:TYR:H	2.18	0.46
47:F8:87:GLN:O	47:F8:88:LYS:HG2	2.15	0.46
1:1G:1059:C:O2'	10:1A:53:PRO:HD3	2.14	0.46
1:1G:1152:A:OP1	10:1A:68:HIS:NE2	2.48	0.46
1:1G:1167:A:O5'	1:1G:1167:A:H8	1.98	0.46
1:1G:1244:C:H2'	1:1G:1245:A:C8	2.50	0.46
6:52:87:ARG:O	6:52:88:VAL:HG23	2.15	0.46
10:1A:4:ILE:O	10:1A:74:ILE:HG23	2.16	0.46
60:2L:2:C:H2'	60:2L:3:C:H6	1.80	0.46
27:14:274:G:C2	27:14:363:G:C6	3.02	0.46
27:14:484:C:H2'	27:14:485:C:H6	1.79	0.46
27:14:975:G:C4	27:14:976:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1114:G:H2'	27:14:1115:G:H8	1.80	0.46
27:14:1971:A:C4	30:19:241:PRO:HD3	2.50	0.46
27:14:2252:G:H2'	27:14:2253:G:O4'	2.15	0.46
27:14:2740:A:H2'	27:14:2741:A:C8	2.50	0.46
27:14:2862:G:C6	27:14:2863:C:C4	3.03	0.46
33:49:161:THR:HG22	33:49:163:ALA:H	1.80	0.46
41:55:63:ARG:HH11	41:55:63:ARG:HB2	1.79	0.46
43:75:97:ALA:C	43:75:98:LYS:HD2	2.36	0.46
44:85:88:ILE:C	44:85:90:VAL:H	2.17	0.46
51:F5:69:LYS:NZ	51:F5:72:GLU:HG2	2.30	0.46
55:J5:9:LYS:HD3	55:J5:9:LYS:HA	1.56	0.46
1:13:76:G:H5'	1:13:77:C:OP2	2.15	0.46
1:13:128:G:H5'	17:8I:2:PRO:O	2.15	0.46
1:13:148:G:H1	1:13:174:C:H42	1.61	0.46
1:13:559:A:OP1	5:4E:126:ARG:NH2	2.49	0.46
1:13:865:A:C2	1:13:918:A:H4'	2.50	0.46
1:13:947:G:C6	1:13:948:C:C4	3.03	0.46
1:13:1102:A:H2'	1:13:1103:C:C6	2.50	0.46
1:13:1261:A:H2'	1:13:1262:C:H5'	1.97	0.46
1:13:1281:U:H5''	1:13:1282:C:C5	2.47	0.46
2:1E:80:ILE:HD11	2:1E:208:ILE:HG23	1.96	0.46
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.16	0.46
3:2E:175:LEU:H	3:2E:175:LEU:HD12	1.80	0.46
6:5E:28:ARG:O	6:5E:32:ASN:ND2	2.39	0.46
13:4I:23:TYR:HB3	13:4I:67:GLU:HB2	1.98	0.46
19:AI:62:ILE:HD12	19:AI:62:ILE:H	1.80	0.46
22:1K:53:G:H1	22:1K:61:C:H42	1.64	0.46
22:1K:74:C:O2'	22:1K:75:C:C6	2.67	0.46
23:2K:55:PSU:H5''	23:2K:56:C:OP2	2.15	0.46
27:1H:174:C:H2'	27:1H:175:U:C6	2.50	0.46
27:1H:1406:A:N1	27:1H:1419:U:C4	2.82	0.46
27:1H:1745:G:OP2	27:1H:1746:A:O2'	2.23	0.46
27:1H:2241:G:C6	27:1H:2242:C:C4	3.02	0.46
27:1H:2333:A:N3	27:1H:2333:A:H2'	2.30	0.46
27:1H:2898:U:H2'	27:1H:2899:C:C6	2.50	0.46
29:71:55:ASP:OD1	29:71:55:ASP:N	2.38	0.46
33:41:66:GLN:OE1	33:41:98:ARG:NH1	2.48	0.46
36:38:7:VAL:O	36:38:11:ALA:N	2.48	0.46
36:38:121:ASP:O	36:38:125:LEU:HB3	2.15	0.46
40:88:34:LEU:HB2	40:88:118:LEU:HD22	1.97	0.46
43:B8:57:PHE:HA	43:B8:79:HIS:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:M8:64:GLY:HA3	54:M8:69:LYS:HD2	1.97	0.46
1:1G:198:G:H2'	1:1G:199:G:H8	1.80	0.46
1:1G:449:C:H5	16:7A:42:ARG:HH11	1.62	0.46
1:1G:533:A:O2'	1:1G:534:U:H5''	2.15	0.46
1:1G:1034:G:N2	1:1G:1035:A:N7	2.63	0.46
1:1G:1067:A:O2'	1:1G:1093:A:O2'	2.33	0.46
1:1G:1116:C:H2'	1:1G:1117:G:O4'	2.15	0.46
1:1G:1319:A:H5'	1:1G:1320:C:OP1	2.15	0.46
1:1G:1379:G:N1	1:1G:1380:U:C4	2.83	0.46
10:1A:3:LYS:O	10:1A:101:VAL:N	2.36	0.46
24:3L:36:A:N6	24:3L:37:MIA:H132	2.31	0.46
27:14:180:G:H5''	27:14:181:A:OP1	2.14	0.46
27:14:459:U:H2'	27:14:460:A:C8	2.50	0.46
27:14:510:C:H2'	27:14:511:U:O4'	2.14	0.46
27:14:565:C:H2'	27:14:566:U:O4'	2.15	0.46
27:14:1274:A:N1	27:14:1644:C:O2'	2.35	0.46
27:14:1569:A:H2'	27:14:1570:A:C8	2.50	0.46
27:14:2124:G:N2	29:79:217:THR:O	2.40	0.46
27:14:2629:A:O2'	27:14:2630:G:H5'	2.15	0.46
27:14:2631:G:N3	27:14:2810:A:H2	2.13	0.46
27:14:2784:C:H1'	31:29:37:ARG:HH12	1.80	0.46
27:14:2852:G:H2'	27:14:2853:C:C6	2.51	0.46
31:29:34:VAL:HG22	31:29:48:GLN:OE1	2.15	0.46
31:29:175:VAL:O	31:29:177:PRO:HD3	2.14	0.46
34:59:148:ILE:H	34:59:148:ILE:HG12	1.43	0.46
50:E5:81:VAL:O	50:E5:83:PRO:HD3	2.15	0.46
56:K5:10:LEU:HD12	56:K5:26:ASN:H	1.79	0.46
1:13:107:G:OP1	1:13:325:A:N6	2.48	0.46
4:3E:109:GLY:HA3	4:3E:165:MET:SD	2.55	0.46
4:3E:139:ARG:O	4:3E:139:ARG:HG2	2.15	0.46
5:4E:131:ILE:HD13	5:4E:131:ILE:HA	1.74	0.46
5:4E:145:LYS:O	5:4E:149:GLU:N	2.36	0.46
27:1H:21:A:H2'	27:1H:22:C:O4'	2.15	0.46
27:1H:103:C:H2'	27:1H:104:C:H6	1.81	0.46
27:1H:152:G:H2'	27:1H:153:C:C6	2.51	0.46
27:1H:424:G:H1'	51:J8:42:GLN:HB3	1.98	0.46
27:1H:442:C:H2'	27:1H:443:A:C8	2.50	0.46
27:1H:869:A:C2'	27:1H:992:G:H5''	2.44	0.46
27:1H:1724:A:OP2	65:1H:3700:HOH:O	2.20	0.46
27:1H:2275:U:OP1	27:1H:2400:U:O2'	2.23	0.46
27:1H:2705:C:N4	27:1H:2731:G:H1	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:40:GLN:NE2	32:31:184:TYR:HB3	2.30	0.46
33:41:55:LYS:O	33:41:58:GLN:HG3	2.15	0.46
33:41:109:VAL:HG11	54:M8:33:VAL:HG21	1.95	0.46
39:78:75:ILE:H	39:78:75:ILE:CD1	2.14	0.46
41:98:67:LEU:HD13	41:98:76:VAL:HG21	1.96	0.46
48:G8:5:MET:HE3	48:G8:5:MET:HB2	1.80	0.46
1:1G:818:G:O2'	1:1G:819:A:H5'	2.15	0.46
1:1G:1095:U:H2'	1:1G:1096:C:O4'	2.15	0.46
10:1A:61:GLU:HG3	14:5A:58:LYS:HE2	1.98	0.46
14:5A:29:ARG:HG2	14:5A:40:CYS:CB	2.33	0.46
60:2L:68:C:H2'	60:2L:69:G:C8	2.50	0.46
27:14:813:U:H2'	27:14:814:C:C6	2.51	0.46
27:14:860:U:H1'	27:14:2268:A:H5'	1.97	0.46
27:14:1041:C:H2'	27:14:1042:G:C8	2.51	0.46
27:14:1777:U:H2'	27:14:1778:U:C6	2.51	0.46
27:14:2496:C:OP2	40:45:82:ARG:HG2	2.15	0.46
32:39:121:GLY:O	32:39:123:LEU:N	2.48	0.46
39:35:106:LEU:HD11	39:35:112:LEU:HB2	1.96	0.46
42:65:30:ARG:HB3	42:65:35:ILE:HG13	1.98	0.46
43:75:27:THR:HG22	43:75:48:ILE:HG12	1.96	0.46
44:85:108:GLU:OE1	45:95:45:THR:HG23	2.15	0.46
45:95:61:VAL:HG13	45:95:62:LEU:H	1.79	0.46
49:D5:101:PRO:HA	49:D5:122:ARG:O	2.16	0.46
58:M5:37:SER:O	58:M5:40:GLU:N	2.48	0.46
1:13:33:A:H2'	1:13:34:C:C6	2.51	0.46
1:13:411:A:C6	1:13:429:U:C5	3.03	0.46
1:13:435:C:H2'	1:13:436:C:C6	2.51	0.46
1:13:674:G:H2'	1:13:675:A:H8	1.80	0.46
1:13:838:G:H1	1:13:848:C:N4	2.13	0.46
15:6I:82:ILE:HG13	15:6I:87:ILE:CB	2.44	0.46
27:1H:270:G:H2'	27:1H:271:C:O4'	2.15	0.46
27:1H:365:A:H2'	27:1H:366:G:O4'	2.15	0.46
27:1H:1443:U:O2	27:1H:1443:U:H2'	2.15	0.46
27:1H:1768:A:H8	27:1H:1769:U:C5	2.33	0.46
27:1H:2201:C:O5'	29:71:46:LYS:HD3	2.16	0.46
27:1H:2214:G:H2'	27:1H:2215:G:O4'	2.15	0.46
27:1H:2327:C:H2'	27:1H:2328:G:H8	1.81	0.46
27:1H:2480:C:H2'	27:1H:2481:G:O4'	2.16	0.46
27:1H:2730:U:O2'	27:1H:2731:G:H5'	2.16	0.46
29:71:7:TYR:O	29:71:11:LEU:N	2.48	0.46
29:71:46:LYS:HE2	29:71:46:LYS:HB3	1.61	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:21:24:THR:HG23	31:21:184:VAL:HG22	1.98	0.46
37:58:33:LEU:HD13	37:58:33:LEU:HA	1.75	0.46
38:68:8:LEU:HD13	38:68:82:ASN:HB2	1.98	0.46
1:1G:93:U:H2'	1:1G:95:G:H8	1.81	0.46
1:1G:102:G:C6	1:1G:103:C:C4	3.04	0.46
1:1G:1188:A:H4'	14:5A:58:LYS:HD2	1.97	0.46
1:1G:1402:4OC:HM22	1:1G:1403:C:H5'	1.98	0.46
1:1G:1468:A:H2'	1:1G:1469:G:O4'	2.15	0.46
3:22:162:GLN:HG2	25:4L:54:U:C4'	2.46	0.46
9:82:19:LEU:HB2	9:82:59:PHE:CE1	2.51	0.46
27:14:639:U:H2'	27:14:640:C:H6	1.78	0.46
27:14:1000:A:C6	27:14:1155:A:C8	3.03	0.46
27:14:1403:C:H5''	27:14:1471:A:H1'	1.96	0.46
27:14:1542:G:H3'	27:14:1543:A:H5''	1.98	0.46
27:14:1608:A:H1'	27:14:1610:A:OP2	2.15	0.46
27:14:1816:G:N7	30:19:35:LYS:NZ	2.62	0.46
28:1J:15:A:H1'	28:1J:109:G:C6	2.50	0.46
28:1J:25:A:H2'	28:1J:25:A:N3	2.29	0.46
31:29:27:LEU:HD13	31:29:180:ASN:O	2.15	0.46
41:55:113:LEU:HD12	41:55:113:LEU:HA	1.82	0.46
44:85:77:SER:OG	44:85:78:THR:N	2.48	0.46
47:B5:88:LYS:HE2	47:B5:90:GLU:CD	2.36	0.46
56:K5:41:PRO:O	56:K5:45:LYS:HD2	2.15	0.46
1:13:362:G:C8	65:13:1860:HOH:O	2.68	0.46
1:13:372:C:O2	1:13:372:C:H2'	2.14	0.46
1:13:681:C:H2'	1:13:682:G:H8	1.80	0.46
1:13:976:G:H22	1:13:1362(A):C:H5'	1.81	0.46
1:13:1104:G:O5'	2:1E:111:ARG:HD2	2.15	0.46
1:13:1182:G:O3'	1:13:1183:A:H3'	2.16	0.46
1:13:1186:G:H21	14:5I:61:TRP:C	2.18	0.46
1:13:1287:A:H2'	1:13:1288:A:C8	2.50	0.46
1:13:1348:U:H2'	1:13:1349:A:H8	1.80	0.46
22:1K:18:G:H5'	22:1K:58:A:H2	1.80	0.46
22:1K:55:PSU:O3'	27:1H:944:C:H5'	2.15	0.46
27:1H:1042:C:OP2	44:C8:54:LYS:HG3	2.15	0.46
27:1H:1463:G:O2'	27:1H:1464:C:H6	1.96	0.46
27:1H:1703:A:H3'	27:1H:1704:C:C6	2.51	0.46
27:1H:2136:U:H3'	27:1H:2137:A:O4'	2.15	0.46
27:1H:2494:G:HO2'	27:1H:2495:G:P	2.39	0.46
34:51:92:ILE:H	34:51:92:ILE:HG13	1.42	0.46
37:58:18:ALA:HB2	37:58:54:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:78:57:THR:CG2	39:78:60:MET:H	2.22	0.46
39:78:94:GLU:HA	39:78:123:LEU:HD13	1.96	0.46
40:88:112:GLU:CD	40:88:112:GLU:H	2.19	0.46
1:1G:431:A:H2'	1:1G:432:A:O4'	2.15	0.46
1:1G:443:C:H2'	1:1G:444:C:H6	1.81	0.46
1:1G:524:G:H2'	1:1G:525:C:C6	2.50	0.46
1:1G:659:U:H2'	1:1G:660:G:H8	1.80	0.46
1:1G:948:C:H2'	1:1G:949:A:H8	1.80	0.46
7:62:23:VAL:HG13	7:62:43:PHE:CE2	2.39	0.46
7:62:101:LEU:O	7:62:105:VAL:HG23	2.16	0.46
8:72:122:ARG:HA	8:72:125:ARG:HE	1.81	0.46
16:7A:38:TYR:CZ	16:7A:50:LYS:HB3	2.51	0.46
19:AA:52:TYR:HB2	19:AA:57:HIS:CE1	2.51	0.46
59:1L:8:U:H3'	59:1L:13:C:H41	1.80	0.46
59:1L:29:G:H2'	59:1L:30:G:C8	2.51	0.46
59:1L:64:A:H2'	59:1L:65:G:O4'	2.16	0.46
27:14:9:U:O4	27:14:2629:A:H2	1.98	0.46
27:14:1022:G:C6	27:14:1140:C:C4	3.03	0.46
27:14:1359:A:C2	27:14:1372:U:O4	2.68	0.46
27:14:2525:G:O3'	27:14:2742:C:O2'	2.33	0.46
27:14:2681:C:H5	27:14:2725:A:N6	2.09	0.46
30:19:228:PRO:HD3	30:19:235:GLY:HA3	1.96	0.46
34:59:97:ARG:O	34:59:98:LEU:HD22	2.16	0.46
44:85:66:ASN:HD21	44:85:70:ARG:HH21	1.63	0.46
44:85:111:GLU:HA	44:85:114:LYS:HG2	1.97	0.46
52:G5:53:LEU:O	52:G5:57:ILE:HG13	2.15	0.46
58:M5:14:VAL:HG13	58:M5:22:VAL:HG13	1.98	0.46
58:M5:40:GLU:C	58:M5:42:ARG:N	2.68	0.46
1:13:319:G:H2'	1:13:320:C:O4'	2.15	0.46
1:13:536:C:H2'	1:13:537:G:H8	1.80	0.46
1:13:683:G:C6	1:13:684:A:C6	3.03	0.46
1:13:956:U:H2'	1:13:957:U:O4'	2.15	0.46
1:13:1027:C:H2'	1:13:1028:C:C5	2.50	0.46
1:13:1060:C:C5	3:2E:2:GLY:HA3	2.51	0.46
2:1E:70:PHE:CE2	2:1E:163:PHE:HD2	2.33	0.46
12:3I:44:LYS:HA	12:3I:46:ASN:H	1.80	0.46
19:AI:24:ALA:C	19:AI:26:GLY:H	2.19	0.46
26:5K:9:A:H4'	26:5K:46:G:H1'	1.97	0.46
27:1H:203:A:H2'	27:1H:204:G:O4'	2.15	0.46
27:1H:964:A:N3	27:1H:964:A:O4'	2.46	0.46
27:1H:1004:U:OP2	40:88:14:ARG:NH1	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1127:A:N3	27:1H:1128:U:H1'	2.31	0.46
27:1H:1249:G:C6	27:1H:1250:A:N1	2.84	0.46
27:1H:1339:U:H2'	27:1H:1340:C:H6	1.80	0.46
30:11:175:LEU:HA	30:11:175:LEU:HD23	1.63	0.46
40:88:109:VAL:HG13	40:88:113:GLN:HB3	1.97	0.46
43:B8:56:GLY:O	43:B8:59:THR:HG22	2.16	0.46
1:1G:955:U:H4'	19:AA:88:LYS:HG3	1.98	0.46
1:1G:1312:G:O6	19:AA:4:SER:OG	2.29	0.46
3:22:82:GLU:HA	3:22:85:ARG:HD3	1.97	0.46
3:22:179:ARG:HD2	3:22:207:VAL:H	1.80	0.46
5:42:33:VAL:HG11	5:42:109:ILE:HA	1.97	0.46
9:82:111:ARG:O	9:82:113:LYS:HD2	2.15	0.46
13:4A:83:ASP:OD1	13:4A:83:ASP:N	2.48	0.46
60:2L:51:U:C2	60:2L:52:G:C8	3.04	0.46
27:14:811:U:C4	39:35:21:ARG:NH2	2.83	0.46
27:14:831:G:N2	39:35:53:GLY:O	2.48	0.46
27:14:1164:G:H2'	27:14:1165:U:C6	2.50	0.46
27:14:1205:U:C2	32:39:171:PRO:HB3	2.50	0.46
27:14:1342:A:C2	27:14:1397:U:C2	3.03	0.46
27:14:1385:G:HO2'	27:14:1396:U:H6	1.58	0.46
27:14:1590:U:H2'	27:14:1591:G:H8	1.81	0.46
27:14:1792:G:O2'	27:14:1830:C:OP1	2.34	0.46
27:14:2095:C:H2'	27:14:2096:U:O4'	2.16	0.46
27:14:2262:U:H4'	27:14:2328:A:C2	2.50	0.46
27:14:2881:C:C2	27:14:2882:A:C8	3.03	0.46
28:1J:9:G:H1	28:1J:111:U:H3	1.62	0.46
28:1J:111:U:H2'	28:1J:112:G:H8	1.81	0.46
29:79:164:ARG:O	29:79:171:ILE:HG13	2.15	0.46
34:59:83:TYR:HB2	34:59:132:ARG:NH2	2.31	0.46
37:15:15:LEU:HG	37:15:134:ARG:NE	2.30	0.46
37:15:47:ALA:HB2	37:15:112:LEU:HD12	1.98	0.46
40:45:31:ASP:H	40:45:107:ALA:HB2	1.81	0.46
41:55:44:LEU:HD22	41:55:48:VAL:HG23	1.96	0.46
1:13:49:U:C4	1:13:364:A:C6	3.04	0.46
1:13:1145:C:H5''	1:13:1146:A:OP1	2.15	0.46
1:13:1199:U:H5'	10:1I:54:PHE:CE2	2.51	0.46
1:13:1342:C:H2'	1:13:1343:G:C8	2.51	0.46
1:13:1346:A:H5''	9:8E:120:ARG:HH12	1.80	0.46
1:13:1375:A:H4'	7:6E:29:LYS:HE2	1.97	0.46
1:13:1502:A:H2	1:13:1505:G:H22	1.63	0.46
3:2E:20:SER:HB2	3:2E:57:ILE:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:42:GLY:HA2	5:4E:65:ASN:O	2.16	0.46
11:2I:27:ASN:OD1	11:2I:55:LYS:HB3	2.16	0.46
18:9I:29:PHE:CD1	18:9I:29:PHE:N	2.84	0.46
26:5K:20:H2U:O2	26:5K:20:H2U:H2'	2.14	0.46
27:1H:390:G:H2'	27:1H:391:G:C8	2.46	0.46
27:1H:2146:G:H2'	27:1H:2147:G:H8	1.80	0.46
27:1H:2241:G:OP2	30:11:263:ARG:NH2	2.49	0.46
27:1H:2343:G:O3'	50:I8:44:ARG:NH1	2.48	0.46
27:1H:2388:G:N2	27:1H:2391:A:OP2	2.39	0.46
27:1H:2481:G:H2'	27:1H:2494:G:N2	2.30	0.46
27:1H:2624:U:H3'	27:1H:2624:U:OP2	2.16	0.46
27:1H:2751:G:H2'	27:1H:2752:A:H8	1.79	0.46
30:11:96:HIS:HD2	30:11:102:LYS:HG2	1.75	0.46
31:21:150:VAL:HG13	31:21:154:LYS:HG3	1.98	0.46
37:58:7:LYS:HB3	37:58:7:LYS:HZ2	1.80	0.46
42:A8:93:LYS:HG2	42:A8:95:HIS:HB2	1.97	0.46
43:B8:78:LEU:HD23	43:B8:78:LEU:HA	1.74	0.46
44:C8:28:ARG:HD3	44:C8:38:THR:OG1	2.15	0.46
44:C8:75:ASN:HB2	44:C8:78:THR:H	1.81	0.46
53:L8:10:LYS:HB3	53:L8:53:LEU:HD23	1.98	0.46
1:1G:433:C:O2'	1:1G:434:U:H5'	2.15	0.46
1:1G:487:A:H2'	1:1G:488:C:O4'	2.16	0.46
1:1G:543:C:OP1	4:32:14:ARG:HG3	2.15	0.46
1:1G:969:A:H2'	1:1G:970:C:O4'	2.16	0.46
1:1G:1021:G:H2'	1:1G:1022:G:C8	2.51	0.46
1:1G:1089:G:C6	1:1G:1090:U:C2	3.04	0.46
1:1G:1104:G:O3'	2:12:111:ARG:NH2	2.48	0.46
1:1G:1398:A:H5''	1:1G:1401:G:C4'	2.46	0.46
2:12:101:MET:HB2	2:12:102:LEU:HD12	1.96	0.46
2:12:144:ARG:HH21	2:12:148:TYR:HD2	1.63	0.46
3:22:4:LYS:HE2	3:22:4:LYS:HB2	1.80	0.46
3:22:162:GLN:HG2	25:4L:54:U:H4'	1.98	0.46
6:52:37:VAL:HA	6:52:65:VAL:HG12	1.97	0.46
24:3L:19:G:H2'	24:3L:19:G:N3	2.31	0.46
24:3L:22:G:N7	24:3L:46:G:N1	2.64	0.46
27:14:17:G:H2'	27:14:18:C:H6	1.81	0.46
27:14:271(C):U:H5'	27:14:271:G:OP2	2.16	0.46
27:14:631:A:OP2	58:M5:47:LYS:NZ	2.49	0.46
27:14:969:U:H2'	27:14:970:C:C6	2.51	0.46
27:14:1138:G:O2'	37:15:106:MET:HG3	2.16	0.46
27:14:1387:C:C2	27:14:1388:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1665:A:H2'	27:14:1666:G:O4'	2.15	0.46
27:14:1779:U:OP2	27:14:1784:A:N6	2.39	0.46
27:14:2572:A:P	31:29:144:ARG:HB2	2.56	0.46
30:19:78:LYS:HE3	30:19:78:LYS:HB2	1.68	0.46
30:19:255:LYS:HA	30:19:255:LYS:HD2	1.60	0.46
31:29:4:ILE:HG21	31:29:28:ALA:HB1	1.97	0.46
49:D5:24:LEU:HD11	49:D5:86:VAL:HG23	1.98	0.46
55:J5:16:ARG:HG3	55:J5:17:ASP:H	1.81	0.46
58:M5:63:PRO:HG2	58:M5:64:TYR:CE2	2.51	0.46
1:13:188:U:H2'	1:13:189:U:H5''	1.98	0.46
1:13:193:C:H2'	1:13:194:C:H6	1.81	0.46
1:13:519:C:H2'	1:13:520:A:O4'	2.15	0.46
1:13:812:C:H6	1:13:812:C:H2'	1.53	0.46
1:13:864:A:H2'	1:13:865:A:C8	2.51	0.46
1:13:953:G:C5'	1:13:965:A:H61	2.25	0.46
1:13:1453:G:C8	20:BI:55:ILE:HD11	2.50	0.46
21:1F:6:ARG:HE	21:1F:15:ARG:NH2	2.14	0.46
23:2K:1:G:C4	23:2K:2:C:C5	3.04	0.46
24:3K:37:MIA:H2'	24:3K:38:A:O4'	2.15	0.46
26:5K:62:C:H2'	26:5K:63:G:H5''	1.97	0.46
27:1H:327:C:H2'	27:1H:328:U:H6	1.79	0.46
27:1H:412:U:H2'	27:1H:413:C:C6	2.51	0.46
27:1H:520:G:H8	27:1H:520:G:H5''	1.81	0.46
27:1H:699:G:HO2'	27:1H:700:A:P	2.39	0.46
27:1H:719:C:H2'	27:1H:720:C:H6	1.80	0.46
27:1H:753:A:C2	27:1H:775:A:H1'	2.51	0.46
27:1H:947:A:C5	27:1H:948:A:C8	3.04	0.46
27:1H:1496:G:H2'	27:1H:1497:A:C8	2.50	0.46
27:1H:2596:G:H3'	27:1H:2597:U:O2	2.15	0.46
34:51:86:GLU:HG2	34:51:87:LEU:N	2.28	0.46
39:78:7:ARG:HA	39:78:8:PRO:HD2	1.82	0.46
41:98:87:TYR:HE1	41:98:117:VAL:HG12	1.80	0.46
46:E8:14:PRO:O	46:E8:18:ARG:HG3	2.15	0.46
52:K8:14:ARG:H	52:K8:14:ARG:HG2	1.46	0.46
1:1G:585:G:C6	1:1G:586:C:C4	3.04	0.46
1:1G:985:C:H2'	1:1G:986:A:C8	2.50	0.46
1:1G:1318:A:H5''	19:AA:10:PHE:CB	2.43	0.46
2:12:142:LEU:HA	2:12:145:LEU:HB2	1.97	0.46
3:22:190:ARG:H	3:22:190:ARG:HD2	1.80	0.46
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.51	0.46
10:1A:54:PHE:CD1	10:1A:55:LYS:HG3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2A:11:LYS:HE2	11:2A:11:LYS:HB3	1.63	0.46
12:3A:82:ILE:HD12	12:3A:82:ILE:HA	1.71	0.46
16:7A:36:ILE:HD12	16:7A:56:ALA:HB2	1.98	0.46
18:9A:36:ASN:OD1	18:9A:36:ASN:N	2.44	0.46
60:2L:7:A:H3'	60:2L:8:4SU:H5''	1.97	0.46
27:14:357:A:H2'	27:14:358:U:C6	2.50	0.46
27:14:2178:C:H4'	29:79:46:LYS:HG3	1.98	0.46
27:14:2315:G:H2'	27:14:2316:C:C6	2.51	0.46
27:14:2365:G:H4'	50:E5:60:PHE:CZ	2.51	0.46
28:1J:78:A:C2	28:1J:99:A:C4	3.04	0.46
28:1J:90:C:OP1	40:45:16:ARG:HG3	2.16	0.46
33:49:75:LYS:HA	33:49:84:LYS:HG2	1.96	0.46
33:49:138:GLN:OE1	33:49:138:GLN:N	2.47	0.46
49:D5:127:LYS:O	49:D5:162:GLU:HB3	2.16	0.46
52:G5:14:ARG:NH1	52:G5:66:GLU:OE2	2.49	0.46
52:G5:65:ASN:HB3	52:G5:69:ARG:NH2	2.28	0.46
56:K5:37:ARG:HA	56:K5:37:ARG:HE	1.80	0.46
1:13:474:G:H5'	16:7I:81:ARG:HG2	1.98	0.46
1:13:482:A:C2'	1:13:483:C:H5'	2.46	0.46
1:13:636:U:H2'	1:13:637:G:C8	2.50	0.46
1:13:767:A:H3'	65:13:1816:HOH:O	2.16	0.46
1:13:895:G:H2'	1:13:896:C:H6	1.81	0.46
1:13:1151:A:H2'	1:13:1152:A:C8	2.51	0.46
2:1E:87:ARG:HD3	2:1E:223:ILE:HD11	1.97	0.46
2:1E:91:PRO:HB3	2:1E:155:LEU:HB2	1.97	0.46
22:1K:4:C:HO2'	22:1K:70:G:H1	0.60	0.46
25:4K:53:U:C2'	25:4K:54:U:H5'	2.45	0.46
26:5K:63:G:H2'	26:5K:64:A:O4'	2.16	0.46
27:1H:32:C:O2'	27:1H:33:U:H5'	2.15	0.46
27:1H:181:A:H2'	27:1H:182:C:C6	2.51	0.46
27:1H:522:G:C6	27:1H:523:A:C4	3.04	0.46
27:1H:928:G:HO2'	27:1H:929:G:P	2.38	0.46
27:1H:1236:G:OP1	39:78:30:THR:HG23	2.16	0.46
27:1H:2150:G:H2'	27:1H:2151:C:H1'	1.98	0.46
27:1H:2299:A:H4'	27:1H:2300:A:O4'	2.16	0.46
28:16:1(M):A:H2'	28:16:1(M):A:N3	2.31	0.46
33:41:97:ASP:H	33:41:100:TRP:HD1	1.63	0.46
33:41:124:SER:HB2	33:41:131:TYR:CE1	2.51	0.46
33:41:135:LEU:O	33:41:154:GLY:HA3	2.15	0.46
41:98:42:LYS:CA	41:98:45:ARG:HH11	2.28	0.46
49:H8:67:LEU:HD22	49:H8:90:VAL:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:I8:27:GLU:HG3	50:I8:69:PHE:H	1.79	0.46
1:1G:660:G:H1	1:1G:745:C:N4	2.04	0.46
1:1G:967:5MC:H2'	1:1G:968:A:N7	2.31	0.46
1:1G:1225:A:H5''	1:1G:1226:C:OP2	2.15	0.46
1:1G:1353:G:O2'	1:1G:1354:C:H5'	2.16	0.46
19:AA:41:VAL:HB	19:AA:67:VAL:HA	1.98	0.46
27:14:428:A:OP2	27:14:428:A:H8	1.98	0.46
27:14:946:G:C2	27:14:947:G:C4	3.04	0.46
27:14:1180:C:H2'	27:14:1181:C:H6	1.81	0.46
27:14:1927:A:H2'	27:14:1928:A:C8	2.51	0.46
27:14:2205:C:O2	27:14:2226:C:N4	2.49	0.46
27:14:2517:C:C6	27:14:2542:A:N7	2.84	0.46
27:14:2745:C:H42	27:14:2759:G:H1	1.63	0.46
30:19:46:GLN:HB2	30:19:48:ARG:HG2	1.98	0.46
31:29:118:LYS:HG3	31:29:119:ARG:N	2.30	0.46
32:39:56:GLU:H	32:39:56:GLU:HG2	1.61	0.46
40:45:110:THR:HG1	40:45:112:GLU:HG2	1.80	0.46
41:55:33:ARG:HG2	41:55:115:GLU:CG	2.44	0.46
58:M5:17:THR:HG23	58:M5:21:LYS:O	2.15	0.46
1:13:17:U:H2'	1:13:18:C:C6	2.51	0.46
1:13:166:G:H2'	1:13:167:G:C8	2.50	0.46
1:13:1130:A:H5''	9:8E:18:PHE:CE2	2.50	0.46
1:13:1346:A:H5''	9:8E:120:ARG:NH1	2.30	0.46
10:1I:42:THR:HG23	10:1I:68:HIS:HA	1.98	0.46
24:3K:39:PSU:N3	24:3K:40:C:C4	2.84	0.46
27:1H:34:C:HO2'	27:1H:35:G:P	2.39	0.46
27:1H:329:G:H2'	27:1H:330:U:H6	1.81	0.46
27:1H:505:A:C6	27:1H:507:A:C6	3.04	0.46
27:1H:820:C:H5'	27:1H:1402:G:O2'	2.15	0.46
27:1H:908:U:O2	27:1H:908:U:O4'	2.33	0.46
27:1H:958:A:H2'	40:88:9:TYR:OH	2.16	0.46
27:1H:1068:A:C8	27:1H:1068:A:C3'	2.99	0.46
27:1H:1071:G:C8	27:1H:1072:G:H2'	2.51	0.46
27:1H:1238:G:O2'	27:1H:1239:G:H5'	2.16	0.46
27:1H:1712:A:P	65:1H:3768:HOH:O	2.74	0.46
27:1H:1922:G:O2'	27:1H:1923:A:P	2.74	0.46
27:1H:2358:G:N3	27:1H:2394:C:H2'	2.31	0.46
27:1H:2428:G:H4'	39:78:67:MET:N	2.28	0.46
27:1H:2705:C:O2	27:1H:2858:U:H4'	2.16	0.46
65:1H:3792:HOH:O	32:31:71:GLY:HA2	2.15	0.46
37:58:107:LEU:HA	37:58:107:LEU:HD23	1.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:58:133:GLN:HG3	37:58:135:PRO:HD3	1.97	0.46
1:1G:778:G:H5''	1:1G:779:C:OP2	2.16	0.46
1:1G:841:U:H5'	1:1G:842:C:C2	2.51	0.46
1:1G:872:A:C4	1:1G:874:G:N7	2.83	0.46
1:1G:887:G:H21	1:1G:1489:G:H4'	1.81	0.46
1:1G:1004:A:C8	1:1G:1026:G:H8	2.34	0.46
5:42:135:THR:O	5:42:138:ALA:HB3	2.16	0.46
8:72:95:VAL:HG12	8:72:99:GLU:HB2	1.98	0.46
16:7A:3:LYS:HG3	16:7A:24:ALA:HB2	1.98	0.46
17:8A:60:ILE:HG13	17:8A:61:GLU:O	2.16	0.46
18:9A:84:LYS:HE2	18:9A:84:LYS:HA	1.98	0.46
20:BA:54:LYS:CA	20:BA:57:ARG:HH21	2.29	0.46
24:3L:16:U:O2	24:3L:18:G:H5'	2.16	0.46
27:14:443:A:N7	32:39:45:ARG:HD2	2.31	0.46
27:14:456:C:O2'	27:14:457:A:H5'	2.16	0.46
27:14:849:A:H3'	27:14:850:C:C6	2.51	0.46
27:14:969:U:O5'	27:14:969:U:H6	1.99	0.46
27:14:1818:U:O4	30:19:154:LYS:HE3	2.16	0.46
27:14:1871:A:H2'	27:14:1872:A:C8	2.51	0.46
27:14:1936:A:C8	27:14:1940:U:O2	2.69	0.46
27:14:2711:A:C8	27:14:2714:G:H1'	2.50	0.46
27:14:2759:G:N2	34:59:139:GLN:OE1	2.49	0.46
32:39:24:LEU:HD23	32:39:115:ALA:HA	1.96	0.46
32:39:152:GLU:HA	32:39:190:GLU:OE2	2.16	0.46
35:69:111:PRO:C	35:69:113:ARG:H	2.19	0.46
43:75:115:ARG:HA	43:75:115:ARG:HD2	1.75	0.46
45:95:75:PHE:CD2	45:95:81:TYR:CD1	3.04	0.46
46:A5:66:GLU:HA	46:A5:69:LEU:HG	1.98	0.46
48:C5:76:CYS:SG	48:C5:102:CYS:HB3	2.56	0.46
1:13:1333:A:H2'	1:13:1334:G:O4'	2.16	0.45
1:13:1387:G:H2'	1:13:1388:C:C6	2.51	0.45
10:1I:3:LYS:NZ	10:1I:75:ILE:O	2.38	0.45
10:1I:78:ASN:HD22	10:1I:79:ARG:N	2.13	0.45
12:3I:36:VAL:CG1	12:3I:38:ARG:HG2	2.46	0.45
13:4I:45:VAL:O	13:4I:48:LEU:HD22	2.16	0.45
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.16	0.45
22:1K:4:C:H6	22:1K:4:C:O5'	1.99	0.45
24:3K:41:C:H2'	24:3K:42:C:C6	2.51	0.45
27:1H:305:C:H2'	27:1H:306:G:O4'	2.17	0.45
27:1H:339:A:C2'	27:1H:340:G:H5'	2.46	0.45
27:1H:719:C:H2'	27:1H:720:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:777:G:C5	30:11:208:LYS:HB2	2.51	0.45
27:1H:823:G:C4	27:1H:842:G:C8	3.04	0.45
27:1H:1107:U:H5''	27:1H:1108:U:C5	2.51	0.45
27:1H:1922:G:O2'	27:1H:1923:A:OP2	2.27	0.45
27:1H:1946:U:H2'	27:1H:1947:C:C6	2.51	0.45
27:1H:2577:A:C2	27:1H:2660:U:H4'	2.51	0.45
27:1H:2700:U:H2'	27:1H:2701:U:O4'	2.16	0.45
32:31:64:ILE:HA	32:31:64:ILE:HD13	1.72	0.45
42:A8:25:ARG:CG	42:A8:88:ASP:HB2	2.46	0.45
54:M8:61:ARG:NH2	54:M8:69:LYS:HD2	2.31	0.45
1:1G:191(F):U:H2'	1:1G:191:G:C8	2.50	0.45
1:1G:599:C:H42	1:1G:639:G:H1	1.63	0.45
1:1G:620:C:H2'	1:1G:621:A:O4'	2.16	0.45
1:1G:673:G:H5''	6:52:87:ARG:CZ	2.45	0.45
1:1G:729:A:H2'	1:1G:730:G:O4'	2.16	0.45
1:1G:745:C:OP1	1:1G:851:G:O2'	2.33	0.45
1:1G:783:C:O2'	1:1G:784:C:H5'	2.16	0.45
1:1G:998(A):C:H42	1:1G:1042:G:H1	1.65	0.45
1:1G:1053:G:C4	1:1G:1199:U:C5	3.04	0.45
1:1G:1198:G:H1'	10:1A:54:PHE:CE2	2.51	0.45
2:12:153:ARG:H	2:12:153:ARG:HG3	1.57	0.45
21:1B:6:ARG:NH1	21:1B:15:ARG:HH21	2.14	0.45
27:14:80:G:C2'	27:14:81:G:H5'	2.46	0.45
27:14:294:A:HO2'	27:14:295:G:P	2.39	0.45
27:14:531:C:H4'	27:14:532:A:H5''	1.98	0.45
27:14:1469:A:H2'	27:14:1470:G:O4'	2.15	0.45
27:14:1784:A:H4'	27:14:1785:A:C5'	2.45	0.45
27:14:2302:G:H1	27:14:2314:C:H42	1.64	0.45
30:19:143:HIS:HD2	30:19:144:ALA:HB2	1.81	0.45
32:39:192:LEU:HD23	32:39:193:VAL:N	2.31	0.45
33:49:25:TYR:CE2	33:49:32:PRO:HD3	2.51	0.45
34:59:149:ARG:HD2	34:59:164:TYR:CE1	2.51	0.45
34:59:156:ALA:O	34:59:171:LEU:HA	2.15	0.45
35:69:9:LEU:H	35:69:9:LEU:HG	1.49	0.45
37:15:111:PRO:HA	37:15:114:ARG:NH1	2.31	0.45
39:35:79:ARG:HE	39:35:109:GLY:CA	2.29	0.45
40:45:10:ARG:HD3	40:45:10:ARG:HA	1.38	0.45
40:45:81:VAL:HG23	40:45:82:ARG:O	2.16	0.45
42:65:33:LYS:HE2	42:65:54:LEU:CD1	2.46	0.45
49:D5:148:ASP:O	49:D5:174:VAL:HG23	2.16	0.45
50:E5:23:VAL:HG12	50:E5:25:ARG:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:I5:61:ARG:HA	54:I5:61:ARG:HE	1.81	0.45
1:13:5:U:H4'	1:13:6:G:O5'	2.16	0.45
1:13:273:A:C2'	1:13:274:A:H5'	2.47	0.45
1:13:398:C:H2'	1:13:399:G:C8	2.52	0.45
1:13:490:G:P	4:3E:132:ARG:HH22	2.39	0.45
1:13:652:U:H1'	1:13:653:A:H2	1.81	0.45
1:13:964:A:N3	1:13:969:A:O2'	2.41	0.45
1:13:1229:A:OP1	13:4I:116:THR:HG23	2.15	0.45
1:13:1309:G:C6	1:13:1329:A:C2	3.04	0.45
2:1E:163:PHE:CD1	2:1E:185:ILE:HB	2.51	0.45
4:3E:163:GLU:HA	4:3E:166:LYS:HE3	1.99	0.45
4:3E:173:TRP:CZ3	4:3E:193:ASP:HB2	2.46	0.45
9:8E:56:LEU:C	9:8E:58:HIS:H	2.20	0.45
13:4I:65:LYS:O	13:4I:66:LEU:HD23	2.17	0.45
13:4I:103:THR:HG22	13:4I:107:ALA:HB2	1.98	0.45
19:AI:36:ARG:HH12	19:AI:75:ALA:HB3	1.82	0.45
27:1H:70:A:H5''	27:1H:71:U:H3'	1.99	0.45
27:1H:214:G:O6	27:1H:447:C:O2'	2.34	0.45
27:1H:1563:U:H2'	27:1H:1564:G:C8	2.52	0.45
27:1H:1604:C:H2'	27:1H:1605:C:C6	2.52	0.45
27:1H:1829:C:C2'	27:1H:1830:U:H5'	2.46	0.45
27:1H:2406:A:H5'	39:78:63:PRO:HB3	1.97	0.45
27:1H:2452:A:H3'	27:1H:2452:A:P	2.56	0.45
27:1H:2485:G:H22	27:1H:2490:C:H5''	1.80	0.45
27:1H:2540:C:N4	27:1H:2541:U:C4	2.84	0.45
27:1H:2585:A:OP1	31:21:144:ARG:HB2	2.16	0.45
27:1H:2713:C:H42	27:1H:2720:G:H1	1.65	0.45
31:21:92:THR:O	31:21:95:ILE:HG23	2.17	0.45
35:61:11:ASN:O	35:61:12:LEU:HB2	2.17	0.45
37:58:65:LYS:O	37:58:69:GLN:HG2	2.15	0.45
43:B8:26:ASP:OD1	43:B8:120:ARG:NH2	2.49	0.45
43:B8:61:PHE:CE1	43:B8:76:PHE:HB2	2.51	0.45
50:I8:17:GLN:OE1	50:I8:17:GLN:HA	2.15	0.45
1:1G:316:G:C2	1:1G:338:A:C2	3.05	0.45
1:1G:1067:A:HO2'	1:1G:1093:A:HO2'	1.63	0.45
10:1A:78:ASN:C	10:1A:80:LYS:H	2.19	0.45
12:3A:89:OTD:O	12:3A:90:LEU:HD23	2.16	0.45
27:14:29:U:H2'	27:14:30:G:C8	2.50	0.45
27:14:270(E):G:H1	27:14:270(U):C:H42	1.64	0.45
27:14:1432:C:H2'	27:14:1433:U:O4'	2.15	0.45
27:14:1464:C:O2'	27:14:1528:A:C8	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:59:89:ILE:HG23	34:59:161:GLY:O	2.17	0.45
39:35:97:PRO:O	39:35:98:GLU:HB3	2.15	0.45
39:35:138:LEU:HD11	39:35:144:GLU:HG2	1.99	0.45
41:55:87:TYR:CD1	41:55:90:ARG:HD2	2.48	0.45
43:75:58:ASN:C	43:75:58:ASN:ND2	2.68	0.45
54:I5:61:ARG:HA	54:I5:61:ARG:NE	2.31	0.45
1:13:194:C:H2'	1:13:195:A:H5''	1.99	0.45
1:13:397:A:C6	1:13:548:G:N7	2.84	0.45
1:13:562:C:N3	12:3I:13:GLU:HG2	2.32	0.45
1:13:575:G:C5	1:13:881:G:C2	3.05	0.45
1:13:614:A:H2'	1:13:615:C:O4'	2.16	0.45
1:13:731:G:H2'	1:13:732:C:C6	2.52	0.45
1:13:1301:U:O2'	1:13:1302:U:OP1	2.34	0.45
1:13:1371:G:OP1	9:8E:12:GLU:HB2	2.16	0.45
4:3E:9:CYS:HB3	4:3E:32:ALA:CB	2.46	0.45
4:3E:81:GLU:HG3	4:3E:82:ALA:N	2.30	0.45
18:9I:50:ILE:HD11	18:9I:74:ARG:HH12	1.82	0.45
24:3K:29:G:C2	24:3K:30:G:C4	3.04	0.45
27:1H:417:G:H22	39:78:72:PRO:CD	2.24	0.45
27:1H:572:A:H2'	27:1H:573:A:N9	2.32	0.45
27:1H:581:U:O2	37:58:45:ASN:HB2	2.16	0.45
27:1H:783:A:N7	27:1H:809:A:H2	2.14	0.45
27:1H:1003:A:N1	27:1H:2471:G:H4'	2.32	0.45
27:1H:1296:U:C4	65:1H:4161:HOH:O	2.67	0.45
27:1H:1588:U:H2'	27:1H:1589:G:O4'	2.16	0.45
29:71:3:HIS:HB2	29:71:7:TYR:HB3	1.98	0.45
33:41:67:LYS:HZ2	54:M8:5:ILE:HB	1.80	0.45
34:51:30:LYS:HG3	34:51:79:VAL:O	2.16	0.45
37:58:67:LEU:O	37:58:88:GLU:HG3	2.17	0.45
43:B8:24:PRO:HD3	43:B8:52:ILE:HD12	1.98	0.45
49:H8:1:MET:HB3	49:H8:2:GLU:H	1.47	0.45
1:1G:327:A:C4	1:1G:329:A:C8	3.04	0.45
1:1G:406:G:H2'	1:1G:407:G:H8	1.81	0.45
1:1G:1126:U:O2	1:1G:1281:U:C2	2.69	0.45
2:12:188:ALA:O	2:12:203:GLY:N	2.49	0.45
2:12:239:VAL:HG12	2:12:240:GLN:HG3	1.98	0.45
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.98	0.45
9:82:91:ASP:N	9:82:91:ASP:OD1	2.50	0.45
11:2A:103:LEU:HD12	11:2A:103:LEU:HA	1.72	0.45
20:BA:77:ALA:O	20:BA:81:LYS:HB2	2.16	0.45
59:1L:9:A:O2'	59:1L:46:G:N3	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:271(B):G:N3	27:14:271:G:H1'	2.32	0.45
27:14:829:A:N7	27:14:2248:C:H5'	2.32	0.45
27:14:2625:G:H2'	27:14:2626:C:C6	2.52	0.45
27:14:2862:G:C5	27:14:2863:C:C5	3.05	0.45
33:49:142:PRO:HG2	33:49:143:GLU:OE2	2.17	0.45
43:75:111:ARG:O	43:75:113:LYS:N	2.46	0.45
50:E5:72:ARG:HB3	50:E5:75:LEU:HD12	1.97	0.45
1:13:201:C:H5'	1:13:208:U:OP2	2.16	0.45
1:13:485:G:HO2'	1:13:486:U:P	2.39	0.45
1:13:779:C:H2'	1:13:780:A:O4'	2.16	0.45
1:13:1189:C:OP1	3:2E:5:ILE:HG21	2.16	0.45
3:2E:34:LEU:HD21	3:2E:38:ARG:HD2	1.99	0.45
4:3E:58:LEU:O	4:3E:58:LEU:HD22	2.16	0.45
5:4E:77:PRO:O	8:7E:105:ARG:HG3	2.16	0.45
5:4E:92:LYS:HB3	5:4E:119:LEU:HB2	1.98	0.45
11:2I:78:GLN:O	11:2I:103:LEU:HD22	2.15	0.45
15:6I:87:ILE:HG22	15:6I:88:ARG:H	1.82	0.45
22:1K:5:G:H1'	22:1K:69:G:H1	1.82	0.45
27:1H:34:C:O2'	27:1H:35:G:OP1	2.31	0.45
27:1H:100:G:OP1	52:K8:7:ARG:NH2	2.49	0.45
27:1H:216:G:H21	27:1H:218:A:H2	1.64	0.45
27:1H:553:C:OP2	27:1H:2793:U:H5	1.99	0.45
27:1H:1018:G:H3'	27:1H:1019:A:H2'	1.99	0.45
27:1H:1286:G:C6	27:1H:1287:U:C4	3.05	0.45
27:1H:1452:U:H2'	27:1H:1453:U:H6	1.82	0.45
27:1H:2895:U:H2'	27:1H:2896:C:O4'	2.17	0.45
32:31:123:LEU:HD21	32:31:199:TRP:CZ3	2.52	0.45
33:41:98:ARG:O	33:41:101:ILE:HG13	2.16	0.45
36:38:40:LEU:HD13	36:38:41:ARG:HG2	1.98	0.45
38:68:23:ARG:O	38:68:39:ILE:HB	2.17	0.45
40:88:137:TYR:CE1	49:H8:83:PRO:HG3	2.51	0.45
41:98:49:ASP:OD1	41:98:95:THR:HG22	2.17	0.45
42:A8:61:ASN:HB3	42:A8:64:GLU:OE2	2.16	0.45
46:E8:59:VAL:HG12	46:E8:60:ASN:OD1	2.17	0.45
47:F8:67:GLY:O	47:F8:69:TYR:N	2.50	0.45
52:K8:3:LEU:O	52:K8:6:VAL:HG13	2.17	0.45
52:K8:17:SER:OG	52:K8:20:GLU:HG2	2.16	0.45
1:1G:57:G:H2'	1:1G:58:C:H6	1.81	0.45
1:1G:635:G:C6	1:1G:636:U:C4	3.04	0.45
1:1G:825:G:H1	1:1G:875:C:H42	1.65	0.45
1:1G:946:A:O2'	1:1G:1333:A:N3	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:977:A:O2'	1:1G:979:C:OP2	2.32	0.45
1:1G:1134:G:H1	1:1G:1140:C:H42	1.64	0.45
1:1G:1306:A:H2'	1:1G:1307:U:H6	1.79	0.45
3:22:91:LEU:O	3:22:95:THR:OG1	2.14	0.45
11:2A:29:ILE:HA	11:2A:44:SER:HB3	1.98	0.45
12:3A:22:PRO:O	12:3A:24:LEU:N	2.50	0.45
27:14:56:A:H2'	27:14:57:C:O4'	2.16	0.45
27:14:155:C:N4	27:14:171:G:H1	2.15	0.45
27:14:253:C:H2'	27:14:254:G:O4'	2.17	0.45
27:14:265:A:H2'	27:14:266:G:O4'	2.16	0.45
27:14:674:G:C1'	32:39:74:ARG:HD3	2.44	0.45
27:14:963:U:H5''	65:14:3960:HOH:O	2.16	0.45
27:14:1015:G:C2	27:14:1016:G:C4	3.05	0.45
27:14:1441:G:H2'	27:14:1442:G:C8	2.52	0.45
27:14:1758:G:C2	27:14:2696:U:H5'	2.51	0.45
27:14:1830:C:H4'	30:19:15:PHE:CZ	2.52	0.45
27:14:1862:G:H1	27:14:1880:C:H42	1.64	0.45
27:14:2148:G:H2'	27:14:2149:G:O4'	2.17	0.45
29:79:43:VAL:HB	29:79:192:PHE:HD2	1.81	0.45
53:H5:52:HIS:H	53:H5:52:HIS:CD2	2.35	0.45
54:I5:68:ARG:HD3	54:I5:68:ARG:HA	1.74	0.45
1:13:321:A:H61	1:13:332:G:H1	1.64	0.45
1:13:475:G:H2'	1:13:476:G:C8	2.52	0.45
1:13:524:G:H2'	1:13:525:C:C6	2.51	0.45
2:1E:178:ARG:NH2	8:7E:74:PRO:HG3	2.32	0.45
2:1E:183:PRO:HA	2:1E:198:ASP:OD2	2.17	0.45
4:3E:12:CYS:HB3	4:3E:33:MET:HG3	1.99	0.45
16:7I:19:ILE:HG22	16:7I:36:ILE:HG13	1.99	0.45
27:1H:91:G:H2'	27:1H:92:C:H6	1.81	0.45
27:1H:291:G:H2'	27:1H:292:G:O4'	2.17	0.45
27:1H:571:C:C4	27:1H:572:A:C6	3.05	0.45
27:1H:748:G:C2'	27:1H:749:G:H5''	2.44	0.45
27:1H:812:A:O4'	30:11:213:ARG:HG3	2.17	0.45
27:1H:990:G:H5''	27:1H:991:A:O5'	2.16	0.45
27:1H:1046:U:H5''	27:1H:1201:G:O6	2.17	0.45
27:1H:1189:A:C4	27:1H:1191:G:N7	2.84	0.45
27:1H:1577:G:H2'	27:1H:1578:C:C6	2.52	0.45
27:1H:1675:G:H2'	27:1H:1676:U:C6	2.51	0.45
27:1H:1703:A:H3'	27:1H:1704:C:H6	1.81	0.45
27:1H:2152:C:C2	27:1H:2183:G:C2	3.05	0.45
29:71:190:ARG:HB3	29:71:194:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:71:213:TYR:HA	29:71:222:VAL:O	2.16	0.45
32:31:125:LEU:HD21	32:31:199:TRP:CE3	2.52	0.45
37:58:6:PRO:HG2	37:58:43:THR:OG1	2.15	0.45
37:58:115:ARG:HA	37:58:118:LYS:HB2	1.97	0.45
40:88:54:MET:HG2	40:88:117:ALA:O	2.16	0.45
41:98:20:LEU:HD21	41:98:40:LYS:HD3	1.99	0.45
49:H8:69:THR:HG22	49:H8:90:VAL:CA	2.47	0.45
56:O8:27:LYS:HE3	56:O8:27:LYS:N	2.26	0.45
56:O8:41:PRO:HD2	56:O8:46:HIS:N	2.32	0.45
1:1G:232:G:H1'	1:1G:262:A:H61	1.81	0.45
1:1G:440:A:H3'	1:1G:442:C:C6	2.50	0.45
1:1G:444:C:H2'	1:1G:445:G:C8	2.51	0.45
1:1G:450:G:OP1	16:7A:43:LYS:NZ	2.47	0.45
3:22:164:ARG:HG2	3:22:165:THR:H	1.81	0.45
14:5A:23:ARG:HE	14:5A:23:ARG:HB2	1.64	0.45
17:8A:86:GLU:O	17:8A:90:ILE:HG12	2.16	0.45
20:BA:87:LYS:HA	20:BA:87:LYS:HD2	1.56	0.45
27:14:68:G:C2	27:14:69:C:C2	3.05	0.45
27:14:76:C:H2'	27:14:77:C:H6	1.82	0.45
27:14:304:G:H2'	27:14:305:U:H6	1.80	0.45
27:14:1210:A:OP1	27:14:1211:U:O2'	2.26	0.45
27:14:2271:G:OP1	50:E5:18:ALA:HB1	2.17	0.45
27:14:2643:G:H2'	27:14:2644:G:O4'	2.17	0.45
32:39:116:ASP:OD2	39:35:1:MET:N	2.49	0.45
37:15:72:TYR:O	37:15:84:LYS:HA	2.17	0.45
37:15:96:GLU:H	37:15:96:GLU:CD	2.19	0.45
41:55:44:LEU:HD23	41:55:44:LEU:HA	1.72	0.45
41:55:103:ARG:HD2	41:55:108:GLY:O	2.17	0.45
42:65:105:ALA:O	42:65:110:LEU:HD21	2.17	0.45
49:D5:14:LYS:HA	49:D5:15:PRO:HD3	1.81	0.45
1:13:282:A:C6	1:13:283:C:C2	3.04	0.45
1:13:563:A:N7	1:13:567:G:H1'	2.31	0.45
1:13:993:G:O2'	1:13:994:A:N7	2.50	0.45
1:13:1228:C:P	13:4I:108:ARG:NH2	2.90	0.45
8:7E:12:ARG:NH1	8:7E:27:PRO:HD3	2.32	0.45
11:2I:20:TYR:HB2	11:2I:31:THR:CG2	2.46	0.45
14:5I:40:CYS:HB3	14:5I:42:ILE:N	2.31	0.45
16:7I:1:MET:HG2	16:7I:2:VAL:O	2.17	0.45
17:8I:51:TYR:HE1	17:8I:76:LEU:HB2	1.82	0.45
18:9I:74:ARG:HD3	18:9I:81:PHE:CE1	2.51	0.45
24:3K:55:U:H3	24:3K:58:A:N6	2.06	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:11:G:H8	27:1H:11:G:O5'	2.00	0.45
27:1H:734:G:N7	57:P8:5:TRP:CH2	2.85	0.45
27:1H:1689:A:H2'	27:1H:1690:G:O4'	2.16	0.45
27:1H:1893:G:H5'	29:71:205:LYS:NZ	2.31	0.45
27:1H:2188:G:N3	27:1H:2188:G:H2'	2.31	0.45
27:1H:2284:G:H5'	50:I8:20:ARG:HD3	1.98	0.45
27:1H:2374:A:O5'	58:Q8:27:THR:OG1	2.35	0.45
27:1H:2587:G:O2'	31:21:143:ASN:HB3	2.17	0.45
30:11:64:ILE:O	30:11:64:ILE:HG13	2.16	0.45
30:11:70:TRP:O	30:11:73:VAL:HG23	2.17	0.45
32:31:29:ASN:HB3	32:31:112:MET:HE1	1.99	0.45
32:31:180:GLY:O	32:31:181:LEU:C	2.55	0.45
38:68:107:ARG:CZ	43:B8:36:GLU:HG2	2.46	0.45
39:78:38:GLN:N	39:78:41:ARG:HG3	2.26	0.45
40:88:24[B]:GLY:HA2	40:88:67:ARG:NH2	2.30	0.45
40:88:132:VAL:HG11	49:H8:81:ARG:HD2	1.99	0.45
42:A8:85:VAL:HG22	42:A8:110:LEU:CB	2.47	0.45
53:L8:11:SER:OG	53:L8:13:ILE:HG12	2.16	0.45
54:M8:61:ARG:NE	54:M8:61:ARG:HA	2.32	0.45
1:1G:5:U:H4'	1:1G:6:G:O5'	2.16	0.45
1:1G:186:C:O2'	20:BA:82:SER:HA	2.16	0.45
1:1G:782:A:O3'	1:1G:1515:C:H4'	2.17	0.45
1:1G:877:C:OP1	8:72:88:LYS:HE3	2.16	0.45
1:1G:908:A:H2'	1:1G:909:A:C8	2.51	0.45
1:1G:1312:G:OP1	54:I5:58:ARG:NH1	2.42	0.45
2:12:48:MET:HG3	2:12:51:LEU:HD13	1.99	0.45
4:32:60:GLU:HG2	4:32:202:LEU:HB2	1.98	0.45
4:32:162:LEU:HA	4:32:165:MET:HB2	1.97	0.45
5:42:47:LYS:HE2	5:42:47:LYS:HB2	1.61	0.45
10:1A:49:VAL:CG2	14:5A:41:ARG:HB2	2.45	0.45
11:2A:21:ILE:HB	11:2A:84:VAL:HG12	1.97	0.45
15:6A:42:HIS:CE1	15:6A:46:HIS:CD2	3.05	0.45
27:14:95:G:H4'	52:G5:45:SER:O	2.17	0.45
27:14:324:A:C6	27:14:325:G:C4	3.05	0.45
27:14:484:C:H2'	27:14:485:C:C6	2.52	0.45
27:14:975:G:H1'	27:14:990:A:C2	2.52	0.45
27:14:1005:C:O2	27:14:1143:A:C6	2.69	0.45
27:14:1324:G:C2	27:14:1331:A:C2	3.05	0.45
27:14:1533:C:N4	27:14:1534:G:H1'	2.31	0.45
27:14:2074:U:H2'	27:14:2075:U:C6	2.52	0.45
27:14:2142:C:H2'	27:14:2143:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2177:C:H2'	27:14:2178:C:O4'	2.17	0.45
31:29:47:VAL:HG22	31:29:84:PHE:O	2.16	0.45
31:29:105:THR:HG21	31:29:164:ARG:NH1	2.31	0.45
33:49:19:LEU:HD22	33:49:23:PHE:CE2	2.52	0.45
38:25:106:LEU:HD22	38:25:111:PHE:HD2	1.81	0.45
40:45:74:TYR:HD1	40:45:74:TYR:HA	1.64	0.45
42:65:3:ARG:CZ	42:65:4:LEU:N	2.79	0.45
44:85:95:LEU:HD11	45:95:12:TYR:N	2.32	0.45
44:85:100:VAL:C	44:85:102:GLU:H	2.20	0.45
49:D5:54:HIS:CG	49:D5:101:PRO:HD3	2.51	0.45
49:D5:61:LEU:HB3	49:D5:65:GLN:HB2	1.99	0.45
58:M5:4:MET:HE3	58:M5:63:PRO:HG3	1.97	0.45
1:13:186(C):G:C5	1:13:191(E):G:C2	3.05	0.45
1:13:199:G:H1	1:13:218:C:N4	2.15	0.45
1:13:486:U:H2'	1:13:487:A:C8	2.52	0.45
1:13:532:A:O2'	1:13:533:A:P	2.75	0.45
1:13:1013:G:N2	1:13:1016:A:OP2	2.49	0.45
1:13:1291:G:H2'	1:13:1292:U:C6	2.52	0.45
4:3E:138:TYR:CE2	4:3E:140:VAL:HG13	2.52	0.45
15:6I:78:TYR:O	15:6I:82:ILE:HG22	2.16	0.45
20:BI:25:ARG:O	20:BI:29:LYS:HG3	2.17	0.45
20:BI:43:LEU:O	20:BI:47:GLY:N	2.42	0.45
27:1H:104:C:H2'	27:1H:105:C:C6	2.51	0.45
27:1H:477:G:OP2	65:1H:3699:HOH:O	2.19	0.45
27:1H:556:G:C5	27:1H:2045:U:H5''	2.51	0.45
27:1H:612:U:H2'	27:1H:613:C:C6	2.52	0.45
27:1H:723:A:OP1	32:31:63:LYS:HE2	2.16	0.45
27:1H:1109:G:H1'	27:1H:1124:A:N6	2.31	0.45
27:1H:1316:A:C8	65:1H:3727:HOH:O	2.69	0.45
27:1H:1465:G:H8	27:1H:1465:G:O5'	2.00	0.45
27:1H:2017:C:O2'	27:1H:2018:U:H5'	2.17	0.45
27:1H:2141:U:H5''	27:1H:2142:A:OP1	2.16	0.45
27:1H:2256:U:H2'	27:1H:2257:U:C6	2.51	0.45
27:1H:2412:G:O5'	27:1H:2412:G:H8	2.00	0.45
27:1H:2663:U:H2'	27:1H:2664:C:C6	2.51	0.45
27:1H:2715:U:OP1	27:1H:2715:U:C6	2.70	0.45
29:71:173:ALA:HB3	29:71:192:PHE:CZ	2.51	0.45
30:11:101:GLU:OE1	30:11:103:ARG:HD3	2.17	0.45
33:41:41:GLN:HG3	33:41:154:GLY:O	2.17	0.45
33:41:145:THR:OG1	33:41:148:MET:HG2	2.16	0.45
34:51:86:GLU:H	34:51:86:GLU:CD	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:61:118:LYS:HA	35:61:118:LYS:HD2	1.71	0.45
39:78:101:VAL:HG23	39:78:106:LEU:HB3	1.97	0.45
40:88:22[B]:LYS:H	40:88:22[B]:LYS:CD	2.30	0.45
49:H8:10:ARG:HB3	49:H8:36:LYS:HB2	1.98	0.45
52:K8:3:LEU:HD22	52:K8:7:ARG:HH21	1.81	0.45
1:1G:501:C:H2'	1:1G:502:G:C8	2.52	0.45
2:12:82:ARG:HG3	2:12:92:TYR:OH	2.17	0.45
4:32:190:ASP:HB2	4:32:193:ASP:OD2	2.15	0.45
12:3A:31:ARG:HE	12:3A:31:ARG:HB3	1.55	0.45
18:9A:41:LYS:C	18:9A:43:PHE:H	2.20	0.45
20:BA:40:ALA:HB2	20:BA:55:ILE:HG22	1.99	0.45
21:1B:15:ARG:HG3	21:1B:17:THR:HG23	1.99	0.45
27:14:242:G:H8	58:M5:4:MET:O	1.98	0.45
27:14:390:A:H4'	27:14:391:G:H5'	1.99	0.45
27:14:529:A:H8	27:14:530:G:N1	2.14	0.45
27:14:664:C:H4'	27:14:941:A:OP1	2.16	0.45
27:14:821:A:N1	65:14:3607:HOH:O	2.36	0.45
27:14:1453:A:O2'	27:14:1454:U:H2'	2.16	0.45
27:14:1629:U:H2'	27:14:1630:G:O4'	2.17	0.45
27:14:1688:U:O2	27:14:1700:A:H5'	2.17	0.45
27:14:2138:C:H42	27:14:2153:G:H22	1.65	0.45
27:14:2287:A:H2	27:14:2346:A:N1	2.14	0.45
27:14:2680:C:H1'	31:29:187:ALA:CB	2.46	0.45
29:79:29:VAL:HA	29:79:32:LEU:HD12	1.99	0.45
29:79:194:ARG:HG2	29:79:197:GLU:OE1	2.16	0.45
35:69:10:GLU:OE1	35:69:11:ASN:HB2	2.17	0.45
42:65:5:THR:O	42:65:8:GLU:N	2.50	0.45
46:A5:110:LYS:HA	46:A5:110:LYS:HD2	1.52	0.45
49:D5:111:VAL:HG23	49:D5:146:ILE:HG13	1.98	0.45
54:I5:59:PHE:O	54:I5:63:TYR:HB3	2.16	0.45
56:K5:14:THR:HA	56:K5:21:TYR:HA	1.99	0.45
1:13:127:G:OP1	1:13:635:G:H1'	2.16	0.45
1:13:222:U:H2'	1:13:223:U:H6	1.80	0.45
1:13:369:C:C2	1:13:393:A:C2	3.05	0.45
1:13:695:A:H2	1:13:787:A:HO2'	1.62	0.45
1:13:756:C:H2'	1:13:757:U:O4'	2.16	0.45
4:3E:139:ARG:HB3	4:3E:139:ARG:HH11	1.82	0.45
9:8E:5:TYR:OH	9:8E:16:ARG:HD3	2.17	0.45
20:BI:34:LYS:O	20:BI:38:LYS:HB2	2.17	0.45
27:1H:229:U:H2'	27:1H:230:G:O4'	2.16	0.45
27:1H:579:U:O2'	27:1H:580:G:P	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:675:G:H2'	27:1H:676:C:C6	2.52	0.45
27:1H:1134:G:H2'	27:1H:1136:G:H4'	1.98	0.45
27:1H:1822:C:H5''	27:1H:1823:A:OP1	2.16	0.45
27:1H:1851:A:H4'	27:1H:1852:U:O5'	2.17	0.45
27:1H:1858:G:H4'	30:11:242:ARG:CZ	2.47	0.45
27:1H:2227:C:N4	27:1H:2232:G:H1	2.14	0.45
27:1H:2494:G:O2'	27:1H:2495:G:P	2.74	0.45
27:1H:2632:C:H5''	31:21:152:LYS:HA	1.99	0.45
27:1H:2866:C:H2'	27:1H:2867:C:H6	1.81	0.45
33:41:176:LEU:HA	33:41:176:LEU:HD23	1.60	0.45
44:C8:90:VAL:CG1	44:C8:91:ASP:N	2.78	0.45
52:K8:10:LEU:HD23	52:K8:10:LEU:HA	1.74	0.45
58:Q8:50:LEU:HA	58:Q8:50:LEU:HD23	1.47	0.45
1:1G:317:G:H1	1:1G:336:C:N4	2.14	0.45
1:1G:342:C:C4	1:1G:343:U:C4	3.05	0.45
1:1G:450:G:H1	1:1G:483:C:H42	1.64	0.45
1:1G:692:U:H2'	1:1G:694:A:OP2	2.17	0.45
1:1G:867:G:O2'	1:1G:868:C:H5'	2.16	0.45
1:1G:1194:U:H2'	1:1G:1195:C:H6	1.81	0.45
1:1G:1291:G:H5''	7:62:41:ARG:NH2	2.32	0.45
1:1G:1523:G:C6	1:1G:1524:C:C4	3.04	0.45
13:4A:81:LEU:HD22	13:4A:88:ARG:HB3	1.99	0.45
14:5A:10:ALA:HB1	14:5A:23:ARG:HB3	1.97	0.45
17:8A:67:LYS:O	17:8A:69:LYS:N	2.49	0.45
27:14:208:C:H2'	27:14:209:C:H6	1.81	0.45
27:14:270(N):G:OP2	35:69:57:ARG:NH1	2.50	0.45
27:14:784:A:OP2	65:14:3540:HOH:O	2.21	0.45
27:14:856:C:C6	27:14:857:C:H5	2.34	0.45
27:14:1292:U:H2'	27:14:1293:C:C6	2.52	0.45
27:14:1813:G:H1'	30:19:50:THR:OG1	2.17	0.45
27:14:2299:G:C2	27:14:2318:G:H8	2.35	0.45
27:14:2646:C:H2'	27:14:2647:U:O4'	2.17	0.45
28:1J:10:C:H42	28:1J:110:G:H1	1.64	0.45
30:19:108:PRO:HD2	30:19:111:LEU:HG	1.98	0.45
33:49:113:ARG:HH21	54:I5:34:GLU:HG3	1.81	0.45
33:49:129:GLY:HA3	33:49:163:ALA:HB3	1.99	0.45
34:59:40:GLU:HG3	34:59:41:MET:HG3	1.98	0.45
54:I5:39:CYS:C	54:I5:41:PRO:HD3	2.37	0.45
56:K5:10:LEU:O	56:K5:11:LEU:HD13	2.16	0.45
1:13:254:G:H21	17:8I:16:GLN:HG3	1.82	0.45
1:13:738:C:H2'	1:13:739:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:870:U:H4'	1:13:871:U:H5''	1.99	0.45
1:13:1018:C:H2'	1:13:1019:C:O4'	2.16	0.45
1:13:1226:C:N4	13:4I:104:ARG:HD2	2.32	0.45
1:13:1290:G:H2'	1:13:1291:G:C8	2.52	0.45
1:13:1303:C:N4	1:13:1304:G:C6	2.85	0.45
5:4E:47:LYS:HE2	5:4E:47:LYS:HB2	1.73	0.45
5:4E:52:PRO:O	5:4E:55:VAL:HG12	2.17	0.45
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.52	0.45
9:8E:79:LEU:O	9:8E:83:ARG:HG2	2.17	0.45
16:7I:9:PHE:N	16:7I:9:PHE:CD1	2.85	0.45
22:1K:12:U:O5'	22:1K:12:U:H6	2.00	0.45
22:1K:21:A:N6	22:1K:46:7MG:C2	2.85	0.45
23:2K:61:C:H2'	23:2K:62:C:H6	1.82	0.45
27:1H:213:A:O2'	27:1H:448:C:O2	2.35	0.45
27:1H:552:A:O2'	27:1H:2066:C:O2	2.29	0.45
27:1H:1379:G:H8	27:1H:1379:G:H2'	1.65	0.45
27:1H:1486:A:H2'	27:1H:1487:G:O4'	2.17	0.45
27:1H:1566:G:H2'	27:1H:1567:U:O4'	2.16	0.45
27:1H:2603:A:O2'	27:1H:2604:C:H5'	2.17	0.45
30:11:183:ARG:HH12	30:11:266:SER:HB2	1.81	0.45
31:21:101:ARG:HA	31:21:170:LEU:O	2.16	0.45
31:21:167:VAL:CG1	31:21:189:PRO:HD3	2.47	0.45
32:31:202:PHE:O	32:31:206:ILE:HG22	2.17	0.45
33:41:17:PRO:HA	33:41:20:ILE:HG13	1.99	0.45
34:51:15:VAL:HG12	34:51:29:PRO:CD	2.47	0.45
34:51:154:PRO:HB3	34:51:163:TYR:CE1	2.52	0.45
36:38:56:ASN:OD1	36:38:56:ASN:N	2.48	0.45
41:98:38:VAL:HB	41:98:39:PRO:HD3	1.98	0.45
42:A8:94:TYR:CZ	42:A8:99:LYS:HG3	2.52	0.45
43:B8:108:ARG:HG3	43:B8:109:GLU:N	2.32	0.45
44:C8:19:LYS:C	44:C8:21:ALA:H	2.20	0.45
45:D8:14:VAL:HG23	45:D8:96:ILE:HG21	1.99	0.45
48:G8:99:CYS:SG	48:G8:105:ALA:HB3	2.56	0.45
1:1G:247:G:C6	1:1G:278:G:C2	3.04	0.45
1:1G:321:A:C2	1:1G:333:G:C2	3.05	0.45
1:1G:531:U:H4'	1:1G:532:A:OP1	2.17	0.45
1:1G:1128:C:H2'	1:1G:1147:C:H42	1.82	0.45
1:1G:1196:U:O2	25:4L:53:U:N3	2.49	0.45
1:1G:1290:G:H2'	1:1G:1291:G:H8	1.81	0.45
2:12:73:THR:HG21	2:12:97:TRP:H	1.82	0.45
2:12:114:ARG:HD3	2:12:117:GLU:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:163:GLU:OE2	4:32:166:LYS:NZ	2.34	0.45
5:42:37:ARG:HG2	5:42:112:LEU:HA	1.97	0.45
10:1A:16:LEU:HD22	10:1A:94:VAL:HG13	1.99	0.45
11:2A:77:MET:O	11:2A:103:LEU:HD11	2.17	0.45
13:4A:69:GLU:HG2	13:4A:70:LEU:N	2.32	0.45
16:7A:38:TYR:CE1	16:7A:50:LYS:HD2	2.52	0.45
19:AA:19:VAL:HG12	19:AA:23:ASN:HD22	1.81	0.45
27:14:58:G:N2	27:14:70:G:C5	2.85	0.45
27:14:71:A:H5''	27:14:73:A:C8	2.52	0.45
27:14:84:A:H5''	48:C5:8:LYS:HB3	1.98	0.45
27:14:768:G:H2'	27:14:769:G:H8	1.82	0.45
27:14:1265:A:C8	27:14:1267:U:C2	3.05	0.45
27:14:1441:G:H2'	27:14:1442:G:H8	1.81	0.45
27:14:1937:A:N7	27:14:1939:5MU:O2'	2.50	0.45
27:14:2859:G:H2'	27:14:2860:A:C8	2.52	0.45
32:39:129:PHE:C	32:39:131:GLY:H	2.19	0.45
38:25:69:ILE:H	38:25:69:ILE:HD12	1.81	0.45
41:55:51:LEU:HD13	41:55:70:LEU:HD11	1.99	0.45
44:85:109:LEU:HD23	44:85:109:LEU:HA	1.75	0.45
48:C5:23:ARG:HE	48:C5:23:ARG:HB3	1.51	0.45
51:F5:18:ILE:HG23	51:F5:37:ILE:HG12	1.98	0.45
58:M5:39:LYS:HG2	58:M5:43:GLN:HG3	1.98	0.45
1:13:137:C:H1'	16:7I:63:GLY:CA	2.47	0.45
1:13:640:A:N3	8:7E:115:SER:HB3	2.32	0.45
1:13:980:C:H1'	14:5I:19:ARG:HG2	1.98	0.45
11:2I:51:LYS:H	11:2I:51:LYS:HD3	1.81	0.45
17:8I:55:ASP:O	17:8I:57:VAL:HG13	2.17	0.45
27:1H:323:G:C8	65:1H:3816:HOH:O	2.68	0.45
27:1H:536:C:O2'	27:1H:537:U:H5'	2.17	0.45
27:1H:595:A:H5'	27:1H:2053:A:N7	2.32	0.45
27:1H:874:U:H2'	27:1H:876:U:O4'	2.17	0.45
27:1H:1267:C:H2'	27:1H:1268:C:C6	2.51	0.45
27:1H:2001:A:H2'	27:1H:2002:C:H6	1.81	0.45
27:1H:2076:G:P	65:1H:3724:HOH:O	2.74	0.45
27:1H:2274:C:H1'	27:1H:2401:A:N3	2.31	0.45
27:1H:2765:G:P	27:1H:2765:G:H8	2.39	0.45
30:11:132:PRO:HG3	30:11:190:TYR:CE1	2.52	0.45
31:21:108:SER:O	31:21:162:ALA:HA	2.17	0.45
41:98:86:ARG:HE	41:98:118:GLU:HG2	1.82	0.45
44:C8:49:HIS:O	44:C8:52:ARG:N	2.50	0.45
46:E8:110:LYS:HD3	46:E8:110:LYS:HA	1.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H8:67:LEU:HD23	49:H8:67:LEU:HA	1.68	0.45
1:1G:38:G:C2	1:1G:397:A:C2	3.05	0.45
1:1G:695:A:OP1	11:2A:52:GLY:HA3	2.17	0.45
1:1G:738:C:H2'	1:1G:739:C:C6	2.52	0.45
1:1G:988:G:H2'	1:1G:989:C:O4'	2.17	0.45
1:1G:1153:C:N3	1:1G:1154:G:C8	2.85	0.45
2:12:141:GLU:O	2:12:145:LEU:HB2	2.17	0.45
12:3A:82:ILE:HD11	12:3A:97:ILE:HG12	1.98	0.45
59:1L:38:A:H2'	59:1L:39:PSU:C6	2.51	0.45
59:1L:75:C:N4	27:14:2553:G:H1	2.15	0.45
24:3L:46:G:N2	24:3L:48:C:H1'	2.32	0.45
27:14:35:G:H1'	27:14:454:A:C4	2.52	0.45
27:14:254:G:N7	58:M5:5:LYS:HE2	2.32	0.45
27:14:535:C:O2'	27:14:536:A:H5'	2.17	0.45
27:14:544:C:O5'	27:14:544:C:H6	2.01	0.45
27:14:686:G:OP1	57:L5:11:LYS:NZ	2.36	0.45
27:14:1115:G:H2'	27:14:1116:C:C6	2.52	0.45
27:14:1301:A:H2	27:14:1626:G:N3	2.15	0.45
27:14:1449(A):G:H2'	27:14:1450:C:C6	2.52	0.45
27:14:1668:A:H4'	27:14:1669:A:O5'	2.16	0.45
27:14:2335:A:HO2'	27:14:2336:A:P	2.38	0.45
28:1J:13:A:O2'	28:1J:15:A:O5'	2.35	0.45
30:19:44:ASN:O	30:19:46:GLN:O	2.35	0.45
31:29:54:GLN:NE2	31:29:58:ARG:HB2	2.31	0.45
31:29:54:GLN:HB2	31:29:76:ARG:CG	2.47	0.45
31:29:103:ASP:OD1	31:29:201:THR:HA	2.17	0.45
33:49:103:LEU:O	33:49:107:LEU:HG	2.17	0.45
39:35:21:ARG:O	39:35:28:GLY:HA2	2.17	0.45
45:95:29:PRO:HA	45:95:61:VAL:HG21	1.99	0.45
47:B5:35:THR:O	47:B5:39:ILE:HD13	2.17	0.45
57:L5:5:TRP:HA	57:L5:5:TRP:CE3	2.52	0.45
1:13:522:C:O2'	1:13:523:A:H5'	2.18	0.44
1:13:762:C:H2'	1:13:763:G:H8	1.80	0.44
1:13:872:A:C5	1:13:874:G:C8	3.04	0.44
1:13:1151:A:N3	10:1I:39:PRO:HG3	2.31	0.44
1:13:1157:A:N6	1:13:1180:A:C4	2.85	0.44
1:13:1300:G:O2'	1:13:1301:U:P	2.75	0.44
1:13:1322:C:H6	1:13:1322:C:OP1	1.99	0.44
2:1E:19:HIS:ND1	2:1E:20:GLU:OE1	2.45	0.44
2:1E:44:LEU:O	2:1E:47:THR:HB	2.17	0.44
4:3E:153:ARG:HB3	4:3E:181:MET:SD	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:18:ARG:NH1	11:2I:35:PRO:O	2.50	0.44
12:3I:16:ARG:HA	12:3I:16:ARG:NH1	2.32	0.44
22:1K:14:A:N7	22:1K:22:G:N2	2.65	0.44
26:5K:19:G:H1'	28:16:0:A:H61	1.82	0.44
27:1H:766:A:H3'	27:1H:767:C:C6	2.52	0.44
27:1H:777:G:C4	27:1H:1807:U:O2	2.70	0.44
27:1H:803:C:H2'	27:1H:804:C:C6	2.52	0.44
27:1H:1073:U:H1'	27:1H:1074:A:C5'	2.47	0.44
27:1H:1218:G:O6	27:1H:1220:A:N6	2.49	0.44
27:1H:1637:U:H2'	27:1H:1638:G:C8	2.52	0.44
27:1H:2353:G:C2'	27:1H:2354:G:H5'	2.47	0.44
27:1H:2570:G:H2'	27:1H:2571:C:C6	2.52	0.44
27:1H:2633:C:OP1	31:21:153:GLY:N	2.40	0.44
30:11:65:ILE:HD11	30:11:106:ILE:HG22	1.98	0.44
33:41:67:LYS:CE	54:M8:5:ILE:HB	2.47	0.44
35:61:88:ILE:HG12	35:61:122:GLU:N	2.32	0.44
54:M8:40:HIS:HA	54:M8:44:THR:HB	1.98	0.44
56:08:29:ASN:O	56:08:32:ASN:HB3	2.17	0.44
58:Q8:57:ARG:O	58:Q8:60:LEU:N	2.50	0.44
1:1G:947:G:O3'	13:4A:109:THR:OG1	2.33	0.44
1:1G:1116:C:H42	1:1G:1184:G:H1	1.64	0.44
1:1G:1221:G:OP1	19:AA:36:ARG:HD3	2.17	0.44
1:1G:1248:A:O2'	9:82:70:LYS:NZ	2.49	0.44
1:1G:1265:G:H2'	1:1G:1266:G:O4'	2.17	0.44
1:1G:1331:G:HO2'	1:1G:1332:A:P	2.39	0.44
7:62:69:VAL:HG21	7:62:134:ALA:HB1	1.99	0.44
27:14:363(E):U:H5'	27:14:363(F):A:OP2	2.17	0.44
27:14:581:C:N3	27:14:1259:G:N1	2.54	0.44
27:14:1204:A:C2	27:14:1206:G:C2	3.05	0.44
27:14:1487:G:H1	27:14:1502:C:H42	1.65	0.44
27:14:1547:C:H2'	27:14:1548:C:H6	1.81	0.44
27:14:1686:C:H3'	27:14:1687:G:H8	1.82	0.44
27:14:1754:C:H2'	27:14:1755:A:O4'	2.17	0.44
27:14:2659:G:OP1	34:59:158:HIS:NE2	2.50	0.44
32:39:184:TYR:O	32:39:188:ARG:HG3	2.18	0.44
40:45:57:HIS:CG	40:45:117:ALA:HB2	2.52	0.44
43:75:6:LEU:HD23	43:75:6:LEU:O	2.17	0.44
43:75:111:ARG:C	43:75:113:LYS:N	2.67	0.44
44:85:8:VAL:HG12	44:85:11:ARG:NH2	2.32	0.44
48:C5:35:TYR:CE2	48:C5:69:ALA:HB3	2.52	0.44
49:D5:8:TYR:HB2	49:D5:38:TYR:CZ	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:G5:44:LEU:HD21	52:G5:47:ASN:HA	1.99	0.44
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.99	0.44
1:13:474:G:H5''	16:7I:81:ARG:CZ	2.48	0.44
1:13:857:C:P	65:13:1823:HOH:O	2.75	0.44
1:13:946:A:H2'	1:13:947:G:C8	2.52	0.44
1:13:947:G:C5	1:13:948:C:C4	3.05	0.44
1:13:1008:C:N4	1:13:1021:G:H1	2.13	0.44
1:13:1157:A:N6	1:13:1178:G:N2	2.64	0.44
1:13:1213:A:C5	1:13:1215:G:C4	3.05	0.44
1:13:1398:A:H61	5:4E:22:GLY:H	1.65	0.44
3:2E:30:ARG:HH11	14:5I:38:GLY:HA2	1.81	0.44
6:5E:94:GLN:HG2	18:9I:32:ARG:HH21	1.83	0.44
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.99	0.44
27:1H:333:G:H2'	27:1H:334:G:C8	2.52	0.44
27:1H:1059:U:C5	37:58:28:THR:HG21	2.52	0.44
27:1H:1407:A:H2'	27:1H:1408:G:O4'	2.17	0.44
27:1H:1821:A:OP1	30:11:221:VAL:HA	2.17	0.44
27:1H:2743:G:H2'	27:1H:2744:C:C6	2.53	0.44
28:16:71:C:C2	28:16:72:G:C8	3.06	0.44
30:11:44:ASN:O	30:11:46:GLN:O	2.34	0.44
34:51:105:LEU:HD23	34:51:105:LEU:H	1.82	0.44
37:58:43:THR:HB	37:58:46:VAL:HG11	1.99	0.44
40:88:24[A]:GLY:HA2	40:88:67:ARG:NH2	2.32	0.44
42:A8:58:LEU:H	42:A8:58:LEU:CD2	2.31	0.44
46:E8:2:GLU:HA	46:E8:64:MET:CE	2.47	0.44
46:E8:4:LYS:CB	46:E8:106:ILE:HG22	2.44	0.44
1:1G:184:G:O2'	1:1G:224:C:H5''	2.18	0.44
1:1G:807:A:C6	1:1G:808:C:N4	2.85	0.44
1:1G:1007:C:C2	1:1G:1023:G:C2	3.05	0.44
1:1G:1055:A:N6	1:1G:1206:G:C5	2.86	0.44
1:1G:1321:C:H41	1:1G:1322:C:N4	2.15	0.44
2:12:233:SER:HB2	2:12:234:PRO:HD2	1.99	0.44
4:32:63:LYS:O	4:32:67:ILE:HG13	2.17	0.44
13:4A:14:ARG:NH2	13:4A:41:PRO:HB2	2.32	0.44
18:9A:22:VAL:O	18:9A:23:LYS:HB3	2.17	0.44
19:AA:7:LYS:HB3	54:I5:67:TYR:CZ	2.52	0.44
24:3L:14:A:H2'	24:3L:14:A:N3	2.33	0.44
27:14:686:G:H8	57:L5:6:GLN:O	1.99	0.44
27:14:755:C:H2'	27:14:756:C:C6	2.51	0.44
27:14:1158:C:H4'	53:H5:31:LEU:O	2.17	0.44
27:14:1268:A:H2'	27:14:1269:A:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1314:C:OP1	27:14:1332:G:H5''	2.17	0.44
27:14:1422:G:N2	27:14:1577:C:H1'	2.32	0.44
27:14:1963:U:H4'	27:14:1964:G:OP1	2.17	0.44
27:14:2016:U:H1'	55:J5:6:VAL:HG13	1.99	0.44
27:14:2068:U:C2	27:14:2430:A:H2	2.34	0.44
34:59:60:ARG:O	34:59:64:LEU:HG	2.17	0.44
35:69:84:GLY:HA2	35:69:89:TYR:HE1	1.81	0.44
41:55:58:GLY:HA2	41:55:80:PHE:CE2	2.52	0.44
49:D5:23:LYS:HB3	49:D5:38:TYR:CD1	2.52	0.44
50:E5:35:ASN:N	50:E5:35:ASN:HD22	2.15	0.44
56:K5:24:GLU:OE1	58:M5:35:GLN:HG2	2.18	0.44
1:13:130:A:C8	17:8I:63:ARG:HB2	2.52	0.44
1:13:347:G:H2'	1:13:348:G:O4'	2.17	0.44
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.50	0.44
1:13:447:G:N2	1:13:487:A:H62	2.15	0.44
1:13:758:G:H8	1:13:758:G:O5'	2.00	0.44
1:13:833:U:H2'	1:13:834:C:H6	1.83	0.44
1:13:1096:C:O2	1:13:1170:A:O2'	2.34	0.44
6:5E:20:ALA:HA	6:5E:23:LYS:HB2	1.98	0.44
6:5E:26:ILE:HG23	6:5E:79:LEU:HD22	2.00	0.44
14:5I:12:ARG:H	14:5I:12:ARG:HG3	1.65	0.44
24:3K:8:U:O4'	24:3K:48:C:H2'	2.18	0.44
24:3K:74:C:H4'	51:J8:23:LYS:HB2	1.99	0.44
27:1H:134:G:H2'	27:1H:135:C:H6	1.81	0.44
27:1H:175:U:H2'	27:1H:176:G:C8	2.52	0.44
27:1H:470:A:N7	32:31:45:ARG:HD2	2.32	0.44
27:1H:597:G:OP2	45:D8:78:LYS:NZ	2.42	0.44
27:1H:858:U:O5'	27:1H:858:U:H6	1.99	0.44
27:1H:1728:U:O2	27:1H:1795:G:H3'	2.16	0.44
27:1H:2018:U:H2'	27:1H:2019:C:C5	2.52	0.44
27:1H:2024:A:H4'	27:1H:2702:U:O2'	2.17	0.44
27:1H:2715:U:OP1	27:1H:2715:U:H6	2.00	0.44
30:11:122:ASP:CG	30:11:123:ALA:H	2.20	0.44
31:21:103:ASP:OD1	31:21:103:ASP:N	2.49	0.44
35:61:12:LEU:HD12	35:61:19:VAL:HG21	1.99	0.44
37:58:61:ARG:HA	37:58:61:ARG:HE	1.82	0.44
41:98:100:LEU:HD11	55:N8:56:LYS:HE2	1.98	0.44
45:D8:35:LEU:HB2	45:D8:57:VAL:HG22	1.99	0.44
49:H8:162:GLU:HG2	49:H8:163:LEU:O	2.17	0.44
51:J8:60:PHE:HE1	51:J8:91:LYS:HZ3	1.65	0.44
52:K8:57:ILE:HG22	52:K8:61:LEU:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:P8:5:TRP:NE1	57:P8:7:PRO:HG3	2.32	0.44
1:1G:175:C:H4'	20:BA:25:ARG:HD3	1.98	0.44
1:1G:690:G:H2'	1:1G:691:G:O4'	2.18	0.44
1:1G:833:U:H2'	1:1G:834:C:H6	1.82	0.44
1:1G:892:A:C2	1:1G:907:A:C4	3.05	0.44
6:52:81:ILE:H	6:52:81:ILE:HG13	1.33	0.44
7:62:26:PHE:O	7:62:30:ILE:HG13	2.18	0.44
12:3A:7:LEU:HB3	17:8A:32:TYR:CE2	2.53	0.44
60:2L:14:A:C5	60:2L:22:G:C2	3.05	0.44
27:14:66:C:C2'	27:14:67:U:H5'	2.48	0.44
27:14:522:G:H8	27:14:522:G:O5'	2.00	0.44
27:14:988:A:N7	65:14:3608:HOH:O	2.36	0.44
27:14:993:G:H1'	45:95:87:HIS:NE2	2.32	0.44
27:14:1639:U:C2'	27:14:1640:C:H5''	2.47	0.44
27:14:2331:G:H4'	50:E5:43:THR:H	1.83	0.44
29:79:66:HIS:HB2	29:79:188:ASN:HD21	1.82	0.44
30:19:145:VAL:HG13	30:19:191:ALA:HB2	1.99	0.44
33:49:61:ALA:HA	33:49:66:GLN:O	2.16	0.44
33:49:97:ASP:HA	33:49:100:TRP:HB2	1.99	0.44
33:49:138:GLN:NE2	33:49:153:ARG:HG2	2.31	0.44
34:59:85:LYS:O	34:59:132:ARG:HG3	2.17	0.44
35:69:77:LEU:HD22	35:69:78:THR:H	1.82	0.44
35:69:82:ARG:H	35:69:143:SER:CB	2.26	0.44
35:69:142:VAL:HG23	35:69:143:SER:N	2.32	0.44
37:15:95:PRO:O	37:15:98:VAL:HG12	2.17	0.44
42:65:67:ARG:NH1	42:65:67:ARG:HB2	2.32	0.44
46:A5:39:THR:HG22	46:A5:44:ALA:HB2	1.98	0.44
48:C5:20:TYR:CE2	48:C5:43:ASN:HA	2.52	0.44
51:F5:91:LYS:HB3	51:F5:92:LYS:H	1.68	0.44
1:13:55:A:C6	35:69:89:TYR:CD2	3.06	0.44
1:13:406:G:N2	1:13:437:U:C2	2.86	0.44
1:13:538:G:H5''	12:3I:111:LYS:HB2	1.99	0.44
1:13:575:G:C8	1:13:881:G:N2	2.85	0.44
1:13:781:A:H5'	1:13:782:A:OP2	2.18	0.44
1:13:799:G:O6	1:13:800:G:C2	2.71	0.44
1:13:851:G:H2'	1:13:852:G:C8	2.52	0.44
1:13:1120:G:H2'	1:13:1121:U:C6	2.52	0.44
1:13:1126:U:H1'	1:13:1281:U:O2	2.17	0.44
1:13:1378:C:C5	1:13:1379:G:C8	3.06	0.44
2:1E:70:PHE:HE2	2:1E:163:PHE:HD2	1.65	0.44
6:5E:54:LYS:HB3	6:5E:54:LYS:HE2	1.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:135:VAL:O	7:6E:139:GLU:HG3	2.18	0.44
13:4I:90:LEU:HA	13:4I:93:ARG:HG3	1.99	0.44
17:8I:22:LEU:HD12	17:8I:40:LYS:O	2.17	0.44
17:8I:76:LEU:HD11	17:8I:79:SER:N	2.32	0.44
27:1H:663:A:O5'	39:78:116:GLY:HA2	2.17	0.44
27:1H:910:G:H2'	27:1H:911:A:O4'	2.18	0.44
27:1H:1208:C:H1'	45:D8:8:GLY:O	2.18	0.44
27:1H:1491:G:N2	27:1H:1596:C:C2	2.85	0.44
27:1H:2687:G:H5'	38:68:26:LYS:HD2	2.00	0.44
28:16:73:A:OP2	65:16:303:HOH:O	2.21	0.44
30:11:102:LYS:C	30:11:103:ARG:HG2	2.38	0.44
31:21:131:ALA:HB1	31:21:134:ILE:HD11	2.00	0.44
31:21:152:LYS:HG3	37:58:78:TYR:CZ	2.52	0.44
33:41:68:PRO:HB3	33:41:92:VAL:HB	1.99	0.44
38:68:2:ILE:HD12	38:68:6:THR:HG21	1.98	0.44
39:78:81:GLN:NE2	39:78:106:LEU:O	2.46	0.44
42:A8:32:LEU:O	42:A8:62:LYS:HE2	2.17	0.44
43:B8:51:ARG:HG3	43:B8:98:LYS:HG3	1.99	0.44
43:B8:79:HIS:O	43:B8:81:PRO:HD3	2.17	0.44
45:D8:4:ILE:O	45:D8:37:VAL:O	2.34	0.44
45:D8:52:VAL:CG2	45:D8:55:ALA:HB3	2.48	0.44
47:F8:24:GLY:CA	47:F8:82:GLN:HE22	2.24	0.44
48:G8:23:ARG:H	48:G8:23:ARG:HG2	1.52	0.44
48:G8:88:LYS:HD3	48:G8:89:PHE:N	2.33	0.44
1:1G:892:A:O2'	1:1G:1415:G:H4'	2.17	0.44
1:1G:1359:C:OP1	14:5A:22:THR:OG1	2.15	0.44
3:22:84:ILE:HA	3:22:87:LEU:HD12	1.99	0.44
8:72:35:ILE:O	8:72:39:LEU:HD22	2.16	0.44
9:82:48:GLU:HA	9:82:51:ARG:HH11	1.82	0.44
9:82:110:GLU:HG2	9:82:119:ALA:HB1	1.99	0.44
9:82:128:ARG:HA	9:82:128:ARG:HD3	1.79	0.44
15:6A:30:ALA:HA	15:6A:85:LEU:HD11	1.99	0.44
17:8A:52:LYS:HG2	17:8A:55:ASP:OD2	2.18	0.44
17:8A:58:GLU:O	17:8A:59:ILE:HD13	2.17	0.44
18:9A:51:LEU:HD23	18:9A:51:LEU:HA	1.86	0.44
27:14:200:U:O2	27:14:386:G:N2	2.50	0.44
27:14:242:G:H5''	58:M5:64:TYR:CE2	2.53	0.44
27:14:428:A:N6	27:14:429:A:N1	2.65	0.44
27:14:550:G:O2'	27:14:1220:A:N3	2.47	0.44
27:14:582:G:H2'	27:14:583:G:C8	2.52	0.44
27:14:651:G:OP2	58:M5:21:LYS:NZ	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:781:A:H2	27:14:1776:G:N3	2.16	0.44
27:14:857:C:N3	27:14:858:U:C4	2.86	0.44
27:14:1384:A:N3	27:14:1405:U:H1'	2.33	0.44
27:14:2105:C:H2'	27:14:2106:G:C8	2.52	0.44
27:14:2340:G:O2'	27:14:2341:G:H5'	2.18	0.44
27:14:2557:G:O2'	27:14:2558:C:H5'	2.17	0.44
27:14:2725:A:C4	27:14:2727:G:C8	3.06	0.44
28:1J:31:C:O2'	28:1J:53:A:N1	2.41	0.44
29:79:29:VAL:HG23	29:79:216:THR:HG23	1.98	0.44
34:59:129:THR:HG23	34:59:130:ARG:HG3	2.00	0.44
39:35:95:VAL:HG23	39:35:125:VAL:HA	1.99	0.44
42:65:18:ILE:HD13	42:65:88:ASP:HA	1.98	0.44
58:M5:34:TRP:HZ3	58:M5:36:LYS:HG3	1.82	0.44
1:13:757:U:O2'	1:13:879:C:O2	2.35	0.44
1:13:1053:G:O2'	1:13:1199:U:H5	2.00	0.44
1:13:1305:G:N7	65:13:1847:HOH:O	2.36	0.44
2:1E:33:TYR:HB2	2:1E:43:ASP:CB	2.48	0.44
3:2E:95:THR:HG23	3:2E:97:LYS:HE2	1.99	0.44
4:3E:189:PRO:HB2	4:3E:194:LEU:HD22	1.99	0.44
14:5I:6:LEU:HB3	14:5I:23:ARG:NH2	2.32	0.44
16:7I:14:ASN:N	16:7I:15:PRO:HD3	2.32	0.44
22:1K:25:C:N4	22:1K:44:G:H1	2.15	0.44
27:1H:832:A:C5	30:11:229:VAL:HG21	2.53	0.44
27:1H:859:U:H3'	39:78:22:GLY:HA2	2.00	0.44
27:1H:887:U:H2'	27:1H:888:C:C6	2.53	0.44
27:1H:1229:G:OP2	27:1H:1229:G:H8	2.00	0.44
27:1H:1738:A:H2'	27:1H:1739:C:O4'	2.17	0.44
27:1H:1943:OMC:H1'	27:1H:1943:OMC:HM23	1.80	0.44
27:1H:2152:C:H2'	27:1H:2153:U:H5'	1.98	0.44
27:1H:2261:C:H2'	27:1H:2262:U:O4'	2.17	0.44
27:1H:2414:U:H2'	27:1H:2415:C:N1	2.32	0.44
27:1H:2414:U:H2'	27:1H:2415:C:C1'	2.47	0.44
28:16:66:A:C6	28:16:108:C:C6	3.05	0.44
28:16:77:U:P	49:H8:19:ARG:HH22	2.40	0.44
33:41:36:LYS:O	33:41:160:VAL:HG23	2.17	0.44
34:51:170:ARG:C	34:51:171:LEU:HG	2.37	0.44
39:78:71:VAL:O	39:78:72:PRO:C	2.56	0.44
48:G8:36:ALA:HA	48:G8:67:LEU:O	2.17	0.44
56:O8:28:ARG:HG3	56:O8:31:PRO:HD2	1.98	0.44
58:Q8:25:MET:O	58:Q8:48:PHE:HE1	2.00	0.44
1:1G:139:G:H2'	1:1G:140:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:192:U:C1'	20:BA:103:GLY:HA2	2.47	0.44
1:1G:752:G:H1'	1:1G:754:C:N4	2.32	0.44
1:1G:1103:C:H5''	2:12:98:LEU:HD13	1.98	0.44
1:1G:1262:C:H2'	1:1G:1263:C:H6	1.81	0.44
3:22:31:HIS:O	3:22:35:GLU:HG3	2.18	0.44
3:22:123:GLN:HG2	3:22:128:PHE:HD2	1.83	0.44
4:32:4:TYR:O	4:32:115:ARG:NH1	2.51	0.44
4:32:107:ARG:HB3	4:32:174:LEU:CD1	2.47	0.44
5:42:12:LEU:HB3	5:42:31:LEU:HB3	2.00	0.44
8:72:104:ARG:HB3	8:72:108:GLY:H	1.82	0.44
11:2A:41:THR:HG21	11:2A:71:LYS:CB	2.38	0.44
13:4A:15:VAL:O	13:4A:19:LEU:HD23	2.18	0.44
13:4A:80:ARG:HH22	19:AA:67:VAL:HG23	1.83	0.44
13:4A:91:ARG:HB3	13:4A:98:VAL:HG22	1.98	0.44
14:5A:15:LYS:HZ3	14:5A:16:PHE:N	2.15	0.44
15:6A:21:ASP:OD1	15:6A:24:SER:OG	2.36	0.44
20:BA:57:ARG:CD	20:BA:102:GLY:HA2	2.47	0.44
59:1L:76:A:H62	27:14:2584:U:H1'	1.82	0.44
27:14:18:C:O3'	44:85:23:GLY:HA2	2.17	0.44
27:14:581:C:H2'	27:14:582:G:H8	1.82	0.44
27:14:601:C:O2'	27:14:605:C:OP1	2.30	0.44
27:14:608:A:C6	27:14:609:A:C6	3.05	0.44
27:14:839:U:H1'	27:14:1191:G:H1'	2.00	0.44
27:14:868:U:C2	27:14:869:G:C8	3.06	0.44
27:14:1429:G:H2'	27:14:1430:C:H6	1.81	0.44
27:14:1533:C:C4	27:14:1534:G:H1'	2.53	0.44
27:14:1551:C:H2'	27:14:1552:G:O4'	2.18	0.44
27:14:2552:OMU:H2'	27:14:2554:U:OP2	2.17	0.44
27:14:2658:C:H2'	27:14:2659:G:O4'	2.16	0.44
27:14:2686:G:H1	27:14:2723:C:H42	1.65	0.44
29:79:216:THR:OG1	29:79:219:GLY:HA3	2.17	0.44
30:19:65:ILE:HD11	30:19:67:PHE:CD1	2.51	0.44
33:49:138:GLN:HE22	33:49:153:ARG:HG2	1.83	0.44
33:49:144:ILE:HA	33:49:144:ILE:HD13	1.64	0.44
40:45:22:LYS:HE2	40:45:98:LYS:H	1.82	0.44
40:45:22:LYS:HE2	40:45:97:VAL:HA	2.00	0.44
41:55:78:LYS:HE2	41:55:83:ILE:HD11	1.99	0.44
44:85:79:PHE:HE1	44:85:83:LEU:HD13	1.81	0.44
46:A5:21:VAL:HG13	46:A5:74:ALA:HB1	2.00	0.44
47:B5:35:THR:HB	47:B5:38:GLU:HG2	1.99	0.44
48:C5:44:ILE:H	48:C5:44:ILE:HG13	1.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:341:C:O2'	1:13:342:C:H5'	2.18	0.44
1:13:411:A:C4	1:13:413:G:H1'	2.52	0.44
1:13:453:A:C6	1:13:454:C:C4	3.06	0.44
1:13:530:G:O2'	1:13:531:U:P	2.75	0.44
1:13:544:G:OP1	4:3E:59:ARG:NH2	2.39	0.44
1:13:642:A:C2	1:13:643:C:C2	3.06	0.44
1:13:1160:G:C6	1:13:1161:C:C4	3.05	0.44
7:6E:91:VAL:HB	7:6E:96:GLN:HG2	1.99	0.44
8:7E:16:ALA:HB2	8:7E:24:THR:HG21	1.99	0.44
9:8E:128:ARG:NH2	23:2K:35:A:OP2	2.51	0.44
27:1H:77:A:H2'	27:1H:78:G:C8	2.52	0.44
27:1H:534:G:H2'	27:1H:534:G:N3	2.32	0.44
27:1H:671:C:O2'	27:1H:672:A:OP1	2.30	0.44
27:1H:1053:C:C2	27:1H:1184:G:N2	2.85	0.44
27:1H:1144:U:H3'	27:1H:1145:A:C8	2.53	0.44
27:1H:2061:G:H2'	27:1H:2062:C:C6	2.52	0.44
27:1H:2200:C:H5''	29:71:213:TYR:CD1	2.52	0.44
27:1H:2807:G:N2	27:1H:2816:C:O2	2.51	0.44
28:16:40:U:C2	28:16:43:C:OP2	2.71	0.44
28:16:44:G:C2	28:16:48:A:C2	3.05	0.44
34:51:153:LYS:H	34:51:153:LYS:CE	2.31	0.44
35:61:64:GLU:O	35:61:67:ARG:HB3	2.18	0.44
39:78:37:GLY:N	39:78:40:SER:OG	2.45	0.44
40:88:109:VAL:HG13	40:88:110:THR:N	2.33	0.44
49:H8:10:ARG:HH21	49:H8:26:GLY:H	1.65	0.44
50:I8:70:GLN:HB3	50:I8:78:TYR:HB2	1.98	0.44
1:1G:426:G:OP1	4:32:38:TYR:OH	2.34	0.44
1:1G:703:G:O2'	1:1G:704:A:OP2	2.34	0.44
1:1G:790:A:H8	1:1G:790:A:O5'	1.99	0.44
1:1G:1498:UR3:O4'	1:1G:1519:MA6:H2	2.17	0.44
2:12:54:THR:HG21	2:12:201:ILE:HD11	1.98	0.44
2:12:86:GLU:O	2:12:89:GLY:N	2.51	0.44
3:22:157:ILE:HD13	3:22:164:ARG:HB3	1.99	0.44
4:32:22:LYS:HD2	63:32:303:SF4:S3	2.58	0.44
4:32:76:ARG:HD2	4:32:76:ARG:HA	1.62	0.44
19:AA:40:ILE:HG22	19:AA:66:MET:O	2.18	0.44
59:1L:22:G:H2'	59:1L:23:A:C8	2.52	0.44
27:14:121:G:H4'	27:14:149:A:H5'	1.99	0.44
27:14:1000:A:C6	27:14:1001:A:N1	2.86	0.44
27:14:2674:G:O2'	38:25:29:ASN:O	2.27	0.44
27:14:2827:C:H6	27:14:2827:C:H5''	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:1J:109:G:C2	28:1J:110:G:C8	3.05	0.44
30:19:206:LEU:HD22	30:19:211:ARG:HG2	2.00	0.44
35:69:29:TYR:CD1	35:69:30:LEU:HD23	2.52	0.44
35:69:78:THR:HA	35:69:104:GLN:OE1	2.17	0.44
43:75:118:ARG:HA	43:75:121:ILE:HB	2.00	0.44
52:G5:2:LYS:HE3	52:G5:6:VAL:HG12	1.98	0.44
1:13:485:G:O2'	1:13:486:U:P	2.75	0.44
1:13:655:A:C2	1:13:754:C:N4	2.86	0.44
1:13:657:G:C2	1:13:658:G:C8	3.05	0.44
1:13:1169:A:H2'	1:13:1170:A:C8	2.52	0.44
1:13:1177:G:C6	1:13:1178:G:C2	3.06	0.44
1:13:1429:C:H2'	1:13:1430:C:C6	2.53	0.44
16:7I:55:ARG:O	16:7I:58:TYR:N	2.51	0.44
19:AI:64:GLU:O	54:M8:56:VAL:HG11	2.18	0.44
20:BI:59:ALA:O	20:BI:63:ILE:HG13	2.18	0.44
20:BI:98:PRO:O	20:BI:100:ILE:N	2.50	0.44
27:1H:91:G:H2'	27:1H:92:C:C6	2.53	0.44
27:1H:212:A:H5'	27:1H:449:U:OP1	2.17	0.44
27:1H:493:A:H4'	57:P8:30:VAL:HG21	1.98	0.44
27:1H:554:A:H2	27:1H:2066:C:C5'	2.31	0.44
27:1H:735:C:H42	27:1H:835:U:H4'	1.82	0.44
27:1H:853:G:O4'	39:78:38:GLN:HG3	2.18	0.44
27:1H:1842:A:H8	27:1H:1842:A:O5'	2.01	0.44
27:1H:2209:G:H2'	27:1H:2210:G:C8	2.52	0.44
27:1H:2487:C:N3	27:1H:2488:C:H1'	2.32	0.44
27:1H:2488:C:H5'	27:1H:2489:A:H5''	1.99	0.44
27:1H:2834:A:OP1	31:21:113:PHE:HB2	2.18	0.44
28:16:50:G:C2	28:16:51:G:H1'	2.52	0.44
30:11:70:TRP:CZ2	30:11:150:LYS:HD3	2.53	0.44
31:21:111:ARG:H	31:21:111:ARG:HG2	1.31	0.44
33:41:173:LEU:HD13	33:41:178:PHE:CD2	2.53	0.44
34:51:117:PRO:HB3	34:51:123:PHE:CE2	2.51	0.44
37:58:128:HIS:O	37:58:130:HIS:NE2	2.50	0.44
42:A8:25:ARG:HD2	42:A8:88:ASP:HB2	2.00	0.44
42:A8:89:ARG:O	42:A8:89:ARG:HG3	2.17	0.44
49:H8:153:SER:HA	49:H8:163:LEU:HD21	1.99	0.44
51:J8:87:PRO:O	51:J8:88:LYS:C	2.56	0.44
53:L8:6:VAL:HA	53:L8:55:ARG:O	2.17	0.44
1:1G:358:U:C4	1:1G:359:U:C5	3.06	0.44
1:1G:377:G:OP1	16:7A:3:LYS:HD2	2.17	0.44
1:1G:1009:G:H2'	1:1G:1010:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1297:C:OP2	1:1G:1297:C:H6	2.00	0.44
3:22:6:HIS:HD2	3:22:7:PRO:HD2	1.82	0.44
3:22:29:TYR:O	3:22:29:TYR:HD1	2.01	0.44
7:62:100:ALA:O	7:62:104:LEU:HD23	2.17	0.44
9:82:75:ASP:O	9:82:78:LYS:HD2	2.18	0.44
17:8A:19:VAL:HG22	17:8A:44:ALA:HB3	2.00	0.44
24:3L:6:G:H2'	24:3L:7:A:H5''	1.99	0.44
27:14:484:C:O2'	27:14:485:C:H5'	2.17	0.44
27:14:576:U:H2'	27:14:577:G:C8	2.52	0.44
27:14:1181:C:H2'	27:14:1182:A:O4'	2.17	0.44
27:14:1359:A:H2	27:14:1372:U:O4	2.00	0.44
27:14:2104:G:H2'	27:14:2105:C:C6	2.53	0.44
27:14:2109:U:H2'	27:14:2110:G:H5'	1.99	0.44
27:14:2176:A:OP1	29:79:7:TYR:OH	2.22	0.44
27:14:2256:G:C6	27:14:2257:U:C4	3.06	0.44
27:14:2459:A:C2	27:14:2460:U:H1'	2.52	0.44
34:59:21:PRO:HG2	34:59:23:ARG:HH12	1.83	0.44
40:45:32:TYR:HE1	40:45:133:ARG:HH21	1.65	0.44
43:75:124:ASP:OD1	43:75:124:ASP:N	2.51	0.44
48:C5:83:THR:HG21	48:C5:99:CYS:SG	2.57	0.44
49:D5:4:ARG:NH1	49:D5:58:VAL:HG21	2.32	0.44
49:D5:48:PHE:CE1	49:D5:52:SER:HA	2.53	0.44
49:D5:146:ILE:HA	49:D5:174:VAL:HB	2.00	0.44
51:F5:69:LYS:O	51:F5:72:GLU:HB3	2.16	0.44
52:G5:35:LEU:HD12	52:G5:53:LEU:HD12	1.99	0.44
1:13:8:A:N7	4:3E:208:SER:O	2.50	0.44
1:13:156:G:H1	1:13:165:C:N4	2.13	0.44
1:13:397:A:N6	1:13:548:G:C5	2.86	0.44
1:13:413:G:C8	1:13:413:G:H3'	2.53	0.44
1:13:538:G:OP2	12:3I:112:LYS:HG3	2.18	0.44
1:13:565:U:H3'	1:13:566:G:H2'	2.00	0.44
1:13:567:G:C2	1:13:568:G:H1'	2.53	0.44
1:13:701:C:O2'	1:13:702:A:OP2	2.36	0.44
1:13:722:A:H2'	1:13:724:G:H8	1.82	0.44
1:13:936:C:H2'	1:13:937:A:O4'	2.17	0.44
4:3E:59:ARG:NH2	4:3E:62:GLN:HG3	2.32	0.44
6:5E:7:ASN:HD21	18:9I:34:TYR:HE1	1.65	0.44
12:3I:82:ILE:HA	12:3I:82:ILE:HD12	1.74	0.44
16:7I:39:TYR:HB2	16:7I:49:LEU:HD13	1.99	0.44
17:8I:40:LYS:HD2	17:8I:42:TYR:CZ	2.53	0.44
26:5K:66:U:H2'	26:5K:67:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:253:C:H2'	27:1H:254:C:O4'	2.18	0.44
27:1H:470:A:H3'	32:31:45:ARG:HH12	1.83	0.44
27:1H:593:U:C4	27:1H:594:G:C6	3.05	0.44
27:1H:957:A:C6	27:1H:958:A:C6	3.06	0.44
27:1H:1383:A:H2'	27:1H:1384:G:H8	1.83	0.44
27:1H:1450:C:H5''	27:1H:1519:A:HI'	1.99	0.44
27:1H:1482:G:H21	27:1H:1526:G:H5'	1.83	0.44
27:1H:1762:G:H2'	27:1H:1763:G:O4'	2.18	0.44
27:1H:2819:U:H5''	27:1H:2901:G:O6	2.18	0.44
28:16:99:A:C6	28:16:100:G:C5	3.06	0.44
28:16:109:G:C6	28:16:110:G:C5	3.06	0.44
30:11:78:LYS:HB2	30:11:78:LYS:HE3	1.81	0.44
33:41:11:TYR:OH	33:41:32:PRO:O	2.31	0.44
33:41:55:LYS:HE3	33:41:59:GLU:OE2	2.17	0.44
33:41:82:LEU:HD23	33:41:82:LEU:HA	1.74	0.44
38:68:13:ASN:C	38:68:15:GLY:H	2.21	0.44
39:78:38:GLN:HG2	39:78:38:GLN:O	2.17	0.44
39:78:68:GLN:HG3	58:Q8:12:LYS:HG2	2.00	0.44
39:78:127:ALA:HB3	39:78:130:PHE:CE1	2.52	0.44
52:K8:16:LEU:HD12	52:K8:20:GLU:CB	2.48	0.44
52:K8:53:LEU:O	52:K8:57:ILE:HG13	2.18	0.44
57:P8:21:ARG:HD2	57:P8:30:VAL:HG11	2.00	0.44
1:1G:6:G:C4	5:42:119:LEU:HD11	2.53	0.44
1:1G:363:A:P	12:3A:30:ARG:HH21	2.41	0.44
1:1G:754:C:H5'	1:1G:755:G:C8	2.53	0.44
1:1G:881:G:C6	1:1G:882:C:C4	3.06	0.44
1:1G:962:C:H2'	1:1G:963:G:O4'	2.18	0.44
1:1G:1188:A:C5'	14:5A:58:LYS:HZ2	2.31	0.44
1:1G:1441:G:O5'	1:1G:1441:G:H8	2.00	0.44
3:22:182:ILE:HG12	3:22:203:PHE:HA	1.99	0.44
3:22:188:LEU:HB2	3:22:190:ARG:CZ	2.48	0.44
8:72:44:PHE:HZ	8:72:138:TRP:HA	1.83	0.44
59:1L:69:G:H2'	59:1L:70:G:H5''	1.98	0.44
60:2L:1:G:C6	60:2L:2:C:C4	3.05	0.44
24:3L:5:G:H2'	24:3L:6:G:O4'	2.18	0.44
24:3L:37:MIA:H121	24:3L:37:MIA:H162	1.77	0.44
27:14:58:G:C2	27:14:70:G:C6	3.05	0.44
27:14:528:A:C8	27:14:528:A:C3'	3.01	0.44
27:14:554:U:H2'	27:14:556:G:N7	2.33	0.44
27:14:828:U:H3'	27:14:828:U:O2	2.18	0.44
27:14:1728:G:C6	27:14:1730:U:OP2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1901:A:OP2	30:19:255:LYS:HE2	2.18	0.44
27:14:2262:U:O2'	27:14:2263:C:H5'	2.18	0.44
27:14:2379:G:OP1	42:65:23:ARG:NH2	2.50	0.44
30:19:77:ALA:HB2	30:19:97:TYR:CG	2.52	0.44
31:29:77:ILE:HD13	31:29:77:ILE:HA	1.74	0.44
34:59:41:MET:HA	34:59:53:GLU:O	2.18	0.44
37:15:7:LYS:H	37:15:7:LYS:HG2	1.61	0.44
38:25:104:ARG:CZ	38:25:104:ARG:HB2	2.48	0.44
39:35:13:ASN:C	39:35:15:ARG:N	2.67	0.44
40:45:35:VAL:HG12	40:45:130:LYS:O	2.17	0.44
49:D5:9:TYR:CE2	49:D5:63:ASP:HB3	2.52	0.44
52:G5:65:ASN:OD1	52:G5:65:ASN:N	2.50	0.44
54:I5:14:ILE:HG22	54:I5:21:VAL:HB	1.99	0.44
54:I5:48:ARG:HH21	54:I5:51:ASP:CB	2.30	0.44
58:M5:56:GLU:O	58:M5:59:LYS:HB2	2.17	0.44
1:13:38:G:N2	1:13:397:A:N3	2.66	0.44
1:13:51:A:N7	1:13:114:U:O2'	2.50	0.44
1:13:359:U:H2'	1:13:360:A:C8	2.52	0.44
1:13:435:C:H2'	1:13:436:C:H6	1.82	0.44
1:13:533:A:O2'	1:13:535:A:OP2	2.27	0.44
1:13:784:C:H2'	1:13:785:G:O4'	2.18	0.44
1:13:933:G:O6	7:6E:3:ARG:NH2	2.47	0.44
5:4E:126:ARG:HG3	5:4E:126:ARG:NH1	2.28	0.44
8:7E:98:LYS:H	8:7E:98:LYS:HZ3	1.65	0.44
9:8E:52:ALA:C	9:8E:95:LYS:HZ1	2.21	0.44
22:1K:27:G:H2'	22:1K:28:G:H8	1.83	0.44
22:1K:74:C:HO2'	22:1K:75:C:P	2.35	0.44
27:1H:267:C:H2'	27:1H:268:C:C6	2.53	0.44
27:1H:606:G:H2'	27:1H:607:G:H8	1.81	0.44
27:1H:926:A:C2	27:1H:927:G:C4	3.06	0.44
27:1H:929:G:C8	27:1H:930:G:H1'	2.53	0.44
27:1H:1736:U:O2	27:1H:1748:A:H8	2.01	0.44
27:1H:2249:C:H2'	27:1H:2250:G:O4'	2.18	0.44
27:1H:2784:G:H5''	27:1H:2785:C:OP2	2.18	0.44
27:1H:2832:A:H2'	27:1H:2833:G:C8	2.52	0.44
31:21:24:THR:HG22	31:21:186:GLY:O	2.18	0.44
32:31:34:TRP:HA	39:78:6:LEU:HG	2.00	0.44
33:41:60:LEU:HD23	33:41:60:LEU:HA	1.80	0.44
34:51:7:LEU:HD23	34:51:8:PRO:CD	2.41	0.44
40:88:41:TRP:CD1	40:88:96:VAL:HG23	2.53	0.44
49:H8:52:SER:C	49:H8:54:HIS:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H8:73:GLN:HE21	49:H8:73:GLN:HB2	1.68	0.44
1:1G:370:C:N4	1:1G:391:G:H1	2.16	0.44
1:1G:601:C:N4	1:1G:637:G:H1	2.15	0.44
1:1G:658:G:H2'	1:1G:659:U:C6	2.53	0.44
1:1G:1280:A:H5'	1:1G:1281:U:OP2	2.18	0.44
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.18	0.44
11:2A:18:ARG:HB2	11:2A:33:THR:OG1	2.17	0.44
27:14:139:G:N2	27:14:1596:A:H4'	2.32	0.44
27:14:617:G:OP1	32:39:40:GLN:HG2	2.17	0.44
27:14:817:C:O2'	27:14:839:U:H5''	2.17	0.44
27:14:873:G:C2	27:14:905:U:O2	2.71	0.44
27:14:886:C:HO2'	27:14:887:A:P	2.41	0.44
27:14:1507:A:O2'	27:14:1510:A:N1	2.46	0.44
27:14:1971:A:H5''	65:14:3689:HOH:O	2.18	0.44
27:14:2638:G:HO2'	27:14:2639:A:H8	1.60	0.44
27:14:2825:C:H2'	27:14:2826:A:O4'	2.17	0.44
27:14:2826:A:H3'	27:14:2827:C:H5''	1.99	0.44
27:14:2839:G:H5'	41:55:46:GLY:HA2	2.00	0.44
32:39:23:ASP:OD1	32:39:23:ASP:N	2.43	0.44
34:59:58:GLU:O	34:59:61:HIS:N	2.50	0.44
35:69:84:GLY:HA2	35:69:89:TYR:CE1	2.53	0.44
37:15:51:PHE:CE2	37:15:119:ARG:HD3	2.52	0.44
37:15:128:HIS:HB2	37:15:129:PRO:HD2	2.00	0.44
42:65:40:ILE:HA	42:65:47:THR:HA	1.99	0.44
45:95:94:LEU:HA	45:95:94:LEU:HD23	1.71	0.44
50:E5:26:TYR:O	50:E5:29:GLN:HB2	2.18	0.44
58:M5:52:LYS:HE3	58:M5:52:LYS:HB3	1.75	0.44
1:13:165:C:H2'	1:13:166:G:C8	2.53	0.43
1:13:177:C:P	20:BI:65:LYS:NZ	2.91	0.43
1:13:372:C:N4	1:13:389:A:H62	2.16	0.43
1:13:405:U:OP2	4:3E:3:ARG:NH2	2.50	0.43
1:13:491:G:H2'	1:13:492:G:O4'	2.17	0.43
1:13:509:A:C6	1:13:510:A:N1	2.86	0.43
1:13:1307:U:OP1	13:4I:101:GLN:NE2	2.37	0.43
2:1E:168:THR:HG21	2:1E:191:ASP:CB	2.47	0.43
7:6E:113:GLU:HB2	7:6E:119:ARG:HG2	1.99	0.43
10:1I:7:LYS:O	10:1I:97:GLU:HB2	2.17	0.43
13:4I:3:ARG:NH1	13:4I:7:VAL:HG12	2.32	0.43
13:4I:49:THR:OG1	13:4I:52:GLU:OE1	2.29	0.43
17:8I:12:SER:HB3	17:8I:20:THR:OG1	2.18	0.43
20:BI:88:VAL:O	20:BI:92:LEU:HB2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:153:C:H2'	27:1H:154:G:O4'	2.18	0.43
27:1H:892:C:H2'	27:1H:893:G:O4'	2.17	0.43
27:1H:1717:A:H5''	27:1H:2563:G:OP1	2.18	0.43
27:1H:1810:U:H2'	27:1H:1816:A:H62	1.83	0.43
27:1H:2515:G:H5''	27:1H:2516:2MA:O5'	2.17	0.43
27:1H:2708:C:H2'	27:1H:2709:U:C6	2.52	0.43
27:1H:2786:C:H2'	27:1H:2787:C:H6	1.83	0.43
27:1H:2828:G:C5	27:1H:2841:G:C2	3.06	0.43
27:1H:2834:A:OP1	31:21:159:HIS:NE2	2.49	0.43
29:71:30:LYS:HE3	29:71:30:LYS:HB3	1.81	0.43
33:41:76:SER:HA	33:41:82:LEU:O	2.18	0.43
40:88:80:GLU:O	50:I8:4:LYS:HE2	2.17	0.43
42:A8:106:ARG:HA	42:A8:109:GLY:H	1.83	0.43
48:G8:55:TYR:HB3	48:G8:58:GLY:HA3	1.99	0.43
54:M8:20:ASN:HB3	54:M8:22:ILE:HG13	2.00	0.43
1:1G:468:A:C5	1:1G:474:G:H1'	2.53	0.43
1:1G:718:G:H5'	11:2A:117:ASN:CB	2.47	0.43
1:1G:1183:A:HO2'	1:1G:1184:G:P	2.41	0.43
1:1G:1338:G:C6	1:1G:1339:A:C6	3.06	0.43
2:12:8:LYS:HZ1	2:12:217:ARG:HH21	1.65	0.43
2:12:137:ARG:HH11	2:12:137:ARG:C	2.20	0.43
3:22:123:GLN:HG2	3:22:128:PHE:CD2	2.53	0.43
13:4A:15:VAL:HG13	13:4A:43:THR:O	2.17	0.43
25:4L:53:U:H1'	25:4L:54:U:O5'	2.18	0.43
27:14:663:G:C6	27:14:664:C:C4	3.06	0.43
27:14:918:A:H5''	28:1J:97:G:O2'	2.18	0.43
27:14:1161:C:H2'	27:14:1162:G:C8	2.52	0.43
27:14:1535:U:H2'	27:14:1536:A:O4'	2.18	0.43
27:14:1614:A:H61	46:A5:88:ARG:H	1.64	0.43
27:14:1728:G:C2	27:14:1730:U:OP2	2.71	0.43
27:14:2462:U:H2'	27:14:2463:C:O4'	2.17	0.43
27:14:2562:U:H1'	38:25:23:ARG:HD3	2.00	0.43
27:14:2615:U:N1	55:J5:7:PRO:HA	2.33	0.43
30:19:71:ASP:OD2	30:19:103:ARG:NH2	2.51	0.43
31:29:26:ILE:O	31:29:181:LEU:HD12	2.18	0.43
33:49:76:SER:N	33:49:84:LYS:HG2	2.33	0.43
33:49:133:LEU:HD11	33:49:157:ILE:HD12	2.00	0.43
35:69:79:ILE:N	35:69:80:PRO:HD3	2.33	0.43
37:15:15:LEU:HD22	37:15:16:ILE:N	2.33	0.43
42:65:76:LYS:O	42:65:80:LEU:HG	2.18	0.43
44:85:12:ARG:HG3	44:85:12:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:85:66:ASN:HD21	44:85:70:ARG:NH2	2.16	0.43
49:D5:139:VAL:HG22	49:D5:155:LEU:HD22	1.99	0.43
58:M5:40:GLU:C	58:M5:42:ARG:H	2.21	0.43
1:13:166:G:H2'	1:13:167:G:H8	1.84	0.43
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.18	0.43
1:13:457:C:N3	1:13:476:G:C2	2.86	0.43
1:13:538:G:OP1	12:3I:110:ARG:HD3	2.18	0.43
1:13:685:G:O2'	1:13:686:U:H5'	2.18	0.43
1:13:1060:C:C4	3:2E:2:GLY:HA3	2.53	0.43
1:13:1492:A:OP1	12:3I:44:LYS:HB3	2.18	0.43
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.51	0.43
2:1E:178:ARG:HD2	2:1E:178:ARG:HA	1.69	0.43
3:2E:76:VAL:O	3:2E:83:ARG:HG2	2.19	0.43
4:3E:20:TYR:HA	4:3E:26:CYS:SG	2.58	0.43
4:3E:81:GLU:HA	4:3E:84:LYS:HB2	1.99	0.43
6:5E:21:LEU:HD22	6:5E:21:LEU:HA	1.90	0.43
6:5E:62:TRP:O	6:5E:63:TYR:HD1	2.01	0.43
9:8E:16:ARG:O	9:8E:63:ILE:HA	2.18	0.43
13:4I:54:VAL:HA	13:4I:57:ARG:HB3	2.00	0.43
22:1K:54:5MU:O5'	22:1K:54:5MU:H6	2.01	0.43
23:2K:53:G:H2'	23:2K:54:5MU:C6	2.53	0.43
27:1H:347:A:OP2	32:3I:169:ASN:HB2	2.19	0.43
27:1H:456:A:H5'	65:1H:4126:HOH:O	2.18	0.43
27:1H:596:A:H2'	27:1H:597:G:O4'	2.18	0.43
27:1H:712:C:H4'	27:1H:987:A:OP1	2.18	0.43
27:1H:1434:C:C2	27:1H:1435:G:C8	3.06	0.43
27:1H:1818:A:H2	27:1H:2619:C:H1'	1.83	0.43
27:1H:2157:A:H2	27:1H:2182:G:HO2'	1.63	0.43
27:1H:2198:C:H1'	29:7I:217:THR:O	2.17	0.43
27:1H:2452:A:H5'	27:1H:2452:A:H8	1.78	0.43
27:1H:2613:A:C6	27:1H:2614:C:N4	2.86	0.43
32:3I:40:GLN:HE22	32:3I:184:TYR:HB3	1.82	0.43
32:3I:56:GLU:H	32:3I:56:GLU:HG2	1.59	0.43
33:4I:62:LEU:HD12	33:4I:62:LEU:HA	1.76	0.43
33:4I:131:TYR:HB3	33:4I:159:VAL:HG22	2.00	0.43
37:58:131:GLN:NE2	37:58:132:ALA:HB2	2.33	0.43
41:98:9:LYS:HE2	41:98:9:LYS:HB3	1.84	0.43
42:A8:61:ASN:HB3	42:A8:64:GLU:CD	2.39	0.43
44:C8:91:ASP:O	44:C8:95:LEU:N	2.45	0.43
46:E8:97:LYS:HE2	46:E8:99:ARG:NH2	2.32	0.43
54:M8:16:CYS:SG	54:M8:36:CYS:N	2.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:157:G:H2'	1:1G:158:G:C8	2.54	0.43
1:1G:182:U:OP2	1:1G:183:G:N7	2.51	0.43
1:1G:232:G:H1'	1:1G:262:A:N1	2.33	0.43
1:1G:321:A:H2'	1:1G:322:C:C6	2.53	0.43
1:1G:433:C:C2'	1:1G:434:U:H5'	2.48	0.43
1:1G:868:C:H2'	1:1G:869:G:O4'	2.18	0.43
1:1G:986:A:H1'	19:AA:55:LYS:HA	2.00	0.43
1:1G:1343:G:O2'	9:82:121:ARG:HG2	2.18	0.43
1:1G:1476:G:H2'	1:1G:1477:C:C6	2.53	0.43
1:1G:1494:G:H4'	27:14:1913:A:C8	2.53	0.43
3:22:119:ARG:HH22	3:22:140:ARG:CB	2.31	0.43
4:32:11:LEU:HD12	4:32:21:LEU:HD13	1.99	0.43
5:42:103:GLY:O	5:42:106:PRO:HD2	2.18	0.43
9:82:26:VAL:HG13	9:82:61:ALA:HB3	2.00	0.43
9:82:105:ASP:O	9:82:107:ARG:N	2.51	0.43
60:2L:24:G:H2'	60:2L:25:C:O4'	2.18	0.43
27:14:141:A:H8	27:14:1595:G:H21	1.63	0.43
27:14:273(E):U:H3	27:14:363(A):A:H61	1.65	0.43
27:14:743:G:OP1	31:29:130:GLY:HA2	2.18	0.43
27:14:997:G:C2	27:14:1159:U:C2	3.06	0.43
27:14:1403:C:H5''	27:14:1471:A:C1'	2.49	0.43
27:14:1537:C:H2'	27:14:1538:G:C8	2.53	0.43
27:14:2357:U:OP1	50:E5:20:ARG:HD2	2.18	0.43
27:14:2712:U:O2'	27:14:2712(A):A:P	2.76	0.43
35:69:5:LEU:HD12	35:69:17:GLN:O	2.18	0.43
37:15:112:LEU:HD23	37:15:113:GLY:N	2.33	0.43
41:55:100:LEU:HD11	41:55:113:LEU:HD13	2.00	0.43
46:A5:11:ARG:HA	46:A5:100:THR:HG22	1.99	0.43
49:D5:5:LEU:HD13	49:D5:6:LYS:N	2.33	0.43
1:13:511:C:O3'	4:3E:43:HIS:CE1	2.71	0.43
1:13:749:C:H2'	1:13:750:G:H8	1.82	0.43
1:13:974:A:P	14:5I:41:ARG:HH12	2.40	0.43
1:13:1326:C:OP1	21:1F:12:LYS:NZ	2.34	0.43
1:13:1349:A:H3'	1:13:1350:A:H8	1.83	0.43
3:2E:164:ARG:CZ	25:4K:55:U:H1'	2.48	0.43
4:3E:88:VAL:HG12	4:3E:91:SER:H	1.83	0.43
6:5E:43:LEU:HD11	18:9I:35:ARG:NH1	2.33	0.43
13:4I:12:ASN:N	13:4I:12:ASN:OD1	2.51	0.43
13:4I:81:LEU:O	13:4I:89:GLY:HA3	2.17	0.43
23:2K:1:G:C2	23:2K:2:C:C4	3.06	0.43
24:3K:25:C:C4	24:3K:26:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:650:C:O5'	27:1H:650:C:H6	2.01	0.43
27:1H:1173:A:H4'	27:1H:1174:A:C5'	2.48	0.43
27:1H:1315:A:OP2	65:1H:3702:HOH:O	2.21	0.43
27:1H:1322:A:H4'	27:1H:1323:A:O5'	2.17	0.43
27:1H:1584:C:H2'	27:1H:1585:G:C8	2.53	0.43
27:1H:1754:U:C2	27:1H:1789:U:H5'	2.52	0.43
27:1H:1767:G:H2'	27:1H:1770:G:O6	2.18	0.43
27:1H:1814:C:H1'	27:1H:2622:U:H5''	1.98	0.43
27:1H:2725:U:OP1	27:1H:2728:G:H4'	2.19	0.43
27:1H:2816:C:H2'	27:1H:2817:G:C8	2.53	0.43
30:11:227:ASN:HB3	30:11:228:PRO:CD	2.49	0.43
34:51:24:VAL:HG23	34:51:25:LYS:O	2.18	0.43
35:61:32:PRO:C	35:61:34:GLY:H	2.22	0.43
38:68:79:PHE:CE2	38:68:101:PRO:HB2	2.53	0.43
40:88:23[A]:GLY:HA2	40:88:101:ARG:NH1	2.34	0.43
42:A8:59:LYS:CG	42:A8:60:GLY:H	2.31	0.43
52:K8:4:SER:O	52:K8:8:LYS:HG2	2.19	0.43
1:1G:244:U:O4	1:1G:906:G:H1'	2.18	0.43
1:1G:903:G:H2'	1:1G:904:C:C6	2.53	0.43
1:1G:1065:U:C5	1:1G:1190:G:H1'	2.52	0.43
1:1G:1129:C:H2'	1:1G:1130:A:N7	2.34	0.43
1:1G:1321:C:H4'	13:4A:87:TYR:CE2	2.53	0.43
1:1G:1346:A:C8	7:62:10:ARG:NH2	2.85	0.43
1:1G:1348:U:H2'	1:1G:1349:A:C8	2.50	0.43
3:22:175:LEU:HD21	3:22:201:TYR:CD1	2.53	0.43
4:32:101:LEU:HD21	4:32:121:VAL:HG11	2.00	0.43
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	2.00	0.43
59:1L:76:A:H62	27:14:2583:G:H21	1.66	0.43
27:14:278:A:H3'	27:14:278:A:OP2	2.17	0.43
27:14:578:A:OP1	27:14:1255:U:O2'	2.18	0.43
27:14:582:G:H2'	27:14:583:G:H8	1.83	0.43
27:14:586:A:N1	27:14:809:G:O2'	2.40	0.43
27:14:588:U:OP2	27:14:588:U:C6	2.71	0.43
27:14:594:U:H2'	27:14:595:C:C6	2.53	0.43
27:14:710:G:H2'	27:14:711:G:O4'	2.18	0.43
27:14:764:A:OP1	30:19:208:LYS:HE3	2.18	0.43
27:14:993:G:O4'	45:95:87:HIS:CD2	2.71	0.43
27:14:1104:C:H2'	27:14:1105:U:C6	2.53	0.43
27:14:1142(A):A:O2'	27:14:1143:A:P	2.77	0.43
27:14:1686:C:H5'	27:14:1687:G:OP2	2.18	0.43
27:14:1712:C:C2	27:14:1747:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1930:G:O2'	27:14:1931:U:O5'	2.36	0.43
27:14:2355:C:H1'	50:E5:39:ARG:HH21	1.83	0.43
28:1J:46:A:H2'	28:1J:47:C:C6	2.53	0.43
31:29:54:GLN:HB2	31:29:76:ARG:HG2	1.99	0.43
35:69:29:TYR:O	35:69:32:PRO:HD2	2.18	0.43
39:35:107:LYS:C	39:35:109:GLY:N	2.72	0.43
43:75:90:GLN:OE1	43:75:121:ILE:HD11	2.17	0.43
49:D5:76:LEU:H	49:D5:76:LEU:HD23	1.83	0.43
55:J5:6:VAL:HG13	55:J5:7:PRO:HD2	1.99	0.43
56:K5:33:LYS:HB3	56:K5:35:GLU:H	1.83	0.43
58:M5:63:PRO:HG2	58:M5:64:TYR:CD2	2.53	0.43
1:13:64:G:H4'	1:13:65:U:H5'	2.00	0.43
1:13:89:U:H2'	1:13:90:C:C6	2.53	0.43
1:13:509:A:C8	1:13:509:A:H3'	2.54	0.43
1:13:945:G:C6	1:13:1337:G:C5	3.06	0.43
1:13:974:A:P	14:5I:29:ARG:NH2	2.91	0.43
1:13:1023:G:C2	1:13:1024:G:H1'	2.53	0.43
1:13:1346:A:C5	7:6E:10:ARG:CZ	3.01	0.43
1:13:1431:C:H2'	1:13:1432:G:O4'	2.18	0.43
2:1E:47:THR:OG1	2:1E:202:PRO:O	2.37	0.43
7:6E:53:LYS:HA	7:6E:53:LYS:HD2	1.86	0.43
11:2I:77:MET:HE3	11:2I:80:VAL:HG12	2.01	0.43
11:2I:87:THR:HG22	11:2I:88:GLY:H	1.82	0.43
12:3I:44:LYS:HE3	25:4K:51:U:OP1	2.17	0.43
19:AI:53:ASN:HD21	19:AI:56:GLN:HG2	1.83	0.43
24:3K:58:A:H1'	24:3K:60:U:C5	2.53	0.43
26:5K:22:G:H8	26:5K:22:G:OP2	2.01	0.43
27:1H:13:A:N1	27:1H:551:U:H2'	2.34	0.43
27:1H:24:G:O2'	46:E8:77:ASP:HB3	2.19	0.43
27:1H:35:G:H1'	27:1H:481:A:C4	2.53	0.43
27:1H:1100:C:N4	27:1H:1153:G:H1	2.15	0.43
27:1H:2446:A:H5''	27:1H:2447:A:OP1	2.18	0.43
27:1H:2775:G:H1'	34:5I:143:GLN:OE1	2.19	0.43
27:1H:2809:G:H3'	27:1H:2810:U:C5'	2.49	0.43
27:1H:2873:G:H2'	27:1H:2874:C:C6	2.53	0.43
35:61:127:VAL:HG22	35:61:139:GLN:HB3	2.00	0.43
37:58:71:ILE:HD13	37:58:86:PRO:HA	2.00	0.43
38:68:77:ILE:HD13	38:68:78:ARG:N	2.33	0.43
40:88:85:LYS:HD2	40:88:85:LYS:N	2.32	0.43
42:A8:78:LEU:CD1	42:A8:108:GLY:HA2	2.49	0.43
49:H8:111:VAL:HG12	49:H8:112:ARG:HH21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:8:A:H4'	1:1G:9:G:OP1	2.17	0.43
1:1G:95:G:C2	1:1G:96:G:C5	3.06	0.43
1:1G:345:C:O2'	1:1G:346:G:N3	2.48	0.43
1:1G:1227:A:OP1	19:AA:80:TYR:OH	2.22	0.43
1:1G:1310:G:N2	1:1G:1328:C:N3	2.66	0.43
5:42:81:GLU:HB3	5:42:90:VAL:HG12	2.00	0.43
6:52:14:LEU:HB3	6:52:19:LEU:HB2	1.99	0.43
8:72:12:ARG:NH1	8:72:27:PRO:HD3	2.33	0.43
9:82:47:LEU:HD12	9:82:47:LEU:N	2.33	0.43
21:1B:12:LYS:O	21:1B:16:GLY:N	2.50	0.43
27:14:55:G:O2'	27:14:127:A:N1	2.37	0.43
27:14:146:G:H2'	27:14:147:U:O4'	2.18	0.43
27:14:784:A:C8	27:14:792:G:C5	3.06	0.43
27:14:1011:G:C2	27:14:1013:C:C2	3.07	0.43
27:14:1509:C:H5'	27:14:1510:A:O4'	2.18	0.43
27:14:1519:G:H2'	27:14:1520:U:O4'	2.19	0.43
27:14:1665:A:H4'	38:25:67:LYS:HB2	1.99	0.43
27:14:1802:A:N1	27:14:1822:G:H1'	2.33	0.43
27:14:2762:G:H2'	27:14:2762:G:N3	2.32	0.43
27:14:2795:G:H3'	27:14:2797:U:H5''	1.99	0.43
29:79:53:ARG:HG2	29:79:54:SER:H	1.83	0.43
31:29:60:ASN:OD1	31:29:62:PRO:HD2	2.18	0.43
57:L5:12:ARG:NH2	57:L5:44:PRO:HB3	2.33	0.43
1:13:73:G:H2'	1:13:74:C:O4'	2.18	0.43
1:13:628:G:H2'	1:13:629:G:O4'	2.17	0.43
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.51	0.43
2:1E:184:VAL:H	2:1E:198:ASP:HB2	1.84	0.43
4:3E:155:LEU:HD23	4:3E:155:LEU:HA	1.86	0.43
6:5E:46:ARG:HB3	6:5E:60:PHE:CE1	2.53	0.43
24:3K:22:G:N7	24:3K:46:G:N1	2.66	0.43
27:1H:275:U:O5'	27:1H:275:U:H6	2.02	0.43
27:1H:1515:C:OP1	27:1H:1515:C:H4'	2.18	0.43
27:1H:1878:G:H5''	27:1H:1878:G:H8	1.84	0.43
27:1H:1923:A:N1	27:1H:1993:A:C6	2.86	0.43
27:1H:2029:C:O2'	27:1H:2834:A:O2'	2.21	0.43
27:1H:2051:U:H2'	27:1H:2052:G:O4'	2.19	0.43
27:1H:2300:A:C2	27:1H:2359:A:N1	2.87	0.43
27:1H:2373:A:H8	27:1H:2373:A:O5'	2.00	0.43
27:1H:2860:U:N3	27:1H:2878:G:O4'	2.37	0.43
32:31:197:ASP:O	32:31:198:ALA:HB3	2.18	0.43
35:61:87:LYS:HG3	35:61:122:GLU:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:38:13:LEU:HB3	36:38:15:GLU:HB3	2.01	0.43
39:78:144:GLU:CD	39:78:144:GLU:N	2.69	0.43
47:F8:49:VAL:CG1	47:F8:50:LYS:N	2.80	0.43
52:K8:41:ILE:HG23	52:K8:41:ILE:HD12	1.78	0.43
58:Q8:32:LEU:HD23	58:Q8:32:LEU:HA	1.86	0.43
1:1G:416:G:C6	1:1G:417:C:C4	3.06	0.43
2:12:185:ILE:HG22	2:12:199:TYR:HB2	2.01	0.43
6:52:61:LEU:HB3	6:52:63:TYR:HE1	1.83	0.43
6:52:92:LYS:HB3	6:52:92:LYS:HE2	1.76	0.43
8:72:121:ASP:OD1	8:72:121:ASP:N	2.50	0.43
9:82:37:PHE:HA	9:82:40:LEU:HD12	2.00	0.43
12:3A:100:GLY:N	12:3A:104:ALA:O	2.51	0.43
17:8A:9:VAL:HG22	17:8A:56:VAL:HG22	2.01	0.43
17:8A:10:VAL:HG23	17:8A:55:ASP:O	2.19	0.43
17:8A:78:GLU:OE2	17:8A:81:ARG:HD2	2.18	0.43
19:AA:50:ALA:HA	19:AA:58:VAL:O	2.18	0.43
59:1L:51:U:H2'	59:1L:52:G:H8	1.83	0.43
27:14:382:G:OP2	65:14:3552:HOH:O	2.20	0.43
27:14:654(B):C:O5'	27:14:654(B):C:H6	2.01	0.43
27:14:754:C:H2'	27:14:755:C:C6	2.54	0.43
27:14:930:U:H3'	27:14:930:U:OP1	2.19	0.43
27:14:1412:A:H2'	27:14:1413:G:C8	2.54	0.43
27:14:1541:U:H2'	27:14:1542:G:O4'	2.19	0.43
27:14:1910:G:H2'	27:14:1911:PSU:O4'	2.19	0.43
27:14:2029:G:H2'	27:14:2031:A:OP2	2.18	0.43
27:14:2417:C:OP1	39:35:65:ARG:NH1	2.52	0.43
27:14:2611:U:C4	55:J5:3:LYS:HG2	2.53	0.43
30:19:16:MET:HB2	30:19:207:GLY:HA3	2.00	0.43
30:19:33:LEU:O	30:19:64:ILE:HG23	2.18	0.43
30:19:79:VAL:CG1	30:19:113:VAL:HA	2.47	0.43
31:29:4:ILE:C	31:29:5:LEU:HD23	2.39	0.43
33:49:75:LYS:HE2	33:49:75:LYS:HB3	1.64	0.43
39:35:57:THR:HG22	39:35:57:THR:O	2.18	0.43
44:85:21:ALA:HB1	44:85:24:TYR:CD2	2.54	0.43
44:85:79:PHE:O	44:85:79:PHE:HD1	2.02	0.43
50:E5:32:ARG:H	50:E5:35:ASN:CG	2.22	0.43
1:13:328:C:O2	1:13:328:C:H2'	2.18	0.43
1:13:1008:C:N4	1:13:1021:G:H22	2.17	0.43
1:13:1238:A:N3	1:13:1241:G:O2'	2.43	0.43
1:13:1301:U:HO2'	1:13:1302:U:P	2.42	0.43
2:1E:51:LEU:HG	2:1E:51:LEU:H	1.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:134:GLU:HA	2:1E:137:ARG:HB3	2.01	0.43
2:1E:215:LEU:HD23	2:1E:215:LEU:HA	1.83	0.43
13:4I:64:TRP:CD1	13:4I:64:TRP:N	2.86	0.43
16:7I:1:MET:SD	16:7I:3:LYS:HD3	2.58	0.43
18:9I:18:ARG:HB2	18:9I:19:LYS:H	1.54	0.43
19:AI:10:PHE:N	19:AI:10:PHE:CD1	2.86	0.43
22:1K:52:G:H5''	22:1K:52:G:H8	1.84	0.43
27:1H:440:A:N7	27:1H:2424:A:H2	2.15	0.43
27:1H:2147:G:H1'	29:7I:42:GLU:OE1	2.19	0.43
33:4I:78:SER:O	33:4I:80:PHE:N	2.51	0.43
34:5I:121:ILE:HD13	34:5I:121:ILE:HA	1.71	0.43
34:5I:124:GLU:HG2	34:5I:126:PRO:HD3	1.99	0.43
34:5I:129:THR:O	34:5I:129:THR:OG1	2.30	0.43
40:88:17:LEU:HD21	40:88:96:VAL:HG22	2.00	0.43
40:88:139:GLU:CD	40:88:139:GLU:H	2.22	0.43
41:98:32:GLY:HA2	41:98:116:LEU:HD12	2.00	0.43
42:A8:38:GLN:HG3	42:A8:47:THR:HG21	2.00	0.43
47:F8:14:SER:O	47:F8:17:ALA:N	2.52	0.43
48:G8:42:VAL:CG2	48:G8:43:ASN:N	2.81	0.43
53:L8:35:ARG:HE	53:L8:35:ARG:HB3	1.56	0.43
58:Q8:56:GLU:O	58:Q8:60:LEU:HD12	2.17	0.43
1:1G:710:G:OP1	6:52:54:LYS:NZ	2.38	0.43
1:1G:925:G:N2	1:1G:1503:A:OP1	2.51	0.43
1:1G:967:5MC:H2'	1:1G:968:A:C8	2.54	0.43
1:1G:1293:G:H2'	1:1G:1294:G:O4'	2.19	0.43
1:1G:1413:A:C2	1:1G:1488:G:C2	3.06	0.43
8:72:1:MET:H3	8:72:1:MET:CE	2.31	0.43
16:7A:23:ASP:OD2	16:7A:25:ARG:NH1	2.52	0.43
20:BA:35:THR:HA	20:BA:38:LYS:HZ3	1.83	0.43
59:1L:10:G:H2'	59:1L:11:C:C6	2.54	0.43
27:14:850:C:O3'	53:H5:49:LYS:HE2	2.19	0.43
27:14:1044:G:O2'	27:14:1111:A:N1	2.45	0.43
27:14:1677:A:N6	65:14:3617:HOH:O	2.38	0.43
27:14:2173:A:H2'	27:14:2173:A:N3	2.33	0.43
27:14:2568:C:O5'	27:14:2568:C:H6	2.02	0.43
27:14:2873:A:C8	41:55:5:LYS:HA	2.54	0.43
30:19:143:HIS:HD2	30:19:144:ALA:CB	2.32	0.43
31:29:181:LEU:HD12	31:29:181:LEU:HA	1.53	0.43
34:59:12:PRO:HG3	34:59:48:GLY:O	2.18	0.43
34:59:56:SER:OG	34:59:58:GLU:HG2	2.18	0.43
38:25:19:ILE:HG22	38:25:43:VAL:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:25:107:ARG:CZ	43:75:36:GLU:HG3	2.49	0.43
39:35:122:PRO:HA	39:35:141:ALA:HB1	2.00	0.43
40:45:7:MET:HB2	40:45:10:ARG:NH2	2.33	0.43
44:85:90:VAL:O	44:85:91:ASP:C	2.57	0.43
47:B5:67:GLY:C	47:B5:69:TYR:N	2.72	0.43
56:K5:26:ASN:ND2	56:K5:51:GLU:OE2	2.52	0.43
57:L5:16:HIS:CB	57:L5:44:PRO:HG2	2.49	0.43
57:L5:29:LYS:HA	57:L5:32:LYS:HB2	2.00	0.43
1:13:773:G:C6	1:13:774:G:C5	3.07	0.43
1:13:976:G:OP2	1:13:1358:U:O2'	2.33	0.43
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.33	0.43
1:13:1293:G:H2'	1:13:1294:G:C8	2.54	0.43
1:13:1360:A:H2'	1:13:1361:G:C8	2.54	0.43
2:1E:4:GLU:HG2	2:1E:5:ILE:HD13	2.01	0.43
4:3E:26:CYS:HA	63:3E:302:SF4:S1	2.58	0.43
6:5E:6:VAL:HG22	6:5E:90:VAL:HG22	2.01	0.43
7:6E:133:GLY:O	7:6E:136:LYS:HB3	2.18	0.43
10:1I:26:ALA:O	10:1I:30:SER:OG	2.37	0.43
11:2I:107:SER:HA	18:9I:87:ARG:NH1	2.34	0.43
15:6I:7:GLU:O	15:6I:11:VAL:HG23	2.17	0.43
18:9I:36:ASN:HB2	18:9I:39:VAL:HG23	2.00	0.43
20:BI:23:ARG:HG2	20:BI:24:LEU:N	2.30	0.43
22:1K:44:G:H2'	22:1K:45:U:H2'	2.00	0.43
24:3K:60:U:O2'	24:3K:61:C:OP1	2.32	0.43
27:1H:240:G:P	39:78:60:MET:HE1	2.59	0.43
27:1H:534:G:H4'	27:1H:535:C:OP2	2.18	0.43
27:1H:1097:A:C8	27:1H:2765:G:C4	3.07	0.43
27:1H:2321:G:H1	27:1H:2324:A:H2	1.65	0.43
27:1H:2349:A:H61	50:I8:43:THR:CG2	2.32	0.43
28:16:37:C:H2'	28:16:38:C:O4'	2.19	0.43
28:16:100:G:H2'	28:16:101:A:O4'	2.19	0.43
39:78:99:LEU:HD13	39:78:99:LEU:HA	1.76	0.43
39:78:106:LEU:HB3	39:78:107:LYS:H	1.58	0.43
41:98:113:LEU:HD12	41:98:113:LEU:HA	1.87	0.43
44:C8:58:ARG:HA	44:C8:61:TRP:CE3	2.53	0.43
46:E8:73:ALA:H	46:E8:106:ILE:HG13	1.83	0.43
50:I8:53:MET:HA	50:I8:58:THR:O	2.18	0.43
54:M8:57:GLU:HA	54:M8:60:GLN:NE2	2.33	0.43
1:1G:264:U:H2'	1:1G:265:G:O4'	2.19	0.43
1:1G:680:C:H2'	1:1G:681:C:C6	2.54	0.43
1:1G:775:G:H2'	1:1G:776:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:974:A:H5'	1:1G:974:A:N3	2.33	0.43
1:1G:1085:U:H3'	1:1G:1086:U:H5	1.84	0.43
1:1G:1359:C:O2'	1:1G:1361:G:N7	2.52	0.43
1:1G:1392:G:N2	1:1G:1502:A:C8	2.83	0.43
1:1G:1469:G:H2'	1:1G:1470:G:C8	2.53	0.43
2:12:74:LYS:HB2	2:12:74:LYS:NZ	2.33	0.43
3:22:14:ILE:O	3:22:15:THR:HG22	2.19	0.43
4:32:20:TYR:HA	4:32:26:CYS:SG	2.58	0.43
4:32:78:LEU:HD22	4:32:96:LEU:HB3	2.00	0.43
5:42:99:GLY:O	5:42:118:ILE:N	2.43	0.43
6:52:79:LEU:HB3	6:52:88:VAL:HG21	2.01	0.43
8:72:97:VAL:O	8:72:100:ILE:HG13	2.18	0.43
11:2A:83:ILE:HG23	11:2A:109:VAL:HB	2.00	0.43
13:4A:96:LEU:HB3	13:4A:97:PRO:HD2	2.01	0.43
16:7A:2:VAL:HG23	16:7A:22:THR:O	2.18	0.43
18:9A:73:ALA:HB3	18:9A:79:LEU:HD12	1.99	0.43
20:BA:92:LEU:HD12	20:BA:92:LEU:HA	1.70	0.43
59:1L:61:C:H2'	59:1L:62:C:O4'	2.18	0.43
24:3L:64:A:H2'	24:3L:65:G:C8	2.53	0.43
27:14:49:A:H5'	27:14:51:G:O4'	2.19	0.43
27:14:991:C:N4	27:14:1163:G:H1	2.17	0.43
27:14:997:G:O2'	27:14:998:C:H5'	2.19	0.43
27:14:1354:A:C8	27:14:1355:G:C8	3.06	0.43
27:14:2153:G:N2	27:14:2154:G:O6	2.52	0.43
27:14:2271:G:C5	27:14:2272:U:C5	3.07	0.43
27:14:2319:G:H4'	27:14:2320:A:O4'	2.19	0.43
27:14:2714:G:OP1	27:14:2714:G:C8	2.72	0.43
31:29:91:VAL:HG13	31:29:95:ILE:HG21	2.01	0.43
33:49:6:ALA:HB3	33:49:104:GLU:OE2	2.18	0.43
33:49:25:TYR:CZ	33:49:32:PRO:HD3	2.54	0.43
33:49:97:ASP:HA	33:49:100:TRP:HD1	1.84	0.43
41:55:29:LEU:HD12	41:55:29:LEU:HA	1.74	0.43
42:65:100:ALA:O	42:65:103:GLU:HG2	2.19	0.43
44:85:17:ILE:HD13	44:85:17:ILE:HA	1.87	0.43
52:G5:35:LEU:CD1	52:G5:53:LEU:HD12	2.49	0.43
58:M5:19:SER:OG	58:M5:21:LYS:HE3	2.19	0.43
1:13:28:G:H2'	1:13:29:G:O4'	2.18	0.43
1:13:417:C:H2'	1:13:418:C:C6	2.52	0.43
1:13:452:A:H4'	16:7I:72:ARG:NH2	2.34	0.43
1:13:738:C:H2'	1:13:739:C:C6	2.52	0.43
1:13:963:G:H5'	65:13:1902:HOH:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:976:G:C8	1:13:1362:C:N4	2.86	0.43
1:13:1353:G:O2'	1:13:1354:C:H5'	2.19	0.43
1:13:1360:A:H2'	1:13:1361:G:O4'	2.19	0.43
1:13:1453:G:H8	20:BI:39:LYS:HE2	1.83	0.43
2:1E:171:ALA:HA	2:1E:174:VAL:HB	2.00	0.43
2:1E:175:ARG:HA	2:1E:178:ARG:HB2	2.00	0.43
4:3E:10:ARG:O	4:3E:14:ARG:HB2	2.19	0.43
9:8E:95:LYS:HB2	9:8E:95:LYS:HE2	1.50	0.43
11:2I:97:ALA:O	11:2I:101:SER:HB3	2.18	0.43
21:1F:3:LYS:HG2	21:1F:14:TRP:CD1	2.53	0.43
26:5K:73:A:OP1	26:5K:74:C:H4'	2.17	0.43
27:1H:6:A:H2'	27:1H:7:G:O4'	2.19	0.43
27:1H:311:C:H2'	27:1H:312:C:C6	2.54	0.43
27:1H:751:U:H2'	27:1H:752:G:O4'	2.18	0.43
27:1H:793:G:C2'	27:1H:794:A:H5'	2.49	0.43
27:1H:1124:A:H3'	27:1H:1125:U:H5''	2.01	0.43
27:1H:1252:G:C6	27:1H:1253:C:C4	3.07	0.43
27:1H:1315:A:H2'	27:1H:1316:A:O4'	2.18	0.43
27:1H:2252:G:H5'	30:11:251:GLY:HA3	2.01	0.43
29:71:44:HIS:HB2	29:71:213:TYR:O	2.19	0.43
30:11:140:THR:HG22	30:11:141:VAL:O	2.18	0.43
31:21:117:MET:H	31:21:117:MET:HG2	1.71	0.43
43:B8:111:ARG:HD3	43:B8:111:ARG:H	1.83	0.43
46:E8:1:MET:O	46:E8:64:MET:HE3	2.17	0.43
49:H8:92:SER:O	49:H8:130:PRO:HG2	2.19	0.43
49:H8:153:SER:HB3	49:H8:167:PRO:HB3	2.00	0.43
58:Q8:35:GLN:OE1	58:Q8:35:GLN:HA	2.19	0.43
1:1G:29:G:O2'	1:1G:30:U:H5'	2.18	0.43
1:1G:166:G:H2'	1:1G:167:G:C8	2.54	0.43
1:1G:339:C:OP2	38:25:97:ARG:HD3	2.18	0.43
1:1G:712:A:H2'	1:1G:713:G:O4'	2.19	0.43
1:1G:865:A:O5'	1:1G:865:A:H8	2.01	0.43
1:1G:936:C:O3'	24:3L:34:G:H5'	2.19	0.43
1:1G:1149:C:H2'	1:1G:1150:U:C6	2.54	0.43
1:1G:1216:G:H2'	1:1G:1217:C:C6	2.54	0.43
3:22:40:ARG:NH2	3:22:57:ILE:HD12	2.34	0.43
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.36	0.43
12:3A:25:LYS:C	12:3A:27:ALA:H	2.22	0.43
12:3A:54:LYS:HG2	12:3A:64:THR:HA	2.01	0.43
16:7A:14:ASN:N	16:7A:15:PRO:HD3	2.34	0.43
20:BA:97:ALA:HB3	20:BA:99:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:2L:5:G:N1	60:2L:68:C:N3	2.46	0.43
24:3L:2:C:H2'	24:3L:3:C:C6	2.54	0.43
27:14:579:G:O2'	27:14:2019:A:OP1	2.29	0.43
27:14:1131:G:OP1	37:15:80:GLY:N	2.48	0.43
27:14:1141:U:H1'	27:14:1142(A):A:C2	2.54	0.43
27:14:1171:G:H1	27:14:1178:C:N4	2.07	0.43
27:14:1658:C:H2'	27:14:1659:U:C6	2.54	0.43
27:14:1668:A:N7	27:14:1674:G:C6	2.86	0.43
27:14:1796:U:H2'	27:14:1797:C:H6	1.82	0.43
27:14:1827:C:C2'	27:14:1828:G:H5'	2.48	0.43
27:14:2038:G:H2'	27:14:2039:C:O4'	2.17	0.43
27:14:2527:C:H2'	27:14:2528:U:O4'	2.18	0.43
27:14:2769:C:H2'	27:14:2770:G:C8	2.53	0.43
27:14:2819:G:H1	27:14:2827:C:N4	2.16	0.43
28:1J:6:C:C2	28:1J:115:G:C2	3.06	0.43
28:1J:42:C:C4	33:49:91:ARG:NH2	2.87	0.43
32:39:108:LYS:O	32:39:112:MET:HG3	2.19	0.43
33:49:55:LYS:HG3	33:49:153:ARG:HH21	1.84	0.43
39:35:38:GLN:O	39:35:44:GLY:HA2	2.18	0.43
40:45:14:ARG:HG2	40:45:41:TRP:HH2	1.84	0.43
49:D5:5:LEU:HD12	49:D5:7:ALA:HB2	2.00	0.43
51:F5:53:VAL:O	51:F5:55:GLY:N	2.52	0.43
51:F5:92:LYS:C	51:F5:94:LEU:H	2.22	0.43
1:13:156:G:C2	1:13:166:G:C2	3.06	0.43
1:13:359:U:H2'	1:13:360:A:H8	1.84	0.43
1:13:875:C:C4	1:13:876:G:N7	2.87	0.43
1:13:910:C:O5'	1:13:910:C:H6	2.02	0.43
1:13:1129:C:O2'	1:13:1139:G:N2	2.51	0.43
2:1E:101:MET:HA	2:1E:108:ILE:HG13	2.01	0.43
6:5E:67:MET:SD	6:5E:75:LEU:HD22	2.59	0.43
13:4I:81:LEU:HD23	13:4I:81:LEU:HA	1.75	0.43
19:AI:18:LYS:NZ	19:AI:22:LEU:HD22	2.34	0.43
23:2K:19:G:C5	23:2K:57:G:N2	2.87	0.43
27:1H:73:A:C8	27:1H:73:A:O5'	2.72	0.43
27:1H:566:C:N4	27:1H:567:C:N4	2.67	0.43
27:1H:949:C:H2'	27:1H:950:C:H6	1.84	0.43
27:1H:1306:G:H2'	27:1H:1307:G:C8	2.54	0.43
27:1H:1995:A:H2'	27:1H:1996:G:H8	1.82	0.43
27:1H:2151:C:O2'	27:1H:2196:A:N3	2.51	0.43
27:1H:2174:G:H2'	27:1H:2175:G:C8	2.54	0.43
28:16:73:A:C4	28:16:104:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:21:38:THR:OG1	31:21:41:LYS:HB3	2.19	0.43
32:31:8:GLN:H	32:31:8:GLN:CD	2.23	0.43
32:31:33:LEU:HB3	39:78:6:LEU:HD11	2.00	0.43
38:68:68:GLU:CD	38:68:68:GLU:H	2.22	0.43
49:H8:99:TYR:HA	49:H8:124:ILE:O	2.18	0.43
51:J8:85:LEU:HA	51:J8:87:PRO:HD2	2.01	0.43
1:1G:468:A:O3'	16:7A:81:ARG:HA	2.19	0.43
1:1G:618:C:H5''	1:1G:619:U:H5''	2.00	0.43
1:1G:1292:U:H2'	1:1G:1293:G:H8	1.83	0.43
1:1G:1337:G:H5''	1:1G:1338:G:OP1	2.18	0.43
9:82:124:GLN:HA	9:82:124:GLN:HE21	1.84	0.43
11:2A:29:ILE:O	11:2A:29:ILE:HG13	2.19	0.43
12:3A:72:HIS:ND1	12:3A:72:HIS:O	2.52	0.43
13:4A:48:LEU:HD11	13:4A:53:VAL:HG22	2.01	0.43
14:5A:37:PHE:HB3	14:5A:39:LEU:HB2	1.99	0.43
19:AA:20:LEU:HA	19:AA:23:ASN:ND2	2.33	0.43
27:14:98:G:C5'	52:G5:3:LEU:HD12	2.49	0.43
27:14:110:G:C2	27:14:111:A:C8	3.06	0.43
27:14:323:G:H1'	27:14:1205:U:O2	2.18	0.43
27:14:654:A:H2'	27:14:654(A):A:H8	1.84	0.43
27:14:848:G:C2	27:14:849:A:C5	3.07	0.43
27:14:901:A:H8	27:14:901:A:OP2	2.00	0.43
27:14:993:G:O4'	45:95:87:HIS:HD2	2.02	0.43
27:14:1166:C:N4	27:14:1183:G:H1	2.11	0.43
27:14:1363:C:H2'	27:14:1364:G:H8	1.83	0.43
27:14:1495:A:O2'	27:14:1496:A:H5'	2.18	0.43
27:14:1645:G:C5'	27:14:1646:C:H5'	2.48	0.43
27:14:2012:G:OP2	46:A5:16:LYS:NZ	2.52	0.43
27:14:2282:G:H4'	27:14:2389:G:O2'	2.19	0.43
27:14:2688:U:C5	27:14:2720:U:OP2	2.72	0.43
27:14:2822:G:O2'	27:14:2824:C:OP2	2.19	0.43
31:29:18:ASP:HA	43:75:82:LEU:HD11	2.01	0.43
44:85:100:VAL:O	44:85:101:ARG:HG2	2.18	0.43
51:F5:40:ARG:HE	51:F5:40:ARG:HB2	1.70	0.43
52:G5:16:LEU:HG	52:G5:20:GLU:CG	2.49	0.43
52:G5:21:LEU:O	52:G5:25:VAL:HG12	2.19	0.43
55:J5:30:LEU:HD23	55:J5:30:LEU:HA	1.84	0.43
58:M5:21:LYS:H	58:M5:21:LYS:HG2	1.55	0.43
1:13:107:G:O6	20:BI:15:ARG:HD3	2.18	0.43
1:13:191(D):U:H2'	1:13:191(E):G:H8	1.83	0.43
1:13:475:G:H2'	1:13:476:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:791:G:C5	1:13:792:A:C2	3.07	0.43
1:13:833:U:H3	1:13:853:G:H1	1.66	0.43
1:13:1273:G:C6	1:13:1274:G:C4	3.06	0.43
1:13:1371:G:H2'	1:13:1372:U:H6	1.83	0.43
4:3E:144:ASP:O	4:3E:146:ILE:HD12	2.19	0.43
5:4E:45:PHE:CE2	5:4E:47:LYS:HD2	2.54	0.43
8:7E:87:SER:CB	8:7E:93:VAL:H	2.32	0.43
14:5I:7:ILE:HG12	14:5I:8:GLU:N	2.34	0.43
15:6I:39:LEU:HB3	15:6I:56:LEU:HD13	2.01	0.43
17:8I:89:LEU:HD23	17:8I:89:LEU:HA	1.67	0.43
19:AI:33:THR:OG1	19:AI:34:TRP:N	2.52	0.43
22:1K:27:G:H2'	22:1K:28:G:C8	2.54	0.43
23:2K:71:G:C6	23:2K:72:C:C5	3.07	0.43
27:1H:54:G:N3	27:1H:125:A:H2	2.16	0.43
27:1H:142:G:H2'	27:1H:143:C:C6	2.53	0.43
27:1H:317:C:C2	27:1H:374:G:C2	3.07	0.43
27:1H:490:G:OP1	65:1H:3704:HOH:O	2.21	0.43
27:1H:589:C:H2'	27:1H:590:U:O4'	2.19	0.43
27:1H:600:U:O5'	27:1H:600:U:H6	2.02	0.43
27:1H:919:U:OP1	40:88:5:ARG:HG2	2.18	0.43
27:1H:923:G:H2'	27:1H:924:C:O4'	2.19	0.43
27:1H:938:A:H5''	27:1H:939:G:C8	2.54	0.43
27:1H:1234:U:C4'	45:D8:79:VAL:HG22	2.49	0.43
27:1H:1253:C:H2'	27:1H:1254:C:H6	1.84	0.43
27:1H:1818:A:H1'	27:1H:1961:A:N6	2.34	0.43
27:1H:2124:G:H2'	27:1H:2125:U:C6	2.54	0.43
27:1H:2542:G:H5''	27:1H:2543:A:C5'	2.49	0.43
28:16:79:C:O5'	28:16:79:C:H6	2.02	0.43
30:11:105:ILE:HD12	30:11:105:ILE:HA	1.59	0.43
33:41:109:VAL:HG21	54:M8:14:ILE:HD11	2.01	0.43
34:51:4:ILE:HD13	34:51:4:ILE:HA	1.87	0.43
35:61:15:VAL:H	35:61:15:VAL:HG22	1.55	0.43
35:61:93:THR:O	35:61:97:ILE:HG13	2.19	0.43
36:38:11:ALA:O	36:38:12:THR:OG1	2.32	0.43
38:68:19:ILE:HB	38:68:41:ALA:HB1	2.01	0.43
38:68:98:VAL:HG13	38:68:117:LEU:HB2	2.00	0.43
39:78:15:ARG:HD3	39:78:15:ARG:HA	1.76	0.43
40:88:22[B]:LYS:HB3	40:88:22[B]:LYS:HE3	1.61	0.43
40:88:118:LEU:HD13	40:88:131:ILE:HG23	2.01	0.43
41:98:97:VAL:HG22	41:98:114:VAL:CG2	2.43	0.43
42:A8:7:TYR:CE1	42:A8:91:PRO:HG3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C8:92:ARG:C	44:C8:94:ASN:N	2.68	0.43
47:F8:57:LEU:HD11	47:F8:78:LYS:HD2	2.00	0.43
51:J8:53:VAL:O	51:J8:54:ALA:C	2.57	0.43
1:1G:792:A:H4'	1:1G:793:U:O5'	2.19	0.43
1:1G:973:G:H1'	10:1A:55:LYS:HG2	2.00	0.43
1:1G:1128:C:H5'	1:1G:1129:C:OP2	2.18	0.43
1:1G:1459:C:H2'	1:1G:1460:A:C8	2.54	0.43
2:12:32:ILE:HD11	2:12:40:HIS:CD2	2.54	0.43
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.53	0.43
7:62:103:TRP:NE1	7:62:137:LYS:HD3	2.34	0.43
10:1A:13:HIS:CE1	10:1A:14:LYS:HE3	2.54	0.43
15:6A:3:ILE:H	15:6A:3:ILE:HD13	1.84	0.43
27:14:210:C:H2'	27:14:211:A:C8	2.54	0.43
27:14:445:C:H2'	27:14:446:G:O4'	2.18	0.43
27:14:588:U:OP2	27:14:588:U:H6	2.02	0.43
27:14:670:A:H5'	39:35:43:GLY:CA	2.49	0.43
27:14:1142(A):A:HO2'	27:14:1143:A:P	2.42	0.43
27:14:1169:G:N1	27:14:1181:C:N3	2.66	0.43
27:14:2078:C:H2'	27:14:2079:U:C6	2.54	0.43
27:14:2102:U:H2'	27:14:2103:C:C6	2.54	0.43
27:14:2345:G:H1'	27:14:2382:G:H5'	2.00	0.43
27:14:2346:A:C2	27:14:2383:G:N3	2.87	0.43
31:29:27:LEU:HD22	31:29:181:LEU:CD1	2.48	0.43
32:39:9:ILE:HD11	32:39:125:LEU:HG	2.01	0.43
38:25:22:ILE:HD13	38:25:22:ILE:HA	1.55	0.43
39:35:115:LEU:HB3	39:35:131:SER:HB2	2.01	0.43
1:13:266:G:H4'	1:13:267:C:C5	2.54	0.42
1:13:509:A:H1'	1:13:543:C:O2'	2.19	0.42
1:13:731:G:H2'	1:13:732:C:H6	1.82	0.42
1:13:903:G:H2'	1:13:904:C:H6	1.83	0.42
1:13:911:U:H2'	1:13:912:C:H6	1.82	0.42
1:13:927:G:N2	1:13:1391:U:H1'	2.34	0.42
1:13:1091:U:O2	1:13:1093:A:C8	2.72	0.42
1:13:1338:G:C6	1:13:1339:A:C6	3.08	0.42
1:13:1453:G:H2'	20:BI:39:LYS:NZ	2.34	0.42
1:13:1498:UR3:O4'	1:13:1519:MA6:H2	2.19	0.42
4:3E:3:ARG:HG2	4:3E:118:ARG:CZ	2.49	0.42
17:8I:76:LEU:HD12	17:8I:77:VAL:N	2.34	0.42
24:3K:3:C:N4	24:3K:70:G:H1	2.16	0.42
24:3K:4:C:O2	24:3K:69:G:N1	2.49	0.42
24:3K:27:G:O6	24:3K:43:C:N4	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:93:G:N3	52:K8:47:ASN:ND2	2.50	0.42
27:1H:505:A:N1	27:1H:526:G:H4'	2.34	0.42
27:1H:1144:U:H3'	27:1H:1145:A:H8	1.84	0.42
27:1H:1218:G:H8	27:1H:1218:G:O5'	2.02	0.42
27:1H:2032:G:OP1	46:E8:41:LYS:HE2	2.19	0.42
27:1H:2466:A:H2'	27:1H:2467:G:O4'	2.19	0.42
27:1H:2556:G:H2'	27:1H:2557:G:O4'	2.18	0.42
27:1H:2584:C:H5''	27:1H:2585:A:H5''	2.01	0.42
27:1H:2625:C:OP2	55:N8:2:ALA:HB3	2.19	0.42
32:31:7:TYR:O	32:31:21:ALA:HA	2.19	0.42
34:51:11:VAL:HG13	34:51:12:PRO:HD2	2.00	0.42
35:61:25:TYR:CE1	35:61:29:TYR:CD2	3.01	0.42
35:61:77:LEU:HD12	35:61:140:LEU:HB3	2.01	0.42
37:58:67:LEU:HB3	37:58:88:GLU:HG3	2.01	0.42
40:88:56:ARG:HA	40:88:56:ARG:HD2	1.64	0.42
43:B8:7:ILE:HG12	43:B8:11:GLU:OE2	2.19	0.42
46:E8:46:PHE:O	46:E8:50:VAL:HG23	2.19	0.42
48:G8:37:VAL:HG21	48:G8:72:VAL:HG21	2.01	0.42
49:H8:110:GLY:N	49:H8:145:GLU:OE2	2.52	0.42
51:J8:90:ILE:HD12	51:J8:90:ILE:HG23	1.82	0.42
54:M8:20:ASN:HD22	54:M8:22:ILE:HG12	1.84	0.42
1:1G:389:A:C6	1:1G:390:C:H1'	2.54	0.42
1:1G:422:C:H4'	1:1G:423:G:C2	2.54	0.42
1:1G:544:G:C6	1:1G:545:C:C4	3.07	0.42
1:1G:685:G:C2	1:1G:686:U:C4	3.07	0.42
1:1G:701:C:H1'	1:1G:703:G:C4	2.54	0.42
1:1G:1186:G:N3	1:1G:1186:G:H2'	2.33	0.42
1:1G:1221:G:H4'	19:AA:77:THR:HG21	2.01	0.42
1:1G:1530:G:H2'	1:1G:1531:A:C8	2.54	0.42
2:12:137:ARG:HD3	2:12:138:LEU:HD23	2.01	0.42
3:22:26:LYS:H	3:22:26:LYS:HG3	1.33	0.42
3:22:137:ALA:O	3:22:141:VAL:HG23	2.19	0.42
7:62:22:LEU:HG	7:62:62:PHE:HE1	1.83	0.42
14:5A:4:LYS:O	14:5A:6:LEU:N	2.52	0.42
15:6A:61:GLY:O	15:6A:65:ARG:HG3	2.19	0.42
16:7A:53:VAL:HB	16:7A:79:VAL:HG22	1.99	0.42
17:8A:81:ARG:HB3	17:8A:84:LEU:HG	2.01	0.42
20:BA:43:LEU:HD23	20:BA:43:LEU:HA	1.75	0.42
59:1L:76:A:O2'	27:14:2452:C:H5''	2.19	0.42
27:14:193:U:O3'	27:14:803:U:H4'	2.18	0.42
27:14:587:C:N3	39:35:33:ARG:NH1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1179:C:H2'	27:14:1180:C:C6	2.53	0.42
27:14:1832:C:N4	27:14:1833:U:C4	2.87	0.42
27:14:1937:A:H1'	27:14:1939:5MU:H73	2.01	0.42
27:14:2017:U:O2	55:J5:10:LYS:HB2	2.18	0.42
27:14:2080:G:H2'	27:14:2081:C:C6	2.54	0.42
27:14:2242:G:H2'	27:14:2243:U:O4'	2.18	0.42
27:14:2281:C:O2'	27:14:2282:G:H5'	2.19	0.42
27:14:2688:U:O2	27:14:2688:U:H3'	2.19	0.42
34:59:35:VAL:HG11	34:59:71:LEU:HB3	2.01	0.42
34:59:121:ILE:HD13	34:59:121:ILE:HA	1.89	0.42
35:69:54:GLN:HA	35:69:57:ARG:HB2	2.00	0.42
39:35:91:PHE:CD1	39:35:91:PHE:N	2.87	0.42
41:55:55:ALA:HB2	41:55:80:PHE:CE1	2.54	0.42
43:75:121:ILE:O	43:75:123:GLN:N	2.52	0.42
48:C5:68:HIS:O	48:C5:71:LYS:HG2	2.19	0.42
51:F5:7:ILE:HG23	51:F5:95:LEU:HD11	2.01	0.42
58:M5:14:VAL:CG1	58:M5:22:VAL:HG13	2.49	0.42
58:M5:22:VAL:CG1	58:M5:50:LEU:HG	2.46	0.42
1:13:321:A:C2	1:13:333:G:C2	3.07	0.42
1:13:350:G:H2'	1:13:351:G:C8	2.54	0.42
1:13:502:G:H2'	1:13:503:C:C6	2.54	0.42
1:13:940:C:O2'	1:13:941:G:H5'	2.19	0.42
4:3E:61:LYS:O	4:3E:65:ARG:HG3	2.18	0.42
6:5E:26:ILE:HG22	6:5E:30:LEU:HD11	2.00	0.42
8:7E:16:ALA:HB1	8:7E:21:LYS:HB3	2.01	0.42
13:4I:23:TYR:CE2	13:4I:71:ARG:HG3	2.55	0.42
18:9I:54:ARG:CZ	18:9I:54:ARG:HB3	2.49	0.42
20:BI:23:ARG:HA	20:BI:26:ASN:ND2	2.32	0.42
20:BI:26:ASN:ND2	20:BI:26:ASN:N	2.54	0.42
27:1H:494:G:OP1	57:P8:33:ARG:NH1	2.52	0.42
27:1H:1110:G:N2	27:1H:1123:C:O2'	2.53	0.42
27:1H:1563:U:H2'	27:1H:1564:G:H8	1.84	0.42
27:1H:1700:A:O2'	27:1H:1701:G:H5'	2.19	0.42
27:1H:1895:G:H2'	27:1H:1896:U:O4'	2.19	0.42
27:1H:1938:5MU:OP2	27:1H:1938:5MU:H71	2.19	0.42
27:1H:2069:G:O5'	55:N8:19:ARG:HA	2.19	0.42
27:1H:2405:A:C2	27:1H:2437:C:N4	2.83	0.42
27:1H:2583:G:H2'	27:1H:2584:C:H6	1.83	0.42
28:16:45:A:H2'	28:16:46:A:O4'	2.19	0.42
28:16:89:G:H8	28:16:89:G:OP2	2.02	0.42
28:16:95:U:H2'	28:16:96:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:71:6:ARG:O	29:71:10:LEU:HD22	2.20	0.42
29:71:53:ARG:NH1	29:71:56:GLN:OE1	2.52	0.42
33:41:145:THR:C	33:41:147:ASP:H	2.22	0.42
34:51:3:ARG:HG3	34:51:5:GLY:N	2.34	0.42
41:98:29:LEU:HD12	41:98:116:LEU:HD21	2.01	0.42
44:C8:110:VAL:O	44:C8:114:LYS:N	2.43	0.42
48:G8:8:LYS:O	48:G8:11:ASP:HB2	2.19	0.42
49:H8:48:PHE:CE1	49:H8:71:VAL:HG11	2.54	0.42
49:H8:105:VAL:HG22	49:H8:106:GLY:H	1.84	0.42
1:1G:746:A:H2'	1:1G:747:C:C6	2.54	0.42
1:1G:1171:G:H2'	1:1G:1172:C:H6	1.83	0.42
1:1G:1374:A:H2'	1:1G:1375:A:H5'	2.01	0.42
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.54	0.42
2:12:69:LEU:HG	2:12:91:PRO:HB2	2.01	0.42
4:32:161:ASN:O	4:32:164:ALA:N	2.52	0.42
5:42:110:LEU:O	5:42:115:VAL:HG13	2.19	0.42
8:72:31:PHE:CZ	8:72:35:ILE:HD11	2.54	0.42
14:5A:25:VAL:HG23	14:5A:38:GLY:O	2.18	0.42
18:9A:22:VAL:HG22	18:9A:23:LYS:N	2.31	0.42
20:BA:16:HIS:NE2	20:BA:20:LEU:HD11	2.34	0.42
20:BA:73:HIS:H	20:BA:76:ALA:HB3	1.83	0.42
24:3L:36:A:H8	24:3L:36:A:O5'	2.02	0.42
27:14:28:A:C4	27:14:513:A:C8	3.07	0.42
27:14:244:A:C2	27:14:255:A:C4	3.07	0.42
27:14:363(E):U:H3'	27:14:363(F):A:C8	2.54	0.42
27:14:688:U:H5'	27:14:1780:A:C2	2.54	0.42
27:14:768:G:O2'	27:14:1379:A:N6	2.52	0.42
27:14:956:G:OP2	40:45:14:ARG:NH2	2.33	0.42
27:14:1048:A:P	27:14:1109:C:H42	2.42	0.42
27:14:1315:C:C2	27:14:1338:G:N2	2.87	0.42
27:14:1555:G:H2'	27:14:1556:C:H6	1.84	0.42
27:14:2251:OMG:HM23	27:14:2251:OMG:H1'	1.78	0.42
27:14:2335:A:O2'	27:14:2336:A:O5'	2.34	0.42
27:14:2335:A:N7	27:14:2337:G:C5	2.87	0.42
27:14:2752:C:H3'	27:14:2753:A:C8	2.54	0.42
27:14:2842:G:H2'	27:14:2843:G:C8	2.55	0.42
29:79:42:GLU:HB2	29:79:44:HIS:HE1	1.82	0.42
31:29:97:LYS:O	31:29:100:GLU:HG3	2.20	0.42
32:39:20:LEU:HD12	32:39:20:LEU:HA	1.76	0.42
33:49:147:ASP:OD1	33:49:148:MET:N	2.52	0.42
40:45:78:PRO:HG2	50:E5:7:LEU:HD11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:95:49:THR:HB	45:95:50:PRO:CD	2.49	0.42
46:A5:67:ASP:OD1	46:A5:67:ASP:N	2.47	0.42
1:13:46:G:O2'	1:13:365:U:H1'	2.19	0.42
1:13:937:A:N6	1:13:1345:U:O4	2.49	0.42
1:13:1508:G:H2'	1:13:1509:C:C6	2.55	0.42
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.19	0.42
14:5I:24:CYS:HA	14:5I:38:GLY:O	2.18	0.42
16:7I:8:ARG:C	16:7I:9:PHE:HD1	2.22	0.42
19:AI:50:ALA:HB1	19:AI:57:HIS:HB3	2.01	0.42
27:1H:249:G:N2	27:1H:647:A:H8	2.13	0.42
27:1H:930:G:O2'	27:1H:931:G:N7	2.41	0.42
27:1H:1001:C:OP1	40:88:87:LYS:HE2	2.18	0.42
27:1H:1131:A:N1	27:1H:1132:A:N7	2.67	0.42
27:1H:1149:C:H2'	27:1H:1150:A:H8	1.85	0.42
27:1H:1686:C:O3'	27:1H:2722:G:N2	2.51	0.42
27:1H:2228:G:H2'	27:1H:2228:G:N3	2.34	0.42
27:1H:2435:A:H8	27:1H:2435:A:H2'	1.72	0.42
27:1H:2539:G:H5'	27:1H:2756:C:O2'	2.18	0.42
27:1H:2567:U:H2'	27:1H:2568:U:C6	2.54	0.42
30:11:24:ILE:HD11	30:11:91:ARG:CD	2.50	0.42
30:11:181:GLU:HG2	30:11:182:LEU:N	2.34	0.42
35:61:48:GLU:O	35:61:52:ARG:HG2	2.19	0.42
35:61:57:ARG:NH1	35:61:61:ARG:HD2	2.35	0.42
40:88:11:LYS:HE2	40:88:88:GLY:O	2.19	0.42
48:G8:57:GLN:OE1	48:G8:58:GLY:N	2.52	0.42
49:H8:5:LEU:C	49:H8:6:LYS:HG3	2.38	0.42
57:P8:20:ALA:HA	57:P8:23:ARG:NH2	2.35	0.42
1:1G:191:G:C6	1:1G:192:U:C4	3.07	0.42
1:1G:370:C:N3	1:1G:391:G:N2	2.58	0.42
1:1G:443:C:H2'	1:1G:444:C:C6	2.54	0.42
1:1G:582:U:C2	1:1G:760:G:C6	3.07	0.42
1:1G:616:G:N2	1:1G:625:G:C4	2.87	0.42
1:1G:666:G:C2	1:1G:741:G:C4	3.07	0.42
1:1G:957:U:H2'	1:1G:959:A:OP2	2.18	0.42
1:1G:983:A:H3'	1:1G:983:A:N3	2.35	0.42
1:1G:1175:G:H2'	1:1G:1176:A:H8	1.84	0.42
1:1G:1291:G:H5''	7:62:41:ARG:HH21	1.83	0.42
2:12:108:ILE:O	2:12:108:ILE:HG22	2.19	0.42
5:42:51:VAL:O	5:42:55:VAL:HG23	2.19	0.42
17:8A:100:LYS:HD3	17:8A:100:LYS:HA	1.55	0.42
19:AA:29:ARG:HD2	19:AA:29:ARG:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:236:C:H2'	27:14:237:C:C6	2.54	0.42
27:14:248:G:C2	27:14:2431:U:H4'	2.54	0.42
27:14:654(C):G:N3	27:14:654(S):G:N2	2.67	0.42
27:14:1054:A:H2'	27:14:1055:G:C8	2.53	0.42
27:14:1137:G:H2'	27:14:1138:G:C8	2.53	0.42
27:14:1725:G:N2	27:14:1741:C:C2	2.87	0.42
27:14:1853:A:N3	27:14:2233:U:O2'	2.47	0.42
27:14:2391:G:O6	27:14:2425:A:C8	2.67	0.42
27:14:2456:C:H42	27:14:2495:G:H1	1.66	0.42
27:14:2561:A:H4'	38:25:40:VAL:HG11	2.00	0.42
27:14:2659:G:P	34:59:158:HIS:HE2	2.41	0.42
28:1J:76:G:H2'	28:1J:77:U:O4'	2.19	0.42
31:29:35:GLN:OE1	31:29:66:HIS:HE1	2.03	0.42
31:29:41:LYS:HB2	31:29:41:LYS:HE3	1.70	0.42
32:39:45:ARG:CG	32:39:45:ARG:HH11	2.32	0.42
33:49:19:LEU:HD22	33:49:23:PHE:HE2	1.84	0.42
38:25:121:VAL:O	38:25:122:LEU:HD23	2.19	0.42
39:35:87:ASP:O	39:35:90:ARG:HD2	2.19	0.42
41:55:34:ILE:HD12	41:55:34:ILE:HA	1.78	0.42
44:85:93:LYS:H	44:85:93:LYS:HG3	1.61	0.42
49:D5:63:ASP:OD1	49:D5:65:GLN:HG3	2.18	0.42
1:13:103:C:OP1	20:BI:17:ARG:NH1	2.53	0.42
1:13:167:G:H2'	1:13:168:G:H8	1.84	0.42
1:13:189:U:H6	1:13:189:U:H2'	1.64	0.42
1:13:309:G:H2'	1:13:310:G:H8	1.83	0.42
1:13:376:G:O3'	16:7I:5:ARG:HD2	2.19	0.42
1:13:681:C:H2'	1:13:682:G:C8	2.54	0.42
1:13:977:A:C8	1:13:1223:C:C4	3.07	0.42
1:13:1053:G:C3'	1:13:1054:C:H5'	2.50	0.42
1:13:1319:A:OP1	19:AI:70:LYS:NZ	2.53	0.42
8:7E:83:ILE:HA	8:7E:136:GLU:O	2.19	0.42
12:3I:99:ARG:HA	12:3I:104:ALA:HB1	2.01	0.42
13:4I:23:TYR:HD2	13:4I:67:GLU:HA	1.84	0.42
16:7I:4:ILE:HA	16:7I:20:VAL:O	2.20	0.42
22:1K:46:7MG:H3'	22:1K:47:U:H4'	2.01	0.42
26:5K:16:H2U:O2'	26:5K:18:G:H5''	2.20	0.42
27:1H:134:G:H2'	27:1H:135:C:C6	2.55	0.42
27:1H:510:A:O4'	48:G8:48:ALA:HB1	2.19	0.42
27:1H:646:G:H4'	27:1H:647:A:H5''	2.02	0.42
27:1H:804:C:C4	27:1H:805:U:C4	3.07	0.42
27:1H:804:C:C4	27:1H:805:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:810:U:H4'	27:1H:811:G:O5'	2.19	0.42
27:1H:1456:C:H2'	27:1H:1457:G:O4'	2.19	0.42
27:1H:1691:G:H2'	27:1H:1692:C:O4'	2.19	0.42
27:1H:2299:A:C8	27:1H:2300:A:N6	2.88	0.42
27:1H:2516:2MA:H4'	27:1H:2517:U:OP1	2.19	0.42
27:1H:2896:C:N3	27:1H:2897:G:H1'	2.34	0.42
34:51:27:LYS:HA	34:51:32:GLU:HB3	2.02	0.42
35:61:12:LEU:HG	35:61:19:VAL:HG11	2.01	0.42
43:B8:51:ARG:CD	43:B8:53:ARG:HB2	2.49	0.42
46:E8:18:ARG:HG2	46:E8:76:VAL:CG1	2.45	0.42
49:H8:100:VAL:O	49:H8:124:ILE:HG22	2.20	0.42
51:J8:5:CYS:HB2	51:J8:63:ALA:HB2	2.01	0.42
52:K8:17:SER:O	52:K8:18:PRO:C	2.57	0.42
56:O8:33:LYS:O	56:O8:35:GLU:HG3	2.19	0.42
1:1G:676:A:H2'	1:1G:677:U:H6	1.84	0.42
1:1G:1267:C:C5	1:1G:1268:A:C5	3.07	0.42
1:1G:1483:A:H1'	27:14:1948:G:H1'	2.01	0.42
2:12:154:LEU:HD23	2:12:154:LEU:HA	1.91	0.42
3:22:42:LEU:HA	3:22:45:LYS:HE3	2.01	0.42
10:1A:48:THR:HA	10:1A:62:HIS:CB	2.41	0.42
19:AA:15:LEU:O	19:AA:15:LEU:HD13	2.19	0.42
59:1L:27:G:H2'	59:1L:28:G:O4'	2.18	0.42
59:1L:29:G:N2	59:1L:41:C:N3	2.49	0.42
27:14:603:A:O4'	27:14:655:A:N6	2.52	0.42
27:14:681:G:H2'	27:14:682:G:O4'	2.19	0.42
27:14:897:C:H2'	27:14:898:C:H5'	2.01	0.42
27:14:932:G:P	53:H5:29:ARG:HH22	2.42	0.42
27:14:954:G:C6	27:14:955:C:C4	3.07	0.42
27:14:1047:G:H21	27:14:1111:A:N6	2.17	0.42
27:14:1170:G:H2'	27:14:1170:G:N3	2.35	0.42
27:14:1578:U:H6	27:14:1578:U:OP2	2.03	0.42
27:14:1814:G:H2'	27:14:1815:A:N7	2.34	0.42
27:14:1814:G:H3'	27:14:1815:A:H2'	2.01	0.42
27:14:1952:A:N6	27:14:1953:A:N1	2.68	0.42
27:14:2107:C:H2'	27:14:2108:C:O4'	2.19	0.42
27:14:2261:C:O2'	27:14:2262:U:H5'	2.20	0.42
27:14:2303:G:O2'	33:49:132:ASN:HB2	2.19	0.42
27:14:2536:G:C6	27:14:2537:U:C4	3.08	0.42
27:14:2883:A:H5'	27:14:2884:U:H5'	2.00	0.42
29:79:186:ALA:HB1	29:79:190:ARG:HH22	1.83	0.42
32:39:93:LYS:HE3	32:39:93:LYS:HB3	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:49:82:LEU:HD23	33:49:82:LEU:HA	1.81	0.42
34:59:7:LEU:HB3	34:59:65:HIS:CE1	2.52	0.42
34:59:77:LYS:HE3	34:59:77:LYS:HB3	1.76	0.42
35:69:100:ALA:O	35:69:104:GLN:HG2	2.20	0.42
42:65:7:TYR:CZ	42:65:91:PRO:HG3	2.54	0.42
43:75:66:VAL:HA	43:75:70:VAL:O	2.20	0.42
46:A5:59:VAL:HG23	46:A5:65:LEU:N	2.35	0.42
48:C5:68:HIS:ND1	48:C5:70:SER:HB3	2.34	0.42
52:G5:15:LYS:HD3	52:G5:15:LYS:HA	1.66	0.42
52:G5:57:ILE:HG13	52:G5:57:ILE:H	1.62	0.42
58:M5:34:TRP:N	58:M5:34:TRP:HE3	2.16	0.42
1:13:160:A:H8	1:13:160:A:OP1	2.02	0.42
1:13:537:G:OP1	12:3I:110:ARG:NH2	2.36	0.42
1:13:625:G:H4'	16:7I:16:HIS:CG	2.55	0.42
1:13:866:C:H4'	1:13:919:A:H5'	2.01	0.42
1:13:1129:C:H5'	9:8E:16:ARG:NH2	2.28	0.42
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.18	0.42
4:3E:119:GLN:HG3	4:3E:123:HIS:HD2	1.83	0.42
27:1H:70:A:H2	47:F8:31:HIS:CD2	2.37	0.42
27:1H:908:U:C5	27:1H:964:A:N1	2.76	0.42
27:1H:1025:G:C2	27:1H:1033:C:C2	3.08	0.42
27:1H:1131:A:C6	27:1H:1132:A:N7	2.87	0.42
27:1H:1383:A:O2'	27:1H:1384:G:H5'	2.19	0.42
27:1H:1541:A:O2'	27:1H:1542:A:H5'	2.19	0.42
27:1H:1849:G:P	30:11:88:ARG:NH2	2.92	0.42
27:1H:1920:G:H2'	27:1H:1921:U:O4'	2.19	0.42
27:1H:1922:G:H22	27:1H:1925:C:H41	1.67	0.42
27:1H:2200:C:H5''	29:71:213:TYR:CG	2.54	0.42
27:1H:2312:G:N2	27:1H:2331:G:H1'	2.35	0.42
31:21:6:GLY:O	31:21:195:LEU:HD12	2.19	0.42
34:51:124:GLU:OE2	34:51:132:ARG:NE	2.36	0.42
35:61:18:VAL:HG21	35:61:44:LEU:HD11	2.01	0.42
35:61:78:THR:HG22	35:61:141:LYS:HD2	2.02	0.42
45:D8:21:ARG:HG2	45:D8:91:TYR:CD1	2.54	0.42
48:G8:29:GLU:HB3	48:G8:38:ILE:HG23	2.01	0.42
53:L8:10:LYS:O	53:L8:53:LEU:HD22	2.19	0.42
1:1G:411:A:N7	1:1G:413:G:N3	2.67	0.42
1:1G:766:A:H2'	1:1G:767:A:O4'	2.19	0.42
1:1G:861:G:C5	1:1G:862:C:C5	3.08	0.42
1:1G:956:U:H2'	1:1G:957:U:O4'	2.20	0.42
1:1G:1368:G:H5'	9:82:112:LYS:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:44:LEU:HD12	2:12:45:GLN:N	2.34	0.42
4:32:174:LEU:HA	4:32:174:LEU:HD23	1.79	0.42
5:42:60:TYR:HB3	5:42:64:ARG:NH2	2.34	0.42
5:42:90:VAL:O	5:42:120:THR:HA	2.18	0.42
6:52:25:ILE:HD13	6:52:25:ILE:HA	1.87	0.42
9:82:34:ASN:O	9:82:38:GLN:HA	2.19	0.42
19:AA:25:LYS:HB3	19:AA:27:GLU:OE1	2.20	0.42
27:14:45:G:H2'	27:14:215:G:H2'	2.02	0.42
27:14:220:G:H2'	27:14:427:U:O4	2.19	0.42
27:14:223:A:O2'	27:14:420:C:O2	2.37	0.42
27:14:270(E):G:C6	27:14:270(F):U:C4	3.08	0.42
27:14:458:G:C8	57:L5:37:LYS:HG2	2.55	0.42
27:14:487:C:O2'	46:A5:52:GLU:O	2.38	0.42
27:14:773:U:H4'	30:19:47:GLY:HA3	2.02	0.42
27:14:1015:G:N2	27:14:1016:G:N3	2.67	0.42
27:14:1133:U:H2'	27:14:1137:G:OP1	2.20	0.42
27:14:1142(A):A:C5	27:14:1144:G:C5	3.07	0.42
27:14:1427:A:H4'	27:14:1428:C:O5'	2.19	0.42
27:14:1854:A:C2'	27:14:1855:G:H5'	2.49	0.42
27:14:2723:C:OP1	31:29:109:LYS:HD3	2.20	0.42
27:14:2792:G:C2	27:14:2805:G:C2	3.07	0.42
27:14:2869:G:H2'	27:14:2870:C:O4'	2.19	0.42
28:1J:57:A:O4'	33:49:30:GLU:HG3	2.19	0.42
29:79:205:LYS:N	29:79:205:LYS:HD2	2.34	0.42
37:15:87:LEU:O	37:15:87:LEU:HD22	2.19	0.42
40:45:30:GLY:HA2	40:45:107:ALA:HB2	2.00	0.42
43:75:5:ALA:HA	43:75:8:LYS:HB2	2.01	0.42
43:75:101:PHE:O	43:75:103:ARG:N	2.51	0.42
44:85:66:ASN:ND2	44:85:70:ARG:HH21	2.17	0.42
45:95:75:PHE:HD2	45:95:81:TYR:CD1	2.37	0.42
52:G5:4:SER:HB2	52:G5:7:ARG:NH1	2.34	0.42
1:13:41:G:H2'	1:13:42:G:C8	2.54	0.42
1:13:218:C:H2'	1:13:219:C:C6	2.55	0.42
1:13:438:G:H4'	4:3E:123:HIS:ND1	2.35	0.42
1:13:474:G:C4	1:13:475:G:C8	3.06	0.42
1:13:563:A:C5	1:13:567:G:H1'	2.54	0.42
1:13:975:A:H4'	1:13:976:G:C5'	2.47	0.42
1:13:1330:U:C5	1:13:1331:G:C5	3.08	0.42
20:BI:73:HIS:HB3	20:BI:76:ALA:H	1.85	0.42
23:2K:2:C:O5'	23:2K:2:C:H6	2.03	0.42
27:1H:709:C:O2'	39:78:14:LYS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1095:A:C5	27:1H:1096:C:C5	3.07	0.42
27:1H:1615:A:O4'	27:1H:1616:G:C2	2.72	0.42
27:1H:1885:A:N1	27:1H:2110:G:H1'	2.35	0.42
27:1H:2201:C:C5'	29:71:46:LYS:HD3	2.49	0.42
27:1H:2321:G:C2	27:1H:2324:A:H2	2.37	0.42
27:1H:2691:C:N4	27:1H:2743:G:H1	2.17	0.42
27:1H:2744:C:H5'	31:21:170:LEU:HD12	2.02	0.42
28:16:104:A:H2'	28:16:105:G:O4'	2.19	0.42
29:71:42:GLU:HG3	29:71:215:THR:O	2.19	0.42
32:31:153:SER:OG	32:31:189:THR:HA	2.20	0.42
33:41:72:ARG:HA	33:41:72:ARG:HD3	1.83	0.42
33:41:113:ARG:NH1	33:41:142:PRO:HA	2.34	0.42
35:61:130:TYR:HB3	35:61:136:VAL:HG13	2.01	0.42
37:58:15:LEU:CB	37:58:134:ARG:HB2	2.49	0.42
41:98:26:LYS:HE2	41:98:70:LEU:O	2.20	0.42
42:A8:58:LEU:H	42:A8:58:LEU:HD22	1.85	0.42
42:A8:66:ALA:O	42:A8:69:VAL:HG13	2.19	0.42
42:A8:89:ARG:O	42:A8:90:GLY:C	2.58	0.42
44:C8:92:ARG:HD3	44:C8:94:ASN:HB3	2.02	0.42
49:H8:38:TYR:CG	49:H8:38:TYR:O	2.72	0.42
1:1G:38:G:N1	1:1G:397:A:OP1	2.49	0.42
1:1G:352:C:O2'	1:1G:353:A:O3'	2.37	0.42
1:1G:977:A:C8	1:1G:1223:C:C4	3.08	0.42
1:1G:1126:U:H5	10:1A:71:LEU:HD22	1.85	0.42
1:1G:1266:G:H2'	1:1G:1268:A:OP2	2.19	0.42
1:1G:1352:C:H2'	1:1G:1353:G:H8	1.83	0.42
1:1G:1358:U:H6	1:1G:1359:C:C5	2.38	0.42
2:12:144:ARG:HE	2:12:148:TYR:HD2	1.65	0.42
2:12:198:ASP:HB2	2:12:199:TYR:CD1	2.55	0.42
3:22:23:TYR:CG	3:22:24:ALA:N	2.87	0.42
3:22:132:ARG:HA	25:4L:57:U:O4	2.20	0.42
12:3A:43:LYS:NZ	12:3A:44:LYS:HE3	2.34	0.42
17:8A:19:VAL:CG2	17:8A:44:ALA:HB3	2.50	0.42
59:1L:52:G:C6	59:1L:63:G:C6	3.08	0.42
27:14:70:G:H21	27:14:71:A:H62	1.67	0.42
27:14:1358:G:O2'	27:14:1373:A:N6	2.52	0.42
27:14:2007:C:H4'	27:14:2824:C:H4'	2.02	0.42
27:14:2323:G:H2'	27:14:2324:C:O4'	2.19	0.42
27:14:2633:G:H5'	27:14:2811:G:O2'	2.19	0.42
28:1J:58:A:H5''	28:1J:58:A:H8	1.84	0.42
34:59:23:ARG:HH11	34:59:23:ARG:H	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:15:42:TRP:N	44:85:64:ARG:HD2	2.34	0.42
37:15:86:PRO:O	37:15:89:LYS:N	2.52	0.42
57:L5:22:MET:HE2	57:L5:22:MET:HB3	1.90	0.42
1:13:138:G:H2'	1:13:139:G:O4'	2.19	0.42
1:13:686:U:O4	1:13:703:G:H1'	2.20	0.42
1:13:858:G:O2'	1:13:859:A:H5''	2.20	0.42
1:13:951:G:O2'	1:13:972:C:H5	2.02	0.42
1:13:976:G:C8	1:13:1358:U:O2	2.73	0.42
1:13:1219:U:H2'	1:13:1220:G:O4'	2.20	0.42
7:6E:39:ALA:HA	7:6E:42:ILE:HG13	2.02	0.42
10:1I:76:ASN:HD22	10:1I:76:ASN:H	1.67	0.42
13:4I:65:LYS:HD3	54:M8:52:THR:HB	2.02	0.42
15:6I:39:LEU:HA	15:6I:39:LEU:HD23	1.79	0.42
19:AI:18:LYS:HA	19:AI:18:LYS:HD2	1.94	0.42
27:1H:895:U:P	65:1H:3728:HOH:O	2.77	0.42
27:1H:1288:A:H2'	27:1H:1289:A:O4'	2.19	0.42
27:1H:1351:C:O2'	27:1H:1352:C:H5'	2.19	0.42
27:1H:1892:G:O3'	29:7I:205:LYS:HE3	2.19	0.42
27:1H:2001:A:H2'	27:1H:2002:C:C6	2.55	0.42
27:1H:2485:G:H1'	27:1H:2491:A:H61	1.85	0.42
27:1H:2519:U:O2'	27:1H:2520:C:H5'	2.20	0.42
28:16:40:U:H3'	28:16:41:U:C5'	2.49	0.42
29:7I:216:THR:HG23	29:7I:219:GLY:HA3	2.01	0.42
30:11:223:GLY:HA3	30:11:231:HIS:CE1	2.55	0.42
32:31:34:TRP:CZ3	39:78:8:PRO:HB3	2.55	0.42
32:31:81:PRO:HG3	32:31:89:VAL:CG2	2.50	0.42
34:51:55:PRO:HD2	34:51:61:HIS:ND1	2.35	0.42
40:88:8:LYS:HG2	40:88:9:TYR:CE2	2.55	0.42
40:88:64:ILE:HG23	40:88:106:VAL:HG12	2.00	0.42
45:D8:44:LYS:C	45:D8:46:VAL:H	2.21	0.42
49:H8:9:TYR:CZ	49:H8:61:LEU:HD21	2.55	0.42
51:J8:13:ILE:HD11	51:J8:42:GLN:OE1	2.20	0.42
55:N8:52:TYR:O	55:N8:54:GLY:N	2.53	0.42
1:1G:564:C:C6	17:8A:31:LEU:HD11	2.54	0.42
1:1G:911:U:H2'	1:1G:912:C:C6	2.54	0.42
1:1G:1004:A:H8	1:1G:1026:G:H8	1.66	0.42
1:1G:1054:C:H2'	1:1G:1055:A:H5''	2.01	0.42
1:1G:1151:A:H5''	10:1A:40:LEU:O	2.20	0.42
1:1G:1413:A:H2'	1:1G:1414:U:O4'	2.20	0.42
10:1A:5:ARG:HG3	10:1A:73:ASP:OD1	2.20	0.42
17:8A:96:GLU:O	17:8A:99:SER:OG	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:137(A):G:H2'	27:14:139:G:N7	2.35	0.42
27:14:142:G:H1'	47:B5:37:THR:CG2	2.50	0.42
27:14:466:A:N7	27:14:467:G:H1'	2.33	0.42
27:14:1357:U:H2'	27:14:1358:G:O4'	2.20	0.42
27:14:1444(A):A:H1'	27:14:1460:A:C4	2.55	0.42
27:14:1556:C:H2'	27:14:1557:C:C6	2.55	0.42
27:14:2065:C:H1'	27:14:2449:U:O2	2.20	0.42
27:14:2505:G:O6	27:14:2576:G:H2'	2.18	0.42
27:14:2667:C:H1'	34:59:109:PHE:CD2	2.55	0.42
27:14:2694:G:C5	27:14:2695:C:C5	3.08	0.42
27:14:2842:G:H2'	27:14:2843:G:H8	1.85	0.42
28:1J:106:G:C2'	28:1J:107:U:H5'	2.50	0.42
29:79:47:LEU:H	29:79:169:GLY:C	2.20	0.42
31:29:12:THR:HG22	43:75:58:ASN:OD1	2.20	0.42
39:35:39:LYS:HB3	65:35:203:HOH:O	2.20	0.42
45:95:53:GLU:C	45:95:55:ALA:H	2.22	0.42
58:M5:15:LYS:HB2	65:M5:203:HOH:O	2.19	0.42
58:M5:36:LYS:O	58:M5:37:SER:C	2.57	0.42
1:13:172:A:H5'	1:13:173:U:OP2	2.20	0.42
1:13:247:G:OP2	17:8I:100:LYS:HB2	2.20	0.42
1:13:339:C:H2'	1:13:340:U:C6	2.55	0.42
1:13:772:U:H2'	1:13:773:G:O4'	2.19	0.42
1:13:872:A:N3	1:13:872:A:H2'	2.35	0.42
1:13:1089:G:H1	1:13:1096:C:H42	1.67	0.42
1:13:1327:C:H2'	1:13:1328:C:H6	1.85	0.42
1:13:1348:U:N3	1:13:1374:A:C2	2.79	0.42
2:1E:220:ASP:OD1	2:1E:220:ASP:N	2.52	0.42
3:2E:30:ARG:HH11	14:5I:38:GLY:CA	2.32	0.42
9:8E:65:VAL:HG21	9:8E:77:ILE:HD11	2.00	0.42
24:3K:10:G:C2	24:3K:11:C:C4	3.07	0.42
26:5K:65:G:O2'	26:5K:66:U:OP1	2.35	0.42
27:1H:273:U:HO2'	27:1H:274:G:P	2.42	0.42
27:1H:299:G:C6	27:1H:300:G:O6	2.72	0.42
27:1H:957:A:H2'	27:1H:2277:C:O2'	2.20	0.42
27:1H:1074:A:N6	27:1H:1173:A:C4	2.88	0.42
27:1H:1267:C:H2'	27:1H:1268:C:H6	1.85	0.42
27:1H:1307:G:C6	27:1H:1308:C:C4	3.08	0.42
27:1H:1378:A:C6	27:1H:1380:C:C2	3.07	0.42
27:1H:1924:A:OP2	30:11:255:LYS:HE2	2.19	0.42
27:1H:2478:C:O2'	27:1H:2479:C:H5'	2.19	0.42
27:1H:2659:C:H2'	27:1H:2660:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:16:15:A:H5'	28:16:16:G:C8	2.54	0.42
30:11:121:PRO:HD3	30:11:190:TYR:OH	2.20	0.42
30:11:211:ARG:O	30:11:215:LEU:HG	2.19	0.42
32:31:156:LEU:HD21	32:31:163:VAL:HG12	2.02	0.42
32:31:182:ASN:ND2	32:31:185:ASP:HB2	2.34	0.42
33:41:37:VAL:HA	33:41:158:ALA:O	2.20	0.42
35:61:60:GLU:HG3	35:61:61:ARG:NH2	2.28	0.42
35:61:79:ILE:HG22	35:61:142:VAL:HA	2.02	0.42
39:78:115:LEU:HA	39:78:134:ALA:HB2	2.01	0.42
42:A8:76:LYS:HB3	42:A8:76:LYS:HE2	1.81	0.42
46:E8:48:ALA:O	46:E8:51:LEU:N	2.52	0.42
49:H8:10:ARG:HG2	49:H8:13:GLU:HG3	2.01	0.42
49:H8:52:SER:OG	49:H8:53:ILE:N	2.46	0.42
1:1G:410:G:C2	1:1G:429:U:C2	3.07	0.42
1:1G:487:A:H3'	1:1G:488:C:C6	2.55	0.42
1:1G:625:G:C4	1:1G:626:U:C5	3.08	0.42
1:1G:676:A:H2'	1:1G:677:U:C6	2.54	0.42
1:1G:718:G:N2	18:9A:82:THR:HG23	2.34	0.42
1:1G:899:C:H2'	1:1G:900:A:O4'	2.20	0.42
1:1G:948:C:H2'	1:1G:949:A:C8	2.55	0.42
1:1G:1206:G:C6	1:1G:1207:2MG:C5	3.08	0.42
4:32:180:GLY:HA3	4:32:182:LYS:HE2	2.02	0.42
6:52:5:GLU:HG2	6:52:64:GLN:HG3	2.02	0.42
7:62:15:ASP:CG	7:62:16:LEU:N	2.72	0.42
11:2A:58:PRO:HB2	11:2A:93:GLN:HG3	2.01	0.42
13:4A:25:ILE:O	13:4A:29:ARG:HB2	2.18	0.42
17:8A:22:LEU:HD11	17:8A:39:SER:HB2	2.02	0.42
19:AA:9:VAL:HB	54:I5:63:TYR:CE1	2.50	0.42
20:BA:35:THR:HA	20:BA:38:LYS:NZ	2.35	0.42
27:14:412:A:H5''	27:14:413:C:OP2	2.20	0.42
27:14:1021:A:H8	27:14:1021:A:H3'	1.84	0.42
27:14:1296:G:OP1	27:14:2709:G:O2'	2.25	0.42
27:14:1424:G:H2'	27:14:1425:G:O4'	2.20	0.42
27:14:1488:G:C6	27:14:1489:U:N3	2.88	0.42
27:14:1788:C:C2	27:14:1789:A:C8	3.07	0.42
27:14:1790:C:H4'	30:19:209:ALA:HB2	2.00	0.42
27:14:2129:C:N4	27:14:2130:U:O4	2.53	0.42
27:14:2683:C:P	43:75:53:ARG:HH22	2.36	0.42
27:14:2748:A:C8	34:59:63:SER:HB3	2.55	0.42
27:14:2785:C:O2'	31:29:66:HIS:ND1	2.35	0.42
28:1J:61:G:C6	28:1J:62:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:120:GLU:H	32:39:120:GLU:HG3	1.60	0.42
33:49:16:ARG:NH2	33:49:31:VAL:HB	2.35	0.42
33:49:180:PHE:HB3	33:49:182:LYS:H	1.85	0.42
34:59:46:GLU:HG2	34:59:47:GLU:H	1.85	0.42
35:69:118:LYS:HG2	35:69:119:PRO:HD2	2.02	0.42
37:15:23:LEU:HD13	37:15:23:LEU:HA	1.87	0.42
37:15:34:LEU:HA	37:15:34:LEU:HD23	1.80	0.42
37:15:123:TYR:CZ	37:15:129:PRO:HD3	2.55	0.42
40:45:35:VAL:HG12	40:45:130:LYS:HB3	2.02	0.42
42:65:104:GLY:O	42:65:106:ARG:N	2.52	0.42
45:95:38:LEU:O	45:95:52:VAL:HG22	2.20	0.42
47:B5:8:ILE:O	52:G5:36:ARG:NH2	2.53	0.42
47:B5:58:HIS:CE1	47:B5:77:LYS:HD2	2.55	0.42
53:H5:30:ARG:H	53:H5:30:ARG:HG2	1.50	0.42
1:13:258:G:H1	1:13:268:C:N4	2.17	0.42
1:13:374:A:C6	1:13:375:U:C4	3.07	0.42
1:13:665:A:N3	1:13:732:C:H2'	2.35	0.42
1:13:894:G:C6	1:13:895:G:C5	3.07	0.42
1:13:1401:G:C2	1:13:1402:4OC:H1'	2.55	0.42
2:1E:101:MET:HG2	2:1E:152:PHE:CE1	2.55	0.42
2:1E:134:GLU:H	2:1E:134:GLU:HG2	1.45	0.42
2:1E:160:ASP:O	2:1E:183:PRO:HD2	2.20	0.42
4:3E:162:LEU:HD23	4:3E:162:LEU:HA	1.94	0.42
5:4E:142:LEU:HD23	5:4E:142:LEU:HA	1.67	0.42
10:1I:40:LEU:HB2	10:1I:69:ASN:CB	2.48	0.42
14:5I:29:ARG:HD3	14:5I:40:CYS:SG	2.60	0.42
15:6I:47:LYS:H	15:6I:47:LYS:HG2	1.54	0.42
17:8I:6:LEU:O	17:8I:58:GLU:HA	2.20	0.42
27:1H:355:A:H2	27:1H:1256:A:C2'	2.33	0.42
27:1H:513:C:O2'	46:E8:60:ASN:ND2	2.53	0.42
27:1H:582:G:P	37:58:111:PRO:HG2	2.60	0.42
27:1H:657:A:OP1	39:78:65:ARG:NH2	2.43	0.42
27:1H:1470:G:H2'	27:1H:1471:G:H8	1.84	0.42
27:1H:1562:C:H2'	27:1H:1563:U:C6	2.52	0.42
27:1H:2055:G:H1'	31:21:145:LYS:HD3	2.00	0.42
27:1H:2147:G:N2	27:1H:2198:C:C2	2.88	0.42
27:1H:2758:G:C2	27:1H:2775:G:C4	3.08	0.42
41:98:44:LEU:HD23	41:98:44:LEU:HA	1.80	0.42
48:G8:75:ILE:HA	48:G8:75:ILE:HD13	1.64	0.42
49:H8:61:LEU:HD13	49:H8:65:GLN:HB2	2.01	0.42
1:1G:1067:A:N1	1:1G:1108:G:O2'	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:215:LEU:HA	2:12:215:LEU:HD13	1.72	0.42
3:22:5:ILE:HG21	10:1A:51:ARG:NH1	2.34	0.42
3:22:166:GLU:HG3	3:22:167:TRP:N	2.31	0.42
4:32:92:VAL:O	4:32:96:LEU:HD13	2.20	0.42
4:32:105:VAL:HB	4:32:117:ALA:HB1	2.01	0.42
5:42:36:ASP:O	5:42:38:GLN:HG2	2.20	0.42
7:62:44:TYR:O	7:62:48:LYS:N	2.45	0.42
12:3A:29:PHE:CG	12:3A:81:LEU:HD11	2.54	0.42
15:6A:48:LYS:HD3	15:6A:48:LYS:HA	1.82	0.42
16:7A:74:LEU:HD23	16:7A:79:VAL:HG21	2.02	0.42
18:9A:24:ALA:C	18:9A:26:LEU:H	2.21	0.42
27:14:320:A:H4'	27:14:322:A:C8	2.55	0.42
27:14:387:U:P	51:F5:20:ARG:HH12	2.40	0.42
27:14:530:G:O6	27:14:2023:G:OP1	2.38	0.42
27:14:780:G:C2	27:14:782:A:C2	3.08	0.42
27:14:1190:G:O2'	27:14:1191:G:H5'	2.20	0.42
27:14:1423:G:H2'	27:14:1424:G:C8	2.54	0.42
27:14:1427:A:C2	30:19:31:LYS:HD2	2.55	0.42
27:14:1465:G:C4	27:14:1466:G:C8	3.08	0.42
27:14:1829:A:H3'	27:14:1830:C:H6	1.84	0.42
27:14:2175:C:H5''	29:79:3:HIS:HD2	1.83	0.42
27:14:2182:G:N2	27:14:2183:C:N3	2.68	0.42
30:19:85:ASP:HB2	30:19:92:ILE:HD13	2.00	0.42
32:39:181:LEU:CD2	32:39:186:ILE:HD11	2.47	0.42
35:69:78:THR:O	35:69:80:PRO:HD3	2.20	0.42
37:15:112:LEU:HA	37:15:115:ARG:HB2	2.02	0.42
42:65:95:HIS:CA	42:65:99:LYS:HB2	2.50	0.42
45:95:37:VAL:HG11	45:95:57:VAL:HG22	2.01	0.42
45:95:67:GLY:O	45:95:88:ARG:HG2	2.19	0.42
47:B5:26:TYR:CE2	47:B5:89:ILE:HG13	2.55	0.42
49:D5:104:PHE:HA	49:D5:139:VAL:O	2.20	0.42
52:G5:32:LEU:HA	52:G5:53:LEU:HD13	2.01	0.42
54:I5:40:HIS:N	54:I5:41:PRO:HD3	2.34	0.42
1:13:1278:U:H5''	1:13:1279:A:O4'	2.19	0.42
1:13:1386:G:O2'	1:13:1387:G:H5'	2.19	0.42
1:13:1424:C:H2'	1:13:1425:U:O4'	2.20	0.42
10:1I:8:LEU:HD23	10:1I:8:LEU:HA	1.90	0.42
27:1H:160:U:C2	27:1H:161:G:C8	3.08	0.42
27:1H:218:A:H1'	27:1H:220:U:O4'	2.20	0.42
27:1H:520:G:H5''	27:1H:520:G:C8	2.55	0.42
27:1H:741:C:H2'	27:1H:742:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1066:U:H2'	27:1H:1067:A:H8	1.85	0.42
27:1H:1282:G:C6	27:1H:1283:G:N1	2.88	0.42
27:1H:1885:A:H2'	27:1H:1886:A:C8	2.54	0.42
27:1H:1975:A:C6	27:1H:1976:A:N1	2.88	0.42
27:1H:2237:G:H4'	27:1H:2239:C:C2	2.55	0.42
27:1H:2518:G:H2'	27:1H:2589:G:O6	2.20	0.42
28:16:15:A:C5'	28:16:16:G:C8	3.03	0.42
29:71:58:VAL:HG13	29:71:199:HIS:HD2	1.81	0.42
30:11:89:SER:HB2	30:11:159:ALA:HB2	2.02	0.42
34:51:158:HIS:O	34:51:160:LYS:N	2.53	0.42
35:61:110:ASP:HB2	35:61:112:LYS:HG3	2.01	0.42
39:78:121:LYS:HG2	39:78:123:LEU:CD2	2.50	0.42
40:88:79:LEU:C	40:88:80:GLU:HG3	2.40	0.42
41:98:74:LYS:O	41:98:75:LEU:HB3	2.20	0.42
42:A8:2:ALA:O	42:A8:3:ARG:O	2.38	0.42
42:A8:56:LEU:CB	42:A8:58:LEU:HD22	2.50	0.42
53:L8:35:ARG:HH21	53:L8:37:LEU:HD21	1.85	0.42
1:1G:271:C:H2'	1:1G:272:C:H6	1.85	0.42
1:1G:408:A:N7	65:1G:1840:HOH:O	2.37	0.42
1:1G:440:A:H3'	1:1G:442:C:H6	1.85	0.42
1:1G:614:A:H61	1:1G:626:U:H3	1.68	0.42
1:1G:667:G:H4'	15:6A:51:HIS:CE1	2.55	0.42
1:1G:715:A:H8	1:1G:715:A:O5'	2.03	0.42
1:1G:792:A:H1'	1:1G:794:A:N7	2.35	0.42
1:1G:1374:A:O2'	7:62:28:ASN:HB3	2.19	0.42
3:22:114:PRO:HB3	3:22:118:GLN:HE22	1.84	0.42
5:42:51:VAL:HG23	5:42:52:PRO:HD3	2.02	0.42
8:72:14:ARG:O	8:72:18:ARG:HD3	2.20	0.42
15:6A:85:LEU:HD23	15:6A:85:LEU:HA	1.84	0.42
20:BA:33:ILE:HD13	20:BA:33:ILE:HA	1.59	0.42
60:2L:56:C:O2'	33:49:78:SER:HB2	2.20	0.42
27:14:270(N):G:H5'	35:69:57:ARG:NH2	2.35	0.42
27:14:423:A:H5''	27:14:424:G:H5''	2.01	0.42
27:14:510:C:P	65:14:3513:HOH:O	2.77	0.42
27:14:992:C:OP1	44:85:47:TYR:OH	2.24	0.42
27:14:1395:A:C6	27:14:1398:C:C2	3.08	0.42
27:14:1653:G:O6	41:55:9:LYS:HB2	2.19	0.42
27:14:1702:G:H2'	27:14:1703:G:O4'	2.19	0.42
27:14:1829:A:HO2'	30:19:15:PHE:HD2	1.66	0.42
27:14:1995:U:H2'	27:14:1996:C:C5	2.55	0.42
27:14:2127:G:N2	27:14:2128:C:O2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2182:G:C2	27:14:2183:C:C4	3.07	0.42
27:14:2383:G:O2'	27:14:2384:G:H5'	2.20	0.42
27:14:2748:A:O2'	34:59:66:GLY:HA3	2.20	0.42
27:14:2769:C:H2'	27:14:2770:G:H8	1.84	0.42
28:1J:96:G:C5	28:1J:97:G:C8	3.08	0.42
30:19:139:GLY:HA2	30:19:164:GLN:HE21	1.84	0.42
37:15:4:TYR:CD2	44:85:100:VAL:HG11	2.55	0.42
37:15:55:VAL:HG23	37:15:56:ASN:OD1	2.20	0.42
39:35:124:LYS:HE3	39:35:145:PRO:HD3	2.01	0.42
40:45:41:TRP:HZ3	40:45:74:TYR:CE1	2.38	0.42
41:55:25:ALA:HB2	41:55:48:VAL:HG22	2.02	0.42
41:55:97:VAL:HA	41:55:113:LEU:O	2.19	0.42
51:F5:25:LYS:HB3	51:F5:25:LYS:HE3	1.77	0.42
51:F5:52:ARG:CZ	51:F5:56:GLN:HA	2.50	0.42
53:H5:8:LEU:HB2	53:H5:28:LEU:HD22	2.02	0.42
56:K5:41:PRO:HD2	56:K5:46:HIS:H	1.85	0.42
57:L5:12:ARG:HD3	57:L5:46:VAL:HG21	2.01	0.42
1:13:58:C:H2'	1:13:59:A:H8	1.85	0.41
1:13:502:G:C6	1:13:503:C:C4	3.08	0.41
1:13:736:C:OP1	18:9I:68:LYS:HE3	2.19	0.41
3:2E:64:VAL:HG12	3:2E:66:VAL:HG23	2.02	0.41
4:3E:4:TYR:CZ	4:3E:6:GLY:HA3	2.55	0.41
4:3E:58:LEU:O	4:3E:62:GLN:HG2	2.20	0.41
6:5E:62:TRP:CD1	18:9I:35:ARG:CZ	3.03	0.41
15:6I:10:LYS:HD2	15:6I:10:LYS:HA	1.73	0.41
16:7I:26:ARG:HE	16:7I:31:LYS:HB3	1.85	0.41
17:8I:52:LYS:HD2	17:8I:55:ASP:OD2	2.19	0.41
25:4K:40:U:H2'	25:4K:41:U:O4'	2.20	0.41
27:1H:43:A:H8	27:1H:43:A:O5'	2.03	0.41
27:1H:85:C:O2'	27:1H:86:C:H5'	2.20	0.41
27:1H:98:U:C6	27:1H:100:G:N1	2.88	0.41
27:1H:794:A:H2'	27:1H:2625:C:H5''	2.02	0.41
27:1H:2048:C:H2'	27:1H:2049:C:C6	2.55	0.41
27:1H:2591:G:OP1	27:1H:2627:A:N6	2.51	0.41
27:1H:2628:U:C2	55:N8:7:PRO:HA	2.54	0.41
27:1H:2628:U:P	65:1H:3873:HOH:O	2.78	0.41
27:1H:2908:U:H2'	27:1H:2909:G:O4'	2.20	0.41
28:16:87:G:C2	28:16:89:G:H5''	2.55	0.41
41:98:42:LYS:O	41:98:45:ARG:HD3	2.19	0.41
42:A8:31:SER:OG	42:A8:34:HIS:N	2.41	0.41
49:H8:110:GLY:HA3	49:H8:174:VAL:HG11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:Q8:61:LEU:HD23	58:Q8:61:LEU:HA	1.70	0.41
1:1G:115:G:C2	1:1G:289:G:N7	2.87	0.41
1:1G:134:A:H2'	1:1G:135:C:O4'	2.20	0.41
1:1G:187:C:O2	1:1G:191(A):G:N1	2.53	0.41
1:1G:397:A:H3'	1:1G:397:A:N3	2.35	0.41
1:1G:413:G:HO2'	1:1G:414:A:P	2.38	0.41
1:1G:537:G:C6	1:1G:538:G:C6	3.08	0.41
1:1G:544:G:OP1	4:32:62:GLN:NE2	2.51	0.41
1:1G:784:C:H2'	1:1G:785:G:C8	2.55	0.41
1:1G:1022:G:C2	1:1G:1023:G:H1'	2.54	0.41
1:1G:1156:G:C3'	1:1G:1157:A:H5''	2.50	0.41
1:1G:1299:A:C2	1:1G:1301:U:C4	3.08	0.41
1:1G:1333:A:H3'	1:1G:1334:G:H8	1.85	0.41
4:32:128:VAL:O	4:32:131:ARG:N	2.53	0.41
9:82:78:LYS:HB3	9:82:78:LYS:HZ2	1.85	0.41
9:82:85:LEU:HD12	9:82:86:VAL:N	2.35	0.41
15:6A:67:LEU:HD23	15:6A:67:LEU:HA	1.83	0.41
19:AA:36:ARG:HB2	19:AA:72:GLY:N	2.35	0.41
27:14:455:C:H6	27:14:455:C:H2'	1.70	0.41
27:14:654(C):G:C2	27:14:654(D):G:H1'	2.55	0.41
27:14:659:C:O2'	32:39:101:LEU:HD12	2.19	0.41
27:14:1111:A:H5'	34:59:3:ARG:NH1	2.35	0.41
27:14:1594:G:H2'	27:14:1595:G:H8	1.85	0.41
27:14:2132:U:O4	29:79:8:ARG:NE	2.43	0.41
30:19:33:LEU:HA	30:19:33:LEU:HD23	1.75	0.41
32:39:59:TYR:HE2	32:39:85:GLY:O	2.03	0.41
35:69:132:PRO:HB2	35:69:134:PRO:HD2	2.02	0.41
39:35:19:VAL:HG13	39:35:20:GLY:N	2.35	0.41
40:45:48:GLU:O	40:45:52:VAL:HG12	2.20	0.41
46:A5:8:ARG:O	46:A5:9:TYR:HB2	2.20	0.41
47:B5:38:GLU:O	47:B5:42:ALA:HB2	2.20	0.41
49:D5:44:PHE:O	49:D5:48:PHE:N	2.30	0.41
49:D5:120:ILE:O	49:D5:171:ILE:HG23	2.20	0.41
50:E5:66:VAL:O	50:E5:81:VAL:HA	2.21	0.41
1:13:256:U:H2'	1:13:257:G:O4'	2.20	0.41
1:13:262:A:N6	1:13:263:A:N6	2.68	0.41
1:13:390:C:H2'	1:13:391:G:C8	2.55	0.41
1:13:727:G:N2	1:13:730:G:OP2	2.39	0.41
1:13:977:A:H1'	1:13:982:U:O4	2.20	0.41
2:1E:46:LYS:O	2:1E:50:GLU:N	2.53	0.41
13:4I:94:ARG:O	13:4I:96:LEU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6I:39:LEU:HD23	15:6I:42:HIS:HB3	2.02	0.41
17:8I:22:LEU:HD11	17:8I:39:SER:HB2	2.02	0.41
20:BI:83:ARG:O	20:BI:87:LYS:HB2	2.20	0.41
27:1H:202:G:O2'	27:1H:203:A:H5'	2.20	0.41
27:1H:532:G:C5'	27:1H:535:C:H1'	2.50	0.41
27:1H:793:G:H2'	27:1H:794:A:H5'	2.02	0.41
27:1H:821:U:C5'	30:11:47:GLY:HA3	2.48	0.41
27:1H:1093:A:C8	36:38:7:VAL:HG21	2.54	0.41
27:1H:1276:G:C6	27:1H:1277:C:N3	2.88	0.41
27:1H:1458:C:C6	27:1H:1458:C:H5''	2.55	0.41
27:1H:1661:A:P	27:1H:1661:A:H8	2.42	0.41
27:1H:2146:G:H1'	29:71:172:HIS:HD2	1.84	0.41
27:1H:2229:G:H8	27:1H:2229:G:O5'	2.02	0.41
27:1H:2728:G:C6	27:1H:2729:C:C4	3.09	0.41
27:1H:2865:G:H2'	27:1H:2866:C:C6	2.54	0.41
27:1H:2891:C:H1'	41:98:91:GLN:O	2.20	0.41
30:11:133:LEU:HB3	30:11:173:VAL:HG11	2.01	0.41
32:31:82:ILE:H	32:31:82:ILE:HG13	1.62	0.41
34:51:32:GLU:O	34:51:33:LEU:HD13	2.20	0.41
41:98:107:ASP:C	41:98:107:ASP:OD1	2.57	0.41
47:F8:36:LYS:HG2	47:F8:56:THR:CG2	2.50	0.41
48:G8:75:ILE:O	48:G8:76:CYS:HB3	2.20	0.41
49:H8:99:TYR:HD1	49:H8:123:ASP:HB3	1.85	0.41
51:J8:12:PRO:HB3	51:J8:43:TYR:CD1	2.55	0.41
57:P8:8:ASN:OD1	57:P8:11:LYS:N	2.29	0.41
1:1G:157:G:H1	1:1G:164:U:H3	1.68	0.41
1:1G:363:A:OP1	12:3A:58:THR:HG21	2.19	0.41
1:1G:563:A:H2'	1:1G:567:G:C8	2.55	0.41
1:1G:1022:G:H2'	1:1G:1023:G:O4'	2.20	0.41
1:1G:1053:G:C6	1:1G:1199:U:H2'	2.56	0.41
1:1G:1053:G:C5	1:1G:1199:U:H2'	2.55	0.41
1:1G:1264:C:H1'	1:1G:1272:G:H22	1.85	0.41
1:1G:1321:C:N4	1:1G:1322:C:N4	2.67	0.41
2:12:71:VAL:HA	2:12:93:VAL:O	2.19	0.41
4:32:94:LEU:HD23	4:32:94:LEU:HA	1.72	0.41
8:72:11:THR:OG1	8:72:14:ARG:NH2	2.53	0.41
8:72:21:LYS:HE2	8:72:21:LYS:HB2	1.94	0.41
14:5A:42:ILE:HA	14:5A:45:ARG:HB3	2.01	0.41
59:1L:75:C:C6	59:1L:76:A:H2	2.37	0.41
27:14:270(V):G:H2'	27:14:270(W):G:C8	2.55	0.41
27:14:389:G:OP1	51:F5:25:LYS:NZ	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:547:A:H2'	27:14:548:A:C8	2.55	0.41
27:14:611:C:H42	27:14:617:G:H1	1.68	0.41
27:14:994:C:H3'	44:85:54:LYS:NZ	2.35	0.41
27:14:1686:C:H3'	27:14:1687:G:C8	2.55	0.41
27:14:2401:U:O2'	27:14:2402:C:C2	2.67	0.41
27:14:2817:G:OP1	41:55:42:LYS:NZ	2.49	0.41
27:14:2876:G:O5'	43:75:2:ASN:HA	2.20	0.41
28:1J:7:G:H4'	42:65:29:PHE:CD2	2.55	0.41
30:19:70:TRP:O	30:19:73:VAL:HG23	2.19	0.41
33:49:114:ILE:HG12	33:49:140:ILE:HG21	2.02	0.41
35:69:26:ALA:O	35:69:31:LEU:HB2	2.20	0.41
37:15:6:PRO:HB3	37:15:41:ASP:OD2	2.20	0.41
37:15:15:LEU:HD22	37:15:16:ILE:H	1.85	0.41
41:55:81:ASP:OD1	41:55:81:ASP:N	2.52	0.41
45:95:24:LYS:HE2	45:95:24:LYS:HB3	1.81	0.41
49:D5:5:LEU:HD23	49:D5:47:VAL:HG21	2.02	0.41
49:D5:94:GLU:O	49:D5:130:PRO:HD3	2.20	0.41
1:13:96:G:C6	1:13:97:U:C2	3.08	0.41
1:13:137:C:H5''	1:13:137:C:H6	1.86	0.41
1:13:439:A:H3'	1:13:440:A:H8	1.85	0.41
1:13:509:A:H5''	4:3E:55:ALA:HB2	2.01	0.41
1:13:684:A:O2'	11:2I:39:PRO:O	2.29	0.41
1:13:791:G:O6	1:13:792:A:N1	2.53	0.41
1:13:1006:C:H2'	1:13:1007:C:C6	2.56	0.41
1:13:1063:C:N4	1:13:1064:G:C2	2.88	0.41
1:13:1292:U:P	7:6E:41:ARG:HH22	2.39	0.41
2:1E:93:VAL:HG11	2:1E:97:TRP:HA	2.01	0.41
6:5E:27:GLN:HA	6:5E:30:LEU:HD12	2.03	0.41
6:5E:60:PHE:C	6:5E:61:LEU:HD12	2.41	0.41
22:1K:46:7MG:H5''	22:1K:46:7MG:H82	2.02	0.41
27:1H:64:C:OP1	47:F8:71:GLY:HA3	2.21	0.41
27:1H:72:A:P	52:K8:54:LYS:HZ3	2.42	0.41
27:1H:662:G:OP1	39:78:132:LYS:HB3	2.20	0.41
27:1H:769:C:H2'	27:1H:770:A:H8	1.85	0.41
27:1H:1436:G:C2	27:1H:1446:C:O2	2.73	0.41
27:1H:1582:U:H2'	27:1H:1582:U:O2	2.19	0.41
27:1H:2028:A:OP1	65:1H:3705:HOH:O	2.21	0.41
27:1H:2298:C:C5	56:O8:27:LYS:HD2	2.55	0.41
27:1H:2418:G:O2'	27:1H:2425:A:N6	2.53	0.41
27:1H:2507:G:O2'	40:88:80:GLU:HB3	2.18	0.41
27:1H:2850:G:H5'	41:98:46:GLY:HA2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:2896:C:C2	27:1H:2897:G:H1'	2.55	0.41
28:16:66:A:C6	28:16:108:C:C5	3.07	0.41
30:11:70:TRP:CE2	30:11:150:LYS:HD3	2.55	0.41
33:41:7:LEU:HA	33:41:7:LEU:HD12	1.85	0.41
33:41:145:THR:HG23	33:41:148:MET:SD	2.61	0.41
39:78:84:ASN:HB3	39:78:86:LYS:HG2	2.01	0.41
43:B8:32:TYR:O	43:B8:34:VAL:HG23	2.20	0.41
48:G8:42:VAL:HG22	48:G8:43:ASN:N	2.35	0.41
49:H8:33:LEU:HA	49:H8:33:LEU:HD12	1.52	0.41
1:1G:130:A:H1'	1:1G:263:A:O2'	2.20	0.41
1:1G:222:U:H2'	1:1G:223:U:C6	2.56	0.41
1:1G:1327:C:H2'	1:1G:1328:C:H6	1.84	0.41
1:1G:1360:A:H2'	1:1G:1361:G:C8	2.55	0.41
1:1G:1420:C:O5'	1:1G:1420:C:H6	2.03	0.41
3:22:37:GLN:NE2	14:5A:52:GLN:OE1	2.32	0.41
4:32:177:ASP:HB3	4:32:182:LYS:HG3	2.03	0.41
5:42:91:LEU:HA	5:42:120:THR:HG22	2.02	0.41
9:82:33:PHE:CE2	9:82:47:LEU:HD11	2.55	0.41
11:2A:95:ILE:H	11:2A:95:ILE:HG12	1.49	0.41
12:3A:81:LEU:HD22	12:3A:82:ILE:N	2.32	0.41
14:5A:48:ALA:N	14:5A:53:LEU:HD12	2.35	0.41
27:14:629:G:H1	27:14:634:C:H42	1.69	0.41
27:14:953:A:H2'	27:14:954:G:H8	1.85	0.41
27:14:1599:C:H2'	27:14:1600:C:C6	2.55	0.41
27:14:1649:G:C6	27:14:2009:G:C6	3.08	0.41
27:14:1820:U:O2	30:19:202:LYS:HB3	2.20	0.41
27:14:2001:A:H2'	27:14:2002:G:O4'	2.20	0.41
27:14:2103:C:N4	27:14:2104:G:O6	2.53	0.41
27:14:2572:A:H2'	31:29:144:ARG:HG3	2.03	0.41
27:14:2581:G:H4'	27:14:2582:G:C8	2.55	0.41
27:14:2729:G:C5	27:14:2730:C:C4	3.08	0.41
28:1J:8:U:O2'	42:65:40:ILE:HD13	2.19	0.41
30:19:68:LYS:HB2	30:19:70:TRP:CZ3	2.54	0.41
35:69:83:ALA:HB1	35:69:89:TYR:HD1	1.83	0.41
40:45:17:LEU:HD21	40:45:41:TRP:NE1	2.34	0.41
49:D5:121:HIS:HB2	49:D5:171:ILE:HD12	2.01	0.41
1:13:303:A:H2'	1:13:304:U:H6	1.85	0.41
1:13:1180:A:H5''	1:13:1181:G:OP1	2.21	0.41
1:13:1308:U:OP1	13:4I:98:VAL:N	2.30	0.41
1:13:1350:A:C2	1:13:1351:U:C2	3.08	0.41
1:13:1511:G:H2'	1:13:1512:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1527:C:H6	1:13:1527:C:O5'	2.03	0.41
2:1E:131:PRO:HD2	2:1E:134:GLU:HG3	2.03	0.41
4:3E:31:CYS:HA	63:3E:302:SF4:S1	2.60	0.41
5:4E:105:VAL:HB	5:4E:106:PRO:HD3	2.02	0.41
9:8E:80:GLY:O	9:8E:84:ALA:N	2.41	0.41
13:4I:15:VAL:HA	13:4I:45:VAL:HG23	2.01	0.41
13:4I:115:LYS:C	13:4I:117:VAL:H	2.24	0.41
15:6I:39:LEU:HD12	15:6I:59:MET:CE	2.51	0.41
19:AI:32:LYS:HA	19:AI:50:ALA:HB3	2.02	0.41
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	2.01	0.41
22:1K:51:U:N3	22:1K:52:G:N7	2.69	0.41
23:2K:62:C:H2'	23:2K:63:G:C8	2.56	0.41
27:1H:44:G:H5''	27:1H:45:C:OP1	2.19	0.41
27:1H:221:C:N4	27:1H:222:G:C2	2.88	0.41
27:1H:314:A:H2'	27:1H:315:G:O4'	2.20	0.41
27:1H:498:A:H8	27:1H:498:A:O5'	2.02	0.41
27:1H:603:G:C2	27:1H:1309:A:C4	3.08	0.41
27:1H:1103:G:HO2'	27:1H:1133:A:HO2'	1.54	0.41
27:1H:1109:G:H8	27:1H:1109:G:OP1	2.03	0.41
27:1H:1733:C:H2'	27:1H:1734:C:C6	2.55	0.41
27:1H:2847:U:H2'	27:1H:2848:G:H8	1.85	0.41
30:11:268:ARG:HE	30:11:268:ARG:HB3	1.60	0.41
32:31:135:LYS:O	32:31:138:GLU:N	2.53	0.41
33:41:103:LEU:HD23	33:41:103:LEU:HA	1.84	0.41
44:C8:49:HIS:O	44:C8:53:ARG:N	2.47	0.41
45:D8:37:VAL:HG11	45:D8:55:ALA:HB3	2.02	0.41
54:M8:15:ILE:H	54:M8:15:ILE:HD13	1.84	0.41
1:1G:198:G:H2'	1:1G:199:G:C8	2.55	0.41
1:1G:254:G:OP1	17:8A:67:LYS:O	2.39	0.41
1:1G:363:A:C5	12:3A:28:PRO:HD2	2.55	0.41
1:1G:674:G:H2'	1:1G:675:A:C8	2.55	0.41
1:1G:1198:G:O2'	1:1G:1199:U:O4'	2.38	0.41
3:22:131:ARG:O	3:22:135:LYS:HG3	2.20	0.41
8:72:118:VAL:O	8:72:119:LEU:HD23	2.21	0.41
16:7A:40:ASP:HB3	16:7A:48:TRP:CB	2.50	0.41
59:1L:10:G:H4'	59:1L:11:C:OP1	2.20	0.41
27:14:35:G:H1'	27:14:454:A:N3	2.34	0.41
27:14:1248:G:C4	44:85:3:ARG:HG3	2.55	0.41
27:14:1614:A:N6	46:A5:87:PRO:HA	2.35	0.41
27:14:1681:G:C2	65:14:3573:HOH:O	2.69	0.41
27:14:1688:U:H1'	27:14:1701:A:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1695:G:HO2'	27:14:1696:G:P	2.44	0.41
27:14:1826:G:H2'	27:14:1827:C:O4'	2.19	0.41
27:14:2127:G:H22	27:14:2161:C:N4	2.19	0.41
27:14:2158:A:H4'	27:14:2159:G:O4'	2.20	0.41
27:14:2720:U:N3	27:14:2873:A:H2	2.14	0.41
27:14:2795:G:O2'	27:14:2802:G:N2	2.53	0.41
27:14:2845:G:O2'	27:14:2846:G:H5'	2.21	0.41
30:19:65:ILE:HD12	30:19:66:ASP:N	2.35	0.41
31:29:116:VAL:HG23	31:29:157:ALA:N	2.36	0.41
34:59:83:TYR:HD1	34:59:83:TYR:H	1.68	0.41
35:69:104:GLN:HE21	35:69:104:GLN:HB2	1.68	0.41
41:55:37:THR:CG2	41:55:39:PRO:HD2	2.40	0.41
41:55:56:LYS:HB2	41:55:56:LYS:HE3	1.83	0.41
43:75:33:LYS:HD2	43:75:82:LEU:HA	2.01	0.41
49:D5:44:PHE:CZ	49:D5:86:VAL:HG21	2.55	0.41
50:E5:49:LYS:H	50:E5:80:HIS:HD1	1.68	0.41
53:H5:42:ALA:O	53:H5:43:ILE:C	2.59	0.41
53:H5:44:ARG:CZ	53:H5:44:ARG:HB2	2.50	0.41
1:13:309:G:H2'	1:13:310:G:C8	2.56	0.41
1:13:325:A:H2'	1:13:326:G:O4'	2.20	0.41
1:13:414:A:H2'	1:13:415:A:O4'	2.20	0.41
1:13:518:C:C5	1:13:530:G:C8	3.09	0.41
1:13:654:G:C6	1:13:655:A:C5	3.08	0.41
1:13:835:U:OP1	18:9I:64:ARG:NH2	2.50	0.41
1:13:942:G:C2	1:13:1342:C:C2	3.08	0.41
1:13:1008:C:H42	1:13:1021:G:N2	2.18	0.41
1:13:1170:A:O5'	1:13:1170:A:H8	2.03	0.41
3:2E:36:ASP:HA	3:2E:39:ILE:HD12	2.02	0.41
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	2.03	0.41
8:7E:2:LEU:HD23	8:7E:2:LEU:HA	1.83	0.41
18:9I:65:ILE:O	18:9I:69:THR:HG23	2.20	0.41
22:1K:74:C:O2'	22:1K:75:C:P	2.77	0.41
27:1H:65:C:O2'	27:1H:66:U:H5'	2.20	0.41
27:1H:224:C:H2'	27:1H:225:U:O4'	2.20	0.41
27:1H:586:U:O4	27:1H:2059:C:H1'	2.20	0.41
27:1H:710:G:O2'	27:1H:711:G:H5'	2.19	0.41
27:1H:721:C:H4'	32:31:82:ILE:HG12	2.02	0.41
27:1H:1278:G:H2'	27:1H:1279:G:H8	1.85	0.41
27:1H:1314:U:H2'	27:1H:1315:A:H8	1.84	0.41
27:1H:1520:A:H2'	27:1H:1521:G:H8	1.85	0.41
27:1H:1598:C:H4'	27:1H:1773:C:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1729:G:O2'	27:1H:1794:A:O2'	2.09	0.41
27:1H:2103:G:H2'	27:1H:2104:C:C6	2.56	0.41
27:1H:2285:U:H5''	27:1H:2286:A:OP1	2.20	0.41
27:1H:2383:G:C6	27:1H:2384:G:C6	3.08	0.41
27:1H:2668:G:O2'	27:1H:2677:G:N1	2.52	0.41
27:1H:2754:A:N6	27:1H:2778:A:C8	2.88	0.41
27:1H:2770:U:H4'	27:1H:2771:A:OP1	2.20	0.41
30:11:127:VAL:HA	30:11:193:VAL:HG22	2.02	0.41
30:11:171:ASP:O	30:11:187:GLY:N	2.53	0.41
36:38:18:GLU:HG3	36:38:19:ARG:H	1.85	0.41
36:38:59:ILE:O	36:38:59:ILE:HG13	2.17	0.41
38:68:35:VAL:HG13	38:68:65:THR:HG22	2.03	0.41
40:88:63:LYS:HG2	40:88:65:PHE:CZ	2.54	0.41
1:1G:277:C:H5'	17:8A:68:ARG:NH1	2.35	0.41
1:1G:791:G:C6	1:1G:792:A:N7	2.89	0.41
1:1G:1157:A:C8	1:1G:1181:G:N2	2.89	0.41
1:1G:1301:U:C4	1:1G:1303:C:C6	3.08	0.41
1:1G:1356:G:N2	1:1G:1367:C:C2	2.87	0.41
3:22:40:ARG:CZ	3:22:40:ARG:HB2	2.51	0.41
8:72:17:THR:HG22	8:72:63:LEU:HD23	2.01	0.41
12:3A:99:ARG:NH2	12:3A:105:ALA:O	2.53	0.41
59:1L:52:G:O3'	40:45:56:ARG:NH2	2.53	0.41
27:14:12:U:H2'	27:14:13:A:H5'	2.01	0.41
27:14:37:C:H4'	27:14:451:C:OP1	2.20	0.41
27:14:182:A:H8	27:14:182:A:OP2	2.03	0.41
27:14:774:A:HO2'	27:14:775:G:P	2.42	0.41
27:14:821:A:H2'	27:14:946:G:H5''	2.02	0.41
27:14:855:G:C6	27:14:856:C:N3	2.89	0.41
27:14:903:C:H2'	27:14:904:C:C6	2.54	0.41
27:14:904:C:H2'	27:14:905:U:O4'	2.21	0.41
27:14:1047:G:N2	27:14:1111:A:N7	2.65	0.41
27:14:1054:A:H62	27:14:1104:C:N4	2.19	0.41
27:14:1268:A:C2	27:14:2013:A:C4	3.09	0.41
27:14:2636:U:H1'	27:14:2783:G:N2	2.35	0.41
27:14:2817:G:C5	27:14:2830:G:C2	3.08	0.41
30:19:77:ALA:HB2	30:19:97:TYR:CD2	2.55	0.41
31:29:16:ARG:O	31:29:19:ARG:HB3	2.20	0.41
31:29:27:LEU:CD2	43:75:6:LEU:HD11	2.50	0.41
33:49:41:GLN:OE1	33:49:56:ALA:HB1	2.20	0.41
38:25:10:VAL:HG21	38:25:16:ALA:C	2.40	0.41
40:45:7:MET:HB2	40:45:10:ARG:HH22	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:65:15:ARG:HD2	42:65:88:ASP:OD2	2.21	0.41
43:75:41:ARG:HH11	43:75:41:ARG:HB2	1.86	0.41
44:85:14:HIS:O	44:85:18:LEU:HD12	2.21	0.41
47:B5:12:VAL:CG1	47:B5:27:THR:HB	2.51	0.41
51:F5:67:ILE:HB	51:F5:68:PRO:HD3	2.02	0.41
1:13:509:A:H5'	4:3E:54:TYR:CD2	2.56	0.41
1:13:988:G:C6	1:13:989:C:C4	3.09	0.41
1:13:1433:A:C4	1:13:1468:A:C2	3.08	0.41
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	2.02	0.41
4:3E:57:ARG:HB2	4:3E:57:ARG:NH1	2.36	0.41
7:6E:37:ASN:O	7:6E:41:ARG:HG3	2.20	0.41
7:6E:65:ALA:HB1	7:6E:127:ALA:HB3	2.03	0.41
10:1I:8:LEU:O	10:1I:16:LEU:HD11	2.21	0.41
10:1I:46:ARG:HG2	10:1I:47:PHE:N	2.36	0.41
16:7I:51:VAL:HG11	16:7I:74:LEU:HD23	2.01	0.41
24:3K:62:C:H2'	24:3K:63:G:C8	2.55	0.41
27:1H:311:C:O2'	27:1H:312:C:H5'	2.21	0.41
27:1H:594:G:H2'	27:1H:2053:A:C5	2.56	0.41
27:1H:1047:A:H62	27:1H:1201:G:H2'	1.85	0.41
27:1H:1105:U:O4	27:1H:1126:C:N4	2.53	0.41
27:1H:1592:A:N6	27:1H:1593:A:N1	2.69	0.41
27:1H:2127:G:H2'	27:1H:2128:C:O4'	2.20	0.41
27:1H:2331:G:N2	42:A8:2:ALA:HB2	2.35	0.41
27:1H:2519:U:O2	27:1H:2519:U:H2'	2.20	0.41
27:1H:2762:A:OP1	34:51:70:THR:OG1	2.31	0.41
27:1H:2763:A:H3'	27:1H:2764:A:H2'	2.02	0.41
28:16:85:G:C6	28:16:86:G:N7	2.89	0.41
29:71:193:ILE:O	29:71:197:GLU:HG2	2.20	0.41
29:71:226:PRO:HG2	29:71:227:HIS:CE1	2.56	0.41
30:11:227:ASN:HB3	30:11:228:PRO:HD2	2.03	0.41
32:31:115:ALA:O	32:31:116:ASP:C	2.59	0.41
40:88:30:GLY:CA	40:88:107:ALA:HB2	2.51	0.41
41:98:38:VAL:HG23	41:98:110:PRO:O	2.19	0.41
44:C8:29:SER:O	44:C8:30:LYS:HD3	2.21	0.41
45:D8:22:VAL:O	45:D8:23:GLU:C	2.59	0.41
47:F8:26:TYR:CD2	47:F8:89:ILE:HD12	2.56	0.41
48:G8:71:LYS:HB3	48:G8:71:LYS:HE3	1.84	0.41
48:G8:106:LEU:C	48:G8:108:THR:N	2.74	0.41
1:1G:110:C:H2'	1:1G:111:G:O4'	2.20	0.41
1:1G:340:U:H2'	1:1G:341:C:H6	1.84	0.41
1:1G:575:G:H4'	1:1G:576:G:OP1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:787:A:H8	1:1G:787:A:H5''	1.85	0.41
2:12:20:GLU:HB3	2:12:23:ARG:HB2	2.02	0.41
4:32:60:GLU:OE2	4:32:198:VAL:HA	2.19	0.41
13:4A:82:MET:O	13:4A:82:MET:HG2	2.19	0.41
17:8A:3:LYS:HB2	17:8A:60:ILE:HD11	2.02	0.41
60:2L:17:C:H3'	60:2L:17:C:H6	1.85	0.41
24:3L:3:C:H2'	24:3L:4:C:O4'	2.20	0.41
24:3L:17:C:C4	27:14:2111:C:H5'	2.56	0.41
27:14:108:U:C2	27:14:109:G:C8	3.09	0.41
27:14:1140:C:H1'	27:14:1143:A:C8	2.55	0.41
27:14:1492:G:H5''	27:14:1493:C:H5'	2.02	0.41
27:14:1923:U:H2'	27:14:1924:C:C6	2.56	0.41
28:1J:96:G:C6	28:1J:97:G:N7	2.89	0.41
32:39:107:LYS:HB3	32:39:107:LYS:HE3	1.57	0.41
32:39:110:LEU:HD11	32:39:181:LEU:HB3	2.03	0.41
33:49:173:LEU:HD22	33:49:178:PHE:CE2	2.56	0.41
38:25:4:PRO:O	38:25:5:GLN:HB2	2.21	0.41
39:35:109:GLY:O	39:35:111:ARG:N	2.54	0.41
48:C5:63:LYS:HA	48:C5:63:LYS:HD2	1.56	0.41
49:D5:158:PRO:HD2	49:D5:161:VAL:HG21	2.02	0.41
51:F5:78:LYS:HD2	51:F5:78:LYS:O	2.19	0.41
1:13:147:G:N2	1:13:176:C:C2	2.89	0.41
1:13:186(E):C:H2'	1:13:186(F):C:O4'	2.21	0.41
1:13:390:C:H2'	1:13:391:G:H8	1.86	0.41
1:13:452:A:HO2'	16:7I:72:ARG:HG3	1.86	0.41
1:13:693:G:H2'	1:13:694:A:C8	2.56	0.41
1:13:1004:A:C8	1:13:1026:G:N7	2.88	0.41
1:13:1301:U:H2'	1:13:1302:U:H5'	2.01	0.41
2:1E:133:LYS:HD3	2:1E:133:LYS:HA	1.83	0.41
3:2E:133:ALA:O	3:2E:137:ALA:N	2.48	0.41
8:7E:64:LYS:C	8:7E:65:TYR:CD1	2.94	0.41
10:1I:61:GLU:OE1	14:5I:58:LYS:HD2	2.21	0.41
12:3I:40:VAL:HG13	12:3I:52:VAL:HG21	2.02	0.41
26:5K:37:MIA:H4'	26:5K:37:MIA:OP1	2.21	0.41
27:1H:553:C:H4'	27:1H:554:A:O5'	2.21	0.41
27:1H:750:G:H5''	27:1H:750:G:H8	1.85	0.41
27:1H:895:U:C5	27:1H:979:A:N1	2.89	0.41
27:1H:957:A:C6	40:88:13:GLN:HG3	2.56	0.41
27:1H:1089:G:C6	27:1H:1090:C:C4	3.09	0.41
27:1H:1100:C:H42	27:1H:1153:G:H1	1.69	0.41
27:1H:1318:G:O2'	27:1H:1665:A:OP1	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1439:A:C6	27:1H:1440:A:C6	3.09	0.41
27:1H:1902:C:C4	27:1H:1903:C:C5	3.08	0.41
27:1H:1926:G:OP1	30:11:241:PRO:HB2	2.21	0.41
27:1H:1959:A:C2	27:1H:1968:G:C6	3.09	0.41
27:1H:2090:G:H4'	27:1H:2091:U:OP2	2.21	0.41
27:1H:2353:G:H2'	27:1H:2354:G:C8	2.56	0.41
27:1H:2861:A:H3'	27:1H:2862:A:H8	1.84	0.41
29:71:36:LYS:H	29:71:36:LYS:HD2	1.85	0.41
33:41:118:ARG:HA	33:41:118:ARG:HE	1.86	0.41
36:38:21:GLN:C	36:38:23:SER:H	2.24	0.41
38:68:68:GLU:HB3	38:68:78:ARG:NH1	2.35	0.41
38:68:70:LYS:HE3	38:68:70:LYS:HB3	1.83	0.41
38:68:111:PHE:O	38:68:115:VAL:HG13	2.21	0.41
39:78:113:LYS:HB2	39:78:129:ALA:HB3	2.01	0.41
41:98:62:ALA:O	41:98:66:VAL:HG23	2.21	0.41
43:B8:123:GLN:C	43:B8:125:ARG:H	2.19	0.41
47:F8:15:GLU:H	47:F8:15:GLU:CD	2.12	0.41
48:G8:39:VAL:O	48:G8:42:VAL:HG13	2.20	0.41
48:G8:97:ARG:HH11	48:G8:97:ARG:HD3	1.75	0.41
51:J8:91:LYS:O	51:J8:94:LEU:N	2.53	0.41
52:K8:33:MET:HG2	52:K8:37:PHE:CE1	2.55	0.41
53:L8:22:ALA:O	53:L8:26:LEU:HG	2.20	0.41
55:N8:11:THR:HG23	55:N8:15:ARG:HB3	2.01	0.41
1:1G:256:U:H5'	17:8A:17:LYS:HZ1	1.86	0.41
1:1G:1053:G:O2'	1:1G:1199:U:H5	1.91	0.41
1:1G:1222:G:C6	1:1G:1223:C:C4	3.08	0.41
1:1G:1226:C:H4'	1:1G:1227:A:OP1	2.20	0.41
1:1G:1322:C:O2'	1:1G:1323:G:P	2.78	0.41
2:12:42:ILE:HG12	2:12:43:ASP:O	2.21	0.41
5:42:101:ILE:HG12	5:42:118:ILE:O	2.20	0.41
6:52:2:ARG:CZ	6:52:69:GLU:HB3	2.50	0.41
6:52:75:LEU:HG	6:52:79:LEU:HG	2.02	0.41
9:82:52:ALA:HB3	9:82:95:LYS:NZ	2.35	0.41
10:1A:83:GLU:HA	10:1A:86:MET:SD	2.60	0.41
18:9A:40:LEU:HD23	18:9A:40:LEU:HA	1.82	0.41
19:AA:15:LEU:HG	19:AA:33:THR:HB	2.03	0.41
19:AA:40:ILE:HA	19:AA:44:MET:SD	2.60	0.41
27:14:270(D):C:H2'	27:14:270(E):G:C8	2.55	0.41
27:14:530:G:HO2'	27:14:531:C:P	2.42	0.41
27:14:2258:C:H4'	27:14:2259:G:OP2	2.21	0.41
27:14:2335:A:O2'	27:14:2336:A:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:2552:OMU:C2	27:14:2554:U:H5''	2.50	0.41
27:14:2749:A:H62	27:14:2750:A:N6	2.16	0.41
27:14:2864:G:C6	27:14:2865:U:N3	2.89	0.41
30:19:106:ILE:O	30:19:106:ILE:HG12	2.21	0.41
31:29:14:ILE:H	31:29:14:ILE:HG13	1.76	0.41
31:29:104:VAL:HG22	31:29:198:VAL:HG13	2.03	0.41
39:35:2:LYS:HE3	39:35:2:LYS:HB2	1.88	0.41
39:35:83:VAL:HG12	39:35:112:LEU:HD21	2.03	0.41
40:45:118:LEU:HD12	40:45:131:ILE:HG23	2.02	0.41
44:85:25:TRP:CD1	44:85:26:GLY:N	2.89	0.41
49:D5:99:TYR:HA	49:D5:124:ILE:O	2.20	0.41
53:H5:28:LEU:HA	53:H5:28:LEU:HD23	1.78	0.41
53:H5:31:LEU:HA	53:H5:31:LEU:HD12	1.89	0.41
1:13:280:C:H3'	1:13:281:G:H5'	2.02	0.41
1:13:706:A:C1'	11:2I:29:ILE:HD11	2.51	0.41
1:13:818:G:O2'	1:13:819:A:H5'	2.21	0.41
1:13:1023:G:H3'	1:13:1024:G:C5'	2.48	0.41
1:13:1053:G:O6	1:13:1199:U:H2'	2.21	0.41
1:13:1234:C:O2'	1:13:1235:U:H5'	2.20	0.41
1:13:1374:A:H2'	1:13:1375:A:H5'	2.01	0.41
2:1E:88:ALA:HB1	2:1E:90:MET:HG2	2.02	0.41
2:1E:189:ASP:OD1	2:1E:189:ASP:N	2.38	0.41
8:7E:95:VAL:HG21	8:7E:133:LEU:HD12	2.03	0.41
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.76	0.41
11:2I:34:ASP:HB2	11:2I:35:PRO:HD2	2.02	0.41
12:3I:8:VAL:HG13	17:8I:29:HIS:HD2	1.86	0.41
13:4I:10:PRO:O	13:4I:11:ARG:NH1	2.54	0.41
13:4I:14:ARG:O	13:4I:16:ASP:N	2.54	0.41
24:3K:71:G:H2'	24:3K:72:C:H5''	2.03	0.41
26:5K:19:G:N2	28:16:119:A:H3'	2.35	0.41
27:1H:1182:G:N3	27:1H:1182:G:H2'	2.36	0.41
27:1H:1581:G:H21	27:1H:1582:U:H5''	1.85	0.41
27:1H:1814:C:O4'	27:1H:2622:U:C2	2.74	0.41
27:1H:2575:U:H1'	38:68:23:ARG:NH1	2.36	0.41
27:1H:2729:C:H2'	27:1H:2730:U:C6	2.51	0.41
28:16:14:U:H5'	28:16:70:C:O2	2.21	0.41
29:71:200:LYS:HG2	29:71:201:PRO:O	2.20	0.41
30:11:4:LYS:HB3	30:11:18:VAL:HG23	2.02	0.41
30:11:34:VAL:CG2	30:11:61:LEU:HG	2.51	0.41
39:78:21:ARG:O	39:78:28:GLY:HA2	2.21	0.41
40:88:10:ARG:O	40:88:11:LYS:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:J8:24:ALA:HB3	51:J8:27:GLU:HB2	2.03	0.41
51:J8:92:LYS:O	51:J8:95:LEU:N	2.54	0.41
55:N8:35:GLU:CD	55:N8:52:TYR:HA	2.41	0.41
1:1G:22:G:H5''	1:1G:561:U:N3	2.36	0.41
1:1G:35:G:C2	1:1G:550:G:C2	3.07	0.41
1:1G:56:U:O2'	1:1G:57:G:H5'	2.21	0.41
1:1G:358:U:H2'	1:1G:359:U:H6	1.86	0.41
1:1G:829:G:H1	1:1G:857:C:H42	1.67	0.41
1:1G:836:G:C6	1:1G:851:G:C6	3.08	0.41
1:1G:1112:C:N3	3:22:178:LEU:HB2	2.36	0.41
1:1G:1128:C:N4	1:1G:1144:G:H1	2.19	0.41
1:1G:1161:C:H2'	1:1G:1162:C:C6	2.55	0.41
1:1G:1331:G:O2'	1:1G:1332:A:O5'	2.33	0.41
3:22:6:HIS:CB	14:5A:49:HIS:HB3	2.50	0.41
5:42:137:GLU:HA	5:42:140:ARG:HB3	2.03	0.41
8:72:35:ILE:H	8:72:35:ILE:HG12	1.63	0.41
12:3A:87:VAL:C	12:3A:89:OTD:H1	2.15	0.41
12:3A:114:ARG:HB2	12:3A:119:THR:O	2.21	0.41
14:5A:42:ILE:HD13	14:5A:45:ARG:HD3	2.03	0.41
17:8A:12:SER:HA	17:8A:14:LYS:NZ	2.36	0.41
27:14:28:A:C4	27:14:513:A:N7	2.89	0.41
27:14:686:G:H21	27:14:788:A:H61	1.69	0.41
27:14:945:A:H2	65:14:3548:HOH:O	2.03	0.41
27:14:1434:A:H61	27:14:1558:A:N6	2.10	0.41
27:14:1494:A:C2	27:14:1495:A:C4	3.09	0.41
27:14:1854:A:H2'	27:14:1855:G:H5'	2.02	0.41
27:14:2035:G:H4'	27:14:2036:C:OP2	2.21	0.41
27:14:2208:U:O4'	30:19:151:LYS:HE2	2.20	0.41
27:14:2322:A:H2'	27:14:2323:G:O4'	2.21	0.41
27:14:2415:G:H1'	39:35:67:MET:HE3	2.03	0.41
27:14:2696:U:H2'	27:14:2697:G:C8	2.56	0.41
28:1J:66:A:HO2'	28:1J:67:G:P	2.35	0.41
28:1J:82:G:C2'	28:1J:83:G:H5'	2.51	0.41
30:19:53:PHE:CE2	30:19:220:HIS:ND1	2.88	0.41
30:19:182:LEU:HD23	30:19:182:LEU:HA	1.89	0.41
31:29:51:PHE:HB3	31:29:77:ILE:HG22	2.02	0.41
33:49:129:GLY:H	33:49:166:ASP:HB3	1.86	0.41
38:25:106:LEU:HD22	38:25:111:PHE:CD2	2.56	0.41
39:35:106:LEU:HD12	39:35:106:LEU:HA	1.79	0.41
41:55:18:LEU:HD23	41:55:18:LEU:HA	1.89	0.41
42:65:62:LYS:HB3	42:65:97:ARG:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:75:12:SER:OG	43:75:13:ARG:N	2.54	0.41
44:85:28:ARG:NH1	44:85:38:THR:OG1	2.47	0.41
46:A5:29:LEU:HG	46:A5:33:ARG:NH1	2.35	0.41
51:F5:91:LYS:HD2	51:F5:91:LYS:HA	1.68	0.41
1:13:104:G:C2	1:13:105:G:C8	3.07	0.41
1:13:162:A:OP2	1:13:162:A:H8	2.04	0.41
1:13:192:U:O3'	20:BI:57:ARG:HD2	2.20	0.41
1:13:226:G:N2	1:13:227:G:H1'	2.35	0.41
1:13:286:G:N7	65:13:1848:HOH:O	2.37	0.41
1:13:514:C:H2'	1:13:515:G:C8	2.55	0.41
1:13:561:U:O2'	1:13:562:C:OP2	2.34	0.41
1:13:586:C:H2'	1:13:587:G:O4'	2.20	0.41
1:13:745:C:H4'	1:13:836:G:H21	1.85	0.41
1:13:837:G:H2'	1:13:838:G:O4'	2.21	0.41
1:13:945:G:C6	1:13:1337:G:C6	3.08	0.41
1:13:1073:U:H2'	1:13:1074:G:C8	2.56	0.41
1:13:1104:G:H4'	2:1E:111:ARG:NH1	2.36	0.41
1:13:1119:C:H2'	1:13:1120:G:C8	2.56	0.41
1:13:1124:G:O2'	1:13:1145:C:C4	2.65	0.41
1:13:1150:U:H1'	1:13:1280:A:N6	2.36	0.41
1:13:1178:G:H5'	1:13:1179:A:OP2	2.21	0.41
1:13:1308:U:H5'	13:4I:110:ARG:HD2	2.02	0.41
1:13:1410:G:H2'	1:13:1411:C:C6	2.56	0.41
2:1E:163:PHE:HD1	2:1E:163:PHE:HA	1.74	0.41
6:5E:5:GLU:HG3	6:5E:93:SER:OG	2.21	0.41
7:6E:38:LEU:HD12	7:6E:38:LEU:HA	1.78	0.41
8:7E:44:PHE:CD1	8:7E:80:ILE:HG12	2.56	0.41
10:1I:40:LEU:HD12	10:1I:69:ASN:HB3	2.02	0.41
10:1I:79:ARG:HA	10:1I:79:ARG:HD3	1.73	0.41
13:4I:22:ILE:HD12	13:4I:25:ILE:HD12	2.03	0.41
13:4I:73:GLU:O	13:4I:77:ASN:HB2	2.21	0.41
16:7I:26:ARG:HH21	16:7I:31:LYS:HB3	1.85	0.41
17:8I:76:LEU:HD11	17:8I:79:SER:H	1.86	0.41
17:8I:83:ASP:O	17:8I:87:LYS:HG2	2.21	0.41
18:9I:53:ARG:HH21	18:9I:60:ALA:H	1.64	0.41
20:BI:38:LYS:HB3	20:BI:38:LYS:HE2	1.77	0.41
24:3K:18:G:C2'	24:3K:57:G:H22	2.33	0.41
24:3K:51:U:H2'	24:3K:52:G:N9	2.36	0.41
24:3K:62:C:H2'	24:3K:63:G:H8	1.85	0.41
27:1H:27:G:H1'	27:1H:539:A:N6	2.36	0.41
27:1H:34:C:H1'	27:1H:35:G:P	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:537:U:C5	27:1H:538:G:C5	3.09	0.41
27:1H:598:C:N3	31:21:145:LYS:NZ	2.64	0.41
27:1H:657:A:OP2	58:Q8:47:LYS:NZ	2.35	0.41
27:1H:660:C:H2'	27:1H:661:C:C6	2.55	0.41
27:1H:765:G:H2'	27:1H:766:A:O4'	2.20	0.41
27:1H:828:G:N2	27:1H:831:A:H62	2.12	0.41
27:1H:1079:A:H2	27:1H:1169:G:H22	1.69	0.41
27:1H:1098:G:H8	27:1H:1098:G:OP2	2.04	0.41
27:1H:1139:C:H2'	27:1H:1140:G:O4'	2.21	0.41
27:1H:1520:A:H2'	27:1H:1521:G:O4'	2.21	0.41
27:1H:1556:C:OP1	27:1H:1556:C:H4'	2.07	0.41
27:1H:1559:G:H2'	27:1H:1560:C:O4'	2.20	0.41
27:1H:2297:C:C2'	27:1H:2298:C:H5'	2.51	0.41
27:1H:2360:C:H2'	27:1H:2361:U:C6	2.56	0.41
27:1H:2414:U:C2	27:1H:2415:C:O2	2.74	0.41
27:1H:2484:C:H5'	27:1H:2485:G:OP2	2.20	0.41
27:1H:2499:G:H2'	27:1H:2500:G:O4'	2.20	0.41
27:1H:2589:G:P	65:1H:3805:HOH:O	2.79	0.41
27:1H:2815:C:H2'	27:1H:2816:C:H6	1.86	0.41
27:1H:2873:G:H2'	27:1H:2874:C:H6	1.86	0.41
27:1H:2892:C:C2	27:1H:2893:A:C8	3.09	0.41
27:1H:2905:U:H2'	27:1H:2906:C:O4'	2.20	0.41
29:71:58:VAL:HG22	29:71:199:HIS:HB3	2.02	0.41
30:11:172:TYR:HB3	30:11:184:LYS:HB3	2.03	0.41
31:21:47:VAL:HG21	31:21:84:PHE:CD2	2.55	0.41
33:41:57:ALA:HB2	33:41:90:LEU:HG	2.03	0.41
38:68:2:ILE:HD11	38:68:82:ASN:HB3	2.03	0.41
39:78:64:LYS:HB3	58:Q8:13:ARG:HB3	2.03	0.41
42:A8:45:GLY:HA3	65:A8:202:HOH:O	2.21	0.41
44:C8:66:ASN:HD21	44:C8:70:ARG:HH21	1.69	0.41
44:C8:98:LEU:HD23	44:C8:98:LEU:C	2.41	0.41
46:E8:70:TYR:HD1	46:E8:70:TYR:H	1.67	0.41
48:G8:44:ILE:H	48:G8:44:ILE:HG13	1.65	0.41
49:H8:125:LEU:HD23	49:H8:164:ALA:O	2.20	0.41
51:J8:15:ALA:O	51:J8:40:ARG:HG3	2.20	0.41
56:O8:13:CYS:HA	56:O8:50:ARG:O	2.21	0.41
1:1G:45:U:H2'	1:1G:46:G:H8	1.83	0.41
1:1G:376:G:H4'	16:7A:5:ARG:HD3	2.03	0.41
1:1G:593:G:N2	1:1G:647:C:H1'	2.36	0.41
1:1G:629:G:H2'	1:1G:630:G:C8	2.55	0.41
1:1G:753:A:H4'	1:1G:754:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:765:G:N1	1:1G:812:C:O2'	2.39	0.41
1:1G:959:A:H2'	1:1G:960:U:H1'	2.03	0.41
1:1G:1004:A:C8	1:1G:1026:G:C8	3.08	0.41
1:1G:1207:2MG:H2'	1:1G:1208:C:H6	1.86	0.41
1:1G:1268:A:N3	1:1G:1326:C:O2'	2.53	0.41
1:1G:1306:A:N6	1:1G:1331:G:H1'	2.34	0.41
1:1G:1329:A:O2'	13:4A:24:GLY:HA2	2.21	0.41
1:1G:1449:C:H1'	1:1G:1455:G:H22	1.86	0.41
4:32:3:ARG:O	4:32:5:ILE:HD12	2.21	0.41
5:42:105:VAL:HB	5:42:106:PRO:HD3	2.02	0.41
6:52:62:TRP:CH2	6:52:64:GLN:HB2	2.56	0.41
7:62:71:PRO:HG3	7:62:103:TRP:CH2	2.56	0.41
9:82:96:LEU:HB3	9:82:102:LEU:HG	2.03	0.41
10:1A:49:VAL:HG22	14:5A:41:ARG:HB2	2.03	0.41
11:2A:22:HIS:O	11:2A:28:THR:HA	2.20	0.41
12:3A:25:LYS:O	12:3A:27:ALA:N	2.54	0.41
12:3A:82:ILE:CD1	12:3A:97:ILE:HG12	2.51	0.41
14:5A:45:ARG:HG3	14:5A:49:HIS:CE1	2.56	0.41
15:6A:2:PRO:HB2	15:6A:3:ILE:H	1.53	0.41
59:1L:29:G:N2	59:1L:42:C:N3	2.68	0.41
59:1L:59:U:N3	59:1L:60:U:H1'	2.36	0.41
59:1L:75:C:H2'	59:1L:76:A:H5''	2.02	0.41
60:2L:4:C:N4	60:2L:69:G:H1	2.16	0.41
24:3L:19:G:N3	27:14:2112:G:H1'	2.36	0.41
27:14:17:G:C4	27:14:18:C:C5	3.08	0.41
27:14:36:G:N2	27:14:445:C:C2	2.89	0.41
27:14:128:C:C6	27:14:128:C:H3'	2.56	0.41
27:14:251:A:C5	27:14:252:G:H1'	2.55	0.41
27:14:374:A:H1'	27:14:401:A:N6	2.35	0.41
27:14:395:U:O2'	27:14:396:G:C8	2.69	0.41
27:14:536:A:H2'	27:14:537:C:C6	2.55	0.41
27:14:561:G:H1'	44:85:45:TYR:HE1	1.85	0.41
27:14:672:C:C2	27:14:809:G:N2	2.89	0.41
27:14:971:C:H2'	27:14:972:G:H5'	2.03	0.41
27:14:980:A:C5	27:14:1136:G:H5''	2.55	0.41
27:14:997:G:H5'	44:85:92:ARG:HD2	2.01	0.41
27:14:1030:G:O2'	27:14:2466:C:O2'	2.28	0.41
27:14:1168:G:C6	27:14:1182:A:C2	3.08	0.41
27:14:1202:C:N4	27:14:1203:G:C6	2.89	0.41
27:14:1483:G:C2	27:14:1484:G:C8	3.09	0.41
27:14:1487:G:N1	27:14:1488:G:C5	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1542:G:N7	27:14:1543:A:C5	2.89	0.41
27:14:1789:A:H2'	27:14:1790:C:O4'	2.21	0.41
27:14:1904:G:H2'	27:14:1905:C:O4'	2.21	0.41
27:14:1937:A:O2'	27:14:1939:5MU:H71	2.20	0.41
27:14:2018:G:H2'	27:14:2019:A:C8	2.56	0.41
27:14:2127:G:N3	27:14:2127:G:H2'	2.35	0.41
27:14:2182:G:H2'	27:14:2183:C:C6	2.56	0.41
27:14:2195:C:H2'	27:14:2196:C:O4'	2.21	0.41
27:14:2420:C:O5'	27:14:2420:C:H6	2.04	0.41
27:14:2478:A:H5'	27:14:2479:G:OP2	2.21	0.41
27:14:2706:G:O6	65:14:3554:HOH:O	2.21	0.41
27:14:2766:G:H5''	27:14:2767:C:OP2	2.20	0.41
28:1J:28:C:H42	28:1J:56:G:H1	1.69	0.41
28:1J:58:A:H5''	28:1J:58:A:C8	2.56	0.41
28:1J:66:A:N1	28:1J:107:U:H2'	2.36	0.41
29:79:30:LYS:HB2	29:79:30:LYS:HE3	1.73	0.41
30:19:228:PRO:HD3	30:19:235:GLY:N	2.36	0.41
31:29:36:ARG:NH2	31:29:88:GLY:O	2.54	0.41
34:59:76:VAL:O	34:59:79:VAL:HG22	2.21	0.41
39:35:15:ARG:O	39:35:16:ARG:C	2.59	0.41
39:35:111:ARG:HG3	39:35:128:HIS:CD2	2.56	0.41
41:55:35:THR:HG23	41:55:100:LEU:HD11	2.02	0.41
42:65:34:HIS:CE1	42:65:54:LEU:N	2.88	0.41
43:75:50:ILE:HD12	43:75:50:ILE:HA	1.63	0.41
43:75:68:TYR:O	43:75:70:VAL:HG23	2.20	0.41
51:F5:67:ILE:N	51:F5:68:PRO:CD	2.84	0.41
53:H5:11:SER:OG	53:H5:13:ILE:HG12	2.20	0.41
58:M5:32:LEU:HA	58:M5:32:LEU:HD23	1.89	0.41
1:13:189:U:O2'	1:13:190:G:P	2.79	0.41
1:13:292:G:C5	1:13:293:G:H1'	2.56	0.41
1:13:372:C:O2'	1:13:373:A:P	2.78	0.41
1:13:591:U:OP2	8:7E:30:ARG:HD3	2.20	0.41
1:13:984:C:H42	1:13:1221:G:H1	1.69	0.41
1:13:1022:G:H2'	1:13:1023:G:O4'	2.21	0.41
1:13:1088:G:C4	1:13:1089:G:C8	3.09	0.41
1:13:1126:U:C2	1:13:1281:U:C2	3.08	0.41
1:13:1192:C:OP2	3:2E:4:LYS:NZ	2.51	0.41
2:1E:30:ARG:H	2:1E:30:ARG:CD	2.33	0.41
4:3E:148:VAL:HG12	4:3E:149:ALA:H	1.85	0.41
27:1H:6:A:N3	37:58:131:GLN:HG3	2.36	0.41
27:1H:475:U:H5'	65:1H:3953:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:522:G:C5	27:1H:523:A:C8	3.09	0.41
27:1H:734:G:O6	57:P8:12:ARG:NH1	2.54	0.41
27:1H:804:C:N4	27:1H:805:U:C4	2.89	0.41
27:1H:816:G:C6	27:1H:817:G:C5	3.09	0.41
27:1H:938:A:H3'	27:1H:939:G:H8	1.86	0.41
27:1H:1306:G:H2'	27:1H:1307:G:H8	1.85	0.41
27:1H:1422:C:H2'	27:1H:1423:C:H6	1.86	0.41
27:1H:1733:C:H2'	27:1H:1734:C:H6	1.84	0.41
27:1H:2480:C:H4'	40:88:123:HIS:CE1	2.56	0.41
27:1H:2898:U:H2'	27:1H:2899:C:H6	1.86	0.41
28:16:95:U:H2'	28:16:96:G:C8	2.55	0.41
30:11:124:PRO:HG2	30:11:129:ASN:ND2	2.36	0.41
31:21:63:LEU:HD23	31:21:63:LEU:HA	1.85	0.41
35:61:44:LEU:HD12	35:61:44:LEU:HA	1.67	0.41
35:61:68:LEU:HA	35:61:68:LEU:HD12	1.74	0.41
35:61:131:LYS:HA	35:61:131:LYS:NZ	2.35	0.41
42:A8:95:HIS:N	42:A8:99:LYS:HB2	2.36	0.41
45:D8:49:THR:O	45:D8:51:VAL:N	2.54	0.41
46:E8:36:LEU:HA	46:E8:36:LEU:HD23	1.76	0.41
51:J8:40:ARG:HE	51:J8:40:ARG:HB2	1.51	0.41
51:J8:73:LEU:HD13	51:J8:90:ILE:HG22	2.03	0.41
58:Q8:34:TRP:CD2	58:Q8:35:GLN:N	2.88	0.41
1:1G:201:C:H4'	1:1G:208:U:OP1	2.19	0.41
1:1G:328:C:O2'	1:1G:329:A:OP2	2.37	0.41
1:1G:373:A:C2	1:1G:374:A:C8	3.09	0.41
1:1G:396:G:O2'	1:1G:398:C:OP1	2.21	0.41
1:1G:624:C:H2'	1:1G:625:G:H8	1.85	0.41
1:1G:672:U:H2'	1:1G:673:G:H8	1.86	0.41
1:1G:675:A:H1'	11:2A:116:HIS:CG	2.56	0.41
1:1G:1091:U:H2'	1:1G:1093:A:OP2	2.20	0.41
1:1G:1107:C:O2	1:1G:1191:A:O2'	2.34	0.41
1:1G:1124:G:N2	1:1G:1127:G:H1	2.19	0.41
1:1G:1156:G:H3'	1:1G:1157:A:C5'	2.51	0.41
1:1G:1375:A:H4'	7:62:29:LYS:NZ	2.36	0.41
1:1G:1480:G:H2'	1:1G:1481:U:O4'	2.20	0.41
1:1G:1509:C:H2'	1:1G:1510:U:O4'	2.21	0.41
4:32:166:LYS:HB2	4:32:166:LYS:HE3	1.86	0.41
5:42:12:LEU:HD11	5:42:14:ARG:HD3	2.02	0.41
8:72:113:SER:O	8:72:131:GLY:HA3	2.21	0.41
16:7A:18:ARG:HE	16:7A:35:LYS:NZ	2.19	0.41
17:8A:10:VAL:HG21	17:8A:55:ASP:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:1B:21:TYR:CD1	21:1B:21:TYR:N	2.88	0.41
59:1L:52:G:H3'	59:1L:53:G:H8	1.86	0.41
27:14:883:G:H22	27:14:893:C:N4	2.19	0.41
27:14:923:C:H2'	27:14:924:C:C6	2.56	0.41
27:14:975:G:C5	27:14:976:C:C5	3.08	0.41
27:14:1060:U:H4'	27:14:1061:U:O5'	2.21	0.41
27:14:1157:G:H2'	27:14:1158:C:C6	2.56	0.41
27:14:1349:A:H5'	27:14:1350:C:O5'	2.20	0.41
27:14:1532:C:N3	27:14:1540:G:N2	2.69	0.41
27:14:1678:G:N2	27:14:1989:G:H1	2.19	0.41
27:14:1686:C:H5''	27:14:1686:C:C6	2.51	0.41
27:14:2745:C:H2'	27:14:2746:U:C6	2.56	0.41
27:14:2755:C:O2'	27:14:2756:U:H2'	2.20	0.41
31:29:120:TRP:CG	31:29:155:LYS:HB3	2.56	0.41
33:49:39:ILE:H	33:49:39:ILE:HG13	1.74	0.41
34:59:85:LYS:HD3	34:59:85:LYS:HA	1.71	0.41
43:75:102:ILE:HB	43:75:110:ILE:HG12	2.03	0.41
45:95:29:PRO:HA	45:95:61:VAL:CG2	2.51	0.41
49:D5:5:LEU:HD22	49:D5:5:LEU:HA	1.91	0.41
49:D5:61:LEU:HD22	49:D5:61:LEU:HA	1.78	0.41
54:I5:23:GLU:C	54:I5:25:TYR:H	2.18	0.41
1:13:201:C:O2	1:13:216:G:N2	2.55	0.40
1:13:264:U:O2'	17:8I:64:PRO:O	2.35	0.40
1:13:353:A:H8	1:13:353:A:H5'	1.85	0.40
1:13:640:A:O2'	8:7E:115:SER:HB2	2.21	0.40
1:13:827:U:C5	1:13:870:U:C4	3.09	0.40
1:13:1253:G:OP1	10:1I:44:VAL:HG21	2.21	0.40
4:3E:4:TYR:CE1	4:3E:6:GLY:HA3	2.56	0.40
8:7E:38:ILE:HD12	8:7E:111:ILE:HG23	2.03	0.40
11:2I:95:ILE:O	11:2I:99:GLN:HG3	2.21	0.40
13:4I:66:LEU:HB3	13:4I:67:GLU:H	1.71	0.40
16:7I:17:TYR:CE2	16:7I:41:PRO:HG3	2.54	0.40
19:AI:49:ILE:O	19:AI:60:VAL:HG22	2.20	0.40
26:5K:65:G:HO2'	26:5K:66:U:P	2.43	0.40
27:1H:81:G:H8	27:1H:81:G:OP2	2.03	0.40
27:1H:322:C:C2	27:1H:367:G:N2	2.89	0.40
27:1H:486:U:H4'	57:P8:40:TRP:CZ3	2.56	0.40
27:1H:612:U:O4	27:1H:718:A:H1'	2.22	0.40
27:1H:830:A:O2'	27:1H:1820:C:H4'	2.22	0.40
27:1H:1189:A:C5	27:1H:1191:G:N7	2.90	0.40
27:1H:1429:G:O2'	27:1H:1430:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:1753:G:C5	27:1H:1754:U:C4	3.09	0.40
27:1H:2640:G:N3	27:1H:2795:A:H2	2.18	0.40
27:1H:2776:G:H2'	27:1H:2777:G:O4'	2.21	0.40
28:16:19:G:H8	28:16:19:G:H5''	1.85	0.40
28:16:92:G:H2'	28:16:93:C:H6	1.85	0.40
32:31:179:GLU:H	32:31:179:GLU:CD	2.24	0.40
37:58:30:ILE:HG23	37:58:52:VAL:HG11	2.02	0.40
38:68:22:ILE:HG22	38:68:40:VAL:HB	2.03	0.40
41:98:10:LEU:O	41:98:12:ARG:NH1	2.55	0.40
48:G8:63:LYS:HD2	48:G8:63:LYS:HA	1.82	0.40
49:H8:24:LEU:HD21	49:H8:86:VAL:HG22	2.03	0.40
1:1G:57:G:C6	1:1G:58:C:C4	3.09	0.40
1:1G:93:U:H2'	1:1G:95:G:C8	2.55	0.40
1:1G:401:C:H2'	1:1G:402:G:H8	1.85	0.40
1:1G:689:C:O2'	1:1G:690:G:H5'	2.21	0.40
1:1G:763:G:H2'	1:1G:764:C:H6	1.85	0.40
1:1G:872:A:P	1:1G:872:A:H3'	2.61	0.40
1:1G:972:C:H4'	10:1A:57:LYS:HG3	2.02	0.40
1:1G:978:A:C5	1:1G:1319:A:C2	3.09	0.40
1:1G:1219:U:OP1	14:5A:19:ARG:NH1	2.31	0.40
1:1G:1255:G:C6	1:1G:1279:A:C8	3.08	0.40
1:1G:1332:A:O5'	1:1G:1332:A:H8	2.04	0.40
1:1G:1399:C:C2	1:1G:1502:A:N6	2.89	0.40
2:12:24:TRP:CZ3	2:12:26:PRO:HB3	2.56	0.40
3:22:38:ARG:H	3:22:38:ARG:HG2	1.55	0.40
3:22:92:ALA:HA	3:22:95:THR:HB	2.03	0.40
6:52:70:ASP:OD1	6:52:70:ASP:N	2.50	0.40
8:72:1:MET:SD	8:72:1:MET:N	2.94	0.40
9:82:16:ARG:N	9:82:64:THR:O	2.43	0.40
10:1A:78:ASN:HB2	10:1A:81:THR:H	1.85	0.40
11:2A:17:GLY:HA3	11:2A:77:MET:SD	2.61	0.40
17:8A:81:ARG:HD3	17:8A:84:LEU:HD11	2.03	0.40
17:8A:87:LYS:O	17:8A:91:ARG:HD2	2.21	0.40
18:9A:50:ILE:CD1	18:9A:70:ILE:HG21	2.51	0.40
19:AA:53:ASN:O	19:AA:77:THR:HG22	2.20	0.40
59:1L:29:G:C2	59:1L:30:G:C5	3.09	0.40
27:14:270(T):G:C6	27:14:270(U):C:C4	3.08	0.40
27:14:301:G:C4	27:14:302:C:C5	3.09	0.40
27:14:807:U:C2	27:14:808:G:C8	3.09	0.40
27:14:1160:G:C6	27:14:1161:C:C4	3.10	0.40
27:14:1228:G:OP1	44:85:13:LYS:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:1496:A:C8	27:14:1498:C:N3	2.89	0.40
27:14:1594:G:H2'	27:14:1595:G:C8	2.57	0.40
27:14:2562:U:H1'	38:25:23:ARG:HH11	1.87	0.40
27:14:2743:C:H2'	27:14:2744:G:O4'	2.21	0.40
28:1J:40:U:O4	54:I5:2:LYS:N	2.54	0.40
30:19:54:ARG:HH11	30:19:54:ARG:HG2	1.86	0.40
30:19:58:HIS:ND1	30:19:59:LYS:O	2.40	0.40
38:25:23:ARG:CG	38:25:24:VAL:H	2.28	0.40
39:35:15:ARG:O	39:35:17:LYS:N	2.53	0.40
42:65:73:LEU:H	42:65:73:LEU:HD22	1.86	0.40
43:75:56:GLY:O	43:75:59:THR:HG22	2.21	0.40
46:A5:58:ALA:O	46:A5:64:MET:HB2	2.22	0.40
46:A5:88:ARG:HD2	46:A5:88:ARG:HA	1.75	0.40
48:C5:71:LYS:HB2	48:C5:71:LYS:HE3	1.98	0.40
1:13:113:G:H2'	1:13:114:U:H6	1.86	0.40
1:13:224:C:H2'	1:13:225:C:C6	2.57	0.40
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.56	0.40
1:13:1151:A:H5'	10:1I:41:PRO:HA	2.03	0.40
2:1E:149:LEU:HD22	2:1E:152:PHE:HB3	2.03	0.40
2:1E:207:ALA:O	2:1E:209:ARG:N	2.54	0.40
3:2E:37:GLN:NE2	14:5I:52:GLN:OE1	2.29	0.40
3:2E:164:ARG:NH1	25:4K:55:U:H1'	2.36	0.40
7:6E:49:ILE:H	7:6E:49:ILE:HG12	1.57	0.40
11:2I:48:ILE:HD13	11:2I:48:ILE:HA	1.83	0.40
13:4I:15:VAL:HG22	13:4I:45:VAL:HA	2.04	0.40
13:4I:102:ARG:O	13:4I:102:ARG:HG2	2.20	0.40
16:7I:69:THR:O	16:7I:69:THR:OG1	2.38	0.40
22:1K:36:A:C6	22:1K:37:MIA:C5	3.04	0.40
26:5K:52:G:H3'	26:5K:53:G:H5''	2.03	0.40
27:1H:28:A:C2	27:1H:539:A:C8	3.09	0.40
27:1H:469:G:N2	32:31:48:THR:OG1	2.54	0.40
27:1H:951:C:H6	27:1H:951:C:H5''	1.86	0.40
27:1H:1059:U:H5	37:58:28:THR:HG21	1.86	0.40
27:1H:1314:U:H2'	27:1H:1315:A:C8	2.56	0.40
27:1H:1520:A:H2'	27:1H:1521:G:C8	2.55	0.40
27:1H:2150:G:H21	27:1H:2196:A:H1'	1.86	0.40
29:71:185:LEU:O	29:71:189:ILE:HG13	2.20	0.40
31:21:18:ASP:CA	43:B8:82:LEU:HD11	2.51	0.40
31:21:52:LEU:O	31:21:76:ARG:N	2.44	0.40
32:31:129:PHE:HA	32:31:142:TRP:CD1	2.55	0.40
37:58:25:ARG:H	37:58:25:ARG:HG2	1.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:68:98:VAL:HG13	38:68:117:LEU:HB3	2.03	0.40
39:78:63:PRO:HG2	58:Q8:25:MET:HB2	2.03	0.40
42:A8:5:THR:H	42:A8:5:THR:HG23	1.46	0.40
43:B8:102:ILE:HD13	43:B8:102:ILE:HG21	1.85	0.40
44:C8:19:LYS:HA	44:C8:22:LYS:HD2	2.03	0.40
50:I8:73:GLY:O	50:I8:75:LEU:N	2.54	0.40
1:1G:272:C:H2'	1:1G:273:A:H8	1.84	0.40
1:1G:406:G:H2'	1:1G:407:G:C8	2.56	0.40
1:1G:544:G:C5	1:1G:545:C:C5	3.09	0.40
1:1G:554:C:C2	1:1G:555:C:C5	3.09	0.40
1:1G:559:A:H4'	1:1G:560:U:H5''	2.03	0.40
1:1G:668:G:O2'	1:1G:669:U:H5'	2.21	0.40
1:1G:724:G:C2	1:1G:725:G:C8	3.09	0.40
1:1G:831:U:OP1	2:12:22:LYS:HD3	2.21	0.40
1:1G:900:A:H2'	1:1G:901:A:C8	2.56	0.40
1:1G:1024:G:H3'	1:1G:1024:G:N3	2.35	0.40
2:12:215:LEU:O	2:12:219:VAL:HG12	2.22	0.40
5:42:76:ILE:HD13	5:42:118:ILE:HD13	2.02	0.40
10:1A:32:ALA:HB2	10:1A:78:ASN:OD1	2.21	0.40
13:4A:25:ILE:HD11	13:4A:66:LEU:HD13	2.03	0.40
14:5A:53:LEU:HD23	14:5A:53:LEU:HA	1.91	0.40
24:3L:21:A:H2'	24:3L:22:G:O4'	2.21	0.40
24:3L:21:A:H3'	24:3L:21:A:N3	2.37	0.40
27:14:68:G:H3'	27:14:69:C:H6	1.86	0.40
27:14:128:C:H2'	27:14:129:C:O4'	2.22	0.40
27:14:224:G:N7	27:14:420:C:H4'	2.35	0.40
27:14:768:G:H2'	27:14:769:G:C8	2.56	0.40
27:14:826:U:H5''	27:14:2428:G:O3'	2.20	0.40
27:14:1259:G:H2'	27:14:1260:G:H8	1.86	0.40
27:14:1534:G:N3	27:14:1537:C:N4	2.68	0.40
27:14:2018:G:H2'	27:14:2019:A:O4'	2.20	0.40
27:14:2275:C:C2	40:45:85:LYS:HE3	2.56	0.40
27:14:2394:C:O2'	27:14:2395:C:H5'	2.21	0.40
27:14:2507:C:H2'	27:14:2508:G:O4'	2.21	0.40
27:14:2641:G:P	37:15:74:ARG:HH21	2.44	0.40
27:14:2843:G:H1	27:14:2874:C:N4	2.20	0.40
30:19:125:ILE:HG21	30:19:137:PRO:HD2	2.03	0.40
31:29:47:VAL:HG23	31:29:81:ILE:HB	2.03	0.40
31:29:108:SER:HB3	31:29:165:VAL:CG2	2.51	0.40
31:29:167:VAL:CG1	31:29:170:LEU:HD13	2.50	0.40
32:39:150:GLY:HA2	32:39:172:TRP:CD2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:59:149:ARG:HD2	34:59:164:TYR:HE1	1.85	0.40
38:25:15:GLY:HA2	38:25:47:ILE:HG22	2.03	0.40
42:65:3:ARG:NE	42:65:4:LEU:H	2.19	0.40
49:D5:21:ALA:O	49:D5:23:LYS:HG2	2.20	0.40
1:13:39:G:N7	1:13:547:A:H8	2.18	0.40
1:13:130:A:N3	1:13:263:A:O2'	2.44	0.40
1:13:191(D):U:H2'	1:13:191(E):G:C8	2.56	0.40
1:13:342:C:C2	1:13:348:G:N2	2.89	0.40
1:13:1092:A:N3	1:13:1183:A:N6	2.69	0.40
1:13:1206:G:O4'	3:2E:194:GLY:HA2	2.21	0.40
1:13:1290:G:H2'	1:13:1291:G:H8	1.87	0.40
1:13:1351:U:H2'	1:13:1352:C:H6	1.86	0.40
2:1E:74:LYS:HE3	2:1E:166:ASP:HB2	2.03	0.40
6:5E:10:LEU:HA	6:5E:84:ASN:O	2.20	0.40
7:6E:8:GLU:H	7:6E:8:GLU:HG3	1.50	0.40
11:2I:124:LYS:HD2	11:2I:125:PHE:CZ	2.56	0.40
12:3I:101:VAL:CG1	12:3I:102:TYR:H	2.34	0.40
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.21	0.40
15:6I:69:TYR:CE1	15:6I:73:GLU:HG3	2.57	0.40
16:7I:43:LYS:HA	16:7I:48:TRP:HB2	2.04	0.40
27:1H:355:A:H2	27:1H:1256:A:H2'	1.86	0.40
27:1H:562:A:P	44:C8:53:ARG:NH1	2.94	0.40
27:1H:776:G:HO2'	27:1H:778:C:H6	1.69	0.40
27:1H:1031:A:H5''	27:1H:1032:C:C5	2.57	0.40
27:1H:1189:A:C5	27:1H:1191:G:C5	3.09	0.40
27:1H:1526:G:H2'	27:1H:1527:G:H8	1.85	0.40
27:1H:1901:G:H2'	27:1H:1902:C:O4'	2.21	0.40
27:1H:2199:A:N3	29:7I:44:HIS:CD2	2.89	0.40
27:1H:2206:C:H2'	27:1H:2207:G:H8	1.86	0.40
27:1H:2604:C:H2'	27:1H:2605:G:C8	2.56	0.40
27:1H:2716:C:H2'	27:1H:2717:C:H6	1.87	0.40
28:16:15:A:H3'	28:16:16:G:H5'	2.03	0.40
28:16:87:G:N2	28:16:89:G:H3'	2.36	0.40
30:11:4:LYS:CB	30:11:18:VAL:HG23	2.52	0.40
30:11:9:TYR:CD1	30:11:10:THR:HG22	2.55	0.40
35:61:40:THR:O	35:61:44:LEU:HB2	2.21	0.40
35:61:73:GLU:OE1	35:61:137:PRO:HD2	2.22	0.40
37:58:28:THR:HG22	37:58:29:LYS:HG2	2.04	0.40
37:58:82:LEU:HD12	37:58:82:LEU:HA	1.77	0.40
38:68:119:PRO:HB2	43:B8:68:TYR:CE2	2.56	0.40
41:98:4:LEU:HD13	41:98:4:LEU:HA	1.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:98:9:LYS:H	41:98:9:LYS:HG2	1.66	0.40
43:B8:14:TYR:CD1	43:B8:14:TYR:N	2.88	0.40
45:D8:30:GLY:N	45:D8:61:VAL:HG13	2.29	0.40
49:H8:79:ARG:HB3	49:H8:80:ARG:HD2	2.03	0.40
51:J8:7:ILE:HD13	51:J8:69:LYS:HB3	2.04	0.40
53:L8:35:ARG:NH2	53:L8:37:LEU:HD21	2.35	0.40
1:1G:754:C:H5'	1:1G:755:G:H8	1.86	0.40
1:1G:824:C:H2'	1:1G:825:G:C8	2.56	0.40
1:1G:1349:A:H2'	1:1G:1350:A:C8	2.56	0.40
2:12:59:GLU:O	2:12:63:MET:HG3	2.21	0.40
9:82:10:ARG:HH21	9:82:11:LYS:HB2	1.84	0.40
11:2A:48:ILE:HA	11:2A:48:ILE:HD12	1.69	0.40
59:1L:12:U:O2	59:1L:24:G:N2	2.54	0.40
24:3L:15:G:N1	24:3L:48:C:N3	2.61	0.40
24:3L:20:U:O2'	24:3L:21:A:H4'	2.21	0.40
27:14:363:G:C2	27:14:363(A):A:C8	3.10	0.40
27:14:470:A:H2'	27:14:471:A:O4'	2.21	0.40
27:14:591:C:H2'	27:14:592:G:O4'	2.22	0.40
27:14:686:G:N2	27:14:788:A:H61	2.18	0.40
27:14:705:A:H2'	27:14:706:A:O4'	2.21	0.40
27:14:1729:A:C6	27:14:1731:G:C5	3.10	0.40
27:14:1825:A:OP1	30:19:249:PRO:HD3	2.21	0.40
27:14:1926:U:H2'	27:14:1928:A:OP2	2.21	0.40
27:14:2109:U:C2'	27:14:2110:G:H5'	2.51	0.40
27:14:2584:U:C6	27:14:2585:U:C4	3.10	0.40
27:14:2729:G:H2'	27:14:2730:C:H6	1.87	0.40
27:14:2749:A:H5''	34:59:6:ARG:HH11	1.86	0.40
28:1J:12:C:O2	50:E5:74:ARG:NH1	2.53	0.40
30:19:176:ARG:HG3	30:19:182:LEU:HD21	2.03	0.40
31:29:117:MET:SD	31:29:136:ARG:HA	2.62	0.40
33:49:180:PHE:C	33:49:182:LYS:H	2.24	0.40
43:75:104:ASN:OD1	43:75:104:ASN:N	2.54	0.40
49:D5:120:ILE:HD13	49:D5:120:ILE:HA	1.82	0.40
49:D5:153:SER:HA	49:D5:163:LEU:HD11	2.02	0.40
52:G5:10:LEU:HD23	52:G5:10:LEU:HA	1.90	0.40
54:I5:15:ILE:HG22	54:I5:32:TYR:HD1	1.86	0.40
1:13:108:G:P	1:13:326:G:H22	2.44	0.40
1:13:142:G:H1	1:13:221:C:H42	1.70	0.40
1:13:448:A:C4	1:13:487:A:C2	3.10	0.40
1:13:593:G:H2'	1:13:594:G:O4'	2.21	0.40
1:13:683:G:H2'	1:13:684:A:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:736:C:OP2	18:9I:68:LYS:NZ	2.43	0.40
1:13:991:U:O2'	1:13:992:U:O5'	2.38	0.40
1:13:1317:C:H5''	1:13:1318:A:OP2	2.21	0.40
4:3E:196:LEU:O	4:3E:198:VAL:N	2.45	0.40
6:5E:24:GLU:HG3	6:5E:28:ARG:HH12	1.86	0.40
15:6I:74:ASP:CB	15:6I:77:ARG:HB3	2.45	0.40
17:8I:60:ILE:O	17:8I:62:SER:OG	2.37	0.40
19:AI:41:VAL:HG23	19:AI:42:PRO:HA	2.03	0.40
21:1F:5:ASP:C	21:1F:7:ARG:H	2.24	0.40
27:1H:175:U:H4'	27:1H:208:A:H4'	2.02	0.40
27:1H:346:G:OP2	32:31:136:THR:HG23	2.22	0.40
27:1H:424:G:O3'	51:J8:44:PRO:HA	2.22	0.40
27:1H:555:A:H4'	27:1H:556:G:H5'	2.04	0.40
27:1H:833:G:C5	27:1H:834:C:C5	3.10	0.40
27:1H:1344:C:O2'	27:1H:1349:A:N1	2.48	0.40
27:1H:1356:G:H5''	57:P8:9:ARG:HD2	2.03	0.40
27:1H:1411:G:N7	51:J8:2:SER:N	2.69	0.40
27:1H:1464:C:H4'	27:1H:1634:A:H2	1.86	0.40
27:1H:1844:A:H2'	27:1H:1845:G:C8	2.57	0.40
27:1H:1847:A:P	30:11:54:ARG:HH22	2.44	0.40
27:1H:1848:G:C8	30:11:62:TYR:CE2	3.09	0.40
27:1H:2177:G:C5	27:1H:2178:G:C8	3.10	0.40
27:1H:2194:A:H2'	27:1H:2195:U:H5''	2.03	0.40
27:1H:2593:U:C5	27:1H:2594:G:C6	3.10	0.40
27:1H:2787:C:P	31:21:166:THR:HG1	2.44	0.40
31:21:52:LEU:HA	31:21:52:LEU:HD12	1.77	0.40
31:21:111:ARG:HD3	41:98:1:MET:HE3	2.04	0.40
37:58:39:ARG:HD3	37:58:41:ASP:OD1	2.22	0.40
39:78:50:ARG:HE	58:Q8:7:HIS:CD2	2.39	0.40
41:98:12:ARG:HG3	41:98:12:ARG:NH1	2.33	0.40
43:B8:30:VAL:HG23	43:B8:83:ILE:HG23	2.01	0.40
44:C8:72:HIS:HD2	44:C8:110:VAL:HG21	1.86	0.40
47:F8:49:VAL:HG13	47:F8:83:VAL:HG13	2.02	0.40
49:H8:127:LYS:HE3	49:H8:162:GLU:OE2	2.21	0.40
52:K8:57:ILE:O	52:K8:61:LEU:HD12	2.21	0.40
1:1G:583:A:H2'	1:1G:584:G:O4'	2.21	0.40
1:1G:624:C:H2'	1:1G:625:G:C8	2.56	0.40
1:1G:628:G:O2'	1:1G:629:G:H5'	2.21	0.40
1:1G:934:C:H5	1:1G:1344:C:H2'	1.87	0.40
1:1G:1085:U:H3'	1:1G:1086:U:C5	2.56	0.40
1:1G:1273:G:C6	1:1G:1274:G:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:31:LEU:HD12	5:42:44:GLY:O	2.21	0.40
6:52:7:ASN:O	6:52:88:VAL:HA	2.21	0.40
9:82:49:PRO:O	9:82:53:VAL:HG22	2.20	0.40
15:6A:84:LYS:HB2	15:6A:84:LYS:HE3	1.57	0.40
18:9A:22:VAL:HG23	18:9A:25:THR:OG1	2.22	0.40
21:1B:18:TYR:CE2	21:1B:24:ARG:HG3	2.56	0.40
24:3L:7:A:O2'	24:3L:8:U:H5'	2.21	0.40
27:14:273(D):C:H42	27:14:363(B):G:H1	1.68	0.40
27:14:394:A:C6	27:14:395:U:C4	3.09	0.40
27:14:631:A:O2'	39:35:67:MET:HB3	2.21	0.40
27:14:699:A:H2'	27:14:700:G:O4'	2.21	0.40
27:14:1024:G:H5''	27:14:1025:G:C5'	2.49	0.40
27:14:1131:G:C8	27:14:2025:C:H4'	2.57	0.40
27:14:1144:G:C6	27:14:1145:C:C4	3.09	0.40
27:14:1161:C:O2'	45:95:23:GLU:HG2	2.20	0.40
27:14:1263:U:O3'	55:J5:11:THR:HB	2.22	0.40
27:14:1313:U:H2'	27:14:1610:A:C2	2.56	0.40
27:14:1360:A:H5''	27:14:1360:A:C8	2.50	0.40
27:14:1459:G:C6	27:14:1461:G:C5	3.09	0.40
27:14:2134:A:H1'	27:14:2159:G:N3	2.35	0.40
29:79:211:SER:HB2	29:79:213:TYR:HE2	1.86	0.40
31:29:59:VAL:HG22	31:29:63:LEU:HD13	2.02	0.40
33:49:167:GLU:O	33:49:170:ARG:HB3	2.21	0.40
34:59:20:ALA:HB1	34:59:23:ARG:NH1	2.36	0.40
45:95:79:VAL:HG23	45:95:80:GLN:H	1.87	0.40
1:13:297:G:H4'	1:13:557:G:H4'	2.02	0.40
1:13:393:A:OP2	16:7I:12:LYS:HD2	2.22	0.40
1:13:737:A:H2'	1:13:738:C:C6	2.56	0.40
1:13:922:G:C6	1:13:923:A:C6	3.10	0.40
1:13:967:5MC:O5'	1:13:967:5MC:H6	2.05	0.40
1:13:1028(A):C:H2'	1:13:1028(B):C:O4'	2.21	0.40
2:1E:55:PHE:O	2:1E:58:ILE:N	2.55	0.40
2:1E:200:ILE:O	2:1E:201:ILE:HD13	2.22	0.40
3:2E:174:PRO:HD2	3:2E:182:ILE:HD11	2.04	0.40
5:4E:29:GLY:HA2	5:4E:46:GLY:O	2.21	0.40
5:4E:127:ASN:HA	5:4E:128:PRO:HD3	1.98	0.40
10:1I:40:LEU:HB3	10:1I:41:PRO:HD2	2.02	0.40
11:2I:85:ARG:HB3	11:2I:111:ASP:O	2.22	0.40
20:BI:30:LYS:HA	20:BI:30:LYS:HD3	1.87	0.40
24:3K:5:G:H2'	24:3K:6:G:H8	1.87	0.40
27:1H:493:A:H4'	57:P8:30:VAL:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1H:510:A:O2'	48:G8:59:GLY:HA2	2.22	0.40
27:1H:704:G:H2'	27:1H:705:U:O4'	2.21	0.40
27:1H:933:C:C5	27:1H:934:C:H1'	2.57	0.40
27:1H:1045:C:H2'	27:1H:1046:U:O4'	2.22	0.40
27:1H:1467:U:O2'	27:1H:1468:G:OP1	2.34	0.40
27:1H:1577:G:C5	27:1H:1578:C:C4	3.09	0.40
27:1H:1803:C:H1'	27:1H:1818:A:C8	2.56	0.40
27:1H:1843:G:H2'	27:1H:1844:A:O4'	2.22	0.40
27:1H:2263:G:C5	40:88:83:MET:HB2	2.57	0.40
27:1H:2340:A:H2'	27:1H:2341:A:O4'	2.22	0.40
27:1H:2799:C:HO2'	31:21:66:HIS:CE1	2.31	0.40
27:1H:2809:G:C2'	27:1H:2814:G:H22	2.34	0.40
27:1H:2906:C:H2'	27:1H:2907:U:C6	2.57	0.40
29:71:59:ARG:HA	29:71:163:PHE:O	2.21	0.40
30:11:54:ARG:HH11	30:11:54:ARG:HG3	1.87	0.40
30:11:73:VAL:HG13	30:11:120:GLY:HA3	2.04	0.40
30:11:142:VAL:HG23	30:11:193:VAL:HA	2.02	0.40
30:11:147:LEU:HD12	30:11:147:LEU:HA	1.64	0.40
32:31:46:ARG:HH11	32:31:46:ARG:HD2	1.74	0.40
32:31:62:ARG:CZ	32:31:62:ARG:HB3	2.51	0.40
37:58:136:GLU:HB2	37:58:137:LYS:H	1.59	0.40
47:F8:24:GLY:HA3	47:F8:82:GLN:NE2	2.28	0.40
52:K8:64:LEU:O	52:K8:68:ARG:HG3	2.21	0.40
54:M8:9:LEU:HD12	54:M8:27:THR:N	2.36	0.40
56:O8:39:TYR:O	56:O8:41:PRO:HD3	2.20	0.40
1:1G:403:C:HO2'	4:32:122:ARG:HH21	1.61	0.40
1:1G:706:A:H1'	11:2A:29:ILE:HD11	2.03	0.40
1:1G:737:A:H4'	6:52:72:VAL:HG21	2.04	0.40
1:1G:919:A:H8	1:1G:919:A:O5'	2.04	0.40
1:1G:1252:A:H2'	1:1G:1253:G:O4'	2.22	0.40
1:1G:1517:G:O6	1:1G:1518:MA6:H92	2.22	0.40
2:12:32:ILE:HG13	2:12:41:ILE:O	2.21	0.40
3:22:130:VAL:HB	3:22:157:ILE:HG23	2.03	0.40
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.53	0.40
7:62:15:ASP:HB3	7:62:19:GLY:N	2.37	0.40
9:82:5:TYR:HE1	9:82:17:VAL:H	1.69	0.40
9:82:45:ALA:HA	9:82:51:ARG:HH12	1.87	0.40
9:82:114:TYR:CE1	10:1A:59:SER:HA	2.55	0.40
14:5A:47:LEU:HB3	14:5A:52:GLN:HB2	2.03	0.40
18:9A:87:ARG:HG3	18:9A:88:LYS:N	2.35	0.40
19:AA:9:VAL:O	54:I5:69:LYS:HD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:14:513:A:C2	27:14:514:A:C4	3.09	0.40
27:14:607:U:OP1	32:39:102:PRO:HA	2.21	0.40
27:14:718:A:H2'	27:14:719:C:O4'	2.22	0.40
27:14:860:U:C2	27:14:2268:A:C8	3.09	0.40
27:14:896:A:H3'	27:14:897:C:C5'	2.51	0.40
27:14:1239:G:H5''	65:14:3653:HOH:O	2.21	0.40
27:14:1425:G:N2	27:14:1573:G:N7	2.69	0.40
27:14:1472:A:C2'	27:14:1473:G:H5'	2.52	0.40
27:14:1630:G:H2'	27:14:1630(A):C:C6	2.57	0.40
27:14:2732:G:H3'	27:14:2733:A:C5'	2.52	0.40
27:14:2755:C:HO2'	27:14:2756:U:H6	1.68	0.40
28:1J:93:C:O2'	28:1J:94:C:H5'	2.22	0.40
33:49:41:GLN:HG2	33:49:154:GLY:O	2.22	0.40
35:69:125:GLU:HB2	35:69:141:LYS:HD3	2.03	0.40
38:25:61:VAL:O	38:25:63:VAL:HG13	2.21	0.40
40:45:135:ASP:CG	49:D5:81:ARG:HH12	2.24	0.40
41:55:10:LEU:O	41:55:12:ARG:HD2	2.21	0.40
42:65:25:ARG:HG3	42:65:26:LEU:N	2.35	0.40
42:65:42:ASP:C	42:65:44:LYS:N	2.75	0.40
43:75:54:ARG:NE	65:75:201:HOH:O	2.48	0.40
44:85:27:LEU:HA	44:85:27:LEU:HD13	1.93	0.40
49:D5:128:VAL:HG21	49:D5:160:GLY:C	2.42	0.40
56:K5:10:LEU:HD12	56:K5:10:LEU:HA	1.85	0.40
56:K5:18:ARG:NH1	56:K5:20:ASN:OD1	2.51	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:5K:75:C:O2'	27:1H:100:G:O6[1_455]	1.97	0.23

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	12	235/256 (92%)	188 (80%)	45 (19%)	2 (1%)	14	45
2	1E	235/256 (92%)	176 (75%)	58 (25%)	1 (0%)	30	63
3	22	204/239 (85%)	166 (81%)	38 (19%)	0	100	100
3	2E	203/239 (85%)	167 (82%)	36 (18%)	0	100	100
4	32	206/209 (99%)	180 (87%)	26 (13%)	0	100	100
4	3E	206/209 (99%)	176 (85%)	30 (15%)	0	100	100
5	42	149/162 (92%)	131 (88%)	18 (12%)	0	100	100
5	4E	149/162 (92%)	131 (88%)	18 (12%)	0	100	100
6	52	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
6	5E	99/101 (98%)	84 (85%)	15 (15%)	0	100	100
7	62	153/156 (98%)	127 (83%)	25 (16%)	1 (1%)	19	51
7	6E	153/156 (98%)	139 (91%)	14 (9%)	0	100	100
8	72	136/138 (99%)	121 (89%)	15 (11%)	0	100	100
8	7E	136/138 (99%)	115 (85%)	21 (15%)	0	100	100
9	82	125/128 (98%)	102 (82%)	22 (18%)	1 (1%)	16	48
9	8E	125/128 (98%)	106 (85%)	18 (14%)	1 (1%)	16	48
10	1A	97/105 (92%)	79 (81%)	18 (19%)	0	100	100
10	1I	97/105 (92%)	86 (89%)	11 (11%)	0	100	100
11	2A	115/129 (89%)	104 (90%)	11 (10%)	0	100	100
11	2I	114/129 (88%)	103 (90%)	11 (10%)	0	100	100
12	3A	122/132 (92%)	93 (76%)	24 (20%)	5 (4%)	2	13
12	3I	122/132 (92%)	100 (82%)	22 (18%)	0	100	100
13	4A	119/126 (94%)	88 (74%)	31 (26%)	0	100	100
13	4I	117/126 (93%)	94 (80%)	22 (19%)	1 (1%)	14	45
14	5A	58/61 (95%)	44 (76%)	13 (22%)	1 (2%)	7	30
14	5I	58/61 (95%)	46 (79%)	11 (19%)	1 (2%)	7	30
15	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	6I	86/89 (97%)	73 (85%)	13 (15%)	0	100	100
16	7A	82/88 (93%)	73 (89%)	9 (11%)	0	100	100
16	7I	81/88 (92%)	71 (88%)	10 (12%)	0	100	100
17	8A	98/105 (93%)	87 (89%)	11 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	8I	98/105 (93%)	82 (84%)	16 (16%)	0	100	100
18	9A	68/88 (77%)	52 (76%)	16 (24%)	0	100	100
18	9I	69/88 (78%)	57 (83%)	12 (17%)	0	100	100
19	AA	84/93 (90%)	56 (67%)	28 (33%)	0	100	100
19	AI	82/93 (88%)	65 (79%)	16 (20%)	1 (1%)	11	38
20	BA	101/106 (95%)	80 (79%)	20 (20%)	1 (1%)	13	42
20	BI	99/106 (93%)	81 (82%)	17 (17%)	1 (1%)	13	42
21	1B	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
21	1F	22/27 (82%)	21 (96%)	1 (4%)	0	100	100
29	71	131/229 (57%)	111 (85%)	20 (15%)	0	100	100
29	79	131/229 (57%)	115 (88%)	16 (12%)	0	100	100
30	11	270/276 (98%)	234 (87%)	31 (12%)	5 (2%)	6	27
30	19	270/276 (98%)	237 (88%)	29 (11%)	4 (2%)	8	33
31	21	202/206 (98%)	185 (92%)	16 (8%)	1 (0%)	25	58
31	29	202/206 (98%)	171 (85%)	31 (15%)	0	100	100
32	31	200/210 (95%)	177 (88%)	20 (10%)	3 (2%)	8	33
32	39	200/210 (95%)	168 (84%)	30 (15%)	2 (1%)	13	42
33	41	179/182 (98%)	145 (81%)	34 (19%)	0	100	100
33	49	179/182 (98%)	149 (83%)	30 (17%)	0	100	100
34	51	172/180 (96%)	133 (77%)	37 (22%)	2 (1%)	11	38
34	59	171/180 (95%)	122 (71%)	48 (28%)	1 (1%)	22	53
35	61	143/148 (97%)	105 (73%)	34 (24%)	4 (3%)	4	20
35	69	144/148 (97%)	109 (76%)	35 (24%)	0	100	100
36	38	74/173 (43%)	43 (58%)	29 (39%)	2 (3%)	4	21
37	15	136/140 (97%)	113 (83%)	22 (16%)	1 (1%)	19	51
37	58	136/140 (97%)	108 (79%)	25 (18%)	3 (2%)	5	24
38	25	120/122 (98%)	107 (89%)	13 (11%)	0	100	100
38	68	120/122 (98%)	106 (88%)	13 (11%)	1 (1%)	16	48
39	35	148/150 (99%)	104 (70%)	38 (26%)	6 (4%)	2	13
39	78	148/150 (99%)	113 (76%)	29 (20%)	6 (4%)	2	13
40	45	139/141 (99%)	105 (76%)	32 (23%)	2 (1%)	9	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	88	144/141 (102%)	109 (76%)	30 (21%)	5 (4%)	3	16
41	55	116/118 (98%)	98 (84%)	17 (15%)	1 (1%)	14	45
41	98	116/118 (98%)	97 (84%)	19 (16%)	0	100	100
42	65	109/112 (97%)	82 (75%)	27 (25%)	0	100	100
42	A8	110/112 (98%)	86 (78%)	22 (20%)	2 (2%)	7	29
43	75	135/146 (92%)	112 (83%)	23 (17%)	0	100	100
43	B8	135/146 (92%)	117 (87%)	18 (13%)	0	100	100
44	85	115/118 (98%)	97 (84%)	18 (16%)	0	100	100
44	C8	115/118 (98%)	98 (85%)	15 (13%)	2 (2%)	7	30
45	95	99/101 (98%)	70 (71%)	26 (26%)	3 (3%)	3	19
45	D8	99/101 (98%)	82 (83%)	15 (15%)	2 (2%)	6	26
46	A5	111/113 (98%)	98 (88%)	13 (12%)	0	100	100
46	E8	111/113 (98%)	97 (87%)	14 (13%)	0	100	100
47	B5	92/96 (96%)	78 (85%)	14 (15%)	0	100	100
47	F8	93/96 (97%)	83 (89%)	10 (11%)	0	100	100
48	C5	105/110 (96%)	76 (72%)	27 (26%)	2 (2%)	6	27
48	G8	107/110 (97%)	80 (75%)	22 (21%)	5 (5%)	2	12
49	D5	174/206 (84%)	125 (72%)	47 (27%)	2 (1%)	12	39
49	H8	177/206 (86%)	127 (72%)	48 (27%)	2 (1%)	12	39
50	E5	82/85 (96%)	70 (85%)	12 (15%)	0	100	100
50	I8	82/85 (96%)	72 (88%)	10 (12%)	0	100	100
51	F5	95/98 (97%)	78 (82%)	16 (17%)	1 (1%)	12	39
51	J8	95/98 (97%)	74 (78%)	20 (21%)	1 (1%)	12	39
52	G5	69/72 (96%)	60 (87%)	8 (12%)	1 (1%)	9	34
52	K8	70/72 (97%)	61 (87%)	8 (11%)	1 (1%)	9	34
53	H5	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
53	L8	57/60 (95%)	49 (86%)	8 (14%)	0	100	100
54	I5	69/71 (97%)	41 (59%)	26 (38%)	2 (3%)	3	20
54	M8	69/71 (97%)	38 (55%)	28 (41%)	3 (4%)	2	13
55	J5	54/60 (90%)	45 (83%)	8 (15%)	1 (2%)	6	27
55	N8	54/60 (90%)	44 (82%)	9 (17%)	1 (2%)	6	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
56	K5	43/54 (80%)	22 (51%)	21 (49%)	0	100	100
56	O8	43/54 (80%)	28 (65%)	13 (30%)	2 (5%)	2	12
57	L5	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
57	P8	47/49 (96%)	41 (87%)	6 (13%)	0	100	100
58	M5	62/65 (95%)	52 (84%)	10 (16%)	0	100	100
58	Q8	62/65 (95%)	54 (87%)	8 (13%)	0	100	100
All	All	11746/12685 (93%)	9634 (82%)	2013 (17%)	99 (1%)	16	48

All (99) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
35	61	134	PRO
37	58	137	LYS
40	88	22[A]	LYS
40	88	22[B]	LYS
2	12	154	LEU
12	3A	61	TYR
12	3A	88	LYS
48	C5	54	LYS
49	D5	60	GLU
14	5I	17	LYS
32	31	128	ALA
35	61	123	LEU
37	58	22	THR
37	58	97	ARG
39	78	57	THR
39	78	106	LEU
39	78	107	LYS
44	C8	92	ARG
48	G8	54	LYS
49	H8	53	ILE
54	M8	24	THR
54	M8	37	SER
56	O8	49	HIS
12	3A	44	LYS
12	3A	45	PRO
12	3A	62	GLU
30	19	239	ARG
32	39	128	ALA
39	35	15	ARG

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Mol	Chain	Res	Type
39	35	36	LYS
39	35	107	LYS
30	11	122	ASP
30	11	237	GLU
32	31	130	ALA
39	78	148	LEU
42	A8	3	ARG
44	C8	93	LYS
45	D8	45	THR
51	J8	91	LYS
52	K8	45	SER
56	O8	48	VAL
14	5A	17	LYS
37	15	130	HIS
39	35	14	LYS
40	45	8	LYS
40	45	80	GLU
45	95	84	LYS
45	95	85	LYS
48	C5	93	GLY
51	F5	92	LYS
54	I5	24	THR
2	1E	208	ILE
35	61	133	HIS
42	A8	88	ASP
54	M8	25	TYR
2	12	153	ARG
9	82	38	GLN
30	19	238	GLY
32	39	130	ALA
39	35	53	GLY
41	55	42	LYS
52	G5	45	SER
19	AI	41	VAL
30	11	240	ALA
34	51	128	PRO
34	51	173	PRO
35	61	13	GLY
36	38	5	ARG
36	38	22	GLY
39	78	15	ARG
40	88	21[A]	THR

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Mol	Chain	Res	Type
40	88	21[B]	THR
40	88	105	GLU
48	G8	107	ASP
39	35	110	TYR
54	I5	25	TYR
30	11	241	PRO
31	21	53	PRO
38	68	97	ARG
45	D8	48	GLY
48	G8	53	PRO
30	19	237	GLU
30	19	240	ALA
30	11	123	ALA
13	4I	15	VAL
20	BI	98	PRO
48	G8	81	LYS
48	G8	82	PRO
49	H8	111	VAL
45	95	50	PRO
9	8E	57	GLY
39	78	7	ARG
20	BA	69	GLY
32	31	78	ILE
7	62	55	GLY
34	59	128	PRO
49	D5	62	PRO
55	N8	42	PRO
55	J5	34	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	12	205/220 (93%)	156 (76%)	49 (24%)	0 2
2	1E	205/220 (93%)	162 (79%)	43 (21%)	1 4
3	22	160/188 (85%)	124 (78%)	36 (22%)	1 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	2E	159/188 (85%)	122 (77%)	37 (23%)	0	2
4	32	180/181 (99%)	146 (81%)	34 (19%)	1	5
4	3E	180/181 (99%)	141 (78%)	39 (22%)	1	4
5	42	116/123 (94%)	96 (83%)	20 (17%)	1	7
5	4E	116/123 (94%)	95 (82%)	21 (18%)	1	6
6	52	90/90 (100%)	76 (84%)	14 (16%)	2	9
6	5E	90/90 (100%)	76 (84%)	14 (16%)	2	9
7	62	126/127 (99%)	105 (83%)	21 (17%)	2	7
7	6E	126/127 (99%)	99 (79%)	27 (21%)	1	4
8	72	119/119 (100%)	98 (82%)	21 (18%)	1	7
8	7E	119/119 (100%)	101 (85%)	18 (15%)	2	10
9	82	97/99 (98%)	67 (69%)	30 (31%)	0	0
9	8E	97/99 (98%)	73 (75%)	24 (25%)	0	2
10	1A	89/92 (97%)	69 (78%)	20 (22%)	1	3
10	1I	89/92 (97%)	68 (76%)	21 (24%)	0	2
11	2A	89/99 (90%)	69 (78%)	20 (22%)	1	3
11	2I	88/99 (89%)	74 (84%)	14 (16%)	2	9
12	3A	103/108 (95%)	77 (75%)	26 (25%)	0	1
12	3I	103/108 (95%)	83 (81%)	20 (19%)	1	5
13	4A	97/101 (96%)	77 (79%)	20 (21%)	1	4
13	4I	95/101 (94%)	70 (74%)	25 (26%)	0	1
14	5A	49/50 (98%)	35 (71%)	14 (29%)	0	1
14	5I	49/50 (98%)	37 (76%)	12 (24%)	0	2
15	6A	79/80 (99%)	73 (92%)	6 (8%)	11	36
15	6I	79/80 (99%)	64 (81%)	15 (19%)	1	5
16	7A	72/74 (97%)	59 (82%)	13 (18%)	1	6
16	7I	72/74 (97%)	58 (81%)	14 (19%)	1	5
17	8A	95/97 (98%)	80 (84%)	15 (16%)	2	9
17	8I	95/97 (98%)	83 (87%)	12 (13%)	3	15
18	9A	61/77 (79%)	47 (77%)	14 (23%)	0	3
18	9I	62/77 (80%)	47 (76%)	15 (24%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	AA	73/80 (91%)	50 (68%)	23 (32%)	0	0
19	AI	73/80 (91%)	52 (71%)	21 (29%)	0	1
20	BA	75/82 (92%)	65 (87%)	10 (13%)	3	13
20	BI	75/82 (92%)	63 (84%)	12 (16%)	2	9
21	1B	20/22 (91%)	17 (85%)	3 (15%)	2	10
21	1F	19/22 (86%)	17 (90%)	2 (10%)	5	22
29	71	111/181 (61%)	95 (86%)	16 (14%)	2	11
29	79	111/181 (61%)	97 (87%)	14 (13%)	3	15
30	11	214/218 (98%)	171 (80%)	43 (20%)	1	4
30	19	214/218 (98%)	172 (80%)	42 (20%)	1	5
31	21	164/166 (99%)	133 (81%)	31 (19%)	1	5
31	29	164/166 (99%)	132 (80%)	32 (20%)	1	5
32	31	161/166 (97%)	130 (81%)	31 (19%)	1	5
32	39	161/166 (97%)	130 (81%)	31 (19%)	1	5
33	41	155/156 (99%)	119 (77%)	36 (23%)	0	2
33	49	155/156 (99%)	114 (74%)	41 (26%)	0	1
34	51	145/148 (98%)	113 (78%)	32 (22%)	1	3
34	59	144/148 (97%)	115 (80%)	29 (20%)	1	4
35	61	122/124 (98%)	86 (70%)	36 (30%)	0	0
35	69	122/124 (98%)	88 (72%)	34 (28%)	0	1
36	38	66/135 (49%)	39 (59%)	27 (41%)	0	0
37	15	117/119 (98%)	94 (80%)	23 (20%)	1	5
37	58	117/119 (98%)	83 (71%)	34 (29%)	0	1
38	25	100/100 (100%)	79 (79%)	21 (21%)	1	4
38	68	100/100 (100%)	76 (76%)	24 (24%)	0	2
39	35	116/116 (100%)	71 (61%)	45 (39%)	0	0
39	78	116/116 (100%)	83 (72%)	33 (28%)	0	1
40	45	111/111 (100%)	88 (79%)	23 (21%)	1	4
40	88	113/111 (102%)	88 (78%)	25 (22%)	1	3
41	55	101/101 (100%)	80 (79%)	21 (21%)	1	4
41	98	101/101 (100%)	74 (73%)	27 (27%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	65	87/88 (99%)	68 (78%)	19 (22%)	1	3
42	A8	88/88 (100%)	62 (70%)	26 (30%)	0	0
43	75	120/127 (94%)	88 (73%)	32 (27%)	0	1
43	B8	120/127 (94%)	87 (72%)	33 (28%)	0	1
44	85	93/94 (99%)	73 (78%)	20 (22%)	1	4
44	C8	93/94 (99%)	69 (74%)	24 (26%)	0	1
45	95	82/82 (100%)	54 (66%)	28 (34%)	0	0
45	D8	82/82 (100%)	56 (68%)	26 (32%)	0	0
46	A5	92/92 (100%)	70 (76%)	22 (24%)	0	2
46	E8	92/92 (100%)	75 (82%)	17 (18%)	1	6
47	B5	76/78 (97%)	58 (76%)	18 (24%)	0	2
47	F8	76/78 (97%)	63 (83%)	13 (17%)	1	7
48	C5	78/91 (86%)	62 (80%)	16 (20%)	1	4
48	G8	88/91 (97%)	64 (73%)	24 (27%)	0	1
49	D5	155/179 (87%)	122 (79%)	33 (21%)	1	4
49	H8	158/179 (88%)	122 (77%)	36 (23%)	0	3
50	E5	65/67 (97%)	50 (77%)	15 (23%)	0	3
50	I8	66/67 (98%)	52 (79%)	14 (21%)	1	4
51	F5	82/83 (99%)	63 (77%)	19 (23%)	0	2
51	J8	82/83 (99%)	64 (78%)	18 (22%)	1	3
52	G5	64/67 (96%)	52 (81%)	12 (19%)	1	5
52	K8	65/67 (97%)	45 (69%)	20 (31%)	0	0
53	H5	51/52 (98%)	41 (80%)	10 (20%)	1	5
53	L8	51/52 (98%)	42 (82%)	9 (18%)	1	7
54	I5	63/63 (100%)	49 (78%)	14 (22%)	1	3
54	M8	63/63 (100%)	47 (75%)	16 (25%)	0	1
55	J5	48/52 (92%)	40 (83%)	8 (17%)	2	7
55	N8	48/52 (92%)	35 (73%)	13 (27%)	0	1
56	K5	44/52 (85%)	31 (70%)	13 (30%)	0	0
56	O8	44/52 (85%)	27 (61%)	17 (39%)	0	0
57	L5	42/42 (100%)	33 (79%)	9 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
57	P8	40/42 (95%)	32 (80%)	8 (20%)	1	4
58	M5	52/55 (94%)	42 (81%)	10 (19%)	1	5
58	Q8	52/55 (94%)	41 (79%)	11 (21%)	1	4
All	All	9889/10493 (94%)	7700 (78%)	2189 (22%)	1	3

All (2189) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	4	GLU
2	1E	5	ILE
2	1E	8	LYS
2	1E	9	GLU
2	1E	12	GLU
2	1E	17	PHE
2	1E	28	PHE
2	1E	30	ARG
2	1E	42	ILE
2	1E	43	ASP
2	1E	48	MET
2	1E	51	LEU
2	1E	64	ARG
2	1E	67	THR
2	1E	69	LEU
2	1E	73	THR
2	1E	74	LYS
2	1E	75	LYS
2	1E	79	ASP
2	1E	82	ARG
2	1E	90	MET
2	1E	101	MET
2	1E	121	LEU
2	1E	134	GLU
2	1E	135	GLN
2	1E	137	ARG
2	1E	154	LEU
2	1E	156	LYS
2	1E	158	LEU
2	1E	163	PHE
2	1E	168	THR
2	1E	178	ARG
2	1E	180	LEU

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Mol	Chain	Res	Type
2	1E	187	LEU
2	1E	193	ASP
2	1E	195	ASP
2	1E	196	LEU
2	1E	209	ARG
2	1E	212	GLN
2	1E	215	LEU
2	1E	216	SER
2	1E	223	ILE
2	1E	230	VAL
3	2E	5	ILE
3	2E	14	ILE
3	2E	16	ARG
3	2E	21	ARG
3	2E	29	TYR
3	2E	30	ARG
3	2E	31	HIS
3	2E	33	LEU
3	2E	34	LEU
3	2E	36	ASP
3	2E	46	GLU
3	2E	49	SER
3	2E	52	LEU
3	2E	56	ASP
3	2E	68	VAL
3	2E	76	VAL
3	2E	79	ARG
3	2E	82	GLU
3	2E	89	GLU
3	2E	94	LEU
3	2E	95	THR
3	2E	98	ASN
3	2E	107	GLN
3	2E	116	VAL
3	2E	134	ILE
3	2E	136	GLN
3	2E	154	SER
3	2E	162	GLN
3	2E	165	THR
3	2E	167	TRP
3	2E	172	ARG
3	2E	176	HIS

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Mol	Chain	Res	Type
3	2E	178	LEU
3	2E	188	LEU
3	2E	195	VAL
3	2E	196	LEU
3	2E	199	LYS
4	3E	3	ARG
4	3E	13	ARG
4	3E	14	ARG
4	3E	15	GLU
4	3E	17	VAL
4	3E	19	LEU
4	3E	30	LYS
4	3E	33	MET
4	3E	47	ARG
4	3E	49	ARG
4	3E	73	ARG
4	3E	81	GLU
4	3E	84	LYS
4	3E	85	LYS
4	3E	89	THR
4	3E	101	LEU
4	3E	119	GLN
4	3E	122	ARG
4	3E	127	THR
4	3E	129	ASN
4	3E	131	ARG
4	3E	135	LEU
4	3E	137	SER
4	3E	139	ARG
4	3E	140	VAL
4	3E	141	ARG
4	3E	145	GLU
4	3E	150	GLU
4	3E	153	ARG
4	3E	175	SER
4	3E	176	LEU
4	3E	179	GLU
4	3E	184	LYS
4	3E	187	ARG
4	3E	188	LEU
4	3E	193	ASP
4	3E	196	LEU

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Mol	Chain	Res	Type
4	3E	201	GLN
4	3E	209	ARG
5	4E	6	PHE
5	4E	10	MET
5	4E	16	THR
5	4E	18	ARG
5	4E	20	GLN
5	4E	27	ARG
5	4E	31	LEU
5	4E	41	VAL
5	4E	55	VAL
5	4E	64	ARG
5	4E	73	ASN
5	4E	76	ILE
5	4E	79	GLU
5	4E	82	VAL
5	4E	87	SER
5	4E	121	LYS
5	4E	125	SER
5	4E	127	ASN
5	4E	131	ILE
5	4E	145	LYS
5	4E	155	GLU
6	5E	15	ASP
6	5E	17	SER
6	5E	21	LEU
6	5E	28	ARG
6	5E	36	ARG
6	5E	43	LEU
6	5E	45	LEU
6	5E	46	ARG
6	5E	54	LYS
6	5E	57	GLN
6	5E	65	VAL
6	5E	70	ASP
6	5E	75	LEU
6	5E	98	LEU
7	6E	4	ARG
7	6E	6	ARG
7	6E	8	GLU
7	6E	11	GLN
7	6E	12	LEU

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Mol	Chain	Res	Type
7	6E	21	VAL
7	6E	22	LEU
7	6E	29	LYS
7	6E	42	ILE
7	6E	49	ILE
7	6E	52	GLU
7	6E	63	LYS
7	6E	77	SER
7	6E	78	ARG
7	6E	84	ASN
7	6E	89	MET
7	6E	91	VAL
7	6E	98	SER
7	6E	101	LEU
7	6E	104	LEU
7	6E	110	GLN
7	6E	118	VAL
7	6E	126	ASP
7	6E	129	GLU
7	6E	137	LYS
7	6E	155	ARG
7	6E	156	TRP
8	7E	1	MET
8	7E	24	THR
8	7E	25	ASP
8	7E	41	ARG
8	7E	49	GLU
8	7E	52	ASP
8	7E	70	GLN
8	7E	81	HIS
8	7E	85	ARG
8	7E	88	LYS
8	7E	91	ARG
8	7E	98	LYS
8	7E	104	ARG
8	7E	105	ARG
8	7E	112	LEU
8	7E	115	SER
8	7E	123	GLU
8	7E	133	LEU
9	8E	10	ARG
9	8E	14	VAL

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Mol	Chain	Res	Type
9	8E	20	ARG
9	8E	27	THR
9	8E	47	LEU
9	8E	48	GLU
9	8E	54	ASP
9	8E	56	LEU
9	8E	64	THR
9	8E	65	VAL
9	8E	81	ILE
9	8E	85	LEU
9	8E	86	VAL
9	8E	88	TYR
9	8E	91	ASP
9	8E	95	LYS
9	8E	111	ARG
9	8E	112	LYS
9	8E	113	LYS
9	8E	114	TYR
9	8E	121	ARG
9	8E	124	GLN
9	8E	126	SER
9	8E	128	ARG
10	1I	3	LYS
10	1I	4	ILE
10	1I	16	LEU
10	1I	17	ASP
10	1I	29	ARG
10	1I	35	SER
10	1I	44	VAL
10	1I	49	VAL
10	1I	59	SER
10	1I	62	HIS
10	1I	65	LEU
10	1I	67	THR
10	1I	70	ARG
10	1I	74	ILE
10	1I	75	ILE
10	1I	76	ASN
10	1I	78	ASN
10	1I	82	ILE
10	1I	92	THR
10	1I	96	ILE

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Mol	Chain	Res	Type
10	1I	98	ILE
11	2I	13	GLN
11	2I	14	VAL
11	2I	16	SER
11	2I	18	ARG
11	2I	29	ILE
11	2I	33	THR
11	2I	51	LYS
11	2I	85	ARG
11	2I	87	THR
11	2I	91	ARG
11	2I	114	VAL
11	2I	117	ASN
11	2I	121	PRO
11	2I	122	LYS
12	3I	16	ARG
12	3I	17	LYS
12	3I	25	LYS
12	3I	30	ARG
12	3I	33	VAL
12	3I	35	THR
12	3I	41	THR
12	3I	51	LYS
12	3I	52	VAL
12	3I	57	LEU
12	3I	59	SER
12	3I	62	GLU
12	3I	63	VAL
12	3I	82	ILE
12	3I	86	ARG
12	3I	88	LYS
12	3I	94	ARG
12	3I	99	ARG
12	3I	120	LYS
12	3I	124	GLU
13	4I	7	VAL
13	4I	11	ARG
13	4I	13	LYS
13	4I	17	VAL
13	4I	19	LEU
13	4I	32	GLU
13	4I	45	VAL

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Mol	Chain	Res	Type
13	4I	48	LEU
13	4I	49	THR
13	4I	50	GLU
13	4I	57	ARG
13	4I	64	TRP
13	4I	65	LYS
13	4I	69	GLU
13	4I	70	LEU
13	4I	73	GLU
13	4I	81	LEU
13	4I	88	ARG
13	4I	102	ARG
13	4I	105	THR
13	4I	106	ASN
13	4I	108	ARG
13	4I	109	THR
13	4I	117	VAL
13	4I	120	LYS
14	5I	3	ARG
14	5I	7	ILE
14	5I	9	LYS
14	5I	16	PHE
14	5I	18	VAL
14	5I	22	THR
14	5I	23	ARG
14	5I	25	VAL
14	5I	35	ARG
14	5I	41	ARG
14	5I	44	LEU
14	5I	53	LEU
15	6I	6	GLU
15	6I	26	GLU
15	6I	28	GLN
15	6I	34	LEU
15	6I	39	LEU
15	6I	40	SER
15	6I	41	GLU
15	6I	44	LYS
15	6I	45	VAL
15	6I	47	LYS
15	6I	51	HIS
15	6I	64	ARG

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Mol	Chain	Res	Type
15	6I	74	ASP
15	6I	84	LYS
15	6I	87	ILE
16	7I	3	LYS
16	7I	4	ILE
16	7I	6	LEU
16	7I	8	ARG
16	7I	11	SER
16	7I	20	VAL
16	7I	48	TRP
16	7I	53	VAL
16	7I	67	THR
16	7I	69	THR
16	7I	71	ARG
16	7I	72	ARG
16	7I	75	ARG
16	7I	79	VAL
17	8I	19	VAL
17	8I	36	ILE
17	8I	52	LYS
17	8I	60	ILE
17	8I	62	SER
17	8I	63	ARG
17	8I	68	ARG
17	8I	74	LEU
17	8I	78	GLU
17	8I	85	VAL
17	8I	91	ARG
17	8I	92	ARG
18	9I	19	LYS
18	9I	25	THR
18	9I	26	LEU
18	9I	29	PHE
18	9I	31	LEU
18	9I	32	ARG
18	9I	36	ASN
18	9I	44	LEU
18	9I	47	THR
18	9I	53	ARG
18	9I	54	ARG
18	9I	76	LEU
18	9I	82	THR

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Mol	Chain	Res	Type
18	9I	86	VAL
18	9I	87	ARG
19	AI	5	LEU
19	AI	6	LYS
19	AI	11	VAL
19	AI	12	ASP
19	AI	14	HIS
19	AI	15	LEU
19	AI	27	GLU
19	AI	29	ARG
19	AI	30	LEU
19	AI	31	ILE
19	AI	37	ARG
19	AI	39	THR
19	AI	40	ILE
19	AI	44	MET
19	AI	45	VAL
19	AI	47	HIS
19	AI	58	VAL
19	AI	61	TYR
19	AI	71	LEU
19	AI	78	ARG
19	AI	81	ARG
20	BI	11	SER
20	BI	23	ARG
20	BI	24	LEU
20	BI	26	ASN
20	BI	36	LEU
20	BI	45	GLN
20	BI	60	GLU
20	BI	73	HIS
20	BI	84	LEU
20	BI	87	LYS
20	BI	92	LEU
20	BI	93	GLU
21	1F	6	ARG
21	1F	24	ARG
29	71	3	HIS
29	71	8	ARG
29	71	30	LYS
29	71	38	ASP
29	71	42	GLU

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Mol	Chain	Res	Type
29	71	49	ILE
29	71	59	ARG
29	71	61	THR
29	71	163	PHE
29	71	165	ASN
29	71	172	HIS
29	71	202	GLU
29	71	205	LYS
29	71	208	PHE
29	71	216	THR
29	71	223	ARG
30	11	3	VAL
30	11	4	LYS
30	11	10	THR
30	11	13	ARG
30	11	17	THR
30	11	18	VAL
30	11	20	ASP
30	11	25	THR
30	11	34	VAL
30	11	37	LEU
30	11	38	LYS
30	11	54	ARG
30	11	61	LEU
30	11	64	ILE
30	11	65	ILE
30	11	89	SER
30	11	91	ARG
30	11	95	LEU
30	11	104	TYR
30	11	105	ILE
30	11	106	ILE
30	11	112	GLN
30	11	113	VAL
30	11	126	GLN
30	11	141	VAL
30	11	157	ARG
30	11	173	VAL
30	11	174	ILE
30	11	181	GLU
30	11	192	THR
30	11	206	LEU

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Mol	Chain	Res	Type
30	11	217	ARG
30	11	221	VAL
30	11	229	VAL
30	11	237	GLU
30	11	242	ARG
30	11	257	LEU
30	11	260	ARG
30	11	262	ARG
30	11	263	ARG
30	11	270	ILE
30	11	271	ILE
30	11	273	ARG
31	21	12	THR
31	21	13	ARG
31	21	19	ARG
31	21	21	VAL
31	21	23	VAL
31	21	40	GLU
31	21	47	VAL
31	21	52	LEU
31	21	73	GLU
31	21	77	ILE
31	21	81	ILE
31	21	82	ARG
31	21	89	ASP
31	21	93	VAL
31	21	103	ASP
31	21	107	THR
31	21	111	ARG
31	21	113	PHE
31	21	116	VAL
31	21	117	MET
31	21	118	LYS
31	21	119	ARG
31	21	128	SER
31	21	144	ARG
31	21	152	LYS
31	21	154	LYS
31	21	163	GLU
31	21	167	VAL
31	21	175	VAL
31	21	181	LEU

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Mol	Chain	Res	Type
31	21	184	VAL
32	31	7	TYR
32	31	8	GLN
32	31	9	ILE
32	31	17	ARG
32	31	18	ARG
32	31	33	LEU
32	31	45	ARG
32	31	57	VAL
32	31	62	ARG
32	31	64	ILE
32	31	70	THR
32	31	74	ARG
32	31	78	ILE
32	31	82	ILE
32	31	93	LYS
32	31	96	ASP
32	31	98	SER
32	31	104	LYS
32	31	106	ARG
32	31	108	LYS
32	31	117	ARG
32	31	124	LEU
32	31	127	GLU
32	31	140	LEU
32	31	158	THR
32	31	165	ARG
32	31	170	LEU
32	31	181	LEU
32	31	183	VAL
32	31	192	LEU
32	31	194	MET
33	41	3	LEU
33	41	20	ILE
33	41	22	ARG
33	41	28	VAL
33	41	31	VAL
33	41	34	LEU
33	41	35	GLU
33	41	40	ASN
33	41	41	GLN
33	41	45	GLU

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Mol	Chain	Res	Type
33	41	51	ARG
33	41	53	LEU
33	41	58	GLN
33	41	63	ILE
33	41	67	LYS
33	41	71	THR
33	41	76	SER
33	41	80	PHE
33	41	82	LEU
33	41	84	LYS
33	41	86	MET
33	41	88	ILE
33	41	90	LEU
33	41	91	ARG
33	41	118	ARG
33	41	132	ASN
33	41	133	LEU
33	41	135	LEU
33	41	139	LEU
33	41	148	MET
33	41	150	ASP
33	41	161	THR
33	41	162	THR
33	41	164	GLU
33	41	173	LEU
33	41	174	GLU
34	51	3	ARG
34	51	7	LEU
34	51	9	ILE
34	51	24	VAL
34	51	33	LEU
34	51	40	GLU
34	51	41	MET
34	51	49	VAL
34	51	50	VAL
34	51	52	VAL
34	51	59	ARG
34	51	71	LEU
34	51	77	LYS
34	51	80	SER
34	51	88	LEU
34	51	92	ILE

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Mol	Chain	Res	Type
34	51	104	GLU
34	51	105	LEU
34	51	107	VAL
34	51	110	SER
34	51	122	THR
34	51	129	THR
34	51	130	ARG
34	51	131	VAL
34	51	134	SER
34	51	139	GLN
34	51	151	ILE
34	51	152	ARG
34	51	153	LYS
34	51	155	SER
34	51	160	LYS
34	51	171	LEU
35	61	7	GLU
35	61	9	LEU
35	61	10	GLU
35	61	12	LEU
35	61	20	ASP
35	61	25	TYR
35	61	33	ARG
35	61	35	LEU
35	61	38	LEU
35	61	40	THR
35	61	44	LEU
35	61	57	ARG
35	61	64	GLU
35	61	68	LEU
35	61	70	GLU
35	61	71	ILE
35	61	72	LEU
35	61	76	THR
35	61	79	ILE
35	61	82	ARG
35	61	88	ILE
35	61	92	VAL
35	61	102	SER
35	61	110	ASP
35	61	113	ARG
35	61	114	LEU

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Mol	Chain	Res	Type
35	61	117	GLU
35	61	126	TYR
35	61	128	LEU
35	61	129	THR
35	61	131	LYS
35	61	135	GLU
35	61	136	VAL
35	61	139	GLN
35	61	140	LEU
35	61	142	VAL
36	38	5	ARG
36	38	6	ASN
36	38	9	LEU
36	38	10	LEU
36	38	13	LEU
36	38	14	LYS
36	38	15	GLU
36	38	16	ASN
36	38	21	GLN
36	38	24	PHE
36	38	32	LEU
36	38	37	THR
36	38	38	HIS
36	38	40	LEU
36	38	41	ARG
36	38	45	LYS
36	38	56	ASN
36	38	58	LEU
36	38	59	ILE
36	38	60	ARG
36	38	64	LYS
36	38	66	LEU
36	38	75	GLN
36	38	111	LEU
36	38	113	GLN
36	38	120	LYS
36	38	121	ASP
37	58	5	VAL
37	58	7	LYS
37	58	10	GLU
37	58	12	ARG
37	58	14	VAL

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Mol	Chain	Res	Type
37	58	28	THR
37	58	33	LEU
37	58	34	LEU
37	58	35	ARG
37	58	39	ARG
37	58	48	MET
37	58	55	VAL
37	58	58	ASP
37	58	60	ILE
37	58	61	ARG
37	58	62	VAL
37	58	67	LEU
37	58	73	THR
37	58	87	LEU
37	58	90	MET
37	58	93	THR
37	58	96	GLU
37	58	98	VAL
37	58	99	LEU
37	58	106	MET
37	58	112	LEU
37	58	115	ARG
37	58	116	LEU
37	58	120	LEU
37	58	131	GLN
37	58	133	GLN
37	58	136	GLU
37	58	137	LYS
37	58	138	LEU
38	68	1	MET
38	68	9	GLU
38	68	20	MET
38	68	22	ILE
38	68	23	ARG
38	68	24	VAL
38	68	28	SER
38	68	31	LYS
38	68	32	TYR
38	68	65	THR
38	68	66	LYS
38	68	71	ARG
38	68	77	ILE

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Mol	Chain	Res	Type
38	68	78	ARG
38	68	80	ASP
38	68	82	ASN
38	68	87	ILE
38	68	89	ASN
38	68	91	LEU
38	68	94	ARG
38	68	98	VAL
38	68	106	LEU
38	68	107	ARG
38	68	116	SER
39	78	6	LEU
39	78	13	ASN
39	78	14	LYS
39	78	18	ARG
39	78	19	VAL
39	78	21	ARG
39	78	25	SER
39	78	27	HIS
39	78	29	LYS
39	78	32	THR
39	78	45	LEU
39	78	47	ASP
39	78	49	ARG
39	78	55	ARG
39	78	57	THR
39	78	64	LYS
39	78	68	GLN
39	78	70	GLN
39	78	75	ILE
39	78	76	LYS
39	78	88	LEU
39	78	91	PHE
39	78	94	GLU
39	78	98	GLU
39	78	99	LEU
39	78	100	LEU
39	78	106	LEU
39	78	112	LEU
39	78	125	VAL
39	78	126	VAL
39	78	138	LEU

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Mol	Chain	Res	Type
39	78	144	GLU
39	78	147	LEU
40	88	1	MET
40	88	5	ARG
40	88	10	ARG
40	88	11	LYS
40	88	14	ARG
40	88	21[A]	THR
40	88	21[B]	THR
40	88	25	ASP
40	88	26	TYR
40	88	35	VAL
40	88	45	GLN
40	88	56	ARG
40	88	59	ARG
40	88	63	LYS
40	88	79	LEU
40	88	89	ASN
40	88	96	VAL
40	88	106	VAL
40	88	109	VAL
40	88	110	THR
40	88	116	GLU
40	88	134	ARG
40	88	135	ASP
40	88	138	ASP
40	88	139	GLU
41	98	1	MET
41	98	3	HIS
41	98	4	LEU
41	98	6	SER
41	98	10	LEU
41	98	18	LEU
41	98	29	LEU
41	98	33	ARG
41	98	36	THR
41	98	37	THR
41	98	43	GLU
41	98	44	LEU
41	98	54	LEU
41	98	57	ARG
41	98	65	LEU

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Mol	Chain	Res	Type
41	98	67	LEU
41	98	71	GLN
41	98	75	LEU
41	98	79	LEU
41	98	83	ILE
41	98	96	ARG
41	98	104	ARG
41	98	105	ARG
41	98	111	LEU
41	98	113	LEU
41	98	117	VAL
41	98	118	GLU
42	A8	4	LEU
42	A8	8	GLU
42	A8	10	ARG
42	A8	12	PHE
42	A8	15	ARG
42	A8	17	ARG
42	A8	19	LYS
42	A8	20	ARG
42	A8	26	LEU
42	A8	30	ARG
42	A8	35	ILE
42	A8	36	TYR
42	A8	46	VAL
42	A8	53	SER
42	A8	54	LEU
42	A8	58	LEU
42	A8	61	ASN
42	A8	69	VAL
42	A8	76	LYS
42	A8	78	LEU
42	A8	83	LYS
42	A8	89	ARG
42	A8	101	LEU
42	A8	106	ARG
42	A8	110	LEU
42	A8	112	PHE
43	B8	1	MET
43	B8	7	ILE
43	B8	8	LYS
43	B8	10	VAL

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Mol	Chain	Res	Type
43	B8	14	TYR
43	B8	18	ASP
43	B8	19	LEU
43	B8	21	GLU
43	B8	27	THR
43	B8	30	VAL
43	B8	51	ARG
43	B8	58	ASN
43	B8	62	THR
43	B8	64	ARG
43	B8	65	LYS
43	B8	74	ARG
43	B8	78	LEU
43	B8	84	GLN
43	B8	86	ILE
43	B8	87	ASP
43	B8	88	ILE
43	B8	89	VAL
43	B8	96	ARG
43	B8	102	ILE
43	B8	106	SER
43	B8	108	ARG
43	B8	110	ILE
43	B8	111	ARG
43	B8	112	ARG
43	B8	118	ARG
43	B8	124	ASP
43	B8	125	ARG
43	B8	128	GLU
44	C8	5	LYS
44	C8	8	VAL
44	C8	16	LYS
44	C8	17	ILE
44	C8	22	LYS
44	C8	31	SER
44	C8	34	LYS
44	C8	52	ARG
44	C8	60	LEU
44	C8	64	ARG
44	C8	77	SER
44	C8	78	THR
44	C8	83	LEU

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Mol	Chain	Res	Type
44	C8	91	ASP
44	C8	92	ARG
44	C8	94	ASN
44	C8	95	LEU
44	C8	97	ASP
44	C8	98	LEU
44	C8	100	VAL
44	C8	102	GLU
44	C8	104	GLN
44	C8	108	GLU
44	C8	111	GLU
45	D8	10	LYS
45	D8	12	TYR
45	D8	19	LYS
45	D8	20	LEU
45	D8	26	ASP
45	D8	28	GLU
45	D8	33	VAL
45	D8	38	LEU
45	D8	39	LEU
45	D8	40	LEU
45	D8	43	GLU
45	D8	44	LYS
45	D8	46	VAL
45	D8	49	THR
45	D8	51	VAL
45	D8	57	VAL
45	D8	61	VAL
45	D8	62	LEU
45	D8	66	ARG
45	D8	69	LYS
45	D8	73	SER
45	D8	78	LYS
45	D8	85	LYS
45	D8	88	ARG
45	D8	95	LEU
45	D8	98	GLU
46	E8	11	ARG
46	E8	16	LYS
46	E8	23	LEU
46	E8	25	ARG
46	E8	37	ARG

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Mol	Chain	Res	Type
46	E8	51	LEU
46	E8	52	GLU
46	E8	67	ASP
46	E8	70	TYR
46	E8	76	VAL
46	E8	95	ILE
46	E8	97	LYS
46	E8	99	ARG
46	E8	100	THR
46	E8	105	VAL
46	E8	107	LEU
46	E8	110	LYS
47	F8	1	MET
47	F8	23	GLU
47	F8	27	THR
47	F8	43	VAL
47	F8	45	THR
47	F8	54	VAL
47	F8	57	LEU
47	F8	63	LYS
47	F8	64	LYS
47	F8	66	LEU
47	F8	68	ARG
47	F8	80	ILE
47	F8	81	VAL
48	G8	4	LYS
48	G8	5	MET
48	G8	6	HIS
48	G8	9	LYS
48	G8	21	LYS
48	G8	27	VAL
48	G8	38	ILE
48	G8	45	VAL
48	G8	54	LYS
48	G8	55	TYR
48	G8	57	GLN
48	G8	64	GLU
48	G8	71	LYS
48	G8	75	ILE
48	G8	84	ARG
48	G8	85	VAL
48	G8	89	PHE

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Mol	Chain	Res	Type
48	G8	90	LEU
48	G8	92	ASN
48	G8	94	LYS
48	G8	95	LYS
48	G8	98	VAL
48	G8	102	CYS
48	G8	109	GLU
49	H8	1	MET
49	H8	2	GLU
49	H8	5	LEU
49	H8	6	LYS
49	H8	19	ARG
49	H8	35	ARG
49	H8	42	VAL
49	H8	59	LEU
49	H8	63	ASP
49	H8	70	LEU
49	H8	71	VAL
49	H8	72	ARG
49	H8	76	LEU
49	H8	77	ASP
49	H8	78	LYS
49	H8	81	ARG
49	H8	84	GLU
49	H8	86	VAL
49	H8	91	LEU
49	H8	93	ASP
49	H8	94	GLU
49	H8	97	GLU
49	H8	111	VAL
49	H8	112	ARG
49	H8	117	LEU
49	H8	119	GLU
49	H8	132	ASN
49	H8	135	GLU
49	H8	142	SER
49	H8	144	LEU
49	H8	154	ASP
49	H8	157	LEU
49	H8	162	GLU
49	H8	166	SER
49	H8	171	ILE

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Mol	Chain	Res	Type
49	H8	174	VAL
50	I8	3	HIS
50	I8	5	LYS
50	I8	7	LEU
50	I8	11	ARG
50	I8	14	ARG
50	I8	20	ARG
50	I8	30	VAL
50	I8	35	ASN
50	I8	36	ILE
50	I8	41	ARG
50	I8	44	ARG
50	I8	55	ARG
50	I8	64	ASP
50	I8	70	GLN
51	J8	4	VAL
51	J8	11	ARG
51	J8	26	ARG
51	J8	30	VAL
51	J8	40	ARG
51	J8	41	ARG
51	J8	46	LEU
51	J8	51	VAL
51	J8	57	GLU
51	J8	61	ARG
51	J8	78	LYS
51	J8	80	LEU
51	J8	82	LEU
51	J8	83	GLU
51	J8	86	SER
51	J8	91	LYS
51	J8	92	LYS
51	J8	95	LEU
52	K8	3	LEU
52	K8	4	SER
52	K8	6	VAL
52	K8	8	LYS
52	K8	15	LYS
52	K8	23	LYS
52	K8	24	LEU
52	K8	28	LYS
52	K8	32	LEU

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Mol	Chain	Res	Type
52	K8	45	SER
52	K8	53	LEU
52	K8	54	LYS
52	K8	55	ARG
52	K8	59	ARG
52	K8	61	LEU
52	K8	64	LEU
52	K8	65	ASN
52	K8	67	LYS
52	K8	68	ARG
52	K8	69	ARG
53	L8	8	LEU
53	L8	17	LYS
53	L8	23	LEU
53	L8	29	ARG
53	L8	33	GLN
53	L8	36	VAL
53	L8	38	GLU
53	L8	44	ARG
53	L8	50	VAL
54	M8	5	ILE
54	M8	10	VAL
54	M8	13	ARG
54	M8	15	ILE
54	M8	16	CYS
54	M8	18	CYS
54	M8	27	THR
54	M8	34	GLU
54	M8	38	LYS
54	M8	42	PHE
54	M8	43	TYR
54	M8	48	ARG
54	M8	55	ARG
54	M8	63	TYR
54	M8	67	TYR
54	M8	68	ARG
55	N8	6	VAL
55	N8	9	LYS
55	N8	13	LYS
55	N8	15	ARG
55	N8	16	ARG
55	N8	29	THR

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Mol	Chain	Res	Type
55	N8	31	VAL
55	N8	33	CYS
55	N8	37	LYS
55	N8	44	THR
55	N8	51	TYR
55	N8	56	LYS
55	N8	57	VAL
56	O8	10	LEU
56	O8	11	LEU
56	O8	12	GLU
56	O8	17	LYS
56	O8	20	ASN
56	O8	23	THR
56	O8	25	LYS
56	O8	27	LYS
56	O8	30	THR
56	O8	33	LYS
56	O8	34	LEU
56	O8	36	LEU
56	O8	37	ARG
56	O8	39	TYR
56	O8	42	TRP
56	O8	45	LYS
56	O8	46	HIS
57	P8	14	LYS
57	P8	24	THR
57	P8	30	VAL
57	P8	32	LYS
57	P8	41	ARG
57	P8	43	THR
57	P8	46	VAL
57	P8	47	ARG
58	Q8	5	LYS
58	Q8	6	THR
58	Q8	8	LYS
58	Q8	14	VAL
58	Q8	34	TRP
58	Q8	35	GLN
58	Q8	40	GLU
58	Q8	43	GLN
58	Q8	52	LYS
58	Q8	60	LEU

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Mol	Chain	Res	Type
58	Q8	62	LEU
2	12	4	GLU
2	12	8	LYS
2	12	10	LEU
2	12	12	GLU
2	12	15	VAL
2	12	21	ARG
2	12	22	LYS
2	12	30	ARG
2	12	31	TYR
2	12	40	HIS
2	12	42	ILE
2	12	55	PHE
2	12	56	ARG
2	12	64	ARG
2	12	69	LEU
2	12	74	LYS
2	12	80	ILE
2	12	83	MET
2	12	90	MET
2	12	97	TRP
2	12	107	THR
2	12	110	GLN
2	12	116	GLU
2	12	117	GLU
2	12	137	ARG
2	12	140	HIS
2	12	144	ARG
2	12	145	LEU
2	12	148	TYR
2	12	153	ARG
2	12	155	LEU
2	12	163	PHE
2	12	168	THR
2	12	170	GLU
2	12	178	ARG
2	12	185	ILE
2	12	193	ASP
2	12	196	LEU
2	12	197	VAL
2	12	198	ASP
2	12	201	ILE

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Mol	Chain	Res	Type
2	12	208	ILE
2	12	209	ARG
2	12	211	ILE
2	12	213	LEU
2	12	214	ILE
2	12	217	ARG
2	12	230	VAL
2	12	236	TYR
3	22	3	ASN
3	22	5	ILE
3	22	16	ARG
3	22	26	LYS
3	22	28	GLN
3	22	29	TYR
3	22	36	ASP
3	22	38	ARG
3	22	43	LEU
3	22	45	LYS
3	22	49	SER
3	22	52	LEU
3	22	54	ARG
3	22	56	ASP
3	22	62	ASP
3	22	76	VAL
3	22	79	ARG
3	22	83	ARG
3	22	90	GLU
3	22	94	LEU
3	22	101	LEU
3	22	104	GLN
3	22	119	ARG
3	22	120	VAL
3	22	124	ILE
3	22	130	VAL
3	22	131	ARG
3	22	140	ARG
3	22	170	GLN
3	22	175	LEU
3	22	178	LEU
3	22	192	THR
3	22	196	LEU
3	22	202	ILE

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Mol	Chain	Res	Type
3	22	204	LEU
3	22	206	GLU
4	32	3	ARG
4	32	8	VAL
4	32	14	ARG
4	32	17	VAL
4	32	19	LEU
4	32	24	GLU
4	32	27	TYR
4	32	30	LYS
4	32	31	CYS
4	32	45	GLN
4	32	49	ARG
4	32	58	LEU
4	32	61	LYS
4	32	70	ILE
4	32	73	ARG
4	32	74	GLN
4	32	80	GLU
4	32	84	LYS
4	32	88	VAL
4	32	101	LEU
4	32	108	LEU
4	32	115	ARG
4	32	118	ARG
4	32	122	ARG
4	32	135	LEU
4	32	139	ARG
4	32	150	GLU
4	32	151	LYS
4	32	155	LEU
4	32	156	GLU
4	32	168	ARG
4	32	181	MET
4	32	186	LEU
4	32	209	ARG
5	42	10	MET
5	42	13	ILE
5	42	24	ARG
5	42	33	VAL
5	42	41	VAL
5	42	47	LYS

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Mol	Chain	Res	Type
5	42	51	VAL
5	42	53	LEU
5	42	72	GLN
5	42	78	HIS
5	42	100	VAL
5	42	101	ILE
5	42	107	ARG
5	42	115	VAL
5	42	126	ARG
5	42	127	ASN
5	42	133	TYR
5	42	135	THR
5	42	137	GLU
5	42	144	THR
6	52	3	ARG
6	52	14	LEU
6	52	15	ASP
6	52	24	GLU
6	52	28	ARG
6	52	40	VAL
6	52	47	ARG
6	52	55	ASP
6	52	72	VAL
6	52	74	ASP
6	52	78	GLU
6	52	81	ILE
6	52	82	ARG
6	52	93	SER
7	62	8	GLU
7	62	12	LEU
7	62	53	LYS
7	62	54	THR
7	62	56	GLN
7	62	59	LEU
7	62	64	GLN
7	62	72	ARG
7	62	85	TYR
7	62	87	VAL
7	62	92	SER
7	62	94	ARG
7	62	95	ARG
7	62	97	GLN

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Mol	Chain	Res	Type
7	62	104	LEU
7	62	106	GLN
7	62	114	ARG
7	62	124	LEU
7	62	137	LYS
7	62	154	TYR
7	62	156	TRP
8	72	1	MET
8	72	8	ASP
8	72	13	ILE
8	72	14	ARG
8	72	25	ASP
8	72	26	VAL
8	72	35	ILE
8	72	39	LEU
8	72	77	GLU
8	72	81	HIS
8	72	82	HIS
8	72	84	ARG
8	72	85	ARG
8	72	88	LYS
8	72	91	ARG
8	72	95	VAL
8	72	102	ARG
8	72	107	LEU
8	72	112	LEU
8	72	121	ASP
8	72	122	ARG
9	82	4	TYR
9	82	9	ARG
9	82	10	ARG
9	82	16	ARG
9	82	19	LEU
9	82	20	ARG
9	82	27	THR
9	82	32	ASP
9	82	34	ASN
9	82	35	GLU
9	82	42	ARG
9	82	44	VAL
9	82	54	ASP
9	82	59	PHE

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Mol	Chain	Res	Type
9	82	71	SER
9	82	78	LYS
9	82	79	LEU
9	82	95	LYS
9	82	96	LEU
9	82	97	LYS
9	82	99	LEU
9	82	104	ARG
9	82	107	ARG
9	82	108	VAL
9	82	110	GLU
9	82	113	LYS
9	82	117	HIS
9	82	118	LYS
9	82	121	ARG
9	82	125	TYR
10	1A	5	ARG
10	1A	16	LEU
10	1A	17	ASP
10	1A	25	GLU
10	1A	45	ARG
10	1A	48	THR
10	1A	49	VAL
10	1A	57	LYS
10	1A	58	ASP
10	1A	62	HIS
10	1A	63	PHE
10	1A	69	ASN
10	1A	70	ARG
10	1A	74	ILE
10	1A	79	ARG
10	1A	83	GLU
10	1A	84	GLN
10	1A	96	ILE
10	1A	99	LYS
10	1A	100	THR
11	2A	24	SER
11	2A	28	THR
11	2A	29	ILE
11	2A	30	VAL
11	2A	34	ASP
11	2A	41	THR

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Mol	Chain	Res	Type
11	2A	48	ILE
11	2A	63	LEU
11	2A	82	VAL
11	2A	83	ILE
11	2A	84	VAL
11	2A	87	THR
11	2A	95	ILE
11	2A	103	LEU
11	2A	108	ILE
11	2A	116	HIS
11	2A	117	ASN
11	2A	119	CYS
11	2A	120	ARG
11	2A	126	ARG
12	3A	3	THR
12	3A	20	LYS
12	3A	21	VAL
12	3A	25	LYS
12	3A	30	ARG
12	3A	36	VAL
12	3A	38	ARG
12	3A	39	THR
12	3A	43	LYS
12	3A	52	VAL
12	3A	59	SER
12	3A	61	TYR
12	3A	62	GLU
12	3A	63	VAL
12	3A	64	THR
12	3A	67	ILE
12	3A	70	GLU
12	3A	72	HIS
12	3A	78	SER
12	3A	81	LEU
12	3A	82	ILE
12	3A	88	LYS
12	3A	99	ARG
12	3A	101	VAL
12	3A	114	ARG
12	3A	115	SER
13	4A	4	ILE
13	4A	19	LEU

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Mol	Chain	Res	Type
13	4A	25	ILE
13	4A	47	ASP
13	4A	54	VAL
13	4A	63	THR
13	4A	64	TRP
13	4A	66	LEU
13	4A	67	GLU
13	4A	69	GLU
13	4A	70	LEU
13	4A	73	GLU
13	4A	78	ILE
13	4A	82	MET
13	4A	88	ARG
13	4A	93	ARG
13	4A	103	THR
13	4A	106	ASN
13	4A	108	ARG
13	4A	117	VAL
14	5A	3	ARG
14	5A	6	LEU
14	5A	15	LYS
14	5A	16	PHE
14	5A	18	VAL
14	5A	22	THR
14	5A	23	ARG
14	5A	25	VAL
14	5A	29	ARG
14	5A	31	ARG
14	5A	35	ARG
14	5A	40	CYS
14	5A	44	LEU
14	5A	46	GLU
15	6A	3	ILE
15	6A	10	LYS
15	6A	24	SER
15	6A	28	GLN
15	6A	40	SER
15	6A	66	LEU
16	7A	1	MET
16	7A	2	VAL
16	7A	5	ARG
16	7A	11	SER

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Mol	Chain	Res	Type
16	7A	21	VAL
16	7A	27	LYS
16	7A	53	VAL
16	7A	57	ARG
16	7A	60	LEU
16	7A	67	THR
16	7A	69	THR
16	7A	75	ARG
16	7A	82	GLN
17	8A	5	VAL
17	8A	6	LEU
17	8A	9	VAL
17	8A	14	LYS
17	8A	34	LYS
17	8A	35	VAL
17	8A	52	LYS
17	8A	58	GLU
17	8A	68	ARG
17	8A	73	VAL
17	8A	74	LEU
17	8A	79	SER
17	8A	82	MET
17	8A	100	LYS
17	8A	101	ARG
18	9A	26	LEU
18	9A	28	GLU
18	9A	31	LEU
18	9A	32	ARG
18	9A	38	GLU
18	9A	47	THR
18	9A	58	LEU
18	9A	65	ILE
18	9A	66	LEU
18	9A	75	ILE
18	9A	76	LEU
18	9A	82	THR
18	9A	85	LEU
18	9A	86	VAL
19	AA	5	LEU
19	AA	6	LYS
19	AA	11	VAL
19	AA	22	LEU

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Mol	Chain	Res	Type
19	AA	29	ARG
19	AA	30	LEU
19	AA	32	LYS
19	AA	33	THR
19	AA	38	SER
19	AA	40	ILE
19	AA	43	GLU
19	AA	45	VAL
19	AA	48	THR
19	AA	49	ILE
19	AA	56	GLN
19	AA	60	VAL
19	AA	62	ILE
19	AA	63	THR
19	AA	64	GLU
19	AA	66	MET
19	AA	67	VAL
19	AA	71	LEU
19	AA	83	HIS
20	BA	23	ARG
20	BA	33	ILE
20	BA	36	LEU
20	BA	38	LYS
20	BA	58	LYS
20	BA	62	LEU
20	BA	63	ILE
20	BA	74	LYS
20	BA	81	LYS
20	BA	92	LEU
21	1B	8	THR
21	1B	15	ARG
21	1B	26	LYS
29	79	3	HIS
29	79	5	LYS
29	79	23	ASP
29	79	30	LYS
29	79	34	THR
29	79	37	PHE
29	79	61	THR
29	79	168	THR
29	79	185	LEU
29	79	207	THR

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Mol	Chain	Res	Type
29	79	210	ARG
29	79	216	THR
29	79	224	ILE
29	79	228	SER
30	19	5	LYS
30	19	10	THR
30	19	14	ARG
30	19	20	ASP
30	19	38	LYS
30	19	39	LYS
30	19	54	ARG
30	19	60	ARG
30	19	61	LEU
30	19	64	ILE
30	19	65	ILE
30	19	71	ASP
30	19	78	LYS
30	19	88	ARG
30	19	94	LEU
30	19	105	ILE
30	19	106	ILE
30	19	112	GLN
30	19	113	VAL
30	19	117	VAL
30	19	125	ILE
30	19	126	GLN
30	19	127	VAL
30	19	142	VAL
30	19	162	SER
30	19	168	ARG
30	19	169	GLU
30	19	173	VAL
30	19	183	ARG
30	19	192	THR
30	19	200	ASP
30	19	220	HIS
30	19	221	VAL
30	19	229	VAL
30	19	237	GLU
30	19	242	ARG
30	19	254	THR
30	19	262	ARG

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Mol	Chain	Res	Type
30	19	267	SER
30	19	268	ARG
30	19	271	ILE
30	19	273	ARG
31	29	1	MET
31	29	12	THR
31	29	21	VAL
31	29	27	LEU
31	29	33	VAL
31	29	40	GLU
31	29	41	LYS
31	29	47	VAL
31	29	52	LEU
31	29	59	VAL
31	29	77	ILE
31	29	82	ARG
31	29	85	ASN
31	29	92	THR
31	29	95	ILE
31	29	100	GLU
31	29	107	THR
31	29	111	ARG
31	29	116	VAL
31	29	118	LYS
31	29	119	ARG
31	29	121	ASN
31	29	137	HIS
31	29	144	ARG
31	29	154	LYS
31	29	169	ASN
31	29	175	VAL
31	29	179	GLU
31	29	181	LEU
31	29	183	LEU
31	29	184	VAL
31	29	200	GLU
32	39	8	GLN
32	39	9	ILE
32	39	32	LEU
32	39	45	ARG
32	39	50	SER
32	39	60	SER

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Mol	Chain	Res	Type
32	39	64	ILE
32	39	67	GLN
32	39	70	THR
32	39	74	ARG
32	39	82	ILE
32	39	104	LYS
32	39	106	ARG
32	39	120	GLU
32	39	127	GLU
32	39	133	ASN
32	39	135	LYS
32	39	158	THR
32	39	165	ARG
32	39	168	ARG
32	39	174	VAL
32	39	175	THR
32	39	181	LEU
32	39	183	VAL
32	39	189	THR
32	39	194	MET
32	39	197	ASP
32	39	200	GLU
32	39	203	GLN
32	39	205	ARG
32	39	206	ILE
33	49	3	LEU
33	49	4	ASP
33	49	10	LYS
33	49	18	GLU
33	49	21	ARG
33	49	26	GLN
33	49	28	VAL
33	49	33	ARG
33	49	39	ILE
33	49	43	LEU
33	49	47	LYS
33	49	51	ARG
33	49	52	ILE
33	49	53	LEU
33	49	58	GLN
33	49	60	LEU
33	49	64	THR

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Mol	Chain	Res	Type
33	49	67	LYS
33	49	76	SER
33	49	77	ILE
33	49	80	PHE
33	49	82	LEU
33	49	84	LYS
33	49	86	MET
33	49	88	ILE
33	49	91	ARG
33	49	94	LEU
33	49	95	ARG
33	49	97	ASP
33	49	99	MET
33	49	101	ILE
33	49	114	ILE
33	49	115	ARG
33	49	117	PHE
33	49	133	LEU
33	49	135	LEU
33	49	144	ILE
33	49	153	ARG
33	49	157	ILE
33	49	159	VAL
33	49	167	GLU
34	59	2	SER
34	59	4	ILE
34	59	7	LEU
34	59	23	ARG
34	59	25	LYS
34	59	32	GLU
34	59	44	VAL
34	59	49	VAL
34	59	64	LEU
34	59	70	THR
34	59	72	ILE
34	59	83	TYR
34	59	86	GLU
34	59	88	LEU
34	59	95	ARG
34	59	97	ARG
34	59	98	LEU
34	59	101	ARG

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Mol	Chain	Res	Type
34	59	119	GLU
34	59	123	PHE
34	59	126	PRO
34	59	136	ILE
34	59	148	ILE
34	59	152	ARG
34	59	153	LYS
34	59	155	SER
34	59	162	ILE
34	59	167	GLU
34	59	170	ARG
35	69	1	MET
35	69	2	LYS
35	69	5	LEU
35	69	7	GLU
35	69	9	LEU
35	69	20	ASP
35	69	31	LEU
35	69	47	LEU
35	69	48	GLU
35	69	52	ARG
35	69	56	LYS
35	69	58	LEU
35	69	62	LYS
35	69	69	LYS
35	69	70	GLU
35	69	74	ASN
35	69	76	THR
35	69	78	THR
35	69	79	ILE
35	69	85	GLU
35	69	86	THR
35	69	93	THR
35	69	99	GLU
35	69	104	GLN
35	69	108	THR
35	69	109	ILE
35	69	114	LEU
35	69	118	LYS
35	69	122	GLU
35	69	128	LEU
35	69	133	HIS

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Mol	Chain	Res	Type
35	69	136	VAL
35	69	139	GLN
35	69	140	LEU
37	15	5	VAL
37	15	7	LYS
37	15	8	GLN
37	15	23	LEU
37	15	29	LYS
37	15	32	THR
37	15	41	ASP
37	15	43	THR
37	15	46	VAL
37	15	48	MET
37	15	58	ASP
37	15	65	LYS
37	15	67	LEU
37	15	70	LYS
37	15	76	SER
37	15	85	ILE
37	15	89	LYS
37	15	90	MET
37	15	99	LEU
37	15	112	LEU
37	15	114	ARG
37	15	130	HIS
37	15	137	LYS
38	25	1	MET
38	25	8	LEU
38	25	9	GLU
38	25	13	ASN
38	25	17	ARG
38	25	22	ILE
38	25	23	ARG
38	25	24	VAL
38	25	32	TYR
38	25	42	SER
38	25	59	LYS
38	25	71	ARG
38	25	78	ARG
38	25	82	ASN
38	25	85	VAL
38	25	91	LEU

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Mol	Chain	Res	Type
38	25	96	THR
38	25	109	LYS
38	25	111	PHE
38	25	113	LYS
38	25	117	LEU
39	35	2	LYS
39	35	15	ARG
39	35	16	ARG
39	35	18	ARG
39	35	19	VAL
39	35	21	ARG
39	35	30	THR
39	35	35	HIS
39	35	41	ARG
39	35	45	LEU
39	35	50	ARG
39	35	55	ARG
39	35	57	THR
39	35	59	LEU
39	35	61	ARG
39	35	64	LYS
39	35	65	ARG
39	35	67	MET
39	35	70	GLN
39	35	75	ILE
39	35	79	ARG
39	35	85	LEU
39	35	86	LYS
39	35	87	ASP
39	35	91	PHE
39	35	92	GLU
39	35	100	LEU
39	35	101	VAL
39	35	105	LEU
39	35	110	TYR
39	35	112	LEU
39	35	114	ILE
39	35	115	LEU
39	35	117	GLU
39	35	124	LYS
39	35	125	VAL
39	35	132	LYS

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Mol	Chain	Res	Type
39	35	133	SER
39	35	135	LEU
39	35	136	GLU
39	35	138	LEU
39	35	144	GLU
39	35	146	VAL
39	35	147	LEU
39	35	149	GLU
40	45	1	MET
40	45	3	MET
40	45	7	MET
40	45	10	ARG
40	45	11	LYS
40	45	22	LYS
40	45	25	ASP
40	45	29	PHE
40	45	35	VAL
40	45	45	GLN
40	45	56	ARG
40	45	58	PHE
40	45	74	TYR
40	45	75	THR
40	45	79	LEU
40	45	81	VAL
40	45	103	MET
40	45	106	VAL
40	45	110	THR
40	45	112	GLU
40	45	113	GLN
40	45	120	ILE
40	45	133	ARG
41	55	1	MET
41	55	18	LEU
41	55	27	SER
41	55	29	LEU
41	55	30	THR
41	55	43	GLU
41	55	44	LEU
41	55	45	ARG
41	55	54	LEU
41	55	65	LEU
41	55	67	LEU

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Mol	Chain	Res	Type
41	55	68	ARG
41	55	71	GLN
41	55	74	LYS
41	55	75	LEU
41	55	76	VAL
41	55	79	LEU
41	55	82	GLU
41	55	91	GLN
41	55	104	ARG
41	55	113	LEU
42	65	10	ARG
42	65	15	ARG
42	65	20	ARG
42	65	21	THR
42	65	23	ARG
42	65	25	ARG
42	65	29	PHE
42	65	30	ARG
42	65	34	HIS
42	65	42	ASP
42	65	56	LEU
42	65	59	LYS
42	65	69	VAL
42	65	78	LEU
42	65	84	GLN
42	65	89	ARG
42	65	101	LEU
42	65	103	GLU
42	65	110	LEU
43	75	1	MET
43	75	2	ASN
43	75	8	LYS
43	75	13	ARG
43	75	17	THR
43	75	19	LEU
43	75	21	GLU
43	75	29	ARG
43	75	30	VAL
43	75	31	SER
43	75	41	ARG
43	75	45	PHE
43	75	51	ARG

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Mol	Chain	Res	Type
43	75	53	ARG
43	75	58	ASN
43	75	62	THR
43	75	63	VAL
43	75	74	ARG
43	75	78	LEU
43	75	86	ILE
43	75	87	ASP
43	75	88	ILE
43	75	89	VAL
43	75	98	LYS
43	75	99	LEU
43	75	104	ASN
43	75	109	GLU
43	75	110	ILE
43	75	111	ARG
43	75	112	ARG
43	75	115	ARG
43	75	125	ARG
44	85	5	LYS
44	85	15	LYS
44	85	19	LYS
44	85	25	TRP
44	85	27	LEU
44	85	31	SER
44	85	54	LYS
44	85	58	ARG
44	85	59	ARG
44	85	60	LEU
44	85	63	VAL
44	85	64	ARG
44	85	69	CYS
44	85	70	ARG
44	85	74	LEU
44	85	79	PHE
44	85	83	LEU
44	85	97	ASP
44	85	98	LEU
44	85	105	VAL
45	95	7	THR
45	95	10	LYS
45	95	12	TYR

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Mol	Chain	Res	Type
45	95	13	ARG
45	95	15	GLU
45	95	18	LEU
45	95	32	THR
45	95	35	LEU
45	95	40	LEU
45	95	44	LYS
45	95	46	VAL
45	95	47	VAL
45	95	51	VAL
45	95	66	ARG
45	95	68	LYS
45	95	69	LYS
45	95	72	VAL
45	95	73	SER
45	95	74	LYS
45	95	75	PHE
45	95	76	LYS
45	95	80	GLN
45	95	81	TYR
45	95	82	ARG
45	95	87	HIS
45	95	91	TYR
45	95	95	LEU
45	95	98	GLU
46	A5	1	MET
46	A5	4	LYS
46	A5	11	ARG
46	A5	23	LEU
46	A5	33	ARG
46	A5	35	ILE
46	A5	37	ARG
46	A5	39	THR
46	A5	50	VAL
46	A5	51	LEU
46	A5	59	VAL
46	A5	65	LEU
46	A5	67	ASP
46	A5	70	TYR
46	A5	76	VAL
46	A5	78	GLU
46	A5	96	ILE

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Mol	Chain	Res	Type
46	A5	100	THR
46	A5	107	LEU
46	A5	110	LYS
46	A5	111	HIS
46	A5	113	LYS
47	B5	6	ASP
47	B5	12	VAL
47	B5	14	SER
47	B5	27	THR
47	B5	30	VAL
47	B5	36	LYS
47	B5	43	VAL
47	B5	45	THR
47	B5	50	LYS
47	B5	52	VAL
47	B5	60	ARG
47	B5	62	LYS
47	B5	64	LYS
47	B5	76	ARG
47	B5	80	ILE
47	B5	81	VAL
47	B5	92	LEU
47	B5	93	GLU
48	C5	5	MET
48	C5	27	VAL
48	C5	40	GLU
48	C5	42	VAL
48	C5	43	ASN
48	C5	57	GLN
48	C5	61	ILE
48	C5	67	LEU
48	C5	70	SER
48	C5	71	LYS
48	C5	75	ILE
48	C5	81	LYS
48	C5	84	ARG
48	C5	86	ARG
48	C5	102	CYS
48	C5	107	ASP
49	D5	4	ARG
49	D5	18	LEU
49	D5	19	ARG

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Mol	Chain	Res	Type
49	D5	24	LEU
49	D5	28	MET
49	D5	29	TYR
49	D5	31	ARG
49	D5	32	HIS
49	D5	41	LEU
49	D5	49	ARG
49	D5	53	ILE
49	D5	61	LEU
49	D5	63	ASP
49	D5	71	VAL
49	D5	76	LEU
49	D5	82	ARG
49	D5	87	ASP
49	D5	94	GLU
49	D5	96	VAL
49	D5	117	LEU
49	D5	119	GLU
49	D5	120	ILE
49	D5	121	HIS
49	D5	131	ARG
49	D5	137	ILE
49	D5	146	ILE
49	D5	148	ASP
49	D5	154	ASP
49	D5	155	LEU
49	D5	157	LEU
49	D5	169	GLU
49	D5	174	VAL
49	D5	175	VAL
50	E5	5	LYS
50	E5	7	LEU
50	E5	10	THR
50	E5	12	ASN
50	E5	20	ARG
50	E5	25	ARG
50	E5	36	ILE
50	E5	37	LEU
50	E5	41	ARG
50	E5	43	THR
50	E5	50	ASN
50	E5	55	ARG

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Mol	Chain	Res	Type
50	E5	64	ASP
50	E5	70	GLN
50	E5	75	LEU
51	F5	17	SER
51	F5	21	ARG
51	F5	25	LYS
51	F5	27	GLU
51	F5	35	THR
51	F5	40	ARG
51	F5	41	ARG
51	F5	51	VAL
51	F5	56	GLN
51	F5	59	THR
51	F5	78	LYS
51	F5	80	LEU
51	F5	82	LEU
51	F5	88	LYS
51	F5	90	ILE
51	F5	91	LYS
51	F5	93	GLU
51	F5	95	LEU
51	F5	97	LEU
52	G5	3	LEU
52	G5	6	VAL
52	G5	9	GLN
52	G5	35	LEU
52	G5	43	GLN
52	G5	53	LEU
52	G5	55	ARG
52	G5	62	THR
52	G5	64	LEU
52	G5	65	ASN
52	G5	67	LYS
52	G5	69	ARG
53	H5	8	LEU
53	H5	18	ASP
53	H5	24	LYS
53	H5	28	LEU
53	H5	30	ARG
53	H5	44	ARG
53	H5	48	GLU
53	H5	52	HIS

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Mol	Chain	Res	Type
53	H5	53	LEU
53	H5	58	VAL
54	I5	6	HIS
54	I5	31	ILE
54	I5	40	HIS
54	I5	42	PHE
54	I5	47	GLN
54	I5	49	PHE
54	I5	52	THR
54	I5	53	GLU
54	I5	56	VAL
54	I5	58	ARG
54	I5	60	GLN
54	I5	61	ARG
54	I5	62	ARG
54	I5	69	LYS
55	J5	13	LYS
55	J5	16	ARG
55	J5	29	THR
55	J5	31	VAL
55	J5	37	LYS
55	J5	40	LYS
55	J5	52	TYR
55	J5	55	ARG
56	K5	12	GLU
56	K5	16	CYS
56	K5	17	LYS
56	K5	18	ARG
56	K5	19	ARG
56	K5	25	LYS
56	K5	27	LYS
56	K5	30	THR
56	K5	37	ARG
56	K5	44	ARG
56	K5	47	THR
56	K5	49	HIS
56	K5	53	LYS
57	L5	1	MET
57	L5	10	ARG
57	L5	14	LYS
57	L5	32	LYS
57	L5	36	GLN

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Mol	Chain	Res	Type
57	L5	42	LEU
57	L5	43	THR
57	L5	47	ARG
57	L5	49	ARG
58	M5	15	LYS
58	M5	19	SER
58	M5	21	LYS
58	M5	31	HIS
58	M5	34	TRP
58	M5	37	SER
58	M5	39	LYS
58	M5	40	GLU
58	M5	50	LEU
58	M5	52	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
4	3E	119	GLN
4	3E	123	HIS
10	1I	78	ASN
11	2I	26	ASN
20	BI	26	ASN
34	51	147	ASN
39	78	13	ASN
43	B8	55	ASN
44	C8	81	HIS
49	H8	34	ASN
50	I8	35	ASN
54	M8	60	GLN
3	22	6	HIS
4	32	123	HIS
7	62	97	GLN
10	1A	13	HIS
18	9A	63	GLN
32	39	169	ASN
38	25	5	GLN
44	85	81	HIS
45	95	64	HIS
45	95	80	GLN
47	B5	55	ASN
48	C5	43	ASN

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Mol	Chain	Res	Type
50	E5	35	ASN
50	E5	40	GLN
50	E5	70	GLN
52	G5	46	GLN
53	H5	19	GLN
56	K5	49	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1511/1522 (99%)	364 (24%)	51 (3%)
1	1G	1509/1522 (99%)	385 (25%)	48 (3%)
22	1K	74/76 (97%)	38 (51%)	0
23	2K	73/76 (96%)	20 (27%)	2 (2%)
24	3K	74/76 (97%)	39 (52%)	3 (4%)
24	3L	74/76 (97%)	37 (50%)	1 (1%)
25	4K	29/60 (48%)	8 (27%)	2 (6%)
25	4L	29/60 (48%)	12 (41%)	2 (6%)
26	5K	74/76 (97%)	35 (47%)	5 (6%)
27	14	2871/2917 (98%)	785 (27%)	65 (2%)
27	1H	2884/2917 (98%)	724 (25%)	77 (2%)
28	16	121/122 (99%)	27 (22%)	1 (0%)
28	1J	120/122 (98%)	39 (32%)	4 (3%)
59	1L	74/76 (97%)	35 (47%)	1 (1%)
60	2L	73/76 (96%)	23 (31%)	0
All	All	9590/9774 (98%)	2571 (26%)	262 (2%)

All (2571) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	8	A
1	13	9	G
1	13	28	G
1	13	32	A
1	13	39	G
1	13	44	G
1	13	47	C
1	13	48	C
1	13	50	A

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Mol	Chain	Res	Type
1	13	51	A
1	13	53	A
1	13	54	C
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	80	G
1	13	81	G
1	13	82	U
1	13	84	U
1	13	85	U
1	13	86	U
1	13	90	C
1	13	91	C
1	13	101	A
1	13	108	G
1	13	113	G
1	13	120	A
1	13	121	C
1	13	133	U
1	13	137	C
1	13	144	G
1	13	162	A
1	13	169	C
1	13	170	U
1	13	172	A
1	13	173	U
1	13	181	G
1	13	186(F)	C
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	195	A
1	13	196	A
1	13	197	A
1	13	198	G
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	220	G

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Mol	Chain	Res	Type
1	13	247	G
1	13	251	G
1	13	258	G
1	13	262	A
1	13	266	G
1	13	267	C
1	13	281	G
1	13	289	G
1	13	299	G
1	13	314	C
1	13	321	A
1	13	328	C
1	13	329	A
1	13	332	G
1	13	335	C
1	13	344	A
1	13	345	C
1	13	346	G
1	13	347	G
1	13	349	A
1	13	352	C
1	13	353	A
1	13	354	G
1	13	356	A
1	13	367	U
1	13	373	A
1	13	381	C
1	13	382	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	412	A
1	13	413	G
1	13	414	A
1	13	421	U
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U

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Mol	Chain	Res	Type
1	13	430	A
1	13	439	A
1	13	440	A
1	13	451	A
1	13	466	C
1	13	467	G
1	13	482	A
1	13	483	C
1	13	484	G
1	13	485	G
1	13	486	U
1	13	496	A
1	13	497	U
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	520	A
1	13	524	G
1	13	527	7MG
1	13	531	U
1	13	532	A
1	13	533	A
1	13	534	U
1	13	536	C
1	13	545	C
1	13	547	A
1	13	549	C
1	13	559	A
1	13	561	U
1	13	562	C
1	13	563	A
1	13	564	C
1	13	566	G
1	13	568	G
1	13	569	C
1	13	572	A
1	13	573	A
1	13	574	A
1	13	576	G
1	13	590	C

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Mol	Chain	Res	Type
1	13	596	C
1	13	614	A
1	13	616	G
1	13	622	A
1	13	630	G
1	13	631	G
1	13	650	G
1	13	653	A
1	13	661	G
1	13	662	G
1	13	665	A
1	13	666	G
1	13	671	G
1	13	687	A
1	13	701	C
1	13	702	A
1	13	703	G
1	13	704	A
1	13	707	C
1	13	711	G
1	13	721	G
1	13	723	U
1	13	724	G
1	13	731	G
1	13	734	G
1	13	747	C
1	13	748	C
1	13	749	C
1	13	752	G
1	13	753	A
1	13	755	G
1	13	766	A
1	13	777	A
1	13	786	G
1	13	792	A
1	13	793	U
1	13	794	A
1	13	803	G
1	13	809	G
1	13	813	U
1	13	815	A
1	13	817	C

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Mol	Chain	Res	Type
1	13	818	G
1	13	820	U
1	13	825	G
1	13	828	A
1	13	841	U
1	13	843	U
1	13	848	C
1	13	853	G
1	13	858	G
1	13	859	A
1	13	863	U
1	13	870	U
1	13	874	G
1	13	876	G
1	13	902	G
1	13	910	C
1	13	913	A
1	13	914	A
1	13	919	A
1	13	926	G
1	13	927	G
1	13	934	C
1	13	936	C
1	13	957	U
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
1	13	972	C
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	980	C
1	13	982	U
1	13	991	U
1	13	992	U
1	13	993	G
1	13	994	A
1	13	998	G
1	13	1001	G
1	13	1004	A

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Mol	Chain	Res	Type
1	13	1005	A
1	13	1006	C
1	13	1008	C
1	13	1009	G
1	13	1011	G
1	13	1017	G
1	13	1021	G
1	13	1022	G
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1028	C
1	13	1028(A)	C
1	13	1029	G
1	13	1031	G
1	13	1032(A)	G
1	13	1033	G
1	13	1034	G
1	13	1037	C
1	13	1038	C
1	13	1040	U
1	13	1042	G
1	13	1053	G
1	13	1054	C
1	13	1055	A
1	13	1064	G
1	13	1066	C
1	13	1077	G
1	13	1082	G
1	13	1094	G
1	13	1095	U
1	13	1100	C
1	13	1101	A
1	13	1109	C
1	13	1116	C
1	13	1122	U
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1128	C
1	13	1129	C

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Mol	Chain	Res	Type
1	13	1130	A
1	13	1131	G
1	13	1132	C
1	13	1133	G
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1140	C
1	13	1141	C
1	13	1146	A
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1171	G
1	13	1178	G
1	13	1181	G
1	13	1182	G
1	13	1183	A
1	13	1184	G
1	13	1185	G
1	13	1188	A
1	13	1196	U
1	13	1200	C
1	13	1201	A
1	13	1212	U
1	13	1214	C
1	13	1218	C
1	13	1225	A
1	13	1238	A
1	13	1240	U
1	13	1241	G
1	13	1250	A
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1262	C
1	13	1263	C
1	13	1269	A
1	13	1270	C
1	13	1272	G
1	13	1273	G

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Mol	Chain	Res	Type
1	13	1275	A
1	13	1278	U
1	13	1280	A
1	13	1281	U
1	13	1286	A
1	13	1287	A
1	13	1288	A
1	13	1292	U
1	13	1299	A
1	13	1300	G
1	13	1301	U
1	13	1302	U
1	13	1303	C
1	13	1305	G
1	13	1317	C
1	13	1318	A
1	13	1319	A
1	13	1321	C
1	13	1322	C
1	13	1336	C
1	13	1338	G
1	13	1353	G
1	13	1362(A)	C
1	13	1364	U
1	13	1368	G
1	13	1370	G
1	13	1379	G
1	13	1398	A
1	13	1419	G
1	13	1439	C
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1447	G
1	13	1450	U
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1454	G
1	13	1469	G
1	13	1471	G
1	13	1483	A

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Mol	Chain	Res	Type
1	13	1487	G
1	13	1492	A
1	13	1493	A
1	13	1497	G
1	13	1499	A
1	13	1502	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1517	G
1	13	1520	G
1	13	1525	G
1	13	1529	G
1	13	1530	G
1	13	1531	A
1	13	1534	A
22	1K	2	C
22	1K	3	C
22	1K	5	G
22	1K	8	4SU
22	1K	9	A
22	1K	10	G
22	1K	11	C
22	1K	15	G
22	1K	16	U
22	1K	17	C
22	1K	18	G
22	1K	19	G
22	1K	20	U
22	1K	21	A
22	1K	22	G
22	1K	24	G
22	1K	25	C
22	1K	27	G
22	1K	34	G
22	1K	36	A
22	1K	44	G
22	1K	45	U
22	1K	46	7MG
22	1K	47	U
22	1K	48	C

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Mol	Chain	Res	Type
22	1K	49	C
22	1K	52	G
22	1K	53	G
22	1K	55	PSU
22	1K	58	A
22	1K	59	U
22	1K	60	U
22	1K	61	C
22	1K	64	A
22	1K	70	G
22	1K	74	C
22	1K	75	C
22	1K	76	A
23	2K	2	C
23	2K	13	C
23	2K	17	C
23	2K	18	G
23	2K	20	H2U
23	2K	21	A
23	2K	22	G
23	2K	30	G
23	2K	36	A
23	2K	38	A
23	2K	44	G
23	2K	45	U
23	2K	46	7MG
23	2K	48	C
23	2K	55	PSU
23	2K	58	A
23	2K	69	G
23	2K	72	C
23	2K	74	C
23	2K	76	A
24	3K	2	C
24	3K	3	C
24	3K	5	G
24	3K	6	G
24	3K	8	U
24	3K	9	A
24	3K	10	G
24	3K	13	C
24	3K	17	C

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Mol	Chain	Res	Type
24	3K	18	G
24	3K	19	G
24	3K	20	U
24	3K	21	A
24	3K	23	A
24	3K	24	G
24	3K	26	A
24	3K	27	G
24	3K	31	A
24	3K	32	PSU
24	3K	40	C
24	3K	43	C
24	3K	45	U
24	3K	46	G
24	3K	47	U
24	3K	48	C
24	3K	49	C
24	3K	51	U
24	3K	52	G
24	3K	55	U
24	3K	56	C
24	3K	59	U
24	3K	61	C
24	3K	62	C
24	3K	64	A
24	3K	66	U
24	3K	68	C
24	3K	72	C
24	3K	73	A
24	3K	75	C
25	4K	31	A
25	4K	42	U
25	4K	45	U
25	4K	46	U
25	4K	49	U
25	4K	54	U
25	4K	56	U
25	4K	57	U
26	5K	2	C
26	5K	3	C
26	5K	8	4SU
26	5K	10	G

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Mol	Chain	Res	Type
26	5K	13	C
26	5K	16	H2U
26	5K	17	C
26	5K	19	G
26	5K	20	H2U
26	5K	21	A
26	5K	22	G
26	5K	23	A
26	5K	27	G
26	5K	34	G
26	5K	35	A
26	5K	38	A
26	5K	40	C
26	5K	44	G
26	5K	45	U
26	5K	46	G
26	5K	47	U
26	5K	48	C
26	5K	49	C
26	5K	50	U
26	5K	52	G
26	5K	53	G
26	5K	54	5MU
26	5K	56	C
26	5K	58	A
26	5K	63	G
26	5K	66	U
26	5K	71	G
26	5K	73	A
26	5K	74	C
26	5K	75	C
27	1H	3	U
27	1H	5	A
27	1H	10	G
27	1H	15	G
27	1H	34	C
27	1H	35	G
27	1H	45	C
27	1H	46	C
27	1H	60	G
27	1H	62	U
27	1H	70	A

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Mol	Chain	Res	Type
27	1H	73	A
27	1H	74	G
27	1H	83	A
27	1H	89	U
27	1H	94	G
27	1H	100	G
27	1H	116	A
27	1H	117	A
27	1H	118	U
27	1H	121	G
27	1H	134	G
27	1H	155	C
27	1H	158	U
27	1H	160	U
27	1H	169	G
27	1H	171	A
27	1H	178	G
27	1H	185	A
27	1H	186	A
27	1H	187	A
27	1H	189	A
27	1H	190	U
27	1H	204	G
27	1H	205	G
27	1H	206	A
27	1H	207	G
27	1H	211	A
27	1H	212	A
27	1H	213	A
27	1H	217	A
27	1H	218	A
27	1H	219	A
27	1H	220	U
27	1H	222	G
27	1H	223	A
27	1H	238	G
27	1H	239	C
27	1H	242	G
27	1H	254	C
27	1H	255	A
27	1H	256	G
27	1H	259	U

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Mol	Chain	Res	Type
27	1H	262	A
27	1H	266	U
27	1H	267	C
27	1H	272	U
27	1H	273	U
27	1H	274	G
27	1H	275	U
27	1H	276	C
27	1H	283	G
27	1H	289	U
27	1H	290	G
27	1H	298	C
27	1H	304	C
27	1H	319	A
27	1H	324	A
27	1H	336	A
27	1H	340	G
27	1H	341	C
27	1H	352	G
27	1H	354	G
27	1H	355	A
27	1H	358	G
27	1H	359	C
27	1H	363	G
27	1H	367	G
27	1H	368	C
27	1H	377	G
27	1H	382	A
27	1H	395	C
27	1H	398	G
27	1H	400	G
27	1H	401	U
27	1H	414	G
27	1H	432	C
27	1H	433	U
27	1H	435	G
27	1H	439	G
27	1H	440	A
27	1H	456	A
27	1H	469	G
27	1H	471	C
27	1H	475	U

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Mol	Chain	Res	Type
27	1H	481	A
27	1H	482	C
27	1H	484	A
27	1H	497	A
27	1H	506	A
27	1H	508	G
27	1H	520	G
27	1H	529	A
27	1H	530	U
27	1H	531	A
27	1H	534	G
27	1H	535	C
27	1H	536	C
27	1H	538	G
27	1H	539	A
27	1H	547	G
27	1H	554	A
27	1H	555	A
27	1H	556	G
27	1H	557	C
27	1H	558	A
27	1H	559	G
27	1H	563	C
27	1H	564	G
27	1H	569	C
27	1H	571	C
27	1H	574	G
27	1H	582	G
27	1H	587	G
27	1H	588	C
27	1H	594	G
27	1H	597	G
27	1H	599	A
27	1H	610	A
27	1H	611	C
27	1H	612	U
27	1H	616	G
27	1H	618	U
27	1H	627	A
27	1H	631	U
27	1H	633	A
27	1H	639	U

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Mol	Chain	Res	Type
27	1H	640	G
27	1H	642	G
27	1H	647	A
27	1H	653	A
27	1H	657	A
27	1H	660	C
27	1H	663	A
27	1H	669	A
27	1H	671	C
27	1H	672	A
27	1H	680	A
27	1H	681	A
27	1H	683	G
27	1H	698	C
27	1H	699	G
27	1H	700	A
27	1H	706	C
27	1H	718	A
27	1H	725	A
27	1H	734	G
27	1H	749	G
27	1H	750	G
27	1H	757	U
27	1H	763	G
27	1H	765	G
27	1H	770	A
27	1H	778	C
27	1H	788	U
27	1H	793	G
27	1H	797	C
27	1H	799	A
27	1H	824	G
27	1H	827	U
27	1H	830	A
27	1H	832	A
27	1H	833	G
27	1H	838	C
27	1H	840	G
27	1H	841	A
27	1H	848	A
27	1H	850	A
27	1H	853	G

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Mol	Chain	Res	Type
27	1H	860	C
27	1H	867	A
27	1H	875	U
27	1H	876	U
27	1H	893	G
27	1H	894	C
27	1H	895	U
27	1H	902	G
27	1H	907	G
27	1H	909	A
27	1H	917	G
27	1H	925	U
27	1H	926	A
27	1H	928	G
27	1H	929	G
27	1H	930	G
27	1H	931	G
27	1H	932	C
27	1H	933	C
27	1H	934	C
27	1H	935	A
27	1H	936	C
27	1H	937	C
27	1H	938	A
27	1H	939	G
27	1H	940	C
27	1H	943	A
27	1H	944	C
27	1H	945	C
27	1H	946	A
27	1H	947	A
27	1H	951	C
27	1H	953	G
27	1H	957	A
27	1H	961	C
27	1H	964	A
27	1H	966	G
27	1H	978	G
27	1H	987	A
27	1H	991	A
27	1H	992	G
27	1H	999	A

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Mol	Chain	Res	Type
27	1H	1005	A
27	1H	1007	C
27	1H	1020	G
27	1H	1030	A
27	1H	1036	G
27	1H	1037	A
27	1H	1038	C
27	1H	1043	A
27	1H	1052	C
27	1H	1057	A
27	1H	1058	G
27	1H	1059	U
27	1H	1060	C
27	1H	1069	G
27	1H	1070	U
27	1H	1072	G
27	1H	1073	U
27	1H	1074	A
27	1H	1077	G
27	1H	1080	U
27	1H	1084	G
27	1H	1085	C
27	1H	1092	A
27	1H	1094	G
27	1H	1095	A
27	1H	1097	A
27	1H	1105	U
27	1H	1107	U
27	1H	1109	G
27	1H	1118	G
27	1H	1121	G
27	1H	1123	C
27	1H	1124	A
27	1H	1125	U
27	1H	1126	C
27	1H	1129	U
27	1H	1130	U
27	1H	1131	A
27	1H	1132	A
27	1H	1133	A
27	1H	1134	G
27	1H	1135	A

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Mol	Chain	Res	Type
27	1H	1136	G
27	1H	1137	U
27	1H	1138	G
27	1H	1145	A
27	1H	1152	U
27	1H	1157	G
27	1H	1158	A
27	1H	1169	G
27	1H	1175	A
27	1H	1176	A
27	1H	1177	U
27	1H	1178	G
27	1H	1181	C
27	1H	1182	G
27	1H	1185	G
27	1H	1188	U
27	1H	1189	A
27	1H	1196	G
27	1H	1199	C
27	1H	1203	A
27	1H	1204	G
27	1H	1209	G
27	1H	1215	G
27	1H	1216	G
27	1H	1219	G
27	1H	1221	U
27	1H	1222	G
27	1H	1223	A
27	1H	1225	C
27	1H	1226	C
27	1H	1229	G
27	1H	1230	G
27	1H	1238	G
27	1H	1241	G
27	1H	1250	A
27	1H	1251	U
27	1H	1257	U
27	1H	1266	A
27	1H	1267	C
27	1H	1274	G
27	1H	1284	A
27	1H	1288	A

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Mol	Chain	Res	Type
27	1H	1296	U
27	1H	1297	G
27	1H	1300	A
27	1H	1303	G
27	1H	1312	A
27	1H	1314	U
27	1H	1316	A
27	1H	1318	G
27	1H	1319	A
27	1H	1320	U
27	1H	1322	A
27	1H	1323	A
27	1H	1335	U
27	1H	1347	U
27	1H	1348	A
27	1H	1350	G
27	1H	1356	G
27	1H	1361	C
27	1H	1368	A
27	1H	1374	C
27	1H	1376	U
27	1H	1381	G
27	1H	1384	G
27	1H	1392	C
27	1H	1396	A
27	1H	1399	U
27	1H	1406	A
27	1H	1407	A
27	1H	1411	G
27	1H	1412	A
27	1H	1417	C
27	1H	1431	A
27	1H	1432	G
27	1H	1433	C
27	1H	1436	G
27	1H	1458	C
27	1H	1462	U
27	1H	1463	G
27	1H	1464	C
27	1H	1466	A
27	1H	1467	U
27	1H	1468	G

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Mol	Chain	Res	Type
27	1H	1475	C
27	1H	1492	A
27	1H	1497	A
27	1H	1498	G
27	1H	1500	C
27	1H	1503	G
27	1H	1506	C
27	1H	1507	G
27	1H	1509	G
27	1H	1515	C
27	1H	1519	A
27	1H	1522	C
27	1H	1523	G
27	1H	1524	C
27	1H	1529	U
27	1H	1530	G
27	1H	1532	G
27	1H	1533	A
27	1H	1534	G
27	1H	1540	C
27	1H	1544	U
27	1H	1552	C
27	1H	1553	C
27	1H	1555	A
27	1H	1556	C
27	1H	1557	A
27	1H	1560	C
27	1H	1561	U
27	1H	1572	G
27	1H	1580	C
27	1H	1581	G
27	1H	1582	U
27	1H	1584	C
27	1H	1585	G
27	1H	1586	G
27	1H	1590	A
27	1H	1591	C
27	1H	1592	A
27	1H	1602	A
27	1H	1606	A
27	1H	1607	G
27	1H	1608	G

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Mol	Chain	Res	Type
27	1H	1617	A
27	1H	1626	U
27	1H	1627	A
27	1H	1633	A
27	1H	1639	C
27	1H	1640	G
27	1H	1644	A
27	1H	1645	C
27	1H	1650	A
27	1H	1653	G
27	1H	1655	A
27	1H	1656	A
27	1H	1657	A
27	1H	1658	C
27	1H	1663	A
27	1H	1664	C
27	1H	1665	A
27	1H	1694	C
27	1H	1695	G
27	1H	1696	C
27	1H	1700	A
27	1H	1701	G
27	1H	1702	A
27	1H	1706	C
27	1H	1712	A
27	1H	1722	G
27	1H	1729	G
27	1H	1743	G
27	1H	1751	G
27	1H	1764	G
27	1H	1767	G
27	1H	1768	A
27	1H	1769	U
27	1H	1770	G
27	1H	1772	G
27	1H	1782	G
27	1H	1787	A
27	1H	1792	A
27	1H	1794	A
27	1H	1795	G
27	1H	1796	G
27	1H	1805	A

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Mol	Chain	Res	Type
27	1H	1811	U
27	1H	1812	A
27	1H	1823	A
27	1H	1830	U
27	1H	1831	G
27	1H	1832	C
27	1H	1833	G
27	1H	1834	A
27	1H	1848	G
27	1H	1849	G
27	1H	1851	A
27	1H	1852	U
27	1H	1864	C
27	1H	1865	U
27	1H	1871	G
27	1H	1874	G
27	1H	1878	G
27	1H	1879	A
27	1H	1880	A
27	1H	1882	G
27	1H	1888	G
27	1H	1890	G
27	1H	1893	G
27	1H	1895	G
27	1H	1897	G
27	1H	1898	C
27	1H	1901	G
27	1H	1905	C
27	1H	1906	G
27	1H	1908	A
27	1H	1911	G
27	1H	1912	A
27	1H	1922	G
27	1H	1923	A
27	1H	1929	G
27	1H	1930	G
27	1H	1937	C
27	1H	1952	G
27	1H	1953	G
27	1H	1959	A
27	1H	1960	A
27	1H	1961	A

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Mol	Chain	Res	Type
27	1H	1962	5MU
27	1H	1963	U
27	1H	1978	U
27	1H	1979	U
27	1H	1983	A
27	1H	1986	U
27	1H	1987	G
27	1H	1990	C
27	1H	1991	G
27	1H	1992	A
27	1H	1993	A
27	1H	1994	A
27	1H	1995	A
27	1H	2003	G
27	1H	2005	C
27	1H	2014	U
27	1H	2015	G
27	1H	2016	U
27	1H	2028	A
27	1H	2042	A
27	1H	2043	A
27	1H	2046	G
27	1H	2054	A
27	1H	2055	G
27	1H	2056	A
27	1H	2058	G
27	1H	2064	U
27	1H	2066	C
27	1H	2072	G
27	1H	2074	A
27	1H	2077	A
27	1H	2078	C
27	1H	2079	G
27	1H	2082	A
27	1H	2083	A
27	1H	2084	G
27	1H	2085	A
27	1H	2091	U
27	1H	2092	G
27	1H	2094	A
27	1H	2099	U
27	1H	2116	G

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Mol	Chain	Res	Type
27	1H	2122	U
27	1H	2123	G
27	1H	2124	G
27	1H	2134	C
27	1H	2135	G
27	1H	2136	U
27	1H	2137	A
27	1H	2138	G
27	1H	2140	A
27	1H	2141	U
27	1H	2143	G
27	1H	2148	G
27	1H	2149	A
27	1H	2150	G
27	1H	2151	C
27	1H	2152	C
27	1H	2155	U
27	1H	2156	G
27	1H	2157	A
27	1H	2159	C
27	1H	2161	C
27	1H	2168	C
27	1H	2169	C
27	1H	2170	G
27	1H	2171	G
27	1H	2177	G
27	1H	2180	G
27	1H	2181	A
27	1H	2185	G
27	1H	2186	C
27	1H	2189	G
27	1H	2190	U
27	1H	2191	G
27	1H	2193	A
27	1H	2194	A
27	1H	2196	A
27	1H	2197	C
27	1H	2199	A
27	1H	2204	G
27	1H	2212	U
27	1H	2213	G
27	1H	2215	G

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Mol	Chain	Res	Type
27	1H	2221	A
27	1H	2228	G
27	1H	2229	G
27	1H	2230	A
27	1H	2231	U
27	1H	2232	G
27	1H	2238	A
27	1H	2239	C
27	1H	2251	G
27	1H	2252	G
27	1H	2269	G
27	1H	2288	C
27	1H	2291	A
27	1H	2293	G
27	1H	2294	C
27	1H	2296	C
27	1H	2298	C
27	1H	2299	A
27	1H	2300	A
27	1H	2301	A
27	1H	2316	G
27	1H	2317	G
27	1H	2318	A
27	1H	2320	G
27	1H	2321	G
27	1H	2324	A
27	1H	2325	U
27	1H	2327	C
27	1H	2332	G
27	1H	2333	A
27	1H	2338	G
27	1H	2339	C
27	1H	2347	G
27	1H	2349	A
27	1H	2354	G
27	1H	2359	A
27	1H	2360	C
27	1H	2361	U
27	1H	2363	C
27	1H	2385	G
27	1H	2392	G
27	1H	2396	G

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Mol	Chain	Res	Type
27	1H	2397	G
27	1H	2398	C
27	1H	2403	U
27	1H	2405	A
27	1H	2419	U
27	1H	2420	G
27	1H	2427	G
27	1H	2435	A
27	1H	2437	C
27	1H	2438	A
27	1H	2440	C
27	1H	2441	G
27	1H	2442	G
27	1H	2443	A
27	1H	2444	U
27	1H	2446	A
27	1H	2447	A
27	1H	2448	A
27	1H	2452	A
27	1H	2453	C
27	1H	2454	C
27	1H	2461	A
27	1H	2464	A
27	1H	2469	C
27	1H	2472	A
27	1H	2473	U
27	1H	2482	A
27	1H	2483	G
27	1H	2486	U
27	1H	2487	C
27	1H	2488	C
27	1H	2489	A
27	1H	2491	A
27	1H	2493	C
27	1H	2495	G
27	1H	2515	G
27	1H	2517	U
27	1H	2518	G
27	1H	2520	C
27	1H	2530	C
27	1H	2531	A
27	1H	2532	U

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Mol	Chain	Res	Type
27	1H	2538	G
27	1H	2542	G
27	1H	2567	U
27	1H	2569	C
27	1H	2572	C
27	1H	2579	A
27	1H	2580	G
27	1H	2586	C
27	1H	2587	G
27	1H	2588	C
27	1H	2595	G
27	1H	2598	U
27	1H	2612	G
27	1H	2615	A
27	1H	2622	U
27	1H	2624	U
27	1H	2625	C
27	1H	2642	A
27	1H	2643	G
27	1H	2645	A
27	1H	2647	G
27	1H	2654	G
27	1H	2658	G
27	1H	2668	G
27	1H	2678	A
27	1H	2679	C
27	1H	2686	G
27	1H	2691	C
27	1H	2692	A
27	1H	2694	C
27	1H	2695	U
27	1H	2696	C
27	1H	2699	G
27	1H	2702	U
27	1H	2715	U
27	1H	2716	C
27	1H	2725	U
27	1H	2726	A
27	1H	2727	A
27	1H	2728	G
27	1H	2732	G
27	1H	2740	U

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Mol	Chain	Res	Type
27	1H	2747	A
27	1H	2748	A
27	1H	2756	C
27	1H	2765	G
27	1H	2766	C
27	1H	2771	A
27	1H	2772	A
27	1H	2775	G
27	1H	2776	G
27	1H	2778	A
27	1H	2779	A
27	1H	2780	G
27	1H	2781	C
27	1H	2784	G
27	1H	2792	A
27	1H	2793	U
27	1H	2804	A
27	1H	2805	C
27	1H	2807	G
27	1H	2810	U
27	1H	2813	A
27	1H	2819	U
27	1H	2829	G
27	1H	2831	A
27	1H	2832	A
27	1H	2841	G
27	1H	2843	U
27	1H	2844	G
27	1H	2845	G
27	1H	2846	A
27	1H	2859	G
27	1H	2877	U
27	1H	2883	G
27	1H	2887	G
27	1H	2890	C
27	1H	2891	C
27	1H	2896	C
27	1H	2897	G
27	1H	2901	G
27	1H	2902	A
27	1H	2904	G
28	16	7	G

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Mol	Chain	Res	Type
28	16	10	C
28	16	11	C
28	16	13	A
28	16	15	A
28	16	16	G
28	16	19	G
28	16	23	G
28	16	25	A
28	16	27	C
28	16	33	G
28	16	40	U
28	16	41	U
28	16	42	C
28	16	43	C
28	16	44	G
28	16	52	A
28	16	53	A
28	16	56	G
28	16	66	A
28	16	67	G
28	16	73	A
28	16	77	U
28	16	82	G
28	16	89	G
28	16	109	G
28	16	116	G
1	1G	5	U
1	1G	6	G
1	1G	7	G
1	1G	9	G
1	1G	16	A
1	1G	22	G
1	1G	32	A
1	1G	39	G
1	1G	41	G
1	1G	47	C
1	1G	48	C
1	1G	50	A
1	1G	51	A
1	1G	54	C
1	1G	64	G
1	1G	65	U

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Mol	Chain	Res	Type
1	1G	79	G
1	1G	80	G
1	1G	87	A
1	1G	88	C
1	1G	90	C
1	1G	91	C
1	1G	93	U
1	1G	101	A
1	1G	105	G
1	1G	108	G
1	1G	115	G
1	1G	116	A
1	1G	119	A
1	1G	120	A
1	1G	121	C
1	1G	131	C
1	1G	137	C
1	1G	143	A
1	1G	144	G
1	1G	163	C
1	1G	169	C
1	1G	174	C
1	1G	182	U
1	1G	186	C
1	1G	186(A)	C
1	1G	187	C
1	1G	188	U
1	1G	189	U
1	1G	190	G
1	1G	191(A)	G
1	1G	191(D)	U
1	1G	191(E)	G
1	1G	195	A
1	1G	196	A
1	1G	197	A
1	1G	208	U
1	1G	209	U
1	1G	210	U
1	1G	216	G
1	1G	244	U
1	1G	247	G
1	1G	250	A

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Mol	Chain	Res	Type
1	1G	251	G
1	1G	252	U
1	1G	262	A
1	1G	266	G
1	1G	279	A
1	1G	280	C
1	1G	281	G
1	1G	287	U
1	1G	289	G
1	1G	304	U
1	1G	306	G
1	1G	321	A
1	1G	324	G
1	1G	328	C
1	1G	329	A
1	1G	332	G
1	1G	343	U
1	1G	345	C
1	1G	346	G
1	1G	347	G
1	1G	350	G
1	1G	351	G
1	1G	352	C
1	1G	353	A
1	1G	354	G
1	1G	367	U
1	1G	372	C
1	1G	373	A
1	1G	388	G
1	1G	397	A
1	1G	398	C
1	1G	406	G
1	1G	409	G
1	1G	410	G
1	1G	412	A
1	1G	413	G
1	1G	414	A
1	1G	419	C
1	1G	421	U
1	1G	422	C
1	1G	423	G
1	1G	424	G

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Mol	Chain	Res	Type
1	1G	429	U
1	1G	434	U
1	1G	439	A
1	1G	442	C
1	1G	452	A
1	1G	465	A
1	1G	466	C
1	1G	467	G
1	1G	475	G
1	1G	478	A
1	1G	482	A
1	1G	484	G
1	1G	485	G
1	1G	486	U
1	1G	496	A
1	1G	497	U
1	1G	505	G
1	1G	508	C
1	1G	509	A
1	1G	510	A
1	1G	511	C
1	1G	517	G
1	1G	518	C
1	1G	519	C
1	1G	527	7MG
1	1G	530	G
1	1G	532	A
1	1G	533	A
1	1G	536	C
1	1G	545	C
1	1G	546	G
1	1G	547	A
1	1G	559	A
1	1G	561	U
1	1G	562	C
1	1G	563	A
1	1G	564	C
1	1G	568	G
1	1G	572	A
1	1G	573	A
1	1G	576	G
1	1G	596	C

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Mol	Chain	Res	Type
1	1G	607	A
1	1G	614	A
1	1G	615	C
1	1G	623	C
1	1G	626	U
1	1G	628	G
1	1G	631	G
1	1G	641	U
1	1G	650	G
1	1G	653	A
1	1G	661	G
1	1G	665	A
1	1G	687	A
1	1G	688	G
1	1G	693	G
1	1G	702	A
1	1G	703	G
1	1G	704	A
1	1G	705	U
1	1G	707	C
1	1G	722	A
1	1G	723	U
1	1G	724	G
1	1G	731	G
1	1G	734	G
1	1G	748	C
1	1G	749	C
1	1G	753	A
1	1G	754	C
1	1G	755	G
1	1G	760	G
1	1G	766	A
1	1G	774	G
1	1G	777	A
1	1G	778	G
1	1G	782	A
1	1G	785	G
1	1G	792	A
1	1G	793	U
1	1G	794	A
1	1G	816	A
1	1G	817	C

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Mol	Chain	Res	Type
1	1G	819	A
1	1G	821	G
1	1G	825	G
1	1G	827	U
1	1G	828	A
1	1G	841	U
1	1G	843	U
1	1G	848	C
1	1G	855	G
1	1G	859	A
1	1G	872	A
1	1G	873	A
1	1G	874	G
1	1G	887	G
1	1G	902	G
1	1G	914	A
1	1G	921	U
1	1G	922	G
1	1G	926	G
1	1G	927	G
1	1G	934	C
1	1G	935	A
1	1G	936	C
1	1G	942	G
1	1G	960	U
1	1G	961	U
1	1G	963	G
1	1G	968	A
1	1G	969	A
1	1G	972	C
1	1G	974	A
1	1G	975	A
1	1G	976	G
1	1G	977	A
1	1G	978	A
1	1G	979	C
1	1G	980	C
1	1G	981	U
1	1G	984	C
1	1G	986	A
1	1G	991	U
1	1G	992	U

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Mol	Chain	Res	Type
1	1G	993	G
1	1G	1006	C
1	1G	1008	C
1	1G	1009	G
1	1G	1016	A
1	1G	1017	G
1	1G	1024	G
1	1G	1025	U
1	1G	1026	G
1	1G	1028	C
1	1G	1028(A)	C
1	1G	1029	G
1	1G	1032(A)	G
1	1G	1033	G
1	1G	1035	A
1	1G	1036	G
1	1G	1040	U
1	1G	1046	A
1	1G	1047	G
1	1G	1048	G
1	1G	1049	U
1	1G	1050	G
1	1G	1053	G
1	1G	1054	C
1	1G	1055	A
1	1G	1060	C
1	1G	1066	C
1	1G	1094	G
1	1G	1095	U
1	1G	1099	G
1	1G	1101	A
1	1G	1113	C
1	1G	1117	G
1	1G	1118	C
1	1G	1122	U
1	1G	1124	G
1	1G	1125	U
1	1G	1127	G
1	1G	1128	C
1	1G	1129	C
1	1G	1130	A
1	1G	1131	G

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Mol	Chain	Res	Type
1	1G	1132	C
1	1G	1136	U
1	1G	1137	C
1	1G	1138	G
1	1G	1139	G
1	1G	1146	A
1	1G	1149	C
1	1G	1151	A
1	1G	1154	G
1	1G	1157	A
1	1G	1158	C
1	1G	1159	U
1	1G	1160	G
1	1G	1171	G
1	1G	1177	G
1	1G	1181	G
1	1G	1182	G
1	1G	1183	A
1	1G	1184	G
1	1G	1186	G
1	1G	1187	G
1	1G	1193	G
1	1G	1196	U
1	1G	1197	G
1	1G	1198	G
1	1G	1199	U
1	1G	1201	A
1	1G	1202	G
1	1G	1206	G
1	1G	1207	2MG
1	1G	1211	U
1	1G	1212	U
1	1G	1213	A
1	1G	1214	C
1	1G	1227	A
1	1G	1229	A
1	1G	1231	G
1	1G	1236	A
1	1G	1238	A
1	1G	1241	G
1	1G	1255	G
1	1G	1256	A

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Mol	Chain	Res	Type
1	1G	1257	U
1	1G	1258	G
1	1G	1261	A
1	1G	1267	C
1	1G	1270	C
1	1G	1272	G
1	1G	1273	G
1	1G	1278	U
1	1G	1280	A
1	1G	1281	U
1	1G	1285	A
1	1G	1286	A
1	1G	1287	A
1	1G	1288	A
1	1G	1289	A
1	1G	1297	C
1	1G	1298	C
1	1G	1299	A
1	1G	1300	G
1	1G	1301	U
1	1G	1305	G
1	1G	1306	A
1	1G	1314	C
1	1G	1318	A
1	1G	1320	C
1	1G	1321	C
1	1G	1322	C
1	1G	1323	G
1	1G	1327	C
1	1G	1331	G
1	1G	1332	A
1	1G	1335	C
1	1G	1336	C
1	1G	1337	G
1	1G	1338	G
1	1G	1346	A
1	1G	1347	G
1	1G	1348	U
1	1G	1350	A
1	1G	1353	G
1	1G	1360	A
1	1G	1362(A)	C

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Mol	Chain	Res	Type
1	1G	1363	A
1	1G	1364	U
1	1G	1365	G
1	1G	1368	G
1	1G	1370	G
1	1G	1380	U
1	1G	1397	C
1	1G	1399	C
1	1G	1400	5MC
1	1G	1419	G
1	1G	1441	G
1	1G	1442	G
1	1G	1443	G
1	1G	1446	A
1	1G	1449	C
1	1G	1450	U
1	1G	1451	A
1	1G	1452	C
1	1G	1453	G
1	1G	1469	G
1	1G	1490	C
1	1G	1492	A
1	1G	1499	A
1	1G	1502	A
1	1G	1506	U
1	1G	1507	A
1	1G	1517	G
1	1G	1520	G
1	1G	1529	G
1	1G	1530	G
1	1G	1537	U
1	1G	1538	C
1	1G	1541	U
59	1L	9	A
59	1L	10	G
59	1L	11	C
59	1L	12	U
59	1L	13	C
59	1L	16	U
59	1L	17	C
59	1L	18	G
59	1L	19	G

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Mol	Chain	Res	Type
59	1L	21	A
59	1L	22	G
59	1L	24	G
59	1L	38	A
59	1L	41	C
59	1L	44	G
59	1L	46	G
59	1L	47	U
59	1L	48	C
59	1L	49	C
59	1L	56	C
59	1L	57	G
59	1L	58	A
59	1L	59	U
59	1L	60	U
59	1L	61	C
59	1L	64	A
59	1L	66	U
59	1L	69	G
59	1L	70	G
59	1L	71	G
59	1L	72	C
59	1L	73	A
59	1L	74	C
59	1L	75	C
59	1L	76	A
60	2L	2	C
60	2L	3	C
60	2L	8	4SU
60	2L	16	H2U
60	2L	17	C
60	2L	18	G
60	2L	19	G
60	2L	20	U
60	2L	21	A
60	2L	22	G
60	2L	29	G
60	2L	42	C
60	2L	43	C
60	2L	44	G
60	2L	45	U
60	2L	46	7MG

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Mol	Chain	Res	Type
60	2L	54	5MU
60	2L	55	PSU
60	2L	58	A
60	2L	61	C
60	2L	67	C
60	2L	74	C
60	2L	76	A
24	3L	9	A
24	3L	10	G
24	3L	12	U
24	3L	13	C
24	3L	15	G
24	3L	16	U
24	3L	17	C
24	3L	19	G
24	3L	20	U
24	3L	21	A
24	3L	22	G
24	3L	24	G
24	3L	26	A
24	3L	28	G
24	3L	31	A
24	3L	32	PSU
24	3L	34	G
24	3L	44	G
24	3L	45	U
24	3L	46	G
24	3L	47	U
24	3L	48	C
24	3L	49	C
24	3L	51	U
24	3L	52	G
24	3L	55	U
24	3L	58	A
24	3L	59	U
24	3L	61	C
24	3L	63	G
24	3L	64	A
24	3L	66	U
24	3L	67	C
24	3L	69	G
24	3L	70	G

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Mol	Chain	Res	Type
24	3L	72	C
24	3L	73	A
25	4L	29	G
25	4L	37	G
25	4L	42	U
25	4L	43	U
25	4L	46	U
25	4L	49	U
25	4L	51	U
25	4L	52	U
25	4L	54	U
25	4L	55	U
25	4L	56	U
25	4L	57	U
27	14	3	U
27	14	4	C
27	14	9	U
27	14	13	A
27	14	30	G
27	14	34	C
27	14	35	G
27	14	40	C
27	14	46	C
27	14	49	A
27	14	50	U
27	14	51	G
27	14	58	G
27	14	60	G
27	14	61	G
27	14	67	U
27	14	68	G
27	14	69	C
27	14	71	A
27	14	72	U
27	14	74	A
27	14	75	G
27	14	78	A
27	14	83	G
27	14	84	A
27	14	85	G
27	14	95	G
27	14	101	G

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Mol	Chain	Res	Type
27	14	102	G
27	14	106	C
27	14	118	A
27	14	119	A
27	14	120	U
27	14	121	G
27	14	125	G
27	14	129	C
27	14	138	G
27	14	140	A
27	14	141	A
27	14	147	U
27	14	154	G
27	14	155	C
27	14	161	U
27	14	162	U
27	14	171	G
27	14	173	G
27	14	175	G
27	14	176	G
27	14	181	A
27	14	182	A
27	14	195	A
27	14	196	A
27	14	199	A
27	14	201	C
27	14	204	A
27	14	205	G
27	14	206	U
27	14	214	G
27	14	216	A
27	14	221	A
27	14	222	A
27	14	225	A
27	14	229	A
27	14	233	A
27	14	235	U
27	14	248	G
27	14	249	C
27	14	250	G
27	14	252	G
27	14	265	A

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Mol	Chain	Res	Type
27	14	266	G
27	14	270(J)	G
27	14	270(K)	C
27	14	270(L)	U
27	14	270(M)	U
27	14	270(N)	G
27	14	270(O)	U
27	14	270(P)	C
27	14	270(U)	C
27	14	270(V)	G
27	14	270(Z)	U
27	14	271(C)	U
27	14	271	G
27	14	273(C)	C
27	14	273(D)	C
27	14	273(F)	C
27	14	276	A
27	14	277	C
27	14	278	A
27	14	279	C
27	14	283	A
27	14	288	C
27	14	289	A
27	14	290	G
27	14	295	G
27	14	308	G
27	14	311	A
27	14	312	G
27	14	315	G
27	14	317	G
27	14	329	G
27	14	330	A
27	14	345	A
27	14	347	A
27	14	352	G
27	14	356	G
27	14	362	U
27	14	363(A)	A
27	14	363(B)	G
27	14	363(E)	U
27	14	363(F)	A
27	14	364	C

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Mol	Chain	Res	Type
27	14	365	C
27	14	372	G
27	14	386	G
27	14	395	U
27	14	396	G
27	14	404	C
27	14	405	U
27	14	406	G
27	14	407	G
27	14	411	G
27	14	412	A
27	14	426	C
27	14	428	A
27	14	434	U
27	14	443	A
27	14	444	C
27	14	448	U
27	14	449	A
27	14	451	C
27	14	454	A
27	14	455	C
27	14	457	A
27	14	458	G
27	14	464	U
27	14	470	A
27	14	471	A
27	14	475	U
27	14	480	A
27	14	481	G
27	14	494	G
27	14	496	G
27	14	504	U
27	14	505	A
27	14	508	G
27	14	509	C
27	14	512	G
27	14	524	U
27	14	526	A
27	14	527	C
27	14	529	A
27	14	530	G
27	14	531	C

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Mol	Chain	Res	Type
27	14	532	A
27	14	533	G
27	14	534	U
27	14	537	C
27	14	549	G
27	14	553	U
27	14	556	G
27	14	563	G
27	14	573	G
27	14	575	A
27	14	587	C
27	14	588	U
27	14	592	G
27	14	593	G
27	14	601	C
27	14	603	A
27	14	604	G
27	14	607	U
27	14	609(A)	G
27	14	612	G
27	14	613	U
27	14	614	U
27	14	615	G
27	14	617	G
27	14	621	A
27	14	622	G
27	14	626	U
27	14	627	A
27	14	637	A
27	14	645	C
27	14	646	A
27	14	652	C
27	14	653	A
27	14	654	A
27	14	654(A)	A
27	14	654(R)	C
27	14	654(S)	G
27	14	654(T)	A
27	14	657	U
27	14	659	C
27	14	668	G
27	14	670	A

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Mol	Chain	Res	Type
27	14	677	A
27	14	686	G
27	14	704	G
27	14	709	U
27	14	712	G
27	14	717	G
27	14	722	A
27	14	730	C
27	14	762	U
27	14	765	G
27	14	776	G
27	14	779	U
27	14	782	A
27	14	783	A
27	14	784	A
27	14	785	G
27	14	789	A
27	14	792	G
27	14	793	A
27	14	796	C
27	14	805	G
27	14	812	C
27	14	819	A
27	14	827	U
27	14	828	U
27	14	829	A
27	14	830	G
27	14	832	G
27	14	842	G
27	14	846	C
27	14	847	U
27	14	848	G
27	14	859	G
27	14	865	C
27	14	866	A
27	14	870	A
27	14	871	U
27	14	878	A
27	14	883	G
27	14	885	C
27	14	886	C
27	14	887	A

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Mol	Chain	Res	Type
27	14	888	C
27	14	889	C
27	14	890	A
27	14	894	C
27	14	896	A
27	14	897	C
27	14	899	A
27	14	900	A
27	14	901	A
27	14	904	C
27	14	905	U
27	14	907	U
27	14	910	A
27	14	911	A
27	14	914	C
27	14	915	C
27	14	917	A
27	14	919	G
27	14	931	G
27	14	932	G
27	14	938	G
27	14	941	A
27	14	945	A
27	14	946	G
27	14	958	U
27	14	959	A
27	14	961	C
27	14	971	C
27	14	974	G
27	14	982	C
27	14	983	A
27	14	986	C
27	14	990	A
27	14	991	C
27	14	996	A
27	14	1010	A
27	14	1011	G
27	14	1012	U
27	14	1013	C
27	14	1020	A
27	14	1022	G
27	14	1025	G

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Mol	Chain	Res	Type
27	14	1026	U
27	14	1027	A
27	14	1030	G
27	14	1032	A
27	14	1033	U
27	14	1037	G
27	14	1045	A
27	14	1047	G
27	14	1048	A
27	14	1050	A
27	14	1054	A
27	14	1056	G
27	14	1057	A
27	14	1059	G
27	14	1060	U
27	14	1061	U
27	14	1062	G
27	14	1080	A
27	14	1083	U
27	14	1086	A
27	14	1088	A
27	14	1089	G
27	14	1090	U
27	14	1105	U
27	14	1111	A
27	14	1112	G
27	14	1122	G
27	14	1129	A
27	14	1130	U
27	14	1131	G
27	14	1133	U
27	14	1135	C
27	14	1136	G
27	14	1139	G
27	14	1142	U
27	14	1142(A)	A
27	14	1143	A
27	14	1155	A
27	14	1159	U
27	14	1160	G
27	14	1173	G
27	14	1174	A

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Mol	Chain	Res	Type
27	14	1175	U
27	14	1176	G
27	14	1177	A
27	14	1178	C
27	14	1179	C
27	14	1180	C
27	14	1195	G
27	14	1198	U
27	14	1205	U
27	14	1206	G
27	14	1210	A
27	14	1211	U
27	14	1212	G
27	14	1220	A
27	14	1221	C
27	14	1225	C
27	14	1228	G
27	14	1236	G
27	14	1244	G
27	14	1247	A
27	14	1248	G
27	14	1250	G
27	14	1253	A
27	14	1255	U
27	14	1256	G
27	14	1257	C
27	14	1265	A
27	14	1269	A
27	14	1271	G
27	14	1272	A
27	14	1273	U
27	14	1280	G
27	14	1284	A
27	14	1287	A
27	14	1300	U
27	14	1301	A
27	14	1308	A
27	14	1309	G
27	14	1314	C
27	14	1317	A
27	14	1319	G
27	14	1321	A

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Mol	Chain	Res	Type
27	14	1329	U
27	14	1332	G
27	14	1341	U
27	14	1345	C
27	14	1352	U
27	14	1358	G
27	14	1359	A
27	14	1360	A
27	14	1365	A
27	14	1368	G
27	14	1370	C
27	14	1371	G
27	14	1379	A
27	14	1384	A
27	14	1385	G
27	14	1386	C
27	14	1388	G
27	14	1395	A
27	14	1407	C
27	14	1408	C
27	14	1416	G
27	14	1417	C
27	14	1421	G
27	14	1427	A
27	14	1428	C
27	14	1435	G
27	14	1437	C
27	14	1439	A
27	14	1444(A)	A
27	14	1445	C
27	14	1449	A
27	14	1449(A)	G
27	14	1451	C
27	14	1453	A
27	14	1458	C
27	14	1459	G
27	14	1460	A
27	14	1461	G
27	14	1467	C
27	14	1471	A
27	14	1475	G
27	14	1476	C

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Mol	Chain	Res	Type
27	14	1478	G
27	14	1482	U
27	14	1483	G
27	14	1485	G
27	14	1486	A
27	14	1488	G
27	14	1490	A
27	14	1493	C
27	14	1494	A
27	14	1495	A
27	14	1498	C
27	14	1499	C
27	14	1502	C
27	14	1503	U
27	14	1505	C
27	14	1506	C
27	14	1508	A
27	14	1509	C
27	14	1510	A
27	14	1513	C
27	14	1515	C
27	14	1522	G
27	14	1526	G
27	14	1528	A
27	14	1534	G
27	14	1535	U
27	14	1537	C
27	14	1538	G
27	14	1543	A
27	14	1544	C
27	14	1545	A
27	14	1554	A
27	14	1555	G
27	14	1558	A
27	14	1559	G
27	14	1569	A
27	14	1574	C
27	14	1578	U
27	14	1579	A
27	14	1581	G
27	14	1582	C
27	14	1585	C

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Mol	Chain	Res	Type
27	14	1586	A
27	14	1587	A
27	14	1588	C
27	14	1595	G
27	14	1598	C
27	14	1608	A
27	14	1609	A
27	14	1610	A
27	14	1616	A
27	14	1618	A
27	14	1628	G
27	14	1630(A)	C
27	14	1632	A
27	14	1639	U
27	14	1640	C
27	14	1647	G
27	14	1648	C
27	14	1653	G
27	14	1654	A
27	14	1663	C
27	14	1664	A
27	14	1671	U
27	14	1674	G
27	14	1675	C
27	14	1676	A
27	14	1679	U
27	14	1681	G
27	14	1686	C
27	14	1694	C
27	14	1696	G
27	14	1700	A
27	14	1701	A
27	14	1725	G
27	14	1726	G
27	14	1728	G
27	14	1729	A
27	14	1731	G
27	14	1735	C
27	14	1742	C
27	14	1756	G
27	14	1758	G
27	14	1762	A

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Mol	Chain	Res	Type
27	14	1763	G
27	14	1764	G
27	14	1767	C
27	14	1773	A
27	14	1780	A
27	14	1782	C
27	14	1783	A
27	14	1786	A
27	14	1788	C
27	14	1791	A
27	14	1800	C
27	14	1801	G
27	14	1816	G
27	14	1820	U
27	14	1826	G
27	14	1828	G
27	14	1829	A
27	14	1836	C
27	14	1839	G
27	14	1846	G
27	14	1847	A
27	14	1849	G
27	14	1858	G
27	14	1871	A
27	14	1872	A
27	14	1878	G
27	14	1882	C
27	14	1888	G
27	14	1889	A
27	14	1899	G
27	14	1900	A
27	14	1906	G
27	14	1913	A
27	14	1914	C
27	14	1916	A
27	14	1922	G
27	14	1929	G
27	14	1930	G
27	14	1931	U
27	14	1935	G
27	14	1936	A
27	14	1937	A

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Mol	Chain	Res	Type
27	14	1938	A
27	14	1943	U
27	14	1948	G
27	14	1955	U
27	14	1956	U
27	14	1962	5MC
27	14	1963	U
27	14	1967	C
27	14	1970	A
27	14	1971	A
27	14	1972	A
27	14	1982	C
27	14	1986	A
27	14	1993	U
27	14	1996	C
27	14	2016	U
27	14	2023	G
27	14	2027	G
27	14	2031	A
27	14	2032	G
27	14	2033	A
27	14	2043	C
27	14	2049	G
27	14	2053	G
27	14	2054	A
27	14	2055	C
27	14	2056	G
27	14	2059	A
27	14	2060	A
27	14	2061	G
27	14	2062	A
27	14	2063	C
27	14	2069	G
27	14	2071	A
27	14	2072	G
27	14	2074	U
27	14	2093	G
27	14	2096	U
27	14	2099	U
27	14	2108	C
27	14	2110	G
27	14	2111	C

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Mol	Chain	Res	Type
27	14	2113	U
27	14	2114	A
27	14	2115	G
27	14	2116	G
27	14	2117	A
27	14	2118	U
27	14	2119	A
27	14	2123	G
27	14	2125	G
27	14	2126	A
27	14	2127	G
27	14	2128	C
27	14	2131	G
27	14	2132	U
27	14	2133	G
27	14	2135	A
27	14	2136	C
27	14	2147	G
27	14	2149	G
27	14	2158	A
27	14	2159	G
27	14	2168	G
27	14	2169	A
27	14	2171	A
27	14	2172	U
27	14	2173	A
27	14	2174	C
27	14	2177	C
27	14	2188	C
27	14	2189	U
27	14	2190	G
27	14	2192	G
27	14	2198	A
27	14	2210	G
27	14	2211	G
27	14	2212	A
27	14	2215	G
27	14	2225	A
27	14	2226	C
27	14	2238	G
27	14	2239	G
27	14	2240	C

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Mol	Chain	Res	Type
27	14	2245	U
27	14	2246	G
27	14	2252	G
27	14	2275	C
27	14	2280	G
27	14	2283	C
27	14	2286	A
27	14	2287	A
27	14	2288	A
27	14	2289	G
27	14	2297	C
27	14	2304	G
27	14	2307	G
27	14	2308	G
27	14	2311	A
27	14	2312	U
27	14	2319	G
27	14	2320	A
27	14	2321	G
27	14	2324	C
27	14	2325	G
27	14	2326	C
27	14	2334	G
27	14	2343	C
27	14	2345	G
27	14	2346	A
27	14	2347	C
27	14	2349	G
27	14	2350	C
27	14	2354	G
27	14	2372	G
27	14	2377	A
27	14	2383	G
27	14	2385	C
27	14	2392	A
27	14	2400	G
27	14	2402	C
27	14	2403	C
27	14	2406	U
27	14	2411	A
27	14	2418	A
27	14	2422	A

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Mol	Chain	Res	Type
27	14	2423	U
27	14	2425	A
27	14	2426	A
27	14	2428	G
27	14	2429	G
27	14	2430	A
27	14	2431	U
27	14	2434	A
27	14	2435	A
27	14	2439	A
27	14	2440	C
27	14	2441	C
27	14	2444	G
27	14	2445	G
27	14	2447	G
27	14	2448	A
27	14	2450	A
27	14	2460	U
27	14	2469	A
27	14	2470	G
27	14	2474	C
27	14	2475	C
27	14	2476	A
27	14	2478	A
27	14	2482	G
27	14	2489	G
27	14	2497	A
27	14	2501	C
27	14	2502	G
27	14	2504	U
27	14	2505	G
27	14	2506	U
27	14	2507	C
27	14	2513	G
27	14	2518	A
27	14	2519	U
27	14	2520	C
27	14	2524	G
27	14	2530	A
27	14	2535	G
27	14	2542	A
27	14	2543	G

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Mol	Chain	Res	Type
27	14	2552	OMU
27	14	2554	U
27	14	2555	U
27	14	2556	C
27	14	2566	A
27	14	2567	G
27	14	2568	C
27	14	2569	G
27	14	2570	G
27	14	2572	A
27	14	2582	G
27	14	2585	U
27	14	2586	C
27	14	2602	A
27	14	2603	G
27	14	2609	U
27	14	2610	C
27	14	2611	U
27	14	2612	C
27	14	2615	U
27	14	2629	A
27	14	2630	G
27	14	2635	C
27	14	2645	G
27	14	2646	C
27	14	2654	A
27	14	2655	G
27	14	2659	G
27	14	2665	A
27	14	2673	G
27	14	2689	U
27	14	2690	C
27	14	2691	C
27	14	2702	U
27	14	2703	C
27	14	2707	G
27	14	2712	U
27	14	2712(A)	A
27	14	2713	A
27	14	2714	G
27	14	2718	G
27	14	2726	U

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Mol	Chain	Res	Type
27	14	2733	A
27	14	2736	G
27	14	2741	A
27	14	2744	G
27	14	2748	A
27	14	2750	A
27	14	2751	G
27	14	2752	C
27	14	2754	U
27	14	2757	A
27	14	2761	G
27	14	2762	G
27	14	2763	G
27	14	2765	A
27	14	2766	G
27	14	2770	G
27	14	2777	G
27	14	2778	A
27	14	2779	U
27	14	2790	A
27	14	2791	C
27	14	2794	C
27	14	2797	U
27	14	2808	U
27	14	2810	A
27	14	2818	G
27	14	2820	A
27	14	2821	A
27	14	2827	C
27	14	2833	G
27	14	2834	G
27	14	2835	A
27	14	2836	U
27	14	2860	A
27	14	2867	G
27	14	2872	G
27	14	2879	C
27	14	2880	C
27	14	2883	A
27	14	2895	U
27	14	2896	C
27	14	2897	U

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Mol	Chain	Res	Type
27	14	2902	C
28	1J	2	C
28	1J	3	C
28	1J	5	C
28	1J	7	G
28	1J	8	U
28	1J	12	C
28	1J	13	A
28	1J	15	A
28	1J	16	G
28	1J	22	U
28	1J	24	G
28	1J	25	A
28	1J	30	C
28	1J	35	U
28	1J	40	U
28	1J	41	U
28	1J	42	C
28	1J	44	G
28	1J	45	A
28	1J	47	C
28	1J	53	A
28	1J	58	A
28	1J	65	C
28	1J	67	G
28	1J	73	A
28	1J	75	G
28	1J	81	G
28	1J	86	G
28	1J	88	C
28	1J	89	G
28	1J	89(A)	A
28	1J	90	C
28	1J	99	A
28	1J	101	A
28	1J	102	G
28	1J	107	U
28	1J	109	G
28	1J	112	G
28	1J	117	G

All (262) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	31	G
1	13	50	A
1	13	60	A
1	13	89	U
1	13	119	A
1	13	189	U
1	13	190	G
1	13	197	A
1	13	250	A
1	13	266	G
1	13	328	C
1	13	366	C
1	13	372	C
1	13	412	A
1	13	428	G
1	13	429	U
1	13	481	G
1	13	484	G
1	13	485	G
1	13	496	A
1	13	509	A
1	13	530	G
1	13	532	A
1	13	533	A
1	13	560	U
1	13	701	C
1	13	703	G
1	13	748	C
1	13	792	A
1	13	812	C
1	13	913	A
1	13	991	U
1	13	992	U
1	13	1025	U
1	13	1027	C
1	13	1054	C
1	13	1094	G
1	13	1125	U
1	13	1127	G
1	13	1139	G
1	13	1145	C
1	13	1183	A

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Mol	Chain	Res	Type
1	13	1200	C
1	13	1211	U
1	13	1285	A
1	13	1300	G
1	13	1301	U
1	13	1302	U
1	13	1452	C
1	13	1503	A
23	2K	20	H2U
23	2K	45	U
24	3K	2	C
24	3K	18	G
24	3K	60	U
25	4K	44	U
25	4K	56	U
26	5K	20	H2U
26	5K	34	G
26	5K	44	G
26	5K	65	G
26	5K	73	A
27	1H	34	C
27	1H	69	G
27	1H	186	A
27	1H	189	A
27	1H	206	A
27	1H	218	A
27	1H	219	A
27	1H	400	G
27	1H	432	C
27	1H	529	A
27	1H	534	G
27	1H	538	G
27	1H	554	A
27	1H	579	U
27	1H	611	C
27	1H	671	C
27	1H	679	A
27	1H	699	G
27	1H	733	A
27	1H	812	A
27	1H	894	C
27	1H	906	U

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Mol	Chain	Res	Type
27	1H	928	G
27	1H	991	A
27	1H	1007	C
27	1H	1020	G
27	1H	1069	G
27	1H	1073	U
27	1H	1104	A
27	1H	1132	A
27	1H	1136	G
27	1H	1156	C
27	1H	1224	C
27	1H	1250	A
27	1H	1256	A
27	1H	1287	U
27	1H	1322	A
27	1H	1463	G
27	1H	1467	U
27	1H	1474	A
27	1H	1508	A
27	1H	1606	A
27	1H	1655	A
27	1H	1693	G
27	1H	1700	A
27	1H	1701	G
27	1H	1729	G
27	1H	1742	C
27	1H	1831	G
27	1H	1851	A
27	1H	1878	G
27	1H	1922	G
27	1H	1962	5MU
27	1H	2007	G
27	1H	2015	G
27	1H	2042	A
27	1H	2083	A
27	1H	2115	U
27	1H	2147	G
27	1H	2190	U
27	1H	2229	G
27	1H	2359	A
27	1H	2418	G
27	1H	2419	U

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Mol	Chain	Res	Type
27	1H	2439	A
27	1H	2452	A
27	1H	2460	G
27	1H	2481	G
27	1H	2494	G
27	1H	2531	A
27	1H	2579	A
27	1H	2694	C
27	1H	2725	U
27	1H	2765	G
27	1H	2770	U
27	1H	2804	A
27	1H	2843	U
28	16	66	A
1	1G	5	U
1	1G	64	G
1	1G	86	U
1	1G	115	G
1	1G	119	A
1	1G	130	A
1	1G	181	G
1	1G	201	C
1	1G	209	U
1	1G	250	A
1	1G	251	G
1	1G	279	A
1	1G	327	A
1	1G	328	C
1	1G	353	A
1	1G	412	A
1	1G	485	G
1	1G	509	A
1	1G	532	A
1	1G	560	U
1	1G	575	G
1	1G	687	A
1	1G	701	C
1	1G	703	G
1	1G	748	C
1	1G	872	A
1	1G	913	A
1	1G	960	U

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Mol	Chain	Res	Type
1	1G	974	A
1	1G	992	U
1	1G	1027	C
1	1G	1049	U
1	1G	1123	A
1	1G	1126	U
1	1G	1157	A
1	1G	1196	U
1	1G	1200	C
1	1G	1240	U
1	1G	1256	A
1	1G	1285	A
1	1G	1297	C
1	1G	1300	G
1	1G	1322	C
1	1G	1331	G
1	1G	1336	C
1	1G	1346	A
1	1G	1347	G
1	1G	1452	C
59	1L	10	G
24	3L	58	A
25	4L	53	U
25	4L	56	U
27	14	34	C
27	14	49	A
27	14	74	A
27	14	128	C
27	14	195	A
27	14	205	G
27	14	276	A
27	14	278	A
27	14	294	A
27	14	403	U
27	14	479	A
27	14	554	U
27	14	587	C
27	14	603	A
27	14	653	A
27	14	654(S)	G
27	14	764	A
27	14	846	C

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Mol	Chain	Res	Type
27	14	865	C
27	14	877	U
27	14	886	C
27	14	888	C
27	14	893	C
27	14	1085	A
27	14	1126	A
27	14	1142(A)	A
27	14	1171	G
27	14	1204	A
27	14	1210	A
27	14	1300	U
27	14	1301	A
27	14	1378	A
27	14	1427	A
27	14	1558	A
27	14	1608	A
27	14	1652	A
27	14	1653	G
27	14	1695	G
27	14	1762	A
27	14	1819	A
27	14	1915	5MU
27	14	1929	G
27	14	1930	G
27	14	1955	U
27	14	1992	G
27	14	2032	G
27	14	2110	G
27	14	2157	G
27	14	2191	G
27	14	2210	G
27	14	2211	G
27	14	2238	G
27	14	2402	C
27	14	2422	A
27	14	2439	A
27	14	2447	G
27	14	2481	G
27	14	2602	A
27	14	2689	U
27	14	2725	A

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Mol	Chain	Res	Type
27	14	2756	U
27	14	2776	A
27	14	2790	A
27	14	2859	G
27	14	2867	G
28	1J	11	C
28	1J	24	G
28	1J	66	A
28	1J	89	G

## 5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

92 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
60	5MU	2L	54	60	19,22,23	3.81	5 (26%)	28,32,35	3.10	10 (35%)
22	MIA	1K	37	22	24,31,32	2.23	3 (12%)	26,44,47	3.01	8 (30%)
23	H2U	2K	16	23	18,21,22	1.88	4 (22%)	21,30,33	1.90	5 (23%)
24	PSU	3K	32	24	18,21,22	1.03	1 (5%)	22,30,33	1.61	4 (18%)
1	5MC	13	1407	1	18,22,23	3.34	7 (38%)	26,32,35	1.12	2 (7%)
27	5MU	14	1939	27,61	19,22,23	3.79	5 (26%)	28,32,35	3.43	9 (32%)
27	PSU	1H	1940	27	18,21,22	0.93	1 (5%)	22,30,33	1.58	4 (18%)
1	UR3	1G	1498	1	19,22,23	2.64	6 (31%)	26,32,35	1.72	4 (15%)
59	MIA	1L	37	59	24,31,32	2.29	3 (12%)	26,44,47	3.02	9 (34%)
24	MIA	3K	37	24,25	24,31,32	2.51	4 (16%)	26,44,47	3.26	11 (42%)
27	PSU	1H	1934	27	18,21,22	1.11	2 (11%)	22,30,33	1.77	6 (27%)
27	OMU	1H	2565	27,62	19,22,23	2.11	6 (31%)	26,31,34	2.36	9 (34%)
1	7MG	1G	527	61,1	22,26,27	3.06	6 (27%)	29,39,42	2.86	10 (34%)
27	5MU	14	1915	27	19,22,23	3.95	5 (26%)	28,32,35	3.43	9 (32%)
59	5MU	1L	54	59	19,22,23	3.86	5 (26%)	28,32,35	3.21	8 (28%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
1	5MC	13	967	1	18,22,23	3.70	7 (38%)	26,32,35	1.09	1 (3%)
1	5MC	1G	1400	1	18,22,23	3.78	7 (38%)	26,32,35	1.47	5 (19%)
26	5MU	5K	54	26	19,22,23	3.98	5 (26%)	28,32,35	3.12	9 (32%)
27	PSU	14	1911	27	18,21,22	1.10	1 (5%)	22,30,33	1.51	4 (18%)
26	H2U	5K	16	26	18,21,22	2.15	4 (22%)	21,30,33	1.97	5 (23%)
27	PSU	14	2605	27	18,21,22	1.32	3 (16%)	22,30,33	2.05	7 (31%)
27	5MU	1H	1962	27,61	19,22,23	3.37	5 (26%)	28,32,35	4.32	9 (32%)
1	2MG	13	1207	61,1	18,26,27	2.46	7 (38%)	16,38,41	1.69	3 (18%)
1	MA6	13	1518	1	18,26,27	0.93	0	19,38,41	2.68	2 (10%)
1	MA6	13	1519	1	18,26,27	0.94	1 (5%)	19,38,41	3.16	3 (15%)
1	5MC	13	1400	1	18,22,23	3.62	7 (38%)	26,32,35	1.11	2 (7%)
22	4SU	1K	8	22	18,21,22	1.77	3 (16%)	26,30,33	2.30	6 (23%)
26	4SU	5K	8	26	18,21,22	1.73	3 (16%)	26,30,33	2.42	5 (19%)
60	H2U	2L	16	60	18,21,22	2.10	4 (22%)	21,30,33	1.94	5 (23%)
22	PSU	1K	55	22	18,21,22	1.13	1 (5%)	22,30,33	1.84	6 (27%)
23	PSU	2K	39	23	18,21,22	1.32	2 (11%)	22,30,33	1.88	5 (22%)
26	PSU	5K	55	26	18,21,22	1.13	1 (5%)	22,30,33	1.61	4 (18%)
27	OMG	1H	2264	27,61,23	18,26,27	5.00	8 (44%)	19,38,41	3.70	8 (42%)
1	M2G	1G	966	1	20,27,28	3.80	7 (35%)	22,40,43	1.30	4 (18%)
22	7MG	1K	46	22	22,26,27	3.09	6 (27%)	29,39,42	2.81	10 (34%)
23	4SU	2K	8	23	18,21,22	1.74	4 (22%)	26,30,33	2.44	6 (23%)
24	PSU	3L	32	24	18,21,22	1.14	1 (5%)	22,30,33	1.73	4 (18%)
27	OMC	1H	1943	27,61	19,22,23	1.73	3 (15%)	26,31,34	1.31	4 (15%)
1	4OC	1G	1402	62,1	20,23,24	2.62	7 (35%)	26,32,35	1.58	4 (15%)
59	PSU	1L	32	59	18,21,22	0.99	1 (5%)	22,30,33	1.43	3 (13%)
27	5MC	1H	1965	27	18,22,23	3.32	7 (38%)	26,32,35	1.47	5 (19%)
1	PSU	13	516	62,1	18,21,22	0.91	1 (5%)	22,30,33	1.55	4 (18%)
27	5MC	1H	1985	27,61	18,22,23	3.68	6 (33%)	26,32,35	1.44	3 (11%)
27	5MC	14	1942	27	18,22,23	3.76	7 (38%)	26,32,35	1.32	5 (19%)
1	5MC	1G	1407	1	18,22,23	3.42	7 (38%)	26,32,35	1.21	3 (11%)
23	3AU	2K	47	23	24,28,29	2.94	7 (29%)	33,40,43	1.71	8 (24%)
12	0TD	3A	89	12	7,9,10	1.40	1 (14%)	6,11,13	1.74	2 (33%)
26	PSU	5K	32	26	18,21,22	1.12	1 (5%)	22,30,33	1.68	3 (13%)
27	5MC	14	1962	27,61	18,22,23	3.42	7 (38%)	26,32,35	1.29	3 (11%)
1	4OC	13	1402	62,1	20,23,24	2.86	8 (40%)	26,32,35	1.45	4 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
12	0TD	3I	89	12	7,9,10	1.32	0	6,11,13	3.46	3 (50%)
1	UR3	13	1498	1	19,22,23	2.72	6 (31%)	26,32,35	1.93	6 (23%)
22	5MU	1K	54	22	19,22,23	3.86	5 (26%)	28,32,35	3.20	9 (32%)
27	5MU	1H	1938	27	19,22,23	4.22	5 (26%)	28,32,35	3.87	10 (35%)
60	4SU	2L	8	60	18,21,22	1.77	3 (16%)	26,30,33	2.20	6 (23%)
1	7MG	13	527	61,1	22,26,27	2.99	8 (36%)	29,39,42	2.75	9 (31%)
1	5MC	13	1404	1	18,22,23	3.19	7 (38%)	26,32,35	1.22	1 (3%)
22	PSU	1K	32	22,61	18,21,22	1.08	1 (5%)	22,30,33	1.22	2 (9%)
1	5MC	1G	967	1	18,22,23	3.57	7 (38%)	26,32,35	1.16	2 (7%)
1	PSU	1G	516	62,1	18,21,22	1.16	1 (5%)	22,30,33	1.45	2 (9%)
23	H2U	2K	20	23	18,21,22	2.11	4 (22%)	21,30,33	1.98	4 (19%)
60	3AU	2L	47	60	24,28,29	2.80	8 (33%)	33,40,43	1.90	8 (24%)
27	2MA	1H	2516	27,61	19,25,26	2.67	6 (31%)	21,37,40	2.22	6 (28%)
60	PSU	2L	55	60	18,21,22	1.33	2 (11%)	22,30,33	1.69	4 (18%)
26	MIA	5K	37	26	24,31,32	2.56	4 (16%)	26,44,47	3.34	11 (42%)
1	2MG	1G	1207	1	18,26,27	2.59	7 (38%)	16,38,41	1.33	3 (18%)
22	PSU	1K	39	22	18,21,22	1.04	1 (5%)	22,30,33	2.00	4 (18%)
1	MA6	1G	1518	1	18,26,27	1.12	2 (11%)	19,38,41	2.49	2 (10%)
27	2MA	14	2503	27,61,62	19,25,26	2.78	4 (21%)	21,37,40	1.81	3 (14%)
59	PSU	1L	39	59	18,21,22	1.13	3 (16%)	22,30,33	2.02	7 (31%)
1	MA6	1G	1519	1	18,26,27	1.05	2 (11%)	19,38,41	2.80	2 (10%)
23	5MU	2K	54	23	19,22,23	3.74	5 (26%)	28,32,35	3.26	7 (25%)
26	PSU	5K	39	26	18,21,22	1.20	1 (5%)	22,30,33	1.75	5 (22%)
23	PSU	2K	32	23	18,21,22	1.07	2 (11%)	22,30,33	1.84	4 (18%)
27	OMU	14	2552	27,62	19,22,23	2.43	6 (31%)	26,31,34	1.91	6 (23%)
26	H2U	5K	20	26,28	18,21,22	2.32	4 (22%)	21,30,33	1.88	5 (23%)
60	PSU	2L	32	60	18,21,22	1.02	1 (5%)	22,30,33	2.00	5 (22%)
23	7MG	2K	46	23	22,26,27	3.02	6 (27%)	29,39,42	2.76	10 (34%)
60	PSU	2L	39	60	18,21,22	1.16	1 (5%)	22,30,33	1.65	4 (18%)
1	5MC	1G	1404	1	18,22,23	3.44	7 (38%)	26,32,35	1.51	3 (11%)
27	PSU	14	1917	27	18,21,22	1.11	2 (11%)	22,30,33	1.65	5 (22%)
27	OMG	14	2251	27,60,61	18,26,27	5.21	8 (44%)	19,38,41	3.84	6 (31%)
23	MIA	2K	37	23	24,31,32	2.37	4 (16%)	26,44,47	2.56	10 (38%)
23	PSU	2K	55	23	18,21,22	1.24	1 (5%)	22,30,33	1.64	3 (13%)
24	MIA	3L	37	24	24,31,32	2.55	4 (16%)	26,44,47	3.40	11 (42%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
24	PSU	3K	39	24	18,21,22	1.15	1 (5%)	22,30,33	1.61	4 (18%)
60	MIA	2L	37	60	24,31,32	2.30	3 (12%)	26,44,47	2.80	8 (30%)
60	7MG	2L	46	60	22,26,27	3.24	5 (22%)	29,39,42	2.76	11 (37%)
24	PSU	3L	39	24	18,21,22	1.15	1 (5%)	22,30,33	1.61	3 (13%)
27	OMC	14	1920	27	19,22,23	1.75	3 (15%)	26,31,34	1.08	1 (3%)
1	M2G	13	966	1	20,27,28	3.39	7 (35%)	22,40,43	1.53	6 (27%)
27	PSU	1H	2618	27	18,21,22	1.29	3 (16%)	22,30,33	1.88	6 (27%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	5MU	2L	54	60	-	2/7/25/26	0/2/2/2
22	MIA	1K	37	22	-	4/11/33/34	0/3/3/3
23	H2U	2K	16	23	-	0/7/38/39	0/2/2/2
24	PSU	3K	32	24	-	2/7/25/26	0/2/2/2
1	5MC	13	1407	1	-	0/7/25/26	0/2/2/2
27	5MU	14	1939	27,61	-	0/7/25/26	0/2/2/2
27	PSU	1H	1940	27	-	0/7/25/26	0/2/2/2
1	UR3	1G	1498	1	-	0/7/25/26	0/2/2/2
59	MIA	1L	37	59	-	2/11/33/34	0/3/3/3
24	MIA	3K	37	24,25	-	8/11/33/34	0/3/3/3
27	PSU	1H	1934	27	-	0/7/25/26	0/2/2/2
27	OMU	1H	2565	27,62	-	0/9/27/28	0/2/2/2
1	7MG	1G	527	61,1	-	2/7/37/38	0/3/3/3
27	5MU	14	1915	27	-	0/7/25/26	0/2/2/2
59	5MU	1L	54	59	-	0/7/25/26	0/2/2/2
1	5MC	13	967	1	-	0/7/25/26	0/2/2/2
1	5MC	1G	1400	1	-	2/7/25/26	0/2/2/2
26	5MU	5K	54	26	-	2/7/25/26	0/2/2/2
27	PSU	14	1911	27	-	0/7/25/26	0/2/2/2
26	H2U	5K	16	26	-	3/7/38/39	0/2/2/2
27	PSU	14	2605	27	-	0/7/25/26	0/2/2/2
27	5MU	1H	1962	27,61	-	2/7/25/26	0/2/2/2
1	2MG	13	1207	61,1	-	0/5/27/28	0/3/3/3
1	MA6	13	1518	1	-	0/7/29/30	0/3/3/3
1	MA6	13	1519	1	-	3/7/29/30	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	5MC	13	1400	1	-	0/7/25/26	0/2/2/2
22	4SU	1K	8	22	-	1/7/25/26	0/2/2/2
26	4SU	5K	8	26	-	2/7/25/26	0/2/2/2
60	H2U	2L	16	60	-	0/7/38/39	0/2/2/2
22	PSU	1K	55	22	-	4/7/25/26	0/2/2/2
23	PSU	2K	39	23	-	0/7/25/26	0/2/2/2
26	PSU	5K	55	26	-	2/7/25/26	0/2/2/2
27	OMG	1H	2264	27,61,23	-	0/5/27/28	0/3/3/3
1	M2G	1G	966	1	-	0/7/29/30	0/3/3/3
22	7MG	1K	46	22	-	2/7/37/38	0/3/3/3
23	4SU	2K	8	23	-	0/7/25/26	0/2/2/2
24	PSU	3L	32	24	-	6/7/25/26	0/2/2/2
27	OMC	1H	1943	27,61	-	0/9/27/28	0/2/2/2
1	4OC	1G	1402	62,1	-	2/9/29/30	0/2/2/2
59	PSU	1L	32	59	-	0/7/25/26	0/2/2/2
27	5MC	1H	1965	27	-	0/7/25/26	0/2/2/2
1	PSU	13	516	62,1	-	0/7/25/26	0/2/2/2
27	5MC	1H	1985	27,61	-	0/7/25/26	0/2/2/2
27	5MC	14	1942	27	-	0/7/25/26	0/2/2/2
1	5MC	1G	1407	1	-	0/7/25/26	0/2/2/2
23	3AU	2K	47	23	-	7/16/34/35	0/2/2/2
12	0TD	3A	89	12	-	4/7/12/14	-
26	PSU	5K	32	26	-	0/7/25/26	0/2/2/2
27	5MC	14	1962	27,61	-	2/7/25/26	0/2/2/2
1	4OC	13	1402	62,1	-	2/9/29/30	0/2/2/2
12	0TD	3I	89	12	-	3/7/12/14	-
1	UR3	13	1498	1	-	2/7/25/26	0/2/2/2
22	5MU	1K	54	22	-	0/7/25/26	0/2/2/2
27	5MU	1H	1938	27	-	3/7/25/26	0/2/2/2
60	4SU	2L	8	60	-	2/7/25/26	0/2/2/2
1	7MG	13	527	61,1	-	2/7/37/38	0/3/3/3
1	5MC	13	1404	1	-	0/7/25/26	0/2/2/2
22	PSU	1K	32	22,61	-	0/7/25/26	0/2/2/2
1	5MC	1G	967	1	-	0/7/25/26	0/2/2/2
1	PSU	1G	516	62,1	-	0/7/25/26	0/2/2/2
23	H2U	2K	20	23	-	5/7/38/39	0/2/2/2
60	3AU	2L	47	60	-	7/16/34/35	0/2/2/2
27	2MA	1H	2516	27,61	-	1/3/25/26	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	PSU	2L	55	60	-	0/7/25/26	0/2/2/2
26	MIA	5K	37	26	-	6/11/33/34	0/3/3/3
1	2MG	1G	1207	1	-	2/5/27/28	0/3/3/3
22	PSU	1K	39	22	-	0/7/25/26	0/2/2/2
1	MA6	1G	1518	1	-	5/7/29/30	0/3/3/3
27	2MA	14	2503	27,61,62	-	1/3/25/26	0/3/3/3
59	PSU	1L	39	59	-	0/7/25/26	0/2/2/2
1	MA6	1G	1519	1	-	2/7/29/30	0/3/3/3
23	5MU	2K	54	23	-	0/7/25/26	0/2/2/2
26	PSU	5K	39	26	-	1/7/25/26	0/2/2/2
23	PSU	2K	32	23	-	0/7/25/26	0/2/2/2
27	OMU	14	2552	27,62	-	4/9/27/28	0/2/2/2
26	H2U	5K	20	26,28	-	5/7/38/39	0/2/2/2
60	PSU	2L	32	60	-	0/7/25/26	0/2/2/2
23	7MG	2K	46	23	-	0/7/37/38	0/3/3/3
60	PSU	2L	39	60	-	0/7/25/26	0/2/2/2
1	5MC	1G	1404	1	-	0/7/25/26	0/2/2/2
27	PSU	14	1917	27	-	0/7/25/26	0/2/2/2
27	OMG	14	2251	27,60,61	-	0/5/27/28	0/3/3/3
23	MIA	2K	37	23	-	3/11/33/34	0/3/3/3
23	PSU	2K	55	23	-	2/7/25/26	0/2/2/2
24	MIA	3L	37	24	-	4/11/33/34	0/3/3/3
24	PSU	3K	39	24	-	0/7/25/26	0/2/2/2
60	MIA	2L	37	60	-	4/11/33/34	0/3/3/3
60	7MG	2L	46	60	-	2/7/37/38	0/3/3/3
24	PSU	3L	39	24	-	0/7/25/26	0/2/2/2
27	OMC	14	1920	27	-	2/9/27/28	0/2/2/2
1	M2G	13	966	1	-	0/7/29/30	0/3/3/3
27	PSU	1H	2618	27	-	0/7/25/26	0/2/2/2

All (374) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	14	2251	OMG	C8-N7	-14.81	1.09	1.35
27	1H	1938	5MU	C2-N1	14.31	1.61	1.38
27	1H	2264	OMG	C8-N7	-13.83	1.11	1.35
26	5K	54	5MU	C2-N1	12.92	1.59	1.38
27	14	1915	5MU	C2-N1	12.72	1.58	1.38
1	1G	966	M2G	C2-N3	12.57	1.46	1.30
60	2L	54	5MU	C2-N1	12.49	1.58	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	1L	54	5MU	C2-N1	12.33	1.58	1.38
22	1K	54	5MU	C2-N1	12.21	1.58	1.38
27	14	1939	5MU	C2-N1	12.21	1.58	1.38
23	2K	54	5MU	C2-N1	12.19	1.58	1.38
1	13	966	M2G	C2-N3	10.81	1.43	1.30
27	1H	1962	5MU	C2-N1	10.49	1.55	1.38
27	14	2251	OMG	C6-N1	-9.78	1.23	1.37
1	13	1400	5MC	C6-C5	9.34	1.49	1.34
27	14	1942	5MC	C6-C5	9.21	1.49	1.34
27	1H	2264	OMG	C6-N1	-9.09	1.24	1.37
60	2L	46	7MG	C5-N7	9.09	1.46	1.35
1	13	967	5MC	C6-C5	8.99	1.49	1.34
27	14	2251	OMG	C4-N3	8.92	1.59	1.37
22	1K	46	7MG	C5-N7	8.90	1.45	1.35
23	2K	37	MIA	C13-C14	8.88	1.57	1.32
1	1G	1400	5MC	C6-C5	8.83	1.49	1.34
60	2L	46	7MG	C4-N9	-8.80	1.27	1.37
24	3L	37	MIA	C13-C14	8.80	1.57	1.32
27	1H	2264	OMG	C4-N3	8.76	1.58	1.37
26	5K	37	MIA	C13-C14	8.72	1.57	1.32
24	3K	37	MIA	C13-C14	8.71	1.57	1.32
1	1G	967	5MC	C6-C5	8.63	1.48	1.34
1	13	1407	5MC	C6-C5	8.57	1.48	1.34
60	2L	37	MIA	C13-C14	8.53	1.56	1.32
1	1G	1404	5MC	C6-C5	8.53	1.48	1.34
22	1K	37	MIA	C13-C14	8.53	1.56	1.32
59	1L	37	MIA	C13-C14	8.52	1.56	1.32
27	1H	1985	5MC	C6-C5	8.35	1.48	1.34
23	2K	47	3AU	C2-N1	8.34	1.50	1.38
60	2L	47	3AU	C2-N1	8.28	1.50	1.38
1	1G	1407	5MC	C6-C5	8.22	1.48	1.34
1	1G	527	7MG	C5-N7	8.21	1.45	1.35
23	2K	46	7MG	C5-N7	8.13	1.45	1.35
27	14	1962	5MC	C6-C5	8.04	1.47	1.34
1	13	1404	5MC	C6-C5	8.03	1.47	1.34
27	1H	1965	5MC	C6-C5	7.90	1.47	1.34
23	2K	46	7MG	C4-N9	-7.76	1.28	1.37
1	1G	1400	5MC	C4-N3	7.75	1.47	1.34
1	1G	527	7MG	C4-N9	-7.65	1.28	1.37
22	1K	46	7MG	C4-N9	-7.55	1.28	1.37
27	1H	2264	OMG	C5-C4	7.45	1.62	1.43
26	5K	20	H2U	C2-N1	7.39	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	13	967	5MC	C4-N3	7.38	1.46	1.34
1	13	527	7MG	C5-N7	7.38	1.44	1.35
27	1H	1985	5MC	C4-N3	7.28	1.46	1.34
1	13	1498	UR3	C2-N1	7.28	1.49	1.38
27	14	2503	2MA	C4-N3	7.25	1.47	1.35
1	13	527	7MG	C4-N9	-7.22	1.29	1.37
1	13	1400	5MC	C4-N3	7.15	1.46	1.34
1	1G	966	M2G	C2-N2	7.13	1.48	1.35
1	1G	967	5MC	C4-N3	7.07	1.46	1.34
27	1H	1985	5MC	C2-N3	7.07	1.50	1.36
27	14	1942	5MC	C4-N3	6.93	1.45	1.34
27	14	1939	5MU	C4-N3	-6.92	1.26	1.38
27	14	1915	5MU	C4-N3	-6.87	1.26	1.38
23	2K	47	3AU	C2-N3	6.82	1.50	1.38
27	14	2251	OMG	C5-C4	6.70	1.60	1.43
27	1H	1938	5MU	C4-N3	-6.70	1.26	1.38
27	14	1942	5MC	C2-N3	6.67	1.49	1.36
1	1G	1400	5MC	C2-N3	6.63	1.49	1.36
27	1H	1965	5MC	C4-N3	6.62	1.45	1.34
27	1H	2516	2MA	C4-N3	6.61	1.46	1.35
1	13	967	5MC	C2-N3	6.54	1.49	1.36
1	13	1407	5MC	C2-N3	6.50	1.49	1.36
1	1G	1498	UR3	C2-N1	6.47	1.47	1.38
60	2L	54	5MU	C4-N3	-6.47	1.26	1.38
27	1H	1962	5MU	C4-N3	-6.47	1.26	1.38
23	2K	20	H2U	C2-N1	6.47	1.44	1.35
23	2K	47	3AU	C6-C5	6.46	1.50	1.35
27	14	1962	5MC	C4-N3	6.38	1.44	1.34
1	1G	1407	5MC	C4-N3	6.38	1.44	1.34
26	5K	16	H2U	C2-N1	6.35	1.44	1.35
1	1G	1404	5MC	C4-N3	6.30	1.44	1.34
22	1K	54	5MU	C4-N3	-6.30	1.27	1.38
59	1L	54	5MU	C4-N3	-6.28	1.27	1.38
1	1G	1207	2MG	C2-N2	6.22	1.47	1.33
1	13	966	M2G	C2-N2	6.21	1.47	1.35
1	13	1498	UR3	C6-C5	6.20	1.49	1.35
27	1H	1938	5MU	C6-N1	6.20	1.48	1.38
26	5K	54	5MU	C4-N3	-6.17	1.27	1.38
1	1G	967	5MC	C2-N3	6.16	1.48	1.36
60	2L	47	3AU	C6-C5	6.13	1.49	1.35
1	1G	1498	UR3	C6-C5	6.06	1.49	1.35
26	5K	37	MIA	C6-N6	6.01	1.45	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	2K	46	7MG	C4-N3	5.99	1.48	1.34
23	2K	54	5MU	C4-N3	-5.96	1.27	1.38
1	13	1402	4OC	C6-C5	5.95	1.48	1.35
26	5K	54	5MU	C2-N3	5.94	1.48	1.38
60	2L	47	3AU	C2-N3	5.90	1.49	1.38
1	1G	1404	5MC	C2-N3	5.89	1.48	1.36
1	1G	1407	5MC	C2-N3	5.84	1.48	1.36
1	13	527	7MG	C4-N3	5.84	1.48	1.34
1	13	1402	4OC	C4-N3	5.83	1.42	1.32
24	3K	37	MIA	C6-N6	5.81	1.45	1.34
26	5K	54	5MU	C6-N1	5.81	1.48	1.38
22	1K	54	5MU	C6-N1	5.81	1.48	1.38
1	13	1400	5MC	C2-N3	5.80	1.48	1.36
24	3L	37	MIA	C6-N6	5.79	1.45	1.34
22	1K	46	7MG	C4-N3	5.78	1.48	1.34
1	1G	527	7MG	C4-N3	5.74	1.47	1.34
27	1H	1965	5MC	C2-N3	5.72	1.48	1.36
27	1H	2516	2MA	C2-N1	5.71	1.44	1.34
59	1L	54	5MU	C6-N1	5.70	1.47	1.38
59	1L	37	MIA	C6-N6	5.70	1.45	1.34
60	2L	37	MIA	C6-N6	5.70	1.45	1.34
1	13	1407	5MC	C4-N3	5.68	1.43	1.34
59	1L	54	5MU	C2-N3	5.67	1.48	1.38
27	14	2552	OMU	C2-N1	5.66	1.47	1.38
22	1K	54	5MU	C2-N3	5.64	1.48	1.38
1	13	1207	2MG	C2-N2	5.56	1.45	1.33
60	2L	46	7MG	C4-N3	5.53	1.47	1.34
60	2L	16	H2U	C2-N1	5.52	1.43	1.35
23	2K	54	5MU	C2-N3	5.51	1.47	1.38
27	14	1915	5MU	C6-N1	5.49	1.47	1.38
60	2L	54	5MU	C2-N3	5.48	1.47	1.38
1	1G	1402	4OC	C4-N3	5.48	1.42	1.32
1	1G	1402	4OC	C6-C5	5.42	1.47	1.35
27	14	1962	5MC	C2-N3	5.42	1.47	1.36
1	1G	966	M2G	C4-N3	5.40	1.50	1.37
23	2K	54	5MU	C6-N1	5.38	1.47	1.38
1	13	1404	5MC	C2-N3	5.35	1.47	1.36
1	13	1404	5MC	C4-N3	5.33	1.43	1.34
27	14	2503	2MA	C2-N1	5.31	1.43	1.34
27	14	1915	5MU	C2-N3	5.29	1.47	1.38
27	1H	1938	5MU	C2-N3	5.28	1.47	1.38
24	3L	37	MIA	C2-S10	5.26	1.80	1.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	14	1942	5MC	C2-N1	5.25	1.51	1.40
23	2K	16	H2U	C2-N1	5.24	1.43	1.35
24	3K	37	MIA	C2-S10	5.19	1.80	1.75
23	2K	37	MIA	C6-N6	5.19	1.44	1.34
60	2L	8	4SU	C5-C4	5.18	1.49	1.42
27	14	1939	5MU	C6-N1	5.15	1.46	1.38
1	13	1402	4OC	C2-N3	5.15	1.46	1.36
1	13	1400	5MC	C4-N4	5.12	1.47	1.34
27	14	2552	OMU	C2-N3	5.11	1.47	1.38
26	5K	37	MIA	C2-S10	5.10	1.80	1.75
1	13	967	5MC	C4-N4	5.09	1.47	1.34
22	1K	8	4SU	C5-C4	5.08	1.49	1.42
1	1G	1402	4OC	C2-N3	5.06	1.46	1.36
27	14	1939	5MU	C2-N3	5.06	1.47	1.38
60	2L	54	5MU	C6-N1	5.02	1.46	1.38
27	1H	2516	2MA	C6-N1	5.01	1.42	1.33
27	14	2503	2MA	C2-N3	5.00	1.42	1.34
27	1H	1985	5MC	C2-N1	4.99	1.50	1.40
1	1G	1400	5MC	C4-N4	4.88	1.46	1.34
26	5K	8	4SU	C5-C4	4.88	1.48	1.42
22	1K	37	MIA	C6-N6	4.88	1.43	1.34
1	1G	1407	5MC	C4-N4	4.87	1.46	1.34
27	1H	1962	5MU	C6-N1	4.87	1.46	1.38
1	1G	967	5MC	C4-N4	4.83	1.46	1.34
22	1K	54	5MU	C4-C5	4.78	1.52	1.44
1	13	1404	5MC	C4-N4	4.76	1.46	1.34
1	13	966	M2G	C4-N3	4.75	1.48	1.37
23	2K	8	4SU	C5-C4	4.75	1.48	1.42
27	14	1962	5MC	C4-N4	4.75	1.46	1.34
27	1H	1962	5MU	C2-N3	4.72	1.46	1.38
27	14	1942	5MC	C4-N4	4.68	1.46	1.34
26	5K	54	5MU	C4-C5	4.67	1.52	1.44
27	14	1915	5MU	C4-C5	4.67	1.52	1.44
1	1G	1207	2MG	C2-N1	4.66	1.44	1.36
1	1G	1207	2MG	C4-N3	4.66	1.48	1.37
1	1G	527	7MG	C5-C4	-4.63	1.22	1.38
1	13	1207	2MG	C4-N3	4.62	1.48	1.37
27	1H	1965	5MC	C4-N4	4.62	1.46	1.34
1	1G	1404	5MC	C4-N4	4.61	1.46	1.34
1	1G	1498	UR3	C2-N3	4.61	1.47	1.39
59	1L	54	5MU	C4-C5	4.59	1.52	1.44
27	1H	2565	OMU	C2-N1	4.53	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	1400	5MC	C2-N1	4.52	1.49	1.40
27	1H	1985	5MC	C6-N1	4.46	1.45	1.38
60	2L	16	H2U	C2-N3	4.46	1.45	1.38
27	14	2251	OMG	C5-C6	-4.46	1.38	1.47
60	2L	46	7MG	C5-C4	-4.42	1.23	1.38
27	14	2503	2MA	C6-N1	4.41	1.41	1.33
23	2K	54	5MU	C4-C5	4.40	1.52	1.44
22	1K	46	7MG	C5-C4	-4.37	1.23	1.38
1	1G	1400	5MC	C6-N1	4.33	1.45	1.38
1	13	1402	4OC	O2-C2	-4.32	1.15	1.23
1	13	1498	UR3	C2-N3	4.31	1.47	1.39
23	2K	46	7MG	C5-C4	-4.31	1.23	1.38
1	1G	967	5MC	C6-N1	4.30	1.45	1.38
27	1H	1985	5MC	C4-N4	4.27	1.45	1.34
27	14	1942	5MC	C6-N1	4.27	1.45	1.38
27	14	2552	OMU	C6-C5	4.26	1.44	1.35
23	2K	47	3AU	C4-N3	4.24	1.47	1.40
26	5K	20	H2U	C2-N3	4.23	1.45	1.38
1	1G	1402	4OC	C2-N1	4.23	1.49	1.40
60	2L	55	PSU	C6-C5	4.23	1.40	1.35
1	13	527	7MG	C5-C4	-4.22	1.24	1.38
1	13	967	5MC	C6-N1	4.22	1.45	1.38
27	14	1939	5MU	C4-C5	4.22	1.51	1.44
26	5K	39	PSU	C6-C5	4.21	1.40	1.35
1	1G	966	M2G	C2-N1	4.20	1.47	1.36
60	2L	16	H2U	C4-N3	4.18	1.44	1.37
27	14	1962	5MC	O2-C2	-4.16	1.16	1.23
1	13	1407	5MC	C4-N4	4.15	1.44	1.34
27	1H	1943	OMC	C2-N3	4.14	1.44	1.36
27	1H	1943	OMC	C4-N4	4.12	1.43	1.33
27	14	1920	OMC	C4-N4	4.12	1.43	1.33
1	13	1400	5MC	C6-N1	4.10	1.45	1.38
27	14	1920	OMC	C2-N3	4.10	1.44	1.36
26	5K	16	H2U	C2-N3	4.09	1.45	1.38
1	13	1207	2MG	C2-N1	4.06	1.43	1.36
27	14	1962	5MC	C2-N1	4.05	1.48	1.40
24	3K	39	PSU	C6-C5	4.02	1.40	1.35
27	1H	1965	5MC	C2-N1	4.01	1.48	1.40
60	2L	8	4SU	C2-N1	4.01	1.44	1.38
60	2L	39	PSU	C6-C5	4.00	1.40	1.35
24	3L	39	PSU	C6-C5	4.00	1.40	1.35
23	2K	8	4SU	C2-N1	3.97	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	2264	OMG	C2-N2	3.97	1.43	1.34
1	13	1402	4OC	C5-C4	3.95	1.49	1.40
60	2L	54	5MU	C4-C5	3.93	1.51	1.44
1	1G	1404	5MC	C2-N1	3.93	1.48	1.40
1	1G	1407	5MC	C6-N1	3.92	1.44	1.38
26	5K	16	H2U	C4-N3	3.91	1.44	1.37
22	1K	55	PSU	C6-C5	3.90	1.39	1.35
1	13	966	M2G	C2-N1	3.90	1.46	1.36
23	2K	39	PSU	C6-C5	3.90	1.39	1.35
1	1G	516	PSU	C6-C5	3.89	1.39	1.35
23	2K	20	H2U	C2-N3	3.89	1.44	1.38
26	5K	55	PSU	C6-C5	3.88	1.39	1.35
27	14	1920	OMC	C5-C4	3.86	1.51	1.42
26	5K	8	4SU	C2-N1	3.85	1.44	1.38
1	1G	1407	5MC	O2-C2	-3.85	1.16	1.23
27	14	1962	5MC	C6-N1	3.84	1.44	1.38
27	14	1911	PSU	C6-C5	3.83	1.39	1.35
23	2K	16	H2U	C2-N3	3.82	1.44	1.38
1	13	1404	5MC	C6-N1	3.79	1.44	1.38
23	2K	55	PSU	C6-C5	3.79	1.39	1.35
60	2L	47	3AU	C4-N3	3.78	1.46	1.40
27	1H	2565	OMU	O2-C2	-3.72	1.16	1.23
26	5K	32	PSU	C6-C5	3.70	1.39	1.35
1	1G	1404	5MC	C6-N1	3.70	1.44	1.38
1	1G	966	M2G	C5-C6	3.69	1.54	1.47
27	1H	2565	OMU	C2-N3	3.66	1.44	1.38
1	13	967	5MC	C2-N1	3.65	1.47	1.40
22	1K	8	4SU	C2-N1	3.63	1.44	1.38
27	1H	1938	5MU	C4-C5	3.62	1.50	1.44
27	1H	2565	OMU	C6-C5	3.61	1.43	1.35
1	1G	967	5MC	C2-N1	3.60	1.47	1.40
1	1G	1404	5MC	O2-C2	-3.56	1.17	1.23
24	3L	32	PSU	C6-C5	3.50	1.39	1.35
1	13	1407	5MC	C6-N1	3.42	1.43	1.38
1	13	1404	5MC	C2-N1	3.41	1.47	1.40
27	14	2251	OMG	O6-C6	-3.39	1.16	1.23
1	13	1407	5MC	C2-N1	3.39	1.47	1.40
1	13	966	M2G	C5-C4	-3.39	1.34	1.43
1	1G	966	M2G	C6-N1	3.39	1.42	1.37
24	3K	32	PSU	C6-C5	3.39	1.39	1.35
27	1H	2264	OMG	C5-C6	-3.37	1.40	1.47
23	2K	16	H2U	C4-N3	3.37	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	1965	5MC	C6-N1	3.35	1.43	1.38
26	5K	20	H2U	C4-N3	3.34	1.43	1.37
1	1G	1207	2MG	C6-N1	3.34	1.42	1.37
59	1L	32	PSU	C6-C5	3.33	1.39	1.35
1	13	1207	2MG	C6-N1	3.30	1.42	1.37
1	13	966	M2G	C6-N1	3.29	1.42	1.37
23	2K	37	MIA	C2-S10	3.28	1.78	1.75
22	1K	32	PSU	C6-C5	3.28	1.39	1.35
1	13	1402	4OC	C4-N4	3.25	1.42	1.35
1	13	527	7MG	C2-N2	3.24	1.41	1.34
27	14	1917	PSU	C6-C5	3.23	1.39	1.35
23	2K	20	H2U	C4-N3	3.22	1.43	1.37
1	13	1207	2MG	C5-C6	3.22	1.53	1.47
1	13	1402	4OC	C2-N1	3.21	1.47	1.40
1	1G	1407	5MC	C2-N1	3.20	1.46	1.40
1	1G	1207	2MG	C5-C6	3.20	1.53	1.47
27	1H	2565	OMU	O4-C4	-3.15	1.18	1.24
1	1G	1402	4OC	C5-C4	3.11	1.47	1.40
27	14	2605	PSU	C6-C5	3.11	1.38	1.35
1	13	1207	2MG	C5-C4	-3.10	1.35	1.43
1	13	966	M2G	C5-C6	3.10	1.53	1.47
1	1G	967	5MC	O2-C2	-3.09	1.18	1.23
60	2L	46	7MG	C2-N2	3.08	1.41	1.34
27	14	2552	OMU	O4-C4	-3.07	1.18	1.24
23	2K	47	3AU	C6-N1	3.07	1.45	1.38
1	1G	1498	UR3	O4-C4	-3.06	1.16	1.23
27	1H	1943	OMC	C5-C4	3.04	1.49	1.42
1	13	967	5MC	O2-C2	-3.04	1.18	1.23
22	1K	39	PSU	C6-C5	3.04	1.38	1.35
60	2L	32	PSU	C6-C5	3.03	1.38	1.35
27	1H	2516	2MA	C2-N3	3.01	1.39	1.34
59	1L	39	PSU	C6-C5	3.00	1.38	1.35
1	1G	1402	4OC	C4-N4	2.98	1.42	1.35
1	1G	527	7MG	C6-N1	-2.98	1.33	1.38
27	1H	1934	PSU	C6-C5	2.97	1.38	1.35
1	1G	1400	5MC	O2-C2	-2.97	1.18	1.23
23	2K	32	PSU	C6-C5	2.96	1.38	1.35
27	1H	1965	5MC	O2-C2	-2.95	1.18	1.23
1	13	1400	5MC	O2-C2	-2.94	1.18	1.23
22	1K	46	7MG	C2-N2	2.93	1.41	1.34
60	2L	47	3AU	C6-N1	2.90	1.45	1.38
27	1H	1962	5MU	C4-C5	2.89	1.49	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	527	7MG	C2-N2	2.89	1.41	1.34
1	13	527	7MG	C8-N9	2.85	1.47	1.46
23	2K	46	7MG	C2-N2	2.83	1.40	1.34
27	14	2605	PSU	C2-N1	2.83	1.40	1.36
1	13	1402	4OC	C6-N1	2.80	1.44	1.38
1	13	1407	5MC	O2-C2	-2.79	1.18	1.23
27	1H	2516	2MA	C5-N7	-2.73	1.29	1.39
1	13	1498	UR3	O4-C4	-2.72	1.17	1.23
1	13	1207	2MG	O6-C6	-2.71	1.17	1.23
1	13	527	7MG	C6-N1	-2.70	1.33	1.38
1	1G	1498	UR3	C6-N1	2.69	1.44	1.38
1	1G	1207	2MG	O6-C6	-2.69	1.17	1.23
1	1G	1518	MA6	C2-N3	2.67	1.36	1.32
22	1K	8	4SU	C6-N1	2.67	1.44	1.38
27	14	2552	OMU	O2-C2	-2.66	1.18	1.23
27	14	2552	OMU	C4-N3	2.65	1.43	1.38
24	3L	37	MIA	C6-N1	2.64	1.36	1.32
23	2K	20	H2U	C6-N1	-2.64	1.42	1.47
1	1G	1207	2MG	C5-C4	-2.63	1.36	1.43
60	2L	8	4SU	C6-N1	2.63	1.44	1.38
27	1H	2618	PSU	C4-C5	-2.63	1.36	1.44
1	13	1498	UR3	C6-N1	2.59	1.44	1.38
60	2L	16	H2U	C6-N1	-2.58	1.42	1.47
60	2L	55	PSU	C2-N1	2.58	1.40	1.36
26	5K	8	4SU	C6-N1	2.56	1.44	1.38
1	1G	1402	4OC	C6-N1	2.56	1.44	1.38
27	14	2251	OMG	C2-N1	-2.54	1.31	1.37
1	13	1400	5MC	C2-N1	2.54	1.45	1.40
27	14	2605	PSU	C4-C5	-2.51	1.37	1.44
1	1G	1498	UR3	O2-C2	-2.50	1.18	1.22
23	2K	8	4SU	C6-N1	2.47	1.44	1.38
23	2K	39	PSU	C2-N1	2.47	1.40	1.36
23	2K	47	3AU	C5-C4	2.46	1.50	1.43
23	2K	46	7MG	C5-C6	2.45	1.49	1.43
23	2K	16	H2U	C6-N1	-2.45	1.42	1.47
26	5K	37	MIA	C6-N1	2.42	1.36	1.32
1	13	516	PSU	C6-C5	2.41	1.38	1.35
1	1G	1519	MA6	C5-C4	-2.39	1.34	1.40
1	13	1404	5MC	O2-C2	-2.38	1.19	1.23
26	5K	16	H2U	C6-N1	-2.37	1.42	1.47
27	14	1942	5MC	O2-C2	-2.35	1.19	1.23
12	3A	89	0TD	CB-CG	2.33	1.56	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1K	46	7MG	C6-N1	-2.33	1.34	1.38
60	2L	47	3AU	C5-C4	2.33	1.49	1.43
22	1K	37	MIA	C2-S10	2.29	1.77	1.75
27	14	2251	OMG	C2-N2	2.28	1.39	1.34
24	3K	37	MIA	C6-N1	2.27	1.35	1.32
59	1L	39	PSU	C4-C5	-2.27	1.37	1.44
1	1G	966	M2G	C5-C4	-2.26	1.37	1.43
23	2K	37	MIA	C6-N1	2.26	1.35	1.32
1	1G	1518	MA6	C5-C4	-2.26	1.35	1.40
23	2K	32	PSU	C4-C5	-2.23	1.37	1.44
26	5K	20	H2U	C6-N1	-2.22	1.43	1.47
27	1H	1934	PSU	C4-C5	-2.21	1.37	1.44
60	2L	47	3AU	O4-C4	-2.21	1.18	1.23
27	1H	2264	OMG	C2-N3	2.21	1.38	1.33
27	1H	2264	OMG	O6-C6	-2.20	1.18	1.23
59	1L	37	MIA	C2-S10	2.18	1.77	1.75
60	2L	37	MIA	C4-N3	-2.18	1.32	1.35
59	1L	39	PSU	O4'-C1'	-2.14	1.40	1.43
60	2L	47	3AU	O2-C2	-2.14	1.18	1.22
1	13	527	7MG	C5-C6	2.13	1.49	1.43
27	1H	2565	OMU	C4-N3	2.11	1.42	1.38
27	1H	1940	PSU	C6-C5	2.11	1.37	1.35
27	1H	2618	PSU	C2'-C1'	-2.09	1.51	1.53
1	1G	1519	MA6	C2-N3	2.07	1.35	1.32
27	14	1917	PSU	C4-C5	-2.07	1.38	1.44
23	2K	8	4SU	C4-N3	2.06	1.39	1.37
27	1H	2618	PSU	O4'-C1'	-2.03	1.41	1.43
27	1H	2516	2MA	C5-C4	-2.02	1.35	1.40
1	13	1498	UR3	O2-C2	-2.02	1.18	1.22
1	13	1519	MA6	C5-C4	-2.01	1.35	1.40
23	2K	47	3AU	O2-C2	-2.00	1.18	1.22

All (499) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1962	5MU	C5-C4-N3	13.97	127.23	115.31
1	13	1519	MA6	N1-C6-N6	-12.51	103.89	117.06
27	1H	1938	5MU	C5-C4-N3	12.45	125.94	115.31
24	3L	37	MIA	C11-S10-C2	11.84	111.11	102.27
26	5K	37	MIA	C11-S10-C2	11.46	110.83	102.27
23	2K	54	5MU	C5-C4-N3	11.27	124.93	115.31
22	1K	37	MIA	C12-C13-C14	-10.94	105.85	127.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	1K	54	5MU	C5-C4-N3	10.75	124.48	115.31
1	1G	1519	MA6	N1-C6-N6	-10.74	105.76	117.06
59	1L	54	5MU	C5-C4-N3	10.71	124.45	115.31
27	14	1939	5MU	C5-C4-N3	10.66	124.41	115.31
27	14	1915	5MU	C5-C4-N3	10.46	124.23	115.31
26	5K	54	5MU	C5-C4-N3	10.43	124.21	115.31
60	2L	54	5MU	C5-C4-N3	10.28	124.08	115.31
27	14	2251	OMG	C8-N7-C5	10.15	122.33	102.99
27	1H	1962	5MU	C5-C6-N1	-10.12	112.93	123.34
24	3K	37	MIA	C11-S10-C2	10.11	109.81	102.27
60	2L	37	MIA	C12-C13-C14	-10.01	107.66	127.14
1	13	1518	MA6	N1-C6-N6	-9.95	106.59	117.06
27	1H	2264	OMG	C8-N7-C5	9.54	121.16	102.99
27	14	2251	OMG	C5-C6-N1	9.51	130.75	113.95
1	1G	1518	MA6	N1-C6-N6	-9.49	107.07	117.06
59	1L	37	MIA	C11-S10-C2	9.49	109.35	102.27
27	1H	1962	5MU	O4-C4-C5	-8.97	114.50	124.90
59	1L	37	MIA	C12-C13-C14	-8.14	111.30	127.14
24	3K	37	MIA	C12-C13-C14	-8.10	111.37	127.14
23	2K	8	4SU	C4-N3-C2	-8.03	119.54	127.34
24	3L	37	MIA	C12-C13-C14	-7.96	111.66	127.14
27	1H	2264	OMG	C5-C6-N1	7.84	127.79	113.95
26	5K	8	4SU	C4-N3-C2	-7.80	119.77	127.34
27	1H	1962	5MU	C4-N3-C2	-7.70	117.38	127.35
22	1K	8	4SU	C4-N3-C2	-7.52	120.03	127.34
27	14	1939	5MU	C5-C6-N1	-7.47	115.65	123.34
60	2L	8	4SU	C4-N3-C2	-7.41	120.14	127.34
27	1H	1938	5MU	C4-N3-C2	-7.35	117.84	127.35
27	1H	1938	5MU	O4-C4-C5	-7.33	116.40	124.90
26	5K	37	MIA	C12-C13-C14	-7.23	113.07	127.14
23	2K	37	MIA	C12-C13-C14	-7.20	113.13	127.14
27	1H	2565	OMU	C4-N3-C2	-6.96	117.40	126.58
27	14	1939	5MU	C6-C5-C4	6.92	123.81	118.03
1	13	527	7MG	C5-C4-N9	6.82	115.20	106.35
27	14	1939	5MU	C4-N3-C2	-6.71	118.67	127.35
27	14	1915	5MU	C4-N3-C2	-6.66	118.73	127.35
22	1K	46	7MG	C4-C5-N7	6.64	114.75	105.53
60	2L	46	7MG	C4-C5-N7	6.53	114.60	105.53
27	14	1915	5MU	C6-C5-C4	6.40	123.38	118.03
22	1K	54	5MU	C4-N3-C2	-6.34	119.14	127.35
27	14	1915	5MU	C5-C6-N1	-6.34	116.82	123.34
59	1L	54	5MU	C4-N3-C2	-6.29	119.21	127.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	2K	20	H2U	C4-N3-C2	-6.27	120.59	125.79
1	1G	527	7MG	C5-C4-N9	6.24	114.44	106.35
60	2L	47	3AU	C1'-N1-C2	6.23	127.51	116.99
27	14	2251	OMG	O6-C6-N1	-6.22	113.31	120.65
23	2K	54	5MU	C5-C6-N1	-6.19	116.97	123.34
1	1G	527	7MG	C4-C5-N7	6.15	114.07	105.53
23	2K	46	7MG	C4-C5-N7	6.09	113.98	105.53
27	1H	2264	OMG	O6-C6-N1	-6.09	113.46	120.65
26	5K	8	4SU	C5-C4-N3	6.08	120.33	114.69
1	1G	527	7MG	CM7-N7-C5	6.07	142.06	126.40
22	1K	46	7MG	CM7-N7-C5	6.04	141.99	126.40
27	1H	1962	5MU	C6-C5-C4	6.04	123.08	118.03
60	2L	46	7MG	C5-C4-N9	6.02	114.17	106.35
27	1H	1938	5MU	C6-C5-C4	5.98	123.03	118.03
23	2K	46	7MG	C5-C4-N9	5.98	114.11	106.35
1	13	527	7MG	C4-C5-N7	5.97	113.82	105.53
23	2K	8	4SU	C5-C4-N3	5.96	120.21	114.69
23	2K	54	5MU	C4-N3-C2	-5.95	119.64	127.35
60	2L	46	7MG	CM7-N7-C5	5.93	141.70	126.40
26	5K	16	H2U	C4-N3-C2	-5.92	120.88	125.79
27	14	2552	OMU	C4-N3-C2	-5.91	118.78	126.58
26	5K	54	5MU	C4-N3-C2	-5.88	119.74	127.35
22	1K	37	MIA	C12-N6-C6	-5.88	113.84	122.55
22	1K	8	4SU	C5-C4-N3	5.88	120.14	114.69
12	3I	89	0TD	CSB-SB-CB	5.75	112.85	102.44
23	2K	16	H2U	C4-N3-C2	-5.75	121.02	125.79
23	2K	54	5MU	O4-C4-C5	-5.73	118.26	124.90
23	2K	46	7MG	CM7-N7-C5	5.71	141.13	126.40
60	2L	54	5MU	C4-N3-C2	-5.63	120.07	127.35
27	1H	1938	5MU	C5-C6-N1	-5.58	117.60	123.34
22	1K	54	5MU	C5-C6-N1	-5.57	117.61	123.34
22	1K	46	7MG	C5-C4-N9	5.55	113.56	106.35
60	2L	16	H2U	C4-N3-C2	-5.53	121.20	125.79
1	13	1518	MA6	N3-C2-N1	-5.52	120.05	128.68
60	2L	8	4SU	C5-C4-N3	5.44	119.73	114.69
1	1G	527	7MG	C5-C6-N1	5.42	120.54	110.99
1	13	527	7MG	CM7-N7-C5	5.41	140.37	126.40
1	1G	1498	UR3	C4-N3-C2	-5.38	119.50	124.56
1	13	1404	5MC	C5-C6-N1	-5.37	117.81	123.34
60	2L	54	5MU	O4-C4-C5	-5.33	118.73	124.90
22	1K	39	PSU	C4-N3-C2	-5.31	118.68	126.34
59	1L	54	5MU	C5-C6-N1	-5.30	117.89	123.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	5K	54	5MU	C6-C5-C4	5.22	122.39	118.03
23	2K	32	PSU	C4-N3-C2	-5.16	118.90	126.34
27	1H	2516	2MA	C1'-N9-C4	-5.14	117.61	126.64
59	1L	54	5MU	C6-C5-C4	5.14	122.33	118.03
27	1H	1938	5MU	C6-N1-C2	-5.13	116.10	121.30
59	1L	54	5MU	O4-C4-C5	-5.13	118.96	124.90
27	14	2503	2MA	C2-N3-C4	5.12	119.69	115.52
22	1K	46	7MG	C5-C6-N1	5.12	120.01	110.99
22	1K	54	5MU	C6-C5-C4	5.07	122.27	118.03
27	1H	2618	PSU	C4-N3-C2	-5.07	119.03	126.34
26	5K	54	5MU	C5-C6-N1	-5.07	118.12	123.34
27	14	2503	2MA	C1'-N9-C4	-5.06	117.75	126.64
27	14	2605	PSU	C4-N3-C2	-5.05	119.06	126.34
1	1G	1519	MA6	N3-C2-N1	-5.04	120.81	128.68
1	13	1498	UR3	C4-N3-C2	-5.03	119.82	124.56
26	5K	20	H2U	C4-N3-C2	-5.01	121.64	125.79
26	5K	54	5MU	O4-C4-C5	-4.99	119.12	124.90
27	1H	1934	PSU	C4-N3-C2	-4.98	119.17	126.34
22	1K	54	5MU	O4-C4-C5	-4.94	119.18	124.90
60	2L	32	PSU	C4-N3-C2	-4.92	119.26	126.34
23	2K	54	5MU	C6-C5-C4	4.89	122.12	118.03
23	2K	39	PSU	N1-C2-N3	4.85	120.63	115.13
12	3I	89	0TD	OD2-CG-CB	4.84	123.60	113.15
59	1L	39	PSU	C4-N3-C2	-4.82	119.39	126.34
27	14	1915	5MU	O4-C4-C5	-4.82	119.32	124.90
23	2K	46	7MG	C5-C6-N1	4.82	119.48	110.99
27	1H	1985	5MC	C5-C6-N1	-4.81	118.39	123.34
22	1K	55	PSU	N1-C2-N3	4.81	120.58	115.13
1	13	1519	MA6	N3-C2-N1	-4.81	121.16	128.68
60	2L	32	PSU	N1-C2-N3	4.79	120.56	115.13
27	1H	2264	OMG	N2-C2-N1	4.77	126.87	116.71
59	1L	39	PSU	N1-C2-N3	4.76	120.53	115.13
26	5K	8	4SU	C5-C4-S4	-4.73	118.37	124.47
23	2K	37	MIA	C11-S10-C2	4.72	105.79	102.27
23	2K	39	PSU	C4-N3-C2	-4.69	119.58	126.34
60	2L	54	5MU	C6-N1-C2	-4.67	116.56	121.30
27	1H	2516	2MA	C2-N3-C4	4.65	119.30	115.52
60	2L	54	5MU	C5M-C5-C6	-4.65	116.64	122.85
1	1G	1518	MA6	N3-C2-N1	-4.64	121.42	128.68
1	13	1498	UR3	C6-N1-C2	-4.64	117.63	121.79
60	2L	46	7MG	C5-C6-N1	4.64	119.17	110.99
60	2L	55	PSU	C4-N3-C2	-4.63	119.66	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1404	5MC	C5-C6-N1	-4.60	118.61	123.34
60	2L	47	3AU	O2-C2-N3	-4.59	115.61	121.99
23	2K	54	5MU	C5M-C5-C6	-4.59	116.72	122.85
24	3L	32	PSU	C4-N3-C2	-4.58	119.74	126.34
27	1H	1938	5MU	C1'-N1-C2	4.54	125.78	117.57
1	1G	527	7MG	C2-N3-C4	4.53	120.38	112.30
1	13	527	7MG	C5-C6-N1	4.53	118.97	110.99
27	14	1939	5MU	O4-C4-C5	-4.53	119.65	124.90
24	3K	37	MIA	C15-C14-C13	-4.52	109.59	122.65
1	1G	527	7MG	C5-C4-N3	-4.51	119.54	128.13
27	1H	2565	OMU	C5-C4-N3	4.49	121.56	114.84
60	2L	39	PSU	N1-C2-N3	4.49	120.22	115.13
23	2K	47	3AU	C1'-N1-C2	4.49	124.56	116.99
22	1K	37	MIA	C16-C14-C13	-4.46	109.75	122.65
27	1H	2264	OMG	C2-N1-C6	4.45	133.30	125.10
1	13	527	7MG	C6-C5-N7	-4.45	124.92	131.91
1	13	527	7MG	C5-C4-N3	-4.42	119.71	128.13
23	2K	46	7MG	C5-C4-N3	-4.42	119.71	128.13
22	1K	39	PSU	N1-C2-N3	4.41	120.12	115.13
23	2K	46	7MG	C2-N3-C4	4.40	120.14	112.30
60	2L	37	MIA	C4-C5-N7	-4.39	104.82	109.40
59	1L	37	MIA	C15-C14-C13	-4.37	110.02	122.65
26	5K	54	5MU	C5M-C5-C6	-4.37	117.02	122.85
23	2K	8	4SU	C5-C4-S4	-4.35	118.86	124.47
23	2K	32	PSU	N1-C2-N3	4.35	120.06	115.13
26	5K	16	H2U	C5-C4-N3	4.33	121.51	116.65
27	14	2251	OMG	O6-C6-C5	-4.31	115.95	124.37
26	5K	39	PSU	N1-C2-N3	4.30	120.00	115.13
1	1G	967	5MC	C5-C6-N1	-4.29	118.93	123.34
22	1K	8	4SU	C5-C4-S4	-4.27	118.96	124.47
60	2L	54	5MU	C6-C5-C4	4.27	121.60	118.03
23	2K	37	MIA	C15-C14-C13	-4.26	110.33	122.65
26	5K	37	MIA	C15-C14-C13	-4.26	110.34	122.65
27	1H	1934	PSU	N1-C2-N3	4.25	119.94	115.13
22	1K	46	7MG	C2-N3-C4	4.24	119.86	112.30
27	1H	2565	OMU	N3-C2-N1	4.23	120.50	114.89
26	5K	32	PSU	C4-N3-C2	-4.22	120.25	126.34
60	2L	32	PSU	O2-C2-N1	-4.21	118.15	122.79
22	1K	46	7MG	C6-C5-N7	-4.21	125.30	131.91
1	13	1207	2MG	CM2-N2-C2	-4.21	114.57	123.86
23	2K	47	3AU	C6-N1-C2	-4.20	118.02	121.79
23	2K	55	PSU	N1-C2-N3	4.20	119.89	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2516	2MA	C5-C6-N1	-4.19	118.26	121.01
24	3L	37	MIA	C2-N3-C4	4.19	121.10	115.32
60	2L	37	MIA	C16-C14-C13	-4.17	110.59	122.65
59	1L	54	5MU	C5M-C5-C6	-4.17	117.28	122.85
24	3L	39	PSU	C4-N3-C2	-4.17	120.33	126.34
24	3K	39	PSU	C4-N3-C2	-4.16	120.34	126.34
1	13	1402	4OC	C6-C5-C4	4.16	122.05	116.96
26	5K	55	PSU	C4-N3-C2	-4.16	120.35	126.34
1	13	1400	5MC	C5-C6-N1	-4.13	119.08	123.34
1	1G	516	PSU	C4-N3-C2	-4.13	120.39	126.34
60	2L	46	7MG	C2-N3-C4	4.12	119.64	112.30
60	2L	16	H2U	C5-C4-N3	4.10	121.26	116.65
24	3L	39	PSU	N1-C2-N3	4.10	119.78	115.13
60	2L	8	4SU	N3-C2-N1	4.10	120.33	114.89
27	1H	1940	PSU	C4-N3-C2	-4.10	120.43	126.34
24	3K	39	PSU	N1-C2-N3	4.10	119.78	115.13
22	1K	46	7MG	C5-C4-N3	-4.10	120.32	128.13
24	3K	32	PSU	C4-N3-C2	-4.09	120.44	126.34
60	2L	37	MIA	C15-C14-C13	-4.09	110.82	122.65
26	5K	39	PSU	C4-N3-C2	-4.08	120.47	126.34
1	13	527	7MG	C2-N3-C4	4.07	119.55	112.30
23	2K	46	7MG	C6-C5-N7	-4.07	125.52	131.91
23	2K	37	MIA	C12-N6-C6	-4.05	116.55	122.55
22	1K	39	PSU	O2-C2-N1	-4.03	118.35	122.79
26	5K	55	PSU	N1-C2-N3	4.02	119.69	115.13
27	14	2552	OMU	C5-C4-N3	4.02	120.85	114.84
27	14	1915	5MU	C6-N1-C2	-4.01	117.23	121.30
27	1H	2565	OMU	O4-C4-C5	-4.01	118.11	125.16
22	1K	55	PSU	C4-N3-C2	-3.99	120.59	126.34
60	2L	39	PSU	C4-N3-C2	-3.99	120.60	126.34
24	3L	37	MIA	C15-C14-C13	-3.98	111.14	122.65
23	2K	8	4SU	N3-C2-N1	3.97	120.16	114.89
26	5K	32	PSU	N1-C2-N3	3.95	119.61	115.13
27	14	1939	5MU	C5M-C5-C6	-3.94	117.59	122.85
1	1G	1402	4OC	C2'-C1'-N1	-3.93	106.58	114.22
26	5K	37	MIA	C2-N3-C4	3.92	120.73	115.32
24	3L	37	MIA	C16-C14-C13	-3.92	111.32	122.65
1	1G	1402	4OC	CM4-N4-C4	-3.91	114.81	122.45
27	14	1915	5MU	C5M-C5-C6	-3.91	117.63	122.85
23	2K	55	PSU	C4-N3-C2	-3.90	120.72	126.34
27	1H	1965	5MC	C5-C6-N1	-3.90	119.32	123.34
60	2L	46	7MG	C6-C5-N7	-3.90	125.79	131.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	2605	PSU	N1-C2-N3	3.89	119.54	115.13
27	14	1917	PSU	N1-C2-N3	3.87	119.52	115.13
1	1G	527	7MG	C6-C5-N7	-3.87	125.83	131.91
22	1K	37	MIA	C15-C14-C13	-3.86	111.48	122.65
24	3K	32	PSU	N1-C2-N3	3.86	119.50	115.13
1	13	516	PSU	N1-C2-N3	3.83	119.47	115.13
1	13	516	PSU	C4-N3-C2	-3.83	120.83	126.34
24	3L	32	PSU	N1-C2-N3	3.82	119.45	115.13
27	14	1911	PSU	C4-N3-C2	-3.79	120.87	126.34
24	3K	37	MIA	C2-N3-C4	3.79	120.55	115.32
26	5K	37	MIA	C1'-N9-C4	3.78	133.29	126.64
27	1H	1938	5MU	C5M-C5-C6	-3.78	117.80	122.85
27	1H	2516	2MA	CM2-C2-N1	3.77	123.04	117.15
59	1L	32	PSU	C4-N3-C2	-3.76	120.92	126.34
60	2L	55	PSU	N1-C2-N3	3.75	119.37	115.13
26	5K	8	4SU	N3-C2-N1	3.74	119.85	114.89
24	3K	37	MIA	C16-C14-C13	-3.71	111.91	122.65
27	1H	2618	PSU	N1-C2-N3	3.71	119.33	115.13
23	2K	20	H2U	C5-C4-N3	3.70	120.80	116.65
27	14	1911	PSU	N1-C2-N3	3.67	119.29	115.13
1	13	967	5MC	C5-C6-N1	-3.67	119.56	123.34
26	5K	37	MIA	C5-C6-N1	-3.67	117.76	120.81
23	2K	37	MIA	C5-C6-N1	-3.67	117.77	120.81
26	5K	54	5MU	C6-N1-C2	-3.65	117.60	121.30
1	13	1407	5MC	C5-C6-N1	-3.65	119.59	123.34
59	1L	54	5MU	C6-N1-C2	-3.62	117.63	121.30
22	1K	8	4SU	N3-C2-N1	3.58	119.64	114.89
1	1G	1400	5MC	C1'-N1-C6	-3.57	115.18	121.12
59	1L	37	MIA	C16-C14-C13	-3.57	112.34	122.65
22	1K	54	5MU	C6-N1-C2	-3.54	117.72	121.30
27	14	1915	5MU	N3-C2-N1	3.53	119.58	114.89
59	1L	37	MIA	C2-N3-C4	3.53	120.19	115.32
27	14	2552	OMU	N3-C2-N1	3.52	119.56	114.89
1	13	1207	2MG	C5-C6-N1	3.51	120.14	113.95
1	13	1498	UR3	O2-C2-N3	-3.50	116.41	121.34
26	5K	20	H2U	C5-C6-N1	3.50	123.13	111.61
26	5K	20	H2U	N3-C2-N1	3.49	120.35	116.65
22	1K	54	5MU	C5M-C5-C6	-3.48	118.19	122.85
60	2L	46	7MG	C5-C4-N3	-3.48	121.50	128.13
27	1H	1938	5MU	N3-C2-N1	3.47	119.49	114.89
26	5K	37	MIA	C16-C14-C13	-3.46	112.65	122.65
1	1G	1400	5MC	C5-C6-N1	-3.45	119.79	123.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	3K	37	MIA	C5-C6-N1	-3.44	117.95	120.81
60	2L	54	5MU	C5-C6-N1	-3.43	119.81	123.34
27	14	1917	PSU	C4-N3-C2	-3.43	121.40	126.34
22	1K	32	PSU	C4-N3-C2	-3.43	121.40	126.34
27	1H	1940	PSU	N1-C2-N3	3.42	119.01	115.13
1	1G	1404	5MC	CM5-C5-C6	-3.41	118.29	122.85
59	1L	32	PSU	N1-C2-N3	3.40	118.98	115.13
60	2L	37	MIA	C2-N3-C4	3.35	119.94	115.32
60	2L	47	3AU	C6-N1-C2	-3.31	118.82	121.79
60	2L	37	MIA	C5-C6-N1	-3.30	118.07	120.81
1	13	966	M2G	C8-N7-C5	3.30	109.27	102.99
23	2K	16	H2U	C5-C4-N3	3.29	120.35	116.65
60	2L	47	3AU	C1'-N1-C6	-3.29	113.67	120.84
60	2L	16	H2U	C5-C6-N1	3.25	122.32	111.61
1	1G	527	7MG	N9-C8-N7	-3.24	98.75	103.38
1	13	1402	4OC	C5-C6-N1	-3.24	116.39	121.81
1	1G	966	M2G	C5-C6-N1	3.22	119.64	113.95
60	2L	46	7MG	N9-C8-N7	-3.22	98.78	103.38
27	14	2251	OMG	N2-C2-N1	3.21	123.55	116.71
23	2K	16	H2U	O2-C2-N1	-3.21	119.08	123.11
22	1K	55	PSU	C6-N1-C2	-3.21	119.40	122.68
23	2K	47	3AU	O2-C2-N3	-3.19	117.56	121.99
26	5K	16	H2U	C5-C6-N1	3.18	122.09	111.61
22	1K	46	7MG	N9-C8-N7	-3.17	98.84	103.38
26	5K	20	H2U	C5-C4-N3	3.16	120.20	116.65
23	2K	16	H2U	N3-C2-N1	3.16	119.99	116.65
1	1G	527	7MG	C2-N1-C6	-3.14	119.37	125.10
22	1K	37	MIA	C4-C5-N7	-3.14	106.13	109.40
1	1G	1407	5MC	C5-C6-N1	-3.14	120.11	123.34
24	3K	37	MIA	C16-C14-C15	-3.13	107.69	114.60
24	3K	37	MIA	C4-C5-N7	-3.12	106.15	109.40
27	14	2605	PSU	O2-C2-N3	-3.12	115.94	121.82
24	3L	37	MIA	N3-C2-N1	-3.11	121.27	126.98
22	1K	55	PSU	O2-C2-N1	-3.11	119.37	122.79
26	5K	39	PSU	O2-C2-N1	-3.11	119.37	122.79
23	2K	39	PSU	C6-C5-C4	3.10	120.36	118.20
60	2L	16	H2U	O2-C2-N1	-3.09	119.22	123.11
23	2K	20	H2U	N3-C2-N1	3.09	119.92	116.65
24	3K	37	MIA	N3-C2-N1	-3.09	121.31	126.98
1	1G	516	PSU	N1-C2-N3	3.08	118.62	115.13
27	1H	1985	5MC	C5-C4-N4	-3.07	116.88	121.48
1	13	966	M2G	C2-N1-C6	-3.07	118.61	123.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	966	M2G	C5-C6-N1	3.07	119.37	113.95
59	1L	39	PSU	O2-C2-N1	-3.06	119.42	122.79
27	1H	1962	5MU	O2-C2-N1	-3.06	118.72	122.79
23	2K	47	3AU	C4-N3-C2	-3.04	120.81	124.63
22	1K	37	MIA	C2-N3-C4	3.04	119.52	115.32
23	2K	46	7MG	N9-C8-N7	-3.03	99.04	103.38
23	2K	46	7MG	C2-N1-C6	-3.03	119.57	125.10
27	14	1962	5MC	CM5-C5-C6	-3.03	118.81	122.85
23	2K	37	MIA	C2-N3-C4	3.03	119.50	115.32
24	3K	37	MIA	C2-N1-C6	3.01	122.58	117.19
59	1L	39	PSU	C6-C5-C4	3.01	120.30	118.20
22	1K	46	7MG	O6-C6-C5	-3.01	120.17	127.54
27	1H	2565	OMU	C1'-N1-C2	2.98	122.97	117.57
59	1L	37	MIA	C5-C6-N1	-2.98	118.34	120.81
23	2K	55	PSU	C6-N1-C2	-2.97	119.65	122.68
27	1H	2264	OMG	N1-C2-N3	-2.96	117.78	123.32
22	1K	46	7MG	C2-N1-C6	-2.95	119.72	125.10
27	14	1939	5MU	N3-C2-N1	2.94	118.79	114.89
27	14	1917	PSU	C6-N1-C2	-2.93	119.68	122.68
60	2L	47	3AU	C4-N3-C2	-2.93	120.95	124.63
12	3A	89	0TD	OD2-CG-CB	2.93	119.48	113.15
27	1H	1940	PSU	C6-C5-C4	2.93	120.25	118.20
22	1K	54	5MU	N3-C2-N1	2.93	118.77	114.89
60	2L	8	4SU	C5-C4-S4	-2.92	120.71	124.47
27	1H	2516	2MA	N3-C2-N1	-2.91	120.41	125.73
1	13	1498	UR3	O4-C4-N3	-2.90	115.65	119.66
1	1G	1207	2MG	C5-C6-N1	2.89	119.06	113.95
1	1G	1402	4OC	C5-C6-N1	-2.89	116.97	121.81
23	2K	37	MIA	C4-C5-N7	-2.89	106.39	109.40
1	13	1498	UR3	C3U-N3-C2	2.88	122.37	117.31
26	5K	32	PSU	O2-C2-N1	-2.88	119.62	122.79
27	1H	2264	OMG	O6-C6-C5	-2.88	118.75	124.37
27	1H	1965	5MC	C1'-N1-C6	-2.87	116.34	121.12
60	2L	46	7MG	O6-C6-C5	-2.87	120.50	127.54
1	13	1207	2MG	C8-N7-C5	2.87	108.46	102.99
27	14	1942	5MC	O2-C2-N3	-2.85	117.69	122.33
27	1H	1943	OMC	C1'-N1-C2	2.85	124.78	118.42
60	2L	47	3AU	C5-C4-N3	2.85	119.25	115.50
23	2K	37	MIA	C16-C14-C13	-2.85	114.42	122.65
1	1G	966	M2G	C2-N1-C6	-2.83	119.02	123.71
59	1L	32	PSU	O2-C2-N1	-2.82	119.69	122.79
27	14	2552	OMU	O4-C4-C5	-2.81	120.21	125.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	3L	37	MIA	C4-C5-N7	-2.80	106.48	109.40
27	1H	2565	OMU	CM2-O2'-C2'	-2.78	107.23	114.52
59	1L	37	MIA	C4-C5-N7	-2.77	106.51	109.40
1	1G	1498	UR3	C1'-N1-C2	2.77	121.66	116.99
27	14	2605	PSU	C6-C5-C4	2.76	120.13	118.20
60	2L	39	PSU	C6-N1-C2	-2.76	119.86	122.68
23	2K	37	MIA	C2-N1-C6	2.76	122.13	117.19
26	5K	55	PSU	O2-C2-N1	-2.76	119.75	122.79
27	1H	2565	OMU	C2'-C1'-N1	-2.76	108.86	114.22
27	14	1920	OMC	O2-C2-N3	-2.75	117.85	122.33
12	3I	89	0TD	OD2-CG-OD1	-2.75	117.84	124.09
27	1H	1943	OMC	N4-C4-N3	2.75	122.79	117.97
1	13	527	7MG	N9-C8-N7	-2.74	99.45	103.38
27	1H	1943	OMC	C5-C4-N4	-2.74	116.26	120.57
27	1H	2618	PSU	O2-C2-N3	-2.74	116.65	121.82
27	14	2552	OMU	C2'-C1'-N1	-2.74	108.91	114.22
27	14	1917	PSU	C6-C5-C4	2.74	120.11	118.20
1	1G	1207	2MG	C8-N7-C5	2.73	108.20	102.99
23	2K	16	H2U	C5-C6-N1	2.73	120.61	111.61
27	14	1962	5MC	O2-C2-N3	-2.73	117.89	122.33
23	2K	8	4SU	C1'-N1-C2	2.72	122.50	117.57
23	2K	20	H2U	C5-C6-N1	2.72	120.57	111.61
60	2L	54	5MU	C5M-C5-C4	2.71	121.75	118.77
59	1L	54	5MU	N3-C2-N1	2.71	118.49	114.89
1	1G	1498	UR3	C6-N1-C2	-2.71	119.36	121.79
59	1L	39	PSU	C6-N1-C2	-2.70	119.92	122.68
1	13	527	7MG	C2-N1-C6	-2.68	120.21	125.10
24	3L	37	MIA	C16-C14-C15	-2.68	108.68	114.60
1	1G	1400	5MC	C5-C4-N4	-2.68	117.47	121.48
60	2L	54	5MU	C1'-N1-C2	2.67	122.41	117.57
24	3K	32	PSU	O2-C2-N1	-2.67	119.85	122.79
27	14	1962	5MC	C5-C6-N1	-2.66	120.60	123.34
1	1G	1407	5MC	CM5-C5-C6	-2.65	119.30	122.85
26	5K	37	MIA	N3-C2-N1	-2.65	122.11	126.98
27	1H	1962	5MU	C1'-N1-C2	-2.65	112.78	117.57
27	14	1917	PSU	O2-C2-N1	-2.64	119.88	122.79
26	5K	20	H2U	O2-C2-N3	-2.62	116.63	121.50
27	14	1939	5MU	C6-N1-C2	-2.61	118.65	121.30
22	1K	37	MIA	C11-S10-C2	2.61	104.22	102.27
27	1H	1938	5MU	O2-C2-N3	-2.60	116.66	121.50
1	13	516	PSU	O2-C2-N1	-2.60	119.93	122.79
23	2K	37	MIA	N3-C2-N1	-2.60	122.20	126.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	14	1942	5MC	C5-C6-N1	-2.60	120.67	123.34
22	1K	32	PSU	N1-C2-N3	2.60	118.07	115.13
24	3K	39	PSU	O2-C2-N1	-2.59	119.94	122.79
1	1G	1207	2MG	CM2-N2-C2	-2.57	118.19	123.86
26	5K	8	4SU	C1'-N1-C2	2.57	122.22	117.57
24	3L	37	MIA	C2-N1-C6	2.56	121.77	117.19
60	2L	46	7MG	C2-N1-C6	-2.53	120.49	125.10
27	14	2605	PSU	C5-C6-N1	-2.51	118.34	122.11
27	1H	1965	5MC	CM5-C5-C6	-2.51	119.49	122.85
23	2K	39	PSU	C6-N1-C2	-2.51	120.11	122.68
1	13	966	M2G	CM2-N2-CM1	2.51	123.55	115.77
22	1K	37	MIA	C5-C6-N1	-2.51	118.73	120.81
1	1G	527	7MG	O6-C6-C5	-2.51	121.39	127.54
27	14	1911	PSU	O2-C2-N1	-2.50	120.04	122.79
26	5K	37	MIA	C2-N1-C6	2.50	121.67	117.19
27	14	1942	5MC	C1'-N1-C6	-2.49	116.97	121.12
24	3L	32	PSU	O2-C2-N1	-2.49	120.05	122.79
24	3L	37	MIA	C5-C6-N1	-2.47	118.76	120.81
60	2L	37	MIA	C12-N6-C6	-2.47	118.89	122.55
23	2K	47	3AU	C5-C4-N3	2.46	118.75	115.50
23	2K	46	7MG	O6-C6-C5	-2.46	121.51	127.54
27	1H	2618	PSU	O2'-C2'-C1'	-2.45	105.38	111.23
22	1K	54	5MU	O2-C2-N1	-2.45	119.53	122.79
27	1H	2565	OMU	C1'-N1-C6	-2.45	115.50	120.84
1	1G	1404	5MC	C1'-N1-C6	-2.44	117.06	121.12
1	13	1402	4OC	N1-C2-N3	2.44	123.25	118.81
27	1H	1943	OMC	C1'-N1-C6	-2.43	115.55	120.84
60	2L	37	MIA	S10-C2-N1	2.42	124.40	116.01
27	14	2503	2MA	N3-C2-N1	-2.41	121.33	125.73
26	5K	39	PSU	C6-N1-C2	-2.41	120.22	122.68
27	14	1915	5MU	O3'-C3'-C2'	2.40	119.59	111.82
26	5K	16	H2U	N3-C2-N1	2.38	119.17	116.65
1	1G	966	M2G	C8-N7-C5	2.38	107.53	102.99
59	1L	39	PSU	O4'-C1'-C2'	2.37	108.48	105.14
59	1L	37	MIA	C2-N1-C6	2.37	121.43	117.19
24	3L	37	MIA	C12-N6-C6	-2.37	119.04	122.55
1	1G	1498	UR3	C3U-N3-C2	2.35	121.43	117.31
1	13	1519	MA6	C4-C5-N7	-2.35	106.95	109.40
24	3K	37	MIA	C12-N6-C6	-2.33	119.09	122.55
1	1G	1407	5MC	C5-C4-N3	-2.33	119.16	121.67
1	13	516	PSU	C6-N1-C2	-2.33	120.31	122.68
12	3A	89	0TD	CSB-SB-CB	2.32	106.64	102.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1400	5MC	CM5-C5-C6	-2.31	119.76	122.85
59	1L	37	MIA	N3-C2-N1	-2.31	122.73	126.98
22	1K	39	PSU	C6-C5-C4	2.31	119.81	118.20
23	2K	47	3AU	O31-C13-O30	-2.30	118.88	124.09
27	1H	1965	5MC	C5-C4-N4	-2.29	118.05	121.48
26	5K	54	5MU	N3-C2-N1	2.29	117.93	114.89
27	14	1942	5MC	C1'-N1-C2	2.28	123.51	118.42
60	2L	39	PSU	O2-C2-N1	-2.28	120.28	122.79
60	2L	32	PSU	C6-N1-C2	-2.27	120.36	122.68
1	1G	1402	4OC	C6-C5-C4	2.26	119.73	116.96
27	1H	2264	OMG	N2-C2-N3	-2.26	115.35	119.74
1	1G	1400	5MC	C1'-N1-C2	2.25	123.45	118.42
27	1H	1962	5MU	C6-N1-C2	2.25	123.57	121.30
1	13	1498	UR3	O3'-C3'-C2'	2.25	119.10	111.82
1	13	1402	4OC	C4-N3-C2	-2.25	117.06	120.12
60	2L	54	5MU	N3-C2-N1	2.22	117.84	114.89
27	14	2605	PSU	C5-C4-N3	2.22	121.61	116.58
23	2K	32	PSU	O4-C4-C5	-2.21	118.26	124.05
26	5K	55	PSU	C6-N1-C2	-2.20	120.43	122.68
1	1G	967	5MC	C5-C4-N4	-2.20	118.19	121.48
24	3L	39	PSU	O2-C2-N1	-2.20	120.37	122.79
24	3K	39	PSU	C6-N1-C2	-2.20	120.44	122.68
27	1H	1934	PSU	C6-N1-C2	-2.19	120.44	122.68
27	1H	2618	PSU	C5-C4-N3	2.19	121.53	116.58
27	14	1939	5MU	O4-C4-N3	-2.18	115.94	120.12
1	1G	966	M2G	O6-C6-C5	-2.18	120.11	124.37
23	2K	32	PSU	O4'-C1'-C2'	2.18	108.22	105.14
24	3K	32	PSU	C6-N1-C2	-2.17	120.46	122.68
23	2K	54	5MU	C5M-C5-C4	2.17	121.16	118.77
60	2L	8	4SU	O2-C2-N3	-2.17	117.46	121.50
60	2L	16	H2U	O4-C4-C5	-2.16	117.55	122.17
60	2L	32	PSU	C6-C5-C4	2.15	119.70	118.20
22	1K	55	PSU	C6-C5-C4	2.15	119.70	118.20
1	13	966	M2G	N1-C2-N2	2.15	119.87	118.04
27	1H	1962	5MU	O2-C2-N3	2.15	125.50	121.50
60	2L	55	PSU	O2-C2-N3	-2.14	117.77	121.82
60	2L	8	4SU	C1'-N1-C2	2.14	121.45	117.57
27	1H	2516	2MA	O4'-C1'-C2'	-2.14	103.80	106.93
27	1H	1934	PSU	C5-C4-N3	2.14	121.42	116.58
27	14	2552	OMU	CM2-O2'-C2'	-2.14	108.91	114.52
23	2K	47	3AU	O3'-C3'-C2'	2.14	118.73	111.82
26	5K	39	PSU	C6-C5-C4	2.14	119.69	118.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1407	5MC	CM5-C5-C6	-2.14	120.00	122.85
26	5K	37	MIA	C4-C5-N7	-2.13	107.18	109.40
27	14	2251	OMG	C2-N1-C6	2.13	129.02	125.10
27	1H	1934	PSU	O2-C2-N1	-2.12	120.45	122.79
27	14	1942	5MC	C5-C4-N4	-2.12	118.31	121.48
23	2K	8	4SU	O2-C2-N3	-2.12	117.56	121.50
27	1H	1985	5MC	C1'-N1-C6	-2.11	117.61	121.12
22	1K	8	4SU	O2-C2-N1	-2.10	120.00	122.79
1	13	1400	5MC	C1'-N1-C2	-2.09	113.76	118.42
27	14	2605	PSU	C3'-C2'-C1'	-2.09	99.20	101.64
26	5K	37	MIA	C16-C14-C15	-2.08	110.00	114.60
60	2L	47	3AU	O31-C13-O30	-2.08	119.36	124.09
60	2L	47	3AU	C10-N3-C4	2.08	121.24	117.14
1	13	966	M2G	O6-C6-C5	-2.07	120.32	124.37
26	5K	54	5MU	C1'-N1-C2	2.07	121.32	117.57
22	1K	55	PSU	O4'-C1'-C2'	2.07	108.06	105.14
59	1L	39	PSU	O4-C4-C5	-2.06	118.65	124.05
27	1H	1965	5MC	O2-C2-N3	-2.06	118.98	122.33
27	1H	1940	PSU	O2-C2-N1	-2.06	120.52	122.79
27	14	1911	PSU	C6-N1-C2	-2.06	120.58	122.68
27	1H	1934	PSU	O4-C4-C5	-2.05	118.69	124.05
23	2K	39	PSU	O2-C2-N3	-2.05	117.95	121.82
23	2K	47	3AU	O31-C13-C12	2.05	120.36	113.38
27	1H	2618	PSU	C5-C6-N1	-2.04	119.06	122.11
60	2L	55	PSU	C5-C6-N1	-2.03	119.06	122.11
24	3L	32	PSU	O4-C4-C5	-2.03	118.73	124.05
27	1H	2565	OMU	O2-C2-N3	-2.02	117.75	121.50
26	5K	16	H2U	O4-C4-C5	-2.01	117.88	122.17
22	1K	8	4SU	C1'-N1-C2	2.01	121.20	117.57
60	2L	46	7MG	N1-C2-N3	-2.00	119.58	123.32

There are no chirality outliers.

All (134) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	13	527	7MG	O4'-C4'-C5'-O5'
1	13	527	7MG	C3'-C4'-C5'-O5'
1	1G	1207	2MG	O4'-C4'-C5'-O5'
1	1G	1207	2MG	C3'-C4'-C5'-O5'
1	13	1402	4OC	O4'-C4'-C5'-O5'
1	1G	1402	4OC	O4'-C4'-C5'-O5'
1	1G	1518	MA6	C5-C6-N6-C9

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Mol	Chain	Res	Type	Atoms
1	13	1519	MA6	O4'-C4'-C5'-O5'
1	1G	1519	MA6	O4'-C4'-C5'-O5'
22	1K	37	MIA	O4'-C4'-C5'-O5'
22	1K	37	MIA	C3'-C4'-C5'-O5'
22	1K	37	MIA	C12-C13-C14-C15
22	1K	37	MIA	C12-C13-C14-C16
22	1K	55	PSU	C2'-C1'-C5-C6
23	2K	20	H2U	C3'-C4'-C5'-O5'
23	2K	20	H2U	O4'-C1'-N1-C6
23	2K	37	MIA	C3'-C4'-C5'-O5'
23	2K	37	MIA	C12-C13-C14-C15
23	2K	47	3AU	N3-C10-C11-C12
23	2K	47	3AU	C10-C11-C12-C13
23	2K	47	3AU	C10-C11-C12-N40
23	2K	47	3AU	C3'-C4'-C5'-O5'
23	2K	47	3AU	O4'-C4'-C5'-O5'
24	3L	32	PSU	C2'-C1'-C5-C4
24	3K	37	MIA	C5-C6-N6-C12
24	3K	37	MIA	N1-C6-N6-C12
24	3K	37	MIA	N1-C2-S10-C11
24	3K	37	MIA	N3-C2-S10-C11
24	3K	37	MIA	C12-C13-C14-C15
24	3K	37	MIA	C12-C13-C14-C16
24	3L	37	MIA	N1-C2-S10-C11
24	3L	37	MIA	N3-C2-S10-C11
24	3L	37	MIA	C12-C13-C14-C15
24	3L	37	MIA	C12-C13-C14-C16
26	5K	8	4SU	C3'-C4'-C5'-O5'
26	5K	8	4SU	O4'-C4'-C5'-O5'
26	5K	16	H2U	O4'-C4'-C5'-O5'
26	5K	16	H2U	C3'-C4'-C5'-O5'
26	5K	20	H2U	O4'-C4'-C5'-O5'
26	5K	20	H2U	C3'-C4'-C5'-O5'
26	5K	37	MIA	C5-C6-N6-C12
26	5K	37	MIA	N1-C2-S10-C11
26	5K	37	MIA	N3-C2-S10-C11
26	5K	37	MIA	C12-C13-C14-C15
26	5K	54	5MU	C3'-C4'-C5'-O5'
26	5K	54	5MU	O4'-C4'-C5'-O5'
27	1H	1938	5MU	C3'-C4'-C5'-O5'
59	1L	37	MIA	C12-C13-C14-C15
60	2L	37	MIA	C5-C6-N6-C12

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Mol	Chain	Res	Type	Atoms
60	2L	37	MIA	C12-C13-C14-C15
60	2L	37	MIA	C12-C13-C14-C16
60	2L	54	5MU	C3'-C4'-C5'-O5'
60	2L	54	5MU	O4'-C4'-C5'-O5'
60	2L	47	3AU	C2'-C1'-N1-C6
26	5K	20	H2U	C2'-C1'-N1-C2
60	2L	47	3AU	C2'-C1'-N1-C2
26	5K	37	MIA	C4'-C5'-O5'-P
1	1G	1402	4OC	C3'-C4'-C5'-O5'
1	13	1519	MA6	C3'-C4'-C5'-O5'
1	1G	1519	MA6	C3'-C4'-C5'-O5'
22	1K	46	7MG	C3'-C4'-C5'-O5'
22	1K	55	PSU	C3'-C4'-C5'-O5'
26	5K	55	PSU	O4'-C4'-C5'-O5'
27	1H	1938	5MU	O4'-C4'-C5'-O5'
27	14	1962	5MC	O4'-C4'-C5'-O5'
60	2L	8	4SU	O4'-C4'-C5'-O5'
60	2L	47	3AU	C3'-C4'-C5'-O5'
60	2L	47	3AU	O4'-C4'-C5'-O5'
1	1G	1400	5MC	O4'-C4'-C5'-O5'
1	1G	1400	5MC	C3'-C4'-C5'-O5'
1	13	1402	4OC	C3'-C4'-C5'-O5'
22	1K	55	PSU	O4'-C4'-C5'-O5'
23	2K	37	MIA	O4'-C4'-C5'-O5'
24	3K	32	PSU	C3'-C4'-C5'-O5'
26	5K	55	PSU	C3'-C4'-C5'-O5'
27	14	1962	5MC	C3'-C4'-C5'-O5'
26	5K	20	H2U	C2'-C1'-N1-C6
60	2L	37	MIA	N1-C6-N6-C12
24	3K	32	PSU	O4'-C4'-C5'-O5'
26	5K	37	MIA	N1-C6-N6-C12
1	1G	527	7MG	C3'-C4'-C5'-O5'
23	2K	20	H2U	O4'-C4'-C5'-O5'
27	14	2552	OMU	C3'-C4'-C5'-O5'
22	1K	46	7MG	O4'-C4'-C5'-O5'
60	2L	46	7MG	O4'-C4'-C5'-O5'
23	2K	47	3AU	C2'-C1'-N1-C2
23	2K	47	3AU	C2'-C1'-N1-C6
24	3K	37	MIA	O4'-C4'-C5'-O5'
1	13	1519	MA6	C4'-C5'-O5'-P
26	5K	16	H2U	C4'-C5'-O5'-P
26	5K	20	H2U	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
60	2L	47	3AU	C4'-C5'-O5'-P
1	1G	527	7MG	O4'-C4'-C5'-O5'
1	1G	1518	MA6	O4'-C4'-C5'-O5'
24	3L	32	PSU	O4'-C4'-C5'-O5'
1	13	1498	UR3	O4'-C4'-C5'-O5'
1	1G	1518	MA6	C3'-C4'-C5'-O5'
24	3L	32	PSU	C3'-C4'-C5'-O5'
1	1G	1518	MA6	N1-C6-N6-C9
12	3A	89	0TD	CA-CB-CG-OD2
12	3A	89	0TD	CA-CB-CG-OD1
60	2L	47	3AU	C11-C12-C13-O31
1	1G	1518	MA6	C5-C6-N6-C10
23	2K	55	PSU	C4'-C5'-O5'-P
27	14	2552	OMU	C4'-C5'-O5'-P
60	2L	8	4SU	C3'-C4'-C5'-O5'
27	14	1920	OMC	C2'-C1'-N1-C6
60	2L	47	3AU	C11-C12-C13-O30
27	1H	2516	2MA	C4'-C5'-O5'-P
23	2K	55	PSU	C3'-C4'-C5'-O5'
60	2L	46	7MG	C3'-C4'-C5'-O5'
59	1L	37	MIA	N6-C12-C13-C14
27	1H	1962	5MU	C3'-C4'-C5'-O5'
27	1H	1962	5MU	O4'-C4'-C5'-O5'
24	3L	32	PSU	O4'-C1'-C5-C4
22	1K	8	4SU	C4'-C5'-O5'-P
24	3L	32	PSU	C4'-C5'-O5'-P
23	2K	20	H2U	O4'-C1'-N1-C2
12	3A	89	0TD	CA-CB-SB-CSB
27	14	2552	OMU	O4'-C4'-C5'-O5'
12	3I	89	0TD	SB-CB-CG-OD2
27	1H	1938	5MU	C2'-C1'-N1-C2
27	14	1920	OMC	C2'-C1'-N1-C2
27	14	2552	OMU	C2'-C1'-N1-C2
1	13	1498	UR3	C3'-C4'-C5'-O5'
24	3K	37	MIA	C3'-C4'-C5'-O5'
12	3I	89	0TD	CG-CB-SB-CSB
12	3A	89	0TD	CG-CB-SB-CSB
22	1K	55	PSU	O4'-C1'-C5-C6
24	3L	32	PSU	O4'-C1'-C5-C6
26	5K	39	PSU	O4'-C1'-C5-C6
12	3I	89	0TD	SB-CB-CG-OD1
27	14	2503	2MA	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
23	2K	20	H2U	C2'-C1'-N1-C2

There are no ring outliers.

55 monomers are involved in 98 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	2L	54	5MU	4	0
22	1K	37	MIA	1	0
27	14	1939	5MU	3	0
27	1H	1940	PSU	1	0
1	1G	1498	UR3	3	0
59	1L	37	MIA	2	0
24	3K	37	MIA	2	0
27	1H	2565	OMU	3	0
27	14	1915	5MU	1	0
1	13	967	5MC	1	0
1	1G	1400	5MC	1	0
26	5K	54	5MU	1	0
27	14	1911	PSU	1	0
26	5K	16	H2U	4	0
27	1H	1962	5MU	1	0
1	13	1207	2MG	1	0
1	13	1518	MA6	2	0
1	13	1519	MA6	2	0
1	13	1400	5MC	1	0
22	1K	55	PSU	4	0
26	5K	55	PSU	1	0
27	1H	2264	OMG	1	0
22	1K	46	7MG	4	0
24	3L	32	PSU	1	0
27	1H	1943	OMC	2	0
1	1G	1402	4OC	2	0
27	1H	1985	5MC	1	0
27	14	1942	5MC	1	0
12	3A	89	0TD	3	0
27	14	1962	5MC	2	0
1	13	1402	4OC	1	0
1	13	1498	UR3	4	0
22	1K	54	5MU	1	0
27	1H	1938	5MU	1	0
60	2L	8	4SU	2	0
1	1G	967	5MC	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	1G	516	PSU	1	0
23	2K	20	H2U	1	0
27	1H	2516	2MA	3	0
26	5K	37	MIA	1	0
1	1G	1207	2MG	3	0
1	1G	1518	MA6	2	0
27	14	2503	2MA	2	0
59	1L	39	PSU	1	0
1	1G	1519	MA6	4	0
23	2K	54	5MU	2	0
27	14	2552	OMU	4	0
26	5K	20	H2U	1	0
60	2L	32	PSU	1	0
23	2K	46	7MG	1	0
27	14	2251	OMG	2	0
23	2K	55	PSU	1	0
24	3L	37	MIA	2	0
24	3K	39	PSU	1	0
1	13	966	M2G	1	0

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 1376 ligands modelled in this entry, 1374 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
63	SF4	3E	302	4	0,12,12	-	-	-		
63	SF4	32	303	4	0,12,12	-	-	-		

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
63	SF4	3E	302	4	-	-	0/6/5/5
63	SF4	32	303	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
63	3E	302	SF4	3	0
63	32	303	SF4	1	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	13	1504/1522 (98%)	-0.40	5 (0%) 90 81	28, 69, 150, 240	0
1	1G	1501/1522 (98%)	-0.34	7 (0%) 87 75	38, 81, 144, 248	0
2	12	237/256 (92%)	1.04	34 (14%) 7 4	85, 134, 165, 184	0
2	1E	237/256 (92%)	0.51	12 (5%) 34 20	67, 105, 146, 160	0
3	22	206/239 (86%)	0.35	2 (0%) 79 64	81, 109, 137, 144	0
3	2E	205/239 (85%)	0.25	4 (1%) 64 45	62, 81, 122, 145	0
4	32	208/209 (99%)	0.12	5 (2%) 59 41	58, 74, 95, 120	0
4	3E	208/209 (99%)	0.24	0 100 100	58, 77, 99, 108	0
5	42	151/162 (93%)	0.15	0 100 100	67, 84, 102, 133	0
5	4E	151/162 (93%)	0.01	1 (0%) 84 70	50, 67, 90, 113	0
6	52	101/101 (100%)	0.15	1 (0%) 79 64	53, 74, 90, 111	0
6	5E	101/101 (100%)	0.02	0 100 100	50, 73, 89, 106	0
7	62	155/156 (99%)	0.16	4 (2%) 57 38	78, 93, 131, 152	0
7	6E	155/156 (99%)	0.05	3 (1%) 66 47	66, 85, 109, 117	0
8	72	138/138 (100%)	-0.08	0 100 100	64, 85, 96, 105	0
8	7E	138/138 (100%)	-0.12	0 100 100	55, 72, 85, 97	0
9	82	127/128 (99%)	0.18	1 (0%) 82 68	78, 115, 132, 137	0
9	8E	127/128 (99%)	0.16	1 (0%) 82 68	57, 102, 119, 123	0
10	1A	99/105 (94%)	0.53	2 (2%) 64 45	86, 123, 142, 144	0
10	1I	99/105 (94%)	0.64	4 (4%) 43 25	52, 105, 131, 135	0
11	2A	117/129 (90%)	-0.02	1 (0%) 81 66	50, 77, 104, 140	0
11	2I	116/129 (89%)	-0.20	0 100 100	42, 69, 94, 119	0
12	3A	124/132 (93%)	-0.07	0 100 100	49, 69, 95, 149	0
12	3I	124/132 (93%)	-0.24	2 (1%) 70 52	37, 47, 77, 139	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	4A	121/126 (96%)	0.29	5 (4%) 42 24	81, 118, 131, 141	0
13	4I	119/126 (94%)	0.36	5 (4%) 41 24	57, 92, 109, 118	0
14	5A	60/61 (98%)	0.02	0 100 100	83, 97, 121, 126	0
14	5I	60/61 (98%)	-0.19	0 100 100	61, 71, 85, 99	0
15	6A	88/89 (98%)	-0.26	0 100 100	53, 75, 94, 100	0
15	6I	88/89 (98%)	-0.14	1 (1%) 77 61	44, 66, 90, 98	0
16	7A	84/88 (95%)	0.01	0 100 100	59, 68, 86, 124	0
16	7I	83/88 (94%)	0.09	1 (1%) 76 60	63, 76, 99, 127	0
17	8A	100/105 (95%)	-0.14	1 (1%) 79 64	57, 77, 94, 110	0
17	8I	100/105 (95%)	-0.24	1 (1%) 79 64	53, 69, 81, 87	0
18	9A	70/88 (79%)	0.08	1 (1%) 73 56	60, 75, 104, 126	0
18	9I	71/88 (80%)	-0.00	1 (1%) 73 56	54, 69, 110, 127	0
19	AA	86/93 (92%)	0.58	5 (5%) 30 18	105, 131, 158, 170	0
19	AI	84/93 (90%)	0.56	5 (5%) 29 17	72, 96, 114, 119	0
20	BA	103/106 (97%)	0.02	2 (1%) 66 47	65, 84, 109, 116	0
20	BI	101/106 (95%)	-0.17	0 100 100	65, 83, 111, 123	0
21	1B	25/27 (92%)	-0.04	0 100 100	94, 109, 123, 127	0
21	1F	24/27 (88%)	-0.09	0 100 100	74, 85, 99, 110	0
22	1K	69/76 (90%)	0.52	6 (8%) 17 10	51, 163, 204, 219	0
23	2K	66/76 (86%)	-0.53	0 100 100	33, 59, 81, 131	0
24	3K	73/76 (96%)	0.73	3 (4%) 42 24	35, 200, 222, 230	0
24	3L	73/76 (96%)	0.71	5 (6%) 25 14	49, 197, 229, 238	0
25	4K	30/60 (50%)	0.29	0 100 100	43, 130, 219, 232	0
25	4L	30/60 (50%)	0.24	0 100 100	61, 148, 218, 223	0
26	5K	68/76 (89%)	0.94	6 (8%) 17 10	80, 154, 180, 197	0
27	14	2865/2917 (98%)	-0.38	22 (0%) 82 68	27, 59, 194, 252	0
27	1H	2879/2917 (98%)	-0.64	27 (0%) 81 66	13, 37, 171, 243	0
28	16	122/122 (100%)	-0.79	0 100 100	37, 55, 74, 146	0
28	1J	121/122 (99%)	-0.27	1 (0%) 82 68	65, 90, 118, 175	0
29	71	135/229 (58%)	1.07	18 (13%) 8 5	113, 202, 228, 236	0
29	79	135/229 (58%)	0.99	13 (9%) 15 9	131, 194, 215, 220	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
30	11	272/276 (98%)	-0.51	0 100 100	14, 32, 47, 68	0
30	19	272/276 (98%)	-0.28	2 (0%) 84 70	25, 45, 61, 73	0
31	21	204/206 (99%)	-0.44	0 100 100	16, 46, 74, 97	0
31	29	204/206 (99%)	-0.08	0 100 100	38, 72, 98, 111	0
32	31	202/210 (96%)	-0.39	1 (0%) 87 75	13, 42, 72, 99	0
32	39	202/210 (96%)	0.32	8 (3%) 43 25	30, 64, 95, 109	0
33	41	181/182 (99%)	0.08	4 (2%) 62 42	50, 66, 95, 111	0
33	49	181/182 (99%)	0.20	1 (0%) 85 72	82, 99, 124, 132	0
34	51	174/180 (96%)	0.32	6 (3%) 48 28	53, 76, 96, 117	0
34	59	173/180 (96%)	0.81	15 (8%) 17 10	135, 183, 220, 240	0
35	61	145/148 (97%)	0.51	7 (4%) 36 21	43, 96, 112, 126	0
35	69	146/148 (98%)	0.58	9 (6%) 28 17	52, 93, 116, 129	0
36	38	84/173 (48%)	1.46	20 (23%) 2 1	116, 159, 172, 180	0
37	15	138/140 (98%)	0.22	2 (1%) 73 56	51, 84, 109, 119	0
37	58	138/140 (98%)	-0.08	5 (3%) 46 27	29, 46, 80, 92	0
38	25	122/122 (100%)	-0.03	0 100 100	43, 65, 83, 95	0
38	68	122/122 (100%)	-0.56	0 100 100	21, 40, 54, 64	0
39	35	150/150 (100%)	0.30	5 (3%) 49 30	35, 77, 106, 122	0
39	78	150/150 (100%)	-0.20	2 (1%) 74 58	19, 46, 81, 121	0
40	45	141/141 (100%)	0.03	2 (1%) 73 56	47, 85, 114, 163	0
40	88	141/141 (100%)	-0.16	3 (2%) 63 44	25, 44, 67, 91	5 (3%)
41	55	118/118 (100%)	-0.37	0 100 100	38, 57, 78, 93	0
41	98	118/118 (100%)	-0.46	0 100 100	24, 42, 61, 73	0
42	65	111/112 (99%)	0.39	2 (1%) 67 49	63, 89, 122, 132	0
42	A8	112/112 (100%)	-0.01	3 (2%) 56 36	41, 55, 75, 94	0
43	75	137/146 (93%)	0.25	5 (3%) 46 27	57, 73, 145, 164	0
43	B8	137/146 (93%)	-0.27	0 100 100	32, 53, 104, 138	0
44	85	117/118 (99%)	0.32	5 (4%) 40 24	41, 78, 120, 134	0
44	C8	117/118 (99%)	-0.35	3 (2%) 57 38	20, 36, 63, 93	0
45	95	101/101 (100%)	0.92	9 (8%) 17 10	41, 94, 109, 125	0
45	D8	101/101 (100%)	-0.01	2 (1%) 64 45	23, 57, 73, 89	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
46	A5	113/113 (100%)	0.10	4 (3%) 47 28	37, 50, 93, 124	0
46	E8	113/113 (100%)	-0.31	2 (1%) 67 49	25, 35, 63, 104	0
47	B5	94/96 (97%)	-0.03	2 (2%) 63 44	40, 58, 79, 106	0
47	F8	95/96 (98%)	-0.36	0 100 100	23, 36, 54, 74	0
48	C5	107/110 (97%)	1.27	25 (23%) 2 1	61, 81, 130, 140	0
48	G8	109/110 (99%)	0.46	9 (8%) 19 10	44, 71, 118, 137	0
49	D5	176/206 (85%)	0.48	1 (0%) 85 72	89, 130, 206, 210	0
49	H8	179/206 (86%)	0.57	11 (6%) 28 17	47, 85, 160, 171	0
50	E5	84/85 (98%)	-0.08	2 (2%) 59 41	44, 65, 88, 110	0
50	I8	84/85 (98%)	-0.32	0 100 100	21, 38, 63, 81	0
51	F5	97/98 (98%)	0.36	10 (10%) 13 8	37, 57, 98, 111	0
51	J8	97/98 (98%)	-0.12	4 (4%) 42 24	20, 41, 88, 114	0
52	G5	71/72 (98%)	0.29	3 (4%) 41 24	49, 69, 96, 122	0
52	K8	72/72 (100%)	-0.00	4 (5%) 31 19	30, 47, 64, 82	0
53	H5	59/60 (98%)	0.21	2 (3%) 48 28	57, 76, 119, 122	0
53	L8	59/60 (98%)	-0.43	0 100 100	30, 44, 74, 93	0
54	I5	71/71 (100%)	0.73	4 (5%) 31 19	104, 142, 169, 174	0
54	M8	71/71 (100%)	1.17	13 (18%) 4 2	72, 115, 152, 158	0
55	J5	56/60 (93%)	0.29	3 (5%) 32 19	35, 63, 121, 129	0
55	N8	56/60 (93%)	-0.03	3 (5%) 32 19	18, 47, 108, 114	0
56	K5	45/54 (83%)	1.32	7 (15%) 6 3	103, 136, 163, 169	0
56	O8	45/54 (83%)	1.33	13 (28%) 1 1	73, 103, 134, 144	0
57	L5	49/49 (100%)	-0.31	1 (2%) 64 45	28, 35, 77, 88	0
57	P8	49/49 (100%)	-0.65	0 100 100	15, 20, 50, 71	0
58	M5	64/65 (98%)	-0.17	0 100 100	41, 51, 76, 94	0
58	Q8	64/65 (98%)	-0.62	0 100 100	21, 31, 41, 62	0
59	1L	72/76 (94%)	0.08	2 (2%) 55 35	80, 196, 235, 239	0
60	2L	67/76 (88%)	-0.48	0 100 100	52, 82, 113, 145	0
All	All	21491/22459 (95%)	-0.11	464 (2%) 62 42	13, 69, 169, 252	5 (0%)

All (464) RSRZ outliers are listed below:



Mol	Chain	Res	Type	RSRZ
27	14	2797	U	6.5
32	39	133	ASN	6.4
45	95	36	PRO	6.1
27	14	2900	A	5.1
48	C5	61	ILE	5.0
40	88	22[A]	LYS	4.8
4	32	24	GLU	4.8
2	12	32	ILE	4.8
36	38	33	PRO	4.8
27	14	2901	C	4.7
27	14	2798	C	4.6
37	58	127	ASP	4.5
48	C5	108	THR	4.5
40	88	21[A]	THR	4.5
13	4A	6	GLY	4.4
48	C5	59	GLY	4.4
37	58	134	ARG	4.4
37	58	138	LEU	4.4
27	1H	158	U	4.4
1	13	345	C	4.4
52	G5	71	ASN	4.4
30	19	237	GLU	4.2
48	C5	48	ALA	4.2
22	1K	76	A	4.2
2	12	15	VAL	4.2
51	F5	98	LEU	4.2
48	C5	49	VAL	4.1
54	M8	70	GLY	4.1
54	M8	66	SER	4.1
51	J8	98	LEU	4.0
27	1H	1110	G	4.0
48	C5	54	LYS	3.9
48	C5	47	LYS	3.9
13	4A	7	VAL	3.9
29	79	176	GLY	3.9
49	H8	173	ALA	3.9
27	14	2899	G	3.8
33	41	80	PHE	3.8
54	M8	22	ILE	3.8
56	K5	26	ASN	3.8
36	38	75	GLN	3.8
15	6I	89	GLY	3.8
49	H8	172	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
56	K5	36	LEU	3.7
10	1I	98	ILE	3.7
13	4A	8	GLU	3.7
48	G8	104	GLY	3.7
35	61	116	LEU	3.7
59	1L	75	C	3.6
2	1E	15	VAL	3.6
29	71	49	ILE	3.6
44	C8	117	GLN	3.6
55	J5	53	ALA	3.6
45	95	35	LEU	3.6
51	J8	97	LEU	3.6
56	O8	34	LEU	3.6
45	95	45	THR	3.6
29	71	68	LEU	3.6
55	N8	57	VAL	3.6
19	AA	87	ALA	3.6
36	38	63	LEU	3.6
48	C5	106	LEU	3.6
34	59	131	VAL	3.6
51	F5	96	LYS	3.6
27	1H	1117	A	3.5
48	C5	62	GLU	3.5
34	59	26	VAL	3.4
32	39	131	GLY	3.4
36	38	76	GLY	3.4
44	85	91	ASP	3.4
34	59	24	VAL	3.4
29	71	189	ILE	3.4
29	79	209	LEU	3.4
46	A5	94	ASP	3.4
2	12	214	ILE	3.4
2	12	44	LEU	3.4
27	14	2799	A	3.4
19	AI	82	GLY	3.4
27	1H	1	G	3.4
2	12	37	ASN	3.4
36	38	74	LEU	3.4
27	1H	2911	C	3.4
28	1J	88	C	3.4
54	M8	63	TYR	3.4
27	1H	680	A	3.4

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Mol	Chain	Res	Type	RSRZ
35	61	139	GLN	3.3
54	M8	31	ILE	3.3
2	12	71	VAL	3.3
19	AA	42	PRO	3.3
34	59	105	LEU	3.3
46	E8	112	GLY	3.3
48	C5	55	TYR	3.3
48	C5	50	ARG	3.3
56	K5	52	VAL	3.3
26	5K	76	A	3.2
44	C8	118	GLY	3.2
45	95	71	LEU	3.2
46	E8	113	LYS	3.2
56	O8	22	ALA	3.2
35	69	146	ALA	3.2
3	22	15	THR	3.2
34	59	148	ILE	3.2
48	C5	51	VAL	3.2
2	12	163	PHE	3.2
39	35	46	LYS	3.2
20	BA	55	ILE	3.2
56	O8	9	LEU	3.2
12	3I	126	ALA	3.1
27	14	1062	G	3.1
2	12	9	GLU	3.1
51	F5	77	ALA	3.1
49	H8	117	LEU	3.1
36	38	66	LEU	3.1
36	38	59	ILE	3.1
48	C5	91	GLU	3.1
2	1E	232	PRO	3.1
46	A5	111	HIS	3.1
22	1K	1	G	3.1
13	4I	2	ALA	3.1
2	12	231	GLU	3.0
4	32	86	LYS	3.0
56	O8	23	THR	3.0
29	79	14	VAL	3.0
34	59	107	VAL	3.0
54	M8	59	PHE	3.0
48	C5	60	PHE	3.0
2	1E	237	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
10	1I	100	THR	3.0
29	71	191	ALA	3.0
2	12	38	GLY	3.0
29	71	58	VAL	3.0
46	A5	92	ARG	3.0
36	38	32	LEU	3.0
36	38	9	LEU	2.9
7	62	153	HIS	2.9
36	38	71	LEU	2.9
2	12	102	LEU	2.9
48	C5	22	GLY	2.9
48	G8	110	GLU	2.9
51	F5	97	LEU	2.9
55	J5	57	VAL	2.9
4	32	37	PRO	2.9
48	C5	53	PRO	2.9
33	49	152	LEU	2.9
32	31	131	GLY	2.9
26	5K	43	C	2.9
56	O8	44	ARG	2.8
2	12	47	THR	2.8
48	C5	81	LYS	2.8
2	12	14	GLY	2.8
51	F5	2	SER	2.8
1	1G	1476	G	2.8
36	38	104	ILE	2.8
2	1E	11	LEU	2.8
7	62	80	VAL	2.8
49	H8	175	VAL	2.8
13	4I	8	GLU	2.8
11	2A	11	LYS	2.8
29	71	175	VAL	2.8
27	1H	160	U	2.8
19	AI	61	TYR	2.8
43	75	137	LYS	2.8
51	F5	85	LEU	2.8
27	14	2553	G	2.8
19	AI	42	PRO	2.7
47	B5	68	ARG	2.7
34	51	119	GLU	2.7
10	1A	10	GLY	2.7
29	79	19	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
35	69	79	ILE	2.7
49	H8	107	THR	2.7
27	1H	2844	G	2.7
27	1H	2909	G	2.7
42	65	2	ALA	2.7
29	71	47	LEU	2.7
48	G8	107	ASP	2.7
34	59	45	VAL	2.7
27	1H	681	A	2.7
48	C5	75	ILE	2.7
36	38	10	LEU	2.7
48	G8	106	LEU	2.7
54	I5	9	LEU	2.7
48	G8	91	GLU	2.7
42	65	108	GLY	2.7
34	59	106	THR	2.7
37	15	129	PRO	2.7
29	79	68	LEU	2.7
54	I5	63	TYR	2.7
17	8A	101	ARG	2.7
34	51	32	GLU	2.7
36	38	100	ASN	2.7
2	12	228	GLY	2.7
43	75	40	THR	2.7
36	38	126	ALA	2.7
49	H8	113	ALA	2.7
59	1L	76	A	2.7
3	2E	193	TYR	2.7
7	6E	79	ARG	2.7
46	A5	113	LYS	2.6
39	35	148	LEU	2.6
3	2E	75	VAL	2.6
51	F5	21	ARG	2.6
1	13	344	A	2.6
26	5K	73	A	2.6
7	6E	139	GLU	2.6
52	G5	34	GLU	2.6
36	38	111	LEU	2.6
48	C5	56	PRO	2.6
56	O8	42	TRP	2.6
29	71	12	GLU	2.6
27	14	1	G	2.6

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Mol	Chain	Res	Type	RSRZ
54	M8	42	PHE	2.6
29	71	9	ALA	2.6
36	38	107	VAL	2.6
48	C5	92	ASN	2.6
10	1I	22	LYS	2.6
56	K5	53	LYS	2.6
1	13	784	C	2.6
1	1G	81	G	2.6
3	2E	74	GLY	2.6
48	C5	58	GLY	2.6
1	13	85	U	2.6
48	C5	63	LYS	2.6
54	M8	10	VAL	2.6
45	95	32	THR	2.6
2	12	17	PHE	2.5
39	78	142	GLY	2.5
39	78	150	ALA	2.5
29	71	202	GLU	2.5
12	3I	58	THR	2.5
2	12	42	ILE	2.5
17	8I	98	LEU	2.5
42	A8	110	LEU	2.5
51	F5	80	LEU	2.5
34	51	101	ARG	2.5
43	75	135	ALA	2.5
2	1E	234	PRO	2.5
2	1E	229	VAL	2.5
2	12	239	VAL	2.5
27	1H	936	C	2.5
27	1H	1141	U	2.5
1	1G	887	G	2.5
1	1G	1482	G	2.5
24	3K	6	G	2.5
29	71	64	LEU	2.5
35	61	140	LEU	2.5
35	69	72	LEU	2.5
35	61	115	ALA	2.5
48	G8	54	LYS	2.5
2	12	4	GLU	2.5
29	79	12	GLU	2.5
27	1H	1120	A	2.5
39	35	18	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
51	J8	96	LYS	2.5
52	K8	15	LYS	2.5
1	1G	413	G	2.5
2	12	167	PRO	2.5
19	AI	8	GLY	2.5
44	C8	90	VAL	2.5
40	45	105	GLU	2.5
48	G8	40	GLU	2.5
2	12	5	ILE	2.4
24	3L	70	G	2.4
29	79	13	LYS	2.4
32	39	8	GLN	2.4
48	G8	55	TYR	2.4
4	32	88	VAL	2.4
32	39	6	VAL	2.4
34	59	115	VAL	2.4
27	1H	697	C	2.4
29	71	19	ILE	2.4
33	41	52	ILE	2.4
5	4E	9	LYS	2.4
2	1E	13	ALA	2.4
24	3K	34	G	2.4
24	3L	1	G	2.4
29	79	171	ILE	2.4
56	K5	9	LEU	2.4
49	H8	60	GLU	2.4
4	32	87	GLY	2.4
7	62	156	TRP	2.4
29	71	174	PRO	2.4
48	C5	23	ARG	2.4
49	H8	144	LEU	2.4
33	41	35	GLU	2.4
43	75	36	GLU	2.4
22	1K	73	A	2.4
18	9I	20	ALA	2.4
19	AA	89	ALA	2.4
27	14	2584	U	2.4
2	1E	10	LEU	2.4
2	1E	238	LEU	2.4
55	N8	53	ALA	2.4
24	3L	6	G	2.4
26	5K	53	G	2.4

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Mol	Chain	Res	Type	RSRZ
29	71	209	LEU	2.3
18	9A	19	LYS	2.3
54	M8	69	LYS	2.3
34	59	34	GLU	2.3
36	38	11	ALA	2.3
53	H5	58	VAL	2.3
2	12	6	THR	2.3
33	41	3	LEU	2.3
56	K5	11	LEU	2.3
45	95	99	ILE	2.3
56	K5	33	LYS	2.3
2	12	236	TYR	2.3
27	1H	5	A	2.3
27	1H	2616	G	2.3
43	75	106	SER	2.3
35	61	117	GLU	2.3
27	14	654(Q)	C	2.3
36	38	114	GLY	2.3
19	AA	88	LYS	2.3
45	D8	45	THR	2.3
54	I5	22	ILE	2.3
53	H5	2	PRO	2.3
2	12	170	GLU	2.3
35	69	11	ASN	2.3
29	71	173	ALA	2.3
49	D5	56	VAL	2.3
9	82	56	LEU	2.3
29	79	28	LEU	2.3
56	O8	36	LEU	2.3
10	1A	82	ILE	2.3
13	4A	84	ILE	2.3
34	59	117	PRO	2.3
40	45	104	PHE	2.3
54	M8	67	TYR	2.3
55	N8	52	TYR	2.3
29	79	9	ALA	2.3
56	O8	20	ASN	2.3
19	AI	83	HIS	2.3
27	1H	701	A	2.3
32	39	14	PRO	2.3
32	39	132	VAL	2.3
34	51	175	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
44	85	113	ALA	2.3
2	12	51	LEU	2.3
45	D8	98	GLU	2.3
52	K8	71	ASN	2.2
1	1G	412	A	2.2
10	1I	90	LEU	2.2
34	51	98	LEU	2.2
34	59	103	LEU	2.2
27	14	4	C	2.2
13	4I	92	HIS	2.2
37	58	130	HIS	2.2
27	1H	159	U	2.2
27	14	3	U	2.2
56	O8	17	LYS	2.2
49	H8	116	VAL	2.2
19	AA	82	GLY	2.2
7	6E	90	GLU	2.2
54	M8	40	HIS	2.2
22	1K	17	C	2.2
27	1H	2811	C	2.2
35	61	110	ASP	2.2
48	G8	50	ARG	2.2
24	3K	5	G	2.2
27	14	2795	G	2.2
36	38	108	LYS	2.2
37	58	131	GLN	2.2
39	35	110	TYR	2.2
34	59	113	VAL	2.2
7	62	152	ALA	2.2
51	J8	77	ALA	2.2
3	2E	80	GLY	2.2
54	M8	54	GLY	2.2
13	4I	9	ILE	2.2
35	69	122	GLU	2.2
35	61	132	PRO	2.2
32	39	12	LEU	2.2
50	E5	7	LEU	2.2
26	5K	34	G	2.2
24	3L	45	U	2.2
27	1H	272	U	2.2
27	14	162	U	2.2
29	71	192	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
16	7I	48	TRP	2.2
2	12	190	THR	2.2
49	H8	170	THR	2.2
2	12	237	ALA	2.1
39	35	31	ALA	2.1
55	J5	54	GLY	2.1
27	1H	1862	C	2.1
27	14	1672	C	2.1
45	95	93	GLU	2.1
2	12	238	LEU	2.1
35	69	140	LEU	2.1
35	69	83	ALA	2.1
27	1H	2813	A	2.1
52	K8	70	GLN	2.1
13	4I	85	GLY	2.1
30	19	236	GLY	2.1
48	C5	34	LYS	2.1
56	O8	43	CYS	2.1
56	O8	45	LYS	2.1
6	52	42	GLU	2.1
42	A8	43	GLU	2.1
22	1K	3	C	2.1
27	1H	698	C	2.1
45	95	16	PRO	2.1
2	1E	138	LEU	2.1
49	H8	163	LEU	2.1
35	69	144	VAL	2.1
27	14	2113	U	2.1
29	79	25	ALA	2.1
42	A8	2	ALA	2.1
27	14	363	G	2.1
9	8E	127	LYS	2.1
51	F5	3	LYS	2.1
56	O8	27	LYS	2.1
52	G5	72	ALA	2.1
20	BA	101	GLY	2.1
54	I5	54	GLY	2.1
2	1E	95	GLN	2.1
2	12	105	PHE	2.1
2	12	11	LEU	2.1
2	12	215	LEU	2.1
27	1H	2164	G	2.1

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Mol	Chain	Res	Type	RSRZ
27	1H	943	A	2.1
34	51	34	GLU	2.1
34	59	150	ALA	2.1
47	B5	91	ALA	2.1
52	K8	72	ALA	2.1
13	4A	4	ILE	2.1
44	85	88	ILE	2.1
29	79	34	THR	2.1
40	88	24[A]	GLY	2.1
1	13	805	C	2.1
27	14	898	C	2.1
36	38	61	LEU	2.1
44	85	109	LEU	2.1
56	O8	24	GLU	2.1
2	12	34	ALA	2.0
2	12	208	ILE	2.0
50	E5	85	ALA	2.0
26	5K	1	G	2.0
27	14	1091	G	2.0
35	69	84	GLY	2.0
29	79	11	LEU	2.0
2	12	48	MET	2.0
27	1H	1144	U	2.0
29	71	62	VAL	2.0
34	59	133	VAL	2.0
57	L5	46	VAL	2.0
44	85	84	LYS	2.0
54	M8	71	ARG	2.0
3	22	80	GLY	2.0
2	1E	230	VAL	2.0
24	3L	71	G	2.0
27	1H	1952	G	2.0
2	12	202	PRO	2.0
29	71	194	ARG	2.0
37	15	134	ARG	2.0
1	1G	1425	U	2.0
27	14	405	U	2.0
27	14	2897	U	2.0
32	39	26	ALA	2.0
45	95	31	ALA	2.0
48	C5	65	ALA	2.0
22	1K	75	C	2.0

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Mol	Chain	Res	Type	RSRZ
51	F5	84	GLY	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
22	4SU	1K	8	20/21	0.61	0.12	181,183,191,193	0
26	H2U	5K	20	20/21	0.66	0.14	119,139,156,163	0
26	H2U	5K	16	20/21	0.67	0.15	121,137,151,153	0
24	PSU	3L	32	20/21	0.71	0.14	116,119,126,129	0
26	PSU	5K	55	20/21	0.71	0.11	115,127,149,152	0
59	5MU	1L	54	21/22	0.71	0.10	139,160,167,169	0
60	H2U	2L	16	20/21	0.72	0.10	100,112,131,139	0
26	PSU	5K	39	20/21	0.73	0.14	116,146,158,158	0
22	7MG	1K	46	24/25	0.74	0.11	180,185,193,198	0
26	PSU	5K	32	20/21	0.75	0.14	152,165,171,173	0
60	3AU	2L	47	27/28	0.76	0.11	95,125,138,141	0
60	5MU	2L	54	21/22	0.76	0.12	75,85,99,108	0
26	4SU	5K	8	20/21	0.77	0.13	147,151,156,157	0
22	PSU	1K	55	20/21	0.77	0.10	123,134,149,150	0
60	7MG	2L	46	24/25	0.81	0.09	89,104,121,126	0
26	5MU	5K	54	21/22	0.81	0.12	129,137,141,145	0
24	PSU	3K	32	20/21	0.81	0.13	111,117,123,125	0
23	H2U	2K	16	20/21	0.82	0.10	67,90,114,126	0
23	H2U	2K	20	20/21	0.82	0.11	88,97,110,111	0
24	PSU	3K	39	20/21	0.82	0.15	100,112,118,119	0
60	PSU	2L	55	20/21	0.83	0.08	77,82,88,89	0
22	5MU	1K	54	21/22	0.84	0.11	94,115,123,126	0
24	MIA	3K	37	29/30	0.84	0.16	95,112,116,117	0
23	PSU	2K	55	20/21	0.85	0.11	60,67,80,86	0
1	2MG	1G	1207	24/25	0.85	0.09	91,101,104,108	0
59	PSU	1L	32	20/21	0.85	0.09	96,104,118,121	0
23	3AU	2K	47	27/28	0.86	0.12	62,95,113,114	0
24	PSU	3L	39	20/21	0.88	0.10	97,111,120,122	0
12	0TD	3I	89	10/11	0.89	0.11	44,46,56,71	0
24	MIA	3L	37	29/30	0.90	0.15	81,113,120,124	0
26	MIA	5K	37	29/30	0.90	0.14	89,114,142,145	0
23	7MG	2K	46	24/25	0.90	0.10	56,62,98,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
27	PSU	1H	1940	20/21	0.91	0.14	35,44,54,54	0
12	0TD	3A	89	10/11	0.91	0.09	65,69,72,77	0
59	PSU	1L	39	20/21	0.91	0.07	77,98,110,110	0
27	5MU	14	1915	21/22	0.91	0.10	63,72,80,88	0
60	4SU	2L	8	20/21	0.91	0.08	70,83,90,90	0
59	MIA	1L	37	29/30	0.92	0.08	68,80,95,96	0
22	PSU	1K	32	20/21	0.92	0.08	65,70,79,85	0
1	5MC	1G	1407	21/22	0.92	0.14	43,49,53,60	0
1	5MC	13	1400	21/22	0.93	0.14	38,45,51,56	0
23	5MU	2K	54	21/22	0.93	0.07	64,68,76,78	0
1	5MC	1G	1404	21/22	0.93	0.11	44,49,55,59	0
27	PSU	14	1911	20/21	0.93	0.08	51,59,64,64	0
60	PSU	2L	32	20/21	0.93	0.10	68,73,80,80	0
60	PSU	2L	39	20/21	0.93	0.07	59,68,72,72	0
1	7MG	13	527	24/25	0.93	0.10	42,50,56,63	0
1	7MG	1G	527	24/25	0.93	0.10	60,65,70,73	0
1	PSU	1G	516	20/21	0.93	0.07	71,76,78,79	0
22	PSU	1K	39	20/21	0.93	0.09	50,67,75,75	0
27	5MC	14	1942	21/22	0.94	0.11	47,57,61,71	0
27	5MC	14	1962	21/22	0.94	0.12	38,45,53,58	0
27	OMG	14	2251	24/25	0.94	0.09	35,40,44,46	0
60	MIA	2L	37	29/30	0.94	0.08	64,69,80,85	0
27	OMU	14	2552	21/22	0.94	0.12	37,42,47,58	0
1	5MC	13	1407	21/22	0.94	0.13	29,32,37,40	0
1	M2G	1G	966	25/26	0.94	0.09	59,67,76,77	0
27	PSU	1H	1934	20/21	0.94	0.10	36,42,47,51	0
27	PSU	14	1917	20/21	0.94	0.07	53,60,67,70	0
1	5MC	13	967	21/22	0.95	0.09	43,50,56,59	0
1	5MC	1G	967	21/22	0.95	0.07	61,68,76,86	0
27	OMU	1H	2565	21/22	0.95	0.10	19,22,26,36	0
1	M2G	13	966	25/26	0.95	0.11	40,46,57,61	0
27	PSU	14	2605	20/21	0.95	0.14	29,33,41,51	0
1	UR3	13	1498	21/22	0.95	0.13	29,33,42,43	0
1	UR3	1G	1498	21/22	0.95	0.10	40,49,53,55	0
23	PSU	2K	32	20/21	0.95	0.07	45,50,57,58	0
27	5MU	1H	1938	21/22	0.95	0.07	45,48,54,64	0
1	MA6	1G	1519	24/25	0.95	0.14	44,54,57,58	0
1	PSU	13	516	20/21	0.95	0.07	50,55,58,60	0
1	5MC	1G	1400	21/22	0.95	0.08	52,64,70,72	0
27	OMC	1H	1943	21/22	0.95	0.10	34,37,43,46	0
27	OMC	14	1920	21/22	0.95	0.07	54,60,62,64	0
27	5MU	1H	1962	21/22	0.95	0.10	20,23,30,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
27	5MC	1H	1965	21/22	0.95	0.11	27,33,36,42	0
1	4OC	1G	1402	22/23	0.95	0.07	46,57,61,71	0
27	5MC	1H	1985	21/22	0.95	0.09	24,30,34,37	0
1	MA6	1G	1518	24/25	0.96	0.10	52,57,60,62	0
1	MA6	13	1519	24/25	0.96	0.13	28,31,33,33	0
27	5MU	14	1939	21/22	0.96	0.10	34,40,44,51	0
23	PSU	2K	39	20/21	0.96	0.09	39,48,57,59	0
1	5MC	13	1404	21/22	0.96	0.12	26,29,41,43	0
1	4OC	13	1402	22/23	0.96	0.12	29,37,42,46	0
23	4SU	2K	8	20/21	0.96	0.07	42,48,57,62	0
1	2MG	13	1207	24/25	0.96	0.07	57,64,68,69	0
27	OMG	1H	2264	24/25	0.97	0.07	19,23,25,26	0
1	MA6	13	1518	24/25	0.97	0.13	27,32,35,38	0
27	2MA	1H	2516	23/24	0.97	0.08	13,17,24,26	0
27	2MA	14	2503	23/24	0.97	0.08	28,32,36,41	0
22	MIA	1K	37	29/30	0.97	0.09	43,49,58,62	0
23	MIA	2K	37	29/30	0.97	0.07	41,47,63,67	0
27	PSU	1H	2618	20/21	0.97	0.09	17,19,24,24	0

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3343[A]	1/1	-0.05	0.61	55,55,55,55	1
62	MG	1H	3343[B]	1/1	-0.05	0.61	68,68,68,68	1
62	MG	1G	1674	1/1	0.46	0.30	122,122,122,122	0
62	MG	1G	1683[A]	1/1	0.55	0.42	51,51,51,51	1
62	MG	1G	1683[B]	1/1	0.55	0.42	45,45,45,45	1
61	K	14	3053	1/1	0.56	0.19	102,102,102,102	0
62	MG	13	1709[B]	1/1	0.59	0.44	45,45,45,45	1
62	MG	13	1709[A]	1/1	0.59	0.44	40,40,40,40	1
62	MG	14	3175[A]	1/1	0.59	0.44	39,39,39,39	1
62	MG	14	3175[B]	1/1	0.59	0.44	36,36,36,36	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3260	1/1	0.62	0.33	84,84,84,84	0
61	K	49	201	1/1	0.65	0.13	108,108,108,108	0
61	K	13	1611	1/1	0.70	0.19	114,114,114,114	0
61	K	1H	3040[B]	1/1	0.71	0.26	43,43,43,43	1
62	MG	13	1674	1/1	0.71	0.21	75,75,75,75	0
61	K	32	301	1/1	0.71	0.15	104,104,104,104	0
61	K	1H	3040[A]	1/1	0.71	0.26	46,46,46,46	1
61	K	1H	3142	1/1	0.72	0.17	78,78,78,78	0
62	MG	13	1698	1/1	0.72	0.29	84,84,84,84	0
61	K	14	3012	1/1	0.72	0.18	117,117,117,117	0
61	K	1G	1601	1/1	0.73	0.22	115,115,115,115	0
62	MG	1G	1690	1/1	0.74	0.32	74,74,74,74	0
61	K	14	3004	1/1	0.74	0.12	81,81,81,81	0
62	MG	1G	1661	1/1	0.75	0.31	79,79,79,79	0
62	MG	13	1721	1/1	0.76	0.20	99,99,99,99	0
62	MG	14	3136	1/1	0.76	0.23	59,59,59,59	0
61	K	14	3067	1/1	0.76	0.17	70,70,70,70	0
61	K	13	1620	1/1	0.76	0.12	87,87,87,87	0
62	MG	16	210	1/1	0.76	0.23	62,62,62,62	0
62	MG	14	3257	1/1	0.77	0.32	65,65,65,65	0
62	MG	14	3249	1/1	0.77	0.19	62,62,62,62	0
62	MG	1H	3363	1/1	0.78	0.14	56,56,56,56	0
61	K	BI	201	1/1	0.78	0.13	108,108,108,108	0
61	K	13	1648	1/1	0.78	0.10	71,71,71,71	0
62	MG	14	3124	1/1	0.78	0.13	58,58,58,58	0
62	MG	13	1684	1/1	0.78	0.28	73,73,73,73	0
62	MG	14	3125	1/1	0.79	0.23	60,60,60,60	0
61	K	14	3013	1/1	0.79	0.21	84,84,84,84	0
61	K	1H	3027	1/1	0.79	0.09	63,63,63,63	0
61	K	14	3062	1/1	0.79	0.14	76,76,76,76	0
62	MG	14	3195	1/1	0.79	0.25	53,53,53,53	0
62	MG	14	3244	1/1	0.79	0.17	64,64,64,64	0
62	MG	1G	1689	1/1	0.79	0.16	57,57,57,57	0
61	K	5E	201	1/1	0.79	0.12	76,76,76,76	0
62	MG	1G	1668	1/1	0.79	0.24	69,69,69,69	0
62	MG	1H	3176[B]	1/1	0.80	0.26	20,20,20,20	1
61	K	14	3088	1/1	0.80	0.14	98,98,98,98	0
61	K	39	302	1/1	0.80	0.09	74,74,74,74	0
61	K	1G	1632	1/1	0.80	0.09	78,78,78,78	0
62	MG	1H	3176[A]	1/1	0.80	0.26	21,21,21,21	1
62	MG	1G	1688	1/1	0.80	0.17	65,65,65,65	0
61	K	13	1608	1/1	0.81	0.11	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	13	1606	1/1	0.81	0.20	57,57,57,57	0
61	K	1G	1631	1/1	0.81	0.17	86,86,86,86	0
61	K	2K	103	1/1	0.81	0.09	79,79,79,79	0
62	MG	13	1720	1/1	0.81	0.25	64,64,64,64	0
61	K	1H	3131	1/1	0.81	0.11	63,63,63,63	0
61	K	14	3092	1/1	0.82	0.16	106,106,106,106	0
62	MG	14	3228	1/1	0.82	0.16	58,58,58,58	0
62	MG	O8	101	1/1	0.82	0.23	60,60,60,60	0
61	K	1G	1622	1/1	0.82	0.09	74,74,74,74	0
62	MG	1H	3211	1/1	0.82	0.18	56,56,56,56	0
62	MG	16	208	1/1	0.82	0.13	44,44,44,44	0
62	MG	1H	3351	1/1	0.83	0.25	79,79,79,79	0
61	K	13	1615	1/1	0.83	0.09	90,90,90,90	0
61	K	29	301	1/1	0.83	0.10	86,86,86,86	0
61	K	1H	3036	1/1	0.83	0.13	60,60,60,60	0
62	MG	6E	201	1/1	0.83	0.24	62,62,62,62	0
62	MG	1G	1650	1/1	0.83	0.25	68,68,68,68	0
62	MG	14	3158	1/1	0.83	0.25	49,49,49,49	0
62	MG	14	3171	1/1	0.83	0.20	55,55,55,55	0
62	MG	14	3173	1/1	0.83	0.23	66,66,66,66	0
61	K	1H	3020	1/1	0.83	0.10	65,65,65,65	0
62	MG	1G	1663[A]	1/1	0.83	0.45	29,29,29,29	1
62	MG	14	3182	1/1	0.83	0.21	62,62,62,62	0
62	MG	1G	1663[B]	1/1	0.83	0.45	30,30,30,30	1
62	MG	14	3199	1/1	0.83	0.26	66,66,66,66	0
61	K	1H	3022	1/1	0.83	0.09	66,66,66,66	0
61	K	14	3070	1/1	0.83	0.08	92,92,92,92	0
62	MG	14	3248	1/1	0.83	0.38	60,60,60,60	0
62	MG	1G	1679	1/1	0.83	0.18	62,62,62,62	0
61	K	14	3072	1/1	0.83	0.09	85,85,85,85	0
61	K	1G	1627	1/1	0.83	0.16	92,92,92,92	0
62	MG	14	3276	1/1	0.83	0.21	52,52,52,52	0
62	MG	14	3336	1/1	0.83	0.11	78,78,78,78	0
62	MG	14	3176	1/1	0.84	0.29	69,69,69,69	0
62	MG	1H	3281	1/1	0.84	0.23	49,49,49,49	0
62	MG	1H	3325	1/1	0.84	0.23	50,50,50,50	0
62	MG	14	3120	1/1	0.84	0.17	44,44,44,44	0
61	K	13	1625	1/1	0.84	0.10	77,77,77,77	0
61	K	1G	1604	1/1	0.84	0.08	91,91,91,91	0
61	K	1H	3038	1/1	0.84	0.14	56,56,56,56	0
62	MG	1H	3359	1/1	0.84	0.27	62,62,62,62	0
61	K	14	3097	1/1	0.84	0.11	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1G	1623	1/1	0.84	0.09	95,95,95,95	0
61	K	13	1610	1/1	0.84	0.09	103,103,103,103	0
62	MG	1H	3272	1/1	0.84	0.29	55,55,55,55	0
62	MG	7I	101	1/1	0.85	0.25	71,71,71,71	0
62	MG	1H	3360	1/1	0.85	0.09	28,28,28,28	0
62	MG	1H	3174	1/1	0.85	0.33	60,60,60,60	0
62	MG	1H	3381	1/1	0.85	0.18	39,39,39,39	0
61	K	14	3105	1/1	0.85	0.13	91,91,91,91	0
62	MG	14	3170	1/1	0.85	0.21	54,54,54,54	0
62	MG	13	1696	1/1	0.85	0.24	64,64,64,64	0
62	MG	1H	3183	1/1	0.85	0.14	47,47,47,47	0
62	MG	1G	1649	1/1	0.85	0.26	74,74,74,74	0
61	K	14	3006	1/1	0.85	0.11	106,106,106,106	0
61	K	1G	1607	1/1	0.85	0.14	87,87,87,87	0
62	MG	1H	3279	1/1	0.85	0.16	32,32,32,32	0
61	K	1H	3044	1/1	0.85	0.13	92,92,92,92	0
62	MG	1H	3286	1/1	0.85	0.28	48,48,48,48	0
62	MG	14	3214	1/1	0.85	0.24	66,66,66,66	0
62	MG	13	1719	1/1	0.85	0.32	63,63,63,63	0
62	MG	14	3242	1/1	0.85	0.28	65,65,65,65	0
62	MG	1G	1678	1/1	0.85	0.26	54,54,54,54	0
62	MG	1H	3328[A]	1/1	0.85	0.42	22,22,22,22	1
62	MG	1H	3328[B]	1/1	0.85	0.42	27,27,27,27	1
62	MG	1H	3329	1/1	0.85	0.25	63,63,63,63	0
62	MG	13	1664	1/1	0.85	0.21	57,57,57,57	0
62	MG	13	1672	1/1	0.85	0.22	49,49,49,49	0
61	K	14	3014	1/1	0.85	0.17	80,80,80,80	0
62	MG	1H	3182	1/1	0.86	0.18	49,49,49,49	0
61	K	1H	3005	1/1	0.86	0.12	100,100,100,100	0
62	MG	13	1702	1/1	0.86	0.21	60,60,60,60	0
62	MG	1H	3269	1/1	0.86	0.11	33,33,33,33	0
62	MG	14	3164	1/1	0.86	0.16	48,48,48,48	0
62	MG	1G	1646	1/1	0.86	0.14	66,66,66,66	0
62	MG	13	1703	1/1	0.86	0.17	49,49,49,49	0
61	K	13	1651	1/1	0.86	0.11	81,81,81,81	0
61	K	14	3034	1/1	0.86	0.12	86,86,86,86	0
62	MG	13	1714	1/1	0.86	0.32	83,83,83,83	0
61	K	13	1646	1/1	0.86	0.14	63,63,63,63	0
61	K	13	1649	1/1	0.86	0.08	81,81,81,81	0
61	K	14	3003	1/1	0.86	0.13	100,100,100,100	0
61	K	1G	1616	1/1	0.86	0.10	86,86,86,86	0
61	K	1H	3126	1/1	0.86	0.11	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3155[A]	1/1	0.86	0.42	19,19,19,19	1
62	MG	14	3234	1/1	0.86	0.27	55,55,55,55	0
62	MG	14	3239	1/1	0.86	0.25	66,66,66,66	0
62	MG	1H	3155[B]	1/1	0.86	0.42	22,22,22,22	1
62	MG	1G	1684	1/1	0.86	0.13	79,79,79,79	0
62	MG	1H	3358	1/1	0.86	0.27	41,41,41,41	0
61	K	14	3077	1/1	0.86	0.11	73,73,73,73	0
61	K	14	3082	1/1	0.86	0.10	80,80,80,80	0
62	MG	1G	1697	1/1	0.86	0.26	63,63,63,63	0
62	MG	14	3268	1/1	0.86	0.14	36,36,36,36	0
62	MG	4L	101	1/1	0.86	0.21	79,79,79,79	0
61	K	13	1650	1/1	0.86	0.14	97,97,97,97	0
61	K	14	3102	1/1	0.87	0.13	76,76,76,76	0
62	MG	1G	1648	1/1	0.87	0.19	67,67,67,67	0
62	MG	1H	3315	1/1	0.87	0.15	43,43,43,43	0
62	MG	1H	3318	1/1	0.87	0.17	56,56,56,56	0
61	K	1H	3026	1/1	0.87	0.14	88,88,88,88	0
61	K	13	1641	1/1	0.87	0.08	84,84,84,84	0
62	MG	14	3174	1/1	0.87	0.19	38,38,38,38	0
62	MG	1H	3164	1/1	0.87	0.09	58,58,58,58	0
61	K	1G	1602	1/1	0.87	0.20	104,104,104,104	0
62	MG	1H	3332	1/1	0.87	0.20	48,48,48,48	0
62	MG	14	3181	1/1	0.87	0.18	49,49,49,49	0
62	MG	1H	3339	1/1	0.87	0.18	55,55,55,55	0
62	MG	14	3185	1/1	0.87	0.24	51,51,51,51	0
62	MG	14	3186	1/1	0.87	0.23	49,49,49,49	0
62	MG	13	1706	1/1	0.87	0.15	46,46,46,46	0
62	MG	1G	1680	1/1	0.87	0.17	50,50,50,50	0
62	MG	13	1707	1/1	0.87	0.22	58,58,58,58	0
62	MG	14	3215	1/1	0.87	0.14	45,45,45,45	0
62	MG	14	3221	1/1	0.87	0.10	52,52,52,52	0
61	K	13	1631	1/1	0.87	0.09	58,58,58,58	0
62	MG	13	1662	1/1	0.87	0.21	54,54,54,54	0
62	MG	1G	1686	1/1	0.87	0.28	75,75,75,75	0
61	K	14	3039	1/1	0.87	0.10	61,61,61,61	0
62	MG	1H	3213	1/1	0.87	0.10	25,25,25,25	0
62	MG	1H	3259	1/1	0.87	0.14	46,46,46,46	0
61	K	1H	3140	1/1	0.87	0.08	62,62,62,62	0
62	MG	14	3256	1/1	0.87	0.20	67,67,67,67	0
61	K	14	3010	1/1	0.87	0.07	58,58,58,58	0
61	K	14	3065	1/1	0.87	0.14	55,55,55,55	0
62	MG	14	3121	1/1	0.87	0.25	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	13	1694	1/1	0.87	0.24	57,57,57,57	0
62	MG	1G	1641	1/1	0.87	0.27	64,64,64,64	0
62	MG	2K	104	1/1	0.88	0.26	48,48,48,48	0
62	MG	1H	3149	1/1	0.88	0.24	40,40,40,40	0
61	K	1H	3105	1/1	0.88	0.08	50,50,50,50	0
62	MG	1G	1692	1/1	0.88	0.30	72,72,72,72	0
61	K	1H	3125	1/1	0.88	0.12	64,64,64,64	0
62	MG	42	201	1/1	0.88	0.20	70,70,70,70	0
61	K	13	1603	1/1	0.88	0.07	75,75,75,75	0
62	MG	14	3119	1/1	0.88	0.17	49,49,49,49	0
62	MG	13	1680	1/1	0.88	0.21	49,49,49,49	0
61	K	1H	3128	1/1	0.88	0.10	64,64,64,64	0
61	K	1H	3023	1/1	0.88	0.08	63,63,63,63	0
61	K	14	3079	1/1	0.88	0.14	81,81,81,81	0
62	MG	1H	3367	1/1	0.88	0.09	35,35,35,35	0
61	K	1H	3138	1/1	0.88	0.12	62,62,62,62	0
62	MG	16	205	1/1	0.88	0.22	46,46,46,46	0
62	MG	1H	3187	1/1	0.88	0.11	30,30,30,30	0
61	K	14	3083	1/1	0.88	0.14	70,70,70,70	0
62	MG	31	303	1/1	0.88	0.17	37,37,37,37	0
61	K	14	3017	1/1	0.88	0.16	52,52,52,52	0
62	MG	P8	101	1/1	0.88	0.16	35,35,35,35	0
62	MG	1G	1639	1/1	0.88	0.17	69,69,69,69	0
62	MG	1H	3245	1/1	0.88	0.17	50,50,50,50	0
62	MG	1G	1643	1/1	0.88	0.21	62,62,62,62	0
61	K	1H	3041	1/1	0.88	0.11	68,68,68,68	0
61	K	14	3038	1/1	0.88	0.08	92,92,92,92	0
61	K	13	1607	1/1	0.88	0.06	65,65,65,65	0
62	MG	14	3187	1/1	0.88	0.22	51,51,51,51	0
62	MG	14	3188	1/1	0.88	0.15	56,56,56,56	0
61	K	14	3042	1/1	0.88	0.08	51,51,51,51	0
62	MG	1G	1653	1/1	0.88	0.13	53,53,53,53	0
62	MG	13	1710	1/1	0.88	0.20	52,52,52,52	0
61	K	14	3052	1/1	0.88	0.10	76,76,76,76	0
62	MG	1H	3287	1/1	0.88	0.14	37,37,37,37	0
62	MG	1H	3290	1/1	0.88	0.12	38,38,38,38	0
62	MG	1G	1670	1/1	0.88	0.20	57,57,57,57	0
62	MG	14	3235	1/1	0.88	0.17	50,50,50,50	0
62	MG	1G	1672	1/1	0.88	0.25	66,66,66,66	0
62	MG	1H	3303	1/1	0.88	0.20	46,46,46,46	0
62	MG	13	1718	1/1	0.88	0.25	55,55,55,55	0
62	MG	14	3245	1/1	0.88	0.20	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3046	1/1	0.88	0.11	72,72,72,72	0
61	K	1H	3088	1/1	0.88	0.07	50,50,50,50	0
62	MG	14	3251	1/1	0.88	0.15	45,45,45,45	0
62	MG	1G	1681	1/1	0.88	0.21	45,45,45,45	0
62	MG	1H	3326	1/1	0.88	0.23	60,60,60,60	0
62	MG	13	1653	1/1	0.88	0.21	67,67,67,67	0
62	MG	13	1654	1/1	0.88	0.18	42,42,42,42	0
62	MG	14	3270	1/1	0.88	0.20	66,66,66,66	0
61	K	14	3064	1/1	0.88	0.10	87,87,87,87	0
62	MG	1G	1687	1/1	0.88	0.18	67,67,67,67	0
62	MG	1J	202	1/1	0.88	0.10	83,83,83,83	0
62	MG	1G	1655	1/1	0.89	0.13	58,58,58,58	0
62	MG	1H	3264	1/1	0.89	0.26	55,55,55,55	0
61	K	13	1613	1/1	0.89	0.09	76,76,76,76	0
61	K	1H	3028	1/1	0.89	0.09	87,87,87,87	0
62	MG	1G	1667	1/1	0.89	0.23	42,42,42,42	0
62	MG	1H	3275	1/1	0.89	0.26	44,44,44,44	0
61	K	1H	3021	1/1	0.89	0.17	78,78,78,78	0
62	MG	1H	3280	1/1	0.89	0.17	86,86,86,86	0
61	K	1H	3135	1/1	0.89	0.14	82,82,82,82	0
61	K	14	3058	1/1	0.89	0.10	85,85,85,85	0
61	K	14	3087	1/1	0.89	0.11	74,74,74,74	0
62	MG	1H	3369	1/1	0.89	0.18	46,46,46,46	0
61	K	13	1635	1/1	0.89	0.12	95,95,95,95	0
62	MG	1H	3500	1/1	0.89	0.09	63,63,63,63	0
62	MG	1H	3517	1/1	0.89	0.10	26,26,26,26	0
62	MG	14	3197	1/1	0.89	0.17	48,48,48,48	0
62	MG	13	1665	1/1	0.89	0.14	51,51,51,51	0
62	MG	14	3207	1/1	0.89	0.29	62,62,62,62	0
62	MG	14	3213	1/1	0.89	0.18	40,40,40,40	0
62	MG	1G	1685	1/1	0.89	0.15	51,51,51,51	0
61	K	14	3091	1/1	0.89	0.14	78,78,78,78	0
62	MG	1H	3316	1/1	0.89	0.16	60,60,60,60	0
62	MG	14	3224	1/1	0.89	0.08	36,36,36,36	0
61	K	14	3020	1/1	0.89	0.07	64,64,64,64	0
62	MG	14	3231	1/1	0.89	0.11	39,39,39,39	0
62	MG	1H	3320[A]	1/1	0.89	0.22	8,8,8,8	1
62	MG	1H	3320[B]	1/1	0.89	0.22	9,9,9,9	1
62	MG	1H	3323	1/1	0.89	0.22	52,52,52,52	0
62	MG	1G	1640	1/1	0.89	0.28	51,51,51,51	0
62	MG	1H	3186	1/1	0.89	0.29	55,55,55,55	0
62	MG	2L	102	1/1	0.89	0.16	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3002	1/1	0.89	0.07	73,73,73,73	0
61	K	14	3101	1/1	0.89	0.07	76,76,76,76	0
62	MG	1G	1647	1/1	0.89	0.28	55,55,55,55	0
61	K	14	3035	1/1	0.89	0.09	83,83,83,83	0
61	K	13	1616	1/1	0.89	0.08	75,75,75,75	0
62	MG	1H	3331	1/1	0.89	0.08	54,54,54,54	0
62	MG	13	1697	1/1	0.89	0.19	45,45,45,45	0
62	MG	14	3143	1/1	0.89	0.12	39,39,39,39	0
62	MG	14	3153	1/1	0.89	0.18	51,51,51,51	0
62	MG	1G	1654	1/1	0.89	0.25	50,50,50,50	0
62	MG	14	3351	1/1	0.89	0.11	55,55,55,55	0
62	MG	14	3161	1/1	0.89	0.11	47,47,47,47	0
62	MG	1H	3221	1/1	0.90	0.15	34,34,34,34	0
62	MG	14	3165	1/1	0.90	0.13	45,45,45,45	0
62	MG	1H	3236	1/1	0.90	0.21	43,43,43,43	0
62	MG	1H	3338	1/1	0.90	0.10	43,43,43,43	0
62	MG	1H	3238	1/1	0.90	0.10	39,39,39,39	0
62	MG	13	1675	1/1	0.90	0.23	49,49,49,49	0
62	MG	13	1678	1/1	0.90	0.15	38,38,38,38	0
62	MG	1H	3263	1/1	0.90	0.09	36,36,36,36	0
62	MG	1H	3355	1/1	0.90	0.09	57,57,57,57	0
61	K	14	3094	1/1	0.90	0.09	86,86,86,86	0
62	MG	13	1722	1/1	0.90	0.10	52,52,52,52	0
62	MG	14	3184	1/1	0.90	0.20	48,48,48,48	0
62	MG	1G	1676	1/1	0.90	0.15	71,71,71,71	0
61	K	1H	3122	1/1	0.90	0.07	65,65,65,65	0
62	MG	1H	3362	1/1	0.90	0.28	64,64,64,64	0
61	K	13	1643	1/1	0.90	0.06	76,76,76,76	0
62	MG	1H	3364	1/1	0.90	0.20	58,58,58,58	0
62	MG	14	3196	1/1	0.90	0.12	59,59,59,59	0
62	MG	1H	3365	1/1	0.90	0.16	58,58,58,58	0
61	K	13	1636	1/1	0.90	0.10	70,70,70,70	0
61	K	14	3076	1/1	0.90	0.08	86,86,86,86	0
62	MG	14	3209	1/1	0.90	0.12	53,53,53,53	0
62	MG	1H	3370	1/1	0.90	0.28	61,61,61,61	0
62	MG	1H	3153	1/1	0.90	0.10	45,45,45,45	0
61	K	14	3005	1/1	0.90	0.13	82,82,82,82	0
62	MG	13	1701	1/1	0.90	0.27	69,69,69,69	0
62	MG	1H	3162	1/1	0.90	0.30	58,58,58,58	0
61	K	14	3078	1/1	0.90	0.09	81,81,81,81	0
62	MG	1H	3305	1/1	0.90	0.23	41,41,41,41	0
62	MG	14	3233	1/1	0.90	0.21	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3165	1/1	0.90	0.12	40,40,40,40	0
62	MG	1G	1699	1/1	0.90	0.20	62,62,62,62	0
62	MG	4I	202	1/1	0.90	0.12	55,55,55,55	0
62	MG	14	3241	1/1	0.90	0.21	59,59,59,59	0
61	K	1H	3008	1/1	0.90	0.08	65,65,65,65	0
61	K	1H	3072	1/1	0.90	0.11	53,53,53,53	0
62	MG	14	3115	1/1	0.90	0.13	42,42,42,42	0
62	MG	1H	3319	1/1	0.90	0.21	50,50,50,50	0
61	K	1H	3010	1/1	0.90	0.10	66,66,66,66	0
62	MG	13	1708	1/1	0.90	0.23	60,60,60,60	0
62	MG	14	3254	1/1	0.90	0.09	62,62,62,62	0
61	K	1H	3096	1/1	0.90	0.11	52,52,52,52	0
61	K	13	1618	1/1	0.90	0.09	85,85,85,85	0
61	K	1H	3108	1/1	0.90	0.09	76,76,76,76	0
62	MG	14	3267	1/1	0.90	0.09	44,44,44,44	0
62	MG	1H	3327	1/1	0.90	0.09	40,40,40,40	0
62	MG	14	3149	1/1	0.90	0.21	37,37,37,37	0
62	MG	14	3271	1/1	0.90	0.21	51,51,51,51	0
61	K	4I	201	1/1	0.90	0.10	67,67,67,67	0
62	MG	14	3309	1/1	0.90	0.09	26,26,26,26	0
62	MG	14	3317	1/1	0.90	0.08	40,40,40,40	0
62	MG	14	3156	1/1	0.90	0.20	34,34,34,34	0
62	MG	1H	3212	1/1	0.90	0.09	44,44,44,44	0
61	K	14	3093	1/1	0.90	0.07	53,53,53,53	0
62	MG	1H	3246	1/1	0.91	0.19	35,35,35,35	0
62	MG	1H	3254	1/1	0.91	0.10	29,29,29,29	0
61	K	1G	1633	1/1	0.91	0.07	76,76,76,76	0
61	K	14	3084	1/1	0.91	0.08	73,73,73,73	0
61	K	1G	1635	1/1	0.91	0.17	91,91,91,91	0
61	K	13	1639	1/1	0.91	0.06	66,66,66,66	0
62	MG	1H	3270	1/1	0.91	0.08	42,42,42,42	0
61	K	14	3048	1/1	0.91	0.08	67,67,67,67	0
62	MG	1H	3147	1/1	0.91	0.18	54,54,54,54	0
62	MG	13	1686	1/1	0.91	0.08	34,34,34,34	0
62	MG	14	3189	1/1	0.91	0.07	50,50,50,50	0
62	MG	14	3190	1/1	0.91	0.17	77,77,77,77	0
62	MG	13	1688	1/1	0.91	0.20	56,56,56,56	0
61	K	52	201	1/1	0.91	0.08	76,76,76,76	0
61	K	13	1645	1/1	0.91	0.12	72,72,72,72	0
62	MG	1H	3429	1/1	0.91	0.11	29,29,29,29	0
62	MG	1H	3157	1/1	0.91	0.18	49,49,49,49	0
61	K	1H	3091	1/1	0.91	0.06	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3212	1/1	0.91	0.23	44,44,44,44	0
62	MG	1H	3297	1/1	0.91	0.11	40,40,40,40	0
61	K	14	3096	1/1	0.91	0.07	70,70,70,70	0
62	MG	1G	1696	1/1	0.91	0.31	52,52,52,52	0
61	K	1H	3003	1/1	0.91	0.05	56,56,56,56	0
62	MG	1H	3171	1/1	0.91	0.17	30,30,30,30	0
62	MG	14	3225	1/1	0.91	0.09	47,47,47,47	0
61	K	1G	1608	1/1	0.91	0.06	80,80,80,80	0
62	MG	14	3230	1/1	0.91	0.18	54,54,54,54	0
61	K	14	3007	1/1	0.91	0.14	64,64,64,64	0
62	MG	13	1705	1/1	0.91	0.19	56,56,56,56	0
62	MG	14	3109	1/1	0.91	0.17	41,41,41,41	0
62	MG	1G	1638	1/1	0.91	0.15	46,46,46,46	0
62	MG	14	3118	1/1	0.91	0.26	58,58,58,58	0
61	K	1H	3132	1/1	0.91	0.10	87,87,87,87	0
61	K	1G	1617	1/1	0.91	0.07	63,63,63,63	0
62	MG	1H	3321	1/1	0.91	0.11	36,36,36,36	0
61	K	14	3071	1/1	0.91	0.17	77,77,77,77	0
61	K	13	1605	1/1	0.91	0.06	81,81,81,81	0
62	MG	1H	3196	1/1	0.91	0.16	40,40,40,40	0
62	MG	14	3139	1/1	0.91	0.15	41,41,41,41	0
62	MG	1H	3199	1/1	0.91	0.18	34,34,34,34	0
62	MG	14	3255	1/1	0.91	0.10	63,63,63,63	0
62	MG	14	3146	1/1	0.91	0.15	49,49,49,49	0
61	K	1K	101	1/1	0.91	0.06	83,83,83,83	0
61	K	1G	1625	1/1	0.91	0.09	108,108,108,108	0
62	MG	14	3155	1/1	0.91	0.16	38,38,38,38	0
62	MG	13	1711	1/1	0.91	0.25	55,55,55,55	0
62	MG	1H	3220	1/1	0.91	0.27	50,50,50,50	0
61	K	1H	3114	1/1	0.91	0.11	55,55,55,55	0
62	MG	1H	3334	1/1	0.91	0.09	43,43,43,43	0
62	MG	1G	1662	1/1	0.91	0.21	51,51,51,51	0
61	K	1H	3115	1/1	0.91	0.09	52,52,52,52	0
61	K	14	3080	1/1	0.91	0.09	79,79,79,79	0
62	MG	1H	3242	1/1	0.91	0.10	37,37,37,37	0
61	K	1H	3047	1/1	0.91	0.13	74,74,74,74	0
62	MG	1J	204	1/1	0.91	0.26	64,64,64,64	0
62	MG	29	302	1/1	0.91	0.16	38,38,38,38	0
62	MG	14	3166	1/1	0.92	0.12	58,58,58,58	0
61	K	1H	3050	1/1	0.92	0.14	53,53,53,53	0
61	K	1H	3051	1/1	0.92	0.10	49,49,49,49	0
61	K	13	1642	1/1	0.92	0.11	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	13	1673	1/1	0.92	0.29	55,55,55,55	0
61	K	14	3041	1/1	0.92	0.09	66,66,66,66	0
62	MG	1G	1664	1/1	0.92	0.19	40,40,40,40	0
62	MG	1G	1666	1/1	0.92	0.30	46,46,46,46	0
62	MG	14	3178	1/1	0.92	0.24	53,53,53,53	0
61	K	1G	1605	1/1	0.92	0.06	92,92,92,92	0
62	MG	1H	3344	1/1	0.92	0.14	39,39,39,39	0
62	MG	1H	3346	1/1	0.92	0.17	55,55,55,55	0
62	MG	1H	3349	1/1	0.92	0.18	48,48,48,48	0
62	MG	1H	3350	1/1	0.92	0.15	25,25,25,25	0
62	MG	1H	3258	1/1	0.92	0.31	52,52,52,52	0
62	MG	1G	1677	1/1	0.92	0.20	57,57,57,57	0
62	MG	1H	3353	1/1	0.92	0.16	33,33,33,33	0
61	K	14	3043	1/1	0.92	0.09	80,80,80,80	0
62	MG	14	3194	1/1	0.92	0.19	54,54,54,54	0
61	K	14	3045	1/1	0.92	0.10	83,83,83,83	0
61	K	1H	3080	1/1	0.92	0.06	45,45,45,45	0
61	K	2K	101	1/1	0.92	0.17	62,62,62,62	0
62	MG	1H	3361	1/1	0.92	0.26	57,57,57,57	0
62	MG	14	3201	1/1	0.92	0.19	49,49,49,49	0
62	MG	14	3204	1/1	0.92	0.20	38,38,38,38	0
61	K	1H	3011	1/1	0.92	0.06	59,59,59,59	0
62	MG	13	1692	1/1	0.92	0.17	51,51,51,51	0
62	MG	13	1693	1/1	0.92	0.25	61,61,61,61	0
61	K	1H	3013	1/1	0.92	0.15	81,81,81,81	0
62	MG	13	1695	1/1	0.92	0.13	66,66,66,66	0
62	MG	1H	3163	1/1	0.92	0.25	55,55,55,55	0
62	MG	14	3217	1/1	0.92	0.13	69,69,69,69	0
62	MG	1H	3282	1/1	0.92	0.12	49,49,49,49	0
62	MG	14	3222	1/1	0.92	0.19	57,57,57,57	0
62	MG	1H	3372	1/1	0.92	0.12	31,31,31,31	0
62	MG	1H	3375	1/1	0.92	0.12	36,36,36,36	0
62	MG	1H	3376	1/1	0.92	0.16	54,54,54,54	0
61	K	14	3061	1/1	0.92	0.12	63,63,63,63	0
62	MG	1G	1718	1/1	0.92	0.09	39,39,39,39	0
61	K	14	3009	1/1	0.92	0.13	64,64,64,64	0
61	K	14	3098	1/1	0.92	0.08	67,67,67,67	0
61	K	1H	3004	1/1	0.92	0.11	88,88,88,88	0
62	MG	14	3236	1/1	0.92	0.23	50,50,50,50	0
62	MG	1H	3298	1/1	0.92	0.07	28,28,28,28	0
61	K	14	3011	1/1	0.92	0.17	80,80,80,80	0
62	MG	14	3117	1/1	0.92	0.08	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	16	209	1/1	0.92	0.36	59,59,59,59	0
61	K	14	3104	1/1	0.92	0.10	75,75,75,75	0
62	MG	1H	3311	1/1	0.92	0.12	47,47,47,47	0
61	K	1H	3045	1/1	0.92	0.12	59,59,59,59	0
62	MG	14	3122	1/1	0.92	0.19	49,49,49,49	0
61	K	14	3106	1/1	0.92	0.21	68,68,68,68	0
61	K	1H	3141	1/1	0.92	0.10	41,41,41,41	0
62	MG	14	3132	1/1	0.92	0.22	53,53,53,53	0
62	MG	14	3133	1/1	0.92	0.17	39,39,39,39	0
61	K	1H	3029	1/1	0.92	0.09	85,85,85,85	0
62	MG	1H	3195	1/1	0.92	0.19	37,37,37,37	0
61	K	1H	3144	1/1	0.92	0.17	56,56,56,56	0
61	K	45	201	1/1	0.92	0.14	90,90,90,90	0
62	MG	1H	3201	1/1	0.92	0.14	45,45,45,45	0
62	MG	14	3273	1/1	0.92	0.16	37,37,37,37	0
62	MG	14	3274	1/1	0.92	0.19	54,54,54,54	0
62	MG	14	3275	1/1	0.92	0.17	42,42,42,42	0
62	MG	1H	3202	1/1	0.92	0.18	45,45,45,45	0
61	K	14	3018	1/1	0.92	0.07	65,65,65,65	0
61	K	16	202	1/1	0.92	0.06	74,74,74,74	0
62	MG	14	3332	1/1	0.92	0.07	54,54,54,54	0
62	MG	13	1712	1/1	0.92	0.17	43,43,43,43	0
62	MG	14	3341	1/1	0.92	0.07	35,35,35,35	0
62	MG	14	3159	1/1	0.92	0.27	56,56,56,56	0
62	MG	14	3352	1/1	0.92	0.10	63,63,63,63	0
62	MG	14	3387	1/1	0.92	0.13	45,45,45,45	0
62	MG	13	1713	1/1	0.92	0.15	46,46,46,46	0
61	K	13	1647	1/1	0.92	0.05	50,50,50,50	0
62	MG	1H	3227	1/1	0.92	0.11	29,29,29,29	0
62	MG	14	3180	1/1	0.93	0.16	59,59,59,59	0
61	K	13	1634	1/1	0.93	0.10	90,90,90,90	0
61	K	13	1612	1/1	0.93	0.15	50,50,50,50	0
62	MG	1H	3179	1/1	0.93	0.19	30,30,30,30	0
61	K	1H	3134	1/1	0.93	0.11	54,54,54,54	0
61	K	1G	1611	1/1	0.93	0.11	86,86,86,86	0
62	MG	1H	3291	1/1	0.93	0.20	47,47,47,47	0
62	MG	1H	3368	1/1	0.93	0.26	44,44,44,44	0
62	MG	1G	1682	1/1	0.93	0.25	41,41,41,41	0
62	MG	1H	3294	1/1	0.93	0.20	59,59,59,59	0
62	MG	14	3191	1/1	0.93	0.07	34,34,34,34	0
62	MG	14	3192	1/1	0.93	0.13	41,41,41,41	0
62	MG	13	1671	1/1	0.93	0.27	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3371	1/1	0.93	0.07	31,31,31,31	0
61	K	14	3050	1/1	0.93	0.05	63,63,63,63	0
62	MG	1H	3373	1/1	0.93	0.21	43,43,43,43	0
61	K	1G	1614	1/1	0.93	0.07	86,86,86,86	0
61	K	1H	3098	1/1	0.93	0.07	41,41,41,41	0
62	MG	14	3202	1/1	0.93	0.17	42,42,42,42	0
61	K	14	3055	1/1	0.93	0.19	65,65,65,65	0
62	MG	1H	3399	1/1	0.93	0.09	24,24,24,24	0
62	MG	14	3208	1/1	0.93	0.22	58,58,58,58	0
62	MG	1H	3313	1/1	0.93	0.07	44,44,44,44	0
62	MG	13	1677	1/1	0.93	0.10	42,42,42,42	0
61	K	1H	3137	1/1	0.93	0.09	63,63,63,63	0
62	MG	1H	3539	1/1	0.93	0.07	66,66,66,66	0
61	K	1H	3031	1/1	0.93	0.10	39,39,39,39	0
62	MG	1G	1736	1/1	0.93	0.09	62,62,62,62	0
62	MG	14	3220	1/1	0.93	0.08	46,46,46,46	0
61	K	1H	3032	1/1	0.93	0.06	54,54,54,54	0
61	K	1H	3110	1/1	0.93	0.06	60,60,60,60	0
62	MG	13	1687	1/1	0.93	0.22	50,50,50,50	0
62	MG	14	3107	1/1	0.93	0.16	33,33,33,33	0
62	MG	13	1724	1/1	0.93	0.16	43,43,43,43	0
62	MG	14	3113	1/1	0.93	0.13	36,36,36,36	0
62	MG	13	1726	1/1	0.93	0.14	46,46,46,46	0
62	MG	78	201	1/1	0.93	0.13	38,38,38,38	0
62	MG	C8	201	1/1	0.93	0.12	44,44,44,44	0
62	MG	1H	3229	1/1	0.93	0.32	43,43,43,43	0
61	K	14	3099	1/1	0.93	0.06	67,67,67,67	0
62	MG	14	3237	1/1	0.93	0.06	96,96,96,96	0
62	MG	13	1689	1/1	0.93	0.19	53,53,53,53	0
62	MG	13	1690	1/1	0.93	0.07	51,51,51,51	0
62	MG	1H	3244	1/1	0.93	0.24	34,34,34,34	0
62	MG	14	3243	1/1	0.93	0.16	54,54,54,54	0
61	K	1H	3112	1/1	0.93	0.08	48,48,48,48	0
61	K	1G	1628	1/1	0.93	0.08	76,76,76,76	0
62	MG	1G	1644	1/1	0.93	0.12	59,59,59,59	0
62	MG	1H	3252	1/1	0.93	0.26	42,42,42,42	0
61	K	14	3103	1/1	0.93	0.10	70,70,70,70	0
62	MG	14	3140	1/1	0.93	0.15	47,47,47,47	0
62	MG	1H	3255	1/1	0.93	0.18	47,47,47,47	0
62	MG	1H	3154	1/1	0.93	0.16	26,26,26,26	0
62	MG	14	3147	1/1	0.93	0.17	40,40,40,40	0
62	MG	14	3259	1/1	0.93	0.25	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3340	1/1	0.93	0.10	48,48,48,48	0
62	MG	14	3264	1/1	0.93	0.15	45,45,45,45	0
62	MG	1G	1651	1/1	0.93	0.20	43,43,43,43	0
62	MG	14	3154	1/1	0.93	0.12	50,50,50,50	0
62	MG	1G	1652	1/1	0.93	0.12	17,17,17,17	0
61	K	13	1614	1/1	0.93	0.16	71,71,71,71	0
61	K	13	1638	1/1	0.93	0.06	56,56,56,56	0
61	K	1H	3025	1/1	0.93	0.08	53,53,53,53	0
62	MG	1G	1656	1/1	0.93	0.26	58,58,58,58	0
62	MG	14	3163	1/1	0.93	0.14	31,31,31,31	0
62	MG	1G	1659	1/1	0.93	0.29	64,64,64,64	0
61	K	1H	3014	1/1	0.93	0.07	60,60,60,60	0
62	MG	13	1699	1/1	0.93	0.10	43,43,43,43	0
61	K	1H	3086	1/1	0.93	0.05	66,66,66,66	0
62	MG	1H	3273	1/1	0.93	0.27	61,61,61,61	0
61	K	1H	3016	1/1	0.93	0.05	63,63,63,63	0
62	MG	1H	3277	1/1	0.93	0.17	42,42,42,42	0
62	MG	1H	3356	1/1	0.93	0.16	43,43,43,43	0
62	MG	14	3399	1/1	0.93	0.06	106,106,106,106	0
62	MG	1H	3278	1/1	0.93	0.14	28,28,28,28	0
61	K	14	3040	1/1	0.93	0.06	93,93,93,93	0
61	K	2A	201	1/1	0.93	0.06	70,70,70,70	0
62	MG	39	303	1/1	0.93	0.13	54,54,54,54	0
62	MG	14	3167	1/1	0.94	0.16	38,38,38,38	0
61	K	1H	3064	1/1	0.94	0.06	34,34,34,34	0
62	MG	1H	3146	1/1	0.94	0.23	38,38,38,38	0
62	MG	1G	1657	1/1	0.94	0.22	53,53,53,53	0
62	MG	1G	1658	1/1	0.94	0.22	46,46,46,46	0
62	MG	1H	3248	1/1	0.94	0.20	34,34,34,34	0
62	MG	1H	3345[A]	1/1	0.94	0.53	23,23,23,23	1
62	MG	1H	3345[B]	1/1	0.94	0.53	24,24,24,24	1
61	K	13	1623	1/1	0.94	0.05	56,56,56,56	0
62	MG	13	1691	1/1	0.94	0.20	50,50,50,50	0
61	K	1H	3073	1/1	0.94	0.10	56,56,56,56	0
61	K	1H	3009	1/1	0.94	0.08	64,64,64,64	0
61	K	1H	3121	1/1	0.94	0.10	62,62,62,62	0
61	K	1H	3081	1/1	0.94	0.09	49,49,49,49	0
61	K	14	3024	1/1	0.94	0.08	52,52,52,52	0
62	MG	1H	3357	1/1	0.94	0.17	28,28,28,28	0
62	MG	1G	1673	1/1	0.94	0.11	50,50,50,50	0
62	MG	1H	3266	1/1	0.94	0.08	39,39,39,39	0
62	MG	1H	3159	1/1	0.94	0.15	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3161	1/1	0.94	0.19	55,55,55,55	0
62	MG	1H	3271	1/1	0.94	0.10	47,47,47,47	0
61	K	14	3025	1/1	0.94	0.07	50,50,50,50	0
61	K	14	3027	1/1	0.94	0.11	54,54,54,54	0
61	K	1G	1634	1/1	0.94	0.08	62,62,62,62	0
62	MG	1H	3276	1/1	0.94	0.18	44,44,44,44	0
62	MG	13	1652	1/1	0.94	0.14	43,43,43,43	0
62	MG	14	3200	1/1	0.94	0.27	52,52,52,52	0
61	K	1H	3082	1/1	0.94	0.05	46,46,46,46	0
61	K	1G	1636	1/1	0.94	0.11	78,78,78,78	0
62	MG	13	1659	1/1	0.94	0.10	56,56,56,56	0
61	K	1H	3030	1/1	0.94	0.05	73,73,73,73	0
61	K	13	1604	1/1	0.94	0.06	82,82,82,82	0
62	MG	1H	3285	1/1	0.94	0.17	43,43,43,43	0
62	MG	1H	3180	1/1	0.94	0.10	43,43,43,43	0
61	K	1H	3017	1/1	0.94	0.14	56,56,56,56	0
62	MG	1G	1691	1/1	0.94	0.23	64,64,64,64	0
61	K	BA	201	1/1	0.94	0.07	72,72,72,72	0
62	MG	14	3216	1/1	0.94	0.15	51,51,51,51	0
62	MG	1G	1695	1/1	0.94	0.15	72,72,72,72	0
61	K	1H	3095	1/1	0.94	0.07	58,58,58,58	0
61	K	1H	3034	1/1	0.94	0.10	66,66,66,66	0
62	MG	1G	1698	1/1	0.94	0.29	66,66,66,66	0
62	MG	14	3223	1/1	0.94	0.15	40,40,40,40	0
62	MG	1H	3437	1/1	0.94	0.09	51,51,51,51	0
62	MG	1G	1714	1/1	0.94	0.07	88,88,88,88	0
62	MG	14	3226	1/1	0.94	0.27	55,55,55,55	0
62	MG	1H	3457	1/1	0.94	0.10	25,25,25,25	0
62	MG	1H	3477	1/1	0.94	0.08	28,28,28,28	0
62	MG	1H	3488	1/1	0.94	0.10	35,35,35,35	0
62	MG	2L	101	1/1	0.94	0.11	58,58,58,58	0
62	MG	1H	3188	1/1	0.94	0.18	20,20,20,20	0
62	MG	1H	3189	1/1	0.94	0.14	41,41,41,41	0
62	MG	1H	3530	1/1	0.94	0.06	21,21,21,21	0
62	MG	14	3108	1/1	0.94	0.16	59,59,59,59	0
62	MG	1H	3192	1/1	0.94	0.10	37,37,37,37	0
62	MG	14	3112	1/1	0.94	0.08	44,44,44,44	0
62	MG	1H	3564	1/1	0.94	0.07	25,25,25,25	0
62	MG	14	3114	1/1	0.94	0.07	33,33,33,33	0
62	MG	1H	3577	1/1	0.94	0.08	37,37,37,37	0
62	MG	16	204	1/1	0.94	0.18	39,39,39,39	0
62	MG	14	3247	1/1	0.94	0.10	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	14	3047	1/1	0.94	0.08	74,74,74,74	0
61	K	1H	3035	1/1	0.94	0.10	52,52,52,52	0
62	MG	1H	3197	1/1	0.94	0.07	30,30,30,30	0
62	MG	1H	3314	1/1	0.94	0.13	41,41,41,41	0
62	MG	13	1676	1/1	0.94	0.22	53,53,53,53	0
61	K	1H	3099	1/1	0.94	0.12	59,59,59,59	0
62	MG	13	1715	1/1	0.94	0.18	60,60,60,60	0
62	MG	14	3131	1/1	0.94	0.14	43,43,43,43	0
62	MG	1H	3203	1/1	0.94	0.10	26,26,26,26	0
62	MG	1H	3204	1/1	0.94	0.12	29,29,29,29	0
62	MG	14	3135	1/1	0.94	0.16	47,47,47,47	0
62	MG	1H	3207	1/1	0.94	0.21	38,38,38,38	0
61	K	14	3051	1/1	0.94	0.05	65,65,65,65	0
62	MG	13	1679	1/1	0.94	0.21	45,45,45,45	0
61	K	1H	3018	1/1	0.94	0.20	51,51,51,51	0
62	MG	14	3145	1/1	0.94	0.12	49,49,49,49	0
62	MG	1H	3214	1/1	0.94	0.21	41,41,41,41	0
62	MG	1G	1642	1/1	0.94	0.14	45,45,45,45	0
62	MG	14	3277	1/1	0.94	0.27	61,61,61,61	0
62	MG	14	3278	1/1	0.94	0.17	49,49,49,49	0
62	MG	14	3289	1/1	0.94	0.09	51,51,51,51	0
62	MG	13	1681	1/1	0.94	0.23	44,44,44,44	0
61	K	1G	1620	1/1	0.94	0.06	83,83,83,83	0
62	MG	14	3329	1/1	0.94	0.08	28,28,28,28	0
62	MG	1G	1645	1/1	0.94	0.12	62,62,62,62	0
62	MG	1H	3225	1/1	0.94	0.13	37,37,37,37	0
62	MG	13	1723	1/1	0.94	0.27	60,60,60,60	0
62	MG	14	3157	1/1	0.94	0.15	34,34,34,34	0
62	MG	1H	3228	1/1	0.94	0.20	31,31,31,31	0
62	MG	13	1685	1/1	0.94	0.20	45,45,45,45	0
61	K	1H	3139	1/1	0.94	0.06	64,64,64,64	0
62	MG	1H	3336	1/1	0.94	0.26	45,45,45,45	0
62	MG	13	1749	1/1	0.94	0.08	52,52,52,52	0
61	K	13	1621	1/1	0.94	0.09	61,61,61,61	0
61	K	14	3100	1/1	0.94	0.07	71,71,71,71	0
62	MG	1H	3160	1/1	0.95	0.12	29,29,29,29	0
62	MG	1G	1665	1/1	0.95	0.07	50,50,50,50	0
61	K	1H	3090	1/1	0.95	0.11	55,55,55,55	0
61	K	13	1630	1/1	0.95	0.05	66,66,66,66	0
62	MG	14	3177	1/1	0.95	0.07	45,45,45,45	0
61	K	1H	3094	1/1	0.95	0.07	51,51,51,51	0
62	MG	14	3179	1/1	0.95	0.15	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3048	1/1	0.95	0.06	72,72,72,72	0
61	K	1H	3049	1/1	0.95	0.11	55,55,55,55	0
62	MG	1H	3166	1/1	0.95	0.11	41,41,41,41	0
62	MG	1H	3168	1/1	0.95	0.16	15,15,15,15	0
62	MG	1G	1675	1/1	0.95	0.19	65,65,65,65	0
61	K	2K	102	1/1	0.95	0.15	58,58,58,58	0
62	MG	1H	3172	1/1	0.95	0.17	31,31,31,31	0
61	K	13	1644	1/1	0.95	0.06	74,74,74,74	0
62	MG	1H	3175	1/1	0.95	0.12	31,31,31,31	0
61	K	14	3069	1/1	0.95	0.09	56,56,56,56	0
61	K	14	3015	1/1	0.95	0.05	47,47,47,47	0
62	MG	13	1704	1/1	0.95	0.21	56,56,56,56	0
61	K	1H	3058	1/1	0.95	0.09	43,43,43,43	0
62	MG	13	1657	1/1	0.95	0.19	38,38,38,38	0
62	MG	1H	3283	1/1	0.95	0.26	44,44,44,44	0
62	MG	1H	3284	1/1	0.95	0.06	36,36,36,36	0
61	K	1H	3059	1/1	0.95	0.05	19,19,19,19	0
62	MG	13	1660	1/1	0.95	0.06	39,39,39,39	0
61	K	1G	1629	1/1	0.95	0.07	88,88,88,88	0
62	MG	1H	3424	1/1	0.95	0.08	42,42,42,42	0
62	MG	1H	3288	1/1	0.95	0.14	44,44,44,44	0
62	MG	13	1663	1/1	0.95	0.14	47,47,47,47	0
62	MG	1H	3453	1/1	0.95	0.08	20,20,20,20	0
61	K	1G	1630	1/1	0.95	0.07	80,80,80,80	0
62	MG	14	3210	1/1	0.95	0.17	47,47,47,47	0
62	MG	14	3211	1/1	0.95	0.18	58,58,58,58	0
62	MG	1H	3473	1/1	0.95	0.08	19,19,19,19	0
61	K	1H	3109	1/1	0.95	0.05	57,57,57,57	0
62	MG	1H	3193	1/1	0.95	0.12	40,40,40,40	0
62	MG	1H	3489	1/1	0.95	0.09	57,57,57,57	0
62	MG	1G	1700	1/1	0.95	0.20	52,52,52,52	0
62	MG	1G	1707	1/1	0.95	0.06	62,62,62,62	0
62	MG	1G	1708	1/1	0.95	0.08	101,101,101,101	0
62	MG	13	1666	1/1	0.95	0.20	46,46,46,46	0
62	MG	1H	3506	1/1	0.95	0.08	15,15,15,15	0
62	MG	1H	3512	1/1	0.95	0.08	39,39,39,39	0
62	MG	1H	3299	1/1	0.95	0.13	47,47,47,47	0
62	MG	1H	3528	1/1	0.95	0.07	50,50,50,50	0
62	MG	1H	3300	1/1	0.95	0.30	59,59,59,59	0
62	MG	1H	3301	1/1	0.95	0.18	41,41,41,41	0
62	MG	13	1669	1/1	0.95	0.13	34,34,34,34	0
61	K	1H	3037	1/1	0.95	0.15	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3232	1/1	0.95	0.27	63,63,63,63	0
61	K	14	3030	1/1	0.95	0.04	63,63,63,63	0
62	MG	14	3110	1/1	0.95	0.11	35,35,35,35	0
62	MG	13	1717	1/1	0.95	0.29	62,62,62,62	0
62	MG	16	206	1/1	0.95	0.10	52,52,52,52	0
61	K	14	3033	1/1	0.95	0.08	52,52,52,52	0
61	K	1H	3111	1/1	0.95	0.06	51,51,51,51	0
62	MG	14	3116	1/1	0.95	0.15	32,32,32,32	0
61	K	13	1602	1/1	0.95	0.10	72,72,72,72	0
61	K	14	3086	1/1	0.95	0.07	65,65,65,65	0
62	MG	1H	3209	1/1	0.95	0.21	52,52,52,52	0
61	K	13	1632	1/1	0.95	0.10	79,79,79,79	0
62	MG	14	3246	1/1	0.95	0.07	35,35,35,35	0
61	K	4I	201	1/1	0.95	0.06	71,71,71,71	0
62	MG	J8	101	1/1	0.95	0.15	32,32,32,32	0
62	MG	L8	101	1/1	0.95	0.08	38,38,38,38	0
61	K	1H	3118	1/1	0.95	0.05	56,56,56,56	0
62	MG	14	3128	1/1	0.95	0.17	28,28,28,28	0
61	K	13	1626	1/1	0.95	0.06	73,73,73,73	0
62	MG	1G	1637	1/1	0.95	0.13	55,55,55,55	0
62	MG	1H	3324	1/1	0.95	0.15	12,12,12,12	0
62	MG	13	1741	1/1	0.95	0.07	109,109,109,109	0
61	K	1H	3006	1/1	0.95	0.15	44,44,44,44	0
62	MG	14	3263	1/1	0.95	0.26	60,60,60,60	0
62	MG	14	3137	1/1	0.95	0.15	49,49,49,49	0
62	MG	14	3265	1/1	0.95	0.15	34,34,34,34	0
62	MG	13	1764	1/1	0.95	0.07	86,86,86,86	0
62	MG	1H	3226	1/1	0.95	0.22	40,40,40,40	0
62	MG	14	3269	1/1	0.95	0.16	68,68,68,68	0
62	MG	13	1682	1/1	0.95	0.17	33,33,33,33	0
62	MG	13	1683	1/1	0.95	0.11	39,39,39,39	0
62	MG	14	3272	1/1	0.95	0.19	61,61,61,61	0
61	K	4A	201	1/1	0.95	0.07	96,96,96,96	0
62	MG	1H	3230	1/1	0.95	0.23	39,39,39,39	0
62	MG	1H	3333	1/1	0.95	0.09	50,50,50,50	0
62	MG	1H	3232	1/1	0.95	0.16	43,43,43,43	0
62	MG	1H	3233	1/1	0.95	0.12	51,51,51,51	0
62	MG	1H	3234	1/1	0.95	0.21	39,39,39,39	0
61	K	14	3095	1/1	0.95	0.04	64,64,64,64	0
62	MG	14	3292	1/1	0.95	0.09	29,29,29,29	0
62	MG	14	3295	1/1	0.95	0.07	50,50,50,50	0
62	MG	14	3305	1/1	0.95	0.07	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	14	3044	1/1	0.95	0.12	69,69,69,69	0
61	K	5A	101	1/1	0.95	0.06	82,82,82,82	0
62	MG	14	3325	1/1	0.95	0.07	30,30,30,30	0
62	MG	14	3326	1/1	0.95	0.07	40,40,40,40	0
62	MG	1H	3243	1/1	0.95	0.18	41,41,41,41	0
62	MG	1H	3151	1/1	0.95	0.20	41,41,41,41	0
62	MG	1H	3152	1/1	0.95	0.06	36,36,36,36	0
61	K	1H	3123	1/1	0.95	0.08	50,50,50,50	0
61	K	14	3001	1/1	0.95	0.08	76,76,76,76	0
62	MG	1H	3348	1/1	0.95	0.09	30,30,30,30	0
62	MG	14	3360	1/1	0.95	0.10	37,37,37,37	0
62	MG	14	3374	1/1	0.95	0.06	30,30,30,30	0
61	K	1H	3007	1/1	0.95	0.05	55,55,55,55	0
62	MG	14	3397	1/1	0.95	0.10	75,75,75,75	0
62	MG	14	3168	1/1	0.95	0.16	37,37,37,37	0
61	K	13	1627	1/1	0.95	0.04	46,46,46,46	0
62	MG	1J	203	1/1	0.95	0.17	48,48,48,48	0
61	K	1G	1612	1/1	0.95	0.05	58,58,58,58	0
62	MG	14	3172	1/1	0.95	0.17	26,26,26,26	0
61	K	1G	1613	1/1	0.95	0.06	63,63,63,63	0
62	MG	M5	101	1/1	0.95	0.07	84,84,84,84	0
62	MG	1H	3544	1/1	0.96	0.05	63,63,63,63	0
62	MG	14	3142	1/1	0.96	0.18	51,51,51,51	0
62	MG	1H	3549	1/1	0.96	0.10	60,60,60,60	0
62	MG	1H	3552	1/1	0.96	0.11	85,85,85,85	0
62	MG	1H	3554	1/1	0.96	0.05	77,77,77,77	0
62	MG	1H	3555	1/1	0.96	0.12	56,56,56,56	0
62	MG	14	3148	1/1	0.96	0.15	43,43,43,43	0
62	MG	1H	3556	1/1	0.96	0.14	47,47,47,47	0
62	MG	14	3150	1/1	0.96	0.09	29,29,29,29	0
62	MG	14	3152	1/1	0.96	0.14	32,32,32,32	0
61	K	1H	3133	1/1	0.96	0.09	61,61,61,61	0
62	MG	1H	3569	1/1	0.96	0.06	62,62,62,62	0
62	MG	1H	3576	1/1	0.96	0.09	69,69,69,69	0
62	MG	1H	3292	1/1	0.96	0.04	32,32,32,32	0
61	K	14	3068	1/1	0.96	0.05	61,61,61,61	0
62	MG	1H	3295	1/1	0.96	0.06	29,29,29,29	0
62	MG	1H	3296	1/1	0.96	0.05	32,32,32,32	0
62	MG	14	3160	1/1	0.96	0.04	38,38,38,38	0
62	MG	16	207	1/1	0.96	0.16	43,43,43,43	0
62	MG	14	3162	1/1	0.96	0.10	46,46,46,46	0
62	MG	13	1716	1/1	0.96	0.08	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1G	1621	1/1	0.96	0.04	76,76,76,76	0
61	K	1H	3100	1/1	0.96	0.05	44,44,44,44	0
62	MG	21	303	1/1	0.96	0.10	33,33,33,33	0
61	K	1H	3101	1/1	0.96	0.04	49,49,49,49	0
61	K	1H	3103	1/1	0.96	0.13	33,33,33,33	0
62	MG	14	3169	1/1	0.96	0.16	33,33,33,33	0
62	MG	1H	3302	1/1	0.96	0.12	29,29,29,29	0
62	MG	78	202	1/1	0.96	0.13	30,30,30,30	0
61	K	14	3074	1/1	0.96	0.11	73,73,73,73	0
62	MG	1H	3304	1/1	0.96	0.17	38,38,38,38	0
61	K	14	3019	1/1	0.96	0.08	40,40,40,40	0
62	MG	N8	101	1/1	0.96	0.14	41,41,41,41	0
62	MG	1H	3306	1/1	0.96	0.07	34,34,34,34	0
62	MG	1H	3308	1/1	0.96	0.04	27,27,27,27	0
62	MG	Q8	101[A]	1/1	0.96	0.49	13,13,13,13	1
62	MG	Q8	101[B]	1/1	0.96	0.49	11,11,11,11	1
62	MG	1H	3309	1/1	0.96	0.05	52,52,52,52	0
62	MG	1H	3310	1/1	0.96	0.04	18,18,18,18	0
61	K	1G	1626	1/1	0.96	0.04	67,67,67,67	0
62	MG	1H	3312	1/1	0.96	0.19	39,39,39,39	0
62	MG	14	3183	1/1	0.96	0.20	30,30,30,30	0
62	MG	1H	3205	1/1	0.96	0.15	33,33,33,33	0
62	MG	1H	3206	1/1	0.96	0.12	25,25,25,25	0
61	K	14	3022	1/1	0.96	0.12	50,50,50,50	0
62	MG	13	1725	1/1	0.96	0.27	58,58,58,58	0
62	MG	1H	3210	1/1	0.96	0.17	38,38,38,38	0
61	K	1H	3104	1/1	0.96	0.07	42,42,42,42	0
62	MG	13	1738	1/1	0.96	0.06	86,86,86,86	0
61	K	1H	3012	1/1	0.96	0.07	51,51,51,51	0
61	K	14	3081	1/1	0.96	0.07	54,54,54,54	0
62	MG	1H	3322	1/1	0.96	0.08	23,23,23,23	0
62	MG	1H	3216	1/1	0.96	0.15	34,34,34,34	0
62	MG	1H	3217	1/1	0.96	0.22	31,31,31,31	0
62	MG	13	1750	1/1	0.96	0.06	52,52,52,52	0
62	MG	14	3198	1/1	0.96	0.13	33,33,33,33	0
62	MG	13	1751	1/1	0.96	0.10	75,75,75,75	0
62	MG	1H	3222	1/1	0.96	0.14	32,32,32,32	0
62	MG	1H	3223	1/1	0.96	0.14	30,30,30,30	0
62	MG	1H	3224	1/1	0.96	0.15	35,35,35,35	0
62	MG	14	3203	1/1	0.96	0.25	45,45,45,45	0
62	MG	13	1755	1/1	0.96	0.05	83,83,83,83	0
62	MG	14	3206	1/1	0.96	0.16	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3330	1/1	0.96	0.21	45,45,45,45	0
62	MG	1G	1660	1/1	0.96	0.26	46,46,46,46	0
62	MG	13	1757	1/1	0.96	0.08	50,50,50,50	0
61	K	13	1609	1/1	0.96	0.06	57,57,57,57	0
62	MG	13	1767	1/1	0.96	0.08	70,70,70,70	0
62	MG	13	1770	1/1	0.96	0.06	71,71,71,71	0
61	K	14	3029	1/1	0.96	0.07	81,81,81,81	0
62	MG	1H	3231	1/1	0.96	0.26	43,43,43,43	0
61	K	1H	3074	1/1	0.96	0.10	34,34,34,34	0
61	K	14	3085	1/1	0.96	0.06	62,62,62,62	0
61	K	14	3032	1/1	0.96	0.13	53,53,53,53	0
62	MG	14	3218	1/1	0.96	0.12	60,60,60,60	0
62	MG	1G	1669	1/1	0.96	0.30	60,60,60,60	0
62	MG	1H	3235	1/1	0.96	0.07	42,42,42,42	0
61	K	1H	3077	1/1	0.96	0.09	47,47,47,47	0
62	MG	1H	3237	1/1	0.96	0.11	38,38,38,38	0
61	K	13	1640	1/1	0.96	0.04	60,60,60,60	0
62	MG	1H	3239	1/1	0.96	0.07	26,26,26,26	0
61	K	14	3089	1/1	0.96	0.06	64,64,64,64	0
61	K	1H	3024	1/1	0.96	0.07	59,59,59,59	0
62	MG	14	3229	1/1	0.96	0.06	48,48,48,48	0
61	K	14	3037	1/1	0.96	0.05	60,60,60,60	0
61	K	31	302	1/1	0.96	0.08	45,45,45,45	0
61	K	1H	3015	1/1	0.96	0.05	44,44,44,44	0
61	K	88	201	1/1	0.96	0.12	57,57,57,57	0
62	MG	1H	3250	1/1	0.96	0.12	38,38,38,38	0
61	K	13	1601	1/1	0.96	0.06	67,67,67,67	0
61	K	13	1624	1/1	0.96	0.09	59,59,59,59	0
61	K	1G	1603	1/1	0.96	0.10	62,62,62,62	0
62	MG	1H	3256	1/1	0.96	0.13	40,40,40,40	0
62	MG	14	3240	1/1	0.96	0.22	57,57,57,57	0
62	MG	1H	3257	1/1	0.96	0.14	40,40,40,40	0
61	K	1H	3120	1/1	0.96	0.05	60,60,60,60	0
61	K	13	1637	1/1	0.96	0.08	64,64,64,64	0
62	MG	1H	3260	1/1	0.96	0.05	24,24,24,24	0
62	MG	1H	3261	1/1	0.96	0.04	44,44,44,44	0
62	MG	1H	3262	1/1	0.96	0.25	46,46,46,46	0
61	K	14	3046	1/1	0.96	0.11	54,54,54,54	0
61	K	1H	3019	1/1	0.96	0.05	60,60,60,60	0
62	MG	1H	3265	1/1	0.96	0.11	48,48,48,48	0
62	MG	14	3250	1/1	0.96	0.05	38,38,38,38	0
61	K	13	1633	1/1	0.96	0.06	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3267	1/1	0.96	0.17	53,53,53,53	0
61	K	1G	1610	1/1	0.96	0.04	68,68,68,68	0
62	MG	13	1700	1/1	0.96	0.13	47,47,47,47	0
61	K	1H	3062	1/1	0.96	0.03	27,27,27,27	0
62	MG	1H	3377	1/1	0.96	0.12	26,26,26,26	0
62	MG	1G	1709	1/1	0.96	0.06	73,73,73,73	0
62	MG	14	3261	1/1	0.96	0.20	43,43,43,43	0
62	MG	14	3262	1/1	0.96	0.19	41,41,41,41	0
62	MG	1G	1711	1/1	0.96	0.07	97,97,97,97	0
62	MG	1G	1713	1/1	0.96	0.09	120,120,120,120	0
62	MG	1H	3379	1/1	0.96	0.26	47,47,47,47	0
62	MG	1H	3380	1/1	0.96	0.27	44,44,44,44	0
62	MG	1G	1721	1/1	0.96	0.05	45,45,45,45	0
62	MG	1G	1731	1/1	0.96	0.06	81,81,81,81	0
61	K	1H	3063	1/1	0.96	0.05	47,47,47,47	0
62	MG	1H	3382	1/1	0.96	0.07	13,13,13,13	0
62	MG	1H	3391	1/1	0.96	0.08	20,20,20,20	0
61	K	1J	201	1/1	0.96	0.05	81,81,81,81	0
62	MG	2L	103	1/1	0.96	0.17	45,45,45,45	0
62	MG	1H	3422	1/1	0.96	0.06	29,29,29,29	0
62	MG	1H	3274	1/1	0.96	0.07	31,31,31,31	0
61	K	1H	3097	1/1	0.96	0.06	25,25,25,25	0
61	K	39	301	1/1	0.96	0.08	75,75,75,75	0
62	MG	14	3280	1/1	0.96	0.08	45,45,45,45	0
61	K	14	3054	1/1	0.96	0.05	58,58,58,58	0
62	MG	14	3111	1/1	0.96	0.09	32,32,32,32	0
62	MG	1H	3455	1/1	0.96	0.06	11,11,11,11	0
61	K	1H	3129	1/1	0.96	0.10	60,60,60,60	0
62	MG	14	3306	1/1	0.96	0.07	32,32,32,32	0
61	K	14	3056	1/1	0.96	0.06	56,56,56,56	0
62	MG	14	3313	1/1	0.96	0.06	33,33,33,33	0
62	MG	14	3314	1/1	0.96	0.07	28,28,28,28	0
62	MG	1H	3474	1/1	0.96	0.06	24,24,24,24	0
62	MG	14	3320	1/1	0.96	0.07	25,25,25,25	0
62	MG	1H	3181	1/1	0.96	0.21	36,36,36,36	0
61	K	14	3008	1/1	0.96	0.12	47,47,47,47	0
61	K	1G	1615	1/1	0.96	0.04	60,60,60,60	0
62	MG	1H	3496	1/1	0.96	0.09	48,48,48,48	0
62	MG	1H	3184	1/1	0.96	0.18	40,40,40,40	0
62	MG	1H	3501	1/1	0.96	0.12	57,57,57,57	0
62	MG	1H	3503	1/1	0.96	0.07	29,29,29,29	0
62	MG	1H	3185	1/1	0.96	0.06	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3042	1/1	0.96	0.04	54,54,54,54	0
62	MG	14	3372	1/1	0.96	0.05	64,64,64,64	0
62	MG	14	3373	1/1	0.96	0.06	68,68,68,68	0
62	MG	1H	3514	1/1	0.96	0.08	53,53,53,53	0
62	MG	14	3380	1/1	0.96	0.07	76,76,76,76	0
62	MG	14	3386	1/1	0.96	0.13	61,61,61,61	0
62	MG	14	3129	1/1	0.96	0.07	34,34,34,34	0
62	MG	14	3394	1/1	0.96	0.13	61,61,61,61	0
62	MG	1H	3515	1/1	0.96	0.07	40,40,40,40	0
61	K	1H	3070	1/1	0.96	0.06	46,46,46,46	0
62	MG	1H	3519	1/1	0.96	0.17	25,25,25,25	0
62	MG	14	3134	1/1	0.96	0.17	34,34,34,34	0
61	K	1G	1618	1/1	0.96	0.14	79,79,79,79	0
62	MG	1H	3529	1/1	0.96	0.15	54,54,54,54	0
61	K	14	3066	1/1	0.96	0.04	64,64,64,64	0
62	MG	1H	3190	1/1	0.96	0.13	32,32,32,32	0
62	MG	1H	3516	1/1	0.97	0.06	21,21,21,21	0
62	MG	1H	3198	1/1	0.97	0.05	20,20,20,20	0
62	MG	14	3193	1/1	0.97	0.19	40,40,40,40	0
61	K	14	3073	1/1	0.97	0.05	60,60,60,60	0
62	MG	1H	3522	1/1	0.97	0.10	49,49,49,49	0
62	MG	1H	3526	1/1	0.97	0.09	21,21,21,21	0
62	MG	1G	1694	1/1	0.97	0.07	43,43,43,43	0
62	MG	1H	3200	1/1	0.97	0.13	36,36,36,36	0
62	MG	1H	3268	1/1	0.97	0.06	34,34,34,34	0
62	MG	1H	3335	1/1	0.97	0.22	40,40,40,40	0
62	MG	13	1769	1/1	0.97	0.08	54,54,54,54	0
62	MG	1H	3542	1/1	0.97	0.13	33,33,33,33	0
62	MG	1H	3337	1/1	0.97	0.04	23,23,23,23	0
62	MG	1G	1702	1/1	0.97	0.06	64,64,64,64	0
62	MG	14	3205	1/1	0.97	0.31	51,51,51,51	0
62	MG	1G	1703	1/1	0.97	0.04	81,81,81,81	0
62	MG	1H	3548	1/1	0.97	0.06	32,32,32,32	0
61	K	1H	3119	1/1	0.97	0.17	46,46,46,46	0
62	MG	1H	3550	1/1	0.97	0.07	64,64,64,64	0
62	MG	1H	3551	1/1	0.97	0.07	45,45,45,45	0
61	K	1H	3143	1/1	0.97	0.04	71,71,71,71	0
62	MG	1H	3553	1/1	0.97	0.07	60,60,60,60	0
61	K	1H	3054	1/1	0.97	0.05	27,27,27,27	0
62	MG	1H	3341	1/1	0.97	0.09	24,24,24,24	0
62	MG	1G	1724	1/1	0.97	0.04	82,82,82,82	0
62	MG	1G	1726	1/1	0.97	0.06	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3056	1/1	0.97	0.04	37,37,37,37	0
62	MG	1G	1733	1/1	0.97	0.04	81,81,81,81	0
62	MG	14	3219	1/1	0.97	0.12	33,33,33,33	0
62	MG	1G	1735	1/1	0.97	0.08	88,88,88,88	0
62	MG	1H	3558	1/1	0.97	0.11	56,56,56,56	0
62	MG	1H	3563	1/1	0.97	0.07	75,75,75,75	0
61	K	2I	301	1/1	0.97	0.12	62,62,62,62	0
62	MG	1H	3566	1/1	0.97	0.10	37,37,37,37	0
62	MG	1H	3567	1/1	0.97	0.08	24,24,24,24	0
62	MG	13	1655	1/1	0.97	0.10	51,51,51,51	0
62	MG	14	3227	1/1	0.97	0.10	38,38,38,38	0
62	MG	1H	3208	1/1	0.97	0.07	37,37,37,37	0
62	MG	13	1656	1/1	0.97	0.09	49,49,49,49	0
62	MG	1H	3150	1/1	0.97	0.19	25,25,25,25	0
62	MG	1H	3347	1/1	0.97	0.06	38,38,38,38	0
61	K	1G	1624	1/1	0.97	0.05	60,60,60,60	0
62	MG	13	1658	1/1	0.97	0.13	36,36,36,36	0
61	K	1H	3076	1/1	0.97	0.05	50,50,50,50	0
61	K	13	1617	1/1	0.97	0.08	50,50,50,50	0
62	MG	1H	3215	1/1	0.97	0.15	40,40,40,40	0
62	MG	16	211	1/1	0.97	0.04	57,57,57,57	0
62	MG	14	3238	1/1	0.97	0.14	44,44,44,44	0
62	MG	16	215	1/1	0.97	0.05	52,52,52,52	0
62	MG	1H	3354	1/1	0.97	0.06	29,29,29,29	0
62	MG	13	1661	1/1	0.97	0.14	39,39,39,39	0
61	K	1H	3124	1/1	0.97	0.06	64,64,64,64	0
62	MG	1H	3218	1/1	0.97	0.13	28,28,28,28	0
62	MG	1H	3156	1/1	0.97	0.26	33,33,33,33	0
61	K	1H	3039	1/1	0.97	0.05	54,54,54,54	0
62	MG	I8	101	1/1	0.97	0.12	26,26,26,26	0
62	MG	14	3126	1/1	0.97	0.11	27,27,27,27	0
62	MG	1H	3158	1/1	0.97	0.07	57,57,57,57	0
61	K	1H	3061	1/1	0.97	0.04	43,43,43,43	0
62	MG	14	3130	1/1	0.97	0.03	38,38,38,38	0
61	K	14	3049	1/1	0.97	0.04	49,49,49,49	0
62	MG	14	3252	1/1	0.97	0.20	42,42,42,42	0
61	K	1H	3127	1/1	0.97	0.05	47,47,47,47	0
62	MG	13	1668	1/1	0.97	0.07	31,31,31,31	0
61	K	1H	3033	1/1	0.97	0.06	36,36,36,36	0
62	MG	1H	3366	1/1	0.97	0.10	40,40,40,40	0
62	MG	14	3258	1/1	0.97	0.10	34,34,34,34	0
62	MG	13	1670	1/1	0.97	0.08	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3085	1/1	0.97	0.10	39,39,39,39	0
61	K	14	3090	1/1	0.97	0.04	64,64,64,64	0
62	MG	1H	3167	1/1	0.97	0.10	20,20,20,20	0
61	K	1G	1606	1/1	0.97	0.19	61,61,61,61	0
62	MG	1H	3169	1/1	0.97	0.14	15,15,15,15	0
62	MG	14	3144	1/1	0.97	0.07	36,36,36,36	0
62	MG	14	3266	1/1	0.97	0.04	38,38,38,38	0
62	MG	1H	3170	1/1	0.97	0.13	18,18,18,18	0
61	K	1H	3107	1/1	0.97	0.07	44,44,44,44	0
61	K	13	1619	1/1	0.97	0.19	58,58,58,58	0
61	K	1G	1609	1/1	0.97	0.04	91,91,91,91	0
62	MG	1H	3378	1/1	0.97	0.04	28,28,28,28	0
62	MG	1H	3307	1/1	0.97	0.06	25,25,25,25	0
62	MG	14	3151	1/1	0.97	0.10	26,26,26,26	0
61	K	13	1628	1/1	0.97	0.03	51,51,51,51	0
61	K	14	3059	1/1	0.97	0.09	48,48,48,48	0
62	MG	1H	3240	1/1	0.97	0.14	39,39,39,39	0
62	MG	1H	3383	1/1	0.97	0.05	18,18,18,18	0
61	K	14	3060	1/1	0.97	0.08	45,45,45,45	0
61	K	14	3026	1/1	0.97	0.03	35,35,35,35	0
62	MG	14	3282	1/1	0.97	0.06	48,48,48,48	0
62	MG	1H	3417	1/1	0.97	0.05	61,61,61,61	0
62	MG	14	3291	1/1	0.97	0.06	58,58,58,58	0
62	MG	1H	3419	1/1	0.97	0.08	27,27,27,27	0
62	MG	14	3293	1/1	0.97	0.07	60,60,60,60	0
62	MG	14	3294	1/1	0.97	0.06	51,51,51,51	0
61	K	1H	3089	1/1	0.97	0.03	36,36,36,36	0
62	MG	14	3301	1/1	0.97	0.06	38,38,38,38	0
62	MG	1H	3423	1/1	0.97	0.06	35,35,35,35	0
61	K	14	3063	1/1	0.97	0.04	57,57,57,57	0
62	MG	1H	3426	1/1	0.97	0.09	12,12,12,12	0
62	MG	1H	3428	1/1	0.97	0.04	23,23,23,23	0
61	K	14	3028	1/1	0.97	0.06	45,45,45,45	0
62	MG	1H	3247	1/1	0.97	0.15	21,21,21,21	0
62	MG	1H	3450	1/1	0.97	0.09	52,52,52,52	0
62	MG	1H	3317	1/1	0.97	0.23	52,52,52,52	0
61	K	1H	3065	1/1	0.97	0.14	30,30,30,30	0
62	MG	1H	3249	1/1	0.97	0.13	31,31,31,31	0
61	K	1H	3067	1/1	0.97	0.03	53,53,53,53	0
61	K	13	1622	1/1	0.97	0.05	61,61,61,61	0
62	MG	14	3340	1/1	0.97	0.06	26,26,26,26	0
62	MG	13	1747	1/1	0.97	0.06	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3343	1/1	0.97	0.07	50,50,50,50	0
62	MG	14	3347	1/1	0.97	0.06	27,27,27,27	0
62	MG	14	3348	1/1	0.97	0.06	30,30,30,30	0
62	MG	1H	3479	1/1	0.97	0.05	18,18,18,18	0
62	MG	1H	3484	1/1	0.97	0.07	16,16,16,16	0
62	MG	1H	3485	1/1	0.97	0.07	29,29,29,29	0
62	MG	14	3364	1/1	0.97	0.05	36,36,36,36	0
62	MG	14	3369	1/1	0.97	0.05	76,76,76,76	0
62	MG	14	3370	1/1	0.97	0.07	44,44,44,44	0
62	MG	14	3371	1/1	0.97	0.05	32,32,32,32	0
62	MG	13	1748	1/1	0.97	0.06	38,38,38,38	0
61	K	1H	3071	1/1	0.97	0.04	42,42,42,42	0
62	MG	1H	3490	1/1	0.97	0.04	32,32,32,32	0
62	MG	14	3375	1/1	0.97	0.06	84,84,84,84	0
61	K	1H	3116	1/1	0.97	0.05	61,61,61,61	0
62	MG	14	3381	1/1	0.97	0.07	56,56,56,56	0
62	MG	14	3383	1/1	0.97	0.09	51,51,51,51	0
62	MG	14	3385	1/1	0.97	0.05	58,58,58,58	0
62	MG	1H	3497	1/1	0.97	0.10	55,55,55,55	0
61	K	14	3002	1/1	0.97	0.06	69,69,69,69	0
62	MG	14	3389	1/1	0.97	0.05	45,45,45,45	0
62	MG	14	3392	1/1	0.97	0.08	75,75,75,75	0
62	MG	1H	3191	1/1	0.97	0.12	24,24,24,24	0
62	MG	13	1753	1/1	0.97	0.05	69,69,69,69	0
62	MG	1H	3504	1/1	0.97	0.10	20,20,20,20	0
61	K	19	301	1/1	0.97	0.13	52,52,52,52	0
62	MG	1H	3507	1/1	0.97	0.06	17,17,17,17	0
62	MG	1H	3508	1/1	0.97	0.06	22,22,22,22	0
61	K	14	3036	1/1	0.97	0.13	41,41,41,41	0
61	K	1H	3001	1/1	0.97	0.05	48,48,48,48	0
62	MG	13	1766	1/1	0.97	0.07	64,64,64,64	0
62	MG	1H	3454	1/1	0.98	0.06	23,23,23,23	0
62	MG	1H	3352	1/1	0.98	0.07	43,43,43,43	0
62	MG	1H	3148	1/1	0.98	0.14	35,35,35,35	0
62	MG	1H	3461	1/1	0.98	0.05	20,20,20,20	0
62	MG	1H	3462	1/1	0.98	0.05	27,27,27,27	0
62	MG	1H	3464	1/1	0.98	0.07	23,23,23,23	0
62	MG	1H	3466	1/1	0.98	0.06	22,22,22,22	0
62	MG	1H	3468	1/1	0.98	0.04	24,24,24,24	0
61	K	1H	3043	1/1	0.98	0.04	58,58,58,58	0
61	K	14	3031	1/1	0.98	0.03	29,29,29,29	0
62	MG	1H	3475	1/1	0.98	0.06	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3117	1/1	0.98	0.12	57,57,57,57	0
62	MG	1H	3478	1/1	0.98	0.12	44,44,44,44	0
62	MG	13	1727	1/1	0.98	0.08	60,60,60,60	0
62	MG	1H	3480	1/1	0.98	0.05	18,18,18,18	0
62	MG	1H	3481	1/1	0.98	0.05	21,21,21,21	0
62	MG	14	3127	1/1	0.98	0.10	30,30,30,30	0
62	MG	1H	3483	1/1	0.98	0.08	36,36,36,36	0
62	MG	13	1728	1/1	0.98	0.06	60,60,60,60	0
62	MG	13	1729	1/1	0.98	0.03	61,61,61,61	0
62	MG	13	1733	1/1	0.98	0.03	62,62,62,62	0
61	K	1H	3093	1/1	0.98	0.07	42,42,42,42	0
61	K	1H	3052	1/1	0.98	0.04	52,52,52,52	0
62	MG	1H	3493	1/1	0.98	0.08	27,27,27,27	0
62	MG	1H	3494	1/1	0.98	0.05	43,43,43,43	0
62	MG	1H	3495	1/1	0.98	0.07	48,48,48,48	0
62	MG	13	1744	1/1	0.98	0.05	19,19,19,19	0
62	MG	14	3138	1/1	0.98	0.08	31,31,31,31	0
61	K	1G	1619	1/1	0.98	0.07	74,74,74,74	0
62	MG	1H	3498	1/1	0.98	0.09	24,24,24,24	0
62	MG	14	3141	1/1	0.98	0.14	26,26,26,26	0
61	K	14	3057	1/1	0.98	0.06	54,54,54,54	0
61	K	1H	3106	1/1	0.98	0.07	59,59,59,59	0
62	MG	1H	3502	1/1	0.98	0.04	25,25,25,25	0
61	K	1H	3136	1/1	0.98	0.09	54,54,54,54	0
62	MG	1H	3241	1/1	0.98	0.16	30,30,30,30	0
61	K	14	3016	1/1	0.98	0.03	44,44,44,44	0
62	MG	13	1752	1/1	0.98	0.06	47,47,47,47	0
61	K	1H	3066	1/1	0.98	0.05	27,27,27,27	0
62	MG	1H	3510	1/1	0.98	0.04	19,19,19,19	0
62	MG	13	1667	1/1	0.98	0.10	29,29,29,29	0
62	MG	1H	3289	1/1	0.98	0.20	35,35,35,35	0
62	MG	1H	3374	1/1	0.98	0.04	28,28,28,28	0
62	MG	13	1756	1/1	0.98	0.09	63,63,63,63	0
61	K	1H	3084	1/1	0.98	0.16	47,47,47,47	0
62	MG	13	1758	1/1	0.98	0.03	76,76,76,76	0
62	MG	1H	3520	1/1	0.98	0.06	37,37,37,37	0
62	MG	1H	3293	1/1	0.98	0.23	40,40,40,40	0
62	MG	1H	3523	1/1	0.98	0.05	32,32,32,32	0
62	MG	1H	3524	1/1	0.98	0.05	16,16,16,16	0
62	MG	13	1759	1/1	0.98	0.06	52,52,52,52	0
62	MG	13	1763	1/1	0.98	0.05	64,64,64,64	0
61	K	1H	3057	1/1	0.98	0.03	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3069	1/1	0.98	0.03	16,16,16,16	0
62	MG	1H	3532	1/1	0.98	0.06	56,56,56,56	0
62	MG	1H	3535	1/1	0.98	0.06	64,64,64,64	0
62	MG	1H	3536	1/1	0.98	0.04	23,23,23,23	0
62	MG	1H	3173	1/1	0.98	0.13	28,28,28,28	0
62	MG	14	3281	1/1	0.98	0.05	25,25,25,25	0
62	MG	1H	3540	1/1	0.98	0.07	50,50,50,50	0
62	MG	14	3288	1/1	0.98	0.04	39,39,39,39	0
62	MG	1H	3541	1/1	0.98	0.04	66,66,66,66	0
62	MG	14	3290	1/1	0.98	0.06	36,36,36,36	0
62	MG	1H	3387	1/1	0.98	0.05	16,16,16,16	0
62	MG	1H	3390	1/1	0.98	0.06	26,26,26,26	0
62	MG	1H	3546	1/1	0.98	0.05	61,61,61,61	0
62	MG	1H	3547	1/1	0.98	0.06	52,52,52,52	0
61	K	14	3021	1/1	0.98	0.04	41,41,41,41	0
62	MG	14	3298	1/1	0.98	0.05	32,32,32,32	0
62	MG	1H	3393	1/1	0.98	0.04	17,17,17,17	0
62	MG	14	3303	1/1	0.98	0.04	58,58,58,58	0
61	K	1H	3053	1/1	0.98	0.04	25,25,25,25	0
62	MG	1H	3400	1/1	0.98	0.08	20,20,20,20	0
62	MG	1G	1693	1/1	0.98	0.09	40,40,40,40	0
62	MG	14	3310	1/1	0.98	0.05	25,25,25,25	0
62	MG	14	3312	1/1	0.98	0.09	38,38,38,38	0
62	MG	1H	3405	1/1	0.98	0.08	16,16,16,16	0
62	MG	1H	3409	1/1	0.98	0.11	14,14,14,14	0
62	MG	14	3315	1/1	0.98	0.05	39,39,39,39	0
62	MG	1H	3411	1/1	0.98	0.04	20,20,20,20	0
62	MG	14	3318	1/1	0.98	0.06	35,35,35,35	0
62	MG	1H	3412	1/1	0.98	0.05	16,16,16,16	0
62	MG	14	3321	1/1	0.98	0.06	26,26,26,26	0
62	MG	14	3322	1/1	0.98	0.04	41,41,41,41	0
62	MG	1H	3413	1/1	0.98	0.04	49,49,49,49	0
62	MG	1H	3415	1/1	0.98	0.07	16,16,16,16	0
62	MG	14	3327	1/1	0.98	0.06	36,36,36,36	0
61	K	1H	3078	1/1	0.98	0.02	45,45,45,45	0
62	MG	14	3331	1/1	0.98	0.07	51,51,51,51	0
62	MG	3E	301	1/1	0.98	0.03	82,82,82,82	0
62	MG	1H	3420	1/1	0.98	0.06	20,20,20,20	0
62	MG	14	3339	1/1	0.98	0.09	29,29,29,29	0
62	MG	1G	1705	1/1	0.98	0.07	73,73,73,73	0
62	MG	1H	3177	1/1	0.98	0.19	29,29,29,29	0
62	MG	14	3342	1/1	0.98	0.06	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3178	1/1	0.98	0.11	17,17,17,17	0
62	MG	14	3345	1/1	0.98	0.06	48,48,48,48	0
62	MG	1H	3570	1/1	0.98	0.05	50,50,50,50	0
62	MG	1H	3573	1/1	0.98	0.03	40,40,40,40	0
62	MG	14	3349	1/1	0.98	0.08	48,48,48,48	0
62	MG	14	3350	1/1	0.98	0.06	39,39,39,39	0
62	MG	1H	3219	1/1	0.98	0.23	31,31,31,31	0
62	MG	1H	3425	1/1	0.98	0.04	16,16,16,16	0
62	MG	14	3354	1/1	0.98	0.06	30,30,30,30	0
62	MG	14	3356	1/1	0.98	0.05	36,36,36,36	0
62	MG	14	3357	1/1	0.98	0.04	48,48,48,48	0
62	MG	14	3358	1/1	0.98	0.12	51,51,51,51	0
62	MG	14	3359	1/1	0.98	0.05	33,33,33,33	0
62	MG	1G	1716	1/1	0.98	0.04	70,70,70,70	0
62	MG	14	3361	1/1	0.98	0.05	48,48,48,48	0
62	MG	14	3362	1/1	0.98	0.04	68,68,68,68	0
61	K	1H	3113	1/1	0.98	0.03	30,30,30,30	0
62	MG	14	3365	1/1	0.98	0.06	28,28,28,28	0
62	MG	1G	1720	1/1	0.98	0.10	73,73,73,73	0
61	K	1H	3079	1/1	0.98	0.05	37,37,37,37	0
62	MG	1G	1723	1/1	0.98	0.07	59,59,59,59	0
61	K	1H	3102	1/1	0.98	0.04	51,51,51,51	0
62	MG	1G	1725	1/1	0.98	0.04	69,69,69,69	0
62	MG	1H	3430	1/1	0.98	0.04	54,54,54,54	0
62	MG	1G	1727	1/1	0.98	0.05	59,59,59,59	0
62	MG	14	3376	1/1	0.98	0.05	54,54,54,54	0
62	MG	14	3379	1/1	0.98	0.04	43,43,43,43	0
62	MG	1G	1728	1/1	0.98	0.07	50,50,50,50	0
62	MG	1G	1729	1/1	0.98	0.06	67,67,67,67	0
62	MG	14	3382	1/1	0.98	0.05	52,52,52,52	0
62	MG	1G	1730	1/1	0.98	0.05	78,78,78,78	0
62	MG	14	3384	1/1	0.98	0.08	47,47,47,47	0
62	MG	1H	3431	1/1	0.98	0.05	46,46,46,46	0
62	MG	1H	3436	1/1	0.98	0.06	57,57,57,57	0
62	MG	1G	1734	1/1	0.98	0.08	94,94,94,94	0
62	MG	14	3388	1/1	0.98	0.07	91,91,91,91	0
62	MG	1H	3145	1/1	0.98	0.15	17,17,17,17	0
62	MG	14	3390	1/1	0.98	0.04	79,79,79,79	0
62	MG	1H	3438	1/1	0.98	0.07	74,74,74,74	0
62	MG	14	3393	1/1	0.98	0.08	63,63,63,63	0
62	MG	32	302	1/1	0.98	0.06	79,79,79,79	0
62	MG	14	3395	1/1	0.98	0.05	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3396	1/1	0.98	0.05	66,66,66,66	0
62	MG	16	214	1/1	0.98	0.05	57,57,57,57	0
62	MG	1H	3440	1/1	0.98	0.04	62,62,62,62	0
62	MG	1H	3443	1/1	0.98	0.08	42,42,42,42	0
62	MG	1H	3444	1/1	0.98	0.05	23,23,23,23	0
61	K	16	203	1/1	0.98	0.03	44,44,44,44	0
62	MG	1H	3451	1/1	0.98	0.04	82,82,82,82	0
62	MG	29	303	1/1	0.98	0.05	28,28,28,28	0
62	MG	1H	3452	1/1	0.98	0.04	68,68,68,68	0
61	K	1H	3130	1/1	0.98	0.07	61,61,61,61	0
62	MG	13	1746	1/1	0.99	0.04	37,37,37,37	0
62	MG	1H	3432	1/1	0.99	0.03	55,55,55,55	0
62	MG	14	3253	1/1	0.99	0.03	47,47,47,47	0
62	MG	1H	3518	1/1	0.99	0.04	37,37,37,37	0
62	MG	1H	3433	1/1	0.99	0.06	51,51,51,51	0
62	MG	1H	3434	1/1	0.99	0.07	46,46,46,46	0
62	MG	1H	3521	1/1	0.99	0.06	14,14,14,14	0
62	MG	1H	3435	1/1	0.99	0.05	46,46,46,46	0
61	K	11	301	1/1	0.99	0.06	31,31,31,31	0
61	K	1H	3055	1/1	0.99	0.06	31,31,31,31	0
62	MG	1H	3525	1/1	0.99	0.05	15,15,15,15	0
62	MG	1H	3342	1/1	0.99	0.20	27,27,27,27	0
62	MG	1H	3527	1/1	0.99	0.07	26,26,26,26	0
61	K	31	301	1/1	0.99	0.06	48,48,48,48	0
62	MG	1H	3441	1/1	0.99	0.06	61,61,61,61	0
62	MG	1H	3442	1/1	0.99	0.04	56,56,56,56	0
62	MG	1H	3531	1/1	0.99	0.09	21,21,21,21	0
61	K	1H	3092	1/1	0.99	0.06	37,37,37,37	0
62	MG	1G	1671	1/1	0.99	0.29	46,46,46,46	0
62	MG	1H	3533	1/1	0.99	0.04	49,49,49,49	0
62	MG	1H	3534	1/1	0.99	0.03	27,27,27,27	0
61	K	14	3023	1/1	0.99	0.07	60,60,60,60	0
62	MG	1H	3445	1/1	0.99	0.03	50,50,50,50	0
62	MG	1H	3537	1/1	0.99	0.04	54,54,54,54	0
62	MG	1H	3538	1/1	0.99	0.04	27,27,27,27	0
62	MG	1H	3446	1/1	0.99	0.04	48,48,48,48	0
62	MG	1H	3447	1/1	0.99	0.04	19,19,19,19	0
62	MG	1H	3448	1/1	0.99	0.07	57,57,57,57	0
62	MG	14	3279	1/1	0.99	0.06	22,22,22,22	0
62	MG	1H	3449	1/1	0.99	0.05	15,15,15,15	0
62	MG	1H	3543	1/1	0.99	0.06	48,48,48,48	0
61	K	1H	3060	1/1	0.99	0.04	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3283	1/1	0.99	0.03	21,21,21,21	0
62	MG	14	3284	1/1	0.99	0.05	34,34,34,34	0
62	MG	14	3285	1/1	0.99	0.06	30,30,30,30	0
62	MG	14	3286	1/1	0.99	0.05	25,25,25,25	0
62	MG	1H	3545	1/1	0.99	0.04	45,45,45,45	0
61	K	1H	3075	1/1	0.99	0.03	28,28,28,28	0
62	MG	13	1754	1/1	0.99	0.05	35,35,35,35	0
61	K	1H	3087	1/1	0.99	0.02	31,31,31,31	0
61	K	14	3075	1/1	0.99	0.03	36,36,36,36	0
62	MG	1H	3384	1/1	0.99	0.04	11,11,11,11	0
62	MG	1H	3456	1/1	0.99	0.12	14,14,14,14	0
62	MG	1H	3386	1/1	0.99	0.03	31,31,31,31	0
62	MG	14	3296	1/1	0.99	0.04	35,35,35,35	0
62	MG	1H	3459	1/1	0.99	0.04	15,15,15,15	0
62	MG	14	3299	1/1	0.99	0.03	48,48,48,48	0
62	MG	1H	3460	1/1	0.99	0.03	11,11,11,11	0
62	MG	14	3302	1/1	0.99	0.06	29,29,29,29	0
62	MG	13	1730	1/1	0.99	0.06	76,76,76,76	0
62	MG	14	3304	1/1	0.99	0.03	63,63,63,63	0
62	MG	1H	3389	1/1	0.99	0.03	13,13,13,13	0
62	MG	1H	3557	1/1	0.99	0.02	22,22,22,22	0
62	MG	14	3307	1/1	0.99	0.09	36,36,36,36	0
62	MG	14	3308	1/1	0.99	0.03	77,77,77,77	0
62	MG	1H	3463	1/1	0.99	0.04	17,17,17,17	0
62	MG	1H	3559	1/1	0.99	0.07	15,15,15,15	0
62	MG	14	3311	1/1	0.99	0.03	31,31,31,31	0
62	MG	1H	3560	1/1	0.99	0.08	13,13,13,13	0
62	MG	1H	3561	1/1	0.99	0.03	38,38,38,38	0
62	MG	1H	3562	1/1	0.99	0.04	31,31,31,31	0
62	MG	1G	1701	1/1	0.99	0.03	45,45,45,45	0
62	MG	1H	3251	1/1	0.99	0.16	39,39,39,39	0
62	MG	1H	3465	1/1	0.99	0.04	21,21,21,21	0
62	MG	1G	1704	1/1	0.99	0.03	66,66,66,66	0
62	MG	1H	3565	1/1	0.99	0.05	25,25,25,25	0
62	MG	13	1732	1/1	0.99	0.04	51,51,51,51	0
62	MG	14	3323	1/1	0.99	0.04	56,56,56,56	0
62	MG	14	3324	1/1	0.99	0.03	43,43,43,43	0
62	MG	1H	3467	1/1	0.99	0.04	44,44,44,44	0
62	MG	1H	3568	1/1	0.99	0.09	34,34,34,34	0
62	MG	1G	1710	1/1	0.99	0.03	59,59,59,59	0
62	MG	1H	3392	1/1	0.99	0.04	51,51,51,51	0
62	MG	14	3330	1/1	0.99	0.05	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1G	1712	1/1	0.99	0.03	81,81,81,81	0
62	MG	1H	3469	1/1	0.99	0.04	13,13,13,13	0
62	MG	14	3333	1/1	0.99	0.06	62,62,62,62	0
62	MG	14	3334	1/1	0.99	0.04	33,33,33,33	0
62	MG	14	3335	1/1	0.99	0.03	70,70,70,70	0
62	MG	1H	3571	1/1	0.99	0.05	26,26,26,26	0
62	MG	14	3337	1/1	0.99	0.03	83,83,83,83	0
62	MG	14	3338	1/1	0.99	0.04	34,34,34,34	0
62	MG	1G	1715	1/1	0.99	0.04	39,39,39,39	0
62	MG	1H	3572	1/1	0.99	0.05	25,25,25,25	0
62	MG	1G	1717	1/1	0.99	0.04	67,67,67,67	0
62	MG	1H	3470	1/1	0.99	0.05	24,24,24,24	0
62	MG	1G	1719	1/1	0.99	0.15	66,66,66,66	0
62	MG	1H	3575	1/1	0.99	0.03	17,17,17,17	0
62	MG	14	3346	1/1	0.99	0.07	52,52,52,52	0
62	MG	1H	3471	1/1	0.99	0.05	56,56,56,56	0
62	MG	1G	1722	1/1	0.99	0.07	46,46,46,46	0
62	MG	1H	3472	1/1	0.99	0.03	17,17,17,17	0
62	MG	1H	3253	1/1	0.99	0.23	41,41,41,41	0
62	MG	1H	3394	1/1	0.99	0.03	11,11,11,11	0
62	MG	1H	3395	1/1	0.99	0.04	23,23,23,23	0
62	MG	14	3353	1/1	0.99	0.11	62,62,62,62	0
62	MG	1H	3476	1/1	0.99	0.05	15,15,15,15	0
62	MG	14	3355	1/1	0.99	0.07	39,39,39,39	0
62	MG	1H	3397	1/1	0.99	0.04	17,17,17,17	0
62	MG	1H	3398	1/1	0.99	0.07	52,52,52,52	0
61	K	13	1629	1/1	0.99	0.03	50,50,50,50	0
62	MG	13	1760	1/1	0.99	0.02	65,65,65,65	0
62	MG	1G	1732	1/1	0.99	0.04	83,83,83,83	0
62	MG	16	212	1/1	0.99	0.04	36,36,36,36	0
62	MG	16	213	1/1	0.99	0.04	41,41,41,41	0
62	MG	14	3363	1/1	0.99	0.03	26,26,26,26	0
62	MG	1H	3403	1/1	0.99	0.03	27,27,27,27	0
62	MG	1H	3482	1/1	0.99	0.03	45,45,45,45	0
62	MG	14	3366	1/1	0.99	0.04	55,55,55,55	0
62	MG	14	3367	1/1	0.99	0.04	70,70,70,70	0
62	MG	1H	3404	1/1	0.99	0.02	43,43,43,43	0
62	MG	13	1761	1/1	0.99	0.06	86,86,86,86	0
62	MG	1H	3407	1/1	0.99	0.02	16,16,16,16	0
62	MG	1H	3486	1/1	0.99	0.04	36,36,36,36	0
62	MG	1H	3487	1/1	0.99	0.07	41,41,41,41	0
62	MG	13	1762	1/1	0.99	0.03	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	F8	101	1/1	0.99	0.15	32,32,32,32	0
62	MG	13	1734	1/1	0.99	0.08	41,41,41,41	0
62	MG	14	3377	1/1	0.99	0.04	59,59,59,59	0
62	MG	14	3378	1/1	0.99	0.04	57,57,57,57	0
62	MG	13	1735	1/1	0.99	0.04	35,35,35,35	0
62	MG	1H	3491	1/1	0.99	0.12	42,42,42,42	0
62	MG	1H	3492	1/1	0.99	0.03	63,63,63,63	0
62	MG	1H	3194	1/1	0.99	0.04	14,14,14,14	0
62	MG	1H	3414	1/1	0.99	0.05	39,39,39,39	0
62	MG	13	1765	1/1	0.99	0.04	73,73,73,73	0
62	MG	1H	3416	1/1	0.99	0.05	69,69,69,69	0
62	MG	13	1736	1/1	0.99	0.04	44,44,44,44	0
62	MG	1H	3418	1/1	0.99	0.03	29,29,29,29	0
62	MG	1H	3499	1/1	0.99	0.04	32,32,32,32	0
62	MG	13	1737	1/1	0.99	0.07	65,65,65,65	0
62	MG	13	1768	1/1	0.99	0.04	78,78,78,78	0
62	MG	14	3391	1/1	0.99	0.03	81,81,81,81	0
62	MG	1H	3421	1/1	0.99	0.06	36,36,36,36	0
61	K	16	201	1/1	0.99	0.02	55,55,55,55	0
62	MG	14	3123	1/1	0.99	0.03	36,36,36,36	0
62	MG	13	1739	1/1	0.99	0.05	30,30,30,30	0
62	MG	1H	3505	1/1	0.99	0.04	16,16,16,16	0
61	K	1H	3068	1/1	0.99	0.04	29,29,29,29	0
62	MG	14	3398	1/1	0.99	0.10	47,47,47,47	0
62	MG	13	1742	1/1	0.99	0.03	60,60,60,60	0
62	MG	14	3400	1/1	0.99	0.04	63,63,63,63	0
62	MG	13	1743	1/1	0.99	0.04	54,54,54,54	0
62	MG	1H	3509	1/1	0.99	0.03	27,27,27,27	0
62	MG	1H	3427	1/1	0.99	0.07	36,36,36,36	0
62	MG	1J	205	1/1	0.99	0.06	68,68,68,68	0
61	K	1H	3083	1/1	0.99	0.03	54,54,54,54	0
62	MG	1H	3513	1/1	0.99	0.11	30,30,30,30	0
62	MG	2K	105	1/1	0.99	0.06	45,45,45,45	0
62	MG	13	1745	1/1	0.99	0.04	39,39,39,39	0
62	MG	M5	102	1/1	0.99	0.08	58,58,58,58	0
63	SF4	3E	302	8/8	0.99	0.07	56,57,68,71	0
63	SF4	32	303	8/8	0.99	0.03	57,68,76,85	0
64	ZN	5I	101	1/1	0.99	0.02	70,70,70,70	0
62	MG	14	3316	1/1	1.00	0.02	34,34,34,34	0
62	MG	1H	3406	1/1	1.00	0.02	14,14,14,14	0
62	MG	14	3297	1/1	1.00	0.03	28,28,28,28	0
62	MG	14	3319	1/1	1.00	0.03	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	13	1740	1/1	1.00	0.04	33,33,33,33	0
62	MG	14	3368	1/1	1.00	0.06	29,29,29,29	0
62	MG	14	3344	1/1	1.00	0.03	31,31,31,31	0
62	MG	1H	3574	1/1	1.00	0.08	24,24,24,24	0
62	MG	14	3300	1/1	1.00	0.03	61,61,61,61	0
62	MG	1H	3408	1/1	1.00	0.01	29,29,29,29	0
62	MG	11	302	1/1	1.00	0.04	14,14,14,14	0
62	MG	21	302	1/1	1.00	0.03	14,14,14,14	0
62	MG	1H	3439	1/1	1.00	0.04	53,53,53,53	0
62	MG	1H	3511	1/1	1.00	0.03	26,26,26,26	0
62	MG	14	3328	1/1	1.00	0.02	25,25,25,25	0
62	MG	13	1731	1/1	1.00	0.06	38,38,38,38	0
62	MG	14	3287	1/1	1.00	0.02	39,39,39,39	0
62	MG	1H	3410	1/1	1.00	0.02	16,16,16,16	0
62	MG	1H	3401	1/1	1.00	0.03	16,16,16,16	0
62	MG	1H	3402	1/1	1.00	0.02	23,23,23,23	0
62	MG	1G	1706	1/1	1.00	0.03	43,43,43,43	0
62	MG	1H	3396	1/1	1.00	0.03	16,16,16,16	0
62	MG	1H	3388	1/1	1.00	0.02	15,15,15,15	0
62	MG	1H	3385	1/1	1.00	0.02	20,20,20,20	0
62	MG	1H	3458	1/1	1.00	0.04	21,21,21,21	0
64	ZN	5A	102	1/1	1.00	0.02	82,82,82,82	0

## 6.5 Other polymers

There are no such residues in this entry.