Full wwPDB EM Validation Report

Mar 19, 2022 – 06:59 am GMT

PDB ID	:	7QV3
EMDB ID	:	EMD-14159
Title	:	Bacillus subtilis MutS2-collided disome complex (MutS2 conf.2; Leading 70S)
Authors	:	Filbeck, S.; Pfeffer, S.
Deposited on	:	2022-01-19
Resolution	:	5.14 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 following versions of software and data (see references ⓘ) were used in the production of this report:

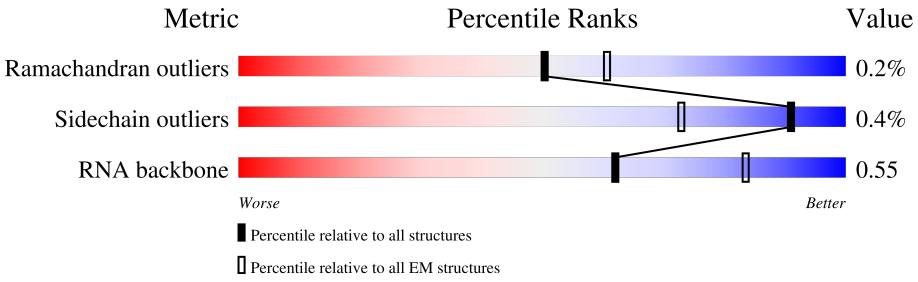
EMDB validation analysis	:	0.0.0.dev97
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.27

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 5.14 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)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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	0	59	92% 8%
2	1	49	98% .
3	2	44	100%
4	3	66	97% .
5	4	37	100%
6	6	66	5% 95% 5%
7	A	26	8% 31% 54% 15%
8	B	112	74% 26%

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Mol	Chain	Length	Quality of chain
9	C	277	98%
10	D	209	98%
11	E	207	99%
12	F	179	97%
13	G	179	98%
14	H	77	81% 19%
15	I	24	33% 100%
16	J	145	98%
17	K	122	100%
18	L	146	100%
19	M	144	94% 6%
20	N	120	99%
21	O	120	98%
22	P	115	100%
23	Q	119	97%
24	R	102	99%
25	S	113	96%
26	T	95	95% 5%
27	U	103	98%
28	V	2928	75% 23%
29	W	94	87% 13%
30	X	149	11% 97%
31	Y	66	98%
32	Z	59	98%
33	a	1533	83% 17%

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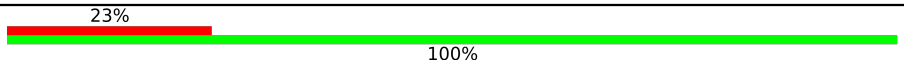
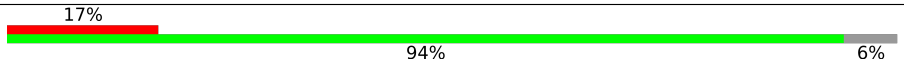
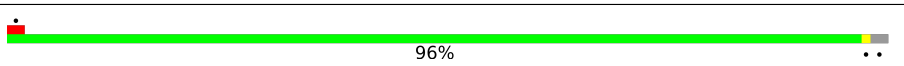
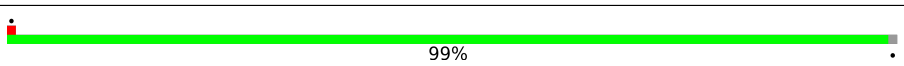
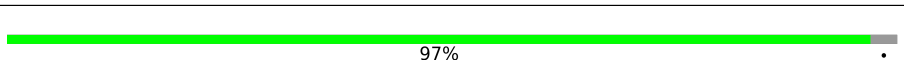
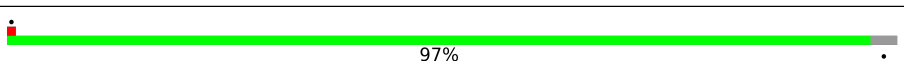
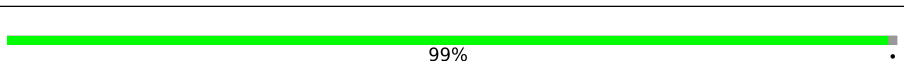
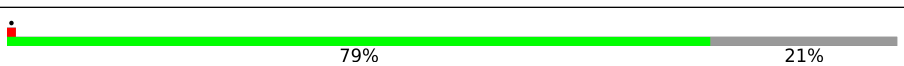
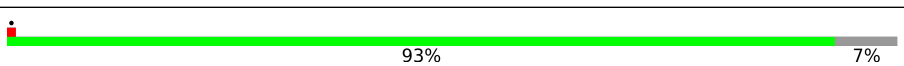
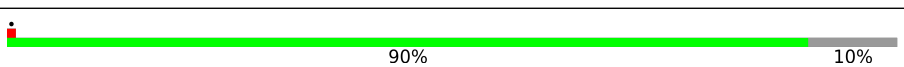
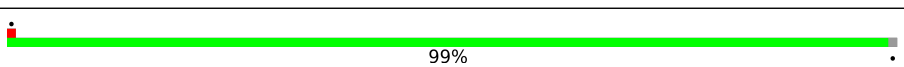
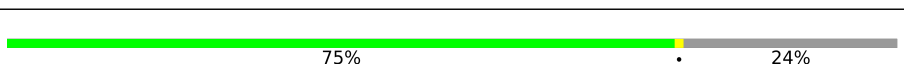
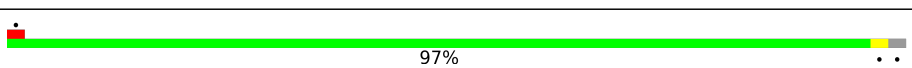
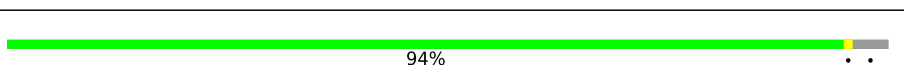
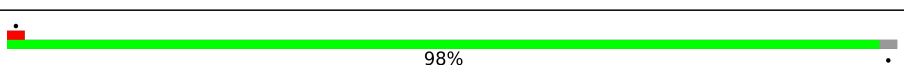
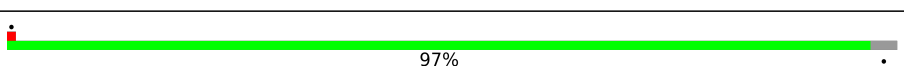
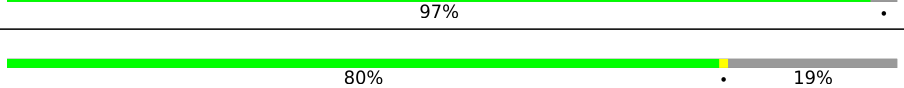
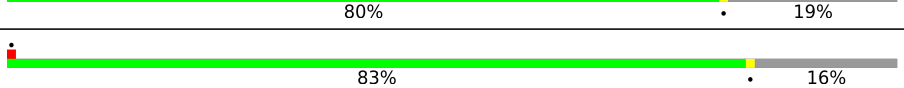
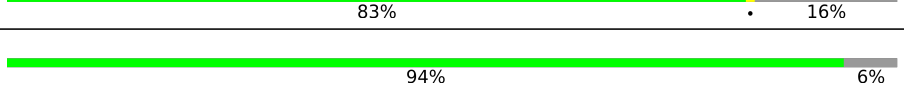
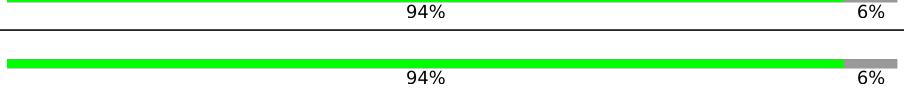
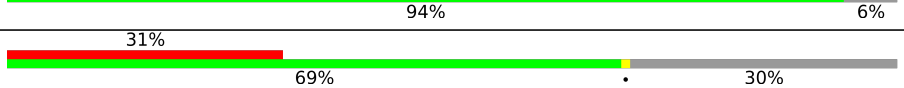
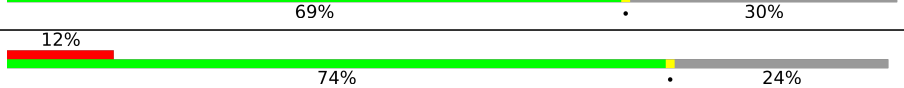
Mol	Chain	Length	Quality of chain
34	b	57	
35	c	218	
36	d	200	
37	e	166	
38	f	95	
39	g	156	
40	h	132	
41	i	130	
42	j	102	
43	k	131	
44	l	138	
45	m	121	
46	n	61	
47	o	89	
48	p	90	
49	q	87	
50	r	79	
51	s	92	
52	t	88	
53	u	62	
54	v	785	
54	w	785	

2 Entry composition

There are 54 unique types of molecules in this entry. The entry contains 149707 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 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	54	426	262	86	71	7	0	0

- Molecule 2 is a protein called 50S ribosomal protein L33 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	1	48	401	244	80	73	4	0	0

- Molecule 3 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	44	367	222	89	54	2	0	0

- Molecule 4 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	3	64	512	321	107	82	2	0	0

- Molecule 5 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	37	296	186	60	45	5	0	0

- Molecule 6 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	6	63	499	312	91	91	5	0	0

- Molecule 7 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A	26	Total	C	N	O	P	0	0
			559	251	106	176	26		

- Molecule 8 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	B	112	Total	C	N	O	P	0	0
			2392	1068	435	778	111		

- Molecule 9 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	C	272	Total	C	N	O	S	0	0
			2083	1296	408	373	6		

- Molecule 10 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	D	206	Total	C	N	O	S	0	0
			1569	985	289	290	5		

- Molecule 11 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	E	205	Total	C	N	O	S	0	0
			1561	980	289	290	2		

- Molecule 12 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	F	176	Total	C	N	O	S	0	0
			1386	882	241	256	7		

- Molecule 13 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	G	175	Total	C	N	O	S	0	0
			1342	835	248	257	2		

- Molecule 14 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	H	77	Total	C	N	O	P	0	0
			1643	731	290	545	77		

- Molecule 15 is a protein called Nascent chain.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	I	24	Total	C	N	O	0	0
			120	72	24	24		

- Molecule 16 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	J	142	Total	C	N	O	S	0	0
			1123	710	206	202	5		

- Molecule 17 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	K	122	Total	C	N	O	S	0	0
			920	571	173	172	4		

- Molecule 18 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	L	146	Total	C	N	O	S	0	0
			1081	671	207	201	2		

- Molecule 19 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	M	135	Total	C	N	O	S	0	0
			1076	690	205	176	5		

- Molecule 20 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	N	119	Total	C	N	O	S	0	0
			953	583	186	180	4		

- Molecule 21 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	O	120	Total	C	N	O	S	0	0
			912	564	176	171	1		

- Molecule 22 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	P	115	Total	C	N	O	S	0	0
			944	600	185	158	1		

- Molecule 23 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Q	117	Total	C	N	O	S	0	0
			940	591	189	156	4		

- Molecule 24 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	R	101	Total	C	N	O	0	0
			786	501	139	146		

- Molecule 25 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	S	109	Total	C	N	O	S	0	0
			842	525	164	150	3		

- Molecule 26 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	T	90	Total	C	N	O	S	0	0
			725	452	134	136	3		

- Molecule 27 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	U	101	Total	C	N	O	S	0	0
			762	478	142	138	4		

- Molecule 28 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	V	2887	Total	C	N	O	P	0	0
			61998	27661	11460	19993	2884		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
V	243	G	A	conflict	GB 1491848961
V	325	A	-	insertion	GB 1491848961
V	326	A	-	insertion	GB 1491848961
V	327	G	-	insertion	GB 1491848961
V	328	G	-	insertion	GB 1491848961
V	640	U	C	conflict	GB 1491848961
V	2232	A	G	conflict	GB 1491848961

- Molecule 29 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	W	82	Total	C	N	O	0	0
			630	390	123	117		

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	X	149	Total	C	N	O	S	0	0
			1151	726	205	219	1		

- Molecule 31 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Y	65	Total	C	N	O	S	0	0
			530	328	102	98	2		

- Molecule 32 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Z	58	Total	C	N	O	S	0	0
			455	281	89	84	1		

- Molecule 33 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	a	1533	Total	C	N	O	P	0	0
			32891	14667	6034	10657	1533		

- Molecule 34 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	b	57	Total	C	N	O	S	0	0
			476	295	97	83	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
b	30	ALA	GLN	conflict	UNP P21478

- Molecule 35 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	c	206	Total	C	N	O	S	0	0
			1619	1011	304	301	3		

- Molecule 36 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	d	195	Total	C	N	O	S	0	0
			1568	991	291	284	2		

- Molecule 37 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	e	164	Total	C	N	O	S	0	0
			1218	767	225	224	2		

- Molecule 38 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	f	92	Total	C	N	O	S	0	0
			755	476	132	146	1		

- Molecule 39 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	g	151	Total	C	N	O	S	0	0
			1203	755	224	218	6		

- Molecule 40 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	h	131	Total	C	N	O	S	0	0
			1036	655	191	187	3		

- Molecule 41 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				AltConf	Trace
41	i	103	Total	C	N	O	0	0
			784	485	151	148		

- Molecule 42 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	j	95	Total	C	N	O	S	0	0
			761	479	139	141	2		

- Molecule 43 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	k	118	Total	C	N	O	S	0	0
			871	537	171	161	2		

- Molecule 44 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	l	136	Total	C	N	O	S	0	0
			1052	653	211	186	2		

- Molecule 45 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	m	92	Total	C	N	O	0	0
			740	459	145	136		

- Molecule 46 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	n	60	Total	C	N	O	S	0	0
			497	317	98	77	5		

- Molecule 47 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	o	85	Total	C	N	O	S	0	0
			710	436	144	129	1		

- Molecule 48 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	p	88	Total	C	N	O	S	0	0
			695	441	128	124	2		

- Molecule 49 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	q	84	Total	C	N	O	S	0	0
			691	435	128	126	2		

- Molecule 50 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	r	64	Total	C	N	O	S	0	0
			518	332	96	88	2		

- Molecule 51 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	s	77	Total	C	N	O	S	0	0
			624	403	110	109	2		

- Molecule 52 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	t	83	Total	C	N	O	S	0	0
			637	390	130	116	1		

- Molecule 53 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	u	58	Total	C	N	O	S	0	0
			444	275	92	75	2		

- Molecule 54 is a protein called Endonuclease MutS2.

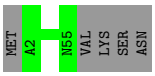
Mol	Chain	Residues	Atoms					AltConf	Trace
54	v	548	Total	C	N	O	S	0	0
			4289	2680	743	850	16		
54	w	593	Total	C	N	O	S	0	0
			4644	2904	804	919	17		

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.

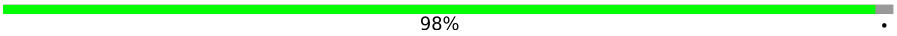
• Molecule 1: 50S ribosomal protein L32

Chain 0:



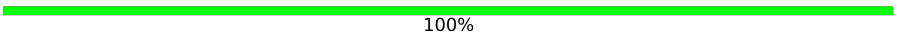
• Molecule 2: 50S ribosomal protein L33 1

Chain 1:



• Molecule 3: 50S ribosomal protein L34

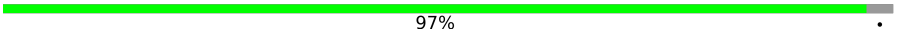
Chain 2:



There are no outlier residues recorded for this chain.

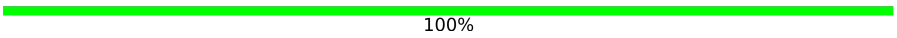
• Molecule 4: 50S ribosomal protein L35

Chain 3:



• Molecule 5: 50S ribosomal protein L36

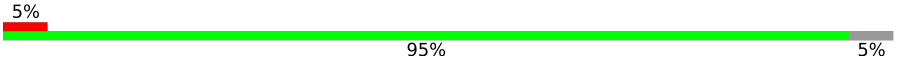
Chain 4:

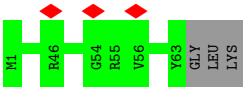


There are no outlier residues recorded for this chain.

• Molecule 6: 50S ribosomal protein L31

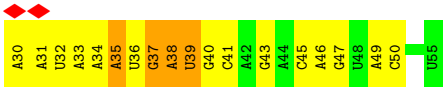
Chain 6:





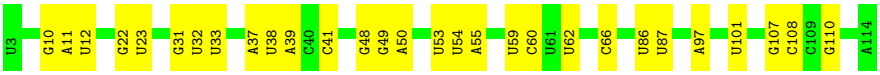
• Molecule 7: mRNA

Chain A:



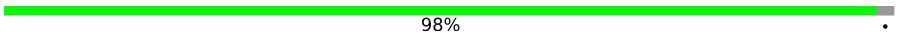
• Molecule 8: 5S ribosomal RNA

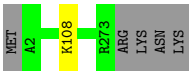
Chain B:



• Molecule 9: 50S ribosomal protein L2

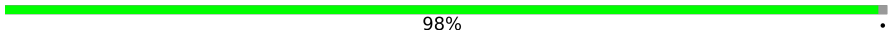
Chain C:

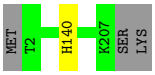




• Molecule 10: 50S ribosomal protein L3

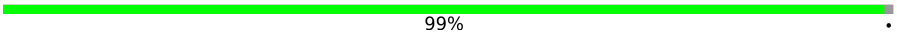
Chain D:





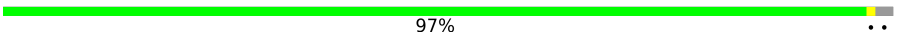
• Molecule 11: 50S ribosomal protein L4

Chain E:



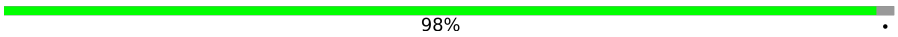
• Molecule 12: 50S ribosomal protein L5

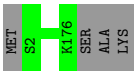
Chain F:



• Molecule 13: 50S ribosomal protein L6

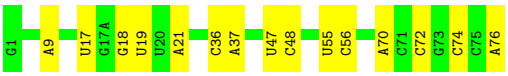
Chain G:





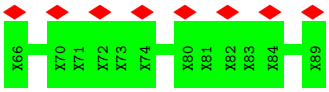
• Molecule 14: P-site tRNA

Chain H:



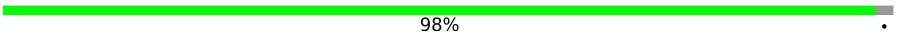
• Molecule 15: Nascent chain

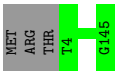
Chain I:



• Molecule 16: 50S ribosomal protein L13

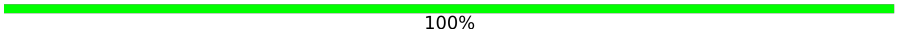
Chain J:





• Molecule 17: 50S ribosomal protein L14

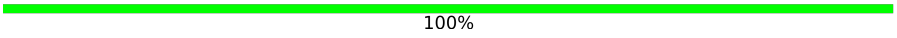
Chain K:



There are no outlier residues recorded for this chain.

• Molecule 18: 50S ribosomal protein L15

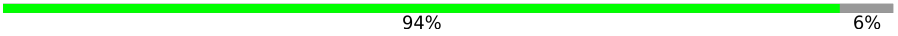
Chain L:



There are no outlier residues recorded for this chain.

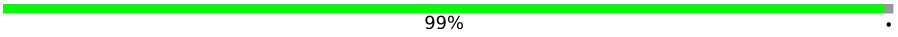
• Molecule 19: 50S ribosomal protein L16

Chain M:



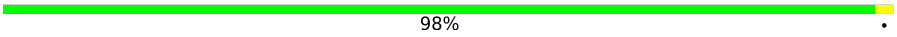
• Molecule 20: 50S ribosomal protein L17

Chain N:



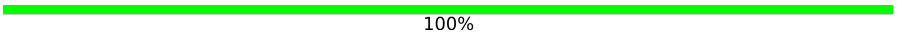
• Molecule 21: 50S ribosomal protein L18

Chain O:



• Molecule 22: 50S ribosomal protein L19

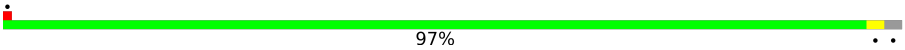
Chain P:

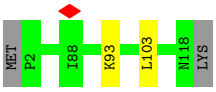


There are no outlier residues recorded for this chain.

• Molecule 23: 50S ribosomal protein L20

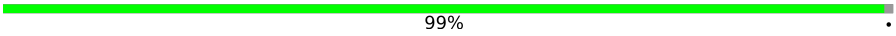
Chain Q:





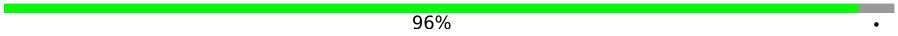
• Molecule 24: 50S ribosomal protein L21

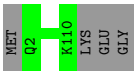
Chain R:



• Molecule 25: 50S ribosomal protein L22

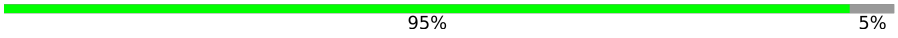
Chain S:

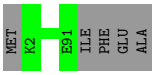




• Molecule 26: 50S ribosomal protein L23

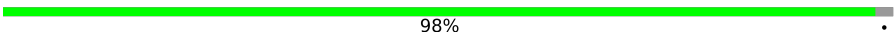
Chain T:





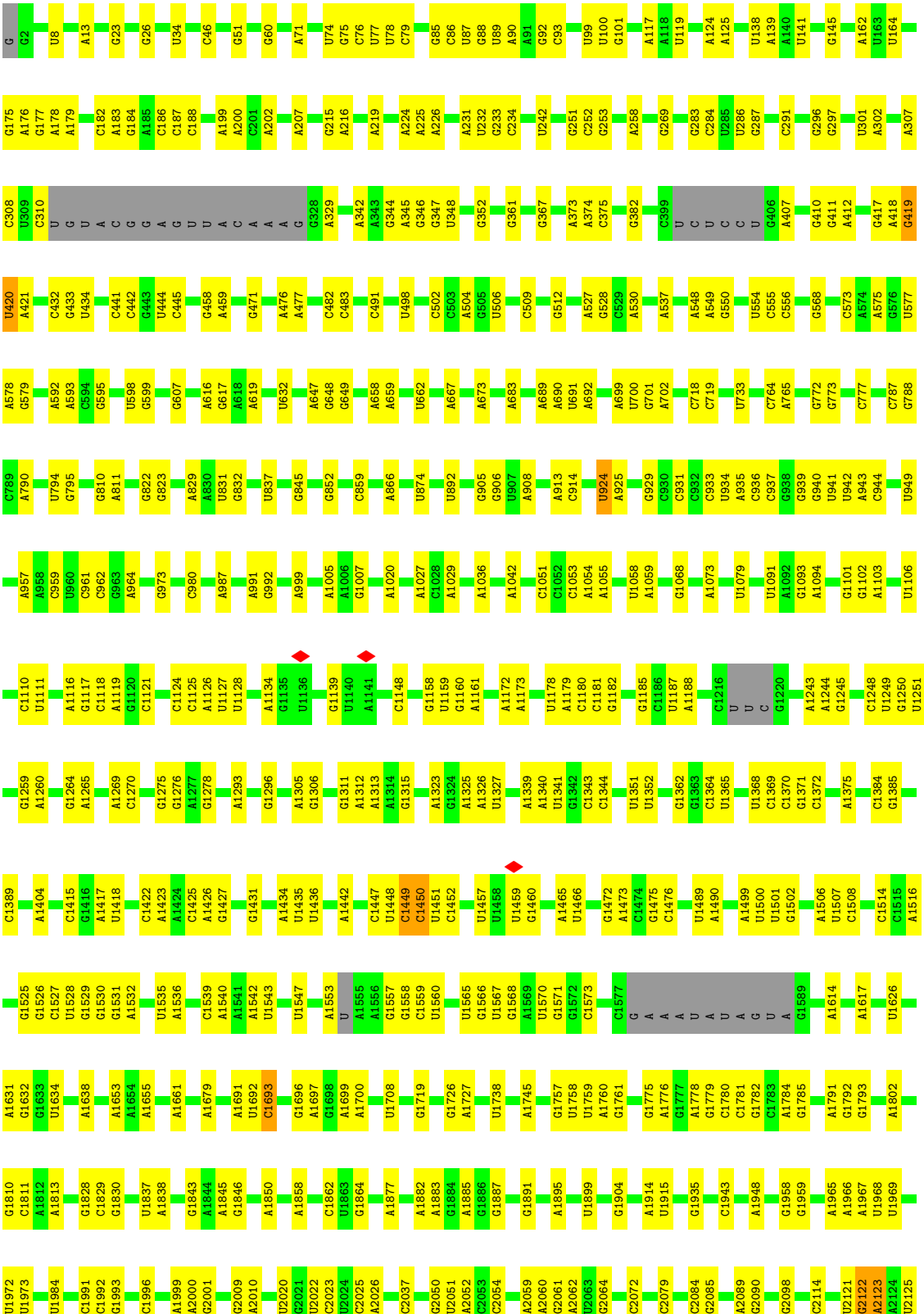
• Molecule 27: 50S ribosomal protein L24

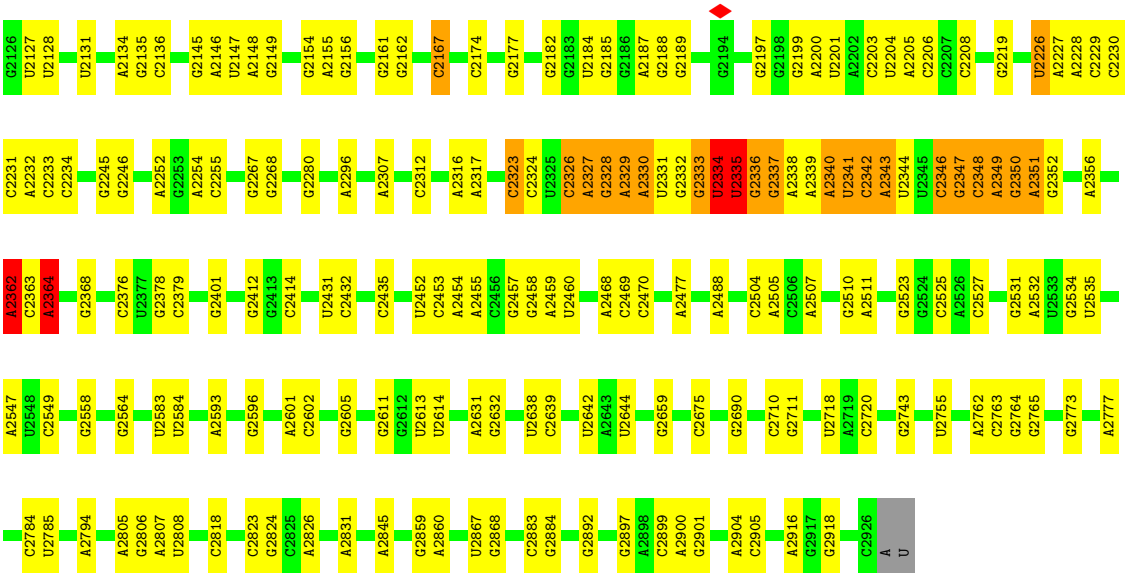
Chain U:



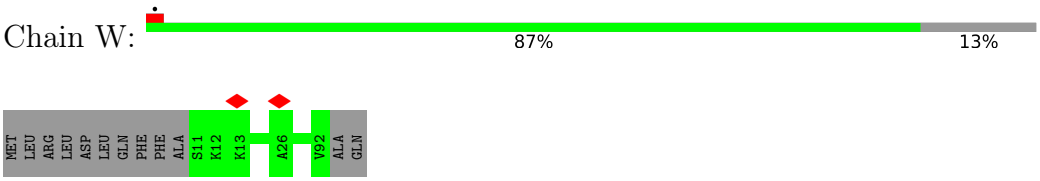
• Molecule 28: 23S ribosomal RNA

Chain V:

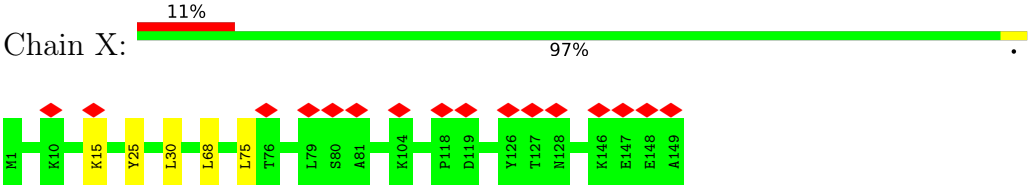




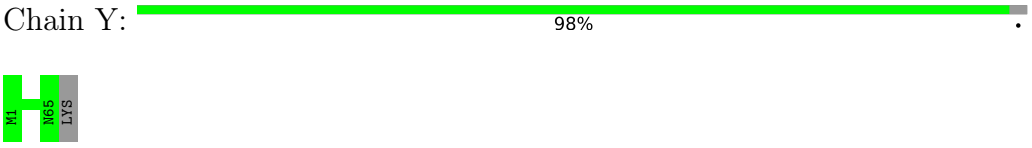
• Molecule 29: 50S ribosomal protein L27



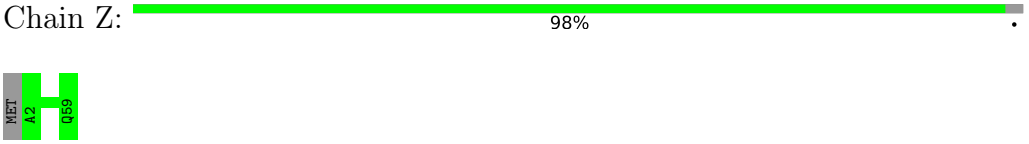
• Molecule 30: 50S ribosomal protein L9



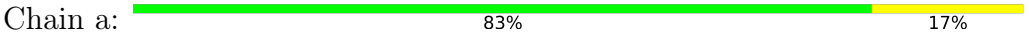
• Molecule 31: 50S ribosomal protein L29

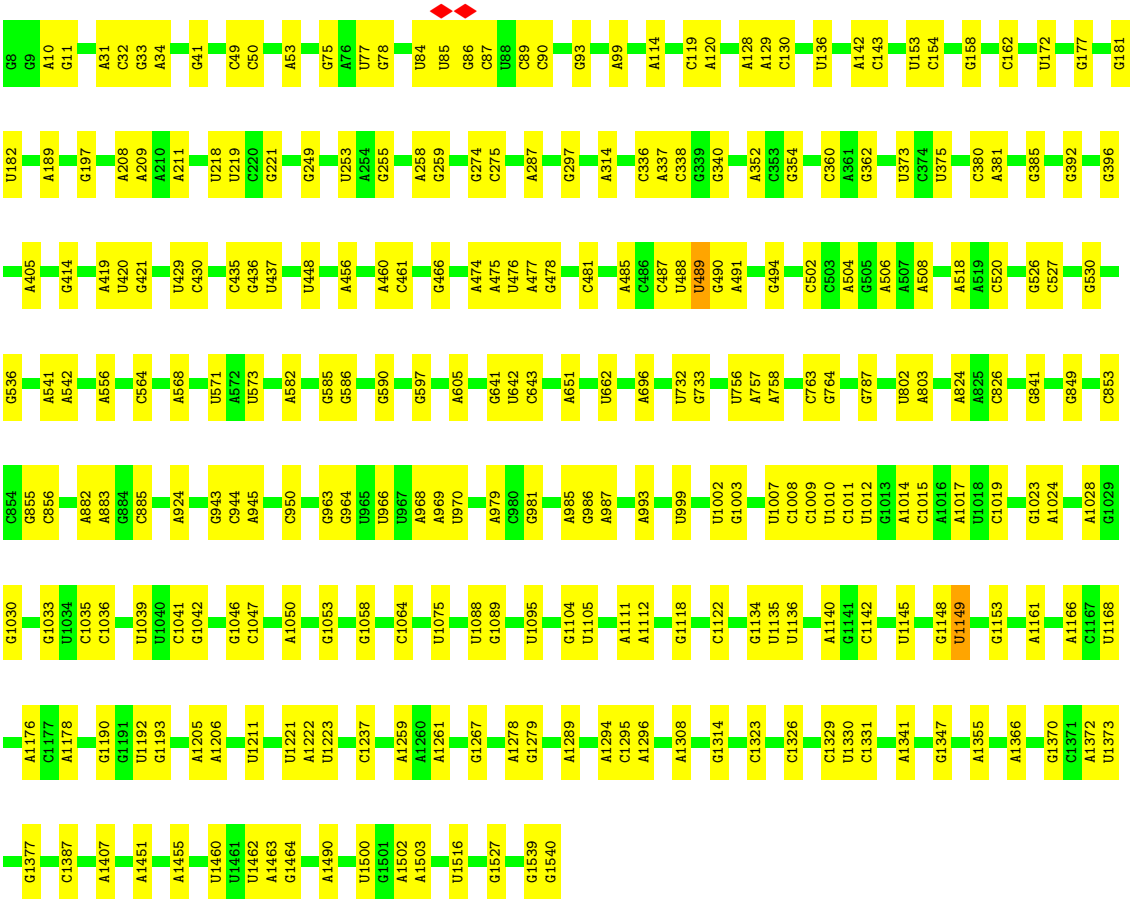


• Molecule 32: 50S ribosomal protein L30



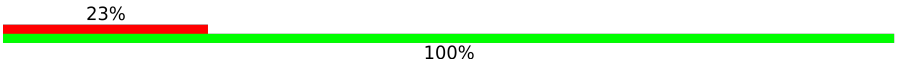
• Molecule 33: 16S ribosomal RNA

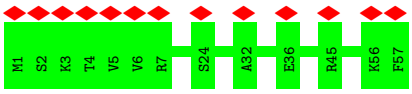




• Molecule 34: 30S ribosomal protein S21

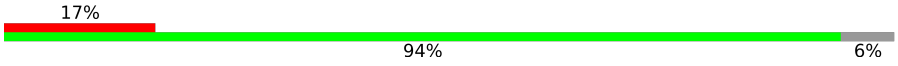
Chain b:

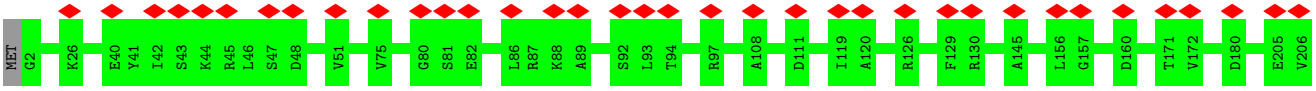


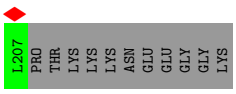


• Molecule 35: 30S ribosomal protein S3

Chain c:

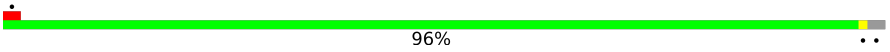


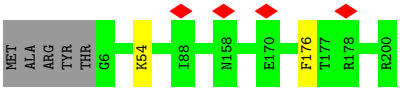




• Molecule 36: 30S ribosomal protein S4

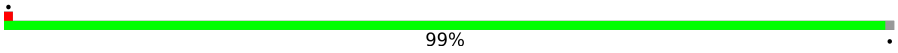
Chain d:

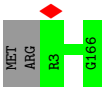




• Molecule 37: 30S ribosomal protein S5

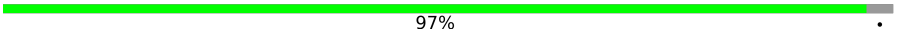
Chain e:

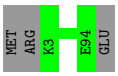




• Molecule 38: 30S ribosomal protein S6

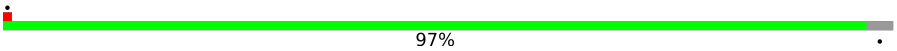
Chain f:

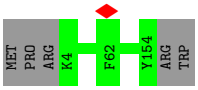




• Molecule 39: 30S ribosomal protein S7

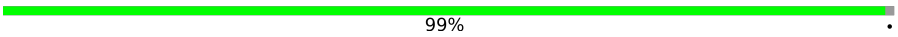
Chain g:





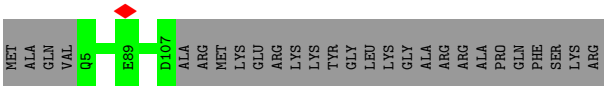
• Molecule 40: 30S ribosomal protein S8

Chain h:



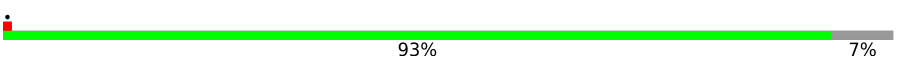
• Molecule 41: 30S ribosomal protein S9

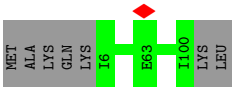
Chain i:



• Molecule 42: 30S ribosomal protein S10

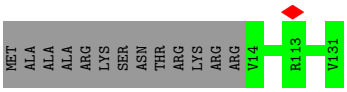
Chain j:





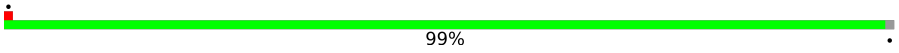
• Molecule 43: 30S ribosomal protein S11

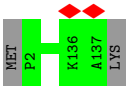
Chain k:



• Molecule 44: 30S ribosomal protein S12

Chain l:



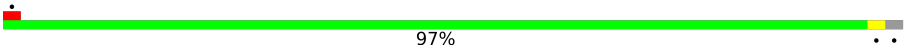


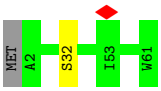
• Molecule 45: 30S ribosomal protein S13

Chain m:

• Molecule 46: 30S ribosomal protein S14

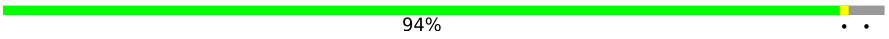
Chain n:

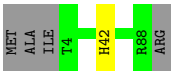




• Molecule 47: 30S ribosomal protein S15

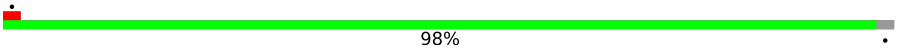
Chain o:

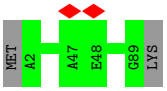




• Molecule 48: 30S ribosomal protein S16

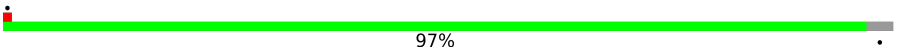
Chain p:

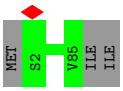




• Molecule 49: 30S ribosomal protein S17

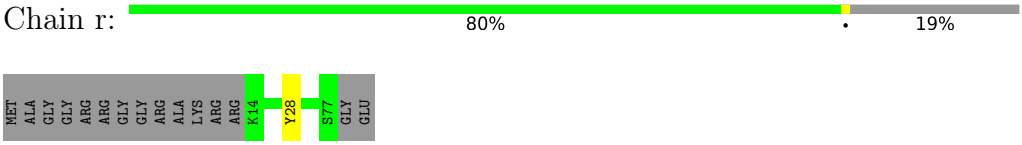
Chain q:





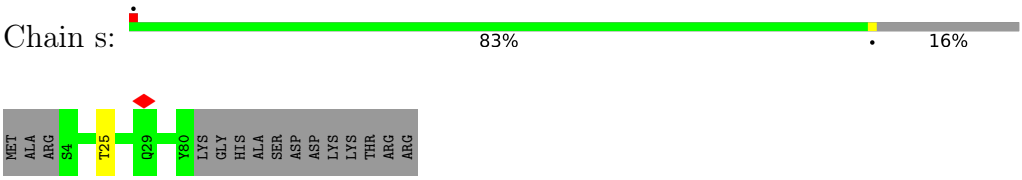
• Molecule 50: 30S ribosomal protein S18

Chain r:



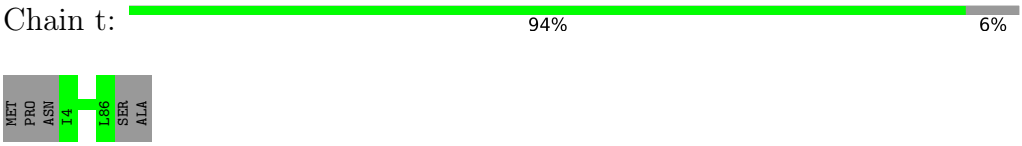
• Molecule 51: 30S ribosomal protein S19

Chain s:



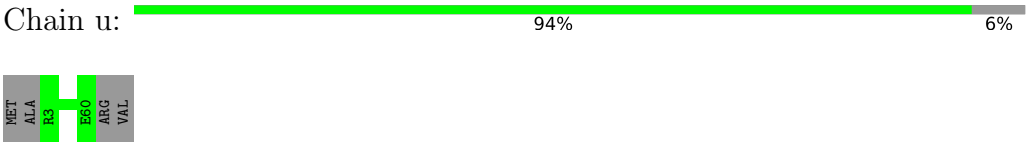
• Molecule 52: 30S ribosomal protein S20

Chain t:



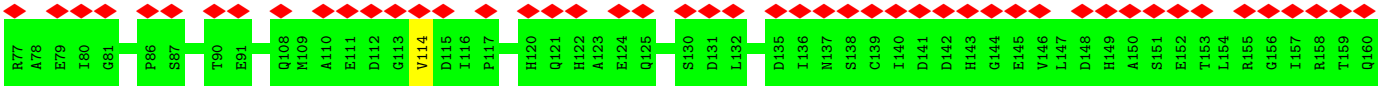
• Molecule 53: 50S ribosomal protein L28

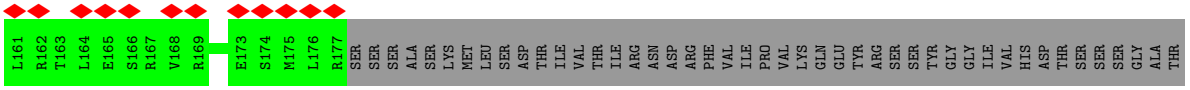
Chain u:

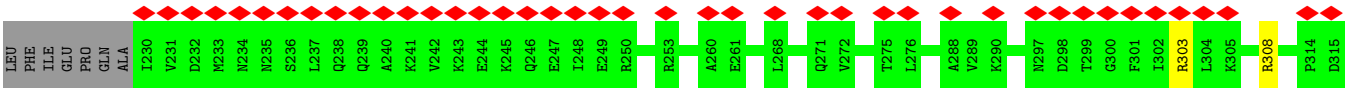


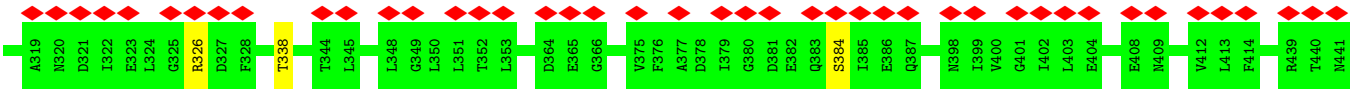
• Molecule 54: Endonuclease MutS2

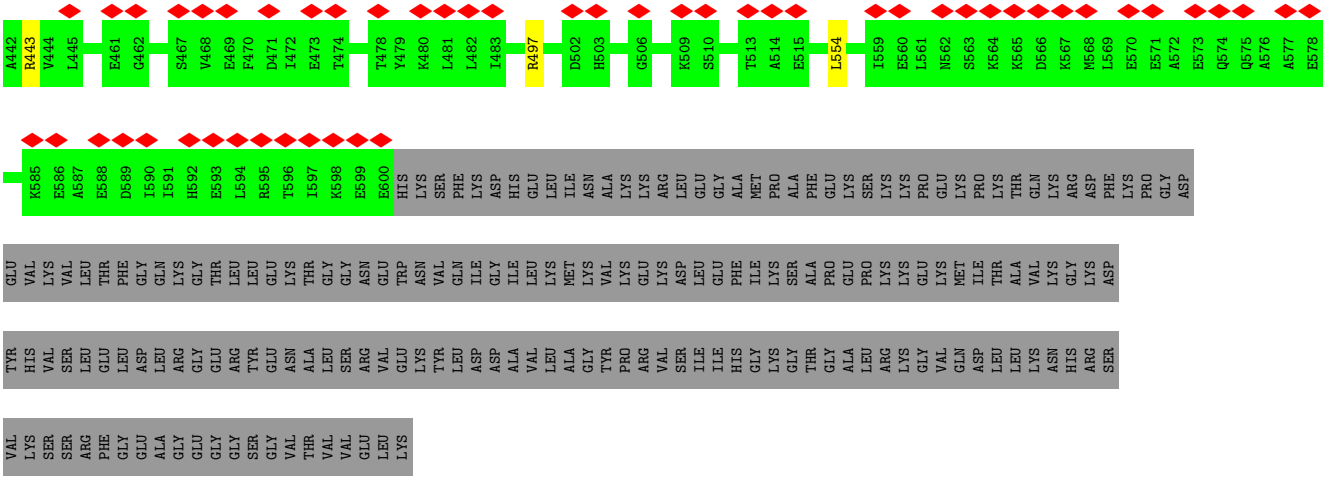
Chain v:





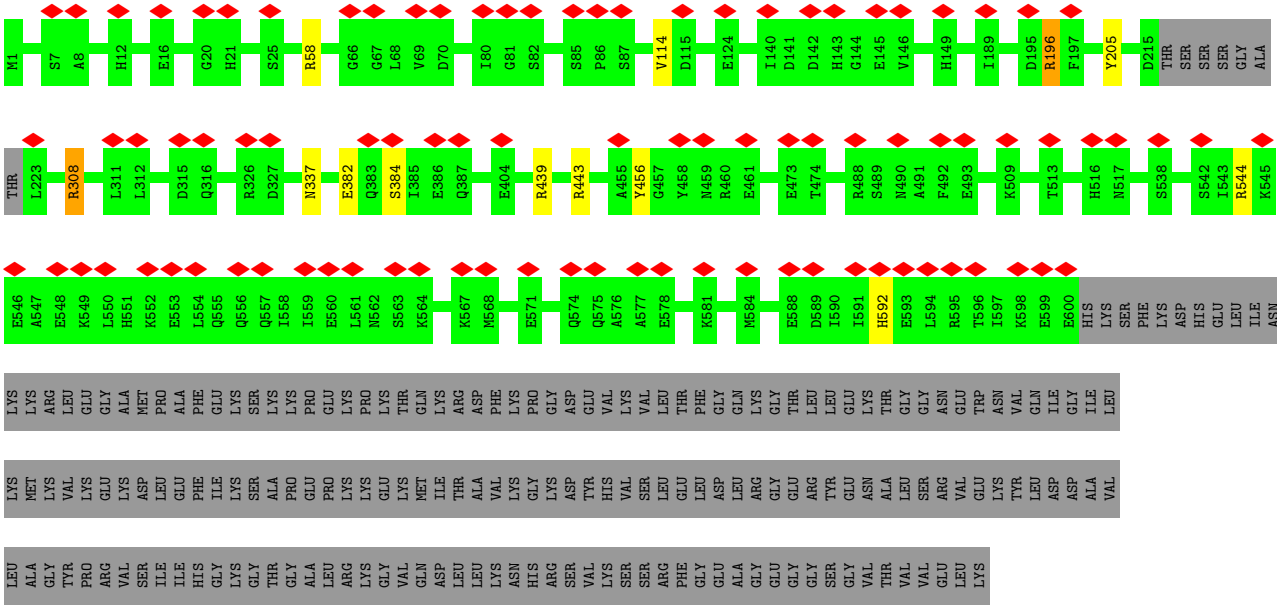






- Molecule 54: Endonuclease MutS2

Chain w:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	5078	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 ($e^-/Å^2$)	46.5	Depositor
Minimum defocus (nm)	750	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.341	Depositor
Minimum map value	-0.207	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.0172	Depositor
Map size (Å)	590.64, 590.64, 590.64	wwPDB
Map dimensions	368, 368, 368	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.605, 1.605, 1.605	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	0	0.25	0/433	0.41	0/574
2	1	0.25	0/406	0.44	0/540
3	2	0.26	0/370	0.42	0/483
4	3	0.24	0/519	0.41	0/680
5	4	0.25	0/299	0.40	0/393
6	6	0.26	0/509	0.40	0/678
7	A	0.72	2/627 (0.3%)	1.17	8/975 (0.8%)
8	B	0.18	0/2675	0.73	0/4170
9	C	0.25	0/2120	0.43	0/2845
10	D	0.25	0/1591	0.45	0/2132
11	E	0.24	0/1580	0.41	0/2132
12	F	0.39	0/1405	0.66	0/1887
13	G	0.24	0/1360	0.42	0/1832
14	H	0.16	0/1834	0.72	0/2858
16	J	0.24	0/1146	0.41	0/1542
17	K	0.26	0/927	0.45	0/1245
18	L	0.26	0/1093	0.44	0/1457
19	M	0.25	0/1099	0.41	0/1468
20	N	0.23	0/960	0.41	0/1284
21	O	0.30	0/921	0.55	2/1236 (0.2%)
22	P	0.25	0/957	0.43	0/1279
23	Q	0.25	0/952	0.40	0/1266
24	R	0.26	0/797	0.46	0/1070
25	S	0.24	0/851	0.43	0/1146
26	T	0.24	0/731	0.41	0/974
27	U	0.25	0/772	0.43	0/1032
28	V	0.27	0/69444	0.81	91/108334 (0.1%)
29	W	0.25	0/638	0.43	0/847
30	X	0.24	0/1162	0.41	0/1551
31	Y	0.24	0/531	0.37	0/707
32	Z	0.23	0/457	0.43	0/613
33	a	0.20	0/36826	0.73	4/57450 (0.0%)
34	b	0.26	0/480	0.42	0/628
35	c	0.25	0/1641	0.43	0/2208

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
36	d	0.25	0/1598	0.40	0/2147
37	e	0.25	0/1230	0.43	0/1655
38	f	0.24	0/766	0.41	0/1031
39	g	0.23	0/1220	0.38	0/1637
40	h	0.25	0/1048	0.45	0/1407
41	i	0.23	0/794	0.43	0/1074
42	j	0.23	0/773	0.40	0/1044
43	k	0.25	0/885	0.44	0/1196
44	l	0.25	0/1069	0.45	0/1435
45	m	0.23	0/744	0.41	0/994
46	n	0.24	0/507	0.40	0/672
47	o	0.23	0/718	0.42	0/960
48	p	0.25	0/708	0.41	0/950
49	q	0.25	0/699	0.42	0/933
50	r	0.24	0/526	0.40	0/705
51	s	0.24	0/640	0.43	0/861
52	t	0.23	0/639	0.39	0/852
53	u	0.23	0/448	0.46	0/596
54	v	0.52	0/4341	0.77	6/5847 (0.1%)
54	w	0.53	0/4703	0.78	7/6337 (0.1%)
All	All	0.27	2/162169 (0.0%)	0.72	118/241849 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
28	V	0	16
54	w	0	2
All	All	0	18

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	41	C	C1'-N1	5.26	1.56	1.48
7	A	50	C	C1'-N1	5.02	1.56	1.48

All (118) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	V	138	U	OP1-P-O3'	-39.33	18.68	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	V	139	A	OP1-P-OP2	-12.74	100.50	119.60
28	V	2340	A	N1-C6-N6	-11.09	111.95	118.60
28	V	2362	A	N1-C6-N6	-11.09	111.95	118.60
28	V	2364	A	N1-C6-N6	-9.31	113.01	118.60
28	V	2328	G	O4'-C1'-N9	9.20	115.56	108.20
7	A	32	U	P-O3'-C3'	-9.19	108.67	119.70
28	V	2349	A	C1'-O4'-C4'	-8.73	102.92	109.90
28	V	2351	A	N1-C6-N6	-8.41	113.55	118.60
28	V	2339	A	N1-C6-N6	-8.41	113.56	118.60
54	w	544	ARG	NE-CZ-NH1	8.30	124.45	120.30
28	V	1449	C	P-O3'-C3'	-8.30	109.74	119.70
7	A	37	G	P-O3'-C3'	-8.23	109.82	119.70
28	V	1450	C	P-O3'-C3'	-8.17	109.89	119.70
7	A	38	A	P-O3'-C3'	-8.14	109.93	119.70
28	V	1447	C	P-O3'-C3'	-7.96	110.15	119.70
54	w	308	ARG	NE-CZ-NH1	7.89	124.25	120.30
28	V	2327	A	N1-C6-N6	-7.84	113.90	118.60
28	V	2123	A	P-O3'-C3'	-7.79	110.35	119.70
28	V	2351	A	C5-C6-N1	7.79	121.59	117.70
28	V	2346	C	N3-C2-O2	-7.74	116.48	121.90
28	V	2349	A	N1-C6-N6	-7.70	113.98	118.60
28	V	2329	A	C5-C6-N1	7.69	121.54	117.70
28	V	2323	C	N3-C2-O2	-7.62	116.57	121.90
28	V	2330	A	C5-C6-N1	7.51	121.46	117.70
28	V	2340	A	C5-C6-N1	7.51	121.46	117.70
28	V	2342	C	N3-C2-O2	-7.51	116.64	121.90
28	V	2330	A	C5'-C4'-O4'	7.43	118.02	109.10
28	V	2324	C	N3-C2-O2	-7.39	116.73	121.90
28	V	2362	A	C5-C6-N1	7.06	121.23	117.70
54	v	326	ARG	NE-CZ-NH1	7.04	123.82	120.30
28	V	2343	A	N1-C6-N6	-6.98	114.41	118.60
28	V	2349	A	C5-C6-N1	6.97	121.18	117.70
54	v	308	ARG	NE-CZ-NH1	6.92	123.76	120.30
28	V	2339	A	C5-C6-N1	6.90	121.15	117.70
28	V	925	A	N1-C6-N6	-6.89	114.46	118.60
28	V	2323	C	N1-C2-O2	6.89	123.03	118.90
28	V	2328	G	N9-C1'-C2'	-6.78	104.55	112.00
28	V	2350	G	N1-C6-O6	-6.75	115.85	119.90
7	A	35	A	P-O3'-C3'	-6.74	111.62	119.70
28	V	2327	A	C5-C6-N1	6.70	121.05	117.70
28	V	2343	A	C5-C6-N1	6.66	121.03	117.70
28	V	2335	U	O4'-C1'-N1	6.64	113.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	V	2349	A	C5'-C4'-O4'	6.58	116.99	109.10
28	V	2343	A	C4-C5-C6	-6.51	113.74	117.00
54	w	439	ARG	NE-CZ-NH1	6.51	123.56	120.30
28	V	2333	G	N3-C2-N2	-6.49	115.35	119.90
28	V	2122	G	P-O3'-C3'	-6.46	111.95	119.70
28	V	2340	A	C4-C5-C6	-6.43	113.78	117.00
28	V	2334	U	N3-C2-O2	-6.38	117.73	122.20
54	w	58	ARG	NE-CZ-NH2	6.37	123.49	120.30
28	V	924	U	O4'-C1'-N1	6.31	113.25	108.20
28	V	2342	C	C5'-C4'-C3'	-6.27	105.97	116.00
54	w	443	ARG	NE-CZ-NH1	6.26	123.43	120.30
28	V	2324	C	N1-C2-O2	6.25	122.65	118.90
28	V	2323	C	O4'-C1'-N1	6.23	113.18	108.20
33	a	1149	U	C2-N1-C1'	6.18	125.11	117.70
28	V	2341	U	O4'-C1'-N1	6.17	113.14	108.20
28	V	2226	U	P-O3'-C3'	-6.10	112.38	119.70
28	V	925	A	C5-C6-N1	6.09	120.75	117.70
28	V	509	C	N3-C2-O2	-6.08	117.64	121.90
28	V	1452	C	P-O3'-C3'	-6.07	112.41	119.70
28	V	2364	A	C5-C6-N1	6.07	120.74	117.70
21	O	17	ARG	NE-CZ-NH1	6.05	123.32	120.30
28	V	2330	A	N1-C6-N6	-6.03	114.98	118.60
7	A	31	A	P-O3'-C3'	-6.01	112.48	119.70
28	V	2362	A	C4-C5-C6	-6.01	114.00	117.00
54	v	443	ARG	NE-CZ-NH1	5.98	123.29	120.30
21	O	14	ARG	NE-CZ-NH1	5.98	123.29	120.30
28	V	420	U	P-O3'-C3'	-5.98	112.53	119.70
28	V	2331	U	C5'-C4'-C3'	-5.97	106.45	116.00
28	V	2335	U	C3'-C2'-C1'	5.95	106.26	101.50
28	V	2342	C	C5'-C4'-O4'	5.94	116.23	109.10
28	V	2348	C	N3-C2-O2	-5.89	117.77	121.90
28	V	2351	A	C4-C5-C6	-5.83	114.08	117.00
28	V	2331	U	C5'-C4'-O4'	5.80	116.06	109.10
28	V	2167	C	N3-C2-O2	-5.79	117.84	121.90
28	V	2339	A	C4-C5-C6	-5.78	114.11	117.00
28	V	2336	G	C3'-C2'-C1'	5.71	106.07	101.50
54	v	303	ARG	NE-CZ-NH1	5.71	123.15	120.30
28	V	2334	U	O4'-C1'-N1	5.71	112.77	108.20
28	V	417	G	P-O3'-C3'	-5.64	112.93	119.70
28	V	138	U	OP2-P-O3'	5.62	117.58	105.20
28	V	1693	C	C2-N1-C1'	-5.57	112.67	118.80
28	V	1693	C	C6-N1-C1'	5.55	127.46	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	V	1451	U	P-O3'-C3'	-5.50	113.10	119.70
28	V	2364	A	O4'-C1'-N9	5.50	112.60	108.20
28	V	2346	C	N1-C2-O2	5.49	122.19	118.90
28	V	2347	G	C5'-C4'-O4'	5.47	115.67	109.10
33	a	489	U	C2-N1-C1'	5.43	124.22	117.70
7	A	30	A	P-O3'-C3'	-5.40	113.22	119.70
28	V	2349	A	N9-C1'-C2'	5.40	121.03	114.00
28	V	419	G	P-O3'-C3'	-5.40	113.22	119.70
54	w	439	ARG	NE-CZ-NH2	-5.38	117.61	120.30
28	V	2037	C	N3-C2-O2	-5.38	118.13	121.90
54	v	308	ARG	NH1-CZ-NH2	-5.37	113.49	119.40
28	V	2333	G	C5'-C4'-C3'	-5.37	107.41	116.00
33	a	1323	C	N1-C2-O2	5.37	122.12	118.90
28	V	2329	A	C4-C5-C6	-5.31	114.34	117.00
28	V	2364	A	C4-C5-C6	-5.28	114.36	117.00
28	V	2329	A	N1-C6-N6	-5.25	115.45	118.60
33	a	763	C	C2-N1-C1'	5.23	124.56	118.80
28	V	2342	C	N1-C2-O2	5.20	122.02	118.90
28	V	2332	G	N1-C6-O6	-5.19	116.78	119.90
54	w	196	ARG	NE-CZ-NH2	5.19	122.89	120.30
7	A	36	U	P-O3'-C3'	-5.19	113.48	119.70
28	V	2327	A	C4-C5-C6	-5.17	114.42	117.00
28	V	2336	G	N3-C4-C5	-5.14	126.03	128.60
54	v	497	ARG	NE-CZ-NH1	5.13	122.87	120.30
28	V	2326	C	N3-C2-O2	-5.09	118.34	121.90
28	V	2346	C	N3-C4-N4	-5.07	114.45	118.00
28	V	2330	A	C4-C5-C6	-5.07	114.46	117.00
28	V	2352	G	N1-C6-O6	-5.06	116.86	119.90
28	V	2350	G	C5-C6-N1	5.06	114.03	111.50
28	V	949	U	O4'-C1'-N1	5.06	112.25	108.20
28	V	2350	G	C5'-C4'-C3'	-5.06	107.91	116.00
7	A	39	U	OP2-P-O3'	5.01	116.22	105.20
28	V	2347	G	C5'-C4'-C3'	-5.01	107.99	116.00

There are no chirality outliers.

All (18) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
28	V	2323	C	Sidechain
28	V	2326	C	Sidechain
28	V	2327	A	Sidechain
28	V	2329	A	Sidechain

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Mol	Chain	Res	Type	Group
28	V	2333	G	Sidechain
28	V	2334	U	Sidechain
28	V	2335	U	Sidechain
28	V	2337	G	Sidechain
28	V	2340	A	Sidechain
28	V	2342	C	Sidechain
28	V	2343	A	Sidechain
28	V	2344	U	Sidechain
28	V	2346	C	Sidechain
28	V	2362	A	Sidechain
28	V	2364	A	Sidechain
28	V	924	U	Sidechain
54	w	308	ARG	Sidechain
54	w	456	TYR	Sidechain

5.2 Too-close contacts (i)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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	0	52/59 (88%)	50 (96%)	2 (4%)	0	100	100
2	1	46/49 (94%)	44 (96%)	2 (4%)	0	100	100
3	2	42/44 (96%)	42 (100%)	0	0	100	100
4	3	62/66 (94%)	60 (97%)	2 (3%)	0	100	100
5	4	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
6	6	61/66 (92%)	60 (98%)	1 (2%)	0	100	100
9	C	270/277 (98%)	260 (96%)	10 (4%)	0	100	100
10	D	204/209 (98%)	193 (95%)	11 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	E	203/207 (98%)	193 (95%)	10 (5%)	0	100	100
12	F	174/179 (97%)	161 (92%)	13 (8%)	0	100	100
13	G	173/179 (97%)	165 (95%)	8 (5%)	0	100	100
16	J	140/145 (97%)	133 (95%)	7 (5%)	0	100	100
17	K	120/122 (98%)	117 (98%)	3 (2%)	0	100	100
18	L	144/146 (99%)	139 (96%)	5 (4%)	0	100	100
19	M	133/144 (92%)	132 (99%)	1 (1%)	0	100	100
20	N	117/120 (98%)	113 (97%)	4 (3%)	0	100	100
21	O	118/120 (98%)	113 (96%)	5 (4%)	0	100	100
22	P	113/115 (98%)	108 (96%)	5 (4%)	0	100	100
23	Q	115/119 (97%)	107 (93%)	6 (5%)	2 (2%)	9	43
24	R	99/102 (97%)	88 (89%)	11 (11%)	0	100	100
25	S	107/113 (95%)	102 (95%)	5 (5%)	0	100	100
26	T	88/95 (93%)	87 (99%)	1 (1%)	0	100	100
27	U	99/103 (96%)	92 (93%)	7 (7%)	0	100	100
29	W	80/94 (85%)	76 (95%)	4 (5%)	0	100	100
30	X	147/149 (99%)	135 (92%)	12 (8%)	0	100	100
31	Y	63/66 (96%)	62 (98%)	1 (2%)	0	100	100
32	Z	56/59 (95%)	53 (95%)	3 (5%)	0	100	100
34	b	55/57 (96%)	53 (96%)	2 (4%)	0	100	100
35	c	204/218 (94%)	194 (95%)	10 (5%)	0	100	100
36	d	193/200 (96%)	176 (91%)	17 (9%)	0	100	100
37	e	162/166 (98%)	155 (96%)	7 (4%)	0	100	100
38	f	90/95 (95%)	87 (97%)	3 (3%)	0	100	100
39	g	149/156 (96%)	144 (97%)	5 (3%)	0	100	100
40	h	129/132 (98%)	116 (90%)	13 (10%)	0	100	100
41	i	101/130 (78%)	95 (94%)	6 (6%)	0	100	100
42	j	93/102 (91%)	87 (94%)	6 (6%)	0	100	100
43	k	116/131 (88%)	110 (95%)	6 (5%)	0	100	100
44	l	134/138 (97%)	124 (92%)	10 (8%)	0	100	100
45	m	90/121 (74%)	85 (94%)	5 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
46	n	58/61 (95%)	52 (90%)	5 (9%)	1 (2%)	9 43
47	o	83/89 (93%)	79 (95%)	4 (5%)	0	100 100
48	p	86/90 (96%)	81 (94%)	5 (6%)	0	100 100
49	q	82/87 (94%)	76 (93%)	6 (7%)	0	100 100
50	r	62/79 (78%)	56 (90%)	5 (8%)	1 (2%)	9 44
51	s	75/92 (82%)	69 (92%)	6 (8%)	0	100 100
52	t	81/88 (92%)	79 (98%)	2 (2%)	0	100 100
53	u	56/62 (90%)	54 (96%)	2 (4%)	0	100 100
54	v	544/785 (69%)	527 (97%)	15 (3%)	2 (0%)	34 72
54	w	589/785 (75%)	569 (97%)	16 (3%)	4 (1%)	22 62
All	All	6293/7048 (89%)	5986 (95%)	297 (5%)	10 (0%)	50 81

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
54	v	384	SER
54	w	384	SER
23	Q	103	LEU
50	r	28	TYR
54	w	382	GLU
54	w	114	VAL
54	w	337	ASN
46	n	32	SER
54	v	114	VAL
23	Q	93	LYS

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	0	48/53 (91%)	48 (100%)	0	100 100
2	1	46/47 (98%)	46 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	2	39/39 (100%)	39 (100%)	0	100	100
4	3	54/56 (96%)	54 (100%)	0	100	100
5	4	35/35 (100%)	35 (100%)	0	100	100
6	6	53/55 (96%)	53 (100%)	0	100	100
9	C	220/225 (98%)	219 (100%)	1 (0%)	88	93
10	D	167/170 (98%)	166 (99%)	1 (1%)	86	91
11	E	169/170 (99%)	169 (100%)	0	100	100
12	F	151/154 (98%)	149 (99%)	2 (1%)	69	82
13	G	148/151 (98%)	148 (100%)	0	100	100
16	J	120/123 (98%)	120 (100%)	0	100	100
17	K	101/101 (100%)	101 (100%)	0	100	100
18	L	110/110 (100%)	110 (100%)	0	100	100
19	M	109/116 (94%)	109 (100%)	0	100	100
20	N	99/100 (99%)	99 (100%)	0	100	100
21	O	93/93 (100%)	93 (100%)	0	100	100
22	P	100/100 (100%)	100 (100%)	0	100	100
23	Q	96/98 (98%)	96 (100%)	0	100	100
24	R	83/84 (99%)	83 (100%)	0	100	100
25	S	90/93 (97%)	90 (100%)	0	100	100
26	T	81/85 (95%)	81 (100%)	0	100	100
27	U	85/87 (98%)	85 (100%)	0	100	100
29	W	64/74 (86%)	64 (100%)	0	100	100
30	X	124/124 (100%)	119 (96%)	5 (4%)	31	56
31	Y	56/57 (98%)	56 (100%)	0	100	100
32	Z	52/53 (98%)	52 (100%)	0	100	100
34	b	51/51 (100%)	51 (100%)	0	100	100
35	c	168/178 (94%)	168 (100%)	0	100	100
36	d	169/173 (98%)	167 (99%)	2 (1%)	71	84
37	e	128/130 (98%)	128 (100%)	0	100	100
38	f	81/84 (96%)	81 (100%)	0	100	100
39	g	127/132 (96%)	127 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
40	h	111/112 (99%)	111 (100%)	0	100 100
41	i	81/102 (79%)	81 (100%)	0	100 100
42	j	86/92 (94%)	86 (100%)	0	100 100
43	k	90/100 (90%)	90 (100%)	0	100 100
44	l	114/116 (98%)	114 (100%)	0	100 100
45	m	80/104 (77%)	79 (99%)	1 (1%)	69 82
46	n	53/54 (98%)	53 (100%)	0	100 100
47	o	80/83 (96%)	79 (99%)	1 (1%)	69 82
48	p	74/76 (97%)	74 (100%)	0	100 100
49	q	77/80 (96%)	77 (100%)	0	100 100
50	r	56/64 (88%)	56 (100%)	0	100 100
51	s	69/81 (85%)	68 (99%)	1 (1%)	67 81
52	t	66/70 (94%)	66 (100%)	0	100 100
53	u	47/50 (94%)	47 (100%)	0	100 100
54	v	472/674 (70%)	470 (100%)	2 (0%)	91 94
54	w	513/674 (76%)	510 (99%)	3 (1%)	86 91
All	All	5386/5933 (91%)	5367 (100%)	19 (0%)	91 94

All (19) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
9	C	108	LYS
10	D	140	HIS
12	F	122	PHE
12	F	164	GLU
30	X	15	LYS
30	X	25	TYR
30	X	30	LEU
30	X	68	LEU
30	X	75	LEU
36	d	54	LYS
36	d	176	PHE
45	m	3	ARG
47	o	42	HIS
51	s	25	THR
54	v	338	THR

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Mol	Chain	Res	Type
54	v	554	LEU
54	w	196	ARG
54	w	205	TYR
54	w	592	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
36	d	137	GLN
38	f	27	ASN
42	j	78	ASN
48	p	72	ASN
54	v	143	HIS
54	v	235	ASN
54	w	46	GLN
54	w	125	GLN
54	w	239	GLN
54	w	551	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
14	H	76/77 (98%)	14 (18%)	2 (2%)
28	V	2881/2928 (98%)	634 (22%)	64 (2%)
33	a	1532/1533 (99%)	266 (17%)	0
7	A	25/26 (96%)	12 (48%)	5 (20%)
8	B	111/112 (99%)	28 (25%)	4 (3%)
All	All	4625/4676 (98%)	954 (20%)	75 (1%)

All (954) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
7	A	33	A
7	A	34	A
7	A	35	A
7	A	37	G
7	A	38	A
7	A	39	U
7	A	40	G
7	A	43	G

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Mol	Chain	Res	Type
7	A	45	C
7	A	46	A
7	A	47	G
7	A	49	A
8	B	10	G
8	B	11	A
8	B	12	U
8	B	22	G
8	B	23	U
8	B	31	G
8	B	32	U
8	B	33	U
8	B	38	U
8	B	39	A
8	B	41	C
8	B	48	G
8	B	49	G
8	B	50	A
8	B	53	U
8	B	54	U
8	B	55	A
8	B	59	U
8	B	60	C
8	B	62	U
8	B	66	C
8	B	86	U
8	B	87	U
8	B	97	A
8	B	101	U
8	B	107	G
8	B	108	C
8	B	110	G
14	H	9	A
14	H	17	U
14	H	18	G
14	H	19	U
14	H	21	A
14	H	36	C
14	H	37	A
14	H	48	C
14	H	55	U
14	H	56	C

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Mol	Chain	Res	Type
14	H	70	A
14	H	72	C
14	H	74	C
14	H	76	A
28	V	8	U
28	V	13	A
28	V	23	G
28	V	26	G
28	V	34	U
28	V	46	C
28	V	51	G
28	V	60	G
28	V	71	A
28	V	74	U
28	V	75	G
28	V	76	C
28	V	77	U
28	V	78	U
28	V	79	C
28	V	85	G
28	V	86	C
28	V	87	U
28	V	89	U
28	V	90	A
28	V	92	G
28	V	93	C
28	V	99	U
28	V	100	U
28	V	101	G
28	V	117	A
28	V	119	U
28	V	124	A
28	V	125	A
28	V	141	U
28	V	145	G
28	V	162	A
28	V	164	U
28	V	175	G
28	V	176	A
28	V	177	G
28	V	178	A
28	V	179	A

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Mol	Chain	Res	Type
28	V	182	C
28	V	184	G
28	V	186	C
28	V	187	C
28	V	188	C
28	V	199	A
28	V	200	A
28	V	202	A
28	V	207	A
28	V	215	G
28	V	216	A
28	V	219	A
28	V	224	A
28	V	225	A
28	V	226	A
28	V	231	A
28	V	232	U
28	V	233	G
28	V	234	C
28	V	242	U
28	V	251	G
28	V	252	C
28	V	253	G
28	V	258	A
28	V	269	G
28	V	283	G
28	V	284	C
28	V	286	U
28	V	287	G
28	V	291	C
28	V	296	G
28	V	297	G
28	V	301	U
28	V	302	A
28	V	307	A
28	V	308	C
28	V	310	C
28	V	329	A
28	V	342	A
28	V	344	G
28	V	345	A
28	V	346	G

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Mol	Chain	Res	Type
28	V	348	U
28	V	352	G
28	V	361	G
28	V	367	G
28	V	373	A
28	V	374	A
28	V	375	C
28	V	382	G
28	V	407	A
28	V	410	G
28	V	411	G
28	V	412	A
28	V	418	A
28	V	419	G
28	V	420	U
28	V	421	A
28	V	432	C
28	V	433	G
28	V	434	U
28	V	442	C
28	V	444	U
28	V	445	C
28	V	458	G
28	V	459	A
28	V	471	G
28	V	476	A
28	V	477	A
28	V	482	C
28	V	483	C
28	V	491	C
28	V	498	U
28	V	502	C
28	V	504	A
28	V	506	U
28	V	512	G
28	V	527	A
28	V	528	G
28	V	530	A
28	V	537	A
28	V	548	A
28	V	550	G
28	V	554	U

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Mol	Chain	Res	Type
28	V	555	C
28	V	556	C
28	V	568	G
28	V	573	C
28	V	575	A
28	V	577	U
28	V	578	A
28	V	579	G
28	V	592	A
28	V	593	A
28	V	595	G
28	V	598	U
28	V	599	G
28	V	607	G
28	V	616	A
28	V	617	G
28	V	619	A
28	V	632	U
28	V	647	A
28	V	648	G
28	V	649	G
28	V	658	A
28	V	659	A
28	V	662	U
28	V	667	A
28	V	673	A
28	V	683	A
28	V	690	A
28	V	691	U
28	V	692	A
28	V	699	A
28	V	700	U
28	V	701	G
28	V	702	A
28	V	718	C
28	V	719	C
28	V	733	U
28	V	764	C
28	V	765	A
28	V	773	G
28	V	777	C
28	V	787	C

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Mol	Chain	Res	Type
28	V	788	G
28	V	790	A
28	V	794	U
28	V	795	G
28	V	810	G
28	V	811	A
28	V	822	G
28	V	823	G
28	V	829	A
28	V	831	U
28	V	832	G
28	V	837	U
28	V	845	G
28	V	852	G
28	V	859	C
28	V	866	A
28	V	874	U
28	V	892	U
28	V	906	G
28	V	908	A
28	V	913	A
28	V	914	C
28	V	929	G
28	V	931	C
28	V	933	C
28	V	934	U
28	V	935	A
28	V	936	C
28	V	937	C
28	V	939	G
28	V	940	G
28	V	941	U
28	V	942	U
28	V	943	A
28	V	944	C
28	V	957	A
28	V	959	C
28	V	961	C
28	V	962	C
28	V	964	A
28	V	973	G
28	V	980	C

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Mol	Chain	Res	Type
28	V	987	A
28	V	991	A
28	V	992	G
28	V	999	A
28	V	1005	A
28	V	1007	G
28	V	1020	A
28	V	1027	A
28	V	1029	A
28	V	1036	A
28	V	1042	A
28	V	1051	C
28	V	1053	C
28	V	1054	A
28	V	1055	A
28	V	1058	U
28	V	1059	A
28	V	1068	G
28	V	1073	A
28	V	1079	U
28	V	1091	U
28	V	1094	A
28	V	1101	G
28	V	1102	G
28	V	1103	A
28	V	1106	U
28	V	1110	C
28	V	1111	U
28	V	1116	A
28	V	1117	G
28	V	1118	C
28	V	1119	A
28	V	1121	C
28	V	1124	C
28	V	1125	C
28	V	1126	A
28	V	1127	U
28	V	1128	U
28	V	1134	A
28	V	1139	G
28	V	1148	C
28	V	1158	G

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Mol	Chain	Res	Type
28	V	1159	U
28	V	1160	G
28	V	1161	A
28	V	1173	A
28	V	1178	U
28	V	1179	A
28	V	1180	C
28	V	1181	C
28	V	1182	G
28	V	1185	G
28	V	1187	U
28	V	1188	A
28	V	1243	A
28	V	1244	A
28	V	1245	G
28	V	1248	C
28	V	1249	U
28	V	1251	U
28	V	1259	G
28	V	1260	A
28	V	1264	G
28	V	1265	A
28	V	1270	C
28	V	1275	G
28	V	1276	G
28	V	1278	G
28	V	1293	A
28	V	1296	G
28	V	1306	G
28	V	1311	G
28	V	1312	A
28	V	1313	A
28	V	1315	G
28	V	1323	A
28	V	1325	A
28	V	1326	A
28	V	1327	U
28	V	1339	A
28	V	1340	A
28	V	1341	U
28	V	1343	C
28	V	1344	C

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Mol	Chain	Res	Type
28	V	1351	U
28	V	1352	U
28	V	1362	G
28	V	1364	C
28	V	1365	U
28	V	1368	U
28	V	1369	C
28	V	1370	C
28	V	1371	G
28	V	1372	C
28	V	1375	A
28	V	1384	C
28	V	1385	G
28	V	1389	C
28	V	1404	A
28	V	1415	C
28	V	1417	A
28	V	1418	U
28	V	1422	C
28	V	1423	A
28	V	1425	C
28	V	1426	A
28	V	1427	G
28	V	1431	G
28	V	1434	A
28	V	1435	U
28	V	1436	U
28	V	1442	A
28	V	1449	C
28	V	1450	C
28	V	1457	U
28	V	1459	U
28	V	1460	G
28	V	1465	A
28	V	1466	U
28	V	1472	G
28	V	1473	A
28	V	1475	G
28	V	1476	C
28	V	1489	U
28	V	1490	A
28	V	1499	A

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Mol	Chain	Res	Type
28	V	1500	U
28	V	1501	U
28	V	1502	G
28	V	1506	A
28	V	1507	U
28	V	1508	C
28	V	1514	C
28	V	1516	A
28	V	1525	G
28	V	1526	G
28	V	1527	C
28	V	1528	U
28	V	1529	G
28	V	1530	G
28	V	1531	G
28	V	1532	A
28	V	1536	A
28	V	1539	C
28	V	1540	A
28	V	1542	A
28	V	1543	U
28	V	1547	U
28	V	1553	A
28	V	1557	G
28	V	1558	G
28	V	1559	C
28	V	1560	U
28	V	1566	G
28	V	1568	G
28	V	1570	U
28	V	1571	G
28	V	1573	C
28	V	1614	A
28	V	1617	A
28	V	1626	U
28	V	1632	G
28	V	1634	U
28	V	1638	A
28	V	1653	A
28	V	1655	A
28	V	1661	A
28	V	1679	A

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Mol	Chain	Res	Type
28	V	1691	A
28	V	1692	U
28	V	1693	C
28	V	1696	G
28	V	1697	A
28	V	1699	A
28	V	1700	A
28	V	1708	U
28	V	1719	G
28	V	1727	A
28	V	1738	U
28	V	1745	A
28	V	1757	G
28	V	1758	U
28	V	1759	U
28	V	1760	A
28	V	1761	G
28	V	1775	G
28	V	1776	A
28	V	1778	A
28	V	1779	G
28	V	1780	C
28	V	1781	C
28	V	1782	G
28	V	1785	G
28	V	1791	A
28	V	1792	G
28	V	1793	G
28	V	1802	A
28	V	1810	G
28	V	1811	C
28	V	1813	A
28	V	1829	C
28	V	1830	G
28	V	1837	U
28	V	1838	A
28	V	1843	G
28	V	1845	A
28	V	1846	G
28	V	1850	A
28	V	1858	A
28	V	1862	C

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Mol	Chain	Res	Type
28	V	1864	G
28	V	1877	A
28	V	1883	A
28	V	1885	A
28	V	1887	G
28	V	1891	G
28	V	1895	A
28	V	1899	U
28	V	1904	G
28	V	1915	U
28	V	1935	G
28	V	1943	C
28	V	1948	A
28	V	1958	G
28	V	1959	G
28	V	1965	A
28	V	1966	A
28	V	1967	A
28	V	1968	U
28	V	1969	U
28	V	1973	U
28	V	1984	U
28	V	1992	C
28	V	1993	G
28	V	1996	C
28	V	1999	A
28	V	2000	A
28	V	2001	G
28	V	2010	A
28	V	2020	U
28	V	2022	U
28	V	2023	C
28	V	2025	C
28	V	2026	A
28	V	2050	G
28	V	2051	U
28	V	2052	A
28	V	2054	C
28	V	2059	A
28	V	2060	A
28	V	2061	G
28	V	2062	A

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Mol	Chain	Res	Type
28	V	2064	G
28	V	2072	C
28	V	2079	C
28	V	2084	C
28	V	2085	G
28	V	2089	A
28	V	2090	G
28	V	2098	G
28	V	2114	C
28	V	2121	U
28	V	2122	G
28	V	2123	A
28	V	2125	U
28	V	2128	U
28	V	2131	U
28	V	2134	A
28	V	2135	G
28	V	2136	C
28	V	2145	G
28	V	2146	A
28	V	2147	U
28	V	2148	A
28	V	2149	G
28	V	2154	G
28	V	2156	G
28	V	2161	G
28	V	2162	G
28	V	2167	C
28	V	2174	C
28	V	2177	G
28	V	2182	G
28	V	2184	U
28	V	2185	G
28	V	2187	A
28	V	2188	G
28	V	2189	G
28	V	2197	G
28	V	2199	G
28	V	2200	A
28	V	2201	U
28	V	2203	C
28	V	2204	U

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Mol	Chain	Res	Type
28	V	2205	A
28	V	2206	C
28	V	2208	C
28	V	2219	G
28	V	2226	U
28	V	2227	A
28	V	2228	A
28	V	2229	C
28	V	2230	C
28	V	2231	C
28	V	2232	A
28	V	2233	C
28	V	2234	C
28	V	2245	G
28	V	2246	G
28	V	2252	A
28	V	2254	A
28	V	2255	C
28	V	2267	G
28	V	2268	G
28	V	2280	G
28	V	2296	A
28	V	2307	A
28	V	2312	C
28	V	2316	A
28	V	2317	A
28	V	2328	G
28	V	2330	A
28	V	2334	U
28	V	2335	U
28	V	2336	G
28	V	2337	G
28	V	2338	A
28	V	2341	U
28	V	2347	G
28	V	2348	C
28	V	2350	G
28	V	2351	A
28	V	2356	A
28	V	2362	A
28	V	2363	C
28	V	2364	A

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Mol	Chain	Res	Type
28	V	2368	G
28	V	2376	C
28	V	2378	G
28	V	2379	C
28	V	2401	G
28	V	2412	G
28	V	2414	C
28	V	2431	U
28	V	2432	C
28	V	2435	C
28	V	2452	U
28	V	2453	C
28	V	2454	A
28	V	2455	A
28	V	2457	G
28	V	2458	G
28	V	2459	A
28	V	2460	U
28	V	2469	C
28	V	2470	C
28	V	2477	A
28	V	2488	A
28	V	2504	C
28	V	2505	A
28	V	2507	A
28	V	2511	A
28	V	2523	G
28	V	2525	C
28	V	2527	C
28	V	2531	G
28	V	2532	A
28	V	2534	G
28	V	2535	U
28	V	2547	A
28	V	2549	C
28	V	2558	G
28	V	2564	G
28	V	2583	U
28	V	2584	U
28	V	2593	A
28	V	2596	G
28	V	2601	A

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Mol	Chain	Res	Type
28	V	2602	C
28	V	2605	G
28	V	2611	G
28	V	2613	U
28	V	2614	U
28	V	2631	A
28	V	2632	G
28	V	2638	U
28	V	2639	C
28	V	2642	U
28	V	2644	U
28	V	2659	G
28	V	2675	C
28	V	2690	G
28	V	2711	G
28	V	2718	U
28	V	2720	C
28	V	2743	G
28	V	2755	U
28	V	2762	A
28	V	2763	C
28	V	2764	G
28	V	2765	G
28	V	2773	G
28	V	2777	A
28	V	2784	C
28	V	2785	U
28	V	2794	A
28	V	2806	G
28	V	2807	A
28	V	2808	U
28	V	2818	C
28	V	2823	C
28	V	2824	G
28	V	2826	A
28	V	2831	A
28	V	2845	A
28	V	2859	G
28	V	2860	A
28	V	2867	U
28	V	2868	G
28	V	2884	G

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Mol	Chain	Res	Type
28	V	2892	G
28	V	2897	G
28	V	2899	C
28	V	2900	A
28	V	2901	G
28	V	2905	C
28	V	2916	A
28	V	2918	G
33	a	10	A
33	a	11	G
33	a	31	A
33	a	32	C
33	a	33	G
33	a	34	A
33	a	41	G
33	a	49	C
33	a	50	C
33	a	53	A
33	a	75	G
33	a	77	U
33	a	78	G
33	a	84	U
33	a	85	U
33	a	86	G
33	a	87	C
33	a	89	C
33	a	90	C
33	a	93	G
33	a	99	A
33	a	114	A
33	a	119	C
33	a	120	A
33	a	128	A
33	a	129	A
33	a	130	C
33	a	136	U
33	a	142	A
33	a	143	C
33	a	153	U
33	a	154	C
33	a	158	G
33	a	162	C

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Mol	Chain	Res	Type
33	a	172	U
33	a	177	G
33	a	181	G
33	a	182	U
33	a	189	A
33	a	197	G
33	a	208	A
33	a	209	A
33	a	211	A
33	a	218	U
33	a	219	U
33	a	221	G
33	a	249	G
33	a	253	U
33	a	255	G
33	a	258	A
33	a	259	G
33	a	274	G
33	a	275	C
33	a	287	A
33	a	297	G
33	a	314	A
33	a	336	C
33	a	337	A
33	a	338	C
33	a	340	G
33	a	352	A
33	a	354	G
33	a	360	C
33	a	362	G
33	a	373	U
33	a	375	U
33	a	380	C
33	a	381	A
33	a	385	G
33	a	392	G
33	a	396	G
33	a	405	A
33	a	414	G
33	a	419	A
33	a	420	U
33	a	421	G

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Mol	Chain	Res	Type
33	a	429	U
33	a	430	C
33	a	435	C
33	a	436	G
33	a	437	U
33	a	448	U
33	a	456	A
33	a	460	A
33	a	461	C
33	a	466	G
33	a	474	A
33	a	475	A
33	a	476	U
33	a	477	A
33	a	478	G
33	a	481	C
33	a	485	A
33	a	487	C
33	a	488	U
33	a	489	U
33	a	490	G
33	a	491	A
33	a	494	G
33	a	502	C
33	a	504	A
33	a	506	A
33	a	508	A
33	a	518	A
33	a	520	C
33	a	526	G
33	a	527	C
33	a	530	G
33	a	536	G
33	a	541	A
33	a	542	A
33	a	556	A
33	a	564	C
33	a	568	A
33	a	571	U
33	a	573	U
33	a	582	A
33	a	585	G

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Mol	Chain	Res	Type
33	a	586	G
33	a	590	G
33	a	597	G
33	a	605	A
33	a	641	G
33	a	642	U
33	a	643	C
33	a	651	A
33	a	662	U
33	a	696	A
33	a	732	U
33	a	733	G
33	a	756	U
33	a	757	A
33	a	758	A
33	a	764	G
33	a	787	G
33	a	802	U
33	a	803	A
33	a	824	A
33	a	826	C
33	a	841	G
33	a	849	G
33	a	853	C
33	a	855	G
33	a	856	C
33	a	882	A
33	a	883	A
33	a	885	C
33	a	924	A
33	a	943	G
33	a	944	C
33	a	945	A
33	a	950	C
33	a	963	G
33	a	964	G
33	a	966	U
33	a	968	A
33	a	969	A
33	a	970	U
33	a	979	A
33	a	981	G

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Mol	Chain	Res	Type
33	a	985	A
33	a	986	G
33	a	987	A
33	a	993	A
33	a	999	U
33	a	1002	U
33	a	1003	G
33	a	1007	U
33	a	1008	C
33	a	1009	C
33	a	1010	U
33	a	1011	C
33	a	1012	U
33	a	1014	A
33	a	1015	C
33	a	1017	A
33	a	1019	C
33	a	1023	G
33	a	1024	A
33	a	1028	A
33	a	1030	G
33	a	1033	G
33	a	1035	C
33	a	1036	C
33	a	1039	U
33	a	1041	C
33	a	1042	G
33	a	1046	G
33	a	1047	C
33	a	1050	A
33	a	1053	G
33	a	1058	G
33	a	1064	C
33	a	1075	U
33	a	1088	U
33	a	1089	G
33	a	1095	U
33	a	1104	G
33	a	1105	U
33	a	1111	A
33	a	1112	A
33	a	1118	G

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Mol	Chain	Res	Type
33	a	1122	C
33	a	1134	G
33	a	1135	U
33	a	1136	U
33	a	1140	A
33	a	1142	C
33	a	1145	U
33	a	1148	G
33	a	1149	U
33	a	1153	G
33	a	1161	A
33	a	1166	A
33	a	1168	U
33	a	1176	A
33	a	1178	A
33	a	1190	G
33	a	1192	U
33	a	1193	G
33	a	1205	A
33	a	1206	A
33	a	1211	U
33	a	1221	U
33	a	1222	A
33	a	1223	U
33	a	1237	C
33	a	1259	A
33	a	1261	A
33	a	1267	G
33	a	1278	A
33	a	1279	G
33	a	1289	A
33	a	1294	A
33	a	1295	C
33	a	1296	A
33	a	1308	A
33	a	1314	G
33	a	1326	C
33	a	1329	C
33	a	1330	U
33	a	1331	C
33	a	1341	A
33	a	1347	G

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Mol	Chain	Res	Type
33	a	1355	A
33	a	1366	A
33	a	1370	G
33	a	1372	A
33	a	1373	U
33	a	1377	G
33	a	1387	C
33	a	1407	A
33	a	1451	A
33	a	1455	A
33	a	1460	U
33	a	1462	U
33	a	1463	A
33	a	1464	G
33	a	1490	A
33	a	1500	U
33	a	1502	A
33	a	1503	A
33	a	1516	U
33	a	1527	G
33	a	1539	G
33	a	1540	G

All (75) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
7	A	33	A
7	A	34	A
7	A	38	A
7	A	39	U
7	A	45	C
8	B	31	G
8	B	37	A
8	B	48	G
8	B	49	G
14	H	47	U
14	H	55	U
28	V	88	G
28	V	183	A
28	V	252	C
28	V	347	G
28	V	411	G

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Mol	Chain	Res	Type
28	V	441	C
28	V	444	U
28	V	549	A
28	V	554	U
28	V	689	A
28	V	772	G
28	V	810	G
28	V	905	G
28	V	1093	G
28	V	1172	A
28	V	1243	A
28	V	1244	A
28	V	1250	G
28	V	1264	G
28	V	1269	A
28	V	1275	G
28	V	1305	A
28	V	1351	U
28	V	1435	U
28	V	1448	U
28	V	1507	U
28	V	1525	G
28	V	1527	C
28	V	1529	G
28	V	1530	G
28	V	1535	U
28	V	1565	U
28	V	1567	U
28	V	1570	U
28	V	1631	A
28	V	1726	G
28	V	1757	G
28	V	1784	A
28	V	1828	G
28	V	1882	A
28	V	1914	A
28	V	1972	U
28	V	1991	C
28	V	2009	G
28	V	2022	U
28	V	2127	U
28	V	2155	A

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Mol	Chain	Res	Type
28	V	2205	A
28	V	2254	A
28	V	2316	A
28	V	2335	U
28	V	2336	G
28	V	2349	A
28	V	2364	A
28	V	2452	U
28	V	2454	A
28	V	2468	A
28	V	2510	G
28	V	2534	G
28	V	2631	A
28	V	2710	C
28	V	2805	A
28	V	2883	C
28	V	2904	A

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.

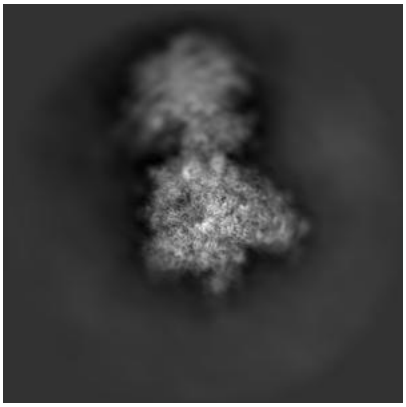
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-14159. These allow visual inspection of the internal detail of the map and identification of artifacts.

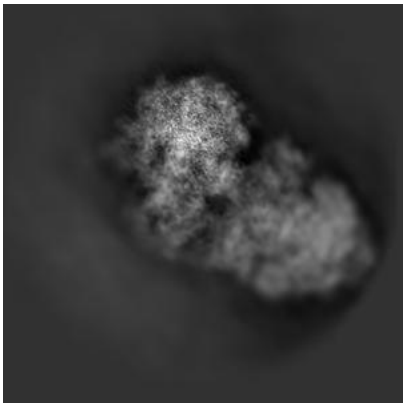
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

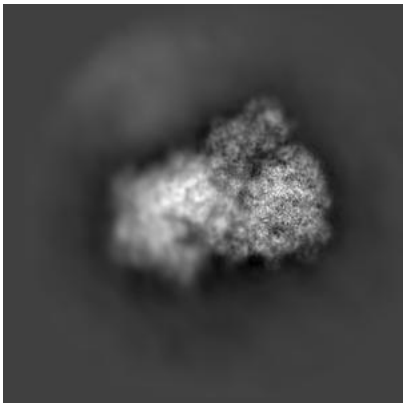
6.1.1 Primary map



X



Y

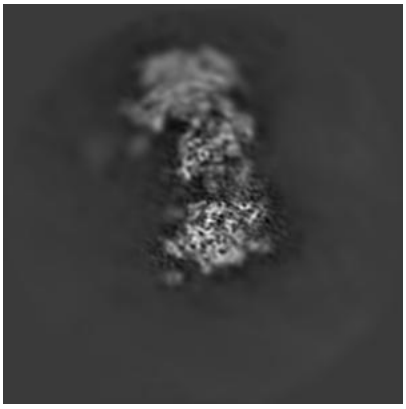


Z

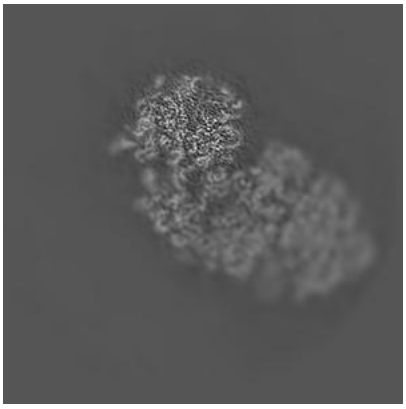
The images above show the map projected in three orthogonal directions.

6.2 Central slices

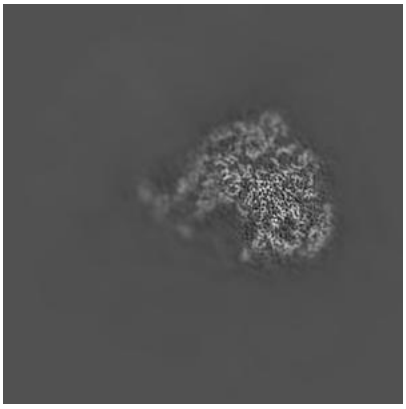
6.2.1 Primary map



X Index: 184



Y Index: 184

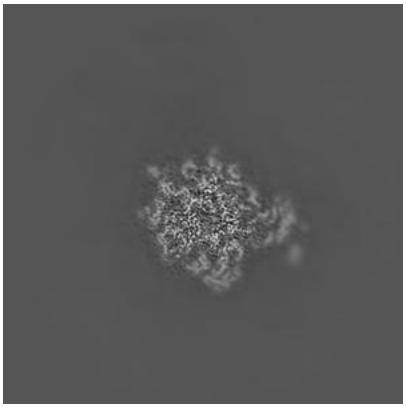


Z Index: 184

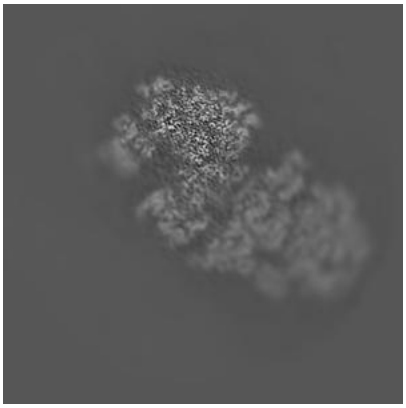
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

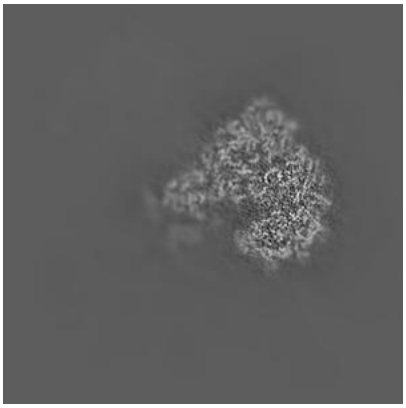
6.3.1 Primary map



X Index: 254



Y Index: 196

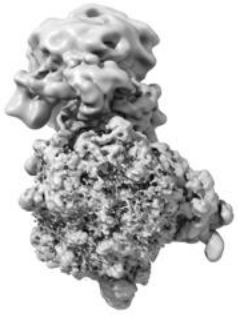


Z Index: 169

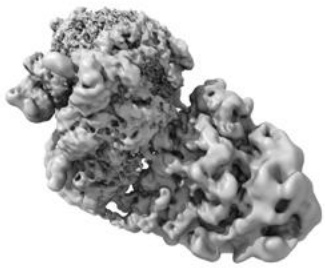
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

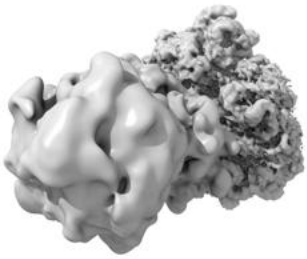
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0172. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

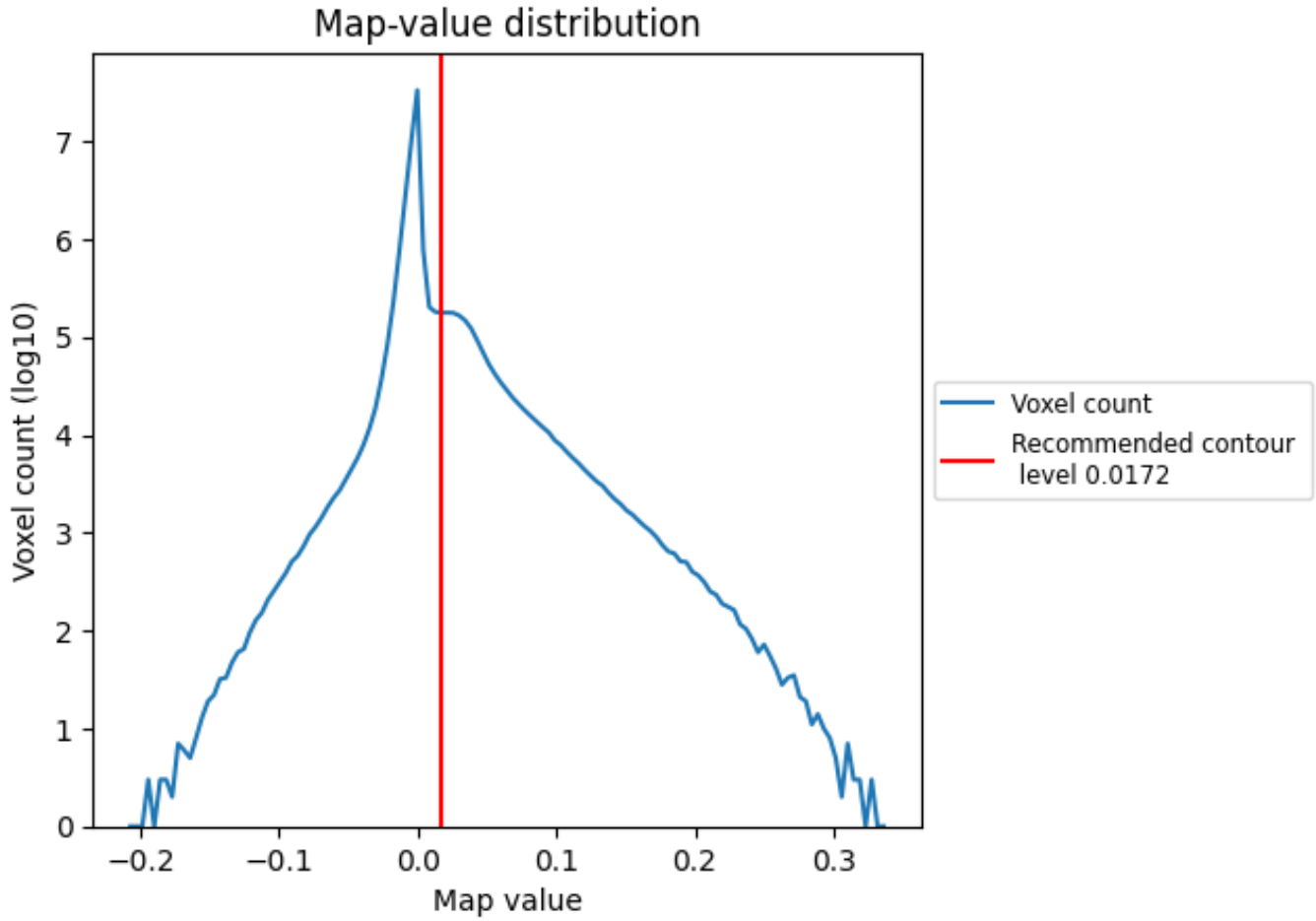
6.5 Mask visualisation (i)

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

7 Map analysis

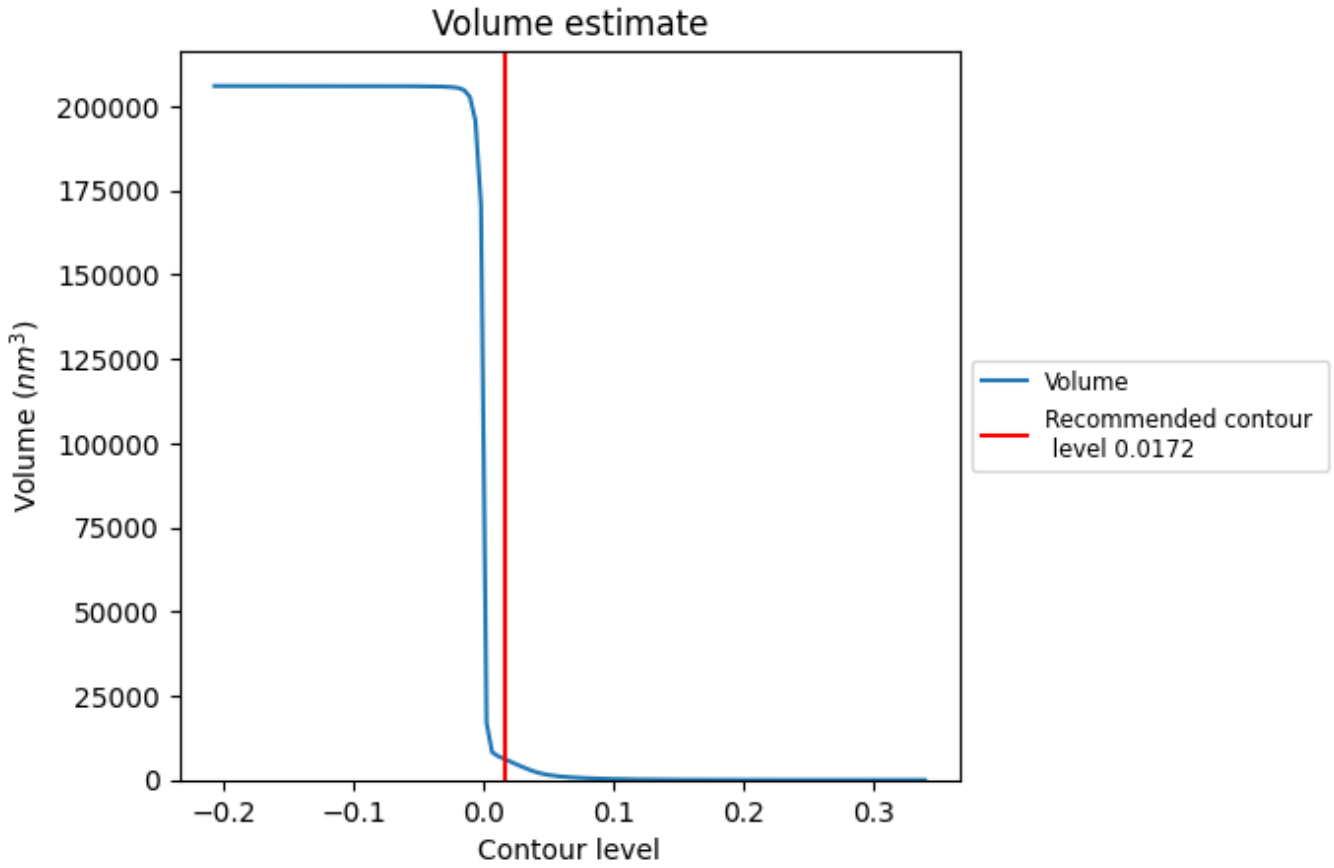
This section contains the results of statistical analysis of the map.

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.

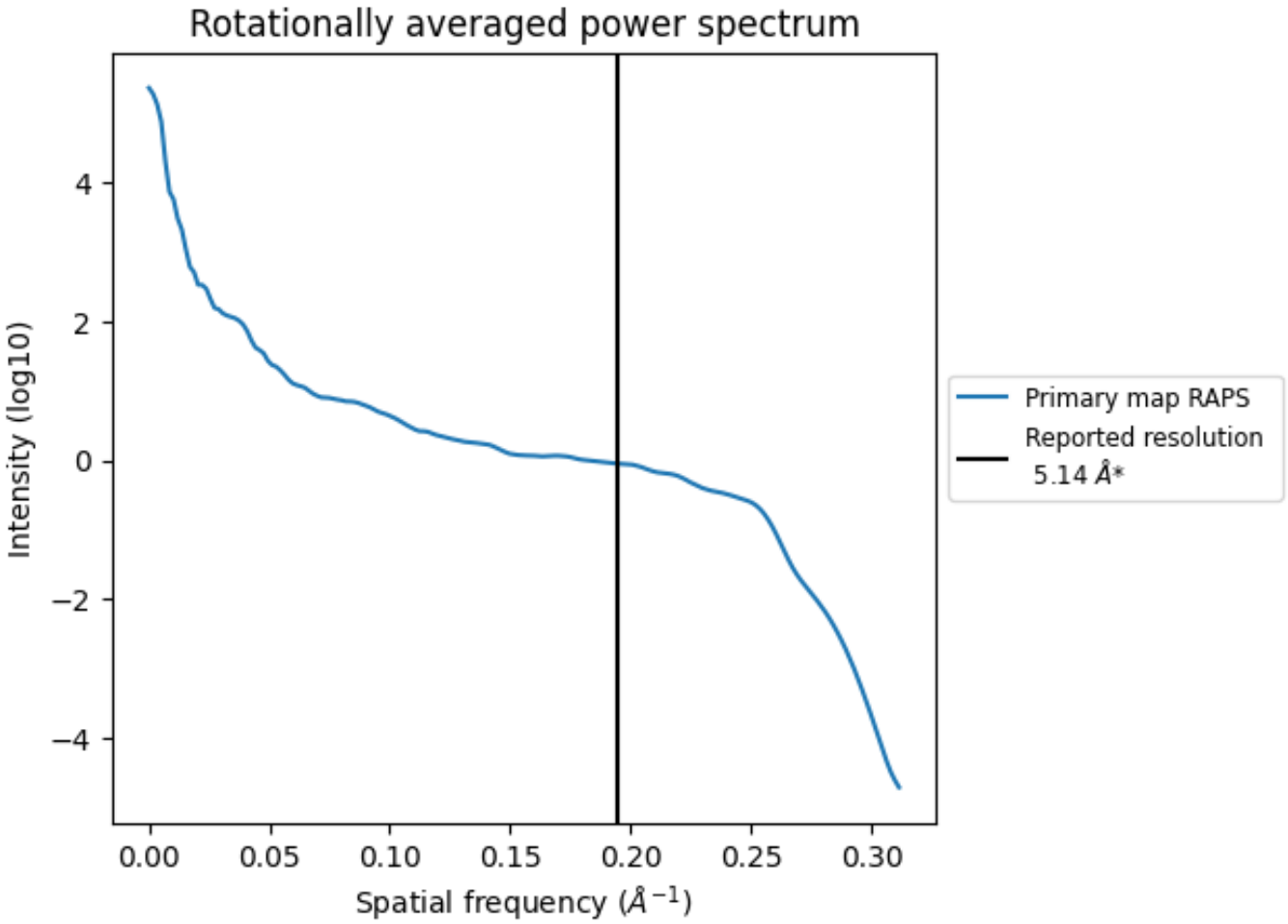
7.2 Volume estimate



The volume at the recommended contour level is 6043 nm^3; this corresponds to an approximate mass of 5459 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 0.195 Å^{-1}

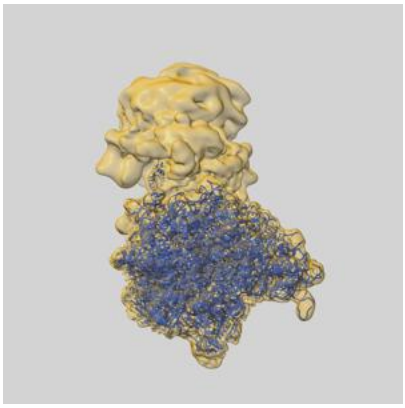
8 Fourier-Shell correlation (i)

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

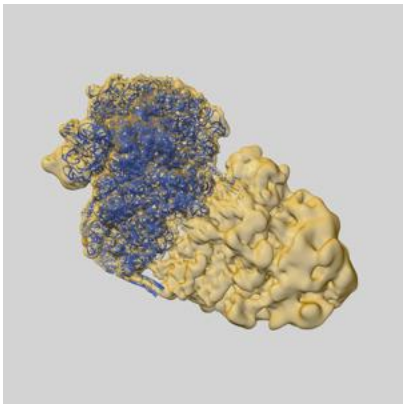
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-14159 and PDB model 7QV3. Per-residue inclusion information can be found in section 3 on page 14.

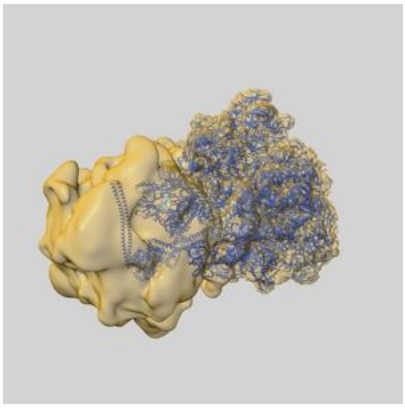
9.1 Map-model overlay



X



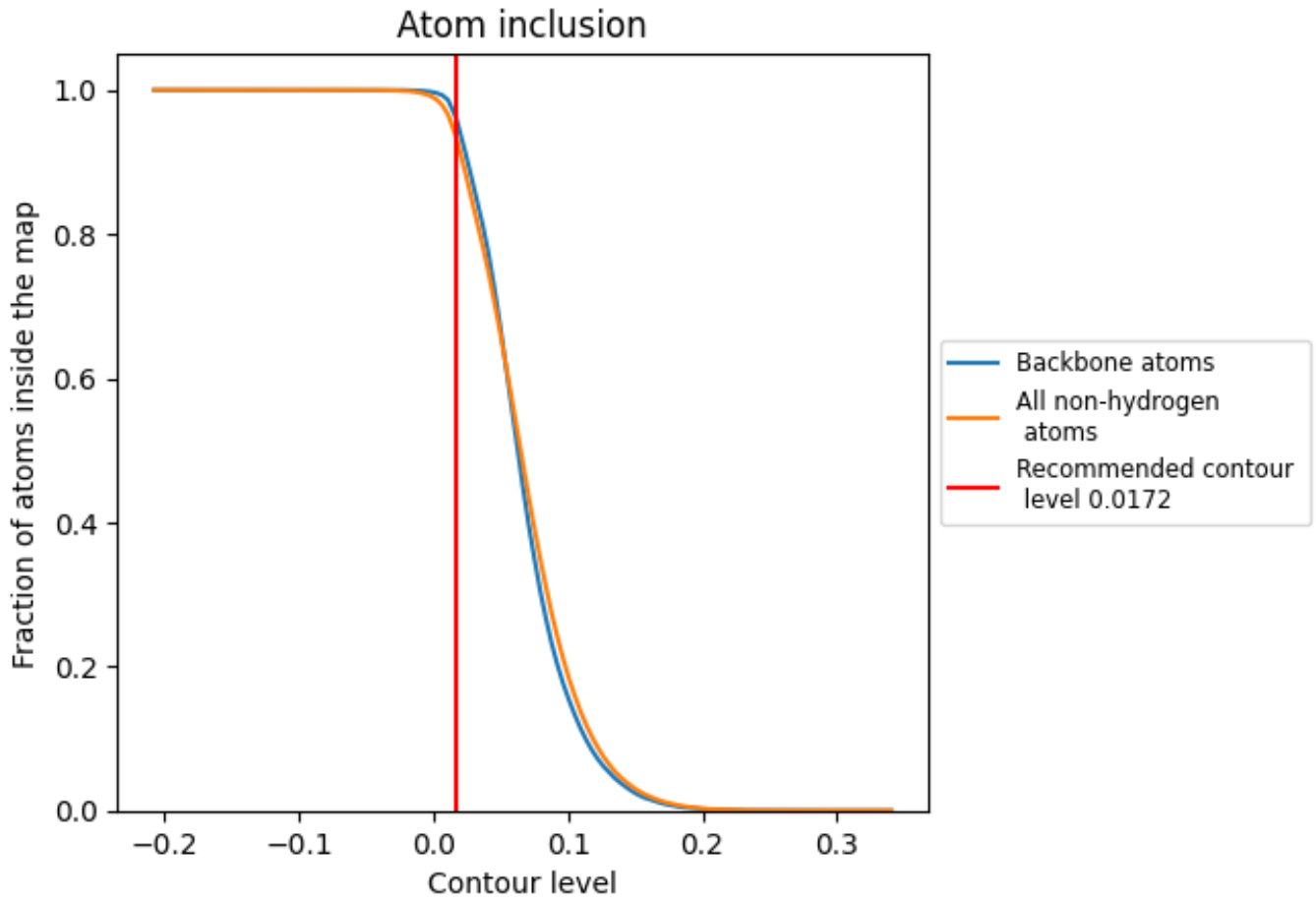
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0172 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 Atom inclusion (i)



At the recommended contour level, 96% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.