Full wwPDB EM Validation Report ⓘ

Nov 29, 2022 – 01:32 AM JST

PDB ID	:	7VLK
EMDB ID	:	EMD-32023
Title	:	eIF2B-SFSV NSs C2-imposed
Authors	:	Kashiwagi, K.; Ito, T.
Deposited on	:	2021-10-04
Resolution	:	2.27 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:

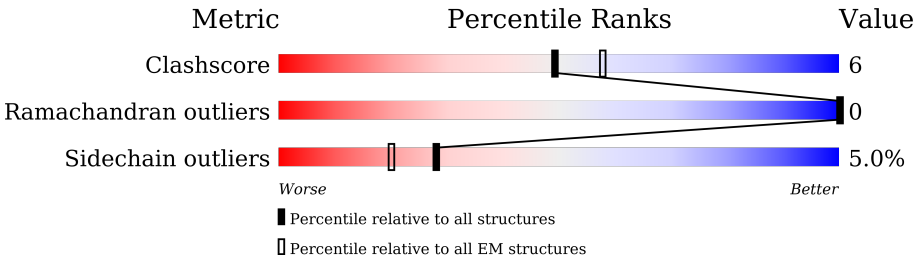
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 2.27 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	307	76% 19%
1	B	307	77% 18%
2	C	351	79% 16% 5%
2	D	351	76% 18% 5%
3	E	452	40% 12% 46%
3	F	452	43% 8% 46%
4	G	523	58% 9% 32%
4	H	523	56% 12% 32%

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Mol	Chain	Length	Quality of chain
5	I	721	
5	J	721	
6	K	261	
6	L	261	

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 28774 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 Translation initiation factor eIF-2B subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	294	Total	C	N	O	S	0	0
			2279	1464	378	425	12		
1	B	294	Total	C	N	O	S	0	0
			2279	1464	378	425	12		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP Q14232
A	0	PRO	-	expression tag	UNP Q14232
B	-1	GLY	-	expression tag	UNP Q14232
B	0	PRO	-	expression tag	UNP Q14232

- Molecule 2 is a protein called Translation initiation factor eIF-2B subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	333	Total	C	N	O	S	0	0
			2613	1652	460	486	15		
2	D	333	Total	C	N	O	S	0	0
			2613	1652	460	486	15		

- Molecule 3 is a protein called Translation initiation factor eIF-2B subunit gamma.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	E	242	Total	C	N	O	S	0	0
			1802	1162	303	328	9		
3	F	242	Total	C	N	O	S	0	0
			1802	1162	303	328	9		

- Molecule 4 is a protein called Translation initiation factor eIF-2B subunit delta.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	G	356	Total	C	N	O	S	0	0
			2771	1752	494	511	14		
4	H	356	Total	C	N	O	S	0	0
			2771	1752	494	511	14		

- Molecule 5 is a protein called Translation initiation factor eIF-2B subunit epsilon.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	I	427	Total	C	N	O	S	0	0
			3333	2103	590	625	15		
5	J	427	Total	C	N	O	S	0	0
			3333	2103	590	625	15		

- Molecule 6 is a protein called Non-structural protein NS-S.

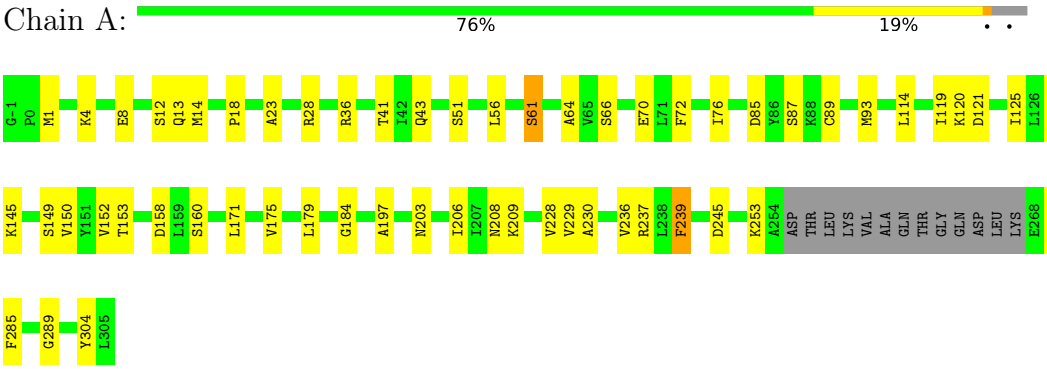
Mol	Chain	Residues	Atoms					AltConf	Trace
6	K	197	Total	C	N	O	S	0	0
			1589	1011	274	290	14		
6	L	197	Total	C	N	O	S	0	0
			1589	1011	274	290	14		

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.

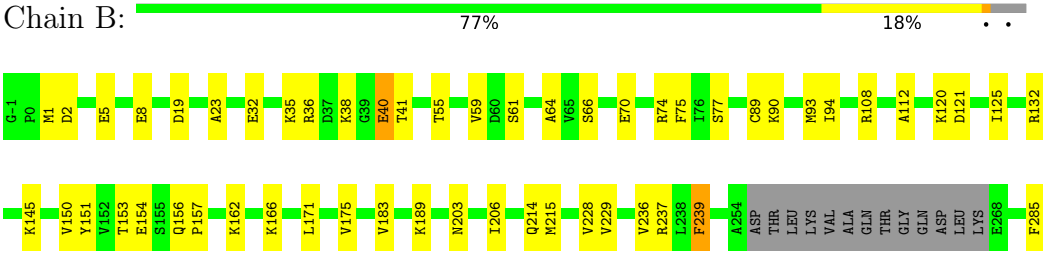
• Molecule 1: Translation initiation factor eIF-2B subunit alpha

Chain A:



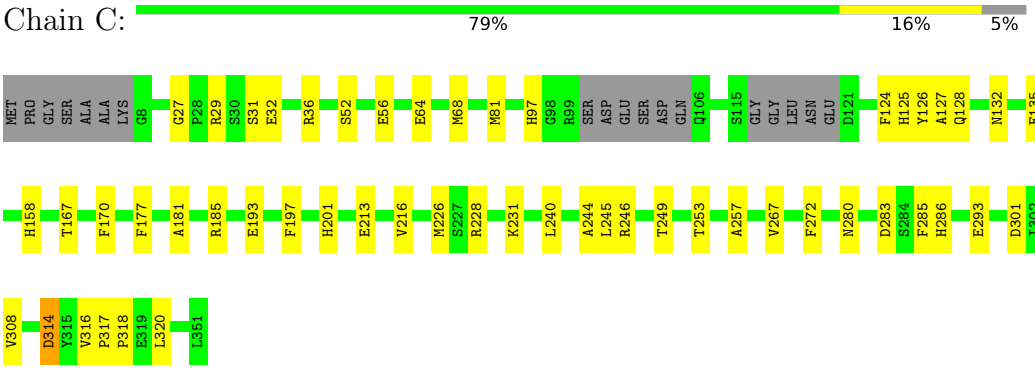
• Molecule 1: Translation initiation factor eIF-2B subunit alpha

Chain B:



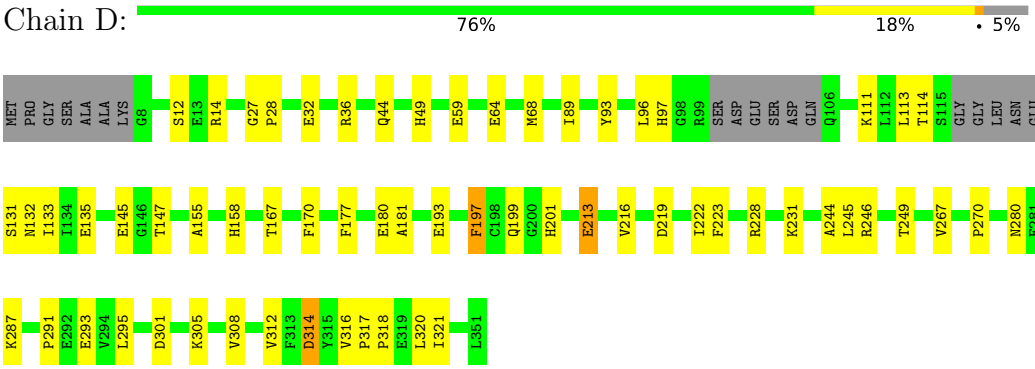
• Molecule 2: Translation initiation factor eIF-2B subunit beta

Chain C:



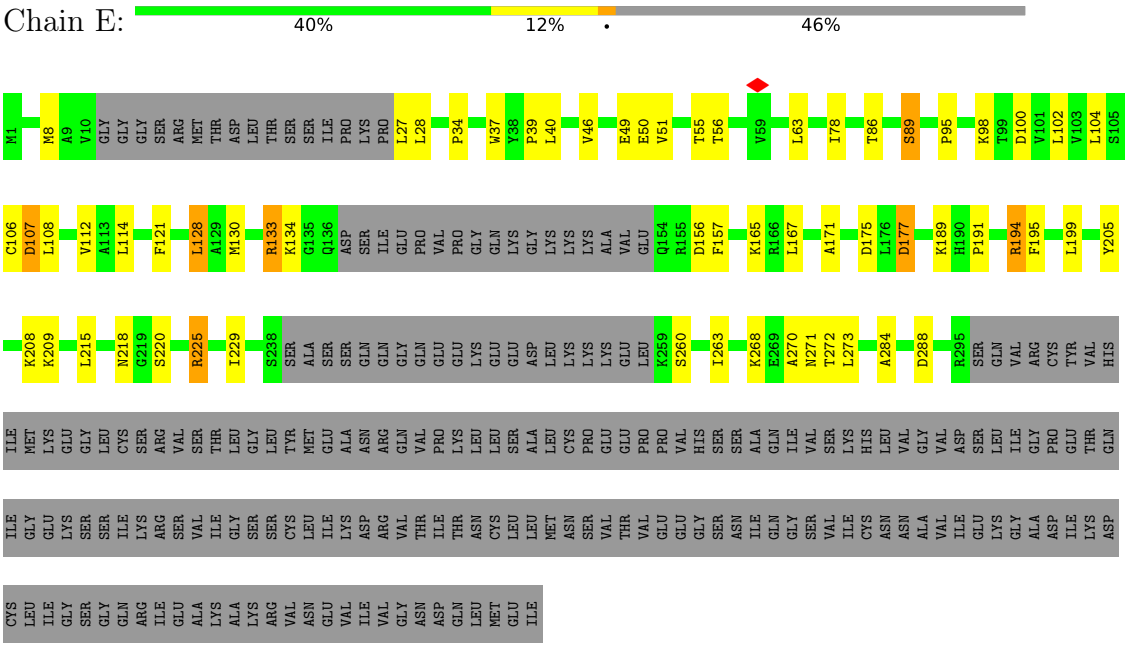
• Molecule 2: Translation initiation factor eIF-2B subunit beta

Chain D:



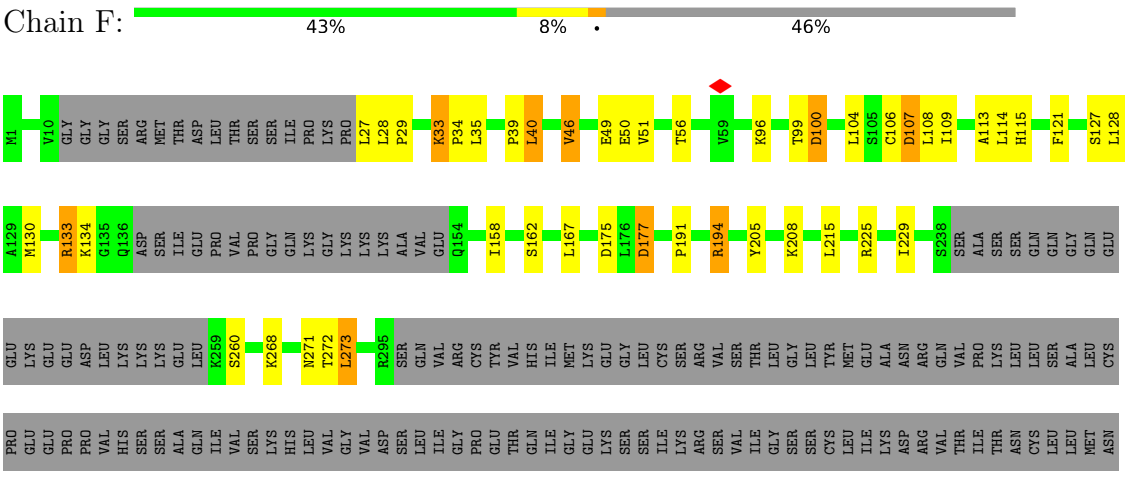
• Molecule 3: Translation initiation factor eIF-2B subunit gamma

Chain E:



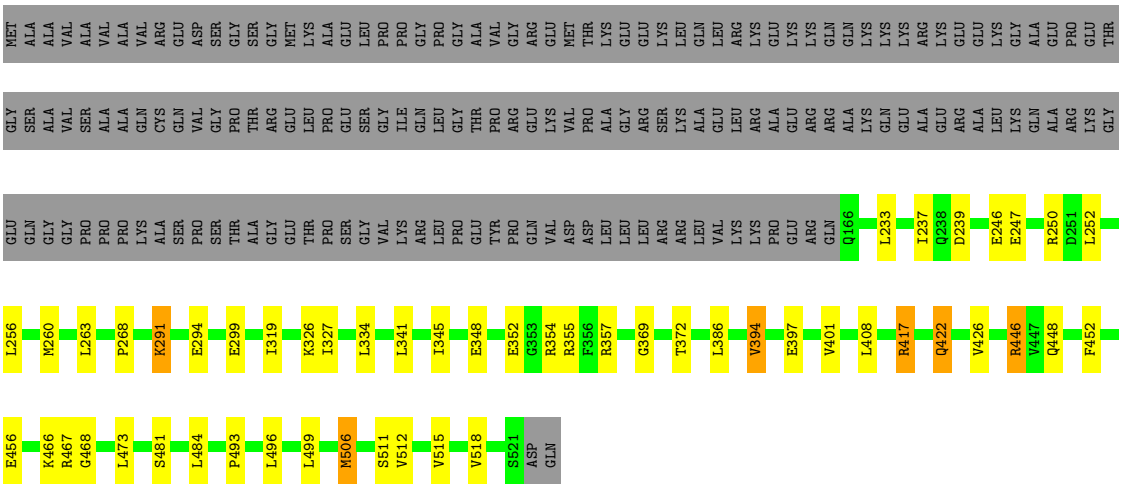
• Molecule 3: Translation initiation factor eIF-2B subunit gamma

Chain F:



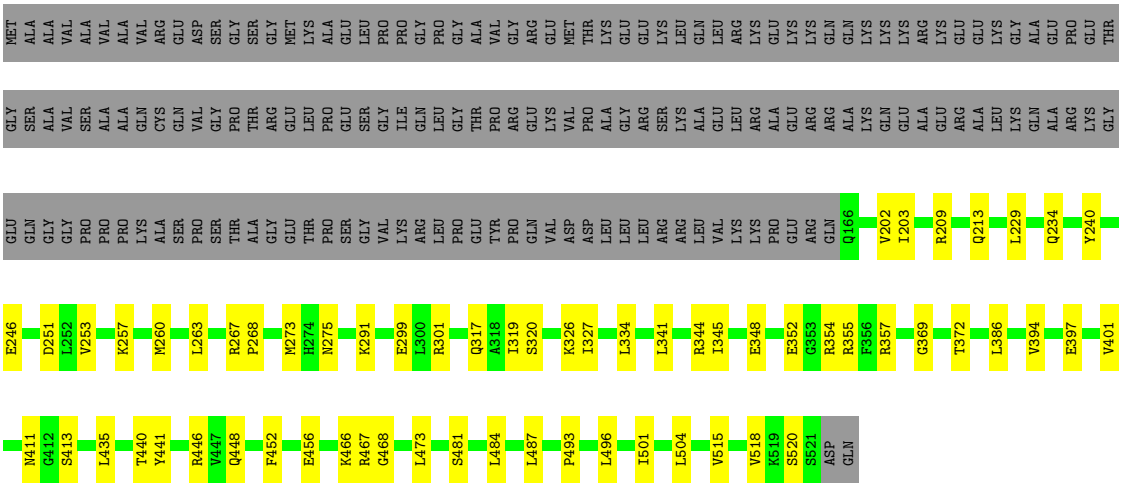
• Molecule 4: Translation initiation factor eIF-2B subunit delta

Chain G:



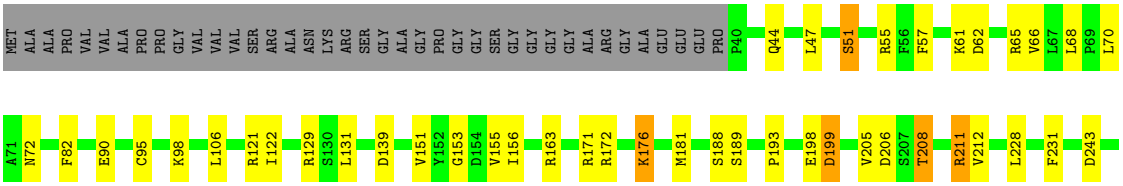
• Molecule 4: Translation initiation factor eIF-2B subunit delta

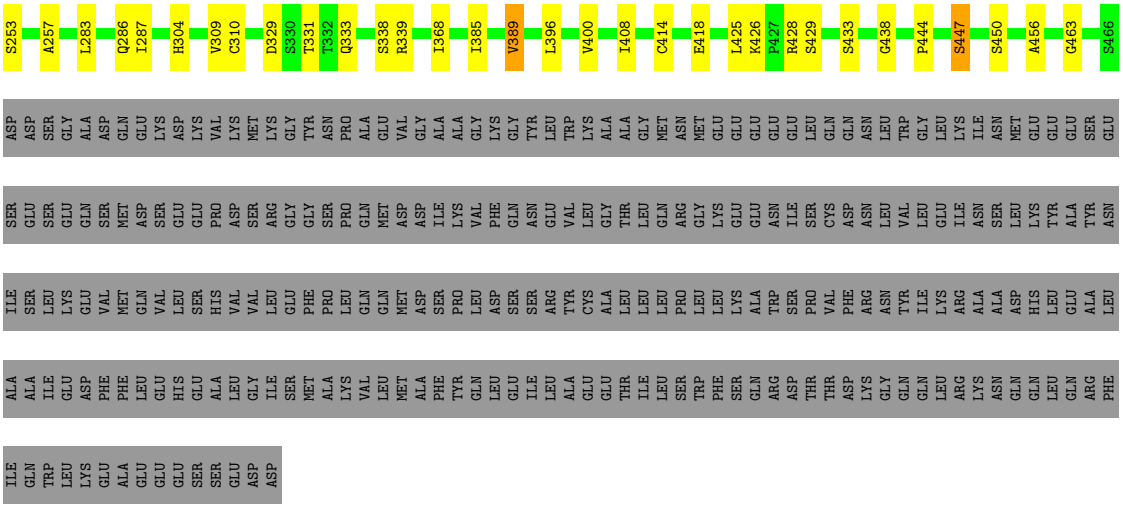
Chain H:



• Molecule 5: Translation initiation factor eIF-2B subunit epsilon

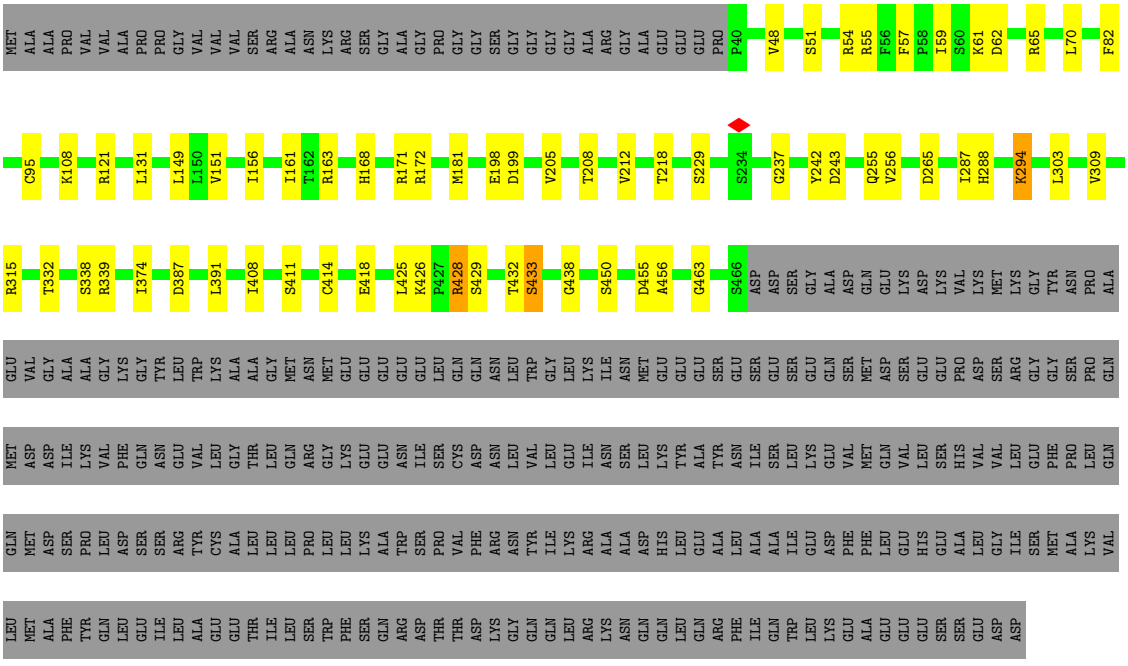
Chain I:





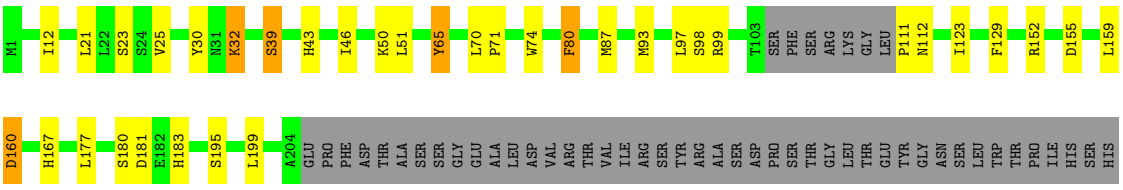
• Molecule 5: Translation initiation factor eIF-2B subunit epsilon

Chain J:



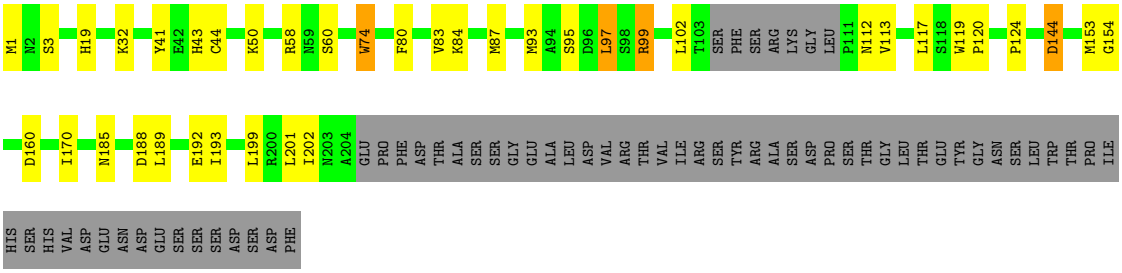
• Molecule 6: Non-structural protein NS-S

Chain K:



• Molecule 6: Non-structural protein NS-S

Chain L:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	888479	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	43.821	Depositor
Minimum map value	-22.302	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	2.5	Depositor
Map size (Å)	331.6, 331.6, 331.6	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.829, 0.829, 0.829	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	0.24	0/2316	0.45	0/3127
1	B	0.25	0/2316	0.47	0/3127
2	C	0.24	0/2662	0.47	0/3597
2	D	0.24	0/2662	0.46	0/3597
3	E	0.25	0/1828	0.53	1/2480 (0.0%)
3	F	0.25	0/1828	0.51	0/2480
4	G	0.24	0/2823	0.47	0/3836
4	H	0.24	0/2823	0.48	0/3836
5	I	0.24	0/3402	0.49	0/4631
5	J	0.24	0/3402	0.49	0/4631
6	K	0.24	0/1627	0.50	0/2196
6	L	0.24	0/1627	0.49	1/2196 (0.0%)
All	All	0.24	0/29316	0.48	2/39734 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E	177	ASP	CB-CG-OD1	5.98	123.68	118.30
6	L	97	LEU	CA-CB-CG	5.51	127.98	115.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2279	0	2353	32	0
1	B	2279	0	2353	35	0
2	C	2613	0	2623	31	0
2	D	2613	0	2623	40	0
3	E	1802	0	1753	34	0
3	F	1802	0	1753	29	0
4	G	2771	0	2834	33	0
4	H	2771	0	2834	37	0
5	I	3333	0	3302	37	0
5	J	3333	0	3302	34	0
6	K	1589	0	1554	19	0
6	L	1589	0	1554	20	0
All	All	28774	0	28838	351	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 6.

All (351) 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)
3:F:104:LEU:HD11	3:F:108:LEU:HD22	1.69	0.73
1:A:245:ASP:OD2	4:G:326:LYS:NZ	2.22	0.73
3:F:33:LYS:HG3	3:F:34:PRO:HD2	1.70	0.73
3:E:8:MET:SD	3:E:89:SER:OG	2.47	0.72
5:J:181:MET:HB3	5:J:287:ILE:HG12	1.71	0.72
1:B:38:LYS:HE3	1:B:38:LYS:HA	1.72	0.71
1:B:154:GLU:OE1	1:B:156:GLN:NE2	2.24	0.71
5:J:149:LEU:HD21	5:J:161:ILE:HG12	1.73	0.70
4:H:202:VAL:HG23	4:H:203:ILE:HG12	1.76	0.68
1:B:112:ALA:HA	1:B:137:VAL:HG12	1.75	0.67
1:A:1:MET:HG3	1:A:36:ARG:HH21	1.61	0.66
4:G:237:ILE:HD12	4:G:252:LEU:HD21	1.78	0.65
3:F:268:LYS:HE2	3:F:271:ASN:H	1.61	0.65
5:J:205:VAL:HG12	5:J:212:VAL:HA	1.79	0.64
6:L:93:MET:O	6:L:97:LEU:HD12	1.97	0.64
5:I:172:ARG:NH1	5:I:253:SER:OG	2.30	0.64
3:F:27:LEU:HD22	3:F:28:LEU:H	1.61	0.64
3:E:128:LEU:HD23	3:E:263:ILE:HD12	1.79	0.64
2:D:36:ARG:NH1	2:D:145:GLU:OE2	2.31	0.64
5:I:438:GLY:H	5:I:463:GLY:HA2	1.62	0.64
2:C:36:ARG:NH1	2:C:145:GLU:OE2	2.30	0.64
6:L:1:MET:SD	6:L:3:SER:OG	2.56	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:THR:HG21	6:K:43:HIS:HB3	1.79	0.63
6:K:51:LEU:HD12	6:K:160:ASP:HB2	1.81	0.63
4:G:499:LEU:HD11	4:G:506:MET:HB3	1.81	0.62
6:K:46:ILE:HG23	6:K:159:LEU:HB3	1.80	0.62
5:I:205:VAL:HG12	5:I:212:VAL:HA	1.81	0.62
1:A:150:VAL:HB	1:A:175:VAL:HG12	1.80	0.62
5:J:438:GLY:H	5:J:463:GLY:HA2	1.63	0.62
5:I:106:LEU:HD12	5:I:122:ILE:HD11	1.81	0.62
1:A:184:GLY:H	1:B:214:GLN:HE21	1.48	0.61
3:F:225:ARG:HA	3:F:229:ILE:HD12	1.83	0.61
1:B:150:VAL:HB	1:B:175:VAL:HG12	1.82	0.60
2:D:219:ASP:O	4:G:422:GLN:NE2	2.26	0.60
6:K:12:ILE:HG12	6:K:25:VAL:HG22	1.83	0.60
5:I:156:ILE:HG13	5:I:309:VAL:HG11	1.83	0.59
1:A:269:GLU:O	1:A:270:HIS:ND1	2.34	0.59
1:B:120:LYS:NZ	2:D:280:ASN:O	2.33	0.59
6:K:98:SER:HA	6:K:129:PHE:HB3	1.84	0.59
4:G:247:GLU:OE1	4:G:250:ARG:NH2	2.36	0.59
3:E:107:ASP:HB3	3:E:273:LEU:HD13	1.85	0.59
3:E:133:ARG:NH1	3:E:134:LYS:O	2.34	0.58
3:F:108:LEU:HA	3:F:273:LEU:HB2	1.84	0.58
1:A:61:SER:O	1:A:61:SER:OG	2.19	0.58
2:D:245:LEU:HB2	2:D:316:VAL:HB	1.86	0.58
1:B:23:ALA:HB2	1:B:64:ALA:HB1	1.86	0.57
1:A:41:THR:HG22	1:A:43:GLN:H	1.69	0.57
5:I:181:MET:HB3	5:I:287:ILE:HG12	1.86	0.57
4:G:397:GLU:OE2	5:I:339:ARG:NH1	2.37	0.57
6:K:93:MET:O	6:K:97:LEU:HD12	2.04	0.56
5:J:172:ARG:NH2	5:J:255:GLN:OE1	2.38	0.56
5:J:450:SER:HB3	5:J:456:ALA:HB2	1.87	0.56
5:I:211:ARG:HD2	5:I:286:GLN:HB3	1.88	0.56
4:G:291:LYS:NZ	4:G:299:GLU:OE1	2.33	0.55
2:C:213:GLU:HA	4:H:481:SER:HB2	1.87	0.55
4:H:348:GLU:O	4:H:352:GLU:HG2	2.06	0.55
1:A:229:VAL:HG12	1:A:285:PHE:HB2	1.89	0.55
3:F:191:PRO:HB2	5:J:243:ASP:HB3	1.89	0.55
1:A:18:PRO:O	1:A:132:ARG:NH2	2.40	0.54
1:B:61:SER:OG	1:B:61:SER:O	2.25	0.54
4:G:348:GLU:O	4:G:352:GLU:HG2	2.07	0.54
5:I:228:LEU:HA	5:I:231:PHE:HD2	1.72	0.54
4:G:260:MET:HE3	4:G:263:LEU:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:206:ASP:OD1	5:I:208:THR:OG1	2.23	0.54
3:E:133:ARG:HD2	3:E:272:THR:HB	1.89	0.54
4:H:435:LEU:HD23	4:H:501:ILE:HD11	1.89	0.54
3:F:29:PRO:HB3	3:F:34:PRO:HB3	1.90	0.54
1:B:89:CYS:O	1:B:93:MET:HG3	2.08	0.54
2:D:64:GLU:O	2:D:68:MET:HG3	2.07	0.54
4:H:397:GLU:OE1	5:J:339:ARG:NH1	2.40	0.54
1:B:40:GLU:HG3	1:B:41:THR:HG23	1.90	0.54
2:C:185:ARG:HG2	2:C:185:ARG:HH11	1.72	0.54
3:E:27:LEU:HD13	3:E:28:LEU:N	2.23	0.53
5:J:408:ILE:HG12	5:J:425:LEU:HD13	1.91	0.53
1:A:179:LEU:HD13	1:B:157:PRO:HD3	1.89	0.53
1:B:108:ARG:HG2	1:B:136:ARG:HG2	1.90	0.53
2:D:213:GLU:HA	4:G:481:SER:HB2	1.90	0.53
5:I:385:ILE:HG22	5:I:389:VAL:HG11	1.90	0.53
6:K:99:ARG:NE	6:K:99:ARG:O	2.40	0.53
4:H:260:MET:HE3	4:H:263:LEU:HD12	1.90	0.53
2:D:147:THR:HG21	2:D:270:PRO:HB3	1.91	0.53
2:C:125:HIS:HE1	2:C:127:ALA:HB2	1.73	0.53
4:H:466:LYS:NZ	4:H:468:GLY:O	2.42	0.53
2:C:245:LEU:HD11	2:C:267:VAL:HG21	1.91	0.53
2:D:96:LEU:HD21	2:D:128:GLN:HG2	1.91	0.52
5:J:55:ARG:NH2	5:J:198:GLU:OE2	2.39	0.52
1:A:89:CYS:O	1:A:93:MET:HG3	2.09	0.52
1:B:206:ILE:HG21	1:B:228:VAL:HG11	1.90	0.52
6:K:39:SER:OG	6:K:71:PRO:O	2.25	0.52
1:A:120:LYS:NZ	2:C:280:ASN:O	2.35	0.52
5:I:72:ASN:O	5:I:333:GLN:NE2	2.42	0.52
3:E:28:LEU:H	3:E:28:LEU:HD22	1.74	0.52
5:I:47:LEU:HD11	5:I:153:GLY:HA2	1.92	0.52
5:I:188:SER:OG	5:I:189:SER:N	2.42	0.52
5:J:156:ILE:HG13	5:J:309:VAL:HG11	1.91	0.52
4:G:408:LEU:HD12	4:G:512:VAL:HG21	1.91	0.52
1:A:23:ALA:HB2	1:A:64:ALA:HB1	1.92	0.52
2:C:245:LEU:HB2	2:C:316:VAL:HB	1.90	0.52
1:B:151:TYR:OH	1:B:189:LYS:NZ	2.43	0.51
2:C:193:GLU:OE1	2:C:201:HIS:NE2	2.33	0.51
3:E:104:LEU:HD21	3:E:108:LEU:HD22	1.91	0.51
3:E:8:MET:HG3	3:E:86:THR:HG23	1.91	0.51
1:B:1:MET:HG2	1:B:5:GLU:HB2	1.93	0.51
1:A:72:PHE:O	1:A:76:ILE:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:272:THR:OG1	3:F:273:LEU:N	2.43	0.51
6:L:74:TRP:HB2	6:L:83:VAL:HG22	1.92	0.51
3:E:191:PRO:HB2	5:I:243:ASP:HB3	1.92	0.51
1:A:206:ILE:HG21	1:A:228:VAL:HG11	1.93	0.50
4:H:440:THR:HG21	4:H:504:LEU:HD13	1.93	0.50
1:B:162:LYS:O	1:B:166:LYS:HG3	2.10	0.50
4:G:493:PRO:HD2	4:G:496:LEU:HD12	1.93	0.50
5:I:408:ILE:HG12	5:I:425:LEU:HD13	1.93	0.50
4:H:229:LEU:HD22	4:H:273:MET:HG2	1.93	0.50
2:C:155:ALA:HB1	2:C:181:ALA:HB2	1.93	0.50
3:E:156:ASP:OD2	3:E:156:ASP:N	2.43	0.50
6:L:170:ILE:HD11	6:L:193:ILE:HG12	1.92	0.50
1:B:19:ASP:OD1	1:B:108:ARG:NH1	2.44	0.50
1:B:133:VAL:O	1:B:137:VAL:HG13	2.12	0.50
2:D:155:ALA:HB1	2:D:181:ALA:HB2	1.92	0.50
2:D:245:LEU:HD11	2:D:267:VAL:HG21	1.94	0.50
4:H:319:ILE:HG22	4:H:345:ILE:HD11	1.94	0.50
3:E:268:LYS:HG2	3:E:270:ALA:H	1.77	0.49
2:D:216:VAL:HG11	4:G:473:LEU:HD11	1.94	0.49
3:E:225:ARG:HA	3:E:229:ILE:HD12	1.93	0.49
4:H:326:LYS:HG2	4:H:435:LEU:HD21	1.94	0.49
6:K:177:LEU:HD23	6:K:199:LEU:HD12	1.94	0.49
1:B:66:SER:O	1:B:70:GLU:HG2	2.13	0.49
3:F:99:THR:OG1	3:F:100:ASP:N	2.45	0.49
4:H:268:PRO:HG2	4:H:456:GLU:HG3	1.95	0.49
3:E:268:LYS:NZ	3:E:270:ALA:HB3	2.27	0.49
5:I:139:ASP:HB2	5:I:257:ALA:HB1	1.94	0.49
3:F:27:LEU:HD12	3:F:35:LEU:HD23	1.94	0.49
4:G:466:LYS:NZ	4:G:468:GLY:O	2.45	0.49
5:I:426:LYS:O	5:I:429:SER:OG	2.29	0.49
1:B:75:PHE:HB2	2:D:113:LEU:HD22	1.94	0.49
2:C:244:ALA:HB2	2:C:318:PRO:HD3	1.95	0.49
2:C:240:LEU:HD12	2:C:244:ALA:HB3	1.95	0.48
3:F:133:ARG:HD2	3:F:272:THR:HB	1.94	0.48
4:H:240:TYR:OH	4:H:251:ASP:OD2	2.25	0.48
5:I:55:ARG:NH2	5:I:198:GLU:OE2	2.45	0.48
6:L:160:ASP:OD1	6:L:160:ASP:N	2.46	0.48
3:F:46:VAL:HG21	3:F:114:LEU:HB3	1.96	0.48
1:A:51:SER:HB3	6:K:80:PHE:HD2	1.77	0.48
3:E:157:PHE:HB2	3:E:171:ALA:HB3	1.96	0.48
4:G:369:GLY:O	4:G:372:THR:OG1	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:334:LEU:HB3	4:H:401:VAL:HG22	1.95	0.48
4:G:268:PRO:HG2	4:G:456:GLU:HG3	1.96	0.48
5:I:176:LYS:HE2	5:I:176:LYS:HB3	1.63	0.48
2:D:301:ASP:OD1	2:D:301:ASP:N	2.46	0.48
1:A:119:ILE:HG23	1:A:125:ILE:HD11	1.95	0.48
2:C:64:GLU:O	2:C:68:MET:HG3	2.13	0.48
2:C:27:GLY:N	2:C:29:ARG:HH12	2.12	0.47
2:D:132:ASN:O	2:D:135:GLU:HG3	2.14	0.47
3:E:55:THR:HB	3:E:63:LEU:HB2	1.96	0.47
5:J:168:HIS:CE1	5:J:172:ARG:HD2	2.49	0.47
3:F:194:ARG:HH12	5:J:237:GLY:H	1.60	0.47
3:F:268:LYS:HE3	3:F:268:LYS:HB2	1.59	0.47
5:J:426:LYS:O	5:J:429:SER:OG	2.30	0.47
1:B:145:LYS:HD3	1:B:145:LYS:HA	1.65	0.47
4:H:515:VAL:HA	4:H:518:VAL:HG22	1.97	0.47
5:I:90:GLU:OE2	5:I:121:ARG:NE	2.47	0.47
1:B:303:LEU:HD11	2:D:113:LEU:HD12	1.96	0.47
3:E:40:LEU:HD11	3:E:51:VAL:HG11	1.97	0.47
2:C:216:VAL:HG11	4:H:473:LEU:HD11	1.95	0.47
2:C:301:ASP:N	2:C:301:ASP:OD1	2.47	0.47
4:G:233:LEU:O	4:G:237:ILE:HG12	2.13	0.47
5:I:396:LEU:HG	5:I:400:VAL:HG11	1.97	0.47
2:D:291:PRO:HB3	2:D:308:VAL:HB	1.97	0.47
3:F:108:LEU:HD12	3:F:273:LEU:HB3	1.97	0.47
5:I:65:ARG:HA	5:I:68:LEU:HG	1.96	0.47
5:J:171:ARG:HD3	5:J:288:HIS:CE1	2.50	0.47
1:B:229:VAL:HG12	1:B:285:PHE:HB2	1.97	0.47
1:B:41:THR:OG1	6:L:43:HIS:ND1	2.35	0.47
2:D:283:ASP:HB3	5:I:338:SER:HA	1.95	0.47
3:F:194:ARG:NH1	5:J:237:GLY:H	2.13	0.47
2:D:89:ILE:HG12	2:D:133:ILE:HD13	1.96	0.47
3:F:107:ASP:HB2	3:F:273:LEU:HD12	1.96	0.47
3:F:107:ASP:OD1	3:F:107:ASP:N	2.48	0.46
4:H:354:ARG:O	4:H:355:ARG:NH1	2.47	0.46
5:J:414:CYS:HB2	5:J:432:THR:HA	1.96	0.46
6:L:84:LYS:O	6:L:185:ASN:ND2	2.46	0.46
1:A:66:SER:O	1:A:70:GLU:HG2	2.14	0.46
2:D:317:PRO:HD2	2:D:320:LEU:HD12	1.97	0.46
3:F:177:ASP:N	3:F:177:ASP:OD2	2.48	0.46
6:L:19:HIS:NE2	6:L:154:GLY:O	2.45	0.46
6:L:113:VAL:HG22	6:L:117:LEU:HD23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:145:LYS:HA	1:A:145:LYS:HD3	1.66	0.46
4:G:327:ILE:O	4:G:354:ARG:NE	2.49	0.46
5:I:414:CYS:HB2	5:I:433:SER:H	1.80	0.46
5:J:303:LEU:HD12	5:J:428:ARG:HH22	1.81	0.46
2:C:132:ASN:O	2:C:135:GLU:HG3	2.15	0.46
3:F:35:LEU:HD11	3:F:109:ILE:HD11	1.96	0.46
4:G:515:VAL:HA	4:G:518:VAL:HG22	1.97	0.46
4:H:275:ASN:ND2	4:H:441:TYR:O	2.49	0.46
1:A:4:LYS:NZ	1:A:8:GLU:OE1	2.48	0.46
4:G:319:ILE:HG22	4:G:345:ILE:HD11	1.96	0.46
5:J:391:LEU:HD23	5:J:408:ILE:HB	1.98	0.46
5:I:44:GLN:HG2	5:I:90:GLU:HB3	1.97	0.46
1:B:120:LYS:HZ2	2:D:282:GLU:HB2	1.81	0.46
5:I:199:ASP:OD1	5:I:199:ASP:N	2.49	0.46
5:J:54:ARG:HE	5:J:54:ARG:HA	1.80	0.46
5:J:265:ASP:OD1	5:J:265:ASP:N	2.41	0.46
1:A:237:ARG:HD2	1:A:304:TYR:CD2	2.52	0.45
3:E:102:LEU:HD21	3:E:114:LEU:HD21	1.98	0.45
3:E:272:THR:OG1	3:E:273:LEU:N	2.49	0.45
4:H:369:GLY:O	4:H:372:THR:OG1	2.30	0.45
5:I:444:PRO:O	5:I:447:SER:OG	2.34	0.45
1:B:74:ARG:NH1	1:B:77:SER:OG	2.45	0.45
6:K:23:SER:HB3	6:K:152:ARG:HG2	1.98	0.45
4:H:317:GLN:HG3	4:H:344:ARG:HH21	1.81	0.45
2:D:305:LYS:HB2	2:D:305:LYS:HE3	1.65	0.45
6:K:65:TYR:HE2	6:K:167:HIS:HD1	1.64	0.45
2:C:52:SER:N	2:C:56:GLU:OE1	2.46	0.45
2:D:222:ILE:HB	4:G:422:GLN:NE2	2.32	0.45
2:D:318:PRO:HA	2:D:321:ILE:HD12	1.99	0.45
3:F:39:PRO:HG2	3:F:106:CYS:HA	1.97	0.45
5:J:374:ILE:HG12	5:J:391:LEU:HD12	1.99	0.45
3:E:130:MET:HE2	3:E:205:TYR:HE1	1.81	0.45
6:L:113:VAL:HG23	6:L:201:LEU:HD11	1.99	0.45
2:C:317:PRO:HD2	2:C:320:LEU:HD12	1.99	0.45
3:E:104:LEU:HD23	3:E:104:LEU:HA	1.85	0.44
6:L:60:SER:HA	6:L:185:ASN:HB2	1.99	0.44
3:F:130:MET:HE2	3:F:205:TYR:HE1	1.82	0.44
4:H:234:GLN:HG2	4:H:301:ARG:HG2	2.00	0.44
5:I:61:LYS:O	5:I:98:LYS:NZ	2.30	0.44
2:C:305:LYS:HB2	2:C:305:LYS:HE3	1.61	0.44
4:G:422:GLN:O	4:G:426:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:291:LYS:NZ	4:H:299:GLU:OE1	2.38	0.44
5:I:151:VAL:HG22	5:I:155:VAL:HG21	2.00	0.44
3:F:113:ALA:HB1	3:F:115:HIS:CD2	2.53	0.44
4:G:446:ARG:NH2	4:G:448:GLN:OE1	2.50	0.44
3:E:39:PRO:HG2	3:E:106:CYS:HA	1.99	0.44
3:F:133:ARG:NH1	3:F:134:LYS:O	2.48	0.44
6:L:102:LEU:HD11	6:L:124:PRO:HB2	1.99	0.44
4:G:473:LEU:HD13	4:G:484:LEU:HD21	2.00	0.44
6:K:21:LEU:HD11	6:K:123:ILE:HD13	1.99	0.44
1:A:158:ASP:O	1:A:160:SER:N	2.47	0.43
2:D:128:GLN:OE1	2:D:128:GLN:N	2.48	0.43
2:D:295:LEU:HD12	2:D:295:LEU:HA	1.91	0.43
4:G:334:LEU:HB3	4:G:401:VAL:HG22	2.00	0.43
5:I:450:SER:HB3	5:I:456:ALA:HB2	2.00	0.43
6:L:41:TYR:O	6:L:44:CYS:HB2	2.18	0.43
2:D:223:PHE:HB2	4:G:422:GLN:HG3	2.00	0.43
4:H:209:ARG:O	4:H:213:GLN:HG2	2.18	0.43
4:H:446:ARG:NH2	4:H:448:GLN:OE1	2.51	0.43
5:J:218:THR:HG21	5:J:242:TYR:HE1	1.84	0.43
2:C:158:HIS:O	2:C:231:LYS:NZ	2.36	0.43
2:D:244:ALA:HB2	2:D:318:PRO:HD3	2.00	0.43
1:A:203:ASN:HB3	1:A:239:PHE:CZ	2.53	0.43
1:A:13:GLN:NE2	1:A:28:ARG:HD3	2.33	0.43
1:A:127:THR:OG1	1:A:152:VAL:HG12	2.19	0.43
1:B:32:GLU:OE2	1:B:36:ARG:NH2	2.51	0.43
1:B:112:ALA:HB2	1:B:136:ARG:HG3	1.99	0.43
3:E:134:LYS:HE3	3:E:199:LEU:HD21	2.00	0.43
4:G:417:ARG:HE	4:G:417:ARG:HB2	1.50	0.43
5:J:108:LYS:HB2	5:J:108:LYS:HE3	1.75	0.43
5:J:294:LYS:HD2	5:J:294:LYS:HA	1.72	0.43
6:K:180:SER:HB3	6:K:183:HIS:ND1	2.34	0.43
5:I:193:PRO:O	5:I:304:HIS:NE2	2.47	0.43
2:C:228:ARG:HD3	4:H:452:PHE:CE1	2.54	0.43
2:D:14:ARG:NH1	2:D:44:GLN:OE1	2.52	0.43
6:L:170:ILE:HD12	6:L:189:LEU:HD13	2.00	0.43
2:D:293:GLU:H	2:D:293:GLU:HG2	1.63	0.43
3:F:96:LYS:HE2	3:F:96:LYS:HB3	1.60	0.43
4:G:354:ARG:O	4:G:355:ARG:NH1	2.51	0.43
4:H:487:LEU:HD23	4:H:487:LEU:HA	1.86	0.43
5:J:48:VAL:HG21	5:J:131:LEU:HD12	2.00	0.43
5:J:218:THR:HG21	5:J:242:TYR:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:32:GLU:OE2	2:D:36:ARG:NH1	2.40	0.43
5:I:368:ILE:HD13	5:I:385:ILE:HG13	2.01	0.43
5:J:414:CYS:HB2	5:J:433:SER:H	1.83	0.43
2:D:158:HIS:O	2:D:231:LYS:NZ	2.40	0.43
3:E:268:LYS:HZ3	3:E:270:ALA:HB3	1.84	0.43
6:L:99:ARG:HD2	6:L:99:ARG:HA	1.82	0.42
3:F:215:LEU:HD12	3:F:215:LEU:HA	1.91	0.42
4:G:394:VAL:O	4:G:397:GLU:HG2	2.19	0.42
1:A:85:ASP:OD2	1:A:87:SER:OG	2.32	0.42
2:D:287:LYS:HB3	2:D:312:VAL:HB	2.02	0.42
3:E:34:PRO:HG2	3:E:37:TRP:HB2	2.02	0.42
4:H:320:SER:HA	4:H:345:ILE:HG12	2.01	0.42
1:B:125:ILE:HB	1:B:150:VAL:HG22	2.01	0.42
2:C:249:THR:HA	2:C:314:ASP:HB2	2.02	0.42
3:E:215:LEU:HD12	3:E:215:LEU:HA	1.86	0.42
3:F:121:PHE:HZ	3:F:208:LYS:HG2	1.84	0.42
1:B:156:GLN:N	1:B:157:PRO:HD2	2.34	0.42
2:C:226:MET:HE3	2:C:257:ALA:HB3	2.02	0.42
2:D:228:ARG:HD3	4:G:452:PHE:CE1	2.54	0.42
1:B:2:ASP:HA	6:L:80:PHE:HE1	1.85	0.42
4:H:267:ARG:HG2	4:H:268:PRO:HD2	2.01	0.42
6:K:155:ASP:OD1	6:K:155:ASP:N	2.51	0.42
2:C:303:LEU:O	5:J:315:ARG:NH1	2.45	0.42
4:H:355:ARG:HA	4:H:355:ARG:HD3	1.84	0.42
4:H:473:LEU:HD13	4:H:484:LEU:HD21	2.01	0.42
5:I:129:ARG:HA	5:I:129:ARG:HD3	1.85	0.42
2:C:32:GLU:OE2	2:C:36:ARG:NH1	2.48	0.42
2:C:197:PHE:CE1	2:C:293:GLU:HG2	2.55	0.42
3:E:133:ARG:HE	3:E:271:ASN:N	2.18	0.42
4:G:467:ARG:HD3	4:G:467:ARG:HA	1.88	0.42
5:J:54:ARG:HA	5:J:54:ARG:NE	2.34	0.42
3:E:95:PRO:O	3:E:98:LYS:NZ	2.45	0.41
4:H:213:GLN:HG2	4:H:213:GLN:H	1.72	0.41
6:L:188:ASP:O	6:L:192:GLU:HG3	2.19	0.41
1:B:55:THR:O	1:B:59:VAL:HG23	2.20	0.41
2:C:124:PHE:CD1	2:C:126:TYR:HE1	2.38	0.41
5:J:59:ILE:HA	5:J:432:THR:HG21	2.02	0.41
1:A:208:ASN:HD22	1:A:208:ASN:HA	1.72	0.41
2:C:283:ASP:HB3	5:J:338:SER:HA	2.02	0.41
2:D:193:GLU:OE1	2:D:201:HIS:NE2	2.35	0.41
4:H:411:ASN:HD21	4:H:413:SER:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:114:LEU:HD13	1:A:289:GLY:HA2	2.02	0.41
2:D:155:ALA:HA	2:D:177:PHE:CZ	2.56	0.41
3:E:284:ALA:O	3:E:288:ASP:N	2.54	0.41
4:G:256:LEU:O	4:G:260:MET:HG2	2.20	0.41
5:I:70:LEU:HD21	5:I:310:CYS:HA	2.02	0.41
5:J:55:ARG:HA	5:J:55:ARG:HD2	1.93	0.41
2:D:27:GLY:HA3	2:D:28:PRO:HD3	1.89	0.41
2:D:197:PHE:O	2:D:199:GLN:N	2.52	0.41
3:E:78:ILE:HD13	3:E:78:ILE:HA	1.89	0.41
6:L:199:LEU:O	6:L:202:ILE:HG13	2.21	0.41
1:A:56:LEU:HD23	1:A:56:LEU:HA	1.91	0.41
2:D:114:THR:O	2:D:114:THR:OG1	2.32	0.41
4:H:253:VAL:HG12	4:H:257:LYS:NZ	2.35	0.41
6:K:30:TYR:CZ	6:K:32:LYS:HE3	2.56	0.41
3:E:27:LEU:HD22	3:E:28:LEU:HD22	2.02	0.41
3:F:40:LEU:HD23	3:F:51:VAL:HG11	2.03	0.41
6:K:71:PRO:HG2	6:K:74:TRP:CE3	2.56	0.41
6:K:111:PRO:HB2	6:K:112:ASN:H	1.62	0.41
1:B:203:ASN:HB3	1:B:239:PHE:CZ	2.55	0.41
2:C:155:ALA:HA	2:C:177:PHE:CZ	2.56	0.41
2:D:93:TYR:O	2:D:97:HIS:HB3	2.21	0.41
3:E:112:VAL:HG23	3:E:268:LYS:HE2	2.03	0.41
3:E:194:ARG:NH1	3:E:195:PHE:O	2.52	0.41
4:H:319:ILE:HD13	4:H:341:LEU:HD21	2.02	0.41
4:H:493:PRO:HD2	4:H:496:LEU:HD12	2.03	0.41
1:A:197:ALA:HB3	1:A:230:ALA:HB2	2.03	0.41
1:A:253:LYS:HD2	1:A:253:LYS:HA	1.92	0.41
6:K:70:LEU:HD12	6:K:70:LEU:HA	1.88	0.40
6:L:144:ASP:OD1	6:L:144:ASP:N	2.54	0.40
1:B:183:VAL:HG13	1:B:215:MET:HG3	2.04	0.40
2:C:246:ARG:HB2	2:C:285:PHE:CZ	2.56	0.40
2:D:249:THR:HA	2:D:314:ASP:HB2	2.03	0.40
6:L:119:TRP:CG	6:L:120:PRO:HA	2.56	0.40
4:G:319:ILE:HD13	4:G:341:LEU:HD21	2.04	0.40
5:J:61:LYS:HD2	5:J:455:ASP:OD2	2.21	0.40
1:B:90:LYS:O	1:B:94:ILE:HG13	2.22	0.40
3:E:121:PHE:HZ	3:E:208:LYS:HG2	1.86	0.40
4:H:327:ILE:O	4:H:354:ARG:NE	2.51	0.40
4:H:467:ARG:HD3	4:H:467:ARG:HA	1.82	0.40
5:I:51:SER:O	5:I:51:SER:OG	2.37	0.40
5:I:57:PHE:CZ	5:I:61:LYS:HG3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:81:MET:CE	2:C:272:PHE:HB2	2.51	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	290/307 (94%)	284 (98%)	6 (2%)	0	100	100
1	B	290/307 (94%)	283 (98%)	7 (2%)	0	100	100
2	C	327/351 (93%)	319 (98%)	8 (2%)	0	100	100
2	D	327/351 (93%)	321 (98%)	6 (2%)	0	100	100
3	E	234/452 (52%)	230 (98%)	4 (2%)	0	100	100
3	F	234/452 (52%)	229 (98%)	5 (2%)	0	100	100
4	G	354/523 (68%)	353 (100%)	1 (0%)	0	100	100
4	H	354/523 (68%)	353 (100%)	1 (0%)	0	100	100
5	I	425/721 (59%)	408 (96%)	17 (4%)	0	100	100
5	J	425/721 (59%)	413 (97%)	12 (3%)	0	100	100
6	K	193/261 (74%)	188 (97%)	5 (3%)	0	100	100
6	L	193/261 (74%)	191 (99%)	2 (1%)	0	100	100
All	All	3646/5230 (70%)	3572 (98%)	74 (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	250/261 (96%)	239 (96%)	11 (4%)	28	37
1	B	250/261 (96%)	240 (96%)	10 (4%)	31	42
2	C	285/298 (96%)	276 (97%)	9 (3%)	39	52
2	D	285/298 (96%)	272 (95%)	13 (5%)	27	35
3	E	178/398 (45%)	158 (89%)	20 (11%)	6	6
3	F	178/398 (45%)	159 (89%)	19 (11%)	6	6
4	G	312/444 (70%)	300 (96%)	12 (4%)	33	44
4	H	312/444 (70%)	307 (98%)	5 (2%)	62	76
5	I	374/626 (60%)	355 (95%)	19 (5%)	24	31
5	J	374/626 (60%)	353 (94%)	21 (6%)	21	27
6	K	176/233 (76%)	167 (95%)	9 (5%)	24	31
6	L	176/233 (76%)	166 (94%)	10 (6%)	20	26
All	All	3150/4520 (70%)	2992 (95%)	158 (5%)	28	32

All (158) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	12	SER
1	A	14	MET
1	A	61	SER
1	A	121	ASP
1	A	149	SER
1	A	153	THR
1	A	171	LEU
1	A	209	LYS
1	A	236	VAL
1	A	239	PHE
1	A	284	LEU
1	B	8	GLU
1	B	35	LYS
1	B	40	GLU
1	B	121	ASP
1	B	132	ARG
1	B	153	THR
1	B	171	LEU

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Mol	Chain	Res	Type
1	B	236	VAL
1	B	237	ARG
1	B	239	PHE
2	C	31	SER
2	C	97	HIS
2	C	128	GLN
2	C	167	THR
2	C	170	PHE
2	C	253	THR
2	C	286	HIS
2	C	308	VAL
2	C	314	ASP
2	D	12	SER
2	D	49	HIS
2	D	59	GLU
2	D	111	LYS
2	D	131	SER
2	D	167	THR
2	D	170	PHE
2	D	180	GLU
2	D	197	PHE
2	D	213	GLU
2	D	246	ARG
2	D	286	HIS
2	D	314	ASP
3	E	46	VAL
3	E	49	GLU
3	E	50	GLU
3	E	56	THR
3	E	89	SER
3	E	100	ASP
3	E	107	ASP
3	E	128	LEU
3	E	133	ARG
3	E	165	LYS
3	E	167	LEU
3	E	175	ASP
3	E	177	ASP
3	E	189	LYS
3	E	194	ARG
3	E	209	LYS
3	E	218	ASN

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Mol	Chain	Res	Type
3	E	220	SER
3	E	225	ARG
3	E	260	SER
3	F	33	LYS
3	F	40	LEU
3	F	46	VAL
3	F	49	GLU
3	F	50	GLU
3	F	56	THR
3	F	100	ASP
3	F	107	ASP
3	F	127	SER
3	F	128	LEU
3	F	133	ARG
3	F	158	ILE
3	F	162	SER
3	F	167	LEU
3	F	175	ASP
3	F	177	ASP
3	F	194	ARG
3	F	260	SER
3	F	273	LEU
4	G	239	ASP
4	G	246	GLU
4	G	291	LYS
4	G	294	GLU
4	G	357	ARG
4	G	386	LEU
4	G	394	VAL
4	G	417	ARG
4	G	422	GLN
4	G	446	ARG
4	G	506	MET
4	G	511	SER
4	H	246	GLU
4	H	357	ARG
4	H	386	LEU
4	H	394	VAL
4	H	520	SER
5	I	51	SER
5	I	62	ASP
5	I	66	VAL

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Mol	Chain	Res	Type
5	I	82	PHE
5	I	95	CYS
5	I	131	LEU
5	I	163	ARG
5	I	171	ARG
5	I	176	LYS
5	I	199	ASP
5	I	208	THR
5	I	211	ARG
5	I	283	LEU
5	I	329	ASP
5	I	331	THR
5	I	389	VAL
5	I	418	GLU
5	I	428	ARG
5	I	447	SER
5	J	51	SER
5	J	57	PHE
5	J	62	ASP
5	J	65	ARG
5	J	70	LEU
5	J	82	PHE
5	J	95	CYS
5	J	121	ARG
5	J	151	VAL
5	J	163	ARG
5	J	199	ASP
5	J	208	THR
5	J	229	SER
5	J	256	VAL
5	J	294	LYS
5	J	332	THR
5	J	387	ASP
5	J	411	SER
5	J	418	GLU
5	J	428	ARG
5	J	433	SER
6	K	32	LYS
6	K	39	SER
6	K	50	LYS
6	K	65	TYR
6	K	80	PHE

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Mol	Chain	Res	Type
6	K	87	MET
6	K	160	ASP
6	K	181	ASP
6	K	195	SER
6	L	32	LYS
6	L	50	LYS
6	L	58	ARG
6	L	74	TRP
6	L	87	MET
6	L	95	SER
6	L	99	ARG
6	L	112	ASN
6	L	144	ASP
6	L	153	MET

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	128	HIS
1	A	208	ASN
1	B	214	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

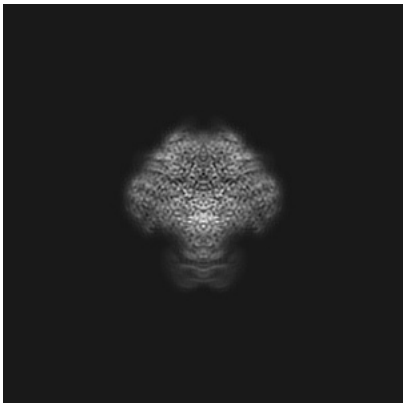
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-32023. These allow visual inspection of the internal detail of the map and identification of artifacts.

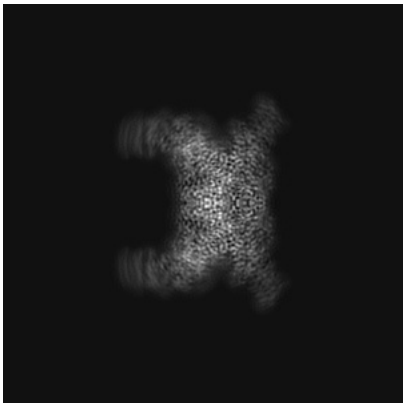
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

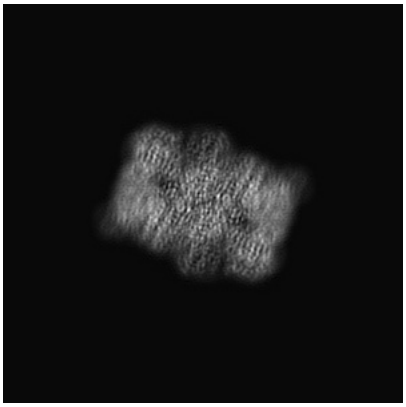
6.1.1 Primary map



X



Y

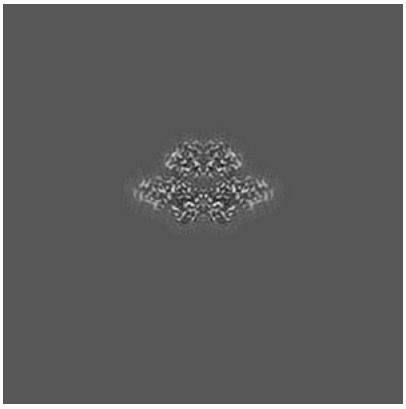


Z

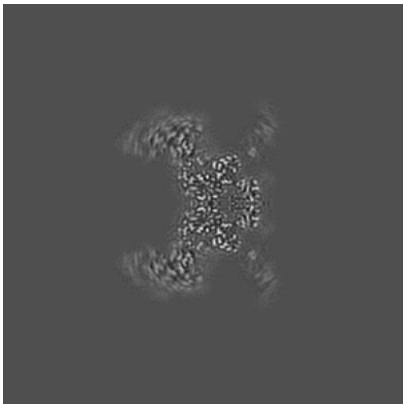
The images above show the map projected in three orthogonal directions.

6.2 Central slices

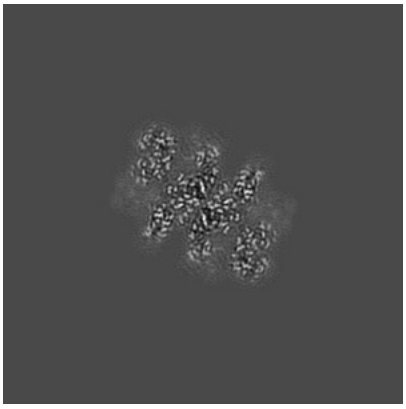
6.2.1 Primary map



X Index: 200



Y Index: 200

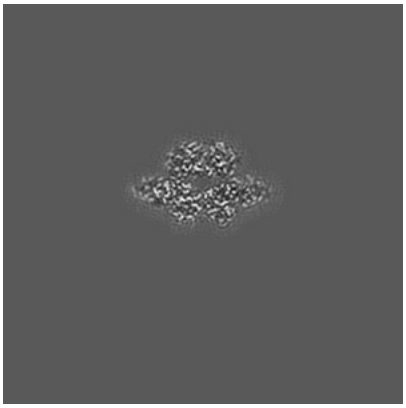


Z Index: 200

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

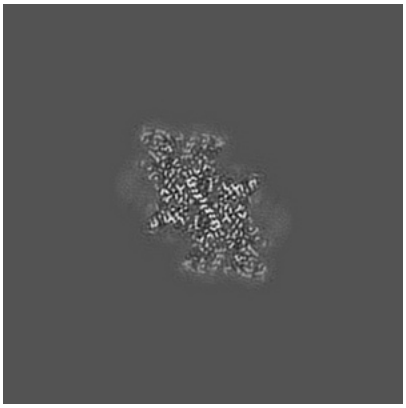
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 198

Y Index: 187



Z Index: 208

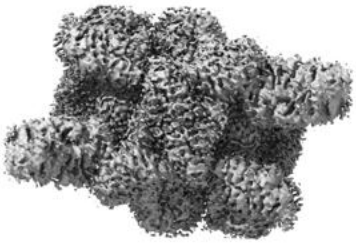
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X

Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

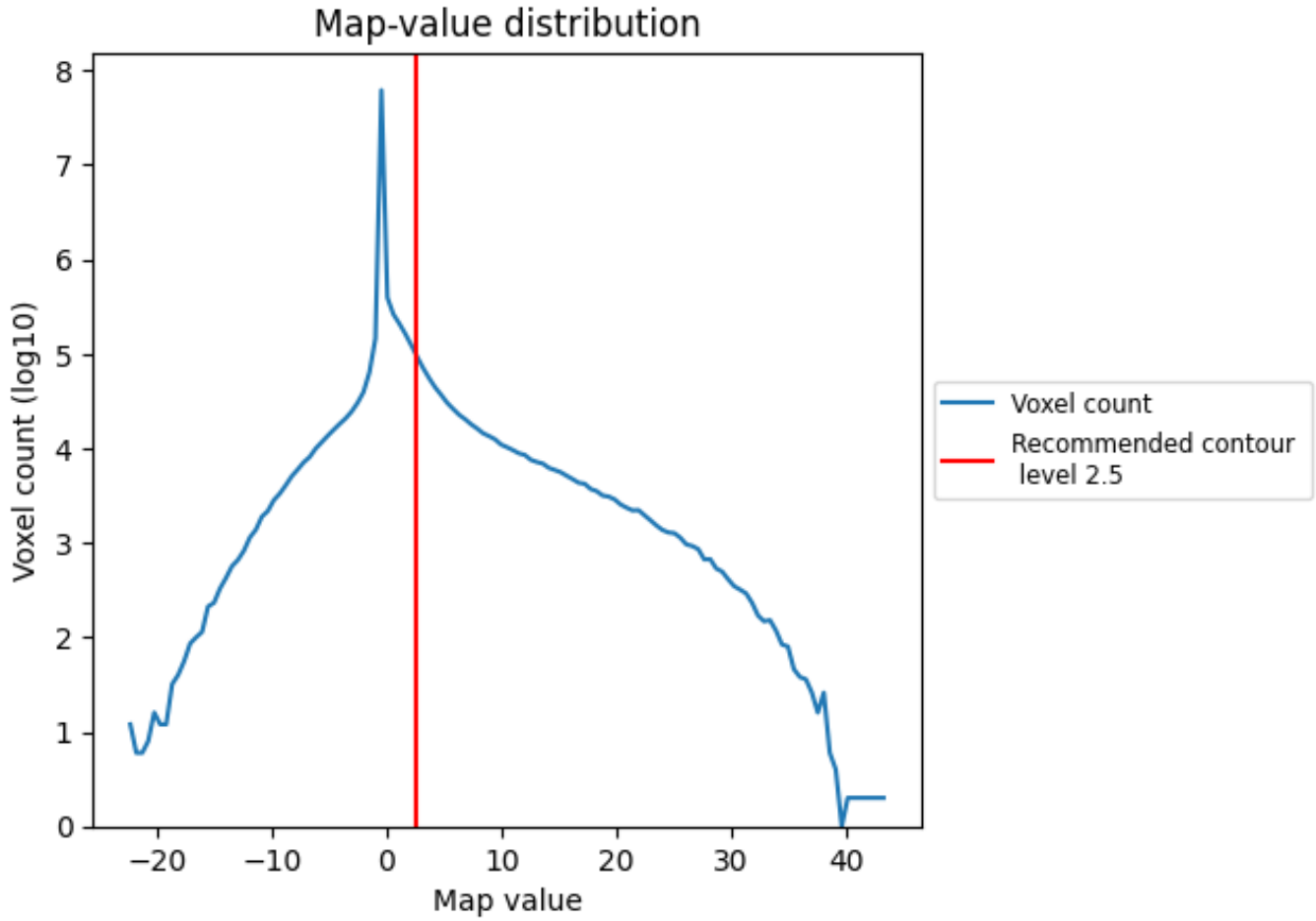
6.5 Mask visualisation (i)

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

7 Map analysis

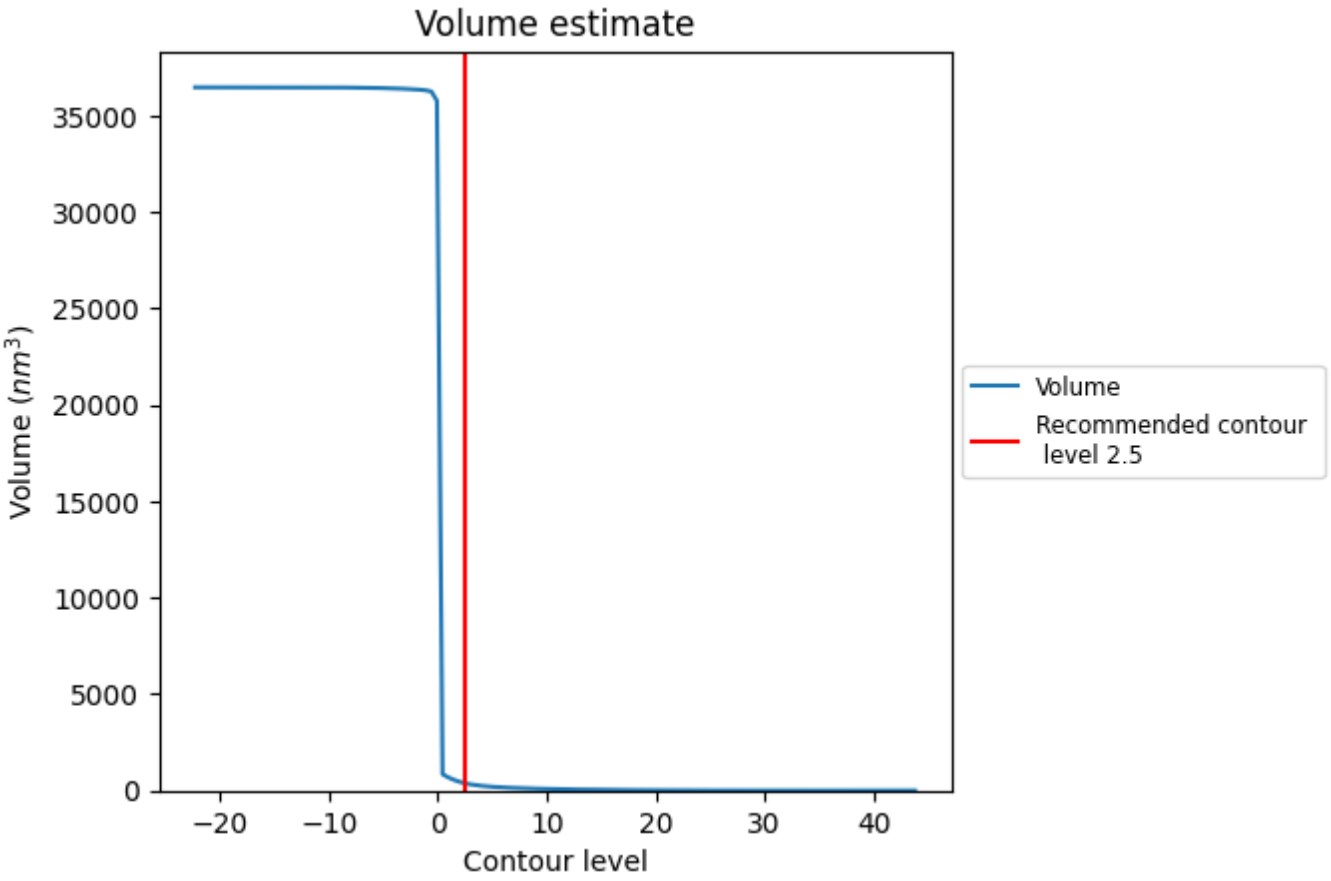
This section contains the results of statistical analysis of the map.

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.

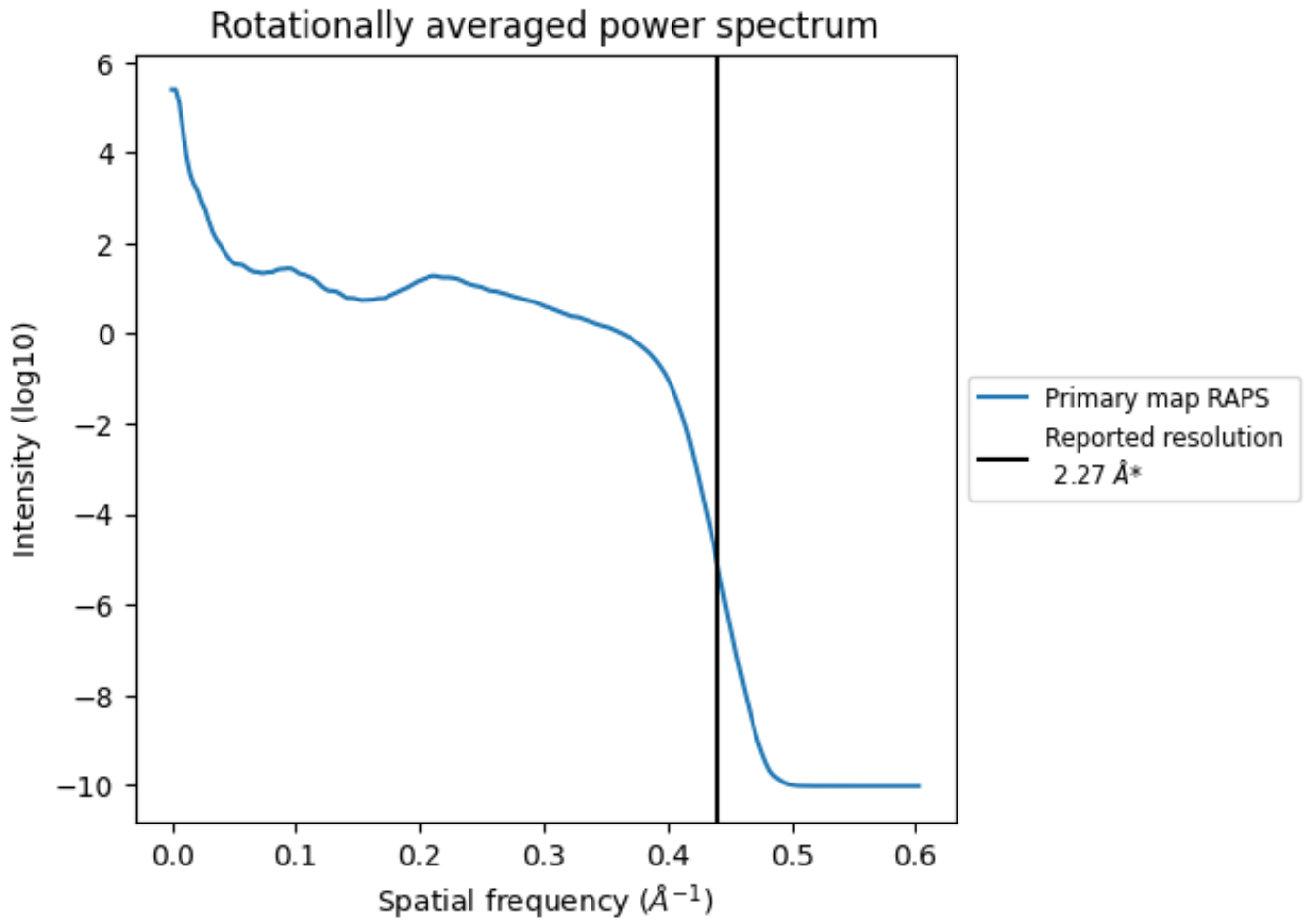
7.2 Volume estimate



The volume at the recommended contour level is 378 nm^3; this corresponds to an approximate mass of 342 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 0.441 $Å^{-1}$

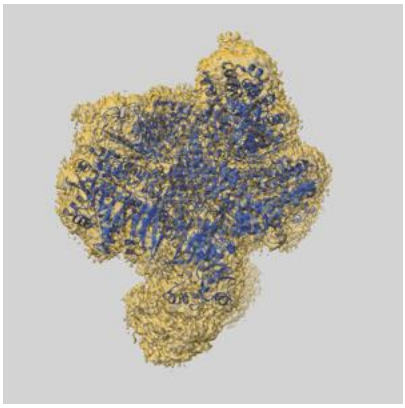
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

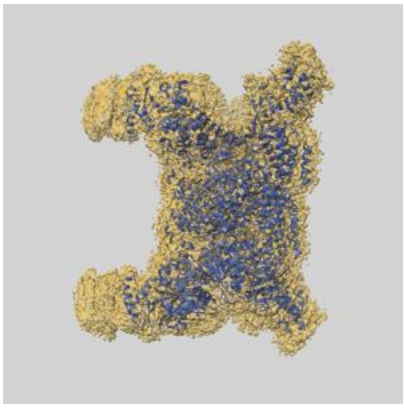
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-32023 and PDB model 7VLK. Per-residue inclusion information can be found in section 3 on page 6.

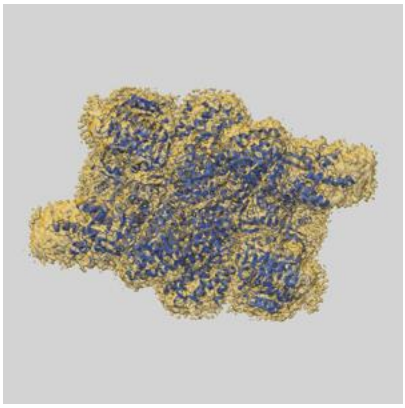
9.1 Map-model overlay



X



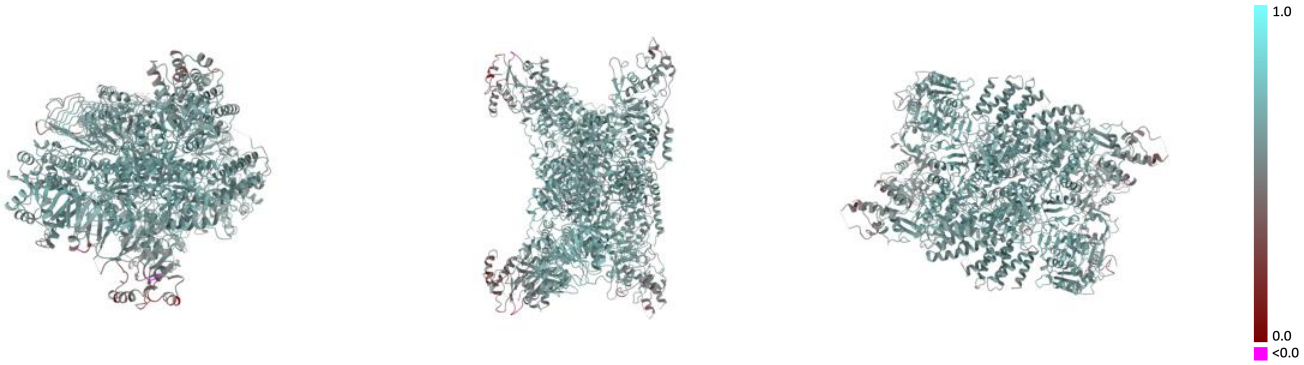
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.5 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.

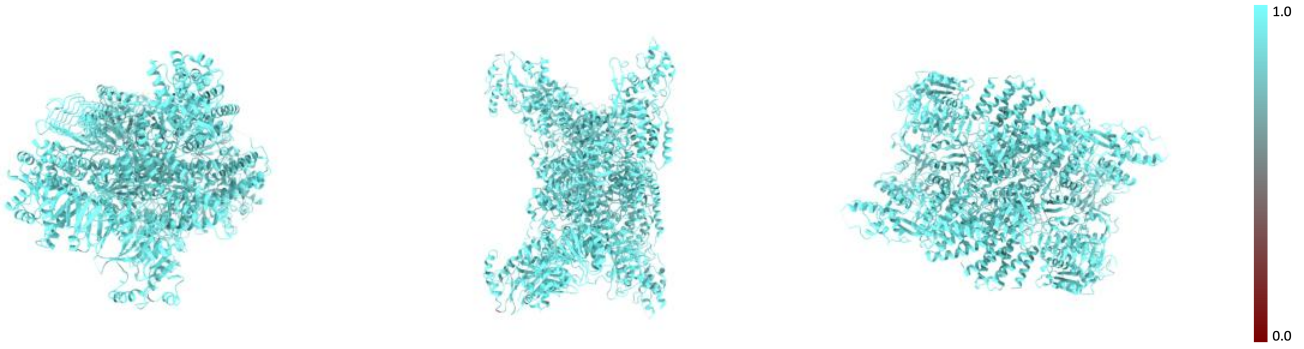
9.2 Q-score mapped to coordinate model (i)



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.

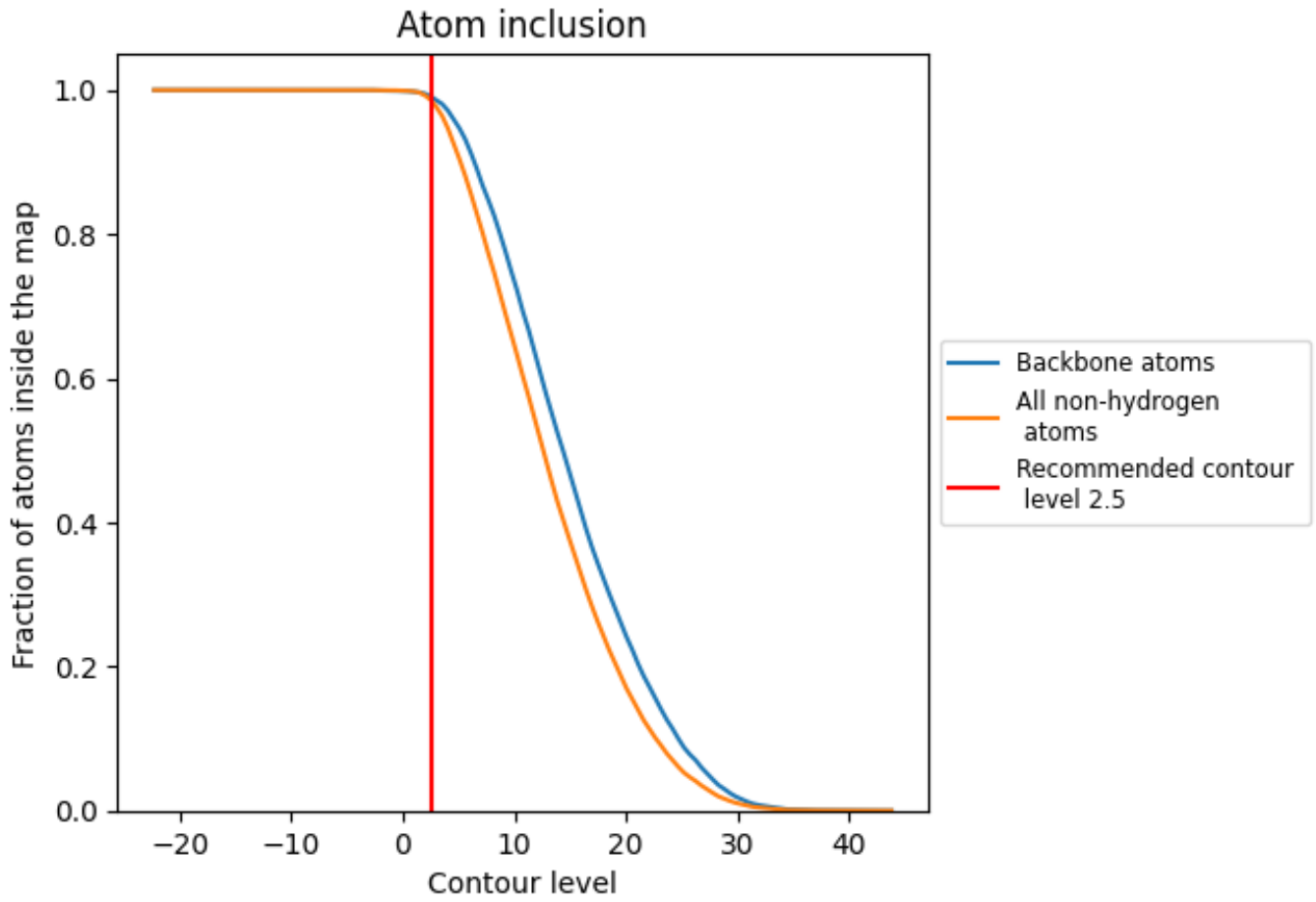
9.3 Atom inclusion mapped to coordinate model (i)



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 (2.5).

9.4 Atom inclusion (i)



At the recommended contour level, 99% of all backbone atoms, 99% 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 (2.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9862	0.6060
A	0.9889	0.6170
B	0.9898	0.6170
C	0.9902	0.6300
D	0.9887	0.6340
E	0.9724	0.5250
F	0.9718	0.5240
G	0.9956	0.6530
H	0.9956	0.6540
I	0.9871	0.6070
J	0.9881	0.6040
K	0.9729	0.5610
L	0.9729	0.5610