



Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 12:29 AM UTC

PDB ID : 6O7K / pdb_00006o7k
EMDB ID : EMD-0643
Title : 30S initiation complex
Authors : Frank, J.; Gonzalez Jr., R.L.; kaledhonkar, S.; Fu, Z.; Caban, K.; Li, W.;
Chen, B.; Sun, M.
Deposited on : 2019-03-08
Resolution : 4.20 Å(reported)
Based on initial model : 2AVY

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:

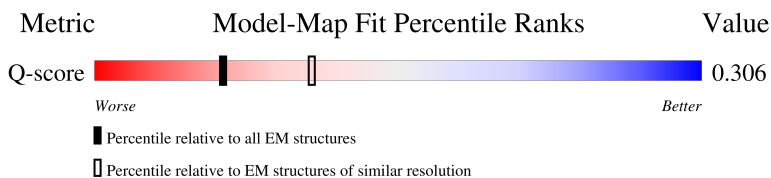
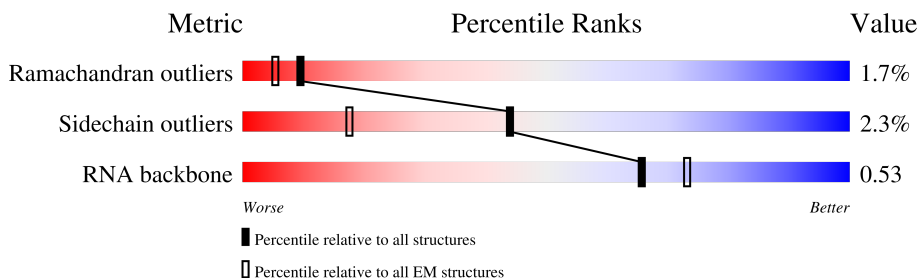
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

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

The reported resolution of this entry is 4.20 Å.

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




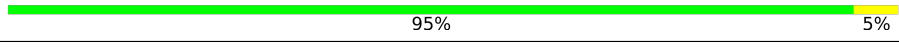
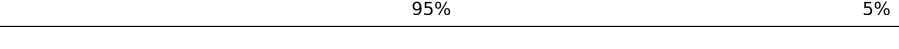
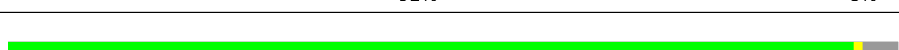
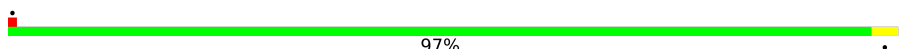
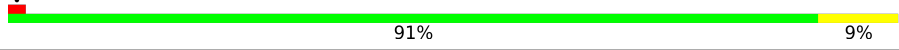

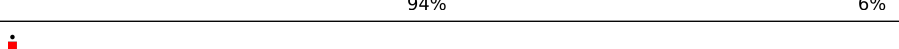
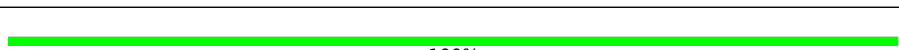

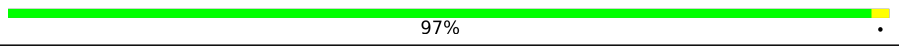
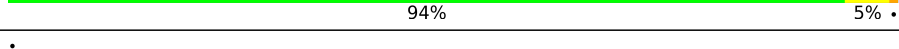
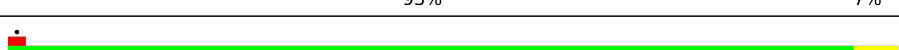
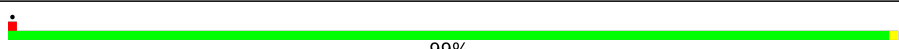
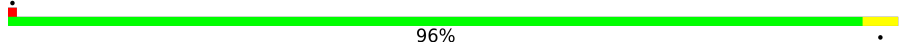
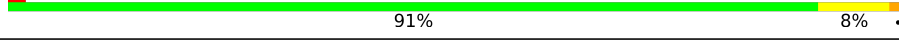
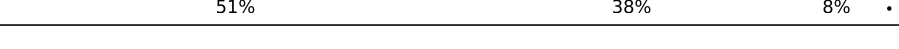
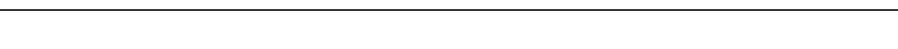



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	5410 (3.70 - 4.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	5	71	
2	f	509	
3	g	1539	
4	P	80	

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Mol	Chain	Length	Quality of chain
5	r	98	
6	q	117	
7	t	123	
8	s	114	
9	w	100	
10	u	88	
11	y	82	
12	1	55	
13	z	79	
14	j	218	
15	3	85	
16	2	51	
17	h	206	
18	l	205	
19	k	150	
20	n	100	
21	m	151	
22	p	129	
23	o	127	
24	v	77	
25	N	6	

2 Entry composition

There are 25 unique types of molecules in this entry. The entry contains 57748 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 IF-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	5	71	Total	C	N	O	S	0	0
			570	362	103	103	2		

- Molecule 2 is a protein called Translation initiation factor IF-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	f	509	Total	C	N	O	S	0	0
			3847	2409	675	748	15		

- Molecule 3 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	g	1539	Total	C	N	O	P	0	0
			33012	14725	6052	10697	1538		

- Molecule 4 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	P	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 5 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	r	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 6 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	q	117	Total	C	N	O	S	0	0
			877	540	174	160	3		

- Molecule 7 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	t	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 8 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	s	114	Total	C	N	O	S	0	0
			884	546	178	157	3		

- Molecule 9 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	w	96	Total	C	N	O	S	0	0
			774	483	160	128	3		

- Molecule 10 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	u	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 11 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	y	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 12 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	1	55	Total	C	N	O	0	0
			456	288	86	82		

- Molecule 13 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	z	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 14 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	j	218	Total	C	N	O	S	0	0
			1705	1081	305	312	7		

- Molecule 15 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	3	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 16 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	2	51	Total	C	N	O	S	0	0
			426	265	86	74	1		

- Molecule 17 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	h	206	Total	C	N	O	S	0	0
			1625	1028	305	289	3		

- Molecule 18 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	l	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 19 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	k	150	Total	C	N	O	S	0	0
			1106	687	211	202	6		

- Molecule 20 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	n	100	Total	C	N	O	S	0	0
			818	515	148	149	6		

- Molecule 21 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	m	151	Total	C	N	O	S	0	0
			1182	735	227	216	4		

- Molecule 22 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	p	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 23 is a protein called 30S ribosomal protein S9.

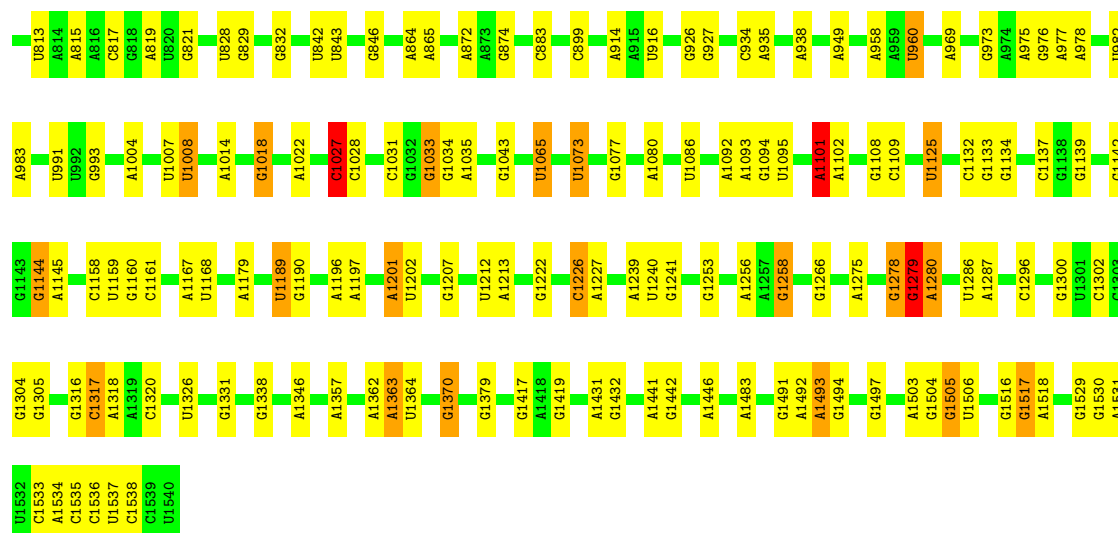
Mol	Chain	Residues	Atoms					AltConf	Trace
23	o	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 24 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	v	77	Total	C	N	O	P	0	0
			1639	732	297	534	76		

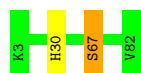
- Molecule 25 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	N	6	Total	C	N	O	P	0	0
			126	58	24	39	5		




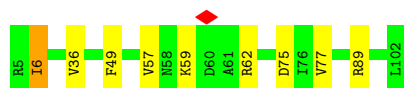
• Molecule 4: 30S ribosomal protein S17

Chain P:  98% ..



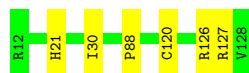
• Molecule 5: 30S ribosomal protein S10

Chain r:  91% 8% .



• Molecule 6: 30S ribosomal protein S11

Chain q:  95% 5%




• Molecule 7: 30S ribosomal protein S12

Chain t:  95% 5%



• Molecule 8: 30S ribosomal protein S13

Chain s:  92% 8%



- Molecule 9: 30S ribosomal protein S14

Chain w: 95%



- Molecule 10: 30S ribosomal protein S15

Chain u: 97%



- Molecule 11: 30S ribosomal protein S16

Chain y: 91%



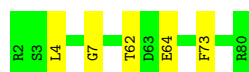
- Molecule 12: 30S ribosomal protein S18

Chain 1: 89%



- Molecule 13: 30S ribosomal protein S19

Chain z: 94%



- Molecule 14: 30S ribosomal protein S2

Chain j: 94%




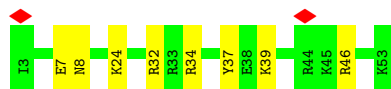
- Molecule 15: 30S ribosomal protein S20

Chain 3: 100%

There are no outlier residues recorded for this chain.

- Molecule 16: 30S ribosomal protein S21

Chain 2:  84% 16%



- Molecule 17: 30S ribosomal protein S3

Chain h:  97%



- Molecule 18: 30S ribosomal protein S4

Chain l:  94% 5%



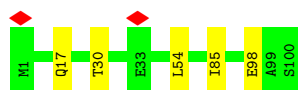
- Molecule 19: 30S ribosomal protein S5

Chain k:  93% 7%



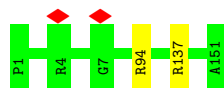
- Molecule 20: 30S ribosomal protein S6

Chain n:  95% 5%



- Molecule 21: 30S ribosomal protein S7

Chain m:  99%

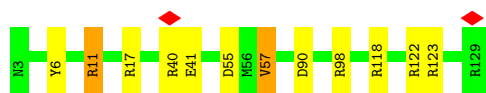
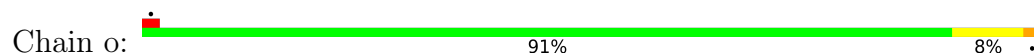


- Molecule 22: 30S ribosomal protein S8

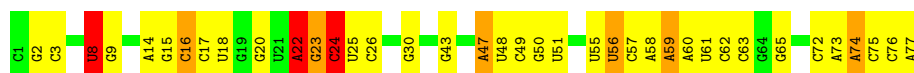
Chain p:  96%



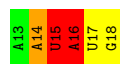
- Molecule 23: 30S ribosomal protein S9



- Molecule 24: tRNA



- Molecule 25: mRNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	86367	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	35	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.231	Depositor
Minimum map value	-0.068	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	424.96, 424.96, 424.96	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.66, 1.66, 1.66	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	5	0.85	0/580	1.37	1/782 (0.1%)
2	f	0.80	0/3895	1.40	13/5264 (0.2%)
3	g	0.92	0/36963	1.02	33/57662 (0.1%)
4	P	0.85	0/658	1.35	1/881 (0.1%)
5	r	0.87	0/797	1.40	2/1077 (0.2%)
6	q	0.85	0/893	1.41	0/1205
7	t	0.84	0/969	1.37	0/1300
8	s	0.86	0/893	1.45	2/1193 (0.2%)
9	w	0.83	0/785	1.46	0/1043
10	u	0.87	0/722	1.51	4/964 (0.4%)
11	y	0.86	0/659	1.46	1/884 (0.1%)
12	l	0.84	0/463	1.52	5/621 (0.8%)
13	z	0.85	0/653	1.45	5/877 (0.6%)
14	j	0.83	0/1736	1.43	9/2338 (0.4%)
15	3	0.85	0/671	1.34	0/888
16	2	0.90	0/431	1.60	2/570 (0.4%)
17	h	0.84	0/1652	1.34	0/2225
18	l	0.83	0/1665	1.45	5/2227 (0.2%)
19	k	0.83	0/1119	1.40	5/1504 (0.3%)
20	n	0.86	0/836	1.43	4/1128 (0.4%)
21	m	0.84	0/1196	1.40	2/1602 (0.1%)
22	p	0.80	0/989	1.26	1/1326 (0.1%)
23	o	0.86	0/1034	1.44	4/1375 (0.3%)
24	v	0.99	0/1831	1.23	14/2853 (0.5%)
25	N	1.11	0/141	1.77	4/218 (1.8%)
All	All	0.89	0/62231	1.18	117/92007 (0.1%)

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

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	f	0	3
3	g	0	108
4	P	0	1
5	r	0	1
6	q	0	2
7	t	0	2
8	s	0	3
11	y	0	1
12	l	0	2
14	j	0	1
16	2	0	3
17	h	0	3
18	l	0	5
19	k	0	4
21	m	0	1
22	p	0	2
23	o	0	4
24	v	0	15
25	N	0	2
All	All	0	163

There are no bond length outliers.

All (117) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	v	56	U	P-O3'-C3'	13.15	139.93	120.20
25	N	14	A	P-O3'-C3'	10.57	136.06	120.20
24	v	8	U	C4'-C3'-C2'	9.99	112.59	102.60
24	v	22	A	O4'-C1'-C2'	-9.49	96.31	105.80
24	v	56	U	C2'-C3'-O3'	9.44	123.65	109.50
24	v	8	U	C2'-C3'-O3'	8.39	122.08	109.50
24	v	8	U	C4'-C3'-O3'	8.39	121.98	109.40
24	v	22	A	C5'-C4'-C3'	8.26	127.59	115.20
3	g	325	A	P-O3'-C3'	8.20	132.50	120.20
3	g	1201	A	P-O3'-C3'	8.15	132.42	120.20
24	v	23	G	C2'-C3'-O3'	8.02	121.53	109.50
24	v	8	U	O4'-C1'-C2'	7.63	113.43	105.80
3	g	363	A	P-O3'-C3'	7.53	131.50	120.20
19	k	79	THR	CA-C-N	6.85	131.09	120.75
19	k	79	THR	C-N-CA	6.85	131.09	120.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	f	451	PHE	CA-CB-CG	-6.81	106.99	113.80
25	N	16	A	P-O5'-C5'	6.77	131.06	120.90
3	g	1280	A	C5'-C4'-C3'	-6.77	105.04	115.20
3	g	96	U	P-O3'-C3'	6.41	129.81	120.20
25	N	15	U	P-O3'-C3'	-6.40	110.60	120.20
3	g	465	A	P-O3'-C3'	6.40	129.79	120.20
3	g	1101	A	P-O3'-C3'	6.26	129.59	120.20
14	j	187	ASP	CA-C-N	6.20	129.21	120.28
14	j	187	ASP	C-N-CA	6.20	129.21	120.28
10	u	47	LYS	CA-C-N	6.19	131.37	122.21
10	u	47	LYS	C-N-CA	6.19	131.37	122.21
3	g	1073	U	C5'-C4'-C3'	-6.13	106.81	116.00
3	g	209	U	P-O3'-C3'	6.12	129.38	120.20
3	g	1189	U	P-O3'-C3'	6.04	129.26	120.20
3	g	117	G	P-O3'-C3'	6.02	129.23	120.20
3	g	1108	G	P-O3'-C3'	5.99	129.18	120.20
12	l	25	ILE	N-CA-C	5.99	119.43	111.17
3	g	1537	U	P-O3'-C3'	5.96	129.14	120.20
2	f	872	ARG	CA-C-O	5.91	122.05	118.33
3	g	1101	A	C2'-C3'-O3'	5.89	118.33	109.50
25	N	15	U	C5'-C4'-C3'	-5.84	107.24	116.00
13	z	62	THR	CA-C-N	5.83	128.36	120.38
13	z	62	THR	C-N-CA	5.83	128.36	120.38
3	g	120	A	C2'-C3'-O3'	5.82	118.24	109.50
18	l	27	ILE	N-CA-C	5.80	116.76	108.93
24	v	51	U	P-O5'-C5'	5.72	129.48	120.90
3	g	115	G	C4'-C3'-O3'	5.69	117.93	109.40
3	g	1493	A	C2'-C3'-O3'	5.68	118.03	109.50
14	j	115	ASP	CA-C-N	5.67	128.16	120.44
14	j	115	ASP	C-N-CA	5.67	128.16	120.44
3	g	51	A	C2'-C3'-O3'	5.64	117.95	109.50
18	l	166	LYS	CA-C-N	5.62	125.63	119.89
18	l	166	LYS	C-N-CA	5.62	125.63	119.89
3	g	1125	U	C2'-C3'-O3'	5.60	117.90	109.50
3	g	1027	C	O3'-P-O5'	-5.58	95.62	104.00
20	n	17	GLN	CA-C-N	5.58	124.80	120.33
20	n	17	GLN	C-N-CA	5.58	124.80	120.33
5	r	49	PHE	CA-CB-CG	-5.58	108.22	113.80
3	g	1144	G	P-O3'-C3'	5.55	128.53	120.20
24	v	16	C	P-O5'-C5'	5.54	129.21	120.90
24	v	24	C	C5'-C4'-O4'	-5.49	101.56	109.80
3	g	1033	G	P-O5'-C5'	5.47	129.11	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	62	PRO	N-CA-C	-5.45	108.44	114.92
8	s	110	GLY	CA-C-N	5.45	126.65	119.84
8	s	110	GLY	C-N-CA	5.45	126.65	119.84
16	2	7	GLU	N-CA-C	5.43	117.73	110.35
3	g	421	U	C5'-C4'-C3'	-5.39	107.11	115.20
11	y	10	GLY	N-CA-C	5.39	118.27	112.33
19	k	134	ASN	CA-CB-CG	-5.38	107.22	112.60
20	n	30	THR	CA-C-N	5.38	125.95	119.98
20	n	30	THR	C-N-CA	5.38	125.95	119.98
18	l	167	PRO	N-CA-C	5.35	119.61	111.11
23	o	40	ARG	CA-C-N	5.35	131.75	121.54
23	o	40	ARG	C-N-CA	5.35	131.75	121.54
3	g	83	C	C2'-C3'-O3'	5.34	117.50	109.50
3	g	130	A	P-O3'-C3'	5.33	128.20	120.20
2	f	525	GLY	CA-C-N	5.33	126.16	121.58
2	f	525	GLY	C-N-CA	5.33	126.16	121.58
4	P	67	SER	N-CA-CB	5.32	119.48	110.49
2	f	726	GLY	CA-C-N	5.31	125.01	119.92
2	f	726	GLY	C-N-CA	5.31	125.01	119.92
13	z	7	GLY	CA-C-N	5.31	125.30	119.89
13	z	7	GLY	C-N-CA	5.31	125.30	119.89
2	f	442	PHE	CA-CB-CG	-5.29	108.50	113.80
2	f	541	ILE	CA-C-N	5.29	127.62	120.38
2	f	541	ILE	C-N-CA	5.29	127.62	120.38
3	g	978	A	P-O3'-C3'	5.25	128.07	120.20
19	k	107	GLY	CA-C-N	5.24	124.95	119.92
19	k	107	GLY	C-N-CA	5.24	124.95	119.92
3	g	457	G	C5'-C4'-C3'	-5.24	108.14	116.00
3	g	86	G	C2'-C3'-O3'	5.23	117.35	109.50
16	2	32	ARG	N-CA-C	5.23	117.40	111.02
14	j	46	VAL	O-C-N	-5.23	117.08	120.42
10	u	20	ASP	CA-C-N	5.22	127.80	120.28
10	u	20	ASP	C-N-CA	5.22	127.80	120.28
18	l	7	LYS	N-CA-C	5.22	117.05	111.36
13	z	73	PHE	CA-CB-CG	-5.19	108.61	113.80
3	g	3	A	P-O3'-C3'	-5.19	112.41	120.20
24	v	8	U	C5'-C4'-O4'	5.19	116.88	109.10
3	g	92	U	C5'-C4'-C3'	-5.18	108.22	116.00
22	p	44	PHE	CA-CB-CG	-5.18	108.62	113.80
14	j	202	ASN	CA-C-N	5.18	127.64	120.29
14	j	202	ASN	C-N-CA	5.18	127.64	120.29
2	f	823	LYS	CA-C-N	5.17	127.21	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	f	823	LYS	C-N-CA	5.17	127.21	120.28
3	g	177	G	C5'-C4'-C3'	-5.16	108.26	116.00
2	f	455	ARG	NE-CZ-NH2	5.15	123.83	119.20
24	v	26	C	P-O5'-C5'	5.14	128.61	120.90
3	g	211	G	P-O5'-C5'	5.11	128.57	120.90
23	o	118	ARG	NH1-CZ-NH2	-5.09	112.68	119.30
14	j	94	ARG	N-CA-C	5.09	116.86	110.91
2	f	645	ARG	N-CA-C	5.06	116.61	111.14
5	r	77	VAL	N-CA-C	5.05	115.28	110.53
12	1	41	SER	CA-C-N	5.05	127.04	120.28
12	1	41	SER	C-N-CA	5.05	127.04	120.28
3	g	1279	G	C2'-C3'-O3'	5.04	117.07	109.50
14	j	165	ALA	N-CA-C	5.04	116.47	111.07
12	1	33	THR	CA-C-N	5.03	127.03	120.28
12	1	33	THR	C-N-CA	5.03	127.03	120.28
21	m	94	ARG	CA-C-N	5.01	126.96	120.44
21	m	94	ARG	C-N-CA	5.01	126.96	120.44
23	o	123	ARG	NE-CZ-NH1	-5.01	116.49	121.50

There are no chirality outliers.

All (163) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	1	42	ARG	Sidechain
12	1	56	ARG	Sidechain
16	2	34	ARG	Sidechain
16	2	37	TYR	Peptide
16	2	46	ARG	Sidechain
25	N	15	U	Sidechain
25	N	16	A	Sidechain
4	P	30	HIS	Peptide
2	f	607	ARG	Sidechain
2	f	610	ARG	Sidechain
2	f	772	TYR	Sidechain
3	g	1007	U	Sidechain
3	g	1008	U	Sidechain
3	g	1014	A	Sidechain
3	g	1018	G	Sidechain
3	g	1027	C	Sidechain
3	g	1035	A	Sidechain
3	g	1065	U	Sidechain
3	g	1077	G	Sidechain

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Mol	Chain	Res	Type	Group
3	g	108	G	Sidechain
3	g	1092	A	Sidechain
3	g	110	C	Sidechain
3	g	1101	A	Sidechain
3	g	1144	G	Sidechain
3	g	115	G	Sidechain
3	g	1158	C	Sidechain
3	g	1179	A	Sidechain
3	g	1207	G	Sidechain
3	g	1222	G	Sidechain
3	g	1226	C	Sidechain
3	g	1256	A	Sidechain
3	g	1258	G	Sidechain
3	g	1266	G	Sidechain
3	g	1278	G	Sidechain
3	g	1279	G	Sidechain
3	g	1296	C	Sidechain
3	g	1316	G	Sidechain
3	g	1317	C	Sidechain
3	g	1326	U	Sidechain
3	g	1331	G	Sidechain
3	g	1338	G	Sidechain
3	g	1346	A	Sidechain
3	g	1357	A	Sidechain
3	g	1363	A	Sidechain
3	g	1370	G	Sidechain
3	g	1417	G	Sidechain
3	g	1431	A	Sidechain
3	g	1432	G	Sidechain
3	g	1442	G	Sidechain
3	g	1483	A	Sidechain
3	g	1491	G	Sidechain
3	g	1494	G	Sidechain
3	g	1504	G	Sidechain
3	g	1505	G	Sidechain
3	g	1506	U	Sidechain
3	g	1516	G	Sidechain
3	g	1517	G	Sidechain
3	g	1518	A	Sidechain
3	g	170	U	Sidechain
3	g	184	G	Sidechain
3	g	187	G	Sidechain

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Mol	Chain	Res	Type	Group
3	g	197	A	Sidechain
3	g	203	G	Sidechain
3	g	244	U	Sidechain
3	g	251	G	Sidechain
3	g	262	A	Sidechain
3	g	263	A	Sidechain
3	g	266	G	Sidechain
3	g	297	G	Sidechain
3	g	3	A	Sidechain
3	g	346	G	Sidechain
3	g	352	C	Sidechain
3	g	362	G	Sidechain
3	g	363	A	Sidechain
3	g	367	U	Sidechain
3	g	380	G	Sidechain
3	g	389	A	Sidechain
3	g	411	A	Sidechain
3	g	42	G	Sidechain
3	g	438	U	Sidechain
3	g	476	U	Sidechain
3	g	481	G	Sidechain
3	g	50	A	Sidechain
3	g	519	C	Sidechain
3	g	520	A	Sidechain
3	g	536	C	Sidechain
3	g	553	A	Sidechain
3	g	561	U	Sidechain
3	g	566	G	Sidechain
3	g	571	U	Sidechain
3	g	575	G	Sidechain
3	g	594	U	Sidechain
3	g	635	A	Sidechain
3	g	641	U	Sidechain
3	g	659	U	Sidechain
3	g	674	G	Sidechain
3	g	695	A	Sidechain
3	g	722	G	Sidechain
3	g	727	G	Sidechain
3	g	740	U	Sidechain
3	g	794	A	Sidechain
3	g	80	A	Sidechain
3	g	813	U	Sidechain

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Mol	Chain	Res	Type	Group
3	g	82	G	Sidechain
3	g	864	A	Sidechain
3	g	865	A	Sidechain
3	g	872	A	Sidechain
3	g	874	G	Sidechain
3	g	883	C	Sidechain
3	g	899	C	Sidechain
3	g	916	U	Sidechain
3	g	938	A	Sidechain
3	g	94	G	Sidechain
3	g	949	A	Sidechain
3	g	958	A	Sidechain
3	g	960	U	Sidechain
3	g	973	G	Sidechain
3	g	982	U	Sidechain
3	g	991	U	Sidechain
17	h	183	TYR	Sidechain
17	h	41	TYR	Sidechain
17	h	58	ARG	Peptide
14	j	94	ARG	Sidechain
19	k	111	ARG	Sidechain
19	k	53	ARG	Sidechain
19	k	67	ARG	Sidechain
19	k	68	ARG	Sidechain
18	l	137	SER	Peptide
18	l	164	ARG	Sidechain
18	l	187	ARG	Sidechain
18	l	55	ARG	Sidechain
18	l	69	ARG	Sidechain
21	m	137	ARG	Sidechain
23	o	11	ARG	Sidechain
23	o	122	ARG	Sidechain
23	o	17	ARG	Sidechain
23	o	6	TYR	Sidechain
22	p	64	TYR	Sidechain
22	p	76	ARG	Sidechain
6	q	126	ARG	Sidechain
6	q	127	ARG	Sidechain
5	r	62	ARG	Sidechain
8	s	70	ARG	Sidechain
8	s	86	ARG	Sidechain
8	s	89	ARG	Sidechain

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Mol	Chain	Res	Type	Group
7	t	109	ARG	Sidechain
7	t	11	ARG	Sidechain
24	v	14	A	Sidechain
24	v	15	G	Sidechain
24	v	22	A	Sidechain
24	v	24	C	Sidechain
24	v	3	C	Sidechain
24	v	30	G	Sidechain
24	v	47	A	Sidechain
24	v	48	U	Sidechain
24	v	50	G	Sidechain
24	v	59	A	Sidechain
24	v	63	C	Sidechain
24	v	65	G	Sidechain
24	v	73	A	Sidechain
24	v	74	A	Sidechain
24	v	8	U	Sidechain
11	y	35	ARG	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	5	570	0	598	0	0
2	f	3847	0	3896	0	0
3	g	33012	0	16618	0	0
4	P	649	0	691	0	0
5	r	787	0	828	0	0
6	q	877	0	887	0	0
7	t	955	0	1018	0	0
8	s	884	0	944	0	0
9	w	774	0	827	0	0
10	u	714	0	737	0	0
11	y	649	0	666	0	0
12	l	456	0	478	0	0
13	z	638	0	665	0	0
14	j	1705	0	1732	0	0
15	3	665	0	714	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	2	426	0	449	0	0
17	h	1625	0	1699	0	0
18	l	1643	0	1710	0	0
19	k	1106	0	1148	0	0
20	n	818	0	808	0	0
21	m	1182	0	1240	0	0
22	p	979	0	1034	0	0
23	o	1022	0	1070	0	0
24	v	1639	0	837	0	0
25	N	126	0	66	0	0
All	All	57748	0	41360	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

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	5	69/71 (97%)	64 (93%)	4 (6%)	1 (1%)	9	39
2	f	507/509 (100%)	465 (92%)	33 (6%)	9 (2%)	6	33
4	P	78/80 (98%)	69 (88%)	8 (10%)	1 (1%)	9	41
5	r	96/98 (98%)	80 (83%)	11 (12%)	5 (5%)	1	16
6	q	115/117 (98%)	105 (91%)	9 (8%)	1 (1%)	14	49
7	t	121/123 (98%)	111 (92%)	7 (6%)	3 (2%)	4	27
8	s	112/114 (98%)	106 (95%)	5 (4%)	1 (1%)	14	49
9	w	92/100 (92%)	82 (89%)	10 (11%)	0	100	100
10	u	86/88 (98%)	81 (94%)	5 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	y	80/82 (98%)	73 (91%)	4 (5%)	3 (4%)	2	20
12	1	53/55 (96%)	52 (98%)	1 (2%)	0	100	100
13	z	77/79 (98%)	71 (92%)	6 (8%)	0	100	100
14	j	216/218 (99%)	200 (93%)	12 (6%)	4 (2%)	6	32
15	3	83/85 (98%)	82 (99%)	1 (1%)	0	100	100
16	2	49/51 (96%)	37 (76%)	9 (18%)	3 (6%)	1	14
17	h	204/206 (99%)	196 (96%)	6 (3%)	2 (1%)	12	47
18	l	203/205 (99%)	190 (94%)	10 (5%)	3 (2%)	8	38
19	k	148/150 (99%)	136 (92%)	8 (5%)	4 (3%)	4	26
20	n	98/100 (98%)	92 (94%)	3 (3%)	3 (3%)	3	23
21	m	149/151 (99%)	142 (95%)	7 (5%)	0	100	100
22	p	127/129 (98%)	123 (97%)	4 (3%)	0	100	100
23	o	125/127 (98%)	114 (91%)	6 (5%)	5 (4%)	2	19
All	All	2888/2938 (98%)	2671 (92%)	169 (6%)	48 (2%)	9	35

All (48) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	f	674	LEU
2	f	685	GLU
5	r	57	VAL
7	t	33	CYS
16	2	39	LYS
19	k	100	GLU
1	5	70	ARG
2	f	673	LYS
7	t	47	ALA
11	y	79	ASN
14	j	148	GLY
19	k	122	VAL
20	n	85	ILE
23	o	41	GLU
2	f	403	GLY
2	f	746	PHE
2	f	848	PHE
4	P	67	SER
5	r	89	ARG

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Mol	Chain	Res	Type
8	s	9	PRO
14	j	67	LEU
16	2	8	ASN
17	h	173	PRO
23	o	11	ARG
2	f	591	LEU
2	f	857	ASN
5	r	36	VAL
11	y	31	ARG
14	j	20	ARG
14	j	22	TRP
16	2	24	LYS
18	l	166	LYS
19	k	77	ASN
23	o	55	ASP
23	o	57	VAL
23	o	90	ASP
2	f	387	ALA
5	r	75	ASP
11	y	43	ALA
20	n	54	LEU
20	n	98	GLU
5	r	6	ILE
6	q	88	PRO
7	t	101	LEU
17	h	190	THR
18	l	174	ALA
19	k	137	ARG
18	l	36	ALA

5.3.2 Protein sidechains ⓘ

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	5	62/62 (100%)	61 (98%)	1 (2%)	55	69
2	f	409/409 (100%)	385 (94%)	24 (6%)	18	41

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	P	74/74 (100%)	74 (100%)	0	100	100
5	r	86/86 (100%)	84 (98%)	2 (2%)	44	64
6	q	90/90 (100%)	87 (97%)	3 (3%)	33	55
7	t	103/103 (100%)	102 (99%)	1 (1%)	68	75
8	s	92/92 (100%)	88 (96%)	4 (4%)	26	48
9	w	79/83 (95%)	78 (99%)	1 (1%)	61	71
10	u	76/76 (100%)	75 (99%)	1 (1%)	61	71
11	y	65/65 (100%)	63 (97%)	2 (3%)	35	56
12	1	48/48 (100%)	47 (98%)	1 (2%)	47	65
13	z	70/70 (100%)	68 (97%)	2 (3%)	37	58
14	j	180/180 (100%)	176 (98%)	4 (2%)	45	64
15	3	65/65 (100%)	65 (100%)	0	100	100
16	2	44/44 (100%)	44 (100%)	0	100	100
17	h	170/170 (100%)	168 (99%)	2 (1%)	63	73
18	l	172/172 (100%)	169 (98%)	3 (2%)	53	67
19	k	113/113 (100%)	112 (99%)	1 (1%)	70	75
20	n	87/87 (100%)	87 (100%)	0	100	100
21	m	124/124 (100%)	124 (100%)	0	100	100
22	p	104/104 (100%)	102 (98%)	2 (2%)	50	66
23	o	105/105 (100%)	103 (98%)	2 (2%)	50	66
All	All	2418/2422 (100%)	2362 (98%)	56 (2%)	44	64

All (56) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	5	32	ILE
2	f	414	THR
2	f	555	LEU
2	f	619	GLU
2	f	649	LYS
2	f	651	ARG
2	f	652	GLU
2	f	658	GLN
2	f	660	LYS
2	f	663	GLU

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Mol	Chain	Res	Type
2	f	664	VAL
2	f	665	LYS
2	f	668	ARG
2	f	671	LYS
2	f	673	LYS
2	f	674	LEU
2	f	675	GLU
2	f	677	MET
2	f	678	PHE
2	f	680	ASN
2	f	681	MET
2	f	683	GLU
2	f	696	ASP
2	f	792	GLN
2	f	872	ARG
5	r	6	ILE
5	r	59	LYS
6	q	21	HIS
6	q	30	ILE
6	q	120	CYS
7	t	35	ARG
8	s	2	ARG
8	s	24	VAL
8	s	65	GLU
8	s	82	LEU
9	w	20	PHE
10	u	19	ASN
11	y	1	MET
11	y	12	LYS
12	l	47	ARG
13	z	4	LEU
13	z	64	GLU
14	j	18	GLN
14	j	31	PHE
14	j	88	GLN
14	j	219	THR
17	h	187	GLU
17	h	190	THR
18	l	69	ARG
18	l	176	LYS
18	l	205	LYS
19	k	53	ARG

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Mol	Chain	Res	Type
22	p	53	ASP
22	p	55	LYS
23	o	57	VAL
23	o	98	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
24	v	76/77 (98%)	27 (35%)	0
25	N	5/6 (83%)	5 (100%)	2 (40%)
3	g	1538/1539 (99%)	203 (13%)	0
All	All	1619/1622 (99%)	235 (14%)	2 (0%)

All (235) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	g	4	U
3	g	5	U
3	g	9	G
3	g	31	G
3	g	32	A
3	g	39	G
3	g	47	C
3	g	48	C
3	g	50	A
3	g	51	A
3	g	52	C
3	g	70	U
3	g	71	A
3	g	72	A
3	g	74	A
3	g	83	C
3	g	84	U
3	g	85	U
3	g	86	G
3	g	87	C
3	g	88	U
3	g	97	G

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Mol	Chain	Res	Type
3	g	116	A
3	g	118	U
3	g	120	A
3	g	121	U
3	g	130	A
3	g	131	A
3	g	136	C
3	g	144	G
3	g	155	A
3	g	159	G
3	g	182	A
3	g	183	C
3	g	204	G
3	g	209	U
3	g	210	C
3	g	211	G
3	g	212	G
3	g	245	U
3	g	247	G
3	g	251	G
3	g	266	G
3	g	267	C
3	g	289	G
3	g	326	G
3	g	328	C
3	g	329	A
3	g	330	C
3	g	332	G
3	g	347	G
3	g	352	C
3	g	354	G
3	g	364	A
3	g	367	U
3	g	372	C
3	g	406	G
3	g	411	A
3	g	412	A
3	g	413	G
3	g	414	A
3	g	421	U
3	g	423	G
3	g	424	G

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Mol	Chain	Res	Type
3	g	429	U
3	g	438	U
3	g	439	U
3	g	451	A
3	g	466	A
3	g	468	A
3	g	469	C
3	g	479	U
3	g	481	G
3	g	485	U
3	g	497	G
3	g	511	C
3	g	518	C
3	g	524	G
3	g	527	G
3	g	532	A
3	g	547	A
3	g	563	A
3	g	572	A
3	g	573	A
3	g	576	C
3	g	577	G
3	g	596	A
3	g	620	C
3	g	633	G
3	g	650	G
3	g	665	A
3	g	722	G
3	g	731	G
3	g	734	G
3	g	747	A
3	g	755	G
3	g	777	A
3	g	794	A
3	g	815	A
3	g	817	C
3	g	819	A
3	g	821	G
3	g	828	U
3	g	829	G
3	g	832	G
3	g	842	U

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Mol	Chain	Res	Type
3	g	843	U
3	g	846	G
3	g	914	A
3	g	926	G
3	g	927	G
3	g	934	C
3	g	935	A
3	g	960	U
3	g	969	A
3	g	975	A
3	g	976	G
3	g	977	A
3	g	983	A
3	g	993	G
3	g	1004	A
3	g	1008	U
3	g	1018	G
3	g	1022	A
3	g	1027	C
3	g	1028	C
3	g	1031	C
3	g	1033	G
3	g	1034	G
3	g	1043	G
3	g	1065	U
3	g	1073	U
3	g	1080	A
3	g	1086	U
3	g	1093	A
3	g	1094	G
3	g	1095	U
3	g	1101	A
3	g	1102	A
3	g	1109	C
3	g	1125	U
3	g	1132	C
3	g	1133	G
3	g	1134	G
3	g	1137	C
3	g	1139	G
3	g	1142	G
3	g	1145	A

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Mol	Chain	Res	Type
3	g	1159	U
3	g	1160	G
3	g	1161	C
3	g	1167	A
3	g	1168	U
3	g	1189	U
3	g	1190	G
3	g	1196	A
3	g	1197	A
3	g	1201	A
3	g	1202	U
3	g	1212	U
3	g	1213	A
3	g	1226	C
3	g	1227	A
3	g	1239	A
3	g	1240	U
3	g	1241	G
3	g	1253	G
3	g	1258	G
3	g	1275	A
3	g	1278	G
3	g	1279	G
3	g	1280	A
3	g	1286	U
3	g	1287	A
3	g	1300	G
3	g	1302	C
3	g	1304	G
3	g	1305	G
3	g	1317	C
3	g	1318	A
3	g	1320	C
3	g	1362	A
3	g	1363	A
3	g	1364	U
3	g	1370	G
3	g	1379	G
3	g	1419	G
3	g	1441	A
3	g	1446	A
3	g	1492	A

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Mol	Chain	Res	Type
3	g	1493	A
3	g	1497	G
3	g	1503	A
3	g	1505	G
3	g	1517	G
3	g	1529	G
3	g	1530	G
3	g	1531	A
3	g	1533	C
3	g	1534	A
3	g	1535	C
3	g	1536	C
3	g	1538	C
24	v	2	G
24	v	8	U
24	v	9	G
24	v	16	C
24	v	17	C
24	v	18	U
24	v	20	G
24	v	22	A
24	v	23	G
24	v	24	C
24	v	25	U
24	v	43	G
24	v	47	A
24	v	49	C
24	v	55	U
24	v	56	U
24	v	57	C
24	v	58	A
24	v	59	A
24	v	60	A
24	v	61	U
24	v	62	C
24	v	72	C
24	v	74	A
24	v	75	C
24	v	76	C
24	v	77	A
25	N	14	A
25	N	15	U

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Mol	Chain	Res	Type
25	N	16	A
25	N	17	U
25	N	18	G

All (2) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
25	N	14	A
25	N	16	A

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.

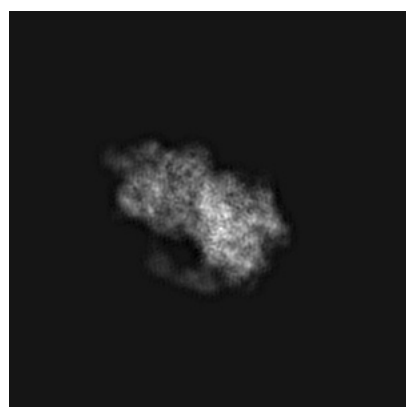
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0643. These allow visual inspection of the internal detail of the map and identification of artifacts.

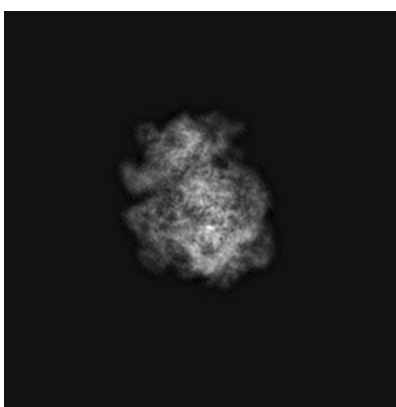
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

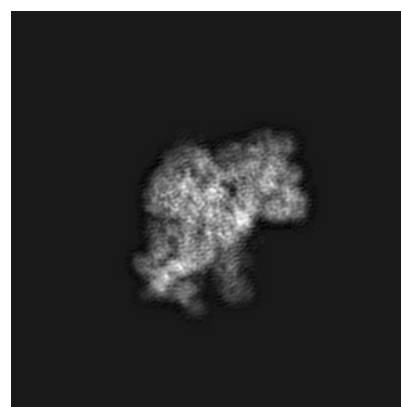
6.1.1 Primary map



X



Y

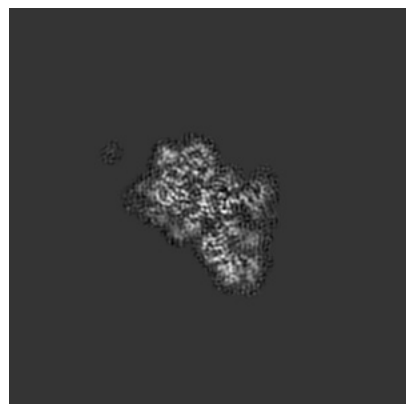


Z

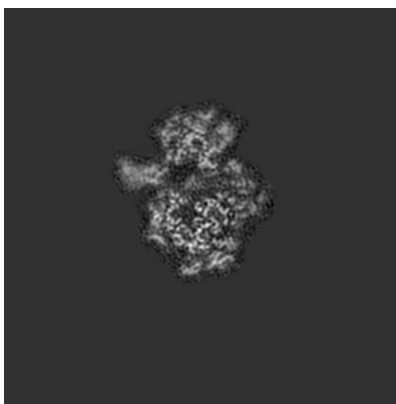
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

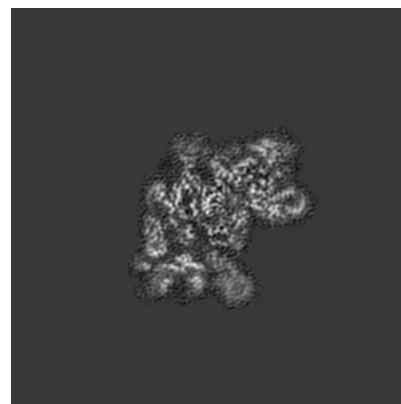
6.2.1 Primary map



X Index: 128



Y Index: 128

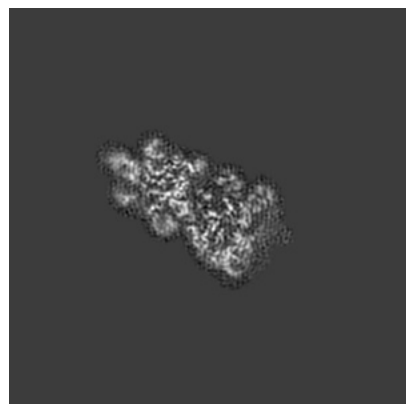


Z Index: 128

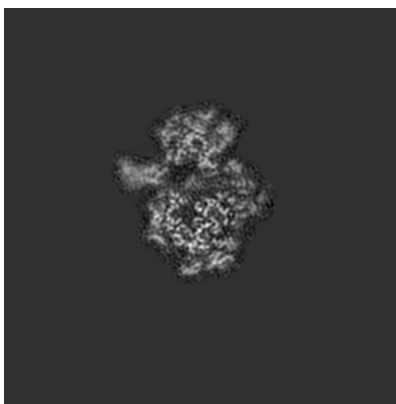
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

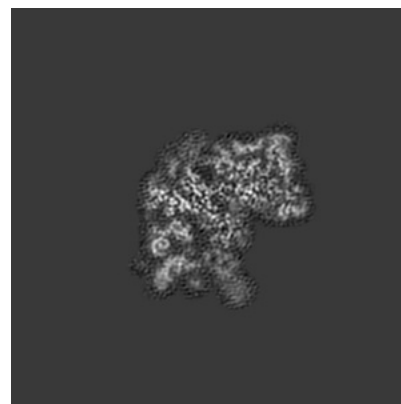
6.3.1 Primary map



X Index: 112



Y Index: 128

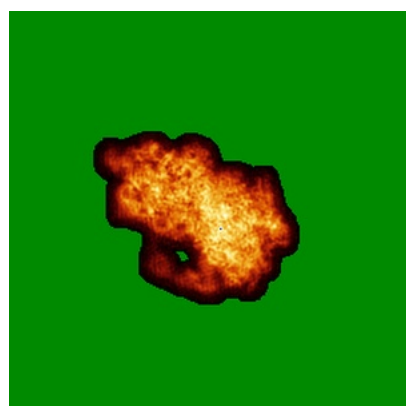


Z Index: 124

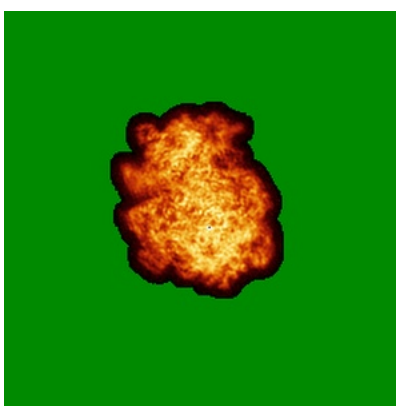
The images above show the largest variance slices of the map in three orthogonal directions.

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

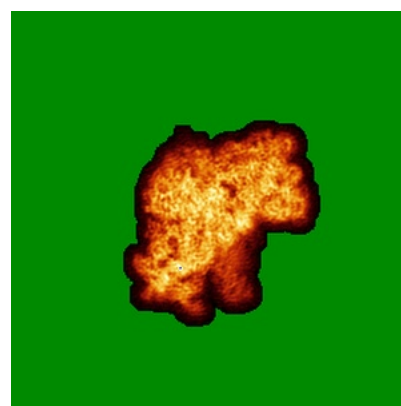
6.4.1 Primary map



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



The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

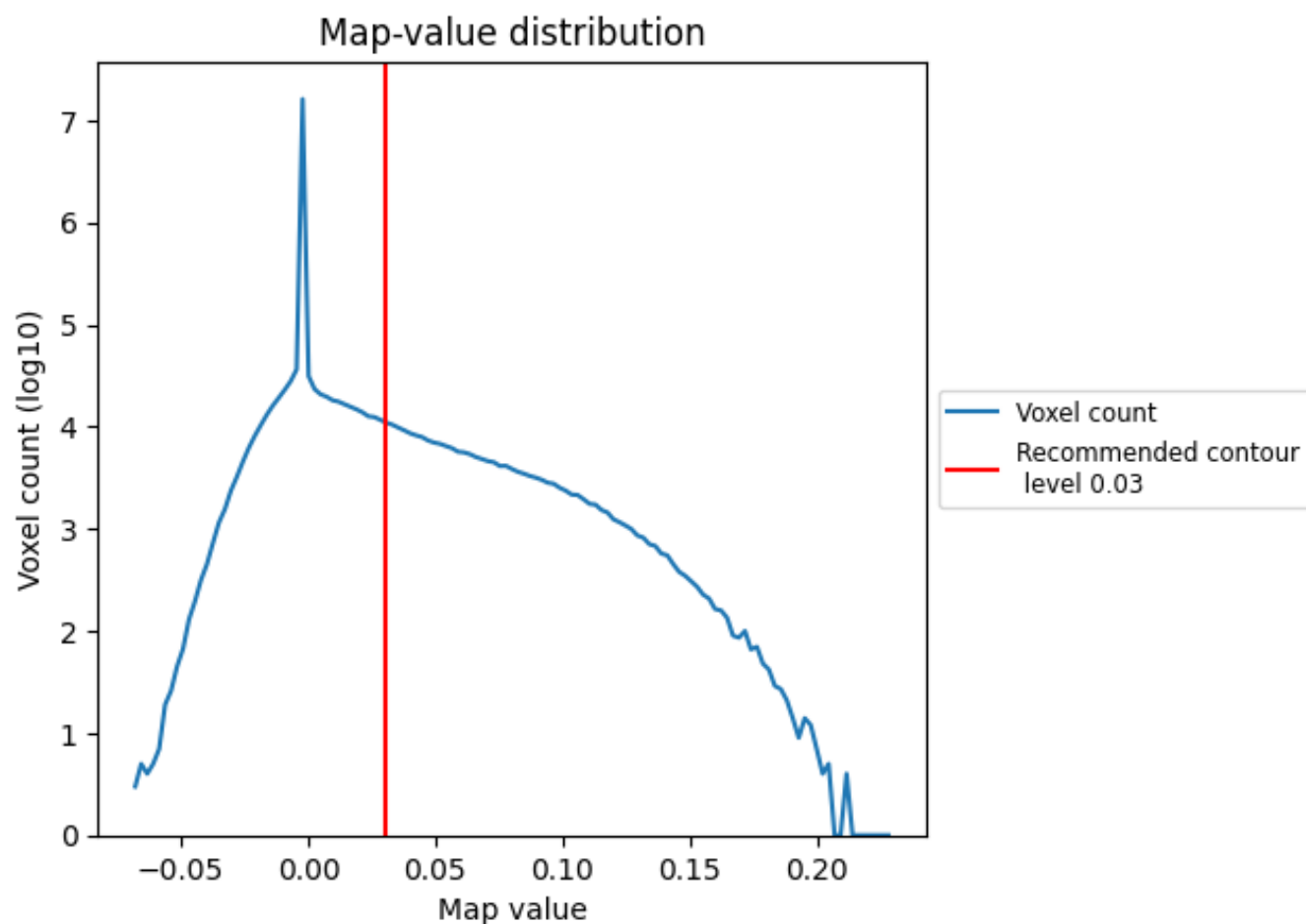
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

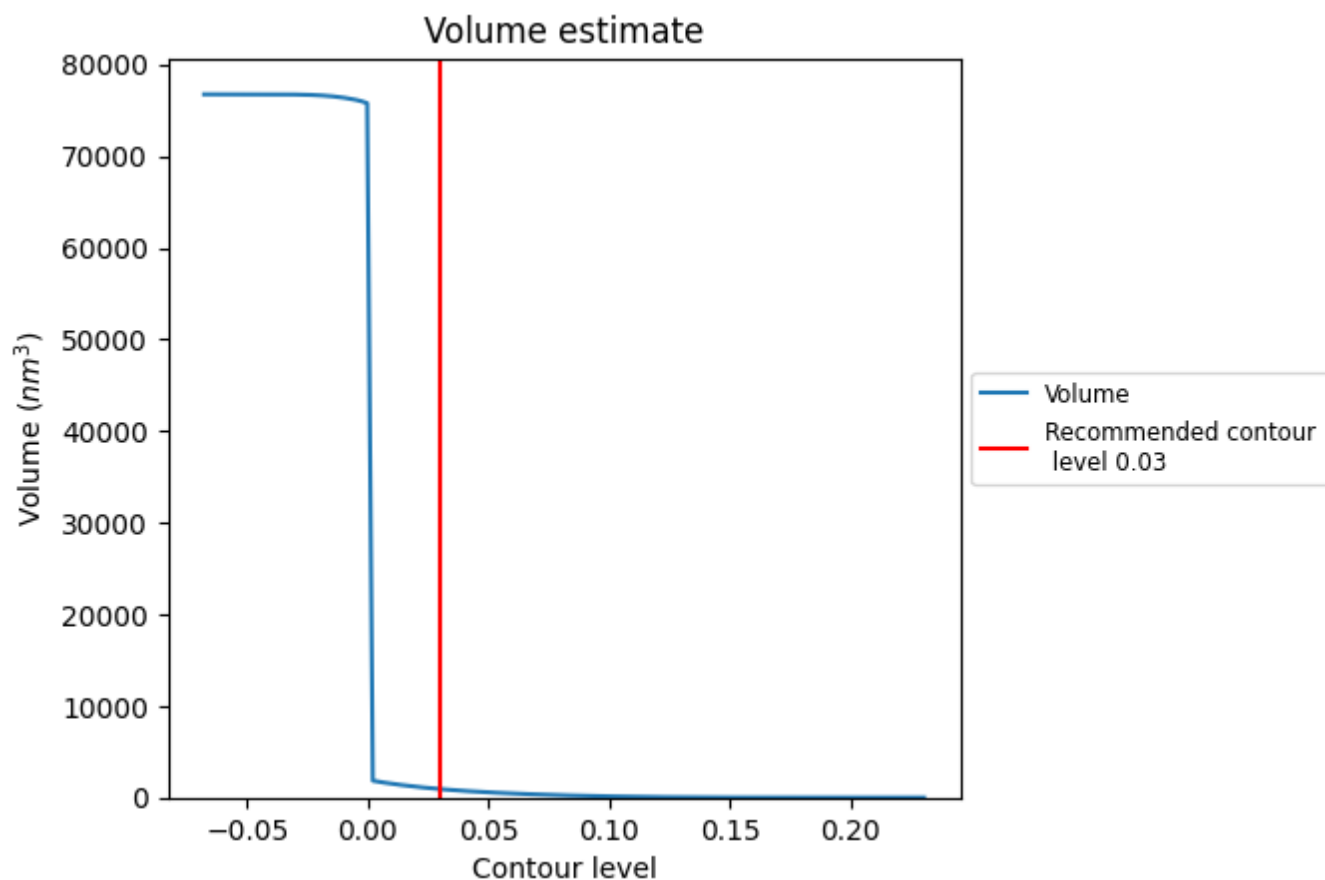
This section contains the results of statistical analysis of the map.

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.

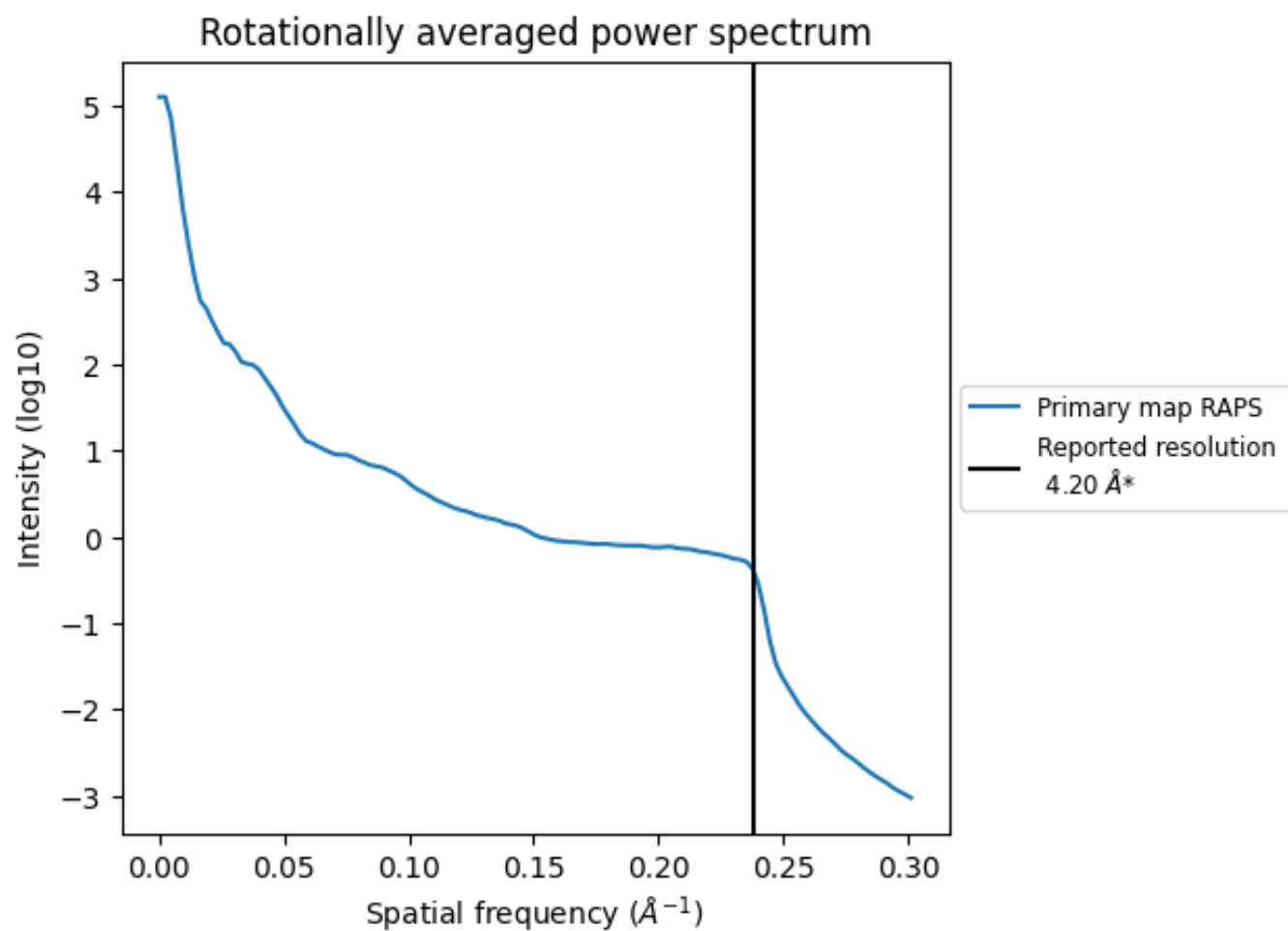
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 925 nm^3 ; this corresponds to an approximate mass of 836 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

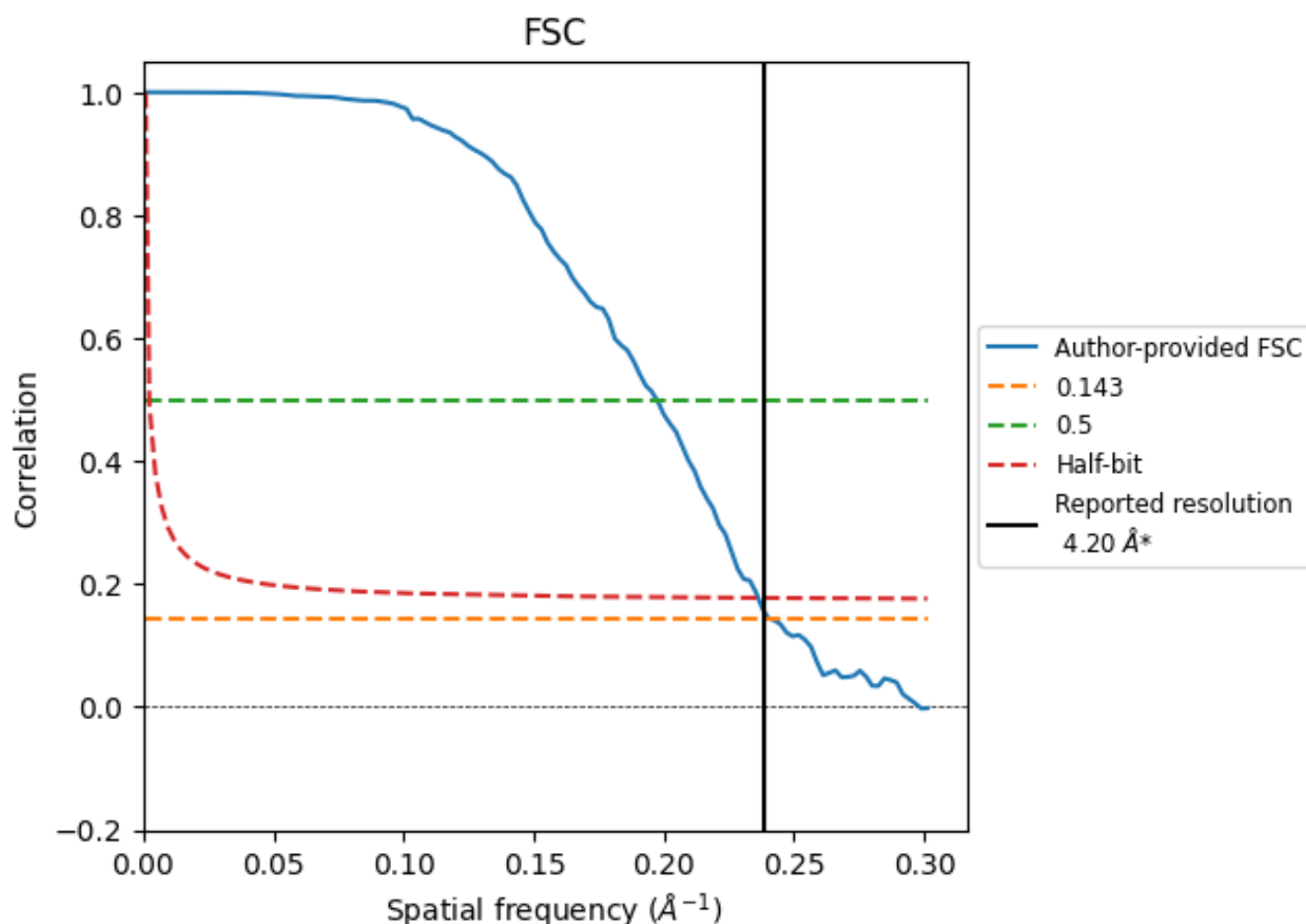


*Reported resolution corresponds to spatial frequency of 0.238 Å⁻¹

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 0.238 Å⁻¹

8.2 Resolution estimates [i](#)

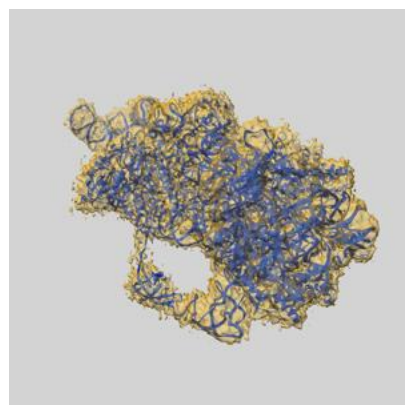
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.20	-	-
Author-provided FSC curve	4.15	5.07	4.23
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

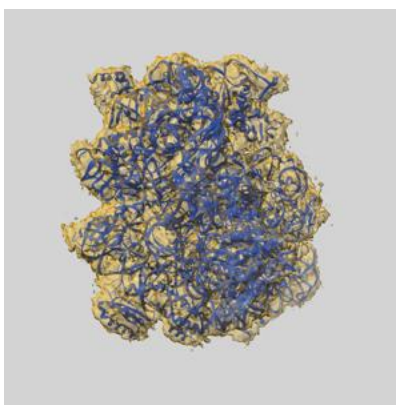
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-0643 and PDB model 6O7K. Per-residue inclusion information can be found in section 3 on page 8.

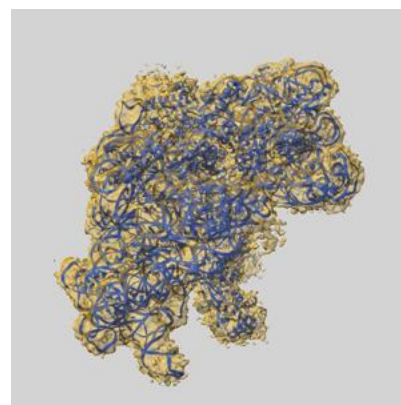
9.1 Map-model overlay [i](#)



X



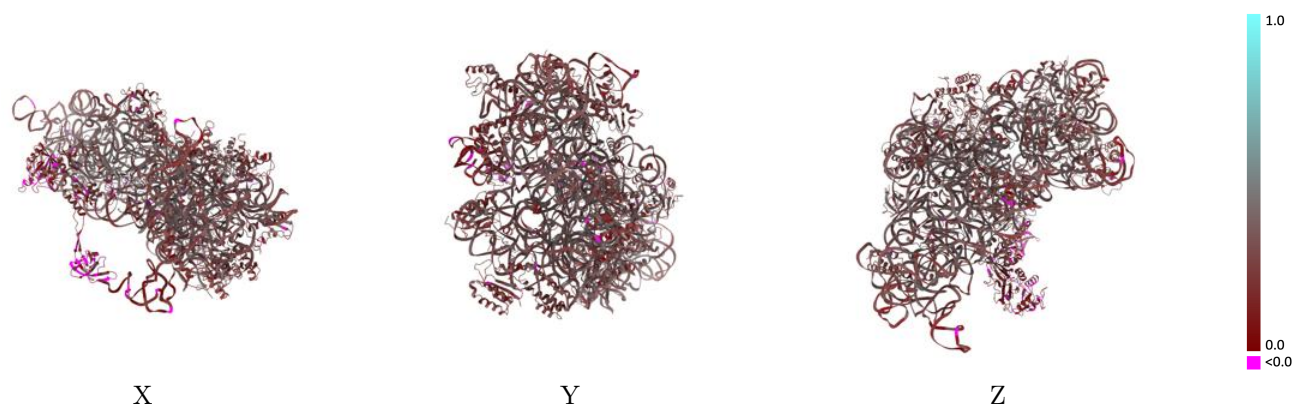
Y



Z

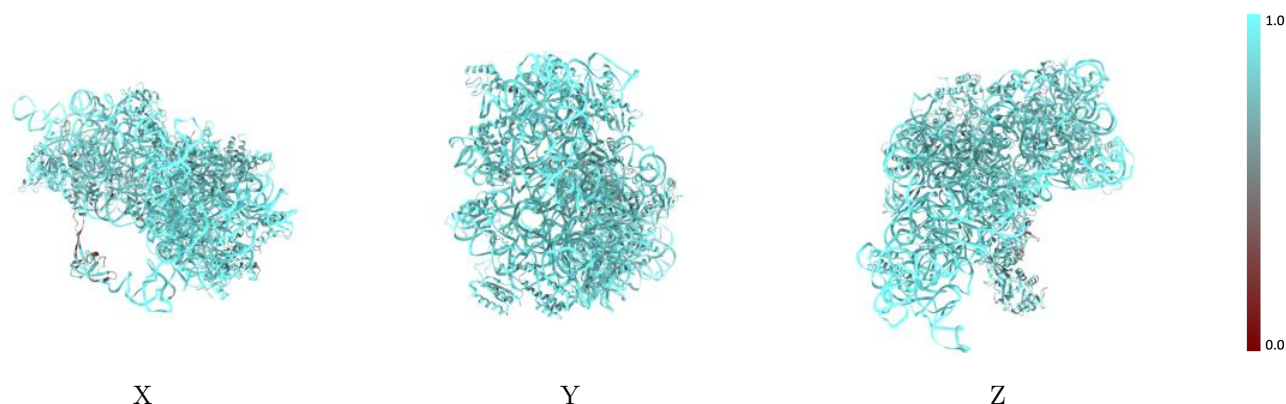
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



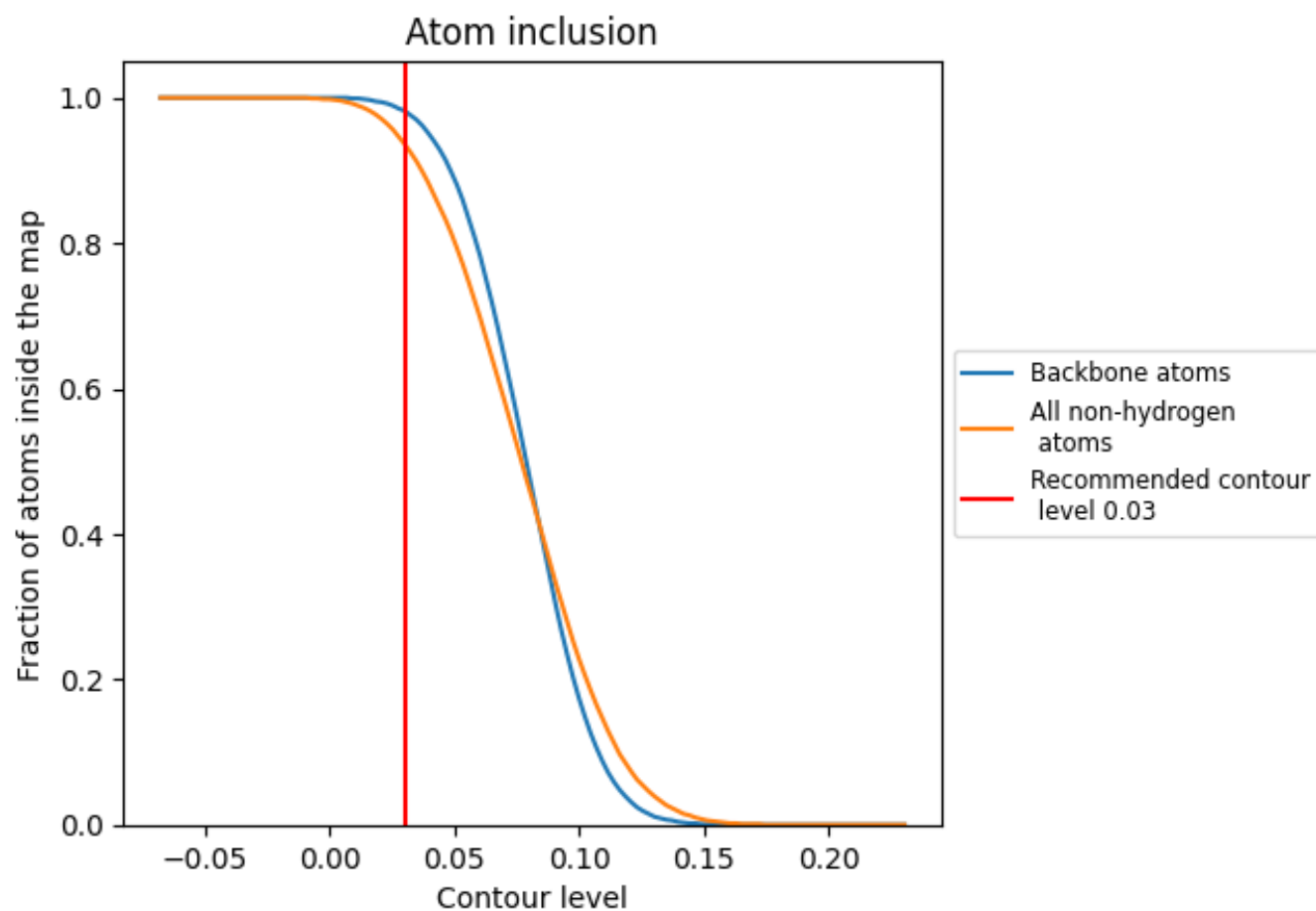
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.03).





















































9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 94% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

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

Chain	Atom inclusion	Q-score
All	 0.9360	 0.3060
1	 0.8720	 0.2680
2	 0.8310	 0.2120
3	 0.9010	 0.2790
5	 0.7910	 0.2650
N	 0.9600	 0.3340
P	 0.8880	 0.3280
f	 0.7610	 0.1710
g	 0.9930	 0.3370
h	 0.8830	 0.3220
j	 0.8250	 0.2530
k	 0.8680	 0.3330
l	 0.8740	 0.2830
m	 0.8510	 0.2690
n	 0.8510	 0.2380
o	 0.8880	 0.2880
p	 0.8650	 0.3180
q	 0.8780	 0.2790
r	 0.8620	 0.2870
s	 0.8910	 0.2510
t	 0.8590	 0.3610
u	 0.8710	 0.2660
v	 0.9660	 0.1950
w	 0.8900	 0.3000
y	 0.8870	 0.3290
z	 0.9120	 0.2640

