Full wwPDB EM Validation Report ⓘ

Apr 22, 2024 – 04:53 pm BST

PDB ID	:	7APX
EMDB ID	:	EMD-11859
Title	:	yeast THO-Sub2 complex
Authors	:	Schuller, S.K.; Schuller, J.M.; Prabu, R.J.; Baumgartner, M.; Bonneau, F.; basquin, J.; Conti, E.
Deposited on	:	2020-10-20
Resolution	:	3.40 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:

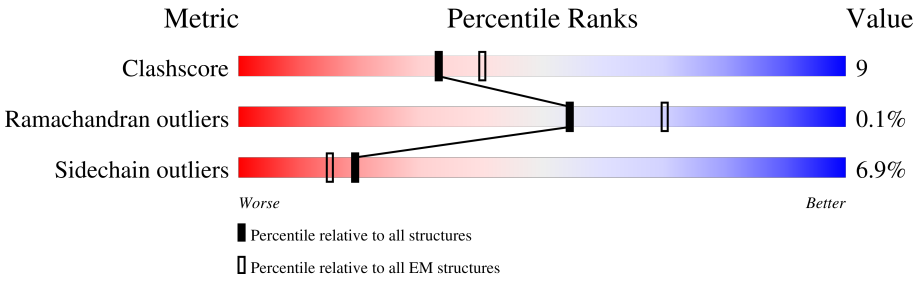
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

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 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)
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	1620	58% 13% • 28%
2	B	720	62% 15% • 22%
3	C	261	10% 74% 12% • 13%
4	D	392	7% 49% 7% • 43%
5	E	380	78% 13% • 8%
6	F	400	66% 56% 34% • 10%

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 20552 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 THO complex subunit 2,Tho2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1165	8222	5337	1392	1465	28	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	GLY	-	expression tag	UNP P53552
A	-2	ALA	-	expression tag	UNP P53552
A	-1	ALA	-	expression tag	UNP P53552
A	0	SER	-	expression tag	UNP P53552

- Molecule 2 is a protein called THO complex subunit HPR1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	563	4143	2713	693	721	16	0	0

- Molecule 3 is a protein called THO complex subunit THP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	227	1573	988	275	307	3	1	0

- Molecule 4 is a protein called THO complex subunit MFT1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	225	1439	895	264	279	1	0	0

- Molecule 5 is a protein called Protein TEX1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	348	Total	C	N	O	S	0	0
			2357	1530	402	414	11		

- Molecule 6 is a protein called ATP-dependent RNA helicase SUB2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	361	Total	C	N	O	S	0	0
			2818	1783	491	535	9		

There are 2 discrepancies between the modelled and reference sequences:

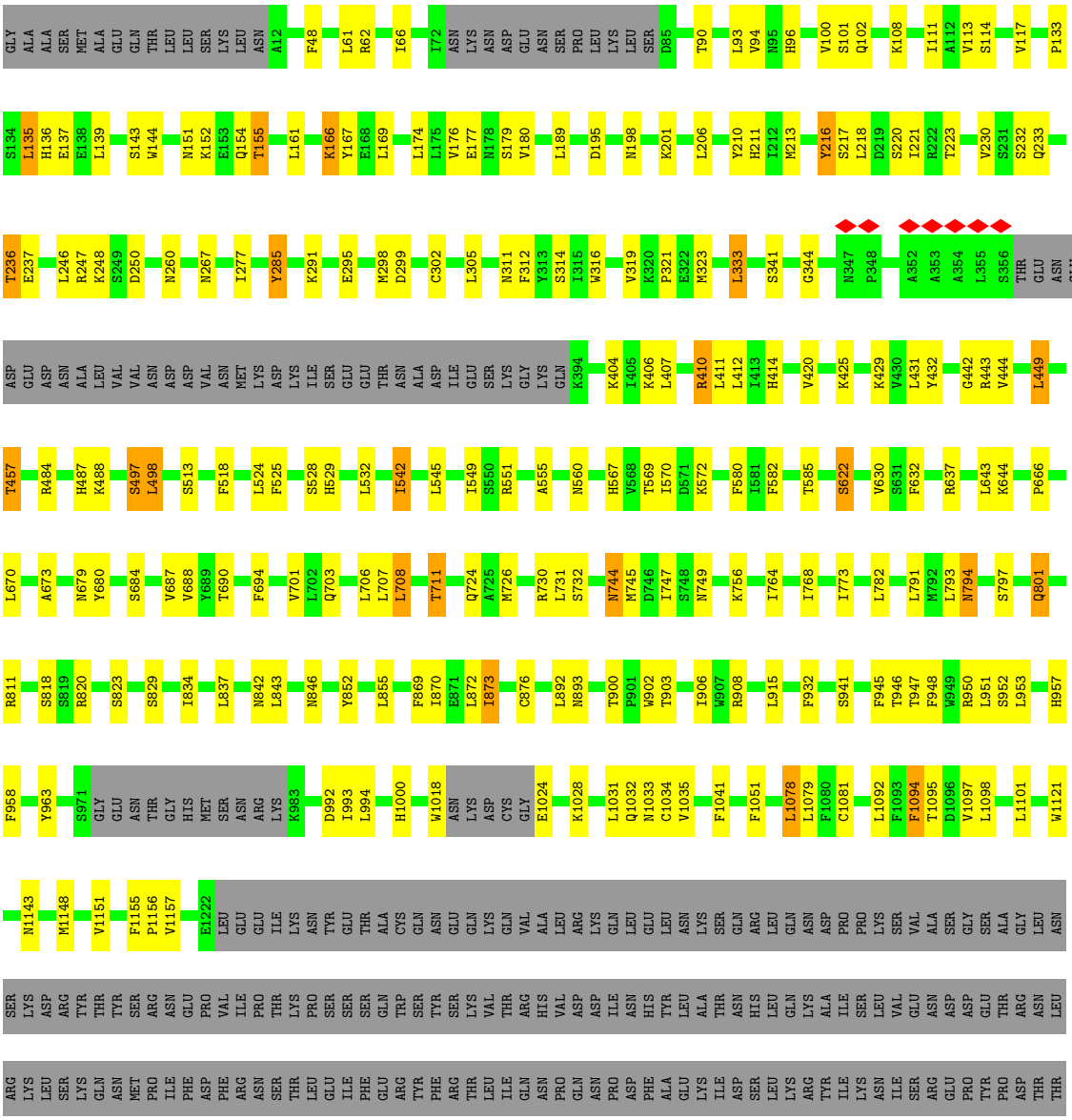
Chain	Residue	Modelled	Actual	Comment	Reference
F	47	GLY	-	expression tag	UNP Q07478
F	50	SER	GLY	conflict	UNP Q07478

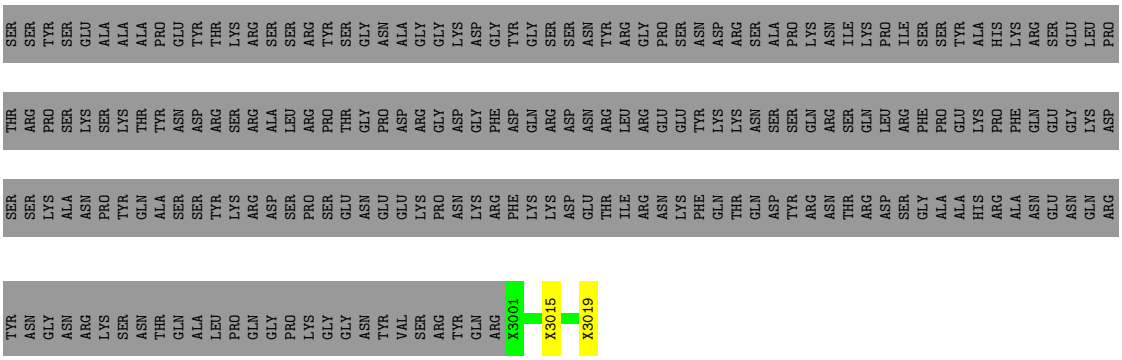
3 Residue-property plots (i)

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: THO complex subunit 2,Tho2

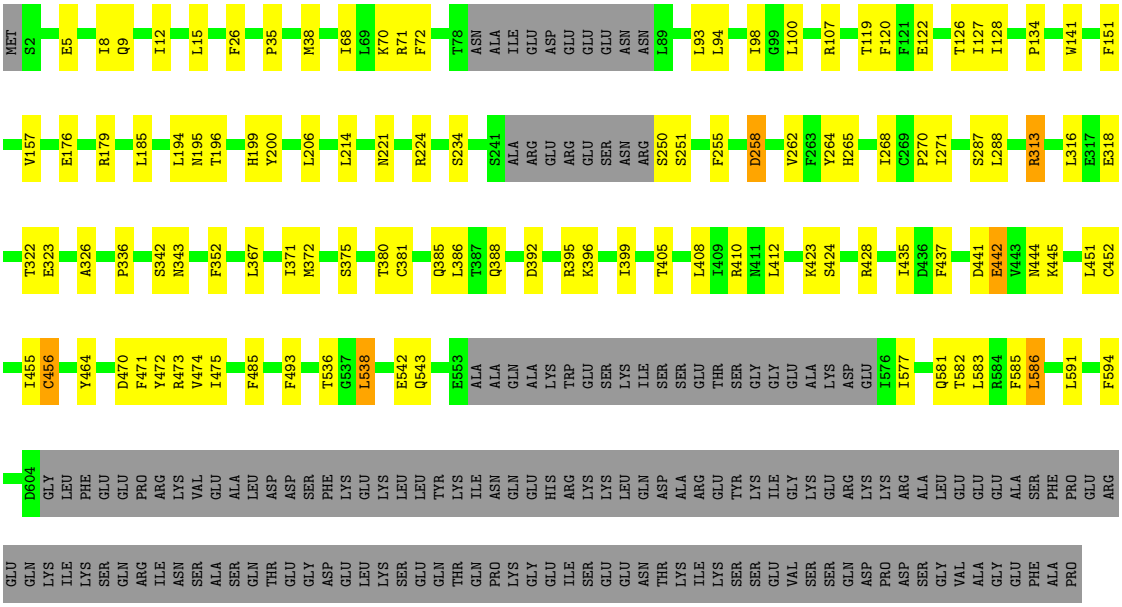
Chain A:





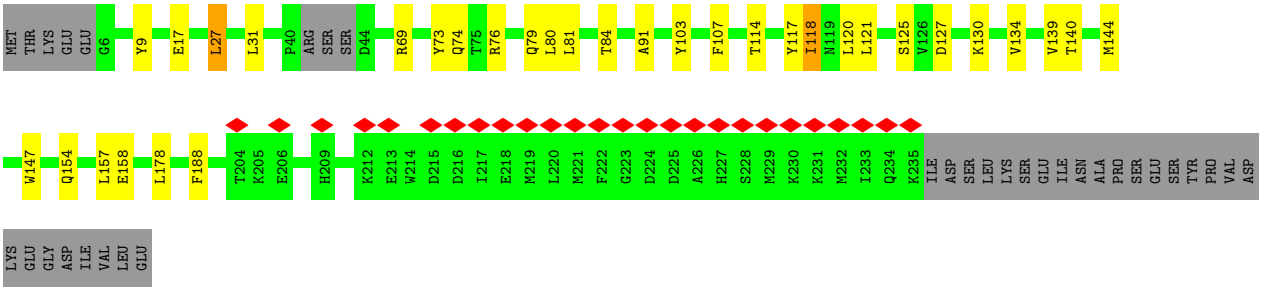
• Molecule 2: THO complex subunit HPR1

Chain B:



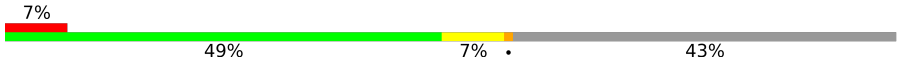
• Molecule 3: THO complex subunit THP2

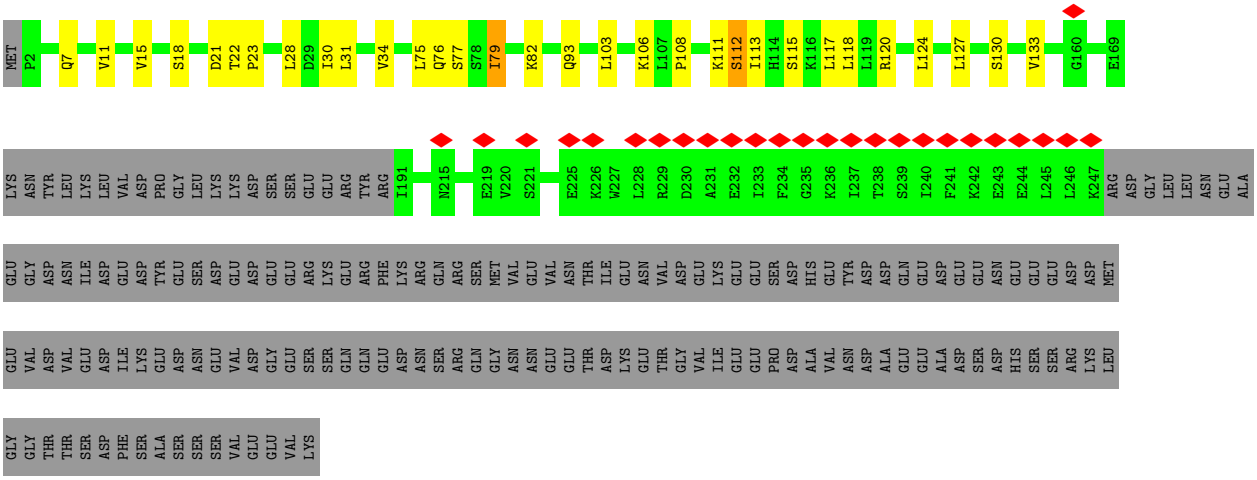
Chain C:



• Molecule 4: THO complex subunit MFT1

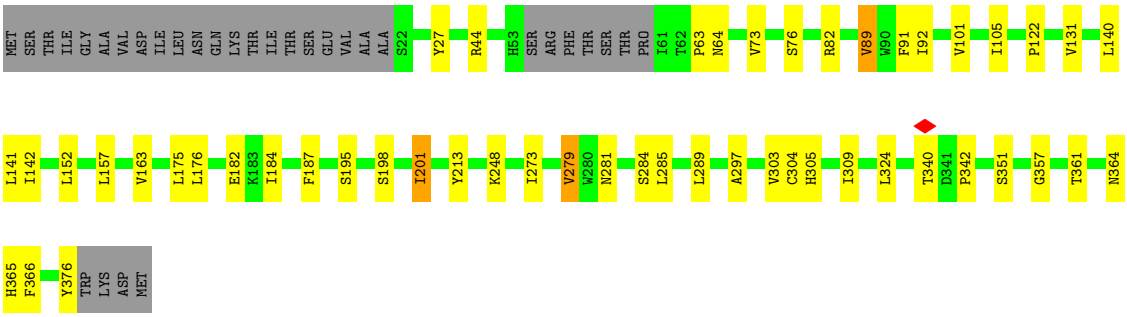
Chain D:





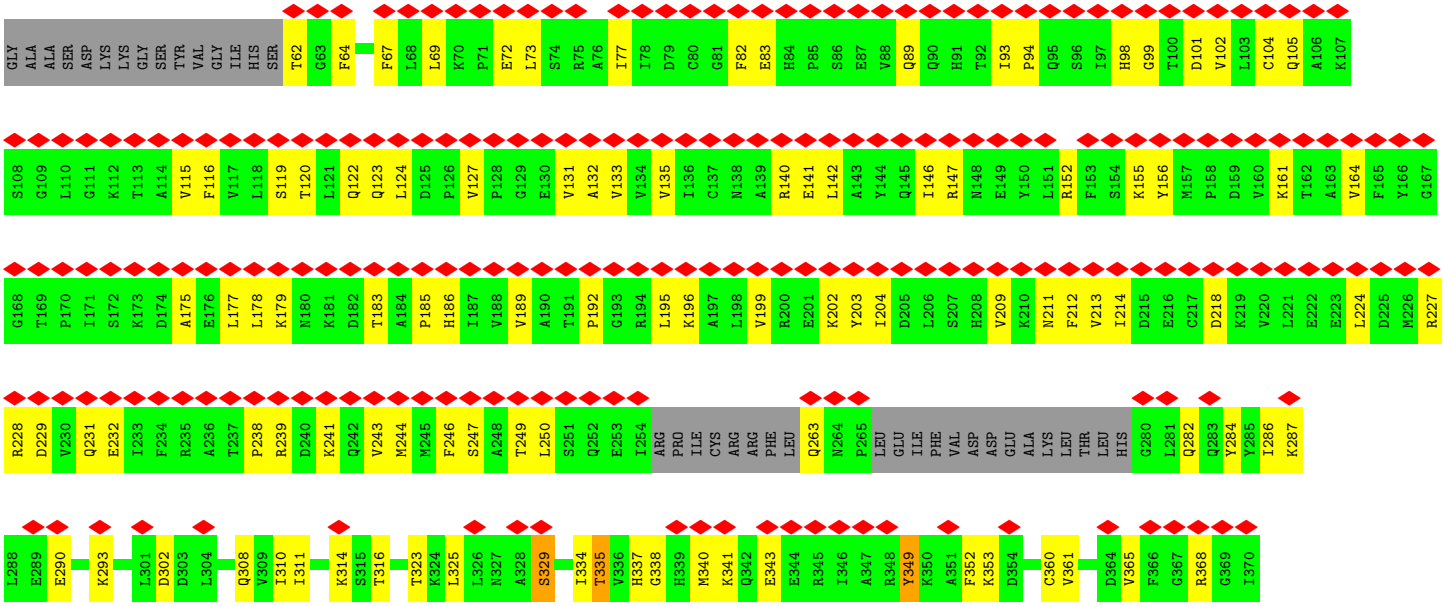
• Molecule 5: Protein TEX1

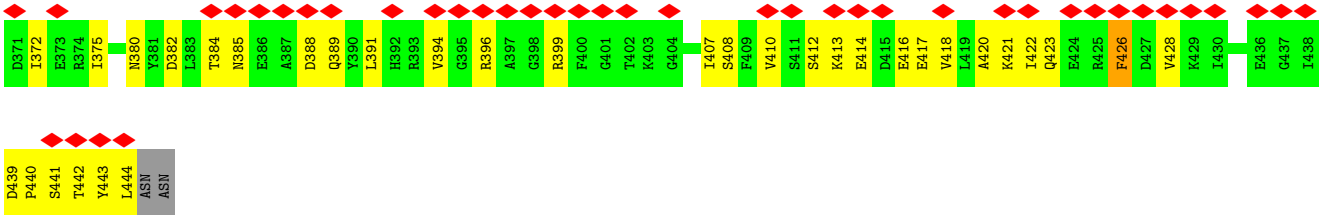
Chain E:



• Molecule 6: ATP-dependent RNA helicase SUB2

Chain F:




D371
I372
E373
R374
I375
N380
Y381
D382
L383
T384
N385
E386
A387
D388
Q389
Y390
L391
H392
R393
V394
G395
R396
A397
G398
R399
F400
G401
T402
K403
G404
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D415
E416
E417
V418
L419
A420
K421
I422
Q423
E424
R425
F426
D427
V428
K429
I430
E436
G437
I438
D439
P440
S441
T442
Y443
L444
ASN
ASN

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	298657	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 ($e^-/Å^2$)	55.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.929	Depositor
Minimum map value	-0.920	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.040	Depositor
Recommended contour level	0.25	Depositor
Map size (Å)	414.0, 414.0, 414.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.38, 1.38, 1.38	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	0.39	0/8296	0.48	1/11350 (0.0%)
2	B	0.36	0/4246	0.45	0/5811
3	C	0.32	0/1595	0.41	0/2184
4	D	0.30	0/1451	0.41	0/1985
5	E	0.32	0/2411	0.46	0/3318
6	F	0.25	0/2862	0.46	0/3865
All	All	0.35	0/20861	0.46	1/28513 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1156	PRO	N-CA-CB	5.74	110.18	103.30

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	8222	0	7233	150	0
2	B	4143	0	3661	64	0
3	C	1573	0	1319	30	0
4	D	1439	0	1149	21	0
5	E	2357	0	1985	22	0
6	F	2818	0	2793	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	20552	0	18140	356	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 (356) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:113:VAL:CG2	3:C:73:TYR:CE2	2.52	0.92
2:B:313:ARG:NH2	3:C:127:ASP:OD1	2.09	0.86
1:A:113:VAL:HG22	3:C:73:TYR:CE2	2.14	0.82
6:F:323:THR:HG21	6:F:335:THR:HB	1.62	0.80
1:A:113:VAL:HG23	3:C:73:TYR:CE2	2.16	0.79
6:F:131:VAL:HG21	6:F:204:ILE:HD11	1.66	0.78
1:A:744:ASN:OD1	1:A:744:ASN:N	2.18	0.75
6:F:104:CYS:HB3	6:F:246:PHE:HD1	1.51	0.73
1:A:260:ASN:ND2	1:A:305:LEU:O	2.20	0.73
1:A:794:ASN:HD21	1:A:953:LEU:HD23	1.54	0.73
5:E:44:ARG:HH22	5:E:63:PRO:HA	1.54	0.71
1:A:524:LEU:O	1:A:528:SER:OG	2.09	0.71
1:A:108:LYS:O	1:A:111:ILE:HG22	1.91	0.70
2:B:270:PRO:HB3	2:B:405:THR:HG23	1.74	0.70
6:F:380:ASN:ND2	6:F:408:SER:OG	2.21	0.70
5:E:44:ARG:HH12	5:E:64:ASN:H	1.38	0.70
1:A:551:ARG:NH1	5:E:285:LEU:O	2.21	0.70
1:A:221:ILE:HG23	1:A:277:ILE:HD11	1.75	0.69
6:F:132:ALA:HA	6:F:209:VAL:HA	1.74	0.69
1:A:1032:GLN:HE22	2:B:591:LEU:H	1.39	0.68
1:A:93:LEU:HD21	1:A:133:PRO:HD2	1.76	0.68
1:A:1148:MET:HA	1:A:1151:VAL:HG12	1.76	0.67
1:A:726:MET:O	1:A:730:ARG:NH2	2.28	0.66
1:A:703:GLN:NE2	1:A:749:ASN:HB2	2.11	0.66
1:A:952:SER:OG	1:A:953:LEU:N	2.28	0.66
6:F:102:VAL:HB	6:F:244:MET:HG3	1.77	0.66
2:B:250:SER:OG	2:B:251:SER:N	2.27	0.65
1:A:176:VAL:HG21	2:B:408:LEU:HD22	1.77	0.65
1:A:797:SER:O	1:A:801:GLN:NE2	2.30	0.65
2:B:35:PRO:HG2	2:B:38:MET:HG3	1.78	0.65
1:A:1031:LEU:HA	1:A:1035:VAL:HG12	1.79	0.65
6:F:67:PHE:HB3	6:F:69:LEU:HD13	1.79	0.65
1:A:195:ASP:OD2	1:A:201:LYS:NZ	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ASP:HB3	1:A:198:ASN:HB3	1.79	0.64
6:F:101:ASP:HA	6:F:243:VAL:O	1.97	0.64
5:E:273:ILE:HG13	5:E:297:ALA:HB1	1.79	0.64
1:A:113:VAL:HG13	3:C:69:ARG:HD3	1.78	0.64
1:A:114:SER:HA	1:A:117:VAL:HG12	1.79	0.64
5:E:364:ASN:OD1	5:E:365:HIS:N	2.30	0.64
1:A:113:VAL:HG23	3:C:73:TYR:HE2	1.63	0.64
3:C:120:LEU:HD23	4:D:124:LEU:HD23	1.79	0.64
1:A:3015:UNK:O	1:A:3019:UNK:N	2.31	0.63
1:A:111:ILE:HG21	1:A:135:LEU:CD1	2.29	0.63
6:F:135:VAL:HB	6:F:189:VAL:HG12	1.80	0.62
6:F:142:LEU:O	6:F:146:ILE:HG12	1.99	0.62
5:E:89:VAL:HG11	5:E:142:ILE:HD13	1.80	0.62
2:B:410:ARG:NH1	2:B:456:CYS:SG	2.73	0.62
6:F:439:ASP:O	6:F:442:THR:OG1	2.16	0.62
5:E:304:CYS:SG	5:E:305:HIS:N	2.72	0.62
2:B:214:LEU:HB2	2:B:221:ASN:HD22	1.64	0.62
2:B:5:GLU:O	2:B:9:GLN:NE2	2.33	0.61
3:C:76:ARG:HH21	3:C:80:LEU:HD13	1.65	0.61
1:A:703:GLN:HE21	1:A:749:ASN:HB2	1.66	0.60
1:A:1078:LEU:HD12	2:B:591:LEU:HD11	1.82	0.60
1:A:1081:CYS:SG	2:B:583:LEU:HB3	2.42	0.60
1:A:946:THR:O	1:A:950:ARG:HB2	2.01	0.60
2:B:258:ASP:OD1	2:B:287:SER:OG	2.18	0.59
1:A:1079:LEU:O	1:A:1143:ASN:ND2	2.32	0.59
1:A:143:SER:OG	1:A:144:TRP:N	2.35	0.59
6:F:175:ALA:O	6:F:179:LYS:HG2	2.03	0.58
2:B:313:ARG:HH21	2:B:313:ARG:HG3	1.68	0.58
2:B:262:VAL:HG21	2:B:288:LEU:HD12	1.84	0.58
6:F:178:LEU:HD13	6:F:204:ILE:HD13	1.86	0.57
2:B:214:LEU:HB2	2:B:221:ASN:ND2	2.19	0.57
6:F:177:LEU:O	6:F:183:THR:OG1	2.19	0.57
1:A:111:ILE:HG21	1:A:135:LEU:HD12	1.87	0.57
1:A:820:ARG:O	1:A:823:SER:OG	2.18	0.56
2:B:134:PRO:HG2	2:B:199:HIS:CD2	2.40	0.56
6:F:195:LEU:O	6:F:199:VAL:HG23	2.05	0.56
1:A:48:PHE:CE1	1:A:61:LEU:HD21	2.42	0.55
1:A:846:ASN:O	2:B:581:GLN:NE2	2.40	0.55
6:F:64:PHE:O	6:F:67:PHE:HB2	2.05	0.55
1:A:902:TRP:O	1:A:906:ILE:HG13	2.07	0.55
6:F:127:VAL:H	6:F:186:HIS:CE1	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:666:PRO:HB2	1:A:701:VAL:HG11	1.89	0.54
3:C:27:LEU:HD21	4:D:34:VAL:HG11	1.88	0.54
6:F:73:LEU:O	6:F:77:ILE:HG12	2.08	0.54
6:F:420:ALA:HA	6:F:423:GLN:HE21	1.72	0.54
1:A:174:LEU:HB3	1:A:177:GLU:HG3	1.89	0.54
1:A:429:LYS:HD3	1:A:432:TYR:HE2	1.72	0.54
1:A:842:ASN:OD1	1:A:843:LEU:N	2.40	0.54
2:B:264:TYR:O	2:B:268:ILE:HB	2.07	0.54
5:E:73:VAL:HG21	5:E:122:PRO:HB3	1.88	0.54
1:A:794:ASN:OD1	1:A:794:ASN:N	2.40	0.54
6:F:77:ILE:HG23	6:F:82:PHE:HD2	1.72	0.54
6:F:441:SER:HA	6:F:444:LEU:HG	1.88	0.54
1:A:442:GLY:HA3	1:A:542:ILE:HD13	1.90	0.54
1:A:670:LEU:HD12	1:A:701:VAL:HG12	1.89	0.54
1:A:90:THR:O	1:A:94:VAL:HG23	2.07	0.54
6:F:239:ARG:HA	6:F:239:ARG:NH1	2.23	0.54
1:A:707:LEU:O	1:A:711:THR:OG1	2.22	0.54
1:A:643:LEU:HD11	1:A:673:ALA:HA	1.89	0.53
1:A:745:MET:HG3	1:A:747:ILE:HG23	1.90	0.53
6:F:418:VAL:O	6:F:422:ILE:HG23	2.08	0.53
1:A:582:PHE:HA	1:A:585:THR:HG22	1.90	0.53
2:B:107:ARG:NH1	2:B:157:VAL:O	2.42	0.53
2:B:464:TYR:O	2:B:472:TYR:HB2	2.08	0.53
5:E:281:ASN:HD22	5:E:284:SER:H	1.57	0.53
6:F:310:ILE:HG22	6:F:360:CYS:SG	2.48	0.53
6:F:101:ASP:OD2	6:F:263:GLN:N	2.42	0.53
2:B:392:ASP:OD2	2:B:396:LYS:NZ	2.27	0.52
1:A:457:THR:O	1:A:457:THR:OG1	2.25	0.52
6:F:334:ILE:HD12	6:F:352:PHE:HB2	1.92	0.52
6:F:228:ARG:O	6:F:232:GLU:HG2	2.10	0.52
6:F:311:ILE:HB	6:F:361:VAL:HG22	1.92	0.52
6:F:213:VAL:O	6:F:214:ILE:HD13	2.09	0.52
6:F:417:GLU:O	6:F:421:LYS:HG2	2.09	0.52
1:A:992:ASP:O	1:A:994:LEU:N	2.43	0.52
2:B:410:ARG:HB2	2:B:452:CYS:SG	2.50	0.52
6:F:164:VAL:HA	6:F:189:VAL:O	2.10	0.52
6:F:286:ILE:N	6:F:408:SER:O	2.40	0.51
1:A:96:HIS:O	1:A:100:VAL:HG23	2.09	0.51
1:A:684:SER:O	1:A:688:VAL:HG23	2.10	0.51
3:C:81:LEU:O	3:C:84:THR:HG22	2.10	0.51
1:A:210:TYR:OH	1:A:250:ASP:OD1	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1032:GLN:HG3	1:A:1033:ASN:ND2	2.25	0.51
1:A:497:SER:OG	1:A:498:LEU:N	2.44	0.51
2:B:119:THR:O	2:B:122:GLU:HB3	2.10	0.51
6:F:152:ARG:HA	6:F:155:LYS:HE3	1.93	0.51
6:F:337:HIS:HA	6:F:365:VAL:HG21	1.91	0.51
2:B:371:ILE:HG23	2:B:372:MET:HG2	1.93	0.51
1:A:113:VAL:HG11	3:C:69:ARG:HB2	1.93	0.51
1:A:154:GLN:OE1	4:D:7:GLN:HB3	2.11	0.51
2:B:441:ASP:O	2:B:442:GLU:HB2	2.11	0.51
1:A:113:VAL:CG2	3:C:73:TYR:HE2	2.14	0.51
1:A:794:ASN:ND2	1:A:953:LEU:HD23	2.25	0.51
2:B:26:PHE:HA	2:B:94:LEU:HD23	1.93	0.51
6:F:104:CYS:HB3	6:F:246:PHE:CD1	2.40	0.50
6:F:105:GLN:HG3	6:F:250:LEU:HD13	1.93	0.50
1:A:295:GLU:OE2	1:A:410:ARG:NH1	2.44	0.50
6:F:349:TYR:O	6:F:353:LYS:HG2	2.10	0.50
1:A:113:VAL:CG1	3:C:69:ARG:HB2	2.41	0.50
1:A:528:SER:HB3	1:A:532:LEU:HD12	1.92	0.50
6:F:282:GLN:HB3	6:F:284:TYR:HE1	1.77	0.50
1:A:260:ASN:HD21	1:A:305:LEU:HD12	1.77	0.50
1:A:216:TYR:O	1:A:218:LEU:N	2.44	0.50
1:A:1031:LEU:HD23	1:A:1035:VAL:HG11	1.94	0.50
6:F:133:VAL:HG22	6:F:211:ASN:HB3	1.93	0.50
6:F:218:ASP:OD1	6:F:218:ASP:N	2.45	0.50
2:B:423:LYS:HD2	2:B:437:PHE:HB3	1.94	0.49
3:C:103:TYR:CD2	4:D:103:LEU:HD13	2.46	0.49
1:A:948:PHE:CD2	1:A:1034:CYS:HB3	2.47	0.49
6:F:196:LYS:HD3	6:F:229:ASP:HA	1.94	0.49
6:F:316:THR:HB	6:F:337:HIS:CE1	2.47	0.49
2:B:194:LEU:HD21	3:C:91:ALA:HB2	1.94	0.49
4:D:130:SER:O	4:D:133:VAL:HG12	2.13	0.49
6:F:414:GLU:O	6:F:418:VAL:HG23	2.12	0.49
1:A:321:PRO:O	1:A:404:LYS:NZ	2.35	0.49
2:B:128:ILE:HD11	2:B:141:TRP:HZ3	1.76	0.49
3:C:157:LEU:HD22	4:D:127:LEU:HD11	1.94	0.49
6:F:286:ILE:O	6:F:410:VAL:N	2.37	0.49
6:F:372:ILE:H	6:F:399:ARG:NH2	2.09	0.49
1:A:167:TYR:OH	2:B:179:ARG:NH2	2.27	0.49
1:A:1094:PHE:HA	1:A:1097:VAL:HG12	1.94	0.49
3:C:17:GLU:OE2	4:D:76:GLN:NE2	2.44	0.49
6:F:119:SER:O	6:F:123:GLN:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:271:ILE:HD13	2:B:412:LEU:HD21	1.94	0.49
2:B:336:PRO:HB3	3:C:127:ASP:HB3	1.95	0.48
1:A:166:LYS:NZ	4:D:18:SER:OG	2.44	0.48
1:A:703:GLN:NE2	1:A:749:ASN:HD22	2.12	0.48
6:F:69:LEU:HD23	6:F:73:LEU:HD23	1.96	0.48
6:F:290:GLU:HA	6:F:293:LYS:HE3	1.94	0.48
1:A:679:ASN:O	1:A:680:TYR:HD1	1.95	0.48
5:E:182:GLU:H	5:E:201:ILE:HB	1.77	0.48
1:A:545:LEU:O	1:A:549:ILE:HG13	2.14	0.48
2:B:381:CYS:O	2:B:385:GLN:HG3	2.14	0.48
4:D:79:ILE:HA	4:D:82:LYS:HG2	1.96	0.48
1:A:305:LEU:HD11	1:A:312:PHE:HA	1.96	0.48
4:D:75:LEU:O	4:D:79:ILE:HG23	2.13	0.48
3:C:121:LEU:O	3:C:125:SER:HB3	2.14	0.47
6:F:396:ARG:O	6:F:399:ARG:NH2	2.47	0.47
1:A:829:SER:O	1:A:829:SER:OG	2.32	0.47
1:A:1031:LEU:HA	1:A:1035:VAL:CG1	2.43	0.47
6:F:218:ASP:OD2	6:F:249:THR:OG1	2.32	0.47
1:A:311:ASN:OD1	1:A:311:ASN:N	2.47	0.47
1:A:873:ILE:HA	1:A:873:ILE:HD13	1.62	0.47
2:B:71:ARG:NH1	4:D:77:SER:HB3	2.29	0.47
2:B:134:PRO:HG2	2:B:199:HIS:HD2	1.80	0.47
5:E:27:TYR:OH	5:E:351:SER:O	2.32	0.47
5:E:141:LEU:HD23	5:E:152:LEU:HB2	1.96	0.47
6:F:124:LEU:HD21	6:F:133:VAL:HG23	1.96	0.47
6:F:314:LYS:HD2	6:F:382:ASP:HB3	1.95	0.47
2:B:255:PHE:HE1	2:B:386:LEU:HD12	1.79	0.47
5:E:184:ILE:O	5:E:198:SER:HA	2.15	0.47
6:F:341:LYS:HG2	6:F:343:GLU:H	1.80	0.47
6:F:244:MET:HB3	6:F:246:PHE:CZ	2.50	0.47
1:A:246:LEU:HD23	1:A:246:LEU:HA	1.72	0.47
3:C:130:LYS:HG2	3:C:147:TRP:CD1	2.50	0.47
5:E:187:PHE:HD1	5:E:195:SER:HA	1.80	0.47
6:F:135:VAL:HG13	6:F:213:VAL:HB	1.97	0.47
6:F:308:GLN:HB2	6:F:375:ILE:HD13	1.97	0.47
5:E:91:PHE:HB2	5:E:101:VAL:HG22	1.97	0.46
6:F:62:THR:N	6:F:83:GLU:OE2	2.48	0.46
1:A:732:SER:OG	1:A:768:ILE:HA	2.15	0.46
6:F:116:PHE:CD2	6:F:213:VAL:HG11	2.50	0.46
2:B:120:PHE:HE2	2:B:151:PHE:CE1	2.34	0.46
6:F:116:PHE:O	6:F:120:THR:HG22	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:457:THR:HG22	1:A:555:ALA:HB2	1.96	0.46
3:C:154:GLN:NE2	3:C:158:GLU:OE2	2.47	0.46
3:C:17:GLU:HB2	4:D:79:ILE:HD11	1.97	0.46
2:B:8:ILE:HG12	2:B:68:ILE:HG22	1.97	0.46
3:C:76:ARG:HA	3:C:76:ARG:HD2	1.77	0.46
1:A:818:SER:HG	1:A:876:CYS:HG	1.64	0.46
1:A:644:LYS:HE3	6:F:302:ASP:O	2.16	0.46
6:F:338:GLY:O	6:F:340:MET:HG3	2.16	0.45
1:A:101:SER:OG	1:A:102:GLN:NE2	2.49	0.45
1:A:794:ASN:HD22	1:A:953:LEU:HB3	1.81	0.45
2:B:234:SER:HA	2:B:375:SER:HA	1.97	0.45
1:A:756:LYS:HE2	1:A:756:LYS:HB2	1.81	0.45
1:A:773:ILE:HD11	1:A:869:PHE:HD1	1.81	0.45
6:F:228:ARG:HH22	6:F:231:GLN:HG3	1.80	0.45
6:F:325:LEU:O	6:F:329:SER:OG	2.29	0.45
6:F:384:THR:OG1	6:F:385:ASN:N	2.50	0.45
4:D:21:ASP:OD1	4:D:23:PRO:HD2	2.15	0.45
6:F:72:GLU:HB3	6:F:156:TYR:HB3	1.99	0.45
6:F:89:GLN:HG3	6:F:115:VAL:HG22	1.99	0.45
1:A:687:VAL:HA	1:A:690:THR:HG22	1.99	0.45
2:B:322:THR:OG1	2:B:323:GLU:N	2.50	0.45
1:A:285:TYR:O	1:A:291:LYS:NZ	2.50	0.45
6:F:212:PHE:CE2	6:F:214:ILE:HD11	2.52	0.45
6:F:440:PRO:HA	6:F:443:TYR:CE2	2.51	0.45
1:A:529:HIS:HD2	1:A:580:PHE:HZ	1.65	0.45
2:B:451:LEU:O	2:B:455:ILE:HG12	2.17	0.45
5:E:92:ILE:H	5:E:92:ILE:HG12	1.66	0.45
6:F:99:GLY:HA2	6:F:123:GLN:HE22	1.82	0.45
6:F:311:ILE:HB	6:F:361:VAL:HG13	1.99	0.45
2:B:542:GLU:O	2:B:543:GLN:C	2.56	0.44
4:D:103:LEU:HD23	4:D:103:LEU:HA	1.78	0.44
1:A:299:ASP:OD1	1:A:414:HIS:HE1	2.00	0.44
1:A:151:ASN:O	1:A:154:GLN:N	2.50	0.44
1:A:161:LEU:HD23	1:A:161:LEU:HA	1.72	0.44
1:A:213:MET:SD	1:A:223:THR:HG21	2.57	0.44
4:D:112:SER:OG	4:D:113:ILE:N	2.51	0.44
6:F:420:ALA:HA	6:F:423:GLN:NE2	2.32	0.44
1:A:250:ASP:OD1	1:A:250:ASP:N	2.46	0.44
1:A:773:ILE:HD11	1:A:869:PHE:CD1	2.52	0.44
3:C:31:LEU:HD23	3:C:31:LEU:HA	1.81	0.44
6:F:423:GLN:H	6:F:423:GLN:HG2	1.67	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:131:VAL:HG11	5:E:163:VAL:HG23	2.00	0.44
1:A:545:LEU:HD23	1:A:545:LEU:HA	1.74	0.44
6:F:440:PRO:HA	6:F:443:TYR:CZ	2.53	0.44
5:E:357:GLY:N	5:E:361:THR:O	2.51	0.44
6:F:224:LEU:O	6:F:228:ARG:HG2	2.18	0.44
6:F:388:ASP:O	6:F:391:LEU:HG	2.18	0.44
1:A:412:LEU:HG	1:A:420:VAL:HG21	2.00	0.43
1:A:344:GLY:HA3	1:A:637:ARG:NH1	2.32	0.43
1:A:449:LEU:HA	1:A:518:PHE:HD2	1.83	0.43
6:F:175:ALA:HB2	6:F:203:TYR:CD2	2.53	0.43
1:A:316:TRP:CH2	1:A:404:LYS:HD3	2.53	0.43
1:A:764:ILE:O	1:A:768:ILE:HG13	2.18	0.43
1:A:870:ILE:HD13	1:A:906:ILE:HG12	2.00	0.43
5:E:175:LEU:HD23	5:E:176:LEU:N	2.33	0.43
6:F:286:ILE:HG13	6:F:407:ILE:HD11	2.01	0.43
6:F:94:PRO:O	6:F:98:HIS:NE2	2.52	0.43
6:F:105:GLN:HA	6:F:247:SER:O	2.18	0.43
1:A:992:ASP:C	1:A:994:LEU:H	2.21	0.43
1:A:211:HIS:CE1	2:B:200:TYR:HD2	2.37	0.43
6:F:192:PRO:HB2	6:F:229:ASP:HB2	2.00	0.43
1:A:267:ASN:C	1:A:311:ASN:HD22	2.22	0.43
1:A:488:LYS:HE2	1:A:488:LYS:HB2	1.86	0.43
4:D:108:PRO:O	4:D:111:LYS:HB2	2.19	0.43
1:A:169:LEU:HA	1:A:169:LEU:HD23	1.71	0.43
3:C:134:VAL:HG21	3:C:139:VAL:HG11	2.00	0.43
6:F:238:PRO:O	6:F:241:LYS:HG2	2.18	0.43
6:F:416:GLU:H	6:F:416:GLU:HG3	1.65	0.43
1:A:622:SER:HB2	1:A:632:PHE:CD2	2.54	0.43
1:A:731:LEU:HD12	1:A:731:LEU:HA	1.88	0.43
1:A:992:ASP:C	1:A:994:LEU:N	2.72	0.43
2:B:538:LEU:HD13	2:B:538:LEU:HA	1.83	0.43
6:F:161:LYS:HB2	6:F:185:PRO:HA	2.00	0.43
6:F:244:MET:HB3	6:F:246:PHE:CE2	2.54	0.43
1:A:855:LEU:HD12	1:A:855:LEU:HA	1.81	0.42
2:B:318:GLU:OE1	2:B:326:ALA:N	2.52	0.42
2:B:396:LYS:HD2	2:B:471:PHE:CE2	2.54	0.42
2:B:424:SER:OG	2:B:428:ARG:NH2	2.53	0.42
1:A:782:LEU:HD23	1:A:782:LEU:HA	1.84	0.42
6:F:247:SER:HB3	6:F:250:LEU:HD11	2.00	0.42
5:E:340:THR:O	5:E:342:PRO:HD3	2.19	0.42
2:B:395:ARG:O	2:B:399:ILE:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:577:ILE:O	2:B:581:GLN:HG2	2.18	0.42
6:F:142:LEU:HD23	6:F:142:LEU:HA	1.90	0.42
2:B:176:GLU:OE2	2:B:176:GLU:N	2.52	0.42
6:F:202:LYS:HD3	6:F:202:LYS:HA	1.85	0.42
1:A:1098:LEU:HD23	1:A:1098:LEU:HA	1.79	0.42
1:A:248:LYS:HB3	1:A:248:LYS:HE3	1.87	0.42
1:A:708:LEU:HD23	1:A:708:LEU:HA	1.88	0.42
1:A:893:ASN:HD22	1:A:903:THR:HG21	1.85	0.42
6:F:287:LYS:HA	6:F:410:VAL:HB	2.01	0.42
3:C:69:ARG:CZ	4:D:28:LEU:HD13	2.48	0.42
1:A:793:LEU:HD23	1:A:793:LEU:HA	1.75	0.42
3:C:114:THR:O	3:C:118:ILE:HG22	2.20	0.42
6:F:124:LEU:HD11	6:F:133:VAL:HG21	2.02	0.42
1:A:706:LEU:HD23	1:A:706:LEU:HA	1.82	0.42
6:F:141:GLU:HG2	6:F:142:LEU:N	2.35	0.42
1:A:206:LEU:HA	1:A:206:LEU:HD23	1.86	0.41
2:B:12:ILE:HD13	2:B:72:PHE:HB2	2.00	0.41
4:D:31:LEU:HA	4:D:31:LEU:HD23	1.80	0.41
1:A:189:LEU:HA	1:A:189:LEU:HD23	1.86	0.41
4:D:118:LEU:HA	4:D:118:LEU:HD23	1.73	0.41
6:F:412:SER:OG	6:F:413:LYS:N	2.53	0.41
1:A:236:THR:O	1:A:237:GLU:HG2	2.20	0.41
1:A:570:ILE:HD13	1:A:570:ILE:HA	1.86	0.41
2:B:195:ASN:HD22	2:B:195:ASN:HA	1.71	0.41
1:A:179:SER:O	1:A:180:VAL:C	2.59	0.41
1:A:233:GLN:HE22	2:B:473:ARG:HD3	1.85	0.41
1:A:298:MET:SD	1:A:407:LEU:HD12	2.60	0.41
1:A:525:PHE:CE1	1:A:572:LYS:HE3	2.55	0.41
1:A:412:LEU:HD23	1:A:412:LEU:HA	1.63	0.41
6:F:391:LEU:HA	6:F:394:VAL:HG12	2.02	0.41
1:A:62:ARG:O	1:A:66:ILE:HG12	2.20	0.41
2:B:352:PHE:CZ	4:D:117:LEU:HD13	2.56	0.41
6:F:147:ARG:HD3	6:F:164:VAL:HB	2.02	0.41
6:F:372:ILE:H	6:F:399:ARG:CZ	2.33	0.41
6:F:426:PHE:HB3	6:F:428:VAL:HG22	2.03	0.41
1:A:341:SER:CB	1:A:630:VAL:HG22	2.51	0.41
2:B:470:ASP:O	2:B:474:VAL:HG23	2.21	0.41
6:F:224:LEU:HA	6:F:227:ARG:HG2	2.02	0.41
1:A:333:LEU:HD23	1:A:333:LEU:HA	1.81	0.41
1:A:801:GLN:HE21	1:A:801:GLN:N	2.19	0.41
1:A:1024:GLU:O	1:A:1028:LYS:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:258:ASP:O	2:B:262:VAL:HG12	2.21	0.41
2:B:444:ASN:O	2:B:445:LYS:C	2.59	0.41
2:B:582:THR:HG22	2:B:586:LEU:HD22	2.03	0.41
3:C:80:LEU:HD12	3:C:80:LEU:HA	1.79	0.41
3:C:117:TYR:OH	4:D:120:ARG:HD3	2.21	0.41
6:F:341:LYS:HB3	6:F:341:LYS:HE2	1.78	0.41
1:A:108:LYS:O	1:A:111:ILE:CG2	2.64	0.41
1:A:837:LEU:HD23	1:A:837:LEU:HA	1.90	0.41
6:F:135:VAL:HA	6:F:213:VAL:O	2.21	0.41
1:A:220:SER:O	1:A:223:THR:HG22	2.21	0.40
1:A:425:LYS:HE2	1:A:425:LYS:HB2	1.86	0.40
1:A:703:GLN:HE22	1:A:749:ASN:HD22	1.69	0.40
1:A:947:THR:O	1:A:951:LEU:HD12	2.21	0.40
1:A:1101:LEU:HA	1:A:1101:LEU:HD23	1.83	0.40
3:C:178:LEU:HA	3:C:178:LEU:HD12	1.86	0.40
1:A:1101:LEU:HD11	1:A:1121:TRP:HZ3	1.86	0.40
2:B:70:LYS:HE2	2:B:70:LYS:HB3	1.66	0.40
1:A:152:LYS:HA	1:A:155:THR:HG23	2.03	0.40
1:A:745:MET:CG	1:A:747:ILE:HG23	2.51	0.40
1:A:957:HIS:CD2	1:A:1051:PHE:HE2	2.37	0.40
1:A:963:TYR:OH	1:A:1000:HIS:ND1	2.38	0.40
2:B:206:LEU:HD12	2:B:206:LEU:HA	1.77	0.40
5:E:279:VAL:HG13	5:E:289:LEU:HB3	2.03	0.40
5:E:324:LEU:HA	5:E:324:LEU:HD23	1.80	0.40
6:F:93:ILE:HD11	6:F:115:VAL:HA	2.04	0.40
6:F:116:PHE:HB3	6:F:246:PHE:CE2	2.56	0.40
6:F:388:ASP:OD1	6:F:389:GLN:N	2.55	0.40
1:A:429:LYS:HD3	1:A:432:TYR:CE2	2.55	0.40
1:A:842:ASN:OD1	1:A:842:ASN:C	2.60	0.40
1:A:892:LEU:HD23	1:A:892:LEU:HA	1.97	0.40
1:A:1095:THR:OG1	1:A:1151:VAL:HA	2.21	0.40
2:B:12:ILE:HD11	2:B:72:PHE:HD1	1.86	0.40
2:B:93:LEU:HD23	2:B:93:LEU:HA	1.83	0.40
2:B:342:SER:OG	2:B:343:ASN:N	2.55	0.40
2:B:471:PHE:O	2:B:475:ILE:HG12	2.21	0.40
6:F:69:LEU:HG	6:F:122:GLN:HG3	2.03	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	1136/1620 (70%)	1059 (93%)	75 (7%)	2 (0%)	47 78
2	B	555/720 (77%)	503 (91%)	51 (9%)	1 (0%)	47 78
3	C	224/261 (86%)	212 (95%)	12 (5%)	0	100 100
4	D	221/392 (56%)	214 (97%)	7 (3%)	0	100 100
5	E	344/380 (90%)	320 (93%)	24 (7%)	0	100 100
6	F	355/400 (89%)	346 (98%)	9 (2%)	0	100 100
All	All	2835/3773 (75%)	2654 (94%)	178 (6%)	3 (0%)	54 82

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	993	ILE
2	B	442	GLU
1	A	1157	VAL

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	704/1468 (48%)	642 (91%)	62 (9%)	10 33
2	B	367/670 (55%)	343 (94%)	24 (6%)	17 46
3	C	129/242 (53%)	120 (93%)	9 (7%)	15 44
4	D	101/363 (28%)	92 (91%)	9 (9%)	9 33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	E	186/344 (54%)	172 (92%)	14 (8%)	13 41
6	F	299/351 (85%)	293 (98%)	6 (2%)	55 77
All	All	1786/3438 (52%)	1662 (93%)	124 (7%)	19 45

All (124) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	135	LEU
1	A	136	HIS
1	A	137	GLU
1	A	139	LEU
1	A	155	THR
1	A	166	LYS
1	A	216	TYR
1	A	217	SER
1	A	230	VAL
1	A	232	SER
1	A	236	THR
1	A	247	ARG
1	A	285	TYR
1	A	302	CYS
1	A	314	SER
1	A	319	VAL
1	A	323	MET
1	A	333	LEU
1	A	406	LYS
1	A	410	ARG
1	A	411	LEU
1	A	431	LEU
1	A	443	ARG
1	A	444	VAL
1	A	449	LEU
1	A	457	THR
1	A	484	ARG
1	A	487	HIS
1	A	497	SER
1	A	498	LEU
1	A	513	SER
1	A	542	ILE
1	A	560	ASN
1	A	567	HIS

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Mol	Chain	Res	Type
1	A	569	THR
1	A	622	SER
1	A	694	PHE
1	A	708	LEU
1	A	711	THR
1	A	724	GLN
1	A	744	ASN
1	A	791	LEU
1	A	794	ASN
1	A	801	GLN
1	A	811	ARG
1	A	834	ILE
1	A	852	TYR
1	A	872	LEU
1	A	873	ILE
1	A	900	THR
1	A	908	ARG
1	A	915	LEU
1	A	932	PHE
1	A	941	SER
1	A	945	PHE
1	A	958	PHE
1	A	1018	TRP
1	A	1041	PHE
1	A	1078	LEU
1	A	1092	LEU
1	A	1094	PHE
1	A	1155	PHE
2	B	15	LEU
2	B	98	ILE
2	B	100	LEU
2	B	126	THR
2	B	127	ILE
2	B	185	LEU
2	B	196	THR
2	B	224	ARG
2	B	258	ASP
2	B	265	HIS
2	B	313	ARG
2	B	316	LEU
2	B	367	LEU
2	B	380	THR

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Mol	Chain	Res	Type
2	B	388	GLN
2	B	435	ILE
2	B	456	CYS
2	B	485	PHE
2	B	493	PHE
2	B	536	THR
2	B	538	LEU
2	B	585	PHE
2	B	586	LEU
2	B	594	PHE
3	C	9	TYR
3	C	27	LEU
3	C	74	GLN
3	C	79	GLN
3	C	107	PHE
3	C	118	ILE
3	C	140	THR
3	C	144	MET
3	C	188	PHE
4	D	11	VAL
4	D	15	VAL
4	D	22	THR
4	D	30	ILE
4	D	79	ILE
4	D	93	GLN
4	D	106	LYS
4	D	112	SER
4	D	115	SER
5	E	76	SER
5	E	82	ARG
5	E	89	VAL
5	E	105	ILE
5	E	140	LEU
5	E	157	LEU
5	E	201	ILE
5	E	213	TYR
5	E	248	LYS
5	E	279	VAL
5	E	303	VAL
5	E	309	ILE
5	E	366	PHE
5	E	376	TYR

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Mol	Chain	Res	Type
6	F	140	ARG
6	F	329	SER
6	F	335	THR
6	F	349	TYR
6	F	368	ARG
6	F	426	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	102	GLN
1	A	211	HIS
1	A	256	HIS
1	A	262	ASN
1	A	318	ASN
1	A	414	HIS
1	A	422	HIS
1	A	703	GLN
1	A	724	GLN
1	A	794	ASN
1	A	801	GLN
1	A	828	GLN
1	A	893	ASN
1	A	1032	GLN
1	A	1033	ASN
1	A	1150	HIS
2	B	9	GLN
2	B	195	ASN
2	B	221	ASN
2	B	350	ASN
2	B	385	GLN
2	B	388	GLN
3	C	79	GLN
3	C	131	GLN
3	C	180	GLN
4	D	25	ASN
4	D	114	HIS
5	E	72	HIS
5	E	223	HIS
5	E	281	ASN
6	F	90	GLN
6	F	122	GLN

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Mol	Chain	Res	Type
6	F	123	GLN
6	F	186	HIS
6	F	380	ASN
6	F	385	ASN
6	F	423	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 monosaccharides 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.

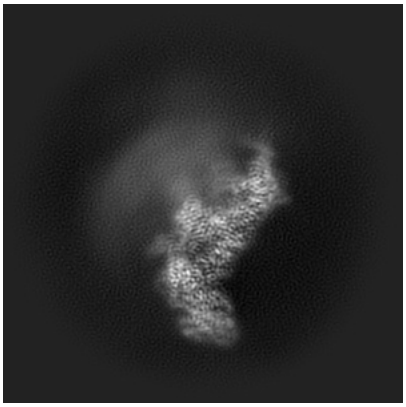
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-11859. These allow visual inspection of the internal detail of the map and identification of artifacts.

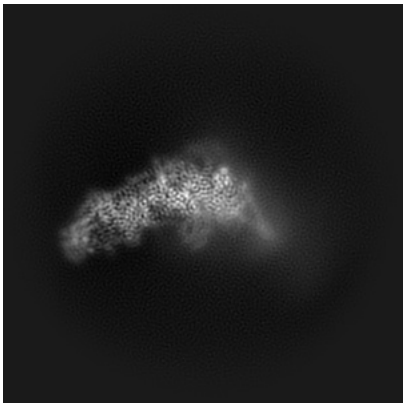
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

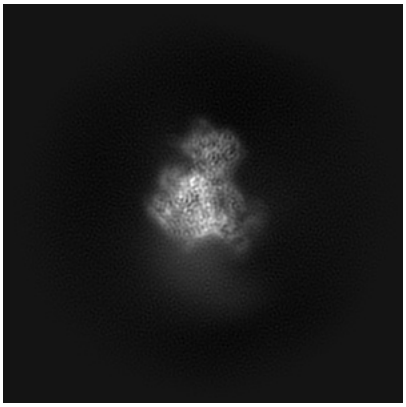
6.1.1 Primary map



X



Y

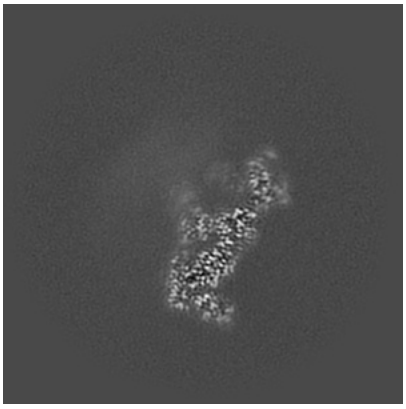


Z

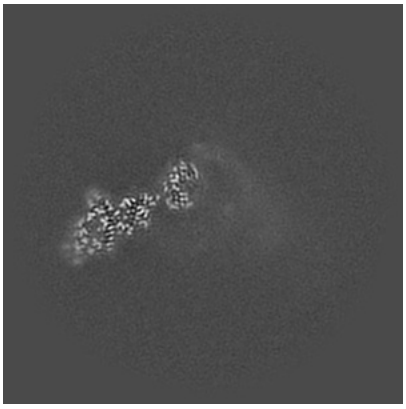
The images above show the map projected in three orthogonal directions.

6.2 Central slices

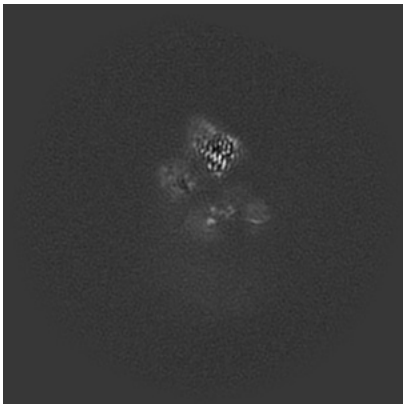
6.2.1 Primary map



X Index: 150



Y Index: 150

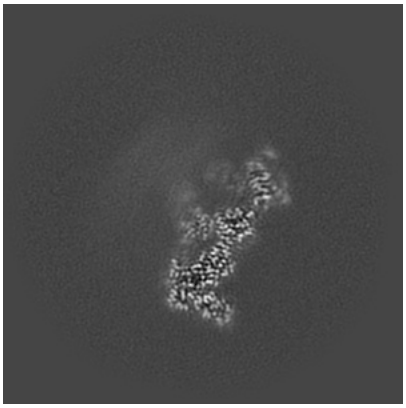


Z Index: 150

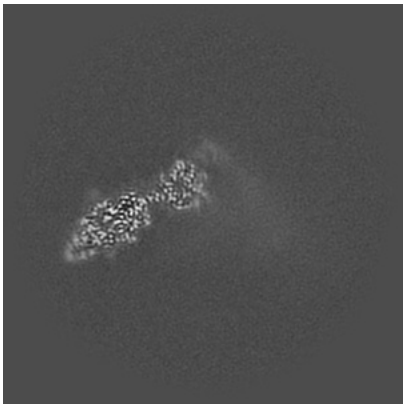
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

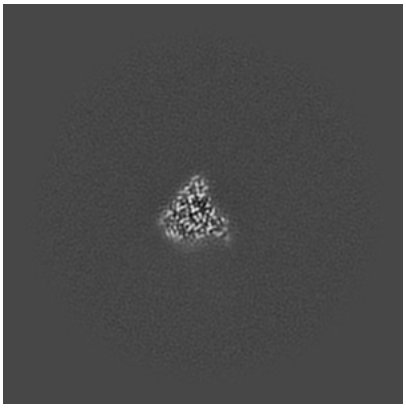
6.3.1 Primary map



X Index: 149



Y Index: 145

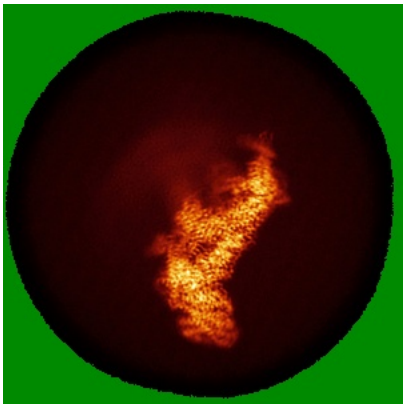


Z Index: 96

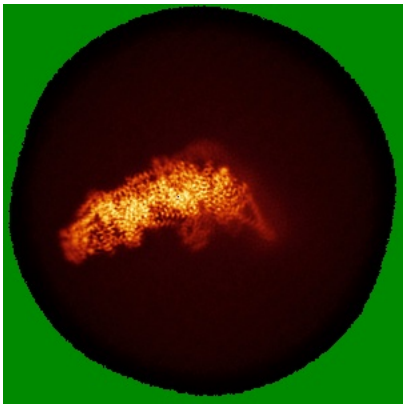
The images above show the largest variance slices of the map in three orthogonal directions.

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

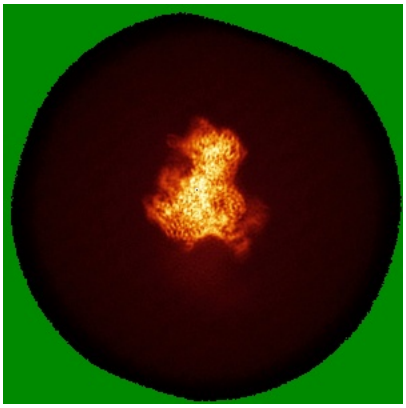
6.4.1 Primary map



X



Y



Z

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 0.25. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

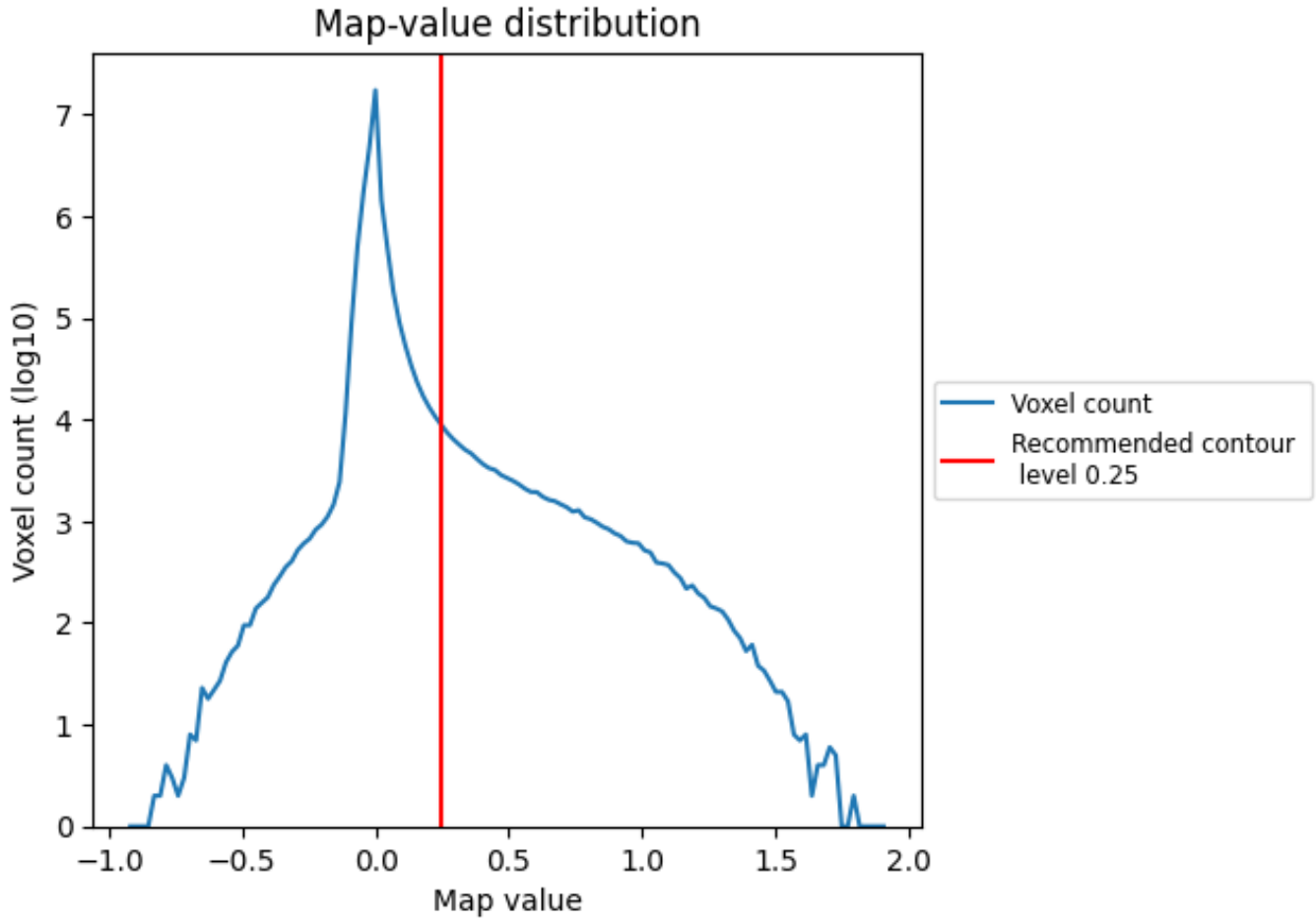
6.6 Mask visualisation (i)

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

7 Map analysis

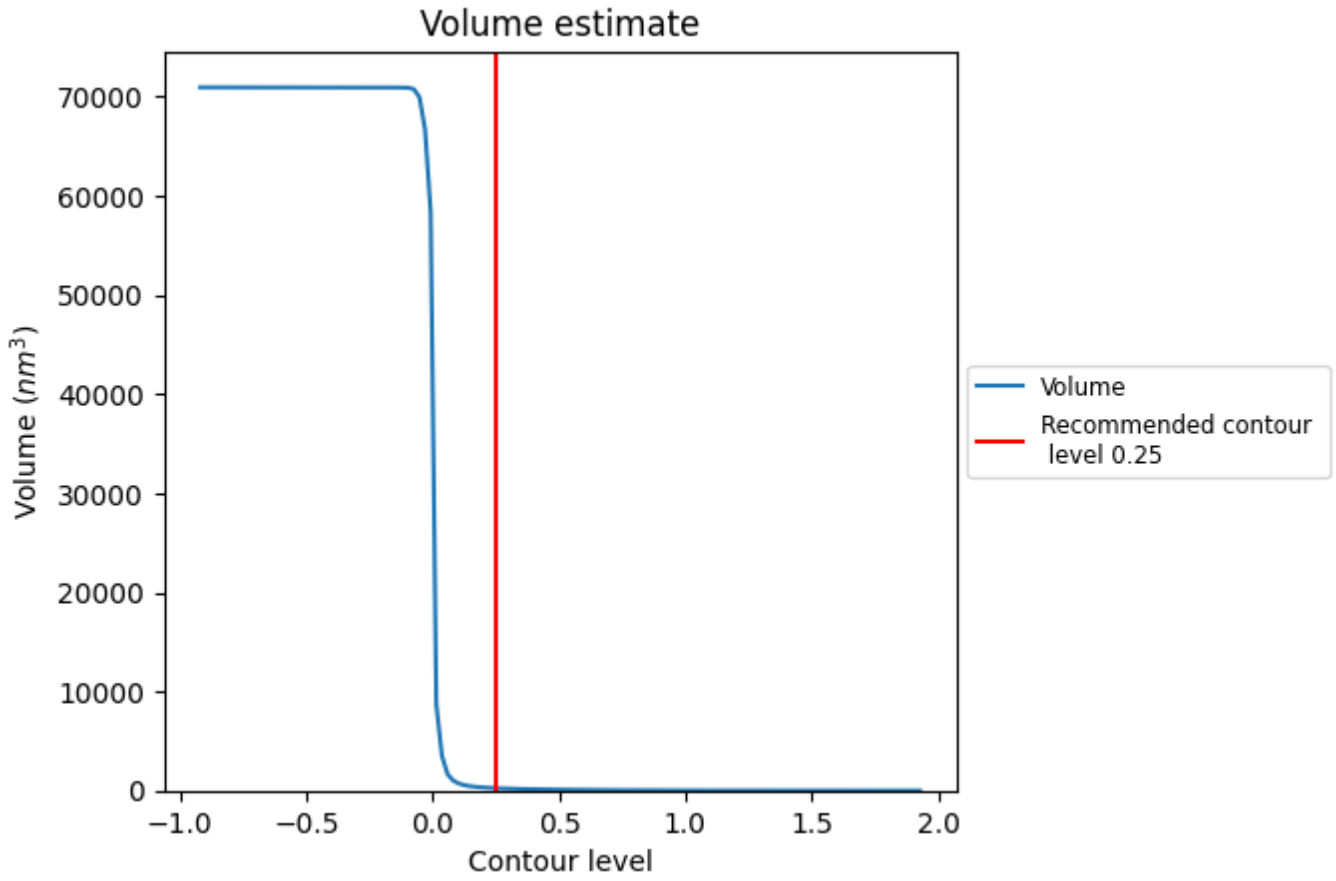
This section contains the results of statistical analysis of the map.

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.

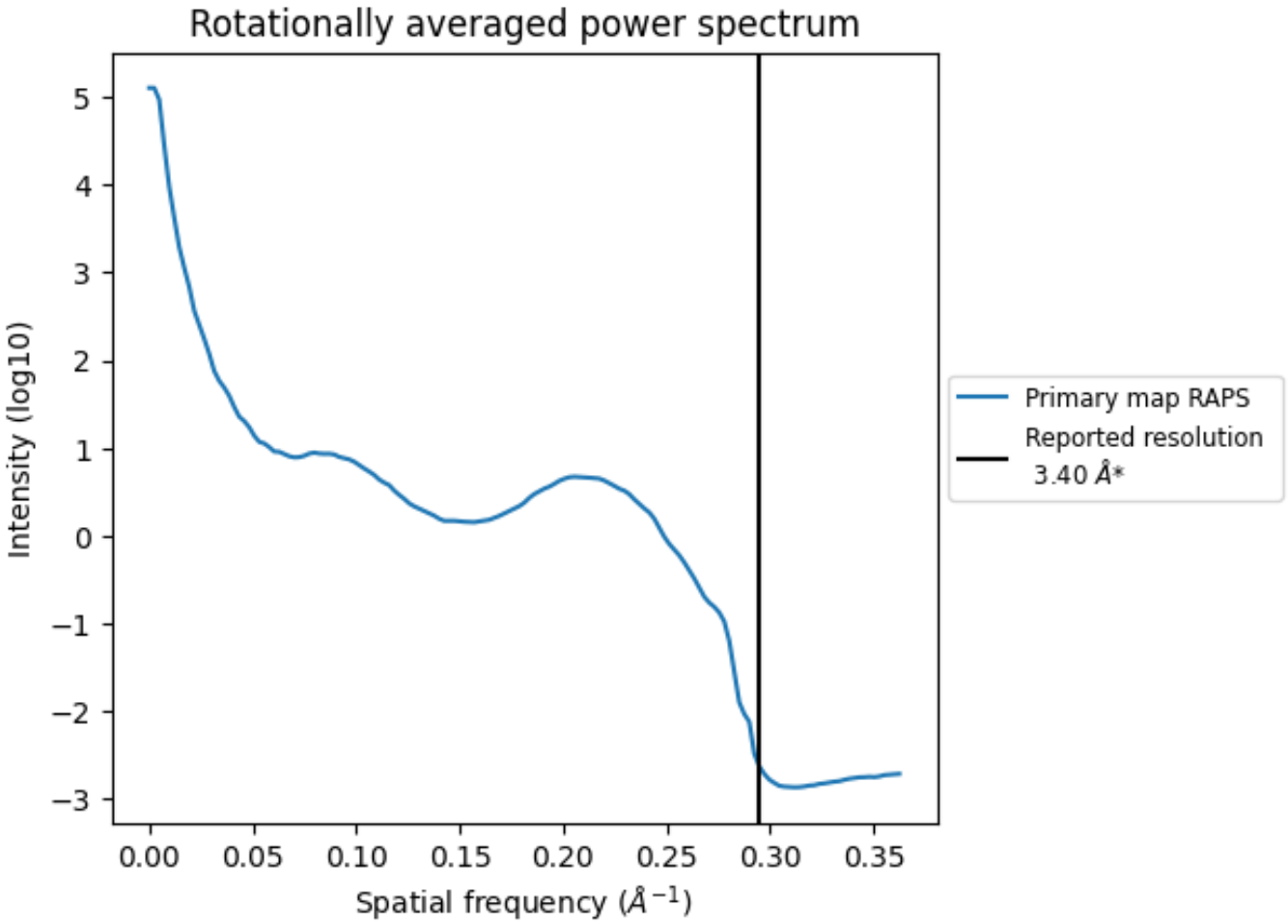
7.2 Volume estimate



The volume at the recommended contour level is 238 nm^3; this corresponds to an approximate mass of 215 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}

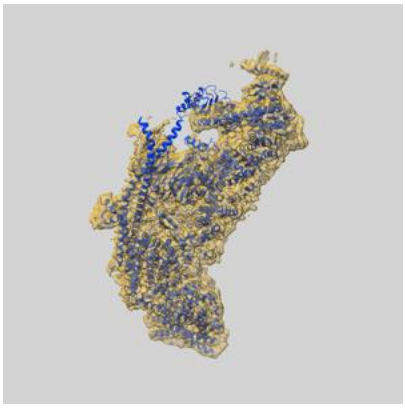
8 Fourier-Shell correlation

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

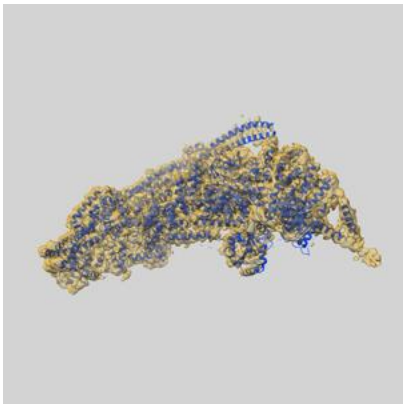
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-11859 and PDB model 7APX. Per-residue inclusion information can be found in section 3 on page 5.

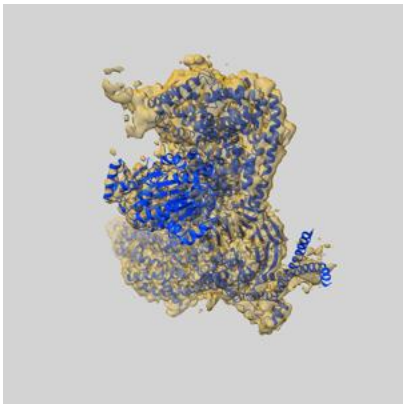
9.1 Map-model overlay



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.25 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

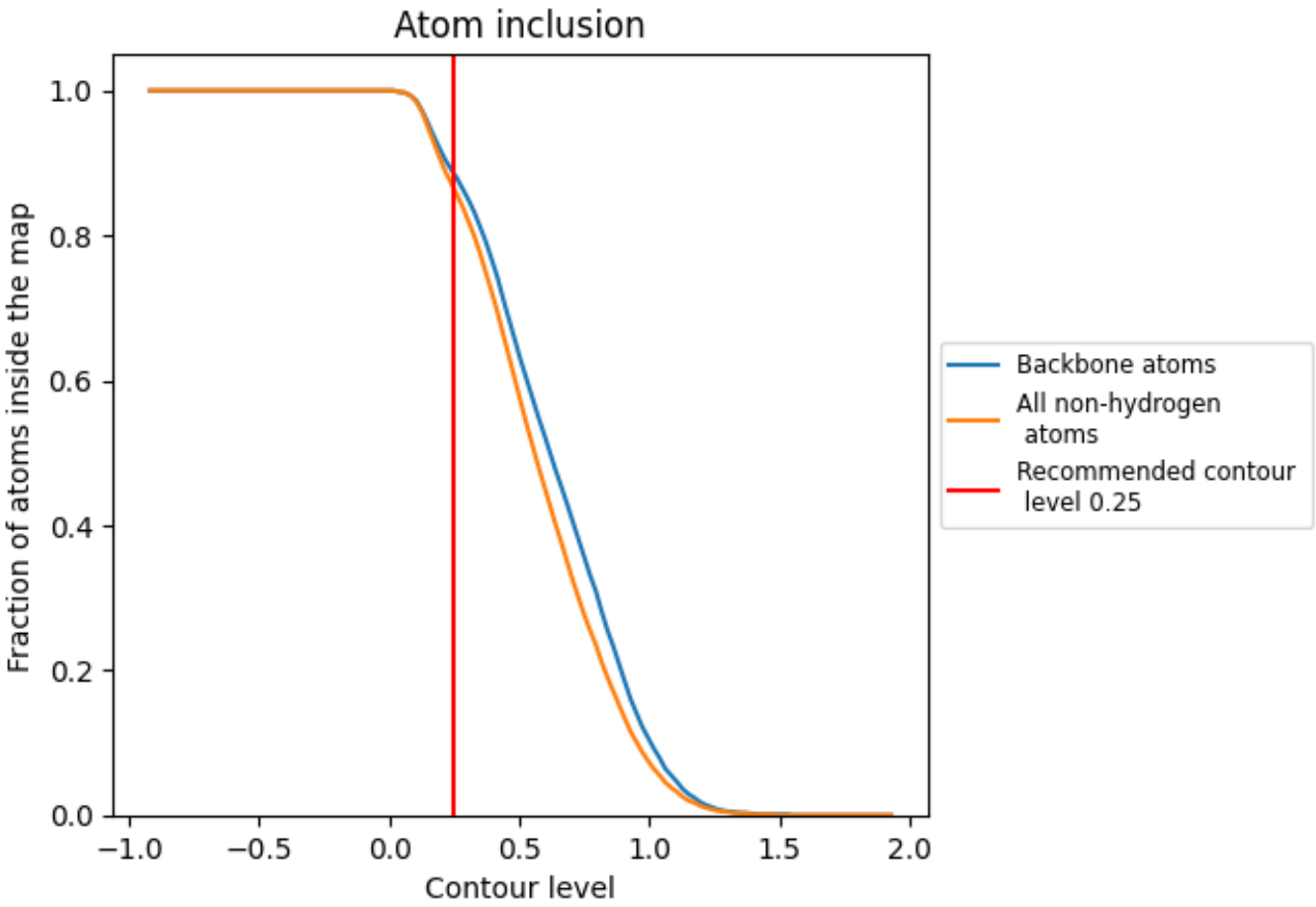
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.25).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 86% 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 (0.25) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8630	0.4370
A	0.9770	0.4750
B	0.9860	0.4940
C	0.8800	0.4250
D	0.8840	0.4200
E	0.9890	0.5050
F	0.2220	0.2000