



Full wwPDB EM Validation Report ⓘ

Mar 5, 2024 – 04:19 PM JST

PDB ID : 8IOB
EMDB ID : EMD-35614
Title : Herg1a-herg1b closed state 1
Authors : Zhang, M.F.
Deposited on : 2023-03-10
Resolution : 3.90 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.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

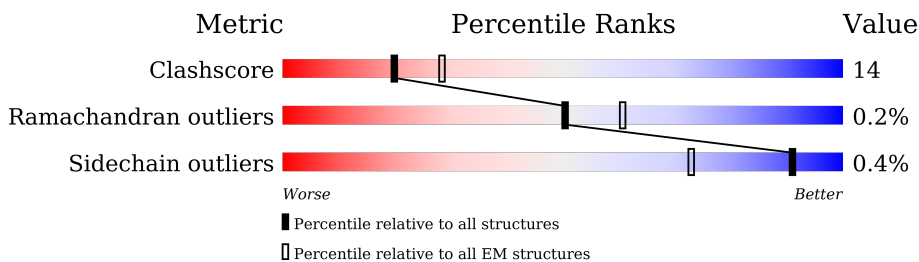
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	1159	
1	B	1159	
1	C	1159	
1	D	1159	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 13736 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.

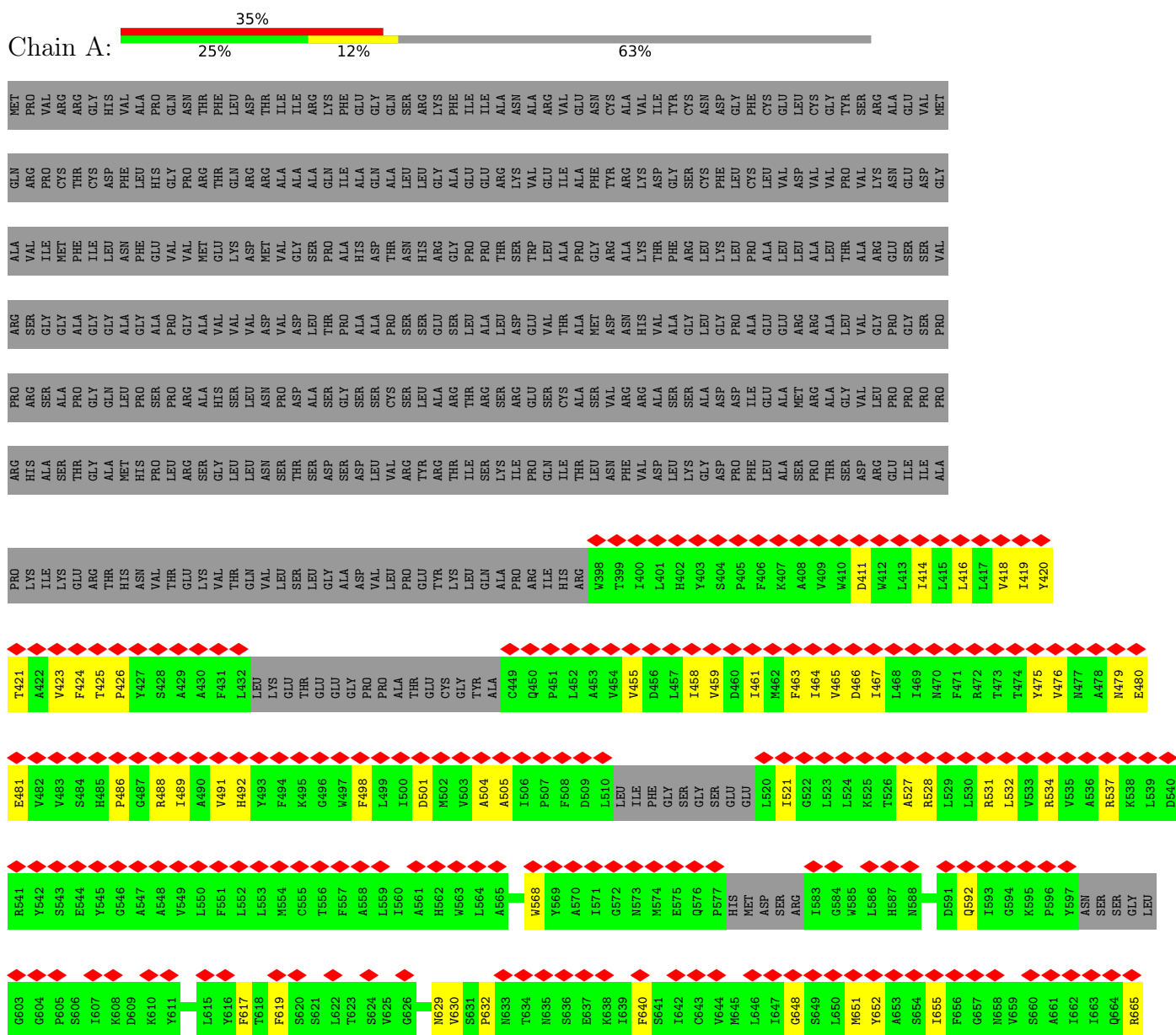
- Molecule 1 is a protein called Potassium voltage-gated channel subfamily H member 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	431	Total 3434	C 2252	N 581	O 584	S 17	0	0
1	B	431	Total 3434	C 2252	N 581	O 584	S 17	0	0
1	C	431	Total 3434	C 2252	N 581	O 584	S 17	0	0
1	D	431	Total 3434	C 2252	N 581	O 584	S 17	0	0

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: Potassium voltage-gated channel subfamily H member 2



S786	I787	E788	I789	L790	R791	G792	D793	V794	V795	V796	A797	I798	L799	G800	K801	N802	D803	I804	F805	G806	E807	P808	L809	N810	L811	Y812	A813	R814	P815	G816	K817	S818	N819	G820	D821	V822	R823	A824	L825	T826	Y827	C828	D829	L830	H831	K832	I833	H834	R835	D836	D837	L838	L839	E840	V841	L842	D843	M844	Y845
P846	E847	F848	S849	D850	H851	F852	W853	S854	S855	L856	E857	I858	T859	F860	N861	L862	R863	ASP	THR	ASN	MET	ILE	PRO	GLY	SER	PRO	GLY	SER	THR	LEU	GLY	PRO	PHE	GLY	ARG	GLN	ARG	ARG	LYS	ARG	LYS	LEU	PHE	ARG	ARG	ARG	THR	ASP	LYS	ASP	THR	GLN	PRO	GLY	VAL				
SER	ALA	LEU	GLY	GLY	ARG	ALA	GLY	ALA	PRO	SER	ARG	GLY	ARG	GLY	GLY	TRP	THR	PRO	THR	ASN	GLY	PRO	PRO	GLY	GLY	GLU	SER	ALA	PHE	PRO	SER	SER	ASN	ASN	ASP	GLU	GLY	GLN	ARG	LEU	LEU	VAL	ALA	PRO	PHE	ARG	THR	SER	PRO	ARG	PRO	GLY	ILE						
GLU	PRO	PRO	GLY	GLU	PRO	LEU	MET	GLY	ALA	ASP	CYS	GLY	PRO	GLY	LYS	SER	SER	ARG	ASP	THR	THR	ASN	GLY	TRP	GLY	GLN	GLY	ALA	PHE	SER	LEU	VAL	GLY	ASN	ASP	GLU	GLY	ARG	GLN	ARG	VAL	GLY	PRO	GLY	VAL	VAL	THR	ASN	PRO	ILE									
PRO	LEU	SER	PRO	GLY	ARG	ARG	PRO	PRO	GLY	ASP	VAL	GLU	GLU	SER	PRO	PRO	ARG	GLN	GLN	LEU	LEU	ASN	ARG	LEU	ALA	ALA	PHE	GLY	GLU	THR	THR	ASP	ALA	LEU	LEU	GLY	THR	LEU	VAL	PRO	VAL	PRO	ALA	TYR	PRO	SER	ALA	VAL	THR	THR	PRO	GLY							
PRO	GLY	PRO	THR	THR	SER	PRO	LEU	LEU	VAL	SER	PRO	LEU	THR	THR	LEU	ASP	GLN	VAL	THR	LEU	LEU	SER	GLN	VAL	VAL	VAL	GLN	GLN	PHE	GLN	THR	THR	ASP	ALA	GLY	LEU	LEU	PRO	PRO	GLN	GLY	THR	THR	VAL	LEU	ARG	LEU	GLY	ALA	LEU									
THR	SER	GLN	PRO	LEU	HIS	HIS	GLY	SER	ASP	PRO	GLY	SER																																															

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	35000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.494	Depositor
Minimum map value	-0.291	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.011	Depositor
Recommended contour level	0.22	Depositor
Map size (\AA)	339.59998, 339.59998, 339.59998	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.8489999, 0.8489999, 0.8489999	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	0.25	0/3524	0.50	0/4788
1	B	0.26	0/3524	0.52	0/4788
1	C	0.26	0/3524	0.52	0/4788
1	D	0.25	0/3524	0.50	0/4788
All	All	0.26	0/14096	0.51	0/19152

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3434	0	3453	100	0
1	B	3434	0	3453	101	0
1	C	3434	0	3453	101	0
1	D	3434	0	3453	95	0
All	All	13736	0	13812	379	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 14.

All (379) 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:A:757:LYS:HE3	1:A:841:VAL:HG11	1.60	0.84
1:C:819:ASN:HB2	1:C:862:LEU:HB3	1.65	0.79
1:C:489:ILE:HA	1:C:492:HIS:CE1	2.18	0.78
1:B:489:ILE:HA	1:B:492:HIS:CE1	2.18	0.78
1:B:632:PRO:O	1:C:629:ASN:ND2	2.17	0.78
1:C:632:PRO:O	1:D:629:ASN:ND2	2.19	0.75
1:A:819:ASN:HB2	1:A:862:LEU:HB3	1.68	0.75
1:D:819:ASN:HB2	1:D:862:LEU:HB3	1.67	0.74
1:A:632:PRO:O	1:B:629:ASN:ND2	2.21	0.74
1:A:629:ASN:ND2	1:D:632:PRO:O	2.21	0.73
1:D:762:HIS:HE2	1:D:827:TYR:HH	1.35	0.73
1:C:676:GLN:HG3	1:C:679:ARG:HH22	1.54	0.72
1:B:504:ALA:HA	1:B:527:ALA:HB1	1.73	0.71
1:C:504:ALA:HA	1:C:527:ALA:HB1	1.72	0.71
1:D:670:THR:O	1:D:674:HIS:ND1	2.23	0.71
1:D:504:ALA:HA	1:D:527:ALA:HB1	1.72	0.71
1:A:679:ARG:HG3	1:D:711:ILE:HD13	1.73	0.70
1:B:676:GLN:HG3	1:B:679:ARG:HH22	1.54	0.70
1:B:684:ILE:HA	1:B:689:ILE:HG13	1.74	0.69
1:C:711:ILE:HD13	1:D:679:ARG:HG3	1.73	0.69
1:B:788:GLU:HG3	1:B:825:LEU:HD22	1.75	0.69
1:C:670:THR:O	1:C:674:HIS:ND1	2.23	0.69
1:C:788:GLU:HG3	1:C:825:LEU:HD22	1.75	0.69
1:B:670:THR:O	1:B:674:HIS:ND1	2.23	0.68
1:C:684:ILE:HA	1:C:689:ILE:HG13	1.75	0.68
1:A:788:GLU:HG3	1:A:825:LEU:HD22	1.74	0.68
1:A:670:THR:O	1:A:674:HIS:ND1	2.23	0.67
1:B:735:SER:OG	1:B:802:ASN:OD1	2.13	0.67
1:D:788:GLU:HG3	1:D:825:LEU:HD22	1.76	0.67
1:A:735:SER:OG	1:A:802:ASN:OD1	2.13	0.67
1:C:735:SER:OG	1:C:802:ASN:OD1	2.13	0.67
1:D:684:ILE:HA	1:D:689:ILE:HG13	1.76	0.67
1:C:486:PRO:HA	1:C:489:ILE:HD12	1.76	0.66
1:D:411:ASP:HA	1:D:414:ILE:HD12	1.77	0.66
1:B:486:PRO:HA	1:B:489:ILE:HD12	1.76	0.66
1:A:834:HIS:ND1	1:A:836:ASP:OD1	2.28	0.66
1:A:684:ILE:HA	1:A:689:ILE:HG13	1.77	0.66
1:C:754:LEU:HB3	1:C:758:PHE:CZ	2.30	0.66
1:A:772:ALA:HB2	1:A:820:GLY:HA2	1.78	0.65
1:D:497:TRP:HB3	1:D:534:ARG:HH12	1.61	0.65
1:B:672:ARG:O	1:B:675:THR:OG1	2.12	0.65
1:B:411:ASP:HA	1:B:414:ILE:HD12	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:ALA:HA	1:A:527:ALA:HB1	1.78	0.64
1:A:423:VAL:HG23	1:A:424:PHE:HD1	1.63	0.64
1:B:819:ASN:HB2	1:B:862:LEU:HB3	1.79	0.64
1:D:735:SER:OG	1:D:802:ASN:OD1	2.14	0.64
1:C:592:GLN:NE2	1:C:629:ASN:O	2.30	0.63
1:B:718:LYS:HE3	1:B:718:LYS:HA	1.81	0.63
1:C:672:ARG:O	1:C:675:THR:OG1	2.12	0.63
1:D:747:THR:OG1	1:D:750:CYS:SG	2.57	0.63
1:A:833:ILE:HB	1:A:838:LEU:HD21	1.79	0.63
1:D:486:PRO:HA	1:D:489:ILE:HD12	1.81	0.63
1:D:718:LYS:HE3	1:D:718:LYS:HA	1.81	0.63
1:D:762:HIS:NE2	1:D:827:TYR:OH	2.24	0.63
1:B:754:LEU:HB3	1:B:758:PHE:CZ	2.34	0.63
1:A:676:GLN:HG2	1:A:679:ARG:HH21	1.63	0.63
1:B:572:GLY:HA3	1:B:585:TRP:HE1	1.62	0.62
1:A:728:ILE:HA	1:A:731:HIS:HD2	1.64	0.62
1:A:676:GLN:HA	1:A:679:ARG:HE	1.65	0.62
1:C:772:ALA:HB2	1:C:820:GLY:HA2	1.80	0.62
1:B:423:VAL:HG23	1:B:424:PHE:HD1	1.64	0.62
1:C:754:LEU:HA	1:C:757:LYS:HG2	1.80	0.62
1:D:728:ILE:HA	1:D:731:HIS:HD2	1.65	0.61
1:D:772:ALA:HB2	1:D:820:GLY:HA2	1.82	0.61
1:A:718:LYS:HE3	1:A:718:LYS:HA	1.82	0.60
1:C:728:ILE:HA	1:C:731:HIS:HD2	1.65	0.60
1:B:772:ALA:HB2	1:B:820:GLY:HA2	1.83	0.60
1:B:410:TRP:NE1	1:B:466:ASP:OD1	2.35	0.60
1:B:592:GLN:NE2	1:B:629:ASN:O	2.30	0.60
1:C:718:LYS:HE3	1:C:718:LYS:HA	1.82	0.60
1:D:410:TRP:NE1	1:D:466:ASP:OD1	2.33	0.60
1:A:486:PRO:HA	1:A:489:ILE:HD12	1.84	0.59
1:A:833:ILE:HD12	1:A:838:LEU:HG	1.84	0.58
1:B:728:ILE:HA	1:B:731:HIS:HD2	1.66	0.58
1:A:592:GLN:NE2	1:A:629:ASN:O	2.31	0.58
1:A:475:TYR:HD1	1:A:489:ILE:HG12	1.69	0.58
1:C:489:ILE:HA	1:C:492:HIS:HE1	1.68	0.58
1:B:781:PHE:HB2	1:B:831:HIS:HB3	1.87	0.57
1:C:757:LYS:HD3	1:C:837:ASP:OD2	2.05	0.57
1:B:782:ILE:HG21	1:B:800:GLY:HA2	1.86	0.57
1:B:687:HIS:O	1:B:689:ILE:N	2.38	0.57
1:B:641:SER:O	1:B:645:MET:HE2	2.04	0.57
1:C:411:ASP:HA	1:C:414:ILE:HD12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:687:HIS:O	1:A:689:ILE:N	2.38	0.57
1:B:711:ILE:HD13	1:C:679:ARG:HG2	1.87	0.56
1:C:789:ILE:HB	1:C:796:VAL:HG23	1.87	0.56
1:C:672:ARG:HG2	1:C:676:GLN:HE22	1.71	0.56
1:B:489:ILE:HA	1:B:492:HIS:HE1	1.67	0.56
1:D:687:HIS:O	1:D:689:ILE:N	2.38	0.56
1:B:497:TRP:HB3	1:B:534:ARG:HH12	1.70	0.56
1:B:672:ARG:HG2	1:B:676:GLN:HE22	1.71	0.55
1:C:687:HIS:O	1:C:689:ILE:N	2.38	0.55
1:B:488:ARG:HA	1:B:491:VAL:HG22	1.88	0.55
1:C:497:TRP:HB3	1:C:534:ARG:HH12	1.72	0.55
1:A:711:ILE:HD13	1:B:679:ARG:HG2	1.88	0.55
1:A:789:ILE:HB	1:A:796:VAL:HG23	1.87	0.55
1:B:789:ILE:HB	1:B:796:VAL:HG23	1.88	0.55
1:A:411:ASP:HA	1:A:414:ILE:HD12	1.87	0.54
1:C:641:SER:O	1:C:645:MET:HE2	2.07	0.54
1:D:789:ILE:HB	1:D:796:VAL:HG23	1.90	0.54
1:A:418:VAL:HG22	1:A:531:ARG:HD2	1.88	0.54
1:B:833:ILE:HD12	1:B:838:LEU:HD22	1.89	0.54
1:C:488:ARG:HA	1:C:491:VAL:HG22	1.89	0.54
1:D:592:GLN:NE2	1:D:629:ASN:O	2.32	0.54
1:A:455:VAL:O	1:A:459:VAL:HG23	2.08	0.54
1:D:475:TYR:HD1	1:D:489:ILE:HG12	1.71	0.54
1:C:812:TYR:O	1:C:814:ARG:HG2	2.06	0.54
1:D:493:TYR:OH	1:D:534:ARG:NH2	2.41	0.53
1:D:639:ILE:HA	1:D:642:ILE:HD12	1.89	0.53
1:A:754:LEU:HB3	1:A:758:PHE:CE1	2.44	0.53
1:D:617:PHE:HB2	1:D:630:VAL:HG11	1.91	0.53
1:C:734:ARG:O	1:C:738:GLN:NE2	2.41	0.53
1:A:812:TYR:O	1:A:814:ARG:HG2	2.09	0.53
1:B:845:TYR:CE2	1:B:848:PHE:HB3	2.43	0.53
1:A:703:HIS:ND1	1:A:764:PRO:HB3	2.24	0.52
1:C:776:LEU:HB2	1:C:815:PRO:HA	1.90	0.52
1:A:693:LEU:HG	1:D:731:HIS:NE2	2.24	0.52
1:D:812:TYR:O	1:D:814:ARG:HG2	2.09	0.52
1:A:782:ILE:HD13	1:A:800:GLY:HA2	1.91	0.52
1:D:676:GLN:HG2	1:D:679:ARG:HH21	1.72	0.52
1:D:776:LEU:HB2	1:D:815:PRO:HA	1.91	0.52
1:C:617:PHE:HB2	1:C:630:VAL:HG11	1.91	0.51
1:A:753:ALA:HB1	1:A:757:LYS:HZ1	1.76	0.51
1:A:766:GLY:HA2	1:A:824:ALA:HB1	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:782:ILE:HD13	1:B:800:GLY:HA2	1.92	0.51
1:C:410:TRP:NE1	1:C:466:ASP:OD1	2.44	0.51
1:C:845:TYR:CE2	1:C:848:PHE:HB3	2.46	0.51
1:D:763:ALA:HB3	1:D:828:CYS:HB2	1.93	0.51
1:B:776:LEU:HB2	1:B:815:PRO:HA	1.91	0.51
1:C:418:VAL:HG22	1:C:531:ARG:HD2	1.93	0.51
1:B:674:HIS:O	1:B:678:LEU:HG	2.11	0.51
1:B:812:TYR:O	1:B:814:ARG:HG2	2.09	0.51
1:D:766:GLY:HA2	1:D:824:ALA:HB1	1.92	0.51
1:C:766:GLY:HA2	1:C:824:ALA:HB1	1.92	0.51
1:A:776:LEU:HB2	1:A:815:PRO:HA	1.93	0.50
1:A:731:HIS:NE2	1:B:693:LEU:HG	2.27	0.50
1:C:720:PHE:O	1:C:725:GLN:NE2	2.44	0.50
1:B:418:VAL:HG22	1:B:531:ARG:HD2	1.93	0.50
1:B:790:LEU:HD12	1:B:823:ARG:HG3	1.94	0.50
1:C:674:HIS:O	1:C:678:LEU:HG	2.11	0.50
1:A:797:ALA:HB2	1:A:860:PHE:HD2	1.77	0.50
1:C:746:ALA:HB2	1:C:848:PHE:CZ	2.46	0.50
1:A:781:PHE:O	1:A:831:HIS:N	2.43	0.50
1:A:790:LEU:HD12	1:A:823:ARG:HG3	1.94	0.50
1:C:464:ILE:HG13	1:C:505:ALA:HB1	1.93	0.50
1:A:720:PHE:O	1:A:725:GLN:NE2	2.45	0.50
1:B:731:HIS:NE2	1:C:693:LEU:HG	2.27	0.50
1:C:536:ALA:HA	1:C:539:LEU:HD23	1.94	0.50
1:D:418:VAL:HG22	1:D:531:ARG:HD2	1.93	0.50
1:A:528:ARG:O	1:A:532:LEU:HD12	2.11	0.50
1:C:747:THR:OG1	1:C:750:CYS:SG	2.67	0.49
1:B:746:ALA:HB2	1:B:848:PHE:CZ	2.47	0.49
1:B:755:ALA:HA	1:B:758:PHE:CD1	2.47	0.49
1:C:731:HIS:NE2	1:D:693:LEU:HG	2.27	0.49
1:B:766:GLY:HA2	1:B:824:ALA:HB1	1.93	0.49
1:B:692:PRO:O	1:B:696:ARG:HG3	2.13	0.49
1:B:757:LYS:HE3	1:B:841:VAL:HG21	1.94	0.49
1:B:536:ALA:HA	1:B:539:LEU:HD23	1.95	0.49
1:C:541:ARG:HD2	1:C:541:ARG:O	2.13	0.49
1:D:414:ILE:HD11	1:D:466:ASP:OD1	2.13	0.49
1:A:534:ARG:NH1	1:A:537:ARG:HH12	2.11	0.49
1:C:479:ASN:OD1	1:C:480:GLU:N	2.46	0.49
1:C:790:LEU:HD12	1:C:823:ARG:HG3	1.95	0.49
1:D:692:PRO:O	1:D:696:ARG:HG3	2.12	0.49
1:D:541:ARG:HD2	1:D:541:ARG:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:479:ASN:OD1	1:A:480:GLU:N	2.46	0.49
1:A:754:LEU:HB3	1:A:758:PHE:CZ	2.47	0.49
1:B:720:PHE:O	1:B:725:GLN:NE2	2.46	0.49
1:B:734:ARG:O	1:B:738:GLN:NE2	2.40	0.49
1:B:617:PHE:HB2	1:B:630:VAL:HG11	1.94	0.48
1:C:781:PHE:O	1:C:831:HIS:N	2.42	0.48
1:A:703:HIS:O	1:A:706:SER:OG	2.26	0.48
1:B:464:ILE:HG13	1:B:505:ALA:HB1	1.94	0.48
1:B:765:PRO:HG3	1:B:827:TYR:HA	1.95	0.48
1:C:475:TYR:HD1	1:C:489:ILE:HG12	1.78	0.48
1:C:692:PRO:O	1:C:696:ARG:HG3	2.13	0.48
1:D:676:GLN:HA	1:D:679:ARG:HE	1.77	0.48
1:C:765:PRO:HG3	1:C:827:TYR:HA	1.95	0.48
1:D:691:ASN:HA	1:D:694:ARG:HE	1.79	0.48
1:B:541:ARG:HD2	1:B:541:ARG:O	2.13	0.48
1:C:648:GLY:O	1:C:652:TYR:HB2	2.13	0.48
1:C:691:ASN:HA	1:C:694:ARG:HE	1.78	0.48
1:A:765:PRO:HG3	1:A:827:TYR:HA	1.94	0.48
1:D:464:ILE:HG13	1:D:505:ALA:HB1	1.95	0.48
1:A:617:PHE:HB2	1:A:630:VAL:HG11	1.95	0.48
1:A:648:GLY:O	1:A:652:TYR:HB2	2.13	0.48
1:A:691:ASN:HA	1:A:694:ARG:HE	1.78	0.48
1:B:414:ILE:HD11	1:B:466:ASP:OD1	2.13	0.48
1:A:825:LEU:HG	1:A:826:THR:H	1.79	0.48
1:A:834:HIS:O	1:A:838:LEU:HD23	2.14	0.48
1:B:479:ASN:OD1	1:B:480:GLU:N	2.46	0.48
1:C:837:ASP:O	1:C:840:GLU:HG3	2.14	0.48
1:D:790:LEU:HD12	1:D:823:ARG:HG3	1.95	0.48
1:A:464:ILE:HG13	1:A:505:ALA:HB1	1.96	0.48
1:A:692:PRO:O	1:A:696:ARG:HG3	2.13	0.48
1:D:489:ILE:O	1:D:492:HIS:ND1	2.47	0.48
1:D:738:GLN:HG2	1:D:739:HIS:CD2	2.49	0.47
1:A:734:ARG:O	1:A:738:GLN:NE2	2.44	0.47
1:A:738:GLN:HG2	1:A:739:HIS:CD2	2.49	0.47
1:B:781:PHE:HE2	1:B:833:ILE:HD11	1.79	0.47
1:D:488:ARG:HA	1:D:491:VAL:HG22	1.96	0.47
1:D:703:HIS:ND1	1:D:764:PRO:HB3	2.29	0.47
1:D:720:PHE:O	1:D:725:GLN:NE2	2.48	0.47
1:B:846:PRO:O	1:B:849:SER:OG	2.28	0.47
1:B:455:VAL:O	1:B:459:VAL:HG23	2.15	0.47
1:B:651:MET:O	1:B:655:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:825:LEU:HG	1:B:826:THR:H	1.79	0.47
1:C:825:LEU:HG	1:C:826:THR:H	1.78	0.47
1:B:475:TYR:HD1	1:B:489:ILE:HG12	1.80	0.47
1:D:479:ASN:OD1	1:D:480:GLU:N	2.46	0.47
1:C:738:GLN:HG2	1:C:739:HIS:CD2	2.50	0.47
1:D:825:LEU:HG	1:D:826:THR:H	1.80	0.47
1:B:738:GLN:HG2	1:B:739:HIS:CD2	2.51	0.46
1:D:458:ILE:HA	1:D:461:ILE:HD12	1.96	0.46
1:D:734:ARG:O	1:D:738:GLN:NE2	2.46	0.46
1:B:665:ARG:HG2	1:B:665:ARG:HH11	1.80	0.46
1:B:845:TYR:HE2	1:B:848:PHE:HB3	1.80	0.46
1:D:461:ILE:O	1:D:465:VAL:HG23	2.15	0.46
1:B:703:HIS:ND1	1:B:764:PRO:HB3	2.30	0.46
1:C:455:VAL:O	1:C:459:VAL:HG23	2.15	0.46
1:C:461:ILE:O	1:C:465:VAL:HG23	2.16	0.46
1:B:461:ILE:O	1:B:465:VAL:HG23	2.16	0.46
1:B:640:PHE:O	1:B:644:VAL:HG23	2.16	0.46
1:C:782:ILE:HD13	1:C:800:GLY:HA2	1.98	0.46
1:A:476:VAL:HG13	1:A:481:GLU:HA	1.97	0.46
1:A:488:ARG:HA	1:A:491:VAL:HG22	1.97	0.46
1:B:691:ASN:HA	1:B:694:ARG:HE	1.80	0.46
1:A:461:ILE:O	1:A:465:VAL:HG23	2.15	0.46
1:A:619:PHE:CE2	1:D:642:ILE:HG23	2.50	0.46
1:B:402:HIS:HB3	1:B:474:THR:O	2.16	0.46
1:C:402:HIS:HB3	1:C:474:THR:O	2.16	0.46
1:C:640:PHE:O	1:C:644:VAL:HG23	2.15	0.46
1:D:476:VAL:HG13	1:D:481:GLU:HA	1.98	0.46
1:B:804:ILE:O	1:B:859:THR:OG1	2.24	0.46
1:D:642:ILE:HA	1:D:645:MET:HE3	1.98	0.46
1:D:758:PHE:HD2	1:D:833:ILE:HG22	1.81	0.46
1:B:703:HIS:O	1:B:706:SER:OG	2.22	0.46
1:B:818:SER:OG	1:B:862:LEU:O	2.31	0.46
1:D:455:VAL:O	1:D:459:VAL:HG23	2.16	0.46
1:D:568:TRP:HB2	1:D:640:PHE:HE2	1.81	0.46
1:C:758:PHE:C	1:C:759:LYS:HD2	2.37	0.45
1:C:761:THR:OG1	1:C:830:LEU:HB2	2.16	0.45
1:D:417:LEU:O	1:D:421:THR:HG23	2.16	0.45
1:B:417:LEU:O	1:B:421:THR:HG23	2.16	0.45
1:B:759:LYS:N	1:B:759:LYS:HD2	2.32	0.45
1:C:766:GLY:N	1:C:825:LEU:O	2.50	0.45
1:D:414:ILE:O	1:D:418:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:648:GLY:O	1:D:652:TYR:HB2	2.16	0.45
1:B:414:ILE:O	1:B:418:VAL:HG23	2.16	0.45
1:A:568:TRP:HB2	1:A:640:PHE:HE2	1.81	0.45
1:C:845:TYR:HE2	1:C:848:PHE:HB3	1.81	0.45
1:D:536:ALA:HA	1:D:539:LEU:HD23	1.98	0.45
1:D:769:LEU:HB2	1:D:822:VAL:HG11	1.99	0.45
1:C:776:LEU:HG	1:C:816:GLY:H	1.81	0.45
1:D:781:PHE:HB2	1:D:831:HIS:HB3	1.99	0.45
1:A:414:ILE:O	1:A:418:VAL:HG23	2.17	0.45
1:B:425:THR:OG1	1:B:426:PRO:HD3	2.17	0.45
1:C:458:ILE:HA	1:C:461:ILE:HD12	1.97	0.45
1:D:766:GLY:N	1:D:825:LEU:O	2.50	0.45
1:D:838:LEU:HA	1:D:841:VAL:HG12	1.99	0.45
1:B:776:LEU:HG	1:B:816:GLY:H	1.82	0.45
1:C:414:ILE:O	1:C:418:VAL:HG23	2.17	0.45
1:D:837:ASP:O	1:D:840:GLU:HG3	2.17	0.45
1:A:691:ASN:O	1:A:694:ARG:HG2	2.17	0.44
1:C:417:LEU:O	1:C:421:THR:HG23	2.17	0.44
1:D:765:PRO:HG3	1:D:827:TYR:HA	2.00	0.44
1:C:487:GLY:O	1:C:491:VAL:HG13	2.17	0.44
1:A:674:HIS:O	1:A:678:LEU:HG	2.17	0.44
1:A:414:ILE:HD11	1:A:466:ASP:OD1	2.18	0.44
1:A:762:HIS:HE1	1:A:827:TYR:OH	2.01	0.44
1:C:425:THR:OG1	1:C:426:PRO:HD3	2.17	0.44
1:D:489:ILE:HA	1:D:492:HIS:HD1	1.83	0.44
1:A:425:THR:OG1	1:A:426:PRO:HD3	2.17	0.44
1:C:846:PRO:O	1:C:849:SER:OG	2.26	0.44
1:A:458:ILE:HA	1:A:461:ILE:HD12	1.99	0.44
1:B:762:HIS:HE1	1:B:827:TYR:OH	2.01	0.44
1:B:455:VAL:HA	1:B:458:ILE:HG12	2.00	0.44
1:A:755:ALA:HA	1:A:758:PHE:HD1	1.83	0.44
1:A:421:THR:OG1	1:A:531:ARG:NH1	2.51	0.43
1:A:804:ILE:O	1:A:859:THR:OG1	2.27	0.43
1:B:645:MET:HG2	1:C:625:VAL:HG21	2.00	0.43
1:B:799:LEU:HB3	1:B:803:ASP:CG	2.39	0.43
1:C:703:HIS:ND1	1:C:764:PRO:HB3	2.32	0.43
1:C:769:LEU:HB2	1:C:822:VAL:HG11	1.99	0.43
1:A:455:VAL:HA	1:A:458:ILE:HG12	2.00	0.43
1:C:455:VAL:HA	1:C:458:ILE:HG12	2.00	0.43
1:D:425:THR:OG1	1:D:426:PRO:HD3	2.17	0.43
1:B:642:ILE:HG23	1:C:619:PHE:CD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:487:GLY:O	1:B:491:VAL:HG13	2.17	0.43
1:B:691:ASN:O	1:B:694:ARG:HG2	2.18	0.43
1:B:743:PHE:HA	1:B:848:PHE:HZ	1.83	0.43
1:A:833:ILE:HB	1:A:838:LEU:CD2	2.48	0.43
1:A:812:TYR:CE1	1:A:814:ARG:HB2	2.53	0.43
1:B:458:ILE:HA	1:B:461:ILE:HD12	1.99	0.43
1:B:766:GLY:N	1:B:825:LEU:O	2.51	0.43
1:C:633:ASN:O	1:C:638:LYS:NZ	2.33	0.43
1:D:725:GLN:HA	1:D:728:ILE:HG22	2.01	0.43
1:D:685:ARG:HA	1:D:685:ARG:HD3	1.81	0.43
1:D:753:ALA:HB1	1:D:757:LYS:NZ	2.34	0.43
1:D:776:LEU:HG	1:D:816:GLY:H	1.83	0.43
1:A:842:LEU:HG	1:A:849:SER:HB3	2.00	0.43
1:D:833:ILE:HB	1:D:838:LEU:CD2	2.49	0.43
1:B:812:TYR:CE1	1:B:814:ARG:HB2	2.54	0.43
1:C:691:ASN:O	1:C:694:ARG:HG2	2.18	0.43
1:D:691:ASN:O	1:D:694:ARG:HG2	2.18	0.43
1:D:761:THR:OG1	1:D:830:LEU:HB2	2.19	0.43
1:D:812:TYR:CE1	1:D:814:ARG:HB2	2.53	0.43
1:A:782:ILE:HG21	1:A:800:GLY:HA2	2.00	0.42
1:B:725:GLN:HA	1:B:728:ILE:HG22	2.01	0.42
1:B:763:ALA:HB3	1:B:828:CYS:HB2	2.00	0.42
1:D:773:GLY:H	1:D:817:LYS:HB3	1.84	0.42
1:D:842:LEU:HG	1:D:849:SER:HB3	2.01	0.42
1:A:758:PHE:C	1:A:759:LYS:HD3	2.39	0.42
1:C:651:MET:O	1:C:655:ILE:HG12	2.19	0.42
1:D:455:VAL:HA	1:D:458:ILE:HG12	2.00	0.42
1:A:651:MET:O	1:A:655:ILE:HG12	2.19	0.42
1:A:720:PHE:HA	1:A:721:PRO:HD3	1.91	0.42
1:B:791:ARG:HB3	1:B:820:GLY:HA3	2.02	0.42
1:D:674:HIS:O	1:D:678:LEU:HG	2.19	0.42
1:C:476:VAL:HG13	1:C:481:GLU:HA	2.02	0.42
1:C:749:GLY:O	1:C:752:ARG:HG2	2.20	0.42
1:C:762:HIS:HE1	1:C:827:TYR:OH	2.03	0.42
1:C:754:LEU:HA	1:C:757:LYS:CG	2.49	0.42
1:D:640:PHE:O	1:D:644:VAL:HG23	2.19	0.42
1:A:665:ARG:HG2	1:A:665:ARG:HH11	1.84	0.42
1:A:725:GLN:HA	1:A:728:ILE:HG22	2.02	0.42
1:A:766:GLY:N	1:A:825:LEU:O	2.52	0.42
1:A:769:LEU:HB2	1:A:822:VAL:HG11	2.01	0.42
1:A:797:ALA:HB2	1:A:860:PHE:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:769:LEU:HB2	1:B:822:VAL:HG11	2.02	0.42
1:B:476:VAL:HG13	1:B:481:GLU:HA	2.01	0.42
1:C:725:GLN:HA	1:C:728:ILE:HG22	2.02	0.42
1:A:463:PHE:O	1:A:467:ILE:HG13	2.19	0.41
1:B:781:PHE:O	1:B:831:HIS:N	2.42	0.41
1:C:782:ILE:HA	1:C:830:LEU:HA	2.02	0.41
1:A:419:ILE:O	1:A:423:VAL:HG22	2.20	0.41
1:A:781:PHE:HB2	1:A:831:HIS:HB3	2.01	0.41
1:A:498:PHE:HA	1:A:501:ASP:OD2	2.20	0.41
1:C:665:ARG:HH21	1:D:674:HIS:CG	2.38	0.41
1:C:759:LYS:HD2	1:C:759:LYS:N	2.35	0.41
1:D:757:LYS:HD2	1:D:837:ASP:OD2	2.21	0.41
1:C:417:LEU:HD23	1:C:417:LEU:HA	1.89	0.41
1:D:749:GLY:HA2	1:D:752:ARG:HG2	2.03	0.41
1:D:781:PHE:O	1:D:831:HIS:N	2.40	0.41
1:A:782:ILE:HA	1:A:830:LEU:HA	2.02	0.41
1:A:856:LEU:HG	1:A:858:ILE:HD11	2.03	0.41
1:B:676:GLN:O	1:B:680:VAL:HG23	2.21	0.41
1:A:674:HIS:CG	1:D:665:ARG:HH21	2.38	0.41
1:C:676:GLN:HG3	1:C:679:ARG:NH2	2.30	0.41
1:C:773:GLY:H	1:C:817:LYS:HB3	1.85	0.41
1:A:489:ILE:O	1:A:492:HIS:ND1	2.54	0.41
1:C:676:GLN:O	1:C:680:VAL:HG23	2.21	0.41
1:A:707:TYR:HB2	1:B:686:PHE:CE1	2.54	0.41
1:A:761:THR:OG1	1:A:830:LEU:HB2	2.20	0.41
1:A:776:LEU:HG	1:A:816:GLY:H	1.86	0.41
1:C:781:PHE:HB2	1:C:831:HIS:HB3	2.02	0.41
1:D:720:PHE:HA	1:D:721:PRO:HD3	1.91	0.41
1:A:729:CYS:HB3	1:A:755:ALA:O	2.21	0.41
1:C:414:ILE:HD11	1:C:466:ASP:OD1	2.21	0.41
1:C:763:ALA:HB3	1:C:828:CYS:HB2	2.02	0.41
1:C:782:ILE:HG23	1:C:830:LEU:HD23	2.03	0.41
1:D:808:PRO:HG2	1:D:812:TYR:HB3	2.02	0.41
1:D:818:SER:OG	1:D:862:LEU:O	2.36	0.41
1:A:416:LEU:HD11	1:A:420:TYR:CZ	2.56	0.41
1:C:755:ALA:HA	1:C:758:PHE:CD1	2.56	0.41
1:D:651:MET:O	1:D:655:ILE:HG12	2.20	0.41
1:A:763:ALA:HB3	1:A:828:CYS:HB2	2.02	0.40
1:A:779:LEU:HD21	1:A:809:LEU:HD21	2.03	0.40
1:D:405:PRO:O	1:D:409:VAL:HG23	2.21	0.40
1:B:419:ILE:O	1:B:423:VAL:HG22	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:473:THR:O	1:B:489:ILE:HD13	2.21	0.40
1:B:761:THR:OG1	1:B:830:LEU:HB2	2.22	0.40
1:D:402:HIS:HB3	1:D:474:THR:O	2.20	0.40
1:A:676:GLN:HG2	1:A:679:ARG:NH2	2.33	0.40
1:B:753:ALA:HB1	1:B:757:LYS:HZ1	1.86	0.40
1:C:685:ARG:HA	1:C:685:ARG:HD3	1.79	0.40
1:C:757:LYS:NZ	1:C:841:VAL:HG21	2.37	0.40
1:C:825:LEU:HD12	1:C:825:LEU:HA	1.93	0.40
1:D:633:ASN:O	1:D:638:LYS:NZ	2.34	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [\(i\)](#)

5.3.1 Protein backbone [\(i\)](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	421/1159 (36%)	392 (93%)	28 (7%)	1 (0%)	47	79
1	B	421/1159 (36%)	391 (93%)	29 (7%)	1 (0%)	47	79
1	C	421/1159 (36%)	391 (93%)	29 (7%)	1 (0%)	47	79
1	D	421/1159 (36%)	392 (93%)	28 (7%)	1 (0%)	47	79
All	All	1684/4636 (36%)	1566 (93%)	114 (7%)	4 (0%)	50	79

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	521	ILE
1	B	521	ILE
1	C	521	ILE
1	D	521	ILE

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	364/973 (37%)	362 (100%)	2 (0%)	88	93
1	B	364/973 (37%)	363 (100%)	1 (0%)	92	95
1	C	364/973 (37%)	363 (100%)	1 (0%)	92	95
1	D	364/973 (37%)	362 (100%)	2 (0%)	88	93
All	All	1456/3892 (37%)	1450 (100%)	6 (0%)	91	94

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	679	ARG
1	A	817	LYS
1	B	817	LYS
1	C	817	LYS
1	D	679	ARG
1	D	817	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	731	HIS
1	A	762	HIS
1	B	731	HIS
1	B	762	HIS
1	C	725	GLN
1	C	731	HIS
1	C	762	HIS
1	D	731	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 monosaccharides 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 [i](#)

There are no chain breaks in this entry.

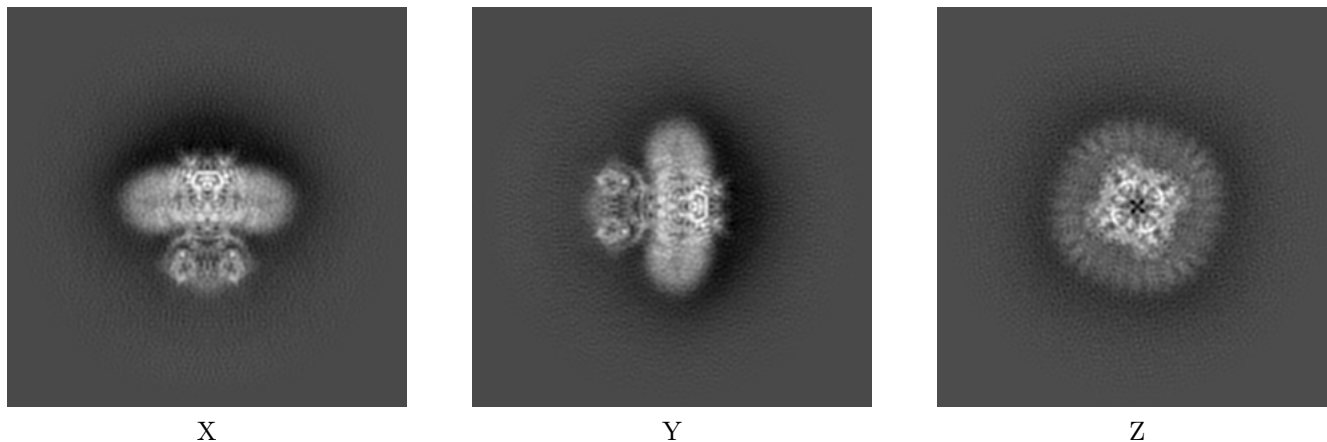
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-35614. These allow visual inspection of the internal detail of the map and identification of artifacts.

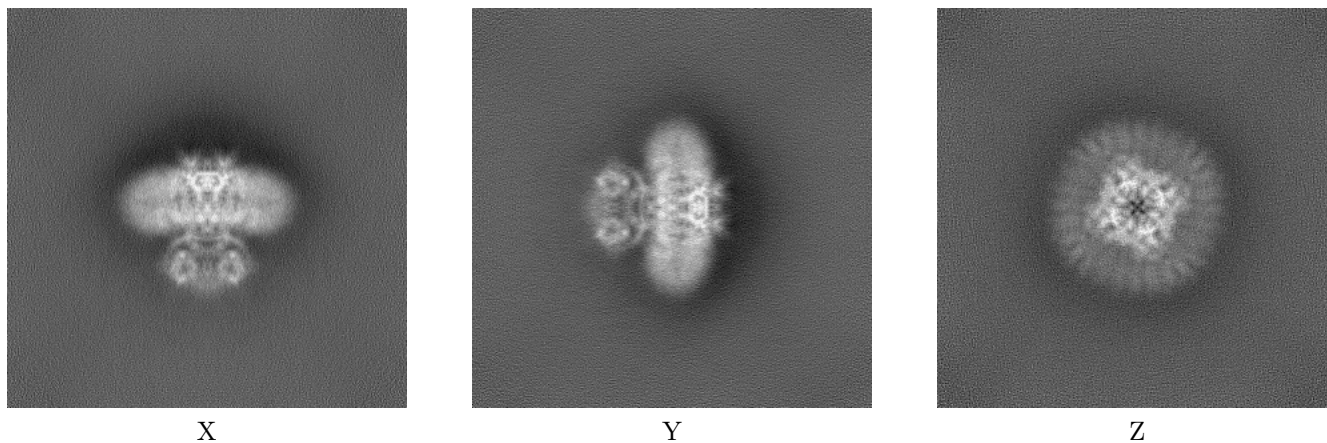
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



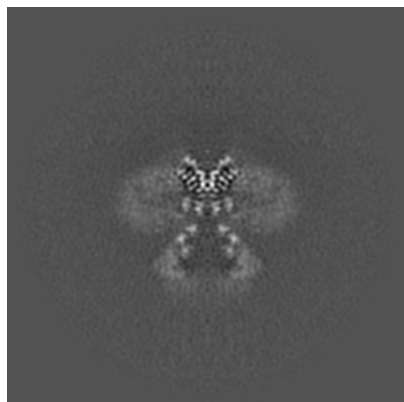
6.1.2 Raw map



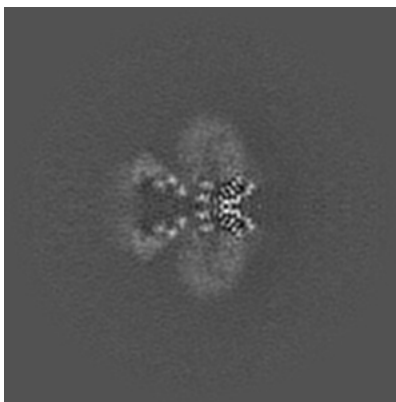
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

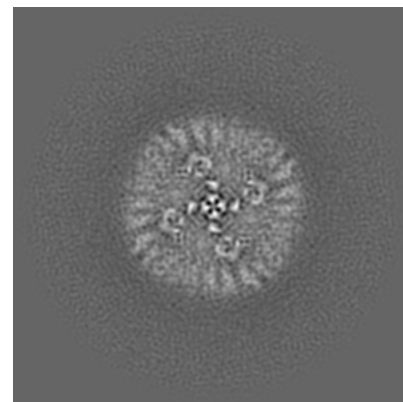
6.2.1 Primary map



X Index: 200

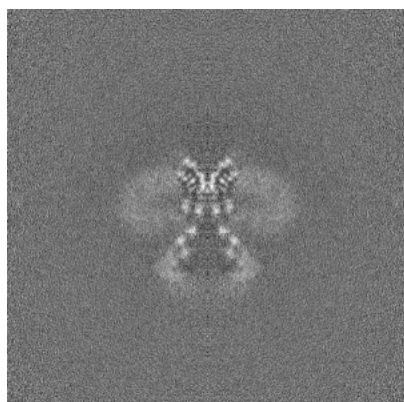


Y Index: 200

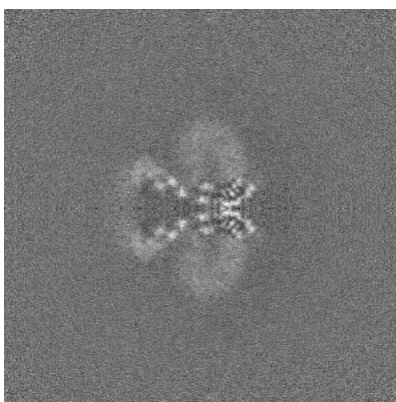


Z Index: 200

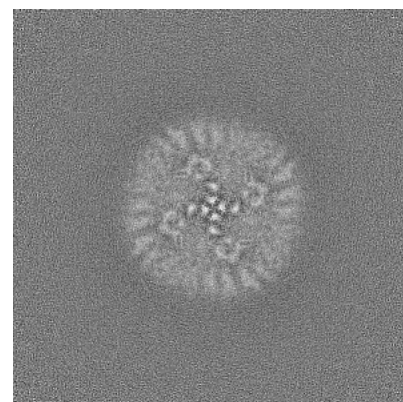
6.2.2 Raw map



X Index: 200



Y Index: 200

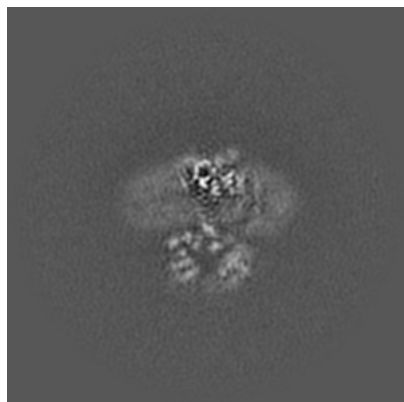


Z Index: 200

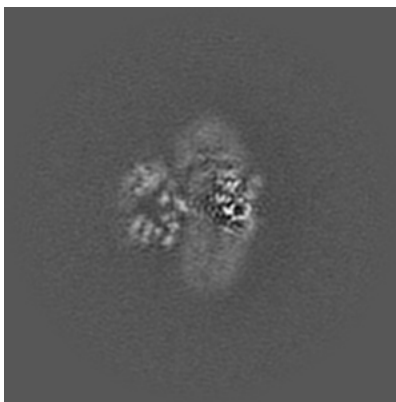
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

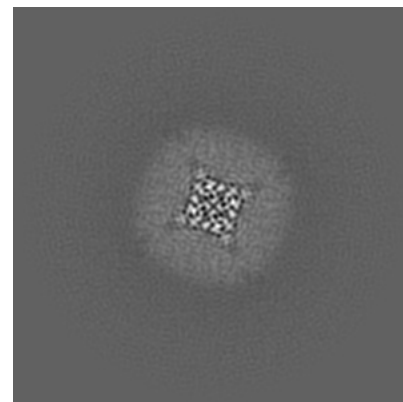
6.3.1 Primary map



X Index: 186

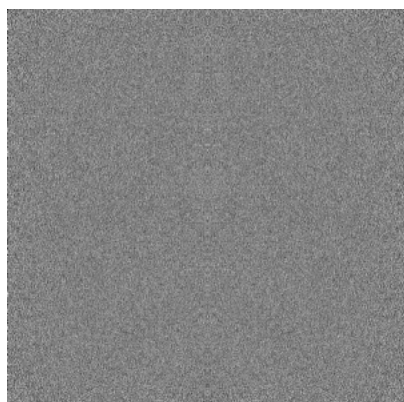


Y Index: 214

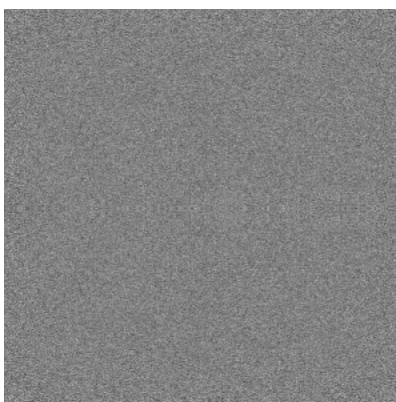


Z Index: 229

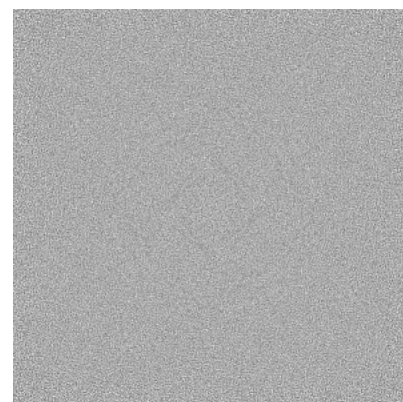
6.3.2 Raw map



X Index: 0



Y Index: 0

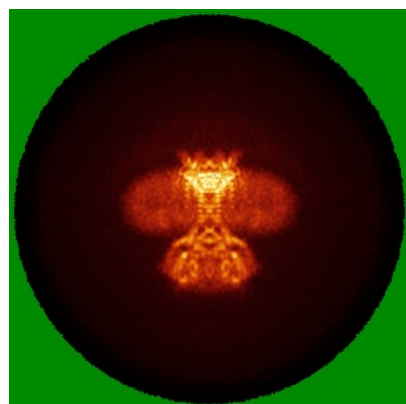


Z Index: 399

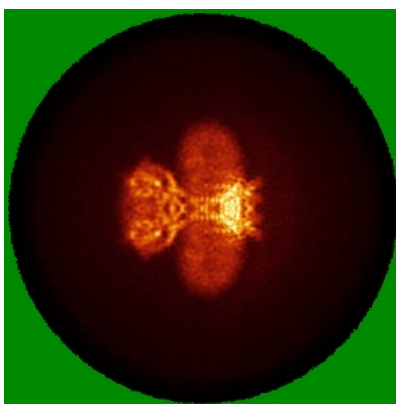
The images above show the largest variance slices of the map in three orthogonal directions.

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

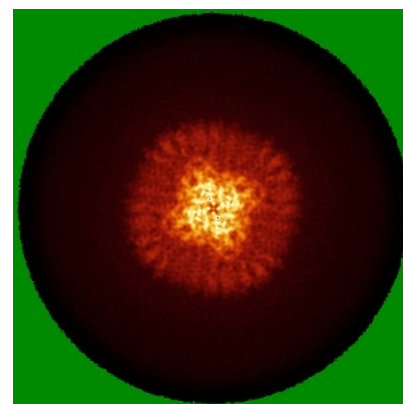
6.4.1 Primary map



X

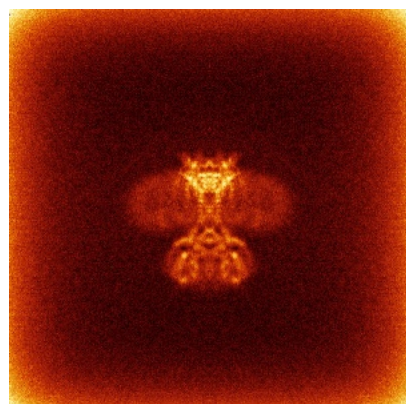


Y

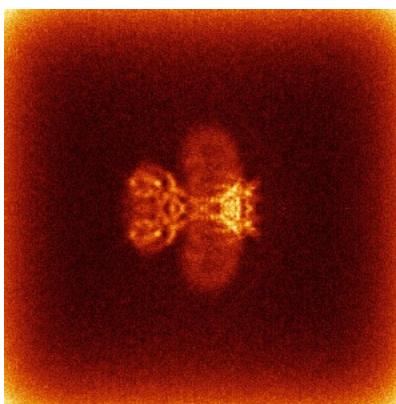


Z

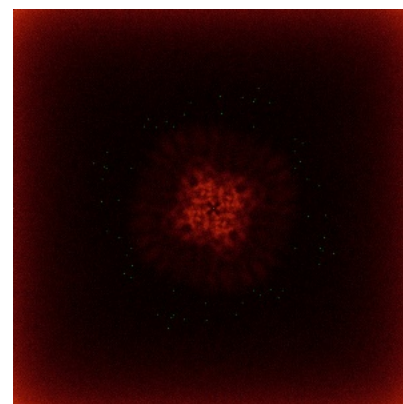
6.4.2 Raw map



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 0.22. 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.

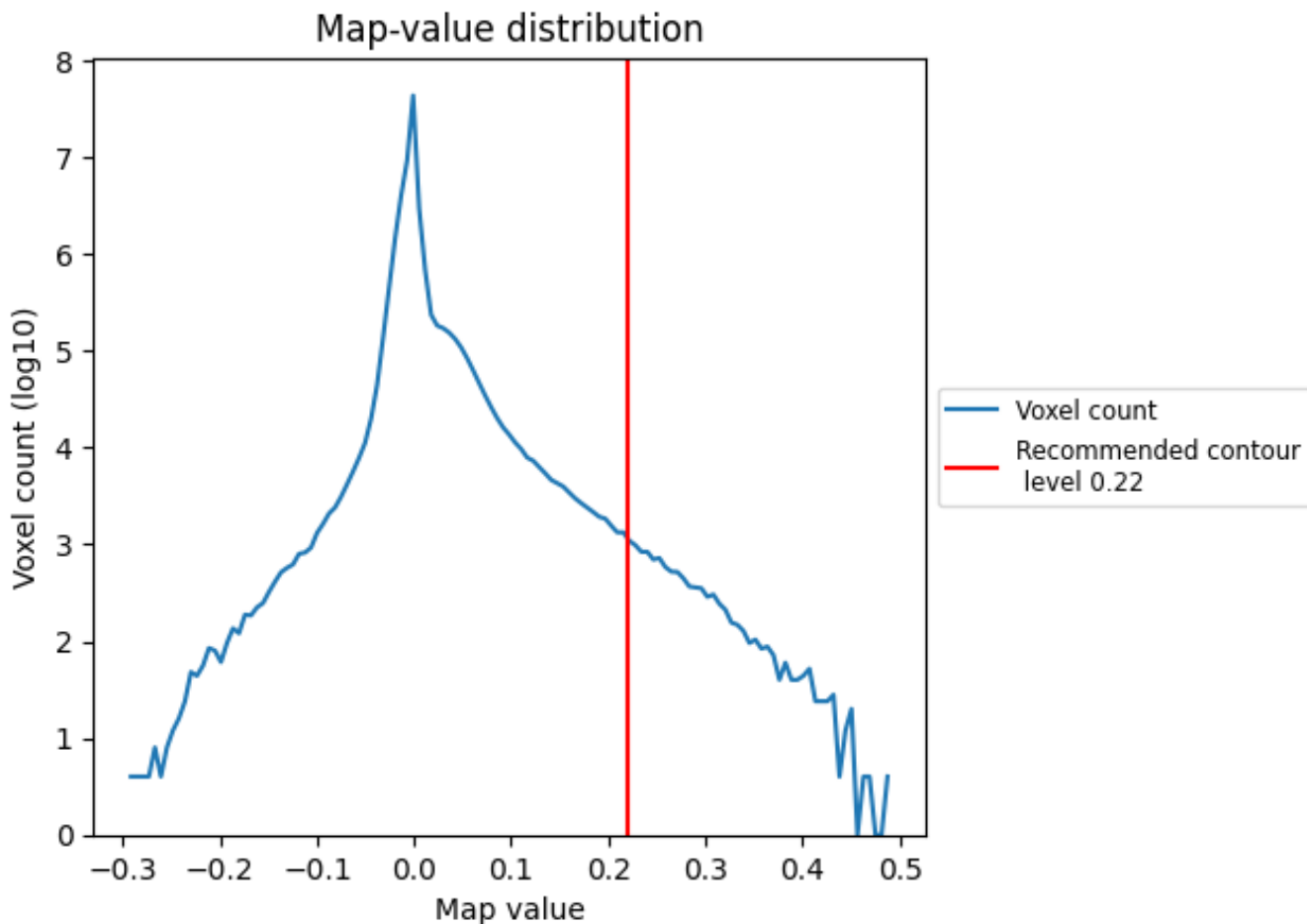
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

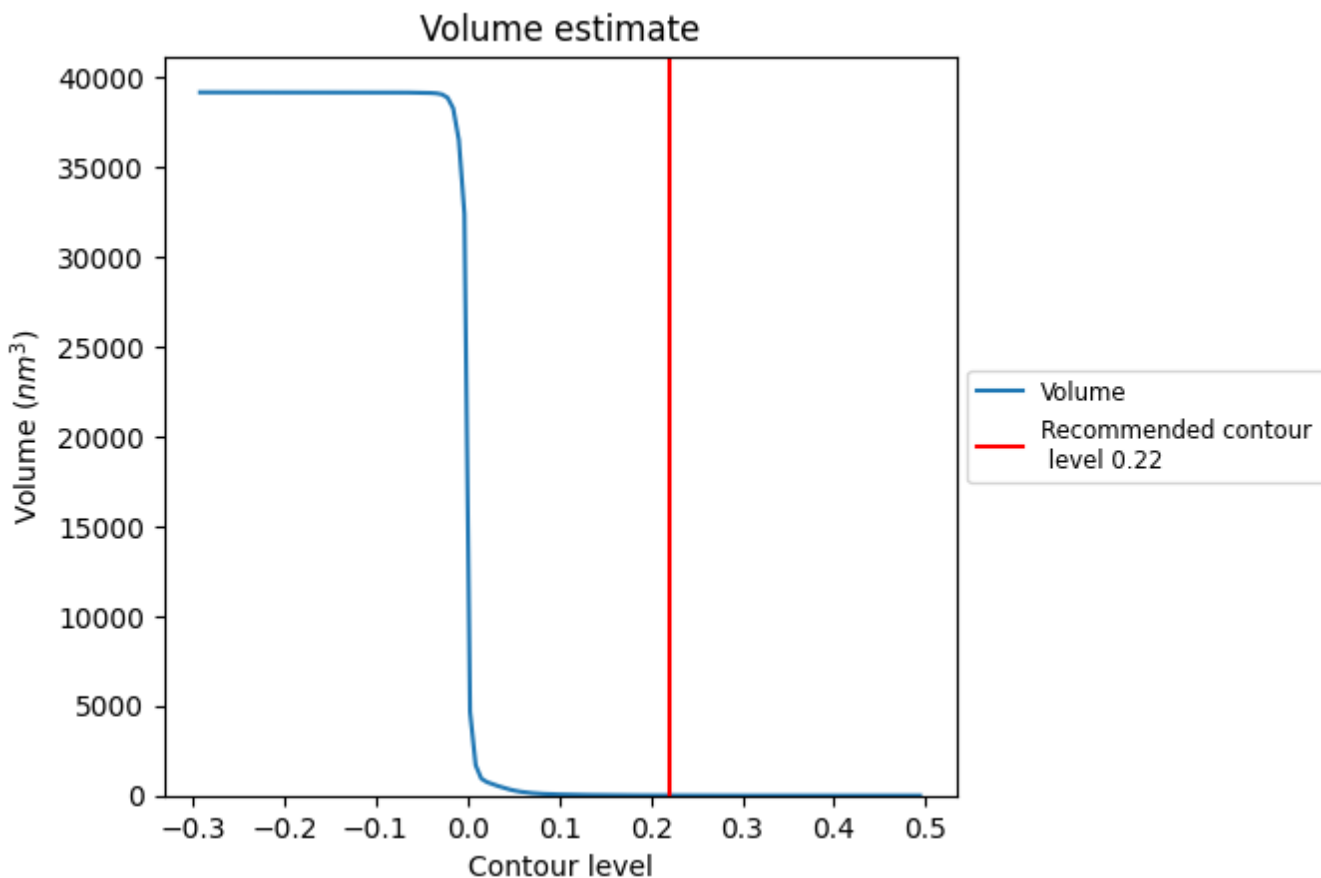
This section contains the results of statistical analysis of the map.

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.

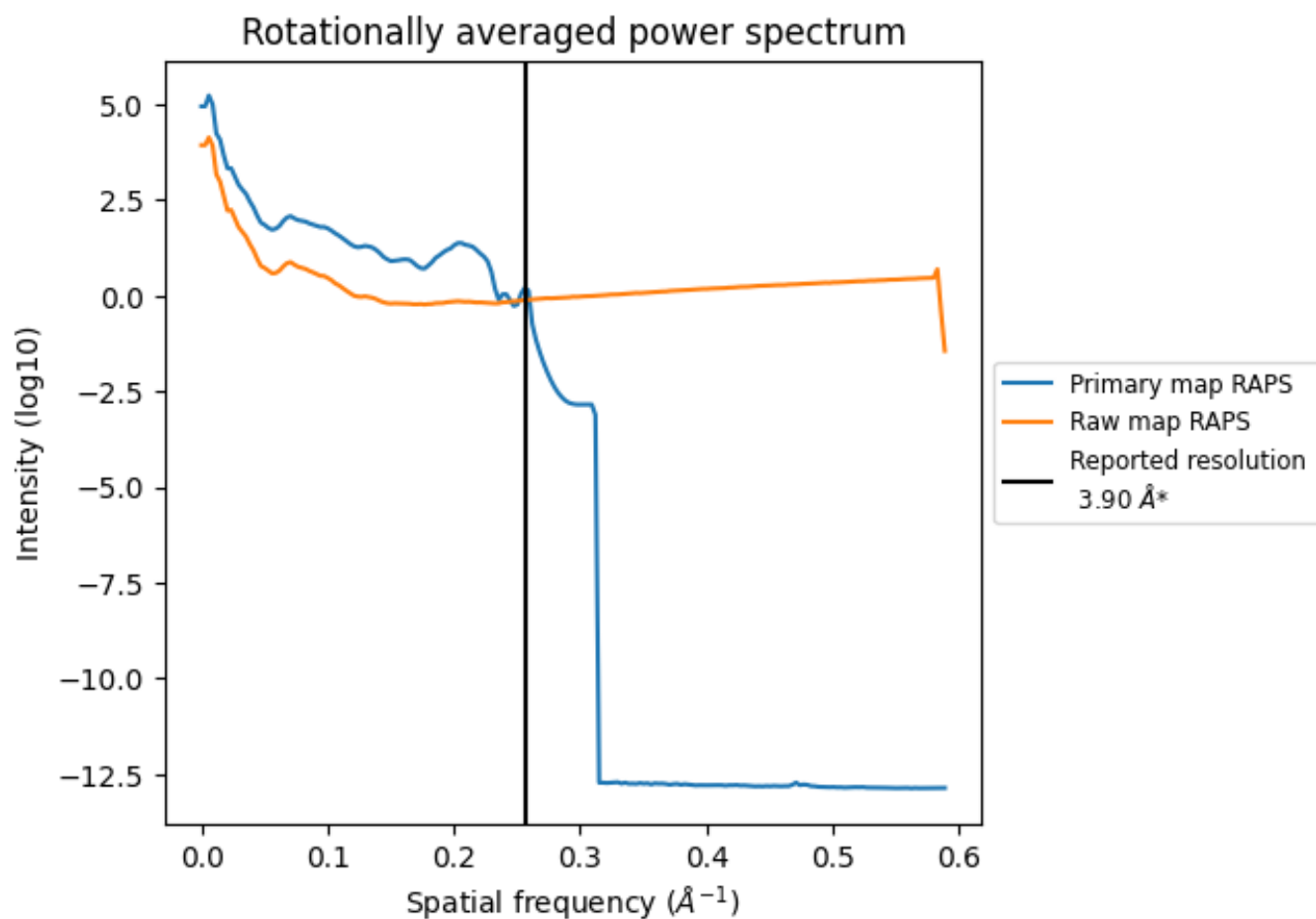
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 7 nm³; this corresponds to an approximate mass of 6 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 [\(i\)](#)

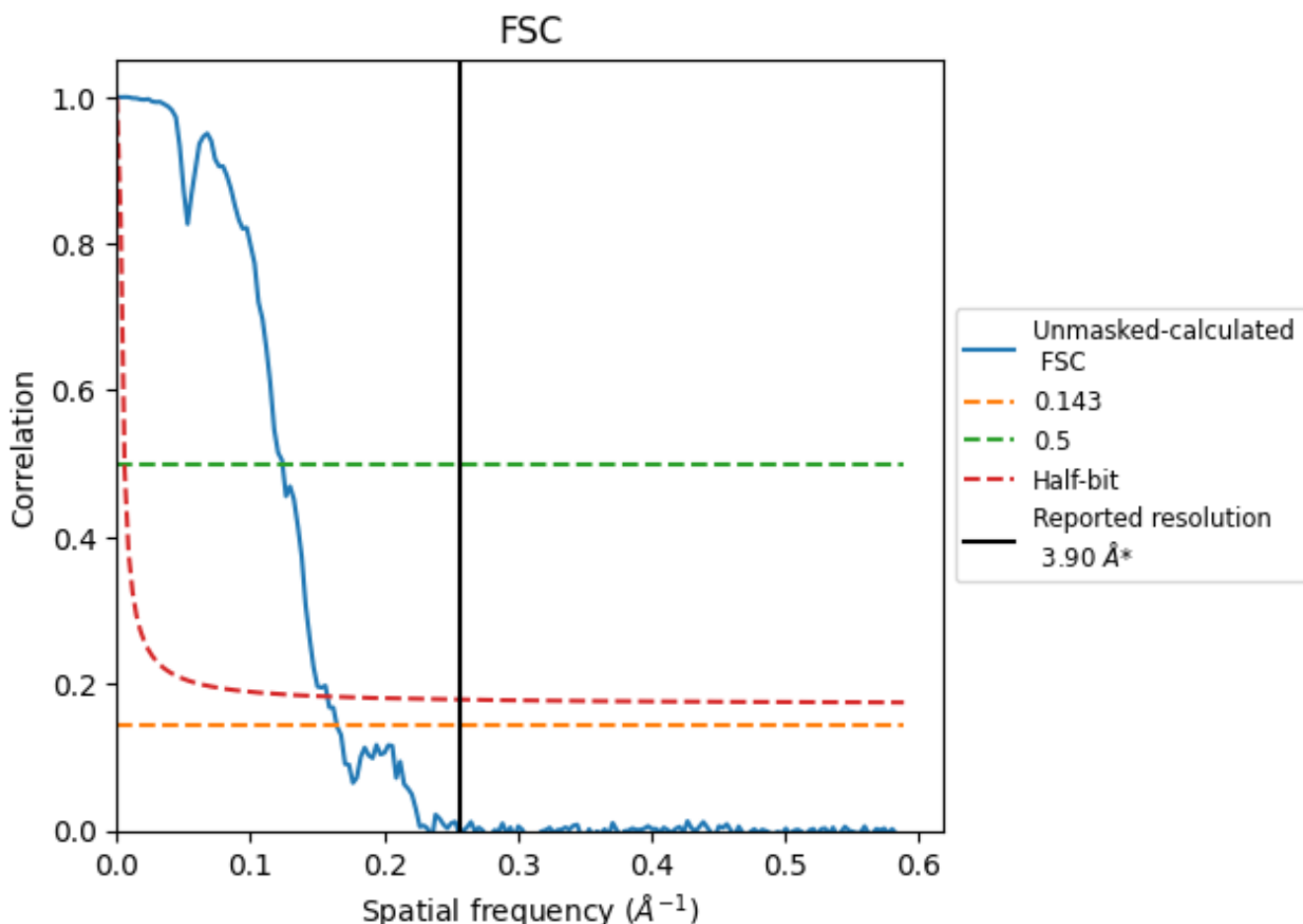


*Reported resolution corresponds to spatial frequency of 0.256 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.256 \AA^{-1}

8.2 Resolution estimates [i](#)

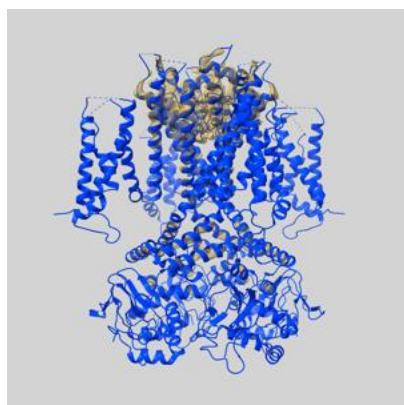
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.07	8.07	6.35

*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 6.07 differs from the reported value 3.9 by more than 10 %

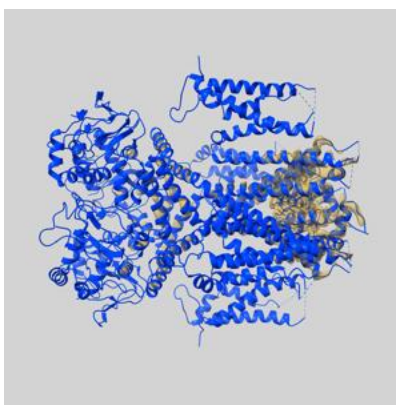
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-35614 and PDB model 8IOB. Per-residue inclusion information can be found in section 3 on page 4.

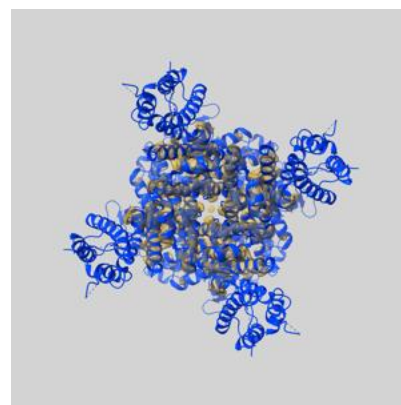
9.1 Map-model overlay [i](#)



X



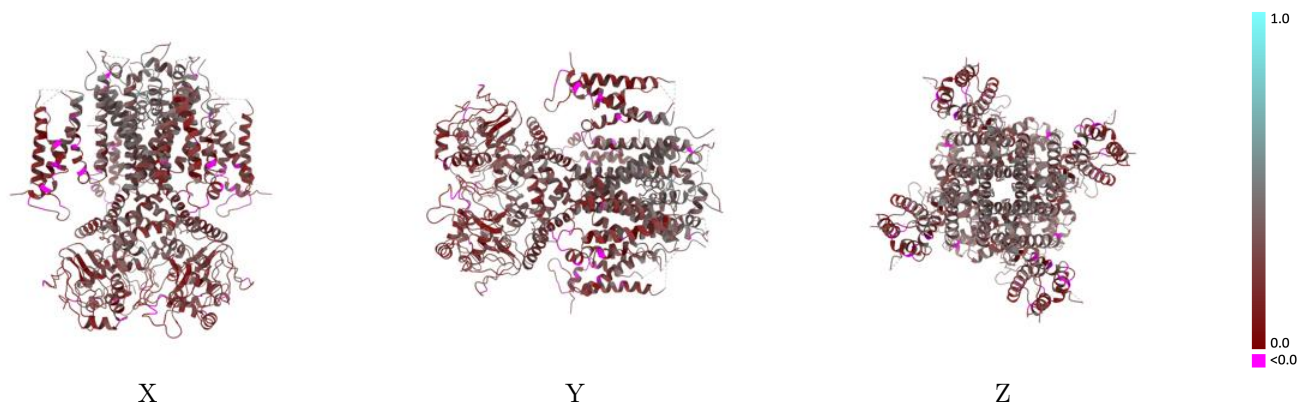
Y



Z

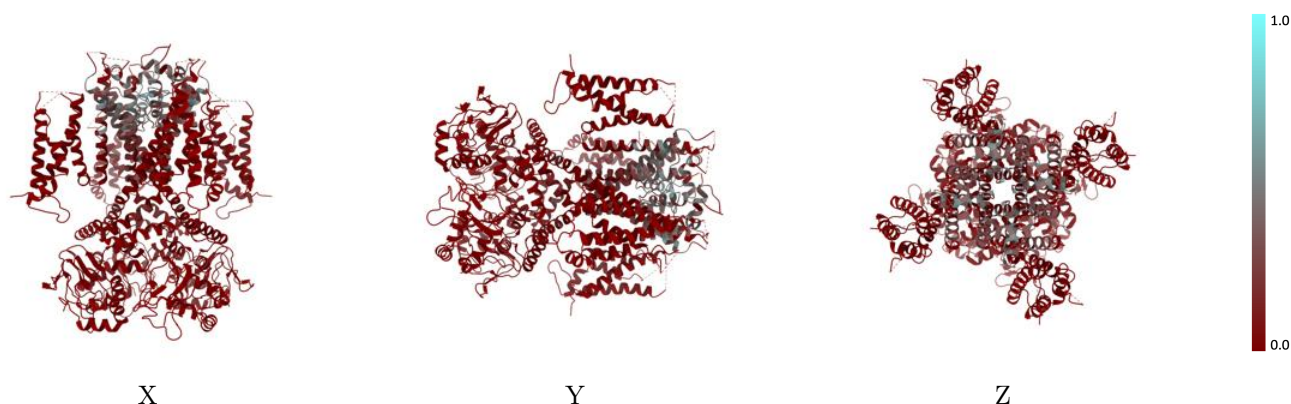
The images above show the 3D surface view of the map at the recommended contour level 0.22 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



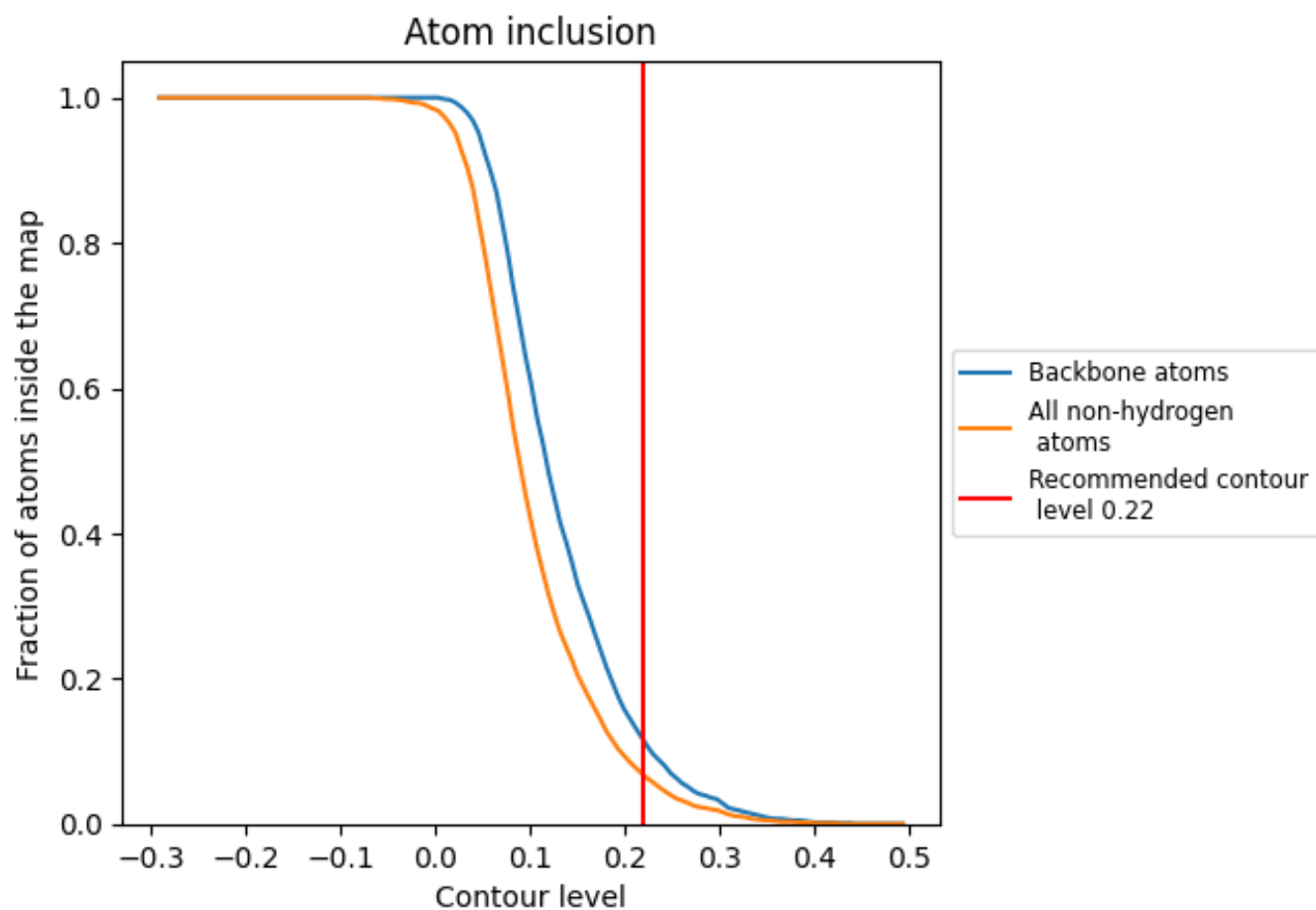
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.22).











9.4 Atom inclusion [i](#)



At the recommended contour level, 12% of all backbone atoms, 7% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.22) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.0670	 0.2710
A	 0.0680	 0.2700
B	 0.0690	 0.2720
C	 0.0670	 0.2730
D	 0.0660	 0.2710

