



Full wwPDB EM Validation Report ⓘ

Dec 4, 2025 – 10:38 AM EST

PDB ID : 9PQX / pdb_00009pqx
EMDB ID : EMD-71792
Title : Structure of M. tuberculosis type-I FAS in the apo state
Authors : Mazhab-Jafari, M.T.; Samani, E.K.
Deposited on : 2025-07-23
Resolution : 2.83 Å(reported)
Based on initial model : 6GJC

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

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

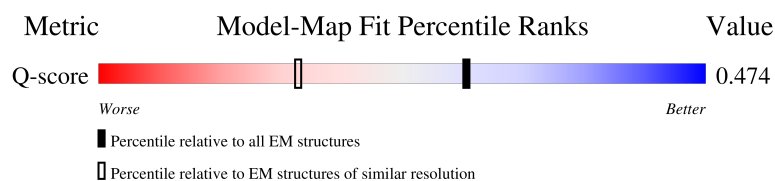
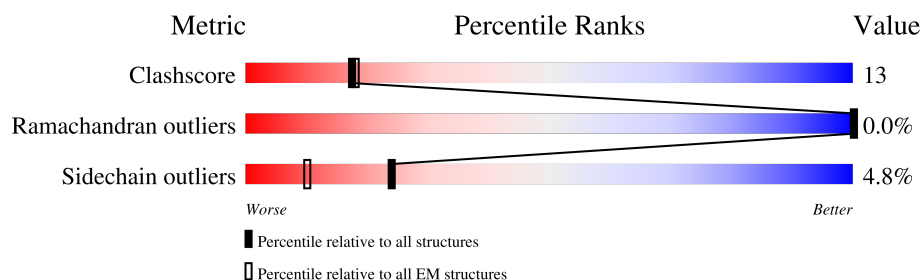
EMDB validation analysis : 0.0.1.dev129
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.46

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.83 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	11847 (2.33 - 3.33)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	3069	<div> <div>5%</div> <div>63%</div> <div>25%</div> <div>10%</div> </div>
1	B	3069	<div> <div>5%</div> <div>63%</div> <div>26%</div> <div>10%</div> </div>
1	C	3069	<div> <div>5%</div> <div>61%</div> <div>27%</div> <div>10%</div> </div>
1	D	3069	<div> <div>5%</div> <div>63%</div> <div>26%</div> <div>10%</div> </div>

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Mol	Chain	Length	Quality of chain
1	E	3069	<div><div>5%</div><div><div></div><div>63%</div><div>26%</div><div>• 10%</div></div></div>
1	F	3069	<div><div>5%</div><div><div></div><div>62%</div><div>26%</div><div>• 10%</div></div></div>

2 Entry composition [i](#)

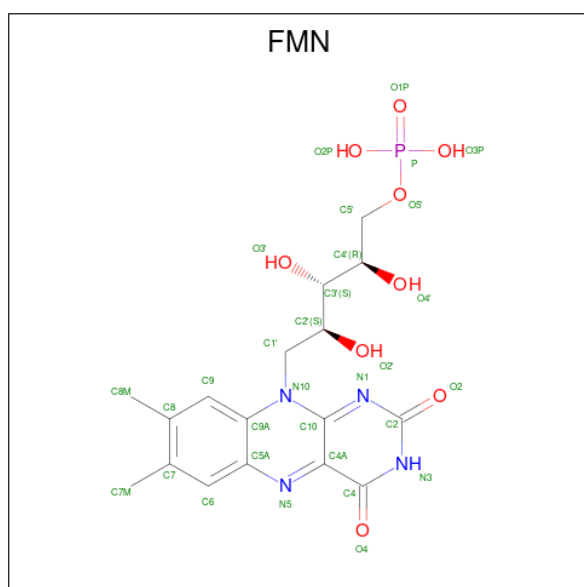
There are 2 unique types of molecules in this entry. The entry contains 124914 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 3-oxoacyl-ACP synthase.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	2770	Total	C	N	O	S	0	0
			20787	13071	3700	3951	65		
1	B	2770	Total	C	N	O	S	0	0
			20788	13072	3700	3951	65		
1	C	2770	Total	C	N	O	S	0	0
			20779	13067	3700	3947	65		
1	D	2770	Total	C	N	O	S	0	0
			20801	13078	3703	3955	65		
1	E	2770	Total	C	N	O	S	0	0
			20782	13068	3699	3950	65		
1	F	2770	Total	C	N	O	S	0	0
			20791	13073	3700	3953	65		

- Molecule 2 is FLAVIN MONONUCLEOTIDE (CCD ID: FMN) (formula: $C_{17}H_{21}N_4O_9P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
2	A	1	Total 31	C 17	N 4	O 9	P 1	0
2	B	1	Total 31	C 17	N 4	O 9	P 1	0
2	C	1	Total 31	C 17	N 4	O 9	P 1	0
2	D	1	Total 31	C 17	N 4	O 9	P 1	0
2	E	1	Total 31	C 17	N 4	O 9	P 1	0
2	F	1	Total 31	C 17	N 4	O 9	P 1	0

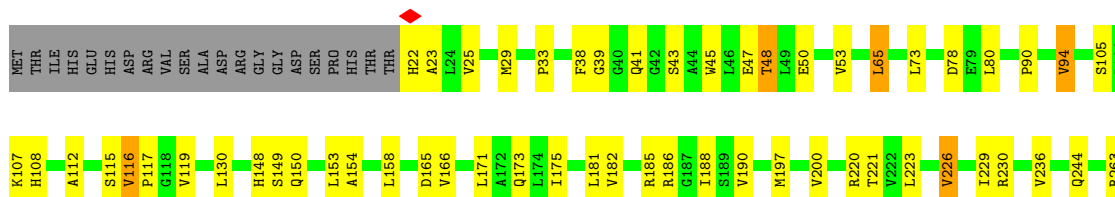
S2345	L2271	V2186	R2044	THR	GLY	THR	ASP	A1709	I1617	G1530	S1524	C1447	A1323	R1207
E2360	S2274	D2187	L2050	VAL	GLY	VAL	ALA	H1710	R1618	G1533	Y1525		S1324	R1208
R2367	ASN	L2189	W2051	VAL	THR	VAL	SER	T1712	D1619	F1526	Y1526	A1456	A1325	R1209
S2368	ARG	S2200	L2052	ALA	ALA	ALA	ALA	V1713	L1620	A1527		L1457	R1326	R1210
P2369	GLY		L2053	LEU	ASP	LEU	VAL		E1624	G1536			F1223	
I2370	GLY	S2205	D2054	GLY		GLY	THR	N1717	P1625				V1226	
D2373	GLY	L2206	L2058	THR	THR	THR	LYS	A1718	L1626	R1533			S1227	
L2378	GLY	H2207	E2067	GLY	GLY	GLY	ALA	E1719	D1627	G1534			E1246	
A2379	S2283	D2210	G2071	SER	SER	THR	LYS	L1725	A1631	L1535			S1247	
L2383	A2289	Q2212	H2074	SER	THR	LYS	ARG	D1729	D1632	E1536			V1260	
L2388	A2290	T2213	T2078	VAL	VAL	VAL	ILE	T1730	R1640				V1263	
K2391	L2293	P2214	R1975	GLY	THR	PRO	ASP	D1731	P1641	E1539			M1253	
A2392	D2294	T2215	R1976	GLY	GLY	GLY	GLN		R1642	V1542			W1254	
R2393	A2295	L2216	E1977	VAL	ALA	PRO	ILE		A1643	E1543			L1255	
E2394	A2296	L2217	L1980	GLY	VAL	GLY	GLU		E1643	R1544			S1256	
Q2395	A2297	F2220	L1980	SER	GLY	LEU	GLU		E1651	R1545			Q1260	
M2396	W2300	A2221	Q2093	HIS	HIS	ASP	ASP		L1652	E1546			H1261	
S2397	H2301	A2222	L2094	GLY	GLY	ILE	ILE		L1653	E1547			A1262	
A2398	S2304	R2224	L2098	ALA	ALA	ASP	SER		Q1656	L1548			V1263	
A2399	A2307	V2225	R2101	LEU	LEU	GLY	SER		F1657	T1549			Q1269	
A2400	A2308	V2226	E2107	ASP	ASP	GLN	ILE			G1550			P1273	
A2401	R2309	Q2227	L2113	ALA	ASP	LEU	THR		V1661	G1551			A1274	
V2402	S2310	D2228	R2114	ALA	ALA	VAL	GLY		W1662	R1552			R1275	
D2403	S2311	L2229	Q2113	SER	VAL	VAL	ALA		I1664	R1553			L1276	
E2404	L2312	T2230	V2121	VAL	ASP	PRO	GLY		E1665	S1554			V1277	
D2405	A2313	E2231	T2122	LYS	LYS	ASP	ARG		T1666	I1556			T1280	
A2406	H2314	A2232	G2123	ILE	ASP	VAL	VAL		L1670	L1557			F1283	
E2407	L2315	R2235	A2124	ASP	ASP	ALA	LEU		I1672	I1561			L1284	
I2412	T2320	W2240	T2129	ALA	ALA	ALA	VAL		A1675	D1562			V1287	
L2415	R2321	K2241	L2137	VAL	VAL	VAL	GLY		E1682	H1566			R1288	
P2418	G2322	V2242	G2141	SER	ALA	ALA	ASP		E1686	S1567			V1293	
P2419	T2323	L2243	A2142	VAL	SER	SER	VAL		I1687	R1568			W1297	
R2420	LEU	L2244	L2151	VAL	VAL	GLU	GLY		G1688				E1298	
P2428	GLY	W2245	D2152	ALA	ALA	ARG	LEU		V1689	R1571			E1299	
Q2429	GLY	A2246	E2153	ARG	ARG	LYS	ASN		K1690	V1572			V1300	
W2430	HIS	Q2248	L2159	GLY	GLY	THR	LEU		P1693	G1573			G1301	
L2433	D2329	R2249	W2167	VAL	VAL	TRP	GLY		T1694	V1574			I1302	
D2434	D2330	L2250	R2168	SER	SER	GLU	ILE		V1695	I1506			E1307	
V2435	A2331	I2251	W2020	VAL	VAL	LEU	ASP		A1696	R1578			I1308	
A2438	L2332	T2257	L2023	LEU	GLY	GLY	GLY		G1697	A1589			V1309	
D2439	A2334	R2261	W2024	LEU	GLY	GLY	ASP		L1698	R1597			D1310	
L2440	A2335	R2261	G2170	PRO	PRO	GLY	ALA		M1701	Y1598			V1311	
V2441	V2336	S2265	A2171	SER	SER	TRP	ALA		T1702	I1599			G1438	
G2442	E2337	R2266	W2179	ALA	GLY	ALA	SER		L1703	P1600			G1440	
	G2340	L2267	H2180	GLY	SER	LYS	ASP		P1706	N1601			E1441	
	V2341	H2268	W2035	GLY	GLY	HIS	ALA		E1707	L1602			L1319	
		V2270	R2036			VAL	ALA		Y1708	T1608			A1444	
			D2037							F1613			N1518	
			R2039										F1519	
													N1520	
													L1521	





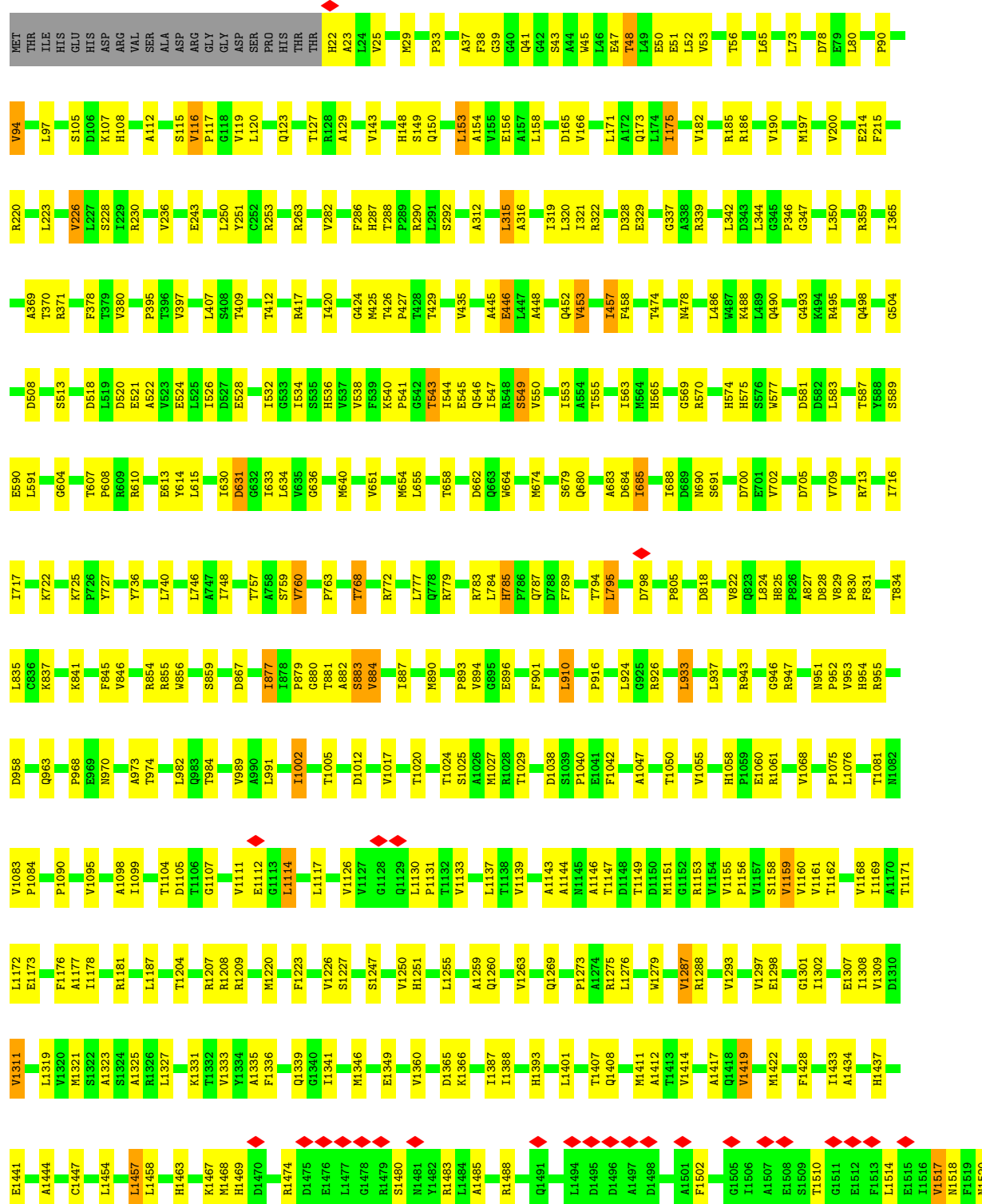


• Molecule 1: 3-oxoacyl-ACP synthase

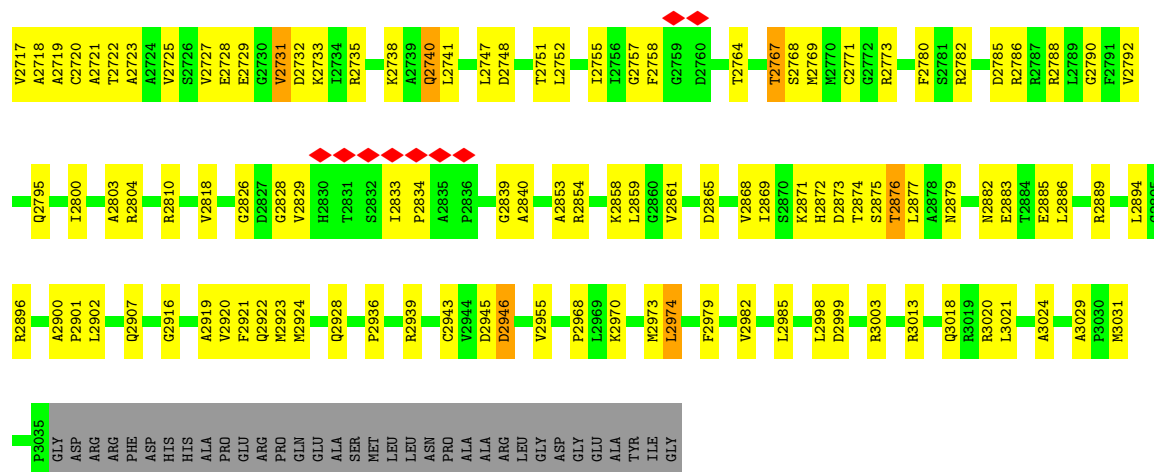




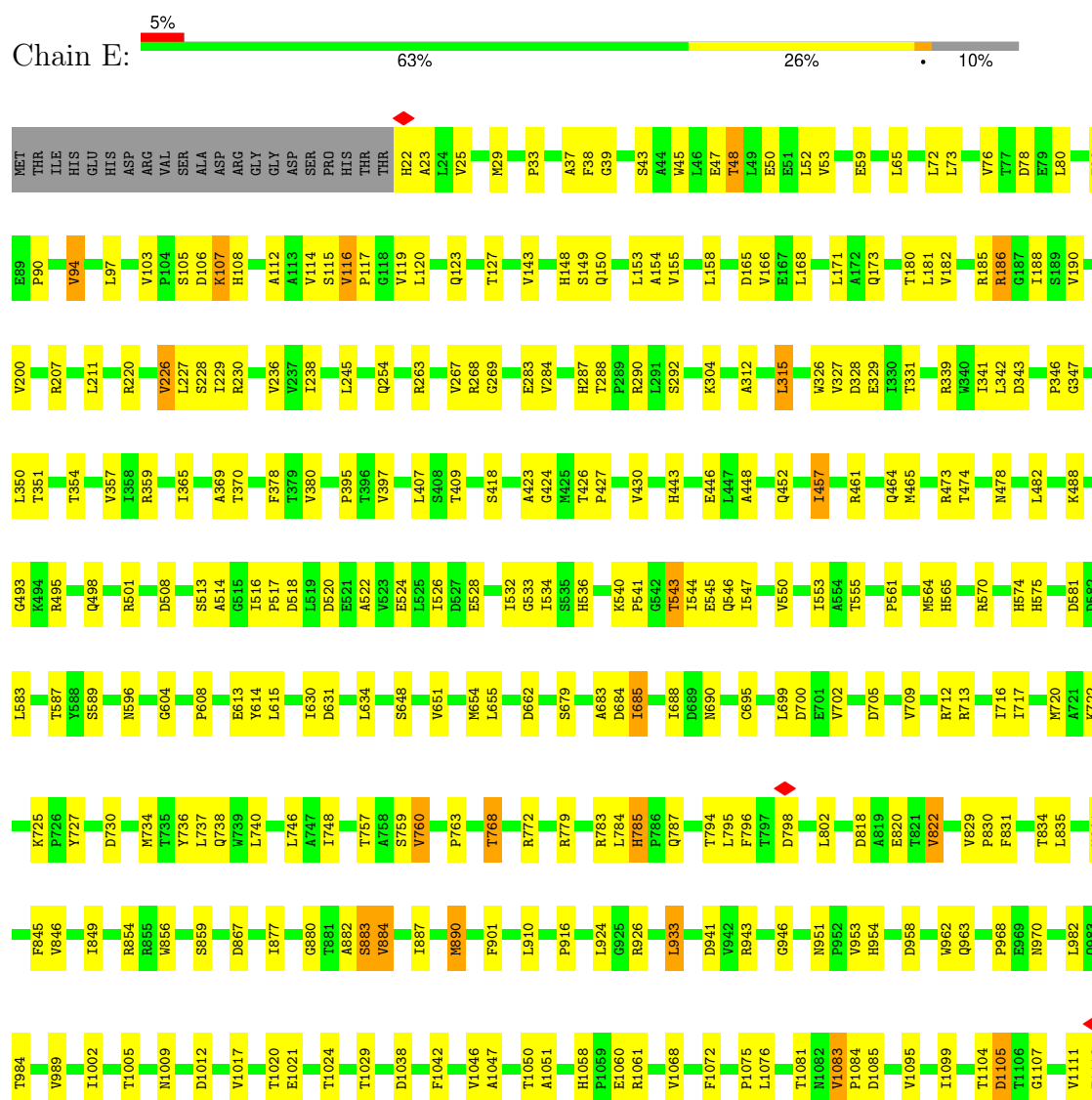




M2650	R2558	Y2452	E2348	PRO	A2177	R2022	VAL	LEU	ASP	PRO	G1697	L1602	L1521
R2651	V2561	T2457	L2353	ASN	A2178	R2023	ALA	GLY	GLY	ASP	L1698	T1608	R1522
V2652	E2562	M2457	M2353	ARG	N2179	L2023	LEU	GLU	ALA	ASP	G1523	G1523	G1523
F2563	F2563	E2460	E2360	MET	M2180	V2024	PRO	TRP	ALA	LEU	N1701	T1617	Q1525
D2564	D2564	M2461	E2366	PHE	A2188	V2027	ALA	ALA	SER	PHE	L1703	R1618	Y1526
P2565	V2463	E2462	Y2366	GLY	L2189	F2028	GLY	LYS	ASP	ASP	K1784	D1619	A1527
E2566	E2464	V2463	Y2366	GLY	V2190	F2028	SER	HIS	LEU	ALA	L1705	L1620	G1530
V2569	L2467	P2369	P2369	D2283	E2191	V2035	ASP	THR	ALA	ALA	E1624	E1624	R1533
I2570	L2467	L2370	L2370	A2289	L2201	D2038	ALA	GLU	ARG	THR	P1625	P1625	G1534
R2571	T2482	D2373	D2373	K2290	G2202	R2039	THR	VAL	SER	LEU	L1626	L1626	L1535
D2572	R2483	L2378	L2378	L2293	A2211	R2044	ILE	ALA	GLN	ALA	D1627	D1627	E1536
V2573	D2486	A2379	A2379	D2294	T2215	L2050	A1963	THR	LYS	ALA	N1717	N1717	A1537
P2574	D2487	L2388	L2388	A2295	L2216	D2054	A1964	GLY	THR	LEU	E1631	E1631	L1538
D2575	P2488	L2388	L2388	V2296	L2217	D2054	A1965	LEU	ALA	LEU	D1632	D1632	V1542
S2576	T2495	K2391	K2391	V2297	F2218	I2058	L1966	GLY	ALA	SER	R1720	R1720	E1543
W2579	M2500	R2391	R2391	W2300	A2221	D2059	S1967	THR	LYS	ALA	L1795	L1795	R1544
Q2580	E2500	R2393	R2393	H2301	A2221	D2059	E1968	ARG	THR	LEU	W1636	W1636	R1544
V2581	E2503	E2394	E2394	A2302	T2215	D2059	A1965	GLY	LYS	LEU	E1639	E1639	R1545
L2582	E2503	Q2395	Q2395	E2303	L2216	D2059	A1965	GLY	LYS	LEU	E1640	E1640	R1546
R2583	V2507	M2396	M2396	S2305	L2217	D2059	L1966	GLY	LYS	LEU	P1643	P1643	E1547
K2584	V2507	S2397	S2397	S2305	F2218	D2059	L1966	GLY	LYS	LEU	E1642	E1642	L1548
G2585	L2518	A2398	A2398	A2307	A2221	D2059	S1967	THR	LYS	LEU	L1795	L1795	T1549
T2587	G2519	A2399	A2399	R2308	T2215	D2059	E1968	ARG	THR	LEU	D1729	D1729	G1550
E2588	L2520	A2400	A2400	R2309	L2216	D2059	F1969	VAL	LYS	LEU	E1641	E1641	R1551
R2589	R2521	A2401	A2401	W2310	E2231	D2059	G1972	GLY	TYR	LEU	E1642	E1642	E1547
P2592	E2522	V2402	V2402	L2312	V2226	D2059	D1971	GLY	ASP	ASP	L1642	L1642	L1548
R2593	A2528	D2403	D2403	A2313	V2226	D2059	Q1972	GLY	GLN	GLU	E1642	E1642	T1549
K2594	I2529	E2404	E2404	H2314	G2227	D2059	G1975	ALA	PRO	GLU	R1646	R1646	G1550
L2595	D2530	D2405	D2405	A2315	D2228	D2059	R1976	GLY	VAL	GLU	E1651	E1651	R1551
P2596	P2531	A2406	A2406	L2316	L2229	D2059	E1977	GLY	LEU	GLU	L1652	L1652	R1552
V2601	D2532	E2407	E2407	E2317	S2230	D2059	G1978	GLY	ASP	ASP	W1655	W1655	R1553
Q2604	H2533	A2408	A2408	R2321	E2237	D2059	S1982	GLY	ILE	ILE	F1657	F1657	S1554
L2605	A2534	I2412	I2412	G2322	D2237	D2059	D1985	ALA	ASP	VAL	P1660	P1660	I1556
P2606	S2535	L2415	L2415	GLY	S2234	D2059	L1986	LEU	GLN	ILE	V1661	V1661	G1560
D2610	P2536	R2420	R2420	MET	A2236	D2059	V1987	ALA	ARG	THR	R1662	R1662	T1561
L2613	L2537	R2420	R2420	GLY	E2237	D2059	L1988	ALA	VAL	GLY	W1663	W1663	R1561
V2613	L2538	R2420	R2420	HIS	M2238	D2059	G1989	SER	LEU	ALA	L1664	L1664	D1562
V2614	V2539	P2428	P2428	G2322	K2241	D2059	Q1990	VAL	LEU	GLY	E1665	E1665	V1563
G2615	S2540	Q2429	Q2429	T2323	V2242	D2059	L1991	ASP	PRO	ARG	P1667	P1667	F1564
L2627	V2541	W2430	W2430	A2331	L2244	D2059	G1992	LYS	VAL	VAL	F1565	F1565	H1565
A2628	F2542	L2543	L2543	E2333	W2245	D2059	L1993	GLY	ASN	SER	D1668	D1668	S1567
W2631	E2544	E2544	E2544	A2334	A2246	D2059	D1994	ILE	LYS	GLN	L1670	L1670	R1568
F2639	D2546	D2546	D2546	E2335	A2246	D2059	D1995	ASP	ARG	LEU	F1671	F1671	R1568
L2640	A2548	V2441	V2441	E2337	V2270	D2059	P1996	ALA	PRO	LEU	I1672	I1672	R1571
E2644	F2549	V2442	V2442	W2336	L2251	D2059	V1997	ALA	GLY	VAL	G1678	G1678	E1576
S2645	A2555	Q2446	Q2446	E2337	D2262	D2059	A1999	VAL	ILE	ALA	E1576	E1576	E1576
A2647	D2556	L2449	L2449	E2337	D2262	D2059	A1999	SER	GLY	PRO	E1682	E1682	R1579
V2649	A2557	I2449	I2449	E2337	D2262	D2059	A1999	VAL	GLY	ALA	R1579	R1579	R1579
				E2337	D2262	D2059	A1999	ALA	ARG	ALA	E1686	E1686	M1585
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	L1687	L1687	P1586
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	G1689	G1689	P1586
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	P1689	P1689	A1589
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	P1693	P1693	A1589
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	T1694	T1694	R1597
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	V1695	V1695	T1599
				E2337	D2262	D2059	A1999	ALA	VAL	LEU	A1696	A1696	P1600
				E2337	D2262	D2059	A1999	ALA	VAL	LEU			N1601



• Molecule 1: 3-oxoacyl-ACP synthase









4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	113758	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.517	Depositor
Minimum map value	-0.288	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.021	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	372.0, 372.0, 372.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.93, 0.93, 0.93	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: FMN

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	A	0.13	0/21209	0.36	3/28918 (0.0%)
1	B	0.13	0/21210	0.38	4/28919 (0.0%)
1	C	0.14	0/21200	0.49	9/28905 (0.0%)
1	D	0.13	0/21223	0.36	5/28935 (0.0%)
1	E	0.21	3/21203 (0.0%)	0.46	13/28909 (0.0%)
1	F	0.13	0/21213	0.36	4/28923 (0.0%)
All	All	0.15	3/127258 (0.0%)	0.41	38/173509 (0.0%)

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	2223	PRO	CG-CD	-20.42	0.81	1.50
1	E	2223	PRO	CB-CG	10.05	1.99	1.49
1	E	2223	PRO	N-CD	5.72	1.55	1.47

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	1707	GLU	CA-C-N	33.23	170.59	122.40
1	C	1707	GLU	C-N-CA	33.23	170.59	122.40
1	C	1707	GLU	N-CA-C	-27.44	68.80	109.96
1	E	2223	PRO	N-CD-CG	-24.95	65.78	103.20
1	E	1708	TYR	N-CA-C	19.89	135.88	111.02
1	E	2223	PRO	CA-CB-CG	-19.39	67.66	104.50
1	E	1707	GLU	N-CA-C	-16.52	85.49	110.10
1	B	1707	GLU	N-CA-C	-15.89	86.43	110.10
1	E	2223	PRO	N-CA-CB	-15.05	87.45	103.25
1	B	1708	TYR	N-CA-C	13.39	130.27	111.52
1	C	1707	GLU	CB-CA-C	-13.20	88.78	109.89
1	B	1707	GLU	CB-CA-C	-11.48	91.99	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	1707	GLU	CB-CA-C	-10.78	93.09	109.90
1	C	2684	ASN	CB-CA-C	9.96	122.05	109.80
1	E	2223	PRO	CB-CG-CD	-9.25	76.51	106.10
1	C	1397	PRO	CA-N-CD	-9.15	99.19	112.00
1	E	1397	PRO	CA-N-CD	-8.43	100.20	112.00
1	D	1706	PRO	CA-N-CD	-8.30	100.38	112.00
1	E	2223	PRO	CA-N-CD	-8.16	100.58	112.00
1	E	2683	ARG	N-CA-C	-8.10	99.02	110.35
1	F	2683	ARG	N-CA-C	-6.78	98.88	109.25
1	C	2684	ASN	N-CA-C	-6.45	101.10	110.64
1	E	2683	ARG	CB-CA-C	6.44	119.78	109.61
1	C	2109	PRO	CA-N-CD	-6.38	103.07	112.00
1	D	2109	PRO	CA-N-CD	-6.17	103.36	112.00
1	B	2683	ARG	N-CA-C	-6.10	101.51	110.42
1	A	1706	PRO	CA-N-CD	-5.93	103.70	112.00
1	E	2223	PRO	N-CA-C	5.83	124.48	112.47
1	F	1706	PRO	CA-N-CD	-5.58	104.18	112.00
1	F	188	ILE	N-CA-C	-5.43	107.07	111.91
1	C	1708	TYR	N-CA-C	-5.41	105.31	112.24
1	D	2683	ARG	N-CA-C	-5.39	102.66	110.64
1	A	2683	ARG	N-CA-C	-5.33	102.75	110.64
1	D	1706	PRO	CB-CA-C	-5.22	102.95	111.56
1	D	1706	PRO	N-CA-C	5.13	123.05	112.47
1	E	107	LYS	CA-CB-CG	5.09	124.29	114.10
1	F	2202	GLY	N-CA-C	5.08	122.70	112.34
1	A	107	LYS	CA-CB-CG	5.01	124.13	114.10

There are no chirality outliers.

There are no planarity outliers.

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	A	20787	0	20642	542	0
1	B	20788	0	20644	569	0
1	C	20779	0	20631	600	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	20801	0	20661	570	0
1	E	20782	0	20632	569	0
1	F	20791	0	20646	571	0
2	A	31	0	19	4	0
2	B	31	0	19	4	0
2	C	31	0	19	5	0
2	D	31	0	19	4	0
2	E	31	0	19	4	0
2	F	31	0	19	4	0
All	All	124914	0	123970	3306	0

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 13.

All (3306) 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)
1:C:2677:HIS:HB3	1:C:2683:ARG:NH1	1.62	1.13
1:C:2677:HIS:CB	1:C:2683:ARG:HH12	1.62	1.10
1:C:1705:LEU:O	1:C:1707:GLU:O	1.69	1.09
1:F:2678:GLY:HA2	1:F:2683:ARG:HD3	1.40	1.03
1:F:2681:LEU:HB2	1:F:2683:ARG:HD2	1.44	0.99
1:C:1705:LEU:HG	1:C:1707:GLU:O	1.66	0.96
1:C:2677:HIS:HB3	1:C:2683:ARG:HH12	0.81	0.95
1:E:1705:LEU:O	1:E:1707:GLU:O	1.92	0.87
1:C:1702:THR:HG22	1:C:1708:TYR:HE1	1.40	0.85
1:F:1408:GLN:HE22	1:F:1439:VAL:HG21	1.41	0.84
1:D:1060:GLU:HB2	1:E:185:ARG:HD2	1.58	0.84
1:B:1408:GLN:HE22	1:B:1439:VAL:HG21	1.42	0.83
1:F:229:ILE:HG12	1:F:237:VAL:HG22	1.61	0.82
1:A:2686:PRO:HG2	1:A:2689:ILE:HB	1.62	0.81
1:A:119:VAL:HG23	1:A:150:GLN:HE22	1.45	0.81
1:D:631:ASP:N	1:D:631:ASP:OD1	2.14	0.81
1:E:1397:PRO:HD2	1:E:1398:ASP:H	1.42	0.81
1:C:2716:PRO:HA	1:E:2716:PRO:HA	1.63	0.81
1:D:495:ARG:HB3	1:D:498:GLN:HB2	1.60	0.81
1:B:495:ARG:HB3	1:B:498:GLN:HB2	1.61	0.81
1:E:2686:PRO:HG2	1:E:2689:ILE:HB	1.63	0.80
1:C:631:ASP:N	1:C:631:ASP:OD1	2.13	0.80
1:F:495:ARG:HB3	1:F:498:GLN:HB2	1.64	0.80
1:A:1433:ILE:HG22	1:A:1597:ARG:HA	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1433:ILE:HG22	1:D:1597:ARG:HA	1.65	0.79
1:C:495:ARG:HB3	1:C:498:GLN:HB2	1.63	0.79
1:A:495:ARG:HB3	1:A:498:GLN:HB2	1.63	0.79
1:F:1624:GLU:HG2	1:F:1625:PRO:HD3	1.64	0.79
1:D:1624:GLU:HG2	1:D:1625:PRO:HD3	1.65	0.79
1:A:2840:ALA:HB3	1:A:2886:LEU:HD11	1.65	0.79
1:A:1060:GLU:HB2	1:B:185:ARG:HD2	1.65	0.79
1:F:1433:ILE:HG22	1:F:1597:ARG:HA	1.65	0.79
1:B:1433:ILE:HG22	1:B:1597:ARG:HA	1.65	0.78
1:C:1624:GLU:HG2	1:C:1625:PRO:HD3	1.65	0.78
1:D:2840:ALA:HB3	1:D:2886:LEU:HD11	1.64	0.78
1:C:1433:ILE:HG22	1:C:1597:ARG:HA	1.64	0.78
1:C:2712:ALA:HB3	1:C:2733:LYS:HZ2	1.49	0.78
1:E:1433:ILE:HG22	1:E:1597:ARG:HA	1.64	0.78
1:F:1271:ARG:O	1:F:1271:ARG:NH1	2.16	0.78
1:B:1705:LEU:O	1:B:1707:GLU:O	2.01	0.77
1:B:2712:ALA:HB3	1:B:2733:LYS:HZ2	1.49	0.77
1:E:2840:ALA:HB3	1:E:2886:LEU:HD11	1.64	0.77
1:B:991:LEU:HD23	1:B:1002:ILE:HD11	1.66	0.77
1:F:991:LEU:HD23	1:F:1002:ILE:HD11	1.67	0.77
1:A:1624:GLU:HG2	1:A:1625:PRO:HD3	1.64	0.77
1:B:1690:LYS:HG2	1:B:1719:GLU:HB3	1.66	0.77
1:E:1624:GLU:HG2	1:E:1625:PRO:HD3	1.64	0.77
1:F:1686:GLU:HG3	1:F:1695:VAL:HB	1.66	0.77
1:C:2840:ALA:HB3	1:C:2886:LEU:HD11	1.64	0.77
1:F:2758:PHE:HB3	1:F:2764:THR:HG21	1.67	0.76
1:B:1624:GLU:HG2	1:B:1625:PRO:HD3	1.66	0.76
1:B:1686:GLU:HG3	1:B:1695:VAL:HB	1.67	0.76
1:B:1060:GLU:HB2	1:C:185:ARG:HD2	1.67	0.76
1:E:1418:GLN:NE2	1:E:1421:GLU:OE1	2.19	0.76
1:F:2840:ALA:HB3	1:F:2886:LEU:HD11	1.68	0.76
1:B:1117:LEU:HD11	1:B:1176:PHE:HB3	1.67	0.75
1:B:2716:PRO:HA	1:F:2716:PRO:HA	1.67	0.75
1:B:2678:GLY:HA2	1:B:2683:ARG:HD3	1.68	0.75
1:E:1060:GLU:HB2	1:F:185:ARG:HG3	1.68	0.75
1:B:2758:PHE:HB3	1:B:2764:THR:HG21	1.68	0.75
1:D:1083:VAL:HG22	1:D:1260:GLN:HE21	1.50	0.75
1:E:495:ARG:HB3	1:E:498:GLN:HB2	1.66	0.75
1:B:1349:GLU:OE1	1:B:1349:GLU:N	2.20	0.74
1:B:2686:PRO:HG2	1:B:2689:ILE:HB	1.69	0.74
1:D:2675:MET:HA	1:D:2685:LYS:HE2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1339:GLN:OE1	1:F:1408:GLN:NE2	2.20	0.74
1:A:397:VAL:HG12	1:A:916:PRO:HB3	1.68	0.74
1:A:2784:ASN:HD22	1:A:2956:TRP:HE1	1.35	0.74
1:B:2231:GLU:HG2	1:B:2235:ARG:HB2	1.69	0.74
1:D:991:LEU:HD23	1:D:1002:ILE:HD11	1.70	0.74
1:E:397:VAL:HG12	1:E:916:PRO:HB3	1.69	0.74
1:A:47:GLU:N	1:A:47:GLU:OE2	2.21	0.73
1:D:185:ARG:HG3	1:F:1060:GLU:HB2	1.69	0.73
1:D:1982:SER:HA	1:D:1985:ARG:HE	1.53	0.73
1:E:47:GLU:N	1:E:47:GLU:OE2	2.20	0.73
1:C:2231:GLU:HG2	1:C:2235:ARG:HB2	1.71	0.73
1:F:2231:GLU:HG2	1:F:2235:ARG:HB2	1.70	0.73
1:F:1117:LEU:HD11	1:F:1176:PHE:HB3	1.69	0.73
1:A:2628:ALA:HA	1:A:2698:ILE:HG23	1.69	0.73
1:A:2716:PRO:HA	1:D:2716:PRO:HA	1.70	0.73
1:C:1397:PRO:HD2	1:C:1398:ASP:H	1.50	0.73
1:F:2788:ARG:NH1	1:F:2945:ASP:OD2	2.21	0.73
1:C:587:THR:HG22	1:C:591:LEU:HG	1.71	0.73
1:C:1058:HIS:HB2	1:C:1061:ARG:HD3	1.70	0.73
1:D:1349:GLU:OE1	1:D:1349:GLU:N	2.20	0.73
1:D:783:ARG:HE	1:D:2415:LEU:HB3	1.54	0.73
1:E:2784:ASN:HD22	1:E:2956:TRP:HE1	1.37	0.73
1:C:47:GLU:OE1	1:C:47:GLU:N	2.21	0.72
1:C:2758:PHE:HB3	1:C:2764:THR:HG21	1.71	0.72
1:D:2686:PRO:HB2	1:D:2689:ILE:HB	1.69	0.72
1:E:963:GLN:OE1	1:E:963:GLN:N	2.22	0.72
1:A:1181:ARG:H	1:A:1181:ARG:HD2	1.53	0.72
1:D:47:GLU:OE1	1:D:47:GLU:N	2.21	0.72
1:D:2712:ALA:HB3	1:D:2733:LYS:HZ2	1.54	0.72
1:E:2628:ALA:HA	1:E:2698:ILE:HG23	1.71	0.72
1:A:1388:ILE:HG13	1:A:1393:HIS:HB2	1.70	0.72
1:F:2678:GLY:HA2	1:F:2683:ARG:HB2	1.69	0.72
1:C:991:LEU:HD23	1:C:1002:ILE:HD11	1.70	0.72
1:F:1638:ARG:NH1	1:F:1638:ARG:HA	2.03	0.72
1:F:2247:VAL:O	1:F:2251:ILE:HG12	1.90	0.72
1:A:2712:ALA:HB3	1:A:2733:LYS:HZ2	1.55	0.72
1:B:1519:PHE:HB3	1:B:1664:ILE:HG22	1.72	0.72
1:B:2840:ALA:HB3	1:B:2886:LEU:HD11	1.71	0.72
1:D:587:THR:HG22	1:D:591:LEU:HG	1.70	0.72
1:B:2678:GLY:HA2	1:B:2683:ARG:HB2	1.71	0.71
1:E:2201:LEU:HD22	1:E:2202:GLY:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2231:GLU:HG2	1:E:2235:ARG:HB2	1.72	0.71
1:F:2201:LEU:HD13	1:F:2203:PRO:HD2	1.70	0.71
1:B:963:GLN:OE1	1:B:963:GLN:N	2.24	0.71
1:B:1339:GLN:OE1	1:B:1408:GLN:NE2	2.23	0.71
1:C:2861:VAL:HG13	1:C:2865:ASP:HB3	1.72	0.71
1:C:2686:PRO:HG2	1:C:2689:ILE:HB	1.71	0.71
1:A:2067:GLU:OE1	1:A:2168:ARG:NH1	2.24	0.71
1:A:2231:GLU:HG2	1:A:2235:ARG:HB2	1.72	0.71
1:B:2247:VAL:O	1:B:2251:ILE:HG12	1.91	0.71
1:A:2442:VAL:HG12	1:A:2818:VAL:HG22	1.73	0.71
1:C:119:VAL:HG23	1:C:150:GLN:HE22	1.55	0.71
1:F:2007:GLU:O	1:F:2011:LEU:HD23	1.91	0.71
1:B:397:VAL:HG12	1:B:916:PRO:HB3	1.72	0.71
1:E:2297:VAL:O	1:E:2301:HIS:ND1	2.23	0.71
1:D:2861:VAL:HG13	1:D:2865:ASP:HB3	1.72	0.70
1:F:119:VAL:HG23	1:F:150:GLN:HE22	1.56	0.70
1:F:397:VAL:HG12	1:F:916:PRO:HB3	1.71	0.70
1:A:207:ARG:O	1:A:211:LEU:HD23	1.91	0.70
1:B:2201:LEU:HD13	1:B:2203:PRO:HD2	1.72	0.70
1:B:2714:ILE:HB	1:B:2729:GLU:OE1	1.91	0.70
1:D:2714:ILE:HB	1:D:2729:GLU:OE2	1.91	0.70
1:F:1519:PHE:HB3	1:F:1664:ILE:HG22	1.73	0.70
1:B:2267:LEU:O	1:B:2311:SER:N	2.23	0.70
1:D:2231:GLU:HG2	1:D:2235:ARG:HB2	1.72	0.70
1:F:2267:LEU:O	1:F:2311:SER:N	2.24	0.70
1:D:2461:MET:HE2	1:D:2461:MET:HA	1.73	0.70
1:D:2758:PHE:HB3	1:D:2764:THR:HG21	1.71	0.70
1:F:1438:SER:OG	1:F:1566:HIS:NE2	2.22	0.70
1:E:2682:GLY:O	1:E:2683:ARG:C	2.35	0.70
1:F:2067:GLU:OE1	1:F:2168:ARG:NH1	2.24	0.70
1:B:167:GLU:O	1:B:171:LEU:HD12	1.92	0.70
1:D:2297:VAL:O	1:D:2301:HIS:ND1	2.24	0.70
1:E:1117:LEU:HD11	1:E:1176:PHE:HB3	1.74	0.70
1:A:587:THR:HG22	1:A:591:LEU:HG	1.74	0.69
1:C:2201:LEU:HD13	1:C:2203:PRO:HD2	1.74	0.69
1:D:29:MET:HA	1:D:29:MET:HE3	1.74	0.69
1:E:2442:VAL:HG12	1:E:2818:VAL:HG22	1.73	0.69
1:C:2681:LEU:HD12	1:C:2683:ARG:HH11	1.57	0.69
1:C:2717:VAL:HA	1:C:2722:THR:HG22	1.74	0.69
1:E:2712:ALA:HB3	1:E:2733:LYS:HZ2	1.57	0.69
1:D:2241:LYS:HA	1:D:2245:TRP:HD1	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:167:GLU:O	1:F:171:LEU:HD12	1.92	0.69
1:F:2201:LEU:HD22	1:F:2202:GLY:H	1.56	0.69
1:C:2628:ALA:HA	1:C:2698:ILE:HG23	1.74	0.69
1:D:2201:LEU:HD13	1:D:2203:PRO:HD2	1.74	0.69
1:F:2686:PRO:HG2	1:F:2689:ILE:HB	1.73	0.69
1:B:2442:VAL:HG12	1:B:2818:VAL:HG22	1.75	0.69
1:B:2463:VAL:HG12	1:B:2464:GLU:HG3	1.75	0.69
1:F:2786:ARG:NH2	1:F:2946:ASP:OD2	2.26	0.69
1:B:1130:LEU:HD12	1:B:1131:PRO:HD2	1.74	0.69
1:D:1705:LEU:HD12	1:D:1707:GLU:H	1.57	0.69
1:F:29:MET:HA	1:F:29:MET:HE3	1.75	0.69
1:F:2442:VAL:HG12	1:F:2818:VAL:HG22	1.74	0.69
1:F:1130:LEU:HD12	1:F:1131:PRO:HD2	1.75	0.69
1:B:119:VAL:HG23	1:B:150:GLN:HE22	1.58	0.68
1:F:2712:ALA:HB3	1:F:2733:LYS:HZ2	1.58	0.68
1:A:1060:GLU:OE2	1:A:1061:ARG:NH1	2.25	0.68
1:A:2627:LEU:HD12	1:A:2668:GLY:H	1.57	0.68
1:A:2982:VAL:HG23	1:D:2713:MET:HB2	1.75	0.68
1:C:2723:ALA:HB3	1:C:2919:ALA:HB3	1.75	0.68
1:E:1702:THR:HA	1:E:1705:LEU:HD22	1.74	0.68
1:E:2201:LEU:HD13	1:E:2203:PRO:HD2	1.75	0.68
1:F:963:GLN:N	1:F:963:GLN:OE1	2.27	0.68
1:A:1456:ALA:O	1:A:1460:MET:HG2	1.93	0.68
1:C:29:MET:HA	1:C:29:MET:HE3	1.74	0.68
1:C:654:MET:HE1	1:C:690:ASN:HB3	1.74	0.68
1:C:1705:LEU:C	1:C:1707:GLU:O	2.35	0.68
1:D:2769:MET:SD	1:D:2769:MET:N	2.67	0.68
1:F:2332:ILE:H	1:F:2332:ILE:HD12	1.57	0.68
1:C:1159:VAL:HG23	1:C:1172:LEU:HB2	1.76	0.68
1:D:654:MET:HE1	1:D:690:ASN:HB3	1.76	0.68
1:D:951:ASN:HB3	1:D:954:HIS:HB2	1.76	0.68
1:D:2628:ALA:HA	1:D:2698:ILE:HG23	1.75	0.68
1:D:2788:ARG:NH1	1:D:2945:ASP:OD2	2.26	0.68
1:E:168:LEU:HA	1:E:171:LEU:HD23	1.76	0.68
1:A:168:LEU:HA	1:A:171:LEU:HD23	1.76	0.68
1:B:2769:MET:N	1:B:2769:MET:SD	2.67	0.68
1:D:2442:VAL:HG12	1:D:2818:VAL:HG22	1.75	0.68
1:E:1336:PHE:HE1	1:E:1687:ILE:HD12	1.58	0.68
1:E:2007:GLU:O	1:E:2011:LEU:HD23	1.94	0.68
1:B:1060:GLU:OE2	1:B:1061:ARG:NH1	2.26	0.68
1:E:1339:GLN:NE2	1:E:1408:GLN:OE1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:397:VAL:HG12	1:C:916:PRO:HB3	1.76	0.68
1:E:1422:MET:HE1	1:E:1725:LEU:HD21	1.75	0.68
1:A:2696:ASN:HB3	1:D:2717:VAL:HG12	1.73	0.67
1:A:2861:VAL:HG13	1:A:2865:ASP:HB3	1.76	0.67
1:C:2217:LEU:HB3	1:C:2269:VAL:HG22	1.77	0.67
1:A:1418:GLN:NE2	1:A:1421:GLU:OE1	2.26	0.67
1:D:1144:ALA:HB3	1:D:1156:PRO:HG2	1.77	0.67
1:A:1339:GLN:OE1	1:A:1408:GLN:NE2	2.28	0.67
1:C:2717:VAL:HG12	1:E:2696:ASN:HB3	1.76	0.67
1:C:2769:MET:N	1:C:2769:MET:SD	2.67	0.67
1:F:2121:VAL:HG22	1:F:2218:PHE:HB2	1.76	0.67
1:A:2153:GLU:OE2	1:A:2153:GLU:N	2.24	0.67
1:A:2703:VAL:HG21	1:A:2713:MET:HE1	1.77	0.67
1:C:2367:ARG:NH1	1:C:2368:SER:OG	2.27	0.67
1:C:2696:ASN:HB3	1:E:2717:VAL:HG12	1.77	0.67
1:D:2241:LYS:HA	1:D:2245:TRP:CD1	2.29	0.67
1:C:951:ASN:HB3	1:C:954:HIS:HB2	1.76	0.67
1:C:2297:VAL:O	1:C:2301:HIS:ND1	2.27	0.67
1:E:1602:LEU:HD21	1:E:1652:LEU:HG	1.75	0.67
1:A:654:MET:HE1	1:A:690:ASN:HB3	1.77	0.67
1:A:1117:LEU:HD11	1:A:1176:PHE:HB3	1.76	0.67
1:E:1388:ILE:HG13	1:E:1393:HIS:HB2	1.77	0.67
1:B:1488:ARG:HG3	1:B:1524:SER:HB2	1.77	0.67
1:F:513:SER:OG	2:F:3101:FMN:O2	2.09	0.67
1:A:1519:PHE:HB3	1:A:1664:ILE:HG22	1.76	0.67
1:C:1144:ALA:HB3	1:C:1156:PRO:HG2	1.76	0.67
1:D:1992:GLY:HA3	1:E:2571:ARG:HG3	1.77	0.67
1:E:1336:PHE:HE2	1:E:1444:ALA:HA	1.59	0.67
1:F:2192:TRP:NE1	1:F:2197:GLN:OE1	2.28	0.67
1:B:513:SER:OG	2:B:3101:FMN:O2	2.10	0.67
1:F:2769:MET:N	1:F:2769:MET:SD	2.68	0.67
1:B:2121:VAL:HG22	1:B:2218:PHE:HB2	1.76	0.66
1:D:397:VAL:HG12	1:D:916:PRO:HB3	1.76	0.66
1:D:2665:GLY:HA2	1:D:2722:THR:HG21	1.75	0.66
1:E:2786:ARG:NH2	1:E:2946:ASP:OD1	2.27	0.66
1:A:2675:MET:HA	1:A:2685:LYS:HD3	1.77	0.66
1:B:2153:GLU:N	1:B:2153:GLU:OE2	2.27	0.66
1:D:448:ALA:O	1:D:452:GLN:NE2	2.27	0.66
1:D:2723:ALA:HB3	1:D:2919:ALA:HB3	1.77	0.66
1:A:448:ALA:O	1:A:452:GLN:NE2	2.29	0.66
1:D:1060:GLU:OE2	1:D:1061:ARG:NH1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1600:PRO:HB3	1:D:1652:LEU:HD21	1.77	0.66
1:B:1388:ILE:HG13	1:B:1393:HIS:HB2	1.75	0.66
1:B:2708:GLY:HA3	1:F:2829:VAL:HG23	1.77	0.66
1:C:2683:ARG:O	1:C:2684:ASN:C	2.37	0.66
1:B:2829:VAL:HG23	1:F:2708:GLY:HA3	1.76	0.66
1:D:2519:GLY:O	1:D:2521:ARG:NH1	2.28	0.66
1:C:448:ALA:O	1:C:452:GLN:NE2	2.27	0.66
1:C:2788:ARG:NH1	1:C:2945:ASP:OD2	2.26	0.66
1:F:448:ALA:O	1:F:452:GLN:NE2	2.29	0.66
1:B:1438:SER:OG	1:B:1566:HIS:NE2	2.25	0.66
1:E:2703:VAL:HG21	1:E:2713:MET:HE1	1.76	0.66
1:E:2827:ASP:HB2	1:E:2981:HIS:HB3	1.76	0.66
1:F:2714:ILE:HB	1:F:2729:GLU:OE1	1.96	0.66
1:B:2681:LEU:HB2	1:B:2683:ARG:HD2	1.76	0.66
1:C:2442:VAL:HG12	1:C:2818:VAL:HG22	1.75	0.66
1:D:1602:LEU:HD21	1:D:1652:LEU:HG	1.77	0.66
1:A:2266:ARG:HH22	1:A:2308:ALA:HA	1.60	0.66
1:A:2708:GLY:HA3	1:D:2829:VAL:HG23	1.77	0.66
1:D:2273:GLY:HA3	1:D:2314:HIS:HE1	1.61	0.66
1:A:2717:VAL:HG12	1:D:2696:ASN:HB3	1.77	0.66
1:E:654:MET:HE1	1:E:690:ASN:HB3	1.77	0.66
1:B:2192:TRP:NE1	1:B:2197:GLN:OE1	2.29	0.65
1:C:1117:LEU:HD11	1:C:1176:PHE:HB3	1.77	0.65
1:E:2266:ARG:HH22	1:E:2308:ALA:HA	1.61	0.65
1:D:1159:VAL:HG23	1:D:1172:LEU:HB2	1.76	0.65
1:D:1401:LEU:O	1:D:1407:THR:OG1	2.11	0.65
1:A:2332:ILE:H	1:A:2332:ILE:HD12	1.61	0.65
1:A:2714:ILE:HG23	1:D:2725:VAL:HG22	1.77	0.65
1:D:1488:ARG:HG3	1:D:1524:SER:HB2	1.78	0.65
1:D:1542:VAL:HG11	1:D:1555:PHE:HB2	1.78	0.65
1:F:825:HIS:HD2	1:F:2418:PRO:HA	1.61	0.65
1:A:2571:ARG:HG3	1:C:1992:GLY:HA3	1.79	0.65
1:C:498:GLN:HG3	1:C:532:ILE:HD13	1.77	0.65
1:D:2420:ARG:O	1:D:3018:GLN:NE2	2.28	0.65
1:A:1600:PRO:HB3	1:A:1652:LEU:HD21	1.77	0.65
1:A:2267:LEU:O	1:A:2311:SER:N	2.30	0.65
1:A:2699:ALA:O	1:A:2703:VAL:HG23	1.97	0.65
1:B:825:HIS:HD2	1:B:2418:PRO:HA	1.61	0.65
1:D:150:GLN:HG3	1:D:319:ILE:HD11	1.77	0.65
1:E:283:GLU:HG2	1:E:284:VAL:HG13	1.79	0.65
1:F:2681:LEU:HB2	1:F:2683:ARG:CD	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1602:LEU:HD21	1:A:1652:LEU:HG	1.79	0.65
1:B:1992:GLY:HA3	1:C:2571:ARG:HG3	1.78	0.65
1:B:2231:GLU:O	1:B:2235:ARG:N	2.27	0.65
1:B:2717:VAL:HG11	1:F:2695:PRO:HB2	1.78	0.65
1:B:2732:ASP:OD1	1:B:2733:LYS:N	2.29	0.65
1:F:2463:VAL:HG12	1:F:2464:GLU:HG3	1.78	0.65
1:B:263:ARG:NH2	1:B:577:TRP:O	2.29	0.65
1:D:2673:GLN:O	1:D:2677:HIS:ND1	2.28	0.65
1:E:1333:VAL:HG11	1:E:1670:LEU:HD21	1.77	0.65
1:F:1600:PRO:HB3	1:F:1652:LEU:HD21	1.79	0.65
1:B:951:ASN:HB3	1:B:954:HIS:HB2	1.78	0.65
1:B:2420:ARG:O	1:B:3018:GLN:NE2	2.28	0.65
1:B:2628:ALA:HA	1:B:2698:ILE:HG23	1.79	0.65
1:E:1336:PHE:CE1	1:E:1687:ILE:HD12	2.31	0.65
1:E:1519:PHE:HB3	1:E:1664:ILE:HG22	1.79	0.65
1:A:610:ARG:NH1	1:A:613:GLU:OE2	2.30	0.65
1:A:1419:VAL:HG11	1:A:1447:CYS:HB3	1.79	0.65
1:A:2519:GLY:O	1:A:2521:ARG:NH1	2.30	0.65
1:F:800:GLY:O	1:F:804:ASN:ND2	2.30	0.65
1:F:2749:ASP:OD1	1:F:2795:GLN:NE2	2.30	0.65
1:A:1992:GLY:HA3	1:B:2571:ARG:HG3	1.80	0.64
1:C:610:ARG:NH1	1:C:613:GLU:OE2	2.30	0.64
1:B:448:ALA:O	1:B:452:GLN:NE2	2.29	0.64
1:C:1418:GLN:NE2	1:C:1719:GLU:OE1	2.27	0.64
1:D:1686:GLU:OE2	1:D:1717:ASN:ND2	2.31	0.64
1:E:1263:VAL:HG23	1:E:1297:VAL:HG21	1.78	0.64
1:E:1992:GLY:HA3	1:F:2571:ARG:HG3	1.79	0.64
1:F:2519:GLY:O	1:F:2521:ARG:NH1	2.31	0.64
1:B:1204:THR:HG23	1:B:1301:GLY:HA2	1.79	0.64
1:C:2519:GLY:O	1:C:2521:ARG:NH1	2.30	0.64
1:F:1024:THR:HG22	1:F:1111:VAL:HG11	1.79	0.64
1:F:1488:ARG:HG3	1:F:1524:SER:HB2	1.78	0.64
1:A:2231:GLU:O	1:A:2235:ARG:N	2.26	0.64
1:D:1130:LEU:HD12	1:D:1131:PRO:HD2	1.78	0.64
1:E:1341:ILE:HD11	1:E:1411:MET:SD	2.38	0.64
1:E:2699:ALA:O	1:E:2703:VAL:HG23	1.97	0.64
1:A:2829:VAL:HG23	1:D:2708:GLY:HA3	1.79	0.64
1:C:1130:LEU:HD12	1:C:1131:PRO:HD2	1.79	0.64
1:E:1397:PRO:HD2	1:E:1398:ASP:N	2.08	0.64
1:F:25:VAL:HG21	1:F:135:MET:HE2	1.79	0.64
1:D:1985:ARG:HG3	1:D:1986:LEU:HD12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2571:ARG:HG3	1:F:1992:GLY:HA3	1.78	0.64
1:C:2677:HIS:CB	1:C:2683:ARG:NH1	2.38	0.64
1:D:1117:LEU:HD11	1:D:1176:PHE:HB3	1.79	0.64
1:E:2121:VAL:HG22	1:E:2218:PHE:HB2	1.79	0.64
1:A:522:ALA:O	1:A:526:ILE:HG13	1.98	0.64
1:C:783:ARG:HH11	1:C:2415:LEU:HB3	1.61	0.64
1:A:1263:VAL:HG23	1:A:1297:VAL:HG21	1.79	0.64
1:D:2153:GLU:N	1:D:2153:GLU:OE2	2.31	0.64
1:C:2829:VAL:HG23	1:E:2708:GLY:HA3	1.78	0.64
1:F:2627:LEU:HD12	1:F:2668:GLY:H	1.63	0.64
1:A:120:LEU:HD13	1:A:153:LEU:HD13	1.80	0.63
1:B:610:ARG:NH1	1:B:613:GLU:OE2	2.32	0.63
1:D:2121:VAL:HG22	1:D:2218:PHE:HB2	1.79	0.63
1:E:2267:LEU:O	1:E:2311:SER:N	2.30	0.63
1:F:2420:ARG:O	1:F:3018:GLN:NE2	2.29	0.63
1:A:951:ASN:HB3	1:A:954:HIS:HB2	1.79	0.63
1:A:2297:VAL:O	1:A:2301:HIS:ND1	2.32	0.63
1:A:2769:MET:N	1:A:2769:MET:SD	2.70	0.63
1:C:2896:ARG:HH22	1:C:2902:LEU:HD13	1.63	0.63
1:E:2723:ALA:HB3	1:E:2919:ALA:HB3	1.80	0.63
1:F:795:LEU:HD23	1:F:795:LEU:H	1.64	0.63
1:C:2786:ARG:NH2	1:C:2946:ASP:OD1	2.31	0.63
1:D:2740:GLN:HB3	1:D:2804:ARG:HD3	1.80	0.63
1:B:1975:GLY:O	1:B:1979:VAL:HG23	1.99	0.63
1:C:2678:GLY:HA2	1:C:2683:ARG:HD3	1.79	0.63
1:E:951:ASN:HB3	1:E:954:HIS:HB2	1.79	0.63
1:F:263:ARG:NH2	1:F:577:TRP:O	2.30	0.63
1:F:2467:LEU:HD21	1:F:2475:LEU:HD12	1.80	0.63
1:A:2811:MET:HB3	1:A:2813:LEU:HG	1.80	0.63
1:A:2924:MET:HA	1:A:2924:MET:HE2	1.81	0.63
1:B:2699:ALA:O	1:B:2703:VAL:HG23	1.97	0.63
1:E:2207:HIS:NE2	1:E:2210:ASP:OD1	2.27	0.63
1:F:1046:VAL:HG22	1:F:1051:ALA:HB2	1.80	0.63
1:C:1181:ARG:HD2	1:C:1181:ARG:H	1.63	0.63
1:E:2675:MET:HA	1:E:2685:LYS:HD3	1.81	0.63
1:E:2769:MET:N	1:E:2769:MET:SD	2.70	0.63
1:C:1339:GLN:NE2	1:C:1408:GLN:OE1	2.32	0.63
1:C:1397:PRO:HD2	1:C:1398:ASP:N	2.12	0.63
1:E:2231:GLU:O	1:E:2235:ARG:N	2.26	0.63
1:B:1024:THR:HG22	1:B:1111:VAL:HG11	1.79	0.63
1:C:1454:LEU:HA	1:C:1457:LEU:HD23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1144:ALA:HB3	1:A:1156:PRO:HG2	1.81	0.63
1:C:2231:GLU:O	1:C:2235:ARG:N	2.24	0.63
1:E:1060:GLU:OE2	1:E:1061:ARG:NH1	2.32	0.63
1:F:951:ASN:HB3	1:F:954:HIS:HB2	1.80	0.63
1:B:1633:TYR:O	1:B:1637:LEU:N	2.30	0.62
1:C:795:LEU:HD23	1:C:795:LEU:H	1.64	0.62
1:C:1600:PRO:HB3	1:C:1652:LEU:HD21	1.80	0.62
1:F:1204:THR:HG23	1:F:1301:GLY:HA2	1.81	0.62
1:A:2420:ARG:O	1:A:3018:GLN:NE2	2.31	0.62
1:D:417:ARG:NH2	1:D:508:ASP:OD2	2.32	0.62
1:A:1112:GLU:OE1	1:A:1153:ARG:NH1	2.32	0.62
1:B:2467:LEU:HD21	1:B:2475:LEU:HD12	1.81	0.62
1:F:420:ILE:HD12	1:F:633:ILE:HD11	1.82	0.62
1:F:883:SER:OG	2:F:3101:FMN:O2P	2.17	0.62
1:A:2695:PRO:HB2	1:D:2717:VAL:HG11	1.82	0.62
1:B:587:THR:HG22	1:B:591:LEU:HG	1.80	0.62
1:B:1600:PRO:HB3	1:B:1652:LEU:HD21	1.82	0.62
1:C:2673:GLN:O	1:C:2677:HIS:ND1	2.26	0.62
1:D:795:LEU:HD23	1:D:795:LEU:H	1.64	0.62
1:A:175:ILE:HD13	1:A:319:ILE:HG21	1.80	0.62
1:A:540:LYS:HB3	1:A:565:HIS:HB2	1.81	0.62
1:A:783:ARG:HH11	1:A:2415:LEU:HB3	1.65	0.62
1:B:2766:ASP:HB3	1:B:2769:MET:HE1	1.80	0.62
1:C:2267:LEU:O	1:C:2311:SER:N	2.25	0.62
1:D:2786:ARG:NH2	1:D:2946:ASP:OD1	2.31	0.62
1:E:1112:GLU:OE1	1:E:1153:ARG:NH1	2.32	0.62
1:F:1388:ILE:HG13	1:F:1393:HIS:HB3	1.81	0.62
1:A:1360:VAL:HG21	1:A:1417:ALA:HA	1.82	0.62
1:C:768:THR:HG21	1:C:841:LYS:H	1.64	0.62
1:C:2665:GLY:HA2	1:C:2722:THR:HG21	1.81	0.62
1:C:2740:GLN:HB3	1:C:2804:ARG:HD3	1.81	0.62
1:D:883:SER:OG	2:D:3101:FMN:O2P	2.16	0.62
1:E:424:GLY:HA3	1:E:478:ASN:HD22	1.64	0.62
1:F:540:LYS:HB3	1:F:565:HIS:HB2	1.82	0.62
1:A:424:GLY:HA3	1:A:478:ASN:HD22	1.63	0.62
1:B:1046:VAL:HG22	1:B:1051:ALA:HB2	1.82	0.62
1:D:1112:GLU:OE1	1:D:1153:ARG:NH1	2.33	0.62
1:E:1419:VAL:HG11	1:E:1447:CYS:HB3	1.82	0.62
1:E:2039:ARG:HD3	1:E:2167:ALA:HB3	1.80	0.62
1:A:119:VAL:HG12	1:A:346:PRO:HG3	1.82	0.62
1:A:963:GLN:OE1	1:A:963:GLN:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2201:LEU:HD22	1:B:2202:GLY:H	1.64	0.62
1:C:883:SER:OG	2:C:3101:FMN:O2P	2.17	0.62
1:C:2273:GLY:HA3	1:C:2314:HIS:HE1	1.63	0.62
1:D:615:LEU:HD12	1:D:630:ILE:HG13	1.82	0.62
1:D:2294:ASP:HA	1:D:2297:VAL:HG22	1.82	0.62
1:E:540:LYS:HB3	1:E:565:HIS:HB2	1.82	0.62
1:F:2363:VAL:O	1:F:2367:ARG:NH2	2.32	0.62
1:E:29:MET:HA	1:E:29:MET:HE3	1.82	0.62
1:F:2265:SER:O	1:F:2309:ARG:NH2	2.32	0.62
1:B:795:LEU:HD23	1:B:795:LEU:H	1.64	0.61
1:D:963:GLN:OE1	1:D:963:GLN:N	2.32	0.61
1:F:2628:ALA:HA	1:F:2698:ILE:HG23	1.82	0.61
1:D:23:ALA:HB2	1:D:380:VAL:HG13	1.82	0.61
1:F:587:THR:HG22	1:F:591:LEU:HG	1.81	0.61
1:A:1273:PRO:HD2	1:A:1682:GLU:HG2	1.81	0.61
1:C:23:ALA:HB2	1:C:380:VAL:HG13	1.81	0.61
1:C:1997:VAL:HG13	1:C:2000:LEU:HD12	1.82	0.61
1:D:2217:LEU:HB3	1:D:2269:VAL:HG22	1.82	0.61
1:F:1349:GLU:OE2	1:F:1349:GLU:N	2.26	0.61
1:F:1365:ASP:OD1	1:F:1366:LYS:N	2.34	0.61
1:A:2121:VAL:HG22	1:A:2218:PHE:HB2	1.81	0.61
1:C:2521:ARG:NH2	1:C:2605:ILE:O	2.32	0.61
1:E:1144:ALA:HB3	1:E:1156:PRO:HG2	1.83	0.61
1:A:29:MET:HA	1:A:29:MET:HE3	1.82	0.61
1:B:1112:GLU:OE1	1:B:1153:ARG:NH1	2.33	0.61
1:E:1204:THR:HG23	1:E:1301:GLY:HA2	1.81	0.61
1:B:2124:ALA:O	1:B:2159:TYR:OH	2.17	0.61
1:E:2521:ARG:NH2	1:E:2605:ILE:O	2.33	0.61
1:B:29:MET:HA	1:B:29:MET:HE3	1.81	0.61
1:D:1514:LEU:HD21	1:D:1538:LEU:HD21	1.82	0.61
1:E:1600:PRO:HB3	1:E:1652:LEU:HD21	1.83	0.61
1:F:1175:ARG:NH1	1:F:1188:ALA:O	2.26	0.61
1:C:2121:VAL:HG22	1:C:2218:PHE:HB2	1.82	0.61
1:D:1269:GLN:O	1:D:1712:THR:OG1	2.19	0.61
1:D:2627:LEU:HD12	1:D:2668:GLY:H	1.65	0.61
1:B:1365:ASP:OD1	1:B:1366:LYS:N	2.34	0.61
1:B:2749:ASP:OD1	1:B:2795:GLN:NE2	2.34	0.61
1:C:2420:ARG:O	1:C:3018:GLN:NE2	2.30	0.61
1:C:2487:ASP:HB2	1:C:2488:PRO:HD3	1.83	0.61
1:D:610:ARG:NH1	1:D:613:GLU:OE2	2.33	0.61
1:E:1365:ASP:OD1	1:E:1366:LYS:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1690:LYS:HG2	1:E:1719:GLU:HB3	1.81	0.61
1:A:883:SER:OG	2:A:3101:FMN:O2P	2.18	0.61
1:A:1204:THR:HG23	1:A:1301:GLY:HA2	1.82	0.61
1:B:2627:LEU:HD12	1:B:2668:GLY:H	1.66	0.61
1:C:2039:ARG:HD3	1:C:2167:ALA:HB3	1.82	0.61
1:E:883:SER:OG	2:E:3101:FMN:O2P	2.18	0.61
1:E:2519:GLY:O	1:E:2521:ARG:NH1	2.33	0.61
1:F:1181:ARG:H	1:F:1181:ARG:HD2	1.66	0.61
1:F:2251:ILE:HD12	1:F:2269:VAL:HG21	1.82	0.61
1:F:785:HIS:NE2	1:F:787:GLN:HB3	2.16	0.60
1:A:1365:ASP:OD1	1:A:1366:LYS:N	2.34	0.60
1:B:1706:PRO:O	1:B:1707:GLU:C	2.43	0.60
1:E:1127:VAL:HG23	1:E:1129:GLN:H	1.66	0.60
1:E:1333:VAL:HG22	1:E:1433:ILE:HD11	1.83	0.60
1:F:2231:GLU:O	1:F:2235:ARG:N	2.27	0.60
1:B:1978:GLY:HA3	1:D:1985:ARG:HH22	1.67	0.60
1:D:540:LYS:HB3	1:D:565:HIS:HB2	1.82	0.60
1:D:2452:TYR:CD2	1:D:2461:MET:HG3	2.36	0.60
1:E:76:VAL:HG12	1:E:304:LYS:HE3	1.82	0.60
1:F:1112:GLU:OE1	1:F:1153:ARG:NH1	2.34	0.60
1:A:23:ALA:HB2	1:A:380:VAL:HG13	1.83	0.60
1:A:772:ARG:HD3	1:A:835:LEU:HD13	1.83	0.60
1:A:2123:GLY:HA3	1:A:2221:ALA:HA	1.83	0.60
1:B:2123:GLY:HA3	1:B:2221:ALA:HA	1.84	0.60
1:B:2487:ASP:HB2	1:B:2488:PRO:HD3	1.83	0.60
1:B:2682:GLY:O	1:B:2683:ARG:C	2.42	0.60
1:F:2266:ARG:NE	1:F:2310:VAL:O	2.34	0.60
1:B:951:ASN:HD22	1:B:952:PRO:HD2	1.67	0.60
1:D:933:LEU:HD21	1:D:982:LEU:HB3	1.84	0.60
1:F:1060:GLU:OE1	1:F:1061:ARG:NH1	2.34	0.60
1:A:326:TRP:HE1	1:A:354:THR:HG22	1.65	0.60
1:A:1341:ILE:HD11	1:A:1411:MET:SD	2.42	0.60
1:B:25:VAL:HG11	1:B:135:MET:HE2	1.83	0.60
1:B:1181:ARG:H	1:B:1181:ARG:HD2	1.66	0.60
1:E:2420:ARG:O	1:E:3018:GLN:NE2	2.32	0.60
1:A:2723:ALA:HB3	1:A:2919:ALA:HB3	1.83	0.60
1:C:1686:GLU:OE1	1:C:1717:ASN:ND2	2.35	0.60
1:D:1204:THR:HG23	1:D:1301:GLY:HA2	1.82	0.60
1:E:1181:ARG:H	1:E:1181:ARG:HD2	1.67	0.60
1:C:1388:ILE:HG13	1:C:1393:HIS:HB3	1.84	0.60
1:C:2192:TRP:NE1	1:C:2197:GLN:OE1	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1181:ARG:H	1:D:1181:ARG:HD2	1.65	0.60
1:D:2869:ILE:HD13	1:D:2973:MET:HB2	1.84	0.60
1:C:1161:VAL:HG23	1:C:1169:ILE:HB	1.84	0.60
1:F:951:ASN:HD22	1:F:952:PRO:HD2	1.67	0.60
1:F:2521:ARG:NH2	1:F:2605:ILE:O	2.35	0.60
1:A:795:LEU:HD23	1:A:795:LEU:H	1.67	0.60
1:C:1204:THR:HG23	1:C:1301:GLY:HA2	1.83	0.60
1:C:2708:GLY:HA3	1:E:2829:VAL:HG23	1.81	0.60
1:E:426:THR:OG1	2:E:3101:FMN:O4	2.20	0.60
1:F:1360:VAL:HG21	1:F:1417:ALA:HA	1.84	0.60
1:F:2740:GLN:HB3	1:F:2804:ARG:HD3	1.83	0.60
1:A:2786:ARG:NH2	1:A:2946:ASP:OD1	2.35	0.59
1:B:2521:ARG:NH2	1:B:2605:ILE:O	2.34	0.59
1:B:2786:ARG:NH2	1:B:2946:ASP:OD1	2.34	0.59
1:C:1273:PRO:HD2	1:C:1682:GLU:HG2	1.84	0.59
1:D:420:ILE:HD12	1:D:633:ILE:HD11	1.83	0.59
1:B:785:HIS:NE2	1:B:787:GLN:HB3	2.17	0.59
1:D:1161:VAL:HG23	1:D:1169:ILE:HB	1.84	0.59
1:E:23:ALA:HB2	1:E:380:VAL:HG13	1.83	0.59
1:E:153:LEU:HB3	1:E:315:LEU:HD11	1.84	0.59
1:B:1161:VAL:HG23	1:B:1169:ILE:HB	1.83	0.59
1:C:1636:TRP:HB3	1:C:1644:MET:HE2	1.84	0.59
1:D:1480:SER:O	1:D:1483:ARG:NH1	2.36	0.59
1:D:1602:LEU:O	1:D:1662:ARG:NH1	2.35	0.59
1:E:2639:PHE:HD1	1:E:2644:PHE:HB3	1.67	0.59
1:F:2875:SER:O	1:F:2875:SER:OG	2.21	0.59
1:A:1046:VAL:HG22	1:A:1051:ALA:HB2	1.84	0.59
1:A:1985:ARG:HH11	1:A:1986:LEU:HD13	1.66	0.59
1:B:540:LYS:HB3	1:B:565:HIS:HB2	1.82	0.59
1:B:1360:VAL:HG21	1:B:1417:ALA:HA	1.84	0.59
1:C:2332:ILE:O	1:C:2336:VAL:HG22	2.03	0.59
1:D:243:GLU:OE2	1:F:1710:HIS:ND1	2.34	0.59
1:E:343:ASP:OD2	1:E:351:THR:OG1	2.20	0.59
1:D:498:GLN:HG3	1:D:532:ILE:HD13	1.83	0.59
1:D:2717:VAL:HA	1:D:2722:THR:HG22	1.83	0.59
1:D:2896:ARG:HH22	1:D:2902:LEU:HD13	1.68	0.59
1:E:1175:ARG:NH1	1:E:1188:ALA:O	2.30	0.59
1:B:933:LEU:HD21	1:B:982:LEU:HB3	1.85	0.59
1:E:2247:VAL:O	1:E:2251:ILE:HG13	2.02	0.59
1:F:1161:VAL:HG23	1:F:1169:ILE:HB	1.83	0.59
1:B:883:SER:OG	2:B:3101:FMN:O2P	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2740:GLN:HB3	1:B:2804:ARG:HD3	1.84	0.59
1:C:2717:VAL:HG11	1:E:2695:PRO:HB2	1.83	0.59
1:D:1997:VAL:HG13	1:D:2000:LEU:HD12	1.84	0.59
1:E:1360:VAL:HG21	1:E:1417:ALA:HA	1.83	0.59
1:E:2782:ARG:NH1	1:E:2785:ASP:OD2	2.35	0.59
1:B:420:ILE:HD12	1:B:633:ILE:HD11	1.84	0.59
1:C:1618:ARG:HD3	1:C:1626:LEU:HB3	1.84	0.59
1:D:1618:ARG:HB2	1:D:1626:LEU:HD12	1.84	0.59
1:D:1640:ARG:O	1:D:1640:ARG:HG2	2.02	0.59
1:F:768:THR:HG21	1:F:841:LYS:H	1.68	0.59
1:A:1469:HIS:O	1:A:1474:ARG:NH2	2.36	0.59
1:B:23:ALA:HB2	1:B:380:VAL:HG13	1.84	0.59
1:B:2266:ARG:NE	1:B:2310:VAL:O	2.35	0.59
1:C:2303:GLU:HG3	1:C:2305:SER:H	1.68	0.59
1:D:674:MET:HG2	1:D:881:THR:HG22	1.85	0.59
1:F:2487:ASP:HB2	1:F:2488:PRO:HD3	1.85	0.59
1:F:2678:GLY:CA	1:F:2683:ARG:HB2	2.32	0.59
1:A:1269:GLN:O	1:A:1712:THR:OG1	2.21	0.59
1:A:1997:VAL:HG13	1:A:2000:LEU:HD12	1.85	0.59
1:B:2265:SER:O	1:B:2309:ARG:NH2	2.36	0.59
1:C:2677:HIS:C	1:C:2683:ARG:NH1	2.60	0.59
1:D:1273:PRO:HD2	1:D:1682:GLU:HG2	1.84	0.59
1:D:2487:ASP:HB2	1:D:2488:PRO:HD3	1.83	0.59
1:D:3020:ARG:NH2	1:D:3029:ALA:O	2.32	0.59
1:E:1546:ARG:O	1:E:1550:GLY:N	2.36	0.59
1:F:608:PRO:HB3	1:F:901:PHE:HA	1.84	0.59
1:F:1510:THR:HG21	1:F:1534:GLY:HA2	1.85	0.59
1:A:1521:LEU:HB3	1:A:1525:GLN:HB3	1.85	0.58
1:D:263:ARG:NH2	1:D:577:TRP:O	2.30	0.58
1:A:768:THR:HG21	1:A:841:LYS:H	1.66	0.58
1:A:2247:VAL:O	1:A:2251:ILE:HG13	2.02	0.58
1:B:768:THR:HG21	1:B:841:LYS:H	1.69	0.58
1:B:1144:ALA:HB3	1:B:1156:PRO:HG2	1.85	0.58
1:B:1175:ARG:NH1	1:B:1188:ALA:O	2.26	0.58
1:D:1341:ILE:HD11	1:D:1411:MET:SD	2.42	0.58
1:D:1365:ASP:OD1	1:D:1366:LYS:N	2.36	0.58
1:D:2231:GLU:O	1:D:2235:ARG:N	2.28	0.58
1:E:795:LEU:HD23	1:E:795:LEU:H	1.68	0.58
1:E:1480:SER:O	1:E:1483:ARG:NH1	2.36	0.58
1:C:38:PHE:HZ	1:C:158:LEU:HD22	1.68	0.58
1:C:1543:GLU:HB2	1:C:1546:ARG:HH21	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:38:PHE:HZ	1:D:158:LEU:HD22	1.69	0.58
1:D:2668:GLY:O	1:D:2672:MET:HG2	2.03	0.58
1:E:785:HIS:NE2	1:E:787:GLN:HB3	2.18	0.58
1:E:1104:THR:HG22	1:E:1146:ALA:HB3	1.85	0.58
1:F:610:ARG:NH1	1:F:613:GLU:OE2	2.34	0.58
1:F:933:LEU:HD21	1:F:982:LEU:HB3	1.85	0.58
1:B:73:LEU:HD21	1:B:173:GLN:HE21	1.68	0.58
1:B:1162:THR:HG22	1:B:1168:VAL:HA	1.85	0.58
1:C:1469:HIS:O	1:C:1474:ARG:NH2	2.36	0.58
1:D:1546:ARG:O	1:D:1550:GLY:N	2.35	0.58
1:D:2345:SER:OG	1:D:2348:GLU:OE2	2.19	0.58
1:E:448:ALA:O	1:E:452:GLN:NE2	2.29	0.58
1:E:1255:LEU:HD11	1:E:1287:VAL:HG21	1.86	0.58
1:E:2294:ASP:HA	1:E:2297:VAL:HG22	1.83	0.58
1:A:2487:ASP:HB2	1:A:2488:PRO:HD3	1.85	0.58
1:B:2869:ILE:HD13	1:B:2973:MET:HB2	1.85	0.58
1:C:540:LYS:HB3	1:C:565:HIS:HB2	1.84	0.58
1:C:2201:LEU:HD22	1:C:2202:GLY:H	1.69	0.58
1:C:2782:ARG:NH1	1:C:2785:ASP:OD2	2.35	0.58
1:E:2067:GLU:OE1	1:E:2168:ARG:NH1	2.37	0.58
1:E:2223:PRO:CG	1:E:2224:ARG:N	2.66	0.58
1:F:534:ILE:HG22	1:F:536:HIS:H	1.69	0.58
1:F:2123:GLY:HA3	1:F:2221:ALA:HA	1.85	0.58
1:F:2486:ASP:N	1:F:2486:ASP:OD1	2.37	0.58
1:A:1255:LEU:HD11	1:A:1287:VAL:HG21	1.85	0.58
1:A:2592:PRO:HB2	1:A:2594:LYS:HE3	1.86	0.58
1:B:534:ILE:HG22	1:B:536:HIS:H	1.68	0.58
1:C:2717:VAL:N	1:E:2715:HIS:O	2.37	0.58
1:E:543:THR:OG1	1:E:545:GLU:OE1	2.21	0.58
1:E:1434:ALA:HB1	1:E:1444:ALA:HB1	1.84	0.58
1:F:1144:ALA:HB3	1:F:1156:PRO:HG2	1.85	0.58
1:A:2486:ASP:OD1	1:A:2486:ASP:N	2.36	0.58
1:B:2241:LYS:HA	1:B:2245:TRP:CD1	2.39	0.58
1:C:1160:VAL:HG12	1:C:1171:THR:HG23	1.86	0.58
1:C:1534:GLY:O	1:C:1538:LEU:HD22	2.04	0.58
1:D:105:SER:OG	1:D:108:HIS:ND1	2.33	0.58
1:D:2332:ILE:O	1:D:2336:VAL:HG22	2.03	0.58
1:D:2782:ARG:NH1	1:D:2785:ASP:OD2	2.36	0.58
1:D:2790:GLY:HA2	1:D:2876:THR:HG23	1.85	0.58
1:E:2727:VAL:O	1:E:2731:VAL:HG13	2.04	0.58
1:F:2367:ARG:NE	1:F:2367:ARG:H	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1333:VAL:HG22	1:A:1433:ILE:HD11	1.84	0.58
1:B:2788:ARG:NH1	1:B:2945:ASP:OD2	2.36	0.58
1:C:588:TYR:HB3	1:C:628:MET:HE2	1.85	0.58
1:C:1333:VAL:HG22	1:C:1433:ILE:HD11	1.86	0.58
1:C:1365:ASP:OD1	1:C:1366:LYS:N	2.36	0.58
1:C:1510:THR:HG21	1:C:1534:GLY:HA2	1.85	0.58
1:D:1220:MET:HE2	1:D:1251:HIS:H	1.69	0.58
1:F:2668:GLY:O	1:F:2672:MET:HG2	2.03	0.58
1:A:1127:VAL:HG23	1:A:1129:GLN:H	1.68	0.58
1:C:423:ALA:HB2	1:C:634:LEU:HD12	1.86	0.58
1:C:1112:GLU:OE1	1:C:1153:ARG:NH1	2.37	0.58
1:E:343:ASP:OD1	1:E:343:ASP:N	2.37	0.58
1:F:1542:VAL:HG11	1:F:1555:PHE:HB2	1.85	0.58
1:C:933:LEU:HD21	1:C:982:LEU:HB3	1.86	0.58
1:C:951:ASN:HD22	1:C:952:PRO:HD2	1.69	0.58
1:C:2109:PRO:HD2	1:C:2110:GLU:H	1.69	0.58
1:C:2345:SER:OG	1:C:2348:GLU:OE1	2.21	0.58
1:D:424:GLY:HA3	1:D:478:ASN:HD22	1.68	0.58
1:D:1521:LEU:HB3	1:D:1525:GLN:HB3	1.86	0.58
1:D:2201:LEU:HD22	1:D:2202:GLY:H	1.69	0.58
1:F:2303:GLU:HG3	1:F:2305:SER:H	1.69	0.58
1:B:1072:PHE:HZ	1:B:1261:HIS:HB3	1.69	0.57
1:B:2486:ASP:OD1	1:B:2486:ASP:N	2.37	0.57
1:C:105:SER:OG	1:C:108:HIS:ND1	2.33	0.57
1:C:529:LEU:HD12	1:C:534:ILE:HG13	1.86	0.57
1:D:2678:GLY:HA3	1:D:2685:LYS:HD3	1.85	0.57
1:E:78:ASP:OD1	1:E:78:ASP:N	2.37	0.57
1:E:168:LEU:HA	1:E:171:LEU:CD2	2.34	0.57
1:E:1161:VAL:HG23	1:E:1169:ILE:HB	1.85	0.57
1:F:1342:GLN:HB2	1:F:1401:LEU:HD21	1.86	0.57
1:F:2241:LYS:HA	1:F:2245:TRP:CD1	2.39	0.57
1:A:1480:SER:O	1:A:1483:ARG:NH1	2.37	0.57
1:B:2251:ILE:HD12	1:B:2269:VAL:HG21	1.85	0.57
1:C:1020:THR:O	1:C:1024:THR:HG23	2.04	0.57
1:D:1255:LEU:HD11	1:D:1287:VAL:HG21	1.85	0.57
1:D:2521:ARG:NH2	1:D:2605:ILE:O	2.37	0.57
1:E:520:ASP:O	1:E:524:GLU:HG3	2.04	0.57
1:E:1469:HIS:O	1:E:1474:ARG:NH2	2.37	0.57
1:E:2108:ASN:ND2	1:E:2108:ASN:O	2.37	0.57
1:F:1104:THR:N	1:F:1107:GLY:O	2.37	0.57
1:A:2678:GLY:HA3	1:A:2685:LYS:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1997:VAL:HG13	1:B:2000:LEU:HD12	1.86	0.57
1:C:1255:LEU:HD11	1:C:1287:VAL:HG21	1.87	0.57
1:D:288:THR:HG22	1:D:290:ARG:H	1.68	0.57
1:D:2648:GLU:OE1	1:D:3013:ARG:NH2	2.36	0.57
1:E:181:LEU:O	1:E:185:ARG:HG2	2.03	0.57
1:E:1020:THR:O	1:E:1024:THR:HG23	2.04	0.57
1:E:1075:PRO:HD2	1:E:1076:LEU:HD12	1.86	0.57
1:F:2673:GLN:O	1:F:2677:HIS:ND1	2.30	0.57
1:A:543:THR:OG1	1:A:545:GLU:OE1	2.22	0.57
1:A:1175:ARG:NH1	1:A:1188:ALA:O	2.30	0.57
1:A:1985:ARG:HH22	1:E:1978:GLY:HA3	1.69	0.57
1:A:2790:GLY:HA2	1:A:2876:THR:HG22	1.85	0.57
1:A:3024:ALA:HB3	1:A:3031:MET:HE3	1.85	0.57
1:B:1693:PRO:HB2	1:B:1696:ALA:HB3	1.86	0.57
1:C:3020:ARG:NH2	1:C:3029:ALA:O	2.37	0.57
1:D:543:THR:OG1	1:D:545:GLU:OE1	2.22	0.57
1:E:2487:ASP:HB2	1:E:2488:PRO:HD3	1.87	0.57
1:A:1081:THR:HG21	1:A:1275:ARG:HG2	1.87	0.57
1:B:2564:ASP:HA	1:B:2583:ARG:HH21	1.69	0.57
1:D:1333:VAL:HG11	1:D:1670:LEU:HD21	1.87	0.57
1:D:2486:ASP:OD1	1:D:2486:ASP:N	2.36	0.57
1:E:1104:THR:N	1:E:1107:GLY:O	2.37	0.57
1:F:2564:ASP:HA	1:F:2583:ARG:HH21	1.69	0.57
1:B:230:ARG:HA	1:B:236:VAL:HG12	1.86	0.57
1:C:713:ARG:O	1:C:717:ILE:HG12	2.05	0.57
1:C:1220:MET:HE2	1:C:1251:HIS:H	1.69	0.57
1:C:2486:ASP:N	1:C:2486:ASP:OD1	2.36	0.57
1:D:2461:MET:HE3	1:D:2467:LEU:HG	1.85	0.57
1:E:39:GLY:HA2	1:E:350:LEU:HD22	1.86	0.57
1:E:1005:THR:OG1	1:E:1017:VAL:O	2.21	0.57
1:F:1104:THR:HG22	1:F:1146:ALA:HB3	1.87	0.57
1:A:1104:THR:HG22	1:A:1146:ALA:HB3	1.87	0.57
1:A:2207:HIS:NE2	1:A:2210:ASP:OD1	2.35	0.57
1:B:575:HIS:HB3	1:B:684:ASP:HB2	1.87	0.57
1:B:1276:LEU:HD23	1:B:1327:LEU:HB3	1.85	0.57
1:B:1510:THR:HG21	1:B:1534:GLY:HA2	1.85	0.57
1:B:2448:GLU:HG2	1:B:2455:SER:HB3	1.87	0.57
1:B:2592:PRO:HB2	1:B:2594:LYS:HE3	1.86	0.57
1:D:45:TRP:HB3	1:D:119:VAL:HG12	1.86	0.57
1:D:1160:VAL:HG12	1:D:1171:THR:HG23	1.85	0.57
1:E:2486:ASP:N	1:E:2486:ASP:OD1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1997:VAL:HG13	1:F:2000:LEU:HD12	1.87	0.57
1:A:88:PHE:HE2	1:A:173:GLN:HE21	1.52	0.57
1:A:1160:VAL:HG12	1:A:1171:THR:HG23	1.87	0.57
1:A:1578:ARG:NH2	1:A:1651:GLU:OE2	2.38	0.57
1:B:181:LEU:O	1:B:185:ARG:HG2	2.04	0.57
1:D:2039:ARG:HD3	1:D:2167:ALA:HB3	1.86	0.57
1:F:543:THR:OG1	1:F:545:GLU:OE1	2.21	0.57
1:F:2663:GLY:HA2	1:F:2715:HIS:HB3	1.86	0.57
1:F:2678:GLY:HA3	1:F:2685:LYS:HE2	1.86	0.57
1:A:570:ARG:NH1	1:A:662:ASP:O	2.36	0.57
1:B:2668:GLY:O	1:B:2672:MET:HG2	2.05	0.57
1:C:2448:GLU:HG2	1:C:2455:SER:HB3	1.86	0.57
1:D:1104:THR:N	1:D:1107:GLY:O	2.35	0.57
1:D:2058:ILE:HB	1:D:2094:ILE:HD11	1.87	0.57
1:E:2251:ILE:HD13	1:E:2269:VAL:HG21	1.87	0.57
1:F:1405:GLN:HG3	1:F:1465:GLY:HA3	1.86	0.57
1:F:1693:PRO:HB2	1:F:1696:ALA:HB3	1.86	0.57
1:F:2124:ALA:O	1:F:2159:TYR:OH	2.17	0.57
1:F:2207:HIS:NE2	1:F:2210:ASP:OD1	2.36	0.57
1:A:426:THR:OG1	2:A:3101:FMN:O4	2.23	0.57
1:C:2124:ALA:O	1:C:2159:TYR:OH	2.17	0.57
1:D:2393:ARG:HA	1:D:2396:MET:HG3	1.85	0.57
1:E:263:ARG:NH2	1:E:269:GLY:O	2.36	0.57
1:E:2681:LEU:HB2	1:E:2683:ARG:HG3	1.87	0.57
1:F:2692:GLU:HA	1:F:2697:ILE:HG21	1.87	0.57
1:B:543:THR:OG1	1:B:545:GLU:OE1	2.21	0.56
1:C:2123:GLY:HA3	1:C:2221:ALA:HA	1.87	0.56
1:D:725:LYS:NZ	1:D:859:SER:O	2.38	0.56
1:D:1360:VAL:HG21	1:D:1417:ALA:HA	1.87	0.56
1:E:1466:SER:O	1:E:1469:HIS:ND1	2.35	0.56
1:E:2896:ARG:HH22	1:E:2902:LEU:HD13	1.70	0.56
1:F:288:THR:HG22	1:F:290:ARG:H	1.70	0.56
1:A:168:LEU:HA	1:A:171:LEU:CD2	2.34	0.56
1:A:1333:VAL:HG11	1:A:1670:LEU:HD21	1.88	0.56
1:B:2511:HIS:O	1:B:2515:VAL:HG13	2.05	0.56
1:B:2519:GLY:O	1:B:2521:ARG:NH1	2.37	0.56
1:C:1518:ASN:HA	1:C:1661:VAL:HG22	1.87	0.56
1:D:1336:PHE:CZ	1:D:1687:ILE:HD12	2.40	0.56
1:D:2721:ALA:O	1:D:2725:VAL:HG12	2.05	0.56
1:E:107:LYS:NZ	1:E:283:GLU:OE2	2.38	0.56
1:E:501:ARG:NH2	1:E:941:ASP:OD2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:135:MET:N	1:F:135:MET:HE3	2.20	0.56
1:F:498:GLN:HG3	1:F:532:ILE:HD13	1.86	0.56
1:A:520:ASP:O	1:A:524:GLU:HG3	2.06	0.56
1:A:2682:GLY:O	1:A:2683:ARG:C	2.49	0.56
1:B:2654:HIS:HB3	1:B:2657:LEU:HD12	1.87	0.56
1:C:181:LEU:O	1:C:185:ARG:HG2	2.05	0.56
1:C:674:MET:HG2	1:C:881:THR:HG22	1.86	0.56
1:C:1048:ASN:OD1	1:C:1049:GLY:N	2.37	0.56
1:C:2293:LEU:HD21	1:C:2314:HIS:CG	2.41	0.56
1:C:2294:ASP:HA	1:C:2297:VAL:HG22	1.85	0.56
1:C:2648:GLU:OE1	1:C:3013:ARG:NH2	2.36	0.56
1:D:768:THR:HG21	1:D:841:LYS:H	1.70	0.56
1:D:2123:GLY:HA3	1:D:2221:ALA:HA	1.87	0.56
1:D:2266:ARG:HH12	1:D:2366:ALA:HA	1.70	0.56
1:E:783:ARG:HH11	1:E:2415:LEU:HB3	1.69	0.56
1:E:1438:SER:OG	1:E:1566:HIS:NE2	2.26	0.56
1:F:1518:ASN:HA	1:F:1661:VAL:HG22	1.86	0.56
1:A:501:ARG:NH2	1:A:941:ASP:OD2	2.38	0.56
1:A:608:PRO:HB3	1:A:901:PHE:HA	1.88	0.56
1:A:2251:ILE:HD13	1:A:2269:VAL:HG21	1.86	0.56
1:B:608:PRO:HB3	1:B:901:PHE:HA	1.87	0.56
1:B:1083:VAL:HG13	1:B:1085:ASP:H	1.70	0.56
1:B:1456:ALA:O	1:B:1460:MET:HG3	2.05	0.56
1:B:2133:VAL:O	1:B:2137:LEU:HG	2.04	0.56
1:C:608:PRO:HB3	1:C:901:PHE:HA	1.87	0.56
1:C:2174:TRP:CH2	1:C:2209:LYS:HB3	2.41	0.56
1:D:2699:ALA:O	1:D:2703:VAL:HG12	2.06	0.56
1:A:1710:HIS:ND1	1:B:243:GLU:OE2	2.35	0.56
1:B:2058:ILE:HB	1:B:2094:ILE:HD11	1.88	0.56
1:C:39:GLY:HA2	1:C:350:LEU:HD22	1.86	0.56
1:D:951:ASN:HD22	1:D:952:PRO:HD2	1.70	0.56
1:B:1104:THR:N	1:B:1107:GLY:O	2.37	0.56
1:B:1341:ILE:HD11	1:B:1411:MET:SD	2.45	0.56
1:C:2430:TRP:HZ3	1:C:2970:LYS:HG2	1.70	0.56
1:D:2875:SER:O	1:D:2875:SER:OG	2.18	0.56
1:F:1469:HIS:O	1:F:1474:ARG:NH2	2.39	0.56
1:A:1543:GLU:HB2	1:A:1546:ARG:HH21	1.70	0.56
1:B:135:MET:N	1:B:135:MET:HE3	2.21	0.56
1:B:165:ASP:OD1	1:B:165:ASP:N	2.36	0.56
1:B:498:GLN:HG3	1:B:532:ILE:HD13	1.87	0.56
1:C:359:ARG:HD3	1:C:589:SER:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:794:THR:HB	1:C:2412:ILE:HG21	1.88	0.56
1:D:1454:LEU:HA	1:D:1457:LEU:HD23	1.87	0.56
1:E:2654:HIS:HB3	1:E:2657:LEU:HD12	1.87	0.56
1:F:1333:VAL:HG11	1:F:1670:LEU:HD21	1.87	0.56
1:A:1161:VAL:HG23	1:A:1169:ILE:HB	1.88	0.56
1:A:1336:PHE:CZ	1:A:1687:ILE:HD12	2.41	0.56
1:B:2303:GLU:HG3	1:B:2305:SER:H	1.69	0.56
1:C:1514:LEU:HD13	1:C:1530:GLY:HA3	1.86	0.56
1:D:120:LEU:HD13	1:D:153:LEU:HD13	1.88	0.56
1:D:608:PRO:HB3	1:D:901:PHE:HA	1.88	0.56
1:D:2682:GLY:O	1:D:2683:ARG:C	2.48	0.56
1:E:2153:GLU:OE1	1:E:2153:GLU:N	2.38	0.56
1:E:2332:ILE:O	1:E:2336:VAL:HG13	2.06	0.56
1:F:575:HIS:HB3	1:F:684:ASP:HB2	1.86	0.56
1:F:1333:VAL:HG22	1:F:1433:ILE:HD11	1.87	0.56
1:F:1534:GLY:O	1:F:1538:LEU:HD22	2.06	0.56
1:A:2639:PHE:HD1	1:A:2644:PHE:HB3	1.71	0.56
1:C:263:ARG:NH2	1:C:577:TRP:O	2.29	0.56
1:D:1469:HIS:O	1:D:1474:ARG:NH2	2.39	0.56
1:E:326:TRP:HE1	1:E:354:THR:HG22	1.71	0.56
1:E:2316:LEU:HB2	1:E:2373:ASP:HA	1.86	0.56
1:A:575:HIS:HB3	1:A:684:ASP:HB2	1.87	0.56
1:B:1104:THR:HG22	1:B:1146:ALA:HB3	1.88	0.56
1:C:615:LEU:HD12	1:C:630:ILE:HG13	1.87	0.56
1:C:1081:THR:HG21	1:C:1275:ARG:HG2	1.88	0.56
1:C:1260:GLN:HE21	1:C:1279:TRP:CD1	2.24	0.56
1:C:1695:VAL:HA	1:C:1698:LEU:HD23	1.88	0.56
1:A:2521:ARG:NH2	1:A:2605:ILE:O	2.38	0.55
1:B:1543:GLU:HB2	1:B:1546:ARG:HH21	1.71	0.55
1:B:2690:PHE:CG	1:F:2757:GLY:HA3	2.41	0.55
1:C:2714:ILE:HG23	1:E:2725:VAL:CG1	2.37	0.55
1:D:359:ARG:HD3	1:D:589:SER:HB2	1.87	0.55
1:D:794:THR:HB	1:D:2412:ILE:HG21	1.87	0.55
1:D:1020:THR:O	1:D:1024:THR:HG23	2.06	0.55
1:D:1339:GLN:OE1	1:D:1408:GLN:NE2	2.39	0.55
1:D:2654:HIS:HB3	1:D:2657:LEU:HD12	1.87	0.55
1:E:1543:GLU:HB2	1:E:1546:ARG:HH21	1.70	0.55
1:E:1729:ASP:OD1	1:E:1729:ASP:N	2.35	0.55
1:F:2727:VAL:O	1:F:2731:VAL:HG13	2.06	0.55
1:B:1020:THR:O	1:B:1024:THR:HG23	2.07	0.55
1:C:1514:LEU:HD21	1:C:1534:GLY:HA3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2293:LEU:HD21	1:D:2314:HIS:CG	2.41	0.55
1:F:713:ARG:O	1:F:717:ILE:HG12	2.06	0.55
1:F:1341:ILE:HD11	1:F:1411:MET:SD	2.46	0.55
1:C:1589:ALA:O	1:C:1642:ARG:NH1	2.40	0.55
1:C:2266:ARG:NE	1:C:2310:VAL:O	2.39	0.55
1:D:1651:GLU:OE2	1:D:1655:TRP:NE1	2.38	0.55
1:F:1480:SER:O	1:F:1483:ARG:NH1	2.40	0.55
1:F:1589:ALA:O	1:F:1642:ARG:NH1	2.39	0.55
1:A:2681:LEU:HB2	1:A:2683:ARG:HG3	1.88	0.55
1:B:2896:ARG:HH22	1:B:2902:LEU:HD13	1.72	0.55
1:D:39:GLY:HA2	1:D:350:LEU:HD22	1.88	0.55
1:D:522:ALA:O	1:D:526:ILE:HG13	2.05	0.55
1:D:2663:GLY:HA2	1:D:2715:HIS:HB3	1.89	0.55
1:E:713:ARG:O	1:E:717:ILE:HG12	2.06	0.55
1:E:2293:LEU:HD11	1:E:2314:HIS:CD2	2.42	0.55
1:F:53:VAL:HG22	1:F:59:GLU:HG3	1.89	0.55
1:F:1162:THR:HG22	1:F:1168:VAL:HA	1.88	0.55
1:F:2654:HIS:HB3	1:F:2657:LEU:HD12	1.89	0.55
1:A:343:ASP:OD2	1:A:351:THR:OG1	2.22	0.55
1:A:488:LYS:HA	1:A:493:GLY:H	1.71	0.55
1:A:1155:VAL:HG13	1:A:1176:PHE:HB2	1.88	0.55
1:A:1589:ALA:O	1:A:1642:ARG:NH1	2.40	0.55
1:B:426:THR:OG1	2:B:3101:FMN:O4	2.23	0.55
1:B:1480:SER:O	1:B:1483:ARG:NH1	2.40	0.55
1:C:343:ASP:OD2	1:C:351:THR:OG1	2.24	0.55
1:D:748:ILE:HD12	1:D:763:PRO:HB2	1.88	0.55
1:D:1139:VAL:HG12	1:D:1161:VAL:HG12	1.88	0.55
1:D:2124:ALA:O	1:D:2159:TYR:OH	2.20	0.55
1:F:679:SER:N	1:F:683:ALA:O	2.38	0.55
1:F:1546:ARG:O	1:F:1550:GLY:N	2.38	0.55
1:F:2393:ARG:HA	1:F:2396:MET:HG3	1.87	0.55
1:A:165:ASP:N	1:A:165:ASP:OD1	2.39	0.55
1:B:474:THR:OG1	1:B:508:ASP:OD1	2.20	0.55
1:B:1333:VAL:HG22	1:B:1433:ILE:HD11	1.88	0.55
1:D:1005:THR:OG1	1:D:1017:VAL:O	2.25	0.55
1:D:2303:GLU:HG3	1:D:2305:SER:H	1.70	0.55
1:E:188:ILE:HD11	1:E:290:ARG:HE	1.70	0.55
1:E:1155:VAL:HG13	1:E:1176:PHE:HB2	1.89	0.55
1:E:2058:ILE:HB	1:E:2094:ILE:HD11	1.89	0.55
1:F:2723:ALA:HB3	1:F:2919:ALA:HB3	1.89	0.55
1:A:651:VAL:HG13	1:A:877:ILE:HD13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1159:VAL:HG13	1:A:1172:LEU:HB2	1.89	0.55
1:B:725:LYS:NZ	1:B:859:SER:O	2.40	0.55
1:C:1412:ALA:HB1	1:C:1457:LEU:HD11	1.89	0.55
1:D:772:ARG:HD3	1:D:835:LEU:HD13	1.88	0.55
1:E:38:PHE:HZ	1:E:158:LEU:HD22	1.71	0.55
1:E:1081:THR:HG21	1:E:1275:ARG:HG2	1.89	0.55
1:E:2241:LYS:HA	1:E:2245:TRP:CD1	2.41	0.55
1:F:1020:THR:O	1:F:1024:THR:HG23	2.07	0.55
1:A:1546:ARG:O	1:A:1550:GLY:N	2.36	0.55
1:A:2008:LEU:HA	1:A:2011:LEU:HD23	1.88	0.55
1:A:2654:HIS:HB3	1:A:2657:LEU:HD12	1.87	0.55
1:C:65:LEU:HD13	1:C:166:VAL:HG12	1.89	0.55
1:D:713:ARG:O	1:D:717:ILE:HG12	2.06	0.55
1:D:2316:LEU:HB2	1:D:2373:ASP:HA	1.88	0.55
1:D:2871:LYS:NZ	1:D:2873:ASP:OD1	2.40	0.55
1:A:343:ASP:OD1	1:A:343:ASP:N	2.38	0.55
1:C:1139:VAL:HG12	1:C:1161:VAL:HG12	1.88	0.55
1:C:2654:HIS:HB3	1:C:2657:LEU:HD12	1.88	0.55
1:E:700:ASP:OD1	1:E:854:ARG:NH1	2.38	0.55
1:F:426:THR:OG1	2:F:3101:FMN:O4	2.24	0.55
1:F:1972:GLN:HA	1:F:1976:ARG:HH12	1.72	0.55
1:A:78:ASP:OD1	1:A:78:ASP:N	2.36	0.55
1:A:2294:ASP:HA	1:A:2297:VAL:HG22	1.88	0.55
1:B:700:ASP:OD1	1:B:854:ARG:NH1	2.37	0.55
1:B:1546:ARG:O	1:B:1550:GLY:N	2.37	0.55
1:C:748:ILE:HD12	1:C:763:PRO:HB2	1.88	0.55
1:C:2218:PHE:HE2	1:C:2353:LEU:HD21	1.72	0.55
1:D:1518:ASN:HA	1:D:1661:VAL:HG22	1.89	0.55
1:E:119:VAL:HG12	1:E:346:PRO:HG3	1.89	0.55
1:E:359:ARG:HD3	1:E:589:SER:HB2	1.89	0.55
1:F:230:ARG:HA	1:F:236:VAL:HG12	1.89	0.55
1:F:2872:HIS:N	1:F:2883:GLU:OE2	2.35	0.55
1:B:1336:PHE:CZ	1:B:1687:ILE:HD12	2.42	0.54
1:B:1469:HIS:O	1:B:1474:ARG:NH2	2.40	0.54
1:B:2672:MET:HE3	1:F:2672:MET:HE3	1.89	0.54
1:B:2782:ARG:NH1	1:B:2785:ASP:OD2	2.39	0.54
1:C:2690:PHE:CD2	1:E:2757:GLY:HA3	2.42	0.54
1:E:522:ALA:O	1:E:526:ILE:HG13	2.06	0.54
1:E:1160:VAL:HG12	1:E:1171:THR:HG23	1.88	0.54
1:F:1083:VAL:HG13	1:F:1085:ASP:H	1.71	0.54
1:F:2367:ARG:H	1:F:2367:ARG:HE	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:713:ARG:O	1:A:717:ILE:HG12	2.06	0.54
1:A:1153:ARG:HB3	1:A:1178:ILE:HB	1.90	0.54
1:B:1333:VAL:HG11	1:B:1670:LEU:HD21	1.89	0.54
1:B:1518:ASN:HA	1:B:1661:VAL:HG22	1.88	0.54
1:B:2452:TYR:O	1:B:2457:THR:OG1	2.25	0.54
1:C:2704:GLN:OE1	1:E:2981:HIS:NE2	2.41	0.54
1:C:2919:ALA:O	1:C:2923:MET:HG3	2.07	0.54
1:F:165:ASP:N	1:F:165:ASP:OD1	2.35	0.54
1:A:1514:LEU:HD23	1:A:1530:GLY:HA3	1.88	0.54
1:A:2568:THR:HG21	1:A:2581:VAL:HG23	1.89	0.54
1:A:2727:VAL:O	1:A:2731:VAL:HG13	2.08	0.54
1:B:2332:ILE:O	1:B:2336:VAL:HG13	2.07	0.54
1:B:2678:GLY:CA	1:B:2683:ARG:HB2	2.36	0.54
1:C:1341:ILE:HD11	1:C:1411:MET:SD	2.48	0.54
1:C:1480:SER:O	1:C:1483:ARG:NH1	2.41	0.54
1:C:2180:MET:HE2	1:C:2180:MET:HA	1.88	0.54
1:D:785:HIS:NE2	1:D:787:GLN:HB3	2.23	0.54
1:D:1686:GLU:HG3	1:D:1695:VAL:HB	1.89	0.54
1:D:2087:SER:OG	1:D:2092:ARG:O	2.25	0.54
1:E:488:LYS:HA	1:E:493:GLY:H	1.72	0.54
1:E:2841:LEU:HD23	1:E:2890:LEU:HG	1.89	0.54
1:F:2698:ILE:O	1:F:2702:VAL:HG23	2.07	0.54
1:A:785:HIS:NE2	1:A:787:GLN:HB3	2.22	0.54
1:B:1506:ILE:HG21	1:B:1538:LEU:HD11	1.90	0.54
1:B:2003:ALA:O	1:B:2007:GLU:HG2	2.08	0.54
1:B:2875:SER:O	1:B:2875:SER:OG	2.21	0.54
1:C:2433:LEU:HB3	1:C:2435:VAL:HG12	1.90	0.54
1:C:2727:VAL:O	1:C:2731:VAL:HG13	2.07	0.54
1:D:1081:THR:HG21	1:D:1275:ARG:HG2	1.88	0.54
1:D:1311:VAL:HG13	1:D:1323:ALA:HB3	1.90	0.54
1:D:2919:ALA:O	1:D:2923:MET:HG3	2.07	0.54
1:E:186:ARG:HB2	1:E:188:ILE:HG12	1.90	0.54
1:E:495:ARG:NH1	1:E:528:GLU:OE2	2.40	0.54
1:F:78:ASP:OD1	1:F:78:ASP:N	2.39	0.54
1:F:1633:TYR:O	1:F:1637:LEU:N	2.32	0.54
1:C:223:LEU:O	1:C:244:GLN:NE2	2.36	0.54
1:C:343:ASP:OD1	1:C:343:ASP:N	2.41	0.54
1:C:1104:THR:HG23	1:C:1109:PRO:HG3	1.88	0.54
1:C:1712:THR:O	1:C:1713:VAL:C	2.50	0.54
1:D:783:ARG:NH1	1:D:828:ASP:OD1	2.40	0.54
1:D:2681:LEU:HB2	1:D:2683:ARG:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1083:VAL:HG13	1:E:1085:ASP:H	1.71	0.54
1:E:1542:VAL:HG11	1:E:1555:PHE:HB2	1.89	0.54
1:C:1546:ARG:O	1:C:1550:GLY:N	2.35	0.54
1:E:2790:GLY:HA2	1:E:2876:THR:HG22	1.89	0.54
1:F:1452:TYR:HD2	1:F:1585:MET:HE1	1.72	0.54
1:A:90:PRO:O	1:A:94:VAL:HG12	2.08	0.54
1:C:426:THR:OG1	2:C:3101:FMN:O4	2.24	0.54
1:C:543:THR:OG1	1:C:545:GLU:OE1	2.24	0.54
1:C:1703:LEU:HD11	1:C:1713:VAL:HB	1.89	0.54
1:D:1434:ALA:HB1	1:D:1444:ALA:HB1	1.89	0.54
1:E:474:THR:OG1	1:E:508:ASP:OD1	2.20	0.54
1:F:495:ARG:NH1	1:F:528:GLU:OE2	2.41	0.54
1:F:2118:VAL:HG21	1:F:2212:GLN:HB2	1.90	0.54
1:F:2293:LEU:HD11	1:F:2314:HIS:CD2	2.43	0.54
1:F:2297:VAL:O	1:F:2301:HIS:ND1	2.40	0.54
1:F:2511:HIS:O	1:F:2515:VAL:HG13	2.08	0.54
1:A:181:LEU:O	1:A:185:ARG:HG2	2.07	0.54
1:A:1083:VAL:HG13	1:A:1085:ASP:H	1.71	0.54
1:B:2604:GLN:HA	1:B:2795:GLN:HG2	1.90	0.54
1:C:575:HIS:HB3	1:C:684:ASP:HB2	1.89	0.54
1:C:825:HIS:HD2	1:C:2418:PRO:HA	1.73	0.54
1:C:1360:VAL:HG21	1:C:1417:ALA:HA	1.90	0.54
1:C:1468:MET:HB2	1:C:1657:PHE:HZ	1.72	0.54
1:C:1521:LEU:HB3	1:C:1525:GLN:HB3	1.90	0.54
1:C:1701:ASN:HA	1:C:1704:LYS:HE3	1.89	0.54
1:D:1695:VAL:HA	1:D:1698:LEU:HD23	1.90	0.54
1:E:267:VAL:HG12	1:E:268:ARG:H	1.72	0.54
1:E:604:GLY:HA2	1:E:882:ALA:HB3	1.88	0.54
1:E:1589:ALA:O	1:E:1642:ARG:NH1	2.41	0.54
1:B:1311:VAL:HG13	1:B:1323:ALA:HB3	1.90	0.54
1:B:1599:ILE:HG21	1:B:1666:THR:OG1	2.08	0.54
1:C:679:SER:N	1:C:683:ALA:O	2.38	0.54
1:D:90:PRO:O	1:D:94:VAL:HG12	2.07	0.54
1:D:702:VAL:HG11	1:D:716:ILE:HD11	1.90	0.54
1:D:1669:LEU:HD12	1:D:1678:GLY:HA2	1.89	0.54
1:E:106:ASP:OD1	1:E:106:ASP:N	2.41	0.54
1:E:165:ASP:OD1	1:E:165:ASP:N	2.40	0.54
1:E:608:PRO:HB3	1:E:901:PHE:HA	1.89	0.54
1:E:748:ILE:HD12	1:E:763:PRO:HB2	1.90	0.54
1:A:263:ARG:NH2	1:A:269:GLY:O	2.40	0.54
1:A:933:LEU:HD21	1:A:982:LEU:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1510:THR:HG21	1:A:1534:GLY:HA2	1.89	0.54
1:A:1695:VAL:HA	1:A:1698:LEU:HD23	1.88	0.54
1:B:1365:ASP:HA	1:B:1368:THR:HG22	1.90	0.54
1:B:2568:THR:HG21	1:B:2581:VAL:HG23	1.90	0.54
1:C:772:ARG:HD3	1:C:835:LEU:HD13	1.89	0.54
1:C:1346:MET:HE3	1:C:1414:VAL:HG21	1.89	0.54
1:D:435:VAL:HG13	1:D:445:ALA:HB1	1.90	0.54
1:E:679:SER:N	1:E:683:ALA:O	2.41	0.54
1:E:2042:SER:OG	1:E:2958:ARG:NH2	2.41	0.54
1:E:2433:LEU:HB3	1:E:2435:VAL:HG12	1.90	0.54
1:B:207:ARG:O	1:B:211:LEU:HG	2.08	0.53
1:B:2610:ASP:O	1:B:2613:VAL:HG12	2.08	0.53
1:D:1204:THR:HG21	1:D:1302:ILE:HG12	1.90	0.53
1:E:933:LEU:HD21	1:E:982:LEU:HB3	1.90	0.53
1:F:23:ALA:H	1:F:26:ASP:HB2	1.73	0.53
1:F:37:ALA:N	1:F:342:LEU:O	2.30	0.53
1:A:2875:SER:O	1:A:2875:SER:OG	2.22	0.53
1:B:2159:TYR:CD1	1:B:2175:LEU:HD11	2.43	0.53
1:B:2698:ILE:O	1:B:2702:VAL:HG23	2.08	0.53
1:C:2573:VAL:HG12	1:C:2576:SER:H	1.72	0.53
1:D:2267:LEU:O	1:D:2311:SER:N	2.27	0.53
1:E:1507:ALA:HB2	1:E:1514:LEU:HB2	1.91	0.53
1:F:2573:VAL:HG12	1:F:2576:SER:H	1.72	0.53
1:A:2241:LYS:HA	1:A:2245:TRP:CD1	2.42	0.53
1:A:2692:GLU:HA	1:A:2697:ILE:HG21	1.90	0.53
1:B:1419:VAL:HG11	1:B:1447:CYS:HB3	1.90	0.53
1:B:1702:THR:HG22	1:B:1708:TYR:HE2	1.73	0.53
1:C:1301:GLY:O	1:C:1308:ILE:N	2.31	0.53
1:C:1703:LEU:HD22	1:C:1711:SER:HB2	1.89	0.53
1:D:1419:VAL:HG11	1:D:1447:CYS:HB3	1.89	0.53
1:E:1153:ARG:HB3	1:E:1178:ILE:HB	1.90	0.53
1:F:1153:ARG:HB3	1:F:1178:ILE:HB	1.91	0.53
1:A:2027:VAL:HG22	1:A:2179:ASN:HB2	1.90	0.53
1:A:2440:LEU:HD11	1:A:2859:LEU:HD11	1.91	0.53
1:B:230:ARG:HB2	1:B:323:LYS:HZ1	1.73	0.53
1:B:2087:SER:OG	1:B:2092:ARG:O	2.27	0.53
1:B:2293:LEU:HD11	1:B:2314:HIS:CD2	2.44	0.53
1:C:655:LEU:HG	1:C:887:ILE:HD12	1.89	0.53
1:C:1576:GLU:O	1:C:1579:ARG:HG3	2.09	0.53
1:F:655:LEU:HD13	1:F:688:ILE:HD11	1.91	0.53
1:A:230:ARG:HA	1:A:236:VAL:HG12	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1005:THR:OG1	1:A:1017:VAL:O	2.24	0.53
1:A:2761:MET:HG2	1:D:2687:ASN:O	2.08	0.53
1:C:2456:ARG:O	1:C:2460:GLU:HG2	2.08	0.53
1:C:2695:PRO:HB2	1:E:2717:VAL:HG11	1.90	0.53
1:D:2266:ARG:HH22	1:D:2366:ALA:HA	1.72	0.53
1:E:1518:ASN:HA	1:E:1661:VAL:HG22	1.91	0.53
1:E:1636:TRP:HB3	1:E:1640:ARG:NH1	2.23	0.53
1:E:1997:VAL:HG13	1:E:2000:LEU:HD12	1.90	0.53
1:E:2396:MET:HE2	1:E:2396:MET:C	2.33	0.53
1:F:1419:VAL:HG11	1:F:1447:CYS:HB3	1.89	0.53
1:B:794:THR:HB	1:B:2412:ILE:HG21	1.89	0.53
1:C:2682:GLY:HA3	1:E:2538:LEU:HG	1.91	0.53
1:E:1510:THR:HG21	1:E:1534:GLY:HA2	1.91	0.53
1:A:1075:PRO:HD2	1:A:1076:LEU:HD12	1.89	0.53
1:A:1085:ASP:OD2	1:A:1256:SER:OG	2.25	0.53
1:A:1311:VAL:HG13	1:A:1323:ALA:HB3	1.91	0.53
1:D:2006:SER:O	1:D:2009:ILE:HG13	2.08	0.53
1:D:2180:MET:HE2	1:D:2180:MET:HA	1.90	0.53
1:D:2218:PHE:HE2	1:D:2353:LEU:HD21	1.73	0.53
1:E:2370:ILE:HD12	1:E:2370:ILE:O	2.09	0.53
1:F:1336:PHE:CZ	1:F:1687:ILE:HD12	2.44	0.53
1:F:1365:ASP:HA	1:F:1368:THR:HG22	1.91	0.53
1:A:604:GLY:HA2	1:A:882:ALA:HB3	1.90	0.53
1:A:2240:MET:HE2	1:A:2240:MET:HA	1.91	0.53
1:A:2428:PRO:HB3	1:A:2968:PRO:HB2	1.91	0.53
1:C:90:PRO:O	1:C:94:VAL:HG12	2.07	0.53
1:C:725:LYS:NZ	1:C:859:SER:O	2.41	0.53
1:C:2071:GLY:HA3	1:C:2169:TYR:HA	1.90	0.53
1:D:575:HIS:HB3	1:D:684:ASP:HB2	1.89	0.53
1:E:2678:GLY:HA3	1:E:2685:LYS:HD2	1.91	0.53
1:F:1521:LEU:HB3	1:F:1525:GLN:HB3	1.91	0.53
1:F:2006:SER:O	1:F:2009:ILE:HG13	2.08	0.53
1:B:1589:ALA:O	1:B:1642:ARG:NH1	2.42	0.53
1:C:2769:MET:O	1:C:2773:ARG:HG3	2.08	0.53
1:D:534:ILE:HG22	1:D:536:HIS:H	1.72	0.53
1:E:1514:LEU:HD23	1:E:1530:GLY:HA3	1.91	0.53
1:E:2652:TYR:O	1:E:2810:ARG:NH2	2.42	0.53
1:E:2875:SER:O	1:E:2875:SER:OG	2.20	0.53
1:F:2782:ARG:NH1	1:F:2785:ASP:OD2	2.39	0.53
1:A:926:ARG:NH1	1:A:962:TRP:O	2.38	0.53
1:A:2758:PHE:HD1	1:A:2761:MET:HE2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:655:LEU:HD22	1:B:887:ILE:HD12	1.90	0.53
1:B:2639:PHE:HD1	1:B:2644:PHE:HB3	1.74	0.53
1:C:2241:LYS:HA	1:C:2245:TRP:CD1	2.44	0.53
1:D:1153:ARG:HB3	1:D:1178:ILE:HB	1.90	0.53
1:D:1247:SER:H	1:D:1288:ARG:HH12	1.57	0.53
1:E:88:PHE:HE2	1:E:173:GLN:HE21	1.57	0.53
1:E:2440:LEU:HD11	1:E:2859:LEU:HD11	1.90	0.53
1:E:2666:MET:HE1	1:E:2672:MET:HE1	1.89	0.53
1:E:3020:ARG:NH2	1:E:3029:ALA:O	2.39	0.53
1:F:1081:THR:HG21	1:F:1275:ARG:HG2	1.91	0.53
1:F:1083:VAL:HG22	1:F:1084:PRO:HD2	1.90	0.53
1:F:1247:SER:H	1:F:1288:ARG:HH12	1.57	0.53
1:A:1072:PHE:HZ	1:A:1261:HIS:HB3	1.74	0.52
1:A:1441:GLU:OE1	1:A:1601:ASN:ND2	2.42	0.52
1:A:1507:ALA:HB2	1:A:1514:LEU:HB2	1.91	0.52
1:A:1518:ASN:HA	1:A:1661:VAL:HG22	1.91	0.52
1:C:534:ILE:HG22	1:C:536:HIS:H	1.74	0.52
1:D:655:LEU:HG	1:D:887:ILE:HD12	1.90	0.52
1:D:1058:HIS:HB2	1:D:1061:ARG:HD3	1.90	0.52
1:E:446:GLU:HG2	1:E:478:ASN:HB2	1.91	0.52
1:E:1311:VAL:HG13	1:E:1323:ALA:HB3	1.91	0.52
1:E:1672:ILE:HD12	1:F:220:ARG:HE	1.74	0.52
1:F:1518:ASN:HB2	1:F:1527:ALA:HB3	1.91	0.52
1:A:1083:VAL:HG22	1:A:1084:PRO:HD2	1.92	0.52
1:A:2300:TRP:NE1	1:A:2369:PRO:HD3	2.24	0.52
1:A:2316:LEU:HB2	1:A:2373:ASP:HA	1.90	0.52
1:B:359:ARG:HD3	1:B:589:SER:HB2	1.92	0.52
1:B:1247:SER:H	1:B:1288:ARG:HH12	1.57	0.52
1:B:1407:THR:O	1:B:1411:MET:HG2	2.10	0.52
1:B:2573:VAL:HG12	1:B:2576:SER:H	1.75	0.52
1:B:2682:GLY:HA3	1:F:2538:LEU:HG	1.90	0.52
1:C:522:ALA:O	1:C:526:ILE:HG13	2.09	0.52
1:C:2087:SER:OG	1:C:2092:ARG:O	2.27	0.52
1:D:73:LEU:HD21	1:D:173:GLN:HE21	1.75	0.52
1:D:230:ARG:HA	1:D:236:VAL:HG12	1.90	0.52
1:D:1467:LYS:HD3	1:D:1576:GLU:HB3	1.91	0.52
1:F:90:PRO:O	1:F:94:VAL:HG12	2.09	0.52
1:F:359:ARG:HD3	1:F:589:SER:HB2	1.91	0.52
1:A:288:THR:HG22	1:A:290:ARG:H	1.75	0.52
1:A:2640:LEU:HD22	1:A:3031:MET:HG2	1.90	0.52
1:B:495:ARG:NH1	1:B:528:GLU:OE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1153:ARG:HB3	1:B:1178:ILE:HB	1.90	0.52
1:B:2297:VAL:O	1:B:2301:HIS:ND1	2.35	0.52
1:B:2692:GLU:HA	1:B:2697:ILE:HG21	1.91	0.52
1:B:2695:PRO:HB2	1:F:2717:VAL:HG11	1.90	0.52
1:C:288:THR:HG22	1:C:290:ARG:H	1.74	0.52
1:C:1204:THR:HG21	1:C:1302:ILE:HG12	1.90	0.52
1:C:1485:ALA:HB2	1:C:1557:LEU:HD12	1.90	0.52
1:E:725:LYS:NZ	1:E:859:SER:O	2.41	0.52
1:E:2537:LEU:HD11	1:E:2595:THR:HG22	1.91	0.52
1:F:700:ASP:OD1	1:F:854:ARG:NH1	2.37	0.52
1:F:725:LYS:NZ	1:F:859:SER:O	2.42	0.52
1:A:2433:LEU:HB3	1:A:2435:VAL:HG12	1.92	0.52
1:B:2725:VAL:HG22	1:F:2714:ILE:HG23	1.91	0.52
1:C:1566:HIS:HB3	1:C:1660:PRO:HA	1.90	0.52
1:C:2058:ILE:HB	1:C:2094:ILE:HD11	1.90	0.52
1:D:215:PHE:HD1	1:D:251:TYR:HD2	1.56	0.52
1:D:426:THR:OG1	2:D:3101:FMN:O4	2.23	0.52
1:D:2573:VAL:HG12	1:D:2576:SER:H	1.73	0.52
1:E:1083:VAL:HG22	1:E:1084:PRO:HD2	1.91	0.52
1:E:1706:PRO:O	1:E:1707:GLU:C	2.49	0.52
1:E:2180:MET:HE2	1:E:2180:MET:HA	1.92	0.52
1:F:655:LEU:HG	1:F:887:ILE:HD12	1.91	0.52
1:F:748:ILE:HD12	1:F:763:PRO:HB2	1.90	0.52
1:A:1599:ILE:HG21	1:A:1666:THR:OG1	2.09	0.52
1:A:2332:ILE:O	1:A:2336:VAL:HG13	2.09	0.52
1:A:2695:PRO:HD3	1:D:2666:MET:HG2	1.91	0.52
1:B:90:PRO:O	1:B:94:VAL:HG12	2.08	0.52
1:C:495:ARG:NH1	1:C:528:GLU:OE2	2.43	0.52
1:D:1158:SER:OG	1:D:1173:GLU:OE2	2.25	0.52
1:D:2071:GLY:HA3	1:D:2169:TYR:HA	1.91	0.52
1:D:2396:MET:SD	1:D:2397:SER:N	2.82	0.52
1:D:2751:THR:O	1:D:2755:ILE:HG12	2.09	0.52
1:D:2769:MET:O	1:D:2773:ARG:HG3	2.10	0.52
1:E:2573:VAL:HG12	1:E:2576:SER:H	1.74	0.52
1:E:2648:GLU:OE1	1:E:3013:ARG:NH2	2.37	0.52
1:F:116:VAL:HG22	1:F:117:PRO:HD3	1.92	0.52
1:F:794:THR:HB	1:F:2412:ILE:HG21	1.91	0.52
1:F:2294:ASP:HA	1:F:2297:VAL:HG22	1.91	0.52
1:B:417:ARG:NH2	1:B:508:ASP:OD1	2.43	0.52
1:C:2452:TYR:O	1:C:2457:THR:OG1	2.27	0.52
1:D:458:PHE:HE2	1:D:490:GLN:HG2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2720:CYS:HB2	1:D:2979:PHE:H	1.75	0.52
1:D:2741:LEU:HD23	1:D:2803:ALA:HB2	1.92	0.52
1:E:288:THR:HG22	1:E:290:ARG:H	1.75	0.52
1:F:2999:ASP:N	1:F:2999:ASP:OD1	2.43	0.52
1:B:1083:VAL:HG22	1:B:1084:PRO:HD2	1.90	0.52
1:C:538:VAL:HG22	1:C:563:ILE:HB	1.92	0.52
1:F:1629:ILE:HG12	1:F:1640:ARG:HH22	1.75	0.52
1:A:65:LEU:HD12	1:A:166:VAL:HG12	1.92	0.52
1:A:84:ARG:HD3	1:A:87:GLY:HA2	1.91	0.52
1:A:2537:LEU:HD11	1:A:2595:THR:HG22	1.91	0.52
1:A:2823:GLN:HG2	1:D:2738:LYS:HE2	1.92	0.52
1:A:2882:ASN:OD1	1:A:2883:GLU:N	2.43	0.52
1:B:2367:ARG:H	1:B:2367:ARG:NE	2.08	0.52
1:C:2790:GLY:HA2	1:C:2876:THR:HG22	1.91	0.52
1:D:1576:GLU:O	1:D:1579:ARG:HG3	2.09	0.52
1:E:1633:TYR:O	1:E:1637:LEU:N	2.39	0.52
1:E:2978:GLY:N	1:E:2982:VAL:O	2.42	0.52
1:F:1105:ASP:OD1	1:F:1105:ASP:N	2.43	0.52
1:F:2720:CYS:HB2	1:F:2979:PHE:H	1.74	0.52
1:F:2751:THR:O	1:F:2755:ILE:HG12	2.08	0.52
1:A:794:THR:HB	1:A:2412:ILE:HG21	1.92	0.52
1:A:1690:LYS:HG2	1:A:1719:GLU:HB3	1.92	0.52
1:B:1471:ILE:HD12	1:B:1472:VAL:HG23	1.92	0.52
1:B:2713:MET:HB2	1:F:2982:VAL:HG23	1.91	0.52
1:D:1025:SER:O	1:D:1029:THR:HG23	2.10	0.52
1:D:1412:ALA:HB1	1:D:1457:LEU:HD11	1.91	0.52
1:D:2028:PHE:HD2	1:D:2178:ALA:HB2	1.74	0.52
1:E:2066:ALA:HB1	1:E:2101:ARG:HD2	1.92	0.52
1:A:423:ALA:HB2	1:A:634:LEU:HD12	1.92	0.52
1:A:1542:VAL:HG11	1:A:1555:PHE:HB2	1.90	0.52
1:A:2538:LEU:HG	1:D:2682:GLY:HA3	1.91	0.52
1:B:73:LEU:HD21	1:B:173:GLN:NE2	2.25	0.52
1:B:2727:VAL:O	1:B:2731:VAL:HG13	2.09	0.52
1:C:41:GLN:HE22	1:C:115:SER:HB3	1.75	0.52
1:C:1024:THR:HG22	1:C:1111:VAL:HG11	1.92	0.52
1:D:321:ILE:HG13	1:D:322:ARG:N	2.25	0.52
1:D:544:ILE:HG13	1:D:583:LEU:HD23	1.91	0.52
1:D:1301:GLY:O	1:D:1308:ILE:N	2.30	0.52
1:D:1520:ASN:HB2	1:D:1525:GLN:HG2	1.92	0.52
1:E:2646:PRO:O	1:E:2650:MET:HG2	2.10	0.52
1:F:73:LEU:HD21	1:F:173:GLN:NE2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1338:GLY:C	1:F:1411:MET:HE1	2.35	0.52
1:F:2003:ALA:O	1:F:2007:GLU:HG2	2.09	0.52
1:A:700:ASP:OD1	1:A:854:ARG:NH1	2.37	0.51
1:A:2006:SER:O	1:A:2009:ILE:HG13	2.10	0.51
1:A:2573:VAL:HG12	1:A:2576:SER:H	1.73	0.51
1:A:2717:VAL:HG11	1:D:2695:PRO:HB2	1.92	0.51
1:B:1403:LEU:HD23	1:B:1404:THR:N	2.25	0.51
1:B:1542:VAL:HG11	1:B:1555:PHE:HB2	1.92	0.51
1:B:2703:VAL:HG21	1:B:2713:MET:HE1	1.92	0.51
1:D:37:ALA:N	1:D:342:LEU:O	2.31	0.51
1:D:1729:ASP:OD1	1:D:1729:ASP:N	2.43	0.51
1:D:2428:PRO:HB3	1:D:2968:PRO:HB2	1.93	0.51
1:D:2433:LEU:HB3	1:D:2435:VAL:HG12	1.91	0.51
1:E:2240:MET:HE2	1:E:2240:MET:HA	1.91	0.51
1:E:2522:GLU:OE2	1:E:2599:ARG:NE	2.43	0.51
1:F:740:LEU:HD13	1:F:777:LEU:HD23	1.92	0.51
1:F:1592:ASP:HA	1:F:1595:ILE:HD12	1.92	0.51
1:F:2604:GLN:HA	1:F:2795:GLN:HG2	1.91	0.51
1:A:2782:ARG:NH1	1:A:2785:ASP:OD2	2.41	0.51
1:B:1672:ILE:HD12	1:C:220:ARG:HE	1.75	0.51
1:B:2446:GLY:HA2	1:B:2800:ILE:HA	1.91	0.51
1:C:1467:LYS:HD3	1:C:1576:GLU:HB3	1.92	0.51
1:C:2701:HIS:CE1	1:C:2704:GLN:HE21	2.28	0.51
1:E:112:ALA:O	1:E:116:VAL:HG13	2.10	0.51
1:E:1365:ASP:HA	1:E:1368:THR:HG22	1.92	0.51
1:F:2180:MET:HE2	1:F:2180:MET:HA	1.92	0.51
1:F:2370:ILE:HD12	1:F:2370:ILE:O	2.10	0.51
1:F:2440:LEU:HD11	1:F:2859:LEU:HD21	1.90	0.51
1:F:2568:THR:HG21	1:F:2581:VAL:HG23	1.92	0.51
1:A:498:GLN:HG3	1:A:532:ILE:HD13	1.91	0.51
1:A:513:SER:OG	2:A:3101:FMN:O2	2.24	0.51
1:A:1130:LEU:HD22	1:A:1131:PRO:HD2	1.92	0.51
1:A:1422:MET:HE2	1:A:1428:PHE:HD1	1.75	0.51
1:A:2393:ARG:HA	1:A:2396:MET:HE3	1.92	0.51
1:B:836:CYS:HB2	1:B:843:VAL:HG11	1.92	0.51
1:E:768:THR:HG21	1:E:841:LYS:H	1.75	0.51
1:E:2568:THR:HG21	1:E:2581:VAL:HG23	1.92	0.51
1:F:1585:MET:HB3	1:F:1646:ARG:HH21	1.74	0.51
1:F:2224:ARG:HH11	1:F:2224:ARG:HA	1.76	0.51
1:F:2316:LEU:HB2	1:F:2373:ASP:HA	1.92	0.51
1:F:2741:LEU:HD23	1:F:2803:ALA:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2811:MET:O	1:F:3013:ARG:NH1	2.44	0.51
1:B:570:ARG:NH1	1:B:662:ASP:O	2.38	0.51
1:B:604:GLY:HA2	1:B:882:ALA:HB3	1.92	0.51
1:B:1348:MET:HE2	1:B:1348:MET:HA	1.93	0.51
1:B:2370:ILE:HD12	1:B:2370:ILE:O	2.11	0.51
1:C:458:PHE:HE2	1:C:490:GLN:HG2	1.75	0.51
1:C:476:GLN:NE2	1:C:508:ASP:OD2	2.44	0.51
1:C:1419:VAL:HG11	1:C:1447:CYS:HB3	1.92	0.51
1:C:2006:SER:O	1:C:2009:ILE:HG13	2.09	0.51
1:C:2690:PHE:CG	1:E:2757:GLY:HA3	2.46	0.51
1:C:2751:THR:O	1:C:2755:ILE:HG12	2.10	0.51
1:D:1104:THR:HG22	1:D:1146:ALA:HB3	1.93	0.51
1:D:1510:THR:HG21	1:D:1534:GLY:HA2	1.93	0.51
1:D:2314:HIS:NE2	1:D:2316:LEU:HD22	2.26	0.51
1:E:90:PRO:O	1:E:94:VAL:HG12	2.09	0.51
1:E:1687:ILE:HG23	1:E:1718:ALA:HB3	1.92	0.51
1:E:2114:TYR:HB3	1:E:2142:ALA:HB2	1.92	0.51
1:F:1311:VAL:HG13	1:F:1323:ALA:HB3	1.91	0.51
1:A:2293:LEU:HD11	1:A:2314:HIS:CD2	2.45	0.51
1:B:2999:ASP:N	1:B:2999:ASP:OD1	2.44	0.51
1:C:326:TRP:HE1	1:C:354:THR:HG22	1.75	0.51
1:C:1158:SER:OG	1:C:1173:GLU:OE2	2.25	0.51
1:C:1669:LEU:HD12	1:C:1678:GLY:HA2	1.92	0.51
1:C:2446:GLY:HA2	1:C:2800:ILE:HA	1.92	0.51
1:D:1599:ILE:HG21	1:D:1666:THR:OG1	2.10	0.51
1:E:2027:VAL:HG22	1:E:2179:ASN:HB2	1.93	0.51
1:E:2485:GLU:HB2	1:E:2493:TYR:CD2	2.45	0.51
1:F:424:GLY:HA3	1:F:478:ASN:HD22	1.75	0.51
1:A:666:SER:HB2	1:A:669:LYS:HG3	1.92	0.51
1:A:2430:TRP:HZ3	1:A:2970:LYS:HG2	1.76	0.51
1:B:2008:LEU:HA	1:B:2011:LEU:HD23	1.92	0.51
1:B:2224:ARG:HA	1:B:2224:ARG:HH11	1.76	0.51
1:D:1589:ALA:O	1:D:1642:ARG:NH1	2.44	0.51
1:E:2896:ARG:NH2	1:E:2901:PRO:O	2.44	0.51
1:F:1348:MET:HE2	1:F:1348:MET:HA	1.93	0.51
1:F:2107:GLU:OE1	1:F:2107:GLU:HA	2.10	0.51
1:F:2452:TYR:O	1:F:2457:THR:OG1	2.28	0.51
1:B:2660:ASN:OD1	1:B:2662:GLN:HG2	2.11	0.51
1:B:2714:ILE:HG23	1:F:2725:VAL:CG1	2.41	0.51
1:C:2882:ASN:OD1	1:C:2883:GLU:N	2.44	0.51
1:D:65:LEU:HD12	1:D:166:VAL:HG12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:679:SER:N	1:D:683:ALA:O	2.37	0.51
1:D:779:ARG:HD2	1:D:831:PHE:CE2	2.46	0.51
1:E:2430:TRP:HZ3	1:E:2970:LYS:HG2	1.75	0.51
1:F:1024:THR:HA	1:F:1111:VAL:HG12	1.93	0.51
1:F:2087:SER:OG	1:F:2092:ARG:O	2.28	0.51
1:F:2113:ARG:HG3	1:F:2114:TYR:CD1	2.46	0.51
1:F:2357:CYS:O	1:F:2362:LYS:NZ	2.40	0.51
1:F:2790:GLY:HA2	1:F:2876:THR:HG22	1.92	0.51
1:A:725:LYS:NZ	1:A:859:SER:O	2.43	0.51
1:A:1276:LEU:HA	1:A:1327:LEU:HA	1.93	0.51
1:A:2757:GLY:HA3	1:D:2690:PHE:CG	2.46	0.51
1:B:116:VAL:HG22	1:B:117:PRO:HD3	1.93	0.51
1:B:424:GLY:HA3	1:B:478:ASN:HD22	1.76	0.51
1:B:2838:LEU:HD12	1:B:2886:LEU:HD12	1.91	0.51
1:C:1175:ARG:NH1	1:C:1188:ALA:O	2.27	0.51
1:C:2610:ASP:O	1:C:2613:VAL:HG12	2.11	0.51
1:D:226:VAL:HG11	1:D:288:THR:HG23	1.91	0.51
1:E:423:ALA:HB2	1:E:634:LEU:HD12	1.92	0.51
1:E:2639:PHE:O	1:E:2644:PHE:HB2	2.10	0.51
1:F:1456:ALA:O	1:F:1460:MET:HG3	2.11	0.51
1:F:1599:ILE:HG21	1:F:1666:THR:OG1	2.10	0.51
1:F:2332:ILE:O	1:F:2336:VAL:HG13	2.11	0.51
1:A:38:PHE:HZ	1:A:158:LEU:HD22	1.74	0.51
1:A:2715:HIS:O	1:D:2717:VAL:N	2.44	0.51
1:C:772:ARG:O	1:C:776:MET:HG3	2.11	0.51
1:C:1223:PHE:O	1:C:1227:SER:OG	2.28	0.51
1:C:1662:ARG:NE	1:C:1665:GLU:OE2	2.37	0.51
1:D:984:THR:HG22	1:D:989:VAL:HG22	1.93	0.51
1:F:1223:PHE:O	1:F:1227:SER:OG	2.29	0.51
1:A:112:ALA:O	1:A:116:VAL:HG13	2.11	0.51
1:A:2631:ASN:HB3	1:A:2702:VAL:HG21	1.93	0.51
1:B:679:SER:N	1:B:683:ALA:O	2.39	0.51
1:B:1585:MET:HB3	1:B:1646:ARG:HH21	1.76	0.51
1:B:2567:HIS:ND1	1:B:2567:HIS:O	2.44	0.51
1:B:2811:MET:O	1:B:3013:ARG:NH1	2.44	0.51
1:C:45:TRP:HB3	1:C:119:VAL:HG12	1.92	0.51
1:C:1336:PHE:CZ	1:C:1687:ILE:HD12	2.45	0.51
1:C:2070:GLU:OE2	1:C:2108:ASN:ND2	2.40	0.51
1:D:446:GLU:HG2	1:D:478:ASN:HB2	1.93	0.51
1:D:2522:GLU:HG2	1:D:2601:VAL:HG12	1.93	0.51
1:D:2882:ASN:OD1	1:D:2883:GLU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1441:GLU:OE1	1:E:1601:ASN:ND2	2.44	0.51
1:E:2044:ARG:HB3	1:E:2955:VAL:HG22	1.91	0.51
1:E:2265:SER:O	1:E:2309:ARG:NH2	2.43	0.51
1:F:924:LEU:HD12	1:F:924:LEU:O	2.11	0.51
1:F:1348:MET:SD	1:F:1381:ARG:HG2	2.51	0.51
1:F:2945:ASP:N	1:F:2945:ASP:OD1	2.44	0.51
1:A:446:GLU:HG2	1:A:478:ASN:HB2	1.92	0.50
1:A:924:LEU:O	1:A:924:LEU:HD12	2.11	0.50
1:A:1104:THR:N	1:A:1107:GLY:O	2.43	0.50
1:A:2740:GLN:HB3	1:A:2804:ARG:HD3	1.93	0.50
1:B:2751:THR:O	1:B:2755:ILE:HG12	2.11	0.50
1:C:1564:PRO:O	1:C:1567:SER:OG	2.28	0.50
1:C:2483:ARG:HH12	1:C:2495:THR:HG23	1.76	0.50
1:D:541:PRO:HG2	1:D:547:ILE:HG12	1.93	0.50
1:E:1085:ASP:OD2	1:E:1256:SER:OG	2.25	0.50
1:F:1209:ARG:NH2	1:F:1307:GLU:OE1	2.41	0.50
1:B:1081:THR:HG21	1:B:1275:ARG:HG2	1.93	0.50
1:B:1521:LEU:HB3	1:B:1525:GLN:HB3	1.91	0.50
1:C:836:CYS:HB2	1:C:843:VAL:HG11	1.93	0.50
1:C:2999:ASP:N	1:C:2999:ASP:OD1	2.41	0.50
1:D:41:GLN:HE22	1:D:115:SER:HB3	1.77	0.50
1:D:2727:VAL:O	1:D:2731:VAL:HG13	2.11	0.50
1:E:655:LEU:HG	1:E:887:ILE:HD12	1.93	0.50
1:E:794:THR:HB	1:E:2412:ILE:HG21	1.93	0.50
1:E:1162:THR:HG22	1:E:1168:VAL:HA	1.92	0.50
1:E:1247:SER:H	1:E:1288:ARG:HH12	1.60	0.50
1:E:1271:ARG:O	1:E:1271:ARG:NH1	2.35	0.50
1:E:2557:ALA:O	1:E:2561:VAL:HG23	2.11	0.50
1:A:2646:PRO:O	1:A:2650:MET:HG2	2.10	0.50
1:B:924:LEU:HD12	1:B:924:LEU:O	2.12	0.50
1:B:1396:HIS:ND1	1:B:1398:ASP:OD1	2.43	0.50
1:D:112:ALA:O	1:D:116:VAL:HG13	2.11	0.50
1:D:165:ASP:N	1:D:165:ASP:OD1	2.38	0.50
1:D:2999:ASP:OD1	1:D:2999:ASP:N	2.42	0.50
1:E:867:ASP:OD1	1:E:867:ASP:N	2.43	0.50
1:E:2223:PRO:HG3	1:E:2224:ARG:H	1.75	0.50
1:E:2764:THR:OG1	1:E:2765:ALA:N	2.44	0.50
1:E:2806:ASP:OD2	1:E:2806:ASP:N	2.44	0.50
1:F:226:VAL:HG11	1:F:288:THR:HG23	1.91	0.50
1:F:549:SER:O	1:F:553:ILE:HG12	2.12	0.50
1:F:1403:LEU:HD23	1:F:1404:THR:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1705:LEU:HD12	1:F:1707:GLU:H	1.77	0.50
1:F:2557:ALA:O	1:F:2561:VAL:HG23	2.11	0.50
1:F:2567:HIS:ND1	1:F:2567:HIS:O	2.43	0.50
1:F:2674:THR:HG22	1:F:2685:LYS:HE3	1.94	0.50
1:A:1336:PHE:HE1	1:A:1415:ALA:HB1	1.75	0.50
1:A:1729:ASP:OD1	1:A:1729:ASP:N	2.35	0.50
1:A:2652:TYR:O	1:A:2810:ARG:NH2	2.45	0.50
1:A:3020:ARG:NH2	1:A:3029:ALA:O	2.41	0.50
1:B:175:ILE:HD12	1:B:176:GLY:N	2.27	0.50
1:B:547:ILE:HG21	1:B:587:THR:HG21	1.92	0.50
1:B:2180:MET:HA	1:B:2180:MET:HE2	1.93	0.50
1:B:2557:ALA:O	1:B:2561:VAL:HG23	2.11	0.50
1:B:2652:TYR:O	1:B:2810:ARG:NH2	2.45	0.50
1:C:1025:SER:O	1:C:1029:THR:HG23	2.11	0.50
1:C:1404:THR:O	1:C:1407:THR:HG22	2.12	0.50
1:C:1520:ASN:HB2	1:C:1525:GLN:HG2	1.94	0.50
1:D:1346:MET:HE3	1:D:1414:VAL:HG21	1.93	0.50
1:D:2924:MET:O	1:D:2928:GLN:HG3	2.12	0.50
1:E:65:LEU:HD12	1:E:166:VAL:HG12	1.93	0.50
1:E:1276:LEU:HA	1:E:1327:LEU:HA	1.93	0.50
1:E:2118:VAL:HG21	1:E:2212:GLN:HB2	1.94	0.50
1:E:2567:HIS:ND1	1:E:2567:HIS:O	2.45	0.50
1:E:2627:LEU:HD12	1:E:2668:GLY:H	1.76	0.50
1:F:425:MET:HB3	1:F:429:THR:H	1.76	0.50
1:F:836:CYS:HB2	1:F:843:VAL:HG11	1.94	0.50
1:F:1690:LYS:HG2	1:F:1719:GLU:HB3	1.94	0.50
1:A:115:SER:O	1:A:119:VAL:HG22	2.11	0.50
1:A:1162:THR:HG22	1:A:1168:VAL:HA	1.92	0.50
1:A:2648:GLU:HB3	1:A:2811:MET:HE3	1.94	0.50
1:B:45:TRP:HB3	1:B:119:VAL:HG12	1.93	0.50
1:B:549:SER:O	1:B:553:ILE:HG12	2.12	0.50
1:B:1024:THR:HA	1:B:1111:VAL:HG12	1.93	0.50
1:B:1126:VAL:HG22	1:B:1277:VAL:HA	1.94	0.50
1:C:570:ARG:NH1	1:C:662:ASP:O	2.41	0.50
1:C:1542:VAL:HG11	1:C:1555:PHE:HB2	1.93	0.50
1:C:2027:VAL:HG22	1:C:2179:ASN:HB2	1.94	0.50
1:D:2872:HIS:N	1:D:2883:GLU:OE2	2.41	0.50
1:E:1467:LYS:HZ3	1:E:1576:GLU:HG3	1.76	0.50
1:E:2314:HIS:NE2	1:E:2316:LEU:HD22	2.27	0.50
1:E:2631:ASN:HB3	1:E:2702:VAL:HG21	1.93	0.50
1:E:2720:CYS:HB2	1:E:2979:PHE:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2293:LEU:HD21	1:F:2314:HIS:CD2	2.47	0.50
1:F:2639:PHE:HD1	1:F:2644:PHE:HB3	1.76	0.50
1:A:1422:MET:SD	1:A:1725:LEU:HD21	2.52	0.50
1:B:654:MET:HE1	1:B:690:ASN:HB3	1.92	0.50
1:B:1368:THR:HG21	1:B:1376:VAL:HG12	1.93	0.50
1:B:2011:LEU:HD12	1:E:2024:VAL:HG12	1.94	0.50
1:B:2590:ARG:NH2	1:F:2681:LEU:HA	2.26	0.50
1:B:2723:ALA:HB3	1:B:2919:ALA:HB3	1.94	0.50
1:C:1247:SER:H	1:C:1288:ARG:HH12	1.58	0.50
1:C:2244:LEU:HD11	1:C:2295:ALA:HB3	1.94	0.50
1:D:604:GLY:HA2	1:D:882:ALA:HB3	1.93	0.50
1:D:2188:ALA:HA	1:D:2191:GLU:HG2	1.92	0.50
1:E:2428:PRO:HB3	1:E:2968:PRO:HB2	1.93	0.50
1:E:2882:ASN:OD1	1:E:2883:GLU:N	2.44	0.50
1:F:604:GLY:HA2	1:F:882:ALA:HB3	1.92	0.50
1:F:2694:LEU:O	1:F:2697:ILE:HG22	2.12	0.50
1:A:1693:PRO:HB2	1:A:1696:ALA:HB3	1.93	0.50
1:A:2050:LEU:HD21	1:A:2098:LEU:HD21	1.93	0.50
1:B:112:ALA:O	1:B:116:VAL:HG13	2.10	0.50
1:B:740:LEU:HD13	1:B:777:LEU:HD23	1.93	0.50
1:B:2741:LEU:HD23	1:B:2803:ALA:HB2	1.94	0.50
1:C:78:ASP:OD1	1:C:78:ASP:N	2.40	0.50
1:C:1005:THR:OG1	1:C:1017:VAL:O	2.25	0.50
1:E:2303:GLU:HG3	1:E:2305:SER:H	1.77	0.50
1:E:2670:THR:OG1	1:E:2749:ASP:OD2	2.23	0.50
1:F:547:ILE:HG21	1:F:587:THR:HG21	1.93	0.50
1:A:495:ARG:NH1	1:A:528:GLU:OE2	2.44	0.50
1:A:2682:GLY:HA3	1:D:2538:LEU:HG	1.92	0.50
1:B:1405:GLN:HG3	1:B:1465:GLY:HA3	1.94	0.50
1:B:2430:TRP:HZ3	1:B:2970:LYS:HB3	1.76	0.50
1:C:1047:ALA:N	1:C:1050:THR:O	2.37	0.50
1:C:1311:VAL:HG13	1:C:1323:ALA:HB3	1.93	0.50
1:D:1441:GLU:OE1	1:D:1601:ASN:ND2	2.45	0.50
1:E:2491:GLY:HA3	1:E:2500:MET:HE1	1.93	0.50
1:F:1276:LEU:HA	1:F:1327:LEU:HA	1.94	0.50
1:A:581:ASP:OD1	1:A:614:TYR:OH	2.24	0.50
1:B:1271:ARG:O	1:B:1271:ARG:HD3	2.12	0.50
1:B:1518:ASN:HB2	1:B:1527:ALA:HB3	1.92	0.50
1:C:43:SER:OG	1:C:346:PRO:O	2.30	0.50
1:C:446:GLU:HG2	1:C:478:ASN:HB2	1.94	0.50
1:C:544:ILE:HG13	1:C:583:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:604:GLY:HA2	1:C:882:ALA:HB3	1.93	0.50
1:C:717:ILE:HD12	1:C:727:TYR:CD2	2.47	0.50
1:C:2853:ALA:HB2	1:C:2894:LEU:HD22	1.93	0.50
1:D:251:TYR:HD1	1:D:251:TYR:O	1.95	0.50
1:D:1534:GLY:O	1:D:1538:LEU:HD22	2.12	0.50
1:D:2678:GLY:HA2	1:D:2683:ARG:HB2	1.94	0.50
1:F:1204:THR:HG21	1:F:1302:ILE:HG12	1.92	0.50
1:A:226:VAL:HG11	1:A:288:THR:HG23	1.93	0.49
1:B:134:GLY:C	1:B:135:MET:HE3	2.37	0.49
1:B:1703:LEU:HD23	1:B:1708:TYR:CD2	2.47	0.49
1:B:2393:ARG:HA	1:B:2396:MET:HE3	1.94	0.49
1:C:488:LYS:HG3	1:C:493:GLY:HA3	1.94	0.49
1:C:1104:THR:HG22	1:C:1146:ALA:HB3	1.93	0.49
1:D:1388:ILE:HG13	1:D:1393:HIS:HB2	1.94	0.49
1:D:1585:MET:HB3	1:D:1646:ARG:HH21	1.77	0.49
1:E:570:ARG:NH1	1:E:662:ASP:O	2.41	0.49
1:E:2592:PRO:HB2	1:E:2594:LYS:HE3	1.93	0.49
1:A:171:LEU:HD12	1:A:312:ALA:HA	1.94	0.49
1:A:2557:ALA:O	1:A:2561:VAL:HG23	2.12	0.49
1:B:188:ILE:HD11	1:B:291:LEU:HD11	1.93	0.49
1:B:2433:LEU:HB3	1:B:2435:VAL:HG12	1.94	0.49
1:C:73:LEU:HD21	1:C:173:GLN:NE2	2.27	0.49
1:C:321:ILE:HG13	1:C:322:ARG:N	2.26	0.49
1:C:424:GLY:HA3	1:C:478:ASN:HD22	1.76	0.49
1:D:115:SER:O	1:D:119:VAL:HG22	2.12	0.49
1:E:105:SER:OG	1:E:108:HIS:ND1	2.36	0.49
1:E:2456:ARG:O	1:E:2460:GLU:HG3	2.12	0.49
1:F:2661:THR:HG22	1:F:2733:LYS:HZ1	1.77	0.49
1:B:1204:THR:HG21	1:B:1302:ILE:HG12	1.93	0.49
1:B:1338:GLY:C	1:B:1411:MET:HE1	2.38	0.49
1:B:1348:MET:SD	1:B:1381:ARG:HG2	2.52	0.49
1:B:1401:LEU:O	1:B:1407:THR:HB	2.12	0.49
1:B:2207:HIS:HE2	1:B:2210:ASP:HA	1.77	0.49
1:B:2367:ARG:H	1:B:2367:ARG:HE	1.60	0.49
1:C:112:ALA:O	1:C:116:VAL:HG13	2.12	0.49
1:C:541:PRO:HG2	1:C:547:ILE:HG12	1.94	0.49
1:C:1434:ALA:HB1	1:C:1444:ALA:HB1	1.94	0.49
1:C:2440:LEU:HD21	1:C:2859:LEU:HD21	1.94	0.49
1:C:2924:MET:O	1:C:2928:GLN:HG3	2.11	0.49
1:D:2610:ASP:O	1:D:2613:VAL:HG12	2.12	0.49
1:E:2123:GLY:HA3	1:E:2221:ALA:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2978:GLY:HA3	1:E:2982:VAL:HG13	1.94	0.49
1:F:45:TRP:HB3	1:F:119:VAL:HG12	1.94	0.49
1:F:1085:ASP:OD2	1:F:1256:SER:OG	2.26	0.49
1:F:2561:VAL:HG13	1:F:2564:ASP:HB2	1.95	0.49
1:A:679:SER:N	1:A:683:ALA:O	2.45	0.49
1:A:2604:GLN:HA	1:A:2795:GLN:HG2	1.93	0.49
1:A:2896:ARG:HH12	1:A:2902:LEU:HD13	1.78	0.49
1:B:958:ASP:OD1	1:B:958:ASP:N	2.45	0.49
1:B:1534:GLY:O	1:B:1538:LEU:HD22	2.13	0.49
1:B:2207:HIS:NE2	1:B:2210:ASP:OD1	2.46	0.49
1:B:2882:ASN:OD1	1:B:2883:GLU:N	2.46	0.49
1:C:1083:VAL:HG22	1:C:1084:PRO:HD2	1.95	0.49
1:C:1729:ASP:OD1	1:C:1729:ASP:N	2.44	0.49
1:C:2293:LEU:HD11	1:C:2314:HIS:NE2	2.27	0.49
1:D:538:VAL:HG22	1:D:563:ILE:HB	1.94	0.49
1:D:1454:LEU:HD12	1:D:1457:LEU:HD21	1.92	0.49
1:D:1566:HIS:HB3	1:D:1660:PRO:HA	1.93	0.49
1:E:148:HIS:CG	1:E:149:SER:H	2.31	0.49
1:E:1469:HIS:CE1	1:E:1470:ASP:HB2	2.47	0.49
1:E:1471:ILE:HD12	1:E:1472:VAL:HG23	1.95	0.49
1:E:1695:VAL:HA	1:E:1698:LEU:HD23	1.94	0.49
1:A:655:LEU:HG	1:A:887:ILE:HD12	1.93	0.49
1:A:1697:GLY:O	1:A:1701:ASN:ND2	2.44	0.49
1:A:2648:GLU:OE1	1:A:3013:ARG:NH2	2.39	0.49
1:A:2660:ASN:HD21	1:A:2662:GLN:HE21	1.60	0.49
1:A:2806:ASP:OD2	1:A:2806:ASP:N	2.44	0.49
1:B:2678:GLY:HA2	1:B:2683:ARG:CD	2.40	0.49
1:B:2694:LEU:O	1:B:2697:ILE:HG22	2.13	0.49
1:C:226:VAL:HG11	1:C:288:THR:HG23	1.94	0.49
1:C:1705:LEU:O	1:C:1707:GLU:C	2.50	0.49
1:C:1978:GLY:HA3	1:F:1985:ARG:HH22	1.77	0.49
1:C:2109:PRO:HD2	1:C:2110:GLU:N	2.27	0.49
1:C:2714:ILE:HB	1:C:2729:GLU:OE1	2.12	0.49
1:C:2872:HIS:N	1:C:2883:GLU:OE2	2.41	0.49
1:D:73:LEU:HD21	1:D:173:GLN:NE2	2.27	0.49
1:D:220:ARG:HE	1:F:1672:ILE:HD12	1.77	0.49
1:E:107:LYS:C	1:E:107:LYS:HD3	2.38	0.49
1:E:226:VAL:HG11	1:E:288:THR:HG23	1.95	0.49
1:E:2300:TRP:NE1	1:E:2369:PRO:HD3	2.28	0.49
1:F:2885:GLU:O	1:F:2889:ARG:HG3	2.13	0.49
1:A:2044:ARG:HB3	1:A:2955:VAL:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2714:ILE:HG23	1:D:2725:VAL:CG2	2.43	0.49
1:B:2054:ASP:OD1	1:B:2054:ASP:N	2.45	0.49
1:B:2690:PHE:CD2	1:F:2757:GLY:HA3	2.47	0.49
1:C:115:SER:O	1:C:119:VAL:HG22	2.12	0.49
1:C:785:HIS:NE2	1:C:787:GLN:HB3	2.28	0.49
1:C:1651:GLU:OE2	1:C:1655:TRP:NE1	2.39	0.49
1:D:250:LEU:HD23	1:D:253:ARG:NH2	2.27	0.49
1:E:1208:ARG:HA	1:E:1298:GLU:HG2	1.95	0.49
1:E:2824:SER:HA	1:E:2984:GLY:HA2	1.94	0.49
1:F:1441:GLU:OE1	1:F:1601:ASN:ND2	2.46	0.49
1:A:123:GLN:O	1:A:127:THR:HG23	2.13	0.49
1:A:1365:ASP:HA	1:A:1368:THR:HG22	1.93	0.49
1:A:1663:TRP:O	1:A:1666:THR:HG22	2.13	0.49
1:A:2751:THR:O	1:A:2755:ILE:HG12	2.13	0.49
1:B:145:MET:HG2	1:B:155:VAL:HG13	1.94	0.49
1:B:1087:LEU:HD12	1:B:1087:LEU:H	1.78	0.49
1:B:2637:ASP:O	1:B:2641:SER:HB3	2.12	0.49
1:C:924:LEU:HD12	1:C:924:LEU:O	2.13	0.49
1:F:123:GLN:O	1:F:127:THR:HG23	2.13	0.49
1:F:446:GLU:HG2	1:F:478:ASN:HB2	1.95	0.49
1:A:1438:SER:OG	1:A:1566:HIS:NE2	2.29	0.49
1:A:2561:VAL:HG13	1:A:2564:ASP:HB2	1.95	0.49
1:B:425:MET:HB3	1:B:429:THR:H	1.78	0.49
1:B:2044:ARG:HB3	1:B:2955:VAL:HG22	1.93	0.49
1:C:425:MET:HB3	1:C:429:THR:H	1.78	0.49
1:C:779:ARG:HD2	1:C:831:PHE:CE2	2.48	0.49
1:E:924:LEU:HD12	1:E:924:LEU:O	2.11	0.49
1:E:2107:GLU:OE1	1:E:2107:GLU:HA	2.12	0.49
1:E:2216:LEU:HD21	1:E:2218:PHE:HE1	1.77	0.49
1:E:2998:LEU:O	1:E:3003:ARG:NH2	2.46	0.49
1:F:112:ALA:O	1:F:116:VAL:HG13	2.13	0.49
1:F:547:ILE:CG2	1:F:587:THR:HG21	2.43	0.49
1:F:1618:ARG:HH12	1:F:1622:PRO:HA	1.77	0.49
1:F:2806:ASP:OD2	1:F:2806:ASP:N	2.45	0.49
1:A:359:ARG:HD3	1:A:589:SER:HB2	1.94	0.49
1:A:1247:SER:H	1:A:1288:ARG:HH12	1.61	0.49
1:A:2438:ALA:HA	1:A:2806:ASP:OD2	2.13	0.49
1:B:123:GLN:O	1:B:127:THR:HG23	2.12	0.49
1:B:543:THR:O	1:B:547:ILE:HG13	2.13	0.49
1:B:2719:ALA:HB1	1:F:2694:LEU:HD13	1.94	0.49
1:C:867:ASP:OD1	1:C:867:ASP:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2315:ALA:HB1	1:C:2374:LEU:HD12	1.94	0.49
1:C:2896:ARG:NH2	1:C:2901:PRO:O	2.45	0.49
1:D:185:ARG:NE	1:F:1060:GLU:OE2	2.46	0.49
1:D:397:VAL:HG11	1:D:910:LEU:HD21	1.95	0.49
1:D:1223:PHE:O	1:D:1227:SER:OG	2.28	0.49
1:E:785:HIS:CE1	1:E:787:GLN:HB3	2.48	0.49
1:E:1422:MET:HG2	1:E:1428:PHE:HD1	1.78	0.49
1:F:1333:VAL:HG21	1:F:1670:LEU:HD21	1.94	0.49
1:A:199:SER:HA	1:A:237:VAL:HG12	1.95	0.49
1:A:634:LEU:HD23	1:A:634:LEU:H	1.78	0.49
1:B:115:SER:O	1:B:119:VAL:HG22	2.12	0.49
1:B:425:MET:HE1	1:B:636:GLY:HA2	1.93	0.49
1:B:1155:VAL:HG13	1:B:1176:PHE:HB2	1.95	0.49
1:B:2113:ARG:HG3	1:B:2114:TYR:CD1	2.48	0.49
1:C:1153:ARG:HB3	1:C:1178:ILE:HB	1.95	0.49
1:C:2114:TYR:CD2	1:C:2137:LEU:HD23	2.48	0.49
1:D:2271:LEU:HB2	1:D:2314:HIS:HB2	1.94	0.49
1:E:120:LEU:HD22	1:E:153:LEU:HD13	1.95	0.49
1:F:221:THR:OG1	1:F:247:ARG:NH2	2.44	0.49
1:F:541:PRO:HG2	1:F:547:ILE:HG12	1.95	0.49
1:F:1058:HIS:HB2	1:F:1061:ARG:HD3	1.94	0.49
1:F:2637:ASP:O	1:F:2641:SER:HB3	2.13	0.49
1:A:2265:SER:O	1:A:2309:ARG:NH2	2.45	0.48
1:B:397:VAL:HG11	1:B:910:LEU:HD21	1.94	0.48
1:B:1209:ARG:NH2	1:B:1307:GLU:OE1	2.42	0.48
1:B:1388:ILE:HB	1:E:2262:ASP:HB2	1.95	0.48
1:C:73:LEU:HD21	1:C:173:GLN:HE21	1.77	0.48
1:C:1276:LEU:HA	1:C:1327:LEU:HA	1.94	0.48
1:D:197:MET:HE3	1:D:286:PHE:H	1.78	0.48
1:E:2740:GLN:HB3	1:E:2804:ARG:HD3	1.95	0.48
1:F:115:SER:O	1:F:119:VAL:HG22	2.13	0.48
1:F:207:ARG:O	1:F:211:LEU:HG	2.13	0.48
1:F:397:VAL:HG11	1:F:910:LEU:HD21	1.94	0.48
1:F:543:THR:O	1:F:547:ILE:HG13	2.13	0.48
1:F:1987:VAL:O	1:F:1988:LEU:HD23	2.12	0.48
1:A:543:THR:O	1:A:547:ILE:HG13	2.14	0.48
1:A:1686:GLU:CD	1:A:1696:ALA:HB2	2.38	0.48
1:A:2738:LYS:NZ	1:D:2732:ASP:OD2	2.35	0.48
1:D:2483:ARG:HH12	1:D:2495:THR:HG23	1.78	0.48
1:E:123:GLN:O	1:E:127:THR:HG23	2.14	0.48
1:F:1401:LEU:O	1:F:1407:THR:HB	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2483:ARG:HH12	1:F:2495:THR:HG23	1.78	0.48
1:A:534:ILE:HG22	1:A:536:HIS:H	1.77	0.48
1:A:655:LEU:HD13	1:A:688:ILE:HD11	1.95	0.48
1:A:734:MET:HG2	1:A:738:GLN:HE21	1.76	0.48
1:A:2054:ASP:N	1:A:2054:ASP:OD1	2.46	0.48
1:A:2087:SER:OG	1:A:2092:ARG:O	2.32	0.48
1:B:1284:LEU:HD12	1:B:1319:LEU:HB3	1.94	0.48
1:D:1333:VAL:HG22	1:D:1433:ILE:HD11	1.94	0.48
1:D:1982:SER:HA	1:D:1985:ARG:NE	2.24	0.48
1:E:1301:GLY:O	1:E:1308:ILE:N	2.36	0.48
1:F:425:MET:HE1	1:F:636:GLY:HA2	1.95	0.48
1:F:2652:TYR:O	1:F:2810:ARG:NH2	2.46	0.48
1:A:106:ASP:N	1:A:106:ASP:OD1	2.44	0.48
1:A:2383:LEU:HB3	1:A:2388:LEU:HD21	1.94	0.48
1:B:1027:MET:SD	1:B:1114:LEU:HB3	2.53	0.48
1:B:1729:ASP:OD1	1:B:1729:ASP:N	2.44	0.48
1:B:2483:ARG:HH12	1:B:2495:THR:HG23	1.77	0.48
1:B:2694:LEU:HD13	1:F:2719:ALA:HB1	1.94	0.48
1:C:22:HIS:ND1	1:C:378:PHE:O	2.40	0.48
1:C:1162:THR:HG22	1:C:1168:VAL:HA	1.95	0.48
1:C:2107:GLU:HA	1:C:2107:GLU:OE2	2.12	0.48
1:C:2293:LEU:O	1:C:2297:VAL:HG13	2.13	0.48
1:D:1333:VAL:HG21	1:D:1670:LEU:HD21	1.95	0.48
1:E:574:HIS:HA	1:E:685:ILE:HG22	1.95	0.48
1:E:575:HIS:HB3	1:E:684:ASP:HB2	1.94	0.48
1:E:1204:THR:HG21	1:E:1302:ILE:HG12	1.95	0.48
1:E:2012:VAL:HG23	1:E:2016:LEU:HD12	1.95	0.48
1:E:2054:ASP:OD1	1:E:2054:ASP:N	2.46	0.48
1:E:2405:ASP:OD2	1:E:2406:ALA:N	2.46	0.48
1:F:1139:VAL:HG12	1:F:1161:VAL:HG12	1.94	0.48
1:A:1047:ALA:N	1:A:1050:THR:O	2.38	0.48
1:A:1208:ARG:HA	1:A:1298:GLU:HG2	1.95	0.48
1:A:2296:VAL:HB	1:A:2312:LEU:HD21	1.96	0.48
1:A:2567:HIS:O	1:A:2567:HIS:ND1	2.46	0.48
1:B:547:ILE:CG2	1:B:587:THR:HG21	2.43	0.48
1:B:1441:GLU:OE1	1:B:1601:ASN:ND2	2.46	0.48
1:B:1514:LEU:HD22	1:B:1530:GLY:HA3	1.96	0.48
1:B:2293:LEU:HD21	1:B:2314:HIS:CD2	2.49	0.48
1:B:2978:GLY:N	1:B:2982:VAL:O	2.45	0.48
1:B:3020:ARG:NH2	1:B:3029:ALA:O	2.44	0.48
1:D:717:ILE:HD12	1:D:727:TYR:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:924:LEU:O	1:D:924:LEU:HD12	2.12	0.48
1:D:1422:MET:SD	1:D:1725:LEU:HD21	2.54	0.48
1:D:1651:GLU:O	1:D:1655:TRP:HD1	1.96	0.48
1:D:2027:VAL:HG22	1:D:2179:ASN:HB2	1.95	0.48
1:D:2266:ARG:HG3	1:D:2309:ARG:C	2.39	0.48
1:D:2652:TYR:O	1:D:2810:ARG:NH2	2.47	0.48
1:D:2718:ALA:H	1:D:2722:THR:HG22	1.78	0.48
1:F:2699:ALA:O	1:F:2703:VAL:HG23	2.14	0.48
1:A:1338:GLY:C	1:A:1411:MET:HE1	2.39	0.48
1:B:2561:VAL:HG13	1:B:2564:ASP:HB2	1.95	0.48
1:C:2266:ARG:HH22	1:C:2366:ALA:HA	1.78	0.48
1:C:2341:VAL:HG21	1:C:2378:LEU:HB2	1.96	0.48
1:D:818:ASP:O	1:D:822:VAL:HG12	2.14	0.48
1:D:1027:MET:SD	1:D:1114:LEU:HB3	2.53	0.48
1:E:1521:LEU:HB3	1:E:1525:GLN:HB3	1.94	0.48
1:E:2190:VAL:HG11	1:E:2253:GLY:HA3	1.96	0.48
1:E:2244:LEU:HD11	1:E:2295:ALA:HB3	1.96	0.48
1:E:2452:TYR:O	1:E:2457:THR:OG1	2.31	0.48
1:E:2741:LEU:HD23	1:E:2803:ALA:HB2	1.95	0.48
1:F:73:LEU:HD21	1:F:173:GLN:HE21	1.77	0.48
1:F:238:ILE:HD12	1:F:245:LEU:HD22	1.95	0.48
1:F:293:ASP:OD1	1:F:293:ASP:N	2.43	0.48
1:F:717:ILE:HD12	1:F:727:TYR:CD2	2.49	0.48
1:A:550:VAL:HB	1:A:564:MET:HE2	1.96	0.48
1:A:2180:MET:HE2	1:A:2180:MET:HA	1.95	0.48
1:A:2764:THR:OG1	1:A:2765:ALA:N	2.47	0.48
1:B:2673:GLN:HG2	1:B:2677:HIS:CE1	2.47	0.48
1:C:171:LEU:HD11	1:C:312:ALA:HA	1.95	0.48
1:D:43:SER:OG	1:D:346:PRO:O	2.30	0.48
1:D:1024:THR:HG22	1:D:1111:VAL:HG22	1.95	0.48
1:E:395:PRO:HB2	1:E:407:LEU:HD11	1.95	0.48
1:E:2114:TYR:CD2	1:E:2137:LEU:HD23	2.49	0.48
1:E:2293:LEU:HD21	1:E:2314:HIS:CD2	2.49	0.48
1:E:2637:ASP:O	1:E:2641:SER:HB3	2.14	0.48
1:F:134:GLY:C	1:F:135:MET:HE3	2.39	0.48
1:F:482:LEU:HG	1:F:514:ALA:O	2.13	0.48
1:F:1027:MET:SD	1:F:1114:LEU:HB3	2.53	0.48
1:F:1975:GLY:HA3	1:F:1976:ARG:NH2	2.27	0.48
1:A:2452:TYR:O	1:A:2457:THR:OG1	2.31	0.48
1:B:446:GLU:HG2	1:B:478:ASN:HB2	1.95	0.48
1:B:1618:ARG:NH1	1:B:1618:ARG:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2392:ALA:O	1:D:2395:GLN:HG3	2.14	0.48
1:E:1454:LEU:HA	1:E:1457:LEU:HD23	1.95	0.48
1:E:1994:ASP:OD1	1:E:1994:ASP:N	2.47	0.48
1:E:2050:LEU:HD21	1:E:2098:LEU:HD21	1.96	0.48
1:E:2874:THR:OG1	1:E:2913:HIS:ND1	2.45	0.48
1:A:2998:LEU:O	1:A:3003:ARG:NH2	2.46	0.48
1:B:238:ILE:HD12	1:B:245:LEU:HD22	1.95	0.48
1:B:713:ARG:O	1:B:717:ILE:HG12	2.14	0.48
1:B:2039:ARG:HD3	1:B:2167:ALA:HB3	1.94	0.48
1:C:1419:VAL:HG21	1:C:1447:CYS:HB3	1.96	0.48
1:E:2243:LEU:O	1:E:2247:VAL:HG13	2.13	0.48
1:F:2462:GLU:HG2	1:F:2936:PRO:HB3	1.96	0.48
1:A:185:ARG:HD2	1:C:1060:GLU:HB3	1.95	0.48
1:A:473:ARG:NH1	1:A:1012:ASP:O	2.46	0.48
1:A:1119:HIS:HD2	1:A:1283:PHE:CE2	2.31	0.48
1:A:1672:ILE:HD12	1:B:220:ARG:HE	1.78	0.48
1:A:2703:VAL:HA	1:A:2707:VAL:HG22	1.94	0.48
1:B:1333:VAL:HG21	1:B:1670:LEU:HD21	1.94	0.48
1:C:634:LEU:HD23	1:C:634:LEU:H	1.78	0.48
1:C:1706:PRO:HA	1:C:1709:ALA:HB2	1.96	0.48
1:C:2358:ASP:OD1	1:C:2358:ASP:N	2.35	0.48
1:C:2811:MET:HB3	1:C:2813:LEU:HG	1.95	0.48
1:D:1276:LEU:HD23	1:D:1327:LEU:HB3	1.96	0.48
1:E:395:PRO:HB3	1:E:409:THR:HG22	1.96	0.48
1:E:534:ILE:HG22	1:E:536:HIS:H	1.78	0.48
1:E:2344:TYR:OH	1:E:2376:GLY:N	2.46	0.48
1:E:2604:GLN:HA	1:E:2795:GLN:HG2	1.96	0.48
1:F:175:ILE:HD13	1:F:319:ILE:HG21	1.95	0.48
1:A:615:LEU:HD12	1:A:630:ILE:HG13	1.96	0.47
1:A:1058:HIS:HB2	1:A:1061:ARG:HD3	1.96	0.47
1:A:1299:ARG:HA	1:A:1309:VAL:HG23	1.95	0.47
1:A:2648:GLU:HG2	1:A:2651:ARG:NH1	2.29	0.47
1:B:522:ALA:HB3	1:B:553:ILE:HD12	1.96	0.47
1:B:2242:VAL:O	1:B:2246:ALA:HB3	2.14	0.47
1:C:2538:LEU:HG	1:E:2682:GLY:HA3	1.95	0.47
1:C:2741:LEU:HD23	1:C:2803:ALA:HB2	1.96	0.47
1:D:2022:ARG:HB3	1:D:2022:ARG:NH1	2.29	0.47
1:E:1299:ARG:HA	1:E:1309:VAL:HG23	1.96	0.47
1:E:2482:ILE:HG23	1:E:2492:TRP:HB3	1.96	0.47
1:F:1966:LEU:HA	1:F:1969:PHE:CD2	2.49	0.47
1:F:2770:MET:HG2	1:F:2789:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:229:ILE:HG12	1:A:237:VAL:HG22	1.96	0.47
1:A:867:ASP:N	1:A:867:ASP:OD1	2.44	0.47
1:A:1204:THR:HG21	1:A:1302:ILE:HG12	1.95	0.47
1:A:2020:TRP:O	1:A:2024:VAL:HG22	2.14	0.47
1:B:482:LEU:HG	1:B:514:ALA:O	2.14	0.47
1:C:1223:PHE:HA	1:C:1226:VAL:HG22	1.96	0.47
1:C:1338:GLY:C	1:C:1411:MET:HE1	2.39	0.47
1:C:2153:GLU:H	1:C:2153:GLU:CD	2.22	0.47
1:C:2718:ALA:H	1:C:2722:THR:HG22	1.79	0.47
1:C:2728:GLU:O	1:C:2731:VAL:HG22	2.14	0.47
1:D:425:MET:HB3	1:D:429:THR:H	1.77	0.47
1:D:1703:LEU:HD11	1:D:1713:VAL:HB	1.96	0.47
1:E:37:ALA:N	1:E:342:LEU:O	2.27	0.47
1:E:544:ILE:HG13	1:E:583:LEU:HD22	1.96	0.47
1:E:1119:HIS:HD2	1:E:1283:PHE:CE2	2.31	0.47
1:E:2485:GLU:HB2	1:E:2493:TYR:HD2	1.78	0.47
1:F:1155:VAL:HG13	1:F:1176:PHE:HB2	1.96	0.47
1:F:1640:ARG:HG2	1:F:1643:GLU:HB3	1.95	0.47
1:F:1994:ASP:OD1	1:F:1994:ASP:N	2.48	0.47
1:A:39:GLY:HA2	1:A:350:LEU:HD22	1.96	0.47
1:A:547:ILE:CG2	1:A:587:THR:HG21	2.44	0.47
1:A:1301:GLY:O	1:A:1308:ILE:N	2.36	0.47
1:A:2321:ARG:O	1:A:2329:ASN:ND2	2.48	0.47
1:D:520:ASP:O	1:D:524:GLU:HG3	2.14	0.47
1:D:2044:ARG:HB3	1:D:2955:VAL:HG22	1.96	0.47
1:E:182:VAL:O	1:E:186:ARG:HG2	2.14	0.47
1:E:1689:VAL:HA	1:E:1719:GLU:HG2	1.96	0.47
1:F:43:SER:OG	1:F:346:PRO:O	2.31	0.47
1:F:777:LEU:O	1:F:781:GLU:HG3	2.14	0.47
1:A:796:PHE:HB3	1:A:802:LEU:HD12	1.95	0.47
1:A:1336:PHE:CE1	1:A:1415:ALA:HB1	2.49	0.47
1:A:1434:ALA:HB1	1:A:1444:ALA:HB1	1.96	0.47
1:B:1266:THR:OG1	1:B:1271:ARG:NH2	2.46	0.47
1:B:2107:GLU:OE2	1:B:2107:GLU:HA	2.15	0.47
1:B:2658:VAL:O	1:B:2709:SER:HB2	2.15	0.47
1:C:417:ARG:NH2	1:C:474:THR:OG1	2.46	0.47
1:C:695:CYS:O	1:C:699:LEU:HG	2.14	0.47
1:C:1484:LEU:HD12	1:C:1529:ALA:HB2	1.97	0.47
1:D:495:ARG:NH1	1:D:528:GLU:OE2	2.48	0.47
1:D:740:LEU:HD13	1:D:777:LEU:HD23	1.95	0.47
1:D:1662:ARG:NE	1:D:1665:GLU:OE2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2440:LEU:HD21	1:D:2859:LEU:HD21	1.96	0.47
1:D:2723:ALA:HB1	1:D:2920:VAL:HG23	1.96	0.47
1:E:119:VAL:HG21	1:E:150:GLN:HE22	1.79	0.47
1:F:2869:ILE:HG13	1:F:2902:LEU:HD13	1.97	0.47
1:A:1966:LEU:HA	1:A:1969:PHE:CD2	2.49	0.47
1:A:2293:LEU:HD11	1:A:2314:HIS:HD2	1.79	0.47
1:B:1160:VAL:HG12	1:B:1171:THR:HG23	1.97	0.47
1:B:2467:LEU:HB3	1:B:2472:VAL:HG23	1.96	0.47
1:B:2748:ASP:HB2	1:B:2916:GLY:H	1.79	0.47
1:C:371:ARG:HB2	1:C:371:ARG:CZ	2.45	0.47
1:C:488:LYS:HA	1:C:493:GLY:H	1.78	0.47
1:C:1087:LEU:H	1:C:1087:LEU:HD12	1.79	0.47
1:C:1271:ARG:O	1:C:1271:ARG:HD3	2.14	0.47
1:C:1599:ILE:HG21	1:C:1666:THR:OG1	2.13	0.47
1:C:2663:GLY:HA2	1:C:2715:HIS:HB3	1.97	0.47
1:D:1276:LEU:HA	1:D:1327:LEU:HA	1.97	0.47
1:E:1676:ALA:HB2	1:F:222:VAL:HG12	1.96	0.47
1:E:2544:GLU:HG2	1:E:2585:ALA:HA	1.97	0.47
1:F:1301:GLY:O	1:F:1308:ILE:N	2.31	0.47
1:F:1506:ILE:HG21	1:F:1538:LEU:HD11	1.95	0.47
1:F:1576:GLU:O	1:F:1579:ARG:HG3	2.15	0.47
1:A:341:ILE:HD11	1:A:365:ILE:HG13	1.94	0.47
1:B:541:PRO:HG2	1:B:547:ILE:HG12	1.97	0.47
1:B:2216:LEU:HD21	1:B:2218:PHE:CE1	2.50	0.47
1:B:2973:MET:HE3	1:B:2985:LEU:HD21	1.96	0.47
1:C:22:HIS:HB2	1:C:25:VAL:HB	1.97	0.47
1:C:818:ASP:O	1:C:822:VAL:HG12	2.15	0.47
1:C:1636:TRP:HE3	1:C:1644:MET:HE1	1.78	0.47
1:E:227:LEU:HA	1:E:238:ILE:HG22	1.97	0.47
1:E:1284:LEU:HD12	1:E:1319:LEU:HB3	1.96	0.47
1:E:2224:ARG:HG3	1:E:2226:VAL:HG23	1.95	0.47
1:F:188:ILE:HD11	1:F:290:ARG:HD3	1.95	0.47
1:F:2242:VAL:O	1:F:2246:ALA:HB3	2.14	0.47
1:A:541:PRO:HG2	1:A:547:ILE:HG12	1.97	0.47
1:A:1566:HIS:ND1	1:A:1657:PHE:O	2.41	0.47
1:A:1717:ASN:N	1:A:1717:ASN:OD1	2.46	0.47
1:A:2713:MET:HB2	1:D:2982:VAL:HG23	1.97	0.47
1:A:2725:VAL:CG1	1:D:2714:ILE:HG23	2.45	0.47
1:B:33:PRO:O	1:B:339:ARG:N	2.45	0.47
1:B:78:ASP:OD1	1:B:78:ASP:N	2.46	0.47
1:B:494:LYS:HB3	1:B:494:LYS:HE2	1.64	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:727:TYR:CD1	1:B:849:ILE:HD11	2.50	0.47
1:B:2313:ALA:HB1	1:B:2370:ILE:HD11	1.97	0.47
1:B:2620:MET:O	1:B:2624:ILE:HG12	2.14	0.47
1:C:165:ASP:OD1	1:C:165:ASP:N	2.37	0.47
1:C:182:VAL:O	1:C:186:ARG:HG2	2.14	0.47
1:C:197:MET:HE3	1:C:286:PHE:H	1.77	0.47
1:C:350:LEU:O	1:C:354:THR:OG1	2.20	0.47
1:C:543:THR:OG1	1:C:544:ILE:N	2.47	0.47
1:C:1109:PRO:HB3	1:C:1153:ARG:HD3	1.95	0.47
1:C:1151:MET:HE1	1:C:1177:ALA:HB1	1.96	0.47
1:C:2054:ASP:N	1:C:2054:ASP:OD1	2.46	0.47
1:D:48:THR:HG21	1:D:347:GLY:H	1.79	0.47
1:D:846:VAL:HG13	1:D:856:TRP:HB3	1.97	0.47
1:D:2054:ASP:N	1:D:2054:ASP:OD1	2.46	0.47
1:D:2537:LEU:HD23	1:D:2537:LEU:HA	1.78	0.47
1:D:2558:ARG:NH2	1:D:2561:VAL:HG23	2.29	0.47
1:E:1223:PHE:HA	1:E:1226:VAL:HG22	1.97	0.47
1:E:1468:MET:HB2	1:E:1657:PHE:HZ	1.79	0.47
1:E:1693:PRO:HB2	1:E:1696:ALA:HB3	1.97	0.47
1:E:2087:SER:OG	1:E:2092:ARG:O	2.33	0.47
1:E:2561:VAL:HG13	1:E:2564:ASP:HB2	1.96	0.47
1:F:395:PRO:HB2	1:F:407:LEU:HD11	1.97	0.47
1:F:829:VAL:HB	1:F:830:PRO:HD3	1.96	0.47
1:F:1566:HIS:ND1	1:F:1657:PHE:O	2.38	0.47
1:F:2027:VAL:HG22	1:F:2179:ASN:HB2	1.96	0.47
1:F:2216:LEU:HD21	1:F:2218:PHE:CE1	2.49	0.47
1:F:2499:GLU:N	1:F:2499:GLU:OE2	2.48	0.47
1:A:829:VAL:HB	1:A:830:PRO:HD3	1.97	0.47
1:B:2243:LEU:O	1:B:2247:VAL:HG13	2.15	0.47
1:B:2806:ASP:OD2	1:B:2806:ASP:N	2.45	0.47
1:C:2216:LEU:HD23	1:C:2218:PHE:HE1	1.79	0.47
1:C:2321:ARG:HH11	1:C:2345:SER:HB3	1.79	0.47
1:D:171:LEU:HD11	1:D:312:ALA:HA	1.95	0.47
1:D:2107:GLU:HA	1:D:2107:GLU:OE2	2.14	0.47
1:D:2109:PRO:HD2	1:D:2110:GLU:H	1.78	0.47
1:E:717:ILE:HD12	1:E:727:TYR:CD2	2.50	0.47
1:E:1072:PHE:HZ	1:E:1261:HIS:HB3	1.79	0.47
1:E:1223:PHE:O	1:E:1227:SER:OG	2.32	0.47
1:E:1966:LEU:HA	1:E:1969:PHE:CD1	2.50	0.47
1:F:717:ILE:HG23	1:F:727:TYR:HD2	1.79	0.47
1:F:2054:ASP:N	1:F:2054:ASP:OD1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2243:LEU:O	1:F:2247:VAL:HG13	2.15	0.47
1:F:2882:ASN:OD1	1:F:2883:GLU:N	2.48	0.47
1:F:2973:MET:HE3	1:F:2985:LEU:HD21	1.97	0.47
1:A:2107:GLU:HA	1:A:2107:GLU:OE2	2.14	0.47
1:A:2452:TYR:HE2	1:A:2461:MET:HE3	1.80	0.47
1:B:417:ARG:NH2	1:B:474:THR:OG1	2.48	0.47
1:B:425:MET:N	1:B:429:THR:OG1	2.48	0.47
1:B:543:THR:OG1	1:B:544:ILE:N	2.48	0.47
1:B:550:VAL:HB	1:B:564:MET:HE2	1.96	0.47
1:B:2266:ARG:HH22	1:B:2366:ALA:HA	1.80	0.47
1:B:2266:ARG:HH12	1:B:2366:ALA:HA	1.80	0.47
1:C:1708:TYR:O	1:C:1709:ALA:C	2.56	0.47
1:D:2592:PRO:HB2	1:D:2594:LYS:HE3	1.97	0.47
1:E:207:ARG:O	1:E:211:LEU:HG	2.15	0.47
1:A:1520:ASN:HB2	1:A:1525:GLN:HG2	1.97	0.47
1:B:2223:PRO:O	1:B:2224:ARG:HG2	2.15	0.47
1:B:2853:ALA:HB2	1:B:2894:LEU:HD22	1.97	0.47
1:C:395:PRO:HB2	1:C:407:LEU:HD11	1.97	0.47
1:C:420:ILE:HD12	1:C:633:ILE:HD11	1.97	0.47
1:C:520:ASP:O	1:C:524:GLU:HG3	2.15	0.47
1:C:943:ARG:CZ	1:C:946:GLY:HA2	2.45	0.47
1:C:1422:MET:HE3	1:C:1428:PHE:HD1	1.80	0.47
1:C:2930:LEU:HD23	1:C:2969:LEU:HD13	1.97	0.47
1:D:78:ASP:OD1	1:D:78:ASP:N	2.40	0.47
1:D:316:ALA:O	1:D:320:LEU:HB2	2.15	0.47
1:D:943:ARG:CZ	1:D:946:GLY:HA2	2.45	0.47
1:D:1047:ALA:N	1:D:1050:THR:O	2.36	0.47
1:D:1223:PHE:HA	1:D:1226:VAL:HG22	1.97	0.47
1:D:2247:VAL:O	1:D:2251:ILE:HG13	2.15	0.47
1:E:2660:ASN:HD21	1:E:2662:GLN:HE21	1.62	0.47
1:F:188:ILE:O	1:F:188:ILE:HG22	2.15	0.47
1:A:153:LEU:HD12	1:A:154:ALA:H	1.80	0.46
1:A:190:VAL:HB	1:A:196:PRO:HD3	1.97	0.46
1:A:549:SER:O	1:A:553:ILE:HG12	2.15	0.46
1:A:1485:ALA:HB2	1:A:1557:LEU:HD12	1.96	0.46
1:A:2214:PRO:HD2	1:A:2257:ILE:HD11	1.96	0.46
1:B:943:ARG:HG2	1:B:1017:VAL:HG23	1.96	0.46
1:B:2614:TRP:O	1:B:3031:MET:HB2	2.15	0.46
1:C:425:MET:N	1:C:429:THR:OG1	2.44	0.46
1:C:2748:ASP:HB2	1:C:2916:GLY:H	1.80	0.46
1:C:2766:ASP:HB2	1:C:2769:MET:HE1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2826:GLY:O	1:C:2839:GLY:HA3	2.15	0.46
1:D:2242:VAL:O	1:D:2246:ALA:HB3	2.16	0.46
1:D:2728:GLU:O	1:D:2731:VAL:HG22	2.16	0.46
1:E:230:ARG:HG2	1:E:236:VAL:HG12	1.97	0.46
1:E:1047:ALA:N	1:E:1050:THR:O	2.38	0.46
1:E:1518:ASN:HB2	1:E:1527:ALA:HB3	1.96	0.46
1:E:2438:ALA:HA	1:E:2806:ASP:OD2	2.15	0.46
1:F:1012:ASP:OD1	1:F:1012:ASP:N	2.48	0.46
1:F:1407:THR:O	1:F:1411:MET:HG2	2.14	0.46
1:A:544:ILE:HG13	1:A:583:LEU:HD22	1.97	0.46
1:A:717:ILE:HD12	1:A:727:TYR:CD2	2.50	0.46
1:A:736:TYR:O	1:A:740:LEU:HG	2.16	0.46
1:A:2666:MET:HG2	1:D:2695:PRO:HD3	1.98	0.46
1:B:1038:ASP:O	1:B:1042:PHE:HB2	2.16	0.46
1:B:1139:VAL:HG12	1:B:1161:VAL:HG12	1.96	0.46
1:B:1336:PHE:CE1	1:B:1687:ILE:HD12	2.50	0.46
1:B:1966:LEU:HA	1:B:1969:PHE:CD2	2.50	0.46
1:C:1038:ASP:O	1:C:1042:PHE:HB2	2.16	0.46
1:C:2266:ARG:HG2	1:C:2311:SER:OG	2.15	0.46
1:D:1468:MET:HB2	1:D:1657:PHE:HZ	1.80	0.46
1:D:1987:VAL:C	1:D:1988:LEU:HD23	2.40	0.46
1:E:615:LEU:HD12	1:E:630:ILE:HG13	1.97	0.46
1:E:1046:VAL:HG22	1:E:1051:ALA:HB2	1.98	0.46
1:E:1488:ARG:HG3	1:E:1524:SER:HB2	1.98	0.46
1:E:2074:HIS:O	1:E:2078:THR:HG23	2.16	0.46
1:F:474:THR:OG1	1:F:508:ASP:OD2	2.28	0.46
1:F:522:ALA:HB3	1:F:553:ILE:HD12	1.98	0.46
1:F:1729:ASP:OD1	1:F:1729:ASP:N	2.44	0.46
1:A:1223:PHE:HA	1:A:1226:VAL:HG22	1.97	0.46
1:A:2452:TYR:HA	1:A:2518:VAL:HG22	1.97	0.46
1:B:2393:ARG:HA	1:B:2396:MET:HG3	1.97	0.46
1:B:2757:GLY:HA3	1:F:2690:PHE:CD2	2.51	0.46
1:C:397:VAL:HG11	1:C:910:LEU:HD21	1.96	0.46
1:C:1441:GLU:OE1	1:C:1601:ASN:ND2	2.48	0.46
1:C:2666:MET:HG2	1:E:2695:PRO:HD3	1.96	0.46
1:C:2922:GLN:HB2	1:C:2974:LEU:HD21	1.97	0.46
1:D:570:ARG:NH1	1:D:662:ASP:O	2.40	0.46
1:D:2446:GLY:HA2	1:D:2800:ILE:HA	1.97	0.46
1:D:2658:VAL:O	1:D:2709:SER:HB2	2.15	0.46
1:D:2826:GLY:O	1:D:2839:GLY:HA3	2.14	0.46
1:E:2242:VAL:O	1:E:2246:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:119:VAL:HG12	1:F:346:PRO:HG3	1.98	0.46
1:F:1618:ARG:NH1	1:F:1618:ARG:O	2.48	0.46
1:F:1636:TRP:HB3	1:F:1640:ARG:NH1	2.30	0.46
1:F:2978:GLY:N	1:F:2982:VAL:O	2.48	0.46
1:A:1401:LEU:O	1:A:1407:THR:HB	2.14	0.46
1:A:2367:ARG:NH1	1:A:2368:SER:OG	2.48	0.46
1:B:1644:MET:SD	1:B:1645:ALA:N	2.88	0.46
1:C:119:VAL:HG12	1:C:346:PRO:HG3	1.96	0.46
1:C:319:ILE:HG23	1:C:320:LEU:HG	1.96	0.46
1:C:1966:LEU:HA	1:C:1969:PHE:CD2	2.50	0.46
1:C:2066:ALA:HB1	1:C:2101:ARG:HD2	1.96	0.46
1:C:2652:TYR:O	1:C:2810:ARG:NH2	2.48	0.46
1:C:2875:SER:O	1:C:2875:SER:OG	2.24	0.46
1:D:651:VAL:HG13	1:D:877:ILE:HD13	1.97	0.46
1:D:1564:PRO:O	1:D:1567:SER:OG	2.32	0.46
1:E:541:PRO:HG2	1:E:547:ILE:HG12	1.97	0.46
1:E:2658:VAL:O	1:E:2709:SER:HB2	2.15	0.46
1:F:867:ASP:N	1:F:867:ASP:OD1	2.47	0.46
1:F:2313:ALA:HB1	1:F:2370:ILE:HD11	1.96	0.46
1:A:182:VAL:O	1:A:186:ARG:HG2	2.16	0.46
1:A:717:ILE:HG23	1:A:727:TYR:HD2	1.81	0.46
1:A:2216:LEU:HD21	1:A:2218:PHE:CE1	2.51	0.46
1:A:2370:ILE:O	1:A:2370:ILE:HD12	2.16	0.46
1:A:2757:GLY:HA3	1:D:2690:PHE:CD2	2.50	0.46
1:A:2896:ARG:HE	1:A:2900:ALA:HB3	1.81	0.46
1:B:2136:ARG:HE	1:B:2136:ARG:HB3	1.54	0.46
1:C:230:ARG:HG2	1:C:236:VAL:HG12	1.97	0.46
1:C:316:ALA:HA	1:C:319:ILE:HG22	1.97	0.46
1:C:2658:VAL:O	1:C:2709:SER:HB2	2.15	0.46
1:E:115:SER:O	1:E:119:VAL:HG22	2.15	0.46
1:E:1404:THR:O	1:E:1407:THR:HG22	2.16	0.46
1:E:1442:TYR:OH	1:E:1464:ARG:NH1	2.49	0.46
1:E:2129:ILE:H	1:E:2129:ILE:HD12	1.79	0.46
1:F:2223:PRO:O	1:F:2224:ARG:HG2	2.15	0.46
1:F:2518:VAL:HG12	1:F:2606:PRO:HB3	1.97	0.46
1:F:2703:VAL:HA	1:F:2707:VAL:HG13	1.97	0.46
1:F:2712:ALA:HB3	1:F:2733:LYS:NZ	2.28	0.46
1:A:105:SER:OG	1:A:108:HIS:ND1	2.40	0.46
1:A:1336:PHE:CE2	1:A:1444:ALA:HA	2.51	0.46
1:A:1471:ILE:HD12	1:A:1472:VAL:HG23	1.98	0.46
1:A:2129:ILE:HD12	1:A:2129:ILE:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2242:VAL:O	1:A:2246:ALA:HB3	2.15	0.46
1:A:2620:MET:O	1:A:2624:ILE:HG12	2.15	0.46
1:A:2896:ARG:HH22	1:A:2902:LEU:HD13	1.80	0.46
1:B:107:LYS:HE2	1:B:107:LYS:HA	1.98	0.46
1:B:2703:VAL:HA	1:B:2707:VAL:HG13	1.98	0.46
1:C:581:ASP:OD1	1:C:614:TYR:OH	2.19	0.46
1:C:2247:VAL:O	1:C:2251:ILE:HG13	2.15	0.46
1:D:156:GLU:HG3	1:D:315:LEU:HD21	1.97	0.46
1:D:1972:GLN:HA	1:D:1976:ARG:HH12	1.81	0.46
1:D:2005:ASP:O	1:D:2009:ILE:HG23	2.16	0.46
1:E:1368:THR:HG21	1:E:1376:VAL:HG12	1.96	0.46
1:E:2392:ALA:O	1:E:2395:GLN:HG3	2.16	0.46
1:F:2005:ASP:O	1:F:2009:ILE:HG23	2.15	0.46
1:F:2703:VAL:HG21	1:F:2713:MET:HE1	1.98	0.46
1:A:116:VAL:HG22	1:A:117:PRO:HD3	1.97	0.46
1:A:1012:ASP:N	1:A:1012:ASP:OD1	2.49	0.46
1:A:2244:LEU:HD23	1:A:2245:TRP:CZ3	2.51	0.46
1:B:52:LEU:HD11	1:B:369:ALA:HA	1.98	0.46
1:B:1223:PHE:O	1:B:1227:SER:OG	2.28	0.46
1:B:3021:LEU:HA	1:B:3031:MET:HE1	1.97	0.46
1:C:425:MET:HE1	1:C:636:GLY:HA2	1.98	0.46
1:C:1098:ALA:HB1	1:C:1143:ALA:HB2	1.98	0.46
1:C:1711:SER:C	1:C:1713:VAL:H	2.24	0.46
1:C:2685:LYS:HD2	1:C:2685:LYS:HA	1.70	0.46
1:D:228:SER:HB3	1:D:287:HIS:HB2	1.97	0.46
1:D:395:PRO:HB2	1:D:407:LEU:HD11	1.97	0.46
1:D:825:HIS:CD2	1:D:827:ALA:H	2.33	0.46
1:D:1038:ASP:O	1:D:1042:PHE:HB2	2.16	0.46
1:D:2415:LEU:HD22	1:D:2503:GLU:HB2	1.97	0.46
1:D:2430:TRP:HZ3	1:D:2970:LYS:HG2	1.81	0.46
1:D:2646:PRO:O	1:D:2650:MET:HG2	2.16	0.46
1:E:171:LEU:HD12	1:E:312:ALA:HA	1.96	0.46
1:F:654:MET:HE1	1:F:690:ASN:HB3	1.97	0.46
1:F:1087:LEU:H	1:F:1087:LEU:HD12	1.81	0.46
1:A:395:PRO:HB2	1:A:407:LEU:HD11	1.98	0.46
1:A:395:PRO:HB3	1:A:409:THR:HG22	1.96	0.46
1:A:501:ARG:NH2	1:A:533:GLY:O	2.49	0.46
1:B:119:VAL:HG12	1:B:346:PRO:HG3	1.98	0.46
1:B:221:THR:OG1	1:B:247:ARG:NH2	2.45	0.46
1:B:350:LEU:HD23	1:B:350:LEU:HA	1.81	0.46
1:B:1404:THR:O	1:B:1407:THR:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2273:GLY:O	1:B:2317:ILE:HG13	2.16	0.46
1:B:2699:ALA:HB3	1:B:2715:HIS:CE1	2.51	0.46
1:C:48:THR:HG21	1:C:347:GLY:H	1.80	0.46
1:C:1488:ARG:HB3	1:C:1554:SER:HA	1.97	0.46
1:C:1663:TRP:HA	1:C:1666:THR:HG22	1.97	0.46
1:D:474:THR:OG1	1:D:508:ASP:OD2	2.29	0.46
1:D:513:SER:OG	2:D:3101:FMN:O2	2.17	0.46
1:D:543:THR:O	1:D:547:ILE:HG13	2.16	0.46
1:D:1422:MET:HE3	1:D:1428:PHE:HD1	1.79	0.46
1:D:2109:PRO:HD2	1:D:2110:GLU:N	2.30	0.46
1:E:543:THR:O	1:E:547:ILE:HG13	2.16	0.46
1:E:772:ARG:HG2	1:E:835:LEU:HG	1.97	0.46
1:E:1401:LEU:O	1:E:1407:THR:HB	2.16	0.46
1:E:1975:GLY:HA3	1:E:1976:ARG:NH2	2.30	0.46
1:E:2853:ALA:HB2	1:E:2894:LEU:HD22	1.98	0.46
1:F:2058:ILE:HB	1:F:2094:ILE:HD11	1.97	0.46
1:A:1518:ASN:HB2	1:A:1527:ALA:HB3	1.97	0.46
1:A:2874:THR:HG22	1:A:2876:THR:HG23	1.96	0.46
1:B:1640:ARG:HG2	1:B:1640:ARG:O	2.16	0.46
1:C:117:PRO:HG3	1:C:173:GLN:HA	1.98	0.46
1:C:829:VAL:HB	1:C:830:PRO:HD3	1.98	0.46
1:C:2028:PHE:HD2	1:C:2178:ALA:HB2	1.81	0.46
1:C:2242:VAL:O	1:C:2246:ALA:HB3	2.16	0.46
1:C:2313:ALA:HB1	1:C:2370:ILE:HD11	1.98	0.46
1:D:22:HIS:HB2	1:D:25:VAL:HB	1.98	0.46
1:D:223:LEU:HD22	1:D:290:ARG:HH12	1.81	0.46
1:D:1309:VAL:HG12	1:D:1325:ALA:HB3	1.97	0.46
1:D:1331:LYS:HG3	1:D:1331:LYS:O	2.15	0.46
1:D:2696:ASN:HB2	1:D:2715:HIS:ND1	2.31	0.46
1:D:2853:ALA:HB2	1:D:2894:LEU:HD22	1.98	0.46
1:E:926:ARG:NH1	1:E:962:TRP:O	2.43	0.46
1:F:326:TRP:HE1	1:F:354:THR:HG22	1.81	0.46
1:F:702:VAL:HG11	1:F:716:ILE:HD11	1.98	0.46
1:F:746:LEU:HD13	1:F:845:PHE:HB3	1.98	0.46
1:F:2396:MET:C	1:F:2396:MET:HE2	2.40	0.46
1:A:1368:THR:HG21	1:A:1376:VAL:HG12	1.98	0.46
1:A:2522:GLU:HA	1:A:2601:VAL:HG12	1.98	0.46
1:B:1223:PHE:HA	1:B:1226:VAL:HG22	1.98	0.46
1:B:2768:SER:HB2	1:B:2769:MET:SD	2.56	0.46
1:C:33:PRO:O	1:C:339:ARG:N	2.45	0.46
1:C:1088:VAL:HG21	1:C:1253:MET:HE3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1151:MET:C	1:C:1151:MET:HE2	2.41	0.46
1:C:1517:VAL:HG12	1:C:1566:HIS:HB2	1.98	0.46
1:C:2998:LEU:O	1:C:3003:ARG:NH2	2.49	0.46
1:D:680:GLN:HG3	1:D:855:ARG:HA	1.98	0.46
1:D:2293:LEU:HD11	1:D:2314:HIS:NE2	2.31	0.46
1:D:2748:ASP:HB2	1:D:2916:GLY:H	1.81	0.46
1:E:116:VAL:HG22	1:E:117:PRO:HD3	1.97	0.46
1:E:513:SER:OG	2:E:3101:FMN:O2	2.23	0.46
1:E:2752:LEU:HD23	1:E:2755:ILE:HD11	1.98	0.46
1:F:1335:ALA:HB3	1:F:1686:GLU:HB2	1.98	0.46
1:F:1396:HIS:ND1	1:F:1398:ASP:OD1	2.48	0.46
1:F:2768:SER:HB2	1:F:2769:MET:SD	2.56	0.46
1:A:2039:ARG:HD3	1:A:2167:ALA:HB3	1.98	0.45
1:A:2710:TYR:HE1	1:D:2828:GLY:HA3	1.80	0.45
1:B:850:ASP:N	1:B:850:ASP:OD1	2.49	0.45
1:B:1105:ASP:OD2	1:B:1105:ASP:N	2.48	0.45
1:B:2223:PRO:HG3	1:B:2243:LEU:HD11	1.98	0.45
1:B:2727:VAL:HG21	1:B:2923:MET:HE1	1.97	0.45
1:C:515:GLY:HA2	1:C:546:GLN:HE22	1.81	0.45
1:C:655:LEU:HD13	1:C:688:ILE:HD11	1.98	0.45
1:C:984:THR:HG22	1:C:989:VAL:HG22	1.97	0.45
1:C:1104:THR:N	1:C:1107:GLY:O	2.35	0.45
1:C:1519:PHE:HB3	1:C:1664:ILE:HG13	1.97	0.45
1:C:1633:TYR:O	1:C:1637:LEU:HB2	2.16	0.45
1:C:2052:LEU:HD21	1:C:2963:LEU:HD23	1.98	0.45
1:C:2677:HIS:NE2	1:E:2676:TYR:OH	2.48	0.45
1:C:2699:ALA:O	1:C:2703:VAL:HG23	2.16	0.45
1:C:2720:CYS:HB2	1:C:2979:PHE:H	1.81	0.45
1:C:2828:GLY:HA3	1:E:2710:TYR:HE1	1.80	0.45
1:D:1972:GLN:O	1:D:1976:ARG:HG2	2.17	0.45
1:D:2114:TYR:CD2	1:D:2137:LEU:HD23	2.51	0.45
1:E:33:PRO:O	1:E:339:ARG:N	2.47	0.45
1:E:1717:ASN:OD1	1:E:1717:ASN:N	2.47	0.45
1:F:327:VAL:O	1:F:331:THR:HG23	2.17	0.45
1:F:2044:ARG:HB3	1:F:2955:VAL:HG22	1.97	0.45
1:A:1488:ARG:HG3	1:A:1524:SER:HB2	1.98	0.45
1:A:2271:LEU:O	1:A:2314:HIS:ND1	2.49	0.45
1:A:2392:ALA:O	1:A:2395:GLN:HG3	2.15	0.45
1:B:327:VAL:O	1:B:331:THR:HG23	2.16	0.45
1:B:395:PRO:HB3	1:B:409:THR:HG22	1.99	0.45
1:B:2114:TYR:HB3	1:B:2142:ALA:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:574:HIS:HA	1:C:685:ILE:HG22	1.98	0.45
1:C:1276:LEU:HD23	1:C:1327:LEU:HB3	1.98	0.45
1:C:1671:PHE:HD2	1:C:1708:TYR:CE1	2.33	0.45
1:C:2731:VAL:O	1:C:2735:ARG:HG3	2.16	0.45
1:D:119:VAL:HG21	1:D:150:GLN:HE22	1.79	0.45
1:D:409:THR:OG1	1:D:631:ASP:O	2.28	0.45
1:D:1485:ALA:HB2	1:D:1557:LEU:HD12	1.97	0.45
1:D:1717:ASN:HB3	1:D:1720:ARG:HB3	1.98	0.45
1:D:1966:LEU:HA	1:D:1969:PHE:CD1	2.51	0.45
1:D:2648:GLU:HG2	1:D:2651:ARG:NH1	2.32	0.45
1:D:2731:VAL:O	1:D:2735:ARG:HG3	2.16	0.45
1:E:546:GLN:O	1:E:550:VAL:HG23	2.16	0.45
1:E:2271:LEU:O	1:E:2314:HIS:ND1	2.46	0.45
1:E:2748:ASP:HB2	1:E:2916:GLY:H	1.81	0.45
1:E:2811:MET:O	1:E:3013:ARG:NH1	2.49	0.45
1:F:2114:TYR:CD2	1:F:2137:LEU:HD23	2.51	0.45
1:F:2433:LEU:HB3	1:F:2435:VAL:HG12	1.97	0.45
1:A:2113:ARG:HE	1:A:2114:TYR:HE1	1.64	0.45
1:B:375:ARG:HG2	1:B:375:ARG:HH11	1.81	0.45
1:C:1600:PRO:HG2	1:C:1603:VAL:O	2.16	0.45
1:C:2561:VAL:O	1:C:2565:PRO:HD3	2.16	0.45
1:D:1220:MET:HE3	1:D:1220:MET:HB3	1.85	0.45
1:D:2176:VAL:HG21	1:D:2189:LEU:HD21	1.99	0.45
1:D:2922:GLN:HB2	1:D:2974:LEU:HD21	1.99	0.45
1:E:1690:LYS:CG	1:E:1719:GLU:HB3	2.45	0.45
1:E:2052:LEU:HD11	1:E:2963:LEU:HD23	1.98	0.45
1:E:2216:LEU:HD21	1:E:2218:PHE:CE1	2.51	0.45
1:E:2620:MET:O	1:E:2624:ILE:HG12	2.16	0.45
1:F:2300:TRP:NE1	1:F:2369:PRO:HD3	2.30	0.45
1:F:2321:ARG:O	1:F:2329:ASN:ND2	2.49	0.45
1:F:2321:ARG:HH11	1:F:2345:SER:HB3	1.82	0.45
1:A:2052:LEU:HD11	1:A:2963:LEU:HD23	1.98	0.45
1:A:2216:LEU:HD21	1:A:2218:PHE:HE1	1.80	0.45
1:A:2223:PRO:HG3	1:A:2243:LEU:HD11	1.98	0.45
1:A:2243:LEU:O	1:A:2247:VAL:HG13	2.17	0.45
1:A:2668:GLY:O	1:A:2672:MET:HG2	2.16	0.45
1:B:1158:SER:OG	1:B:1173:GLU:OE2	2.26	0.45
1:B:1336:PHE:CE2	1:B:1444:ALA:HA	2.51	0.45
1:B:1400:VAL:HG22	1:B:1406:PHE:HD2	1.81	0.45
1:C:2604:GLN:HA	1:C:2795:GLN:HG2	1.98	0.45
1:C:2723:ALA:HB1	1:C:2920:VAL:HG23	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:829:VAL:HB	1:D:830:PRO:HD3	1.99	0.45
1:E:50:GLU:HG2	1:E:97:LEU:HD23	1.98	0.45
1:E:473:ARG:NH1	1:E:1012:ASP:O	2.47	0.45
1:E:655:LEU:HD13	1:E:688:ILE:HD11	1.98	0.45
1:E:829:VAL:HB	1:E:830:PRO:HD3	1.98	0.45
1:E:1640:ARG:HG2	1:E:1640:ARG:O	2.15	0.45
1:F:1309:VAL:HG12	1:F:1325:ALA:HB3	1.98	0.45
1:F:1400:VAL:HG22	1:F:1406:PHE:HD2	1.82	0.45
1:F:1602:LEU:HD23	1:F:1602:LEU:H	1.81	0.45
1:A:1388:ILE:HA	1:A:1393:HIS:HA	1.98	0.45
1:B:1663:TRP:O	1:B:1666:THR:HG22	2.17	0.45
1:C:543:THR:O	1:C:547:ILE:HG13	2.16	0.45
1:D:33:PRO:HB3	1:D:143:VAL:HG11	1.98	0.45
1:D:546:GLN:O	1:D:550:VAL:HG23	2.16	0.45
1:D:2703:VAL:HA	1:D:2707:VAL:HG13	1.99	0.45
1:E:397:VAL:HG11	1:E:910:LEU:HD21	1.99	0.45
1:E:2145:ILE:HD13	1:E:2193:ILE:HG12	1.99	0.45
1:E:2915:LYS:HE2	1:E:2915:LYS:HB2	1.81	0.45
1:E:3024:ALA:HB3	1:E:3031:MET:HE2	1.99	0.45
1:F:1160:VAL:HG12	1:F:1171:THR:HG23	1.98	0.45
1:F:1368:THR:HG21	1:F:1376:VAL:HG12	1.99	0.45
1:A:2341:VAL:HG21	1:A:2378:LEU:HB2	1.99	0.45
1:B:182:VAL:O	1:B:186:ARG:HG2	2.16	0.45
1:B:229:ILE:HG13	1:B:237:VAL:HG22	1.98	0.45
1:B:293:ASP:N	1:B:293:ASP:OD1	2.45	0.45
1:C:1686:GLU:HG3	1:C:1695:VAL:HB	1.99	0.45
1:C:2020:TRP:O	1:C:2024:VAL:HG22	2.16	0.45
1:D:56:THR:HG21	1:D:129:ALA:HB1	1.97	0.45
1:D:150:GLN:O	1:D:150:GLN:HG2	2.17	0.45
1:D:2604:GLN:HA	1:D:2795:GLN:HG2	1.98	0.45
1:D:2678:GLY:HA3	1:D:2685:LYS:CD	2.47	0.45
1:E:117:PRO:HG3	1:E:173:GLN:HA	1.99	0.45
1:E:717:ILE:HG23	1:E:727:TYR:HD2	1.81	0.45
1:E:2113:ARG:HG3	1:E:2114:TYR:CD1	2.52	0.45
1:E:2663:GLY:HA2	1:E:2715:HIS:HB3	1.99	0.45
1:E:2728:GLU:HG3	1:E:2729:GLU:N	2.30	0.45
1:E:2896:ARG:HE	1:E:2900:ALA:HB3	1.81	0.45
1:F:1640:ARG:HG2	1:F:1640:ARG:O	2.17	0.45
1:F:2266:ARG:HH22	1:F:2366:ALA:HA	1.81	0.45
1:F:2430:TRP:HZ3	1:F:2970:LYS:HB3	1.81	0.45
1:F:2750:LEU:HD22	1:F:2795:GLN:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:97:LEU:HD13	1:A:103:VAL:HG11	1.99	0.45
1:A:107:LYS:C	1:A:107:LYS:HD3	2.42	0.45
1:A:117:PRO:HG3	1:A:173:GLN:HA	1.98	0.45
1:A:420:ILE:HD12	1:A:633:ILE:HD11	1.97	0.45
1:A:1690:LYS:CG	1:A:1719:GLU:HB3	2.47	0.45
1:A:2462:GLU:HG2	1:A:2936:PRO:HB3	1.98	0.45
1:B:818:ASP:O	1:B:822:VAL:HG12	2.17	0.45
1:B:867:ASP:OD1	1:B:867:ASP:N	2.49	0.45
1:B:1445:LEU:HD12	1:B:1451:ILE:HG21	1.98	0.45
1:B:1594:ILE:HD11	1:B:1598:TYR:HB2	1.98	0.45
1:B:2071:GLY:HA3	1:B:2169:TYR:HA	1.99	0.45
1:B:2316:LEU:HB2	1:B:2373:ASP:HA	1.98	0.45
1:C:521:GLU:HA	1:C:524:GLU:HG3	1.98	0.45
1:C:736:TYR:CD1	1:C:784:LEU:HD21	2.51	0.45
1:D:51:GLU:HG3	1:D:371:ARG:HH22	1.82	0.45
1:D:1994:ASP:OD1	1:D:1994:ASP:N	2.47	0.45
1:D:2874:THR:HB	1:D:2879:ASN:HD21	1.81	0.45
1:E:48:THR:HG21	1:E:347:GLY:H	1.81	0.45
1:E:1012:ASP:OD1	1:E:1012:ASP:N	2.48	0.45
1:E:2124:ALA:O	1:E:2159:TYR:OH	2.30	0.45
1:E:2610:ASP:O	1:E:2613:VAL:HG12	2.17	0.45
1:E:2713:MET:HE3	1:E:2713:MET:HB3	1.81	0.45
1:F:880:GLY:O	1:F:884:VAL:HG22	2.17	0.45
1:F:1585:MET:HE3	1:F:1586:PRO:HD2	1.99	0.45
1:F:1703:LEU:HD11	1:F:1713:VAL:HB	1.98	0.45
1:F:2145:ILE:HD11	1:F:2192:TRP:CZ3	2.52	0.45
1:A:2261:ARG:CZ	1:A:2261:ARG:HB2	2.46	0.45
1:A:2853:ALA:HB2	1:A:2894:LEU:HD22	1.98	0.45
1:B:67:GLY:O	1:B:71:LEU:HD13	2.17	0.45
1:B:798:ASP:OD2	1:B:798:ASP:N	2.49	0.45
1:B:1085:ASP:OD2	1:B:1256:SER:OG	2.30	0.45
1:B:2005:ASP:O	1:B:2009:ILE:HG13	2.17	0.45
1:B:2244:LEU:HD23	1:B:2245:TRP:CZ3	2.51	0.45
1:C:2114:TYR:HB3	1:C:2142:ALA:HB2	1.99	0.45
1:D:867:ASP:OD1	1:D:867:ASP:N	2.47	0.45
1:D:2004:PRO:HA	1:D:2007:GLU:HG2	1.98	0.45
1:E:1266:THR:OG1	1:E:1271:ARG:NH2	2.49	0.45
1:F:705:ASP:O	1:F:709:VAL:HG23	2.17	0.45
1:F:720:MET:SD	1:F:727:TYR:HB2	2.57	0.45
1:F:1618:ARG:HD3	1:F:1626:LEU:HB3	1.98	0.45
1:F:2052:LEU:HD21	1:F:2963:LEU:HD23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2658:VAL:O	1:F:2709:SER:HB2	2.16	0.45
1:F:2660:ASN:OD1	1:F:2662:GLN:HG2	2.17	0.45
1:A:982:LEU:HD23	1:A:982:LEU:HA	1.84	0.45
1:A:2188:ALA:O	1:A:2189:LEU:C	2.60	0.45
1:A:2838:LEU:HD12	1:A:2886:LEU:HD12	1.98	0.45
1:B:744:VAL:HG21	1:B:805:PRO:HB2	1.98	0.45
1:B:2145:ILE:HD11	1:B:2192:TRP:HZ3	1.81	0.45
1:B:2790:GLY:HA2	1:B:2876:THR:HG22	1.99	0.45
1:C:1717:ASN:HB3	1:C:1720:ARG:HB3	1.99	0.45
1:C:2129:ILE:H	1:C:2129:ILE:HD12	1.82	0.45
1:D:1162:THR:HG22	1:D:1168:VAL:HA	1.97	0.45
1:D:1632:ASP:OD1	1:D:1632:ASP:N	2.50	0.45
1:E:501:ARG:NH2	1:E:533:GLY:O	2.50	0.45
1:E:1626:LEU:O	1:E:1626:LEU:HD13	2.17	0.45
1:E:2341:VAL:HG21	1:E:2378:LEU:HB2	1.98	0.45
1:F:197:MET:HE3	1:F:286:PHE:H	1.81	0.45
1:A:1207:ARG:HD2	1:A:1207:ARG:HA	1.78	0.45
1:A:1602:LEU:HD23	1:A:1602:LEU:H	1.81	0.45
1:A:1703:LEU:HD11	1:A:1713:VAL:HB	1.98	0.45
1:A:2978:GLY:N	1:A:2982:VAL:O	2.50	0.45
1:B:2027:VAL:HG22	1:B:2179:ASN:HB2	1.99	0.45
1:B:2568:THR:HB	1:B:2583:ARG:HG2	1.99	0.45
1:C:1149:THR:HG21	1:C:1187:LEU:HD13	1.99	0.45
1:C:1507:ALA:HB2	1:C:1514:LEU:HB2	1.99	0.45
1:C:2243:LEU:O	1:C:2247:VAL:HG13	2.17	0.45
1:C:2592:PRO:HB2	1:C:2594:LYS:HE3	1.98	0.45
1:C:2767:THR:HG22	1:C:2771:CYS:SG	2.57	0.45
1:D:1208:ARG:HA	1:D:1298:GLU:OE1	2.17	0.45
1:D:1602:LEU:H	1:D:1602:LEU:HD23	1.81	0.45
1:D:2336:VAL:HB	1:D:2341:VAL:HG13	1.99	0.45
1:D:2397:SER:HA	1:D:2401:ALA:HB2	1.98	0.45
1:D:2557:ALA:HB1	1:D:2579:TRP:HB2	1.99	0.45
1:E:1276:LEU:HD23	1:E:1327:LEU:HB3	1.99	0.45
1:E:2108:ASN:ND2	1:E:2108:ASN:C	2.75	0.45
1:F:818:ASP:O	1:F:822:VAL:HG12	2.17	0.45
1:F:943:ARG:HG2	1:F:1017:VAL:HG23	1.99	0.45
1:F:1223:PHE:HA	1:F:1226:VAL:HG22	1.98	0.45
1:F:2145:ILE:HD11	1:F:2192:TRP:HZ3	1.82	0.45
1:F:2727:VAL:HG21	1:F:2923:MET:HE1	1.99	0.45
1:A:482:LEU:HG	1:A:514:ALA:O	2.17	0.44
1:A:746:LEU:HD13	1:A:845:PHE:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1276:LEU:HD23	1:A:1327:LEU:HB3	1.98	0.44
1:A:1368:THR:HG23	1:A:1374:PHE:O	2.17	0.44
1:A:1975:GLY:HA3	1:A:1976:ARG:NH2	2.32	0.44
1:B:1012:ASP:N	1:B:1012:ASP:OD1	2.50	0.44
1:B:2871:LYS:HZ2	1:B:2873:ASP:CG	2.26	0.44
1:B:2885:GLU:O	1:B:2889:ARG:HG3	2.17	0.44
1:C:1110:VAL:HG13	1:C:1111:VAL:HG13	1.99	0.44
1:D:182:VAL:O	1:D:186:ARG:HG2	2.16	0.44
1:D:783:ARG:HD3	1:D:783:ARG:HA	1.71	0.44
1:D:893:PRO:HG2	1:D:896:GLU:HB2	1.99	0.44
1:E:153:LEU:HD12	1:E:154:ALA:N	2.32	0.44
1:F:148:HIS:CG	1:F:149:SER:H	2.35	0.44
1:F:1638:ARG:HA	1:F:1638:ARG:HH11	1.82	0.44
1:A:522:ALA:HB3	1:A:553:ILE:HD12	1.98	0.44
1:B:371:ARG:CZ	1:B:371:ARG:HB2	2.46	0.44
1:B:717:ILE:HD12	1:B:727:TYR:CD2	2.52	0.44
1:B:1276:LEU:HA	1:B:1327:LEU:HA	1.98	0.44
1:B:1632:ASP:OD1	1:B:1632:ASP:N	2.51	0.44
1:B:2396:MET:SD	1:B:2397:SER:N	2.90	0.44
1:C:1308:ILE:HD13	1:C:1326:ARG:HD3	1.99	0.44
1:C:1518:ASN:HB2	1:C:1527:ALA:HB3	1.99	0.44
1:C:2681:LEU:HB2	1:C:2683:ARG:HD3	1.99	0.44
1:D:153:LEU:HD12	1:D:154:ALA:H	1.82	0.44
1:D:982:LEU:HD23	1:D:982:LEU:HA	1.88	0.44
1:D:1663:TRP:HA	1:D:1666:THR:HG22	1.99	0.44
1:D:1975:GLY:HA3	1:D:1976:ARG:NH2	2.32	0.44
1:D:2701:HIS:CE1	1:D:2704:GLN:HE21	2.36	0.44
1:F:88:PHE:CZ	1:F:117:PRO:HB2	2.52	0.44
1:F:2592:PRO:HB2	1:F:2594:LYS:HE3	1.98	0.44
1:F:2853:ALA:HB2	1:F:2894:LEU:HD22	1.98	0.44
1:A:1223:PHE:O	1:A:1227:SER:OG	2.31	0.44
1:A:2658:VAL:O	1:A:2709:SER:HB2	2.17	0.44
1:A:2827:ASP:HB2	1:A:2981:HIS:HB3	1.99	0.44
1:B:22:HIS:HB2	1:B:25:VAL:HB	1.98	0.44
1:B:829:VAL:HB	1:B:830:PRO:HD3	1.99	0.44
1:B:1058:HIS:HB2	1:B:1061:ARG:HD3	1.98	0.44
1:B:2183:TYR:H	1:E:2015:GLU:CD	2.24	0.44
1:C:532:ILE:HD11	1:C:534:ILE:HG12	1.99	0.44
1:C:2982:VAL:HG23	1:E:2713:MET:HB2	1.99	0.44
1:D:837:LYS:HB2	1:D:837:LYS:HE3	1.77	0.44
1:D:2896:ARG:NH2	1:D:2901:PRO:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:22:HIS:ND1	1:E:378:PHE:O	2.45	0.44
1:E:1024:THR:HG22	1:E:1111:VAL:HG22	1.99	0.44
1:F:395:PRO:HB3	1:F:409:THR:HG22	1.98	0.44
1:A:186:ARG:HB2	1:A:188:ILE:HG12	2.00	0.44
1:A:984:THR:HG22	1:A:989:VAL:HG22	1.98	0.44
1:A:2312:LEU:HD12	1:A:2312:LEU:HA	1.78	0.44
1:A:2448:GLU:HG2	1:A:2455:SER:HB3	1.99	0.44
1:B:1047:ALA:N	1:B:1050:THR:O	2.38	0.44
1:B:1358:ARG:NH1	1:B:1362:ASP:OD1	2.50	0.44
1:B:1387:ILE:HG22	1:E:2261:ARG:HD3	1.99	0.44
1:C:534:ILE:HD13	1:C:534:ILE:HA	1.86	0.44
1:C:2710:TYR:HE1	1:E:2828:GLY:HA3	1.81	0.44
1:C:2752:LEU:HD23	1:C:2755:ILE:HD11	2.00	0.44
1:C:2973:MET:HE3	1:C:2973:MET:HB3	1.88	0.44
1:D:22:HIS:HB3	1:D:378:PHE:HA	1.98	0.44
1:D:779:ARG:HD2	1:D:831:PHE:CD2	2.52	0.44
1:D:1522:ARG:N	1:D:1664:ILE:HD11	2.32	0.44
1:E:2136:ARG:NH1	1:E:2351:ALA:HB2	2.33	0.44
1:F:543:THR:OG1	1:F:544:ILE:N	2.50	0.44
1:F:1038:ASP:O	1:F:1042:PHE:HB2	2.18	0.44
1:F:2557:ALA:HB1	1:F:2579:TRP:HB2	1.99	0.44
1:F:2614:TRP:O	1:F:3031:MET:HB2	2.17	0.44
1:A:750:GLU:N	1:A:750:GLU:OE1	2.51	0.44
1:A:841:LYS:HD2	1:A:842:PRO:HD2	2.00	0.44
1:A:1057:TRP:HB2	1:A:1137:LEU:HD22	1.99	0.44
1:A:2200:SER:HA	1:A:2205:SER:HA	1.99	0.44
1:B:37:ALA:N	1:B:342:LEU:O	2.31	0.44
1:B:473:ARG:NH1	1:B:1012:ASP:O	2.50	0.44
1:B:746:LEU:HD13	1:B:845:PHE:HB3	2.00	0.44
1:B:880:GLY:O	1:B:884:VAL:HG22	2.16	0.44
1:B:2015:GLU:CD	1:E:2183:TYR:H	2.24	0.44
1:B:2392:ALA:O	1:B:2395:GLN:HG3	2.18	0.44
1:B:2827:ASP:HB2	1:B:2981:HIS:HB3	2.00	0.44
1:C:171:LEU:HD23	1:C:171:LEU:HA	1.79	0.44
1:C:328:ASP:OD1	1:C:329:GLU:N	2.51	0.44
1:C:926:ARG:HH11	1:C:937:LEU:HD21	1.83	0.44
1:C:1502:PHE:CD1	1:C:1502:PHE:C	2.96	0.44
1:C:1651:GLU:O	1:C:1655:TRP:HD1	1.99	0.44
1:C:2757:GLY:HA3	1:E:2690:PHE:CG	2.53	0.44
1:D:1388:ILE:HA	1:D:1393:HIS:HA	1.99	0.44
1:D:2300:TRP:NE1	1:D:2369:PRO:HD3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:730:ASP:O	1:E:734:MET:HG3	2.18	0.44
1:E:746:LEU:HD23	1:E:746:LEU:HA	1.74	0.44
1:F:798:ASP:OD2	1:F:798:ASP:N	2.50	0.44
1:F:2314:HIS:NE2	1:F:2316:LEU:HD22	2.32	0.44
1:A:148:HIS:CG	1:A:149:SER:H	2.35	0.44
1:A:2486:ASP:HA	1:A:2490:PRO:HA	2.00	0.44
1:A:2502:ASP:HB3	1:A:2505:GLU:HG3	2.00	0.44
1:B:1109:PRO:HB3	1:B:1153:ARG:HD3	1.99	0.44
1:B:1309:VAL:HG12	1:B:1325:ALA:HB3	1.99	0.44
1:B:1985:ARG:HH22	1:D:1978:GLY:HA3	1.83	0.44
1:B:2712:ALA:HB3	1:B:2733:LYS:NZ	2.27	0.44
1:C:651:VAL:HG13	1:C:877:ILE:HD13	1.98	0.44
1:C:1027:MET:SD	1:C:1114:LEU:HB3	2.57	0.44
1:C:2068:ARG:NH2	1:C:2166:HIS:HA	2.33	0.44
1:C:2259:ALA:HA	1:C:2309:ARG:CZ	2.48	0.44
1:C:2462:GLU:HG2	1:C:2936:PRO:HB3	1.99	0.44
1:C:2672:MET:HA	1:C:2675:MET:HG2	1.99	0.44
1:D:2639:PHE:HD1	1:D:2644:PHE:HB3	1.82	0.44
1:E:482:LEU:HG	1:E:514:ALA:O	2.17	0.44
1:E:736:TYR:O	1:E:740:LEU:HG	2.18	0.44
1:E:890:MET:HE3	1:E:890:MET:HB3	1.81	0.44
1:F:943:ARG:CZ	1:F:946:GLY:HA2	2.48	0.44
1:F:1110:VAL:HG12	1:F:1111:VAL:HG13	1.99	0.44
1:F:2491:GLY:HA3	1:F:2500:MET:HE1	1.99	0.44
1:A:752:ASN:HB3	1:A:869:ARG:HB2	2.00	0.44
1:A:2446:GLY:HA2	1:A:2800:ILE:HA	2.00	0.44
1:B:2672:MET:HA	1:B:2675:MET:HG2	1.99	0.44
1:C:841:LYS:HD2	1:C:842:PRO:HD2	1.98	0.44
1:C:1012:ASP:OD1	1:C:1012:ASP:N	2.49	0.44
1:C:1271:ARG:HA	1:C:1272:PRO:HD3	1.90	0.44
1:C:2332:ILE:H	1:C:2332:ILE:HD12	1.83	0.44
1:D:746:LEU:HD23	1:D:746:LEU:HA	1.76	0.44
1:D:1098:ALA:HB1	1:D:1143:ALA:HB2	1.99	0.44
1:D:1502:PHE:CD1	1:D:1502:PHE:C	2.95	0.44
1:E:547:ILE:HG23	1:E:564:MET:HE1	2.00	0.44
1:F:376:ASN:HB3	1:F:384:PRO:HD3	1.99	0.44
1:F:802:LEU:HD12	1:F:802:LEU:O	2.17	0.44
1:F:851:GLN:H	1:F:851:GLN:CD	2.21	0.44
1:F:2039:ARG:HD3	1:F:2167:ALA:HB3	2.00	0.44
1:F:2244:LEU:HD23	1:F:2245:TRP:CZ3	2.52	0.44
1:F:2731:VAL:O	1:F:2735:ARG:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:730:ASP:O	1:A:734:MET:HG3	2.18	0.44
1:A:1342:GLN:OE1	1:A:1407:THR:OG1	2.24	0.44
1:A:1468:MET:HB2	1:A:1657:PHE:HZ	1.81	0.44
1:A:1626:LEU:O	1:A:1626:LEU:HD13	2.18	0.44
1:B:943:ARG:CZ	1:B:946:GLY:HA2	2.48	0.44
1:B:1566:HIS:ND1	1:B:1657:PHE:O	2.38	0.44
1:B:2300:TRP:NE1	1:B:2369:PRO:HD3	2.32	0.44
1:C:395:PRO:HB3	1:C:409:THR:HG22	2.00	0.44
1:C:789:PHE:CE1	1:C:2507:VAL:HG21	2.53	0.44
1:C:1105:ASP:OD1	1:C:1105:ASP:N	2.50	0.44
1:C:2438:ALA:HA	1:C:2806:ASP:OD1	2.18	0.44
1:C:2681:LEU:HD12	1:C:2683:ARG:NH1	2.26	0.44
1:C:2713:MET:HB2	1:E:2982:VAL:HG23	1.99	0.44
1:D:783:ARG:NH2	1:D:2503:GLU:OE1	2.51	0.44
1:D:1099:ILE:HD11	1:D:1176:PHE:CD2	2.53	0.44
1:E:238:ILE:HD12	1:E:245:LEU:HD22	1.99	0.44
1:E:522:ALA:HB3	1:E:553:ILE:HD12	2.00	0.44
1:E:1457:LEU:HG	1:E:1458:LEU:N	2.32	0.44
1:F:1336:PHE:CE1	1:F:1415:ALA:HB1	2.52	0.44
1:F:2341:VAL:HG21	1:F:2378:LEU:HB2	2.00	0.44
1:F:2568:THR:HB	1:F:2583:ARG:HG2	2.00	0.44
1:A:33:PRO:O	1:A:339:ARG:N	2.47	0.44
1:A:2293:LEU:HD21	1:A:2314:HIS:CD2	2.53	0.44
1:A:2334:ALA:O	1:A:2337:GLU:HG2	2.17	0.44
1:A:2676:TYR:OH	1:D:2677:HIS:NE2	2.50	0.44
1:B:2631:ASN:ND2	1:B:2702:VAL:HG21	2.33	0.44
1:B:2732:ASP:OD1	1:B:2732:ASP:C	2.61	0.44
1:B:2896:ARG:HE	1:B:2900:ALA:HB3	1.83	0.44
1:C:2694:LEU:HD13	1:E:2719:ALA:HB1	1.98	0.44
1:C:2703:VAL:HA	1:C:2707:VAL:HG13	1.99	0.44
1:C:2718:ALA:H	1:C:2722:THR:CG2	2.31	0.44
1:D:123:GLN:O	1:D:127:THR:HG23	2.18	0.44
1:D:655:LEU:HD13	1:D:688:ILE:HD11	2.00	0.44
1:D:798:ASP:OD2	1:D:798:ASP:N	2.50	0.44
1:D:880:GLY:O	1:D:884:VAL:HG22	2.17	0.44
1:D:1075:PRO:HD2	1:D:1076:LEU:HD22	2.00	0.44
1:D:2313:ALA:HB1	1:D:2370:ILE:HD11	1.99	0.44
1:E:150:GLN:O	1:E:150:GLN:HG2	2.17	0.44
1:F:1358:ARG:NH1	1:F:1362:ASP:OD1	2.51	0.44
1:A:397:VAL:HG11	1:A:910:LEU:HD21	1.99	0.43
1:A:547:ILE:HG21	1:A:587:THR:HG21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2058:ILE:HB	1:A:2094:ILE:HD11	2.00	0.43
1:B:1110:VAL:HG12	1:B:1111:VAL:HG13	2.00	0.43
1:B:2757:GLY:HA3	1:F:2690:PHE:CG	2.53	0.43
1:C:2266:ARG:HH12	1:C:2366:ALA:HA	1.83	0.43
1:C:2646:PRO:O	1:C:2650:MET:HG2	2.18	0.43
1:C:2806:ASP:OD1	1:C:2806:ASP:N	2.49	0.43
1:D:543:THR:OG1	1:D:544:ILE:N	2.51	0.43
1:E:581:ASP:OD1	1:E:614:TYR:OH	2.22	0.43
1:E:1354:SER:HB2	1:E:1421:GLU:HG3	2.00	0.43
1:F:186:ARG:HD3	1:F:290:ARG:HG2	2.00	0.43
1:F:2748:ASP:HB2	1:F:2916:GLY:H	1.81	0.43
1:F:2896:ARG:HE	1:F:2900:ALA:HB3	1.83	0.43
1:A:56:THR:HG21	1:A:129:ALA:HB1	1.99	0.43
1:A:263:ARG:NH2	1:A:577:TRP:O	2.52	0.43
1:A:746:LEU:HD23	1:A:746:LEU:HA	1.79	0.43
1:A:798:ASP:N	1:A:798:ASP:OD1	2.50	0.43
1:B:1602:LEU:HD23	1:B:1602:LEU:H	1.82	0.43
1:C:1711:SER:C	1:C:1713:VAL:N	2.76	0.43
1:C:2648:GLU:HG2	1:C:2651:ARG:NH1	2.33	0.43
1:D:1105:ASP:OD2	1:D:1105:ASP:N	2.50	0.43
1:D:2462:GLU:HG2	1:D:2936:PRO:HB3	2.00	0.43
1:D:2530:ASP:HB2	1:D:2533:HIS:CD2	2.53	0.43
1:D:2549:PHE:CZ	1:D:2581:VAL:HG12	2.53	0.43
1:D:2678:GLY:HA2	1:D:2683:ARG:CG	2.48	0.43
1:D:2686:PRO:O	1:D:2689:ILE:HG22	2.18	0.43
1:E:461:ARG:HA	1:E:464:GLN:HG2	2.00	0.43
1:E:1566:HIS:ND1	1:E:1657:PHE:O	2.41	0.43
1:F:1492:ILE:HB	1:F:1545:ARG:HG2	2.00	0.43
1:A:50:GLU:HG2	1:A:97:LEU:HD23	1.99	0.43
1:A:779:ARG:HD2	1:A:831:PHE:CD2	2.53	0.43
1:A:1284:LEU:HD12	1:A:1319:LEU:HB3	1.99	0.43
1:B:651:VAL:HG13	1:B:877:ILE:HD13	2.00	0.43
1:B:1485:ALA:HB2	1:B:1557:LEU:HD12	2.00	0.43
1:B:2294:ASP:O	1:B:2298:SER:HB3	2.19	0.43
1:B:2826:GLY:O	1:B:2839:GLY:HA3	2.18	0.43
1:C:22:HIS:HB3	1:C:378:PHE:HA	1.99	0.43
1:C:880:GLY:O	1:C:884:VAL:HG22	2.17	0.43
1:C:2145:ILE:HD11	1:C:2192:TRP:HZ3	1.84	0.43
1:C:2499:GLU:OE1	1:C:2499:GLU:N	2.51	0.43
1:D:328:ASP:OD1	1:D:329:GLU:N	2.51	0.43
1:D:1149:THR:HG21	1:D:1187:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2129:ILE:H	1:D:2129:ILE:HD12	1.82	0.43
1:D:2234:SER:O	1:D:2237:GLU:HG3	2.17	0.43
1:D:2685:LYS:O	1:D:2686:PRO:C	2.61	0.43
1:D:2998:LEU:O	1:D:3003:ARG:NH2	2.50	0.43
1:E:1105:ASP:OD2	1:E:1105:ASP:N	2.51	0.43
1:E:1602:LEU:HD23	1:E:1602:LEU:H	1.83	0.43
1:E:2223:PRO:CG	1:E:2224:ARG:H	2.31	0.43
1:F:350:LEU:HD23	1:F:350:LEU:HA	1.79	0.43
1:F:615:LEU:HD12	1:F:630:ILE:HG13	2.00	0.43
1:F:1632:ASP:N	1:F:1632:ASP:OD1	2.51	0.43
1:A:88:PHE:HA	1:A:93:TRP:CH2	2.53	0.43
1:A:2101:ARG:O	1:A:2101:ARG:HD3	2.17	0.43
1:A:2941:LEU:HD12	1:A:2941:LEU:HA	1.90	0.43
1:B:783:ARG:HB3	1:B:2418:PRO:HD3	2.00	0.43
1:B:1088:VAL:HG21	1:B:1253:MET:HE3	1.99	0.43
1:B:1099:ILE:HD11	1:B:1176:PHE:CD2	2.53	0.43
1:B:2334:ALA:O	1:B:2337:GLU:HG2	2.18	0.43
1:C:116:VAL:HG22	1:C:117:PRO:HD3	1.99	0.43
1:C:148:HIS:CG	1:C:149:SER:H	2.37	0.43
1:C:223:LEU:HD22	1:C:290:ARG:HH12	1.82	0.43
1:C:434:ILE:HG13	1:C:894:VAL:HG11	2.01	0.43
1:C:2336:VAL:HB	1:C:2341:VAL:HG13	1.99	0.43
1:C:2530:ASP:HB2	1:C:2533:HIS:CD2	2.53	0.43
1:D:1099:ILE:HD13	1:D:1117:LEU:HD21	2.01	0.43
1:D:1619:ASP:OD1	1:D:1620:LEU:N	2.52	0.43
1:D:2003:ALA:O	1:D:2007:GLU:HG2	2.18	0.43
1:D:2243:LEU:O	1:D:2247:VAL:HG13	2.17	0.43
1:E:1485:ALA:HB2	1:E:1557:LEU:HD12	2.00	0.43
1:E:2334:ALA:O	1:E:2337:GLU:HG2	2.17	0.43
1:F:2188:ALA:O	1:F:2191:GLU:HG3	2.18	0.43
1:F:2440:LEU:HD12	1:F:2440:LEU:HA	1.88	0.43
1:F:3020:ARG:NH2	1:F:3029:ALA:O	2.48	0.43
1:A:45:TRP:HB3	1:A:119:VAL:HG12	2.00	0.43
1:A:796:PHE:HZ	1:A:812:LEU:HB2	1.84	0.43
1:A:1287:VAL:HG13	1:A:1315:VAL:HG21	2.00	0.43
1:A:1388:ILE:HB	1:F:2262:ASP:CG	2.42	0.43
1:A:2828:GLY:HA3	1:D:2710:TYR:HE1	1.82	0.43
1:B:746:LEU:HD23	1:B:746:LEU:HA	1.80	0.43
1:B:2998:LEU:O	1:B:3003:ARG:NH2	2.50	0.43
1:C:1422:MET:SD	1:C:1725:LEU:HD21	2.58	0.43
1:C:2040:TRP:O	1:C:2044:ARG:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2146:ALA:O	1:C:2175:LEU:HA	2.19	0.43
1:C:2300:TRP:NE1	1:C:2369:PRO:HD3	2.34	0.43
1:D:581:ASP:OD1	1:D:614:TYR:OH	2.24	0.43
1:D:679:SER:OG	1:D:680:GLN:N	2.52	0.43
1:D:1518:ASN:HB2	1:D:1527:ALA:HB3	2.01	0.43
1:D:2245:TRP:HA	1:D:2248:GLN:HG2	1.99	0.43
1:D:2321:ARG:HH11	1:D:2345:SER:HB3	1.83	0.43
1:E:105:SER:HG	1:E:108:HIS:HD1	1.63	0.43
1:E:1130:LEU:HD22	1:E:1131:PRO:HD2	2.01	0.43
1:E:1209:ARG:NH2	1:E:1307:GLU:OE1	2.44	0.43
1:E:2486:ASP:HA	1:E:2490:PRO:HA	2.01	0.43
1:E:2703:VAL:HA	1:E:2707:VAL:HG13	2.00	0.43
1:F:570:ARG:NH1	1:F:662:ASP:O	2.40	0.43
1:F:1099:ILE:HD11	1:F:1176:PHE:CD2	2.54	0.43
1:F:2631:ASN:ND2	1:F:2702:VAL:HG21	2.34	0.43
1:F:2998:LEU:O	1:F:3003:ARG:NH2	2.49	0.43
1:A:654:MET:O	1:A:658:THR:HG22	2.19	0.43
1:A:674:MET:HG2	1:A:881:THR:HG22	2.01	0.43
1:A:818:ASP:O	1:A:822:VAL:HG12	2.17	0.43
1:A:1099:ILE:HD11	1:A:1176:PHE:CD2	2.54	0.43
1:A:1105:ASP:OD2	1:A:1105:ASP:N	2.51	0.43
1:B:395:PRO:HB2	1:B:407:LEU:HD11	1.99	0.43
1:B:569:GLY:HA3	1:B:664:TRP:HH2	1.84	0.43
1:B:2262:ASP:CG	1:E:1388:ILE:HB	2.44	0.43
1:B:2530:ASP:HB2	1:B:2533:HIS:CD2	2.53	0.43
1:C:221:THR:HG23	1:C:244:GLN:NE2	2.34	0.43
1:C:444:TRP:CZ2	1:C:476:GLN:HG2	2.53	0.43
1:C:717:ILE:HG23	1:C:727:TYR:HD2	1.83	0.43
1:C:1619:ASP:OD1	1:C:1620:LEU:N	2.51	0.43
1:C:1693:PRO:HB2	1:C:1696:ALA:HB3	2.01	0.43
1:C:1702:THR:HG22	1:C:1708:TYR:CE1	2.33	0.43
1:C:2631:ASN:OD1	1:C:2662:GLN:NE2	2.52	0.43
1:D:640:MET:HE1	1:D:879:PRO:HA	2.01	0.43
1:E:779:ARG:HD2	1:E:831:PHE:CD2	2.53	0.43
1:E:984:THR:HG22	1:E:989:VAL:HG22	1.99	0.43
1:E:1514:LEU:HD23	1:E:1514:LEU:HA	1.87	0.43
1:F:1336:PHE:HE1	1:F:1415:ALA:HB1	1.84	0.43
1:F:1637:LEU:HD12	1:F:1644:MET:HE3	2.01	0.43
1:A:2530:ASP:HB2	1:A:2533:HIS:CD2	2.54	0.43
1:A:2752:LEU:HD23	1:A:2755:ILE:HD11	2.00	0.43
1:B:120:LEU:HD22	1:B:153:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:121:LEU:HD13	1:B:169:PHE:CZ	2.53	0.43
1:B:326:TRP:HE1	1:B:354:THR:HG22	1.83	0.43
1:B:2557:ALA:HB1	1:B:2579:TRP:HB2	1.99	0.43
1:C:547:ILE:HG21	1:C:587:THR:HG21	2.01	0.43
1:C:680:GLN:HG3	1:C:855:ARG:HA	2.00	0.43
1:C:1099:ILE:HD11	1:C:1176:PHE:CD2	2.53	0.43
1:C:1632:ASP:N	1:C:1632:ASP:OD1	2.49	0.43
1:D:395:PRO:HB3	1:D:409:THR:HG22	2.00	0.43
1:D:547:ILE:HG21	1:D:587:THR:HG21	2.00	0.43
1:D:1335:ALA:HB3	1:D:1686:GLU:HB2	2.00	0.43
1:D:2332:ILE:H	1:D:2332:ILE:HD12	1.84	0.43
1:D:2561:VAL:O	1:D:2565:PRO:HD3	2.18	0.43
1:D:2767:THR:HG22	1:D:2771:CYS:SG	2.59	0.43
1:D:2780:PHE:HB3	1:D:2792:VAL:HG21	2.00	0.43
1:E:488:LYS:HA	1:E:488:LYS:HD2	1.85	0.43
1:E:798:ASP:OD1	1:E:798:ASP:N	2.51	0.43
1:E:1632:ASP:N	1:E:1632:ASP:OD1	2.51	0.43
1:F:837:LYS:HE2	1:F:837:LYS:HB2	1.77	0.43
1:F:1047:ALA:N	1:F:1050:THR:O	2.39	0.43
1:F:1403:LEU:HD23	1:F:1404:THR:H	1.84	0.43
1:F:2152:ASP:OD1	1:F:2155:ARG:HG3	2.19	0.43
1:F:2153:GLU:H	1:F:2153:GLU:CD	2.25	0.43
1:F:2391:LYS:O	1:F:2394:GLU:HG3	2.19	0.43
1:A:108:HIS:O	1:A:114:VAL:HG11	2.18	0.43
1:A:716:ILE:HG22	1:A:720:MET:HE3	2.01	0.43
1:A:2896:ARG:NH2	1:A:2901:PRO:O	2.51	0.43
1:B:43:SER:OG	1:B:346:PRO:O	2.33	0.43
1:B:85:PRO:HG2	1:B:108:HIS:HD2	1.84	0.43
1:C:1321:MET:HE2	1:C:1321:MET:HB3	1.81	0.43
1:C:1445:LEU:O	1:C:1449:THR:OG1	2.29	0.43
1:C:1604:PRO:HG3	1:C:1665:GLU:HB2	2.00	0.43
1:C:2370:ILE:HD12	1:C:2370:ILE:O	2.19	0.43
1:D:1987:VAL:O	1:D:1988:LEU:HD23	2.19	0.43
1:D:2059:ASP:OD1	1:D:2059:ASP:N	2.52	0.43
1:D:2393:ARG:HB2	1:D:2396:MET:HE3	1.99	0.43
1:E:53:VAL:HG13	1:E:59:GLU:HG3	2.01	0.43
1:E:327:VAL:O	1:E:331:THR:HG23	2.19	0.43
1:E:634:LEU:HD23	1:E:634:LEU:H	1.83	0.43
1:E:1021:GLU:O	1:E:1024:THR:OG1	2.24	0.43
1:E:1038:ASP:O	1:E:1042:PHE:HB2	2.18	0.43
1:E:1058:HIS:HB2	1:E:1061:ARG:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1271:ARG:O	1:E:1271:ARG:HD3	2.18	0.43
1:E:2244:LEU:HD23	1:E:2245:TRP:CZ3	2.53	0.43
1:E:2811:MET:HE2	1:E:2811:MET:HB3	1.89	0.43
1:F:1109:PRO:HB3	1:F:1153:ARG:HD3	1.99	0.43
1:F:2033:ALA:HB1	1:F:2174:TRP:HE1	1.84	0.43
1:F:2209:LYS:HB3	1:F:2209:LYS:HE3	1.75	0.43
1:A:43:SER:OG	1:A:346:PRO:O	2.36	0.43
1:A:740:LEU:HD13	1:A:777:LEU:HD23	2.00	0.43
1:A:1502:PHE:C	1:A:1502:PHE:CD1	2.97	0.43
1:A:2114:TYR:HB3	1:A:2142:ALA:HB2	2.01	0.43
1:A:2186:VAL:HG11	1:A:2249:ARG:HG3	2.00	0.43
1:C:654:MET:O	1:C:658:THR:HG22	2.19	0.43
1:C:2244:LEU:HD23	1:C:2245:TRP:CZ3	2.53	0.43
1:C:2639:PHE:HD1	1:C:2644:PHE:HB3	1.83	0.43
1:C:2874:THR:O	1:C:2875:SER:HB3	2.18	0.43
1:D:116:VAL:HG22	1:D:117:PRO:HD3	1.99	0.43
1:D:488:LYS:HA	1:D:493:GLY:H	1.84	0.43
1:D:1084:PRO:HG2	1:D:1260:GLN:NE2	2.34	0.43
1:D:2640:LEU:HD23	1:D:3020:ARG:HD2	2.00	0.43
1:D:2692:GLU:HA	1:D:2697:ILE:HG21	2.00	0.43
1:D:2768:SER:HB2	1:D:2769:MET:SD	2.58	0.43
1:D:2945:ASP:OD1	1:D:2945:ASP:N	2.52	0.43
1:E:2293:LEU:O	1:E:2297:VAL:HG13	2.19	0.43
1:E:2321:ARG:O	1:E:2329:ASN:ND2	2.52	0.43
1:F:890:MET:HE2	1:F:890:MET:HA	2.00	0.43
1:F:1388:ILE:HA	1:F:1393:HIS:HA	2.00	0.43
1:F:2446:GLY:HA2	1:F:2800:ILE:HA	2.00	0.43
1:A:695:CYS:O	1:A:699:LEU:HG	2.18	0.43
1:A:825:HIS:HD2	1:A:2418:PRO:HA	1.84	0.43
1:A:878:ILE:N	1:A:879:PRO:HD3	2.34	0.43
1:A:1619:ASP:OD1	1:A:1620:LEU:N	2.52	0.43
1:A:2884:THR:HG23	1:A:2954:PHE:CE2	2.54	0.43
1:B:117:PRO:HG3	1:B:173:GLN:HA	2.00	0.43
1:B:2145:ILE:HD11	1:B:2192:TRP:CZ3	2.54	0.43
1:B:2448:GLU:OE1	1:B:2458:ARG:NH2	2.40	0.43
1:B:2462:GLU:HG2	1:B:2936:PRO:HB3	2.00	0.43
1:C:48:THR:HG21	1:C:347:GLY:N	2.33	0.43
1:C:427:PRO:CD	2:C:3101:FMN:H6	2.49	0.43
1:C:640:MET:HE1	1:C:879:PRO:HA	2.00	0.43
1:C:1021:GLU:O	1:C:1024:THR:OG1	2.26	0.43
1:C:2670:THR:OG1	1:C:2749:ASP:OD2	2.24	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:700:ASP:OD1	1:D:854:ARG:NH1	2.41	0.43
1:D:717:ILE:HG23	1:D:727:TYR:HD2	1.84	0.43
1:D:1972:GLN:HA	1:D:1976:ARG:NH1	2.33	0.43
1:E:2358:ASP:OD1	1:E:2358:ASP:N	2.39	0.43
1:E:2561:VAL:O	1:E:2565:PRO:HD3	2.19	0.43
1:F:2066:ALA:HB1	1:F:2101:ARG:HG2	2.01	0.43
1:F:2223:PRO:HG3	1:F:2243:LEU:HD11	2.01	0.43
1:F:2273:GLY:O	1:F:2317:ILE:HG13	2.19	0.43
1:F:2648:GLU:HB3	1:F:2811:MET:HE1	1.99	0.43
1:A:1653:LEU:HD23	1:A:1653:LEU:HA	1.92	0.42
1:B:197:MET:HE1	1:B:286:PHE:HB2	2.00	0.42
1:B:453:VAL:HA	1:B:486:LEU:HD21	2.00	0.42
1:B:839:LEU:HD13	1:B:839:LEU:HA	1.82	0.42
1:B:2874:THR:OG1	1:B:2913:HIS:ND1	2.47	0.42
1:C:153:LEU:HB3	1:C:315:LEU:HD11	2.00	0.42
1:C:1087:LEU:HD22	1:C:1161:VAL:HG21	2.01	0.42
1:C:2392:ALA:O	1:C:2395:GLN:HG3	2.19	0.42
1:C:2679:ASN:O	1:E:2536:PRO:HA	2.18	0.42
1:C:2714:ILE:HG12	1:E:2725:VAL:HG13	2.01	0.42
1:D:48:THR:HG21	1:D:347:GLY:N	2.34	0.42
1:D:705:ASP:O	1:D:709:VAL:HG23	2.18	0.42
1:D:736:TYR:CD1	1:D:784:LEU:HD21	2.53	0.42
1:D:1112:GLU:HB3	1:D:1181:ARG:HH21	1.84	0.42
1:D:2393:ARG:CB	1:D:2396:MET:HE3	2.49	0.42
1:D:2701:HIS:O	1:D:2704:GLN:HG2	2.19	0.42
1:E:47:GLU:O	1:E:50:GLU:HG3	2.19	0.42
1:E:705:ASP:O	1:E:709:VAL:HG23	2.18	0.42
1:E:2261:ARG:HG2	1:E:2261:ARG:HH11	1.83	0.42
1:E:3003:ARG:H	1:E:3003:ARG:HG2	1.59	0.42
1:F:417:ARG:NH2	1:F:474:THR:OG1	2.51	0.42
1:F:2334:ALA:O	1:F:2337:GLU:HG2	2.19	0.42
1:F:2869:ILE:HD13	1:F:2973:MET:HB2	2.01	0.42
1:A:704:GLY:C	1:A:851:GLN:HE22	2.26	0.42
1:A:736:TYR:CD1	1:A:784:LEU:HD21	2.54	0.42
1:A:1038:ASP:O	1:A:1042:PHE:HB2	2.18	0.42
1:A:1109:PRO:HB3	1:A:1153:ARG:HD3	2.02	0.42
1:B:1618:ARG:HH12	1:B:1622:PRO:HA	1.84	0.42
1:C:150:GLN:HG3	1:C:319:ILE:HD11	2.01	0.42
1:C:1099:ILE:HD13	1:C:1117:LEU:HD21	2.01	0.42
1:C:2183:TYR:H	1:D:2015:GLU:CD	2.27	0.42
1:D:33:PRO:O	1:D:339:ARG:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1672:ILE:HD12	1:E:220:ARG:HH11	1.84	0.42
1:D:2452:TYR:HA	1:D:2518:VAL:HG22	2.00	0.42
1:E:418:SER:HB3	1:E:443:HIS:CD2	2.54	0.42
1:E:1502:PHE:CD1	1:E:1502:PHE:C	2.97	0.42
1:E:2766:ASP:HB2	1:E:2769:MET:HE1	2.02	0.42
1:F:119:VAL:CG2	1:F:150:GLN:HE22	2.29	0.42
1:F:651:VAL:HG13	1:F:877:ILE:HD13	2.00	0.42
1:A:846:VAL:HG13	1:A:856:TRP:HB3	2.01	0.42
1:A:1613:PHE:O	1:A:1617:ILE:HG23	2.19	0.42
1:A:2037:ASP:OD1	1:A:2786:ARG:NH2	2.52	0.42
1:A:2313:ALA:HB1	1:A:2370:ILE:HD11	2.02	0.42
1:A:2536:PRO:HA	1:D:2679:ASN:O	2.19	0.42
1:B:88:PHE:CZ	1:B:117:PRO:HB2	2.54	0.42
1:B:654:MET:O	1:B:658:THR:HG22	2.19	0.42
1:B:729:GLY:HA3	1:B:734:MET:HE3	2.02	0.42
1:B:1231:ASN:HB3	1:B:1234:HIS:HD2	1.85	0.42
1:B:2003:ALA:O	1:B:2006:SER:OG	2.25	0.42
1:B:2341:VAL:HG21	1:B:2378:LEU:HB2	2.01	0.42
1:B:2705:SER:O	1:B:3034:ARG:NH2	2.52	0.42
1:B:2720:CYS:HB2	1:B:2979:PHE:H	1.84	0.42
1:C:105:SER:HG	1:C:108:HIS:HD1	1.61	0.42
1:C:504:GLY:HA3	1:C:947:ARG:HG3	2.00	0.42
1:C:1457:LEU:HG	1:C:1458:LEU:N	2.34	0.42
1:C:2780:PHE:HB3	1:C:2792:VAL:HG21	2.00	0.42
1:D:453:VAL:HA	1:D:486:LEU:HD21	2.00	0.42
1:D:521:GLU:HA	1:D:524:GLU:HG3	2.00	0.42
1:D:1707:GLU:HG3	1:D:1708:TYR:CD1	2.54	0.42
1:D:2718:ALA:H	1:D:2722:THR:CG2	2.32	0.42
1:D:2752:LEU:HD23	1:D:2755:ILE:HD11	2.02	0.42
1:E:1099:ILE:HD11	1:E:1176:PHE:CD2	2.55	0.42
1:E:2293:LEU:HD21	1:E:2314:HIS:CG	2.54	0.42
1:E:2462:GLU:HG2	1:E:2936:PRO:HB3	2.00	0.42
1:E:2648:GLU:HG2	1:E:2651:ARG:NH1	2.33	0.42
1:E:2838:LEU:HD12	1:E:2886:LEU:HD12	2.00	0.42
1:F:425:MET:N	1:F:429:THR:OG1	2.52	0.42
1:F:779:ARG:HD2	1:F:831:PHE:CE2	2.55	0.42
1:F:1368:THR:HG23	1:F:1374:PHE:O	2.20	0.42
1:F:1457:LEU:HG	1:F:1458:LEU:N	2.34	0.42
1:A:222:VAL:HG11	1:C:1675:ALA:HB1	2.00	0.42
1:A:820:GLU:OE1	1:A:820:GLU:N	2.27	0.42
1:A:1368:THR:HG21	1:A:1376:VAL:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2725:VAL:HG13	1:D:2714:ILE:HG12	2.00	0.42
1:B:1335:ALA:HB3	1:B:1686:GLU:HB2	2.02	0.42
1:B:1985:ARG:HD2	1:B:1986:LEU:HD12	2.01	0.42
1:B:2152:ASP:OD1	1:B:2155:ARG:HG3	2.18	0.42
1:B:2286:TYR:HD2	1:B:2316:LEU:HD12	1.84	0.42
1:B:2389:ALA:O	1:B:2393:ARG:HG2	2.19	0.42
1:B:2482:ILE:HD12	1:B:2482:ILE:HA	1.89	0.42
1:B:2881:PRO:HB3	1:B:2947:GLU:HG3	2.02	0.42
1:C:1103:VAL:HA	1:C:1109:PRO:HD3	2.01	0.42
1:C:1700:THR:O	1:C:1704:LYS:HG3	2.19	0.42
1:C:1975:GLY:HA3	1:C:1976:ARG:NH2	2.34	0.42
1:D:2452:TYR:O	1:D:2457:THR:OG1	2.36	0.42
1:E:52:LEU:HD11	1:E:369:ALA:HA	2.01	0.42
1:E:818:ASP:O	1:E:822:VAL:HG12	2.19	0.42
1:E:1977:GLU:O	1:E:1980:LEU:HG	2.20	0.42
1:E:2692:GLU:HA	1:E:2697:ILE:HG21	2.01	0.42
1:F:97:LEU:HD13	1:F:103:VAL:HG11	2.01	0.42
1:F:550:VAL:HB	1:F:564:MET:HE2	2.01	0.42
1:F:783:ARG:HB3	1:F:2418:PRO:HD3	2.01	0.42
1:F:877:ILE:HG22	1:F:879:PRO:HD3	2.01	0.42
1:F:1068:VAL:HG11	1:F:1226:VAL:HG21	2.00	0.42
1:F:2392:ALA:O	1:F:2395:GLN:HG3	2.19	0.42
1:F:2452:TYR:CD2	1:F:2461:MET:HG3	2.54	0.42
1:F:2705:SER:O	1:F:3034:ARG:NH2	2.52	0.42
1:F:3021:LEU:HA	1:F:3031:MET:HE1	2.02	0.42
1:A:1675:ALA:HB1	1:B:222:VAL:HG11	2.01	0.42
1:A:2071:GLY:HA3	1:A:2169:TYR:HA	2.01	0.42
1:A:2669:GLY:O	1:A:2672:MET:HG3	2.18	0.42
1:B:1321:MET:HE2	1:B:1321:MET:HB3	1.80	0.42
1:B:2259:ALA:HA	1:B:2309:ARG:CZ	2.50	0.42
1:B:2725:VAL:CG2	1:F:2714:ILE:HG12	2.48	0.42
1:C:1021:GLU:OE2	1:C:1021:GLU:N	2.35	0.42
1:C:1048:ASN:OD1	1:C:1048:ASN:C	2.62	0.42
1:C:1209:ARG:HB2	1:C:1297:VAL:HG22	2.02	0.42
1:C:2440:LEU:HD23	1:C:2440:LEU:HA	1.89	0.42
1:C:2757:GLY:HA3	1:E:2690:PHE:CD2	2.54	0.42
1:D:22:HIS:ND1	1:D:378:PHE:O	2.42	0.42
1:D:457:ILE:H	1:D:457:ILE:HG12	1.68	0.42
1:D:789:PHE:CE1	1:D:2507:VAL:HG21	2.54	0.42
1:D:2439:ASP:OD1	1:D:2439:ASP:N	2.53	0.42
1:E:716:ILE:HG22	1:E:720:MET:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:796:PHE:HB3	1:E:802:LEU:HD12	2.01	0.42
1:E:846:VAL:HG13	1:E:856:TRP:HB3	2.00	0.42
1:F:38:PHE:HZ	1:F:158:LEU:HD22	1.85	0.42
1:F:2293:LEU:C	1:F:2295:ALA:H	2.28	0.42
1:F:2530:ASP:HB2	1:F:2533:HIS:CD2	2.54	0.42
1:A:47:GLU:O	1:A:50:GLU:HG3	2.19	0.42
1:A:327:VAL:O	1:A:331:THR:HG23	2.20	0.42
1:A:1640:ARG:HB2	1:A:1643:GLU:HB3	2.01	0.42
1:A:1656:GLN:O	1:A:1656:GLN:NE2	2.51	0.42
1:A:1994:ASP:OD1	1:A:1994:ASP:N	2.47	0.42
1:A:2314:HIS:NE2	1:A:2316:LEU:HD22	2.34	0.42
1:B:229:ILE:HG22	1:B:324:VAL:HG12	2.02	0.42
1:B:636:GLY:HA3	2:B:3101:FMN:O4'	2.18	0.42
1:B:779:ARG:HD2	1:B:831:PHE:CD2	2.55	0.42
1:C:457:ILE:H	1:C:457:ILE:HG12	1.66	0.42
1:C:2223:PRO:HG3	1:C:2243:LEU:HD11	2.01	0.42
1:D:532:ILE:HD11	1:D:534:ILE:HG12	2.01	0.42
1:D:746:LEU:HD13	1:D:845:PHE:HB3	2.02	0.42
1:D:759:SER:OG	1:D:760:VAL:N	2.53	0.42
1:D:2070:GLU:OE2	1:D:2108:ASN:ND2	2.52	0.42
1:D:2391:LYS:O	1:D:2394:GLU:HG3	2.19	0.42
1:D:2615:GLY:HA3	1:D:3031:MET:O	2.20	0.42
1:D:2907:GLN:OE1	1:D:2921:PHE:HB3	2.18	0.42
1:E:108:HIS:O	1:E:114:VAL:HG11	2.20	0.42
1:F:581:ASP:OD1	1:F:614:TYR:OH	2.24	0.42
1:F:1231:ASN:HB3	1:F:1234:HIS:HD2	1.85	0.42
1:F:1490:SER:OG	1:F:1491:GLN:OE1	2.25	0.42
1:F:2259:ALA:HA	1:F:2309:ARG:CZ	2.49	0.42
1:F:2561:VAL:O	1:F:2565:PRO:HD3	2.20	0.42
1:F:2974:LEU:HB2	1:F:2986:VAL:HB	2.02	0.42
1:A:943:ARG:CZ	1:A:946:GLY:HA2	2.50	0.42
1:A:1209:ARG:NH2	1:A:1307:GLU:OE1	2.45	0.42
1:A:1404:THR:O	1:A:1407:THR:HG22	2.20	0.42
1:A:1488:ARG:O	1:A:1488:ARG:HG2	2.20	0.42
1:A:2511:HIS:O	1:A:2515:VAL:HG13	2.20	0.42
1:A:2690:PHE:CD2	1:D:2757:GLY:HA3	2.55	0.42
1:B:72:LEU:HD22	1:B:72:LEU:HA	1.93	0.42
1:B:251:TYR:CD1	1:B:251:TYR:C	2.98	0.42
1:B:581:ASP:OD1	1:B:614:TYR:OH	2.27	0.42
1:B:1209:ARG:HB2	1:B:1297:VAL:HG22	2.01	0.42
1:B:2315:ALA:HB1	1:B:2374:LEU:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:188:ILE:HD12	1:C:291:LEU:HD21	2.00	0.42
1:C:736:TYR:O	1:C:740:LEU:HG	2.20	0.42
1:C:1075:PRO:HD2	1:C:1076:LEU:HD22	2.01	0.42
1:C:1482:TYR:CG	1:C:1564:PRO:HG3	2.54	0.42
1:C:2197:GLN:HB3	1:C:2209:LYS:HG2	2.01	0.42
1:C:2393:ARG:NH1	1:C:2396:MET:SD	2.93	0.42
1:D:117:PRO:HG3	1:D:173:GLN:HA	2.00	0.42
1:D:968:PRO:HG2	1:D:970:ASN:OD1	2.20	0.42
1:D:2114:TYR:HB3	1:D:2142:ALA:HB2	2.02	0.42
1:E:426:THR:HB	1:E:427:PRO:HD3	2.01	0.42
1:E:2392:ALA:O	1:E:2396:MET:HG3	2.19	0.42
1:E:2701:HIS:O	1:E:2704:GLN:HG2	2.19	0.42
1:E:3021:LEU:HA	1:E:3031:MET:HE1	2.02	0.42
1:F:85:PRO:HG2	1:F:108:HIS:HD2	1.84	0.42
1:F:2266:ARG:HH12	1:F:2366:ALA:HA	1.85	0.42
1:A:171:LEU:CD1	1:A:312:ALA:HA	2.50	0.42
1:A:968:PRO:HG2	1:A:970:ASN:OD1	2.20	0.42
1:A:2663:GLY:HA2	1:A:2715:HIS:HB3	2.00	0.42
1:A:2974:LEU:HB2	1:A:2986:VAL:HB	2.00	0.42
1:B:1602:LEU:HD21	1:B:1652:LEU:HG	2.02	0.42
1:C:513:SER:OG	2:C:3101:FMN:O2	2.26	0.42
1:C:1388:ILE:HB	1:D:2262:ASP:CG	2.44	0.42
1:C:2101:ARG:O	1:C:2101:ARG:HD3	2.19	0.42
1:C:2595:THR:OG1	1:C:2596:LYS:N	2.53	0.42
1:C:2725:VAL:HG22	1:E:2714:ILE:HG23	2.00	0.42
1:D:107:LYS:HE2	1:D:107:LYS:HA	2.01	0.42
1:D:427:PRO:CD	2:D:3101:FMN:H6	2.49	0.42
1:D:1276:LEU:HD13	1:D:1279:TRP:CD1	2.55	0.42
1:E:746:LEU:HD13	1:E:845:PHE:HB3	2.02	0.42
1:E:1139:VAL:HG12	1:E:1161:VAL:HG12	2.00	0.42
1:E:1151:MET:SD	1:E:1151:MET:C	3.03	0.42
1:E:1302:ILE:HA	1:E:1307:GLU:HA	2.01	0.42
1:E:2101:ARG:O	1:E:2101:ARG:HD3	2.20	0.42
1:E:2113:ARG:HG3	1:E:2114:TYR:HD1	1.83	0.42
1:F:407:LEU:HB2	1:F:906:ILE:HD11	2.02	0.42
1:F:737:LEU:HD11	1:F:741:ARG:HE	1.85	0.42
1:F:1279:TRP:HD1	1:F:1325:ALA:HB2	1.85	0.42
1:F:1600:PRO:HG2	1:F:1603:VAL:O	2.20	0.42
1:F:2146:ALA:O	1:F:2175:LEU:HA	2.20	0.42
1:F:2238:MET:HE2	1:F:2238:MET:HB2	1.89	0.42
1:F:2317:ILE:C	1:F:2317:ILE:HD12	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1253:MET:HA	1:A:1256:SER:HB3	2.02	0.42
1:A:1689:VAL:HA	1:A:1719:GLU:HG2	2.01	0.42
1:A:2392:ALA:O	1:A:2396:MET:HG3	2.20	0.42
1:A:2561:VAL:O	1:A:2565:PRO:HD3	2.20	0.42
1:B:148:HIS:CG	1:B:149:SER:H	2.38	0.42
1:B:1302:ILE:HA	1:B:1307:GLU:HA	2.02	0.42
1:B:1576:GLU:O	1:B:1579:ARG:HG3	2.20	0.42
1:B:2129:ILE:H	1:B:2129:ILE:HD12	1.85	0.42
1:B:2430:TRP:CZ3	1:B:2970:LYS:HB3	2.54	0.42
1:B:2518:VAL:HG12	1:B:2606:PRO:HB3	2.02	0.42
1:C:679:SER:OG	1:C:680:GLN:N	2.53	0.42
1:C:2038:ASP:OD2	1:C:2943:CYS:HA	2.19	0.42
1:C:2252:GLY:O	1:C:2256:THR:OG1	2.26	0.42
1:C:2694:LEU:H	1:C:2694:LEU:HG	1.66	0.42
1:D:33:PRO:HB2	1:D:337:GLY:O	2.20	0.42
1:D:365:ILE:HD12	1:D:365:ILE:HA	1.89	0.42
1:D:654:MET:O	1:D:658:THR:HG22	2.19	0.42
1:E:180:THR:HA	1:E:284:VAL:HG11	2.01	0.42
1:E:943:ARG:CZ	1:E:946:GLY:HA2	2.50	0.42
1:E:1072:PHE:CE1	1:E:1214:ILE:HD11	2.55	0.42
1:E:2907:GLN:OE1	1:E:2921:PHE:HB3	2.19	0.42
1:F:145:MET:HG2	1:F:155:VAL:HG13	2.01	0.42
1:F:2827:ASP:HB2	1:F:2981:HIS:HB3	2.01	0.42
1:A:418:SER:HB3	1:A:443:HIS:CD2	2.55	0.42
1:A:981:ARG:HB2	1:A:992:SER:OG	2.20	0.42
1:A:1618:ARG:HD2	1:A:1618:ARG:HA	1.73	0.42
1:A:2769:MET:O	1:A:2773:ARG:HG3	2.20	0.42
1:B:65:LEU:HD12	1:B:166:VAL:HG12	2.02	0.42
1:B:1336:PHE:HA	1:B:1337:PRO:HD3	1.89	0.42
1:B:2066:ALA:HB1	1:B:2101:ARG:HG2	2.01	0.42
1:B:2561:VAL:O	1:B:2565:PRO:HD3	2.20	0.42
1:B:2713:MET:HE3	1:B:2713:MET:HB3	1.94	0.42
1:C:376:ASN:HB3	1:C:384:PRO:HD3	2.02	0.42
1:C:428:THR:HA	1:C:866:HIS:CE1	2.55	0.42
1:C:557:VAL:HG11	1:C:560:LYS:HD2	2.01	0.42
1:C:1387:ILE:C	1:C:1387:ILE:HD12	2.44	0.42
1:C:1514:LEU:HD13	1:C:1514:LEU:HA	1.86	0.42
1:C:2262:ASP:CG	1:D:1388:ILE:HB	2.45	0.42
1:C:2915:LYS:HB2	1:C:2915:LYS:HE2	1.83	0.42
2:C:3101:FMN:HM73	2:C:3101:FMN:HM81	1.87	0.42
1:D:547:ILE:CG2	1:D:587:THR:HG21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1012:ASP:OD1	1:D:1012:ASP:N	2.49	0.42
1:D:1259:ALA:HB2	1:D:1321:MET:HE1	2.01	0.42
1:D:1668:ASP:O	1:D:1672:ILE:HG12	2.20	0.42
1:E:97:LEU:HD13	1:E:103:VAL:HG11	2.02	0.42
1:E:228:SER:OG	1:E:229:ILE:HG23	2.20	0.42
1:E:473:ARG:HG2	1:E:1009:ASN:HD21	1.85	0.42
1:E:1398:ASP:N	1:E:1398:ASP:OD1	2.50	0.42
1:F:734:MET:HG2	1:F:738:GLN:HG3	2.02	0.42
1:F:958:ASP:OD1	1:F:958:ASP:N	2.53	0.42
1:F:1374:PHE:HZ	1:F:1409:VAL:HG21	1.85	0.42
1:F:2129:ILE:HD12	1:F:2129:ILE:H	1.84	0.42
1:F:2273:GLY:HA3	1:F:2314:HIS:HE1	1.84	0.42
1:F:2486:ASP:HA	1:F:2490:PRO:HA	2.02	0.42
1:A:220:ARG:HE	1:A:247:ARG:NH1	2.17	0.41
1:A:473:ARG:HG2	1:A:1009:ASN:HD21	1.85	0.41
1:B:168:LEU:HD23	1:B:171:LEU:HD13	2.01	0.41
1:B:841:LYS:HD2	1:B:842:PRO:HD2	2.02	0.41
1:B:2332:ILE:HD12	1:B:2332:ILE:H	1.85	0.41
1:B:2663:GLY:HA2	1:B:2715:HIS:HB3	2.02	0.41
1:B:2710:TYR:HE1	1:F:2828:GLY:HA3	1.85	0.41
1:C:107:LYS:HE2	1:C:107:LYS:HA	2.01	0.41
1:C:2547:PHE:CD1	1:C:2582:ILE:HA	2.55	0.41
1:D:52:LEU:HD11	1:D:369:ALA:HA	2.02	0.41
1:D:175:ILE:HD13	1:D:175:ILE:HA	1.87	0.41
1:D:504:GLY:HA3	1:D:947:ARG:HG3	2.02	0.41
1:D:2334:ALA:O	1:D:2337:GLU:HG2	2.20	0.41
1:E:38:PHE:HD2	1:E:155:VAL:HG23	1.85	0.41
1:E:171:LEU:CD1	1:E:312:ALA:HA	2.50	0.41
1:E:561:PRO:HA	1:E:596:ASN:HB2	2.02	0.41
1:E:779:ARG:HD2	1:E:831:PHE:CE2	2.55	0.41
1:E:982:LEU:HD23	1:E:982:LEU:HA	1.85	0.41
1:E:1126:VAL:HG22	1:E:1277:VAL:HA	2.02	0.41
1:E:1388:ILE:HA	1:E:1393:HIS:HA	2.02	0.41
1:E:2459:PHE:CZ	1:E:2928:GLN:HB3	2.55	0.41
1:E:2673:GLN:HG2	1:E:2677:HIS:CE1	2.54	0.41
1:F:425:MET:H	1:F:448:ALA:HB2	1.85	0.41
1:F:636:GLY:HA3	2:F:3101:FMN:O4'	2.20	0.41
1:F:2136:ARG:NH1	1:F:2351:ALA:HB2	2.34	0.41
1:F:2318:GLY:HA2	1:F:2375:THR:HG23	2.02	0.41
1:A:1076:LEU:HD21	1:A:1210:ARG:HD3	2.02	0.41
1:A:1492:ILE:HB	1:A:1545:ARG:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2124:ALA:O	1:A:2159:TYR:OH	2.29	0.41
1:A:2907:GLN:OE1	1:A:2921:PHE:HB3	2.19	0.41
1:B:699:LEU:HD12	1:B:854:ARG:HA	2.02	0.41
1:B:2701:HIS:CE1	1:B:2704:GLN:HE21	2.37	0.41
1:B:2747:LEU:HD23	1:B:2796:GLY:C	2.45	0.41
1:C:785:HIS:CE1	1:C:787:GLN:HB3	2.55	0.41
1:C:1334:TYR:CE1	1:C:1422:MET:HE1	2.56	0.41
1:C:1517:VAL:HA	1:C:1660:PRO:HB3	2.02	0.41
1:C:2549:PHE:CZ	1:C:2581:VAL:HG12	2.54	0.41
1:C:2692:GLU:HA	1:C:2697:ILE:HG21	2.02	0.41
1:C:2963:LEU:HB3	1:C:2967:PHE:HB3	2.01	0.41
1:D:47:GLU:O	1:D:50:GLU:HG3	2.20	0.41
1:D:148:HIS:CG	1:D:149:SER:H	2.37	0.41
1:D:569:GLY:HA3	1:D:664:TRP:HH2	1.85	0.41
1:D:2039:ARG:HA	1:D:2039:ARG:HD2	1.87	0.41
1:D:2460:GLU:HB2	1:D:2464:GLU:OE1	2.20	0.41
1:D:2547:PHE:CD1	1:D:2582:ILE:HA	2.56	0.41
1:E:695:CYS:O	1:E:699:LEU:HG	2.20	0.41
1:E:759:SER:OG	1:E:760:VAL:N	2.53	0.41
1:E:1577:PHE:CE2	1:E:1654:ALA:HA	2.55	0.41
1:E:2518:VAL:HG12	1:E:2606:PRO:HB3	2.02	0.41
1:E:2661:THR:O	1:E:2726:SER:HB2	2.20	0.41
1:E:2745:GLY:HA3	1:E:2799:THR:HA	2.02	0.41
1:F:52:LEU:HD11	1:F:369:ALA:HA	2.02	0.41
1:F:654:MET:O	1:F:658:THR:HG22	2.20	0.41
1:F:779:ARG:HD2	1:F:831:PHE:CD2	2.55	0.41
1:F:1377:LEU:O	1:F:1381:ARG:HB2	2.21	0.41
1:F:1977:GLU:O	1:F:1980:LEU:HG	2.20	0.41
1:F:1985:ARG:HH11	1:F:1986:LEU:HD23	1.84	0.41
1:F:2438:ALA:HA	1:F:2806:ASP:OD2	2.20	0.41
1:F:2861:VAL:HG13	1:F:2865:ASP:HB3	2.02	0.41
1:F:2881:PRO:HB3	1:F:2947:GLU:HG3	2.03	0.41
1:A:153:LEU:HB3	1:A:315:LEU:HD11	2.01	0.41
1:A:1632:ASP:OD1	1:A:1632:ASP:N	2.50	0.41
1:A:2482:ILE:HD11	1:A:2510:TYR:CZ	2.55	0.41
1:A:2558:ARG:NH2	1:A:2561:VAL:O	2.53	0.41
1:B:1068:VAL:HG11	1:B:1226:VAL:HG21	2.02	0.41
1:B:1502:PHE:CD1	1:B:1502:PHE:C	2.98	0.41
1:B:1977:GLU:O	1:B:1980:LEU:HG	2.20	0.41
1:B:2538:LEU:HG	1:F:2682:GLY:HA3	2.01	0.41
1:C:150:GLN:O	1:C:150:GLN:HG2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:968:PRO:HG2	1:C:970:ASN:OD1	2.20	0.41
1:C:1302:ILE:HA	1:C:1307:GLU:HA	2.03	0.41
1:C:1388:ILE:HA	1:C:1393:HIS:HA	2.02	0.41
1:C:1618:ARG:HA	1:C:1618:ARG:HD2	1.78	0.41
1:C:2052:LEU:HD23	1:C:2052:LEU:HA	1.87	0.41
1:D:1038:ASP:HB3	1:D:1040:PRO:HD2	2.02	0.41
1:D:1083:VAL:HG22	1:D:1084:PRO:HD2	2.03	0.41
1:D:1209:ARG:NH2	1:D:1307:GLU:OE1	2.44	0.41
1:D:2370:ILE:HD12	1:D:2370:ILE:O	2.21	0.41
1:E:45:TRP:HB3	1:E:119:VAL:HG12	2.01	0.41
1:E:516:ILE:HA	1:E:517:PRO:HD3	1.90	0.41
1:E:1165:ASP:OD1	1:E:1165:ASP:N	2.52	0.41
1:E:1220:MET:HE2	1:E:1251:HIS:H	1.85	0.41
1:E:1618:ARG:O	1:E:1618:ARG:NH1	2.46	0.41
1:E:2262:ASP:OD2	1:E:2265:SER:HB3	2.20	0.41
1:F:33:PRO:HB3	1:F:143:VAL:HG11	2.01	0.41
1:F:33:PRO:O	1:F:339:ARG:N	2.47	0.41
1:F:108:HIS:O	1:F:114:VAL:HG11	2.20	0.41
1:F:504:GLY:HA3	1:F:947:ARG:HG3	2.02	0.41
1:F:1209:ARG:HB2	1:F:1297:VAL:HG22	2.03	0.41
1:F:1641:PRO:O	1:F:1644:MET:HG3	2.20	0.41
1:F:2726:SER:O	1:F:2729:GLU:HG2	2.20	0.41
1:A:572:GLY:HA3	2:A:3101:FMN:HM83	2.02	0.41
1:A:1021:GLU:OE1	1:A:1021:GLU:N	2.35	0.41
1:A:2141:GLY:HA2	1:A:2171:ALA:HB2	2.02	0.41
1:A:2694:LEU:HD13	1:D:2719:ALA:HB1	2.02	0.41
1:A:2766:ASP:HB2	1:A:2769:MET:HE1	2.01	0.41
1:B:737:LEU:HD11	1:B:741:ARG:HE	1.85	0.41
1:B:779:ARG:HD2	1:B:831:PHE:CE2	2.55	0.41
1:B:2039:ARG:HA	1:B:2039:ARG:HD2	1.92	0.41
1:B:2438:ALA:HA	1:B:2806:ASP:OD2	2.19	0.41
1:B:2752:LEU:HD23	1:B:2755:ILE:HD11	2.02	0.41
1:C:549:SER:O	1:C:553:ILE:HG13	2.20	0.41
1:C:1076:LEU:HB3	1:C:1265:ALA:HB1	2.01	0.41
1:C:1190:PRO:HD2	1:C:1282:ARG:HH22	1.85	0.41
1:C:1207:ARG:HD2	1:C:1207:ARG:HA	1.77	0.41
1:C:1407:THR:O	1:C:1411:MET:HG2	2.20	0.41
1:C:1594:ILE:HD12	1:C:1594:ILE:HA	1.90	0.41
1:C:2059:ASP:OD1	1:C:2059:ASP:N	2.51	0.41
1:C:2557:ALA:HB1	1:C:2579:TRP:HB2	2.01	0.41
1:C:2675:MET:HG3	1:C:2676:TYR:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2719:ALA:HB1	1:E:2694:LEU:HD13	2.01	0.41
1:D:1514:LEU:HD12	1:D:1530:GLY:HA3	2.03	0.41
1:D:1697:GLY:O	1:D:1701:ASN:ND2	2.43	0.41
1:D:2631:ASN:HB3	1:D:2702:VAL:HG21	2.01	0.41
1:E:727:TYR:CD1	1:E:849:ILE:HD11	2.55	0.41
1:E:820:GLU:H	1:E:820:GLU:CD	2.21	0.41
1:E:1336:PHE:CE2	1:E:1444:ALA:HA	2.46	0.41
1:E:1368:THR:HG21	1:E:1376:VAL:H	1.84	0.41
1:E:2751:THR:O	1:E:2755:ILE:HG12	2.19	0.41
1:F:453:VAL:HA	1:F:486:LEU:HD21	2.02	0.41
1:F:1419:VAL:HG21	1:F:1447:CYS:HB3	2.02	0.41
1:F:1577:PHE:CE2	1:F:1654:ALA:HA	2.55	0.41
1:F:1690:LYS:CG	1:F:1719:GLU:HB3	2.50	0.41
1:F:2174:TRP:CH2	1:F:2209:LYS:HG2	2.55	0.41
1:F:2561:VAL:HG11	1:F:2570:ILE:HG12	2.03	0.41
1:A:260:GLU:HG2	1:A:272:VAL:HG11	2.03	0.41
1:A:453:VAL:HA	1:A:486:LEU:HD21	2.01	0.41
1:A:488:LYS:HA	1:A:488:LYS:HD2	1.85	0.41
1:A:543:THR:OG1	1:A:544:ILE:N	2.53	0.41
1:A:727:TYR:CD1	1:A:849:ILE:HD11	2.55	0.41
1:A:1310:ASP:C	1:A:1310:ASP:OD1	2.64	0.41
1:A:2321:ARG:HH11	1:A:2345:SER:HB3	1.85	0.41
1:B:97:LEU:HD13	1:B:103:VAL:HG11	2.02	0.41
1:B:1038:ASP:HB3	1:B:1040:PRO:HD2	2.02	0.41
1:B:1149:THR:O	1:B:1182:THR:OG1	2.35	0.41
1:B:1388:ILE:HA	1:B:1393:HIS:HA	2.02	0.41
1:B:2008:LEU:HA	1:B:2011:LEU:CD2	2.50	0.41
1:B:2151:LEU:HD12	1:B:2151:LEU:HA	1.84	0.41
1:B:2828:GLY:HA3	1:F:2710:TYR:HE1	1.85	0.41
1:C:47:GLU:O	1:C:50:GLU:HG3	2.19	0.41
1:C:893:PRO:HG2	1:C:896:GLU:HB2	2.02	0.41
1:C:2005:ASP:O	1:C:2009:ILE:HG23	2.21	0.41
1:C:2234:SER:O	1:C:2237:GLU:HG3	2.21	0.41
1:C:2695:PRO:HD3	1:E:2666:MET:HG2	2.02	0.41
1:D:50:GLU:HG2	1:D:97:LEU:HD23	2.01	0.41
1:D:1517:VAL:HG12	1:D:1566:HIS:HB2	2.03	0.41
1:D:2238:MET:HE2	1:D:2238:MET:HB2	1.70	0.41
1:E:409:THR:OG1	1:E:631:ASP:O	2.36	0.41
1:E:534:ILE:HD13	1:E:534:ILE:HA	1.89	0.41
1:E:651:VAL:HG13	1:E:877:ILE:HD13	2.03	0.41
1:E:1207:ARG:HA	1:E:1207:ARG:HD2	1.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1332:THR:HG22	1:F:1683:ARG:HB2	2.03	0.41
1:F:2672:MET:HG2	1:F:2672:MET:H	1.65	0.41
1:A:561:PRO:HA	1:A:596:ASN:HB2	2.02	0.41
1:A:1977:GLU:O	1:A:1980:LEU:HG	2.21	0.41
1:A:2509:ARG:HG2	1:A:2510:TYR:CE2	2.55	0.41
1:B:56:THR:HG21	1:B:129:ALA:HB1	2.03	0.41
1:B:119:VAL:HG23	1:B:150:GLN:NE2	2.30	0.41
1:B:796:PHE:HZ	1:B:812:LEU:HB2	1.85	0.41
1:B:1287:VAL:HG13	1:B:1315:VAL:HG21	2.02	0.41
1:B:1368:THR:HG23	1:B:1374:PHE:O	2.21	0.41
1:B:1419:VAL:HG21	1:B:1447:CYS:HB3	2.02	0.41
1:B:1582:ASP:O	1:B:1587:ARG:NH2	2.53	0.41
1:B:2317:ILE:HD12	1:B:2317:ILE:C	2.45	0.41
1:B:2915:LYS:HE2	1:B:2915:LYS:HB2	1.81	0.41
1:B:2941:LEU:HD23	1:B:2941:LEU:HA	1.94	0.41
1:C:1038:ASP:HB3	1:C:1040:PRO:HD2	2.02	0.41
1:C:1165:ASP:OD1	1:C:1165:ASP:N	2.52	0.41
1:C:1332:THR:HG22	1:C:1683:ARG:HB2	2.02	0.41
1:C:1398:ASP:N	1:C:1398:ASP:OD1	2.53	0.41
1:C:1626:LEU:HD22	1:C:1629:ILE:HD12	2.03	0.41
1:C:2297:VAL:O	1:C:2301:HIS:CE1	2.74	0.41
1:C:2558:ARG:NH2	1:C:2561:VAL:HG23	2.35	0.41
1:D:2189:LEU:HD23	1:D:2189:LEU:HA	1.93	0.41
1:D:2885:GLU:O	1:D:2889:ARG:HG3	2.20	0.41
1:D:2896:ARG:HE	1:D:2900:ALA:HB3	1.86	0.41
1:E:457:ILE:H	1:E:457:ILE:HG12	1.62	0.41
1:E:736:TYR:CD1	1:E:784:LEU:HD21	2.56	0.41
1:E:2058:ILE:HG23	1:E:2098:LEU:HD22	2.02	0.41
1:F:962:TRP:HB3	1:F:973:ALA:HB1	2.03	0.41
1:F:968:PRO:HG2	1:F:970:ASN:OD1	2.20	0.41
1:F:1618:ARG:HH11	1:F:1618:ARG:HA	1.86	0.41
1:A:425:MET:N	1:A:429:THR:OG1	2.46	0.41
1:A:1260:GLN:O	1:A:1263:VAL:HG12	2.19	0.41
1:A:2005:ASP:O	1:A:2009:ILE:HG23	2.20	0.41
1:A:2719:ALA:HB1	1:D:2694:LEU:HD13	2.03	0.41
1:B:229:ILE:CG1	1:B:237:VAL:HG22	2.51	0.41
1:B:926:ARG:HH11	1:B:937:LEU:HD21	1.86	0.41
1:B:982:LEU:HD23	1:B:982:LEU:HA	1.85	0.41
1:B:2028:PHE:HD2	1:B:2178:ALA:HB2	1.86	0.41
1:C:1985:ARG:HD3	1:C:1985:ARG:HA	1.76	0.41
1:C:2827:ASP:HB2	1:C:2981:HIS:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1693:PRO:HB2	1:D:1696:ALA:HB3	2.02	0.41
1:D:2393:ARG:HA	1:D:2396:MET:HE3	2.02	0.41
1:D:2558:ARG:HH21	1:D:2561:VAL:HG23	1.86	0.41
1:D:2973:MET:HE3	1:D:2973:MET:HB3	1.85	0.41
1:E:430:VAL:O	1:E:461:ARG:HD3	2.20	0.41
1:E:2452:TYR:HE1	1:E:2461:MET:HE3	1.85	0.41
1:E:2530:ASP:HB2	1:E:2533:HIS:CD2	2.55	0.41
1:E:2547:PHE:CD1	1:E:2582:ILE:HA	2.56	0.41
1:E:2557:ALA:HB1	1:E:2579:TRP:HB2	2.02	0.41
1:E:2861:VAL:HG13	1:E:2865:ASP:HB3	2.02	0.41
2:E:3101:FMN:H9	2:E:3101:FMN:H1'2	1.84	0.41
1:F:181:LEU:O	1:F:185:ARG:HD3	2.21	0.41
1:F:591:LEU:HD13	1:F:599:VAL:HG21	2.02	0.41
1:F:1669:LEU:HD12	1:F:1678:GLY:HA2	2.02	0.41
1:F:2390:ALA:HA	1:F:2393:ARG:HG2	2.03	0.41
1:A:705:ASP:O	1:A:709:VAL:HG23	2.20	0.41
1:A:877:ILE:C	1:A:879:PRO:HD3	2.46	0.41
1:A:2396:MET:SD	1:A:2397:SER:N	2.93	0.41
1:B:33:PRO:HB3	1:B:143:VAL:HG11	2.02	0.41
1:B:520:ASP:O	1:B:524:GLU:HG3	2.21	0.41
1:C:130:LEU:HD12	1:C:344:LEU:HD11	2.02	0.41
1:C:1055:VAL:HG21	1:C:1090:PRO:HB2	2.03	0.41
1:C:1668:ASP:O	1:C:1672:ILE:HG12	2.21	0.41
1:D:574:HIS:HA	1:D:685:ILE:HG22	2.02	0.41
1:D:890:MET:HE3	1:D:890:MET:HB3	1.94	0.41
1:D:1546:ARG:HD3	1:D:1551:GLY:HA2	2.02	0.41
1:D:2680:LEU:HD23	1:D:2680:LEU:HA	1.83	0.41
1:E:547:ILE:CG2	1:E:587:THR:HG21	2.51	0.41
1:E:1310:ASP:C	1:E:1310:ASP:OD1	2.63	0.41
1:E:1686:GLU:CD	1:E:1696:ALA:HB2	2.46	0.41
1:F:144:ALA:HB1	1:F:333:VAL:HG22	2.02	0.41
1:F:227:LEU:HA	1:F:238:ILE:HG22	2.02	0.41
1:F:921:SER:HB3	1:F:935:VAL:HG22	2.02	0.41
1:F:1158:SER:OG	1:F:1173:GLU:OE2	2.26	0.41
1:F:1271:ARG:HH11	1:F:1271:ARG:C	2.16	0.41
1:F:2537:LEU:HD23	1:F:2537:LEU:HA	1.80	0.41
1:F:2595:THR:OG1	1:F:2596:LYS:N	2.54	0.41
1:F:2874:THR:OG1	1:F:2913:HIS:ND1	2.47	0.41
1:F:2896:ARG:NH2	1:F:2901:PRO:O	2.54	0.41
1:A:880:GLY:O	1:A:884:VAL:HG22	2.21	0.41
1:A:1302:ILE:HA	1:A:1307:GLU:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1309:VAL:HG12	1:A:1325:ALA:HB3	2.03	0.41
1:A:1404:THR:O	1:A:1408:GLN:HG2	2.21	0.41
1:A:2074:HIS:O	1:A:2078:THR:HG23	2.20	0.41
1:A:2114:TYR:CD2	1:A:2137:LEU:HD23	2.56	0.41
1:A:2122:THR:HG22	1:A:2219:PRO:HA	2.02	0.41
1:A:2391:LYS:O	1:A:2394:GLU:HG3	2.21	0.41
1:A:2393:ARG:HA	1:A:2396:MET:HG3	2.02	0.41
1:B:504:GLY:HA3	1:B:947:ARG:HG3	2.02	0.41
1:B:717:ILE:HG23	1:B:727:TYR:HD2	1.86	0.41
1:B:750:GLU:OE1	1:B:750:GLU:N	2.54	0.41
1:B:968:PRO:HG2	1:B:970:ASN:OD1	2.20	0.41
1:B:1388:ILE:HB	1:E:2262:ASP:CG	2.46	0.41
1:B:1611:ARG:HA	1:B:1614:ILE:HG12	2.03	0.41
1:B:1684:PHE:O	1:B:1715:VAL:HA	2.21	0.41
1:B:2224:ARG:HA	1:B:2224:ARG:NH1	2.35	0.41
1:B:2321:ARG:HH11	1:B:2345:SER:HB3	1.86	0.41
1:B:2537:LEU:HD23	1:B:2537:LEU:HA	1.80	0.41
1:B:2974:LEU:HB2	1:B:2986:VAL:HB	2.03	0.41
1:C:746:LEU:HD13	1:C:845:PHE:HB3	2.03	0.41
1:C:1374:PHE:HZ	1:C:1409:VAL:HG21	1.86	0.41
1:C:1519:PHE:O	1:C:1664:ILE:HG12	2.20	0.41
1:C:2145:ILE:HD11	1:C:2192:TRP:CZ3	2.56	0.41
1:C:2428:PRO:HB3	1:C:2968:PRO:HB2	2.03	0.41
1:C:2833:ILE:N	1:C:2834:PRO:HD2	2.36	0.41
1:D:50:GLU:HB2	1:D:94:VAL:HG23	2.02	0.41
1:D:1585:MET:SD	1:D:1586:PRO:HD2	2.61	0.41
1:D:2038:ASP:OD2	1:D:2943:CYS:HA	2.20	0.41
1:D:2293:LEU:C	1:D:2295:ALA:H	2.28	0.41
1:D:2341:VAL:HG21	1:D:2378:LEU:HB2	2.01	0.41
1:E:22:HIS:HB2	1:E:25:VAL:HB	2.03	0.41
1:E:328:ASP:OD1	1:E:329:GLU:N	2.54	0.41
1:E:543:THR:OG1	1:E:544:ILE:N	2.54	0.41
1:E:1273:PRO:HD2	1:E:1682:GLU:HG2	2.03	0.41
1:E:1368:THR:HG23	1:E:1374:PHE:O	2.20	0.41
1:E:1467:LYS:HD3	1:E:1576:GLU:HB3	2.03	0.41
1:E:2036:PHE:HE1	1:E:2942:ASP:HB3	1.86	0.41
1:E:2332:ILE:H	1:E:2332:ILE:HD12	1.86	0.41
1:F:121:LEU:HD13	1:F:169:PHE:CZ	2.56	0.41
1:F:316:ALA:O	1:F:320:LEU:HB2	2.21	0.41
1:F:841:LYS:HD2	1:F:842:PRO:HD2	2.02	0.41
1:F:1207:ARG:HA	1:F:1207:ARG:HD2	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1209:ARG:HA	1:F:1209:ARG:HD3	1.91	0.41
1:F:1485:ALA:HB2	1:F:1557:LEU:HD12	2.03	0.41
1:F:1684:PHE:O	1:F:1715:VAL:HA	2.20	0.41
1:F:2224:ARG:HA	1:F:2224:ARG:NH1	2.34	0.41
1:F:2833:ILE:N	1:F:2834:PRO:HD2	2.36	0.41
1:F:2896:ARG:HH12	1:F:2902:LEU:HD21	1.86	0.41
1:A:2058:ILE:HG23	1:A:2098:LEU:HD22	2.02	0.41
1:A:2678:GLY:HA2	1:A:2683:ARG:CG	2.51	0.41
1:A:2701:HIS:O	1:A:2704:GLN:HG2	2.21	0.41
1:A:2745:GLY:HA3	1:A:2799:THR:HA	2.02	0.41
1:A:2833:ILE:N	1:A:2834:PRO:HD2	2.36	0.41
1:B:2188:ALA:O	1:B:2191:GLU:HG3	2.20	0.41
1:B:2675:MET:HG3	1:B:2676:TYR:N	2.36	0.41
1:C:153:LEU:HD12	1:C:154:ALA:N	2.36	0.41
1:C:547:ILE:CG2	1:C:587:THR:HG21	2.50	0.41
1:C:759:SER:OG	1:C:760:VAL:N	2.53	0.41
1:C:1209:ARG:NH2	1:C:1307:GLU:OE1	2.43	0.41
1:C:1697:GLY:O	1:C:1701:ASN:ND2	2.45	0.41
1:C:1994:ASP:OD1	1:C:1994:ASP:N	2.46	0.41
1:C:2334:ALA:O	1:C:2337:GLU:HG2	2.21	0.41
1:E:149:SER:HG	1:E:287:HIS:CE1	2.29	0.41
1:E:350:LEU:O	1:E:354:THR:OG1	2.26	0.41
1:E:1488:ARG:O	1:E:1488:ARG:HG2	2.20	0.41
1:E:2568:THR:OG1	1:E:2569:VAL:N	2.54	0.41
1:E:2833:ILE:N	1:E:2834:PRO:HD2	2.36	0.41
1:F:56:THR:HG21	1:F:129:ALA:HB1	2.03	0.41
1:F:117:PRO:HG3	1:F:173:GLN:HA	2.03	0.41
1:F:453:VAL:HG12	1:F:486:LEU:HD21	2.03	0.41
1:F:926:ARG:HH11	1:F:937:LEU:HD21	1.85	0.41
1:F:2902:LEU:HA	1:F:2902:LEU:HD23	1.84	0.41
1:A:22:HIS:HB2	1:A:25:VAL:HB	2.03	0.40
1:A:785:HIS:CE1	1:A:787:GLN:HB3	2.56	0.40
1:B:457:ILE:H	1:B:457:ILE:HG12	1.66	0.40
1:B:515:GLY:HA2	1:B:546:GLN:NE2	2.36	0.40
1:B:1207:ARG:HD2	1:B:1207:ARG:HA	1.77	0.40
1:B:1520:ASN:HB2	1:B:1525:GLN:HG2	2.02	0.40
1:C:735:THR:OG1	1:C:738:GLN:HG2	2.22	0.40
1:C:890:MET:HE3	1:C:890:MET:HB3	1.95	0.40
1:C:1053:LEU:HD23	1:C:1053:LEU:HA	1.97	0.40
1:D:528:GLU:O	1:D:532:ILE:HG23	2.21	0.40
1:D:748:ILE:HG13	1:D:805:PRO:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1521:LEU:C	1:D:1664:ILE:HD11	2.45	0.40
1:E:341:ILE:HD11	1:E:365:ILE:HG13	2.03	0.40
1:E:1253:MET:HA	1:E:1256:SER:HB3	2.02	0.40
1:E:1336:PHE:HA	1:E:1337:PRO:HD3	1.88	0.40
1:E:1441:GLU:HG3	1:E:1598:TYR:HE1	1.85	0.40
1:E:2223:PRO:HG3	1:E:2224:ARG:N	2.32	0.40
1:E:2238:MET:HE2	1:E:2238:MET:HB2	1.84	0.40
1:F:328:ASP:OD1	1:F:329:GLU:N	2.54	0.40
1:F:520:ASP:O	1:F:524:GLU:HG3	2.21	0.40
1:F:1321:MET:HB3	1:F:1321:MET:HE2	1.78	0.40
1:F:1404:THR:O	1:F:1407:THR:HG22	2.21	0.40
1:F:1703:LEU:HD23	1:F:1703:LEU:HA	1.94	0.40
1:F:2767:THR:HG22	1:F:2771:CYS:SG	2.61	0.40
1:A:52:LEU:HD11	1:A:369:ALA:HA	2.02	0.40
1:A:2748:ASP:HB2	1:A:2916:GLY:H	1.85	0.40
1:B:328:ASP:OD1	1:B:329:GLU:N	2.55	0.40
1:B:699:LEU:HD11	1:B:853:VAL:HG22	2.02	0.40
1:B:788:ASP:OD2	1:B:2416:PRO:HA	2.22	0.40
1:B:1253:MET:HA	1:B:1256:SER:HB3	2.03	0.40
1:B:1293:VAL:HG12	1:B:1315:VAL:HG22	2.03	0.40
1:B:2217:LEU:HD22	1:B:2254:LEU:HD12	2.04	0.40
1:B:2393:ARG:CB	1:B:2396:MET:HE3	2.51	0.40
1:B:2477:TRP:CZ2	1:B:2613:VAL:HG22	2.56	0.40
1:B:2767:THR:HG22	1:B:2771:CYS:SG	2.61	0.40
1:B:2935:ILE:HG21	1:B:2957:VAL:HG21	2.03	0.40
1:C:1653:LEU:HD23	1:C:1653:LEU:HA	1.93	0.40
1:C:2500:MET:HE2	1:C:2500:MET:HA	2.03	0.40
1:D:153:LEU:HD12	1:D:154:ALA:N	2.36	0.40
1:D:825:HIS:HD2	1:D:827:ALA:H	1.68	0.40
1:D:1457:LEU:HG	1:D:1458:LEU:N	2.37	0.40
1:D:2723:ALA:CB	1:D:2920:VAL:HG23	2.51	0.40
1:D:3020:ARG:NH1	1:D:3024:ALA:HB2	2.35	0.40
1:E:48:THR:HG21	1:E:347:GLY:N	2.36	0.40
1:E:880:GLY:O	1:E:884:VAL:HG22	2.21	0.40
1:E:1309:VAL:HG12	1:E:1325:ALA:HB3	2.02	0.40
1:E:2758:PHE:HB3	1:E:2764:THR:HG21	2.04	0.40
1:E:2999:ASP:OD1	1:E:2999:ASP:N	2.54	0.40
1:F:486:LEU:HD23	1:F:486:LEU:HA	1.87	0.40
1:F:1287:VAL:HG13	1:F:1315:VAL:HG21	2.02	0.40
1:F:1343:HIS:CD2	1:F:1346:MET:HG2	2.57	0.40
1:A:486:LEU:HD23	1:A:486:LEU:HA	1.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:528:GLU:O	1:A:532:ILE:HG23	2.21	0.40
1:A:575:HIS:CE1	1:A:664:TRP:HZ3	2.40	0.40
1:A:2300:TRP:CZ3	1:A:2307:ALA:HA	2.57	0.40
1:B:551:ILE:HD13	1:B:590:GLU:HB2	2.03	0.40
1:B:1124:ALA:HA	1:B:1172:LEU:HD23	2.03	0.40
1:B:1343:HIS:CD2	1:B:1346:MET:HG2	2.56	0.40
1:B:2296:VAL:HG12	1:B:2312:LEU:HD21	2.03	0.40
1:B:2833:ILE:N	1:B:2834:PRO:HD2	2.36	0.40
1:C:461:ARG:HD3	1:C:464:GLN:HE21	1.87	0.40
1:C:1194:GLY:H	1:C:1280:THR:HB	1.86	0.40
1:C:1600:PRO:HG3	1:C:1652:LEU:HD11	2.03	0.40
1:C:1706:PRO:O	1:C:1707:GLU:C	2.49	0.40
1:D:549:SER:O	1:D:553:ILE:HG13	2.21	0.40
1:D:926:ARG:HH11	1:D:937:LEU:HD21	1.86	0.40
1:D:973:ALA:HB3	1:D:982:LEU:HD12	2.04	0.40
1:D:1055:VAL:HG21	1:D:1090:PRO:HB2	2.03	0.40
1:D:1151:MET:HE1	1:D:1177:ALA:HB1	2.02	0.40
1:D:1207:ARG:HA	1:D:1207:ARG:HD2	1.79	0.40
1:D:2902:LEU:HD12	1:D:2902:LEU:HA	1.94	0.40
1:E:968:PRO:HG2	1:E:970:ASN:OD1	2.20	0.40
1:E:1611:ARG:HA	1:E:1614:ILE:HG12	2.03	0.40
1:E:2039:ARG:HA	1:E:2039:ARG:HD2	1.93	0.40
1:E:2152:ASP:OD1	1:E:2152:ASP:N	2.54	0.40
1:E:2885:GLU:O	1:E:2889:ARG:HG3	2.21	0.40
1:F:426:THR:HB	1:F:427:PRO:HD3	2.04	0.40
1:F:1279:TRP:CD1	1:F:1325:ALA:HB2	2.55	0.40
1:F:1467:LYS:HB2	1:F:1467:LYS:HE3	1.84	0.40
1:F:2068:ARG:NH1	1:F:2165:ASP:O	2.54	0.40
1:F:2977:LEU:H	1:F:2977:LEU:HD22	1.87	0.40
1:A:328:ASP:OD1	1:A:329:GLU:N	2.54	0.40
1:A:779:ARG:HD2	1:A:831:PHE:CE2	2.56	0.40
1:A:2293:LEU:C	1:A:2295:ALA:H	2.29	0.40
1:A:2568:THR:OG1	1:A:2569:VAL:N	2.54	0.40
1:A:2705:SER:O	1:A:3034:ARG:NH2	2.54	0.40
1:B:407:LEU:HB2	1:B:906:ILE:HD11	2.03	0.40
1:B:1374:PHE:HZ	1:B:1409:VAL:HG21	1.86	0.40
1:B:2059:ASP:OD1	1:B:2059:ASP:N	2.54	0.40
1:B:2452:TYR:CD2	1:B:2461:MET:HG3	2.57	0.40
1:C:50:GLU:HB2	1:C:94:VAL:HG23	2.04	0.40
1:C:425:MET:HG2	1:C:428:THR:HG23	2.03	0.40
1:C:699:LEU:O	1:C:703:ALA:N	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1387:ILE:HD11	1:C:1406:PHE:CZ	2.57	0.40
1:C:2884:THR:HG23	1:C:2954:PHE:CE2	2.57	0.40
1:C:2885:GLU:O	1:C:2889:ARG:HG3	2.21	0.40
1:C:2945:ASP:OD1	1:C:2945:ASP:N	2.53	0.40
1:C:3003:ARG:H	1:C:3003:ARG:HG2	1.63	0.40
1:C:3031:MET:H	1:C:3031:MET:HG2	1.75	0.40
1:D:214:GLU:OE2	1:D:251:TYR:OH	2.37	0.40
1:D:425:MET:HE1	1:D:636:GLY:HA2	2.04	0.40
1:D:2300:TRP:CZ3	1:D:2307:ALA:HA	2.56	0.40
1:D:2833:ILE:N	1:D:2834:PRO:HD2	2.36	0.40
1:E:2644:PHE:CZ	1:E:2813:LEU:HD13	2.57	0.40
1:E:2694:LEU:O	1:E:2697:ILE:HG22	2.22	0.40
1:F:813:LEU:HD11	1:F:820:GLU:HG3	2.04	0.40
1:F:1124:ALA:HA	1:F:1172:LEU:HD23	2.03	0.40
1:F:1454:LEU:HA	1:F:1457:LEU:HD23	2.03	0.40
1:F:2747:LEU:HD23	1:F:2796:GLY:C	2.46	0.40
1:A:615:LEU:HD12	1:A:615:LEU:HA	1.92	0.40
1:B:38:PHE:HZ	1:B:158:LEU:HD22	1.86	0.40
1:B:175:ILE:HD12	1:B:175:ILE:C	2.46	0.40
1:B:1279:TRP:CD1	1:B:1325:ALA:HB2	2.56	0.40
1:B:1618:ARG:HA	1:B:1618:ARG:HH11	1.87	0.40
1:B:1994:ASP:OD1	1:B:1994:ASP:N	2.48	0.40
1:B:2266:ARG:HG2	1:B:2311:SER:OG	2.22	0.40
1:B:2660:ASN:ND2	1:B:2703:VAL:HG22	2.37	0.40
1:B:2907:GLN:OE1	1:B:2921:PHE:HB3	2.20	0.40
1:C:1541:GLU:O	1:C:1544:ARG:HG2	2.22	0.40
1:C:2152:ASP:OD1	1:C:2152:ASP:N	2.54	0.40
1:C:2748:ASP:CB	1:C:2916:GLY:H	2.35	0.40
1:C:2770:MET:HG2	1:C:2789:LEU:HD11	2.03	0.40
1:D:1617:ILE:HD11	1:D:1626:LEU:HG	2.03	0.40
1:D:1686:GLU:CD	1:D:1696:ALA:HB2	2.47	0.40
1:D:2482:ILE:HD12	1:D:2482:ILE:HA	1.89	0.40
1:D:2595:THR:OG1	1:D:2596:LYS:N	2.53	0.40
1:E:1566:HIS:HB3	1:E:1660:PRO:HA	2.04	0.40
1:E:2439:ASP:OD1	1:E:2439:ASP:N	2.55	0.40
1:E:2599:ARG:NH1	1:E:2771:CYS:SG	2.93	0.40
1:F:473:ARG:NH1	1:F:1012:ASP:O	2.54	0.40
1:F:759:SER:OG	1:F:760:VAL:N	2.54	0.40
1:F:788:ASP:OD2	1:F:2416:PRO:HA	2.22	0.40
1:F:1336:PHE:HA	1:F:1337:PRO:HD3	1.91	0.40
1:F:1336:PHE:CE2	1:F:1444:ALA:HA	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2134:VAL:HG13	1:F:2144:VAL:HG11	2.04	0.40
1:F:2315:ALA:HB1	1:F:2374:LEU:HD12	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	A	2762/3069 (90%)	2629 (95%)	133 (5%)	0	100	100
1	B	2762/3069 (90%)	2643 (96%)	119 (4%)	0	100	100
1	C	2762/3069 (90%)	2630 (95%)	132 (5%)	0	100	100
1	D	2762/3069 (90%)	2633 (95%)	129 (5%)	0	100	100
1	E	2762/3069 (90%)	2630 (95%)	132 (5%)	0	100	100
1	F	2762/3069 (90%)	2636 (95%)	125 (4%)	1 (0%)	100	100
All	All	16572/18414 (90%)	15801 (95%)	770 (5%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	2203	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	A	2132/2359 (90%)	2038 (96%)	94 (4%)	24	47
1	B	2132/2359 (90%)	2038 (96%)	94 (4%)	24	47
1	C	2129/2359 (90%)	2010 (94%)	119 (6%)	17	35
1	D	2135/2359 (90%)	2025 (95%)	110 (5%)	19	39
1	E	2130/2359 (90%)	2022 (95%)	108 (5%)	20	40
1	F	2133/2359 (90%)	2038 (96%)	95 (4%)	23	46
All	All	12791/14154 (90%)	12171 (95%)	620 (5%)	24	43

All (620) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	48	THR
1	A	53	VAL
1	A	72	LEU
1	A	94	VAL
1	A	116	VAL
1	A	143	VAL
1	A	186	ARG
1	A	190	VAL
1	A	200	VAL
1	A	226	VAL
1	A	229	ILE
1	A	292	SER
1	A	315	LEU
1	A	357	VAL
1	A	370	THR
1	A	457	ILE
1	A	480	LEU
1	A	543	THR
1	A	555	THR
1	A	601	VAL
1	A	702	VAL
1	A	737	LEU
1	A	757	THR
1	A	760	VAL
1	A	768	THR
1	A	785	HIS
1	A	822	VAL
1	A	883	SER
1	A	884	VAL
1	A	933	LEU

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Mol	Chain	Res	Type
1	A	953	VAL
1	A	958	ASP
1	A	1002	ILE
1	A	1029	THR
1	A	1068	VAL
1	A	1083	VAL
1	A	1095	VAL
1	A	1105	ASP
1	A	1127	VAL
1	A	1147	THR
1	A	1155	VAL
1	A	1246	GLU
1	A	1250	VAL
1	A	1277	VAL
1	A	1280	THR
1	A	1287	VAL
1	A	1293	VAL
1	A	1297	VAL
1	A	1311	VAL
1	A	1319	LEU
1	A	1327	LEU
1	A	1393	HIS
1	A	1439	VAL
1	A	1457	LEU
1	A	1461	VAL
1	A	1463	HIS
1	A	1574	VAL
1	A	1608	THR
1	A	1656	GLN
1	A	1661	VAL
1	A	1670	LEU
1	A	1689	VAL
1	A	1698	LEU
1	A	1708	TYR
1	A	1717	ASN
1	A	1997	VAL
1	A	2023	LEU
1	A	2035	VAL
1	A	2094	ILE
1	A	2151	LEU
1	A	2189	LEU
1	A	2213	THR

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Mol	Chain	Res	Type
1	A	2215	THR
1	A	2320	THR
1	A	2449	ILE
1	A	2482	ILE
1	A	2518	VAL
1	A	2561	VAL
1	A	2600	VAL
1	A	2644	PHE
1	A	2658	VAL
1	A	2675	MET
1	A	2683	ARG
1	A	2685	LYS
1	A	2696	ASN
1	A	2731	VAL
1	A	2740	GLN
1	A	2807	LEU
1	A	2811	MET
1	A	2859	LEU
1	A	2868	VAL
1	A	2875	SER
1	A	2963	LEU
1	A	3021	LEU
1	B	48	THR
1	B	53	VAL
1	B	72	LEU
1	B	78	ASP
1	B	83	VAL
1	B	91	LEU
1	B	94	VAL
1	B	110	THR
1	B	114	VAL
1	B	116	VAL
1	B	226	VAL
1	B	288	THR
1	B	292	SER
1	B	307	LEU
1	B	350	LEU
1	B	370	THR
1	B	446	GLU
1	B	457	ILE
1	B	480	LEU
1	B	543	THR

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Mol	Chain	Res	Type
1	B	555	THR
1	B	607	THR
1	B	628	MET
1	B	631	ASP
1	B	634	LEU
1	B	680	GLN
1	B	685	ILE
1	B	691	SER
1	B	702	VAL
1	B	722	LYS
1	B	757	THR
1	B	760	VAL
1	B	768	THR
1	B	785	HIS
1	B	795	LEU
1	B	822	VAL
1	B	824	LEU
1	B	834	THR
1	B	839	LEU
1	B	883	SER
1	B	884	VAL
1	B	888	THR
1	B	933	LEU
1	B	953	VAL
1	B	958	ASP
1	B	974	THR
1	B	1029	THR
1	B	1083	VAL
1	B	1095	VAL
1	B	1137	LEU
1	B	1147	THR
1	B	1155	VAL
1	B	1157	VAL
1	B	1250	VAL
1	B	1263	VAL
1	B	1287	VAL
1	B	1293	VAL
1	B	1297	VAL
1	B	1311	VAL
1	B	1319	LEU
1	B	1322	SER
1	B	1327	LEU

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Mol	Chain	Res	Type
1	B	1382	ASP
1	B	1393	HIS
1	B	1419	VAL
1	B	1457	LEU
1	B	1461	VAL
1	B	1538	LEU
1	B	1661	VAL
1	B	1689	VAL
1	B	1705	LEU
1	B	1708	TYR
1	B	1997	VAL
1	B	2035	VAL
1	B	2094	ILE
1	B	2144	VAL
1	B	2215	THR
1	B	2344	TYR
1	B	2444	VAL
1	B	2482	ILE
1	B	2561	VAL
1	B	2601	VAL
1	B	2644	PHE
1	B	2658	VAL
1	B	2683	ARG
1	B	2685	LYS
1	B	2707	VAL
1	B	2731	VAL
1	B	2740	GLN
1	B	2807	LEU
1	B	2871	LYS
1	B	2875	SER
1	B	2974	LEU
1	B	2982	VAL
1	C	48	THR
1	C	53	VAL
1	C	65	LEU
1	C	80	LEU
1	C	94	VAL
1	C	116	VAL
1	C	175	ILE
1	C	190	VAL
1	C	200	VAL
1	C	226	VAL

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Mol	Chain	Res	Type
1	C	229	ILE
1	C	282	VAL
1	C	292	SER
1	C	315	LEU
1	C	322	ARG
1	C	370	THR
1	C	412	THR
1	C	428	THR
1	C	446	GLU
1	C	453	VAL
1	C	457	ILE
1	C	480	LEU
1	C	516	ILE
1	C	518	ASP
1	C	543	THR
1	C	549	SER
1	C	555	THR
1	C	590	GLU
1	C	607	THR
1	C	631	ASP
1	C	685	ILE
1	C	691	SER
1	C	702	VAL
1	C	722	LYS
1	C	737	LEU
1	C	757	THR
1	C	760	VAL
1	C	768	THR
1	C	785	HIS
1	C	795	LEU
1	C	797	THR
1	C	822	VAL
1	C	824	LEU
1	C	834	THR
1	C	839	LEU
1	C	883	SER
1	C	884	VAL
1	C	910	LEU
1	C	933	LEU
1	C	953	VAL
1	C	955	ARG
1	C	958	ASP

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Mol	Chain	Res	Type
1	C	974	THR
1	C	1002	ILE
1	C	1068	VAL
1	C	1095	VAL
1	C	1110	VAL
1	C	1126	VAL
1	C	1133	VAL
1	C	1147	THR
1	C	1155	VAL
1	C	1159	VAL
1	C	1250	VAL
1	C	1263	VAL
1	C	1280	THR
1	C	1287	VAL
1	C	1293	VAL
1	C	1297	VAL
1	C	1309	VAL
1	C	1311	VAL
1	C	1319	LEU
1	C	1322	SER
1	C	1327	LEU
1	C	1407	THR
1	C	1419	VAL
1	C	1437	HIS
1	C	1457	LEU
1	C	1463	HIS
1	C	1517	VAL
1	C	1538	LEU
1	C	1565	PHE
1	C	1608	THR
1	C	1661	VAL
1	C	1689	VAL
1	C	1698	LEU
1	C	1705	LEU
1	C	1708	TYR
1	C	1710	HIS
1	C	1711	SER
1	C	1712	THR
1	C	2035	VAL
1	C	2045	GLU
1	C	2050	LEU
1	C	2068	ARG

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Mol	Chain	Res	Type
1	C	2094	ILE
1	C	2191	GLU
1	C	2215	THR
1	C	2225	VAL
1	C	2316	LEU
1	C	2344	TYR
1	C	2405	ASP
1	C	2449	ILE
1	C	2482	ILE
1	C	2500	MET
1	C	2601	VAL
1	C	2644	PHE
1	C	2658	VAL
1	C	2685	LYS
1	C	2707	VAL
1	C	2731	VAL
1	C	2747	LEU
1	C	2767	THR
1	C	2858	LYS
1	C	2868	VAL
1	C	2869	ILE
1	C	2877	LEU
1	C	2963	LEU
1	C	2969	LEU
1	C	2974	LEU
1	D	48	THR
1	D	53	VAL
1	D	80	LEU
1	D	94	VAL
1	D	116	VAL
1	D	153	LEU
1	D	175	ILE
1	D	190	VAL
1	D	200	VAL
1	D	226	VAL
1	D	282	VAL
1	D	292	SER
1	D	315	LEU
1	D	344	LEU
1	D	370	THR
1	D	412	THR
1	D	446	GLU

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Mol	Chain	Res	Type
1	D	453	VAL
1	D	457	ILE
1	D	518	ASP
1	D	543	THR
1	D	549	SER
1	D	555	THR
1	D	590	GLU
1	D	607	THR
1	D	631	ASP
1	D	634	LEU
1	D	685	ILE
1	D	691	SER
1	D	722	LYS
1	D	757	THR
1	D	760	VAL
1	D	768	THR
1	D	785	HIS
1	D	795	LEU
1	D	824	LEU
1	D	834	THR
1	D	877	ILE
1	D	883	SER
1	D	884	VAL
1	D	894	VAL
1	D	910	LEU
1	D	933	LEU
1	D	953	VAL
1	D	955	ARG
1	D	958	ASP
1	D	974	THR
1	D	1002	ILE
1	D	1068	VAL
1	D	1095	VAL
1	D	1114	LEU
1	D	1126	VAL
1	D	1133	VAL
1	D	1137	LEU
1	D	1147	THR
1	D	1155	VAL
1	D	1159	VAL
1	D	1250	VAL
1	D	1263	VAL

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Mol	Chain	Res	Type
1	D	1287	VAL
1	D	1293	VAL
1	D	1297	VAL
1	D	1311	VAL
1	D	1319	LEU
1	D	1387	ILE
1	D	1419	VAL
1	D	1437	HIS
1	D	1457	LEU
1	D	1463	HIS
1	D	1517	VAL
1	D	1538	LEU
1	D	1585	MET
1	D	1608	THR
1	D	1661	VAL
1	D	1689	VAL
1	D	1698	LEU
1	D	1997	VAL
1	D	2024	VAL
1	D	2035	VAL
1	D	2050	LEU
1	D	2094	ILE
1	D	2145	ILE
1	D	2191	GLU
1	D	2215	THR
1	D	2225	VAL
1	D	2316	LEU
1	D	2344	TYR
1	D	2449	ILE
1	D	2482	ILE
1	D	2500	MET
1	D	2518	VAL
1	D	2644	PHE
1	D	2658	VAL
1	D	2683	ARG
1	D	2685	LYS
1	D	2707	VAL
1	D	2731	VAL
1	D	2740	GLN
1	D	2747	LEU
1	D	2767	THR
1	D	2854	ARG

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Mol	Chain	Res	Type
1	D	2858	LYS
1	D	2868	VAL
1	D	2876	THR
1	D	2877	LEU
1	D	2939	ARG
1	D	2946	ASP
1	D	2974	LEU
1	D	2985	LEU
1	D	3021	LEU
1	E	43	SER
1	E	48	THR
1	E	72	LEU
1	E	73	LEU
1	E	80	LEU
1	E	94	VAL
1	E	116	VAL
1	E	143	VAL
1	E	186	ARG
1	E	190	VAL
1	E	200	VAL
1	E	226	VAL
1	E	254	GLN
1	E	292	SER
1	E	315	LEU
1	E	357	VAL
1	E	370	THR
1	E	457	ILE
1	E	465	MET
1	E	518	ASP
1	E	532	ILE
1	E	543	THR
1	E	555	THR
1	E	613	GLU
1	E	648	SER
1	E	685	ILE
1	E	702	VAL
1	E	712	ARG
1	E	722	LYS
1	E	737	LEU
1	E	738	GLN
1	E	757	THR
1	E	760	VAL

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Mol	Chain	Res	Type
1	E	768	THR
1	E	785	HIS
1	E	822	VAL
1	E	834	THR
1	E	883	SER
1	E	884	VAL
1	E	890	MET
1	E	933	LEU
1	E	953	VAL
1	E	958	ASP
1	E	1002	ILE
1	E	1029	THR
1	E	1068	VAL
1	E	1083	VAL
1	E	1095	VAL
1	E	1105	ASP
1	E	1126	VAL
1	E	1147	THR
1	E	1155	VAL
1	E	1246	GLU
1	E	1250	VAL
1	E	1280	THR
1	E	1287	VAL
1	E	1293	VAL
1	E	1297	VAL
1	E	1311	VAL
1	E	1319	LEU
1	E	1327	LEU
1	E	1393	HIS
1	E	1419	VAL
1	E	1457	LEU
1	E	1461	VAL
1	E	1463	HIS
1	E	1464	ARG
1	E	1574	VAL
1	E	1661	VAL
1	E	1666	THR
1	E	1670	LEU
1	E	1689	VAL
1	E	1690	LYS
1	E	1698	LEU
1	E	1705	LEU

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Mol	Chain	Res	Type
1	E	1717	ASN
1	E	1997	VAL
1	E	2023	LEU
1	E	2035	VAL
1	E	2094	ILE
1	E	2108	ASN
1	E	2145	ILE
1	E	2151	LEU
1	E	2169	TYR
1	E	2191	GLU
1	E	2215	THR
1	E	2223	PRO
1	E	2320	THR
1	E	2344	TYR
1	E	2449	ILE
1	E	2486	ASP
1	E	2561	VAL
1	E	2600	VAL
1	E	2658	VAL
1	E	2683	ARG
1	E	2685	LYS
1	E	2696	ASN
1	E	2707	VAL
1	E	2731	VAL
1	E	2740	GLN
1	E	2789	LEU
1	E	2800	ILE
1	E	2807	LEU
1	E	2859	LEU
1	E	2868	VAL
1	E	2875	SER
1	E	2963	LEU
1	E	2999	ASP
1	F	22	HIS
1	F	48	THR
1	F	53	VAL
1	F	72	LEU
1	F	78	ASP
1	F	91	LEU
1	F	94	VAL
1	F	114	VAL
1	F	116	VAL

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Mol	Chain	Res	Type
1	F	292	SER
1	F	293	ASP
1	F	307	LEU
1	F	350	LEU
1	F	370	THR
1	F	446	GLU
1	F	457	ILE
1	F	480	LEU
1	F	543	THR
1	F	555	THR
1	F	607	THR
1	F	631	ASP
1	F	634	LEU
1	F	680	GLN
1	F	685	ILE
1	F	691	SER
1	F	702	VAL
1	F	757	THR
1	F	760	VAL
1	F	768	THR
1	F	785	HIS
1	F	795	LEU
1	F	822	VAL
1	F	824	LEU
1	F	834	THR
1	F	839	LEU
1	F	883	SER
1	F	884	VAL
1	F	888	THR
1	F	910	LEU
1	F	933	LEU
1	F	953	VAL
1	F	958	ASP
1	F	974	THR
1	F	1029	THR
1	F	1083	VAL
1	F	1095	VAL
1	F	1105	ASP
1	F	1126	VAL
1	F	1137	LEU
1	F	1147	THR
1	F	1155	VAL

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Mol	Chain	Res	Type
1	F	1157	VAL
1	F	1204	THR
1	F	1250	VAL
1	F	1263	VAL
1	F	1287	VAL
1	F	1293	VAL
1	F	1297	VAL
1	F	1311	VAL
1	F	1319	LEU
1	F	1322	SER
1	F	1419	VAL
1	F	1457	LEU
1	F	1458	LEU
1	F	1463	HIS
1	F	1538	LEU
1	F	1661	VAL
1	F	1689	VAL
1	F	1997	VAL
1	F	2035	VAL
1	F	2094	ILE
1	F	2215	THR
1	F	2320	THR
1	F	2349	MET
1	F	2444	VAL
1	F	2482	ILE
1	F	2516	GLN
1	F	2561	VAL
1	F	2641	SER
1	F	2644	PHE
1	F	2658	VAL
1	F	2683	ARG
1	F	2684	ASN
1	F	2707	VAL
1	F	2714	ILE
1	F	2731	VAL
1	F	2740	GLN
1	F	2764	THR
1	F	2807	LEU
1	F	2858	LYS
1	F	2875	SER
1	F	2945	ASP
1	F	2974	LEU

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Mol	Chain	Res	Type
1	F	2999	ASP
1	F	3021	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (84) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	150	GLN
1	A	265	ASN
1	A	490	GLN
1	A	574	HIS
1	A	775	GLN
1	A	807	GLN
1	A	985	HIS
1	A	1234	HIS
1	A	1339	GLN
1	A	1378	HIS
1	A	1408	GLN
1	A	1601	ASN
1	A	1656	GLN
1	A	2580	GLN
1	A	2673	GLN
1	A	2696	ASN
1	A	2784	ASN
1	A	2795	GLN
1	A	2981	HIS
1	A	3002	GLN
1	B	150	GLN
1	B	173	GLN
1	B	265	ASN
1	B	490	GLN
1	B	680	GLN
1	B	951	ASN
1	B	954	HIS
1	B	1234	HIS
1	B	1339	GLN
1	B	1408	GLN
1	B	1601	ASN
1	B	2074	HIS
1	B	2662	GLN
1	B	2673	GLN
1	B	2795	GLN
1	B	2938	ASN

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Mol	Chain	Res	Type
1	C	41	GLN
1	C	265	ASN
1	C	476	GLN
1	C	951	ASN
1	C	954	HIS
1	C	1234	HIS
1	C	2074	HIS
1	C	2580	GLN
1	C	2696	ASN
1	C	3002	GLN
1	D	173	GLN
1	D	265	ASN
1	D	807	GLN
1	D	951	ASN
1	D	954	HIS
1	D	985	HIS
1	D	1234	HIS
1	D	1260	GLN
1	D	1408	GLN
1	D	1463	HIS
1	D	2166	HIS
1	D	2580	GLN
1	D	2696	ASN
1	D	2704	GLN
1	D	2784	ASN
1	D	2879	ASN
1	E	265	ASN
1	E	460	ASN
1	E	738	GLN
1	E	1145	ASN
1	E	1234	HIS
1	E	1304	GLN
1	E	1378	HIS
1	E	1425	GLN
1	E	2580	GLN
1	E	2696	ASN
1	E	2784	ASN
1	E	2953	HIS
1	E	3002	GLN
1	F	92	GLN
1	F	150	GLN
1	F	265	ASN

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Mol	Chain	Res	Type
1	F	951	ASN
1	F	954	HIS
1	F	1234	HIS
1	F	1408	GLN
1	F	2662	GLN
1	F	2823	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

6 ligands 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	$\# Z > 2$
2	FMN	A	3101	-	33,33,33	1.06	2 (6%)	48,50,50	1.26	8 (16%)
2	FMN	E	3101	-	33,33,33	1.07	2 (6%)	48,50,50	1.28	8 (16%)
2	FMN	D	3101	-	33,33,33	1.07	2 (6%)	48,50,50	1.25	8 (16%)
2	FMN	B	3101	-	33,33,33	1.07	2 (6%)	48,50,50	1.28	8 (16%)
2	FMN	F	3101	-	33,33,33	1.06	2 (6%)	48,50,50	1.28	8 (16%)
2	FMN	C	3101	-	33,33,33	1.07	2 (6%)	48,50,50	1.24	8 (16%)

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
2	FMN	A	3101	-	-	2/18/18/18	0/3/3/3
2	FMN	E	3101	-	-	2/18/18/18	0/3/3/3
2	FMN	D	3101	-	-	2/18/18/18	0/3/3/3
2	FMN	B	3101	-	-	2/18/18/18	0/3/3/3
2	FMN	F	3101	-	-	2/18/18/18	0/3/3/3
2	FMN	C	3101	-	-	2/18/18/18	0/3/3/3

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	3101	FMN	C4A-N5	3.49	1.38	1.30
2	D	3101	FMN	C4A-N5	3.49	1.38	1.30
2	E	3101	FMN	C4A-N5	3.47	1.38	1.30
2	C	3101	FMN	C4A-N5	3.45	1.38	1.30
2	F	3101	FMN	C4A-N5	3.43	1.38	1.30
2	A	3101	FMN	C4A-N5	3.43	1.38	1.30
2	C	3101	FMN	C10-N1	2.45	1.38	1.33
2	D	3101	FMN	C10-N1	2.42	1.38	1.33
2	A	3101	FMN	C10-N1	2.34	1.37	1.33
2	E	3101	FMN	C10-N1	2.34	1.37	1.33
2	B	3101	FMN	C10-N1	2.31	1.37	1.33
2	F	3101	FMN	C10-N1	2.30	1.37	1.33

All (48) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	3101	FMN	C4-N3-C2	-3.27	119.83	125.64
2	A	3101	FMN	C4-N3-C2	-3.25	119.86	125.64
2	E	3101	FMN	C4-N3-C2	-3.23	119.91	125.64
2	B	3101	FMN	C4-N3-C2	-3.21	119.95	125.64
2	D	3101	FMN	C4-N3-C2	-3.18	119.99	125.64
2	C	3101	FMN	C4-N3-C2	-3.17	120.02	125.64
2	F	3101	FMN	C4A-C10-N10	2.82	120.52	116.48
2	B	3101	FMN	C4A-C10-N10	2.78	120.47	116.48
2	E	3101	FMN	C4A-C10-N10	2.75	120.42	116.48
2	E	3101	FMN	C5A-C9A-N10	2.72	120.43	117.97
2	D	3101	FMN	C4A-C10-N10	2.71	120.36	116.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	3101	FMN	C4A-C10-N10	2.71	120.36	116.48
2	C	3101	FMN	C4A-C10-N10	2.66	120.29	116.48
2	B	3101	FMN	C5A-C9A-N10	2.63	120.35	117.97
2	A	3101	FMN	C5A-C9A-N10	2.62	120.34	117.97
2	F	3101	FMN	C5A-C9A-N10	2.58	120.31	117.97
2	D	3101	FMN	C4A-C4-N3	2.58	119.81	113.25
2	C	3101	FMN	C4A-C4-N3	2.56	119.78	113.25
2	E	3101	FMN	C4A-C4-N3	2.56	119.77	113.25
2	F	3101	FMN	C4A-C4-N3	2.55	119.76	113.25
2	A	3101	FMN	C4A-C4-N3	2.55	119.75	113.25
2	B	3101	FMN	C4A-C4-N3	2.54	119.73	113.25
2	A	3101	FMN	O4-C4-C4A	-2.45	120.07	126.53
2	D	3101	FMN	C4'-C3'-C2'	-2.43	109.53	113.57
2	F	3101	FMN	O4-C4-C4A	-2.42	120.13	126.53
2	D	3101	FMN	O4-C4-C4A	-2.42	120.15	126.53
2	E	3101	FMN	O4-C4-C4A	-2.42	120.15	126.53
2	C	3101	FMN	O4-C4-C4A	-2.41	120.16	126.53
2	C	3101	FMN	C4'-C3'-C2'	-2.40	109.58	113.57
2	B	3101	FMN	O4-C4-C4A	-2.39	120.22	126.53
2	C	3101	FMN	C5A-C9A-N10	2.39	120.13	117.97
2	D	3101	FMN	C5A-C9A-N10	2.38	120.12	117.97
2	B	3101	FMN	C4'-C3'-C2'	-2.38	109.62	113.57
2	B	3101	FMN	C10-C4A-N5	-2.36	119.98	124.81
2	D	3101	FMN	C10-C4A-N5	-2.36	119.98	124.81
2	F	3101	FMN	C10-C4A-N5	-2.36	119.98	124.81
2	E	3101	FMN	C9A-C5A-N5	-2.34	119.97	122.45
2	C	3101	FMN	C10-C4A-N5	-2.32	120.06	124.81
2	E	3101	FMN	C10-C4A-N5	-2.32	120.07	124.81
2	A	3101	FMN	C10-C4A-N5	-2.29	120.14	124.81
2	F	3101	FMN	C4'-C3'-C2'	-2.26	109.80	113.57
2	B	3101	FMN	C9A-C5A-N5	-2.21	120.11	122.45
2	A	3101	FMN	C4'-C3'-C2'	-2.21	109.89	113.57
2	E	3101	FMN	C4'-C3'-C2'	-2.20	109.91	113.57
2	F	3101	FMN	C9A-C5A-N5	-2.17	120.15	122.45
2	A	3101	FMN	C9A-C5A-N5	-2.17	120.15	122.45
2	D	3101	FMN	C9A-C5A-N5	-2.11	120.22	122.45
2	C	3101	FMN	C9A-C5A-N5	-2.10	120.22	122.45

There are no chirality outliers.

All (12) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	3101	FMN	C5'-O5'-P-O1P
2	B	3101	FMN	C5'-O5'-P-O1P
2	E	3101	FMN	C5'-O5'-P-O1P
2	F	3101	FMN	C5'-O5'-P-O1P
2	C	3101	FMN	C5'-O5'-P-O1P
2	D	3101	FMN	C5'-O5'-P-O1P
2	A	3101	FMN	C5'-O5'-P-O2P
2	B	3101	FMN	C5'-O5'-P-O2P
2	E	3101	FMN	C5'-O5'-P-O2P
2	F	3101	FMN	C5'-O5'-P-O2P
2	C	3101	FMN	C5'-O5'-P-O2P
2	D	3101	FMN	C5'-O5'-P-O2P

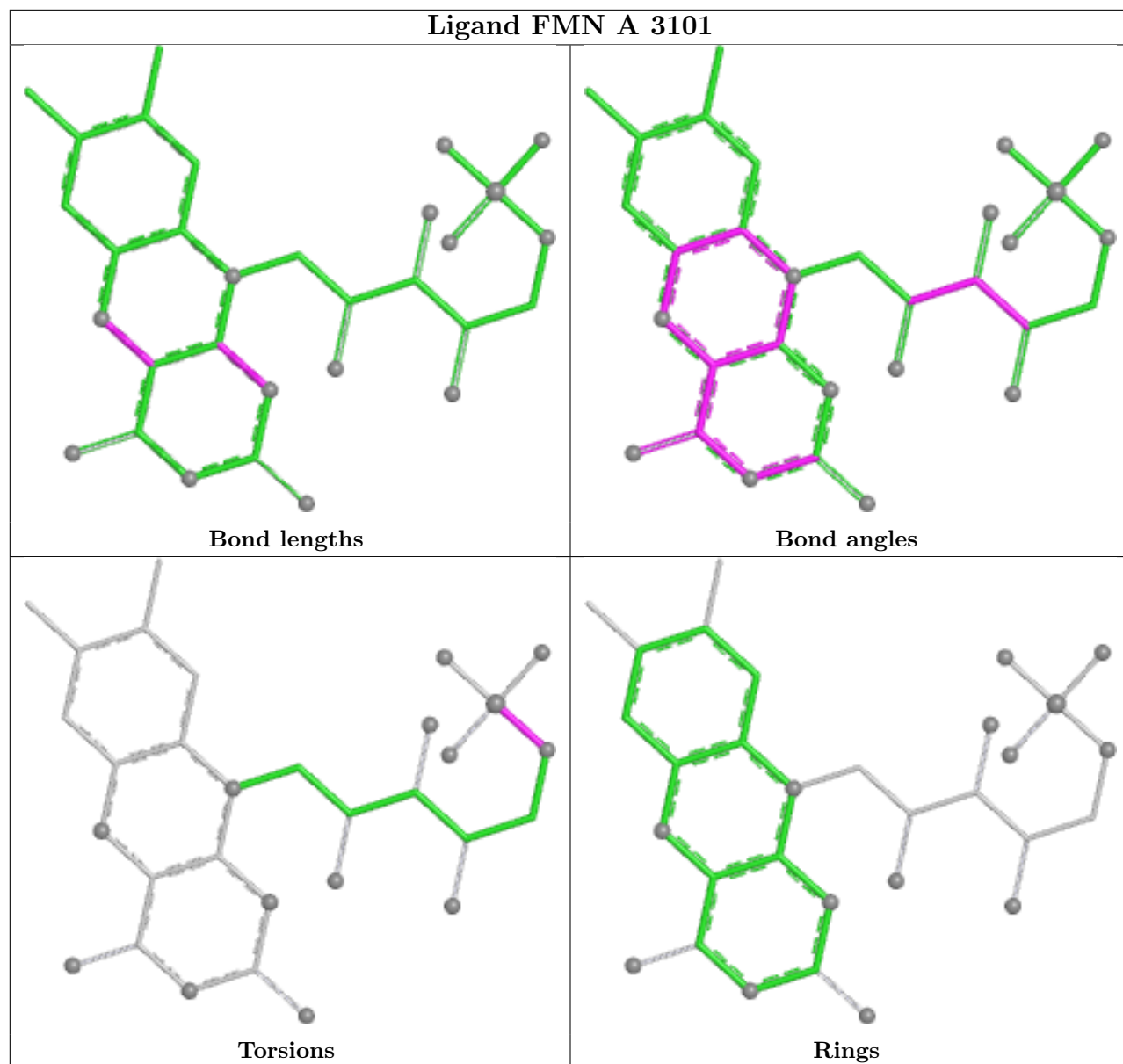
There are no ring outliers.

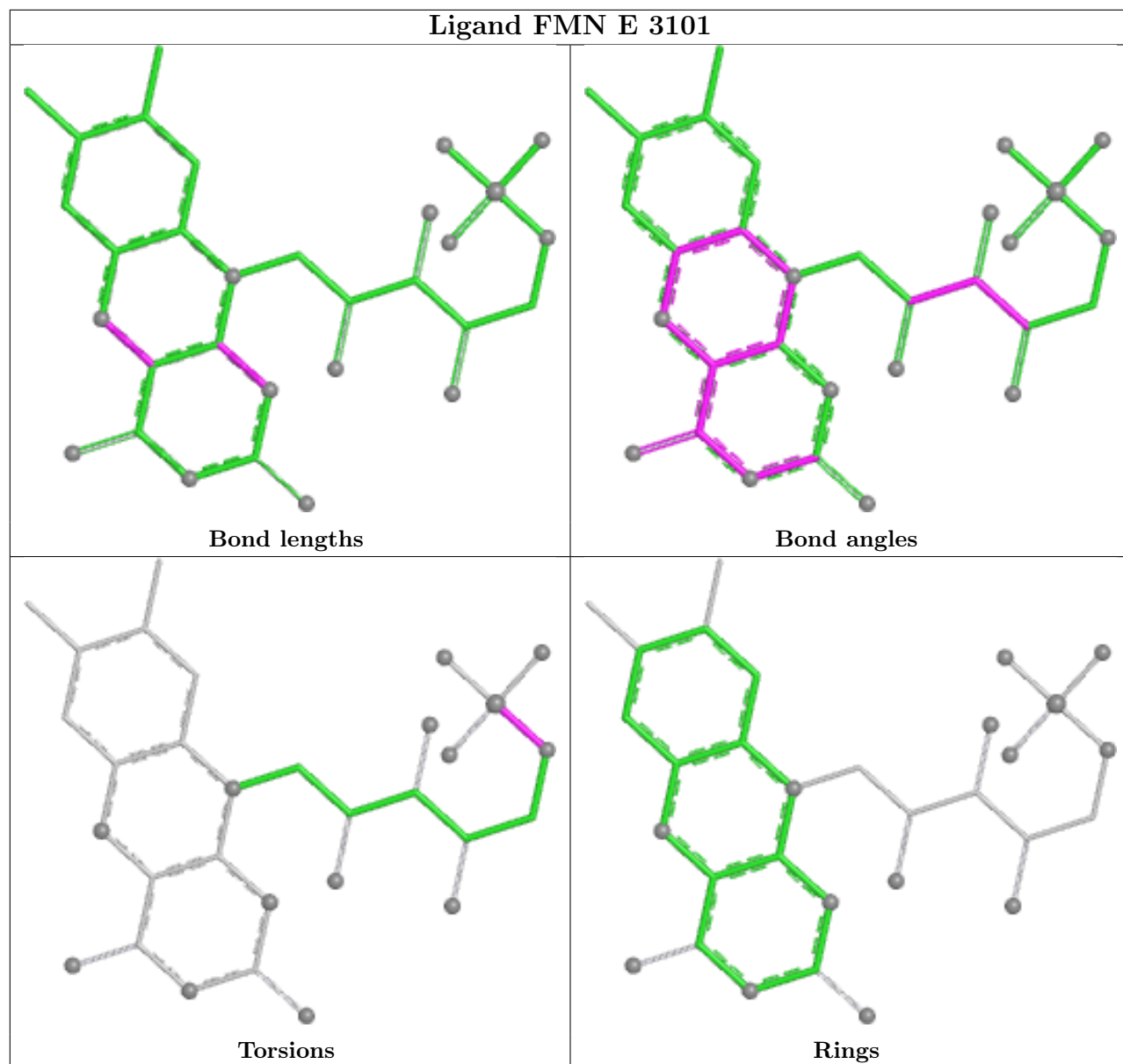
6 monomers are involved in 25 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	3101	FMN	4	0
2	E	3101	FMN	4	0
2	D	3101	FMN	4	0
2	B	3101	FMN	4	0
2	F	3101	FMN	4	0
2	C	3101	FMN	5	0

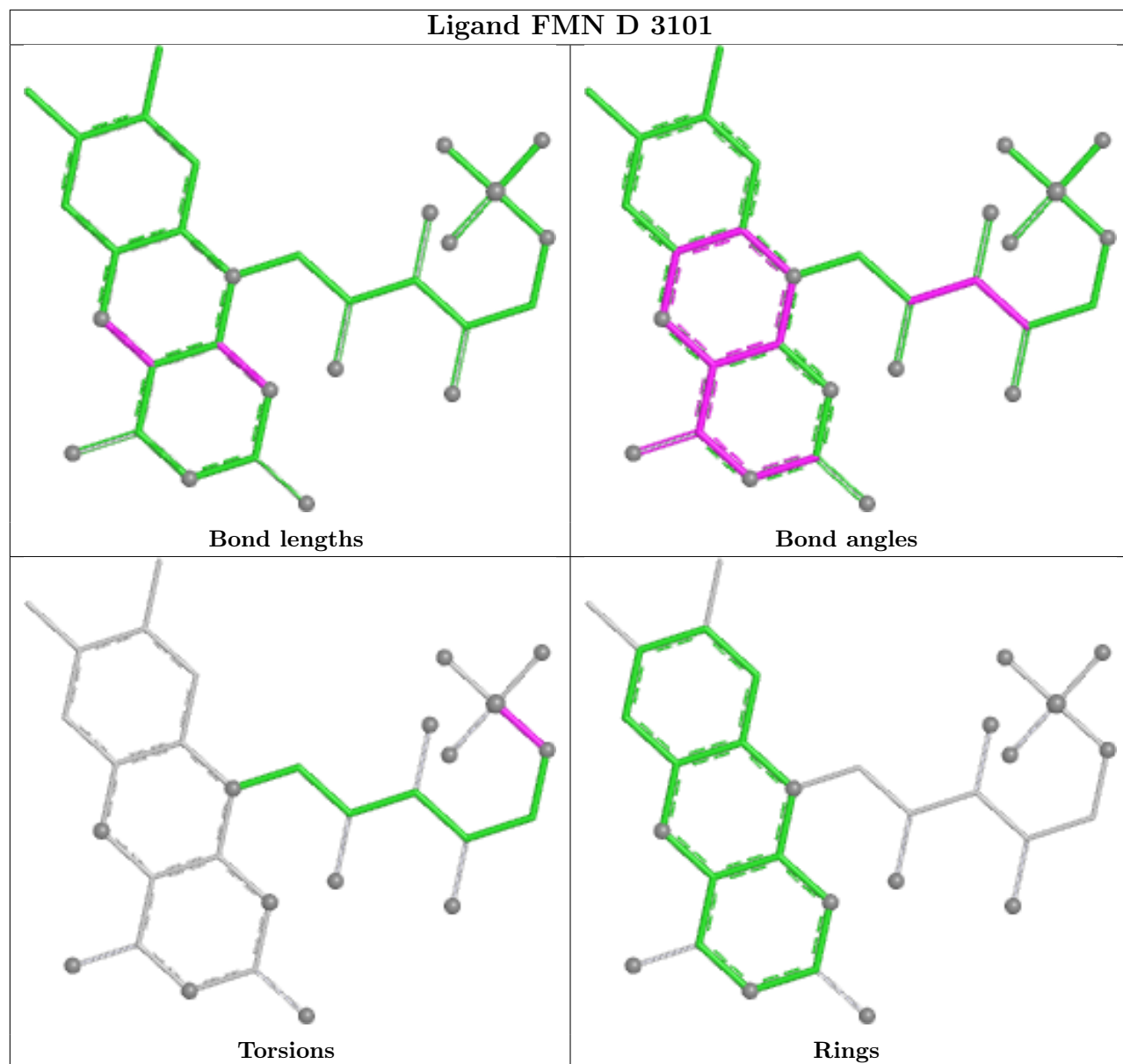
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

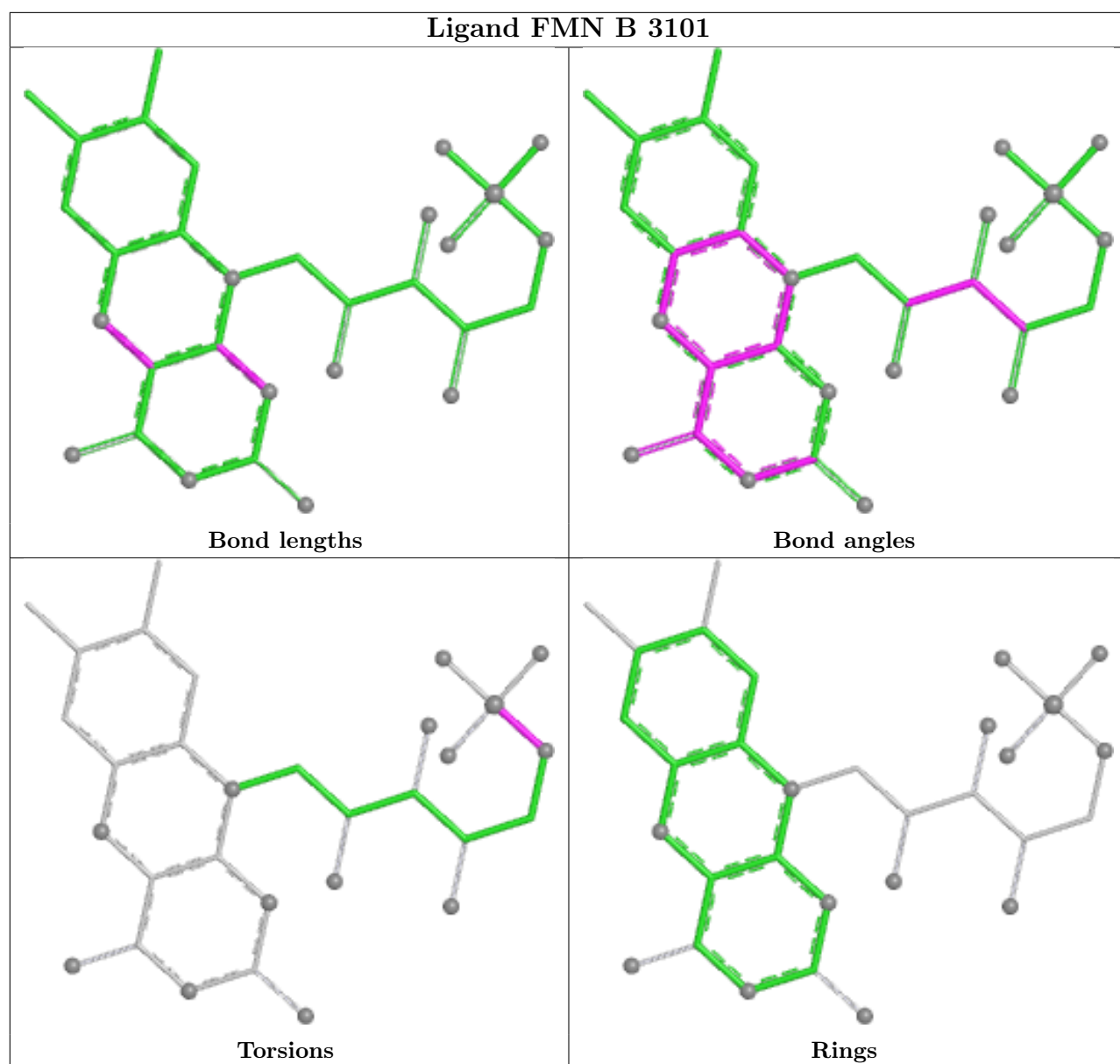
Ligand FMN A 3101

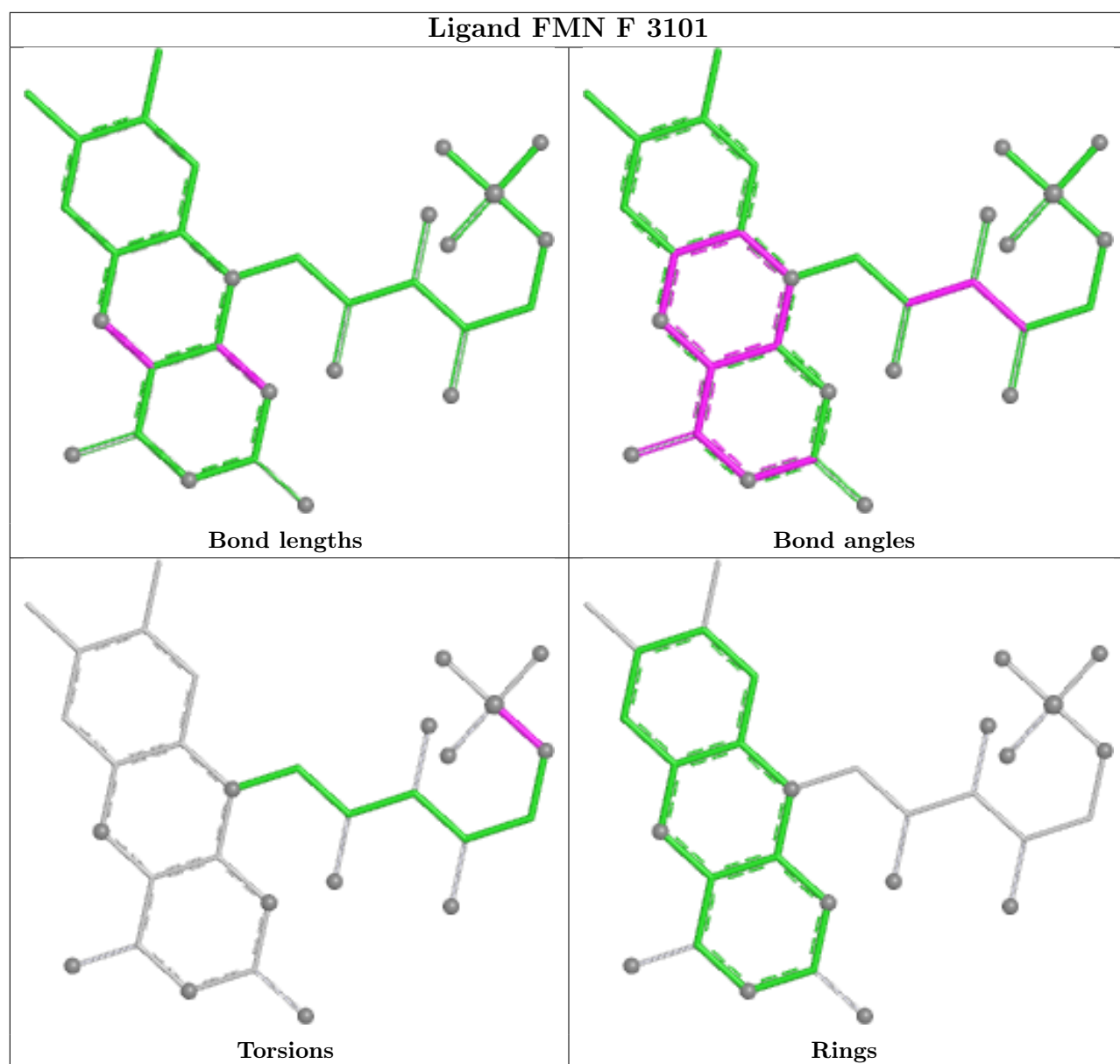


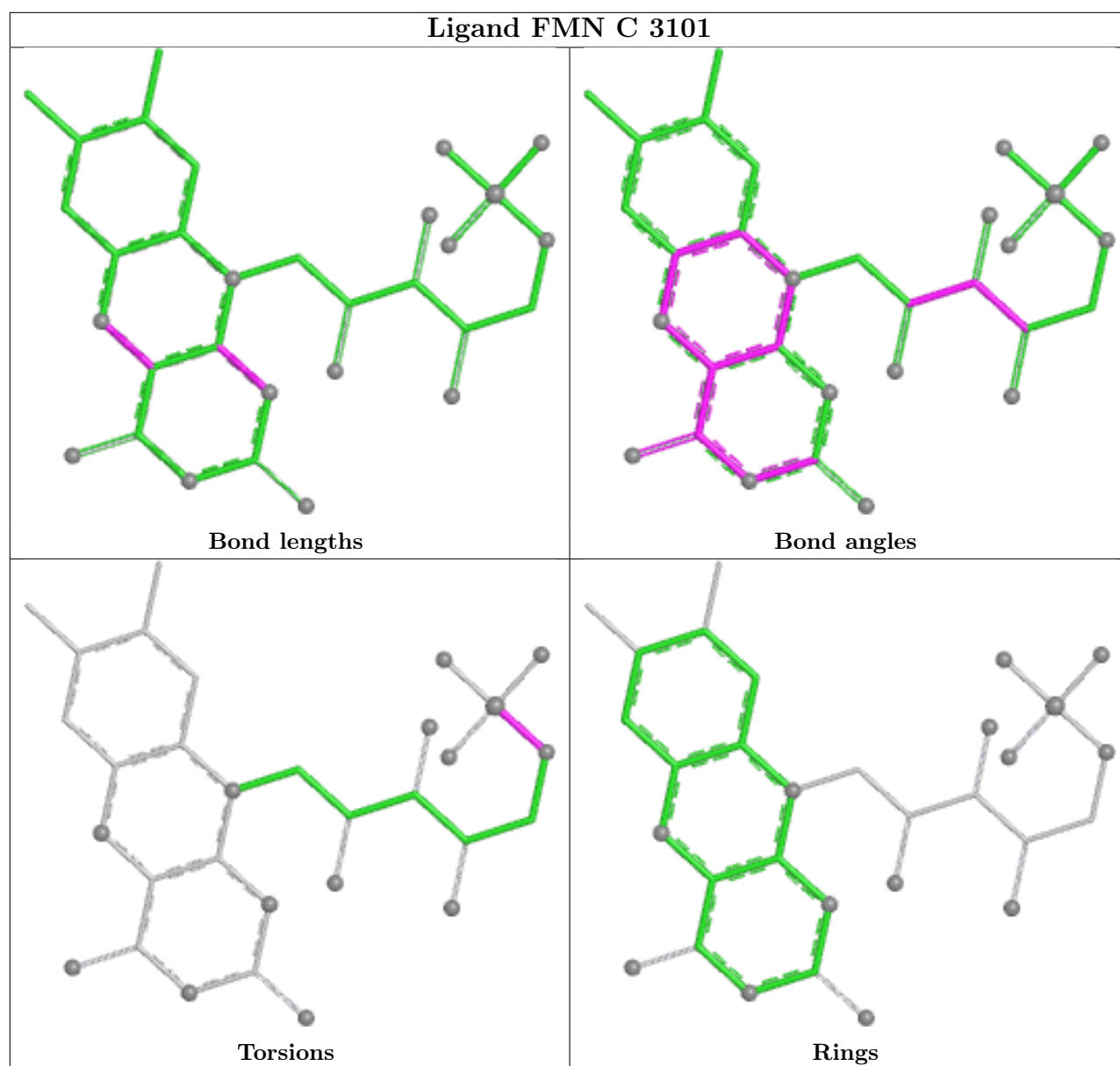


Ligand FMN D 3101









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.

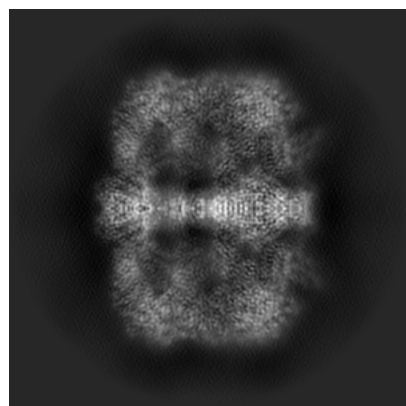
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-71792. These allow visual inspection of the internal detail of the map and identification of artifacts.

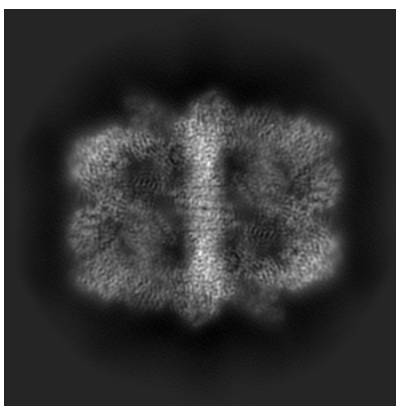
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

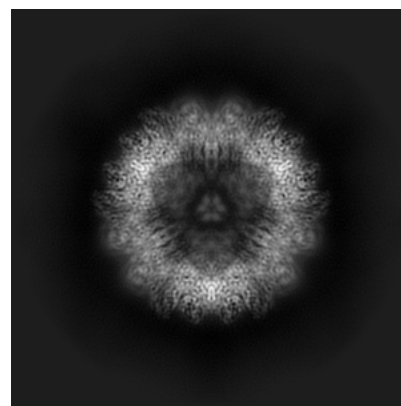
6.1.1 Primary map



X

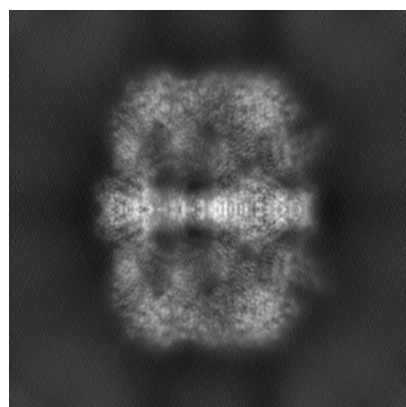


Y

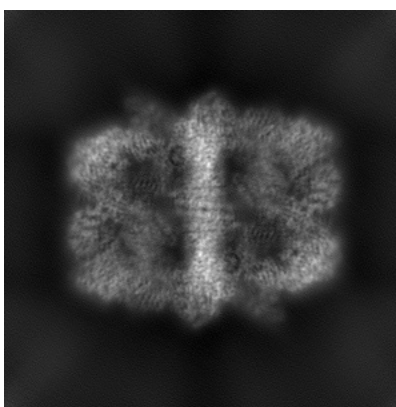


Z

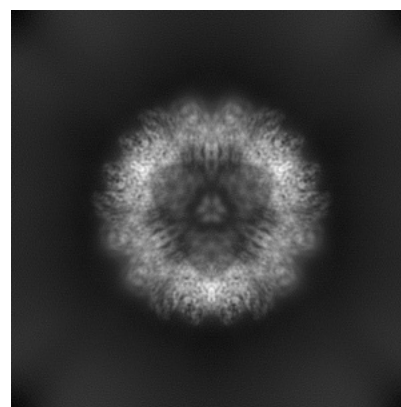
6.1.2 Raw map



X



Y

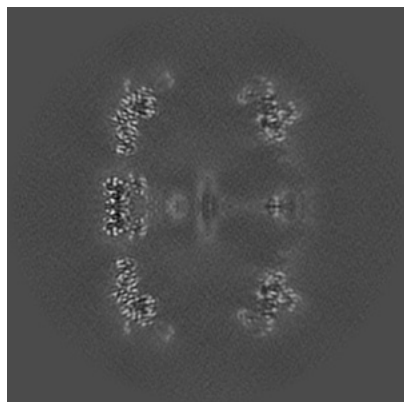


Z

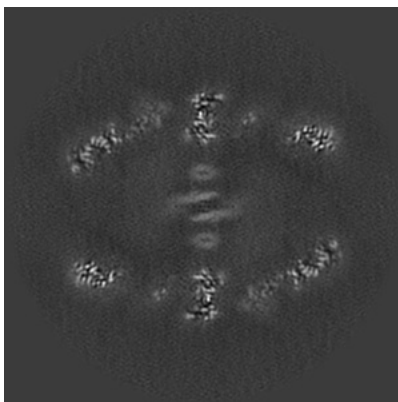
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

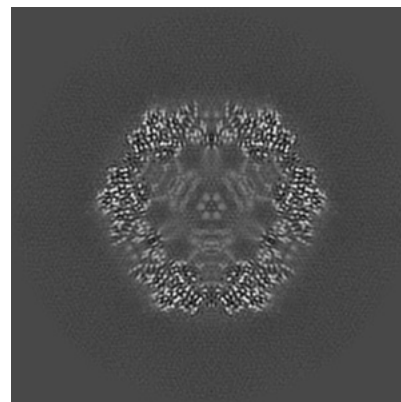
6.2.1 Primary map



X Index: 200

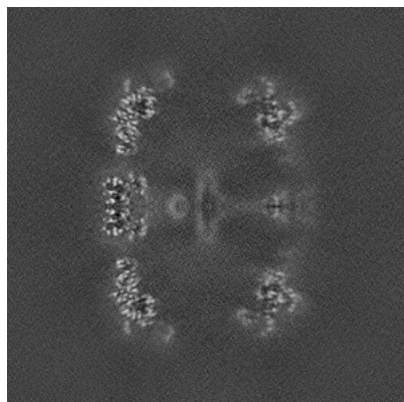


Y Index: 200

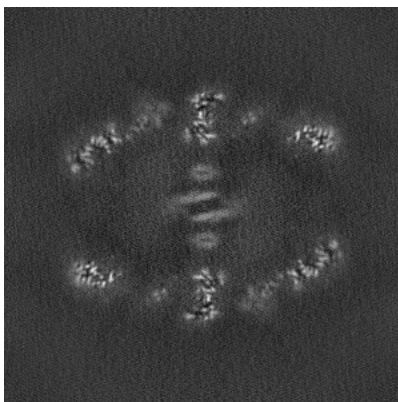


Z Index: 200

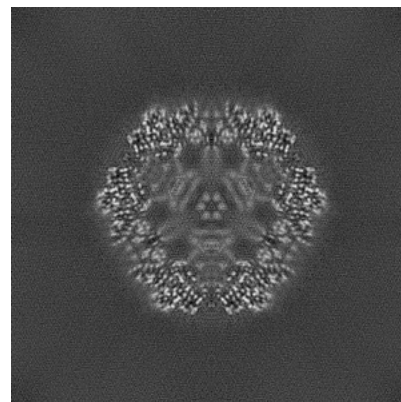
6.2.2 Raw map



X Index: 200



Y Index: 200

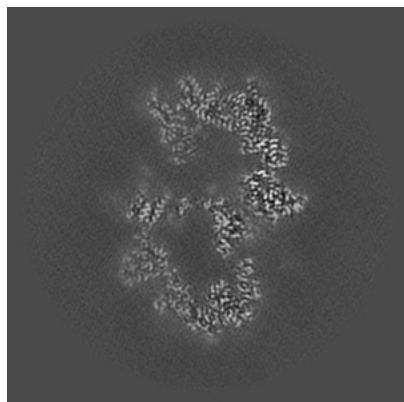


Z Index: 200

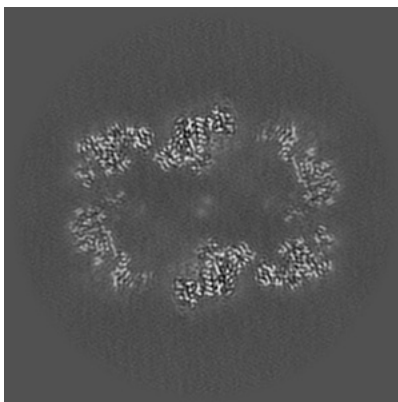
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

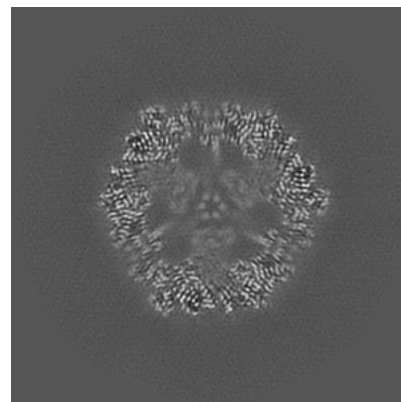
6.3.1 Primary map



X Index: 135

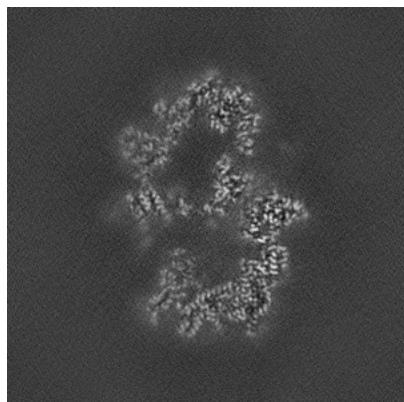


Y Index: 248

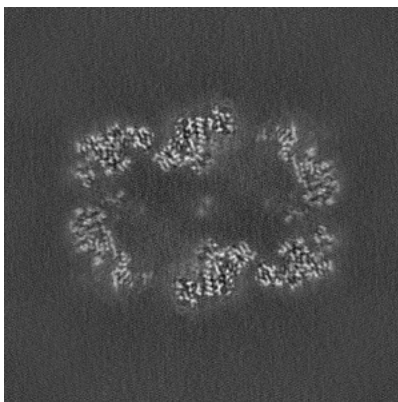


Z Index: 204

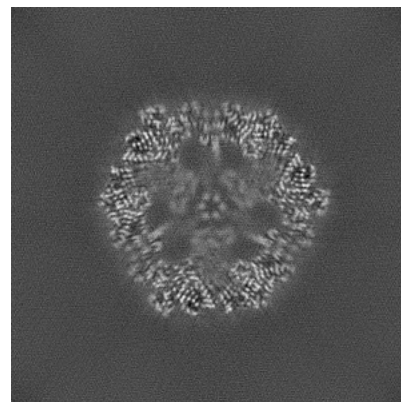
6.3.2 Raw map



X Index: 265



Y Index: 248

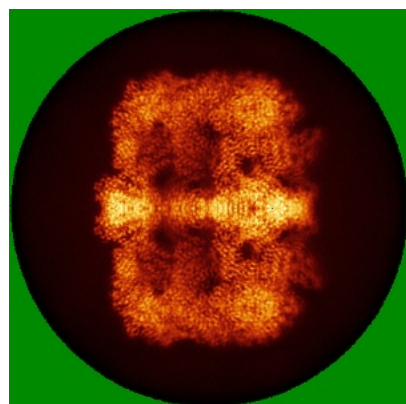


Z Index: 204

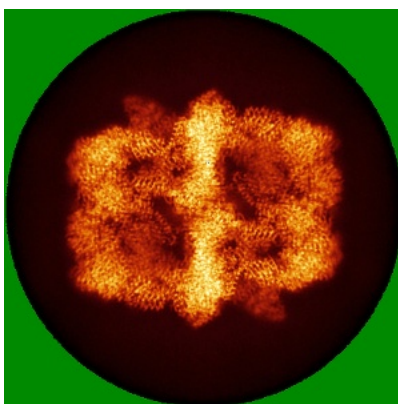
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



X

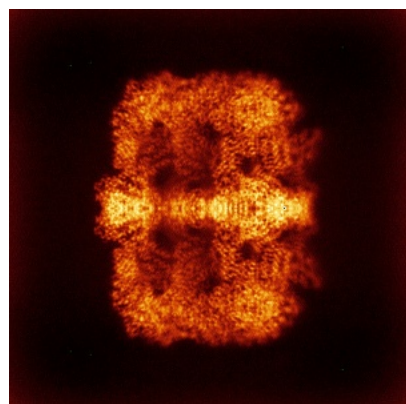


Y

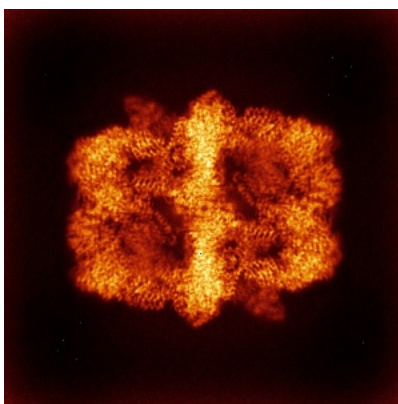


Z

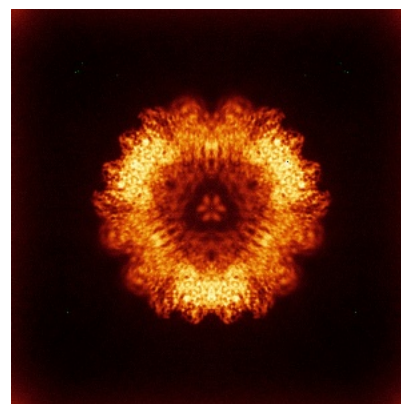
6.4.2 Raw map



X



Y

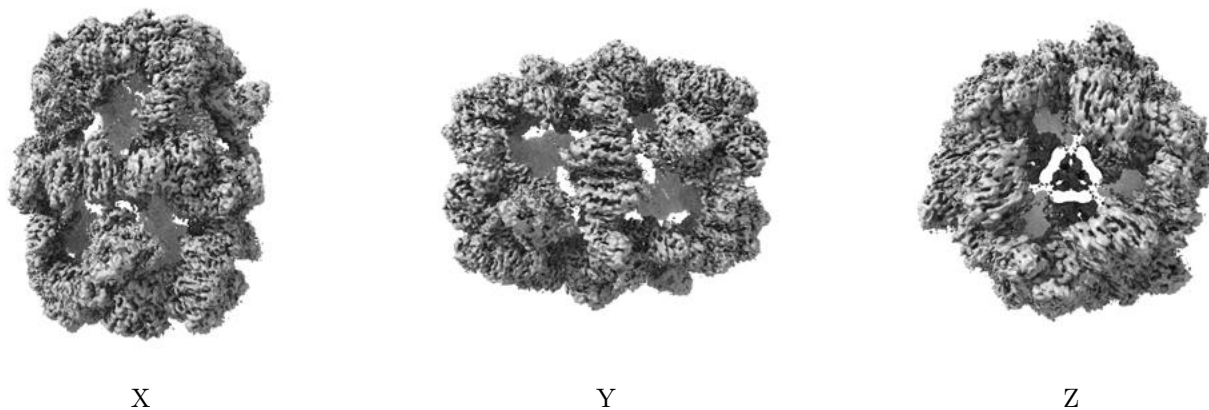


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

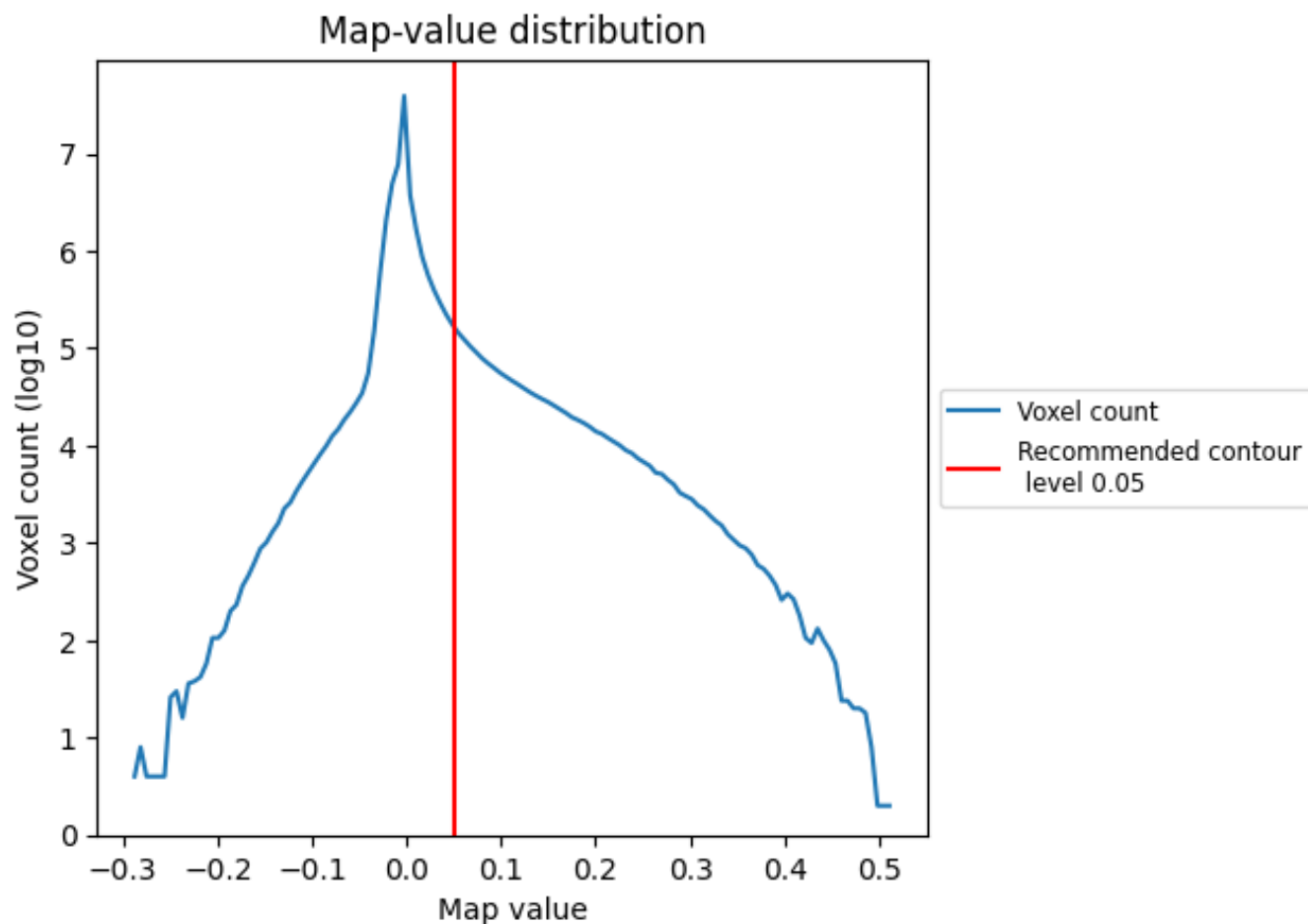
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

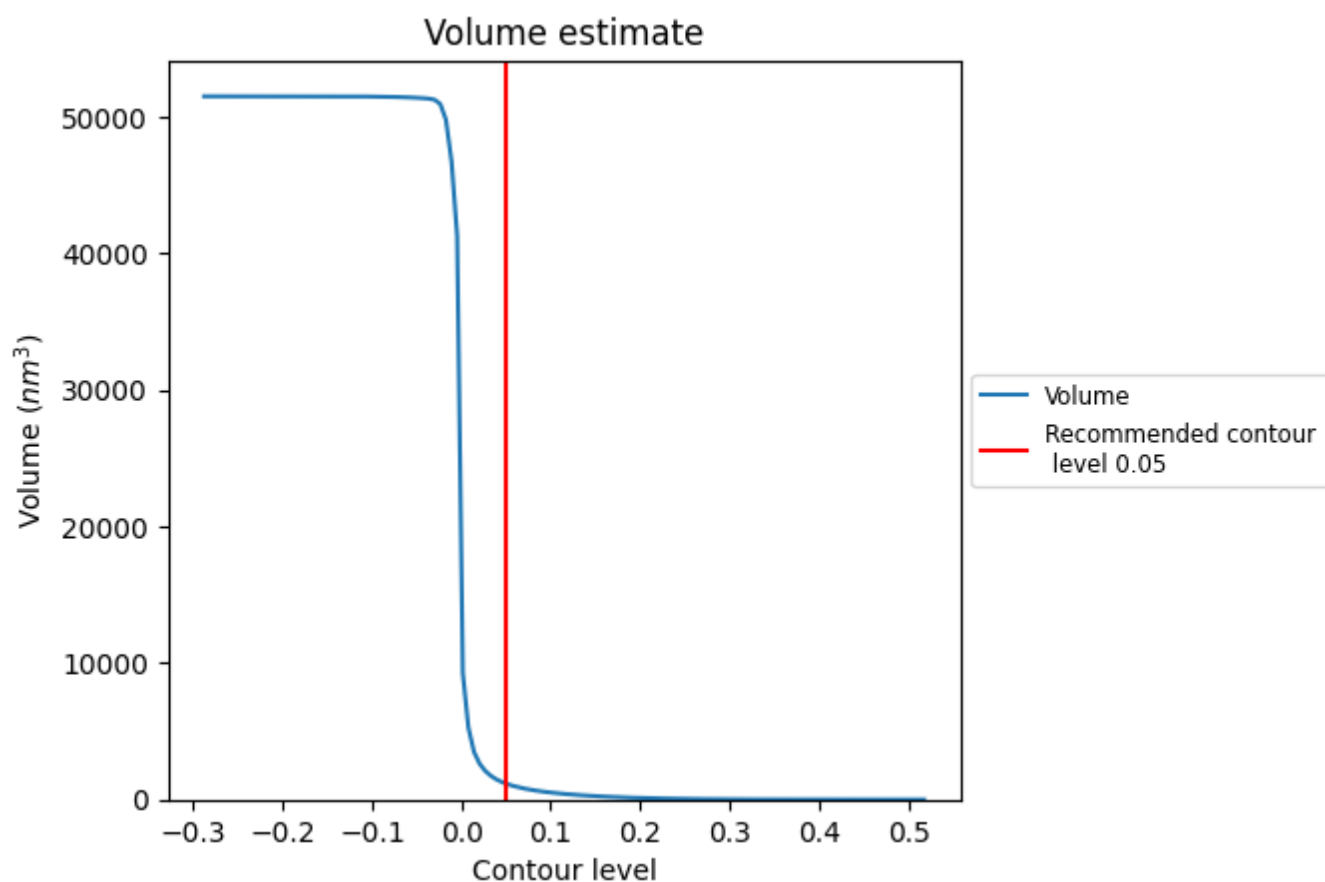
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

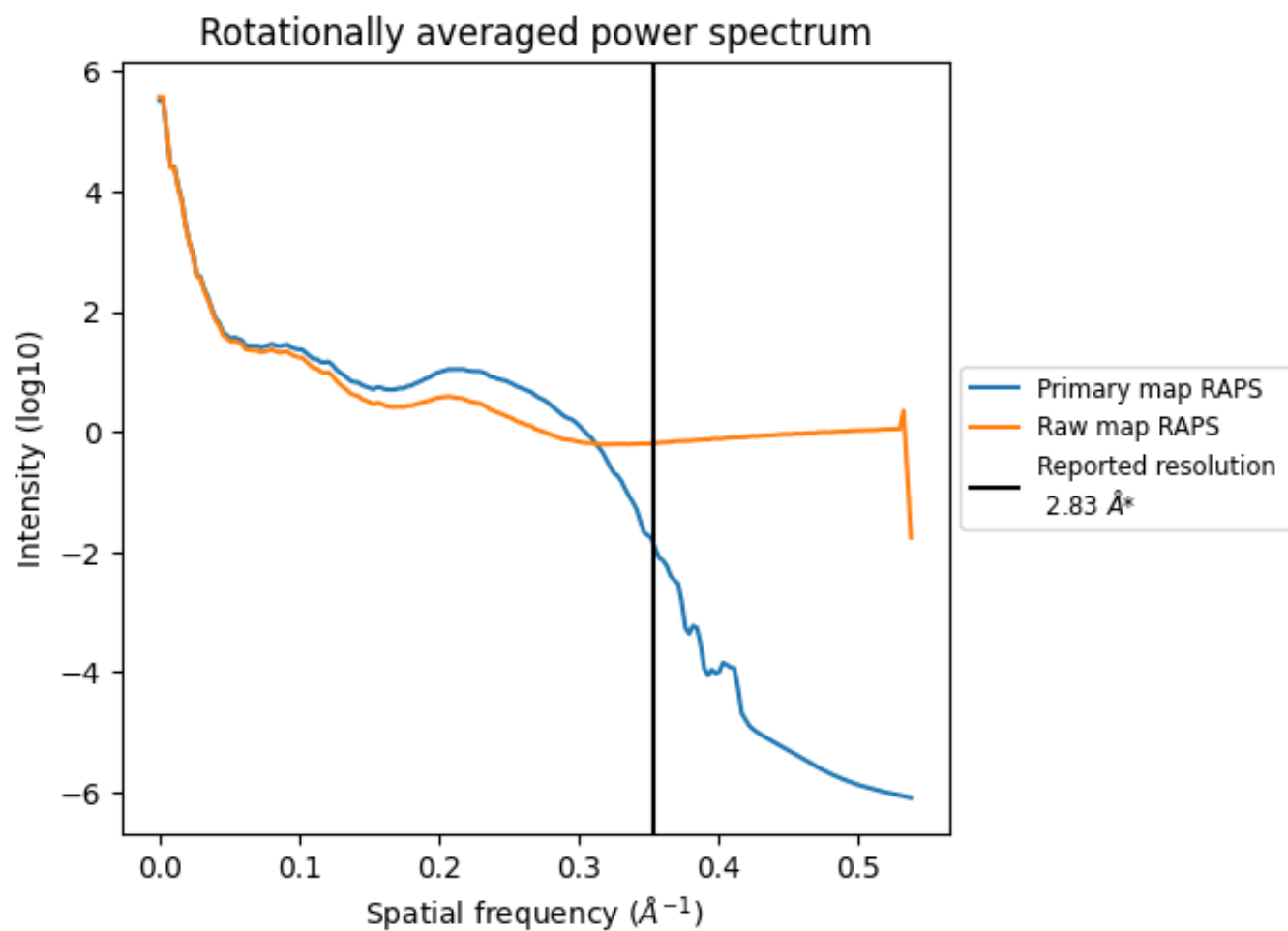
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1168 nm^3 ; this corresponds to an approximate mass of 1055 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

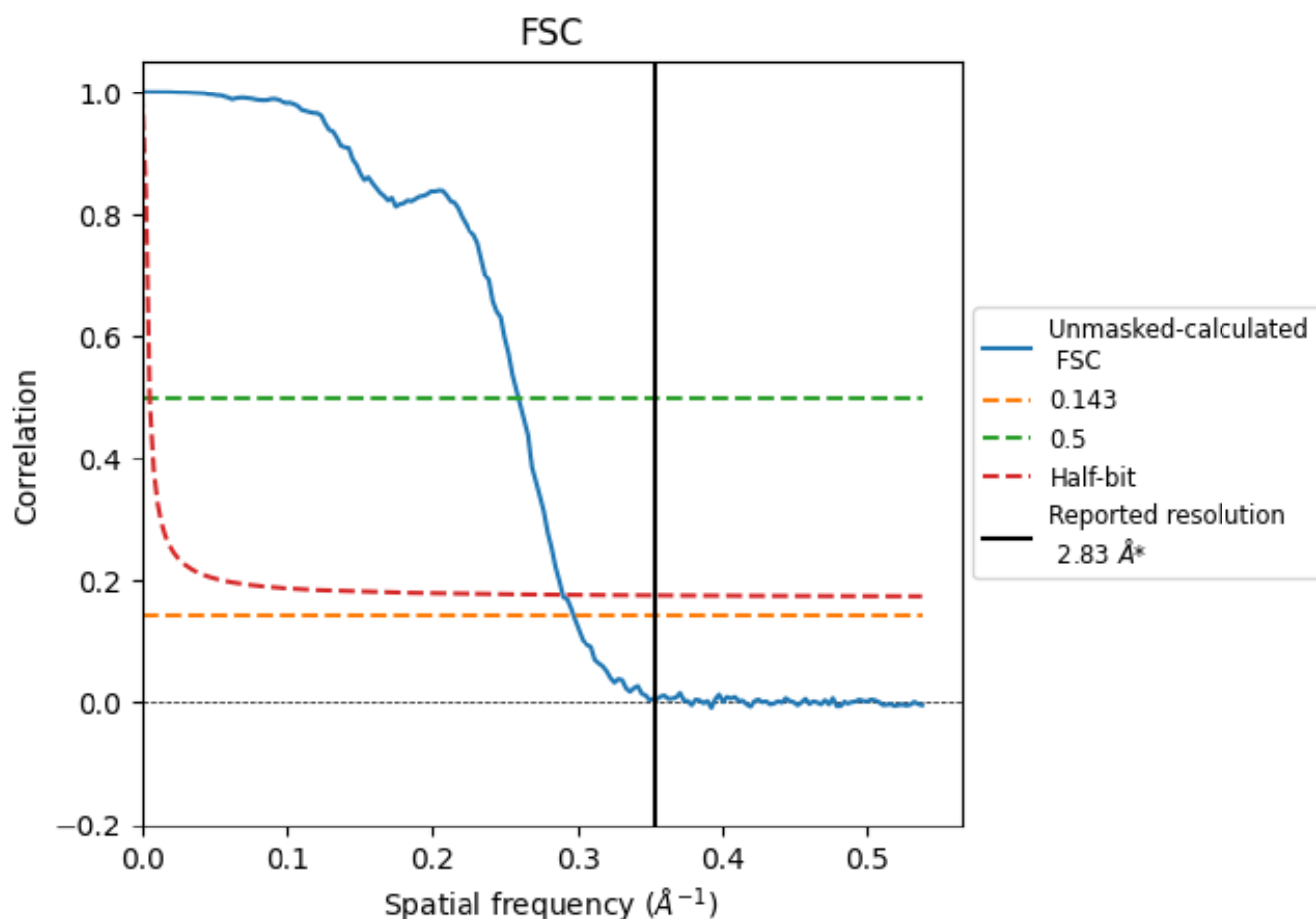


*Reported resolution corresponds to spatial frequency of 0.353 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.353 Å⁻¹

8.2 Resolution estimates [i](#)

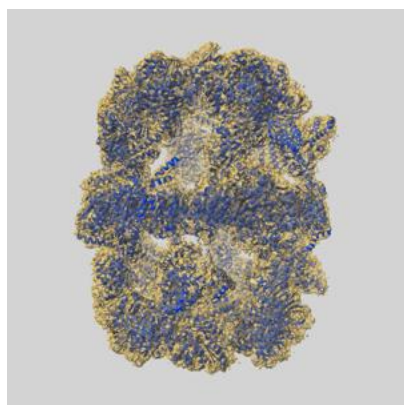
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.83	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.36	3.86	3.45

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.36 differs from the reported value 2.83 by more than 10 %

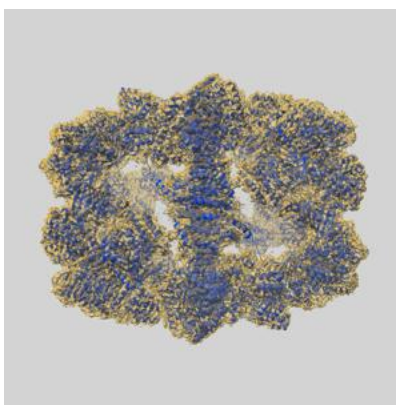
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-71792 and PDB model 9PQX. Per-residue inclusion information can be found in section [3](#) on page [6](#).

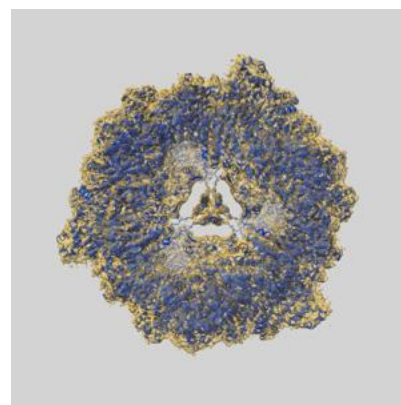
9.1 Map-model overlay [i](#)



X



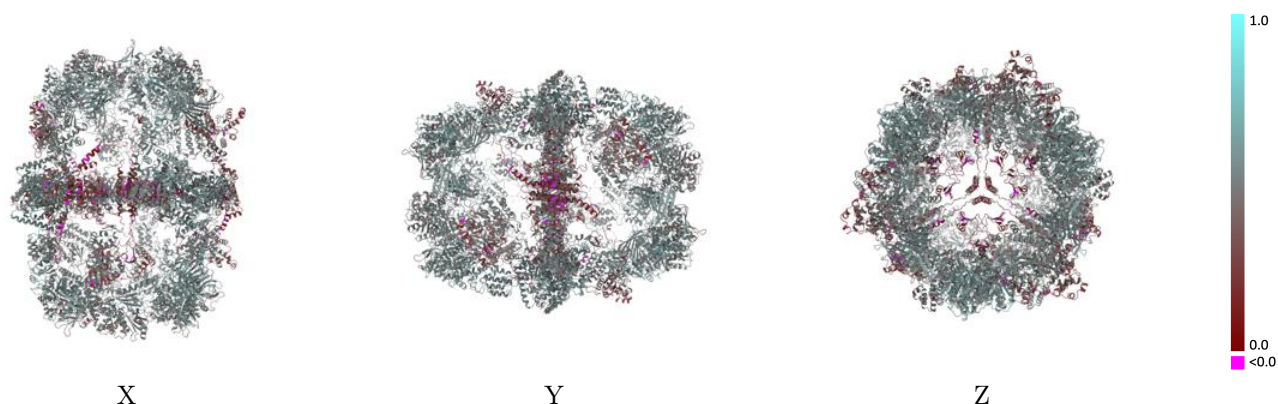
Y



Z

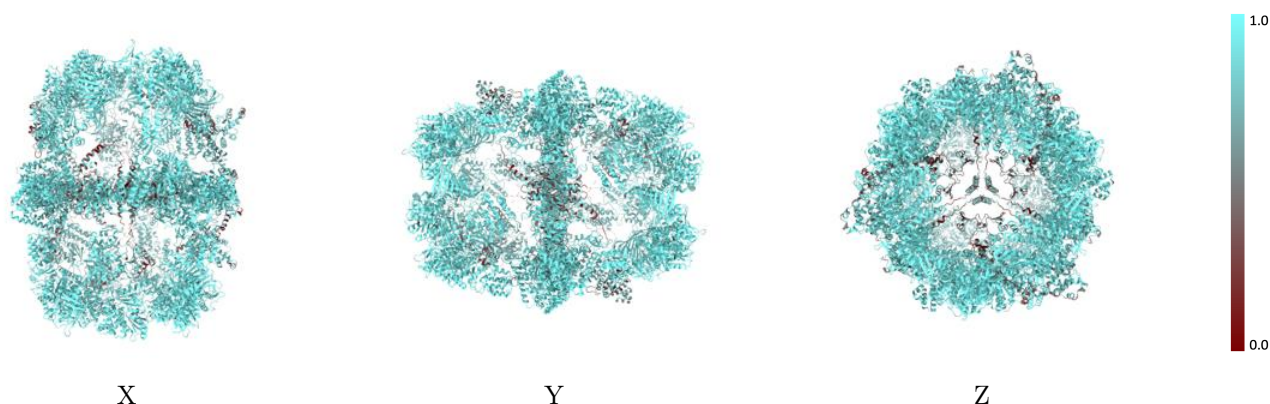
The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



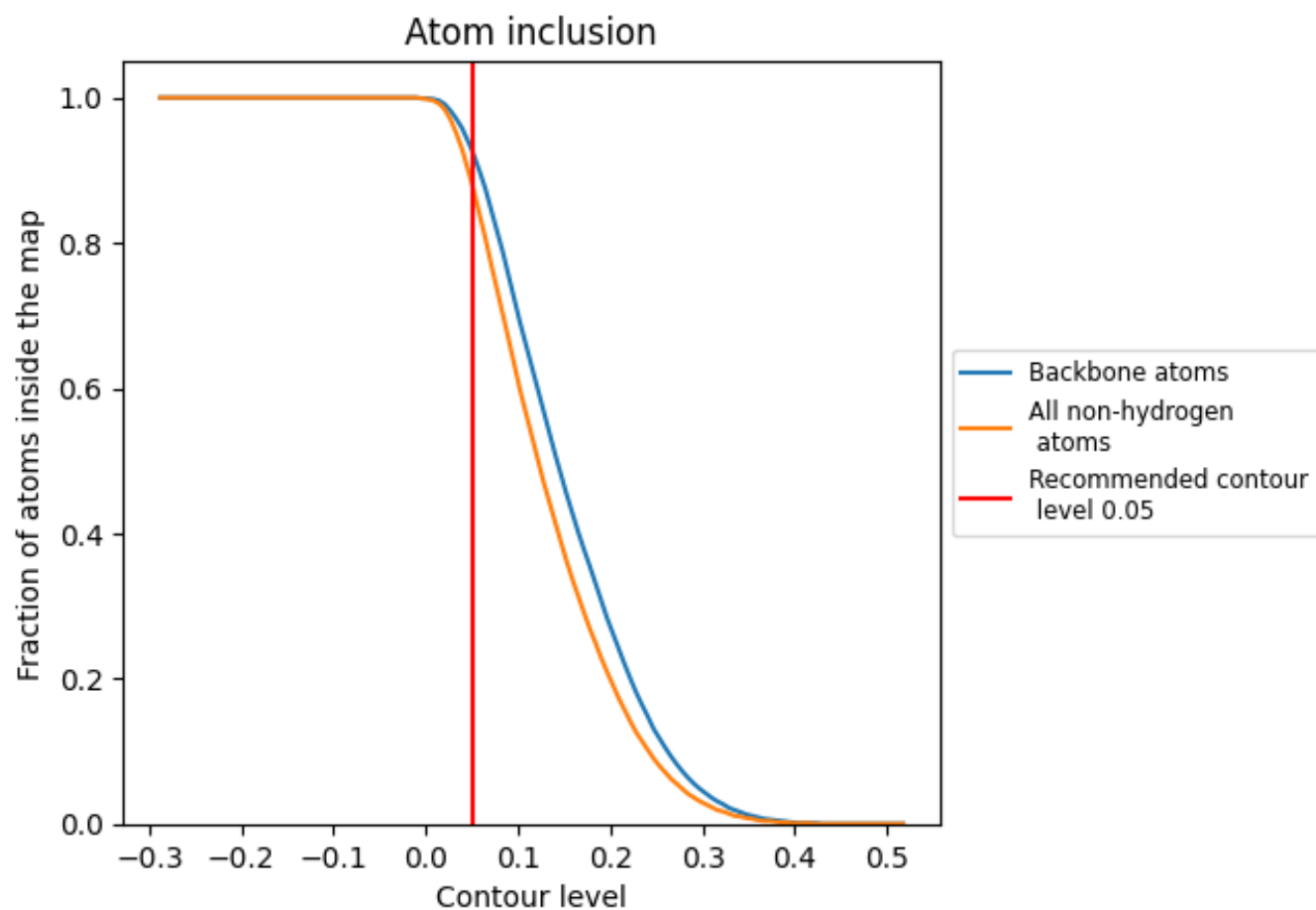
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 88% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div><div></div></div> 0.8820	<div><div></div></div> 0.4740
A	<div><div></div></div> 0.8820	<div><div></div></div> 0.4750
B	<div><div></div></div> 0.8800	<div><div></div></div> 0.4730
C	<div><div></div></div> 0.8830	<div><div></div></div> 0.4740
D	<div><div></div></div> 0.8820	<div><div></div></div> 0.4730
E	<div><div></div></div> 0.8820	<div><div></div></div> 0.4730
F	<div><div></div></div> 0.8820	<div><div></div></div> 0.4740

1.0

0.0

<0.0