



Full wwPDB EM Validation Report ⓘ

May 11, 2025 – 12:13 AM JST

PDB ID : 9JH6 / pdb_00009jh6
EMDB ID : EMD-61473
Title : Activation mechanism of CYSLTR2 by C20:0
Authors : Wang, J.L.; Sun, J.P.; Yu, X.
Deposited on : 2024-09-09
Resolution : 2.89 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.dev118
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0rc1
buster-report : 1.1.7 (2018)
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) : 2.43.1

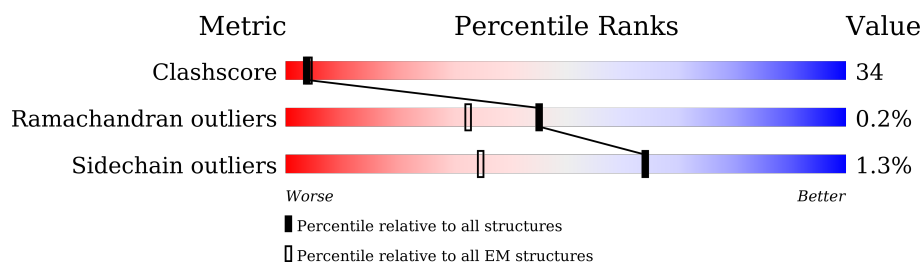
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.89 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	R	346	
2	C	59	
3	S	250	
4	A	361	
5	B	358	
6	N	151	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
7	A1LXR	R	401	-	-	X	-

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 9748 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 Cysteinyl leukotriene receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	259	Total	C	N	O	S	0	0
			2069	1393	331	332	13		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	193	PHE	TYR	engineered mutation	UNP Q9NS75

- Molecule 2 is a protein called Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	55	Total	C	N	O	S	0	0
			422	264	75	80	3		

- Molecule 3 is a protein called scFv16.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	S	233	Total	C	N	O	S	0	0
			1783	1132	296	345	10		

- Molecule 4 is a protein called Guanine nucleotide-binding protein G(i) subunit alpha-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A	236	Total	C	N	O	S	0	0
			1878	1191	336	342	9		

- Molecule 5 is a protein called Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	B	338	Total	C	N	O	S	0	0
			2584	1596	461	506	21		

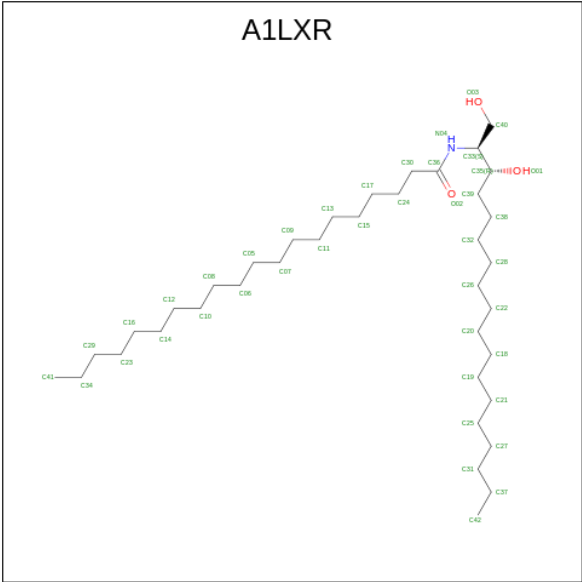
There are 19 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-17	MET	-	initiating methionine	UNP P62873
B	-16	HIS	-	expression tag	UNP P62873
B	-15	HIS	-	expression tag	UNP P62873
B	-14	HIS	-	expression tag	UNP P62873
B	-13	HIS	-	expression tag	UNP P62873
B	-12	HIS	-	expression tag	UNP P62873
B	-11	HIS	-	expression tag	UNP P62873
B	-10	LEU	-	expression tag	UNP P62873
B	-9	GLU	-	expression tag	UNP P62873
B	-8	VAL	-	expression tag	UNP P62873
B	-7	LEU	-	expression tag	UNP P62873
B	-6	PHE	-	expression tag	UNP P62873
B	-5	GLN	-	expression tag	UNP P62873
B	-4	GLY	-	expression tag	UNP P62873
B	-3	PRO	-	expression tag	UNP P62873
B	-2	GLY	-	expression tag	UNP P62873
B	-1	SER	-	expression tag	UNP P62873
B	0	SER	-	expression tag	UNP P62873
B	1	GLN	-	expression tag	UNP P62873

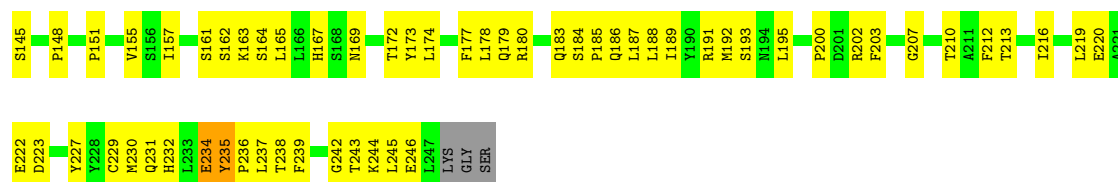
- Molecule 6 is a protein called Nb35.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	N	128	Total	C	N	O	S	0	0
			970	604	170	190	6		

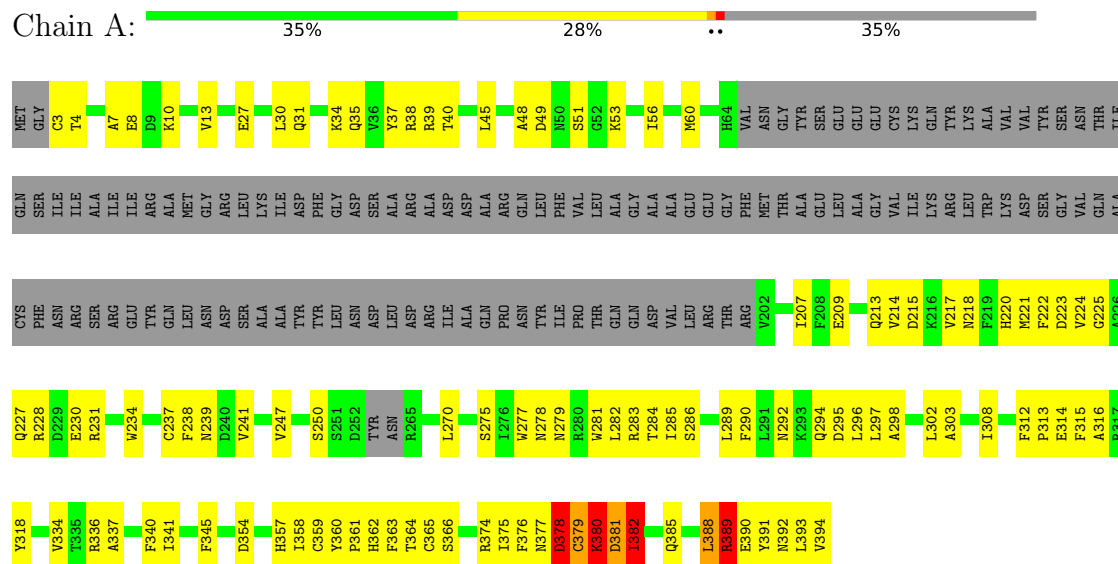
- Molecule 7 is Cer(d18:0/20:0) (CCD ID: A1LXR) (formula: C₃₈H₇₇NO₃).



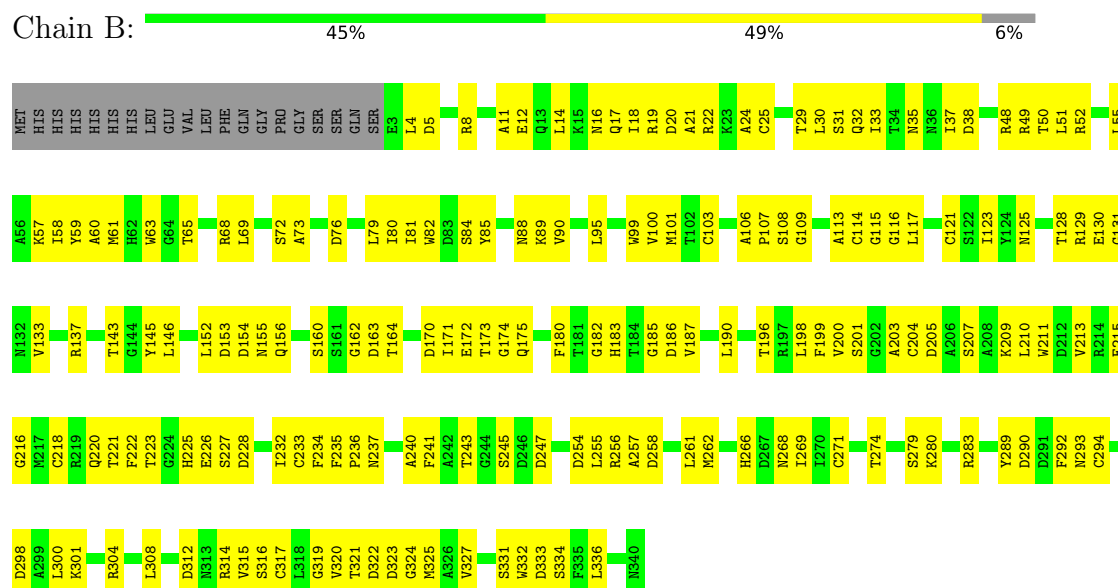
Mol	Chain	Residues	Atoms				AltConf
7	R	1	Total	C	N	O	0
			42	38	1	3	



• Molecule 4: Guanine nucleotide-binding protein G(i) subunit alpha-1



• Molecule 5: Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1



• Molecule 6: Nb35





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	239501	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 IS (4k x 4k)	Depositor
Maximum map value	20.640	Depositor
Minimum map value	-0.115	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.666	Depositor
Recommended contour level	0.9	Depositor
Map size ($\text{\AA}$)	235.52, 235.52, 235.52	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.92, 0.92, 0.92	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1LXR

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	R	1.15	29/2120 (1.4%)	1.05	27/2883 (0.9%)
2	C	1.25	1/427 (0.2%)	0.96	3/575 (0.5%)
3	S	1.60	8/1827 (0.4%)	0.92	6/2478 (0.2%)
4	A	1.01	23/1910 (1.2%)	0.81	12/2576 (0.5%)
5	B	0.49	0/2631	0.60	0/3570
6	N	0.37	0/990	0.55	0/1341
All	All	1.05	61/9905 (0.6%)	0.83	48/13423 (0.4%)

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	R	0	1
3	S	0	2
All	All	0	3

All (61) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	S	94	TYR	CD1-CE1	31.01	2.31	1.38
3	S	94	TYR	CD2-CE2	28.68	2.24	1.38
3	S	38	ARG	CD-NE	28.18	1.85	1.46
2	C	54	VAL	C-N	-23.09	1.03	1.34
3	S	94	TYR	CE1-CZ	21.48	1.89	1.38
3	S	94	TYR	CE2-CZ	21.20	1.89	1.38
3	S	94	TYR	CG-CD1	18.94	1.79	1.39
3	S	94	TYR	CG-CD2	18.73	1.78	1.39
3	S	38	ARG	NE-CZ	15.45	1.50	1.33
4	A	380	LYS	C-O	-10.18	1.11	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	378	ASP	C-O	-9.98	1.12	1.24
1	R	151	SER	CA-C	-9.94	1.39	1.52
4	A	377	ASN	CA-C	-9.93	1.39	1.52
4	A	379	CYS	C-O	-9.57	1.12	1.24
4	A	39	ARG	CA-C	-9.00	1.40	1.52
4	A	377	ASN	C-O	-8.38	1.13	1.24
4	A	382	ILE	CA-CB	-8.04	1.43	1.54
4	A	382	ILE	C-O	-7.97	1.14	1.24
1	R	143	PRO	C-O	-7.96	1.14	1.24
1	R	136	ARG	CA-C	-7.91	1.42	1.52
4	A	380	LYS	CA-C	-7.76	1.42	1.52
4	A	378	ASP	CA-C	-7.71	1.42	1.52
1	R	138	LEU	CA-C	-7.25	1.43	1.52
4	A	381	ASP	C-O	-7.23	1.14	1.24
4	A	389	ARG	CA-C	-7.11	1.43	1.52
1	R	143	PRO	CA-CB	-7.07	1.44	1.53
1	R	141	VAL	CA-C	-6.85	1.44	1.52
1	R	268	THR	N-CA	-6.79	1.36	1.46
1	R	141	VAL	CA-CB	-6.74	1.46	1.54
1	R	141	VAL	N-CA	-6.71	1.38	1.46
4	A	379	CYS	CA-C	-6.50	1.44	1.52
4	A	379	CYS	N-CA	-6.39	1.38	1.46
1	R	270	HIS	CA-C	-6.36	1.45	1.52
1	R	172	MET	N-CA	6.35	1.54	1.46
4	A	382	ILE	CA-C	-6.33	1.44	1.52
1	R	156	TRP	CA-CB	-6.24	1.43	1.53
1	R	137	PHE	CA-C	-6.03	1.45	1.52
1	R	140	MET	CA-C	-5.94	1.45	1.52
4	A	379	CYS	CA-CB	-5.90	1.44	1.53
4	A	378	ASP	CA-CB	-5.83	1.44	1.53
1	R	136	ARG	CA-CB	-5.80	1.44	1.53
1	R	268	THR	CA-C	-5.77	1.44	1.52
4	A	39	ARG	C-O	-5.70	1.16	1.24
1	R	167	MET	C-O	-5.63	1.17	1.24
1	R	271	LEU	CA-C	-5.58	1.45	1.52
1	R	165	LEU	CA-CB	-5.50	1.44	1.53
1	R	140	MET	CA-CB	-5.48	1.44	1.53
1	R	170	SER	N-CA	-5.47	1.38	1.46
4	A	389	ARG	C-O	-5.47	1.16	1.23
4	A	377	ASN	CA-CB	-5.46	1.44	1.53
4	A	39	ARG	N-CA	-5.40	1.40	1.46
1	R	150	THR	CA-C	-5.34	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	378	ASP	CB-CG	-5.33	1.38	1.52
1	R	168	ALA	CA-C	-5.28	1.46	1.52
1	R	165	LEU	CA-C	-5.26	1.46	1.52
1	R	269	VAL	C-O	-5.17	1.19	1.24
1	R	141	VAL	C-O	-5.10	1.17	1.24
1	R	156	TRP	CE2-CZ2	-5.08	1.29	1.39
1	R	149	VAL	CA-CB	-5.05	1.47	1.54
4	A	38	ARG	C-N	-5.03	1.27	1.33
1	R	149	VAL	N-CA	-5.03	1.40	1.46

All (48) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	S	38	ARG	CD-NE-CZ	20.29	152.81	124.40
1	R	151	SER	CB-CA-C	-13.90	83.96	109.54
4	A	382	ILE	CB-CA-C	-10.58	98.06	112.24
1	R	153	ARG	N-CA-C	-9.79	89.95	110.80
1	R	155	ALA	CA-C-N	-9.69	107.85	120.44
1	R	155	ALA	C-N-CA	-9.69	107.85	120.44
4	A	379	CYS	CA-CB-SG	-9.25	93.12	114.40
3	S	38	ARG	NE-CZ-NH1	8.64	130.15	121.50
1	R	260	PHE	N-CA-C	8.22	121.81	111.69
1	R	150	THR	N-CA-C	8.02	127.88	110.80
3	S	234	GLU	CA-C-N	-7.73	114.01	123.21
3	S	234	GLU	C-N-CA	-7.73	114.01	123.21
1	R	140	MET	N-CA-C	7.69	119.30	111.07
1	R	171	ILE	N-CA-CB	7.56	123.58	110.65
1	R	169	SER	CA-C-N	-7.22	108.63	122.06
1	R	169	SER	C-N-CA	-7.22	108.63	122.06
1	R	140	MET	CB-CA-C	-6.67	100.41	110.88
4	A	378	ASP	CB-CA-C	-6.66	100.16	110.81
1	R	165	LEU	CA-CB-CG	-6.56	93.33	116.30
3	S	38	ARG	CG-CD-NE	6.39	126.07	112.00
2	C	16	VAL	CA-C-N	-6.38	110.06	120.72
2	C	16	VAL	C-N-CA	-6.38	110.06	120.72
1	R	140	MET	CB-CG-SD	-6.36	93.62	112.70
1	R	171	ILE	CA-C-O	-6.28	113.86	120.57
1	R	172	MET	CA-C-N	6.14	133.27	121.54
1	R	172	MET	C-N-CA	6.14	133.27	121.54
1	R	151	SER	N-CA-C	6.13	119.14	110.50
4	A	389	ARG	CG-CD-NE	-6.02	98.75	112.00
1	R	267	ARG	O-C-N	5.98	128.23	122.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	R	270	HIS	N-CA-C	-5.79	104.66	110.97
1	R	156	TRP	CA-C-N	-5.77	111.15	120.62
1	R	156	TRP	C-N-CA	-5.77	111.15	120.62
3	S	64	VAL	N-CA-C	-5.60	107.67	113.10
1	R	152	ILE	N-CA-C	5.59	120.97	109.34
1	R	170	SER	CB-CA-C	5.47	120.22	109.72
4	A	377	ASN	CA-C-N	5.43	127.88	120.54
4	A	377	ASN	C-N-CA	5.43	127.88	120.54
2	C	11	GLN	CB-CA-C	-5.39	99.69	110.42
1	R	270	HIS	O-C-N	5.35	127.59	122.03
1	R	172	MET	CB-CA-C	-5.34	99.80	110.42
1	R	272	THR	CA-C-N	-5.31	113.54	120.44
1	R	272	THR	C-N-CA	-5.31	113.54	120.44
4	A	388	LEU	CA-C-N	-5.26	112.43	122.53
4	A	388	LEU	C-N-CA	-5.26	112.43	122.53
4	A	382	ILE	CA-C-N	5.09	127.71	120.53
4	A	382	ILE	C-N-CA	5.09	127.71	120.53
4	A	381	ASP	N-CA-C	5.06	118.95	112.87
4	A	379	CYS	CB-CA-C	-5.06	102.39	110.79

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	R	238	LEU	Peptide
3	S	235	TYR	Peptide
3	S	68	PHE	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	R	2069	0	2155	190	0
2	C	422	0	430	31	0
3	S	1783	0	1716	155	0
4	A	1878	0	1836	131	0
5	B	2584	0	2479	172	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	N	970	0	932	64	0
7	R	42	0	0	30	0
All	All	9748	0	9548	650	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 34.

All (650) 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)
3:S:94:TYR:CG	3:S:94:TYR:CD1	1.79	1.63
3:S:94:TYR:CG	3:S:94:TYR:CD2	1.78	1.63
3:S:94:TYR:CZ	3:S:94:TYR:CE2	1.89	1.56
3:S:94:TYR:CZ	3:S:94:TYR:CE1	1.89	1.54
1:R:119:TYR:CD2	7:R:401:A1LXR:C40	1.86	1.53
1:R:140:MET:HE3	4:A:388:LEU:CD2	1.48	1.44
3:S:38:ARG:NE	3:S:94:TYR:CE2	1.86	1.43
1:R:119:TYR:HD2	7:R:401:A1LXR:C40	1.18	1.43
3:S:38:ARG:NE	3:S:38:ARG:CD	1.85	1.39
3:S:38:ARG:NE	3:S:94:TYR:CD2	1.91	1.37
3:S:38:ARG:NE	3:S:94:TYR:CZ	1.97	1.32
1:R:148:HIS:HD2	4:A:391:TYR:OH	1.00	1.27
1:R:249:ILE:CD1	4:A:393:LEU:HD11	1.65	1.26
3:S:94:TYR:CD2	3:S:94:TYR:CE2	2.24	1.25
1:R:259:CYS:SG	1:R:260:PHE:HD1	1.59	1.25
1:R:148:HIS:CD2	4:A:391:TYR:OH	1.88	1.25
1:R:259:CYS:SG	1:R:260:PHE:CD1	2.30	1.22
3:S:38:ARG:NE	3:S:94:TYR:CE1	2.08	1.22
1:R:311:ASN:CG	4:A:390:GLU:HA	1.64	1.21
3:S:38:ARG:NE	3:S:94:TYR:CG	2.10	1.20
3:S:38:ARG:NE	3:S:94:TYR:CD1	2.11	1.19
3:S:94:TYR:CD1	3:S:94:TYR:CE1	2.31	1.18
1:R:249:ILE:HD11	4:A:393:LEU:CD1	1.71	1.17
1:R:68:LYS:N	5:B:312:ASP:OD2	1.79	1.15
3:S:38:ARG:HD3	3:S:94:TYR:CD1	1.82	1.13
3:S:38:ARG:CD	3:S:94:TYR:CD1	2.32	1.11
1:R:75:VAL:HG21	1:R:155:ALA:HB1	1.11	1.10
1:R:311:ASN:HB2	4:A:389:ARG:O	1.52	1.09
1:R:139:ALA:HB2	4:A:391:TYR:HE2	1.11	1.07
1:R:140:MET:CE	4:A:388:LEU:HD23	1.84	1.06
3:S:38:ARG:CD	3:S:94:TYR:CE1	2.38	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:202:ASN:ND2	1:R:267:ARG:NH1	2.03	1.05
3:S:38:ARG:CZ	3:S:94:TYR:CE1	2.45	1.00
1:R:139:ALA:HB2	4:A:391:TYR:CE2	1.97	1.00
1:R:140:MET:CE	4:A:388:LEU:CD2	2.40	0.99
1:R:311:ASN:CB	4:A:390:GLU:HA	1.91	0.99
1:R:202:ASN:ND2	1:R:267:ARG:HH11	1.58	0.98
1:R:75:VAL:CG2	1:R:155:ALA:HB1	1.93	0.98
1:R:163:TRP:O	1:R:167:MET:HG2	1.65	0.97
3:S:38:ARG:CZ	3:S:94:TYR:CD1	2.48	0.97
4:A:360:TYR:CD2	4:A:378:ASP:OD1	2.17	0.96
3:S:38:ARG:HD2	3:S:94:TYR:CE1	1.99	0.96
1:R:170:SER:OG	7:R:401:A1LXR:C28	2.15	0.94
1:R:75:VAL:HG21	1:R:155:ALA:CB	1.97	0.93
4:A:375:ILE:O	4:A:379:CYS:HB2	1.67	0.93
1:R:311:ASN:CG	4:A:390:GLU:CA	2.43	0.92
1:R:165:LEU:HD23	7:R:401:A1LXR:C31	1.99	0.92
6:N:47:TRP:HZ2	6:N:50:ASP:HB2	1.35	0.91
1:R:140:MET:HE3	4:A:388:LEU:HD23	0.92	0.90
1:R:69:LYS:HE3	5:B:334:SER:OG	1.72	0.90
1:R:140:MET:HE2	4:A:393:LEU:HD23	1.53	0.90
1:R:291:LEU:HD11	7:R:401:A1LXR:C14	2.01	0.90
3:S:52:SER:O	3:S:72:ARG:NH1	2.07	0.88
1:R:140:MET:CE	4:A:393:LEU:HD23	2.03	0.88
3:S:38:ARG:CD	3:S:94:TYR:CG	2.55	0.88
1:R:148:HIS:HD2	4:A:391:TYR:HH	1.21	0.87
6:N:38:ARG:NH1	6:N:94:TYR:OH	2.07	0.87
1:R:139:ALA:CB	4:A:391:TYR:HE2	1.87	0.87
1:R:311:ASN:HB2	4:A:390:GLU:HA	1.55	0.87
1:R:202:ASN:HD21	1:R:267:ARG:NH1	1.74	0.86
1:R:96:ASP:OD1	1:R:103:ASN:ND2	2.09	0.86
6:N:40:ALA:HB3	6:N:43:LYS:HD3	1.58	0.86
1:R:88:ILE:HA	1:R:91:LEU:HD23	1.56	0.85
2:C:16:VAL:HG12	5:B:11:ALA:HB2	1.58	0.85
3:S:38:ARG:CD	3:S:94:TYR:CZ	2.60	0.85
3:S:38:ARG:CZ	3:S:94:TYR:CZ	2.60	0.84
6:N:112:SER:O	6:N:118:ARG:NH2	2.08	0.84
1:R:140:MET:SD	1:R:140:MET:N	2.52	0.83
4:A:213:GLN:HG2	4:A:218:ASN:HA	1.61	0.82
4:A:360:TYR:CG	4:A:378:ASP:OD1	2.32	0.82
3:S:67:ARG:NH2	3:S:85:SER:HB2	1.93	0.82
6:N:39:GLN:NE2	6:N:43:LYS:O	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:126:ILE:HD11	1:R:260:PHE:HE2	1.43	0.81
1:R:139:ALA:CB	4:A:391:TYR:CE2	2.62	0.81
1:R:140:MET:HE2	4:A:393:LEU:CD2	2.11	0.80
3:S:38:ARG:O	3:S:46:GLU:N	2.15	0.80
5:B:58:ILE:O	5:B:316:SER:OG	1.99	0.80
3:S:9:GLY:HA2	3:S:117:LEU:HB3	1.64	0.80
5:B:266:HIS:NE2	5:B:268:ASN:OD1	2.14	0.80
3:S:48:VAL:HG12	3:S:49:ALA:H	1.45	0.79
1:R:202:ASN:HD21	1:R:267:ARG:HH11	1.25	0.79
6:N:47:TRP:CZ2	6:N:50:ASP:HB2	2.16	0.79
1:R:126:ILE:HD11	1:R:260:PHE:CE2	2.17	0.79
1:R:259:CYS:SG	1:R:260:PHE:CE1	2.76	0.79
1:R:119:TYR:HB3	7:R:401:A1LXR:O03	1.83	0.79
5:B:271:CYS:HB2	5:B:290:ASP:HB3	1.63	0.78
4:A:375:ILE:O	4:A:379:CYS:CB	2.32	0.78
1:R:311:ASN:OD1	4:A:390:GLU:CB	2.32	0.78
1:R:312:PHE:HB2	4:A:392:ASN:HD21	1.48	0.78
5:B:60:ALA:HB3	5:B:73:ALA:HB3	1.66	0.78
5:B:30:LEU:HD23	5:B:262:MET:HB3	1.64	0.77
5:B:95:LEU:HD13	5:B:100:VAL:HG11	1.64	0.77
3:S:202:ARG:NH1	3:S:223:ASP:OD2	2.17	0.77
3:S:38:ARG:NH1	3:S:94:TYR:CD1	2.53	0.77
1:R:311:ASN:OD1	4:A:390:GLU:HA	1.85	0.77
3:S:59:TYR:OH	4:A:10:LYS:NZ	2.15	0.76
3:S:38:ARG:CD	3:S:94:TYR:CD2	2.69	0.76
1:R:291:LEU:CD1	7:R:401:A1LXR:C14	2.64	0.75
3:S:38:ARG:CZ	3:S:94:TYR:CG	2.68	0.75
1:R:260:PHE:HE1	1:R:297:ASN:HD22	1.32	0.75
1:R:167:MET:CA	1:R:167:MET:HE3	2.17	0.74
1:R:69:LYS:NZ	5:B:55:LEU:O	2.20	0.74
1:R:291:LEU:CD1	7:R:401:A1LXR:C12	2.64	0.74
1:R:270:HIS:NE2	1:R:284:HIS:CE1	2.56	0.73
1:R:202:ASN:OD1	1:R:268:THR:OG1	2.04	0.73
3:S:174:LEU:HD22	3:S:212:PHE:HE2	1.52	0.73
1:R:312:PHE:CB	4:A:392:ASN:ND2	2.52	0.73
1:R:119:TYR:CG	7:R:401:A1LXR:C40	2.66	0.72
1:R:171:ILE:O	1:R:173:LEU:N	2.21	0.72
4:A:289:LEU:HB2	4:A:361:PRO:HA	1.70	0.72
1:R:170:SER:CB	7:R:401:A1LXR:C28	2.67	0.72
1:R:119:TYR:HD2	7:R:401:A1LXR:C33	2.01	0.72
1:R:312:PHE:HB2	4:A:392:ASN:ND2	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:24:ALA:HB1	3:S:27:PHE:HE1	1.55	0.72
5:B:204:CYS:HA	5:B:228:ASP:HB2	1.71	0.71
6:N:33:LYS:HD3	6:N:50:ASP:OD1	1.90	0.71
1:R:156:TRP:O	1:R:157:ILE:C	2.28	0.71
1:R:67:TYR:C	5:B:312:ASP:OD2	2.33	0.71
3:S:174:LEU:HD22	3:S:212:PHE:CE2	2.25	0.71
3:S:67:ARG:HH22	3:S:85:SER:HB2	1.55	0.71
6:N:3:GLN:NE2	6:N:5:GLN:OE1	2.24	0.71
4:A:60:MET:HE3	4:A:221:MET:HE1	1.73	0.71
3:S:38:ARG:CD	3:S:94:TYR:CE2	2.73	0.71
3:S:169:ASN:ND2	3:S:173:TYR:OH	2.20	0.71
5:B:222:PHE:HE1	5:B:258:ASP:HA	1.56	0.70
1:R:244:LYS:HG2	4:A:394:VAL:OXT	1.90	0.70
1:R:260:PHE:CE1	1:R:297:ASN:ND2	2.58	0.70
5:B:320:VAL:HG12	5:B:327:VAL:HG12	1.73	0.70
6:N:67:ARG:NH2	6:N:85:SER:O	2.23	0.70
3:S:38:ARG:CZ	3:S:94:TYR:CD2	2.75	0.70
5:B:22:ARG:NH2	5:B:221:THR:O	2.24	0.70
6:N:38:ARG:HH21	6:N:92:ALA:H	1.38	0.70
1:R:68:LYS:CB	5:B:312:ASP:OD2	2.40	0.69
4:A:283:ARG:HA	4:A:357:HIS:NE2	2.07	0.69
3:S:38:ARG:CZ	3:S:94:TYR:CE2	2.75	0.69
3:S:38:ARG:NH1	3:S:94:TYR:CE1	2.60	0.69
3:S:28:ALA:N	5:B:130:GLU:OE2	2.24	0.69
4:A:207:ILE:HD11	4:A:222:PHE:HB3	1.74	0.69
3:S:174:LEU:HD11	3:S:229:CYS:SG	2.33	0.69
1:R:68:LYS:CA	5:B:312:ASP:OD2	2.40	0.69
3:S:103:TYR:CZ	5:B:68:ARG:HD3	2.27	0.69
1:R:156:TRP:O	1:R:159:CYS:N	2.27	0.68
3:S:38:ARG:HD3	3:S:94:TYR:CG	2.27	0.68
1:R:123:TYR:OH	1:R:267:ARG:NH2	2.27	0.68
2:C:48:ASP:OD2	5:B:279:SER:OG	2.10	0.68
1:R:241:SER:CB	4:A:385:GLN:HE22	2.05	0.68
1:R:312:PHE:CB	4:A:392:ASN:HD21	2.07	0.68
3:S:67:ARG:HH21	3:S:86:LEU:H	1.42	0.67
6:N:12:VAL:HG21	6:N:18:LEU:HD22	1.75	0.67
3:S:111:TRP:HE3	3:S:185:PRO:HG2	1.60	0.67
3:S:111:TRP:CE3	3:S:185:PRO:HG2	2.30	0.66
4:A:214:VAL:HG23	4:A:215:ASP:H	1.60	0.66
3:S:177:PHE:HD1	3:S:187:LEU:HA	1.60	0.66
1:R:171:ILE:O	1:R:171:ILE:HG12	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:98:TYR:OH	7:R:401:A1LXR:C23	2.44	0.66
1:R:152:ILE:O	1:R:152:ILE:HG22	1.95	0.66
6:N:48:VAL:HG13	6:N:64:VAL:HG21	1.77	0.66
3:S:38:ARG:HD2	3:S:94:TYR:CZ	2.31	0.66
1:R:291:LEU:HD13	7:R:401:A1LXR:C12	2.26	0.66
3:S:235:TYR:HE1	4:A:7:ALA:HB1	1.61	0.65
1:R:165:LEU:CD2	7:R:401:A1LXR:C31	2.73	0.65
3:S:174:LEU:HB3	3:S:192:MET:HB3	1.79	0.65
5:B:61:MET:HE1	5:B:319:GLY:N	2.11	0.65
3:S:145:SER:O	3:S:244:LYS:N	2.29	0.65
1:R:90:THR:OG1	1:R:94:ARG:NH2	2.23	0.65
5:B:279:SER:HA	5:B:320:VAL:HG11	1.79	0.65
6:N:19:ARG:HA	6:N:82:GLN:HA	1.80	0.65
6:N:52:SER:O	6:N:72:ARG:NH1	2.30	0.65
3:S:86:LEU:O	3:S:88:SER:N	2.26	0.64
4:A:302:LEU:HD23	4:A:334:VAL:HG21	1.80	0.64
1:R:38:ARG:HD2	1:R:288:VAL:HG11	1.80	0.64
1:R:96:ASP:O	1:R:103:ASN:ND2	2.30	0.64
3:S:39:GLN:HA	3:S:45:LEU:HA	1.80	0.64
5:B:152:LEU:HB2	5:B:156:GLN:HB2	1.79	0.64
2:C:36:ASP:OD2	5:B:256:ARG:NH2	2.31	0.63
3:S:38:ARG:HG3	3:S:48:VAL:HG21	1.80	0.63
3:S:100:ILE:HG23	3:S:105:SER:HB2	1.80	0.63
3:S:47:TRP:CG	3:S:237:LEU:HB2	2.34	0.63
4:A:365:CYS:SG	4:A:366:SER:N	2.71	0.63
5:B:162:GLY:HA2	5:B:186:ASP:HB2	1.80	0.63
4:A:228:ARG:NH2	4:A:230:GLU:OE2	2.31	0.63
4:A:279:ASN:HB3	4:A:282:LEU:HB2	1.79	0.63
4:A:48:ALA:O	4:A:51:SER:OG	2.14	0.63
6:N:38:ARG:NH2	6:N:92:ALA:H	1.97	0.63
1:R:119:TYR:CB	7:R:401:A1LXR:O03	2.47	0.62
1:R:109:LEU:O	1:R:112:ARG:NH2	2.26	0.62
1:R:126:ILE:CD1	1:R:260:PHE:HE2	2.10	0.62
5:B:79:LEU:HD11	5:B:114:CYS:HB3	1.80	0.62
5:B:187:VAL:HA	5:B:203:ALA:HA	1.81	0.62
1:R:249:ILE:HD11	4:A:393:LEU:HD11	0.76	0.62
1:R:259:CYS:SG	1:R:260:PHE:N	2.72	0.62
1:R:311:ASN:ND2	4:A:390:GLU:O	2.33	0.62
4:A:13:VAL:HG22	5:B:88:ASN:HD21	1.64	0.62
1:R:170:SER:HB3	7:R:401:A1LXR:C28	2.30	0.62
4:A:3:CYS:SG	4:A:4:THR:N	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:265:THR:O	1:R:269:VAL:HG12	1.99	0.62
1:R:69:LYS:CE	5:B:334:SER:OG	2.45	0.61
1:R:143:PRO:HD2	1:R:144:PHE:H	1.66	0.61
1:R:155:ALA:O	1:R:156:TRP:C	2.36	0.61
5:B:114:CYS:SG	5:B:115:GLY:N	2.73	0.61
3:S:10:GLY:H	3:S:117:LEU:HA	1.65	0.61
5:B:65:THR:OG1	5:B:107:PRO:O	2.17	0.61
1:R:119:TYR:CD2	7:R:401:A1LXR:C33	2.79	0.61
1:R:160:GLY:O	1:R:164:ILE:HG13	2.01	0.60
4:A:45:LEU:HD21	4:A:53:LYS:HG3	1.83	0.60
1:R:144:PHE:CD2	4:A:376:PHE:HE1	2.19	0.60
5:B:210:LEU:HD22	5:B:255:LEU:HD12	1.83	0.60
5:B:314:ARG:O	5:B:331:SER:OG	2.14	0.60
2:C:13:ARG:O	2:C:16:VAL:HG22	2.02	0.60
5:B:283:ARG:NE	5:B:298:ASP:OD2	2.27	0.60
4:A:380:LYS:O	4:A:380:LYS:HG2	2.01	0.60
3:S:32:PHE:CD1	3:S:100:ILE:HB	2.37	0.60
5:B:207:SER:HB2	5:B:223:THR:HG22	1.84	0.60
5:B:137:ARG:HG3	5:B:171:ILE:O	2.02	0.59
3:S:48:VAL:CG1	3:S:49:ALA:H	2.16	0.59
6:N:68:PHE:HB3	6:N:81:LEU:HD11	1.84	0.59
1:R:291:LEU:HD11	7:R:401:A1LXR:C12	2.30	0.59
3:S:94:TYR:O	3:S:114:GLY:HA3	2.03	0.59
1:R:238:LEU:O	1:R:242:HIS:HB2	2.03	0.59
1:R:94:ARG:HG3	1:R:94:ARG:HH11	1.67	0.59
5:B:180:PHE:CE1	5:B:216:GLY:HA2	2.38	0.59
5:B:183:HIS:NE2	5:B:201:SER:OG	2.33	0.59
6:N:9:GLY:HA2	6:N:124:VAL:HG12	1.84	0.59
1:R:97:TYR:HA	1:R:103:ASN:HB3	1.85	0.58
1:R:163:TRP:O	1:R:167:MET:CG	2.48	0.58
3:S:48:VAL:HG12	3:S:49:ALA:N	2.15	0.58
1:R:260:PHE:HE1	1:R:297:ASN:ND2	1.97	0.58
3:S:99:SER:HB3	3:S:107:PRO:HB3	1.83	0.58
4:A:278:ASN:HB2	6:N:106:ASP:HB3	1.86	0.58
1:R:135:VAL:HA	1:R:138:LEU:HD12	1.86	0.58
5:B:222:PHE:HZ	5:B:255:LEU:HA	1.68	0.58
1:R:311:ASN:OD1	4:A:390:GLU:CA	2.45	0.58
3:S:22:CYS:SG	3:S:23:SER:N	2.76	0.58
3:S:32:PHE:O	3:S:72:ARG:NH2	2.36	0.58
1:R:170:SER:HB3	7:R:401:A1LXR:C32	2.33	0.58
4:A:237:CYS:SG	5:B:101:MET:HE2	2.44	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:140:MET:HE1	3:S:161:SER:OG	2.03	0.58
5:B:226:GLU:O	6:N:98:ARG:NH1	2.31	0.58
6:N:38:ARG:HE	6:N:92:ALA:HB3	1.68	0.58
3:S:32:PHE:CE1	3:S:100:ILE:HB	2.39	0.58
5:B:279:SER:OG	5:B:280:LYS:N	2.37	0.58
3:S:39:GLN:HG3	3:S:45:LEU:HB3	1.84	0.57
5:B:269:ILE:HD11	5:B:304:ARG:HH21	1.69	0.57
1:R:221:TYR:HD1	1:R:224:ILE:HD12	1.67	0.57
4:A:283:ARG:HA	4:A:357:HIS:CE1	2.39	0.57
3:S:203:PHE:HD1	3:S:216:ILE:HD12	1.69	0.57
1:R:116:TYR:O	1:R:120:VAL:HG23	2.04	0.57
3:S:231:GLN:HE21	3:S:238:THR:HG23	1.69	0.57
2:C:40:TYR:OH	5:B:236:PRO:HB2	2.05	0.57
1:R:167:MET:CA	1:R:167:MET:CE	2.83	0.57
3:S:40:ALA:HB3	3:S:43:LYS:HB2	1.85	0.57
5:B:163:ASP:O	5:B:164:THR:OG1	2.21	0.57
5:B:180:PHE:HE1	5:B:216:GLY:HA2	1.70	0.57
2:C:16:VAL:CG1	5:B:11:ALA:HB2	2.33	0.57
5:B:57:LYS:HB2	5:B:332:TRP:HA	1.86	0.57
6:N:83:MET:HE2	6:N:86:LEU:HD11	1.85	0.57
1:R:69:LYS:HE3	5:B:334:SER:CB	2.35	0.56
1:R:151:SER:OG	1:R:152:ILE:HG12	2.05	0.56
1:R:161:ILE:O	1:R:165:LEU:HB2	2.05	0.56
3:S:138:ILE:HG23	3:S:162:SER:HB2	1.87	0.56
5:B:68:ARG:O	5:B:84:SER:HB3	2.05	0.56
1:R:260:PHE:CD1	1:R:260:PHE:N	2.72	0.56
5:B:225:HIS:NE2	5:B:243:THR:OG1	2.28	0.56
1:R:141:VAL:HG12	1:R:141:VAL:O	2.05	0.56
7:R:401:A1LXR:C14	7:R:401:A1LXR:C34	2.81	0.56
1:R:150:THR:O	1:R:154:SER:HB2	2.06	0.56
3:S:34:MET:HG3	3:S:79:LEU:HD11	1.88	0.56
4:A:314:GLU:OE2	6:N:65:LYS:NZ	2.38	0.56
3:S:106:SER:OG	3:S:109:ASP:OD2	2.23	0.56
4:A:283:ARG:O	4:A:284:THR:OG1	2.18	0.56
1:R:249:ILE:CD1	4:A:393:LEU:CD1	2.53	0.56
4:A:315:PHE:HB2	4:A:340:PHE:CE2	2.41	0.56
7:R:401:A1LXR:C12	7:R:401:A1LXR:C07	2.84	0.55
2:C:41:CYS:SG	5:B:300:LEU:HD11	2.46	0.55
3:S:38:ARG:HH12	3:S:117:LEU:HD21	1.71	0.55
6:N:73:ASP:OD2	6:N:76:LYS:NZ	2.23	0.55
5:B:30:LEU:HD23	5:B:262:MET:CB	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:45:TYR:CD1	1:R:91:LEU:HD12	2.42	0.55
4:A:315:PHE:O	4:A:336:ARG:NH1	2.40	0.55
6:N:88:PRO:HA	6:N:126:VAL:HG21	1.88	0.55
1:R:167:MET:HE3	1:R:167:MET:C	2.32	0.55
1:R:260:PHE:HD1	1:R:260:PHE:N	2.03	0.55
6:N:12:VAL:O	6:N:126:VAL:HA	2.07	0.55
3:S:18:ARG:HE	3:S:19:LYS:H	1.54	0.55
5:B:160:SER:HB2	5:B:190:LEU:HD22	1.88	0.55
5:B:121:CYS:HB2	5:B:146:LEU:HD21	1.89	0.55
1:R:167:MET:HE3	1:R:167:MET:HA	1.88	0.55
7:R:401:A1LXR:C12	7:R:401:A1LXR:C29	2.85	0.55
5:B:143:THR:N	5:B:163:ASP:OD2	2.38	0.55
3:S:68:PHE:HB2	3:S:82:GLN:O	2.06	0.54
3:S:138:ILE:HB	3:S:238:THR:HG21	1.89	0.54
4:A:362:HIS:CD2	4:A:374:ARG:HD3	2.42	0.54
6:N:61:THR:HG22	6:N:64:VAL:HG22	1.88	0.54
1:R:69:LYS:CE	5:B:55:LEU:O	2.55	0.54
1:R:311:ASN:OD1	4:A:390:GLU:HB2	2.07	0.54
3:S:59:TYR:HD2	3:S:235:TYR:CG	2.26	0.54
1:R:126:ILE:CD1	1:R:260:PHE:CE2	2.88	0.54
2:C:15:LEU:O	2:C:19:LEU:HD23	2.07	0.54
1:R:145:ARG:HG2	1:R:147:LEU:HG	1.90	0.54
3:S:61:ALA:O	3:S:65:LYS:HB2	2.08	0.54
1:R:252:THR:HA	1:R:304:LEU:HD13	1.90	0.54
5:B:59:TYR:HD2	5:B:101:MET:HA	1.73	0.54
1:R:41:PHE:O	1:R:45:TYR:HB2	2.08	0.53
5:B:215:GLU:OE2	5:B:215:GLU:N	2.41	0.53
7:R:401:A1LXR:C12	7:R:401:A1LXR:C05	2.85	0.53
3:S:157:ILE:O	3:S:213:THR:OG1	2.23	0.53
6:N:12:VAL:HG11	6:N:18:LEU:HB3	1.90	0.53
6:N:36:TRP:HZ3	6:N:94:TYR:HB3	1.72	0.53
1:R:134:VAL:O	1:R:138:LEU:HD12	2.09	0.53
7:R:401:A1LXR:C23	7:R:401:A1LXR:C10	2.84	0.53
1:R:150:THR:O	1:R:150:THR:HG22	2.08	0.53
5:B:183:HIS:HE2	5:B:201:SER:HG	1.48	0.53
6:N:37:VAL:HG12	6:N:47:TRP:HA	1.91	0.53
6:N:62:GLY:HA2	6:N:65:LYS:HE3	1.91	0.53
1:R:144:PHE:CE2	4:A:376:PHE:HE1	2.27	0.53
6:N:115:TYR:HD1	6:N:117:TYR:H	1.57	0.53
2:C:9:ILE:C	2:C:11:GLN:H	2.17	0.53
5:B:29:THR:HG23	5:B:32:GLN:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:38:ARG:NH1	6:N:94:TYR:HH	2.07	0.53
1:R:156:TRP:O	1:R:158:LEU:N	2.41	0.53
2:C:29:LYS:HD2	5:B:25:CYS:HA	1.90	0.53
3:S:177:PHE:CD1	3:S:187:LEU:HA	2.43	0.53
2:C:16:VAL:HG12	5:B:11:ALA:CB	2.37	0.52
3:S:47:TRP:NE1	3:S:237:LEU:HD12	2.23	0.52
4:A:51:SER:HB2	4:A:247:VAL:HG12	1.91	0.52
6:N:60:TYR:OH	6:N:68:PHE:O	2.25	0.52
4:A:277:TRP:CZ2	4:A:357:HIS:HB3	2.44	0.52
5:B:113:ALA:HB2	5:B:123:ILE:HD13	1.91	0.52
5:B:153:ASP:CG	5:B:155:ASN:H	2.16	0.52
6:N:33:LYS:HD2	6:N:33:LYS:O	2.08	0.52
1:R:79:ASN:HA	1:R:82:ILE:HG12	1.91	0.52
2:C:29:LYS:NZ	5:B:24:ALA:O	2.37	0.52
4:A:382:ILE:HG22	4:A:382:ILE:O	2.08	0.52
1:R:137:PHE:HB2	1:R:220:CYS:SG	2.49	0.52
3:S:178:LEU:HG	3:S:227:TYR:CE1	2.44	0.52
4:A:250:SER:HB3	4:A:297:LEU:HD22	1.92	0.52
5:B:321:THR:OG1	5:B:324:GLY:N	2.39	0.52
5:B:283:ARG:HD2	5:B:300:LEU:HD13	1.91	0.52
1:R:136:ARG:NH1	1:R:221:TYR:OH	2.43	0.52
3:S:34:MET:CG	3:S:79:LEU:HD11	2.40	0.52
5:B:14:LEU:O	5:B:17:GLN:HG3	2.10	0.52
6:N:33:LYS:HG2	6:N:52:SER:HA	1.90	0.52
5:B:155:ASN:O	5:B:171:ILE:HG12	2.10	0.51
3:S:142:GLN:CD	3:S:242:GLY:H	2.18	0.51
3:S:186:GLN:NE2	3:S:187:LEU:O	2.42	0.51
3:S:47:TRP:CD2	3:S:237:LEU:HB2	2.44	0.51
5:B:31:SER:O	5:B:35:ASN:N	2.44	0.51
5:B:205:ASP:OD2	5:B:207:SER:OG	2.28	0.51
1:R:140:MET:HE3	4:A:388:LEU:HD21	1.72	0.51
1:R:148:HIS:ND1	1:R:148:HIS:N	2.58	0.51
4:A:237:CYS:HG	5:B:59:TYR:HE2	1.57	0.51
5:B:164:THR:HG22	5:B:185:GLY:C	2.35	0.51
3:S:157:ILE:HG21	3:S:227:TYR:HD2	1.75	0.51
3:S:59:TYR:HD2	3:S:235:TYR:CD2	2.28	0.51
3:S:183:GLN:NE2	3:S:184:SER:O	2.44	0.51
4:A:270:LEU:HA	4:A:345:PHE:HE1	1.76	0.51
4:A:215:ASP:O	4:A:217:VAL:HG23	2.11	0.51
5:B:37:ILE:O	5:B:301:LYS:NZ	2.42	0.51
5:B:108:SER:OG	5:B:154:ASP:OD1	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:144:PHE:CE2	4:A:376:PHE:CE1	2.99	0.51
1:R:255:ILE:HD12	1:R:304:LEU:HD21	1.93	0.51
1:R:309:GLY:HA3	4:A:392:ASN:HA	1.93	0.51
3:S:94:TYR:C	3:S:114:GLY:HA3	2.36	0.51
3:S:191:ARG:O	3:S:192:MET:HG3	2.10	0.51
5:B:19:ARG:HD2	5:B:20:ASP:N	2.25	0.51
3:S:67:ARG:HH21	3:S:86:LEU:N	2.09	0.50
3:S:17:SER:HA	3:S:84:THR:HA	1.93	0.50
3:S:53:SER:HA	3:S:72:ARG:HH12	1.75	0.50
3:S:155:VAL:HG11	3:S:245:LEU:HD21	1.91	0.50
5:B:200:VAL:HG12	5:B:234:PHE:CE2	2.46	0.50
4:A:214:VAL:HG23	4:A:215:ASP:N	2.25	0.50
1:R:87:PHE:HE1	1:R:118:LEU:HD12	1.77	0.50
1:R:126:ILE:CG1	1:R:260:PHE:HE2	2.25	0.50
1:R:159:CYS:HG	1:R:163:TRP:CD1	2.30	0.50
3:S:2:VAL:HG11	5:B:129:ARG:NH1	2.27	0.50
3:S:94:TYR:CD1	3:S:94:TYR:CB	2.82	0.50
4:A:49:ASP:OD1	4:A:49:ASP:N	2.43	0.50
4:A:286:SER:HB2	4:A:382:ILE:CD1	2.42	0.50
1:R:270:HIS:CD2	1:R:274:TRP:CB	2.95	0.50
1:R:274:TRP:HA	1:R:279:CYS:HB3	1.94	0.50
4:A:31:GLN:O	4:A:35:GLN:HG2	2.11	0.50
4:A:298:ALA:O	4:A:302:LEU:HG	2.12	0.50
5:B:101:MET:H	5:B:116:GLY:HA2	1.77	0.50
6:N:38:ARG:HH22	6:N:90:ASP:C	2.20	0.50
5:B:269:ILE:HD11	5:B:304:ARG:NH2	2.26	0.50
5:B:5:ASP:HA	5:B:8:ARG:HE	1.76	0.50
5:B:293:ASN:HB2	5:B:308:LEU:O	2.12	0.50
3:S:203:PHE:CD1	3:S:216:ILE:HD12	2.47	0.50
4:A:222:PHE:CE2	5:B:99:TRP:HZ2	2.30	0.50
1:R:45:TYR:CE1	1:R:91:LEU:HD12	2.47	0.49
3:S:180:ARG:HD2	3:S:183:GLN:HE21	1.77	0.49
5:B:128:THR:HG23	5:B:130:GLU:O	2.12	0.49
6:N:115:TYR:HE1	6:N:117:TYR:HB2	1.76	0.49
4:A:290:PHE:HB3	4:A:364:THR:HG21	1.93	0.49
1:R:312:PHE:HB3	4:A:392:ASN:ND2	2.27	0.49
5:B:50:THR:O	5:B:52:ARG:N	2.45	0.49
5:B:152:LEU:HD13	5:B:196:THR:HB	1.94	0.49
5:B:323:ASP:HB3	5:B:325:MET:HE3	1.93	0.49
1:R:127:TYR:OH	1:R:208:VAL:O	2.29	0.49
4:A:275:SER:HA	6:N:106:ASP:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:34:MET:HE3	3:S:96:CYS:SG	2.53	0.49
5:B:49:ARG:NE	5:B:85:TYR:O	2.46	0.49
4:A:238:PHE:O	4:A:241:VAL:HG22	2.12	0.49
4:A:295:ASP:OD1	4:A:296:LEU:N	2.45	0.49
3:S:35:HIS:HB2	3:S:97:VAL:CG1	2.43	0.49
3:S:178:LEU:HG	3:S:227:TYR:HE1	1.76	0.49
5:B:30:LEU:HD12	5:B:33:ILE:HD11	1.94	0.49
6:N:29:PHE:CZ	6:N:34:MET:HE1	2.48	0.48
1:R:59:SER:HB2	1:R:306:TYR:CE1	2.48	0.48
1:R:170:SER:HB3	7:R:401:A1LXR:C38	2.43	0.48
6:N:6:GLU:HB2	6:N:21:SER:O	2.13	0.48
5:B:59:TYR:O	5:B:317:CYS:HB3	2.13	0.48
2:C:27:ARG:NE	5:B:258:ASP:OD2	2.41	0.48
3:S:67:ARG:CZ	3:S:87:ARG:HH11	2.26	0.48
4:A:302:LEU:HD12	4:A:303:ALA:HB2	1.94	0.48
1:R:73:VAL:HG13	1:R:73:VAL:O	2.14	0.48
1:R:268:THR:HG23	1:R:268:THR:O	2.13	0.48
3:S:142:GLN:OE1	3:S:242:GLY:N	2.43	0.48
5:B:182:GLY:HA3	5:B:209:LYS:HZ1	1.79	0.48
6:N:34:MET:HG2	6:N:98:ARG:HA	1.95	0.48
1:R:94:ARG:HG3	1:R:94:ARG:NH1	2.29	0.48
3:S:191:ARG:C	3:S:192:MET:HG3	2.38	0.48
5:B:222:PHE:CZ	5:B:255:LEU:HD13	2.48	0.48
6:N:18:LEU:HD23	6:N:83:MET:HB2	1.95	0.48
1:R:279:CYS:SG	1:R:284:HIS:NE2	2.75	0.48
2:C:54:VAL:O	2:C:56:ALA:C	2.57	0.48
5:B:63:TRP:NE1	5:B:319:GLY:O	2.39	0.48
6:N:21:SER:HA	6:N:80:TYR:HD1	1.78	0.48
4:A:237:CYS:HA	5:B:59:TYR:OH	2.15	0.47
6:N:92:ALA:O	6:N:124:VAL:HG22	2.14	0.47
3:S:47:TRP:HB2	3:S:237:LEU:O	2.14	0.47
3:S:148:PRO:HB3	3:S:246:GLU:HB2	1.97	0.47
3:S:200:PRO:HB2	3:S:202:ARG:HG2	1.96	0.47
3:S:235:TYR:CE1	4:A:7:ALA:HB1	2.47	0.47
5:B:61:MET:HE1	5:B:319:GLY:H	1.78	0.47
3:S:60:TYR:OH	3:S:69:THR:HA	2.15	0.47
3:S:138:ILE:HD11	3:S:163:LYS:HD2	1.95	0.47
3:S:180:ARG:HH12	3:S:222:GLU:C	2.23	0.47
3:S:234:GLU:HB2	3:S:236:PRO:HD3	1.97	0.47
4:A:27:GLU:OE2	5:B:89:LYS:NZ	2.32	0.47
5:B:232:ILE:HG23	5:B:241:PHE:HD2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:42:PRO:O	1:R:46:LEU:HD23	2.15	0.47
1:R:311:ASN:OD1	4:A:390:GLU:HB3	2.15	0.47
3:S:174:LEU:HD12	3:S:174:LEU:HA	1.58	0.47
5:B:117:LEU:HA	5:B:145:TYR:HB2	1.95	0.47
5:B:209:LYS:HD2	5:B:218:CYS:SG	2.55	0.47
1:R:202:ASN:HD21	1:R:267:ARG:HG2	1.79	0.47
1:R:140:MET:CE	4:A:393:LEU:CD2	2.79	0.47
2:C:13:ARG:CZ	2:C:13:ARG:HB2	2.44	0.47
4:A:281:TRP:HZ2	5:B:290:ASP:OD2	1.98	0.47
5:B:106:ALA:O	5:B:109:GLY:N	2.48	0.47
1:R:270:HIS:O	1:R:274:TRP:N	2.36	0.47
5:B:81:ILE:O	5:B:90:VAL:N	2.47	0.46
1:R:202:ASN:ND2	1:R:267:ARG:HH12	2.05	0.46
4:A:376:PHE:O	4:A:380:LYS:N	2.42	0.46
2:C:9:ILE:O	2:C:11:GLN:N	2.48	0.46
4:A:30:LEU:HD21	5:B:80:ILE:HD11	1.96	0.46
5:B:51:LEU:HB2	5:B:336:LEU:HB2	1.97	0.46
5:B:200:VAL:HG13	5:B:232:ILE:HG21	1.97	0.46
6:N:36:TRP:CZ3	6:N:94:TYR:HB3	2.51	0.46
6:N:76:LYS:O	6:N:78:THR:HG23	2.16	0.46
2:C:26:ASP:OD1	2:C:26:ASP:N	2.47	0.46
3:S:157:ILE:HG12	3:S:243:THR:OG1	2.15	0.46
3:S:169:ASN:ND2	3:S:173:TYR:HH	2.13	0.46
5:B:180:PHE:HB3	5:B:211:TRP:CE3	2.51	0.46
4:A:277:TRP:CH2	4:A:359:CYS:HB2	2.50	0.46
4:A:354:ASP:OD1	4:A:354:ASP:N	2.48	0.46
5:B:190:LEU:HD11	5:B:199:PHE:CE2	2.50	0.46
5:B:30:LEU:HA	5:B:33:ILE:HG12	1.98	0.46
6:N:16:GLY:O	6:N:86:LEU:HD23	2.15	0.46
5:B:130:GLU:CD	5:B:131:GLY:H	2.24	0.46
2:C:12:ALA:O	2:C:16:VAL:HG13	2.16	0.46
2:C:19:LEU:HD12	5:B:18:ILE:HD12	1.97	0.46
3:S:51:ILE:HD11	3:S:55:SER:OG	2.15	0.46
5:B:73:ALA:HB1	5:B:100:VAL:HG21	1.98	0.46
5:B:153:ASP:OD1	5:B:156:GLN:N	2.43	0.46
5:B:240:ALA:HA	5:B:254:ASP:HA	1.98	0.46
3:S:19:LYS:HD2	3:S:19:LYS:O	2.15	0.45
3:S:165:LEU:O	3:S:172:THR:HG23	2.15	0.45
4:A:34:LYS:HB2	5:B:55:LEU:HD21	1.99	0.45
6:N:40:ALA:HB2	6:N:92:ALA:HB2	1.98	0.45
3:S:101:TYR:OH	3:S:232:HIS:NE2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:286:SER:HB2	4:A:382:ILE:HD12	1.97	0.45
1:R:118:LEU:C	1:R:119:TYR:HD1	2.25	0.45
1:R:119:TYR:CB	7:R:401:A1LXR:C40	2.94	0.45
4:A:227:GLN:HE22	5:B:145:TYR:H	1.65	0.45
4:A:224:VAL:HG11	4:A:234:TRP:CH2	2.51	0.45
1:R:119:TYR:HB3	7:R:401:A1LXR:C40	2.46	0.45
5:B:222:PHE:CE2	5:B:241:PHE:HE1	2.35	0.45
1:R:217:LEU:HA	1:R:220:CYS:HB3	1.99	0.45
5:B:55:LEU:HB2	5:B:76:ASP:OD2	2.17	0.45
5:B:76:ASP:OD1	5:B:76:ASP:N	2.49	0.45
5:B:183:HIS:CD2	5:B:201:SER:HG	2.34	0.45
4:A:313:PRO:CG	6:N:65:LYS:HD2	2.47	0.45
4:A:218:ASN:OD1	4:A:218:ASN:N	2.51	0.44
5:B:190:LEU:HA	5:B:190:LEU:HD12	1.66	0.44
1:R:165:LEU:HA	1:R:165:LEU:HD12	1.09	0.44
5:B:137:ARG:HH21	5:B:174:GLY:HA3	1.82	0.44
5:B:172:GLU:HG2	5:B:173:THR:N	2.31	0.44
5:B:198:LEU:HD12	5:B:210:LEU:HD21	1.99	0.44
3:S:38:ARG:NH2	3:S:94:TYR:CE2	2.86	0.44
5:B:17:GLN:HA	5:B:20:ASP:OD2	2.16	0.44
5:B:51:LEU:HB3	5:B:82:TRP:CE3	2.53	0.44
5:B:333:ASP:OD1	5:B:333:ASP:N	2.44	0.44
6:N:70:ILE:HG13	6:N:81:LEU:HD13	1.98	0.44
5:B:222:PHE:CE1	5:B:258:ASP:HA	2.45	0.44
5:B:274:THR:HG21	5:B:316:SER:HA	2.00	0.44
1:R:148:HIS:C	1:R:149:VAL:HG13	2.41	0.44
4:A:209:GLU:OE1	4:A:209:GLU:N	2.50	0.44
5:B:8:ARG:O	5:B:12:GLU:HG2	2.17	0.44
5:B:16:ASN:O	5:B:19:ARG:HG3	2.17	0.44
5:B:227:SER:OG	5:B:228:ASP:N	2.40	0.44
1:R:104:TRP:HE1	1:R:111:CYS:HA	1.82	0.44
1:R:119:TYR:CE2	7:R:401:A1LXR:C40	2.81	0.44
1:R:152:ILE:HD13	1:R:152:ILE:HA	1.60	0.44
3:S:220:GLU:CD	3:S:222:GLU:H	2.22	0.44
3:S:10:GLY:H	3:S:117:LEU:CA	2.30	0.44
3:S:38:ARG:CG	3:S:94:TYR:CD2	3.01	0.44
3:S:48:VAL:HG11	3:S:94:TYR:HE2	1.82	0.44
6:N:38:ARG:HH21	6:N:92:ALA:N	2.12	0.44
1:R:126:ILE:CG1	1:R:260:PHE:CE2	3.00	0.44
1:R:144:PHE:CD2	4:A:376:PHE:CE1	3.04	0.44
1:R:278:LEU:H	1:R:278:LEU:HD23	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:285:LYS:O	1:R:289:ILE:HG12	2.18	0.44
1:R:302:PRO:HA	1:R:306:TYR:CE2	2.53	0.44
4:A:337:ALA:O	4:A:341:ILE:HG12	2.18	0.44
5:B:210:LEU:H	5:B:220:GLN:HE21	1.66	0.43
1:R:43:ILE:HG13	1:R:44:VAL:N	2.32	0.43
5:B:68:ARG:CZ	5:B:85:TYR:HD2	2.31	0.43
1:R:245:ALA:O	1:R:249:ILE:HG12	2.19	0.43
3:S:164:SER:HA	3:S:210:THR:HG22	2.00	0.43
4:A:318:TYR:H	4:A:336:ARG:NH1	2.16	0.43
6:N:72:ARG:HB3	6:N:79:LEU:HD12	2.00	0.43
3:S:173:TYR:HE2	4:A:8:GLU:OE1	2.01	0.43
3:S:187:LEU:HD23	3:S:188:LEU:C	2.44	0.43
3:S:207:GLY:HA2	3:S:212:PHE:HB3	2.01	0.43
1:R:200:THR:O	1:R:204:ILE:HG12	2.19	0.43
5:B:210:LEU:HB3	5:B:220:GLN:HG3	2.00	0.43
2:C:61:PHE:HB3	5:B:48:ARG:HG3	1.99	0.43
4:A:37:TYR:O	4:A:40:THR:HG22	2.19	0.43
4:A:45:LEU:O	4:A:45:LEU:HD23	2.18	0.43
4:A:227:GLN:HE22	5:B:145:TYR:HB3	1.84	0.43
1:R:41:PHE:N	1:R:42:PRO:HD2	2.34	0.43
1:R:64:LEU:HD21	1:R:78:LEU:HD11	1.99	0.43
1:R:170:SER:O	1:R:171:ILE:C	2.57	0.43
2:C:54:VAL:O	2:C:57:SER:N	2.51	0.43
5:B:69:LEU:HD23	5:B:69:LEU:HA	1.74	0.43
5:B:170:ASP:O	5:B:174:GLY:N	2.52	0.43
1:R:170:SER:CB	7:R:401:A1LXR:C32	2.97	0.43
2:C:9:ILE:HB	2:C:13:ARG:HH22	1.83	0.43
5:B:38:ASP:O	5:B:283:ARG:NH2	2.47	0.43
6:N:107:CYS:HB3	6:N:110:VAL:CG2	2.49	0.43
3:S:74:ASP:HB2	3:S:75:PRO:HD3	2.01	0.43
3:S:151:PRO:HA	3:S:219:LEU:HB2	2.01	0.43
3:S:230:MET:HB2	3:S:239:PHE:CE1	2.54	0.43
4:A:292:ASN:OD1	4:A:364:THR:HG23	2.18	0.43
6:N:59:SER:OG	6:N:60:TYR:N	2.52	0.43
3:S:187:LEU:HD21	3:S:189:ILE:C	2.44	0.42
5:B:4:LEU:O	5:B:4:LEU:HD23	2.19	0.42
5:B:209:LYS:HG2	5:B:221:THR:HG23	1.99	0.42
6:N:94:TYR:N	6:N:122:THR:O	2.35	0.42
1:R:291:LEU:HD13	7:R:401:A1LXR:C14	2.47	0.42
4:A:56:ILE:HD13	4:A:56:ILE:HA	1.87	0.42
1:R:104:TRP:CD1	1:R:111:CYS:HB3	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:153:ARG:O	1:R:156:TRP:N	2.53	0.42
1:R:171:ILE:C	1:R:173:LEU:N	2.78	0.42
1:R:299:CYS:C	1:R:302:PRO:HD2	2.44	0.42
3:S:223:ASP:OD1	3:S:227:TYR:OH	2.36	0.42
4:A:227:GLN:NE2	5:B:145:TYR:HD1	2.17	0.42
6:N:11:LEU:H	6:N:11:LEU:HD23	1.84	0.42
2:C:40:TYR:CD2	5:B:237:ASN:HB3	2.55	0.42
3:S:34:MET:HG2	3:S:79:LEU:HD21	2.01	0.42
5:B:245:SER:HB2	5:B:247:ASP:OD1	2.20	0.42
5:B:60:ALA:HB1	5:B:103:CYS:SG	2.60	0.42
5:B:294:CYS:SG	5:B:315:VAL:HG11	2.59	0.42
4:A:239:ASN:HA	4:A:285:ILE:HD11	2.01	0.42
5:B:68:ARG:NE	5:B:85:TYR:HD2	2.17	0.42
3:S:97:VAL:HG23	3:S:111:TRP:CD1	2.54	0.42
4:A:308:ILE:O	4:A:312:PHE:HB2	2.20	0.42
2:C:9:ILE:C	2:C:11:GLN:N	2.76	0.42
2:C:9:ILE:HG13	2:C:10:ALA:N	2.35	0.42
2:C:47:GLU:OE1	5:B:280:LYS:HD3	2.19	0.42
4:A:220:HIS:CD2	4:A:222:PHE:CZ	3.08	0.42
2:C:9:ILE:O	2:C:13:ARG:HB3	2.20	0.42
2:C:30:VAL:CG1	5:B:261:LEU:HD11	2.49	0.42
6:N:39:GLN:OE1	6:N:45:LEU:HG	2.20	0.42
3:S:12:VAL:HG12	3:S:118:THR:O	2.20	0.41
4:A:231:ARG:HG2	6:N:109:ASP:OD2	2.20	0.41
5:B:255:LEU:HA	5:B:255:LEU:HD13	1.88	0.41
1:R:100:ARG:HB2	1:R:103:ASN:HB2	2.02	0.41
1:R:126:ILE:HG12	1:R:260:PHE:CE2	2.55	0.41
1:R:221:TYR:O	1:R:225:ILE:HG13	2.19	0.41
3:S:70:ILE:HA	3:S:81:LEU:HD23	2.02	0.41
5:B:73:ALA:HB1	5:B:100:VAL:CG2	2.51	0.41
6:N:19:ARG:HG3	6:N:82:GLN:HB3	2.01	0.41
3:S:2:VAL:HG21	5:B:129:ARG:CZ	2.49	0.41
5:B:209:LYS:HB3	5:B:218:CYS:SG	2.60	0.41
1:R:272:THR:O	1:R:273:THR:C	2.62	0.41
3:S:20:LEU:O	3:S:81:LEU:HB2	2.21	0.41
3:S:24:ALA:HB1	3:S:27:PHE:CE1	2.44	0.41
3:S:93:MET:HA	3:S:116:THR:HA	2.01	0.41
3:S:179:GLN:HE21	3:S:180:ARG:H	1.67	0.41
5:B:292:PHE:HA	5:B:314:ARG:HA	2.02	0.41
3:S:189:ILE:HG22	3:S:195:LEU:HD13	2.02	0.41
5:B:254:ASP:OD1	5:B:257:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:225:GLY:O	4:A:227:GLN:N	2.52	0.41
5:B:213:VAL:O	5:B:213:VAL:HG13	2.21	0.41
5:B:294:CYS:HB2	5:B:308:LEU:HB2	2.02	0.41
3:S:207:GLY:HA2	3:S:212:PHE:CB	2.51	0.41
4:A:51:SER:C	4:A:53:LYS:H	2.29	0.41
4:A:53:LYS:NZ	4:A:223:ASP:OD1	2.53	0.41
4:A:308:ILE:HD12	4:A:308:ILE:H	1.85	0.41
5:B:220:GLN:NE2	5:B:222:PHE:CE2	2.89	0.41
1:R:43:ILE:O	1:R:47:ILE:HG12	2.21	0.41
1:R:144:PHE:HE2	4:A:376:PHE:CE1	2.39	0.41
1:R:244:LYS:CG	4:A:394:VAL:OXT	2.65	0.41
3:S:167:HIS:HE1	4:A:4:THR:O	2.04	0.41
3:S:180:ARG:CD	3:S:183:GLN:HE21	2.34	0.41
4:A:318:TYR:HB3	4:A:336:ARG:NH1	2.36	0.41
4:A:362:HIS:CE1	4:A:378:ASP:OD2	2.74	0.41
6:N:107:CYS:HB3	6:N:110:VAL:HG23	2.03	0.41
2:C:41:CYS:SG	5:B:235:PHE:HZ	2.44	0.41
3:S:180:ARG:HD2	3:S:183:GLN:NE2	2.36	0.41
3:S:177:PHE:HA	3:S:186:GLN:O	2.21	0.40
3:S:180:ARG:NH2	3:S:222:GLU:O	2.54	0.40
3:S:192:MET:SD	3:S:193:SER:OG	2.71	0.40
5:B:269:ILE:HG21	5:B:289:TYR:CE2	2.56	0.40
6:N:33:LYS:NZ	6:N:107:CYS:SG	2.64	0.40
6:N:51:ILE:HB	6:N:70:ILE:HG21	2.03	0.40
1:R:246:LEU:O	1:R:250:ILE:HG12	2.21	0.40
2:C:51:LEU:HD21	5:B:283:ARG:HB3	2.02	0.40
4:A:359:CYS:O	4:A:361:PRO:HD3	2.20	0.40
5:B:20:ASP:OD1	5:B:21:ALA:N	2.54	0.40
5:B:72:SER:OG	5:B:336:LEU:HD11	2.21	0.40
6:N:53:GLN:NE2	6:N:104:THR:O	2.54	0.40
2:C:28:ILE:HD12	2:C:32:LYS:HB3	2.04	0.40
5:B:173:THR:HG22	5:B:175:GLN:HG2	2.03	0.40
5:B:232:ILE:HG22	5:B:233:CYS:N	2.37	0.40
5:B:266:HIS:HB3	5:B:269:ILE:CD1	2.51	0.40
3:S:47:TRP:NE1	3:S:48:VAL:O	2.55	0.40
4:A:316:ALA:O	4:A:336:ARG:NH1	2.55	0.40
4:A:357:HIS:O	4:A:358:ILE:HD13	2.21	0.40
5:B:65:THR:HA	5:B:322:ASP:OD2	2.21	0.40
5:B:314:ARG:HD3	5:B:332:TRP:CE3	2.56	0.40
1:R:137:PHE:CB	1:R:220:CYS:SG	3.09	0.40
1:R:141:VAL:O	1:R:141:VAL:CG1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:294:GLN:CD	4:A:363:PHE:HB3	2.46	0.40
5:B:125:ASN:O	5:B:133:VAL:HG13	2.21	0.40
5:B:130:GLU:CG	5:B:131:GLY:H	2.35	0.40
6:N:93:VAL:HA	6:N:123:GLN:HA	2.04	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	R	253/346 (73%)	216 (85%)	34 (13%)	3 (1%)	11	35
2	C	53/59 (90%)	47 (89%)	6 (11%)	0	100	100
3	S	229/250 (92%)	180 (79%)	49 (21%)	0	100	100
4	A	230/361 (64%)	209 (91%)	21 (9%)	0	100	100
5	B	336/358 (94%)	292 (87%)	44 (13%)	0	100	100
6	N	126/151 (83%)	114 (90%)	12 (10%)	0	100	100
All	All	1227/1525 (80%)	1058 (86%)	166 (14%)	3 (0%)	45	73

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	R	153	ARG
1	R	172	MET
1	R	150	THR

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	R	225/314 (72%)	216 (96%)	9 (4%)	27	61
2	C	44/48 (92%)	44 (100%)	0	100	100
3	S	195/203 (96%)	195 (100%)	0	100	100
4	A	197/316 (62%)	192 (98%)	5 (2%)	42	75
5	B	278/299 (93%)	278 (100%)	0	100	100
6	N	104/121 (86%)	104 (100%)	0	100	100
All	All	1043/1301 (80%)	1029 (99%)	14 (1%)	64	88

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	R	154	SER
1	R	164	ILE
1	R	165	LEU
1	R	166	ILE
1	R	170	SER
1	R	171	ILE
1	R	268	THR
1	R	269	VAL
1	R	271	LEU
4	A	378	ASP
4	A	380	LYS
4	A	381	ASP
4	A	382	ILE
4	A	389	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	R	148	HIS
1	R	202	ASN
1	R	242	HIS
3	S	183	GLN
4	A	29	GLN
4	A	227	GLN
4	A	278	ASN

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Mol	Chain	Res	Type
4	A	294	GLN
4	A	357	HIS
4	A	362	HIS
4	A	385	GLN
4	A	392	ASN
5	B	62	HIS
5	B	156	GLN
5	B	220	GLN
5	B	259	GLN
6	N	74	ASN
6	N	123	GLN

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](#)

1 ligand is 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	$\# Z > 2$
7	A1LXR	R	401	-	41,41,41	1.60	6 (14%)	41,43,43	4.30	15 (36%)

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
7	A1LXR	R	401	-	-	27/44/44/44	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	R	401	A1LXR	C38-C39	-6.42	1.24	1.52
7	R	401	A1LXR	C39-C35	-4.45	1.44	1.52
7	R	401	A1LXR	C36-N04	3.38	1.41	1.34
7	R	401	A1LXR	O02-C36	-2.45	1.18	1.23
7	R	401	A1LXR	C24-C30	2.06	1.59	1.52
7	R	401	A1LXR	C30-C36	2.05	1.55	1.51

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	R	401	A1LXR	C33-N04-C36	16.59	151.45	123.48
7	R	401	A1LXR	C40-C33-N04	9.75	124.79	109.27
7	R	401	A1LXR	O01-C35-C39	-9.20	89.13	109.15
7	R	401	A1LXR	C30-C36-N04	8.79	131.07	115.83
7	R	401	A1LXR	C38-C39-C35	-8.04	100.97	114.18
7	R	401	A1LXR	O02-C36-N04	-7.88	109.65	122.95
7	R	401	A1LXR	C24-C17-C15	-3.85	94.90	114.42
7	R	401	A1LXR	C35-C33-N04	-3.67	102.86	109.92
7	R	401	A1LXR	O01-C35-C33	3.23	116.37	109.85
7	R	401	A1LXR	C29-C23-C16	-2.45	101.98	114.42
7	R	401	A1LXR	C12-C10-C08	-2.28	102.84	114.42
7	R	401	A1LXR	C19-C18-C20	2.21	125.64	114.42
7	R	401	A1LXR	C08-C06-C05	2.19	125.54	114.42
7	R	401	A1LXR	C11-C09-C07	-2.09	103.81	114.42
7	R	401	A1LXR	C17-C24-C30	-2.03	105.88	113.19

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	R	401	A1LXR	C40-C33-C35-C39
7	R	401	A1LXR	C40-C33-C35-O01

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Mol	Chain	Res	Type	Atoms
7	R	401	A1LXR	N04-C33-C35-C39
7	R	401	A1LXR	N04-C33-C35-O01
7	R	401	A1LXR	C30-C36-N04-C33
7	R	401	A1LXR	O02-C36-N04-C33
7	R	401	A1LXR	C19-C21-C25-C27
7	R	401	A1LXR	C10-C12-C14-C16
7	R	401	A1LXR	C22-C26-C28-C32
7	R	401	A1LXR	C14-C16-C23-C29
7	R	401	A1LXR	C25-C27-C31-C37
7	R	401	A1LXR	C07-C05-C06-C08
7	R	401	A1LXR	C20-C18-C19-C21
7	R	401	A1LXR	C18-C20-C22-C26
7	R	401	A1LXR	O01-C35-C39-C38
7	R	401	A1LXR	C20-C22-C26-C28
7	R	401	A1LXR	C26-C28-C32-C38
7	R	401	A1LXR	C13-C15-C17-C24
7	R	401	A1LXR	C17-C24-C30-C36
7	R	401	A1LXR	C21-C25-C27-C31
7	R	401	A1LXR	C27-C31-C37-C42
7	R	401	A1LXR	C15-C17-C24-C30
7	R	401	A1LXR	C07-C09-C11-C13
7	R	401	A1LXR	C11-C13-C15-C17
7	R	401	A1LXR	C08-C10-C12-C14
7	R	401	A1LXR	C33-C35-C39-C38
7	R	401	A1LXR	C35-C33-C40-O03

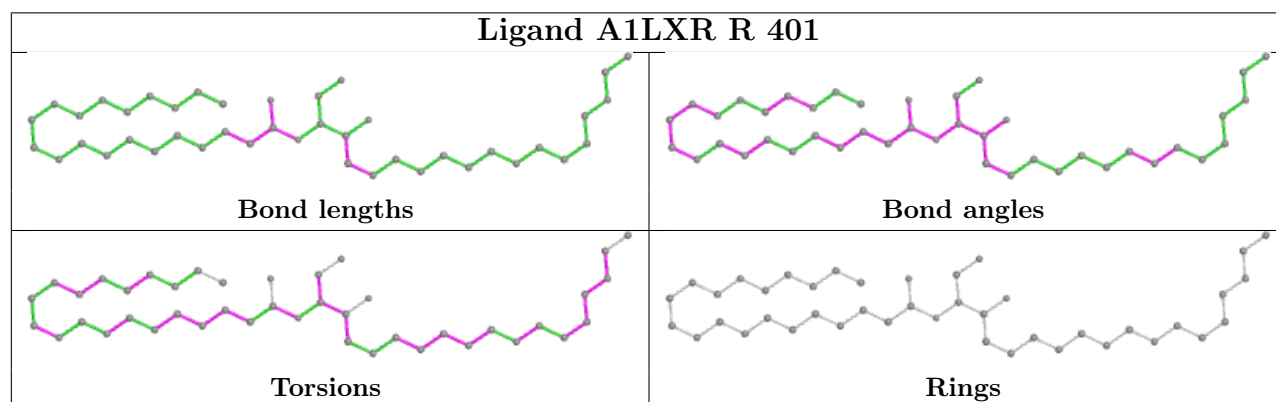
There are no ring outliers.

1 monomer is involved in 30 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	R	401	A1LXR	30	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.



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.

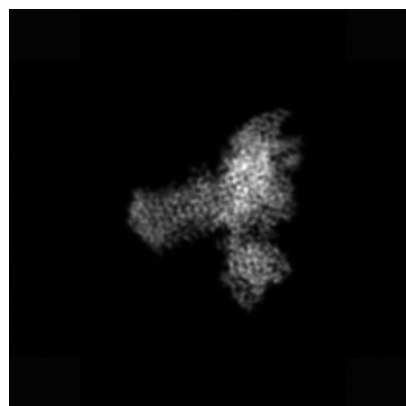
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-61473. These allow visual inspection of the internal detail of the map and identification of artifacts.

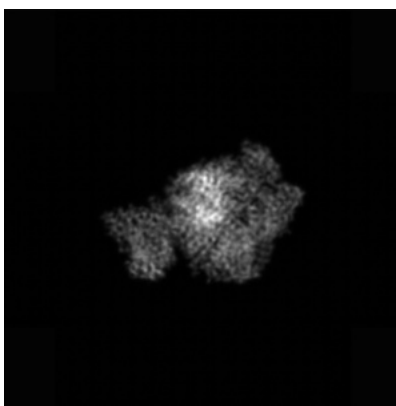
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

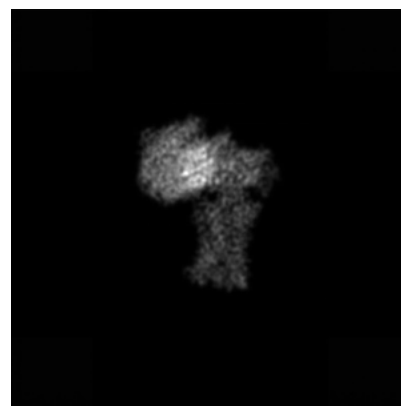
6.1.1 Primary map



X

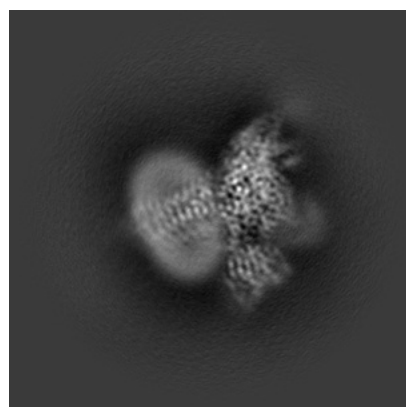


Y

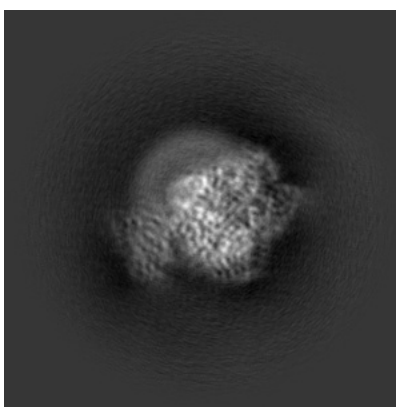


Z

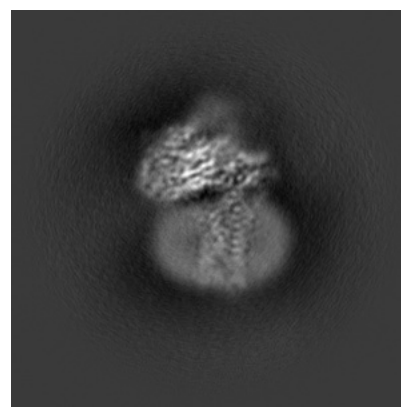
6.1.2 Raw map



X



Y

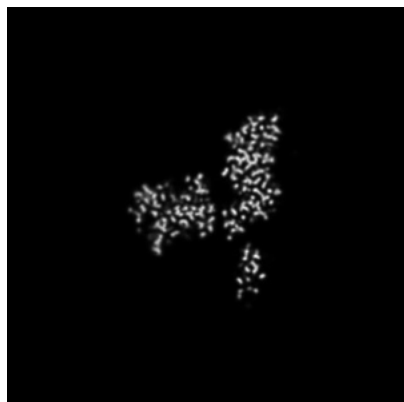


Z

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

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 128

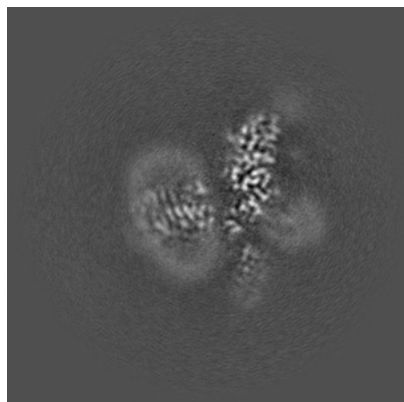


Y Index: 128

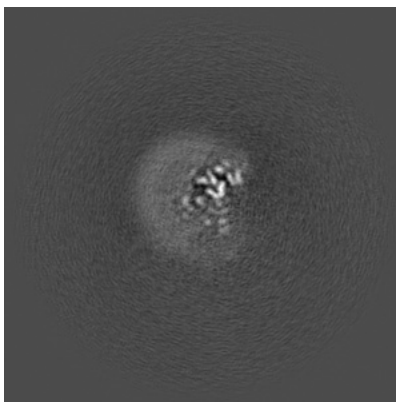


Z Index: 128

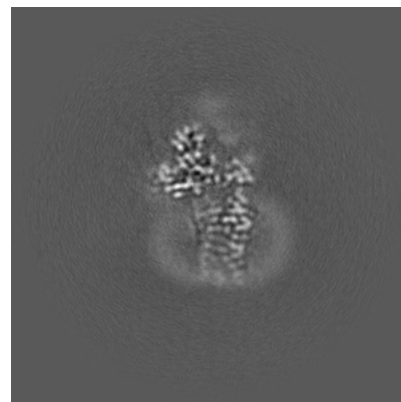
6.2.2 Raw map



X Index: 128



Y Index: 128

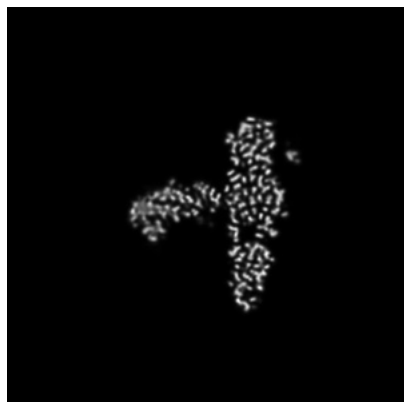


Z Index: 128

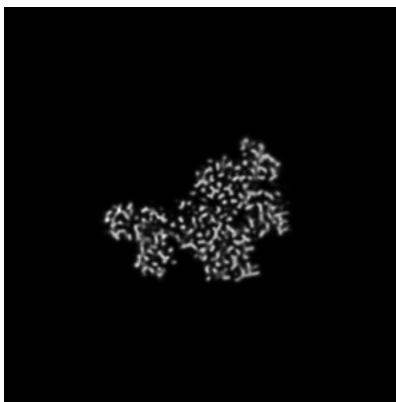
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 123

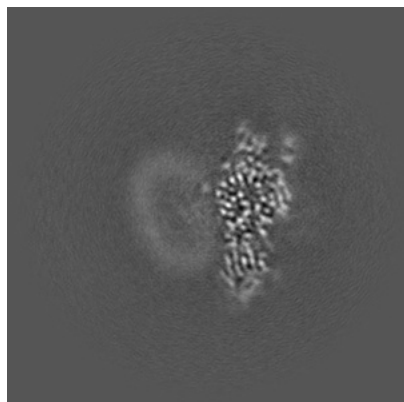


Y Index: 149

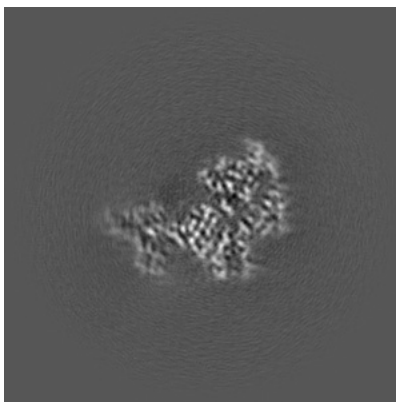


Z Index: 137

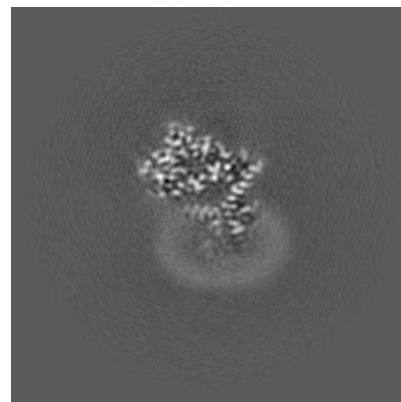
6.3.2 Raw map



X Index: 112



Y Index: 151

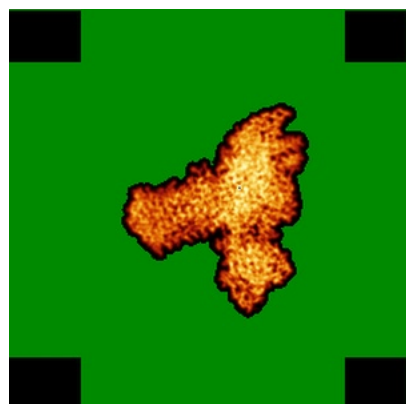


Z Index: 140

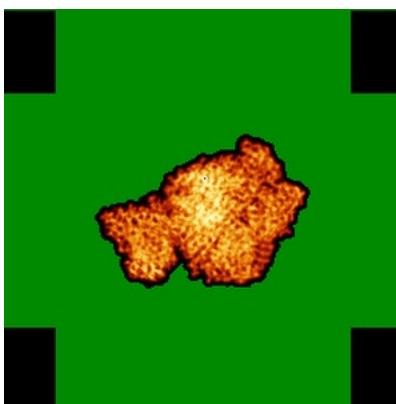
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



X

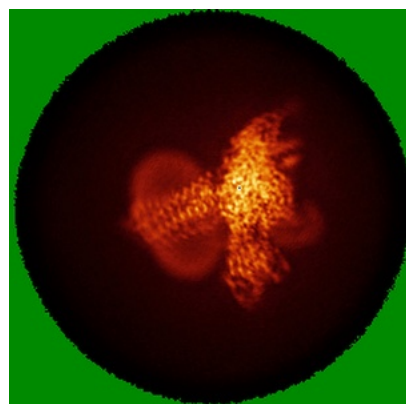


Y

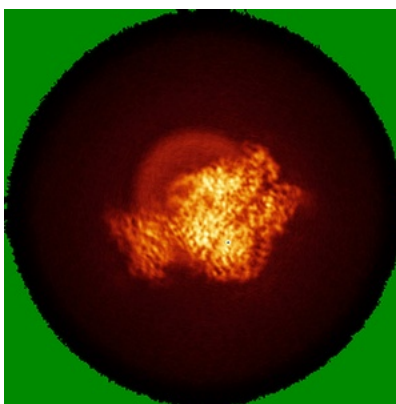


Z

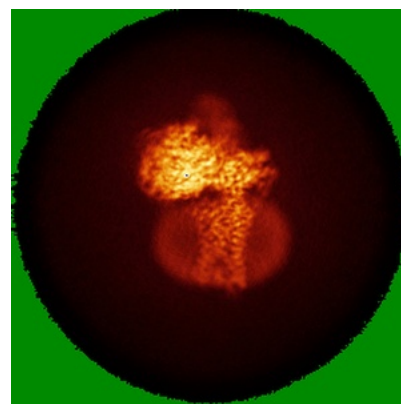
6.4.2 Raw map



X



Y

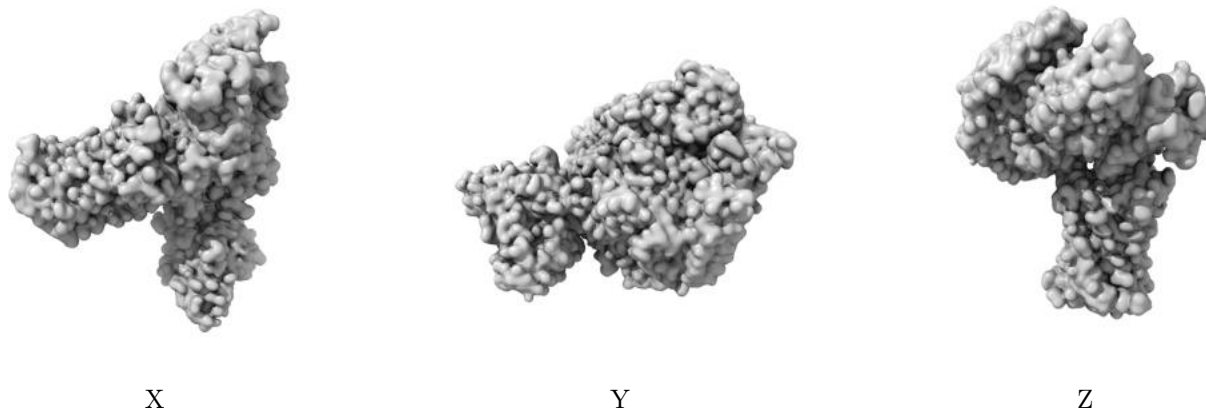


Z

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.

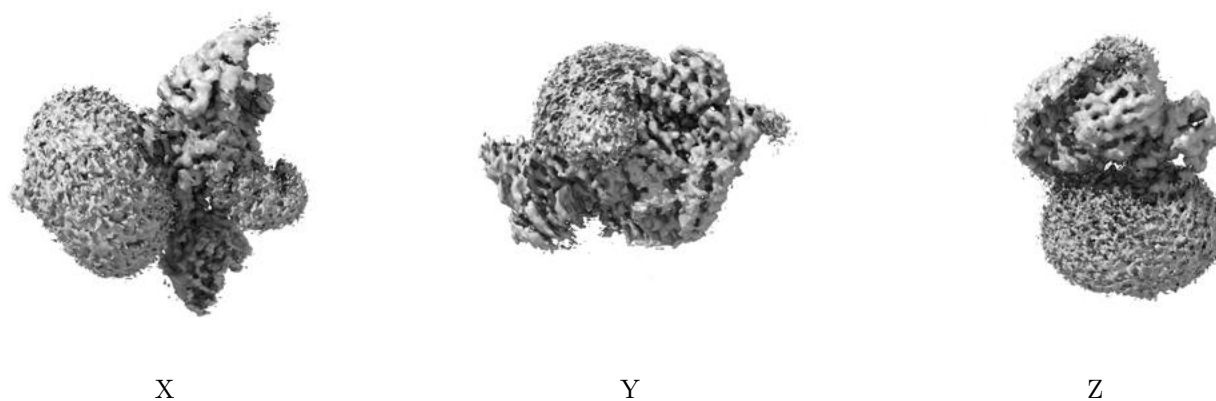
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.9. 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.

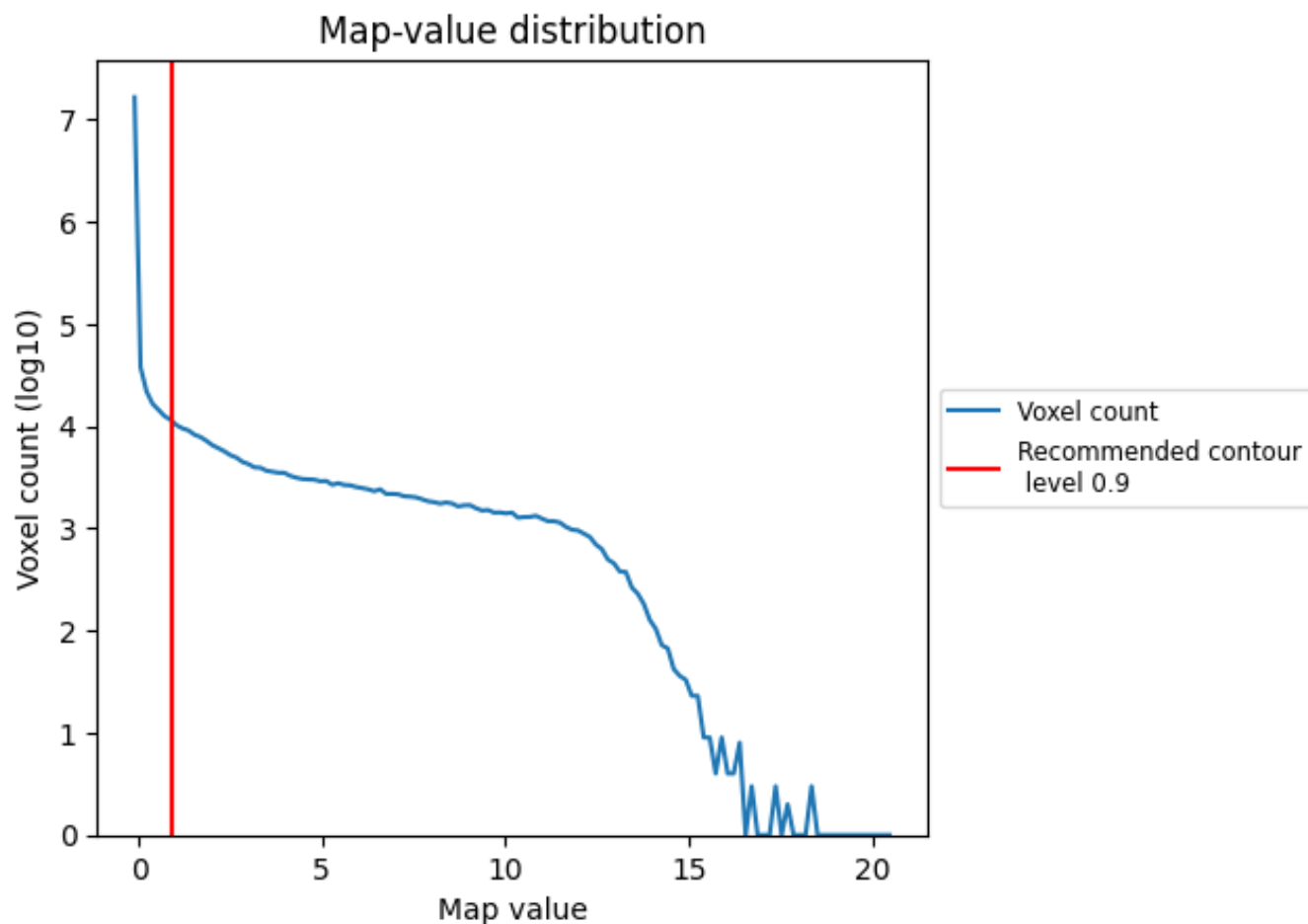
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

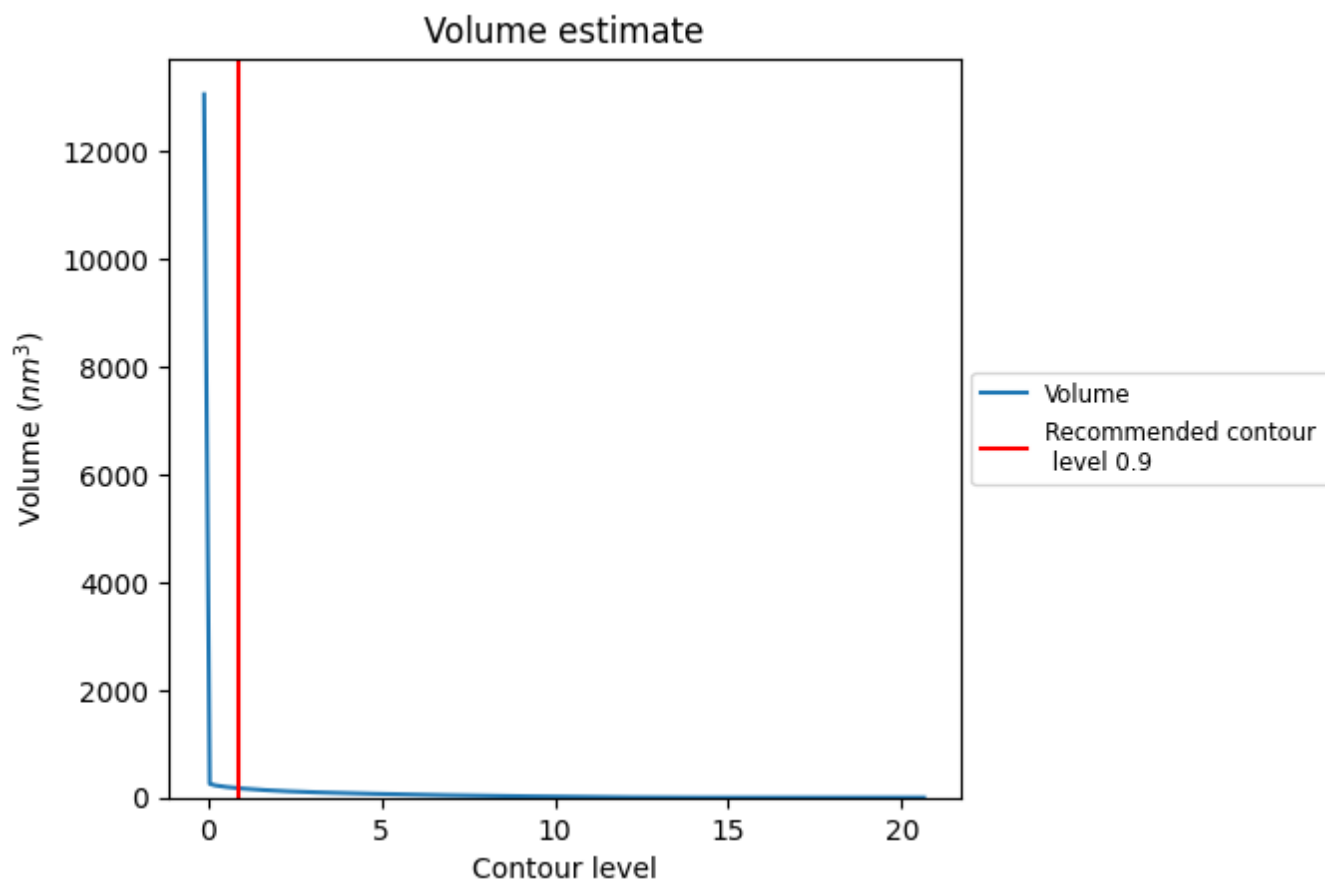
This section contains the results of statistical analysis of the map.

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.

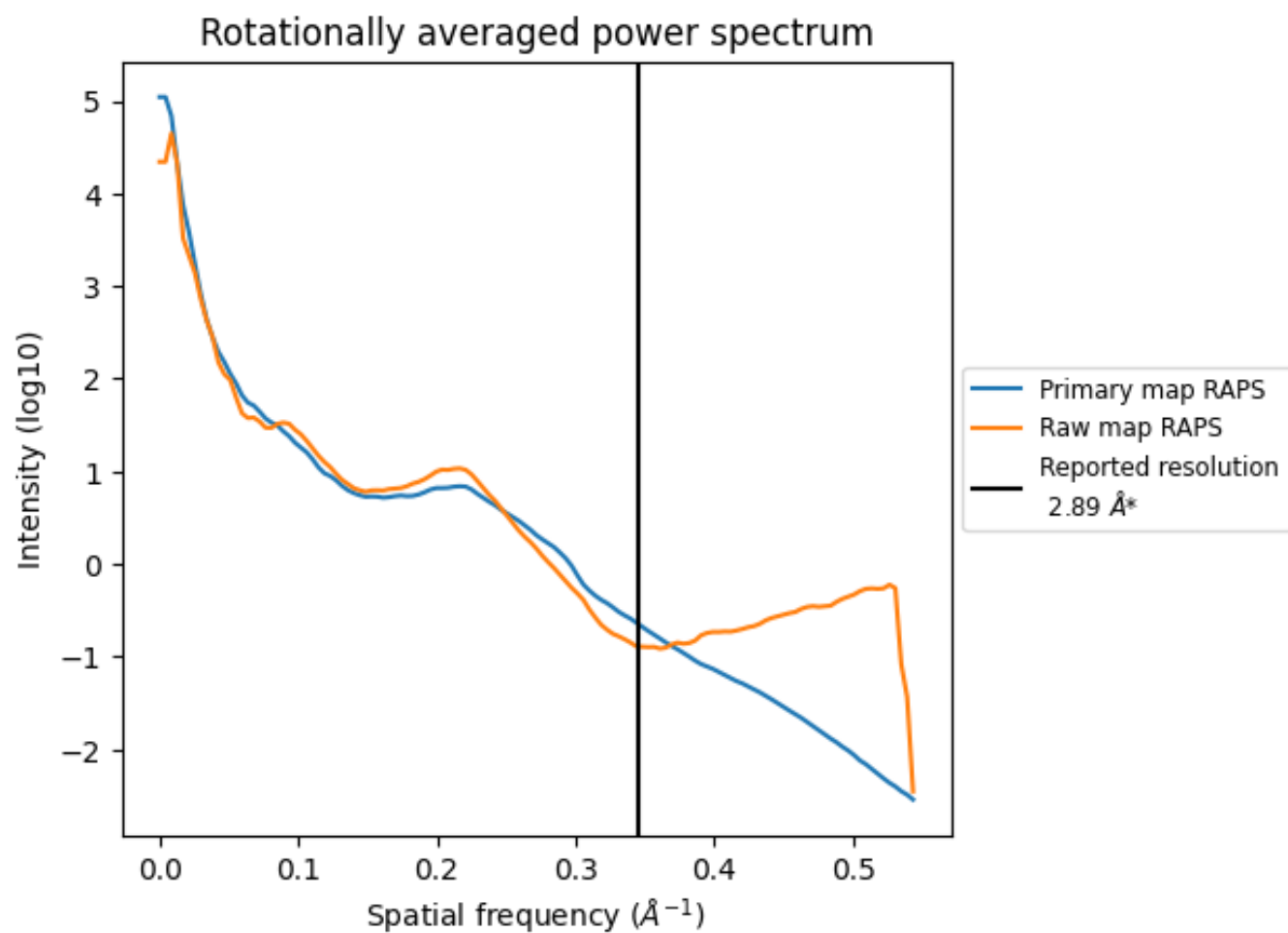
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 173 nm³; this corresponds to an approximate mass of 156 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 ⓘ

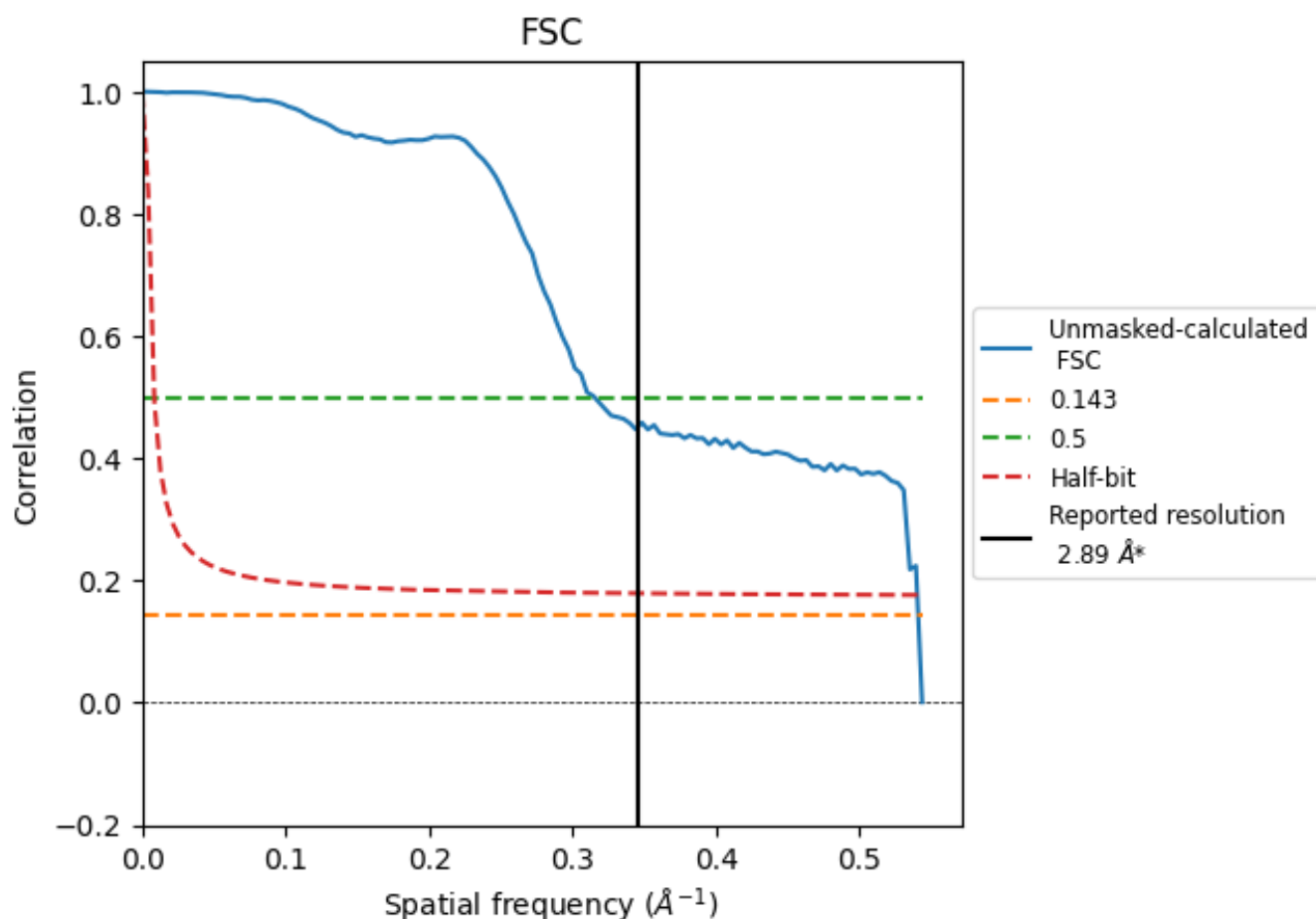


*Reported resolution corresponds to spatial frequency of 0.346 $\text{\AA}^{-1}$

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 0.346 Å⁻¹

8.2 Resolution estimates [i](#)

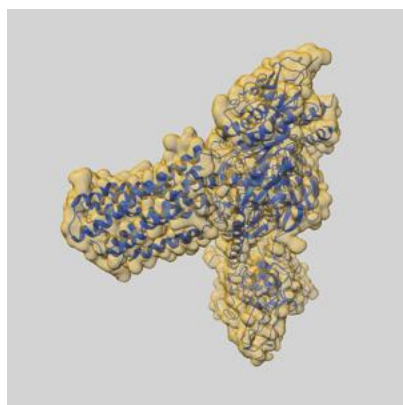
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.89	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	1.85	3.17	1.85

*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 1.85 differs from the reported value 2.89 by more than 10 %

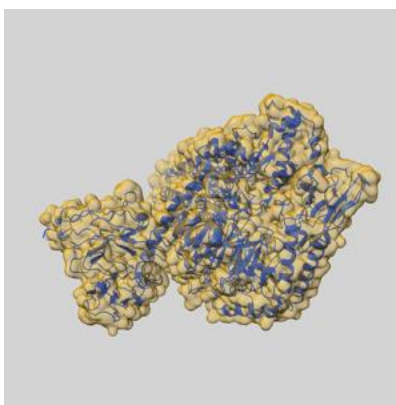
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-61473 and PDB model 9JH6. Per-residue inclusion information can be found in section [3](#) on page [7](#).

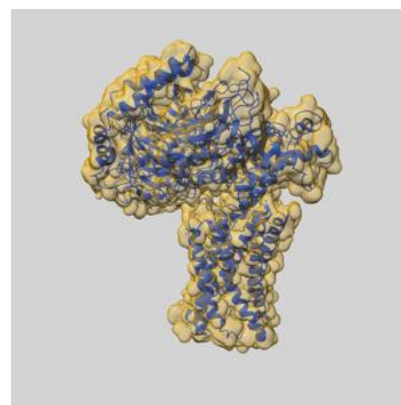
9.1 Map-model overlay [i](#)



X



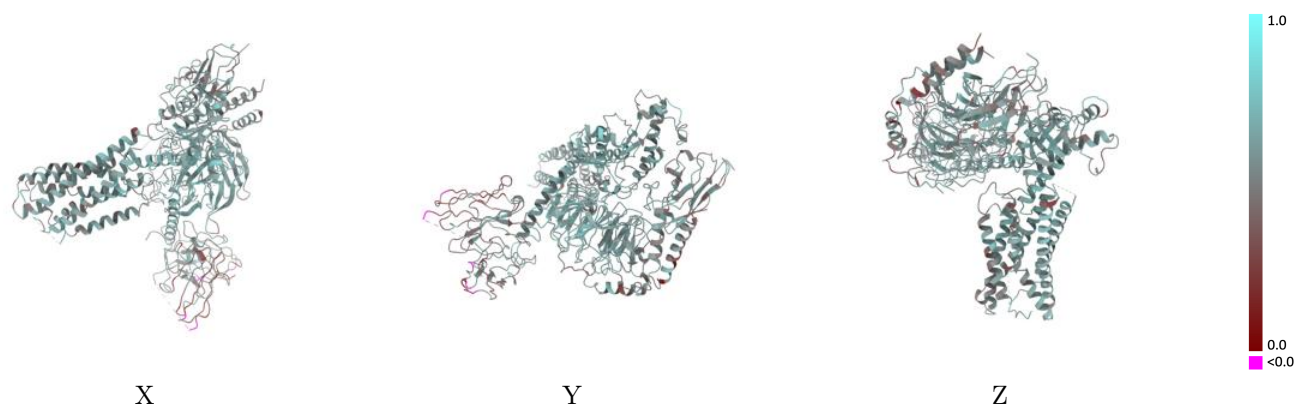
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.9 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](#)



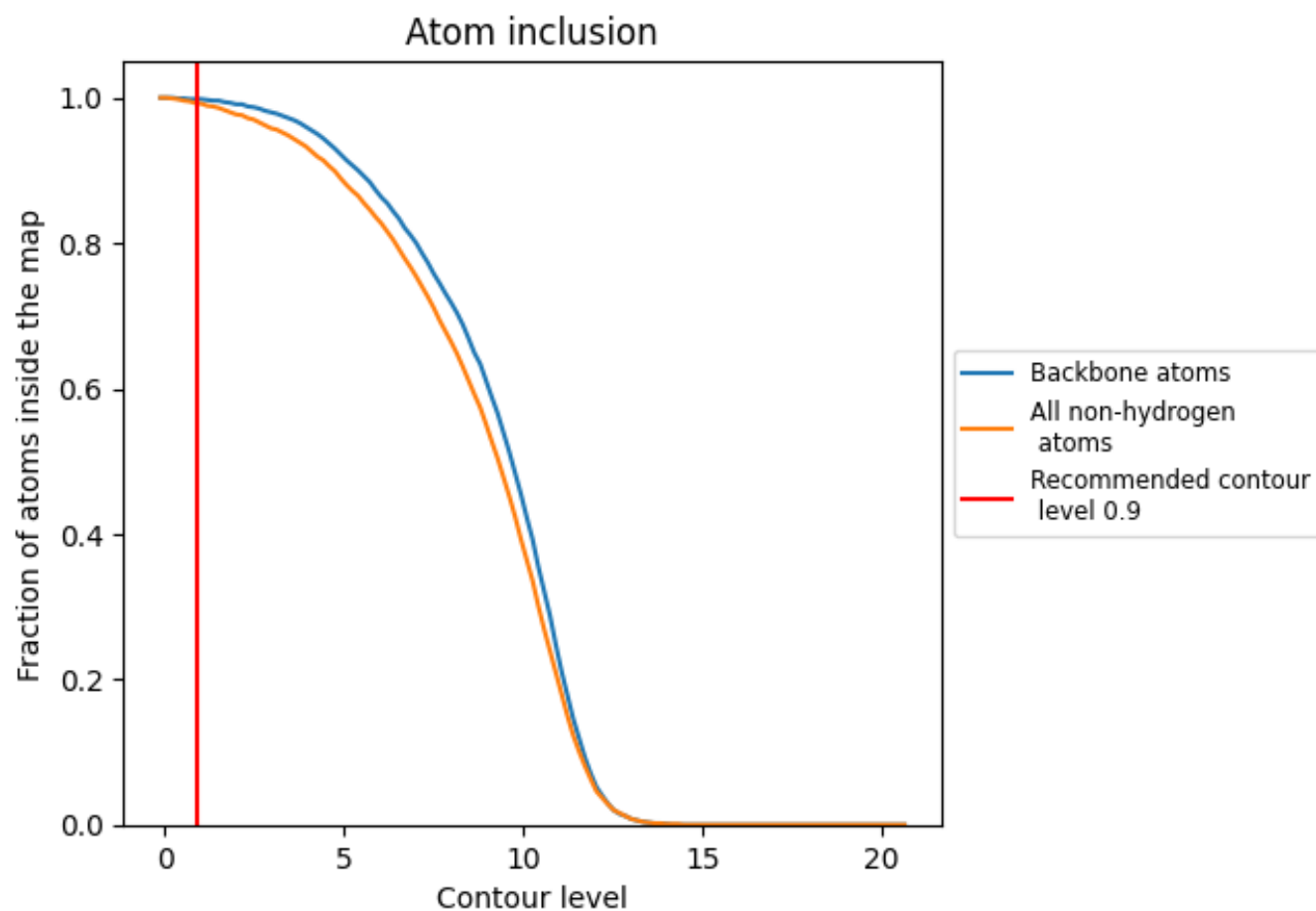
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.9).

9.4 Atom inclusion [i](#)



At the recommended contour level, 100% of all backbone atoms, 99% 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 (0.9) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9920	0.5370
A	1.0000	0.5830
B	0.9990	0.5720
C	0.9930	0.5040
N	0.9950	0.5250
R	0.9910	0.5500
S	0.9750	0.4370

1.0

0.0

<0.0