



Full wwPDB EM Validation Report ⓘ

Sep 22, 2026 – 12:10 PM JST

PDB ID : 25RW / pdb_000025rw
EMDB ID : EMD-80332
Title : Peptidoglycan and lipopolysaccharide biosynthesis enzymes with inhibitor
Authors : Yeo, J.Y.; Yan, X.F.; Gao, Y.G.
Deposited on : 2026-04-16
Resolution : 2.35 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.dev133
Mogul : 1.8.5 (274361), CSD as541be (2020)
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) : 2.50

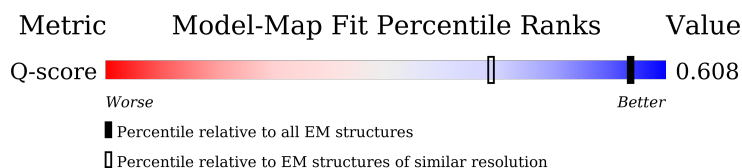
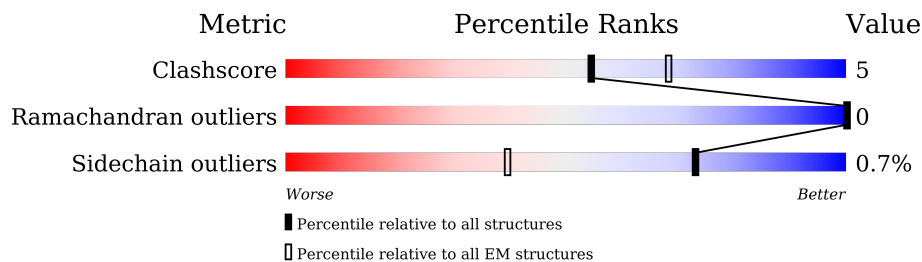
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.35 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	4607 (1.85 - 2.85)

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	724	
1	B	724	

2 Entry composition [i](#)

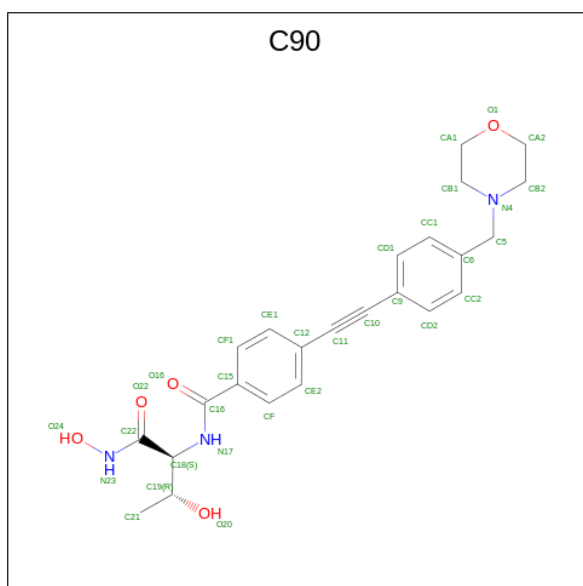
There are 2 unique types of molecules in this entry. The entry contains 5334 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 UDP-N-acetylglucosamine 1-carboxyvinyltransferase,UDP-3-O-acyl-N-acetylglucosamine deacetylase.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	286	Total	C	N	O	S	0	0
			2229	1415	382	426	6		
1	B	412	Total	C	N	O	S	0	0
			3073	1937	536	581	19		

- Molecule 2 is N-{(1S,2R)-2-hydroxy-1-[(hydroxyamino)carbonyl]propyl}-4-{[4-(morpholin-4-ylmethyl)phenyl]ethynyl}benzamide (CCD ID: C90) (formula: C₂₄H₂₇N₃O₅) (labeled as "Ligand of Interest" by depositor).



Ile	Val	Ile	Ser	Leu	Thr	H337
Ala	Ala	Val	Phe	Ser	Gly	V338
Asp	Asp	Val	Glu	Ala	Ile	R343
Lys	Asp	Ile	Ser	Ser	Val	R343
Ala	Asn	Glu	Phe	Glu	Phe	I348
Trp	Arg	Asp	Asp	Pro	Arg	V357
Glu	Val	Val	His	Ile	Thr	V357
Val	Asn	Pro	Pro	Met	Asp	P367
Val	Leu	Val	Val	Asp	Leu	P367
Thr	Glu	Glu	Phe	Gly	Asp	D372
Phe	Asp	Arg	Arg	Ser	Pro	D372
Glu	Gly	Gly	Gly	Ala	Val	L373
Asp	Leu	Arg	Arg	Gly	Val	L373
Ala	Arg	Arg	Thr	Pro	Glu	R374
Arg	Tyr	Glu	Gln	Phe	Ile	L391
Thr	Glu	Gln	Gln	Val	Pro	L391
Ala	Asp	Ala	Ala	Phe	Ala	Q410
Pro	Glu	Ser	Ser	Leu	Arg	Q410
Ile	Phe	Val	Val	Ile	Ala	K415
Ser	Val	Val	Asp	Gln	Glu	I416
Tyr	Lys	Phe	Phe	Ser	Asn	R417
Met	His	Ser	Ser	Ala	Val	R418
Arg	Lys	Ser	Ser	Gly	Gly	R418
Pro	Ile	Thr	Thr	Leu	Glu	V419
Ala	Leu	Ser	Phe	Gln	Thr	V419
Ala	Asp	Ala	Val	Glu	Thr	P420
Ala	Ala	Ala	Val	Gln	Thr	P420
Val	Gly	Ile	Lys	Glu	Met	Gly
	Asp	Glu	Val	Glu	Met	Met
	Leu	Lys	Lys	Glu	Ile	Ile
	Asp	Val	Val	Ala	Lys	Lys
	Leu	Ser	Ser	Ala	Thr	Gln
	Tyr	Arg	Leu	Lys	Thr	Arg
	Leu	Arg	Lys	Lys	Leu	Thr
	Leu	Ala	Phe	Val	Val	Leu
	Leu	Ala	Ile	Phe	Lys	Lys
	Gly	Thr	Arg	Ile	Gly	Asn
	Asn	Phe	Phe	Ile	Val	Ile
	Ser	Gly	Gly	Val	Ile	Ile
	Leu	Leu	Phe	Arg	Val	Arg
	Ile	Met	Met	Glu	Val	Ala
	Gly	Arg	Arg	Val	Thr	Thr
	Glu	Asp	Asp	Ser	Gly	Gly
	Phe	Ile	Ile	Val	Val	Val
	Arg	Glu	Glu	Glu	Glu	Gly
	Gly	Tyr	Glu	Glu	His	Leu
	Phe	Phe	Leu	Gly	Leu	His
	Lys	Ser	Arg	Asp	Ser	Ser
	Ser	Ser	Ser	Lys	Ala	Gly
	Gly	Gln	Gln	Arg	Met	Lys
	His	Asn	Ala	Ala	Lys	Glu
	Leu	Ala	Leu	Val	Gly	Val
	Leu	Ala	Ala	Phe	Leu	Thr
	Asn	Asn	Leu	Val	Gly	Leu
	Asn	Gly	Pro	Pro	Ile	Thr
	Gln	Gly	Phe	Pro	Asp	Thr
	Leu	Ser	Asp	Asn	Lys	Lys
	Leu	Leu	Glu	Ala	Pro	Pro
	Arg	Arg	Val	Phe	Tyr	Ala
	Thr	Thr	Asn	Lys	Val	Pro
			Ala	Val	Glu	Val

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	275131	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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.179	Depositor
Minimum map value	-0.072	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.03	Depositor
Map size ($\text{\AA}$)	194.56, 194.56, 194.56	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.76, 0.76, 0.76	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: C90

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	0.30	0/2266	0.38	0/3060
1	B	0.28	0/3116	0.36	0/4224
All	All	0.29	0/5382	0.36	0/7284

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	2229	0	2237	22	0
1	B	3073	0	3159	32	0
2	A	32	0	27	2	0
All	All	5334	0	5423	55	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 5.

All (55) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:113:LEU:HD11	1:B:140:VAL:HG13	1.55	0.86
1:B:330:VAL:HG12	1:B:331:PHE:CD2	2.23	0.74
1:A:133:ARG:NH2	1:A:277:ASP:OD2	2.23	0.71
1:A:102:ILE:HG23	1:A:102:ILE:O	1.95	0.65
1:A:121:GLU:N	1:A:121:GLU:OE1	2.30	0.65
1:B:113:LEU:HD12	1:B:143:GLY:HA2	1.78	0.64
1:A:176:PHE:CZ	1:A:243:ILE:HD11	2.32	0.64
1:B:96:ILE:HD11	1:B:124:VAL:HG23	1.80	0.61
1:B:372:ASP:N	1:B:372:ASP:OD1	2.35	0.59
1:B:45:PRO:HB2	1:B:47:LEU:HD23	1.84	0.58
1:B:5:ILE:CD1	1:B:419:VAL:HG11	2.34	0.58
1:B:5:ILE:HD12	1:B:419:VAL:HG11	1.86	0.57
1:A:176:PHE:CE2	1:A:243:ILE:HD11	2.40	0.57
1:B:95:SER:O	1:B:98:VAL:HG22	2.05	0.56
1:B:29:LEU:O	1:B:32:THR:OG1	2.23	0.54
1:A:90:ASN:ND2	1:A:122:GLN:OE1	2.41	0.53
1:A:166:ARG:HB3	1:A:166:ARG:NH1	2.23	0.53
1:B:162:ASP:C	1:B:162:ASP:OD1	2.52	0.52
1:B:343:ARG:NH2	1:B:367:PRO:O	2.42	0.52
1:B:338:VAL:CG2	1:B:348:ILE:HG21	2.40	0.52
1:A:70:ASP:N	1:A:70:ASP:OD1	2.44	0.50
1:A:199:TYR:O	1:A:202:SER:OG	2.25	0.48
1:B:410:GLN:HG3	1:B:416:ILE:HG22	1.95	0.47
1:B:17:ARG:CZ	1:B:255:LYS:HE2	2.46	0.46
1:B:4:LEU:HD22	1:B:416:ILE:CG1	2.45	0.46
1:A:62:MET:HE1	1:A:200:LEU:HD11	1.98	0.46
1:B:330:VAL:HG12	1:B:331:PHE:CE2	2.51	0.46
1:A:45:ASP:HB2	1:A:46:PRO:CD	2.45	0.45
1:B:348:ILE:HG12	1:B:357:VAL:HG22	1.99	0.45
1:B:113:LEU:HD11	1:B:140:VAL:CG1	2.36	0.45
1:B:333:ASN:O	1:B:333:ASN:OD1	2.35	0.45
1:B:334:ARG:O	1:B:337:HIS:NE2	2.50	0.45
1:A:225:GLU:H	1:A:225:GLU:CD	2.25	0.44
1:B:124:VAL:O	1:B:125:ASP:C	2.60	0.44
1:A:218:ASP:OD1	1:A:219:GLU:N	2.47	0.44
1:A:14:THR:HG22	1:A:25:TYR:CD1	2.53	0.44
1:B:3:LYS:HG3	1:B:419:VAL:HG23	2.00	0.44
1:A:102:ILE:O	1:A:102:ILE:CG2	2.64	0.44
1:A:269:GLN:OE1	1:A:273:THR:OG1	2.34	0.44
1:B:333:ASN:O	1:B:333:ASN:CG	2.60	0.44
1:B:113:LEU:HD23	1:B:145:ILE:HD11	1.99	0.43
1:B:128:ILE:HG22	1:B:132:GLU:OE2	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:417:ARG:HG3	1:B:419:VAL:HG13	2.00	0.43
1:A:232:ASP:OD1	1:A:232:ASP:N	2.52	0.42
1:A:206:ALA:HB2	2:A:401:C90:HE2	2.02	0.42
1:A:141:ASP:OD1	1:A:141:ASP:N	2.42	0.42
1:B:113:LEU:HD12	1:B:143:GLY:CA	2.48	0.42
1:A:166:ARG:HH11	1:A:166:ARG:CB	2.33	0.42
1:B:3:LYS:HD3	1:B:391:LEU:HD11	2.02	0.41
1:B:162:ASP:OD1	1:B:163:THR:N	2.54	0.41
1:B:236:ILE:HG21	1:B:374:ARG:NH1	2.35	0.41
1:A:225:GLU:CD	1:A:225:GLU:N	2.79	0.41
1:A:284:VAL:HG12	1:A:285:THR:N	2.35	0.41
2:A:401:C90:HN17	2:A:401:C90:HF1	1.68	0.40
1:B:1:MET:HA	1:B:1:MET:HE2	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	A	284/724 (39%)	274 (96%)	10 (4%)	0	100	100
1	B	408/724 (56%)	387 (95%)	21 (5%)	0	100	100
All	All	692/1448 (48%)	661 (96%)	31 (4%)	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	242/580 (42%)	241 (100%)	1 (0%)	84	91
1	B	322/580 (56%)	319 (99%)	3 (1%)	70	82
All	All	564/1160 (49%)	560 (99%)	4 (1%)	73	86

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	178	SER
1	B	125	ASP
1	B	415	LYS
1	B	417	ARG

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	9	ASN
1	B	10	ASN
1	B	158	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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	C90	A	401	-	34,34,34	1.64	2 (5%)	44,45,45	1.40	2 (4%)

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	C90	A	401	-	-	2/27/35/35	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	401	C90	C9-C10	-6.66	1.28	1.44
2	A	401	C90	C12-C11	-6.55	1.28	1.44

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	401	C90	C6-C5-N4	-7.31	98.94	113.12
2	A	401	C90	CA1-CB1-N4	-2.39	106.48	110.10

There are no chirality outliers.

All (2) torsion outliers are listed below:

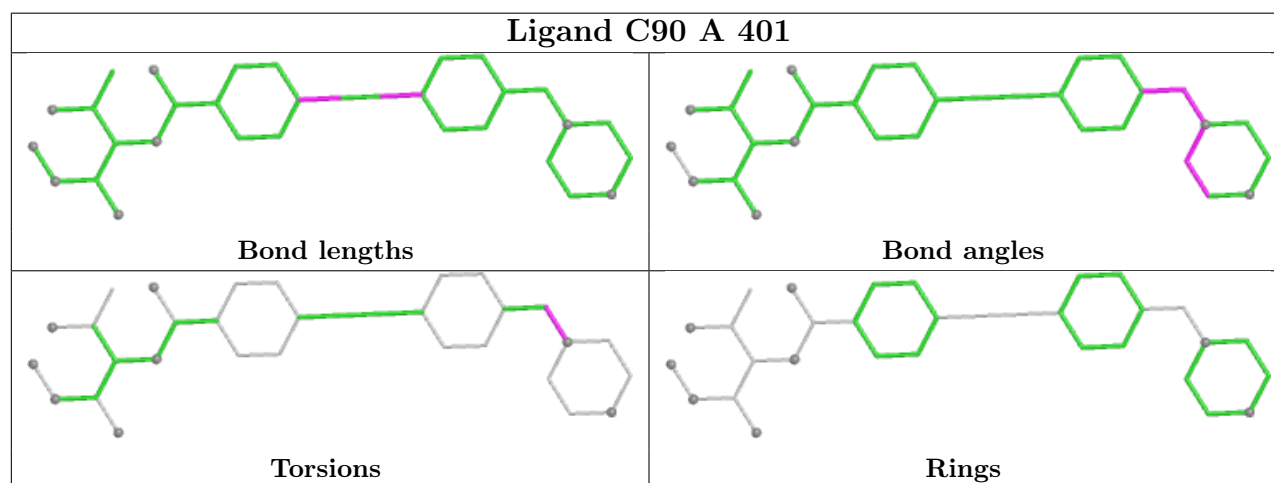
Mol	Chain	Res	Type	Atoms
2	A	401	C90	C6-C5-N4-CB2
2	A	401	C90	C6-C5-N4-CB1

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	401	C90	2	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.

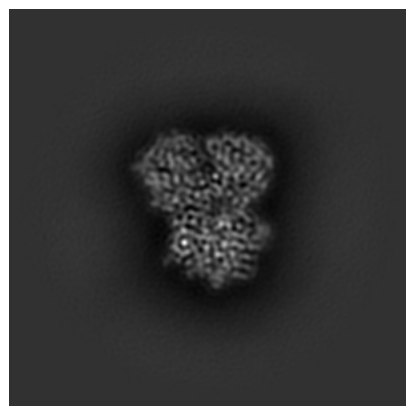
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-80332. These allow visual inspection of the internal detail of the map and identification of artifacts.

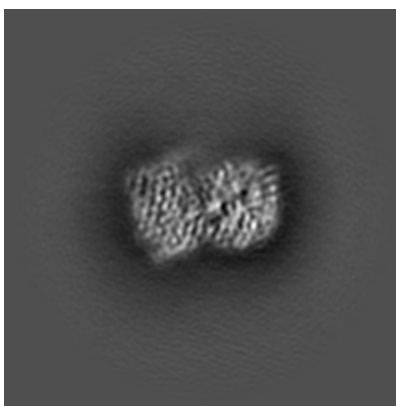
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

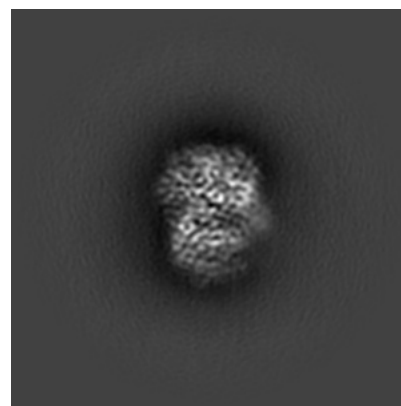
6.1.1 Primary map



X

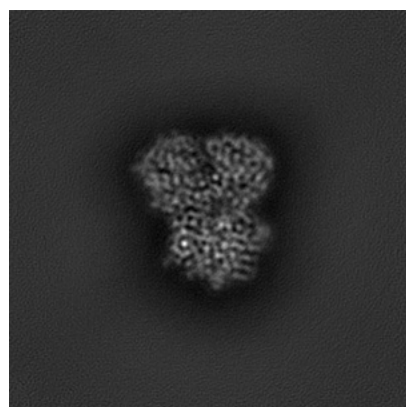


Y

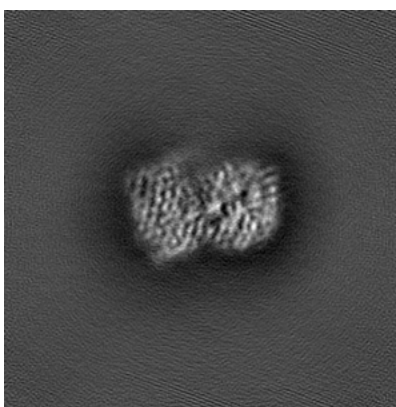


Z

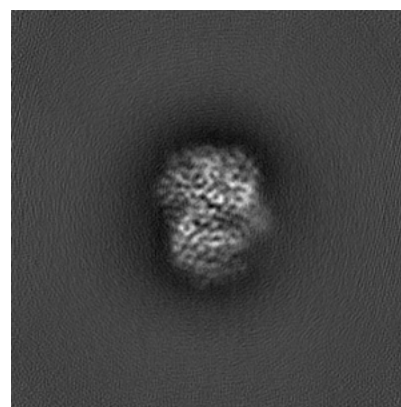
6.1.2 Raw map



X



Y

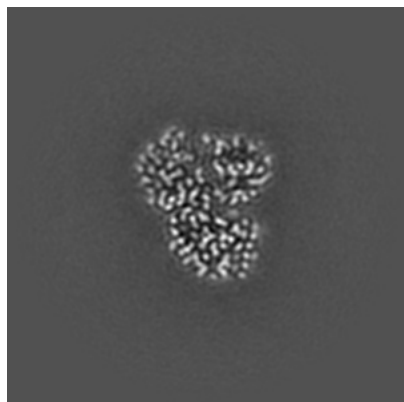


Z

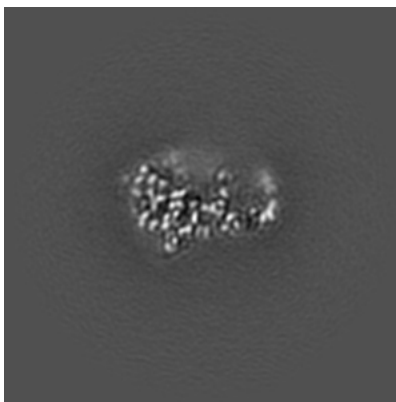
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

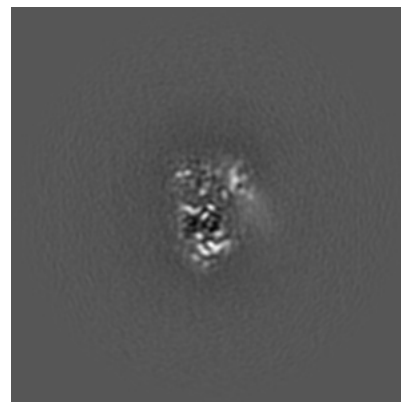
6.2.1 Primary map



X Index: 128

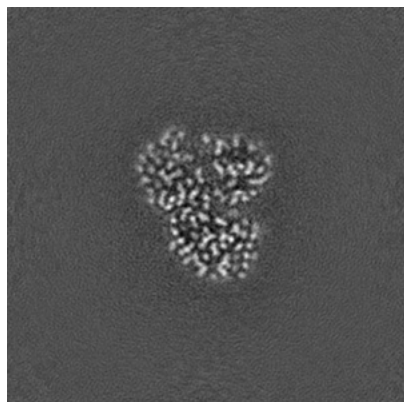


Y Index: 128

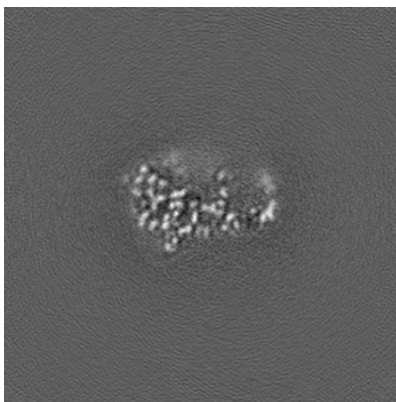


Z Index: 128

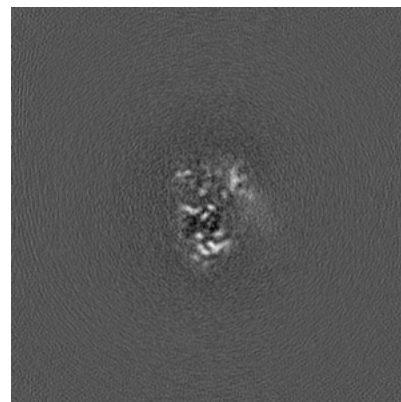
6.2.2 Raw map



X Index: 128



Y Index: 128

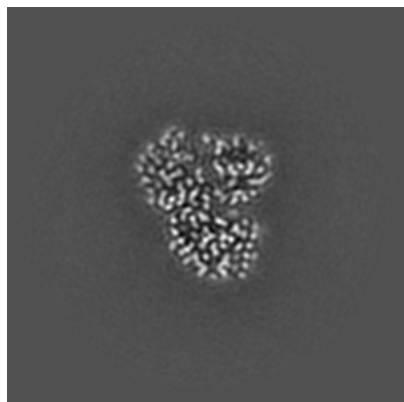


Z Index: 128

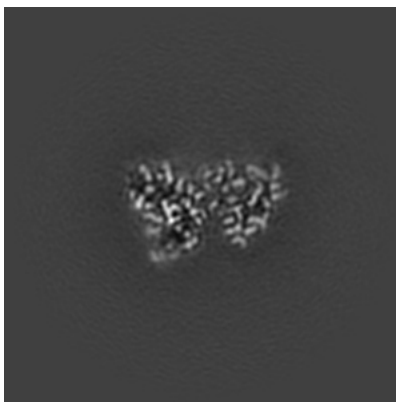
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

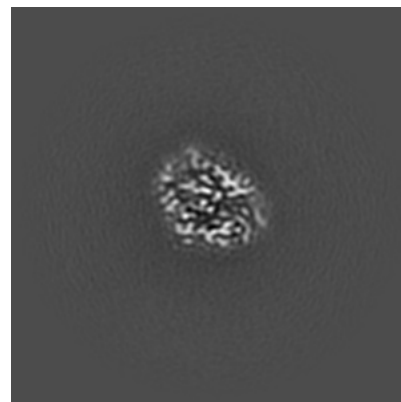
6.3.1 Primary map



X Index: 128

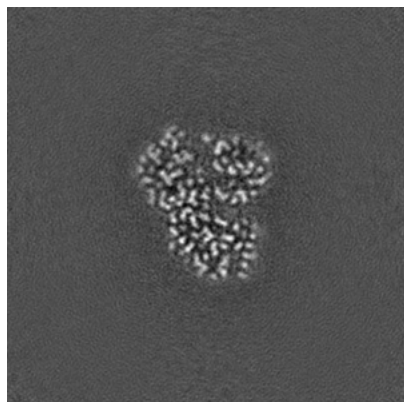


Y Index: 138

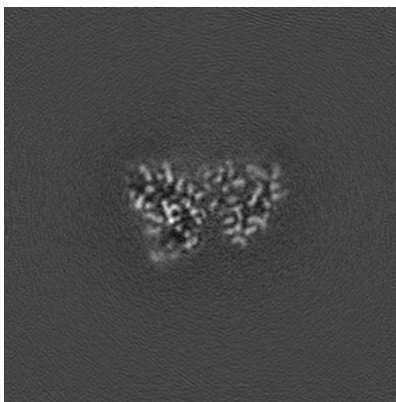


Z Index: 105

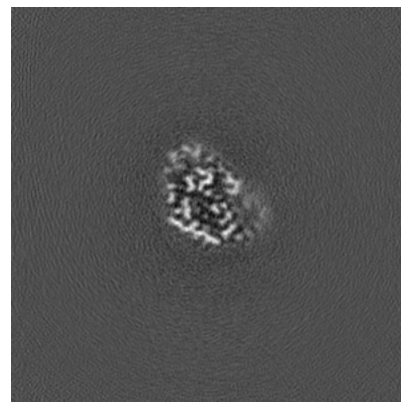
6.3.2 Raw map



X Index: 129



Y Index: 138

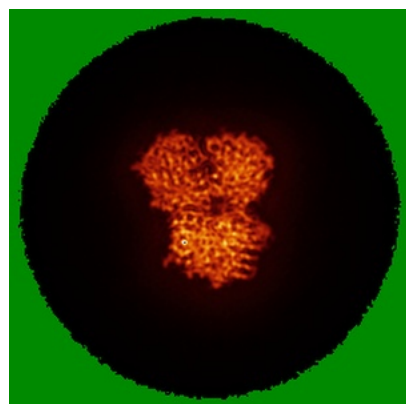


Z Index: 112

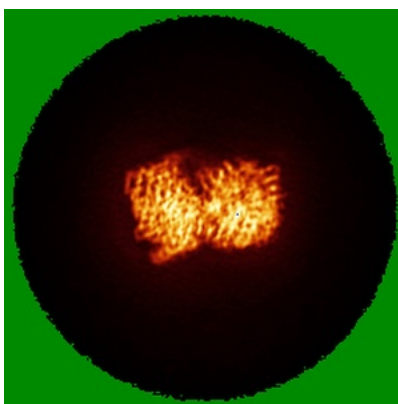
The images above show the largest variance slices of the map in three orthogonal directions.

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

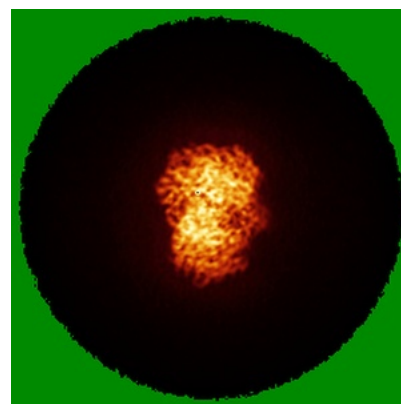
6.4.1 Primary map



X

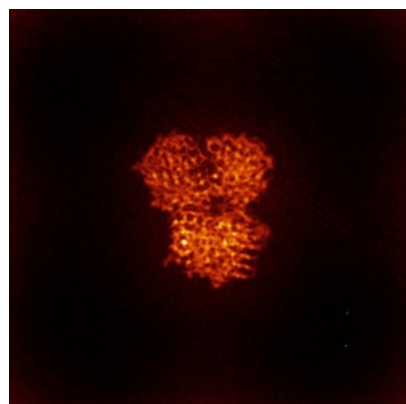


Y

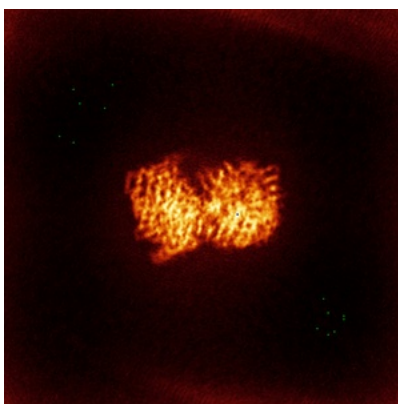


Z

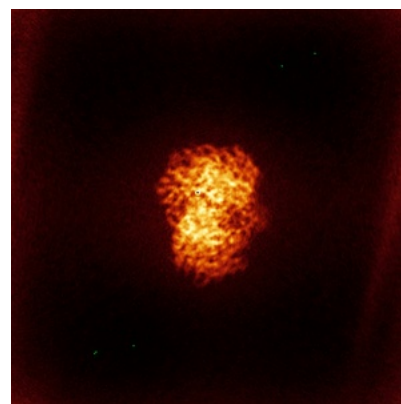
6.4.2 Raw map



X



Y

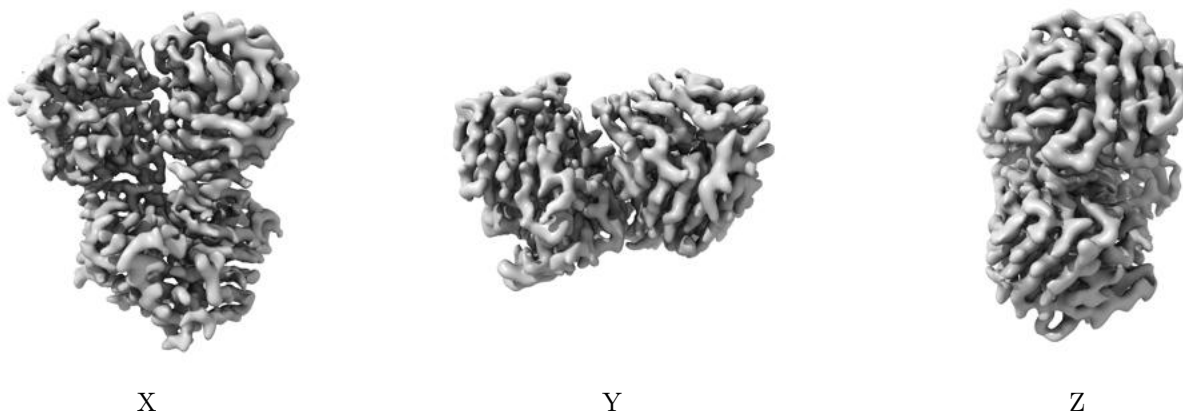


Z

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.

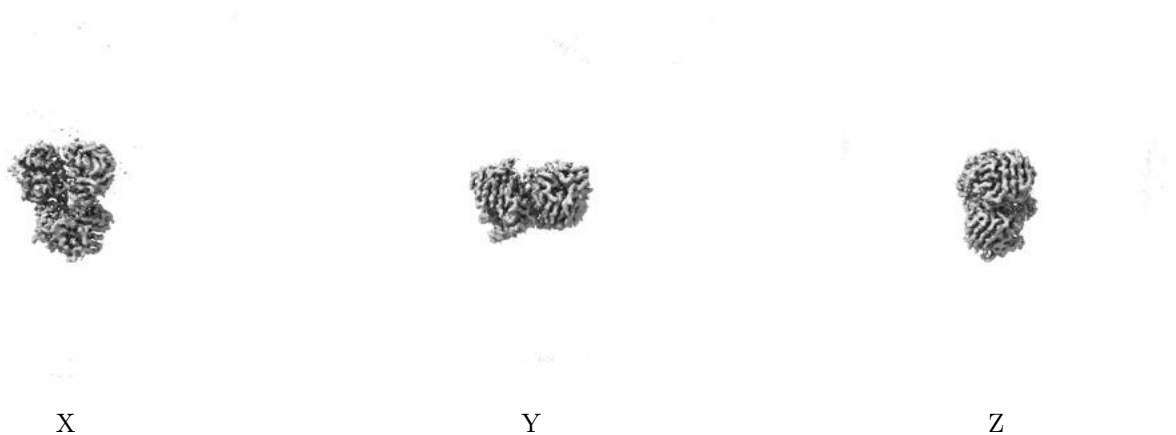
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.03. 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.

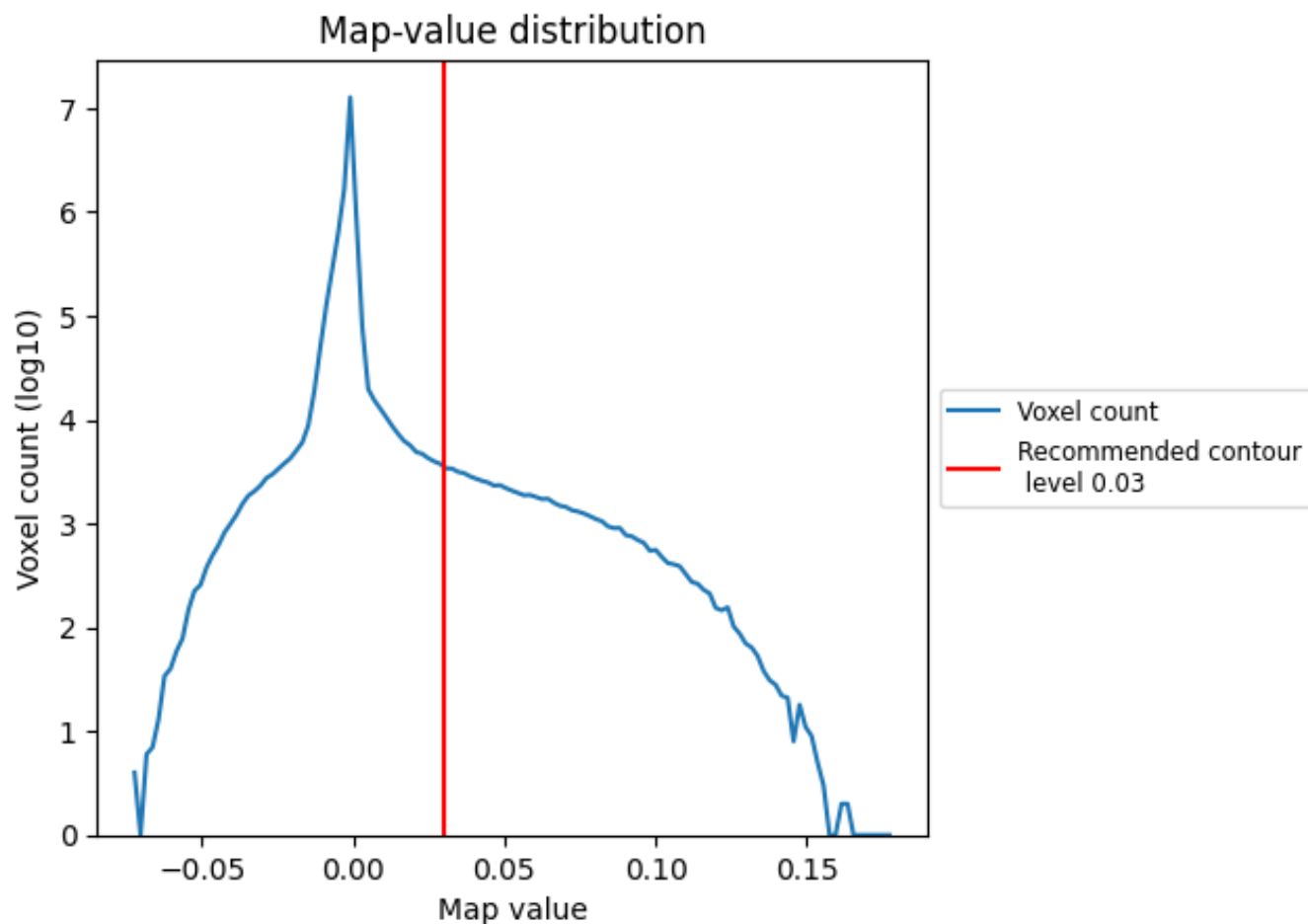
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

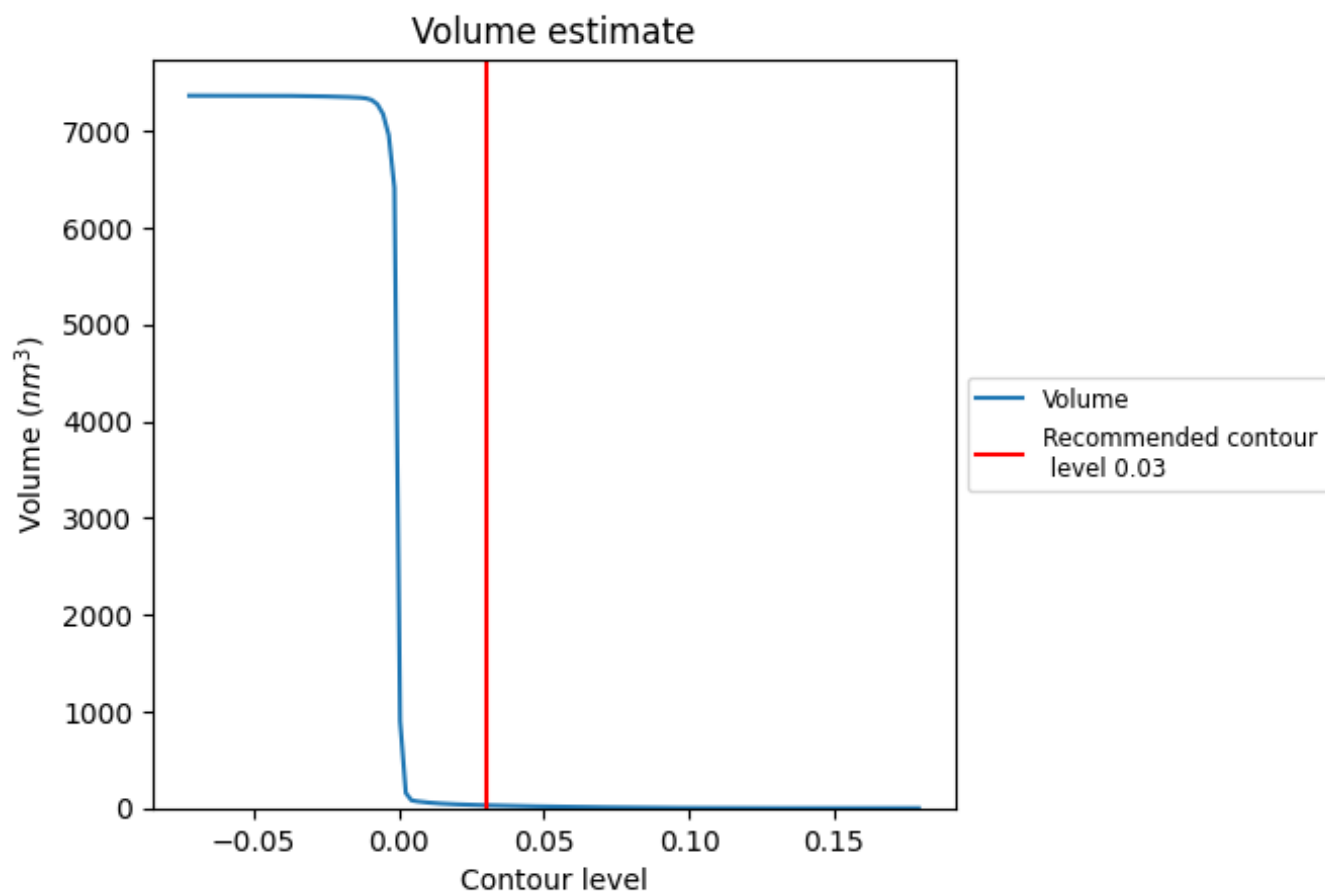
This section contains the results of statistical analysis of the map.

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.

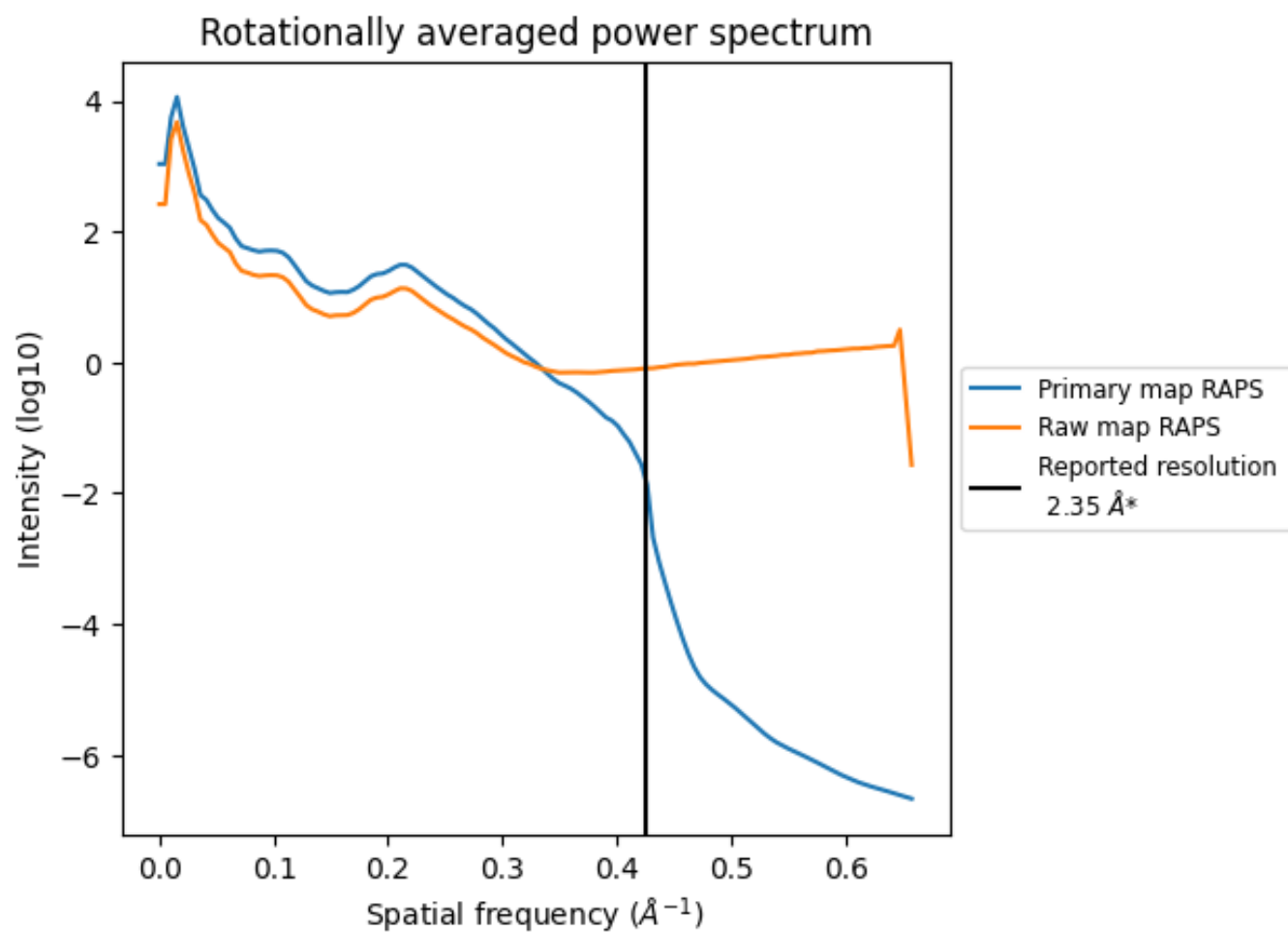
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 30 nm^3 ; this corresponds to an approximate mass of 27 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 ⓘ

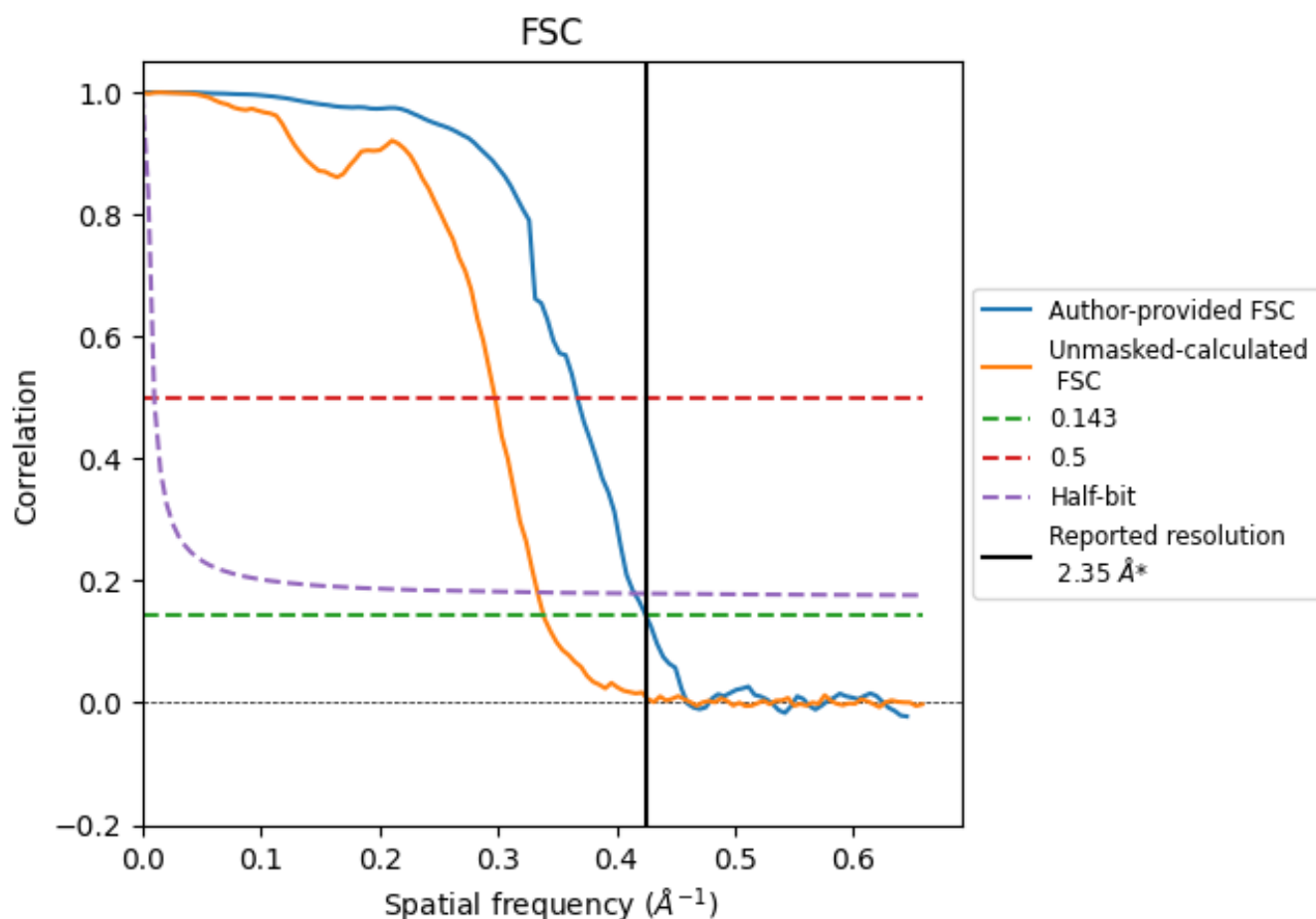


*Reported resolution corresponds to spatial frequency of 0.426 Å⁻¹

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 $0.426 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

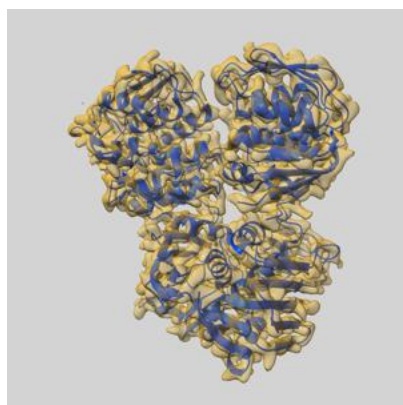
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.35	-	-
Author-provided FSC curve	2.35	2.72	2.41
Unmasked-calculated*	2.95	3.36	3.00

*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 2.95 differs from the reported value 2.35 by more than 10 %

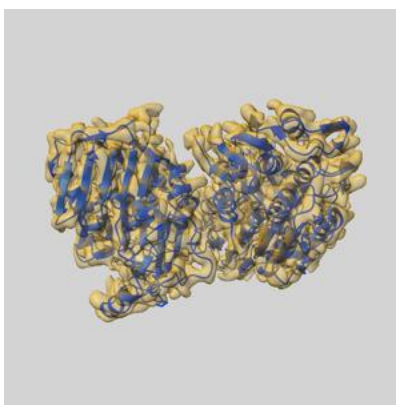
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-80332 and PDB model 25RW. Per-residue inclusion information can be found in section [3](#) on page [4](#).

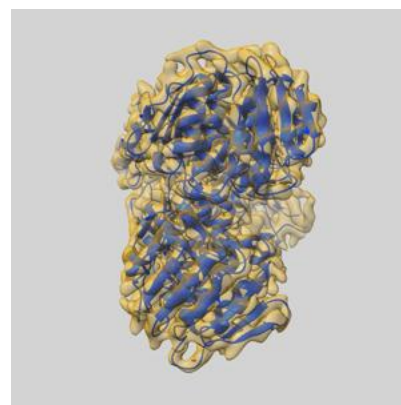
9.1 Map-model overlay [i](#)



X



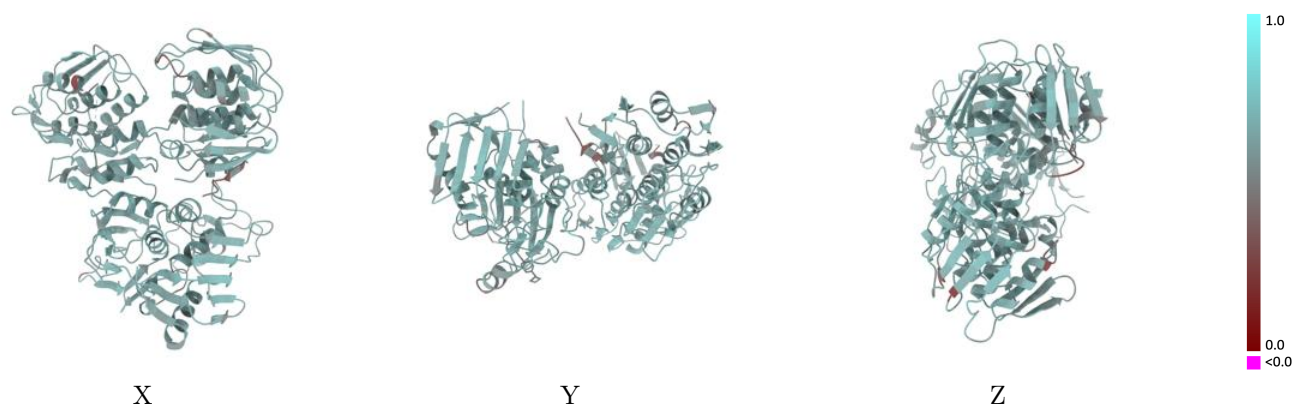
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.03 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](#)



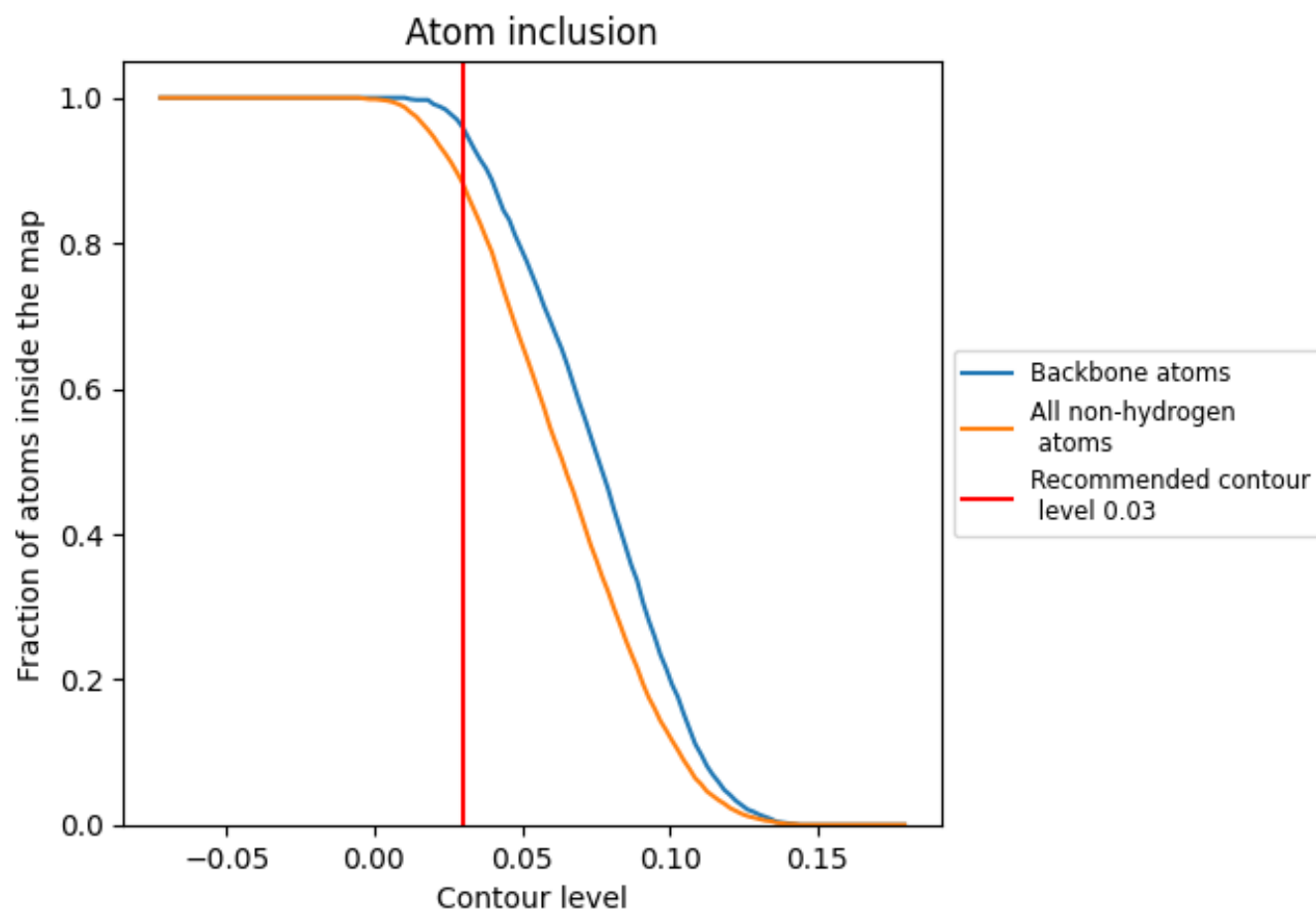
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.03).

9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 88% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8820	0.6080
A	0.9010	0.6170
B	0.8680	0.6020

