Full wwPDB EM Validation Report (i)

Sep 16, 2025 – 02:50 PM JST

PDB ID	:	9L2E / pdb_00009l2e
EMDB ID	:	EMD-62773
Title	:	Structure of SARM1 bound to M1 in the intermediate state 2
Authors	:	Huang, Y.; Zhang, J.; Zheng, S.; Wang, X.
Deposited on	:	2024-12-17
Resolution	:	2.46 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 (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:

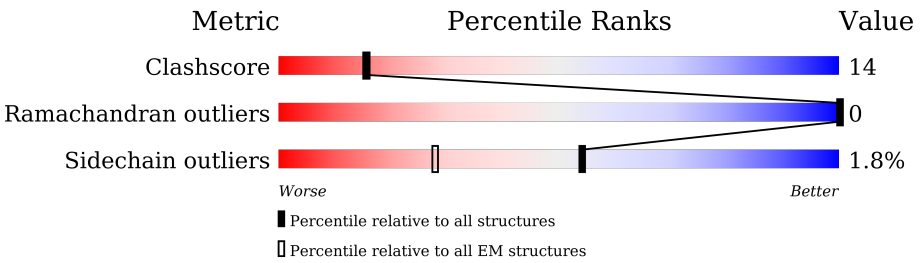
EMDB validation analysis	:	0.0.1.dev126
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.46 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	732	13% 6% 81%
1	B	732	12% 6% 81%
1	C	732	13% 6% 81%
1	D	732	13% 6% 81%
1	E	732	13% 6% 81%
1	F	732	13% 6% 81%
1	G	732	13% 6% 81%
1	H	732	12% 7% 81%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 9064 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 NAD(+) hydrolase SARM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	139	1133	710	203	214	6	0	0
1	B	139	1133	710	203	214	6	0	0
1	C	139	1133	710	203	214	6	0	0
1	D	139	1133	710	203	214	6	0	0
1	E	139	1133	710	203	214	6	0	0
1	F	139	1133	710	203	214	6	0	0
1	G	139	1133	710	203	214	6	0	0
1	H	139	1133	710	203	214	6	0	0

There are 64 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	725	ASP	-	expression tag	UNP Q6SZW1
A	726	TYR	-	expression tag	UNP Q6SZW1
A	727	LYS	-	expression tag	UNP Q6SZW1
A	728	ASP	-	expression tag	UNP Q6SZW1
A	729	ASP	-	expression tag	UNP Q6SZW1
A	730	ASP	-	expression tag	UNP Q6SZW1
A	731	ASP	-	expression tag	UNP Q6SZW1
A	732	LYS	-	expression tag	UNP Q6SZW1
B	725	ASP	-	expression tag	UNP Q6SZW1
B	726	TYR	-	expression tag	UNP Q6SZW1
B	727	LYS	-	expression tag	UNP Q6SZW1
B	728	ASP	-	expression tag	UNP Q6SZW1
B	729	ASP	-	expression tag	UNP Q6SZW1
B	730	ASP	-	expression tag	UNP Q6SZW1

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Chain	Residue	Modelled	Actual	Comment	Reference
B	731	ASP	-	expression tag	UNP Q6SZW1
B	732	LYS	-	expression tag	UNP Q6SZW1
C	725	ASP	-	expression tag	UNP Q6SZW1
C	726	TYR	-	expression tag	UNP Q6SZW1
C	727	LYS	-	expression tag	UNP Q6SZW1
C	728	ASP	-	expression tag	UNP Q6SZW1
C	729	ASP	-	expression tag	UNP Q6SZW1
C	730	ASP	-	expression tag	UNP Q6SZW1
C	731	ASP	-	expression tag	UNP Q6SZW1
C	732	LYS	-	expression tag	UNP Q6SZW1
D	725	ASP	-	expression tag	UNP Q6SZW1
D	726	TYR	-	expression tag	UNP Q6SZW1
D	727	LYS	-	expression tag	UNP Q6SZW1
D	728	ASP	-	expression tag	UNP Q6SZW1
D	729	ASP	-	expression tag	UNP Q6SZW1
D	730	ASP	-	expression tag	UNP Q6SZW1
D	731	ASP	-	expression tag	UNP Q6SZW1
D	732	LYS	-	expression tag	UNP Q6SZW1
E	725	ASP	-	expression tag	UNP Q6SZW1
E	726	TYR	-	expression tag	UNP Q6SZW1
E	727	LYS	-	expression tag	UNP Q6SZW1
E	728	ASP	-	expression tag	UNP Q6SZW1
E	729	ASP	-	expression tag	UNP Q6SZW1
E	730	ASP	-	expression tag	UNP Q6SZW1
E	731	ASP	-	expression tag	UNP Q6SZW1
E	732	LYS	-	expression tag	UNP Q6SZW1
F	725	ASP	-	expression tag	UNP Q6SZW1
F	726	TYR	-	expression tag	UNP Q6SZW1
F	727	LYS	-	expression tag	UNP Q6SZW1
F	728	ASP	-	expression tag	UNP Q6SZW1
F	729	ASP	-	expression tag	UNP Q6SZW1
F	730	ASP	-	expression tag	UNP Q6SZW1
F	731	ASP	-	expression tag	UNP Q6SZW1
F	732	LYS	-	expression tag	UNP Q6SZW1
G	725	ASP	-	expression tag	UNP Q6SZW1
G	726	TYR	-	expression tag	UNP Q6SZW1
G	727	LYS	-	expression tag	UNP Q6SZW1
G	728	ASP	-	expression tag	UNP Q6SZW1
G	729	ASP	-	expression tag	UNP Q6SZW1
G	730	ASP	-	expression tag	UNP Q6SZW1
G	731	ASP	-	expression tag	UNP Q6SZW1
G	732	LYS	-	expression tag	UNP Q6SZW1

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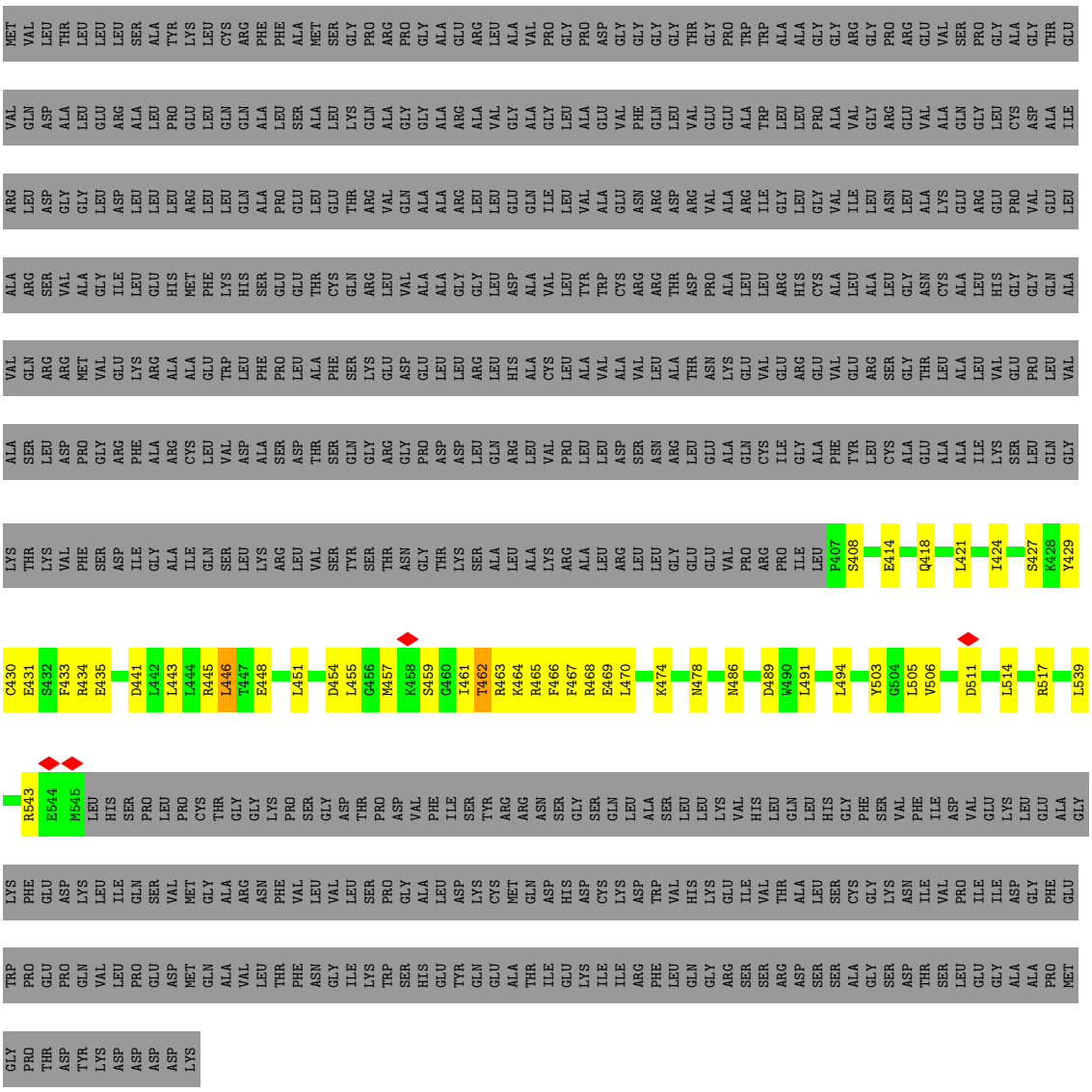
Chain	Residue	Modelled	Actual	Comment	Reference
H	725	ASP	-	expression tag	UNP Q6SZW1
H	726	TYR	-	expression tag	UNP Q6SZW1
H	727	LYS	-	expression tag	UNP Q6SZW1
H	728	ASP	-	expression tag	UNP Q6SZW1
H	729	ASP	-	expression tag	UNP Q6SZW1
H	730	ASP	-	expression tag	UNP Q6SZW1
H	731	ASP	-	expression tag	UNP Q6SZW1
H	732	LYS	-	expression tag	UNP Q6SZW1

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: NAD(+) hydrolase SARM1

Chain A: 13% 6% 81%



- Molecule 1: NAD(+) hydrolase SARM1

Chain B: 12% 6% 81%

MET VAL LEU THR LEU LEU LEU SER ALA TYR LYS LEU CYS ARG PHE PHE ALA MET SER GLY PRO ARG PRO GLY ALA GLU ARG LEU ALA VAL PRO GLY PRO ASP GLY GLY GLY THR GLY PRO TRP TRP ALA ALA GLY GLY ARG GLY PRO ARG GLU VAL SER PRO GLY ALA GLY THR GLU

VAL GLN ASP ALA LEU GLU ARG ALA LEU PRO GLU LEU GLN GLN ALA LEU SER ALA LEU LYS GLN ALA GLY GLY ALA ARG ALA VAL GLY ALA GLY LEU GLU VAL PHE GLN LEU VAL GLU GLU ALA TRP LEU LEU PRO ALA VAL GLY ARG GLU VAL ALA GLN GLY LEU CYS ASP ALA ILE

ARG LEU ASP GLY GLY LEU ASP LEU LEU LEU ARG LEU LEU GLN ALA PRO GLU LEU THR GLU THR ARG VAL GLN ALA ALA ARG LEU LEU GLU GLN ILE LEU VAL ALA GLU ASN ARG ASP ARG VAL ALA ARG ILE GLY LEU GLY VAL ILE LEU ASN LEU ALA LYS GLU ARG GLU PRO VAL GLU LEU

ALA ARG SER VAL ALA GLY ILE LEU GLU HIS HIS MET PHE LYS HIS SER GLU GLU THR CYS GLN ARG LEU ALA ALA GLY GLY LEU ASP ALA VAL LEU TYR TRP CYS ARG ARG THR ASP PRO ALA LEU LEU ARG HIS CYS ALA LEU ALA LEU GLY ASN CYS ALA LEU HIS GLY GLY GLN ALA

VAL GLN ARG ARG MET VAL GLU LYS ARG ALA ALA GLU TRP LEU PHE PRO LEU ALA PHE SER LYS GLU ASP GLU LEU LEU ARG LEU HIS ALA CYS LEU ALA VAL ALA VAL LEU ALA THR ASN LYS GLU VAL GLU ARG GLU VAL GLU ARG GLU VAL GLU PRO LEU GLN

ALA SER LEU ASP PRO GLY ARG PHE ALA ARG CYS LEU VAL ASP ALA SER ASP THR SER GLN GLY ARG GLY PRO ASP ASP LEU GLN ARG LEU VAL PRO LEU LEU ASP SER ASN ARG LEU GLU ALA GLN CYS ILE GLY ALA PHE TYR LEU CYS ALA GLU ALA ALA ILE LYS SER LEU GLN GLY

LYS THR LYS VAL PHE SER ASP ILE GLY ALA ILE GLN SER LEU LYS ARG LEU VAL SER TYR SER THR ASN GLY THR LYS SER ALA LEU ALA LYS ARG ALA LEU ARG GLY GLU GLU VAL PRO ARG PRO ILE LEU P407 S408 E414 Q418 L421 I424 S427 K428 Y429

C430 E431 S432 F433 R434 E435 Q436 D441 L442 L443 L444 R445 L446 T447 E448 L451 D454 L455 G456 M457 K458 S459 G460 I461 T462 R463 K464 R465 F466 F467 R468 E469 L470 K474 N478 D483 N486 L487 A488 D489 W490 L491 Y503 G504 L505 V506 S507 D511 L514

R517 L539 R543 E544 M545 LEU HIS SER PRO LEU PRO CYS THR GLY GLY LYS PRO SER GLY ASP THR PRO ASP VAL PHE ILE SER TYR ARG ARG ASN SER GLY SER GLN LEU ALA SER LEU LEU LYS VAL HIS LEU GLN LEU HIS GLY PHE SER VAL PHE ILE ASP VAL GLU LYS LEU

GLU ALA GLY LYS PHE GLU ASP LYS LEU ILE GLN SER VAL MET MET GLY ALA ARG ASN PHE VAL LEU VAL LEU SER PRO GLY ALA LEU ASP LYS CYS MET GLN ASP HIS ASP CYS LYS ASP TRP VAL HIS LYS GLU ILE VAL THR ALA LEU SER CYS GLY LYS ASN ILE VAL PRO ILE ILE ASP

GLY PHE GLU TRP PRO GLU PRO GLN VAL LEU PRO GLU ASP MET GLN ALA VAL LEU THR PHE ASN GLY ILE LYS TRP SER HIS GLU TYR GLN GLU ALA THR ILE GLU LYS ILE ILE ARG PHE LEU GLN GLY ARG SER SER ARG ASP SER SER SER ALA GLY SER ASP THR SER LEU GLU GLY ALA

ALA PRO MET GLY PRO THR ASP TYR LYS ASP ASP ASP ASP LYS

- Molecule 1: NAD(+) hydrolase SARM1

Chain C: 13% 6% 81%

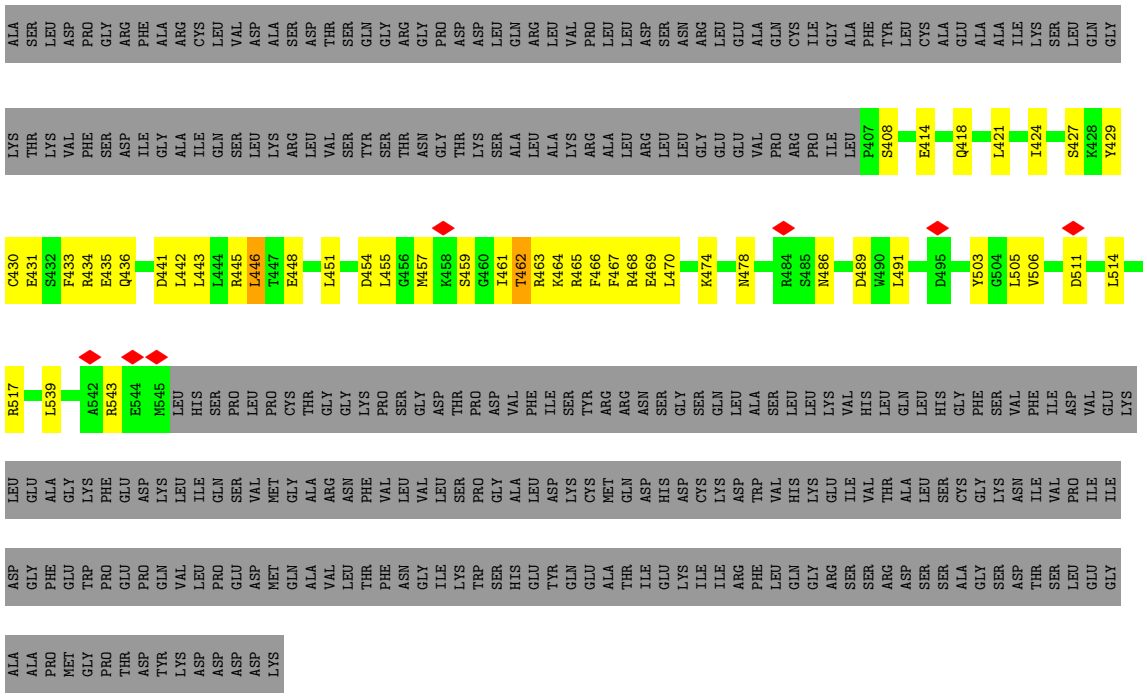
MET VAL LEU THR LEU LEU LEU SER ALA TYR LYS LEU CYS ARG PHE PHE ALA MET SER GLY PRO ARG PRO GLY ALA GLU ARG LEU ALA VAL PRO GLY PRO ASP GLY GLY GLY THR GLY PRO TRP TRP ALA ALA GLY GLY ARG GLY PRO ARG GLU VAL SER PRO GLY ALA GLY THR GLU

VAL GLN ASP ALA LEU GLU ARG ALA LEU PRO GLU LEU GLN GLN ALA LEU SER ALA LEU LYS GLN ALA GLY GLY ALA ARG ALA VAL GLY ALA GLY LEU GLU VAL PHE GLN LEU VAL GLU GLU ALA TRP LEU LEU PRO ALA VAL GLY ARG GLU VAL ALA GLN GLY LEU CYS ASP ALA ILE

ARG LEU ASP GLY GLY LEU ASP LEU LEU LEU ARG LEU LEU GLN ALA PRO GLU LEU THR GLU THR ARG VAL GLN ALA ALA ARG LEU LEU GLU GLN ILE LEU VAL ALA GLU ASN ARG ASP ARG VAL ALA ARG ILE GLY LEU GLY VAL ILE LEU ASN LEU ALA LYS GLU ARG GLU PRO VAL GLU LEU

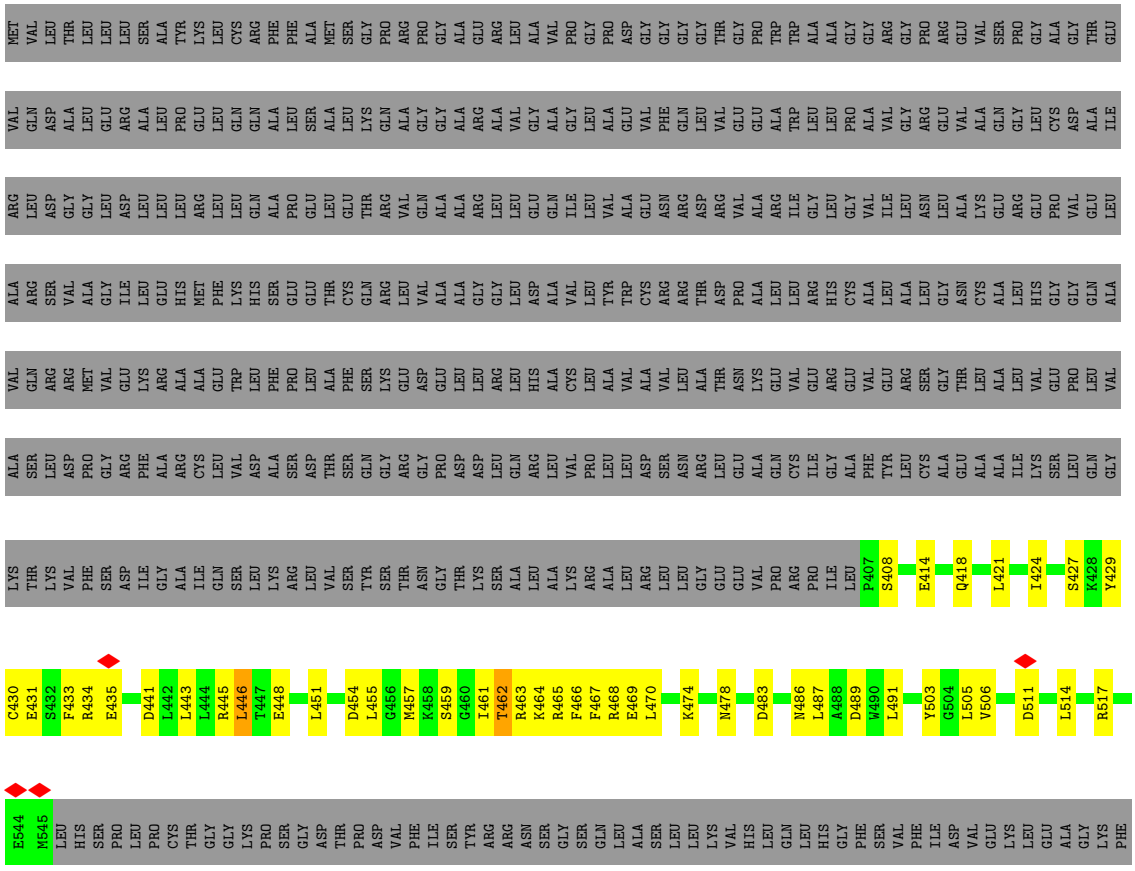
ALA ARG SER VAL ALA GLY ILE LEU GLU HIS HIS MET PHE LYS HIS SER GLU GLU THR CYS GLN ARG LEU VAL ALA ALA GLY GLY LEU ASP ALA VAL LEU TYR TRP CYS ARG ARG THR ASP PRO ALA LEU LEU ARG HIS CYS ALA LEU ALA LEU GLY ASN CYS ALA LEU HIS GLY GLY GLN ALA

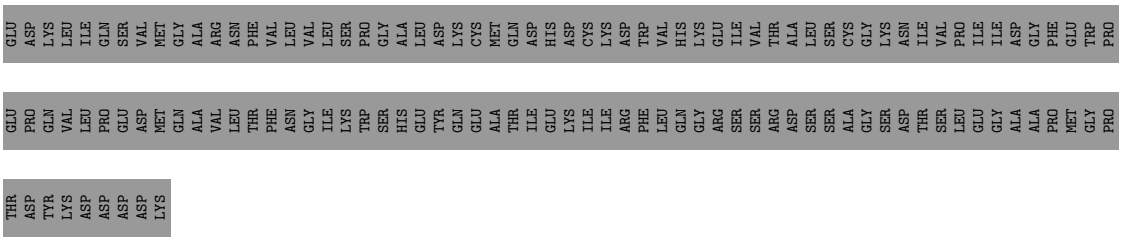
VAL GLN ARG ARG MET VAL GLU LYS ARG ALA ALA GLU TRP LEU PHE PRO LEU ALA PHE SER LYS GLU ASP GLU LEU LEU ARG LEU HIS ALA CYS LEU ALA VAL ALA VAL LEU ALA THR ASN LYS GLU VAL GLU ARG GLU VAL GLU ARG GLU VAL GLU PRO LEU GLN



- Molecule 1: NAD(+) hydrolase SARM1

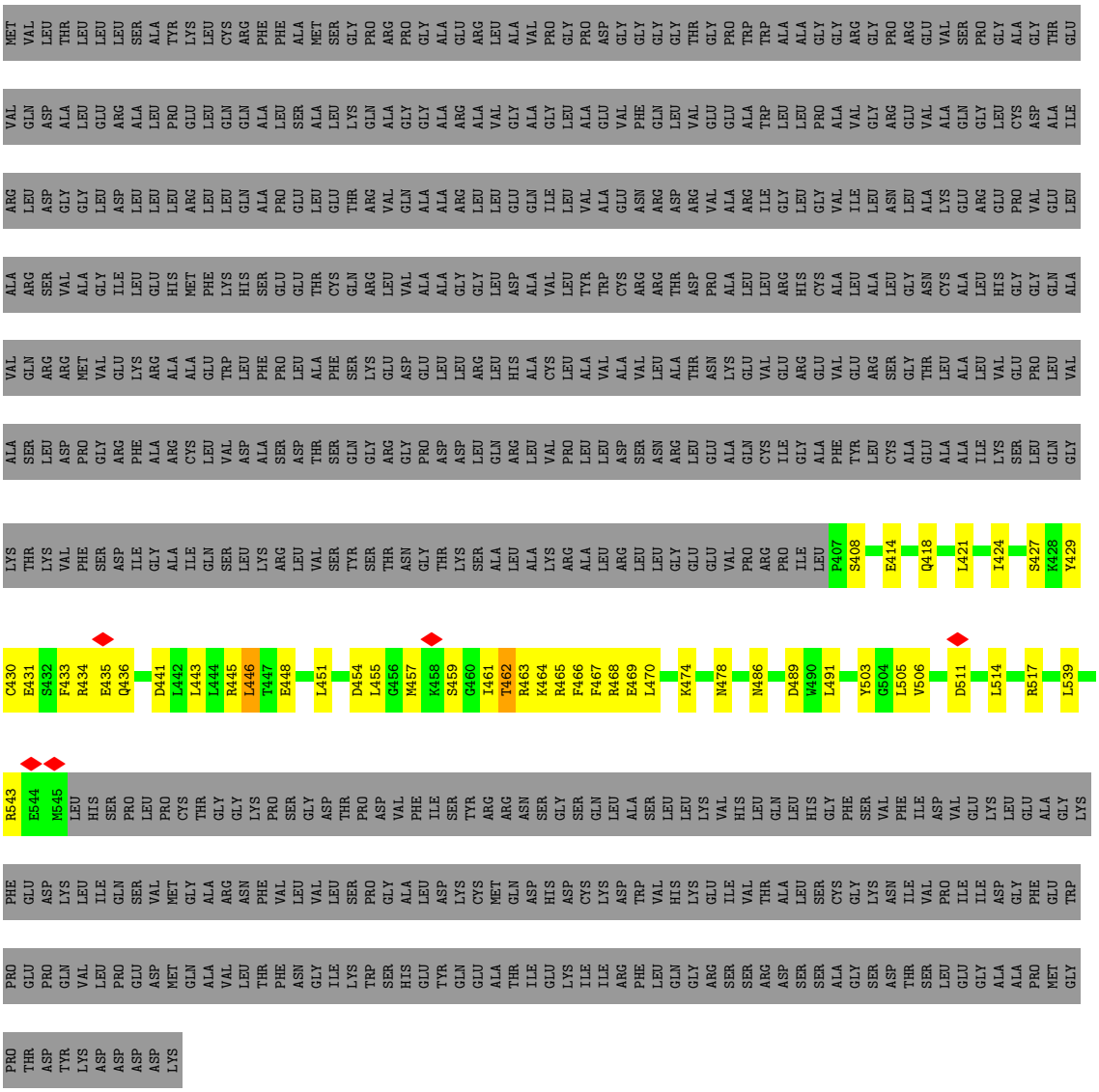
Chain D:





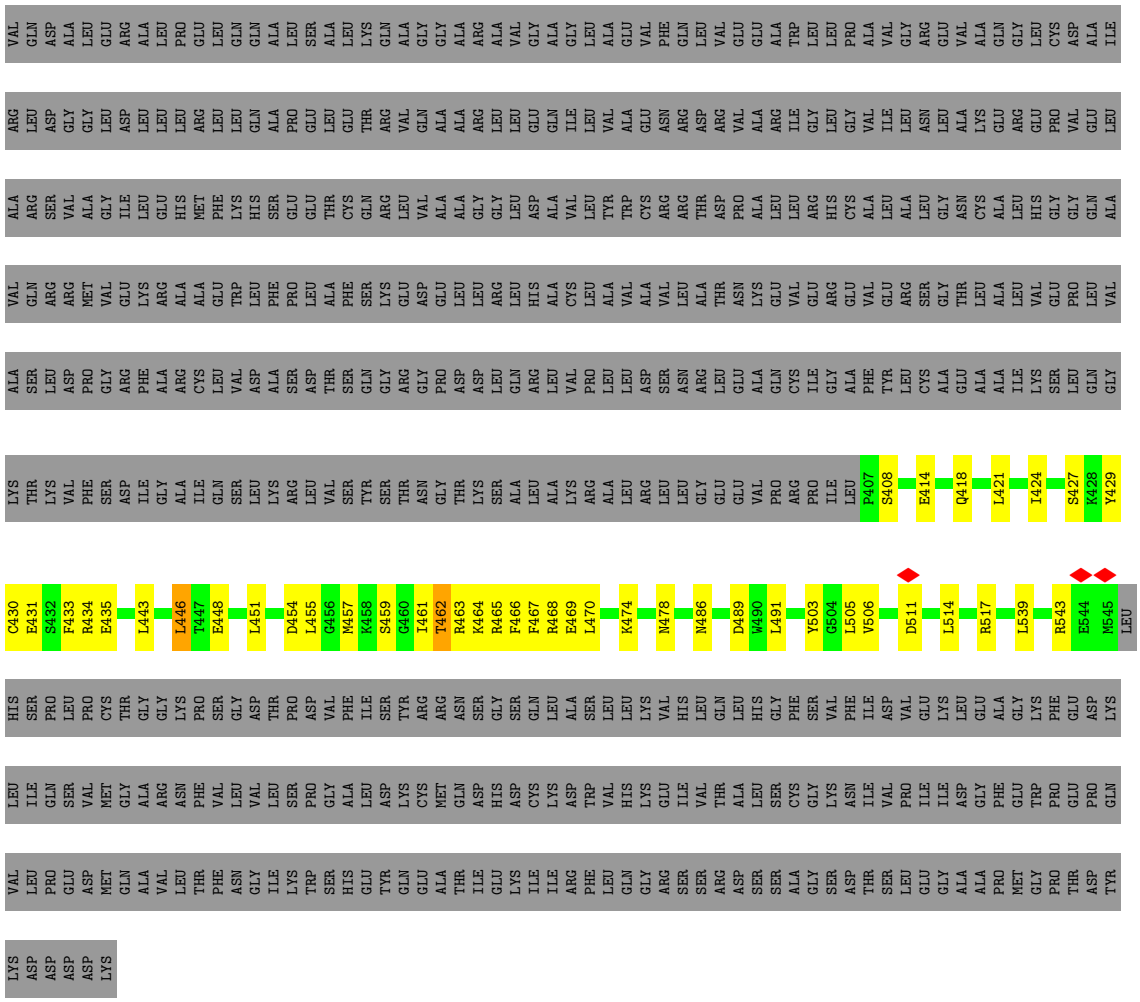
- Molecule 1: NAD(+) hydrolase SARM1

Chain E: 13% 6% 81%



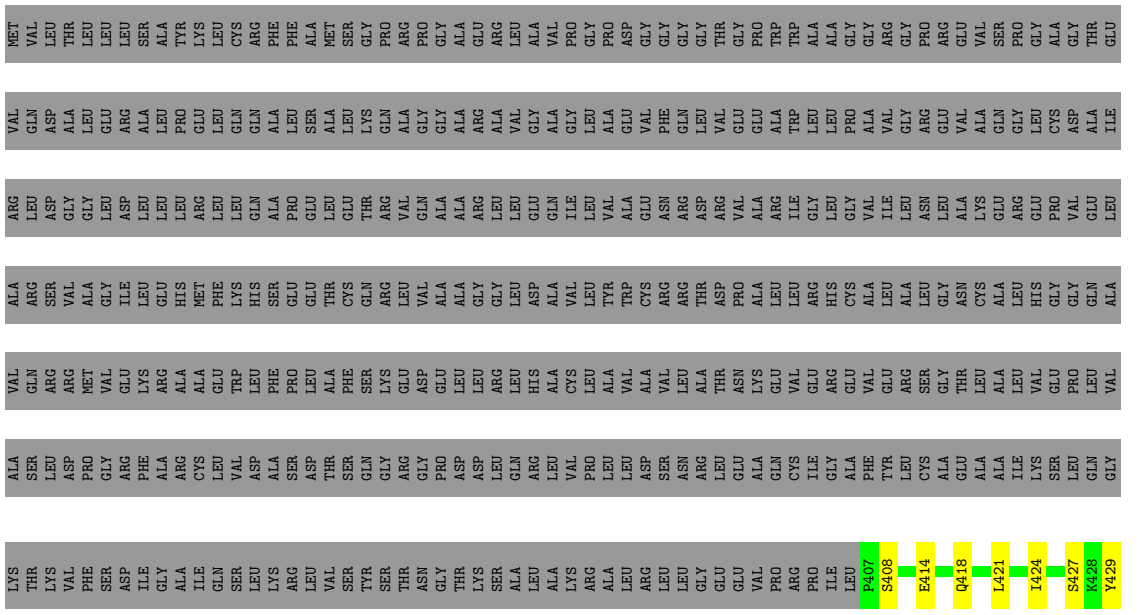
- Molecule 1: NAD(+) hydrolase SARM1

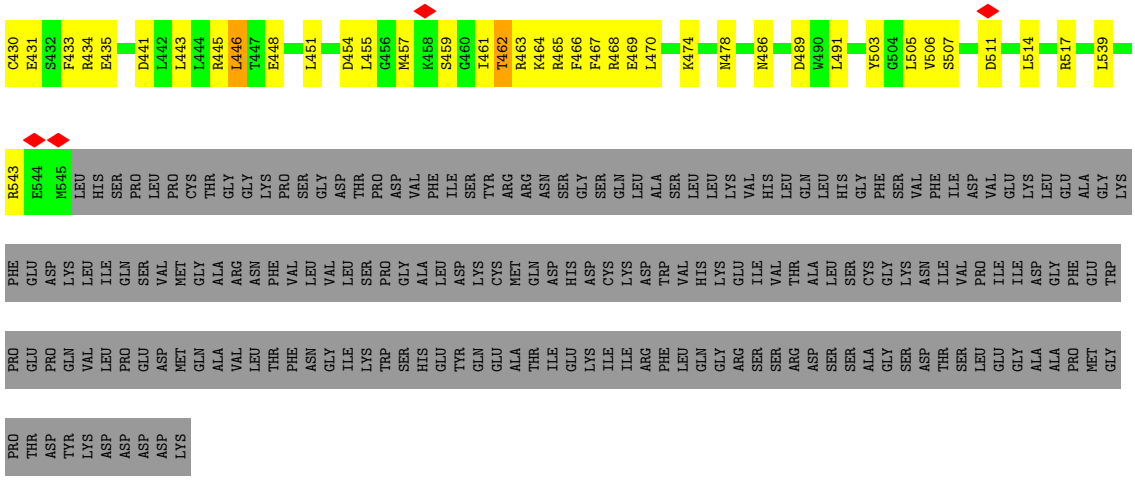
Chain F: 13% 6% 81%



- Molecule 1: NAD(+) hydrolase SARM1

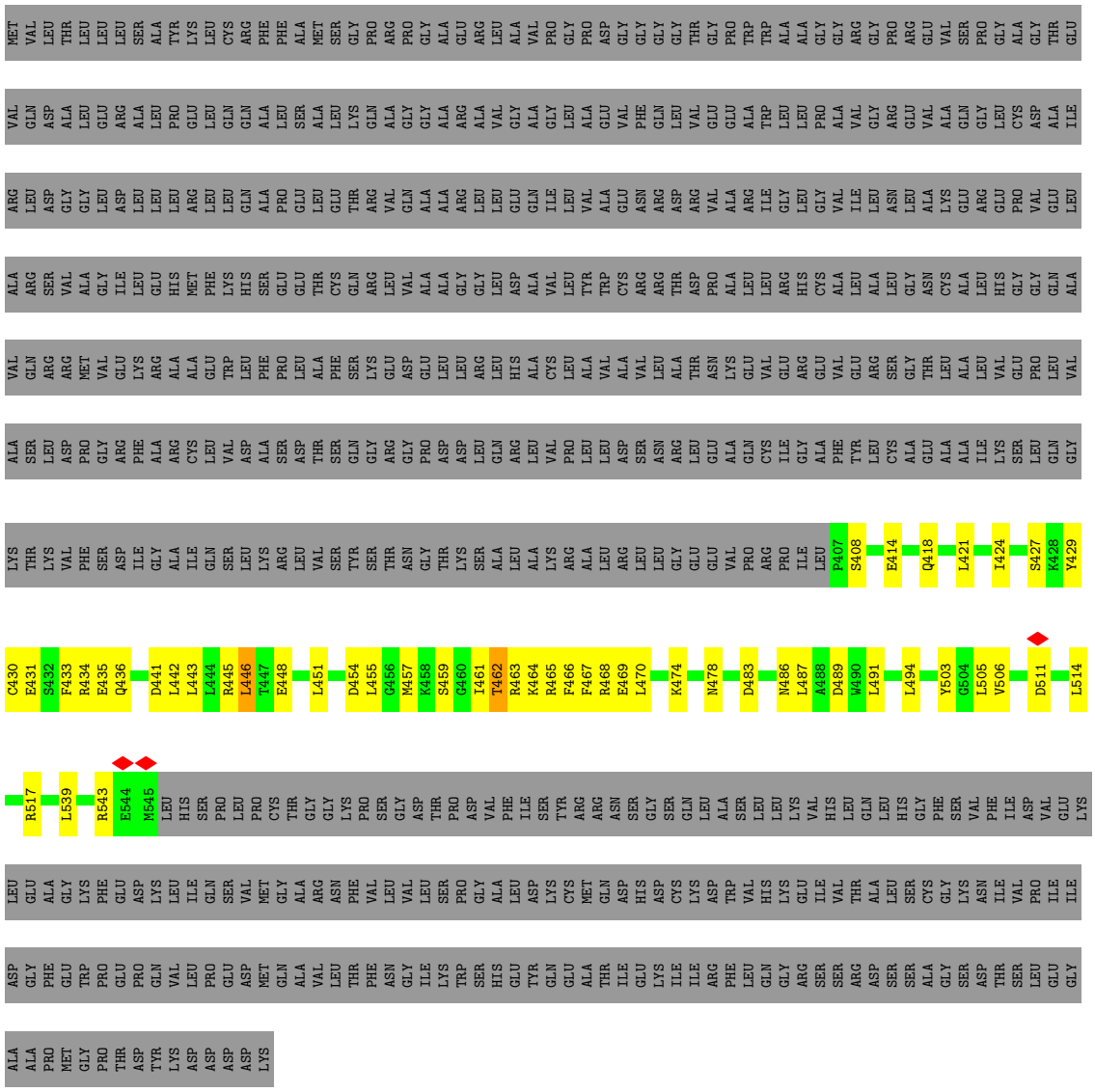
Chain G:





- Molecule 1: NAD(+) hydrolase SARM1

Chain H:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	244752	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 ($e^-/Å^2$)	52.73	Depositor
Minimum defocus (nm)	710	Depositor
Maximum defocus (nm)	2240	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	10.088	Depositor
Minimum map value	-6.713	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.169	Depositor
Recommended contour level	1.48	Depositor
Map size (Å)	323.2, 323.2, 323.2	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.808, 0.808, 0.808	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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	0.16	0/1154	0.35	0/1554
1	B	0.16	0/1154	0.35	0/1554
1	C	0.16	0/1154	0.35	0/1554
1	D	0.16	0/1154	0.35	0/1554
1	E	0.16	0/1154	0.35	0/1554
1	F	0.16	0/1154	0.35	0/1554
1	G	0.16	0/1154	0.35	0/1554
1	H	0.16	0/1154	0.35	0/1554
All	All	0.16	0/9232	0.35	0/12432

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	1133	0	1115	34	0
1	B	1133	0	1115	35	0
1	C	1133	0	1115	37	0
1	D	1133	0	1115	34	0
1	E	1133	0	1115	33	0
1	F	1133	0	1115	31	0
1	G	1133	0	1115	33	0
1	H	1133	0	1115	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	9064	0	8920	258	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 14.

All (258) 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:459:SER:HB3	1:D:462:THR:HB	1.63	0.81
1:B:459:SER:HB3	1:B:462:THR:HB	1.63	0.81
1:F:459:SER:HB3	1:F:462:THR:HB	1.63	0.81
1:H:459:SER:HB3	1:H:462:THR:HB	1.63	0.80
1:A:459:SER:HB3	1:A:462:THR:HB	1.63	0.79
1:C:459:SER:HB3	1:C:462:THR:HB	1.63	0.79
1:E:459:SER:HB3	1:E:462:THR:HB	1.63	0.79
1:G:459:SER:HB3	1:G:462:THR:HB	1.63	0.78
1:A:459:SER:OG	1:H:454:ASP:OD1	2.05	0.75
1:G:454:ASP:OD1	1:H:459:SER:OG	2.10	0.69
1:E:454:ASP:OD1	1:F:459:SER:OG	2.08	0.68
1:D:454:ASP:OD1	1:E:459:SER:OG	2.12	0.65
1:F:454:ASP:OD1	1:G:459:SER:OG	2.11	0.62
1:C:431:GLU:OE2	1:C:434:ARG:NH1	2.33	0.61
1:B:431:GLU:OE2	1:B:434:ARG:NH1	2.33	0.61
1:D:431:GLU:OE2	1:D:434:ARG:NH1	2.33	0.61
1:A:431:GLU:OE2	1:A:434:ARG:NH1	2.33	0.61
1:F:431:GLU:OE2	1:F:434:ARG:NH1	2.33	0.61
1:G:431:GLU:OE2	1:G:434:ARG:NH1	2.33	0.60
1:H:431:GLU:OE2	1:H:434:ARG:NH1	2.33	0.60
1:A:454:ASP:OD1	1:B:459:SER:OG	2.13	0.60
1:E:431:GLU:OE2	1:E:434:ARG:NH1	2.33	0.60
1:B:454:ASP:OD1	1:C:459:SER:OG	2.15	0.58
1:B:421:LEU:HD13	1:B:430:CYS:HA	1.86	0.57
1:H:421:LEU:HD13	1:H:430:CYS:HA	1.86	0.57
1:G:421:LEU:HD13	1:G:430:CYS:HA	1.86	0.56
1:A:421:LEU:HD13	1:A:430:CYS:HA	1.86	0.56
1:E:421:LEU:HD13	1:E:430:CYS:HA	1.86	0.56
1:F:421:LEU:HD13	1:F:430:CYS:HA	1.86	0.56
1:C:421:LEU:HD13	1:C:430:CYS:HA	1.86	0.56
1:D:421:LEU:HD13	1:D:430:CYS:HA	1.86	0.56
1:C:448:GLU:HG2	1:C:467:PHE:HE2	1.72	0.55
1:E:448:GLU:HG2	1:E:467:PHE:HE2	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:448:GLU:HG2	1:D:467:PHE:HE2	1.72	0.55
1:F:448:GLU:HG2	1:F:467:PHE:HE2	1.72	0.55
1:G:448:GLU:HG2	1:G:467:PHE:HE2	1.72	0.54
1:B:448:GLU:HG2	1:B:467:PHE:HE2	1.72	0.54
1:A:448:GLU:HG2	1:A:467:PHE:HE2	1.72	0.54
1:C:454:ASP:OD1	1:D:459:SER:OG	2.15	0.54
1:A:448:GLU:OE2	1:A:463:ARG:NE	2.41	0.53
1:D:414:GLU:O	1:D:418:GLN:HG2	2.09	0.53
1:H:448:GLU:HG2	1:H:467:PHE:HE2	1.72	0.53
1:E:414:GLU:O	1:E:418:GLN:HG2	2.09	0.53
1:H:431:GLU:O	1:H:435:GLU:HG3	2.09	0.53
1:H:448:GLU:OE2	1:H:463:ARG:NE	2.41	0.53
1:C:414:GLU:O	1:C:418:GLN:HG2	2.09	0.53
1:B:448:GLU:OE2	1:B:463:ARG:NE	2.41	0.53
1:F:414:GLU:O	1:F:418:GLN:HG2	2.09	0.53
1:A:431:GLU:O	1:A:435:GLU:HG3	2.09	0.53
1:H:414:GLU:O	1:H:418:GLN:HG2	2.09	0.53
1:A:414:GLU:O	1:A:418:GLN:HG2	2.09	0.52
1:B:431:GLU:O	1:B:435:GLU:HG3	2.09	0.52
1:E:431:GLU:O	1:E:435:GLU:HG3	2.09	0.52
1:F:431:GLU:O	1:F:435:GLU:HG3	2.09	0.52
1:B:414:GLU:O	1:B:418:GLN:HG2	2.09	0.52
1:G:448:GLU:OE2	1:G:463:ARG:NE	2.41	0.52
1:D:431:GLU:O	1:D:435:GLU:HG3	2.09	0.52
1:G:414:GLU:O	1:G:418:GLN:HG2	2.09	0.52
1:G:431:GLU:O	1:G:435:GLU:HG3	2.09	0.52
1:C:431:GLU:O	1:C:435:GLU:HG3	2.09	0.52
1:E:448:GLU:OE2	1:E:463:ARG:NE	2.41	0.52
1:F:448:GLU:OE2	1:F:463:ARG:NE	2.41	0.52
1:C:448:GLU:OE2	1:C:463:ARG:NE	2.41	0.51
1:D:491:LEU:HD11	1:D:505:LEU:HD12	1.93	0.51
1:E:491:LEU:HD11	1:E:505:LEU:HD12	1.93	0.51
1:C:491:LEU:HD11	1:C:505:LEU:HD12	1.93	0.51
1:D:486:ASN:ND2	1:D:489:ASP:OD2	2.43	0.51
1:D:448:GLU:OE2	1:D:463:ARG:NE	2.41	0.50
1:E:486:ASN:ND2	1:E:489:ASP:OD2	2.43	0.50
1:B:427:SER:O	1:B:430:CYS:HB3	2.12	0.50
1:F:491:LEU:HD11	1:F:505:LEU:HD12	1.93	0.50
1:B:424:ILE:HB	1:B:469:GLU:HG3	1.94	0.50
1:C:424:ILE:HB	1:C:469:GLU:HG3	1.94	0.50
1:C:427:SER:O	1:C:430:CYS:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:427:SER:O	1:F:430:CYS:HB3	2.12	0.50
1:A:427:SER:O	1:A:430:CYS:HB3	2.12	0.50
1:A:424:ILE:HB	1:A:469:GLU:HG3	1.94	0.50
1:C:486:ASN:ND2	1:C:489:ASP:OD2	2.43	0.50
1:D:427:SER:O	1:D:430:CYS:HB3	2.12	0.50
1:G:427:SER:O	1:G:430:CYS:HB3	2.12	0.50
1:B:491:LEU:HD11	1:B:505:LEU:HD12	1.93	0.49
1:D:424:ILE:HB	1:D:469:GLU:HG3	1.94	0.49
1:E:427:SER:O	1:E:430:CYS:HB3	2.12	0.49
1:H:424:ILE:HB	1:H:469:GLU:HG3	1.94	0.49
1:B:451:LEU:HD23	1:B:455:LEU:HD12	1.95	0.49
1:G:491:LEU:HD11	1:G:505:LEU:HD12	1.93	0.49
1:H:486:ASN:ND2	1:H:489:ASP:OD2	2.43	0.49
1:A:491:LEU:HD11	1:A:505:LEU:HD12	1.93	0.49
1:C:451:LEU:HD23	1:C:455:LEU:HD12	1.95	0.49
1:E:464:LYS:O	1:E:468:ARG:HG3	2.13	0.49
1:F:486:ASN:ND2	1:F:489:ASP:OD2	2.43	0.49
1:A:451:LEU:HD23	1:A:455:LEU:HD12	1.95	0.49
1:E:424:ILE:HB	1:E:469:GLU:HG3	1.94	0.49
1:C:464:LYS:O	1:C:468:ARG:HG3	2.13	0.49
1:H:451:LEU:HD23	1:H:455:LEU:HD12	1.95	0.49
1:H:491:LEU:HD11	1:H:505:LEU:HD12	1.93	0.49
1:G:464:LYS:O	1:G:468:ARG:HG3	2.13	0.49
1:H:427:SER:O	1:H:430:CYS:HB3	2.12	0.49
1:B:436:GLN:HE22	1:C:459:SER:HG	1.56	0.49
1:C:429:TYR:CE1	1:C:457:MET:HG2	2.48	0.49
1:A:486:ASN:ND2	1:A:489:ASP:OD2	2.43	0.49
1:B:443:LEU:HD12	1:B:446:LEU:HD12	1.95	0.49
1:C:443:LEU:HD12	1:C:446:LEU:HD12	1.95	0.49
1:D:443:LEU:HD12	1:D:446:LEU:HD12	1.95	0.49
1:E:443:LEU:HD12	1:E:446:LEU:HD12	1.95	0.49
1:G:451:LEU:HD23	1:G:455:LEU:HD12	1.95	0.49
1:B:464:LYS:O	1:B:468:ARG:HG3	2.13	0.48
1:B:486:ASN:ND2	1:B:489:ASP:OD2	2.43	0.48
1:F:429:TYR:CE1	1:F:457:MET:HG2	2.48	0.48
1:D:451:LEU:HD23	1:D:455:LEU:HD12	1.95	0.48
1:D:464:LYS:O	1:D:468:ARG:HG3	2.13	0.48
1:F:424:ILE:HB	1:F:469:GLU:HG3	1.94	0.48
1:F:443:LEU:HD12	1:F:446:LEU:HD12	1.95	0.48
1:G:424:ILE:HB	1:G:469:GLU:HG3	1.94	0.48
1:G:429:TYR:CE1	1:G:457:MET:HG2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:464:LYS:O	1:H:468:ARG:HG3	2.13	0.48
1:D:429:TYR:CE1	1:D:457:MET:HG2	2.48	0.48
1:H:429:TYR:CE1	1:H:457:MET:HG2	2.48	0.48
1:A:429:TYR:CE1	1:A:457:MET:HG2	2.48	0.48
1:A:443:LEU:HD12	1:A:446:LEU:HD12	1.95	0.48
1:A:464:LYS:O	1:A:468:ARG:HG3	2.13	0.48
1:F:451:LEU:HD23	1:F:455:LEU:HD12	1.95	0.48
1:F:464:LYS:O	1:F:468:ARG:HG3	2.13	0.48
1:E:451:LEU:HD23	1:E:455:LEU:HD12	1.95	0.48
1:G:408:SER:H	1:G:478:ASN:HB3	1.79	0.48
1:B:429:TYR:CE1	1:B:457:MET:HG2	2.48	0.48
1:E:408:SER:H	1:E:478:ASN:HB3	1.79	0.48
1:E:429:TYR:CE1	1:E:457:MET:HG2	2.48	0.48
1:C:408:SER:H	1:C:478:ASN:HB3	1.79	0.47
1:D:470:LEU:O	1:D:474:LYS:HG3	2.14	0.47
1:E:470:LEU:O	1:E:474:LYS:HG3	2.15	0.47
1:F:470:LEU:O	1:F:474:LYS:HG3	2.15	0.47
1:A:511:ASP:OD1	1:A:514:LEU:HD12	2.14	0.47
1:E:511:ASP:OD1	1:E:514:LEU:HD12	2.14	0.47
1:G:443:LEU:HD12	1:G:446:LEU:HD12	1.95	0.47
1:G:511:ASP:OD1	1:G:514:LEU:HD12	2.14	0.47
1:A:408:SER:H	1:A:478:ASN:HB3	1.79	0.47
1:B:511:ASP:OD1	1:B:514:LEU:HD12	2.14	0.47
1:G:470:LEU:O	1:G:474:LYS:HG3	2.15	0.47
1:H:443:LEU:HD12	1:H:446:LEU:HD12	1.95	0.47
1:B:408:SER:H	1:B:478:ASN:HB3	1.79	0.47
1:C:470:LEU:O	1:C:474:LYS:HG3	2.15	0.47
1:G:486:ASN:ND2	1:G:489:ASP:OD2	2.43	0.47
1:H:511:ASP:OD1	1:H:514:LEU:HD12	2.14	0.47
1:B:470:LEU:O	1:B:474:LYS:HG3	2.14	0.47
1:F:433:PHE:CE1	1:F:455:LEU:HD13	2.50	0.47
1:H:408:SER:H	1:H:478:ASN:HB3	1.79	0.47
1:G:433:PHE:CE1	1:G:455:LEU:HD13	2.50	0.47
1:H:470:LEU:O	1:H:474:LYS:HG3	2.15	0.47
1:A:441:ASP:OD2	1:A:445:ARG:NH2	2.45	0.47
1:D:433:PHE:CE1	1:D:455:LEU:HD13	2.50	0.47
1:E:433:PHE:CE1	1:E:455:LEU:HD13	2.50	0.47
1:F:511:ASP:OD1	1:F:514:LEU:HD12	2.14	0.47
1:C:436:GLN:HE22	1:D:459:SER:HG	1.61	0.47
1:C:511:ASP:OD1	1:C:514:LEU:HD12	2.14	0.47
1:C:433:PHE:CE1	1:C:455:LEU:HD13	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:511:ASP:OD1	1:D:514:LEU:HD12	2.14	0.46
1:F:408:SER:H	1:F:478:ASN:HB3	1.79	0.46
1:E:441:ASP:OD2	1:E:445:ARG:NH2	2.45	0.46
1:H:433:PHE:CE1	1:H:455:LEU:HD13	2.50	0.46
1:C:442:LEU:HD11	1:D:465:ARG:HG2	1.97	0.46
1:D:408:SER:H	1:D:478:ASN:HB3	1.79	0.46
1:A:433:PHE:CE1	1:A:455:LEU:HD13	2.50	0.46
1:B:433:PHE:CE1	1:B:455:LEU:HD13	2.50	0.46
1:A:470:LEU:O	1:A:474:LYS:HG3	2.15	0.46
1:G:514:LEU:HD23	1:G:517:ARG:CZ	2.46	0.46
1:A:514:LEU:HD23	1:A:517:ARG:CZ	2.46	0.46
1:B:514:LEU:HD23	1:B:517:ARG:CZ	2.46	0.45
1:D:433:PHE:CZ	1:D:455:LEU:HD13	2.51	0.45
1:E:433:PHE:CZ	1:E:455:LEU:HD13	2.51	0.45
1:G:433:PHE:CZ	1:G:455:LEU:HD13	2.51	0.45
1:G:461:ILE:O	1:G:465:ARG:HG3	2.17	0.45
1:H:514:LEU:HD23	1:H:517:ARG:CZ	2.46	0.45
1:A:433:PHE:CZ	1:A:455:LEU:HD13	2.51	0.45
1:E:514:LEU:HD23	1:E:517:ARG:CZ	2.46	0.45
1:F:514:LEU:HD23	1:F:517:ARG:CZ	2.46	0.45
1:D:461:ILE:O	1:D:465:ARG:HG3	2.17	0.45
1:H:461:ILE:O	1:H:465:ARG:HG3	2.17	0.45
1:B:433:PHE:CZ	1:B:455:LEU:HD13	2.51	0.45
1:C:514:LEU:HD23	1:C:517:ARG:CZ	2.46	0.45
1:F:433:PHE:CZ	1:F:455:LEU:HD13	2.51	0.45
1:C:433:PHE:CZ	1:C:455:LEU:HD13	2.51	0.45
1:F:461:ILE:O	1:F:465:ARG:HG3	2.17	0.44
1:F:470:LEU:HG	1:F:474:LYS:HE2	1.99	0.44
1:D:470:LEU:HG	1:D:474:LYS:HE2	1.99	0.44
1:D:514:LEU:HD23	1:D:517:ARG:CZ	2.46	0.44
1:E:470:LEU:HG	1:E:474:LYS:HE2	1.99	0.44
1:H:433:PHE:CZ	1:H:455:LEU:HD13	2.51	0.44
1:B:461:ILE:O	1:B:465:ARG:HG3	2.17	0.44
1:C:470:LEU:HG	1:C:474:LYS:HE2	1.99	0.44
1:G:470:LEU:HG	1:G:474:LYS:HE2	1.99	0.44
1:E:461:ILE:O	1:E:465:ARG:HG3	2.17	0.44
1:D:441:ASP:OD2	1:D:445:ARG:NH2	2.45	0.44
1:H:441:ASP:OD2	1:H:445:ARG:NH2	2.45	0.44
1:A:461:ILE:O	1:A:465:ARG:HG3	2.17	0.44
1:C:461:ILE:O	1:C:465:ARG:HG3	2.17	0.44
1:B:470:LEU:HG	1:B:474:LYS:HE2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:470:LEU:HG	1:H:474:LYS:HE2	1.99	0.44
1:B:441:ASP:OD2	1:B:445:ARG:NH2	2.45	0.44
1:A:470:LEU:HG	1:A:474:LYS:HE2	1.99	0.43
1:B:503:TYR:HA	1:B:506:VAL:HG22	2.00	0.43
1:F:503:TYR:HA	1:F:506:VAL:HG22	2.00	0.43
1:C:421:LEU:HD11	1:C:433:PHE:CD2	2.54	0.43
1:E:421:LEU:HD11	1:E:433:PHE:CD2	2.54	0.43
1:F:421:LEU:HD11	1:F:433:PHE:CD2	2.54	0.43
1:A:503:TYR:HA	1:A:506:VAL:HG22	2.00	0.43
1:H:503:TYR:HA	1:H:506:VAL:HG22	2.00	0.43
1:C:457:MET:HE1	1:C:466:PHE:CG	2.54	0.43
1:D:457:MET:HE1	1:D:466:PHE:CG	2.54	0.43
1:D:421:LEU:HD11	1:D:433:PHE:CD2	2.54	0.42
1:E:503:TYR:HA	1:E:506:VAL:HG22	2.00	0.42
1:F:457:MET:HE1	1:F:466:PHE:CG	2.54	0.42
1:A:465:ARG:HG2	1:H:442:LEU:HD11	2.01	0.42
1:G:441:ASP:OD2	1:G:445:ARG:NH2	2.45	0.42
1:D:503:TYR:HA	1:D:506:VAL:HG22	2.00	0.42
1:E:511:ASP:OD1	1:E:511:ASP:N	2.53	0.42
1:G:421:LEU:HD11	1:G:433:PHE:CD2	2.54	0.42
1:C:503:TYR:HA	1:C:506:VAL:HG22	2.00	0.42
1:D:511:ASP:OD1	1:D:511:ASP:N	2.53	0.42
1:E:457:MET:HE1	1:E:466:PHE:CG	2.54	0.42
1:B:421:LEU:HD11	1:B:433:PHE:CD2	2.54	0.42
1:C:441:ASP:OD2	1:C:445:ARG:NH2	2.45	0.42
1:G:503:TYR:HA	1:G:506:VAL:HG22	2.00	0.42
1:H:421:LEU:HD11	1:H:433:PHE:CD2	2.54	0.42
1:A:421:LEU:HD11	1:A:433:PHE:CD2	2.54	0.42
1:H:457:MET:HE1	1:H:466:PHE:CG	2.54	0.42
1:B:457:MET:HE1	1:B:466:PHE:CG	2.54	0.42
1:F:511:ASP:OD1	1:F:511:ASP:N	2.53	0.42
1:A:457:MET:HE1	1:A:466:PHE:CG	2.54	0.41
1:B:511:ASP:OD1	1:B:511:ASP:N	2.53	0.41
1:C:511:ASP:OD1	1:C:511:ASP:N	2.53	0.41
1:G:457:MET:HE1	1:G:466:PHE:CG	2.54	0.41
1:A:511:ASP:OD1	1:A:511:ASP:N	2.53	0.41
1:B:436:GLN:NE2	1:C:459:SER:OG	2.38	0.41
1:H:511:ASP:OD1	1:H:511:ASP:N	2.53	0.41
1:C:436:GLN:HE21	1:C:436:GLN:HB3	1.75	0.41
1:G:511:ASP:OD1	1:G:511:ASP:N	2.53	0.41
1:F:539:LEU:O	1:F:543:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:539:LEU:O	1:G:543:ARG:HG2	2.21	0.41
1:G:457:MET:HE1	1:G:466:PHE:CD1	2.56	0.41
1:B:483:ASP:CG	1:B:487:LEU:H	2.29	0.41
1:D:457:MET:HE1	1:D:466:PHE:CD1	2.56	0.41
1:E:539:LEU:O	1:E:543:ARG:HG2	2.21	0.41
1:A:457:MET:HE1	1:A:466:PHE:CD1	2.56	0.41
1:A:459:SER:HG	1:H:436:GLN:HE22	1.65	0.41
1:B:539:LEU:O	1:B:543:ARG:HG2	2.21	0.40
1:C:539:LEU:O	1:C:543:ARG:HG2	2.21	0.40
1:H:539:LEU:O	1:H:543:ARG:HG2	2.21	0.40
1:A:539:LEU:O	1:A:543:ARG:HG2	2.21	0.40
1:B:503:TYR:O	1:B:507:SER:OG	2.37	0.40
1:G:503:TYR:O	1:G:507:SER:OG	2.37	0.40
1:D:483:ASP:CG	1:D:487:LEU:H	2.29	0.40
1:H:483:ASP:CG	1:H:487:LEU:H	2.29	0.40
1:F:457:MET:HE1	1:F:466:PHE:CD1	2.56	0.40
1:H:457:MET:HE1	1:H:466:PHE:CD1	2.56	0.40
1:C:457:MET:HE1	1:C:466:PHE:CD1	2.56	0.40
1:E:436:GLN:HE21	1:E:436:GLN:HB3	1.75	0.40
1:E:457:MET:HE1	1:E:466:PHE:CD1	2.56	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	137/732 (19%)	135 (98%)	2 (2%)	0	100	100
1	B	137/732 (19%)	134 (98%)	3 (2%)	0	100	100
1	C	137/732 (19%)	134 (98%)	3 (2%)	0	100	100
1	D	137/732 (19%)	134 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	137/732 (19%)	134 (98%)	3 (2%)	0	100	100
1	F	137/732 (19%)	133 (97%)	4 (3%)	0	100	100
1	G	137/732 (19%)	134 (98%)	3 (2%)	0	100	100
1	H	137/732 (19%)	134 (98%)	3 (2%)	0	100	100
All	All	1096/5856 (19%)	1072 (98%)	24 (2%)	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	124/598 (21%)	121 (98%)	3 (2%)	44	60
1	B	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	C	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	D	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	E	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	F	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	G	124/598 (21%)	122 (98%)	2 (2%)	58	72
1	H	124/598 (21%)	121 (98%)	3 (2%)	44	60
All	All	992/4784 (21%)	974 (98%)	18 (2%)	54	68

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	446	LEU
1	A	462	THR
1	A	494	LEU
1	B	446	LEU
1	B	462	THR
1	C	446	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	462	THR
1	D	446	LEU
1	D	462	THR
1	E	446	LEU
1	E	462	THR
1	F	446	LEU
1	F	462	THR
1	G	446	LEU
1	G	462	THR
1	H	446	LEU
1	H	462	THR
1	H	494	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	478	ASN
1	A	500	GLN
1	B	478	ASN
1	B	500	GLN
1	C	478	ASN
1	C	500	GLN
1	D	478	ASN
1	D	500	GLN
1	E	478	ASN
1	E	500	GLN
1	F	478	ASN
1	G	478	ASN
1	G	500	GLN
1	H	478	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)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

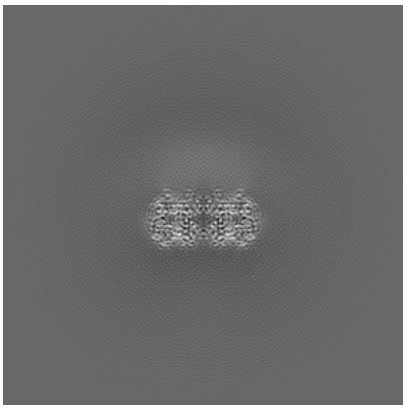
6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-62773. These allow visual inspection of the internal detail of the map and identification of artifacts.

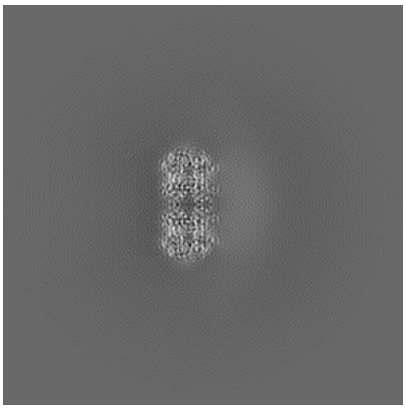
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections (i)

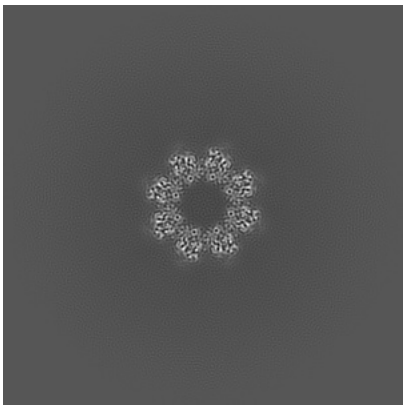
6.1.1 Primary map



X

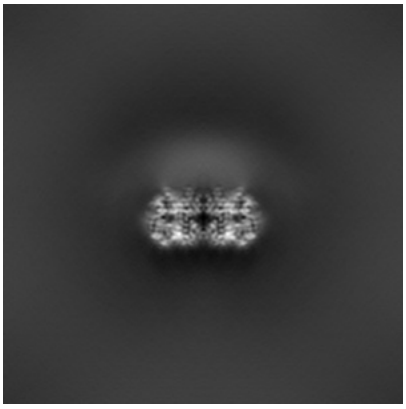


Y

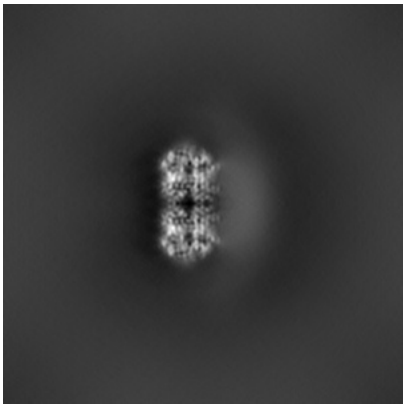


Z

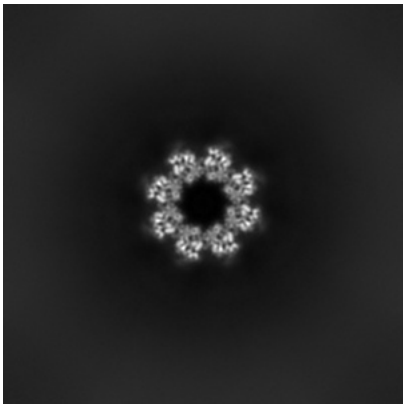
6.1.2 Raw map



X



Y

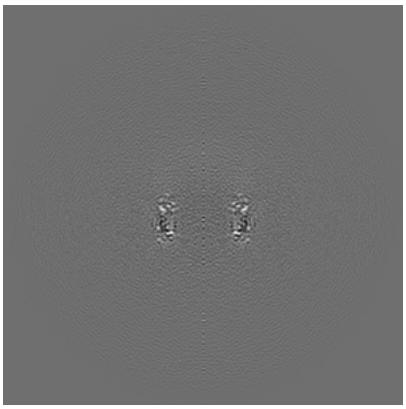


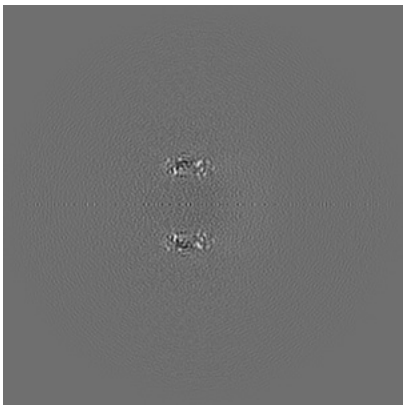
Z

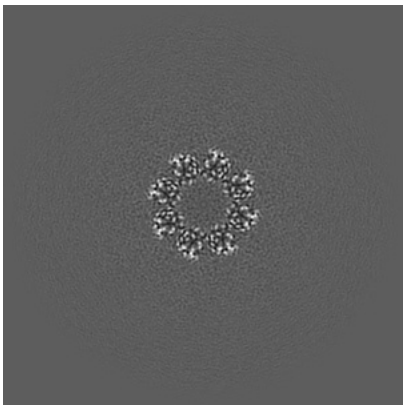
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

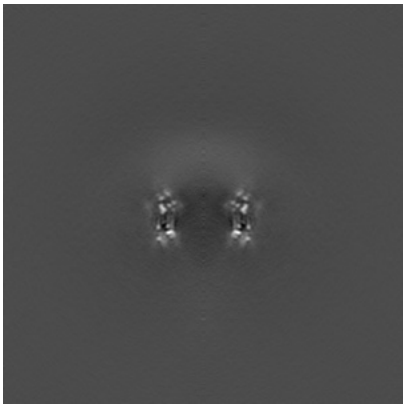
6.2.1 Primary map

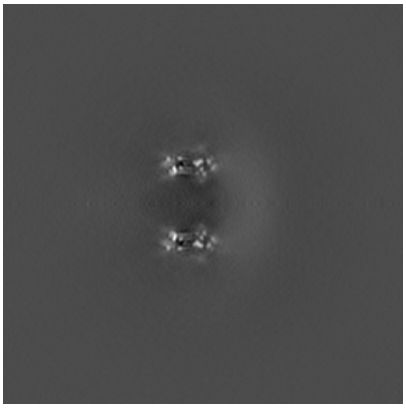

X Index: 200

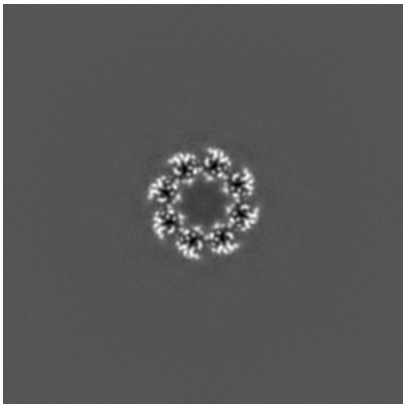

Y Index: 200


Z Index: 200

6.2.2 Raw map


X Index: 200


Y Index: 200

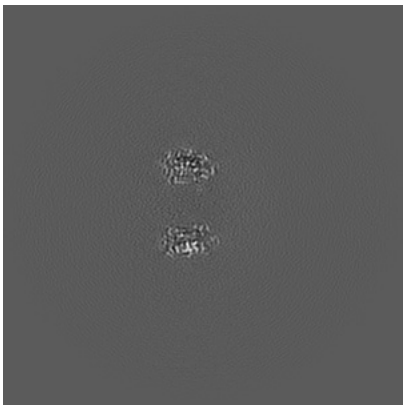

Z Index: 200

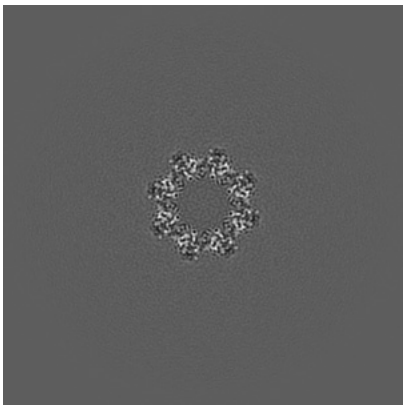
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

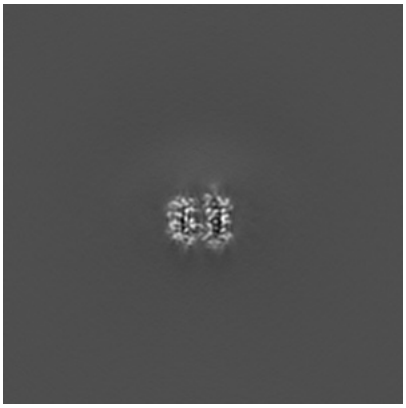
6.3.1 Primary map

X Index: 217

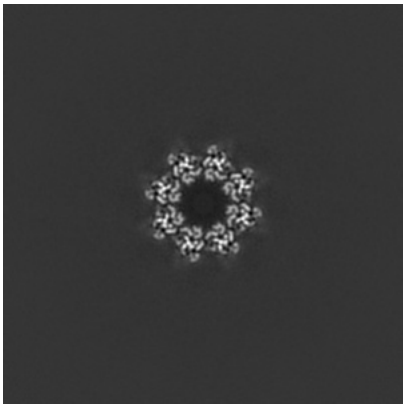

Y Index: 183


Z Index: 178

6.3.2 Raw map


X Index: 156

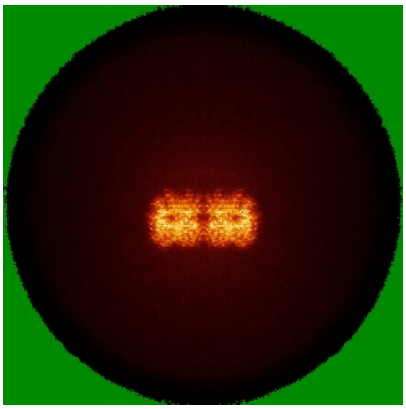
Y Index: 156

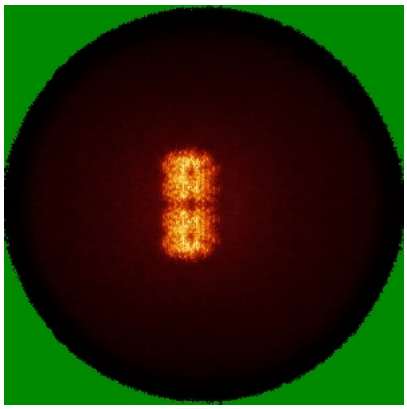

Z Index: 192

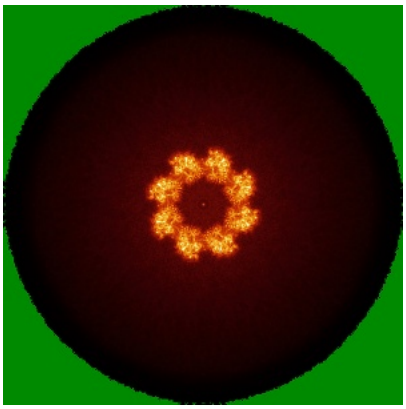
The images above show the largest variance slices of the map in three orthogonal directions.

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

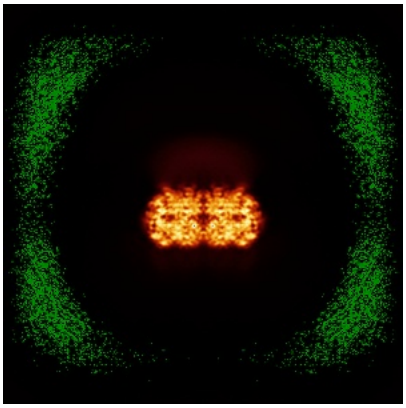
6.4.1 Primary map

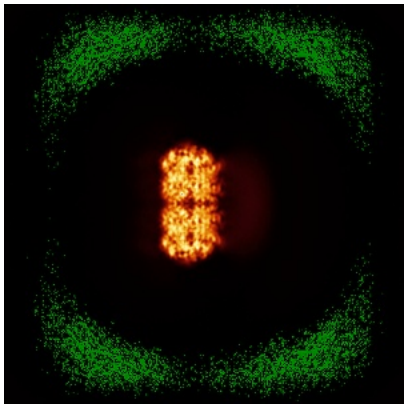

X

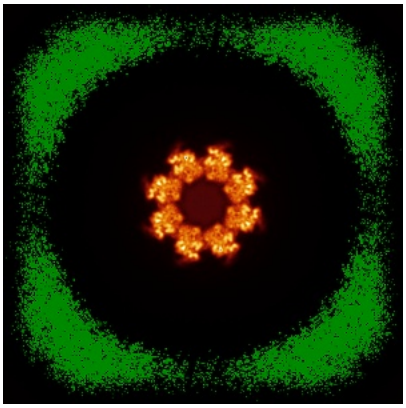

Y


Z

6.4.2 Raw map


X

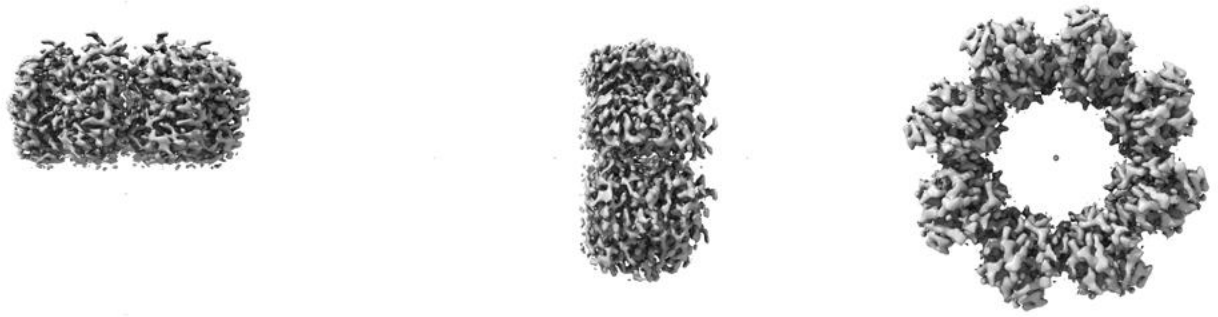

Y


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 1.48. 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.

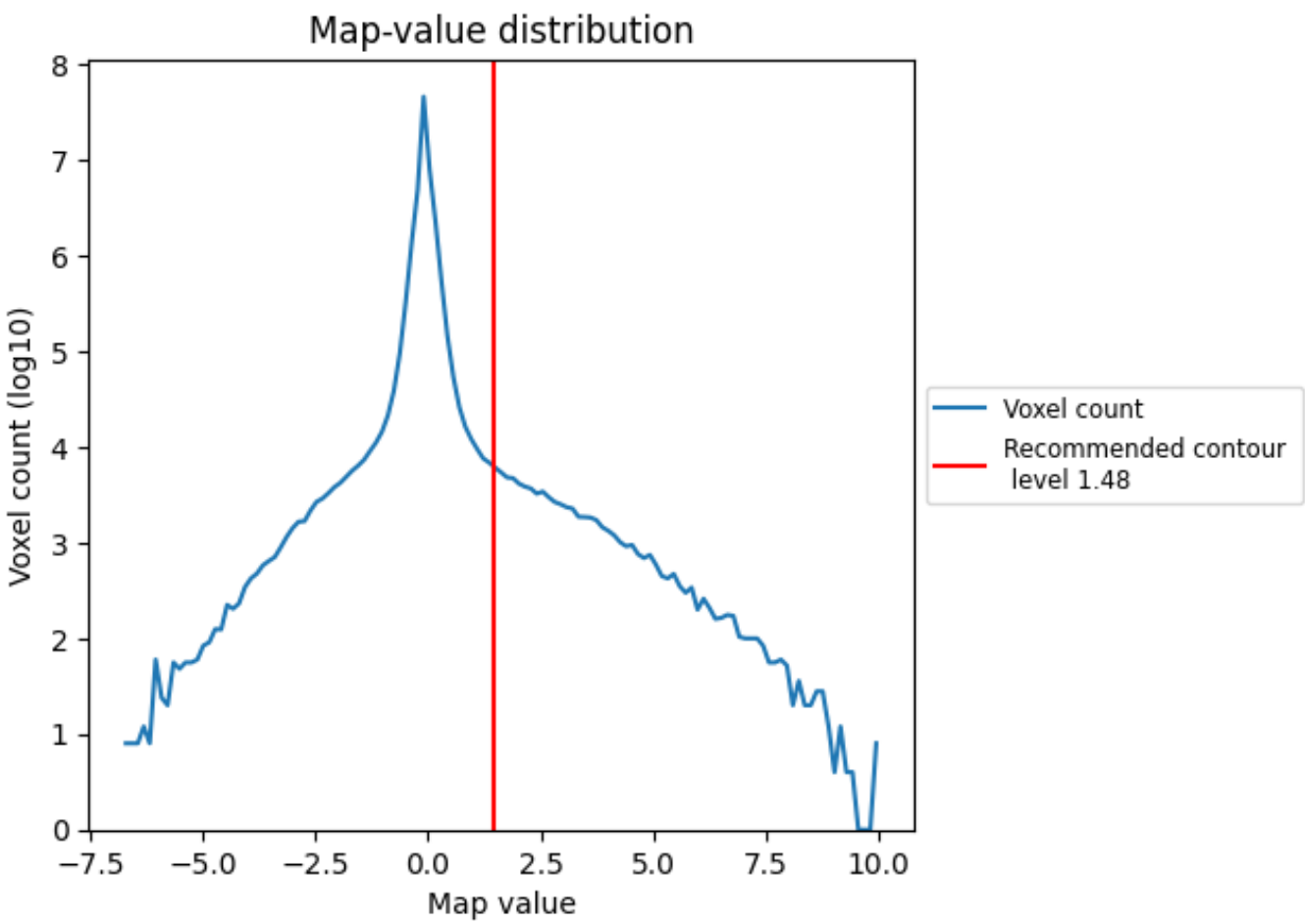
6.6 Mask visualisation (i)

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

7 Map analysis (i)

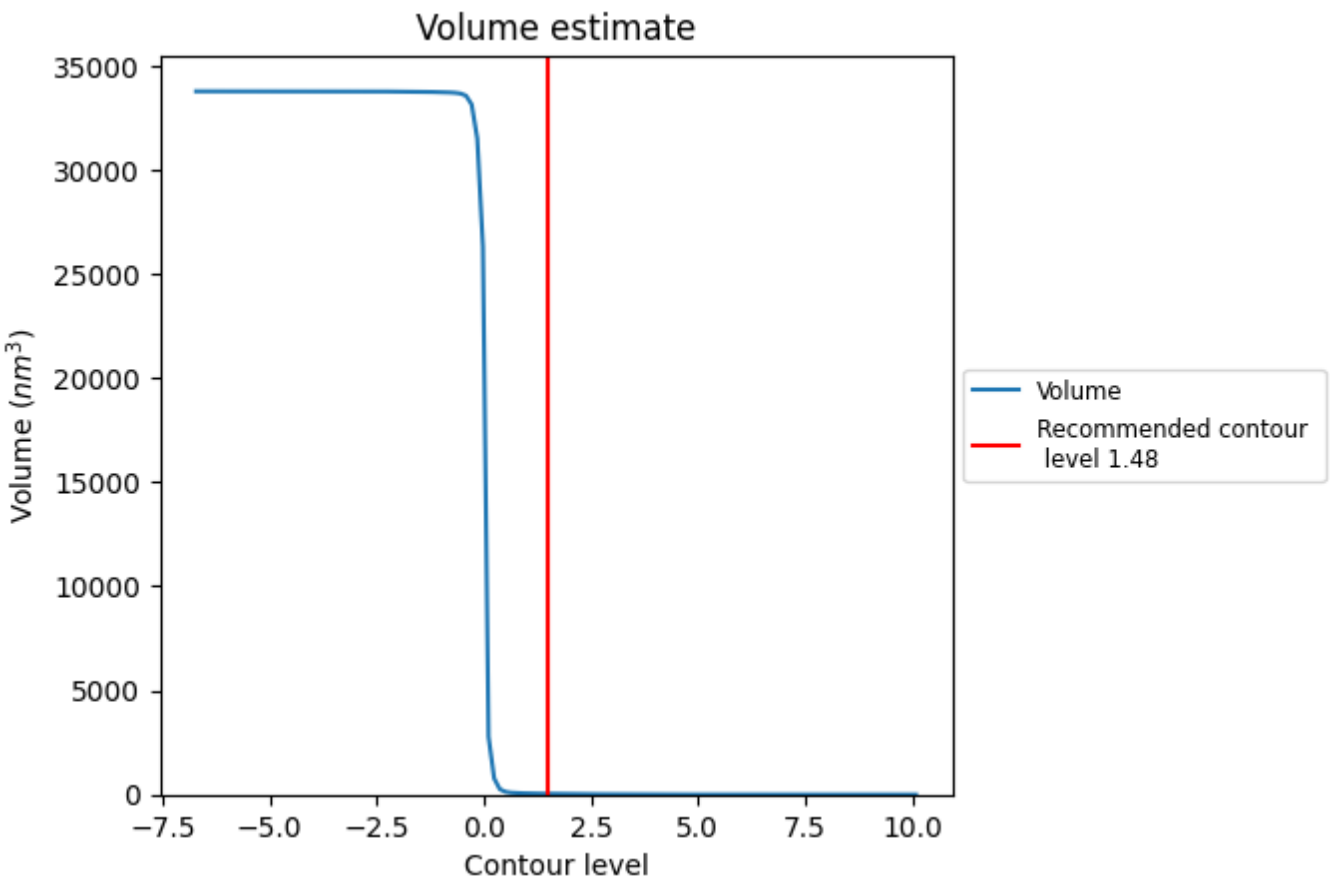
This section contains the results of statistical analysis of the map.

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.

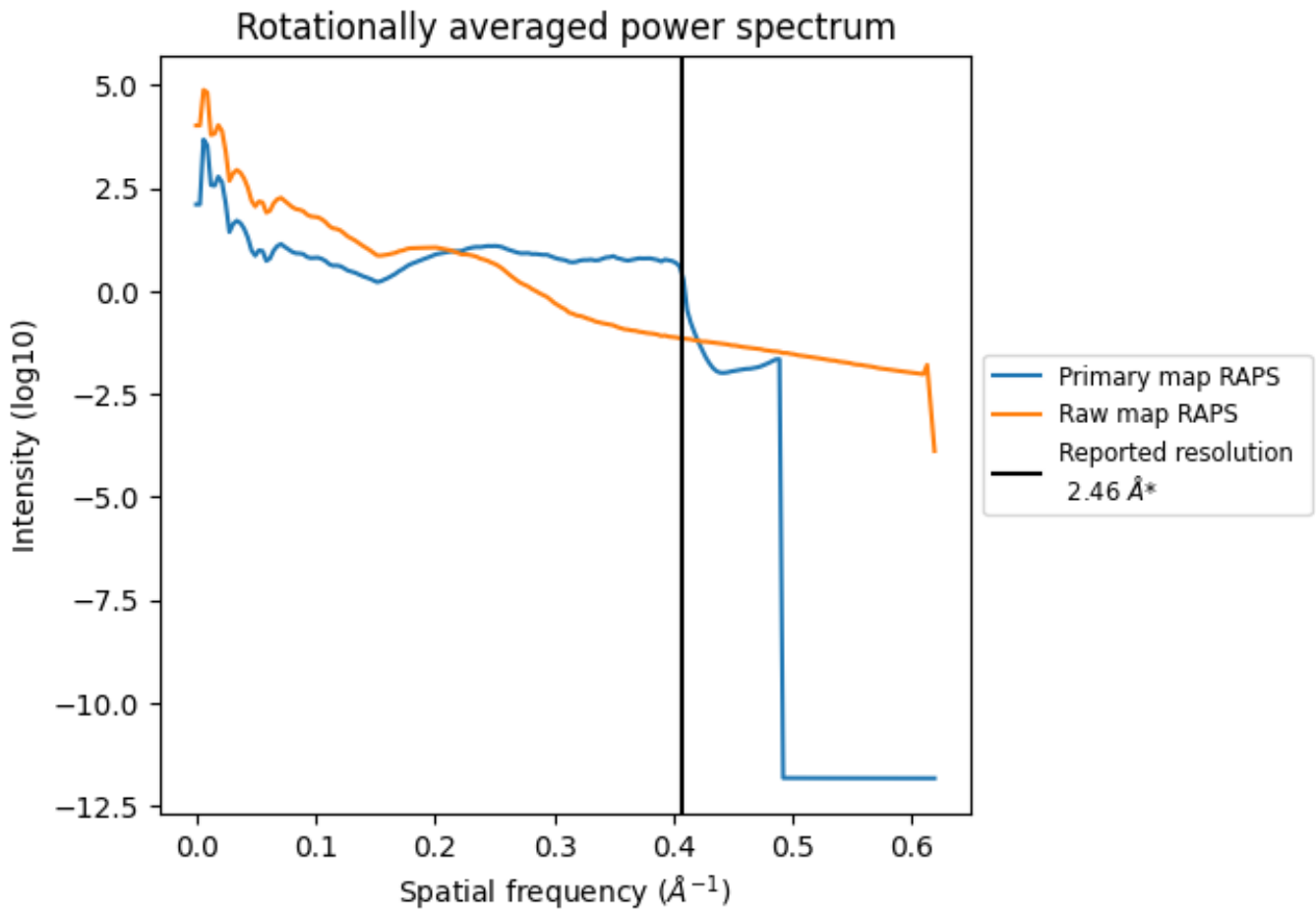
7.2 Volume estimate (i)



The volume at the recommended contour level is 39 nm^3; this corresponds to an approximate mass of 35 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)

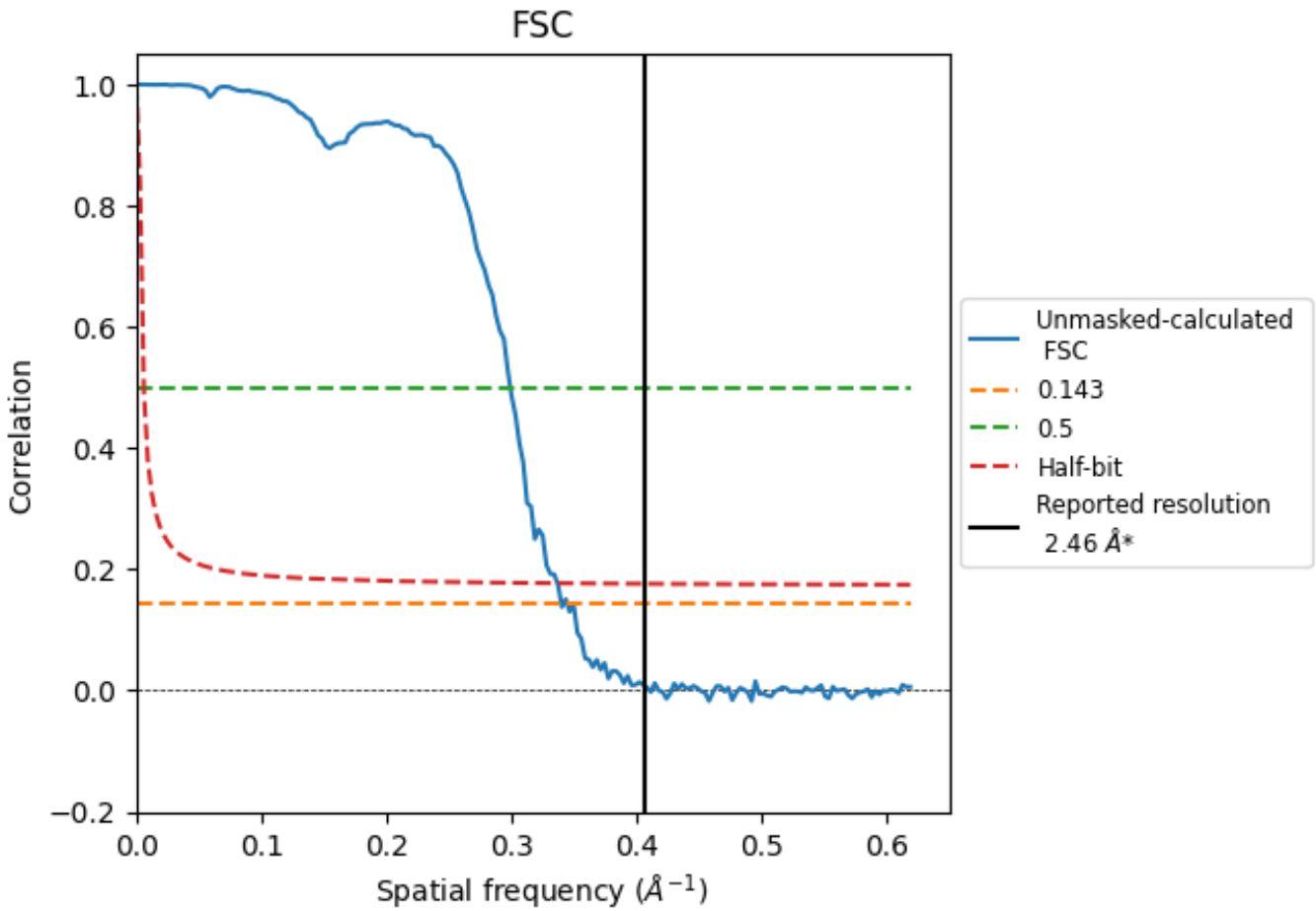


*Reported resolution corresponds to spatial frequency of 0.407 Å^{-1}

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 0.407 Å^{-1}

8.2 Resolution estimates (i)

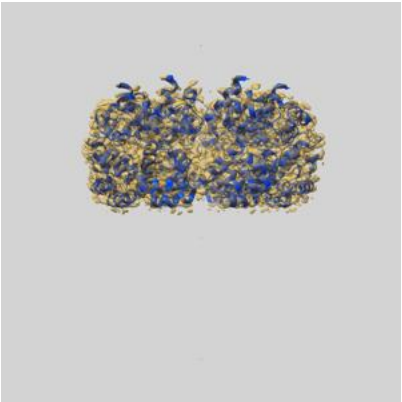
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.46	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	2.94	3.34	2.97

*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 2.94 differs from the reported value 2.46 by more than 10 %

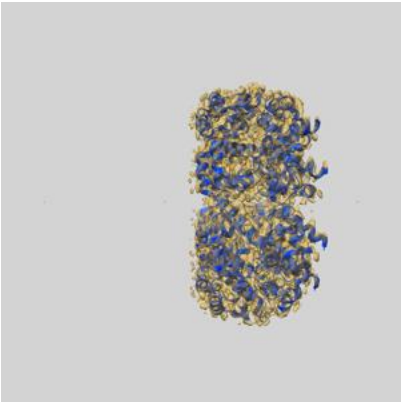
9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-62773 and PDB model 9L2E. Per-residue inclusion information can be found in section 3 on page 6.

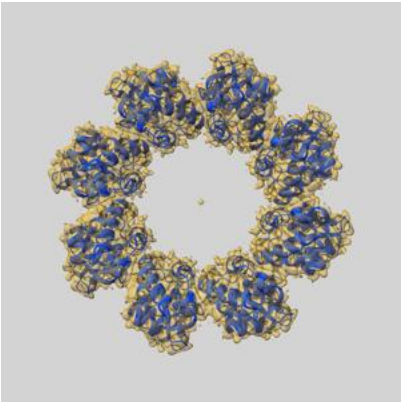
9.1 Map-model overlay (i)



X



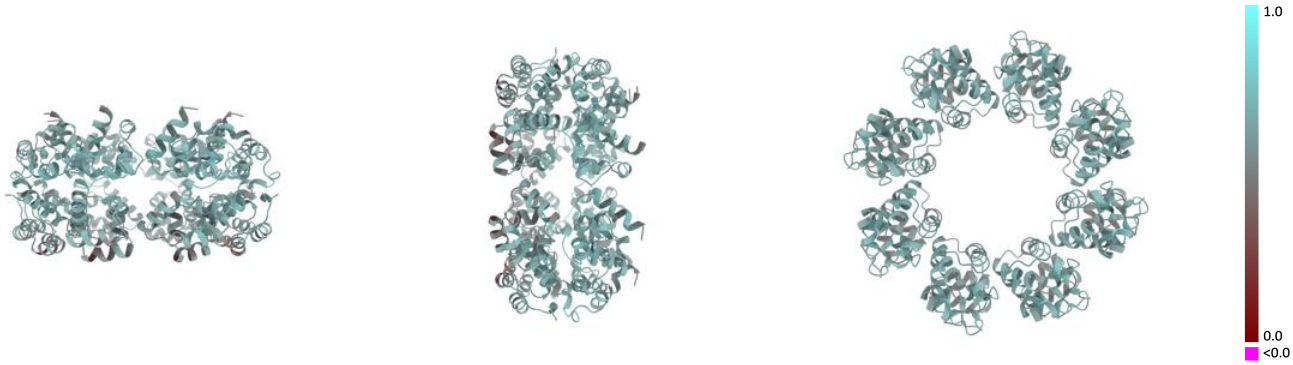
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.48 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.

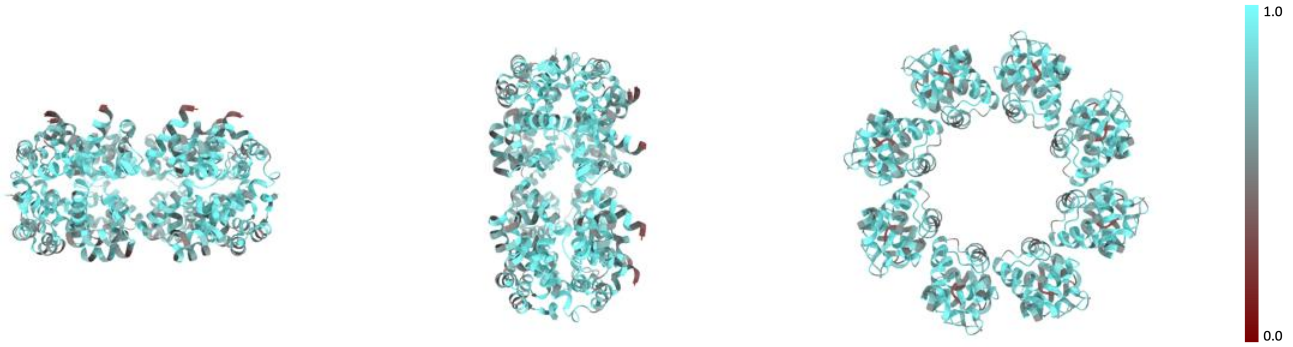
9.2 Q-score mapped to coordinate model (i)



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.

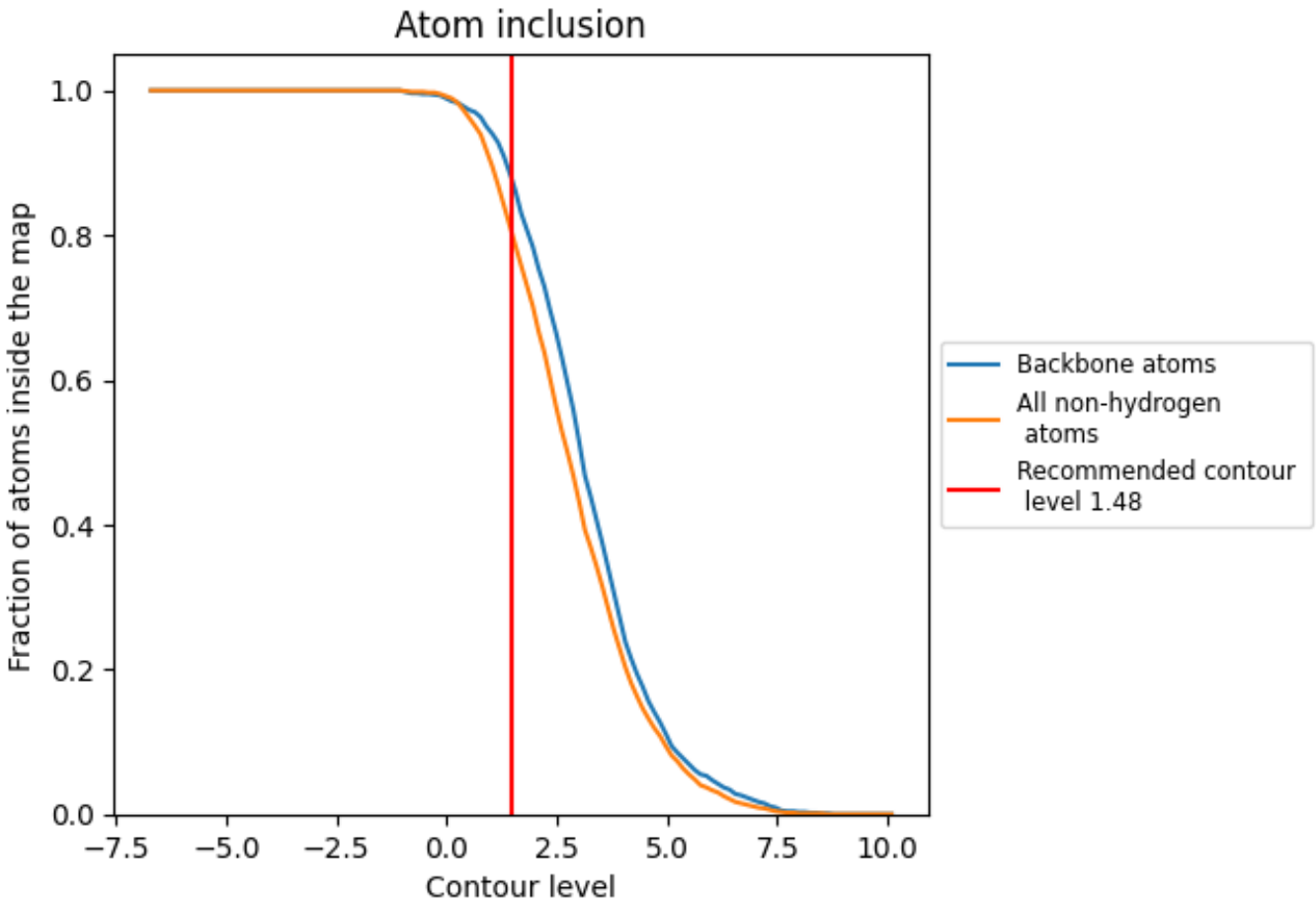
9.3 Atom inclusion mapped to coordinate model (i)



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 (1.48).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 80% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (1.48) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8020	0.6130
A	0.8030	0.6120
B	0.8020	0.6120
C	0.7990	0.6100
D	0.8000	0.6140
E	0.8030	0.6150
F	0.8010	0.6140
G	0.8030	0.6130
H	0.8030	0.6130