



Full wwPDB EM Validation Report ⓘ

Feb 27, 2025 – 05:32 PM JST

PDB ID : 8YGA
EMDB ID : EMD-39240
Title : The tetramer Structure of DSR2 alone
Authors : Gao, X.; Zhu, H.; Cui, S.
Deposited on : 2024-02-26
Resolution : 4.53 Å(reported)

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.dev117
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.41.2

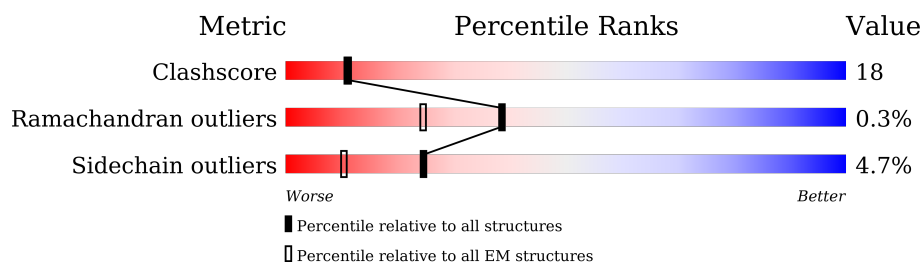
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.53 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	1005	 61% 35% . .
1	B	1005	 63% 33% . .
1	C	1005	 62% 34% . .
1	D	1005	 58% 37% . .

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 33140 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 SIR2-like domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	995	Total	C	N	O	S	0	0
			8285	5362	1336	1555	32		
1	B	995	Total	C	N	O	S	0	0
			8285	5362	1336	1555	32		
1	C	995	Total	C	N	O	S	0	0
			8285	5362	1336	1555	32		
1	D	995	Total	C	N	O	S	0	0
			8285	5362	1336	1555	32		

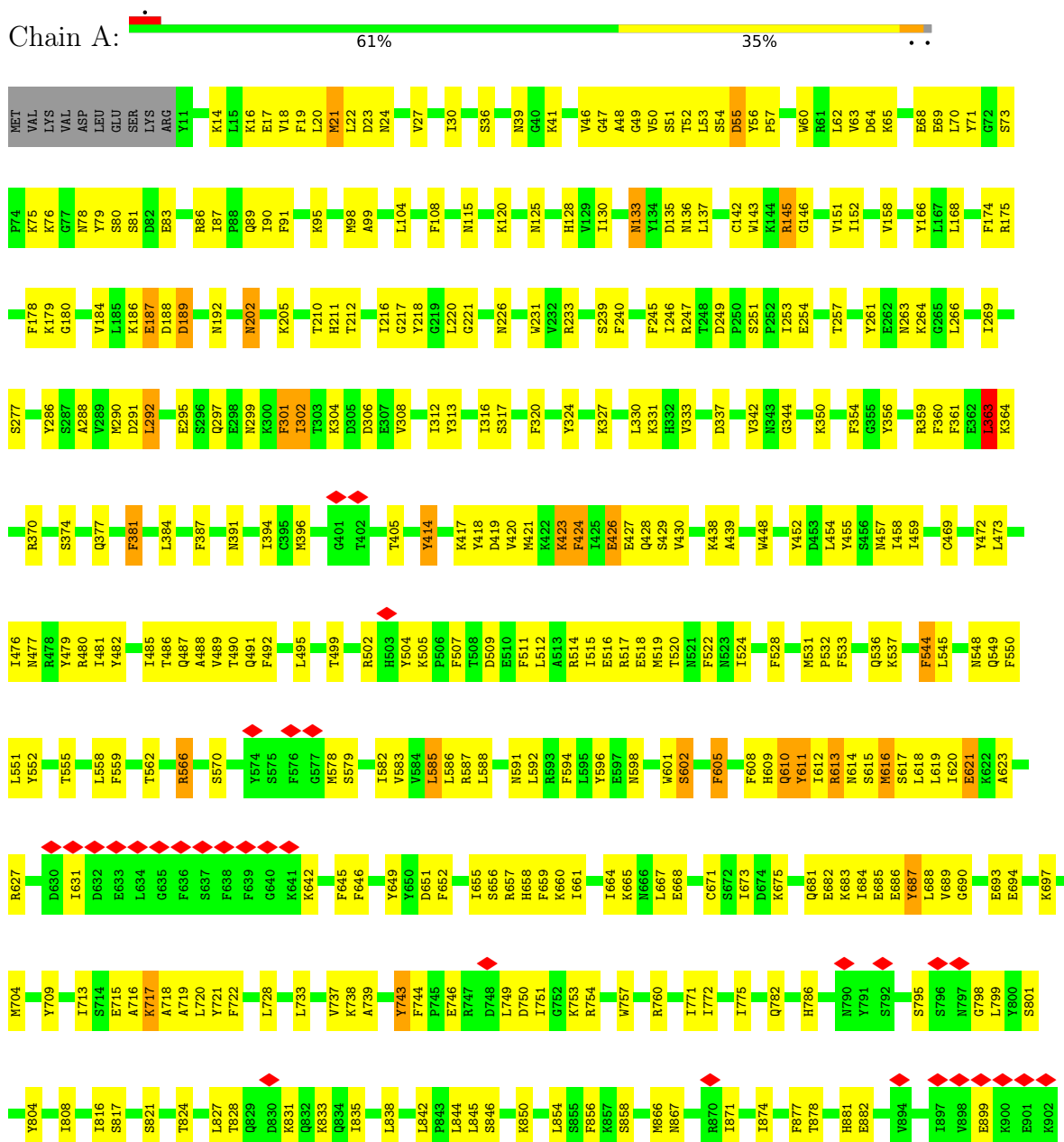
There are 4 discrepancies between the modelled and reference sequences:

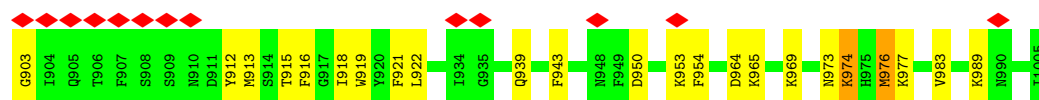
Chain	Residue	Modelled	Actual	Comment	Reference
A	171	ALA	HIS	engineered mutation	UNP D4G637
B	171	ALA	HIS	engineered mutation	UNP D4G637
C	171	ALA	HIS	engineered mutation	UNP D4G637
D	171	ALA	HIS	engineered mutation	UNP D4G637

3 Residue-property plots

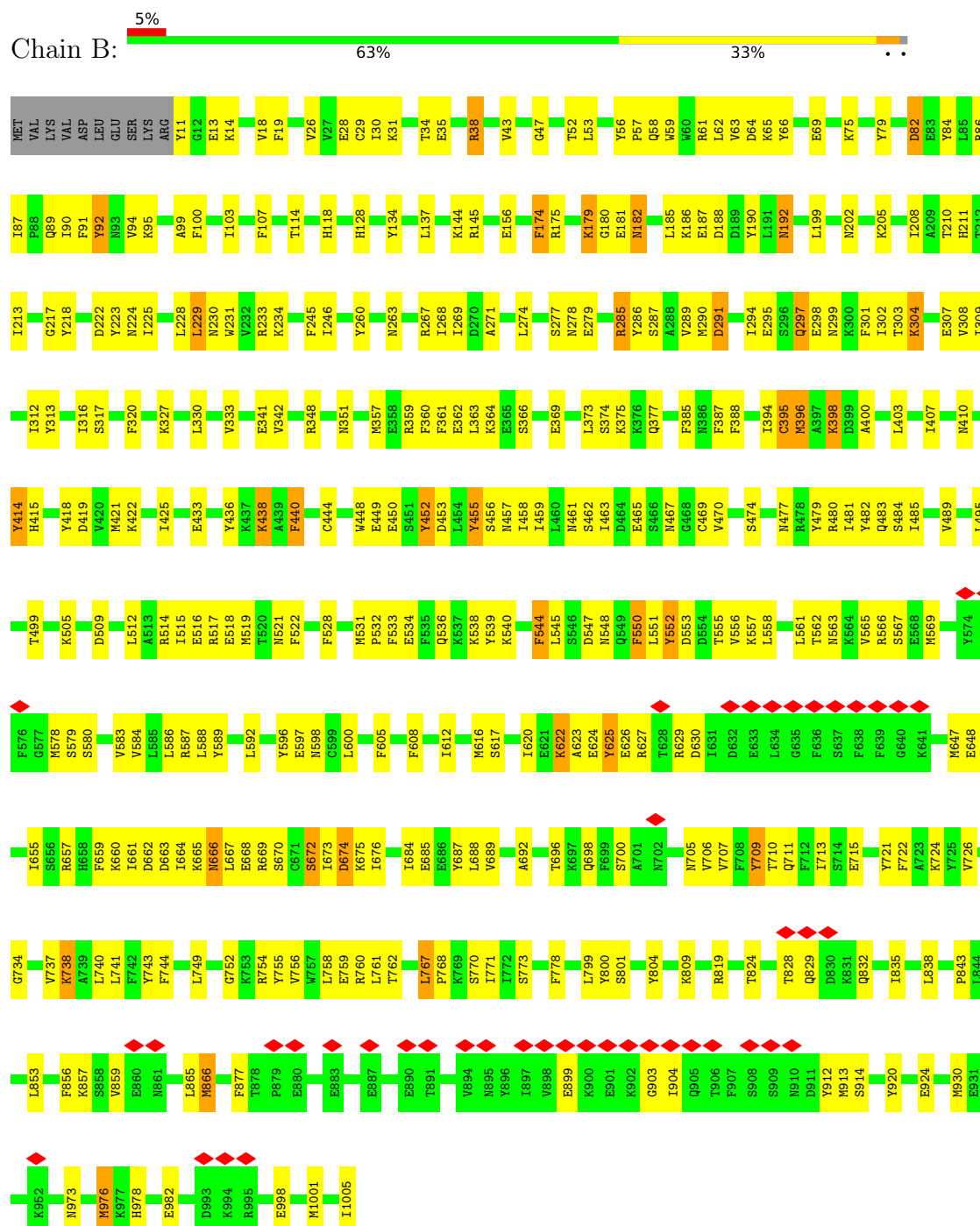
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: SIR2-like domain-containing protein



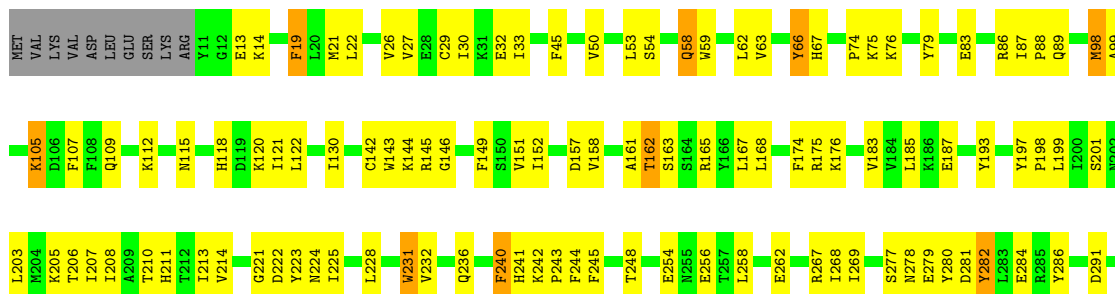
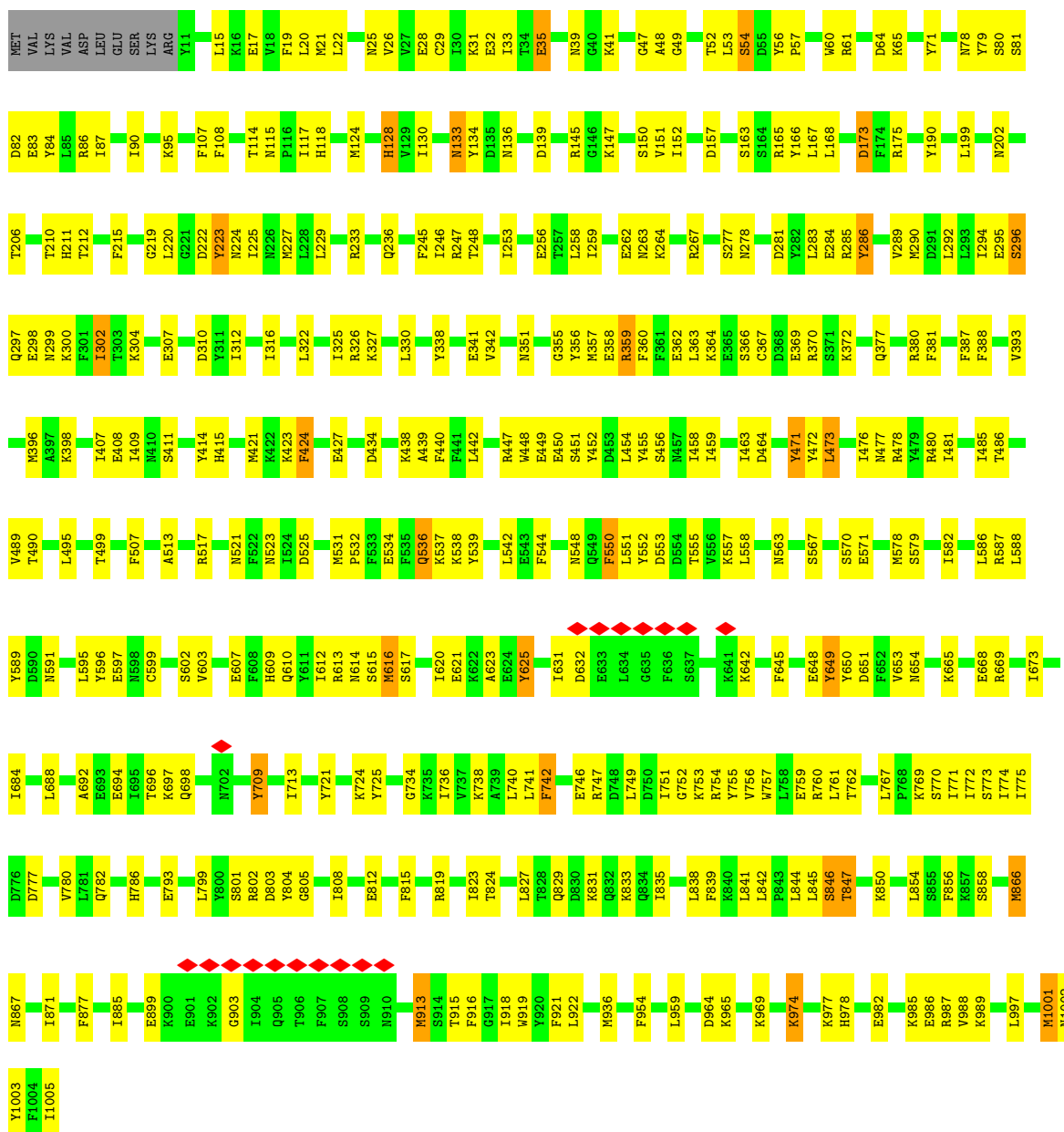


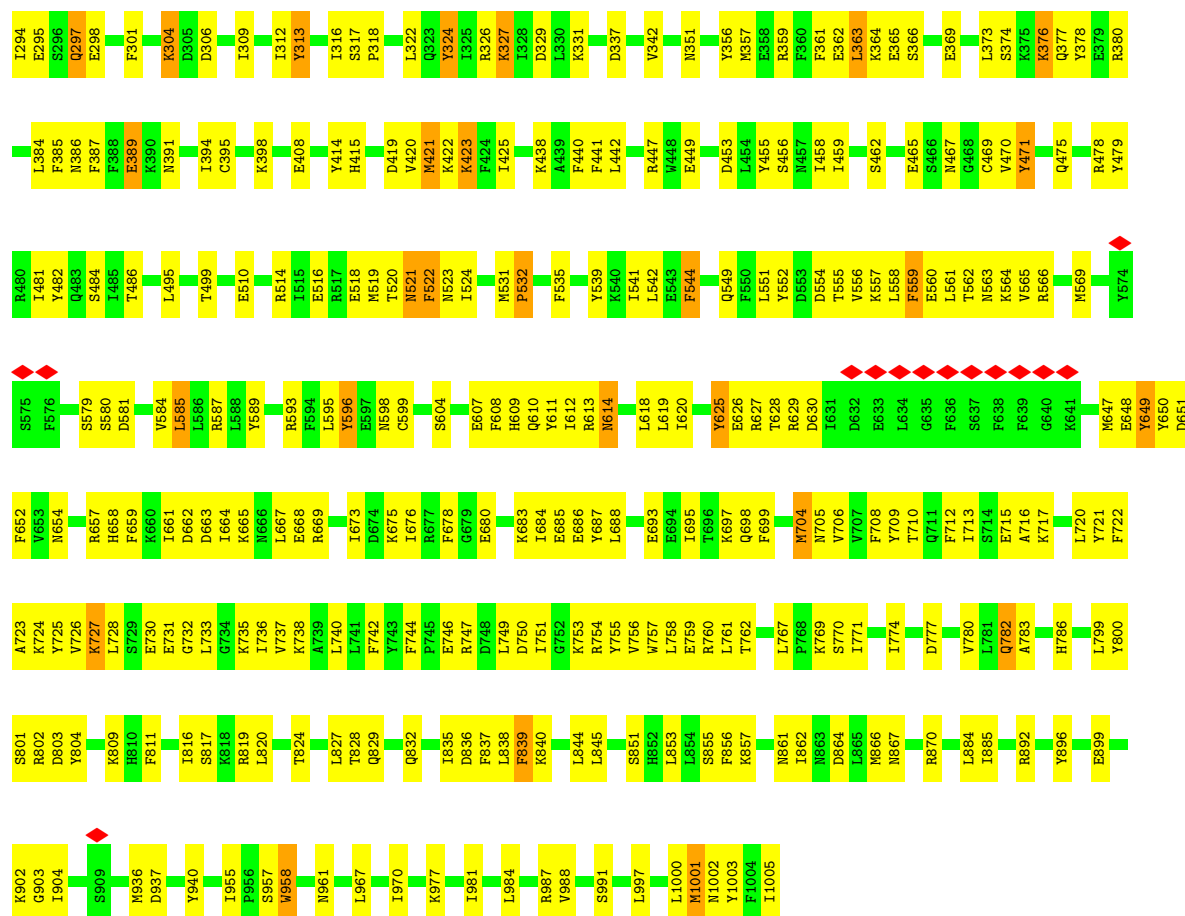
• Molecule 1: SIR2-like domain-containing protein



• Molecule 1: SIR2-like domain-containing protein







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	64553	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	66	Depositor
Minimum defocus (nm)	1800	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.574	Depositor
Minimum map value	-0.117	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.1	Depositor
Map size (\AA)	381.8, 381.8, 381.8	wwPDB
Map dimensions	460, 460, 460	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.83, 0.83, 0.83	Depositor

5 Model quality

5.1 Standard geometry

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	0.29	0/8478	0.56	5/11418 (0.0%)
1	B	0.29	0/8478	0.55	2/11418 (0.0%)
1	C	0.29	0/8478	0.53	0/11418
1	D	0.31	0/8478	0.59	5/11418 (0.0%)
All	All	0.30	0/33912	0.56	12/45672 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1
1	D	0	2
All	All	0	3

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	55	ASP	CB-CG-OD1	8.24	125.72	118.30
1	B	229	LEU	CA-CB-CG	6.61	130.50	115.30
1	D	532	PRO	CA-N-CD	-5.92	103.22	111.50
1	A	363	LEU	CA-CB-CG	5.77	128.58	115.30
1	B	767	LEU	CA-CB-CG	5.64	128.26	115.30
1	D	585	LEU	CA-CB-CG	5.51	127.98	115.30
1	D	704	MET	CA-CB-CG	5.32	122.34	113.30
1	D	363	LEU	CA-CB-CG	5.28	127.44	115.30
1	A	616	MET	CB-CG-SD	-5.28	96.57	112.40
1	A	292	LEU	CA-CB-CG	5.23	127.33	115.30
1	D	777	ASP	CB-CG-OD1	5.09	122.88	118.30
1	A	585	LEU	CA-CB-CG	5.02	126.84	115.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	297	GLN	Peptide
1	D	297	GLN	Peptide
1	D	58	GLN	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	8285	0	8120	298	0
1	B	8285	0	8120	298	0
1	C	8285	0	8120	281	0
1	D	8285	0	8120	335	0
All	All	33140	0	32480	1183	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 18.

All (1183) 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:B:973:ASN:HB3	1:B:976:MET:HE3	1.55	0.87
1:B:627:ARG:HH12	1:B:675:LYS:HG2	1.43	0.82
1:D:425:ILE:HD11	1:D:442:LEU:HG	1.59	0.82
1:C:588:LEU:HD11	1:C:612:ILE:HD12	1.61	0.82
1:D:45:PHE:HB2	1:D:213:ILE:HD11	1.61	0.82
1:B:360:PHE:HA	1:B:363:LEU:HD12	1.61	0.81
1:A:693:GLU:OE1	1:A:697:LYS:NZ	2.13	0.81
1:D:83:GLU:HA	1:D:86:ARG:HE	1.45	0.80
1:A:439:ALA:HB2	1:A:454:LEU:HD22	1.63	0.79
1:D:626:GLU:HB2	1:D:629:ARG:HB3	1.64	0.79
1:B:422:LYS:HA	1:B:425:ILE:HD12	1.64	0.79
1:B:38:ARG:HH12	1:B:297:GLN:HB2	1.47	0.78
1:B:297:GLN:HG2	1:B:298:GLU:H	1.49	0.78
1:D:75:LYS:HG2	1:D:79:TYR:HA	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:800:TYR:HB2	1:D:802:ARG:HE	1.48	0.78
1:A:610:GLN:HA	1:A:613:ARG:HG2	1.67	0.77
1:D:130:ILE:HG13	1:D:168:LEU:HB3	1.65	0.77
1:B:455:TYR:HA	1:B:458:ILE:HD12	1.65	0.77
1:C:302:ILE:HG23	1:C:307:GLU:HB3	1.66	0.77
1:A:70:LEU:HD11	1:D:256:GLU:HG2	1.64	0.77
1:A:661:ILE:HD11	1:A:717:LYS:HD2	1.65	0.76
1:C:749:LEU:O	1:C:754:ARG:NH1	2.19	0.76
1:B:692:ALA:O	1:B:696:THR:HG23	1.84	0.76
1:A:842:LEU:O	1:A:850:LYS:NZ	2.15	0.76
1:B:767:LEU:HB2	1:B:771:ILE:HB	1.67	0.75
1:C:414:TYR:OH	1:C:654:ASN:ND2	2.20	0.75
1:B:374:SER:O	1:B:377:GLN:NE2	2.15	0.75
1:C:295:GLU:C	1:C:297:GLN:H	1.91	0.75
1:A:613:ARG:HH21	1:A:659:PHE:HD1	1.33	0.74
1:D:244:PHE:HE1	1:D:267:ARG:HD3	1.52	0.74
1:B:533:PHE:HA	1:B:536:GLN:HE21	1.52	0.74
1:B:234:LYS:HA	1:B:234:LYS:HE2	1.70	0.74
1:A:312:ILE:O	1:A:316:ILE:HG22	1.88	0.74
1:A:824:THR:HG23	1:A:838:LEU:HD13	1.70	0.73
1:B:327:LYS:HA	1:B:330:LEU:HD13	1.69	0.73
1:B:551:LEU:HD21	1:B:608:PHE:HD1	1.54	0.73
1:A:488:ALA:HA	1:A:491:GLN:HE21	1.52	0.73
1:C:842:LEU:O	1:C:850:LYS:NZ	2.20	0.73
1:D:187:GLU:OE1	1:D:187:GLU:N	2.21	0.73
1:A:596:TYR:OH	1:A:657:ARG:NH1	2.21	0.73
1:D:198:PRO:HG2	1:D:199:LEU:HD22	1.71	0.73
1:A:297:GLN:HE22	1:A:299:ASN:HB2	1.53	0.72
1:B:364:LYS:NZ	1:B:394:ILE:O	2.22	0.72
1:A:518:GLU:HG3	1:A:519:MET:SD	2.29	0.72
1:B:555:THR:HA	1:B:558:LEU:HG	1.70	0.72
1:B:359:ARG:O	1:B:359:ARG:NH1	2.22	0.72
1:C:248:THR:O	1:C:285:ARG:NH2	2.23	0.72
1:A:842:LEU:HD22	1:A:871:ILE:HD12	1.71	0.72
1:D:421:MET:HG3	1:D:441:PHE:HD1	1.52	0.72
1:A:657:ARG:HA	1:A:715:GLU:HG3	1.71	0.72
1:C:544:PHE:HB2	1:C:550:PHE:HB3	1.70	0.71
1:C:471:TYR:OH	1:D:146:GLY:O	2.06	0.71
1:D:105:LYS:HA	1:D:105:LYS:HE2	1.72	0.71
1:D:322:LEU:HD11	1:D:542:LEU:HD11	1.72	0.71
1:A:41:LYS:O	1:A:212:THR:OG1	2.08	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:145:ARG:NH2	1:D:521:ASN:OD1	2.23	0.71
1:B:627:ARG:NH1	1:B:675:LYS:HG2	2.05	0.71
1:B:291:ASP:HA	1:B:294:ILE:HG22	1.70	0.71
1:A:509:ASP:HA	1:A:512:LEU:HD12	1.72	0.71
1:C:41:LYS:O	1:C:212:THR:OG1	2.09	0.71
1:B:62:LEU:HB2	1:B:107:PHE:CE2	2.26	0.71
1:C:439:ALA:HB2	1:C:454:LEU:HD22	1.73	0.71
1:A:19:PHE:HA	1:A:22:LEU:HG	1.73	0.70
1:A:749:LEU:HD12	1:A:753:LYS:HG3	1.73	0.70
1:D:516:GLU:OE1	1:D:520:THR:OG1	2.07	0.70
1:C:824:THR:HG21	1:C:845:LEU:HD21	1.72	0.70
1:B:519:MET:O	1:B:521:ASN:N	2.24	0.70
1:C:19:PHE:HA	1:C:22:LEU:HG	1.73	0.70
1:D:337:ASP:OD2	1:D:356:TYR:OH	2.07	0.70
1:A:583:VAL:HG12	1:A:587:ARG:HH12	1.56	0.70
1:D:740:LEU:HA	1:D:744:PHE:HE2	1.55	0.70
1:D:730:GLU:HA	1:D:733:LEU:HD12	1.74	0.69
1:A:544:PHE:HB2	1:A:550:PHE:HB3	1.74	0.69
1:A:73:SER:OG	1:A:76:LYS:NZ	2.25	0.69
1:D:984:LEU:HB3	1:D:1000:LEU:HD11	1.74	0.69
1:D:13:GLU:HG2	1:D:14:LYS:HD3	1.74	0.69
1:D:329:ASP:HB2	1:D:541:ILE:HD11	1.73	0.69
1:B:278:ASN:O	1:B:285:ARG:NH2	2.26	0.69
1:B:279:GLU:O	1:B:285:ARG:NH1	2.22	0.69
1:B:749:LEU:O	1:B:754:ARG:NH2	2.24	0.69
1:C:210:THR:O	1:C:211:HIS:ND1	2.26	0.69
1:B:400:ALA:HB1	1:B:403:LEU:HD11	1.74	0.69
1:D:376:LYS:HB2	1:D:380:ARG:HH21	1.57	0.68
1:A:245:PHE:HB2	1:A:266:LEU:HD11	1.74	0.68
1:C:724:LYS:HD3	1:C:760:ARG:HG3	1.75	0.68
1:A:75:LYS:NZ	1:A:78:ASN:O	2.26	0.68
1:B:512:LEU:O	1:B:516:GLU:HG2	1.92	0.68
1:D:749:LEU:HD11	1:D:757:TRP:HE1	1.58	0.68
1:B:538:LYS:HG3	1:B:539:TYR:CD1	2.28	0.68
1:C:780:VAL:HG21	1:C:819:ARG:HD3	1.76	0.68
1:B:330:LEU:O	1:B:333:VAL:HB	1.93	0.67
1:C:616:MET:O	1:C:620:ILE:HG12	1.94	0.67
1:A:782:GLN:OE1	1:A:801:SER:OG	2.13	0.67
1:D:425:ILE:O	1:D:438:LYS:NZ	2.26	0.67
1:D:105:LYS:HZ3	1:D:109:GLN:HB2	1.59	0.67
1:A:827:LEU:HD13	1:A:835:ILE:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:222:ASP:O	1:D:224:ASN:N	2.28	0.67
1:B:449:GLU:OE1	1:B:449:GLU:N	2.22	0.67
1:B:218:TYR:HD2	1:B:225:ILE:HD11	1.60	0.67
1:A:609:HIS:O	1:A:613:ARG:HD2	1.94	0.67
1:C:473:LEU:O	1:C:477:ASN:ND2	2.28	0.66
1:B:809:LYS:HE2	1:B:843:PRO:HB2	1.77	0.66
1:C:531:MET:HG3	1:C:532:PRO:HD2	1.78	0.66
1:C:866:MET:SD	1:C:867:ASN:ND2	2.68	0.66
1:D:755:TYR:HB2	1:D:804:TYR:CZ	2.30	0.66
1:B:436:TYR:OH	1:B:598:ASN:O	2.14	0.66
1:C:846:SER:O	1:C:847:THR:OG1	2.14	0.66
1:B:190:TYR:HD2	1:B:223:TYR:HE2	1.43	0.66
1:B:291:ASP:O	1:B:295:GLU:HG3	1.96	0.66
1:A:921:PHE:O	1:A:969:LYS:NZ	2.29	0.66
1:B:47:GLY:HA3	1:B:218:TYR:HE1	1.61	0.66
1:A:751:ILE:HA	1:A:754:ARG:HG3	1.78	0.65
1:B:457:ASN:OD1	1:B:461:ASN:ND2	2.27	0.65
1:D:648:GLU:N	1:D:651:ASP:OD2	2.30	0.65
1:C:80:SER:OG	1:C:82:ASP:OD1	2.15	0.65
1:C:312:ILE:O	1:C:316:ILE:HG22	1.97	0.65
1:B:233:ARG:NH1	1:B:263:ASN:O	2.30	0.65
1:C:570:SER:OG	1:D:669:ARG:NH1	2.30	0.65
1:C:614:ASN:OD1	1:C:615:SER:N	2.30	0.65
1:D:610:GLN:OE1	1:D:613:ARG:NH2	2.30	0.65
1:D:122:LEU:HD11	1:D:142:CYS:HA	1.79	0.64
1:D:453:ASP:O	1:D:456:SER:OG	2.11	0.64
1:D:835:ILE:HA	1:D:838:LEU:HD12	1.79	0.64
1:B:673:ILE:HG23	1:B:676:ILE:HD12	1.79	0.64
1:C:286:TYR:O	1:C:290:MET:HG2	1.97	0.64
1:C:480:ARG:NH1	1:C:602:SER:OG	2.30	0.64
1:C:552:TYR:CZ	1:D:556:VAL:HG13	2.32	0.64
1:D:782:GLN:OE1	1:D:786:HIS:ND1	2.23	0.64
1:B:588:LEU:O	1:B:592:LEU:HG	1.97	0.64
1:B:477:ASN:O	1:B:481:ILE:HG12	1.97	0.64
1:C:233:ARG:NH2	1:C:263:ASN:O	2.29	0.64
1:D:374:SER:O	1:D:377:GLN:NE2	2.31	0.64
1:B:419:ASP:HA	1:B:422:LYS:HE2	1.80	0.64
1:D:54:SER:OG	1:D:115:ASN:ND2	2.30	0.64
1:C:844:LEU:O	1:C:850:LYS:NZ	2.26	0.63
1:B:533:PHE:HA	1:B:536:GLN:NE2	2.13	0.63
1:C:295:GLU:C	1:C:297:GLN:N	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:201:SER:O	1:D:205:LYS:HG2	1.98	0.63
1:D:327:LYS:NZ	1:D:342:VAL:O	2.24	0.63
1:A:36:SER:OG	1:A:212:THR:OG1	2.11	0.63
1:B:28:GLU:HA	1:B:31:LYS:HE2	1.79	0.63
1:D:326:ARG:NH1	1:D:329:ASP:OD2	2.31	0.63
1:A:488:ALA:HA	1:A:491:GLN:NE2	2.13	0.63
1:D:997:LEU:O	1:D:1001:MET:HG3	1.98	0.63
1:A:427:GLU:O	1:A:438:LYS:NZ	2.30	0.63
1:C:537:LYS:HE3	1:C:537:LYS:HA	1.80	0.63
1:C:824:THR:HG23	1:C:838:LEU:HD13	1.79	0.63
1:A:486:THR:O	1:A:490:THR:OG1	2.17	0.63
1:D:740:LEU:HA	1:D:744:PHE:CE2	2.34	0.63
1:D:366:SER:HB2	1:D:369:GLU:HG2	1.80	0.62
1:B:303:THR:N	1:B:307:GLU:OE2	2.29	0.62
1:D:987:ARG:NH2	1:D:991:SER:HB3	2.15	0.62
1:A:417:LYS:NZ	1:A:419:ASP:HB3	2.13	0.62
1:A:877:PHE:CE1	1:A:882:GLU:HG3	2.35	0.62
1:D:421:MET:HG3	1:D:441:PHE:CD1	2.33	0.62
1:A:83:GLU:HA	1:A:86:ARG:HB2	1.81	0.62
1:A:135:ASP:OD1	1:A:135:ASP:N	2.30	0.62
1:A:716:ALA:O	1:A:720:LEU:HG	1.99	0.62
1:B:596:TYR:OH	1:B:657:ARG:NH2	2.32	0.62
1:D:408:GLU:O	1:D:593:ARG:NH1	2.31	0.62
1:A:53:LEU:HD21	1:A:286:TYR:HD2	1.65	0.62
1:D:420:VAL:HA	1:D:423:LYS:HE2	1.80	0.62
1:B:94:VAL:HG13	1:B:95:LYS:HD2	1.82	0.62
1:B:495:LEU:HD23	1:B:499:THR:HG23	1.82	0.62
1:C:145:ARG:HH22	1:D:522:PHE:HB2	1.64	0.62
1:C:982:GLU:HA	1:C:985:LYS:HD2	1.82	0.62
1:A:613:ARG:NH1	1:A:658:HIS:HB2	2.15	0.62
1:B:425:ILE:HG23	1:B:438:LYS:HD2	1.80	0.62
1:A:913:MET:HA	1:A:916:PHE:HD2	1.64	0.61
1:C:684:ILE:O	1:C:688:LEU:HG	2.00	0.61
1:C:899:GLU:O	1:C:903:GLY:N	2.32	0.61
1:D:755:TYR:HD2	1:D:799:LEU:HD11	1.64	0.61
1:C:220:LEU:HD23	1:C:247:ARG:HE	1.65	0.61
1:C:298:GLU:C	1:C:300:LYS:N	2.52	0.61
1:D:89:GLN:CD	1:D:89:GLN:H	2.04	0.61
1:C:17:GLU:HA	1:C:20:LEU:HD12	1.82	0.61
1:C:987:ARG:NH1	1:D:628:THR:O	2.34	0.61
1:D:899:GLU:O	1:D:903:GLY:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:83:GLU:O	1:C:87:ILE:HG13	2.00	0.61
1:C:448:TRP:HE3	1:C:485:ILE:HG22	1.66	0.61
1:C:913:MET:HA	1:C:916:PHE:HD2	1.66	0.61
1:A:613:ARG:CZ	1:A:658:HIS:HB2	2.31	0.61
1:D:721:TYR:HD1	1:D:757:TRP:CZ3	2.19	0.61
1:A:613:ARG:HD2	1:A:613:ARG:H	1.66	0.61
1:C:767:LEU:HG	1:C:771:ILE:HB	1.82	0.61
1:A:27:VAL:HA	1:A:30:ILE:HD12	1.83	0.61
1:A:50:VAL:HA	1:A:53:LEU:HD12	1.83	0.61
1:A:210:THR:O	1:A:211:HIS:ND1	2.34	0.61
1:C:801:SER:HA	1:C:804:TYR:HD1	1.66	0.61
1:A:750:ASP:H	1:A:753:LYS:HZ3	1.48	0.60
1:C:15:LEU:HD22	1:C:292:LEU:HD13	1.82	0.60
1:D:651:ASP:HA	1:D:654:ASN:HD21	1.66	0.60
1:D:708:PHE:CZ	1:D:712:PHE:HE2	2.19	0.60
1:A:899:GLU:O	1:A:903:GLY:N	2.34	0.60
1:B:579:SER:O	1:B:583:VAL:HG13	2.00	0.60
1:C:589:TYR:OH	1:C:651:ASP:OD1	2.20	0.60
1:A:877:PHE:HE1	1:A:882:GLU:HG3	1.66	0.60
1:B:302:ILE:HG23	1:B:307:GLU:HB2	1.83	0.60
1:D:14:LYS:HD3	1:D:14:LYS:H	1.66	0.60
1:D:495:LEU:HD23	1:D:499:THR:HG23	1.83	0.60
1:A:651:ASP:O	1:A:655:ILE:HG12	2.02	0.60
1:C:760:ARG:HG2	1:C:761:LEU:HD23	1.81	0.60
1:D:862:ILE:HD13	1:D:884:LEU:HB3	1.84	0.60
1:A:48:ALA:O	1:A:51:SER:OG	2.13	0.60
1:B:457:ASN:O	1:B:461:ASN:ND2	2.35	0.60
1:D:733:LEU:O	1:D:737:VAL:HG23	2.00	0.60
1:D:205:LYS:HA	1:D:231:TRP:HH2	1.66	0.60
1:C:463:ILE:HD13	1:D:143:TRP:HB3	1.83	0.60
1:D:579:SER:OG	1:D:581:ASP:OD1	2.14	0.60
1:A:549:GLN:NE2	1:B:552:TYR:O	2.35	0.60
1:C:464:ASP:OD1	1:C:464:ASP:N	2.33	0.60
1:D:561:LEU:HB2	1:D:618:LEU:HD21	1.84	0.60
1:D:609:HIS:CE1	1:D:658:HIS:HA	2.36	0.60
1:A:656:SER:HB2	1:A:719:ALA:HB2	1.84	0.59
1:A:824:THR:HG21	1:A:845:LEU:HD21	1.83	0.59
1:B:721:TYR:O	1:B:760:ARG:NE	2.33	0.59
1:C:297:GLN:HB3	1:C:300:LYS:HG2	1.83	0.59
1:A:717:LYS:HG3	1:A:718:ALA:N	2.17	0.59
1:B:62:LEU:HB2	1:B:107:PHE:HE2	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:175:ARG:HG2	1:D:176:LYS:HD2	1.84	0.59
1:D:456:SER:HB3	1:D:478:ARG:HH22	1.65	0.59
1:D:721:TYR:HA	1:D:757:TRP:HZ3	1.67	0.59
1:A:844:LEU:HD12	1:A:845:LEU:HB2	1.84	0.59
1:B:327:LYS:HD2	1:B:342:VAL:HA	1.83	0.59
1:A:454:LEU:HA	1:A:457:ASN:ND2	2.17	0.59
1:C:351:ASN:HD21	1:C:355:GLY:HA2	1.68	0.59
1:B:304:LYS:HD3	1:B:304:LYS:H	1.67	0.59
1:B:824:THR:HG23	1:B:838:LEU:HD13	1.83	0.59
1:C:553:ASP:HA	1:D:552:TYR:HE2	1.67	0.59
1:C:854:LEU:O	1:C:858:SER:OG	2.18	0.59
1:D:471:TYR:O	1:D:475:GLN:HG2	2.03	0.59
1:A:512:LEU:O	1:A:516:GLU:HG3	2.03	0.59
1:C:130:ILE:HD12	1:C:168:LEU:HB3	1.84	0.59
1:C:145:ARG:HG3	1:C:147:LYS:NZ	2.18	0.59
1:D:479:TYR:CG	1:D:524:ILE:HD11	2.38	0.59
1:D:551:LEU:HD21	1:D:608:PHE:HD1	1.66	0.59
1:A:482:TYR:CE1	1:A:515:ILE:HD12	2.37	0.59
1:D:649:TYR:N	1:D:680:GLU:OE1	2.36	0.59
1:A:64:ASP:OD1	1:A:65:LYS:N	2.36	0.58
1:D:112:LYS:HA	1:D:112:LYS:HE3	1.84	0.58
1:A:247:ARG:NH1	1:A:251:SER:O	2.24	0.58
1:A:555:THR:O	1:A:558:LEU:HB3	2.03	0.58
1:A:659:PHE:CD2	1:A:664:ILE:HG23	2.39	0.58
1:C:64:ASP:OD1	1:C:65:LYS:N	2.37	0.58
1:C:596:TYR:CE1	1:C:603:VAL:HG21	2.38	0.58
1:D:419:ASP:O	1:D:423:LYS:HD3	2.02	0.58
1:A:184:VAL:HG23	1:A:189:ASP:HB3	1.84	0.58
1:D:242:LYS:NZ	1:D:267:ARG:HD2	2.18	0.58
1:D:620:ILE:HD11	1:D:667:LEU:HD22	1.86	0.58
1:B:734:GLY:HA2	1:B:738:LYS:HZ3	1.68	0.58
1:A:83:GLU:O	1:A:87:ILE:HG13	2.03	0.58
1:D:14:LYS:HD3	1:D:14:LYS:N	2.18	0.58
1:D:89:GLN:HG3	1:D:187:GLU:CD	2.24	0.58
1:D:306:ASP:O	1:D:309:ILE:HG13	2.04	0.58
1:A:46:VAL:HG23	1:A:50:VAL:HG21	1.84	0.58
1:B:90:ILE:O	1:B:94:VAL:HG12	2.03	0.58
1:B:674:ASP:OD1	1:B:674:ASP:N	2.36	0.58
1:B:53:LEU:HD11	1:B:286:TYR:HD2	1.68	0.58
1:B:913:MET:SD	1:B:937:ASP:HB2	2.44	0.58
1:C:978:HIS:O	1:C:982:GLU:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:278:ASN:OD1	1:D:279:GLU:N	2.37	0.58
1:A:361:PHE:HA	1:A:364:LYS:HD3	1.85	0.58
1:A:405:THR:HG21	1:A:586:LEU:HD11	1.86	0.58
1:C:407:ILE:HG12	1:C:589:TYR:CD2	2.38	0.58
1:D:337:ASP:HB2	1:D:351:ASN:HB2	1.84	0.58
1:B:308:VAL:O	1:B:312:ILE:HG22	2.03	0.57
1:C:455:TYR:O	1:C:459:ILE:HG12	2.04	0.57
1:C:770:SER:O	1:C:773:SER:OG	2.22	0.57
1:B:179:LYS:NZ	1:B:181:GLU:OE1	2.35	0.57
1:B:341:GLU:N	1:B:341:GLU:OE1	2.36	0.57
1:B:737:VAL:HG11	1:B:771:ILE:HG23	1.85	0.57
1:D:242:LYS:HZ3	1:D:242:LYS:HB2	1.68	0.57
1:C:224:ASN:O	1:C:227:MET:HG3	2.04	0.57
1:A:152:ILE:HD11	1:A:158:VAL:HG22	1.85	0.57
1:D:205:LYS:HA	1:D:231:TRP:CH2	2.39	0.57
1:A:772:ILE:HD11	1:A:808:ILE:HG23	1.85	0.57
1:A:570:SER:OG	1:B:669:ARG:NH1	2.38	0.57
1:A:989:LYS:HE3	1:A:989:LYS:HA	1.87	0.57
1:C:222:ASP:HB2	1:C:225:ILE:HG12	1.86	0.57
1:C:236:GLN:HG2	1:D:199:LEU:HD21	1.86	0.57
1:B:225:ILE:O	1:B:229:LEU:HG	2.05	0.57
1:B:608:PHE:O	1:B:612:ILE:HG13	2.05	0.57
1:C:692:ALA:O	1:C:696:THR:HG23	2.05	0.57
1:D:659:PHE:HB3	1:D:664:ILE:HD11	1.86	0.57
1:D:801:SER:HA	1:D:804:TYR:CD1	2.40	0.57
1:B:187:GLU:HA	1:B:190:TYR:HB2	1.87	0.57
1:B:298:GLU:HG3	1:B:302:ILE:HD11	1.85	0.57
1:A:739:ALA:HA	1:A:743:TYR:HD1	1.70	0.57
1:B:899:GLU:O	1:B:903:GLY:N	2.38	0.57
1:D:324:TYR:HE1	1:D:391:ASN:HA	1.70	0.57
1:D:555:THR:HA	1:D:558:LEU:HG	1.86	0.57
1:D:967:LEU:O	1:D:970:ILE:HG22	2.04	0.57
1:D:650:TYR:O	1:D:654:ASN:ND2	2.37	0.56
1:D:657:ARG:HA	1:D:715:GLU:HG3	1.85	0.56
1:A:697:LYS:HD3	1:A:697:LYS:N	2.20	0.56
1:B:26:VAL:O	1:B:30:ILE:HG12	2.05	0.56
1:C:997:LEU:O	1:C:1001:MET:HG2	2.05	0.56
1:A:507:PHE:CE1	1:A:511:PHE:HB3	2.41	0.56
1:A:657:ARG:HG2	1:A:658:HIS:NE2	2.20	0.56
1:B:474:SER:HA	1:B:477:ASN:ND2	2.20	0.56
1:B:724:LYS:HD3	1:B:760:ARG:NE	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:844:LEU:HD12	1:C:845:LEU:HB2	1.86	0.56
1:D:733:LEU:HD23	1:D:736:ILE:HD11	1.87	0.56
1:A:507:PHE:HE1	1:A:511:PHE:HB3	1.70	0.56
1:C:229:LEU:HD21	1:C:264:LYS:HD2	1.86	0.56
1:C:513:ALA:HB1	1:C:517:ARG:HH22	1.69	0.56
1:A:135:ASP:HB2	1:A:137:LEU:HD23	1.86	0.56
1:B:224:ASN:O	1:B:228:LEU:HD22	2.05	0.56
1:B:845:LEU:HD23	1:B:853:LEU:HD21	1.86	0.56
1:D:455:TYR:HA	1:D:458:ILE:HD12	1.87	0.56
1:B:531:MET:SD	1:B:532:PRO:HD2	2.46	0.56
1:C:769:LYS:HA	1:C:772:ILE:HD11	1.86	0.56
1:C:827:LEU:HD13	1:C:835:ILE:HG22	1.88	0.56
1:D:585:LEU:HD13	1:D:619:LEU:HD11	1.88	0.56
1:D:647:MET:HB3	1:D:651:ASP:HB2	1.88	0.56
1:A:616:MET:O	1:A:620:ILE:HG12	2.06	0.56
1:A:801:SER:HA	1:A:804:TYR:HD2	1.71	0.56
1:A:915:THR:HA	1:A:918:ILE:HD12	1.88	0.56
1:B:684:ILE:HG21	1:B:726:VAL:HG21	1.87	0.56
1:D:75:LYS:NZ	1:D:76:LYS:O	2.34	0.56
1:C:396:MET:HG3	1:C:398:LYS:HG2	1.88	0.56
1:C:964:ASP:OD2	1:C:965:LYS:NZ	2.39	0.56
1:D:845:LEU:HD23	1:D:853:LEU:HD21	1.88	0.56
1:C:87:ILE:HA	1:C:90:ILE:HD12	1.87	0.56
1:D:767:LEU:H	1:D:811:PHE:HE2	1.54	0.56
1:A:128:HIS:CE1	1:A:166:TYR:HD2	2.24	0.55
1:A:516:GLU:O	1:A:520:THR:OG1	2.06	0.55
1:B:299:ASN:OD1	1:B:299:ASN:N	2.38	0.55
1:B:144:LYS:HG3	1:B:145:ARG:HD2	1.88	0.55
1:B:187:GLU:OE1	1:B:187:GLU:N	2.38	0.55
1:A:295:GLU:O	1:A:297:GLN:N	2.32	0.55
1:B:297:GLN:HG2	1:B:298:GLU:N	2.20	0.55
1:B:722:PHE:HA	1:B:760:ARG:HH21	1.71	0.55
1:B:756:VAL:HA	1:B:759:GLU:OE1	2.05	0.55
1:A:297:GLN:NE2	1:A:299:ASN:H	2.05	0.55
1:A:608:PHE:O	1:A:612:ILE:HG13	2.07	0.55
1:A:973:ASN:HB3	1:A:976:MET:HG3	1.88	0.55
1:A:87:ILE:HA	1:A:90:ILE:HG12	1.89	0.55
1:B:534:GLU:N	1:B:534:GLU:OE1	2.38	0.55
1:D:479:TYR:CD1	1:D:524:ILE:HD11	2.42	0.55
1:A:588:LEU:O	1:A:592:LEU:HG	2.07	0.55
1:B:770:SER:O	1:B:773:SER:OG	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:246:ILE:HG21	1:C:289:VAL:HG11	1.88	0.55
1:C:477:ASN:O	1:C:481:ILE:HG22	2.05	0.55
1:C:54:SER:OG	1:C:54:SER:O	2.25	0.55
1:D:161:ALA:O	1:D:163:SER:N	2.39	0.55
1:A:704:MET:HE1	1:A:709:TYR:HB2	1.88	0.55
1:A:795:SER:HB3	1:A:798:GLY:HA2	1.88	0.55
1:C:721:TYR:O	1:C:760:ARG:NH1	2.38	0.55
1:D:26:VAL:O	1:D:30:ILE:HG12	2.07	0.55
1:D:324:TYR:HE2	1:D:593:ARG:HE	1.55	0.55
1:D:706:VAL:O	1:D:710:THR:HG23	2.07	0.55
1:A:337:ASP:HA	1:A:350:LYS:HB2	1.89	0.55
1:A:418:TYR:HA	1:A:421:MET:HB3	1.89	0.55
1:A:423:LYS:HA	1:A:426:GLU:OE2	2.07	0.55
1:B:415:HIS:ND1	1:B:649:TYR:OH	2.39	0.55
1:C:563:ASN:OD1	1:C:563:ASN:N	2.38	0.55
1:D:535:PHE:HE1	1:D:539:TYR:HD2	1.54	0.55
1:B:685:GLU:O	1:B:689:VAL:HG22	2.07	0.54
1:B:758:LEU:O	1:B:761:LEU:HG	2.07	0.54
1:C:49:GLY:O	1:C:53:LEU:HG	2.07	0.54
1:D:380:ARG:O	1:D:384:LEU:HG	2.07	0.54
1:A:495:LEU:HD23	1:A:499:THR:HG23	1.89	0.54
1:A:511:PHE:HD1	1:A:514:ARG:HH12	1.52	0.54
1:B:313:TYR:CE1	1:B:317:SER:HB3	2.42	0.54
1:B:452:TYR:HA	1:B:455:TYR:CD2	2.41	0.54
1:B:740:LEU:HA	1:B:744:PHE:CD1	2.42	0.54
1:C:327:LYS:HA	1:C:330:LEU:HD23	1.88	0.54
1:D:231:TRP:CD1	1:D:231:TRP:C	2.81	0.54
1:D:422:LYS:O	1:D:425:ILE:HG22	2.07	0.54
1:A:221:GLY:O	1:A:226:ASN:ND2	2.35	0.54
1:A:455:TYR:OH	1:A:477:ASN:ND2	2.41	0.54
1:B:13:GLU:HG2	1:B:14:LYS:HD2	1.89	0.54
1:D:322:LEU:HB3	1:D:598:ASN:HD21	1.73	0.54
1:D:535:PHE:CE1	1:D:539:TYR:HD2	2.25	0.54
1:A:454:LEU:O	1:A:458:ILE:HG12	2.07	0.54
1:A:665:LYS:HA	1:A:668:GLU:OE1	2.08	0.54
1:B:31:LYS:O	1:B:35:GLU:HG2	2.07	0.54
1:C:542:LEU:HD12	1:C:542:LEU:H	1.71	0.54
1:B:515:ILE:O	1:B:519:MET:CB	2.55	0.54
1:C:206:THR:HG21	1:D:206:THR:HG21	1.89	0.54
1:D:242:LYS:HZ3	1:D:267:ARG:HD2	1.71	0.54
1:D:749:LEU:HD11	1:D:757:TRP:NE1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:55:ASP:OD1	1:A:55:ASP:O	2.24	0.54
1:D:630:ASP:OD1	1:D:630:ASP:N	2.41	0.54
1:D:757:TRP:O	1:D:761:LEU:HD12	2.07	0.54
1:A:98:MET:SD	1:A:99:ALA:N	2.81	0.54
1:A:428:GLN:NE2	1:A:429:SER:O	2.40	0.54
1:D:324:TYR:CE1	1:D:391:ASN:HA	2.43	0.54
1:D:699:PHE:HZ	1:D:713:ILE:HD11	1.72	0.54
1:B:190:TYR:HD2	1:B:223:TYR:CE2	2.24	0.54
1:B:561:LEU:HA	1:B:565:VAL:HB	1.89	0.54
1:C:415:HIS:ND1	1:C:649:TYR:OH	2.39	0.54
1:C:915:THR:HA	1:C:918:ILE:HD12	1.90	0.54
1:A:247:ARG:NE	1:A:253:ILE:HD13	2.23	0.54
1:A:660:LYS:NZ	1:A:717:LYS:HE2	2.22	0.54
1:C:623:ALA:HB2	1:C:645:PHE:HB3	1.90	0.54
1:C:866:MET:CE	1:C:866:MET:H	2.21	0.54
1:D:758:LEU:O	1:D:762:THR:HG23	2.08	0.54
1:C:596:TYR:HE1	1:C:603:VAL:HG21	1.71	0.53
1:D:686:GLU:HA	1:D:686:GLU:OE1	2.08	0.53
1:A:49:GLY:O	1:A:52:THR:OG1	2.19	0.53
1:C:80:SER:OG	1:C:81:SER:N	2.41	0.53
1:D:510:GLU:O	1:D:514:ARG:HG2	2.09	0.53
1:A:623:ALA:HB2	1:A:645:PHE:HB3	1.88	0.53
1:A:667:LEU:O	1:A:671:CYS:N	2.38	0.53
1:B:156:GLU:CD	1:B:156:GLU:H	2.12	0.53
1:B:709:TYR:CE1	1:B:713:ILE:HG13	2.43	0.53
1:A:414:TYR:HB2	1:A:596:TYR:CD2	2.44	0.53
1:A:578:MET:HA	1:A:582:ILE:HD11	1.89	0.53
1:A:690:GLY:O	1:A:694:GLU:HG3	2.09	0.53
1:B:415:HIS:HD1	1:B:649:TYR:HH	1.55	0.53
1:C:28:GLU:OE2	1:C:267:ARG:NH2	2.42	0.53
1:C:424:PHE:HD1	1:C:424:PHE:O	1.91	0.53
1:D:684:ILE:O	1:D:688:LEU:HG	2.09	0.53
1:D:835:ILE:HD12	1:D:857:LYS:HE3	1.90	0.53
1:B:82:ASP:O	1:B:86:ARG:NH1	2.42	0.53
1:C:613:ARG:NE	1:D:563:ASN:OD1	2.38	0.53
1:C:819:ARG:O	1:C:823:ILE:HG12	2.08	0.53
1:D:566:ARG:HA	1:D:569:MET:HB2	1.91	0.53
1:B:515:ILE:O	1:B:519:MET:HB2	2.08	0.53
1:B:937:ASP:OD2	1:B:940:TYR:N	2.40	0.53
1:C:534:GLU:O	1:C:538:LYS:HG2	2.08	0.53
1:C:808:ILE:HD12	1:C:815:PHE:CD2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:681:GLN:N	1:A:681:GLN:OE1	2.41	0.53
1:B:698:GLN:NE2	1:B:705:ASN:OD1	2.40	0.53
1:B:648:GLU:HG2	1:B:650:TYR:H	1.74	0.53
1:C:26:VAL:HA	1:C:29:CYS:SG	2.49	0.53
1:C:290:MET:O	1:C:294:ILE:HG23	2.08	0.53
1:C:567:SER:OG	1:C:571:GLU:OE2	2.26	0.53
1:C:579:SER:H	1:C:582:ILE:HD12	1.73	0.53
1:C:755:TYR:CZ	1:C:803:ASP:HB3	2.44	0.53
1:D:856:PHE:CD2	1:D:857:LYS:HG2	2.43	0.53
1:A:612:ILE:HG22	1:A:616:MET:SD	2.48	0.53
1:B:741:LEU:HD11	1:B:778:PHE:CG	2.44	0.53
1:C:78:ASN:N	1:C:78:ASN:OD1	2.42	0.53
1:C:114:THR:OG1	1:C:118:HIS:ND1	2.39	0.53
1:C:985:LYS:HZ1	1:D:1005:ILE:C	2.11	0.53
1:A:476:ILE:HD13	1:A:524:ILE:HD11	1.92	0.52
1:C:56:TYR:CG	1:C:57:PRO:HD2	2.44	0.52
1:C:80:SER:OG	1:C:82:ASP:N	2.35	0.52
1:C:548:ASN:HB2	1:C:552:TYR:HE2	1.74	0.52
1:D:240:PHE:HD1	1:D:241:HIS:N	2.08	0.52
1:D:716:ALA:O	1:D:720:LEU:HG	2.09	0.52
1:D:731:GLU:O	1:D:735:LYS:HD3	2.09	0.52
1:D:977:LYS:O	1:D:981:ILE:HG12	2.09	0.52
1:A:472:TYR:CZ	1:A:476:ILE:HG13	2.45	0.52
1:A:531:MET:CE	1:A:532:PRO:HD2	2.39	0.52
1:C:341:GLU:OE1	1:C:342:VAL:HG12	2.10	0.52
1:A:120:LYS:HE3	1:A:290:MET:HB3	1.89	0.52
1:A:749:LEU:HG	1:A:754:ARG:HG2	1.90	0.52
1:C:215:PHE:HB2	1:C:245:PHE:HA	1.91	0.52
1:B:480:ARG:HG3	1:B:605:PHE:CZ	2.44	0.52
1:B:734:GLY:O	1:B:737:VAL:HG12	2.09	0.52
1:D:482:TYR:O	1:D:486:THR:HG22	2.09	0.52
1:A:417:LYS:HG3	1:A:420:VAL:HG12	1.91	0.52
1:A:502:ARG:HD2	1:A:504:TYR:HB2	1.91	0.52
1:A:867:ASN:O	1:A:871:ILE:HG12	2.10	0.52
1:B:856:PHE:CD2	1:B:857:LYS:HG2	2.45	0.52
1:C:281:ASP:HB3	1:C:284:GLU:HB2	1.91	0.52
1:D:562:THR:O	1:D:566:ARG:HB3	2.09	0.52
1:A:151:VAL:HG21	1:A:175:ARG:HH22	1.75	0.52
1:A:297:GLN:NE2	1:A:299:ASN:HB2	2.25	0.52
1:A:455:TYR:O	1:A:459:ILE:HG22	2.09	0.52
1:A:964:ASP:OD2	1:A:965:LYS:NZ	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:52:THR:HG23	1:B:58:GLN:NE2	2.24	0.52
1:B:309:ILE:HD12	1:B:377:GLN:HB2	1.92	0.52
1:C:668:GLU:OE2	1:C:760:ARG:NH2	2.43	0.52
1:D:244:PHE:CE1	1:D:267:ARG:HD3	2.39	0.52
1:D:560:GLU:O	1:D:565:VAL:HG23	2.09	0.52
1:B:534:GLU:O	1:B:538:LYS:HB3	2.09	0.52
1:B:630:ASP:OD1	1:B:630:ASP:N	2.43	0.52
1:C:759:GLU:O	1:C:762:THR:OG1	2.28	0.52
1:D:98:MET:HE3	1:D:98:MET:H	1.74	0.52
1:D:254:GLU:HB3	1:D:256:GLU:OE1	2.10	0.52
1:D:767:LEU:HD22	1:D:771:ILE:HG21	1.91	0.52
1:A:18:VAL:HG12	1:A:22:LEU:HD21	1.92	0.52
1:B:661:ILE:HA	1:B:664:ILE:HG12	1.92	0.52
1:A:664:ILE:HA	1:A:667:LEU:HG	1.92	0.51
1:A:728:LEU:HB2	1:A:733:LEU:HD12	1.91	0.51
1:C:366:SER:O	1:C:370:ARG:NH1	2.37	0.51
1:B:448:TRP:HE3	1:B:485:ILE:HD13	1.76	0.51
1:C:805:GLY:O	1:C:808:ILE:HG12	2.10	0.51
1:B:835:ILE:HD12	1:B:857:LYS:HE3	1.93	0.51
1:C:617:SER:O	1:C:621:GLU:HG2	2.10	0.51
1:C:985:LYS:NZ	1:D:1005:ILE:O	2.34	0.51
1:D:120:LYS:NZ	1:D:294:ILE:HG21	2.25	0.51
1:B:664:ILE:HA	1:B:667:LEU:HG	1.92	0.51
1:C:867:ASN:O	1:C:871:ILE:HG12	2.11	0.51
1:D:678:PHE:CE2	1:D:725:TYR:HB2	2.46	0.51
1:D:984:LEU:O	1:D:988:VAL:HG13	2.10	0.51
1:A:361:PHE:HD2	1:A:396:MET:SD	2.34	0.51
1:B:756:VAL:O	1:B:759:GLU:HG2	2.10	0.51
1:C:82:ASP:OD1	1:C:82:ASP:N	2.37	0.51
1:A:360:PHE:HE2	1:A:384:LEU:HD23	1.75	0.51
1:B:186:LYS:HZ3	1:B:188:ASP:HB2	1.76	0.51
1:B:410:ASN:N	1:B:597:GLU:OE1	2.43	0.51
1:B:624:GLU:O	1:B:626:GLU:N	2.42	0.51
1:C:455:TYR:O	1:C:458:ILE:HG22	2.10	0.51
1:D:732:GLY:O	1:D:736:ILE:HG12	2.11	0.51
1:D:809:LYS:HZ2	1:D:844:LEU:HD23	1.75	0.51
1:B:28:GLU:HA	1:B:31:LYS:CE	2.41	0.51
1:B:433:GLU:H	1:B:433:GLU:CD	2.13	0.51
1:C:486:THR:O	1:C:490:THR:OG1	2.26	0.51
1:D:174:PHE:HE1	1:D:183:VAL:HG21	1.76	0.51
1:C:694:GLU:O	1:C:698:GLN:NE2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:841:LEU:HD22	1:C:844:LEU:HD21	1.92	0.51
1:A:301:PHE:CD1	1:A:302:ILE:HD12	2.44	0.51
1:B:663:ASP:HA	1:B:666:ASN:OD1	2.11	0.51
1:D:89:GLN:HG3	1:D:187:GLU:OE1	2.10	0.51
1:A:89:GLN:OE1	1:A:187:GLU:HG3	2.11	0.51
1:B:31:LYS:HA	1:B:34:THR:HG22	1.92	0.51
1:B:245:PHE:HB3	1:B:268:ILE:HD13	1.93	0.51
1:B:414:TYR:HB2	1:B:596:TYR:CD2	2.46	0.51
1:C:751:ILE:HA	1:C:754:ARG:HG3	1.92	0.51
1:D:364:LYS:HZ1	1:D:394:ILE:HD12	1.76	0.51
1:D:514:ARG:O	1:D:518:GLU:HG2	2.11	0.51
1:D:837:PHE:HA	1:D:840:LYS:HE2	1.93	0.51
1:A:130:ILE:HG23	1:A:168:LEU:HD23	1.92	0.50
1:A:179:LYS:HD2	1:A:180:GLY:H	1.76	0.50
1:C:411:SER:N	1:C:597:GLU:OE1	2.44	0.50
1:D:281:ASP:HB2	1:D:284:GLU:OE1	2.11	0.50
1:D:324:TYR:HE2	1:D:593:ARG:NE	2.09	0.50
1:A:205:LYS:HG2	1:A:231:TRP:CH2	2.46	0.50
1:A:417:LYS:HE3	1:A:420:VAL:HB	1.93	0.50
1:A:617:SER:O	1:A:620:ILE:HG13	2.11	0.50
1:D:297:GLN:HG2	1:D:298:GLU:H	1.76	0.50
1:A:552:TYR:CZ	1:B:556:VAL:HG13	2.46	0.50
1:A:615:SER:O	1:A:619:LEU:HD23	2.11	0.50
1:A:649:TYR:CD2	1:A:683:LYS:HD3	2.47	0.50
1:A:854:LEU:O	1:A:858:SER:OG	2.26	0.50
1:B:11:TYR:HA	1:B:14:LYS:HD3	1.93	0.50
1:B:536:GLN:O	1:B:540:LYS:HB2	2.11	0.50
1:C:359:ARG:O	1:C:362:GLU:HG3	2.11	0.50
1:D:158:VAL:HG23	1:D:203:LEU:HD11	1.93	0.50
1:D:801:SER:HA	1:D:804:TYR:HD1	1.74	0.50
1:A:585:LEU:HB2	1:A:619:LEU:HD11	1.94	0.50
1:B:522:PHE:CG	1:B:522:PHE:O	2.65	0.50
1:C:423:LYS:HD3	1:C:424:PHE:N	2.26	0.50
1:C:523:ASN:OD1	1:C:525:ASP:N	2.37	0.50
1:C:974:LYS:HA	1:C:977:LYS:HD3	1.93	0.50
1:D:242:LYS:NZ	1:D:242:LYS:HB2	2.26	0.50
1:D:569:MET:SD	1:D:625:TYR:HA	2.52	0.50
1:D:753:LYS:HA	1:D:756:VAL:HG22	1.93	0.50
1:B:218:TYR:CD2	1:B:225:ILE:HD11	2.44	0.50
1:B:469:CYS:HB3	1:B:539:TYR:HE2	1.75	0.50
1:C:115:ASN:H	1:C:118:HIS:CE1	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:786:HIS:NE2	1:C:793:GLU:OE2	2.39	0.50
1:A:684:ILE:O	1:A:688:LEU:HG	2.12	0.50
1:A:827:LEU:C	1:A:828:THR:HG1	2.15	0.50
1:A:866:MET:SD	1:A:866:MET:N	2.85	0.50
1:B:14:LYS:O	1:B:18:VAL:HG22	2.11	0.50
1:C:513:ALA:HB1	1:C:517:ARG:NH2	2.26	0.50
1:D:213:ILE:HG23	1:D:243:PRO:HB3	1.94	0.50
1:A:70:LEU:HG	1:A:71:TYR:CD1	2.47	0.50
1:B:547:ASP:OD1	1:B:548:ASN:N	2.45	0.50
1:C:610:GLN:HA	1:C:613:ARG:NH2	2.26	0.50
1:C:665:LYS:N	1:C:665:LYS:HD3	2.26	0.50
1:C:782:GLN:O	1:C:786:HIS:ND1	2.45	0.50
1:D:318:PRO:HB2	1:D:539:TYR:CE1	2.47	0.50
1:A:587:ARG:NH1	1:A:587:ARG:HB2	2.27	0.50
1:A:844:LEU:O	1:A:850:LYS:NZ	2.41	0.50
1:B:287:SER:O	1:B:291:ASP:HB2	2.11	0.50
1:B:583:VAL:O	1:B:587:ARG:HG2	2.11	0.50
1:C:697:LYS:HG3	1:C:698:GLN:NE2	2.27	0.50
1:D:312:ILE:HG23	1:D:316:ILE:HD12	1.94	0.50
1:D:425:ILE:HD12	1:D:438:LYS:HD2	1.93	0.50
1:A:511:PHE:O	1:A:515:ILE:HG12	2.12	0.49
1:A:720:LEU:HB2	1:A:757:TRP:CZ3	2.46	0.49
1:A:739:ALA:HA	1:A:743:TYR:CD1	2.46	0.49
1:C:448:TRP:O	1:C:451:SER:OG	2.28	0.49
1:D:313:TYR:CE1	1:D:317:SER:HB3	2.47	0.49
1:A:360:PHE:O	1:A:363:LEU:HD12	2.12	0.49
1:C:322:LEU:HD11	1:C:542:LEU:HD21	1.94	0.49
1:D:654:ASN:O	1:D:658:HIS:ND1	2.45	0.49
1:A:60:TRP:HA	1:A:63:VAL:HG22	1.94	0.49
1:B:369:GLU:OE1	1:B:369:GLU:N	2.30	0.49
1:C:79:TYR:CE2	1:C:84:TYR:HB2	2.47	0.49
1:C:808:ILE:HD12	1:C:815:PHE:CE2	2.48	0.49
1:D:580:SER:O	1:D:584:VAL:HG23	2.12	0.49
1:D:738:LYS:HZ2	1:D:742:PHE:HD2	1.59	0.49
1:A:47:GLY:HA3	1:A:218:TYR:HE1	1.77	0.49
1:A:866:MET:HG3	1:A:912:TYR:CZ	2.48	0.49
1:C:409:ILE:HD12	1:C:409:ILE:H	1.78	0.49
1:D:362:GLU:OE1	1:D:363:LEU:HD23	2.12	0.49
1:D:462:SER:O	1:D:465:GLU:HG2	2.12	0.49
1:B:61:ARG:O	1:B:65:LYS:HG2	2.12	0.49
1:B:550:PHE:HD1	1:B:550:PHE:H	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:684:ILE:O	1:B:688:LEU:HG	2.13	0.49
1:C:296:SER:O	1:C:297:GLN:C	2.51	0.49
1:C:356:TYR:CD2	1:C:357:MET:HG2	2.47	0.49
1:D:98:MET:H	1:D:98:MET:CE	2.25	0.49
1:D:565:VAL:HG21	1:D:580:SER:HB2	1.94	0.49
1:A:370:ARG:HD3	1:A:381:PHE:CE2	2.48	0.49
1:A:613:ARG:HD2	1:A:613:ARG:N	2.27	0.49
1:D:709:TYR:O	1:D:713:ILE:HG12	2.13	0.49
1:D:755:TYR:CE2	1:D:803:ASP:HB3	2.47	0.49
1:B:660:LYS:HB2	1:B:662:ASP:OD1	2.13	0.49
1:C:427:GLU:O	1:C:438:LYS:NZ	2.45	0.49
1:C:438:LYS:O	1:C:442:LEU:HG	2.13	0.49
1:D:651:ASP:HA	1:D:654:ASN:ND2	2.27	0.49
1:B:672:SER:O	1:B:672:SER:OG	2.28	0.49
1:C:25:ASN:O	1:C:28:GLU:HG3	2.11	0.49
1:C:128:HIS:CE1	1:C:165:ARG:HA	2.48	0.49
1:D:385:PHE:O	1:D:389:GLU:HG3	2.13	0.49
1:D:531:MET:SD	1:D:532:PRO:HD3	2.53	0.49
1:A:657:ARG:HG2	1:A:658:HIS:CD2	2.48	0.49
1:A:713:ILE:HG23	1:A:744:PHE:HZ	1.78	0.49
1:A:717:LYS:HG3	1:A:718:ALA:H	1.77	0.49
1:C:665:LYS:HB2	1:C:669:ARG:HH12	1.78	0.49
1:D:755:TYR:HB2	1:D:804:TYR:CE2	2.48	0.49
1:B:474:SER:HA	1:B:477:ASN:HD21	1.77	0.48
1:C:360:PHE:O	1:C:363:LEU:HG	2.13	0.48
1:B:652:PHE:CE2	1:B:687:TYR:HD2	2.30	0.48
1:C:358:GLU:CD	1:C:358:GLU:H	2.16	0.48
1:D:59:TRP:CH2	1:D:185:LEU:HG	2.48	0.48
1:D:145:ARG:HA	1:D:145:ARG:NE	2.27	0.48
1:D:291:ASP:O	1:D:295:GLU:HB2	2.12	0.48
1:D:557:LYS:HE3	1:D:587:ARG:HH12	1.78	0.48
1:A:344:GLY:HA3	1:A:394:ILE:HG22	1.95	0.48
1:B:29:CYS:SG	1:B:267:ARG:NH2	2.87	0.48
1:B:608:PHE:CE2	1:B:612:ILE:HD11	2.49	0.48
1:C:649:TYR:O	1:C:653:VAL:HG23	2.12	0.48
1:C:734:GLY:O	1:C:738:LYS:HG3	2.13	0.48
1:C:752:GLY:O	1:C:756:VAL:HG23	2.13	0.48
1:B:69:GLU:OE2	1:B:95:LYS:HG3	2.14	0.48
1:C:448:TRP:CE3	1:C:485:ILE:HG22	2.45	0.48
1:D:66:TYR:CE2	1:D:88:PRO:HG3	2.48	0.48
1:D:359:ARG:O	1:D:359:ARG:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:685:GLU:OE1	1:D:728:LEU:HA	2.13	0.48
1:A:452:TYR:CG	1:A:511:PHE:HZ	2.31	0.48
1:B:758:LEU:O	1:B:762:THR:HG23	2.13	0.48
1:C:80:SER:CB	1:C:83:GLU:HG2	2.43	0.48
1:C:449:GLU:HG2	1:C:507:PHE:CE1	2.49	0.48
1:D:626:GLU:CB	1:D:629:ARG:HB3	2.40	0.48
1:A:23:ASP:OD1	1:A:24:ASN:N	2.46	0.48
1:B:290:MET:HE3	1:B:294:ILE:HB	1.95	0.48
1:B:450:GLU:HA	1:B:453:ASP:OD2	2.13	0.48
1:C:294:ILE:O	1:C:296:SER:N	2.37	0.48
1:D:50:VAL:HA	1:D:53:LEU:HD12	1.96	0.48
1:D:120:LYS:HZ1	1:D:294:ILE:HG21	1.78	0.48
1:A:377:GLN:OE1	1:A:377:GLN:N	2.33	0.48
1:B:79:TYR:HB2	1:B:84:TYR:HE1	1.79	0.48
1:C:755:TYR:HD2	1:C:799:LEU:HD13	1.78	0.48
1:A:75:LYS:HG2	1:A:79:TYR:HA	1.96	0.48
1:A:89:GLN:OE1	1:A:188:ASP:N	2.42	0.48
1:A:485:ILE:O	1:A:489:VAL:HG13	2.14	0.48
1:B:182:ASN:OD1	1:B:182:ASN:N	2.46	0.48
1:B:467:ASN:OD1	1:B:467:ASN:N	2.47	0.48
1:C:21:MET:N	1:C:21:MET:SD	2.86	0.48
1:C:804:TYR:O	1:C:808:ILE:HG23	2.13	0.48
1:C:985:LYS:HZ2	1:D:1005:ILE:HG22	1.79	0.48
1:D:120:LYS:HE2	1:D:120:LYS:HA	1.94	0.48
1:D:532:PRO:HD2	1:D:535:PHE:HB2	1.96	0.48
1:D:560:GLU:O	1:D:564:LYS:HB3	2.13	0.48
1:A:455:TYR:CD1	1:A:458:ILE:HD11	2.49	0.48
1:B:509:ASP:OD1	1:B:509:ASP:N	2.46	0.48
1:D:414:TYR:OH	1:D:654:ASN:HB3	2.13	0.48
1:D:456:SER:O	1:D:459:ILE:HG12	2.14	0.48
1:A:533:PHE:HA	1:A:536:GLN:HG3	1.96	0.48
1:A:548:ASN:HB2	1:A:552:TYR:HE2	1.78	0.48
1:B:551:LEU:O	1:B:553:ASP:N	2.41	0.48
1:B:696:THR:HG22	1:B:743:TYR:HD2	1.79	0.48
1:C:631:ILE:HD11	1:C:642:LYS:HE3	1.96	0.48
1:D:832:GLN:HA	1:D:835:ILE:HD11	1.96	0.48
1:D:958:TRP:HA	1:D:961:ASN:OD1	2.14	0.48
1:A:220:LEU:O	1:A:261:TYR:OH	2.29	0.47
1:B:832:GLN:HA	1:B:835:ILE:HD11	1.96	0.47
1:D:386:ASN:HA	1:D:389:GLU:OE2	2.14	0.47
1:D:469:CYS:HB3	1:D:539:TYR:HE2	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:693:GLU:HB3	1:D:697:LYS:NZ	2.28	0.47
1:D:698:GLN:HE22	1:D:704:MET:HA	1.79	0.47
1:B:755:TYR:HD2	1:B:799:LEU:HD11	1.79	0.47
1:C:921:PHE:O	1:C:969:LYS:NZ	2.47	0.47
1:D:851:SER:O	1:D:855:SER:HB3	2.14	0.47
1:A:522:PHE:CE2	1:A:524:ILE:HD12	2.49	0.47
1:A:631:ILE:HD11	1:A:642:LYS:HE3	1.96	0.47
1:D:562:THR:C	1:D:566:ARG:HB3	2.35	0.47
1:A:246:ILE:HD13	1:A:269:ILE:HB	1.95	0.47
1:A:850:LYS:HG2	1:A:854:LEU:HD23	1.96	0.47
1:B:199:LEU:HD12	1:B:199:LEU:HA	1.75	0.47
1:B:260:TYR:HB2	1:C:90:ILE:HG23	1.97	0.47
1:B:569:MET:HG2	1:B:625:TYR:HD1	1.78	0.47
1:C:48:ALA:O	1:C:52:THR:HG23	2.14	0.47
1:C:256:GLU:OE1	1:C:256:GLU:N	2.43	0.47
1:C:582:ILE:O	1:C:586:LEU:HD23	2.14	0.47
1:A:817:SER:O	1:A:821:SER:OG	2.26	0.47
1:A:831:LYS:HB2	1:A:835:ILE:HG23	1.97	0.47
1:B:47:GLY:HA3	1:B:218:TYR:CE1	2.45	0.47
1:B:217:GLY:HA2	1:B:286:TYR:OH	2.15	0.47
1:B:544:PHE:CD2	1:B:550:PHE:HB2	2.50	0.47
1:B:662:ASP:HA	1:B:665:LYS:HG2	1.97	0.47
1:B:976:MET:SD	1:B:976:MET:N	2.87	0.47
1:A:233:ARG:NH2	1:A:263:ASN:O	2.48	0.47
1:A:448:TRP:CD1	1:A:448:TRP:N	2.83	0.47
1:A:492:PHE:CZ	1:A:505:LYS:HA	2.50	0.47
1:A:673:ILE:HD12	1:A:673:ILE:H	1.80	0.47
1:A:687:TYR:HD1	1:A:688:LEU:HD23	1.79	0.47
1:B:561:LEU:HD11	1:B:584:VAL:HG21	1.97	0.47
1:B:562:THR:O	1:B:566:ARG:HB3	2.15	0.47
1:B:930:MET:SD	1:B:940:TYR:OH	2.73	0.47
1:C:447:ARG:HD2	1:C:450:GLU:OE2	2.14	0.47
1:D:27:VAL:O	1:D:30:ILE:HG13	2.15	0.47
1:B:53:LEU:HD11	1:B:286:TYR:CD2	2.50	0.47
1:B:59:TRP:HH2	1:B:185:LEU:HA	1.80	0.47
1:B:92:TYR:CD2	1:B:186:LYS:HE3	2.50	0.47
1:C:555:THR:HG21	1:D:559:PHE:CZ	2.50	0.47
1:D:362:GLU:HA	1:D:365:GLU:OE1	2.15	0.47
1:A:16:LYS:O	1:A:20:LEU:HG	2.14	0.47
1:A:202:ASN:ND2	1:B:202:ASN:OD1	2.47	0.47
1:C:304:LYS:HZ3	1:C:307:GLU:N	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:325:ILE:HD13	1:C:387:PHE:HZ	1.79	0.47
1:D:771:ILE:O	1:D:774:ILE:HG12	2.14	0.47
1:D:809:LYS:NZ	1:D:844:LEU:HD23	2.30	0.47
1:C:388:PHE:HD1	1:C:393:VAL:HB	1.79	0.47
1:D:151:VAL:HG23	1:D:167:LEU:HD22	1.96	0.47
1:A:316:ILE:HD11	1:A:387:PHE:CD1	2.50	0.46
1:B:667:LEU:HD12	1:B:668:GLU:HG3	1.97	0.46
1:C:985:LYS:NZ	1:D:1005:ILE:HG22	2.30	0.46
1:D:83:GLU:OE2	1:D:86:ARG:NE	2.48	0.46
1:A:65:LYS:O	1:A:69:GLU:HG2	2.14	0.46
1:D:213:ILE:HD12	1:D:214:VAL:H	1.80	0.46
1:A:331:LYS:HD3	1:A:331:LYS:C	2.36	0.46
1:A:417:LYS:HZ2	1:A:419:ASP:HB3	1.78	0.46
1:A:522:PHE:HE2	1:A:524:ILE:HD12	1.81	0.46
1:B:652:PHE:HE2	1:B:687:TYR:HD2	1.62	0.46
1:D:607:GLU:N	1:D:607:GLU:OE1	2.47	0.46
1:A:145:ARG:NH1	1:A:145:ARG:HA	2.31	0.46
1:A:559:PHE:HA	1:A:562:THR:HG22	1.96	0.46
1:C:277:SER:OG	1:C:278:ASN:N	2.49	0.46
1:A:359:ARG:O	1:A:363:LEU:HG	2.16	0.46
1:C:95:LYS:HA	1:C:95:LYS:HD2	1.75	0.46
1:C:411:SER:HB2	1:C:597:GLU:HA	1.98	0.46
1:C:552:TYR:OH	1:C:607:GLU:HG3	2.15	0.46
1:D:228:LEU:O	1:D:232:VAL:HG23	2.16	0.46
1:A:151:VAL:HG11	1:A:175:ARG:NH2	2.31	0.46
1:B:622:LYS:HD2	1:B:623:ALA:N	2.31	0.46
1:C:555:THR:HG21	1:D:559:PHE:CE2	2.51	0.46
1:C:742:PHE:HZ	1:C:774:ILE:HG23	1.80	0.46
1:D:755:TYR:CZ	1:D:803:ASP:HB3	2.51	0.46
1:B:89:GLN:HE22	1:B:186:LYS:NZ	2.13	0.46
1:D:899:GLU:HB3	1:D:904:ILE:O	2.16	0.46
1:A:417:LYS:HZ3	1:A:419:ASP:HB3	1.77	0.46
1:A:479:TYR:CD2	1:A:524:ILE:HD13	2.50	0.46
1:B:208:ILE:HD13	1:B:213:ILE:HG13	1.98	0.46
1:B:316:ILE:HG22	1:B:320:PHE:HE1	1.80	0.46
1:B:1001:MET:HA	1:B:1005:ILE:HB	1.97	0.46
1:C:986:GLU:HG3	1:C:989:LYS:HZ1	1.81	0.46
1:D:552:TYR:HA	1:D:555:THR:HG22	1.98	0.46
1:A:364:LYS:HA	1:A:370:ARG:HH12	1.81	0.46
1:C:297:GLN:C	1:C:299:ASN:H	2.19	0.46
1:C:472:TYR:O	1:C:476:ILE:HG12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:772:ILE:HD13	1:C:812:GLU:HG3	1.97	0.46
1:C:986:GLU:HA	1:C:989:LYS:NZ	2.31	0.46
1:D:625:TYR:HB3	1:D:626:GLU:H	1.56	0.46
1:A:48:ALA:O	1:A:52:THR:HG23	2.16	0.46
1:A:360:PHE:HZ	1:A:384:LEU:HB3	1.81	0.46
1:A:514:ARG:O	1:A:517:ARG:HG2	2.15	0.46
1:B:118:HIS:NE2	1:B:137:LEU:HD21	2.31	0.46
1:B:859:VAL:HG13	1:B:865:LEU:HD12	1.97	0.46
1:D:277:SER:HB3	1:D:281:ASP:OD2	2.16	0.46
1:D:442:LEU:HD22	1:D:447:ARG:HB2	1.98	0.46
1:A:47:GLY:HA3	1:A:218:TYR:CE1	2.52	0.45
1:A:689:VAL:O	1:A:693:GLU:HG2	2.16	0.45
1:B:179:LYS:HE2	1:B:180:GLY:H	1.80	0.45
1:B:373:LEU:HB3	1:B:377:GLN:NE2	2.30	0.45
1:B:759:GLU:HA	1:B:762:THR:OG1	2.16	0.45
1:B:899:GLU:HB3	1:B:904:ILE:O	2.16	0.45
1:C:219:GLY:N	1:C:222:ASP:OD2	2.48	0.45
1:C:532:PRO:HB3	1:D:162:THR:O	2.16	0.45
1:C:536:GLN:OE1	1:C:537:LYS:HD2	2.15	0.45
1:C:595:LEU:HD23	1:C:595:LEU:HA	1.76	0.45
1:A:544:PHE:O	1:A:550:PHE:HD2	2.00	0.45
1:C:151:VAL:HG22	1:C:167:LEU:HD23	1.97	0.45
1:C:307:GLU:HA	1:C:310:ASP:OD2	2.16	0.45
1:C:772:ILE:HA	1:C:775:ILE:HD12	1.98	0.45
1:D:326:ARG:HH11	1:D:329:ASP:HB3	1.82	0.45
1:C:407:ILE:N	1:C:407:ILE:HD12	2.31	0.45
1:C:452:TYR:HE1	1:C:478:ARG:HD2	1.80	0.45
1:A:143:TRP:CD1	1:B:463:ILE:HG12	2.51	0.45
1:A:519:MET:SD	1:A:519:MET:N	2.89	0.45
1:B:462:SER:O	1:B:465:GLU:HG2	2.17	0.45
1:C:56:TYR:CD1	1:C:57:PRO:HD2	2.51	0.45
1:C:152:ILE:HG23	1:C:157:ASP:HB3	1.98	0.45
1:C:456:SER:O	1:C:459:ILE:HG13	2.16	0.45
1:D:144:LYS:HG2	1:D:145:ARG:HH22	1.81	0.45
1:A:660:LYS:HZ2	1:A:717:LYS:HE2	1.81	0.45
1:A:697:LYS:HD3	1:A:697:LYS:H	1.82	0.45
1:A:737:VAL:HG21	1:A:771:ILE:HG23	1.98	0.45
1:B:277:SER:OG	1:B:278:ASN:N	2.49	0.45
1:B:418:TYR:HA	1:B:421:MET:HG2	1.98	0.45
1:B:469:CYS:SG	1:B:470:VAL:N	2.89	0.45
1:B:752:GLY:O	1:B:756:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:291:ASP:O	1:D:295:GLU:CB	2.64	0.45
1:A:56:TYR:CD1	1:A:57:PRO:HD2	2.52	0.45
1:A:602:SER:HA	1:A:605:PHE:CE1	2.51	0.45
1:A:738:LYS:HG3	1:A:743:TYR:HE1	1.82	0.45
1:A:874:ILE:HD13	1:A:881:HIS:CE1	2.52	0.45
1:B:43:VAL:HG22	1:B:128:HIS:H	1.81	0.45
1:B:485:ILE:HD12	1:B:485:ILE:HA	1.87	0.45
1:B:586:LEU:HA	1:B:589:TYR:CD2	2.51	0.45
1:B:755:TYR:HB2	1:B:804:TYR:CZ	2.52	0.45
1:C:229:LEU:HD21	1:C:264:LYS:CG	2.46	0.45
1:C:769:LYS:HA	1:C:772:ILE:CG1	2.47	0.45
1:C:831:LYS:O	1:C:833:LYS:N	2.50	0.45
1:D:844:LEU:HD12	1:D:845:LEU:HB2	1.98	0.45
1:A:750:ASP:HB2	1:A:753:LYS:HZ2	1.81	0.45
1:A:782:GLN:O	1:A:786:HIS:ND1	2.49	0.45
1:B:64:ASP:HB2	1:B:65:LYS:NZ	2.31	0.45
1:B:707:VAL:O	1:B:710:THR:OG1	2.30	0.45
1:C:247:ARG:HD3	1:C:253:ILE:CD1	2.46	0.45
1:C:415:HIS:CE1	1:C:649:TYR:HH	2.35	0.45
1:D:673:ILE:HA	1:D:676:ILE:HD12	1.98	0.45
1:D:756:VAL:HA	1:D:759:GLU:OE2	2.16	0.45
1:A:330:LEU:HD12	1:A:330:LEU:O	2.16	0.45
1:C:434:ASP:O	1:C:438:LYS:HG3	2.16	0.45
1:A:492:PHE:HZ	1:A:505:LYS:HA	1.82	0.45
1:A:878:THR:OG1	1:A:881:HIS:ND1	2.49	0.45
1:B:469:CYS:HB3	1:B:539:TYR:CE2	2.52	0.45
1:B:768:PRO:O	1:B:770:SER:N	2.50	0.45
1:C:35:GLU:OE2	1:C:39:ASN:ND2	2.50	0.45
1:C:128:HIS:CD2	1:C:166:TYR:HD2	2.35	0.45
1:C:256:GLU:H	1:C:256:GLU:CD	2.16	0.45
1:C:258:LEU:O	1:C:262:GLU:HG3	2.17	0.45
1:D:118:HIS:HA	1:D:121:ILE:HG22	1.98	0.45
1:D:291:ASP:HA	1:D:294:ILE:HG22	1.98	0.45
1:D:408:GLU:H	1:D:593:ARG:HH12	1.64	0.45
1:D:469:CYS:HB3	1:D:539:TYR:CE2	2.52	0.45
1:D:627:ARG:HH22	1:D:675:LYS:NZ	2.14	0.45
1:D:648:GLU:HG3	1:D:650:TYR:HD2	1.81	0.45
1:D:724:LYS:HD3	1:D:760:ARG:NE	2.32	0.45
1:B:205:LYS:HG2	1:B:231:TRP:CZ3	2.52	0.45
1:B:290:MET:HE3	1:B:290:MET:O	2.17	0.45
1:B:605:PHE:N	1:B:605:PHE:CD1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:242:LYS:HA	1:D:243:PRO:HD3	1.82	0.45
1:D:595:LEU:HD23	1:D:595:LEU:HA	1.76	0.45
1:D:733:LEU:HA	1:D:736:ILE:CG1	2.47	0.45
1:D:746:GLU:OE2	1:D:751:ILE:N	2.50	0.45
1:D:770:SER:O	1:D:774:ILE:HG23	2.17	0.45
1:A:594:PHE:CE1	1:A:598:ASN:ND2	2.85	0.44
1:A:613:ARG:O	1:A:617:SER:HB3	2.18	0.44
1:A:683:LYS:HA	1:A:686:GLU:OE1	2.18	0.44
1:A:713:ILE:HG23	1:A:744:PHE:CZ	2.52	0.44
1:B:186:LYS:O	1:B:190:TYR:HD1	2.00	0.44
1:B:359:ARG:HA	1:B:362:GLU:OE1	2.16	0.44
1:B:479:TYR:O	1:B:483:GLN:HG2	2.17	0.44
1:C:742:PHE:CZ	1:C:774:ILE:HG23	2.52	0.44
1:C:885:ILE:HG12	1:C:916:PHE:CE1	2.53	0.44
1:D:861:ASN:HD21	1:D:864:ASP:HB2	1.81	0.44
1:D:892:ARG:NH2	1:D:896:TYR:OH	2.50	0.44
1:B:312:ILE:HD11	1:B:316:ILE:HD12	1.98	0.44
1:C:625:TYR:O	1:C:625:TYR:HD1	2.00	0.44
1:D:414:TYR:HD1	1:D:596:TYR:CE2	2.35	0.44
1:D:987:ARG:O	1:D:987:ARG:NE	2.38	0.44
1:A:151:VAL:HG11	1:A:175:ARG:HH22	1.83	0.44
1:B:482:TYR:CZ	1:B:519:MET:HG3	2.52	0.44
1:B:612:ILE:HG13	1:B:612:ILE:H	1.66	0.44
1:B:978:HIS:O	1:B:982:GLU:HG2	2.17	0.44
1:C:325:ILE:HD13	1:C:387:PHE:CZ	2.52	0.44
1:D:59:TRP:HH2	1:D:185:LEU:HG	1.82	0.44
1:D:440:PHE:CG	1:D:599:CYS:HB3	2.52	0.44
1:B:75:LYS:HB2	1:B:79:TYR:HD1	1.82	0.44
1:B:363:LEU:O	1:B:366:SER:OG	2.36	0.44
1:B:616:MET:HB3	1:B:659:PHE:HZ	1.83	0.44
1:C:755:TYR:HB2	1:C:804:TYR:CZ	2.53	0.44
1:D:83:GLU:OE1	1:D:87:ILE:HG12	2.18	0.44
1:A:363:LEU:O	1:A:370:ARG:NH1	2.51	0.44
1:A:479:TYR:CG	1:A:524:ILE:HD13	2.52	0.44
1:A:709:TYR:CZ	1:A:713:ILE:HG13	2.53	0.44
1:A:721:TYR:HE1	1:A:760:ARG:HD2	1.83	0.44
1:B:482:TYR:O	1:B:485:ILE:HG22	2.17	0.44
1:C:199:LEU:HD21	1:D:236:GLN:HG2	1.98	0.44
1:C:285:ARG:H	1:C:285:ARG:HG3	1.52	0.44
1:D:661:ILE:O	1:D:665:LYS:HG2	2.18	0.44
1:A:145:ARG:NH1	1:B:518:GLU:OE2	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:440:PHE:CD1	1:B:440:PHE:C	2.91	0.44
1:B:528:PHE:HZ	1:B:540:LYS:HA	1.82	0.44
1:B:913:MET:HG3	1:B:914:SER:N	2.33	0.44
1:C:841:LEU:HB3	1:C:844:LEU:HD11	1.99	0.44
1:C:850:LYS:HG2	1:C:854:LEU:HD23	2.00	0.44
1:D:620:ILE:HD11	1:D:667:LEU:HD13	1.99	0.44
1:B:186:LYS:HG3	1:B:188:ASP:HB2	2.00	0.44
1:B:425:ILE:HA	1:B:438:LYS:CE	2.48	0.44
1:C:83:GLU:HA	1:C:86:ARG:HB2	2.00	0.44
1:C:338:TYR:HE1	1:C:356:TYR:CZ	2.36	0.44
1:C:369:GLU:HA	1:C:372:LYS:HE2	1.99	0.44
1:A:531:MET:HE1	1:A:532:PRO:HD2	1.99	0.44
1:A:831:LYS:O	1:A:833:LYS:N	2.47	0.44
1:B:210:THR:HB	1:B:211:HIS:CE1	2.53	0.44
1:B:407:ILE:HG13	1:B:589:TYR:CG	2.52	0.44
1:B:566:ARG:O	1:B:569:MET:HB3	2.18	0.44
1:C:199:LEU:HA	1:C:202:ASN:OD1	2.18	0.44
1:C:298:GLU:C	1:C:300:LYS:H	2.21	0.44
1:D:149:PHE:CE1	1:D:165:ARG:HD3	2.53	0.44
1:D:280:TYR:HA	1:D:282:TYR:CE1	2.53	0.44
1:D:751:ILE:HA	1:D:754:ARG:HG2	2.00	0.44
1:D:828:THR:OG1	1:D:829:GLN:N	2.48	0.44
1:D:867:ASN:HA	1:D:870:ARG:HG2	1.99	0.44
1:A:687:TYR:CD1	1:A:688:LEU:HD23	2.53	0.44
1:B:100:PHE:CZ	1:B:185:LEU:HD23	2.53	0.44
1:B:304:LYS:HD3	1:B:304:LYS:N	2.32	0.44
1:B:396:MET:HE1	1:B:398:LYS:HG2	1.99	0.44
1:C:25:ASN:OD1	1:C:26:VAL:N	2.51	0.44
1:C:150:SER:HB3	1:C:163:SER:OG	2.18	0.44
1:C:801:SER:HA	1:C:804:TYR:CD1	2.49	0.44
1:A:62:LEU:HD22	1:A:108:PHE:HE2	1.83	0.43
1:A:354:PHE:HZ	1:A:359:ARG:NH1	2.15	0.43
1:A:480:ARG:HB3	1:A:605:PHE:HZ	1.83	0.43
1:A:950:ASP:HB3	1:A:953:LYS:NZ	2.32	0.43
1:C:831:LYS:HB2	1:C:835:ILE:HG23	2.00	0.43
1:A:469:CYS:O	1:A:473:LEU:HG	2.17	0.43
1:A:919:TRP:HA	1:A:922:LEU:HD12	2.01	0.43
1:B:481:ILE:HA	1:B:484:SER:OG	2.18	0.43
1:B:657:ARG:HA	1:B:715:GLU:OE2	2.17	0.43
1:C:297:GLN:C	1:C:299:ASN:N	2.72	0.43
1:C:721:TYR:HB2	1:C:757:TRP:CH2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:151:VAL:HG21	1:D:175:ARG:HH12	1.83	0.43
1:D:207:ILE:HD12	1:D:207:ILE:HA	1.80	0.43
1:D:727:LYS:HD2	1:D:728:LEU:N	2.33	0.43
1:D:827:LEU:HD11	1:D:838:LEU:HD13	1.99	0.43
1:A:264:LYS:H	1:A:264:LYS:HG2	1.66	0.43
1:A:579:SER:O	1:A:583:VAL:HG23	2.18	0.43
1:B:61:ARG:HA	1:B:64:ASP:OD2	2.18	0.43
1:B:222:ASP:HB2	1:B:225:ILE:HD13	1.99	0.43
1:B:246:ILE:HD13	1:B:269:ILE:HB	2.01	0.43
1:B:662:ASP:OD1	1:B:662:ASP:N	2.51	0.43
1:C:609:HIS:HA	1:C:612:ILE:HG22	2.00	0.43
1:C:753:LYS:O	1:C:757:TRP:HD1	2.01	0.43
1:D:297:GLN:CG	1:D:298:GLU:H	2.32	0.43
1:D:589:TYR:OH	1:D:651:ASP:OD1	2.22	0.43
1:B:565:VAL:HG21	1:B:580:SER:HB2	2.00	0.43
1:C:117:ILE:HD11	1:C:283:LEU:HD12	1.99	0.43
1:D:678:PHE:HE2	1:D:725:TYR:HB2	1.83	0.43
1:A:14:LYS:O	1:A:18:VAL:HG23	2.19	0.43
1:A:80:SER:OG	1:A:81:SER:N	2.50	0.43
1:A:746:GLU:OE2	1:A:750:ASP:HA	2.18	0.43
1:B:348:ARG:NE	1:B:351:ASN:O	2.40	0.43
1:B:569:MET:HG2	1:B:625:TYR:CD1	2.53	0.43
1:B:625:TYR:CG	1:B:626:GLU:N	2.84	0.43
1:C:316:ILE:HD11	1:C:387:PHE:CZ	2.53	0.43
1:C:648:GLU:OE2	1:C:650:TYR:HB2	2.18	0.43
1:C:1002:ASN:OD1	1:C:1003:TYR:N	2.50	0.43
1:D:408:GLU:N	1:D:593:ARG:HH12	2.16	0.43
1:D:612:ILE:HD11	1:D:654:ASN:HB2	2.00	0.43
1:D:662:ASP:HA	1:D:665:LYS:HG2	2.01	0.43
1:D:955:ILE:HG22	1:D:957:SER:H	1.83	0.43
1:A:65:LYS:HA	1:A:68:GLU:OE1	2.18	0.43
1:A:681:GLN:O	1:A:685:GLU:HG3	2.19	0.43
1:A:816:ILE:HD13	1:A:846:SER:HA	2.00	0.43
1:B:192:ASN:OD1	1:B:192:ASN:N	2.51	0.43
1:D:33:ILE:HD13	1:D:33:ILE:HA	1.85	0.43
1:D:62:LEU:HG	1:D:66:TYR:CZ	2.54	0.43
1:D:98:MET:SD	1:D:99:ALA:N	2.91	0.43
1:D:723:ALA:O	1:D:726:VAL:HG12	2.19	0.43
1:A:292:LEU:O	1:A:292:LEU:HD23	2.18	0.43
1:A:313:TYR:CD1	1:A:317:SER:HB3	2.54	0.43
1:A:877:PHE:CD1	1:A:878:THR:N	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:617:SER:O	1:B:620:ILE:HG22	2.19	0.43
1:B:563:ASN:HA	1:B:567:SER:H	1.83	0.43
1:B:920:TYR:CD2	1:B:944:VAL:HG22	2.54	0.43
1:C:256:GLU:HA	1:C:259:ILE:HD12	2.01	0.43
1:C:557:LYS:HD2	1:C:587:ARG:NH1	2.33	0.43
1:D:609:HIS:HE1	1:D:658:HIS:HA	1.83	0.43
1:A:142:CYS:O	1:A:146:GLY:N	2.52	0.43
1:A:502:ARG:CD	1:A:504:TYR:HB2	2.49	0.43
1:C:145:ARG:HG3	1:C:147:LYS:HZ2	1.84	0.43
1:C:440:PHE:CG	1:C:599:CYS:HB3	2.54	0.43
1:C:495:LEU:HD23	1:C:499:THR:HG23	2.01	0.43
1:C:709:TYR:O	1:C:713:ILE:HG22	2.19	0.43
1:D:455:TYR:O	1:D:459:ILE:HG23	2.19	0.43
1:A:477:ASN:O	1:A:481:ILE:HG23	2.18	0.43
1:B:114:THR:HG22	1:B:137:LEU:HD12	2.00	0.43
1:B:479:TYR:O	1:B:483:GLN:NE2	2.45	0.43
1:A:308:VAL:HG13	1:A:356:TYR:HB2	2.00	0.42
1:A:317:SER:HB2	1:A:320:PHE:CZ	2.54	0.42
1:A:536:GLN:OE1	1:A:537:LYS:HD2	2.18	0.42
1:A:660:LYS:O	1:A:664:ILE:HG12	2.19	0.42
1:B:455:TYR:O	1:B:459:ILE:HG12	2.19	0.42
1:C:551:LEU:HD13	1:C:607:GLU:HG2	2.01	0.42
1:D:902:LYS:HD3	1:D:904:ILE:HD12	2.00	0.42
1:B:605:PHE:N	1:B:605:PHE:HD1	2.16	0.42
1:C:449:GLU:HG2	1:C:507:PHE:HE1	1.83	0.42
1:C:985:LYS:O	1:C:988:VAL:HG12	2.19	0.42
1:D:32:GLU:OE1	1:D:32:GLU:HA	2.19	0.42
1:D:152:ILE:HD11	1:D:168:LEU:HD12	2.01	0.42
1:D:248:THR:HG21	1:D:286:TYR:CE1	2.54	0.42
1:D:668:GLU:OE2	1:D:725:TYR:OH	2.36	0.42
1:A:56:TYR:CE1	1:A:135:ASP:HB3	2.55	0.42
1:B:14:LYS:HD2	1:B:14:LYS:H	1.83	0.42
1:B:59:TRP:O	1:B:63:VAL:HG23	2.20	0.42
1:B:99:ALA:O	1:B:103:ILE:HG12	2.19	0.42
1:B:271:ALA:HA	1:B:274:LEU:HD12	2.01	0.42
1:B:438:LYS:HB2	1:B:438:LYS:HE3	1.89	0.42
1:B:453:ASP:O	1:B:456:SER:OG	2.33	0.42
1:C:173:ASP:OD1	1:C:175:ARG:HB2	2.19	0.42
1:C:190:TYR:CD1	1:C:223:TYR:HE2	2.38	0.42
1:D:213:ILE:HD12	1:D:214:VAL:N	2.34	0.42
1:D:304:LYS:HA	1:D:304:LYS:HD2	1.79	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:361:PHE:HD1	1:D:364:LYS:HD3	1.84	0.42
1:A:91:PHE:CE1	1:A:95:LYS:HB3	2.55	0.42
1:A:327:LYS:HE3	1:A:342:VAL:O	2.19	0.42
1:B:174:PHE:CD1	1:B:174:PHE:N	2.83	0.42
1:C:548:ASN:HB2	1:C:552:TYR:CE2	2.54	0.42
1:C:579:SER:N	1:C:582:ILE:HD12	2.34	0.42
1:D:67:HIS:ND1	1:D:74:PRO:HA	2.34	0.42
1:A:104:LEU:O	1:A:108:PHE:HB2	2.20	0.42
1:C:326:ARG:NH1	1:C:591:ASN:OD1	2.44	0.42
1:C:753:LYS:O	1:C:757:TRP:CD1	2.73	0.42
1:D:118:HIS:O	1:D:121:ILE:HG22	2.19	0.42
1:D:240:PHE:CD1	1:D:241:HIS:N	2.86	0.42
1:D:647:MET:HG2	1:D:678:PHE:CE1	2.55	0.42
1:D:717:LYS:HE2	1:D:717:LYS:HB3	1.47	0.42
1:B:222:ASP:HB3	1:B:223:TYR:H	1.73	0.42
1:B:627:ARG:HA	1:B:627:ARG:HD2	1.87	0.42
1:C:28:GLU:HA	1:C:31:LYS:HG2	2.01	0.42
1:D:89:GLN:CD	1:D:89:GLN:N	2.72	0.42
1:D:663:ASP:O	1:D:667:LEU:HG	2.20	0.42
1:A:254:GLU:HB3	1:A:257:THR:HG23	2.01	0.42
1:A:374:SER:HB3	1:A:377:GLN:OE1	2.19	0.42
1:A:566:ARG:NH2	1:B:670:SER:HA	2.35	0.42
1:A:611:TYR:HA	1:A:614:ASN:OD1	2.19	0.42
1:B:246:ILE:HG23	1:B:289:VAL:HG11	2.00	0.42
1:D:193:TYR:HE1	1:D:197:TYR:HD2	1.67	0.42
1:D:258:LEU:O	1:D:262:GLU:HG3	2.19	0.42
1:D:387:PHE:O	1:D:391:ASN:HB2	2.19	0.42
1:D:693:GLU:HB3	1:D:697:LYS:HZ1	1.84	0.42
1:D:695:ILE:HG23	1:D:699:PHE:CD2	2.54	0.42
1:D:987:ARG:HE	1:D:987:ARG:C	2.20	0.42
1:A:481:ILE:HG22	1:A:601:TRP:CD1	2.54	0.42
1:A:550:PHE:CE1	1:A:551:LEU:HG	2.54	0.42
1:A:609:HIS:O	1:A:612:ILE:N	2.53	0.42
1:B:65:LYS:HA	1:B:65:LYS:HD3	1.91	0.42
1:B:578:MET:CE	1:B:583:VAL:HG11	2.49	0.42
1:C:740:LEU:HD12	1:C:741:LEU:N	2.34	0.42
1:D:742:PHE:N	1:D:742:PHE:CD1	2.87	0.42
1:D:783:ALA:HA	1:D:837:PHE:HE2	1.84	0.42
1:B:360:PHE:HE2	1:B:388:PHE:CD2	2.37	0.42
1:D:221:GLY:O	1:D:225:ILE:HG22	2.20	0.42
1:D:554:ASP:HB3	1:D:611:TYR:HE1	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:614:ASN:OD1	1:D:614:ASN:N	2.52	0.42
1:A:772:ILE:HD12	1:A:775:ILE:HD12	2.02	0.42
1:A:939:GLN:HE21	1:A:943:PHE:HE2	1.68	0.42
1:B:59:TRP:O	1:B:62:LEU:HB3	2.20	0.42
1:B:998:GLU:HA	1:B:1001:MET:SD	2.60	0.42
1:C:919:TRP:HA	1:C:922:LEU:HD12	2.01	0.42
1:D:377:GLN:H	1:D:377:GLN:HG3	1.70	0.42
1:D:937:ASP:OD2	1:D:940:TYR:N	2.52	0.42
1:A:50:VAL:HA	1:A:53:LEU:CD1	2.49	0.41
1:B:316:ILE:HD13	1:B:387:PHE:HE2	1.85	0.41
1:C:407:ILE:HG12	1:C:589:TYR:CG	2.55	0.41
1:A:682:GLU:H	1:A:682:GLU:CD	2.21	0.41
1:A:916:PHE:CD1	1:A:919:TRP:HZ3	2.38	0.41
1:B:229:LEU:HD12	1:B:230:ASN:N	2.35	0.41
1:B:361:PHE:CD2	1:B:396:MET:HB2	2.55	0.41
1:B:616:MET:HG2	1:B:655:ILE:HG12	2.02	0.41
1:B:801:SER:HA	1:B:804:TYR:HD2	1.85	0.41
1:C:408:GLU:OE1	1:C:408:GLU:O	2.38	0.41
1:C:746:GLU:HG3	1:C:754:ARG:HH22	1.86	0.41
1:D:709:TYR:OH	1:D:747:ARG:NH1	2.52	0.41
1:A:89:GLN:NE2	1:A:186:LYS:HB3	2.35	0.41
1:C:90:ILE:H	1:C:90:ILE:HG13	1.61	0.41
1:C:485:ILE:O	1:C:489:VAL:HG22	2.20	0.41
1:D:268:ILE:O	1:D:269:ILE:HD13	2.20	0.41
1:A:17:GLU:O	1:A:21:MET:HG2	2.20	0.41
1:A:53:LEU:HD21	1:A:286:TYR:CD2	2.50	0.41
1:A:587:ARG:O	1:A:591:ASN:ND2	2.54	0.41
1:B:59:TRP:HZ3	1:B:134:TYR:CZ	2.38	0.41
1:B:626:GLU:CB	1:B:629:ARG:HB3	2.51	0.41
1:C:47:GLY:O	1:C:133:ASN:ND2	2.37	0.41
1:C:310:ASP:HA	1:C:380:ARG:NH2	2.35	0.41
1:C:407:ILE:HG21	1:C:589:TYR:CD1	2.55	0.41
1:C:736:ILE:O	1:C:740:LEU:HG	2.20	0.41
1:D:83:GLU:HA	1:D:86:ARG:NE	2.26	0.41
1:D:210:THR:HB	1:D:211:HIS:ND1	2.35	0.41
1:D:449:GLU:OE1	1:D:449:GLU:N	2.50	0.41
1:D:866:MET:HE1	1:D:885:ILE:HG12	2.01	0.41
1:A:424:PHE:CZ	1:A:438:LYS:HG2	2.56	0.41
1:A:974:LYS:HA	1:A:977:LYS:HD3	2.02	0.41
1:C:364:LYS:HD2	1:C:364:LYS:O	2.21	0.41
1:D:88:PRO:HD2	1:D:89:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:824:THR:HG23	1:D:838:LEU:HD13	2.02	0.41
1:A:136:ASN:OD1	1:A:136:ASN:N	2.42	0.41
1:A:288:ALA:HA	1:A:291:ASP:OD2	2.19	0.41
1:B:175:ARG:NH1	1:B:175:ARG:HB3	2.36	0.41
1:B:866:MET:HG3	1:B:912:TYR:CE2	2.55	0.41
1:C:377:GLN:OE1	1:C:377:GLN:N	2.53	0.41
1:C:954:PHE:HZ	1:C:959:LEU:HD21	1.86	0.41
1:D:652:PHE:CD2	1:D:684:ILE:HG23	2.55	0.41
1:A:60:TRP:O	1:A:63:VAL:HG22	2.21	0.41
1:A:316:ILE:HD11	1:A:387:PHE:CE1	2.55	0.41
1:A:720:LEU:HB2	1:A:757:TRP:CH2	2.56	0.41
1:B:233:ARG:HA	1:B:233:ARG:HD2	1.87	0.41
1:B:304:LYS:N	1:B:307:GLU:OE2	2.53	0.41
1:B:544:PHE:CE1	1:B:545:LEU:HG	2.55	0.41
1:B:738:LYS:HD3	1:B:738:LYS:N	2.35	0.41
1:C:555:THR:HG23	1:C:558:LEU:HD23	2.02	0.41
1:C:747:ARG:HE	1:C:747:ARG:HB3	1.74	0.41
1:C:1001:MET:HA	1:C:1005:ILE:HD12	2.02	0.41
1:D:19:PHE:HA	1:D:22:LEU:HG	2.03	0.41
1:D:683:LYS:H	1:D:683:LYS:HE2	1.85	0.41
1:D:767:LEU:HB2	1:D:771:ILE:HB	2.02	0.41
1:A:428:GLN:HE22	1:A:430:VAL:HG12	1.85	0.41
1:A:545:LEU:HA	1:A:550:PHE:CD2	2.56	0.41
1:A:795:SER:HB3	1:A:799:LEU:H	1.86	0.41
1:B:62:LEU:HD11	1:B:66:TYR:CZ	2.55	0.41
1:B:696:THR:O	1:B:700:SER:HB3	2.20	0.41
1:B:713:ILE:HD13	1:B:713:ILE:HA	1.88	0.41
1:C:115:ASN:OD1	1:C:115:ASN:C	2.59	0.41
1:C:472:TYR:CE1	1:C:476:ILE:HD11	2.56	0.41
1:C:738:LYS:HZ3	1:C:774:ILE:HD11	1.85	0.41
1:D:799:LEU:HA	1:D:799:LEU:HD23	1.77	0.41
1:D:836:ASP:HA	1:D:839:PHE:CD2	2.56	0.41
1:A:47:GLY:O	1:A:133:ASN:ND2	2.51	0.41
1:A:54:SER:HA	1:A:115:ASN:HD21	1.86	0.41
1:A:457:ASN:OD1	1:A:458:ILE:N	2.54	0.41
1:A:954:PHE:CD2	1:A:983:VAL:HG11	2.56	0.41
1:B:75:LYS:HB2	1:B:79:TYR:CD1	2.55	0.41
1:B:364:LYS:HG3	1:B:385:PHE:CE2	2.56	0.41
1:B:395:CYS:SG	1:B:396:MET:N	2.94	0.41
1:B:514:ARG:HA	1:B:517:ARG:CZ	2.51	0.41
1:B:514:ARG:HA	1:B:517:ARG:NH2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:557:LYS:N	1:B:557:LYS:HD3	2.36	0.41
1:B:711:GLN:O	1:B:715:GLU:HG2	2.21	0.41
1:C:136:ASN:HB2	1:C:139:ASP:HB3	2.02	0.41
1:D:469:CYS:SG	1:D:470:VAL:N	2.94	0.41
1:D:695:ILE:HG23	1:D:699:PHE:HD2	1.86	0.41
1:D:724:LYS:HD3	1:D:760:ARG:HG3	2.03	0.41
1:D:753:LYS:O	1:D:757:TRP:CD1	2.74	0.41
1:D:1002:ASN:OD1	1:D:1003:TYR:N	2.53	0.41
1:A:618:LEU:HA	1:A:621:GLU:HG3	2.02	0.41
1:B:87:ILE:HA	1:B:90:ILE:HD12	2.03	0.41
1:B:91:PHE:O	1:B:95:LYS:HG2	2.20	0.41
1:B:828:THR:OG1	1:B:829:GLN:N	2.49	0.41
1:C:33:ILE:HD12	1:C:33:ILE:HA	1.85	0.41
1:C:673:ILE:HB	1:C:725:TYR:CE2	2.55	0.41
1:D:199:LEU:HD22	1:D:199:LEU:H	1.85	0.41
1:B:56:TYR:HA	1:B:57:PRO:HD3	1.98	0.40
1:B:661:ILE:HG13	1:B:665:LYS:NZ	2.36	0.40
1:C:536:GLN:HE22	1:C:537:LYS:NZ	2.19	0.40
1:C:538:LYS:HB2	1:C:539:TYR:HD1	1.86	0.40
1:C:632:ASP:OD1	1:C:632:ASP:N	2.55	0.40
1:D:149:PHE:HE1	1:D:165:ARG:HD3	1.85	0.40
1:D:544:PHE:CD1	1:D:544:PHE:C	2.95	0.40
1:A:247:ARG:CZ	1:A:249:ASP:HB3	2.51	0.40
1:A:324:TYR:OH	1:A:391:ASN:O	2.36	0.40
1:A:330:LEU:HA	1:A:333:VAL:HG23	2.03	0.40
1:A:605:PHE:CD1	1:A:605:PHE:N	2.88	0.40
1:B:485:ILE:O	1:B:489:VAL:HG12	2.21	0.40
1:B:877:PHE:CE1	1:B:924:GLU:HB3	2.57	0.40
1:C:553:ASP:O	1:C:557:LYS:HE2	2.21	0.40
1:C:829:GLN:O	1:C:831:LYS:HG2	2.21	0.40
1:D:661:ILE:HG13	1:D:665:LYS:HD3	2.02	0.40
1:A:304:LYS:HD2	1:A:306:ASP:H	1.86	0.40
1:B:505:LYS:NZ	1:B:512:LEU:HD11	2.36	0.40
1:B:515:ILE:O	1:B:519:MET:HB3	2.21	0.40
1:B:586:LEU:HD13	1:B:589:TYR:HD2	1.85	0.40
1:B:706:VAL:O	1:B:709:TYR:HB3	2.21	0.40
1:B:706:VAL:O	1:B:710:THR:HG23	2.22	0.40
1:C:145:ARG:CZ	1:C:147:LYS:HZ2	2.35	0.40
1:C:281:ASP:O	1:C:285:ARG:HG3	2.20	0.40
1:D:63:VAL:HA	1:D:66:TYR:CD2	2.56	0.40
1:D:63:VAL:HG13	1:D:87:ILE:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:481:ILE:HA	1:D:484:SER:OG	2.21	0.40
1:D:737:VAL:HB	1:D:774:ILE:HD11	2.02	0.40
1:D:780:VAL:HG22	1:D:820:LEU:HG	2.04	0.40
1:D:1001:MET:HG3	1:D:1001:MET:H	1.77	0.40
1:A:174:PHE:HD2	1:A:178:PHE:CD2	2.40	0.40
1:D:322:LEU:HB3	1:D:598:ASN:ND2	2.35	0.40
1:D:329:ASP:CB	1:D:541:ILE:HD11	2.46	0.40
1:D:373:LEU:HB3	1:D:377:GLN:NE2	2.36	0.40
1:D:408:GLU:HA	1:D:650:TYR:OH	2.21	0.40
1:D:749:LEU:HD12	1:D:749:LEU:HA	1.92	0.40
1:A:17:GLU:HA	1:A:20:LEU:HG	2.03	0.40
1:A:216:ILE:HG13	1:A:217:GLY:N	2.37	0.40
1:A:396:MET:HE3	1:A:396:MET:HA	2.04	0.40
1:A:627:ARG:NH1	1:A:675:LYS:HD2	2.37	0.40
1:B:661:ILE:O	1:B:665:LYS:HG2	2.21	0.40
1:C:302:ILE:O	1:C:304:LYS:HG2	2.21	0.40
1:C:552:TYR:CD2	1:D:556:VAL:HG22	2.56	0.40
1:D:208:ILE:HD11	1:D:213:ILE:HG21	2.04	0.40
1:D:231:TRP:CD2	1:D:232:VAL:HG22	2.56	0.40
1:D:408:GLU:O	1:D:408:GLU:HG2	2.22	0.40
1:D:608:PHE:O	1:D:612:ILE:HG22	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	993/1005 (99%)	927 (93%)	65 (6%)	1 (0%)	48	83
1	B	993/1005 (99%)	919 (92%)	73 (7%)	1 (0%)	48	83
1	C	993/1005 (99%)	932 (94%)	56 (6%)	5 (0%)	25	64
1	D	993/1005 (99%)	906 (91%)	81 (8%)	6 (1%)	22	59

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	3972/4020 (99%)	3684 (93%)	275 (7%)	13 (0%)	38	72

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	521	ASN
1	C	846	SER
1	C	847	THR
1	D	223	TYR
1	D	521	ASN
1	B	625	TYR
1	C	302	ILE
1	D	817	SER
1	C	296	SER
1	D	162	THR
1	A	302	ILE
1	D	769	LYS
1	D	816	ILE

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	912/922 (99%)	874 (96%)	38 (4%)	25	47
1	B	912/922 (99%)	872 (96%)	40 (4%)	24	46
1	C	912/922 (99%)	872 (96%)	40 (4%)	24	46
1	D	912/922 (99%)	860 (94%)	52 (6%)	17	39
All	All	3648/3688 (99%)	3478 (95%)	170 (5%)	24	44

All (170) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	21	MET
1	A	39	ASN

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Mol	Chain	Res	Type
1	A	125	ASN
1	A	133	ASN
1	A	145	ARG
1	A	187	GLU
1	A	189	ASP
1	A	192	ASN
1	A	202	ASN
1	A	239	SER
1	A	240	PHE
1	A	277	SER
1	A	301	PHE
1	A	363	LEU
1	A	381	PHE
1	A	414	TYR
1	A	423	LYS
1	A	424	PHE
1	A	426	GLU
1	A	487	GLN
1	A	528	PHE
1	A	544	PHE
1	A	566	ARG
1	A	602	SER
1	A	605	PHE
1	A	610	GLN
1	A	611	TYR
1	A	613	ARG
1	A	621	GLU
1	A	646	PHE
1	A	652	PHE
1	A	687	TYR
1	A	717	LYS
1	A	722	PHE
1	A	743	TYR
1	A	856	PHE
1	A	974	LYS
1	A	976	MET
1	B	19	PHE
1	B	38	ARG
1	B	82	ASP
1	B	92	TYR
1	B	174	PHE
1	B	179	LYS

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Mol	Chain	Res	Type
1	B	182	ASN
1	B	192	ASN
1	B	285	ARG
1	B	291	ASP
1	B	301	PHE
1	B	304	LYS
1	B	357	MET
1	B	375	LYS
1	B	395	CYS
1	B	396	MET
1	B	398	LYS
1	B	414	TYR
1	B	438	LYS
1	B	440	PHE
1	B	444	CYS
1	B	452	TYR
1	B	455	TYR
1	B	544	PHE
1	B	550	PHE
1	B	552	TYR
1	B	600	LEU
1	B	622	LYS
1	B	647	MET
1	B	649	TYR
1	B	652	PHE
1	B	666	ASN
1	B	672	SER
1	B	674	ASP
1	B	709	TYR
1	B	738	LYS
1	B	800	TYR
1	B	819	ARG
1	B	866	MET
1	B	976	MET
1	C	32	GLU
1	C	35	GLU
1	C	54	SER
1	C	60	TRP
1	C	61	ARG
1	C	71	TYR
1	C	107	PHE
1	C	108	PHE

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Mol	Chain	Res	Type
1	C	124	MET
1	C	128	HIS
1	C	133	ASN
1	C	134	TYR
1	C	173	ASP
1	C	223	TYR
1	C	286	TYR
1	C	359	ARG
1	C	367	CYS
1	C	381	PHE
1	C	421	MET
1	C	424	PHE
1	C	471	TYR
1	C	473	LEU
1	C	536	GLN
1	C	550	PHE
1	C	578	MET
1	C	616	MET
1	C	625	TYR
1	C	649	TYR
1	C	709	TYR
1	C	742	PHE
1	C	777	ASP
1	C	802	ARG
1	C	839	PHE
1	C	856	PHE
1	C	866	MET
1	C	877	PHE
1	C	913	MET
1	C	936	MET
1	C	974	LYS
1	C	1001	MET
1	D	19	PHE
1	D	21	MET
1	D	29	CYS
1	D	58	GLN
1	D	66	TYR
1	D	98	MET
1	D	105	LYS
1	D	107	PHE
1	D	157	ASP
1	D	231	TRP

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Mol	Chain	Res	Type
1	D	240	PHE
1	D	245	PHE
1	D	282	TYR
1	D	301	PHE
1	D	304	LYS
1	D	313	TYR
1	D	324	TYR
1	D	327	LYS
1	D	331	LYS
1	D	357	MET
1	D	376	LYS
1	D	378	TYR
1	D	389	GLU
1	D	395	CYS
1	D	398	LYS
1	D	415	HIS
1	D	421	MET
1	D	423	LYS
1	D	467	ASN
1	D	471	TYR
1	D	519	MET
1	D	522	PHE
1	D	523	ASN
1	D	544	PHE
1	D	549	GLN
1	D	559	PHE
1	D	596	TYR
1	D	604	SER
1	D	614	ASN
1	D	625	TYR
1	D	649	TYR
1	D	687	TYR
1	D	705	ASN
1	D	722	PHE
1	D	727	LYS
1	D	750	ASP
1	D	782	GLN
1	D	819	ARG
1	D	839	PHE
1	D	936	MET
1	D	958	TRP
1	D	1001	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	297	GLN
1	A	491	GLN
1	B	89	GLN
1	B	536	GLN
1	B	609	HIS
1	C	297	GLN
1	C	299	ASN
1	C	351	ASN
1	C	536	GLN
1	C	654	ASN
1	C	698	GLN
1	C	867	ASN
1	C	939	GLN
1	D	115	ASN
1	D	118	HIS
1	D	609	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

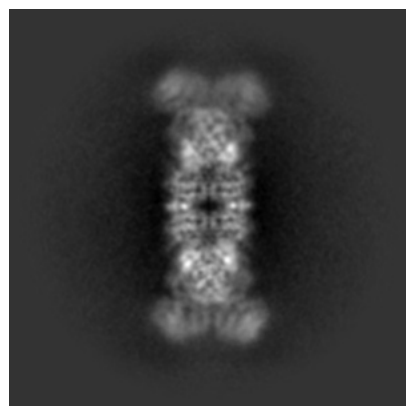
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-39240. These allow visual inspection of the internal detail of the map and identification of artifacts.

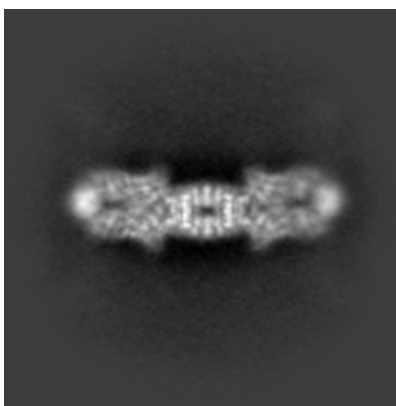
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

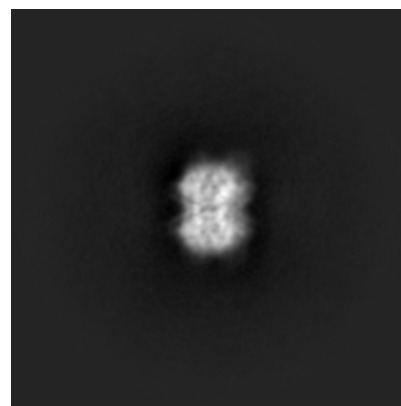
6.1.1 Primary map



X

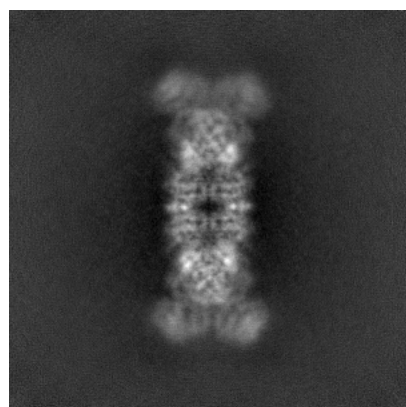


Y

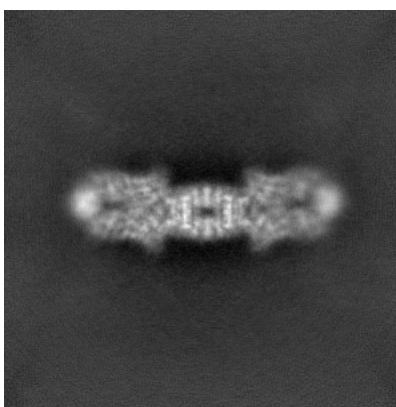


Z

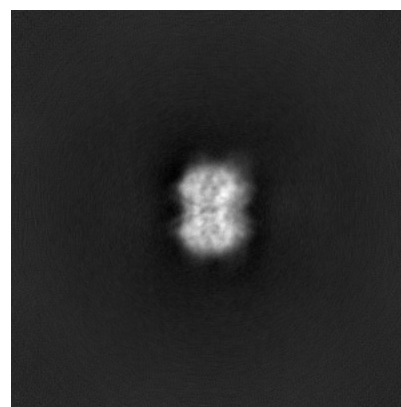
6.1.2 Raw map



X



Y

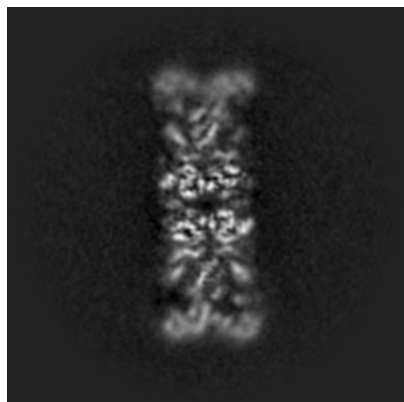


Z

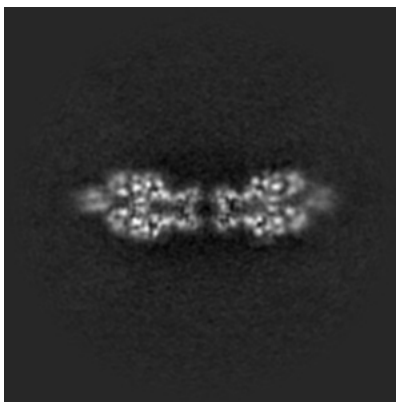
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

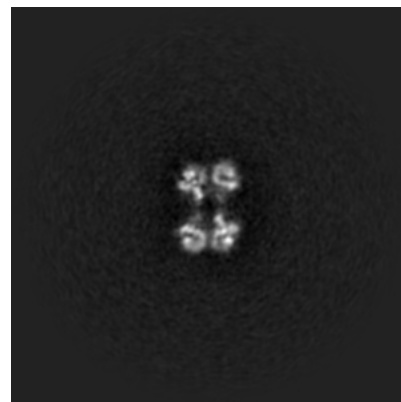
6.2.1 Primary map



X Index: 230

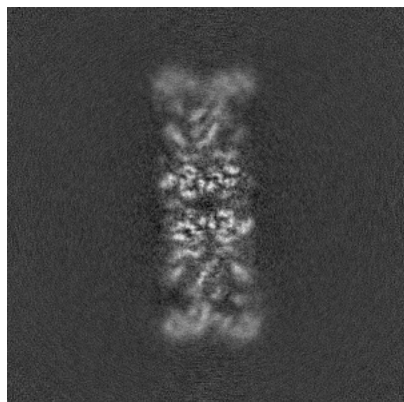


Y Index: 230

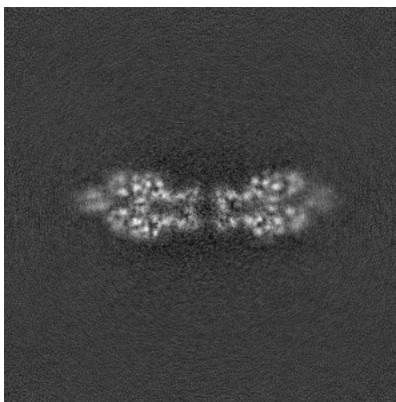


Z Index: 230

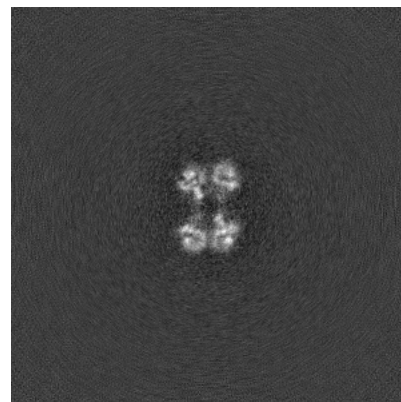
6.2.2 Raw map



X Index: 230



Y Index: 230

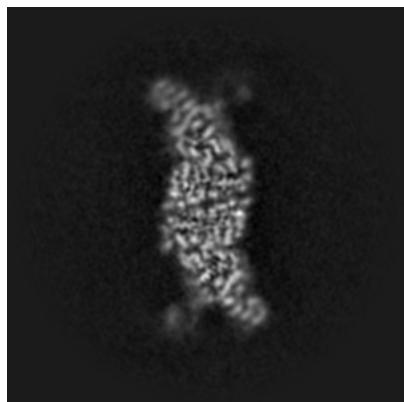


Z Index: 230

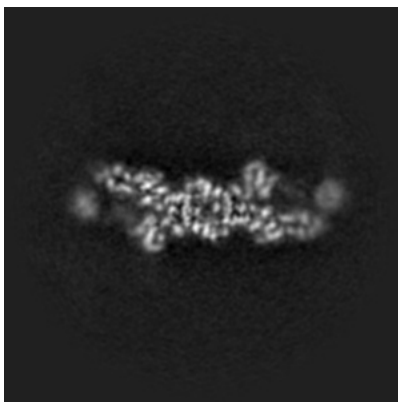
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

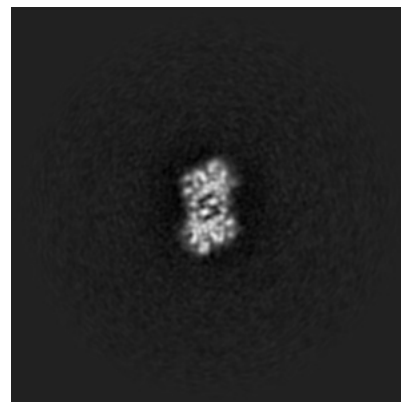
6.3.1 Primary map



X Index: 214

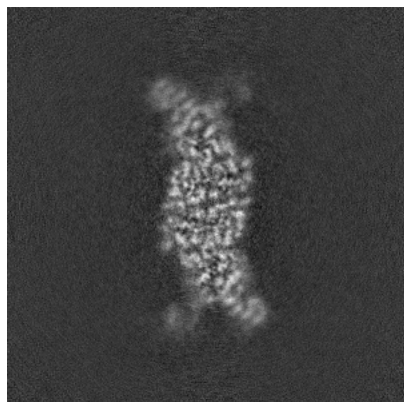


Y Index: 205

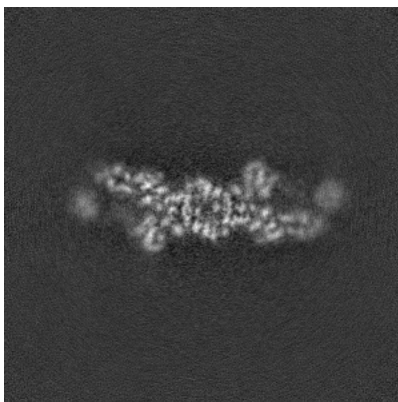


Z Index: 208

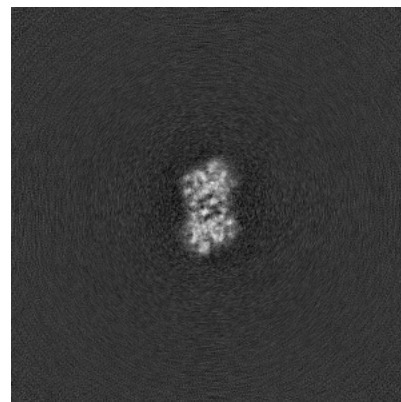
6.3.2 Raw map



X Index: 215



Y Index: 205

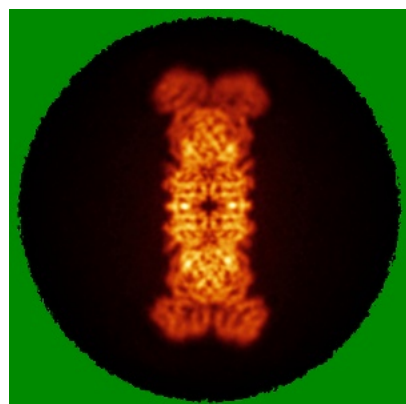


Z Index: 208

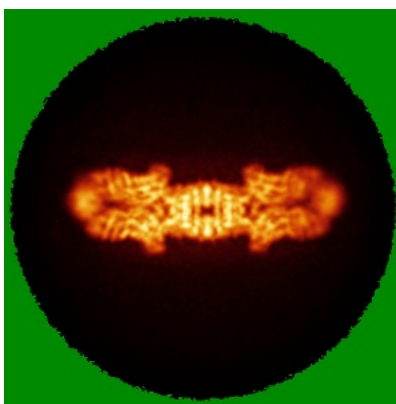
The images above show the largest variance slices of the map in three orthogonal directions.

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

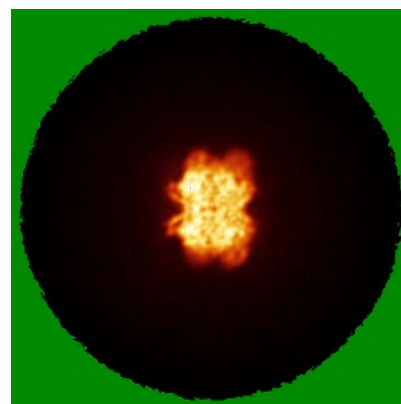
6.4.1 Primary map



X

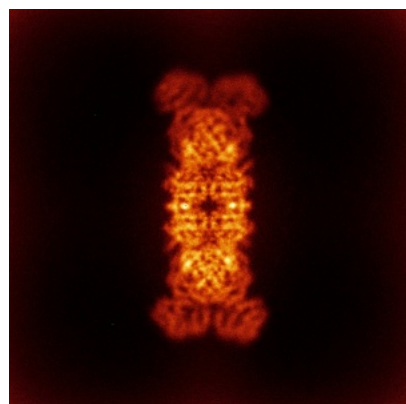


Y

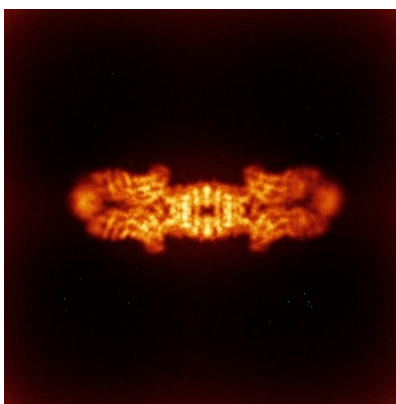


Z

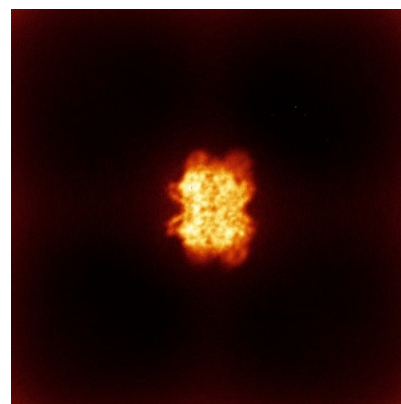
6.4.2 Raw map



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.

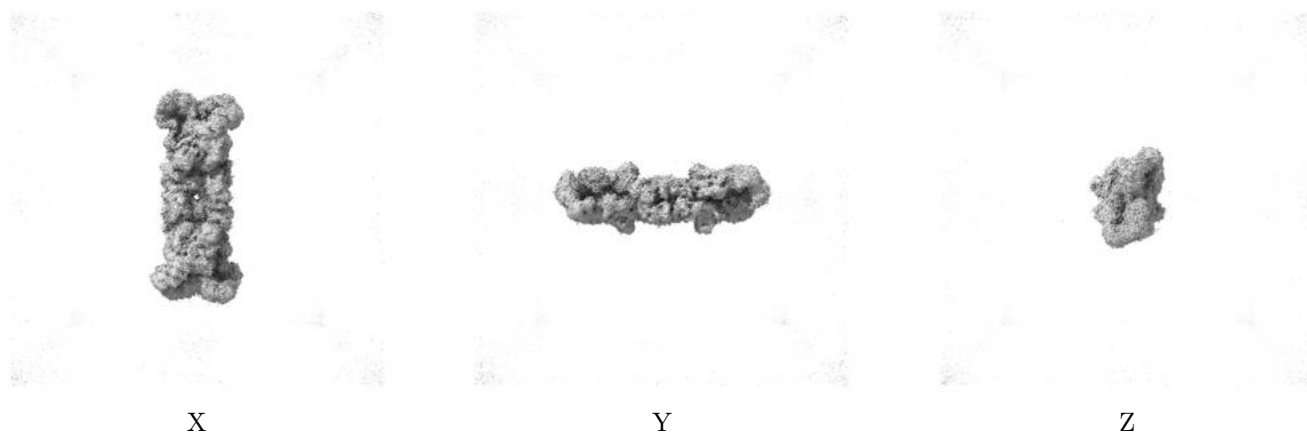
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.1. 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.

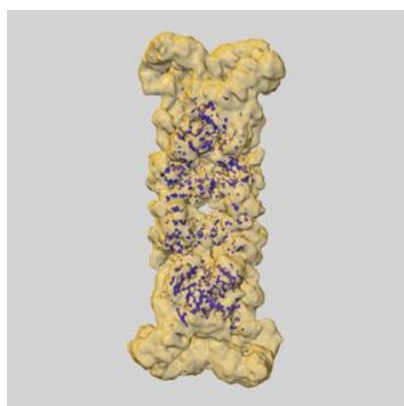
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

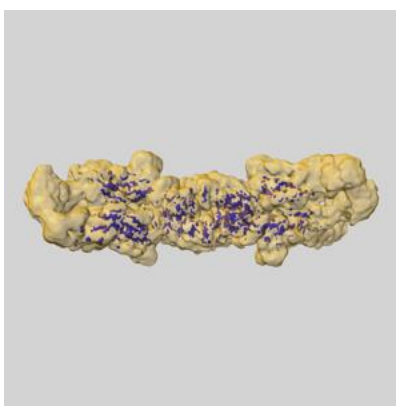
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

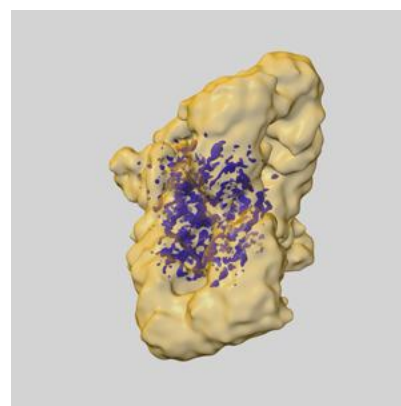
6.6.1 emd_39240_msk_1.map [i](#)



X



Y

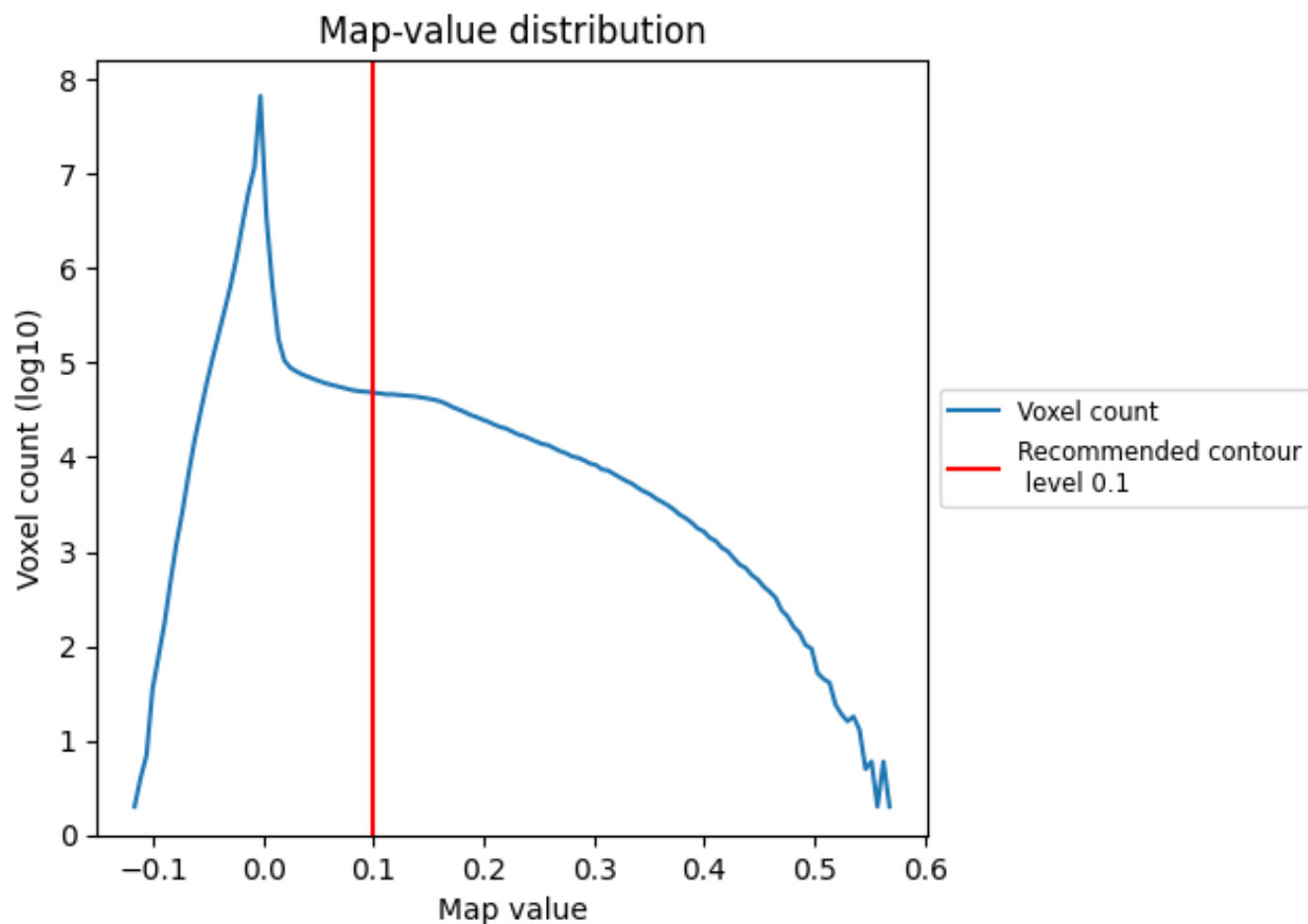


Z

7 Map analysis [i](#)

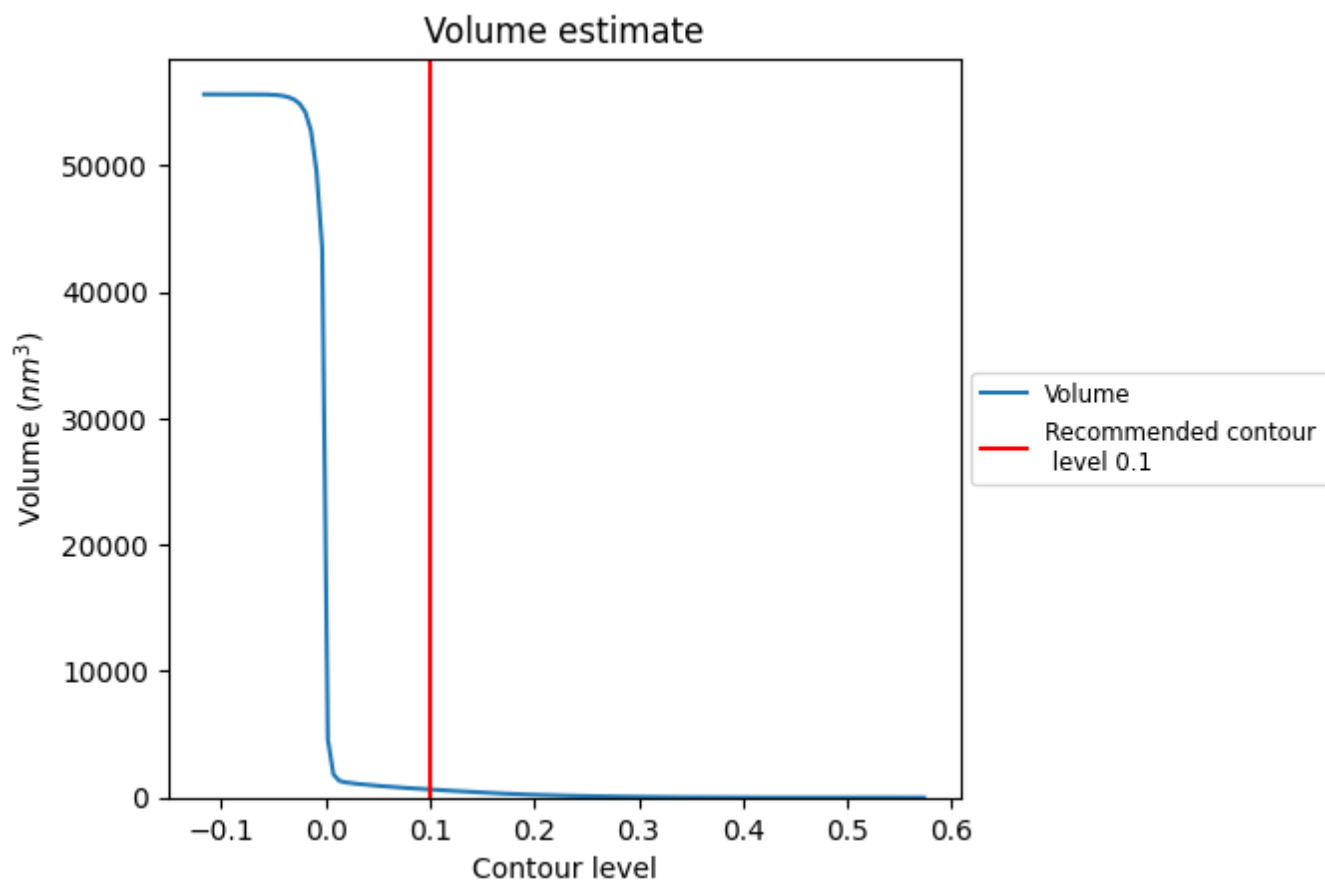
This section contains the results of statistical analysis of the map.

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.

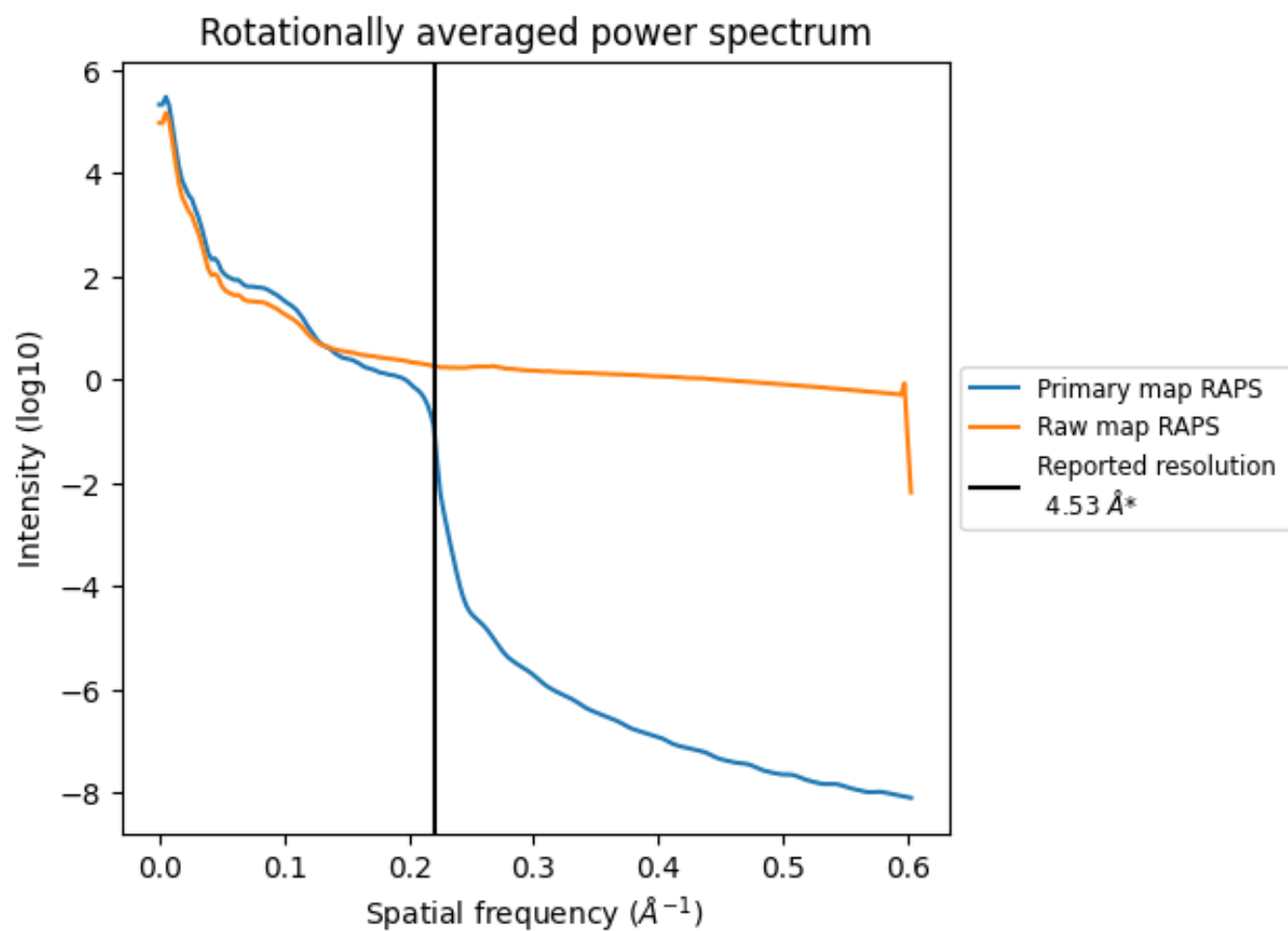
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 640 nm³; this corresponds to an approximate mass of 578 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 ⓘ

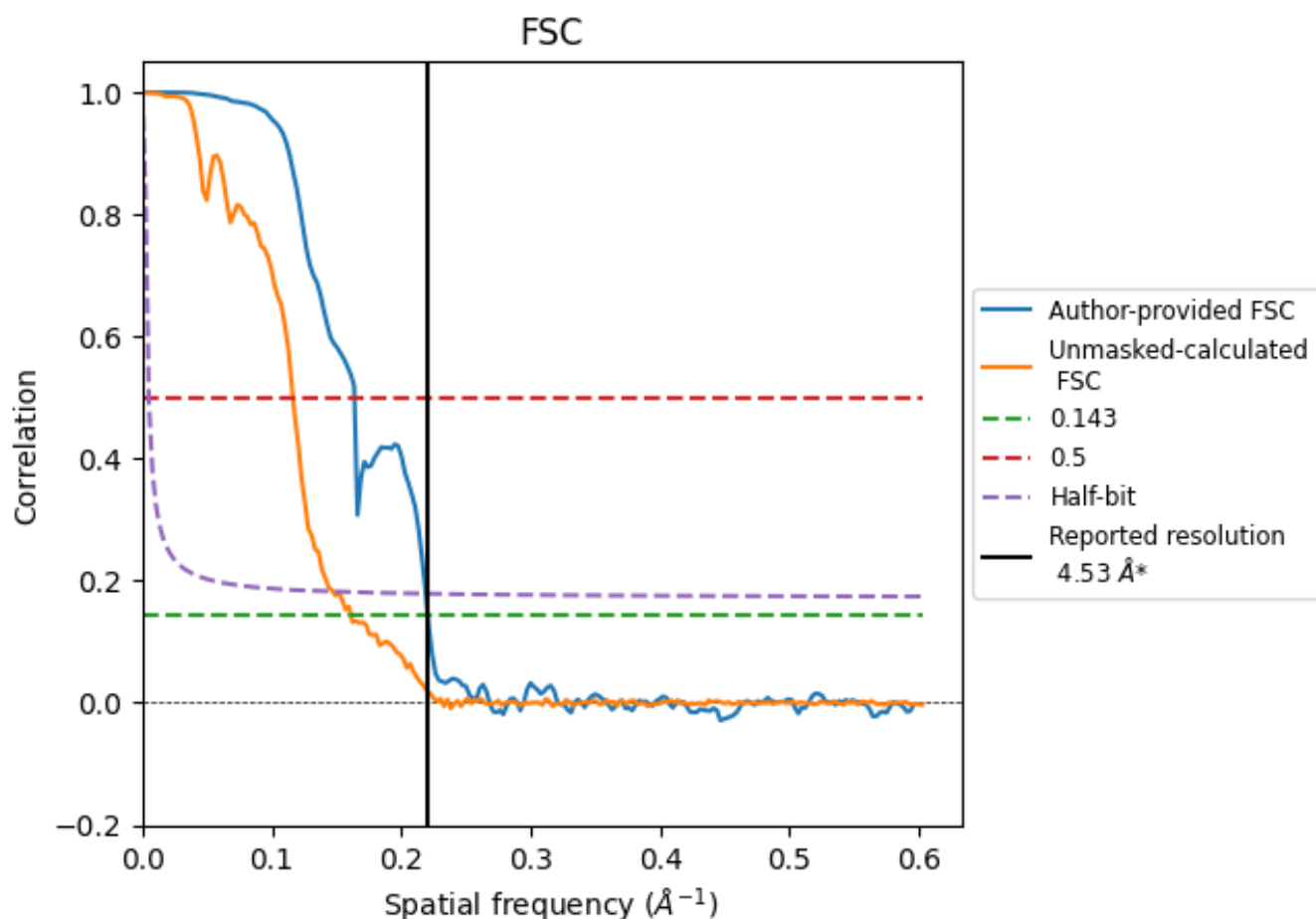


*Reported resolution corresponds to spatial frequency of 0.221 \AA^{-1}

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 0.221 \AA^{-1}

8.2 Resolution estimates [i](#)

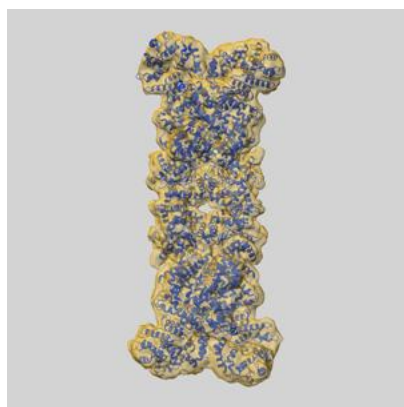
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.53	-	-
Author-provided FSC curve	4.53	6.10	4.57
Unmasked-calculated*	6.20	8.59	6.78

*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 6.20 differs from the reported value 4.53 by more than 10 %

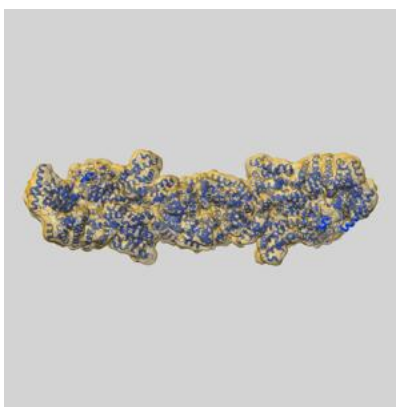
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-39240 and PDB model 8YGA. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

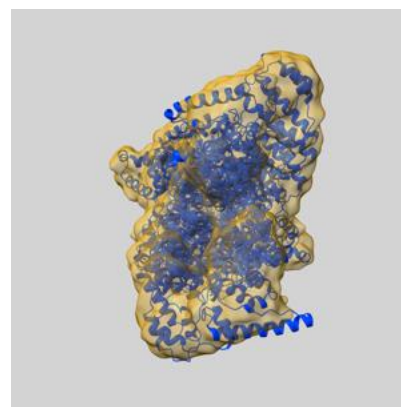
9.1 Map-model overlay [i](#)



X



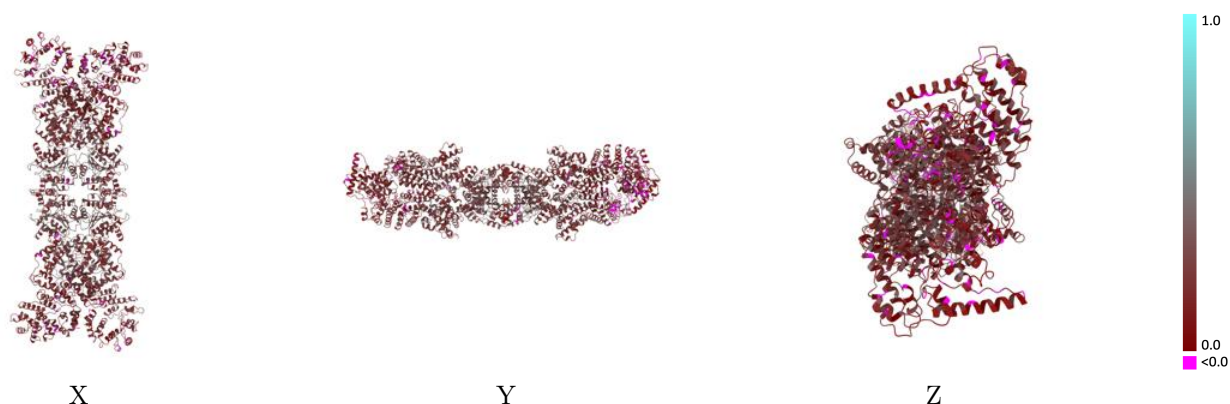
Y



Z

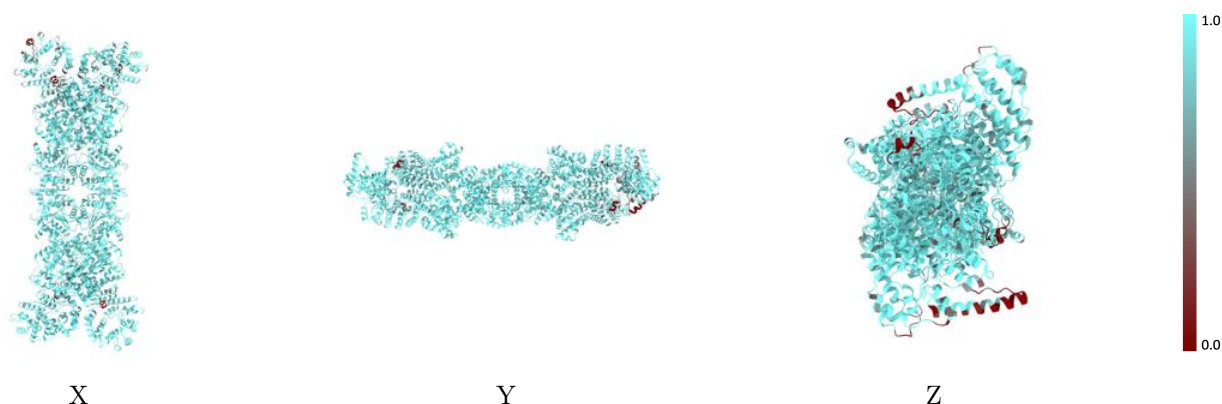
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



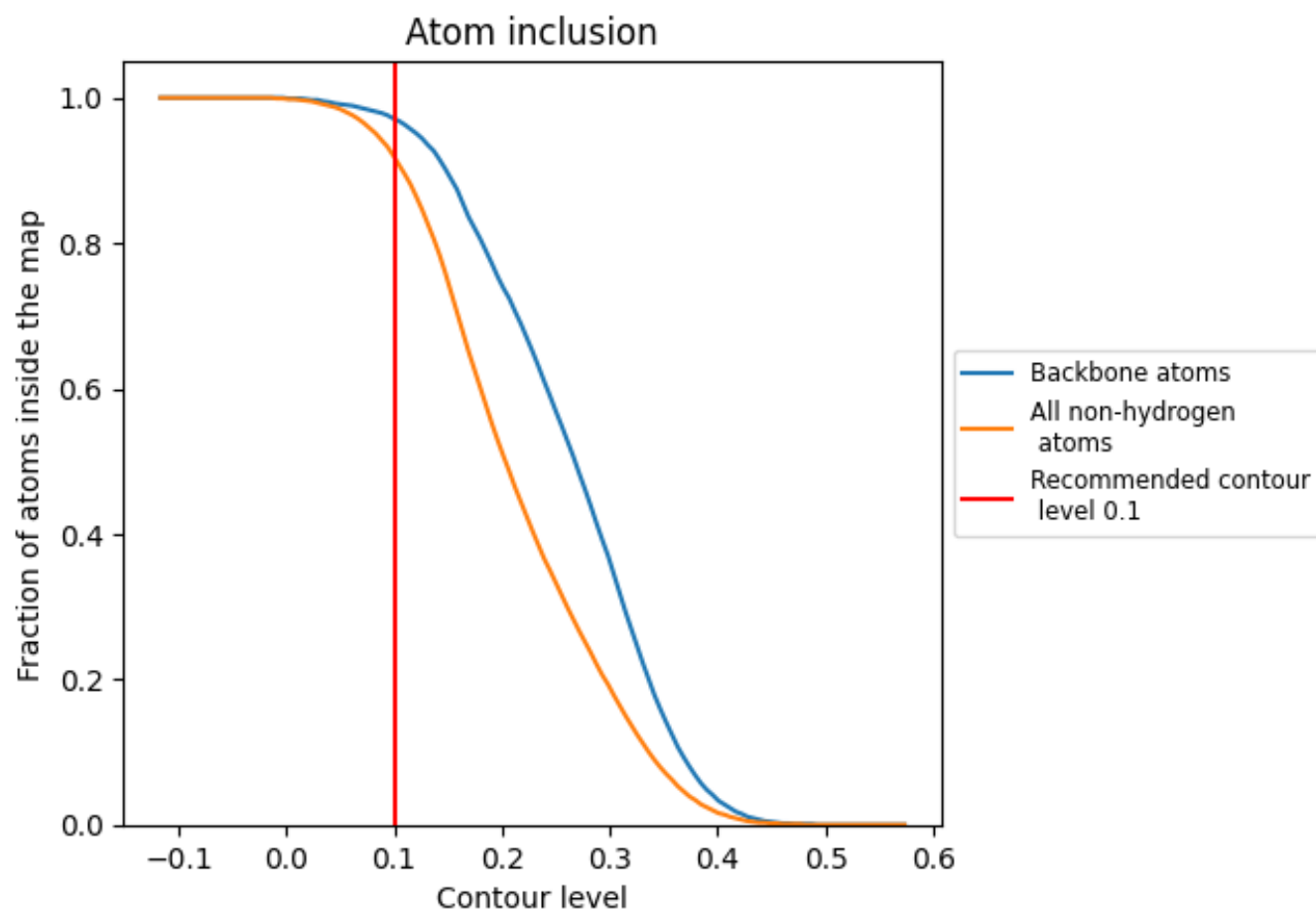
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.1).

9.4 Atom inclusion ⓘ



At the recommended contour level, 97% of all backbone atoms, 92% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.9190	<div></div> 0.2230
A	<div></div> 0.8950	<div></div> 0.2110
B	<div></div> 0.8950	<div></div> 0.2120
C	<div></div> 0.9410	<div></div> 0.2310
D	<div></div> 0.9450	<div></div> 0.2370

