



wwPDB EM Validation Summary Report ⓘ

Mar 5, 2026 – 03:45 PM UTC

PDB ID : 8ZYQ / pdb_00008zyq
EMDB ID : EMD-60576
Title : Cryo-EM Structure of pimozone-bound hERG Channel
Authors : Miyashita, Y.; Moriya, T.; Kato, T.; Kawasaki, M.; Yasuda, Y.; Adachi, N.;
Suzuki, K.; Ogasawara, S.; Saito, T.; Senda, T.; Murata, T.
Deposited on : 2024-06-18
Resolution : 3.18 Å(reported)

This is a wwPDB EM Validation Summary 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.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

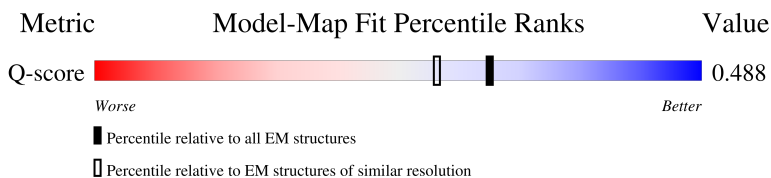
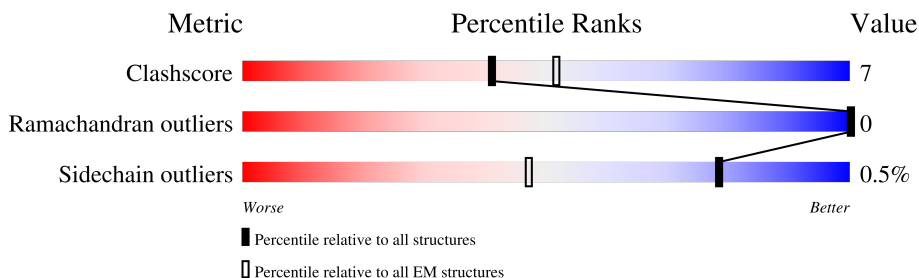
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.18 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	14470 (2.68 - 3.68)

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	820	
1	B	820	
1	C	820	
1	D	820	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 6329 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
1	A	166	Total	C	N	O	S	0	0
			1309	873	215	214	7		
1	B	210	Total	C	N	O	S	0	0
			1662	1117	267	270	8		
1	C	210	Total	C	N	O	S	0	0
			1662	1117	267	270	8		
1	D	210	Total	C	N	O	S	0	0
			1662	1117	267	270	8		

There are 24 discrepancies between the modelled and reference sequences:

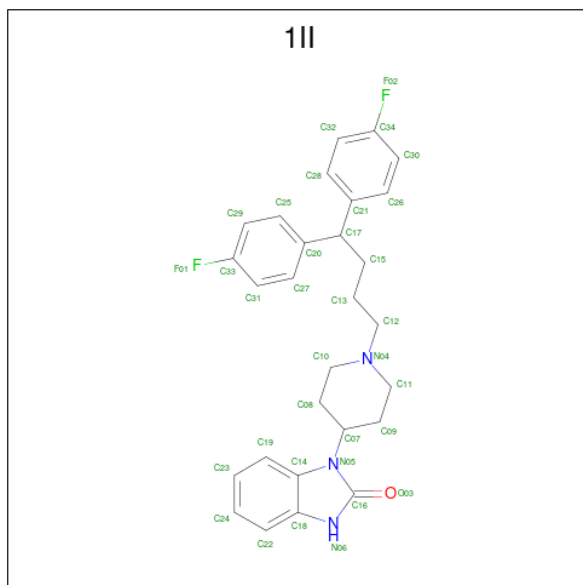
Chain	Residue	Modelled	Actual	Comment	Reference
A	1025	LEU	-	expression tag	UNP Q12809
A	1026	GLU	-	expression tag	UNP Q12809
A	1027	VAL	-	expression tag	UNP Q12809
A	1028	LEU	-	expression tag	UNP Q12809
A	1029	PHE	-	expression tag	UNP Q12809
A	1030	GLN	-	expression tag	UNP Q12809
B	1025	LEU	-	expression tag	UNP Q12809
B	1026	GLU	-	expression tag	UNP Q12809
B	1027	VAL	-	expression tag	UNP Q12809
B	1028	LEU	-	expression tag	UNP Q12809
B	1029	PHE	-	expression tag	UNP Q12809
B	1030	GLN	-	expression tag	UNP Q12809
C	1025	LEU	-	expression tag	UNP Q12809
C	1026	GLU	-	expression tag	UNP Q12809
C	1027	VAL	-	expression tag	UNP Q12809
C	1028	LEU	-	expression tag	UNP Q12809
C	1029	PHE	-	expression tag	UNP Q12809
C	1030	GLN	-	expression tag	UNP Q12809
D	1025	LEU	-	expression tag	UNP Q12809
D	1026	GLU	-	expression tag	UNP Q12809
D	1027	VAL	-	expression tag	UNP Q12809
D	1028	LEU	-	expression tag	UNP Q12809

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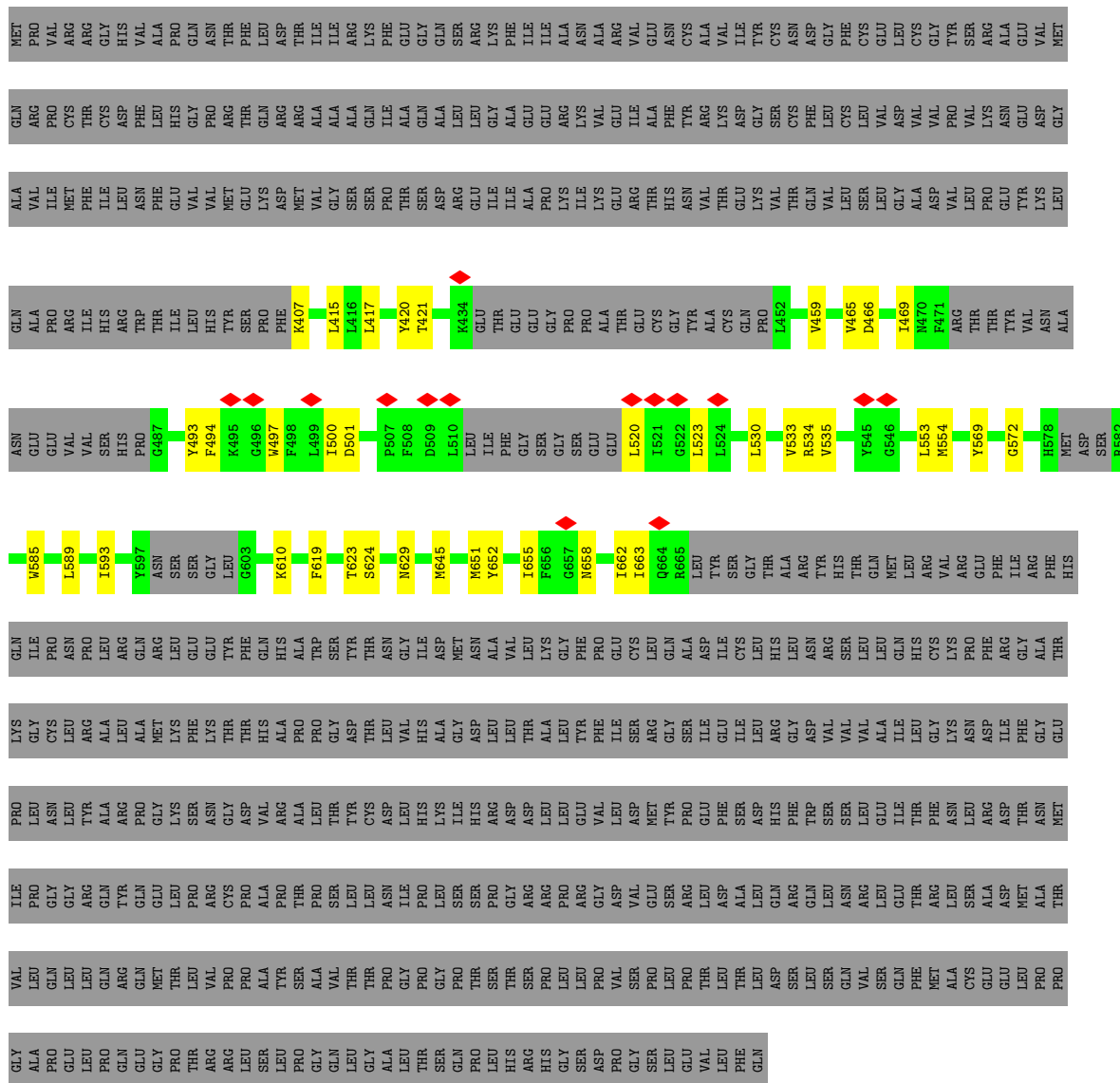
Chain	Residue	Modelled	Actual	Comment	Reference
D	1029	PHE	-	expression tag	UNP Q12809
D	1030	GLN	-	expression tag	UNP Q12809

- Molecule 2 is 3-[1-[4,4-bis(4-fluorophenyl)butyl]piperidin-4-yl]-1 {H}-benzimidazol-2-one (CCD ID: 1II) (formula: C₂₈H₂₉F₂N₃O) (labeled as "Ligand of Interest" by depositor).

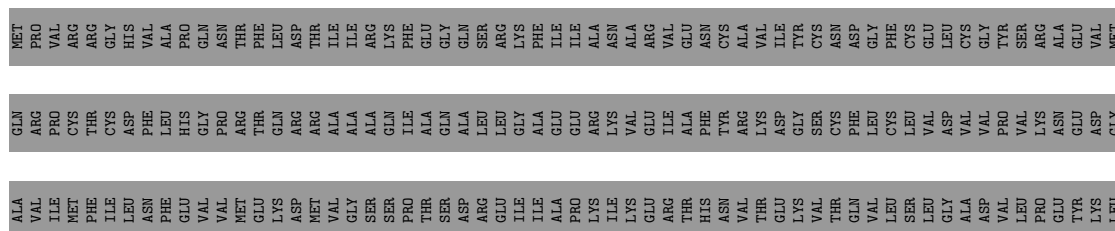


Mol	Chain	Residues	Atoms					AltConf
2	B	1	Total	C	F	N	O	0
			34	28	2	3	1	

Chain B:



Chain C:



PHE	THR	THR	THR	LEU	HIS	ARG	Q592
MET	ARG	PHE	ASN	GLY	CYS	VAL	Q593
ALA	LEU	ASN	GLY	ASN	PRO	GLU	I593
CYS	SER	ARG	LEU	ASP	PHE	PHE	Y597
GLU	ASP	ASP	ASP	ILE	ARG	ILE	ASN
GLU	MET	THR	THR	PHE	GLY	ARG	SER
PRO	ALA	ASN	ALA	GLY	PHE	SER	GLY
PRO	THR	MET	GLU	GLU	THR	HIS	LEU
GLY	VAL	ILE	ILE	PRO	LYS	GLN	G603
ALA	LEU	PRO	GLY	LEU	GLY	ILE	G603
ALA	GLN	GLY	GLY	ASN	CYS	PRO	G610
GLU	LEU	GLY	GLY	LEU	LEU	ASN	G610
GLU	LEU	ARG	ARG	TYR	ALA	PRO	T613
PRO	GLN	GLN	GLN	ALA	ALA	LEU	T613
GLN	ARG	TYR	TYR	ARG	LEU	GLN	F619
GLU	GLN	GLN	GLN	PRO	ALA	GLN	F619
GLY	MET	GLU	GLU	GLY	MET	ARG	T623
THR	THR	LEU	LEU	LYS	LYS	LEU	T623
PRO	PRO	PRO	ARG	SER	PHE	GLU	S624
VAL	ARG	ARG	ASN	GLY	LYS	GLU	V625
PRO	VAL	PRO	CYS	ASN	THR	TYR	G626
ARG	ARG	PRO	PRO	ASP	THR	PHE	F627
LEU	PRO	PRO	ALA	VAL	HIS	GLN	F632
SER	ALA	ALA	ALA	VAL	ALA	HIS	F632
LEU	TYR	PRO	PRO	ARG	PRO	ALA	I642
PRO	SER	THR	THR	ALA	PRO	TRP	I642
GLY	ALA	PRO	PRO	LEU	GLY	SER	M645
GLN	VAL	SER	SER	THR	GLY	TYR	M645
LEU	THR	LEU	LEU	CYS	ASP	THR	L646
GLY	THR	THR	LEU	THR	THR	THR	L647
ALA	PRO	ASN	ASN	ASP	LEU	ASN	G648
LEU	GLY	ILE	ILE	LEU	VAL	GLY	G648
THR	PRO	PRO	PRO	HIS	ILE	ILE	G652
SER	GLY	LEU	LEU	LYS	ALA	ASP	Y652
GLN	PRO	SER	SER	ILE	GLY	MET	A653
PRO	THR	SER	SER	THR	ASN	ASN	S654
LEU	SER	PRO	PRO	ARG	ALA	ALA	I655
HIS	THR	GLY	GLY	ASP	LEU	VAL	F656
GLY	SER	ARG	ARG	ASP	THR	LEU	F656
HIS	PRO	ARG	ARG	LEU	ALA	LYS	G657
GLY	LEU	PRO	PRO	LEU	LEU	GLY	M658
SER	LEU	ARG	ARG	GLU	THR	PHE	V659
SER	PRO	GLY	GLY	VAL	PHE	PRO	S660
PRO	VAL	ASP	ASP	LEU	ILE	GLU	A661
GLY	SER	VAL	VAL	LEU	ILE	GLU	A661
SER	PRO	GLU	GLU	ASP	SER	CYS	I662
LEU	LEU	SER	SER	MET	ARG	LEU	I662
GLU	PRO	ARG	ARG	TYR	GLY	GLN	I663
VAL	THR	LEU	LEU	GLU	SER	ALA	Q664
LEU	LEU	ASP	ASP	GLY	ILE	ASP	Q664
PHE	LEU	LEU	LEU	PHE	GLY	ILE	R665
GLN	THR	ALA	ALA	PHE	GLY	ILE	R665
	ASP	LEU	LEU	ASP	GLY	CYS	TYR
	LEU	LEU	LEU	ASP	GLY	GLY	SER
	ASP	GLN	GLN	ASP	THR	LEU	THR
	SER	LEU	LEU	THR	ASP	ASN	ALA
	GLN	SER	ASN	SER	VAL	ARG	ARG
	VAL	ASN	GLN	SER	VAL	SER	TYR
	GLN	VAL	ASN	LEU	VAL	LEU	HIS
	SER	LEU	LEU	GLU	ALA	LEU	THR
	GLN	GLU	GLU	ILE	ILE	GLN	GLN
							MET

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	98139	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.311	Depositor
Minimum map value	-0.926	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.15	Depositor
Map size (Å)	298.8, 298.8, 298.8	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.83, 0.83, 0.83	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section:
1II

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	0.14	0/1341	0.31	0/1818
1	B	0.11	0/1702	0.28	0/2309
1	C	0.12	0/1702	0.27	0/2309
1	D	0.13	0/1702	0.29	0/2309
All	All	0.12	0/6447	0.29	0/8745

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 [i](#)

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	1309	0	1355	24	0
1	B	1662	0	1717	25	0
1	C	1662	0	1717	23	0
1	D	1662	0	1717	24	0
2	B	34	0	0	1	0
All	All	6329	0	6506	88	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 7.

The worst 5 of 88 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:428:SER:HA	1:A:432:LEU:HD23	1.72	0.71
1:C:569:TYR:HE1	1:C:610:LYS:HD2	1.59	0.68
1:B:651:MET:HE3	1:B:655:ILE:HD12	1.74	0.68
1:D:564:LEU:HD11	1:D:647:ILE:HD11	1.75	0.67
1:D:569:TYR:HE1	1:D:610:LYS:HD2	1.59	0.66

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	158/820 (19%)	152 (96%)	6 (4%)	0	100	100
1	B	198/820 (24%)	194 (98%)	4 (2%)	0	100	100
1	C	198/820 (24%)	193 (98%)	5 (2%)	0	100	100
1	D	198/820 (24%)	192 (97%)	6 (3%)	0	100	100
All	All	752/3280 (23%)	731 (97%)	21 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	137/706 (19%)	136 (99%)	1 (1%)	76	81
1	B	174/706 (25%)	172 (99%)	2 (1%)	65	77
1	C	174/706 (25%)	174 (100%)	0	100	100
1	D	174/706 (25%)	174 (100%)	0	100	100
All	All	659/2824 (23%)	656 (100%)	3 (0%)	78	83

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	597	TYR
1	B	494	PHE
1	B	663	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	576	GLN
1	B	576	GLN
1	D	633	ASN

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
2	1II	B	1101	-	38,38,38	2.45	11 (28%)	53,53,53	1.97	12 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	1II	B	1101	-	-	7/18/28/28	0/5/5/5

The worst 5 of 11 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1101	1II	F02-C34	-7.06	1.19	1.36
2	B	1101	1II	C20-C17	-5.23	1.40	1.53
2	B	1101	1II	C21-C17	-4.96	1.40	1.53
2	B	1101	1II	C19-C14	-4.48	1.32	1.39
2	B	1101	1II	C16-N06	-4.39	1.32	1.37

The worst 5 of 12 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1101	1II	O03-C16-N06	-5.91	122.39	127.49
2	B	1101	1II	C14-N05-C16	-5.49	105.54	109.24
2	B	1101	1II	C18-N06-C16	-5.31	107.02	110.27
2	B	1101	1II	C23-C24-C22	-3.22	116.27	120.24
2	B	1101	1II	N06-C16-N05	3.19	110.53	106.69

There are no chirality outliers.

5 of 7 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	1101	1II	C08-C07-N05-C14
2	B	1101	1II	C08-C07-N05-C16
2	B	1101	1II	C13-C15-C17-C20

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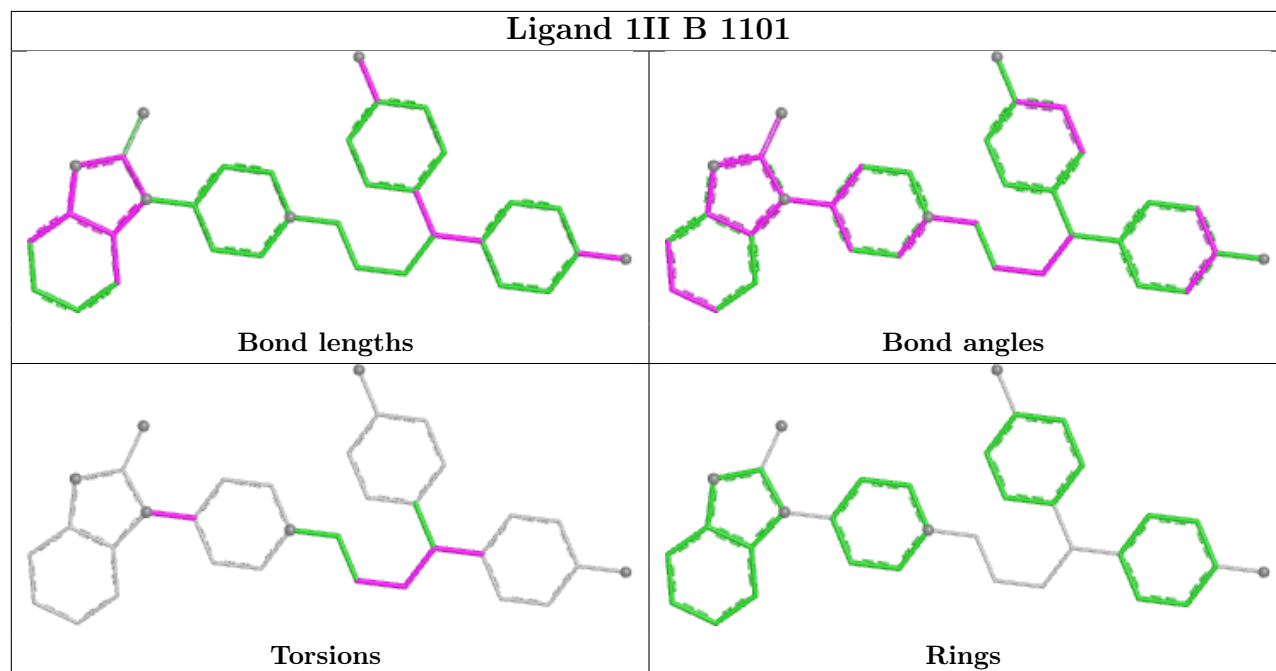
Mol	Chain	Res	Type	Atoms
2	B	1101	1II	C13-C15-C17-C21
2	B	1101	1II	C12-C13-C15-C17

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1101	1II	1	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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

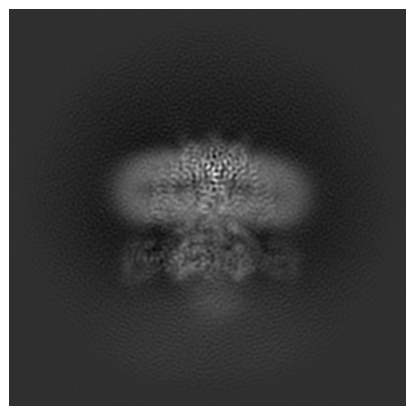
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-60576. These allow visual inspection of the internal detail of the map and identification of artifacts.

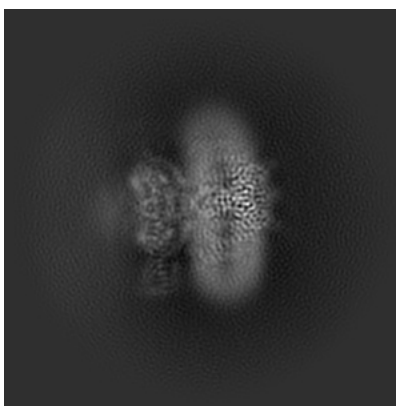
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

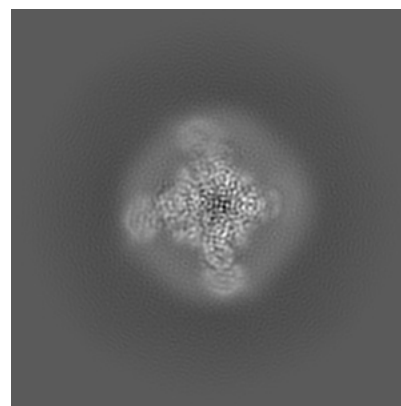
6.1.1 Primary map



X

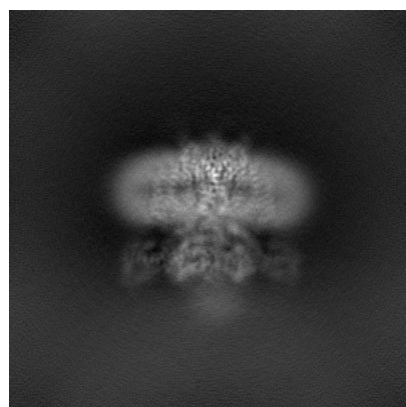


Y

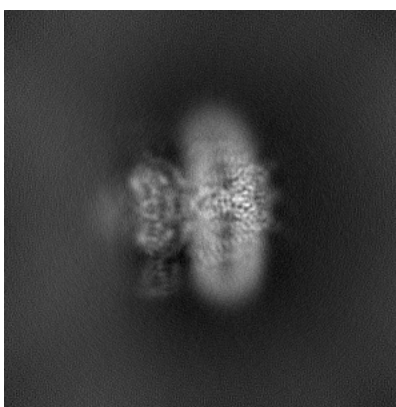


Z

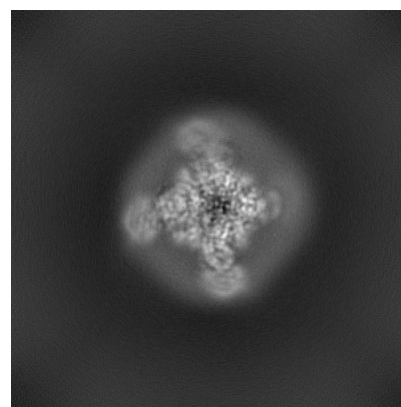
6.1.2 Raw map



X



Y

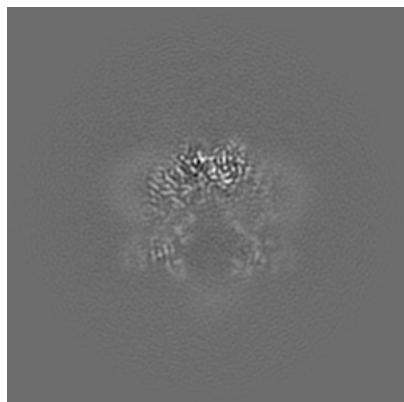


Z

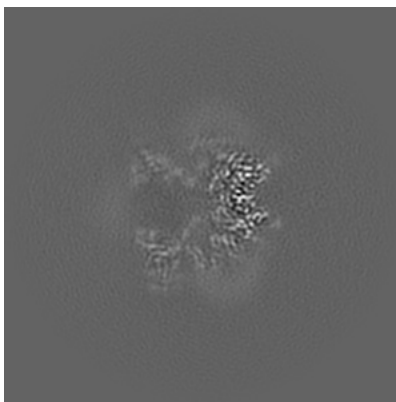
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

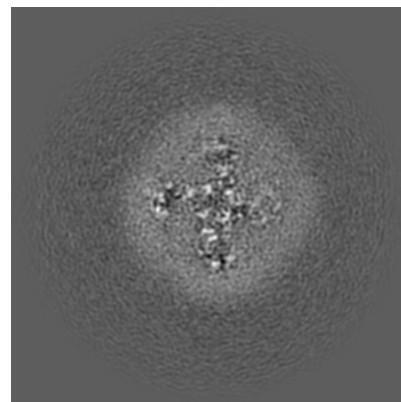
6.2.1 Primary map



X Index: 180

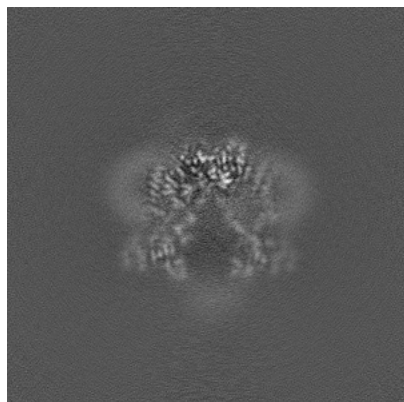


Y Index: 180

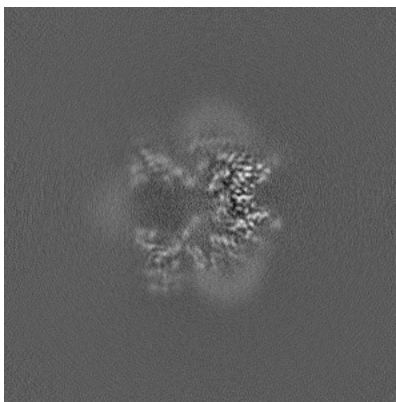


Z Index: 180

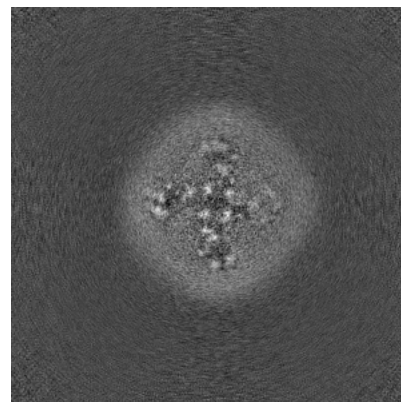
6.2.2 Raw map



X Index: 180



Y Index: 180

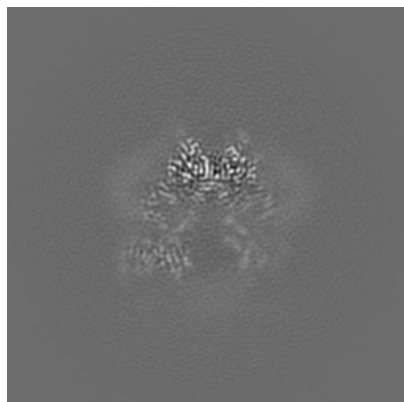


Z Index: 180

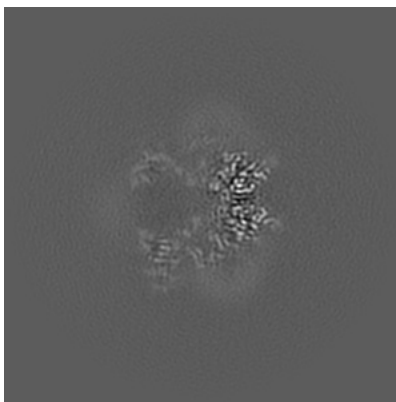
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

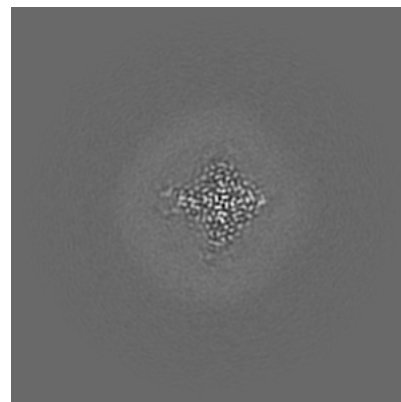
6.3.1 Primary map



X Index: 188

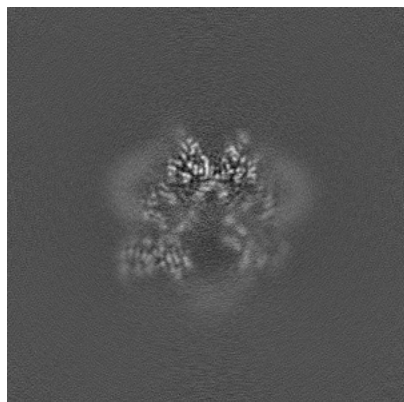


Y Index: 182

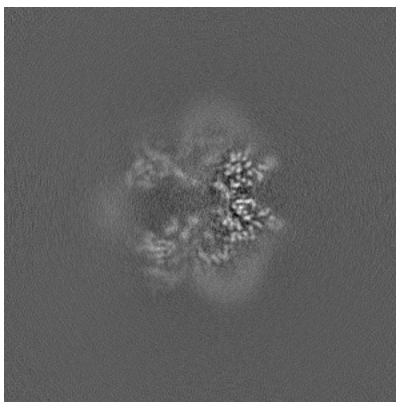


Z Index: 211

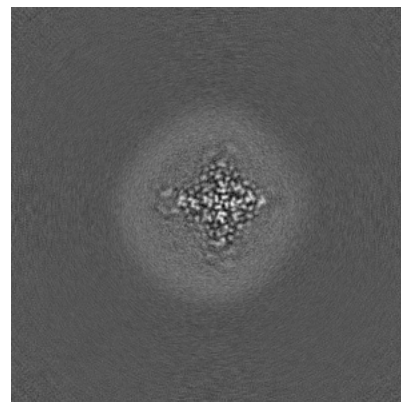
6.3.2 Raw map



X Index: 188



Y Index: 186

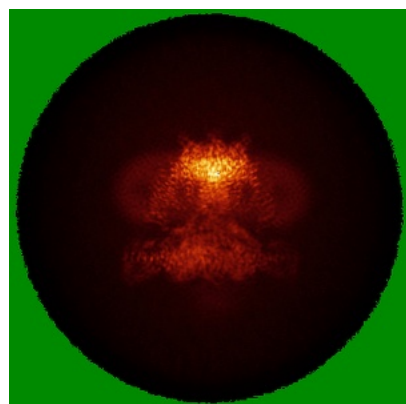


Z Index: 211

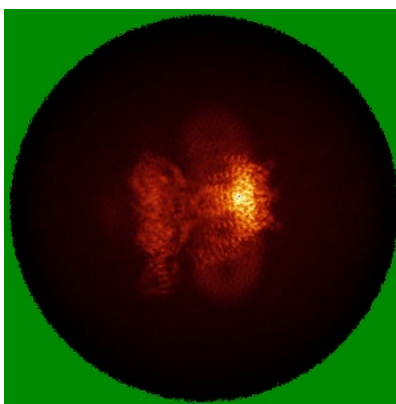
The images above show the largest variance slices of the map in three orthogonal directions.

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

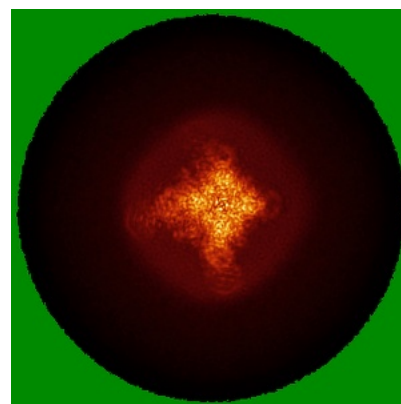
6.4.1 Primary map



X

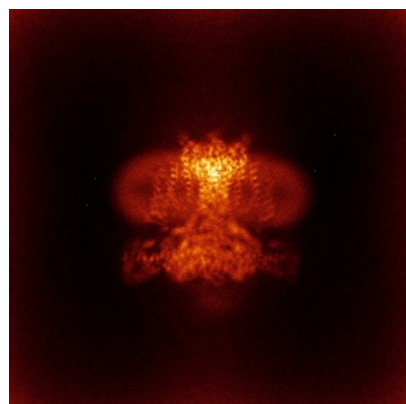


Y

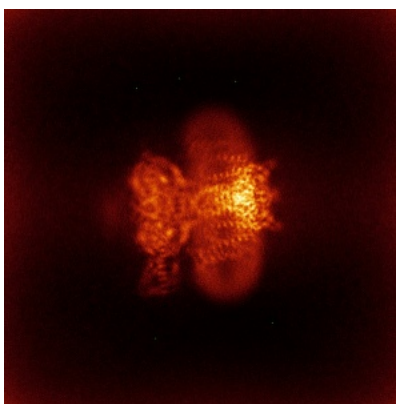


Z

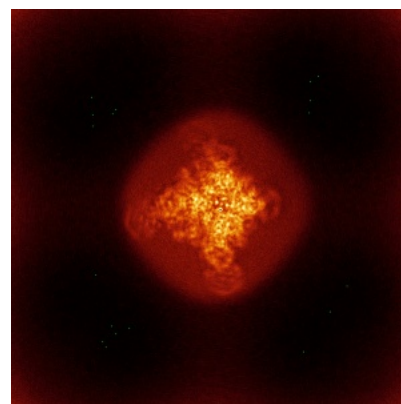
6.4.2 Raw map



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](#)

This section was not generated.

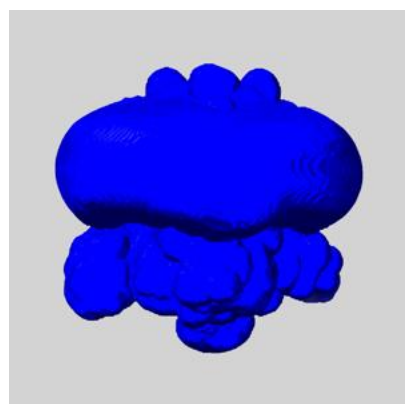
6.6 Mask visualisation [i](#)

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

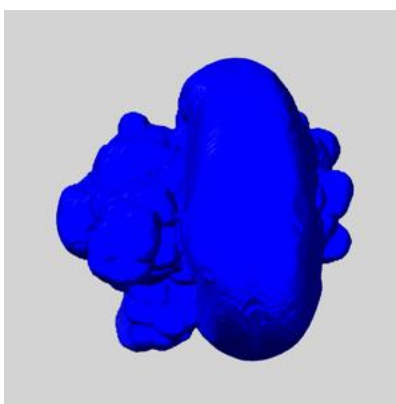
A mask typically either:

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

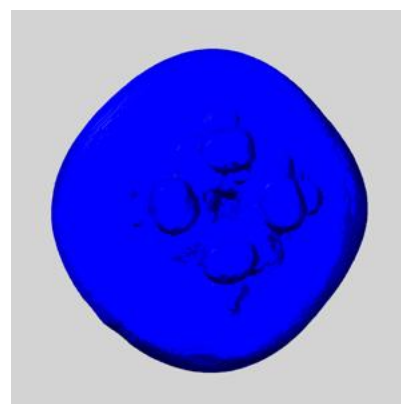
6.6.1 emd_60576_msk_1.map [i](#)



X



Y

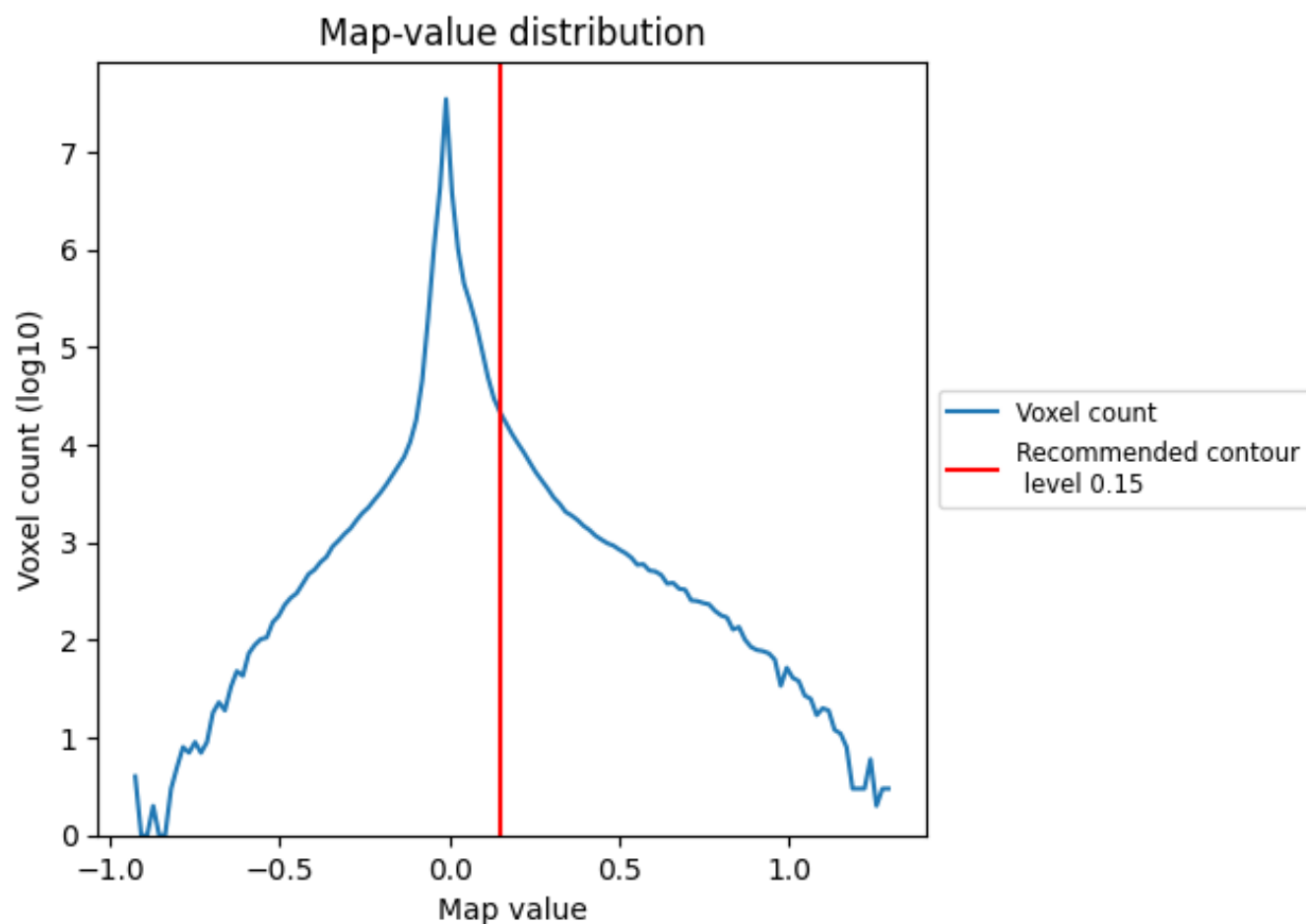


Z

7 Map analysis [i](#)

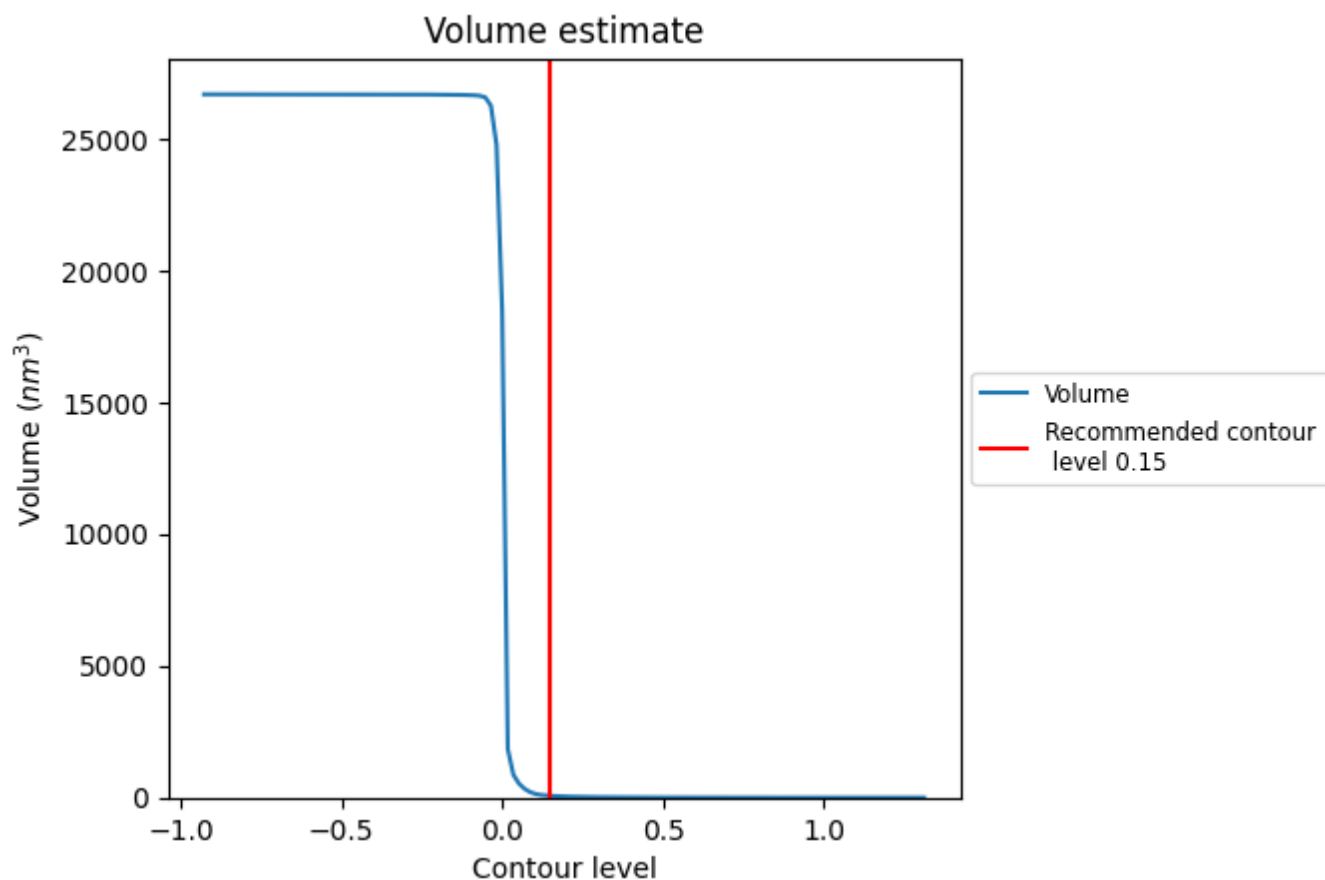
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

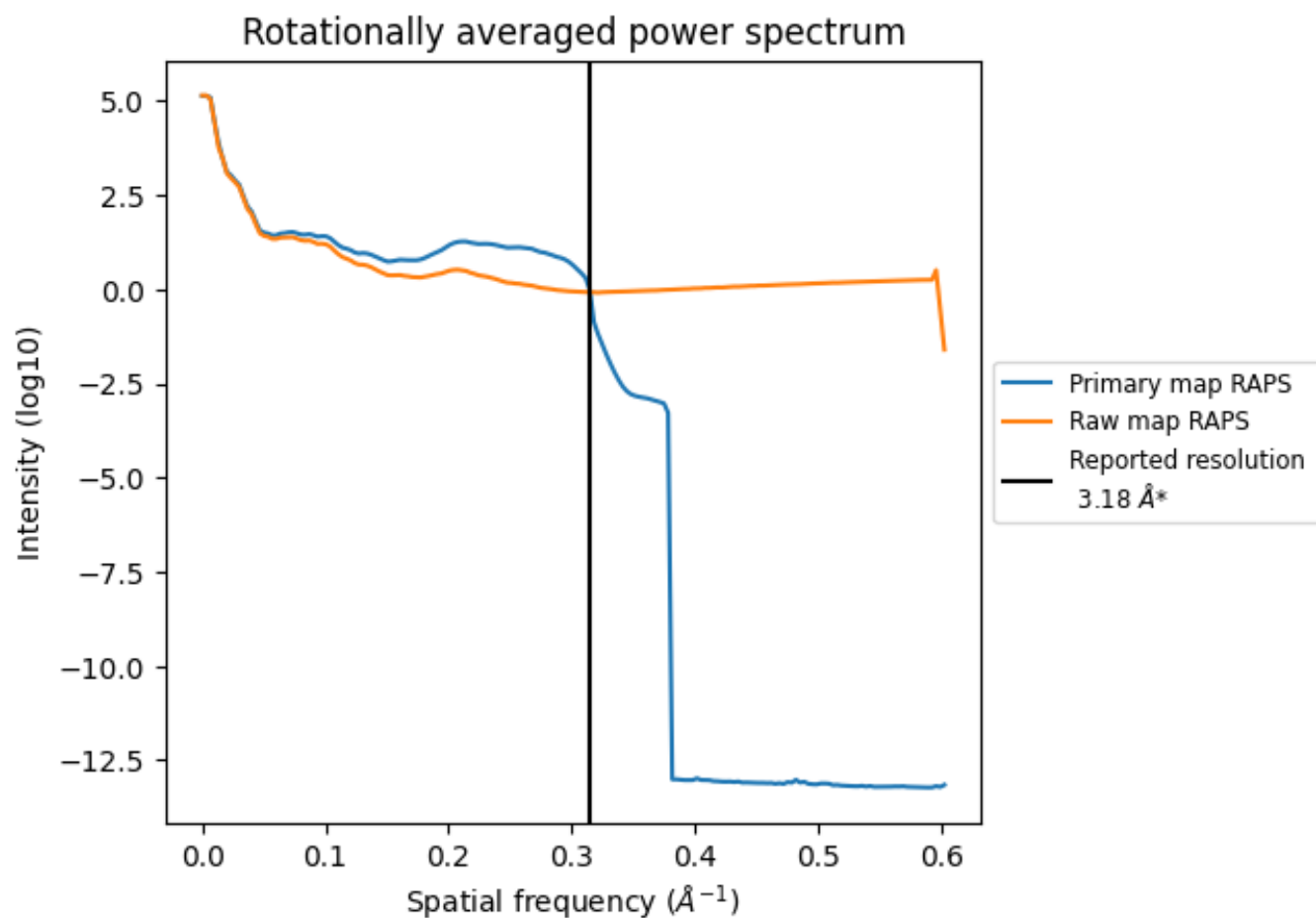
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 66 nm^3 ; this corresponds to an approximate mass of 60 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 ⓘ

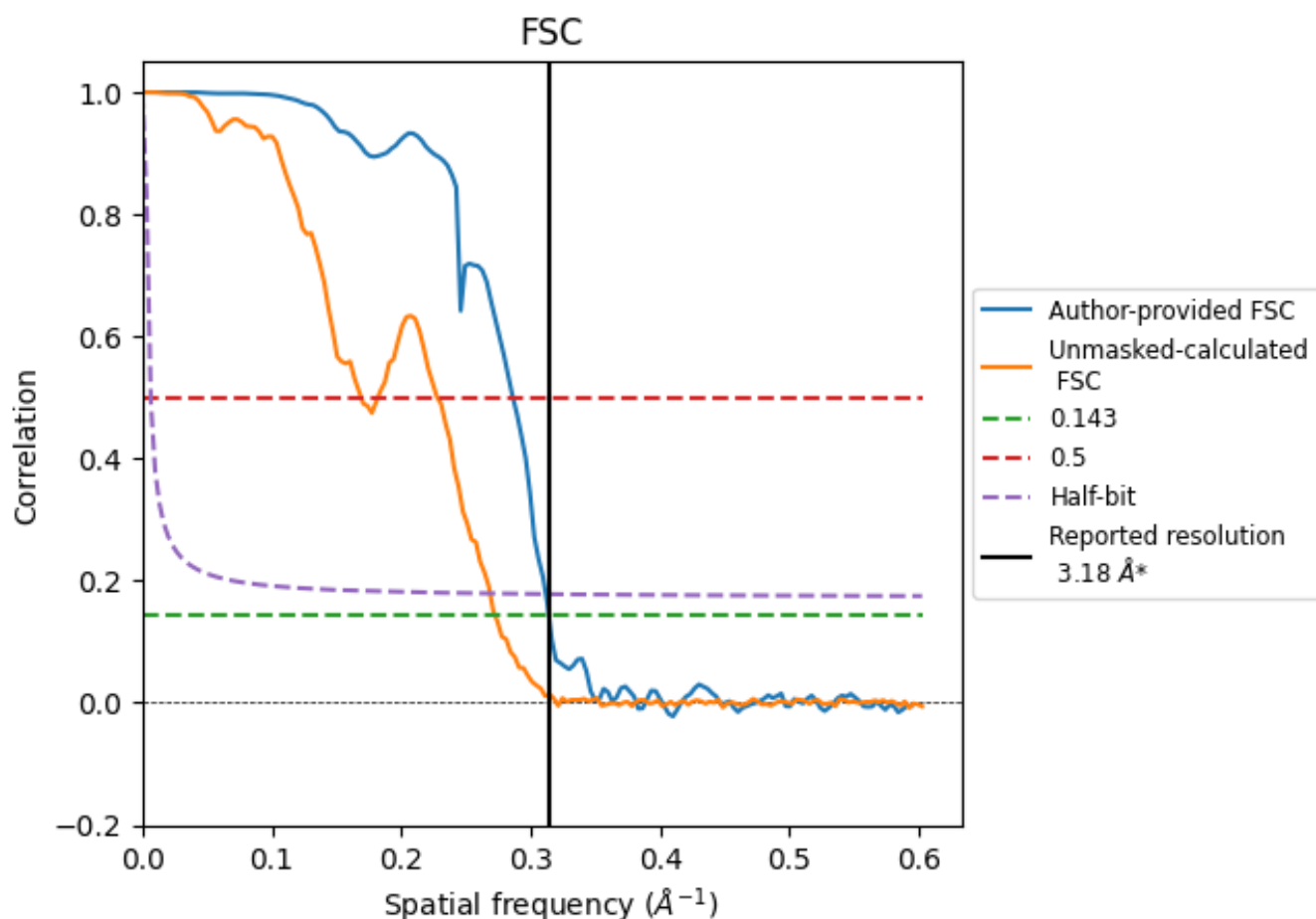


*Reported resolution corresponds to spatial frequency of 0.314 Å⁻¹

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 0.314 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.18	-	-
Author-provided FSC curve	3.18	3.49	3.21
Unmasked-calculated*	3.67	5.91	3.72

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.67 differs from the reported value 3.18 by more than 10 %

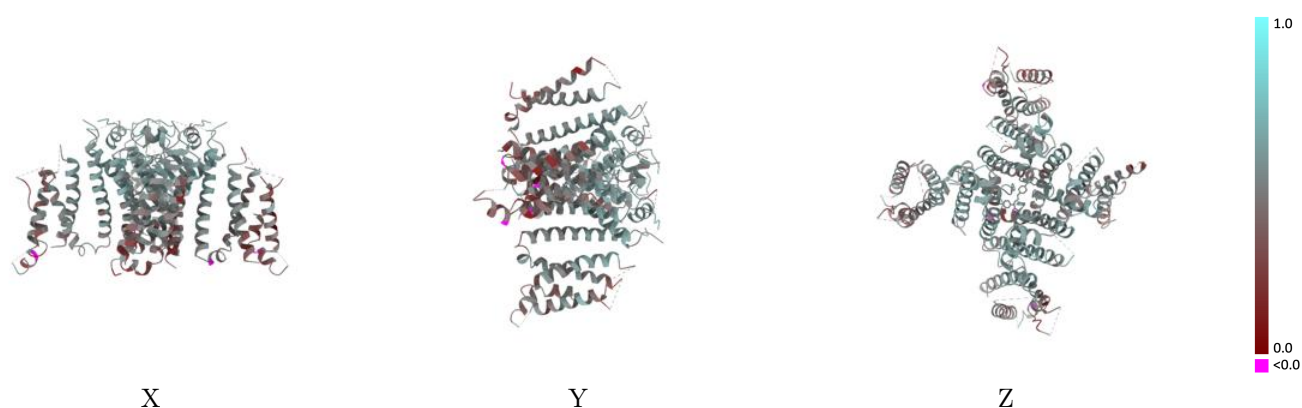
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-60576 and PDB model 8ZYQ. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay [i](#)

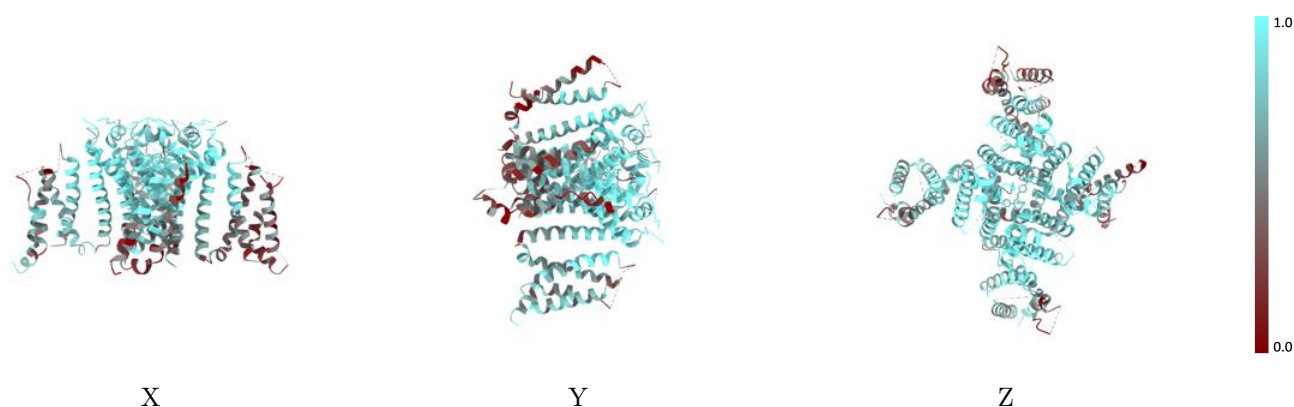
This section was not generated.

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



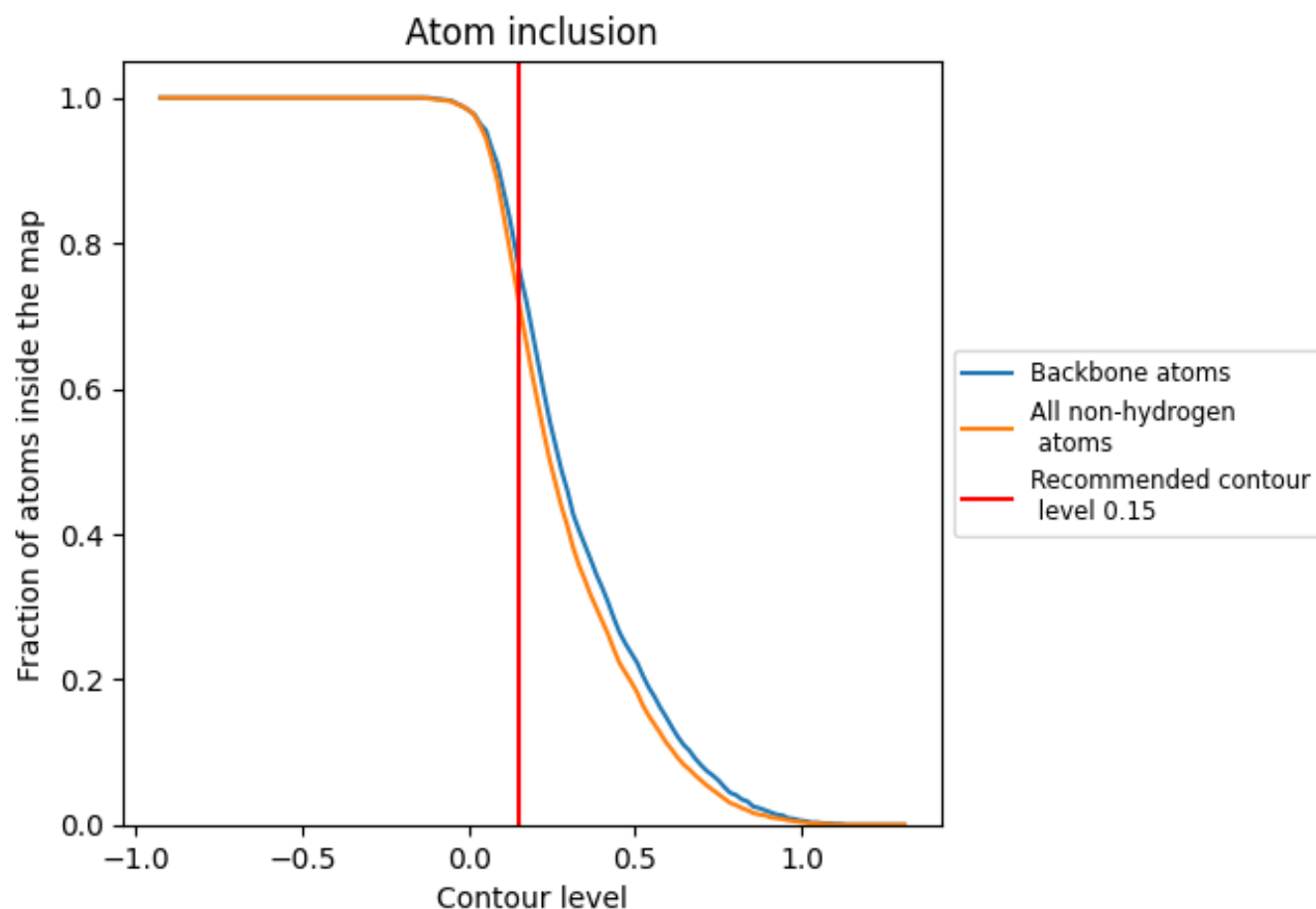
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.15).

9.4 Atom inclusion [i](#)



At the recommended contour level, 77% of all backbone atoms, 72% 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 (0.15) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7220	0.4880
A	0.7040	0.4920
B	0.7730	0.5000
C	0.6440	0.4640
D	0.7610	0.4980

