Full wwPDB EM Validation Report

Mar 26, 2026 – 05:35 PM UTC

PDB ID	:	9N0P / pdb_00009n0p
EMDB ID	:	EMD-48789
Title	:	Cryo EM structure of the Open tetramer of Rv2531c from Mycobacterium Tuberculosis.
Authors	:	Gupta, J.; Izard, T.
Deposited on	:	2025-01-24
Resolution	:	3.40 Å(reported)
Based on initial model	:	.

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 (i) 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 (i)) were used in the production of this report:

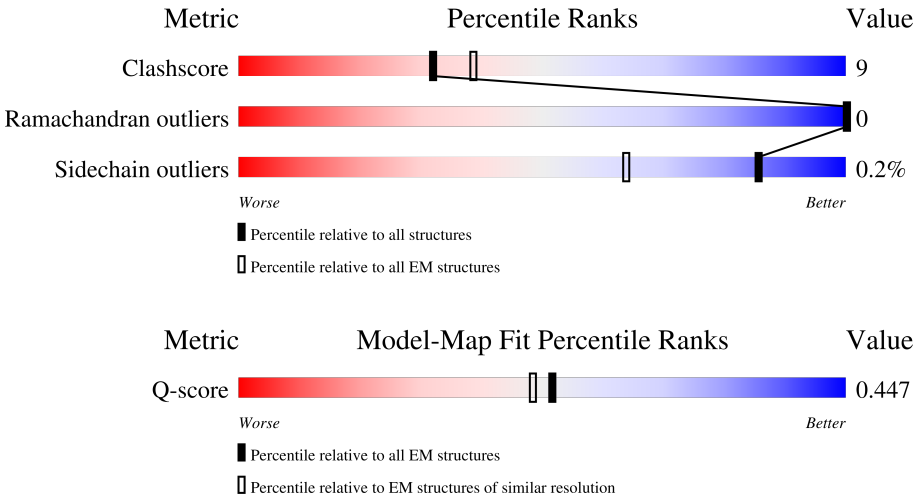
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & 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 3.40 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	14717 (2.90 - 3.90)

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 <=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	947	19% 65% 16% 19%
1	B	947	11% 46% 12% 42%
1	C	947	10% 45% 13% 43%
1	D	947	20% 67% 14% 19%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 41426 atoms, of which 20509 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 Probable amino acid decarboxylase.

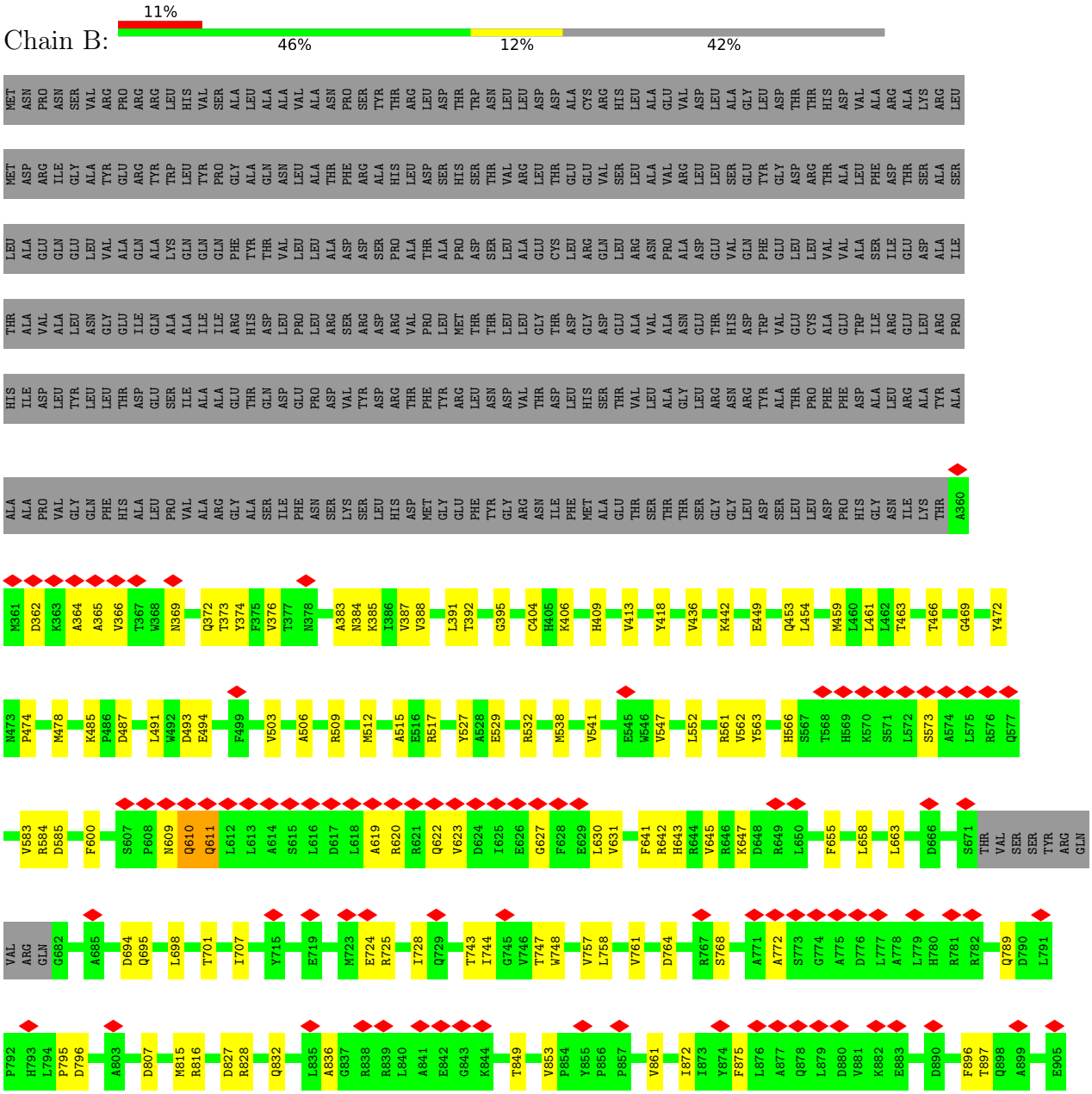
Mol	Chain	Residues	Atoms						AltConf	Trace
1	B	548	Total	C	H	N	O	S	0	0
			8655	2783	4285	774	796	17		
1	C	544	Total	C	H	N	O	S	0	0
			8581	2770	4235	768	791	17		
1	A	766	Total	C	H	N	O	S	0	0
			12126	3877	6014	1084	1130	21		
1	D	764	Total	C	H	N	O	S	0	0
			12064	3869	5975	1077	1122	21		

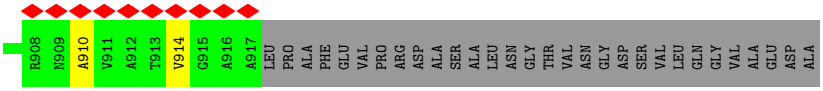
3 Residue-property plots (i)

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: Probable amino acid decarboxylase

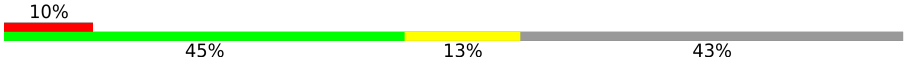
Chain B:

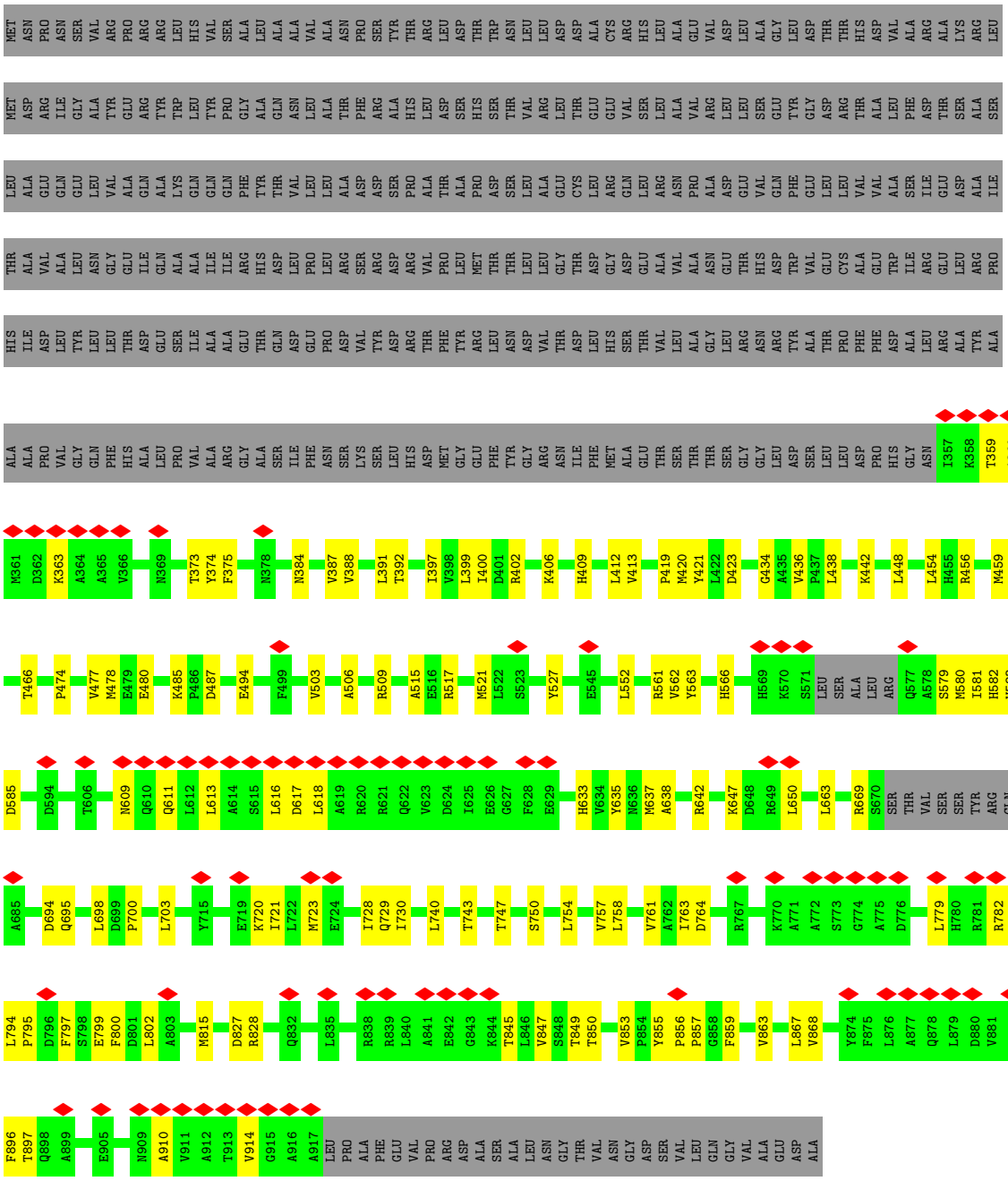




• Molecule 1: Probable amino acid decarboxylase

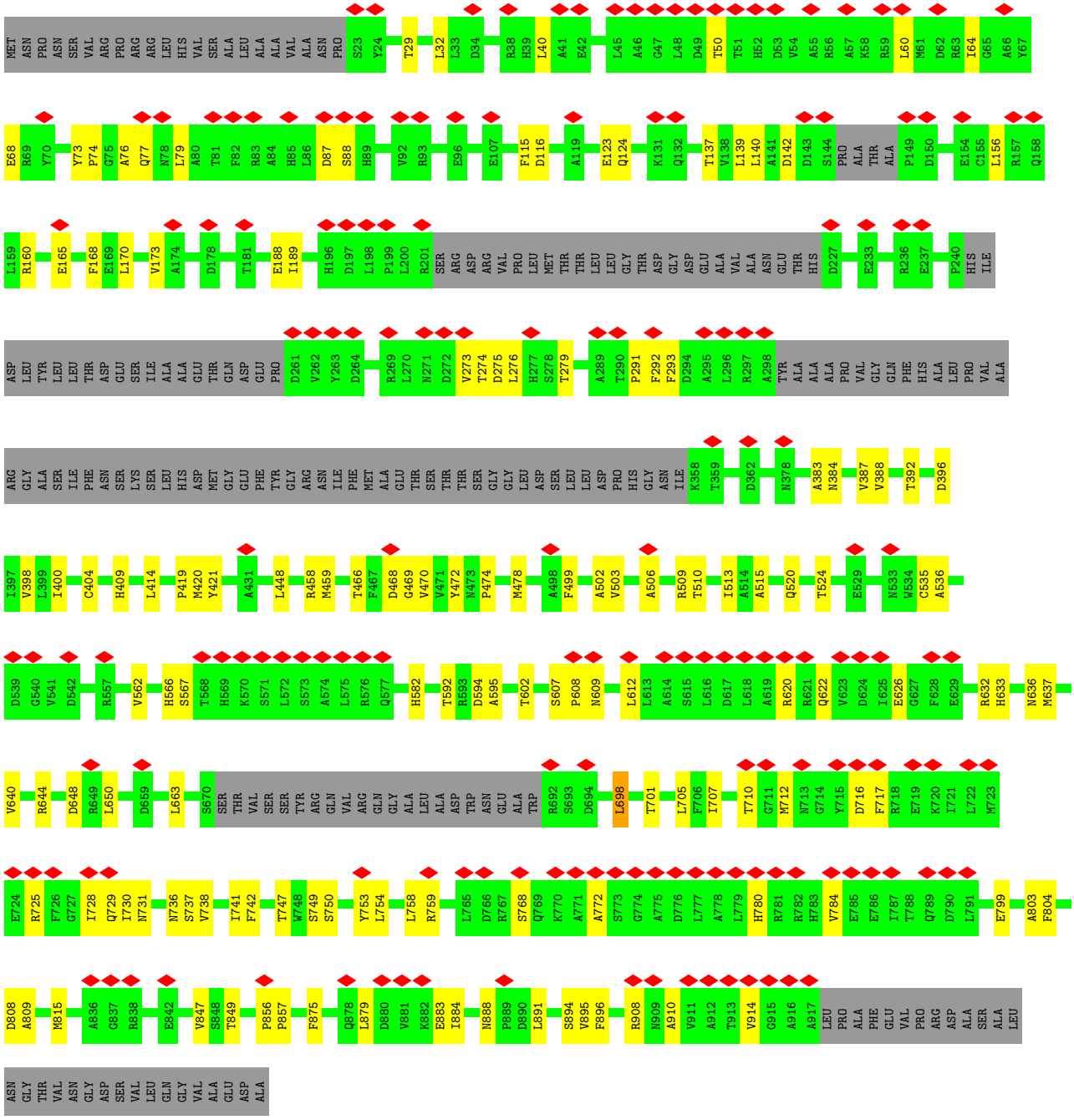
Chain C:





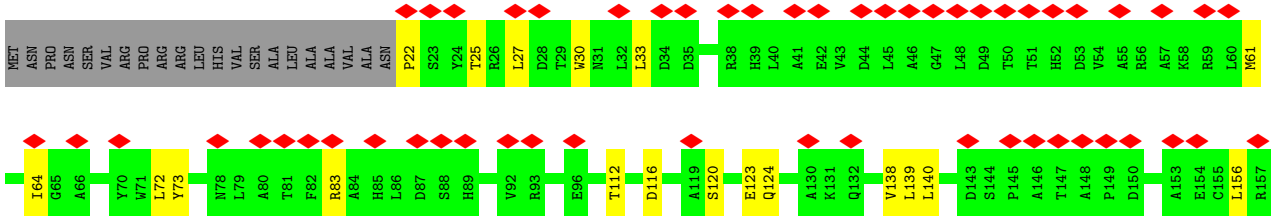
• Molecule 1: Probable amino acid decarboxylase

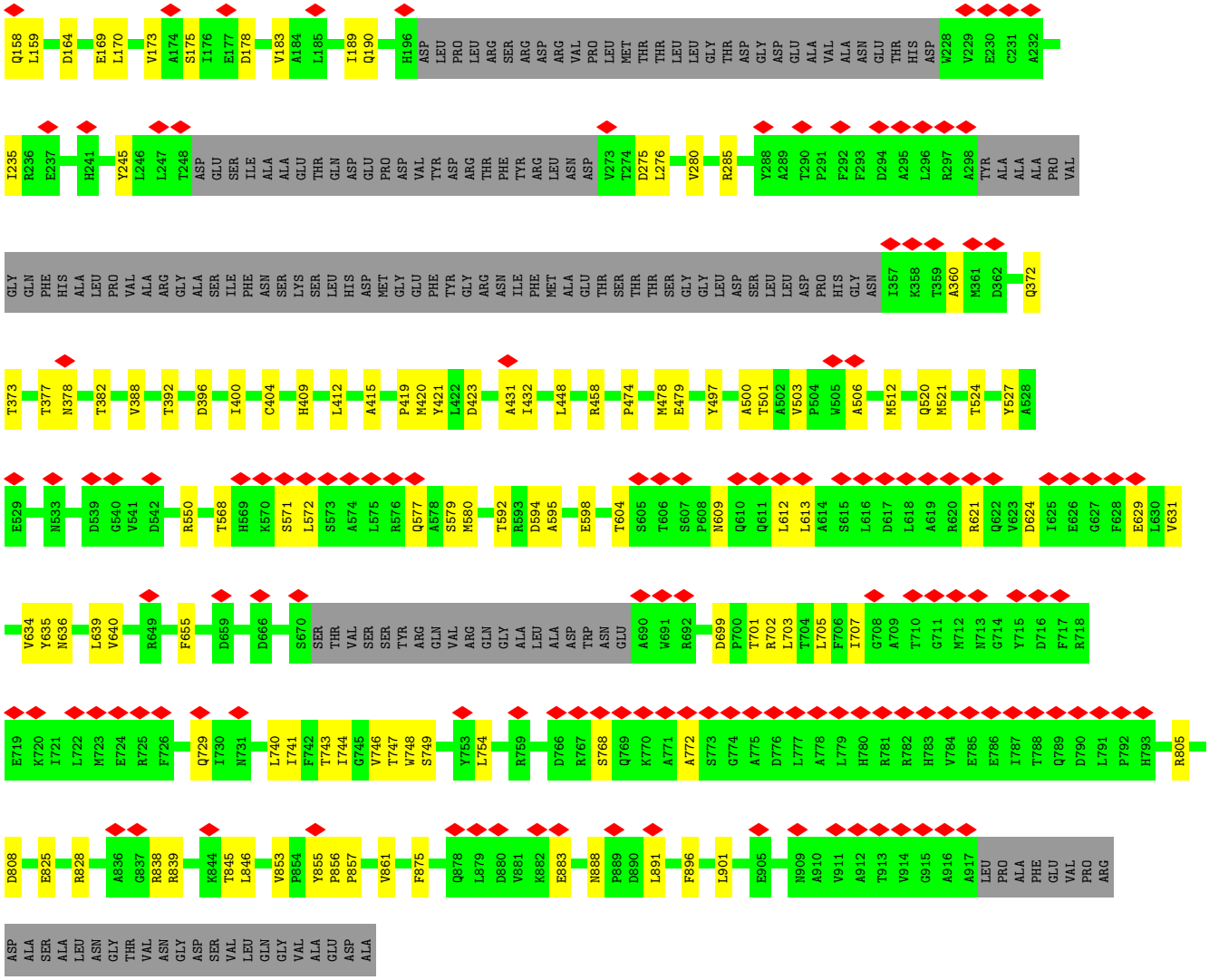
Chain A:



• Molecule 1: Probable amino acid decarboxylase

Chain D:




Q158 L159 D164 E169 L170 V173 A174 S175 I176 E177 D178 V183 A184 L185 I189 Q190 H196 ASP LEU PRO LEU ARG SER ARG ASP ARG VAL PRO LEU MET THR THR LEU LEU GLY THR ASP GLY ASP GLU ALA VAL ALA ASN GLU THR HIS ASP W228 V229 E230 C231 A232
I235 R236 E237 H241 Y245 L246 L247 T248 ASP GLU SER ILE ALA ALA GLU THR GLN ASP GLU PRO ASP VAL TYR ASP ARG THR PHE TYR ARG LEU ASN ASP V273 T274 D275 L276 V280 R285 Y288 A289 T290 F291 F292 F293 D294 A295 L296 R297 A298 TYR ALA ALA ALA PRO VAL
GLY GLN PHE HIS ALA LEU PRO VAL ALA ARG GLY ALA SER ILE PHE ASN SER LYS SER LEU HIS ASP MET GLY GLU PHE TYR GLY ARG ASN ILE PHE MET ALA GLU THR SER THR THR SER GLY GLY LEU ASP SER LEU LEU ASP PRO HIS GLY ASN I357 K358 T359 A360 M361 D362 Q372
T373 T377 N378 T382 V388 T392 D396 I400 C404 H409 L412 A415 P419 M420 Y421 L422 D423 A431 I432 L448 R458 P474 M478 E479 Y497 A500 T501 A502 V503 P504 W505 A506 M512 Q520 M521 T524 Y527 A528
E529 N533 D539 G540 V541 D542 R550 T568 H569 K570 S571 L572 S573 A574 L575 R576 Q577 A578 S579 M580 T592 R593 D594 A595 E598 T604 S605 T606 S607 P608 N609 Q610 Q611 L612 L613 A614 S615 L616 D617 L618 A619 R620 R621 Q622 V623 D624 I625 E626 G627 F628 E629 L630 V631
V634 Y635 N636 L639 V640 R649 F655 D659 D666 S670 SER THR VAL SER SER TYR ARG GLN VAL ARG GLN GLY ALA LEU ALA ASP TRP ASN GLU A690 W691 R692 D699 P700 T701 R702 L703 T704 L705 F706 I707 G708 A709 T710 G711 M712 N713 G714 Y715 D716 F717 R718
E719 K720 I721 L722 M723 E724 R725 F726 Q729 L730 N731 L740 I741 F742 T743 I744 G745 V746 T747 W748 S749 Y753 L754 R759 D766 R767 S768 Q769 K770 A771 A772 S773 G774 A775 D776 L777 A778 L779 H780 R781 R782 H783 V784 E785 E786 I787 T788 Q789 D790 L791 P792 H793 R805
D808 E825 R828 A836 G837 R838 R839 K844 T845 L846 V853 P854 Y855 P856 P857 V861 F875 Q878 L879 D880 V881 K882 E883 N888 P889 D890 L891 F896 L901 E905 N909 A910 V911 A912 T913 V914 G915 A916 A917 LEU PRO ALA PHE GLU VAL PRO ARG
ASP ALA SER ALA LEU ASN GLY THR VAL ASN GLY ASP SER VAL LEU GLN GLY VAL ALA GLU ASP ALA

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	113770	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.594	Depositor
Minimum map value	-0.409	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.014	Depositor
Recommended contour level	0.103	Depositor
Map size (Å)	368.64, 368.64, 368.64	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.72, 0.72, 0.72	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	0.13	0/6242	0.31	0/8483
1	B	0.15	0/4472	0.34	0/6078
1	C	0.14	0/4447	0.32	0/6043
1	D	0.12	0/6222	0.31	0/8461
All	All	0.13	0/21383	0.32	0/29065

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	3
1	C	0	2
All	All	0	5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	611	GLN	Sidechain
1	B	622	GLN	Sidechain
1	B	789	GLN	Sidechain
1	C	609	ASN	Sidechain
1	C	611	GLN	Sidechain

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	6112	6014	6019	99	0
1	B	4370	4285	4316	83	0
1	C	4346	4235	4293	89	0
1	D	6089	5975	6019	95	0
All	All	20917	20509	20647	359	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 9.

All (359) 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:D:388:VAL:O	1:D:392:THR:HG22	1.74	0.88
1:A:115:PHE:O	1:A:124:GLN:NE2	2.10	0.85
1:A:648:ASP:OD2	1:A:759:ARG:NH1	2.11	0.83
1:C:485:LYS:NZ	1:C:487:ASP:OD1	2.11	0.82
1:A:716:ASP:OD1	1:A:717:PHE:N	2.12	0.82
1:B:816:ARG:NH2	1:A:414:LEU:O	2.13	0.81
1:D:747:THR:HG22	1:D:749:SER:H	1.46	0.81
1:B:509:ARG:NH2	1:B:694:ASP:O	2.14	0.80
1:B:485:LYS:NZ	1:B:487:ASP:OD1	2.15	0.80
1:D:805:ARG:NH2	1:D:808:ASP:O	2.15	0.80
1:B:385:LYS:NZ	1:A:602:THR:O	2.15	0.79
1:C:509:ARG:NH2	1:C:694:ASP:O	2.16	0.79
1:C:438:LEU:HD13	1:C:477:VAL:HG23	1.64	0.79
1:B:647:LYS:NZ	1:D:116:ASP:OD1	2.11	0.78
1:C:747:THR:O	1:C:750:SER:OG	2.04	0.76
1:A:388:VAL:O	1:A:392:THR:OG1	2.04	0.75
1:B:643:HIS:CE1	1:B:647:LYS:HG3	2.23	0.73
1:C:867:LEU:HD12	1:C:868:VAL:N	2.05	0.72
1:D:164:ASP:OD1	1:D:285:ARG:NH2	2.24	0.70
1:B:529:GLU:OE1	1:B:532:ARG:NH1	2.24	0.69
1:A:725:ARG:NH2	1:A:750:SER:OG	2.26	0.69
1:C:406:LYS:HD3	1:C:853:VAL:HG21	1.75	0.68
1:D:592:THR:HG22	1:D:592:THR:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:910:ALA:O	1:C:914:VAL:HG23	1.94	0.68
1:B:663:LEU:HD12	1:B:698:LEU:HD11	1.75	0.68
1:C:867:LEU:HD12	1:C:868:VAL:H	1.60	0.67
1:B:406:LYS:HE3	1:B:853:VAL:HG21	1.77	0.67
1:A:160:ARG:NH1	1:A:168:PHE:O	2.28	0.66
1:A:799:GLU:OE1	1:A:799:GLU:N	2.28	0.66
1:C:515:ALA:CB	1:C:562:VAL:HG21	2.26	0.66
1:C:828:ARG:NH2	1:D:594:ASP:OD2	2.30	0.65
1:B:627:GLY:O	1:B:631:VAL:HG23	1.96	0.65
1:A:594:ASP:OD1	1:A:595:ALA:N	2.30	0.65
1:B:515:ALA:CB	1:B:562:VAL:HG21	2.26	0.64
1:A:77:GLN:OE1	1:A:77:GLN:N	2.30	0.64
1:D:512:MET:HA	1:D:512:MET:HE3	1.78	0.64
1:B:454:LEU:HD23	1:B:454:LEU:O	1.97	0.64
1:A:165:GLU:OE2	1:A:632:ARG:NH2	2.31	0.63
1:C:663:LEU:HD12	1:C:698:LEU:HD11	1.80	0.63
1:B:369:ASN:O	1:B:584:ARG:NH1	2.31	0.63
1:C:400:ILE:CD1	1:C:461:LEU:HD13	2.29	0.63
1:C:400:ILE:HD12	1:C:461:LEU:HD13	1.80	0.63
1:A:804:PHE:HE2	1:A:847:VAL:HG11	1.63	0.63
1:B:494:GLU:OE1	1:B:566:HIS:NE2	2.32	0.62
1:D:189:ILE:O	1:D:190:GLN:NE2	2.32	0.62
1:D:883:GLU:N	1:D:883:GLU:OE1	2.32	0.62
1:B:728:ILE:HG22	1:B:743:THR:OG1	1.99	0.62
1:D:400:ILE:HD11	1:D:404:CYS:SG	2.40	0.62
1:D:412:LEU:HD13	1:D:419:PRO:HB3	1.82	0.62
1:D:158:GLN:O	1:D:159:LEU:HG	1.99	0.61
1:C:650:LEU:HD21	1:C:763:ILE:HG22	1.83	0.61
1:D:568:THR:O	1:D:572:LEU:N	2.33	0.61
1:B:642:ARG:NH2	1:B:658:LEU:O	2.34	0.60
1:D:604:THR:HG23	1:D:604:THR:O	2.01	0.60
1:D:629:GLU:HG2	1:D:631:VAL:HG22	1.84	0.60
1:C:413:VAL:HG23	1:C:815:MET:HE3	1.83	0.60
1:D:396:ASP:OD2	1:D:458:ARG:NE	2.35	0.59
1:D:139:LEU:HD23	1:D:140:LEU:N	2.16	0.59
1:D:33:LEU:HD22	1:D:64:ILE:CD1	2.32	0.59
1:D:768:SER:O	1:D:772:ALA:N	2.35	0.59
1:C:402:ARG:HD3	1:C:797:PHE:HB2	1.84	0.59
1:A:139:LEU:HD23	1:A:140:LEU:N	2.18	0.59
1:B:910:ALA:O	1:B:914:VAL:HG23	2.03	0.59
1:A:123:GLU:OE1	1:A:123:GLU:N	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:156:LEU:HD23	1:D:170:LEU:HD11	1.85	0.58
1:A:609:ASN:O	1:A:609:ASN:CG	2.45	0.58
1:A:472:TYR:O	1:A:509:ARG:NH1	2.35	0.58
1:C:647:LYS:NZ	1:A:116:ASP:OD2	2.34	0.57
1:A:648:ASP:OD1	1:A:650:LEU:N	2.38	0.57
1:B:372:GLN:O	1:B:583:VAL:HG22	2.05	0.57
1:B:453:GLN:NE2	1:B:807:ASP:OD2	2.38	0.57
1:C:850:THR:OG1	1:D:598:GLU:OE2	2.23	0.56
1:D:592:THR:O	1:D:592:THR:CG2	2.52	0.56
1:D:138:VAL:HG23	1:D:170:LEU:HD13	1.86	0.56
1:D:699:ASP:OD1	1:D:701:THR:HG22	2.05	0.56
1:A:276:LEU:O	1:A:279:THR:HG22	2.05	0.56
1:D:175:SER:OG	1:D:178:ASP:OD2	2.19	0.56
1:D:276:LEU:O	1:D:280:VAL:HG13	2.05	0.56
1:D:621:ARG:NH1	1:D:624:ASP:OD2	2.36	0.56
1:A:729:GLN:CG	1:A:729:GLN:O	2.54	0.56
1:A:384:ASN:O	1:A:388:VAL:HG23	2.06	0.56
1:D:61:MET:HE1	1:D:83:ARG:HA	1.88	0.56
1:B:413:VAL:HG23	1:B:815:MET:HE3	1.88	0.56
1:B:641:PHE:O	1:B:645:VAL:HG23	2.06	0.55
1:D:183:VAL:HG11	1:D:235:ILE:HG23	1.88	0.55
1:D:409:HIS:ND1	1:D:421:TYR:OH	2.39	0.55
1:B:610:GLN:N	1:B:610:GLN:NE2	2.55	0.55
1:B:757:VAL:O	1:B:761:VAL:HG23	2.07	0.55
1:C:638:ALA:O	1:C:642:ARG:HG3	2.06	0.55
1:B:365:ALA:O	1:B:369:ASN:N	2.40	0.55
1:B:620:ARG:HA	1:B:623:VAL:HG12	1.89	0.55
1:A:636:ASN:O	1:A:640:VAL:HG23	2.07	0.55
1:B:701:THR:HG22	1:B:701:THR:O	2.06	0.54
1:A:707:ILE:HD13	1:A:738:VAL:HG22	1.89	0.54
1:D:360:ALA:HB3	1:D:613:LEU:HD13	1.89	0.54
1:B:828:ARG:NH2	1:A:594:ASP:OD2	2.40	0.54
1:C:384:ASN:O	1:C:388:VAL:HG23	2.08	0.54
1:A:458:ARG:CG	1:A:458:ARG:O	2.56	0.54
1:D:577:GLN:OE1	1:D:577:GLN:N	2.40	0.54
1:C:859:PHE:CD1	1:C:859:PHE:C	2.86	0.54
1:C:409:HIS:ND1	1:C:421:TYR:OH	2.40	0.54
1:D:169:GLU:OE1	1:D:169:GLU:HA	2.08	0.54
1:A:520:GLN:O	1:A:524:THR:HG23	2.08	0.54
1:C:563:TYR:CE2	1:C:583:VAL:HG13	2.43	0.54
1:D:392:THR:HG23	1:D:415:ALA:HB1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:594:ASP:OD1	1:D:595:ALA:N	2.42	0.53
1:B:503:VAL:HG23	1:B:506:ALA:HB3	1.90	0.53
1:B:538:MET:O	1:B:541:VAL:HG12	2.09	0.53
1:C:757:VAL:O	1:C:761:VAL:HG23	2.09	0.53
1:A:68:GLU:OE1	1:A:79:LEU:HD13	2.09	0.53
1:D:888:ASN:OD1	1:D:891:LEU:HD12	2.08	0.53
1:C:650:LEU:HD21	1:C:763:ILE:CG2	2.37	0.53
1:A:891:LEU:HD12	1:A:891:LEU:H	1.74	0.52
1:C:563:TYR:CD2	1:C:583:VAL:HG13	2.45	0.52
1:C:721:ILE:HG21	1:C:761:VAL:HG21	1.91	0.52
1:C:845:THR:HG22	1:C:847:VAL:HG23	1.91	0.52
1:C:412:LEU:HD13	1:C:419:PRO:HB3	1.91	0.52
1:C:387:VAL:HG21	1:C:581:ILE:HD12	1.92	0.52
1:A:768:SER:O	1:A:772:ALA:N	2.43	0.52
1:A:392:THR:HG21	1:A:398:VAL:HG21	1.91	0.52
1:D:740:LEU:CD2	1:D:754:LEU:HD21	2.40	0.52
1:B:796:ASP:OD1	1:B:796:ASP:N	2.43	0.51
1:D:138:VAL:CG2	1:D:170:LEU:HD13	2.39	0.51
1:D:891:LEU:HD12	1:D:891:LEU:H	1.75	0.51
1:C:613:LEU:O	1:C:616:LEU:HG	2.11	0.51
1:A:383:ALA:O	1:A:387:VAL:HG23	2.11	0.51
1:B:655:PHE:CD2	1:B:758:LEU:HD22	2.45	0.51
1:B:631:VAL:HG22	1:B:744:ILE:HD11	1.91	0.51
1:A:515:ALA:HB2	1:A:562:VAL:HG21	1.93	0.51
1:B:563:TYR:CD2	1:B:583:VAL:HG12	2.47	0.51
1:B:795:PRO:HG3	1:B:875:PHE:HD2	1.76	0.51
1:C:388:VAL:O	1:C:392:THR:HG22	2.10	0.51
1:D:501:THR:HG23	1:D:631:VAL:HG21	1.91	0.50
1:B:527:TYR:CE1	1:B:552:LEU:HD23	2.45	0.50
1:B:384:ASN:O	1:B:388:VAL:HG23	2.10	0.50
1:A:50:THR:HG22	1:A:50:THR:O	2.12	0.50
1:C:728:ILE:HD13	1:C:754:LEU:HD11	1.94	0.50
1:A:87:ASP:OD1	1:A:88:SER:N	2.43	0.50
1:A:888:ASN:OD1	1:A:891:LEU:HD12	2.10	0.50
1:C:849:THR:HG22	1:C:896:PHE:CD2	2.47	0.50
1:B:517:ARG:HG3	1:B:517:ARG:HH11	1.76	0.50
1:C:434:GLY:O	1:C:466:THR:HG21	2.12	0.50
1:D:420:MET:HE1	1:D:448:LEU:HD21	1.93	0.50
1:C:764:ASP:C	1:C:764:ASP:OD1	2.55	0.49
1:A:274:THR:HG22	1:A:275:ASP:N	2.27	0.49
1:C:633:HIS:O	1:C:637:MET:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:849:THR:HG22	1:C:896:PHE:CE2	2.48	0.49
1:B:383:ALA:O	1:B:387:VAL:HG23	2.13	0.49
1:D:825:GLU:OE2	1:D:828:ARG:NH2	2.45	0.49
1:C:617:ASP:OD1	1:C:618:LEU:N	2.46	0.49
1:B:561:ARG:NH2	1:B:585:ASP:OD1	2.45	0.49
1:C:613:LEU:HA	1:C:616:LEU:HD23	1.95	0.49
1:D:275:ASP:OD1	1:D:275:ASP:O	2.30	0.49
1:D:123:GLU:N	1:D:123:GLU:OE1	2.40	0.48
1:D:655:PHE:HD2	1:D:705:LEU:HD21	1.78	0.48
1:C:399:LEU:HD23	1:C:420:MET:HB3	1.95	0.48
1:B:694:ASP:OD1	1:B:695:GLN:N	2.45	0.48
1:A:466:THR:O	1:A:469:GLY:N	2.45	0.48
1:D:72:LEU:O	1:D:72:LEU:HD23	2.13	0.48
1:D:420:MET:HE1	1:D:448:LEU:HD11	1.95	0.48
1:B:449:GLU:HB2	1:B:454:LEU:HD12	1.95	0.48
1:A:731:ASN:OD1	1:A:731:ASN:O	2.32	0.48
1:A:731:ASN:OD1	1:A:731:ASN:C	2.55	0.48
1:D:22:PRO:O	1:D:25:THR:HG22	2.12	0.48
1:A:137:THR:HG23	1:A:189:ILE:HD13	1.96	0.48
1:A:29:THR:HG22	1:A:64:ILE:HD11	1.95	0.48
1:D:521:MET:HE3	1:D:527:TYR:CE2	2.49	0.48
1:A:474:PRO:O	1:A:478:MET:HG3	2.14	0.48
1:B:388:VAL:O	1:B:392:THR:HG22	2.13	0.47
1:C:474:PRO:O	1:C:478:MET:HG3	2.13	0.47
1:B:849:THR:HG22	1:B:896:PHE:CE2	2.49	0.47
1:A:705:LEU:HD23	1:A:707:ILE:HD11	1.95	0.47
1:D:634:VAL:HG13	1:D:746:VAL:HG11	1.96	0.47
1:C:421:TYR:HE2	1:C:863:VAL:HG21	1.79	0.47
1:A:808:ASP:OD1	1:A:809:ALA:N	2.48	0.47
1:D:853:VAL:HG12	1:D:853:VAL:O	2.13	0.47
1:C:374:TYR:O	1:C:581:ILE:N	2.47	0.47
1:C:799:GLU:HG3	1:C:800:PHE:N	2.29	0.47
1:B:620:ARG:HA	1:B:623:VAL:CG1	2.44	0.47
1:C:503:VAL:CG2	1:C:506:ALA:HB3	2.44	0.47
1:A:396:ASP:OD2	1:A:458:ARG:NE	2.47	0.47
1:B:436:VAL:HG23	1:B:436:VAL:O	2.15	0.47
1:B:609:ASN:HB3	1:B:610:GLN:NE2	2.29	0.47
1:C:521:MET:HE3	1:C:527:TYR:CE1	2.49	0.47
1:D:479:GLU:OE2	1:D:550:ARG:NH1	2.45	0.47
1:D:845:THR:HG23	1:D:845:THR:O	2.15	0.47
1:C:515:ALA:HB2	1:C:562:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:580:MET:HE2	1:C:582:HIS:CE1	2.50	0.46
1:A:592:THR:O	1:A:592:THR:HG22	2.15	0.46
1:D:520:GLN:O	1:D:524:THR:HG23	2.14	0.46
1:C:845:THR:HG23	1:C:867:LEU:HD13	1.97	0.46
1:A:409:HIS:ND1	1:A:421:TYR:OH	2.42	0.46
1:D:378:ASN:OD1	1:D:382:THR:HG21	2.15	0.46
1:C:527:TYR:CE1	1:C:552:LEU:HD23	2.50	0.46
1:B:609:ASN:HB3	1:B:610:GLN:HE22	1.80	0.46
1:C:503:VAL:HG23	1:C:503:VAL:O	2.16	0.46
1:A:753:TYR:CD1	1:A:753:TYR:C	2.93	0.46
1:D:139:LEU:HD21	1:D:173:VAL:HG22	1.96	0.46
1:B:474:PRO:O	1:B:478:MET:HG3	2.15	0.46
1:A:612:LEU:HD23	1:A:612:LEU:O	2.16	0.46
1:D:420:MET:HE1	1:D:448:LEU:CD1	2.46	0.46
1:D:120:SER:O	1:D:124:GLN:NE2	2.49	0.46
1:D:138:VAL:HG23	1:D:138:VAL:O	2.16	0.46
1:D:609:ASN:O	1:D:613:LEU:HD11	2.16	0.46
1:C:517:ARG:HG2	1:C:517:ARG:HH11	1.81	0.46
1:C:669:ARG:HG2	1:C:669:ARG:HH11	1.80	0.46
1:A:168:PHE:O	1:A:168:PHE:CD1	2.69	0.46
1:D:73:TYR:CG	1:D:112:THR:HG23	2.51	0.46
1:A:156:LEU:HD13	1:A:170:LEU:HD22	1.98	0.45
1:B:404:CYS:SG	1:B:409:HIS:NE2	2.88	0.45
1:C:387:VAL:CG2	1:C:581:ILE:HD12	2.46	0.45
1:B:663:LEU:HD12	1:B:698:LEU:CD1	2.45	0.45
1:D:420:MET:HE1	1:D:448:LEU:CD2	2.47	0.45
1:C:853:VAL:HG12	1:C:853:VAL:O	2.16	0.45
1:D:635:TYR:CE1	1:D:639:LEU:HD11	2.51	0.45
1:B:362:ASP:O	1:B:366:VAL:HG23	2.17	0.45
1:B:849:THR:HG22	1:B:896:PHE:CD2	2.52	0.45
1:C:494:GLU:HB2	1:C:566:HIS:CD2	2.51	0.45
1:B:610:GLN:NE2	1:B:610:GLN:H	2.15	0.45
1:A:503:VAL:HG12	1:A:506:ALA:H	1.81	0.45
1:D:503:VAL:HB	1:D:506:ALA:HB3	1.99	0.45
1:D:856:PRO:HB2	1:D:857:PRO:HD3	1.98	0.45
1:B:875:PHE:CD1	1:B:875:PHE:C	2.95	0.45
1:A:728:ILE:HD12	1:A:730:ILE:H	1.82	0.45
1:D:423:ASP:OD1	1:D:423:ASP:N	2.49	0.44
1:D:703:LEU:O	1:D:740:LEU:N	2.51	0.44
1:B:573:SER:HB3	1:B:619:ALA:HB1	2.00	0.44
1:B:643:HIS:O	1:B:647:LYS:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:724:GLU:C	1:B:725:ARG:HG2	2.42	0.44
1:A:73:TYR:HB3	1:A:74:PRO:HD3	2.00	0.44
1:D:392:THR:HG23	1:D:415:ALA:CB	2.47	0.44
1:B:658:LEU:HD13	1:B:663:LEU:HD21	1.99	0.44
1:A:32:LEU:HG	1:A:60:LEU:HD11	1.98	0.44
1:D:571:SER:O	1:D:744:ILE:HG21	2.17	0.44
1:C:729:GLN:NE2	1:C:743:THR:HG21	2.31	0.44
1:A:502:ALA:O	1:A:503:VAL:HG23	2.17	0.44
1:D:61:MET:HE1	1:D:83:ARG:CA	2.47	0.44
1:B:376:VAL:HG22	1:B:600:PHE:CE2	2.53	0.44
1:B:875:PHE:HD1	1:B:875:PHE:O	2.00	0.44
1:C:420:MET:SD	1:C:448:LEU:HD21	2.58	0.44
1:A:883:GLU:O	1:A:884:ILE:HD13	2.17	0.44
1:B:707:ILE:HG22	1:B:707:ILE:O	2.16	0.44
1:C:723:MET:O	1:C:730:ILE:HD13	2.17	0.44
1:B:515:ALA:HB2	1:B:562:VAL:HG21	1.97	0.44
1:A:875:PHE:CD1	1:A:875:PHE:C	2.95	0.44
1:D:896:PHE:HB2	1:D:901:LEU:HD21	2.00	0.44
1:A:398:VAL:HG22	1:A:459:MET:CB	2.48	0.44
1:D:701:THR:HG23	1:D:702:ARG:HG3	2.00	0.44
1:A:168:PHE:CD1	1:A:168:PHE:C	2.96	0.44
1:A:458:ARG:O	1:A:459:MET:HB2	2.18	0.44
1:B:391:LEU:HD12	1:B:459:MET:SD	2.58	0.43
1:D:245:TYR:CD2	1:D:280:VAL:HG12	2.53	0.43
1:C:436:VAL:O	1:C:436:VAL:HG23	2.18	0.43
1:B:461:LEU:HD13	1:B:491:LEU:HG	2.00	0.43
1:B:630:LEU:O	1:B:630:LEU:HD12	2.18	0.43
1:C:391:LEU:HD12	1:C:459:MET:SD	2.58	0.43
1:A:468:ASP:OD2	1:A:470:VAL:HG23	2.19	0.43
1:A:535:CYS:SG	1:A:536:ALA:N	2.91	0.43
1:A:736:ASN:OD1	1:A:737:SER:N	2.51	0.43
1:A:849:THR:OG1	1:A:894:SER:OG	2.18	0.43
1:D:497:TYR:CD2	1:D:500:ALA:HB2	2.53	0.43
1:C:503:VAL:HG23	1:C:506:ALA:HB3	1.99	0.43
1:D:431:ALA:O	1:D:432:ILE:HG23	2.18	0.43
1:C:360:ALA:HB1	1:C:616:LEU:HD11	2.01	0.43
1:C:454:LEU:O	1:C:454:LEU:HD23	2.18	0.43
1:C:802:LEU:HD12	1:C:802:LEU:H	1.82	0.43
1:A:76:ALA:HB3	1:A:77:GLN:OE1	2.18	0.43
1:B:832:GLN:O	1:B:836:ALA:N	2.48	0.43
1:A:273:VAL:HG13	1:A:273:VAL:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:799:GLU:HG3	1:C:800:PHE:O	2.18	0.43
1:A:64:ILE:HG21	1:A:79:LEU:CD1	2.49	0.43
1:A:567:SER:O	1:A:567:SER:OG	2.30	0.43
1:B:512:MET:HA	1:B:512:MET:HE2	2.00	0.43
1:A:291:PRO:O	1:A:292:PHE:C	2.61	0.43
1:A:633:HIS:C	1:A:637:MET:HE3	2.43	0.43
1:D:838:ARG:C	1:D:838:ARG:HD2	2.44	0.43
1:B:436:VAL:HG22	1:B:472:TYR:OH	2.19	0.43
1:A:420:MET:SD	1:A:448:LEU:HD21	2.58	0.43
1:D:474:PRO:O	1:D:478:MET:HG3	2.19	0.43
1:D:747:THR:CG2	1:D:748:TRP:N	2.82	0.43
1:C:503:VAL:HG11	1:C:635:TYR:CD2	2.54	0.42
1:C:579:SER:OG	1:C:580:MET:N	2.52	0.42
1:A:400:ILE:HD11	1:A:404:CYS:SG	2.59	0.42
1:A:607:SER:OG	1:A:608:PRO:HD3	2.20	0.42
1:B:376:VAL:HG22	1:B:600:PHE:CZ	2.53	0.42
1:B:768:SER:O	1:B:772:ALA:N	2.52	0.42
1:A:707:ILE:HD12	1:A:707:ILE:N	2.33	0.42
1:A:510:THR:OG1	1:A:513:ILE:HD13	2.19	0.42
1:A:620:ARG:O	1:A:620:ARG:HD3	2.19	0.42
1:A:419:PRO:CG	1:A:815:MET:HE2	2.50	0.42
1:A:622:GLN:NE2	1:A:626:GLU:OE2	2.49	0.42
1:A:663:LEU:HD12	1:A:698:LEU:CD1	2.49	0.42
1:B:610:GLN:HG2	1:B:611:GLN:N	2.34	0.42
1:B:764:ASP:OD1	1:B:764:ASP:C	2.62	0.42
1:C:442:LYS:NZ	1:C:480:GLU:OE1	2.49	0.42
1:D:707:ILE:O	1:D:707:ILE:HG22	2.18	0.42
1:C:375:PHE:CE1	1:C:616:LEU:HD22	2.54	0.42
1:C:454:LEU:HD23	1:C:454:LEU:C	2.45	0.42
1:A:640:VAL:O	1:A:644:ARG:HG2	2.20	0.42
1:A:710:THR:O	1:A:712:MET:HE2	2.20	0.42
1:B:442:LYS:NZ	1:B:547:VAL:O	2.45	0.42
1:D:377:THR:HA	1:D:612:LEU:HD13	2.02	0.42
1:D:729:GLN:HG3	1:D:743:THR:HG21	2.01	0.42
1:D:743:THR:O	1:D:746:VAL:HG12	2.20	0.42
1:B:374:TYR:HE2	1:B:583:VAL:HG21	1.85	0.42
1:C:720:LYS:HB2	1:C:721:ILE:HD13	2.02	0.42
1:D:139:LEU:HD21	1:D:173:VAL:CG2	2.50	0.42
1:C:642:ARG:NH1	1:C:700:PRO:HA	2.35	0.41
1:B:395:GLY:HA2	1:B:418:TYR:CE2	2.55	0.41
1:B:861:VAL:HG12	1:B:872:ILE:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:701:THR:HG23	1:A:742:PHE:HB2	2.01	0.41
1:C:642:ARG:NH1	1:C:703:LEU:HD23	2.35	0.41
1:A:747:THR:HG22	1:A:749:SER:H	1.85	0.41
1:D:629:GLU:CG	1:D:631:VAL:HG22	2.51	0.41
1:A:754:LEU:O	1:A:758:LEU:HD13	2.20	0.41
1:B:364:ALA:HB1	1:B:373:THR:HG21	2.02	0.41
1:A:420:MET:HE1	1:A:448:LEU:HG	2.01	0.41
1:A:803:ALA:O	1:A:908:ARG:HD3	2.21	0.41
1:A:40:LEU:CD1	1:A:50:THR:HG21	2.50	0.41
1:D:855:TYR:HB3	1:D:883:GLU:HB2	2.03	0.41
1:C:827:ASP:O	1:C:897:THR:HG23	2.21	0.41
1:A:142:ASP:N	1:A:173:VAL:O	2.53	0.41
1:A:398:VAL:HG13	1:A:459:MET:HG2	2.02	0.41
1:A:780:HIS:O	1:A:784:VAL:HG23	2.21	0.41
1:A:856:PRO:HB2	1:A:857:PRO:HD3	2.02	0.41
1:C:694:ASP:OD1	1:C:695:GLN:N	2.53	0.41
1:C:730:ILE:HG13	1:C:740:LEU:HD23	2.02	0.41
1:C:855:TYR:N	1:C:856:PRO:CD	2.84	0.41
1:A:499:PHE:CD1	1:A:499:PHE:C	2.98	0.41
1:D:372:GLN:O	1:D:373:THR:OG1	2.35	0.41
1:D:636:ASN:O	1:D:640:VAL:HG23	2.21	0.41
1:D:861:VAL:HG21	1:D:875:PHE:HE2	1.86	0.41
1:C:423:ASP:OD1	1:C:423:ASP:N	2.47	0.41
1:A:137:THR:HG22	1:A:188:GLU:O	2.20	0.41
1:D:621:ARG:NE	1:D:621:ARG:HA	2.35	0.41
1:D:839:ARG:HG2	1:D:846:LEU:HD11	2.02	0.41
1:C:793:HIS:ND1	1:C:794:LEU:O	2.52	0.40
1:A:879:LEU:HD21	1:A:884:ILE:HD11	2.04	0.40
1:A:910:ALA:O	1:A:914:VAL:HG23	2.21	0.40
1:D:702:ARG:CZ	1:D:741:ILE:HD11	2.52	0.40
1:B:372:GLN:O	1:B:583:VAL:CG2	2.68	0.40
1:B:463:THR:HG22	1:B:493:ASP:HB3	2.02	0.40
1:B:747:THR:OG1	1:B:748:TRP:N	2.54	0.40
1:B:827:ASP:O	1:B:897:THR:HG23	2.21	0.40
1:C:561:ARG:NH2	1:C:585:ASP:OD1	2.52	0.40
1:B:466:THR:O	1:B:469:GLY:N	2.52	0.40
1:C:779:LEU:O	1:C:782:ARG:HG2	2.21	0.40
1:C:856:PRO:CB	1:C:857:PRO:HD3	2.51	0.40
1:D:27:LEU:HD12	1:D:27:LEU:HA	1.99	0.40
1:D:30:TRP:CZ3	1:D:33:LEU:HD23	2.56	0.40
1:D:579:SER:OG	1:D:580:MET:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:373:THR:O	1:C:373:THR:HG23	2.22	0.40
1:C:397:ILE:HD12	1:C:456:ARG:HB2	2.04	0.40
1:A:566:HIS:HD1	1:A:582:HIS:CD2	2.39	0.40
1:A:895:VAL:HG12	1:A:896:PHE:O	2.22	0.40
1:B:493:ASP:OD2	1:B:493:ASP:C	2.65	0.40
1:C:359:THR:O	1:C:363:LYS:HG2	2.22	0.40
1:C:402:ARG:NH2	1:C:795:PRO:O	2.54	0.40
1:C:754:LEU:O	1:C:758:LEU:HG	2.22	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	754/947 (80%)	719 (95%)	35 (5%)	0	100	100
1	B	544/947 (57%)	525 (96%)	19 (4%)	0	100	100
1	C	538/947 (57%)	512 (95%)	26 (5%)	0	100	100
1	D	754/947 (80%)	717 (95%)	37 (5%)	0	100	100
All	All	2590/3788 (68%)	2473 (96%)	117 (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	642/788 (82%)	639 (100%)	3 (0%)	81 81
1	B	458/788 (58%)	457 (100%)	1 (0%)	87 85
1	C	456/788 (58%)	456 (100%)	0	100 100
1	D	640/788 (81%)	640 (100%)	0	100 100
All	All	2196/3152 (70%)	2192 (100%)	4 (0%)	85 85

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

Mol	Chain	Res	Type
1	B	610	GLN
1	A	293	PHE
1	A	698	LEU
1	A	741	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	443	GLN
1	B	603	HIS
1	B	609	ASN
1	B	610	GLN
1	B	622	GLN
1	B	643	HIS
1	B	752	HIS
1	B	793	HIS
1	C	389	GLN
1	C	603	HIS
1	A	39	HIS
1	A	124	GLN
1	A	133	GLN
1	A	371	ASN
1	A	372	GLN
1	D	196	HIS
1	D	277	HIS
1	D	464	ASN
1	D	566	HIS
1	D	582	HIS
1	D	789	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

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.

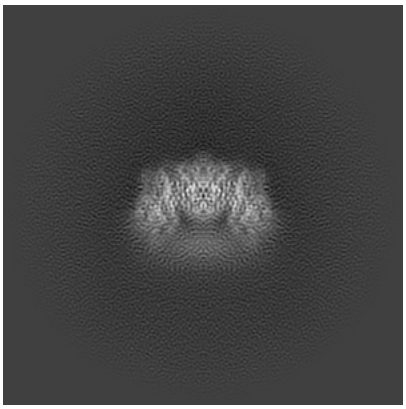
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-48789. These allow visual inspection of the internal detail of the map and identification of artifacts.

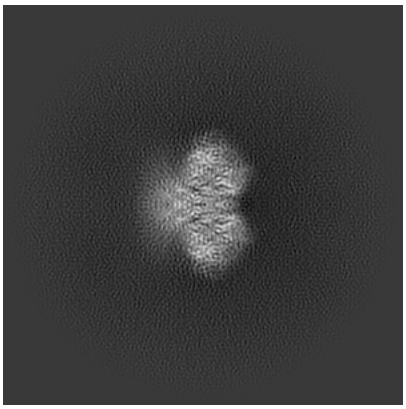
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

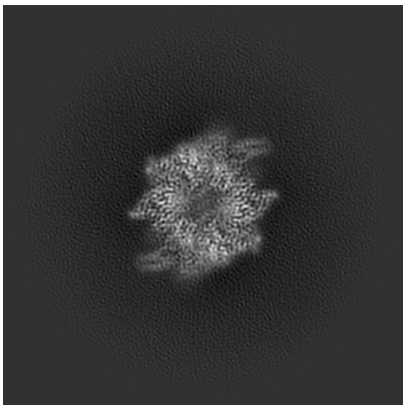
6.1.1 Primary map



X

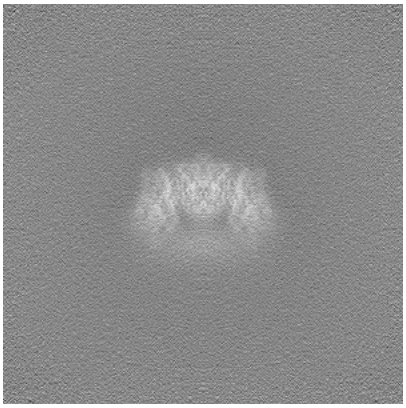


Y

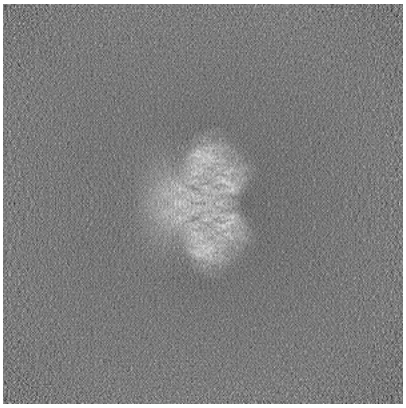


Z

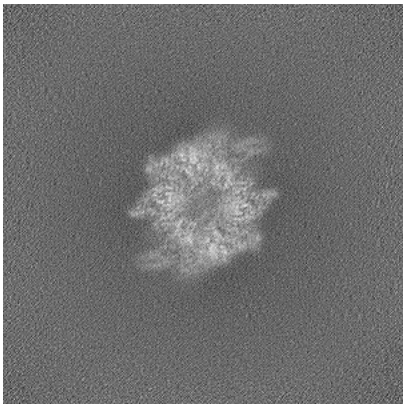
6.1.2 Raw map



X



Y

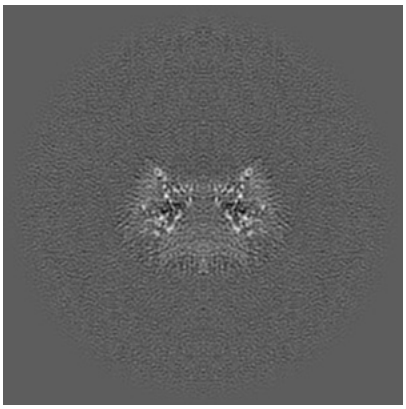


Z

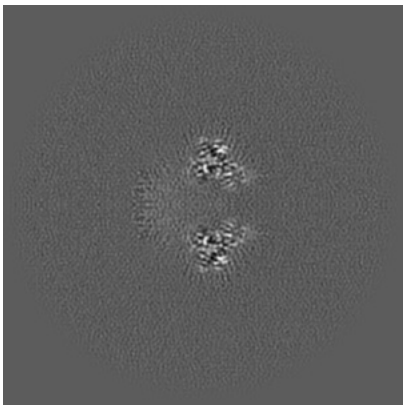
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

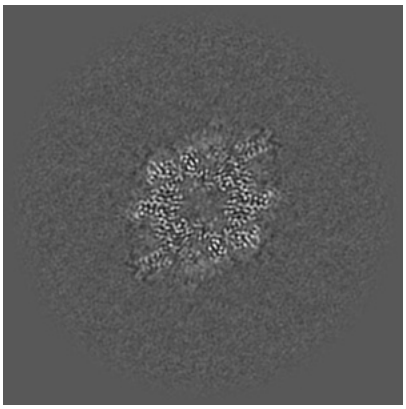
6.2.1 Primary map



X Index: 256

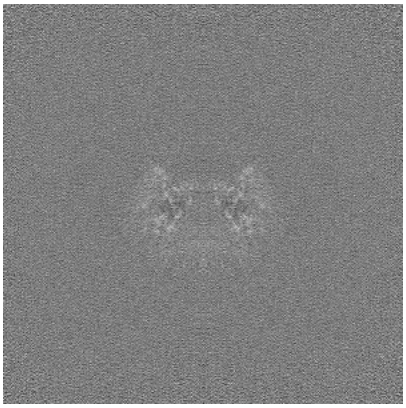


Y Index: 256

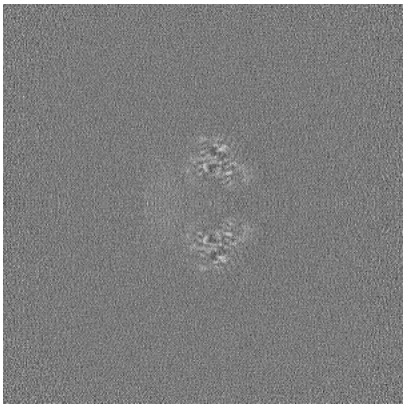


Z Index: 256

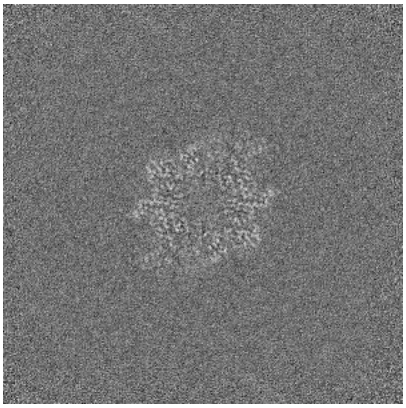
6.2.2 Raw map



X Index: 256



Y Index: 256

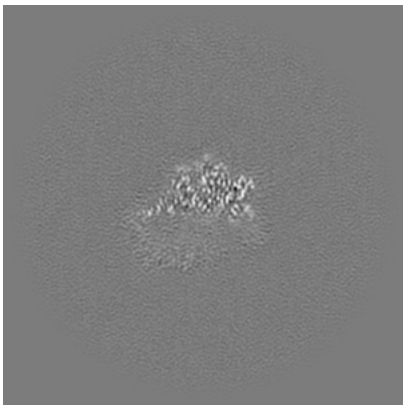


Z Index: 256

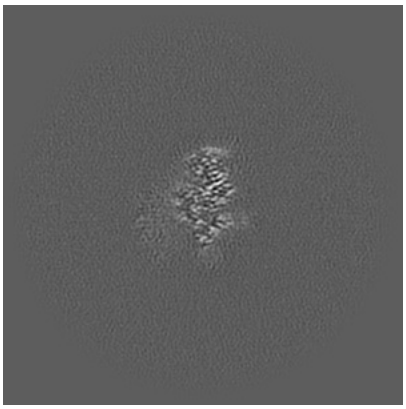
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

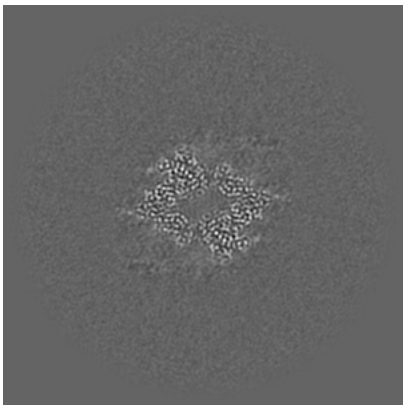
6.3.1 Primary map



X Index: 217

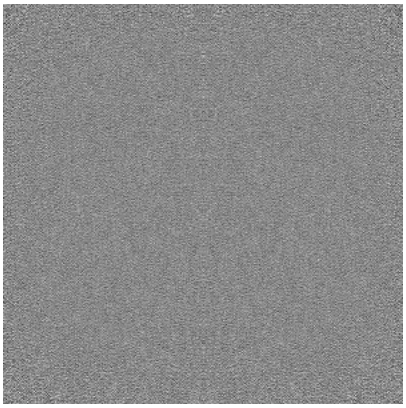


Y Index: 211

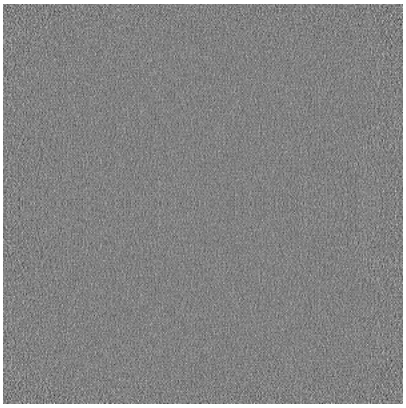


Z Index: 275

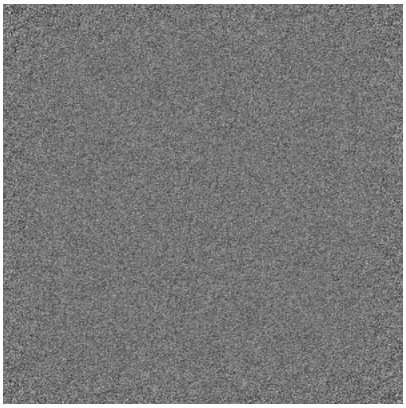
6.3.2 Raw map



X Index: 0



Y Index: 0

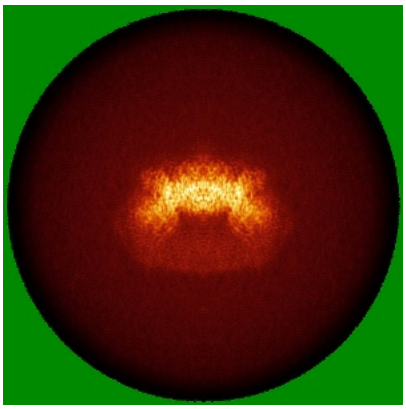


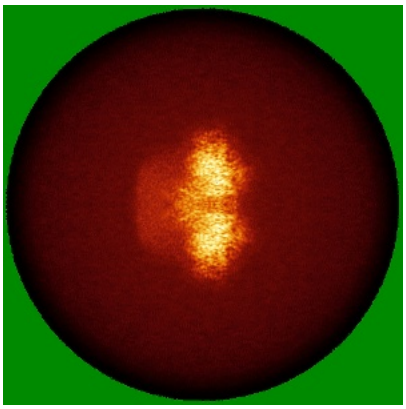
Z Index: 511

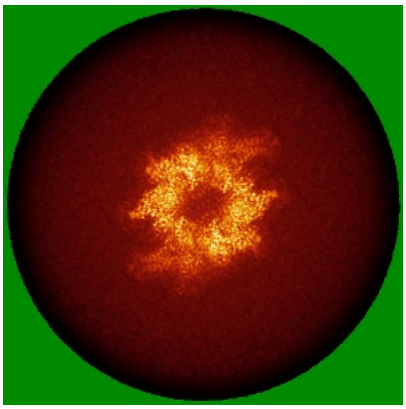
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

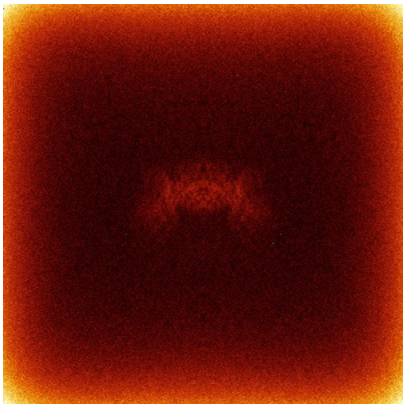
6.4.1 Primary map

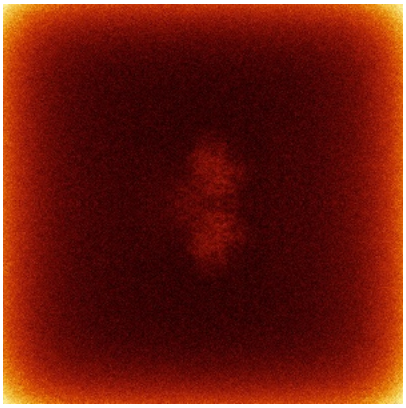

X

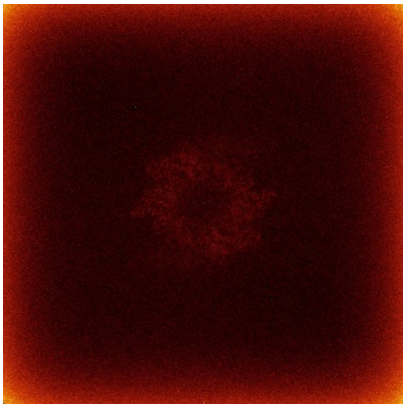

Y


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.

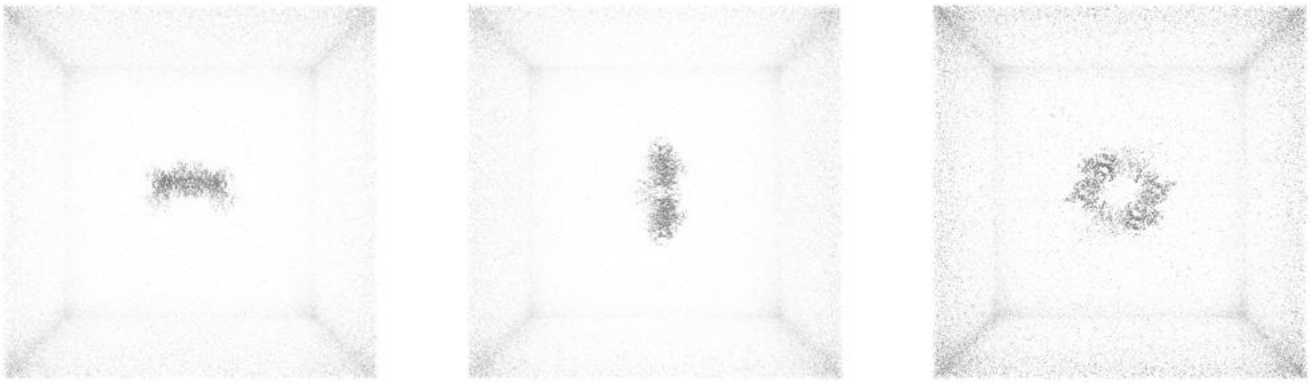
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.103. 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



X Y Z

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.

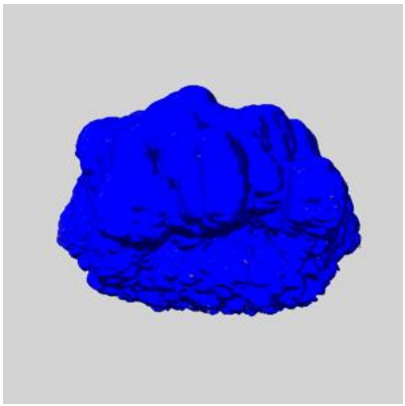
6.6 Mask visualisation

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

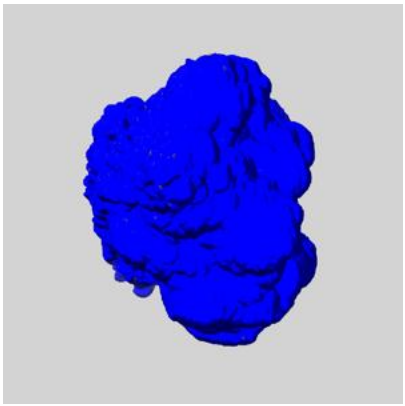
A mask typically either:

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

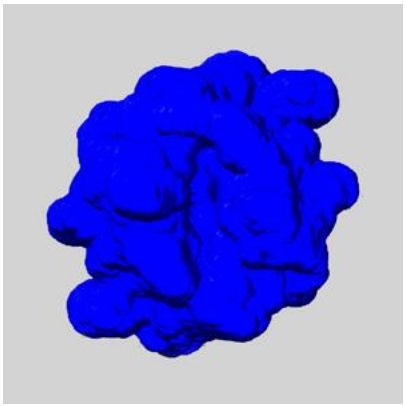
6.6.1 emd_48789_msk_1.map



X



Y

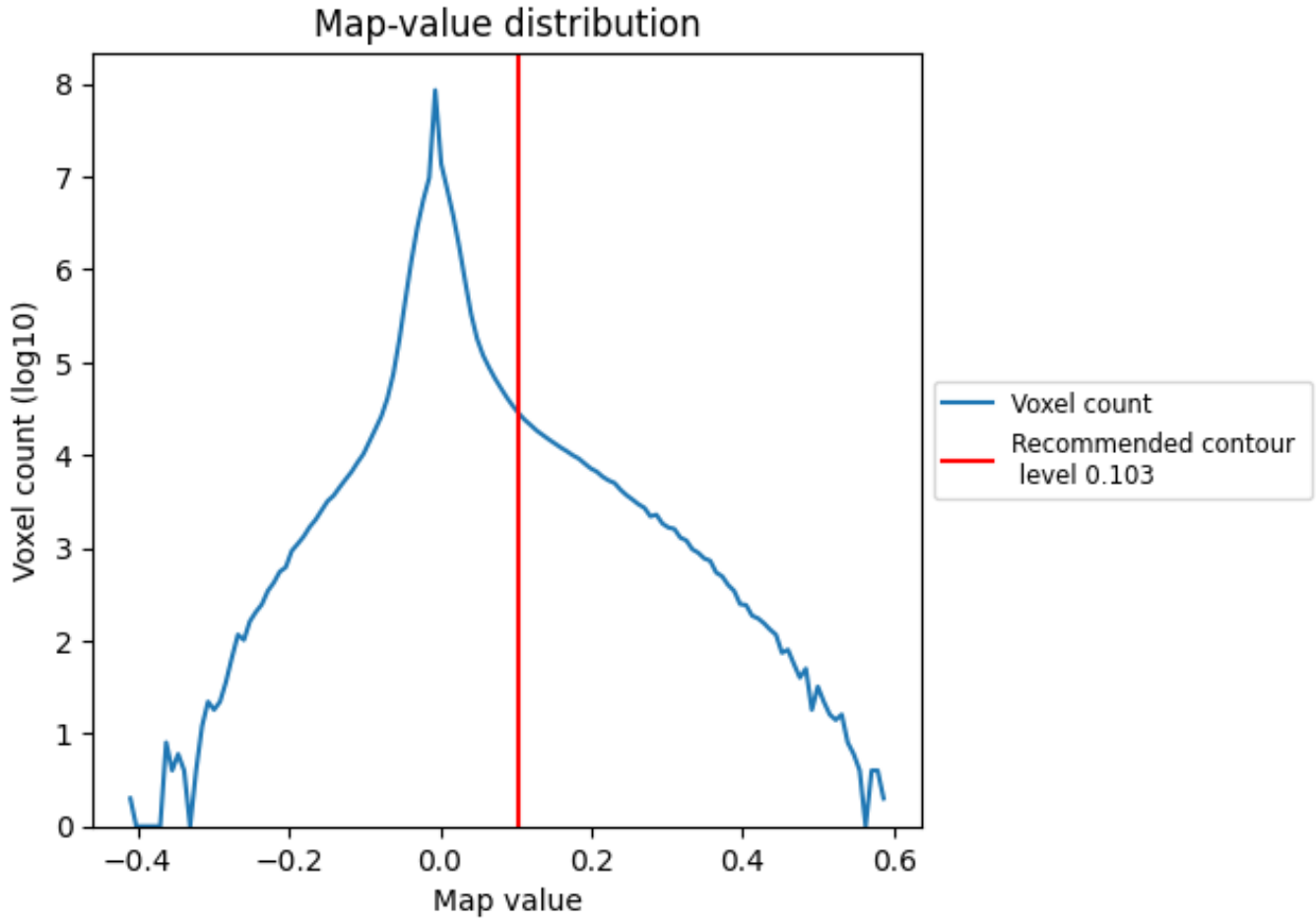


Z

7 Map analysis

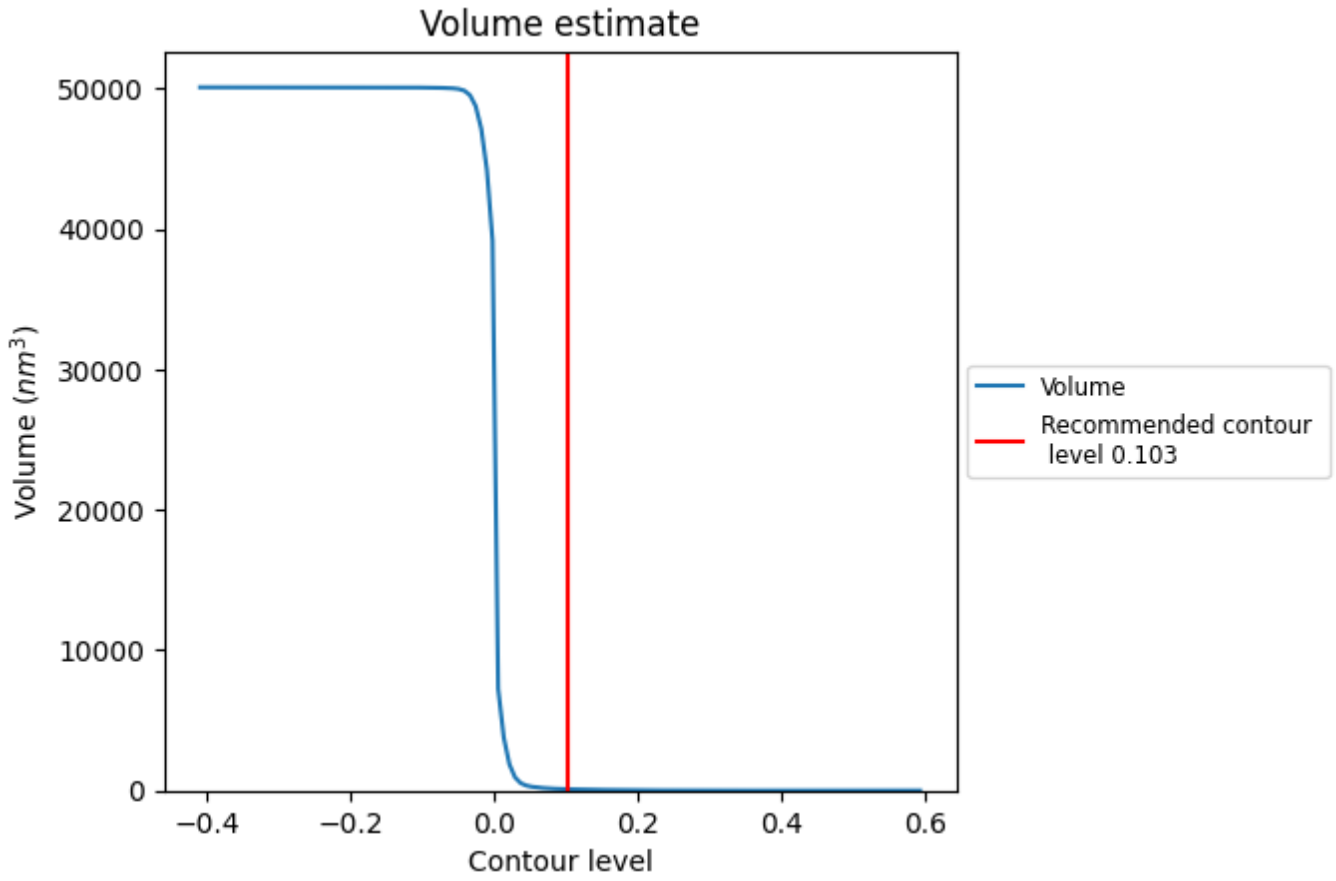
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

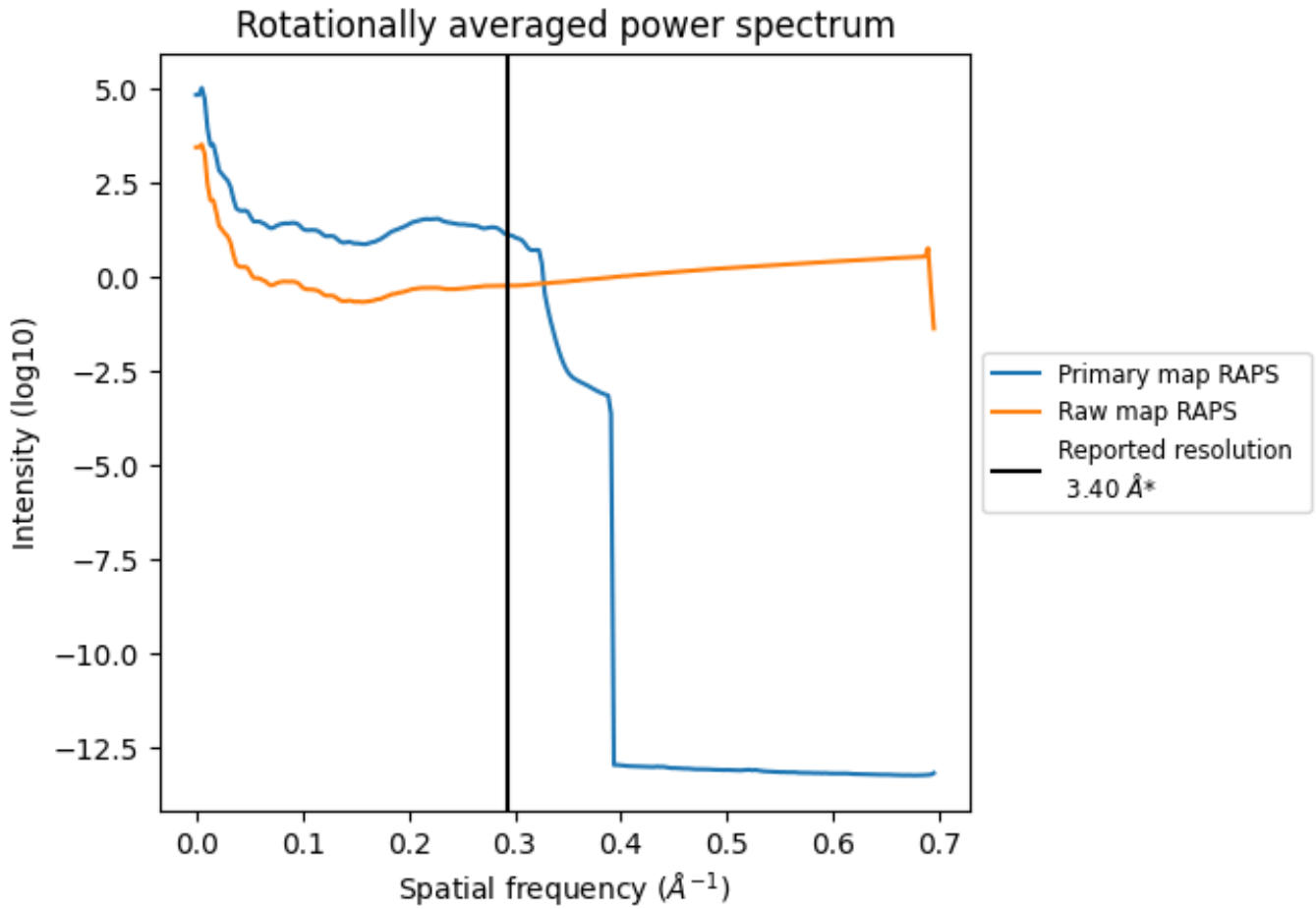
7.2 Volume estimate



The volume at the recommended contour level is 96 nm^3; this corresponds to an approximate mass of 87 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)

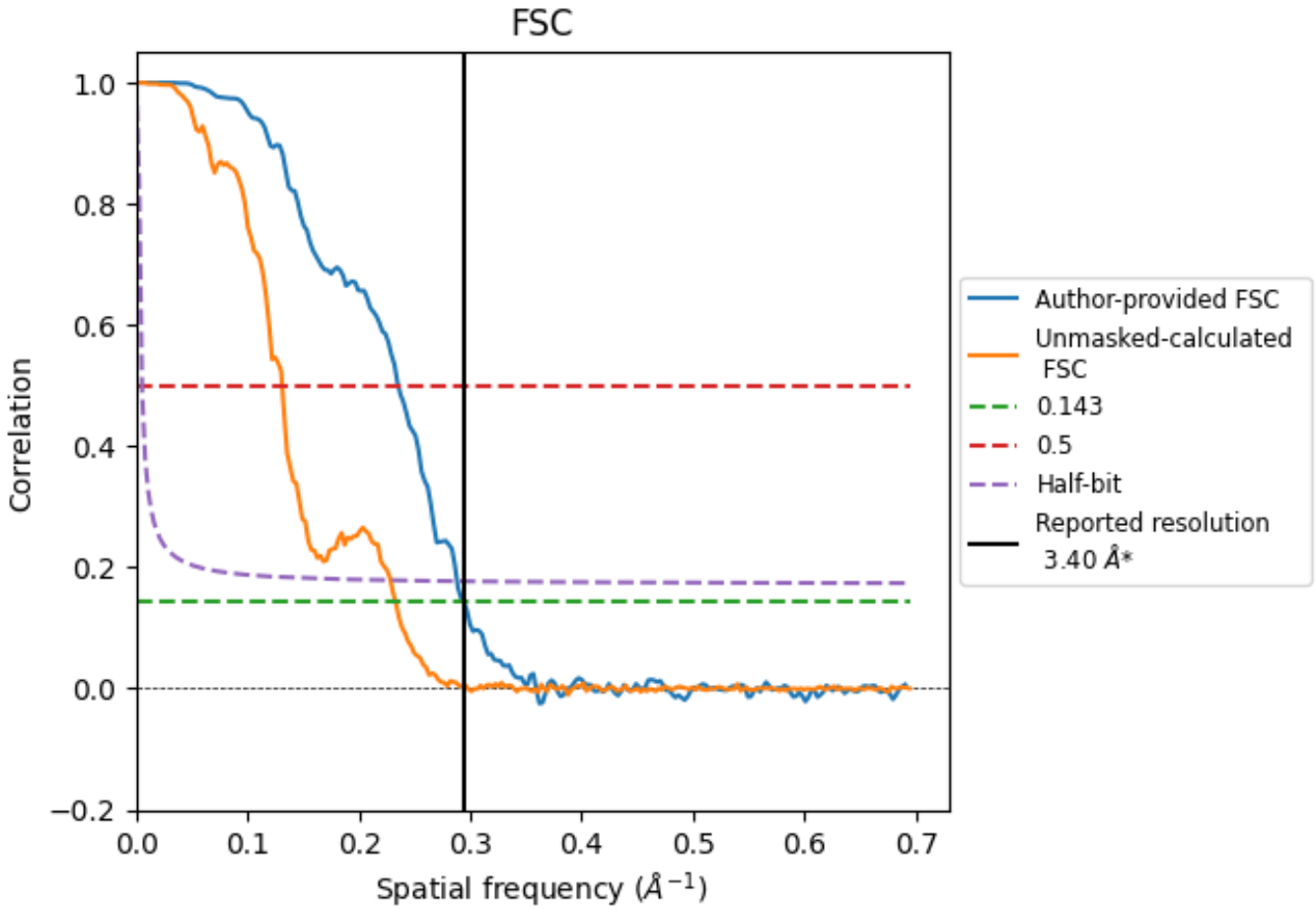


*Reported resolution corresponds to spatial frequency of 0.294 $Å^{-1}$

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.294 Å^{-1}

8.2 Resolution estimates (i)

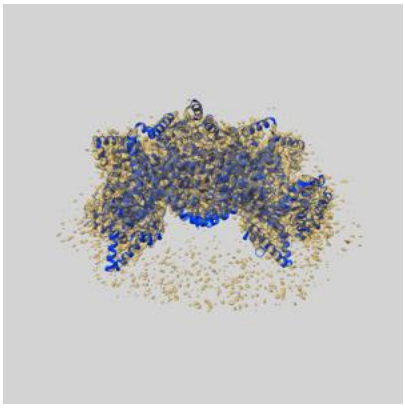
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.40	4.25	3.47
Unmasked-calculated*	4.29	7.63	4.38

*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 4.29 differs from the reported value 3.4 by more than 10 %

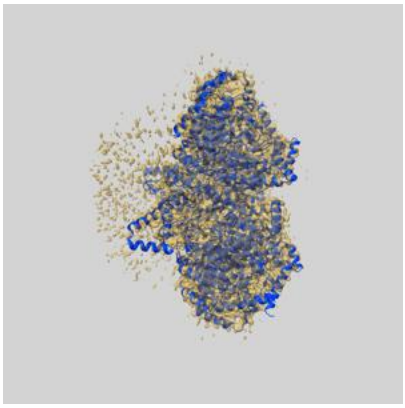
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-48789 and PDB model 9N0P. Per-residue inclusion information can be found in section 3 on page 4.

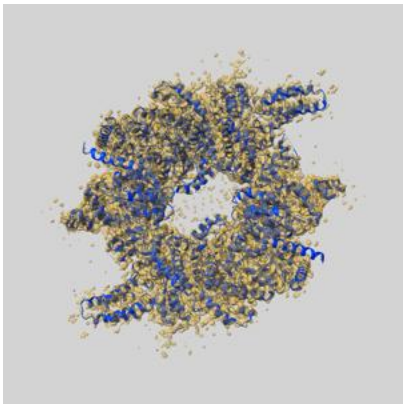
9.1 Map-model overlay



X



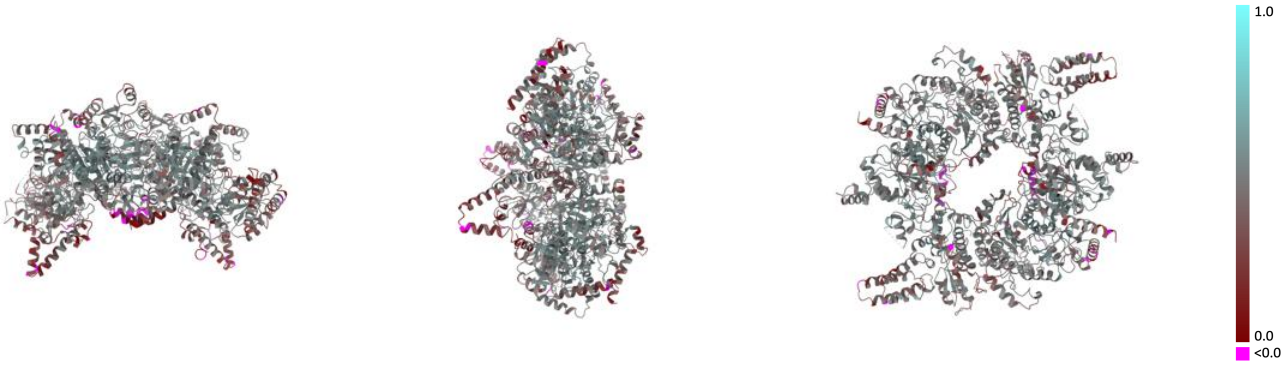
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.103 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.

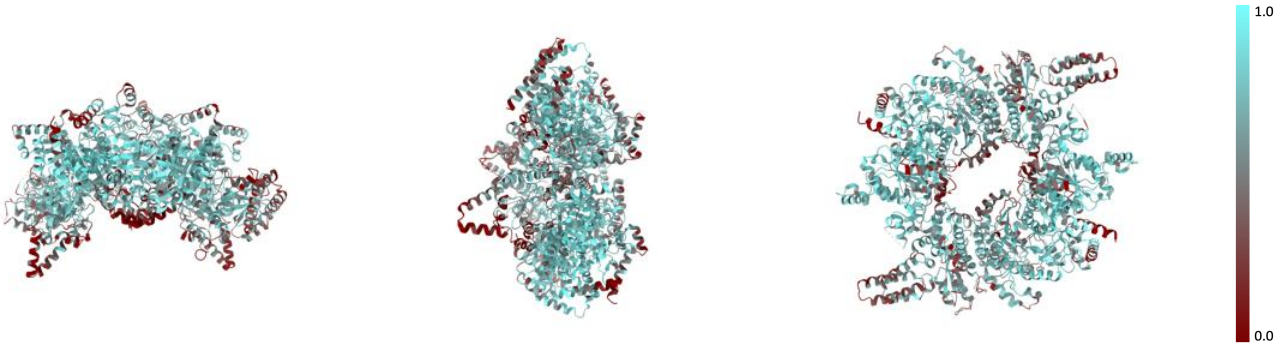
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

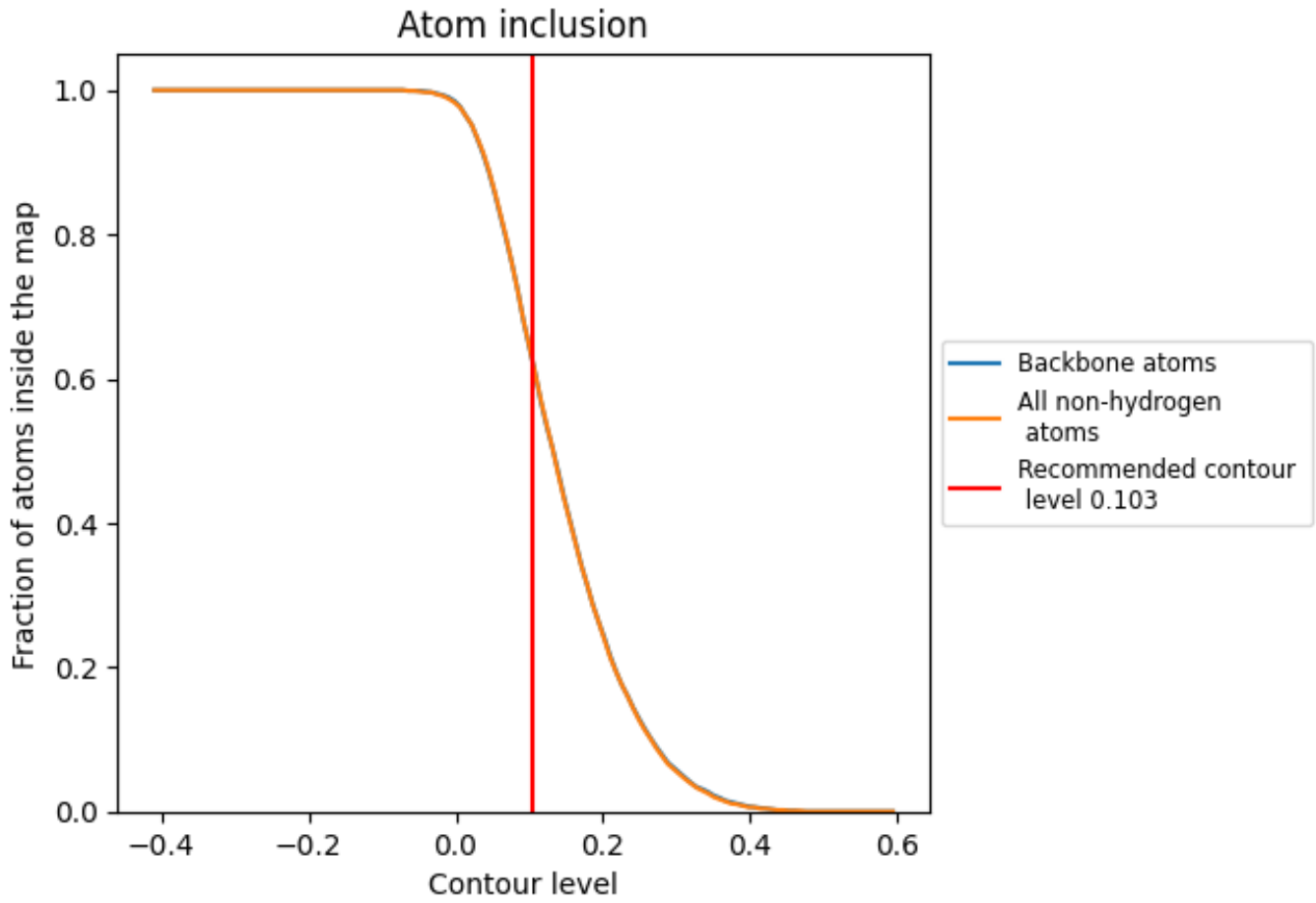
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.103).

9.4 Atom inclusion (i)



At the recommended contour level, 63% of all backbone atoms, 63% 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 (0.103) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6310	0.4470
A	0.6130	0.4340
B	0.6730	0.4590
C	0.6810	0.4710
D	0.6080	0.4350