



## wwPDB EM Validation Summary Report ⓘ

Feb 9, 2026 – 02:08 PM EST

PDB ID : 9Y4H / pdb\_00009y4h  
EMDB ID : EMD-72483  
Title : Structure of guinea pig ribosome with P/E-tRNA and mRNA  
Authors : Gutierrez-Vargas, C.; De, S.; Maji, S.; Liu, Z.; Nieb, M.; Seluanov, A.; Gorbunova, V.; Frank, J.  
Deposited on : 2025-09-03  
Resolution : 4.70 Å(reported)  
Based on initial model : 4V6X

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

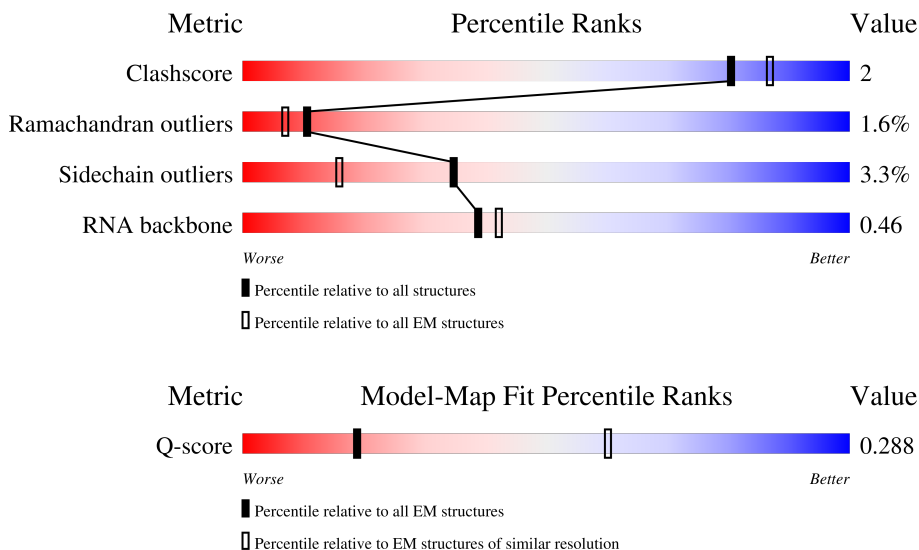
EMDB validation analysis : 0.0.1.dev131  
MolProbity : 4-5-2 with Phenix2.0  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.48

# 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 4.70 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))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	1989 ( 4.20 - 5.20 )

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  $\geq 3$ , 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	AO	151	
2	AX	143	
3	AN	151	










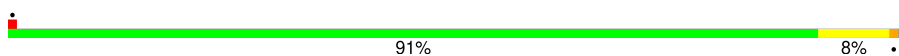


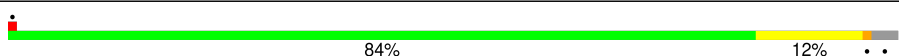
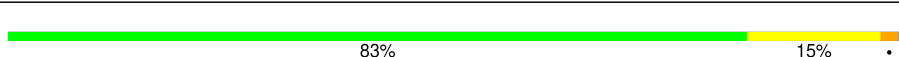


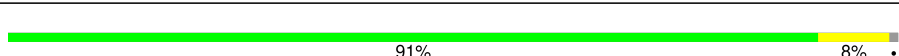
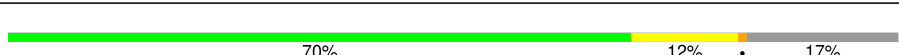
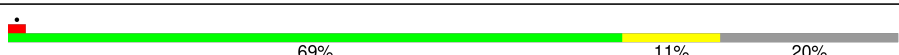
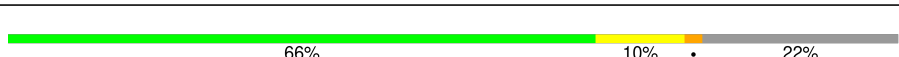
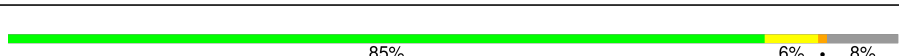
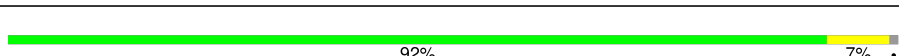


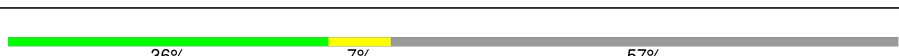
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Mol	Chain	Length	Quality of chain
4	AL	158	84% 9% 7%
5	AB	264	66% 14% 19%
6	AA	295	56% 14% 30%
7	AV	83	81% 17%
8	AY	133	81% 13% 5%
9	Aa	115	79% 6% 15%
10	Ab	84	92% 7%
11	Ae	59	81% 14%
12	AJ	194	80% 9% 10%
13	AE	263	87% 11%
14	AC	293	65% 9% 26%
15	AG	249	85% 9% 5%
16	AH	194	78% 13% 8%
17	AW	130	88% 11%
18	AI	208	82% 13%
19	B2	1803	72% 25%
20	CW	157	71% 25%
21	Ag	317	6% 85% 9% 6%
22	AU	119	16% 72% 13% 13%
23	AK	165	48% 8% 42%
24	AS	152	82% 9% 10%
25	Ad	56	84% 11% 5%
26	AR	135	6% 66% 12% 22%
27	AP	145	5% 70% 14% 14%
28	AT	145	82% 14%














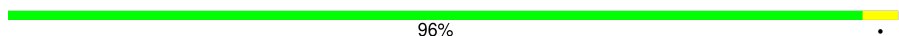











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Mol	Chain	Length	Quality of chain
29	AZ	125	
30	Ac	69	
31	AD	243	
32	AF	204	
33	AQ	146	
34	CO	203	
35	CL	211	
36	CV	140	
37	CM	215	
38	Ca	148	
39	CN	204	
40	CI	214	
41	CD	297	
42	CQ	188	
43	CA	257	
44	CS	176	
45	CT	160	
46	CP	184	
47	CU	128	
48	CX	156	
49	CY	145	
50	CZ	136	
51	Cr	137	
52	Ch	123	
53	Cb	159	

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Mol	Chain	Length	Quality of chain
54	CB	403	 83% 13% ..
55	CF	248	 81% 12% 8%
56	Cc	115	 69% 18% 13%
57	Cd	125	 84% 6% • 10%
58	Ce	135	 79% 16% ..
59	Cf	110	 87% 10% ..
60	Cg	117	 89% 8% ..
61	Ci	105	 87% 11% •
62	Cj	97	 71% 19% 10%
63	Ck	70	 87% 10% ..
64	Cl	51	 82% 10% • 6%
65	CC	427	 69% 14% • 16%
66	Cm	52	 75% 23% •
67	Cn	25	 96% •
68	Cp	92	 85% 12% ..
69	Co	106	 81% 13% • 5%
70	CJ	178	 80% 13% • 6%
71	CH	192	 89% 9% ..
72	CE	288	 66% 18% •• 12%
73	CG	266	 78% 14% 8%
74	A5	4010	 72% 24% ..
75	A7	121	 81% 18% •
76	A8	157	 73% 25% ..
77	Cw	77	 75% 23% •
78	Dd	7	 57% 43%

## 2 Entry composition

There are 79 unique types of molecules in this entry. The entry contains 371528 atoms, of which 156643 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 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
1	AO	126	1921	580	973	188	174	6	0	0

- Molecule 2 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
2	AX	140	2257	691	1163	218	182	3	0	0

- Molecule 3 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
3	AN	150	2502	773	1294	229	205	1	0	0

- Molecule 4 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
4	AL	147	2495	777	1279	226	207	6	0	0

- Molecule 5 is a protein called Small ribosomal subunit protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
5	AB	215	3567	1110	1820	313	310	14	0	0

- Molecule 6 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
6	AA	206	3250	1035	1626	287	294	8	0	0

- Molecule 7 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
7	AV	81	1232	379	615	115	119	4	0	0

- Molecule 8 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
8	AY	126	2111	646	1088	200	172	5	0	0

- Molecule 9 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
9	Aa	98	1613	486	832	161	129	5	0	0

- Molecule 10 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
10	Ab	84	1339	413	680	122	116	8	0	0

- Molecule 11 is a protein called FAU ubiquitin like and ribosomal protein S30 fusion.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
11	Ae	58	972	287	511	101	72	1	0	0

- Molecule 12 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
12	AJ	174	3025	931	1566	291	235	2	0	0

- Molecule 13 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
13	AE	261	4254	1324	2181	385	355	9	0	0

- Molecule 14 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
14	AC	218	3469	1096	1777	290	296	10	0	0

- Molecule 15 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
15	AG	237	4008	1200	2085	387	329	7	0	0

- Molecule 16 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
16	AH	179	2983	924	1534	266	258	1	0	0

- Molecule 17 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
17	AW	129	2113	659	1079	193	176	6	0	0

- Molecule 18 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
18	AI	200	3364	1031	1720	324	284	5	0	0

- Molecule 19 is a RNA chain called 18S rRNA (1803-MER).

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	P		
19	B2	1773	56567	16783	18948	6729	12335	1772	0	0

- Molecule 20 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
20	CW	118	1988	604	1023	199	158	4	0	0

- Molecule 21 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
21	Ag	299	4623	1474	2289	408	440	12	0	0

- Molecule 22 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
22	AU	103	1699	511	882	155	147	4	0	0

- Molecule 23 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
23	AK	95	1621	524	822	139	130	6	0	0

- Molecule 24 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
24	AS	137	2327	714	1188	231	193	1	0	0

- Molecule 25 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
25	Ad	53	887	278	442	90	72	5	0	0

- Molecule 26 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
26	AR	105	1768	538	910	164	151	5	0	0

- Molecule 27 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
27	AP	124	2136	659	1099	198	173	7	0	0

- Molecule 28 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
28	AT	141	2236	690	1135	212	196	3	0	0

- Molecule 29 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
29	AZ	74	1243	380	649	110	103	1	0	0

- Molecule 30 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
30	Ac	64	1041	308	535	102	94	2	0	0

- Molecule 31 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
31	AD	227	3622	1125	1857	317	315	8	0	0

- Molecule 32 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
32	AF	191	3067	943	1558	286	273	7	0	0

- Molecule 33 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
33	AQ	141	2316	715	1192	212	194	3	0	0

- Molecule 34 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
34	CO	199	3410	1053	1776	319	257	5	0	0

- Molecule 35 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
35	CL	204	3406	1032	1757	343	270	4	0	0

- Molecule 36 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
36	CV	129	1999	613	1030	182	169	5	0	0

- Molecule 37 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
37	CM	139	2348	730	1209	218	183	8	0	0

- Molecule 38 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
38	Ca	147	2372	736	1210	237	186	3	0	0

- Molecule 39 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
39	CN	203	3448	1072	1747	359	266	4	0	0

- Molecule 40 is a protein called 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
40	CI	202	3300	1037	1666	314	269	14	0	0

- Molecule 41 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
41	CD	289	4723	1483	2370	429	427	14	0	0

- Molecule 42 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
42	CQ	187	3142	944	1629	314	250	5	0	0

- Molecule 43 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
43	CA	255	4008	1225	2051	399	327	6	0	0

- Molecule 44 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
44	CS	175	2938	925	1485	283	235	10	0	0

- Molecule 45 is a protein called Large ribosomal subunit protein eL21.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
45	CT	159	2661	823	1363	252	217	6	0	0

- Molecule 46 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
46	CP	152	2493	771	1260	240	213	9	0	0

- Molecule 47 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
47	CU	102	1698	535	863	147	151	2	0	0

- Molecule 48 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
48	CX	121	2072	636	1078	187	170	1	0	0

- Molecule 49 is a protein called Large ribosomal subunit protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace	
49	CY	133	Total	C	H	N	O	S	0	0
			2300	695	1193	225	185	2		

- Molecule 50 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace	
50	CZ	135	Total	C	H	N	O	S	0	0
			2289	714	1182	208	182	3		

- Molecule 51 is a protein called Large ribosomal subunit protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace	
51	Cr	134	Total	C	H	N	O	S	0	0
			2247	670	1164	227	180	6		

- Molecule 52 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace	
52	Ch	123	Total	C	H	N	O	S	0	0
			2183	646	1160	206	169	2		

- Molecule 53 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace	
53	Cb	68	Total	C	H	N	O	S	0	0
			1149	344	590	122	90	3		

- Molecule 54 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace	
54	CB	394	Total	C	H	N	O	S	0	0
			6484	2024	3306	596	544	14		

- Molecule 55 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace	
55	CF	229	Total	C	H	N	O	S	0	0
			3956	1226	2046	370	305	9		

- Molecule 56 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
56	Cc	100	1588	492	812	136	141	7	0	0

- Molecule 57 is a protein called Large ribosomal subunit protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
57	Cd	113	1910	586	979	181	162	2	0	0

- Molecule 58 is a protein called Ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
58	Ce	129	2219	672	1158	217	166	6	0	0

- Molecule 59 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
59	Cf	109	1786	555	910	174	144	3	0	0

- Molecule 60 is a protein called Large ribosomal subunit protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
60	Cg	114	1905	566	999	187	147	6	0	0

- Molecule 61 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
61	Ci	103	1765	526	925	178	130	6	0	0

- Molecule 62 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
62	Cj	87	1470	440	754	159	112	5	0	0

- Molecule 63 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace	
63	Ck	69	Total	C	H	N	O	S	0	0
			1206	366	637	103	99	1		

- Molecule 64 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace	
64	Cl	48	Total	C	H	N	O	S	0	0
			900	273	469	96	61	1		

- Molecule 65 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace	
65	CC	360	Total	C	H	N	O	S	0	0
			5900	1805	3033	573	476	13		

- Molecule 66 is a protein called Ubiquitin-ribosomal protein eL40 fusion protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
66	Cm	51	Total	C	H	N	O	S	0	0
			875	260	456	88	65	6		

- Molecule 67 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace	
67	Cn	25	Total	C	H	N	O	S	0	0
			529	145	289	64	28	3		

- Molecule 68 is a protein called Large ribosomal subunit protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace	
68	Cp	90	Total	C	H	N	O	S	0	0
			1458	442	755	135	119	7		

- Molecule 69 is a protein called Ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace	
69	Co	101	Total	C	H	N	O	S	0	0
			1720	517	893	170	134	6		

- Molecule 70 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms						AltConf	Trace
70	CJ	168	Total	C	H	N	O	S	0	0
			2732	853	1383	251	239	6		

- Molecule 71 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms						AltConf	Trace
71	CH	191	Total	C	H	N	O	S	0	0
			3129	960	1603	285	275	6		

- Molecule 72 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms						AltConf	Trace
72	CE	252	Total	C	H	N	O	S	0	0
			4253	1307	2217	387	338	4		

- Molecule 73 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms						AltConf	Trace
73	CG	246	Total	C	H	N	O	S	0	0
			4093	1256	2120	379	334	4		

- Molecule 74 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
74	A5	3875	Total	C	H	N	O	P	0	0
			122271	36174	40870	14718	26635	3874		

- Molecule 75 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
75	A7	121	Total	C	H	N	O	P	0	0
			3884	1150	1306	458	850	120		

- Molecule 76 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
76	A8	156	Total	C	H	N	O	P	0	0
			4996	1480	1682	585	1094	155		

- Molecule 77 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	P		
77	Cw	77	2481	732	837	298	537	77	0	0

- Molecule 78 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	P		
78	Dd	7	209	63	69	14	56	7	0	0

- Molecule 79 is water.

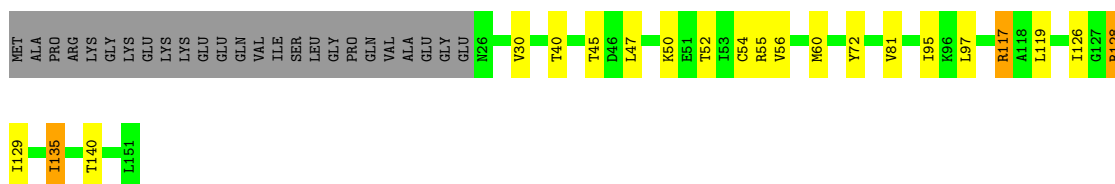
Mol	Chain	Residues	Atoms		AltConf
79	B2	2	Total 2	O 2	0
79	Cw	4	Total 4	O 4	0
79	Dd	1	Total 1	O 1	0

### 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: 40S ribosomal protein S14

Chain AO:  70% 12% 17%



- Molecule 2: Small ribosomal subunit protein uS12

Chain AX:  83% 15% ..




- Molecule 3: 40S ribosomal protein S13

Chain AN:  91% 8% ..



- Molecule 4: Small ribosomal subunit protein uS17

Chain AL:  84% 9% 7%



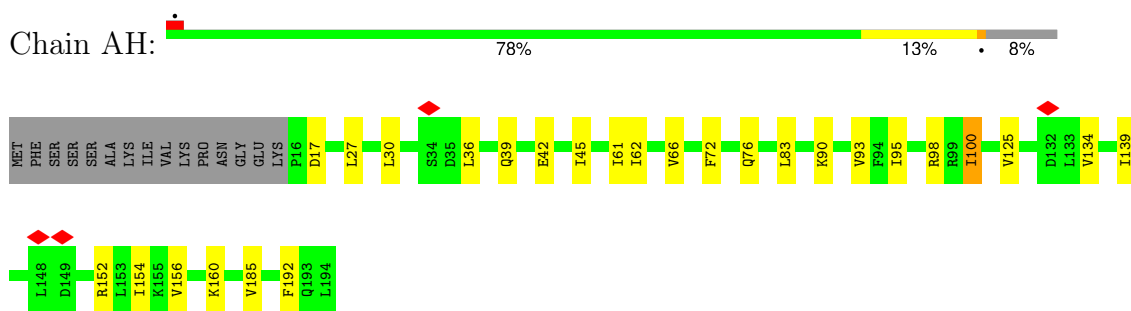
- Molecule 5: Small ribosomal subunit protein eS1

Chain AB:  66% 14% 19%

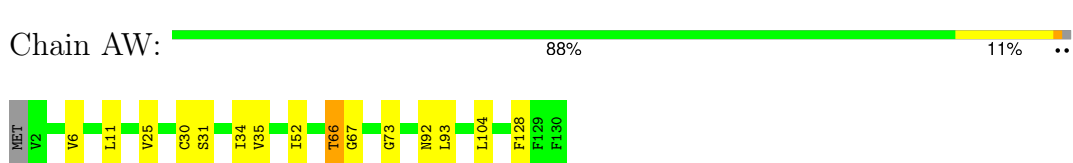




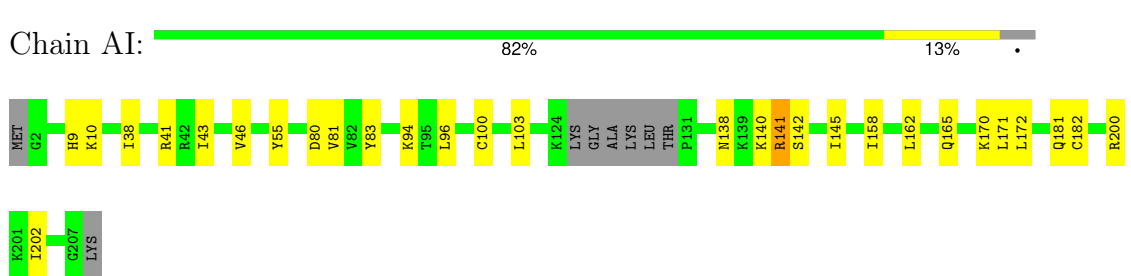
• Molecule 16: 40S ribosomal protein S7



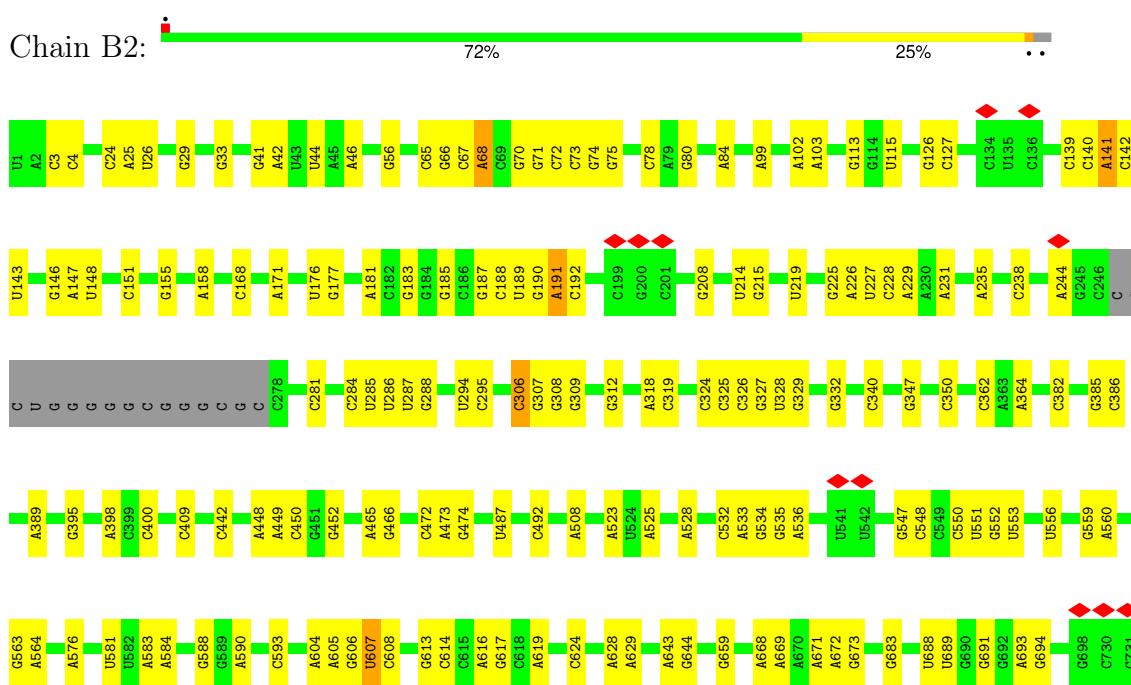
• Molecule 17: Small ribosomal subunit protein uS8

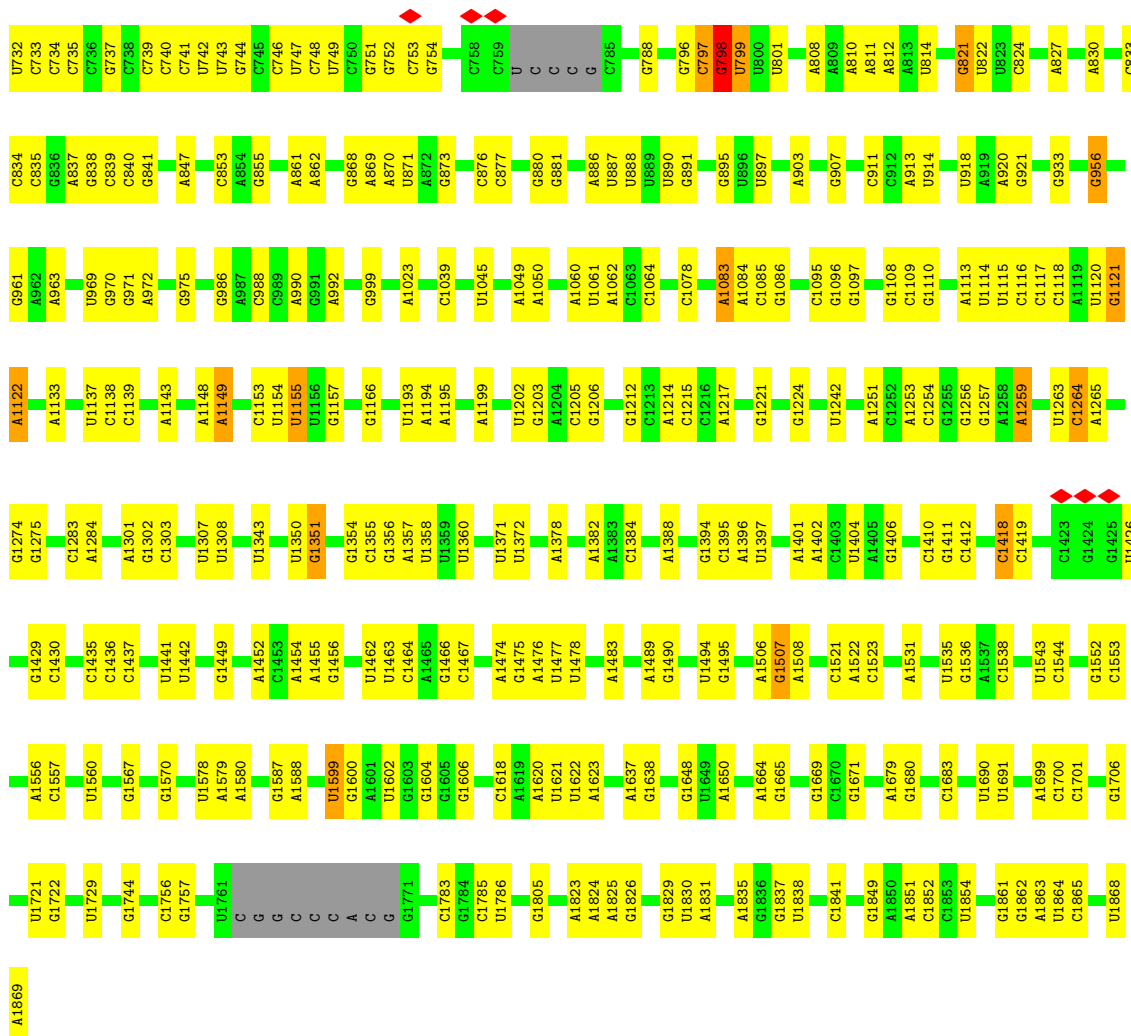


• Molecule 18: 40S ribosomal protein S8

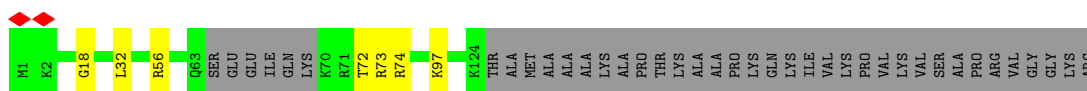


• Molecule 19: 18S rRNA (1803-MER)

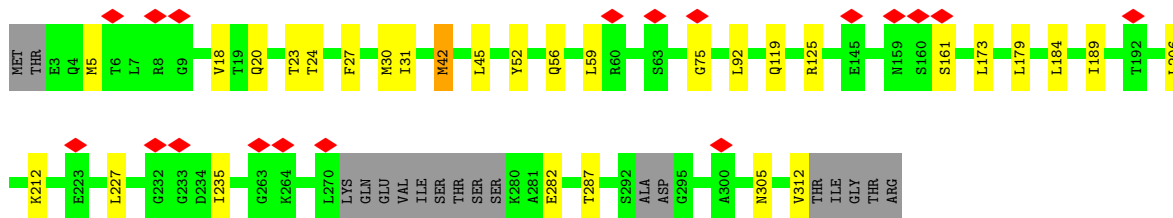
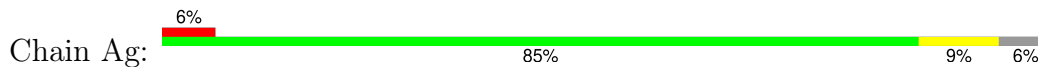




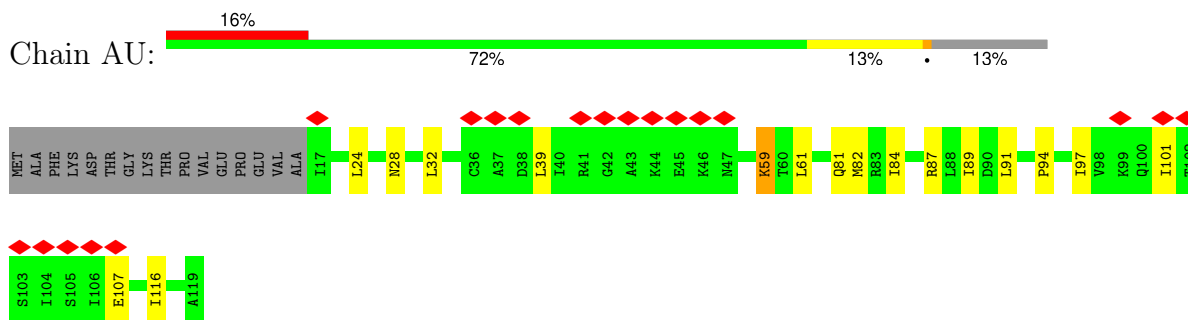
- Molecule 20: Large ribosomal subunit protein eL24



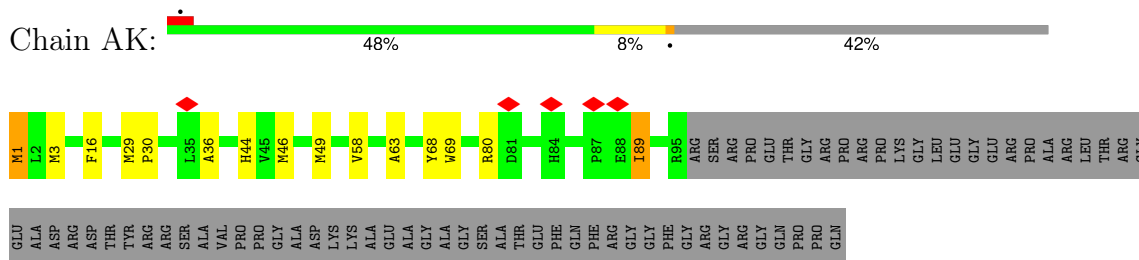
- Molecule 21: Small ribosomal subunit protein RACK1



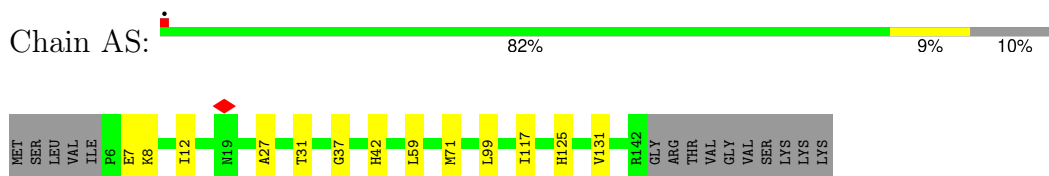
- Molecule 22: Small ribosomal subunit protein uS10



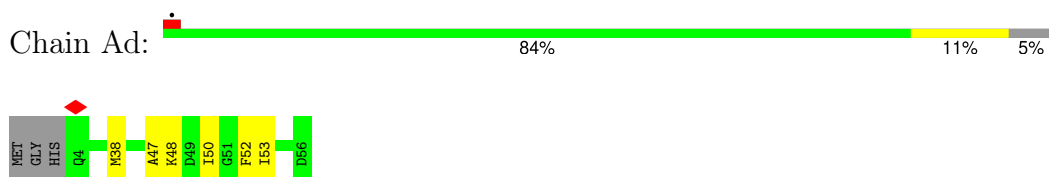
• Molecule 23: 40S ribosomal protein S10



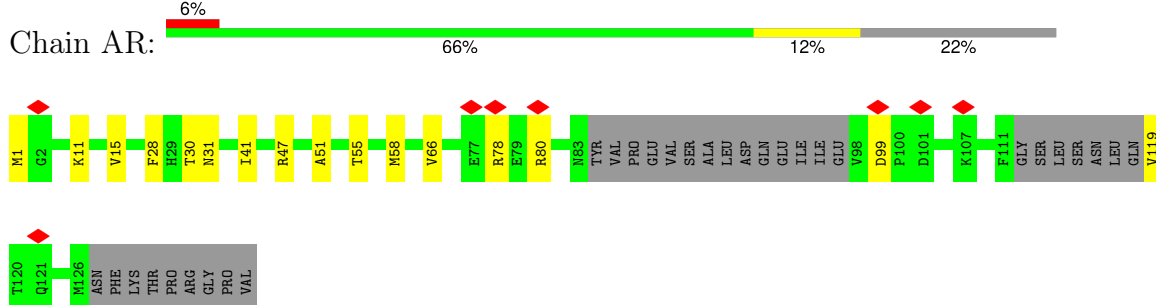
• Molecule 24: Small ribosomal subunit protein uS13



• Molecule 25: Small ribosomal subunit protein uS14

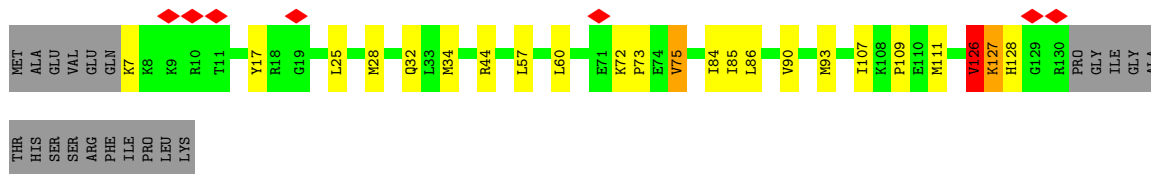


• Molecule 26: Small ribosomal subunit protein eS17

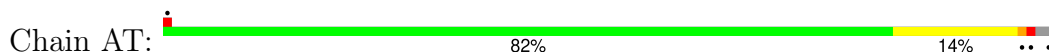


• Molecule 27: 40S ribosomal protein S15

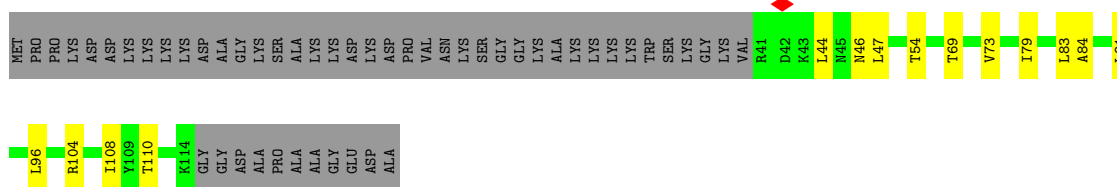




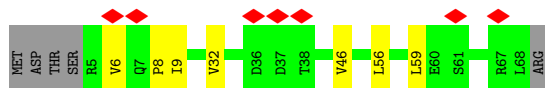
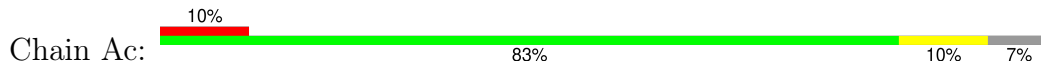
- Molecule 28: Small ribosomal subunit protein eS19



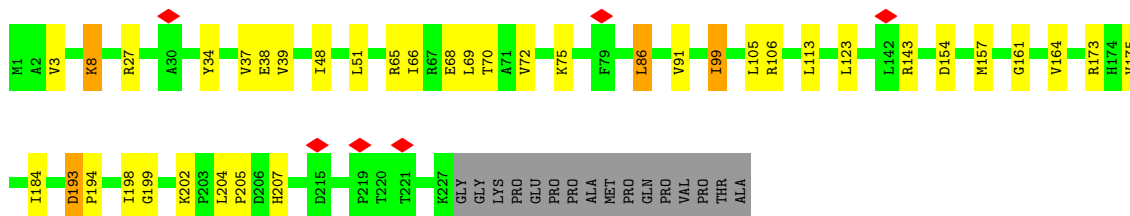
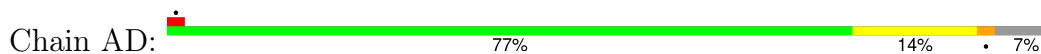
- Molecule 29: 40S ribosomal protein S25



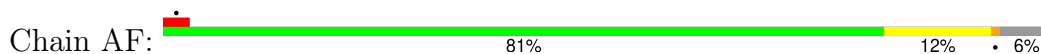
- Molecule 30: 40S ribosomal protein S28

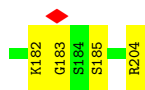


- Molecule 31: 40S ribosomal protein S3

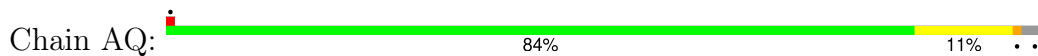


- Molecule 32: Small ribosomal subunit protein uS7

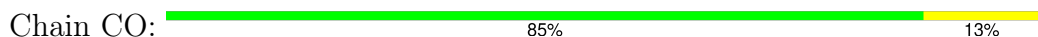




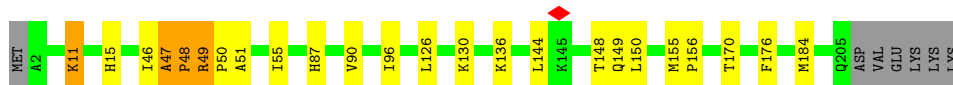
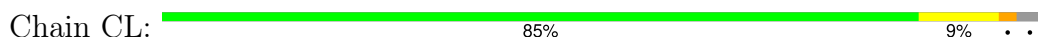
- Molecule 33: Small ribosomal subunit protein uS9



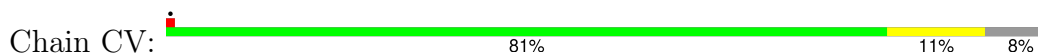
- Molecule 34: 60S ribosomal protein L13a



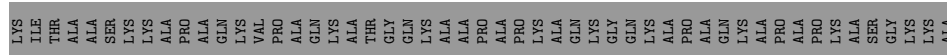
- Molecule 35: 60S ribosomal protein L13



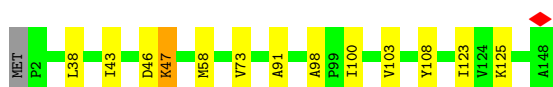
- Molecule 36: Large ribosomal subunit protein uL14



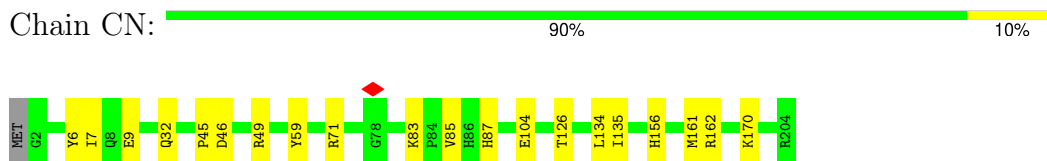
- Molecule 37: 60S ribosomal protein L14



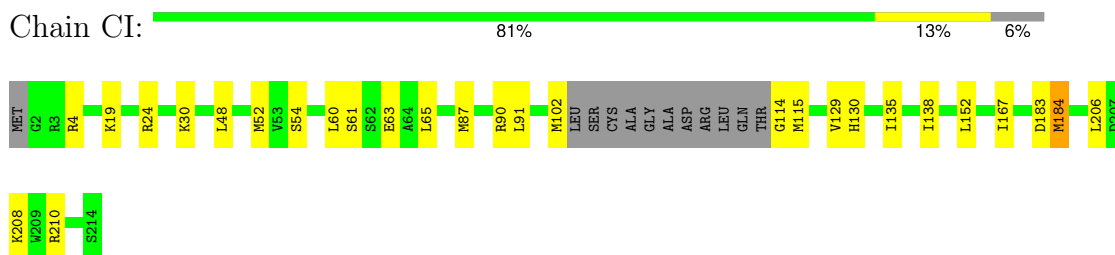
- Molecule 38: 60S ribosomal protein L27a



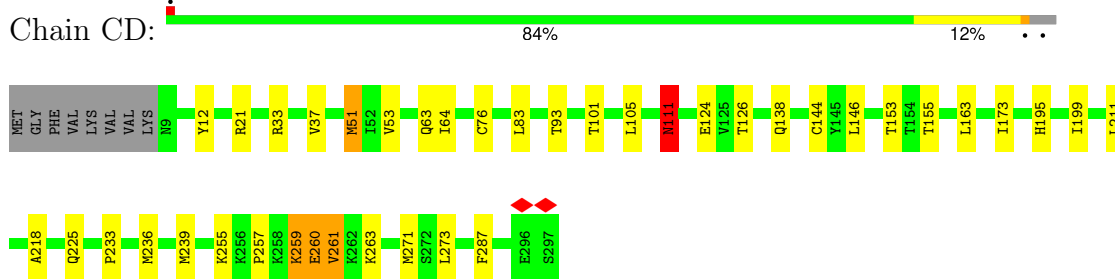
- Molecule 39: Ribosomal protein L15



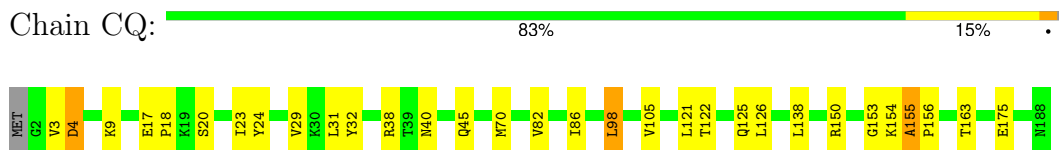
- Molecule 40: 60S ribosomal protein L10-like



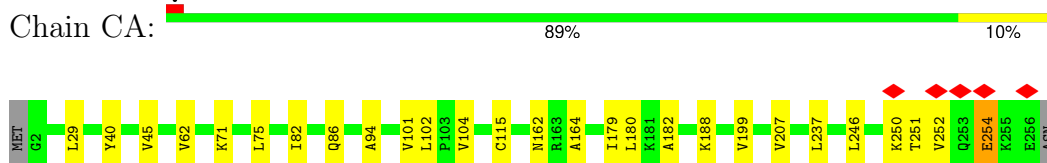
- Molecule 41: 60S ribosomal protein L5



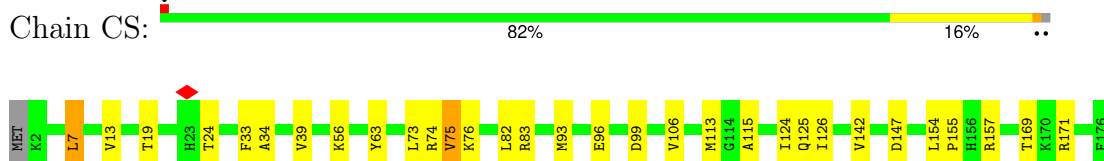
- Molecule 42: 60S ribosomal protein L18



- Molecule 43: Large ribosomal subunit protein uL2

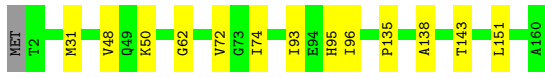


- Molecule 44: 60S ribosomal protein L18a



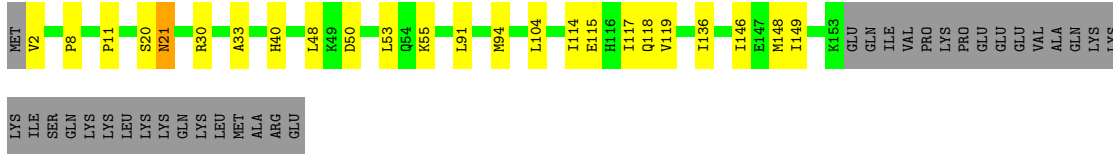
- Molecule 45: Large ribosomal subunit protein eL21

Chain CT:  91% 8%



- Molecule 46: 60S ribosomal protein L17

Chain CP:  70% 12% 17%



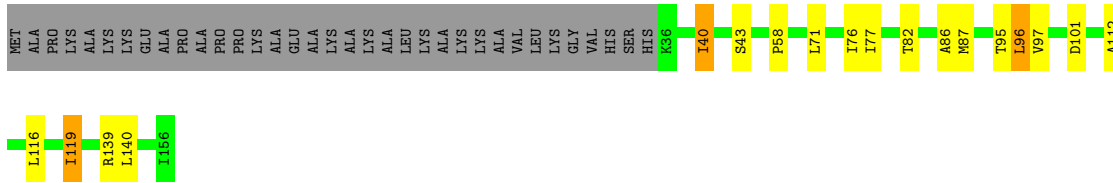
- Molecule 47: 60S ribosomal protein L22

Chain CU:  69% 11% 20%




- Molecule 48: 60S ribosomal protein L23a

Chain CX:  66% 10% 22%



- Molecule 49: Large ribosomal subunit protein uL24

Chain CY:  85% 6% 8%

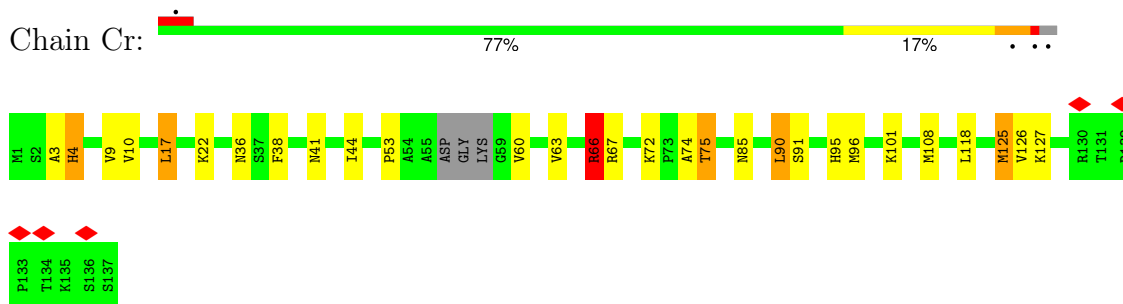


- Molecule 50: 60S ribosomal protein L27

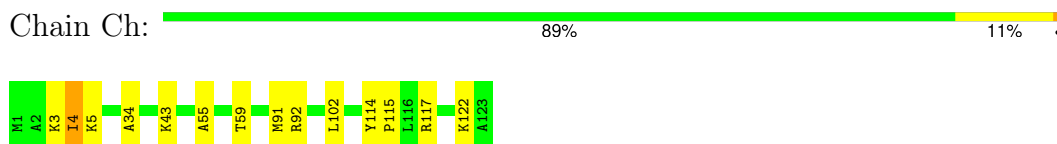
Chain CZ:  92% 7%



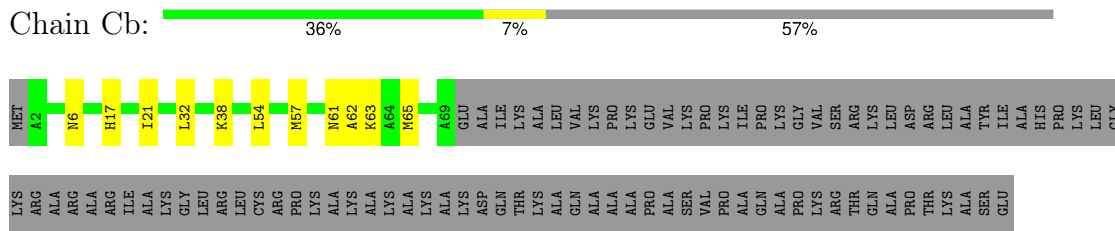
- Molecule 51: Large ribosomal subunit protein eL28



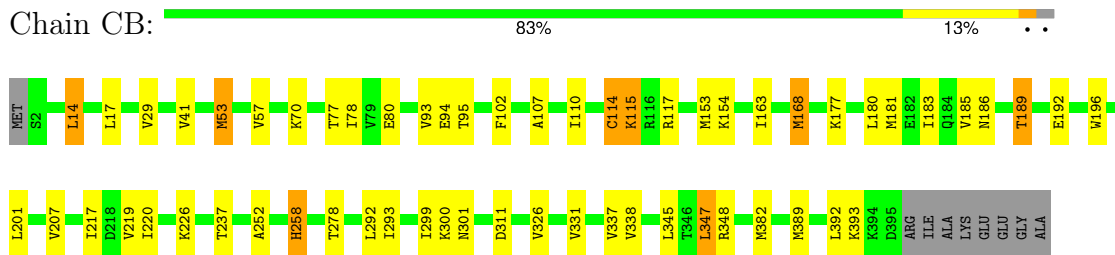
- Molecule 52: 60S ribosomal protein L35



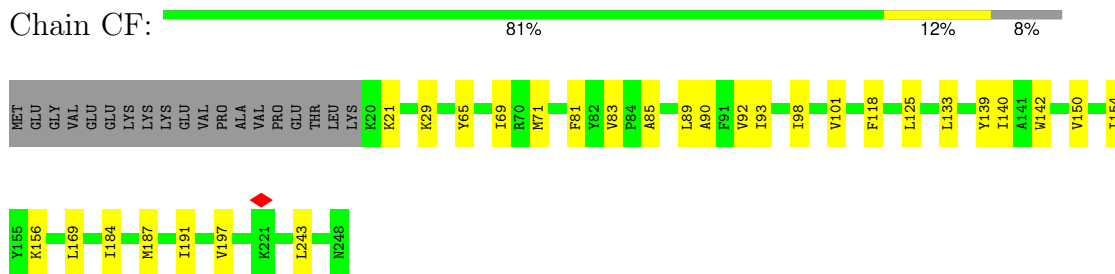
- Molecule 53: 60S ribosomal protein L29



- Molecule 54: 60S ribosomal protein L3



- Molecule 55: 60S ribosomal protein L7

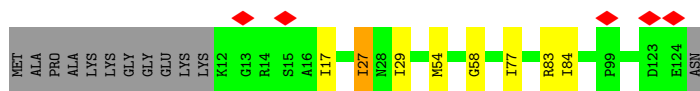
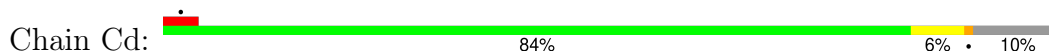


- Molecule 56: Large ribosomal subunit protein eL30

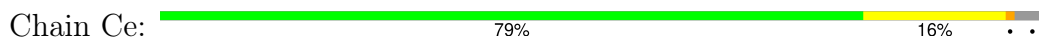




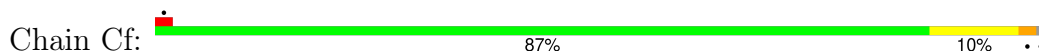
- Molecule 57: Large ribosomal subunit protein eL31



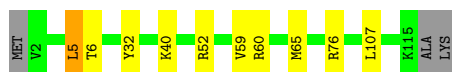
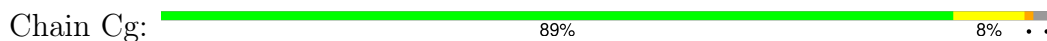
- Molecule 58: Ribosomal protein L32



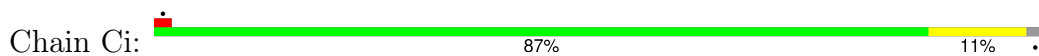
- Molecule 59: 60S ribosomal protein L35a



- Molecule 60: Large ribosomal subunit protein eL34



- Molecule 61: 60S ribosomal protein L36




- Molecule 62: Ribosomal protein L37




- Molecule 63: Large ribosomal subunit protein eL38

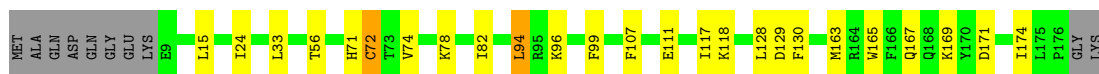


Chain Co:  81% 13% • 5%



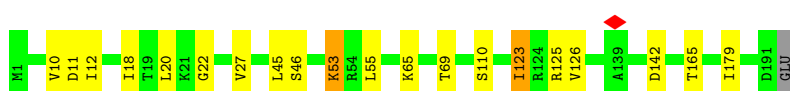
- Molecule 70: Large ribosomal subunit protein uL5

Chain CJ:  80% 13% • 6%



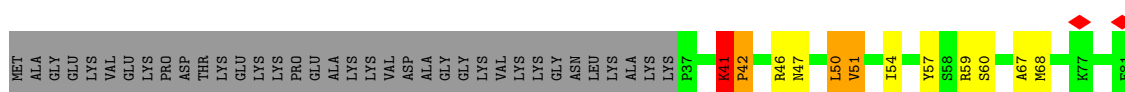
- Molecule 71: 60S ribosomal protein L9

Chain CH:  89% 9% ••




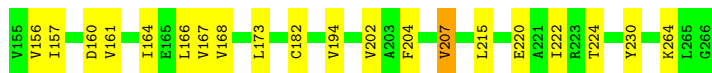
- Molecule 72: 60S ribosomal protein L6

Chain CE:  66% 18% •• 12%



- Molecule 73: 60S ribosomal protein L7a

Chain CG:  78% 14% 8%

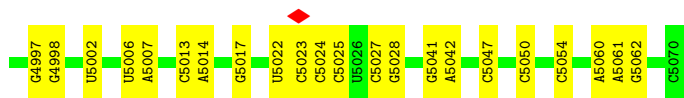


- Molecule 74: 28S ribosomal RNA

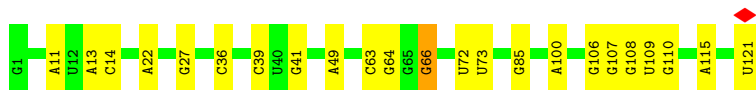
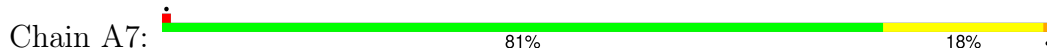
Chain A5:  72% 24% ••



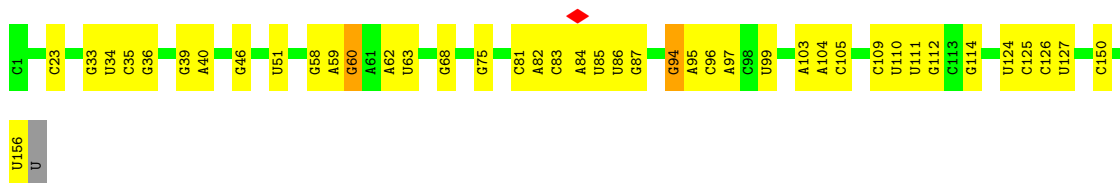
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G2331	A2332	G2333	G2345	C2346	A2347	G2348	A2349	C2351	A2360	A2370	A2395	A2396	G2397	U2398	C2399	A2401	G2407	U2409	C2410	G2416	A2417	A2418	C2419	A2420	G2421	C2422	C2430	C2437	C2441	G2442	G2469	G2463	C2470	G2471	A2472	G2475	G2476	G2487	C2488	C2489	U2490	C2491							
C2504	C2505	G2506	A2507	A2513	A2517	A2529	U2530	C2531	C2532	C2544	U2545	C2546	G2547	C2552	U2553	U2554	G2564	U2575	A2581	A2582	C2583	G2586	A2587	C2588	C2589	A2600	A2601	A2621	C2627	G2638	U2639	A2647	G2648	G2652	G2658	U2661	G2662	C2669	C2670	C2671	C2672	C2673							
G2681	G2685	C2686	U2687	G2688	A2695	A2696	U2707	G2711	G2712	C2713	C2716	C2719	C2720	G2721	A2725	G2726	U2734	U2740	U2741	G2742	A2743	C2748	C2749	C2752	G2753	G2754	G2759	C2760	U2761	G2762	A2766	U2767	C2768	U2769	C2770	G2778	G2781	A2787	U2788	C2789	U2790								
G2793	C2794	A2798	U2803	A2806	C2814	A2825	U2826	G2827	U2828	U2829	G2842	G2855	C2890	U2900	C2901	G2903	C2904	C2905	C2918	C	C	C	C	A	A	U	C	G	U3272	C3273	G3274	C3275	C3276	C3277	C3281	U3282	G3290	C3292	G3293	G3294	G3295	G3296	G3297	C3574	C3575	C3594			
U3595	A3596	G3597	C3605	U3606	A3611	G3615	U3616	G3617	C3618	G3625	G3626	A3635	A3646	A3652	A3653	A3656	A3662	A3663	G3664	G3672	C3673	G3674	G3678	G3691	A3692	U3697	G3698	U3709	G3710	A3711	A3712	U3713	G3714	A3727	A3732	U3745	A3748	G3751	A3756										
A3759	A3760	C3761	C3767	A3774	A3775	G3776	G3777	A3784	A3785	G3786	G3787	C3788	C3789	U3802	G3811	C3812	A3813	U3814	A3817	U3818	G3819	G3823	U3832	C3833	U3838	G3839	U3840	C3843	A3856	A3876	A3877	C3878	G3879	C3880	C3887	G3888	G3889	G3897	A3901	A3906	G3907	A3908							
U3915	C3919	G3922	A3923	U3927	U3959	A3960	G3961	A3962	A3963	U3964	A3965	A3966	G3967	U3968	G3969	G3973	C3979	G	C	C	C	C	C	C	C	C	A	G	G	G	G	G	G	G	G	U	C	C	G	C	C	G							
G	G4028	G4036	G4037	G4038	G4041	G4042	G4043	A4047	A4048	U4049	A4053	G4054	U4055	G4072	A4073	U4074	G4076	A4077	G4082	U4083	G4084	A4085	G4086	G4087	G4088	G4093	G4094	G4107	C4114	C4115	C4116	U4117	U4118	C4119	U4120	C4121	C4122	C4123	G4124	C4125	C4126	A4127	A4128	G4143	C4144	G4150			
A4157	C4158	A4159	C4160	C4161	C4162	U4163	C4164	C4165	A4170	C4171	U4174	G4183	G4184	G4191	G4196	G4217	G4222	U4229	U4232	G4233	A4233	A4251	G4254	G4266	G4267	A4268	A4271	A4272	A4273	C4284	U4285	U4296	U4299	A4304	G4305	U4306	G4326	G4329	G4330	G4331	C4332								
C4335	A4336	C4337	C4341	C4349	C4350	U4354	U4355	G4356	G4373	A4376	A4377	A4378	A4381	C4387	G4393	A4394	U4395	A4396	G4405	U4419	A4422	C4426	U4436	U4437	U4438	C4444	G4448	A4449	U4452	U4457	U4463	A4464	A4473	C4476	U4500	C4508													
U4512	A4513	G4524	G4527	G4534	A4548	U4556	U4557	G4567	A4568	U4569	U4574	G4575	A4584	U4588	A4589	A4590	C4591	A4599	A4616	A4626	U4627	G4633	U4634	G4637	G4652	A4656	U4657	A4664	C4670	C4671	A4672	U4677	A4687	G4689	U4689	C4695	C4696	U4697											
A4700	A4708	U4709	G4713	C4714	C4719	C4720	C4730	C4731	C4732	G4733	A4734	C4738	C4739	C4747	U4748	C4749	G4750	C4751	U4752	G4754	G4755	C4756	C4757	U4758	A4764	C4767	C4771	G4789	C4790	C4791	G4794	G4837	U4838	G4839	C4843	U4869	C4870	C4871	G4872	C4873	A4874	G4875	U4876						
G4887	U4888	C4889	C4890	A4893	A4894	C4895	C4896	C4900	C4901	G4910	A4911	G4915	U4925	G4931	G4936	C4937	A4938	C4939	C4940	C4941	C4942	C4943	C4944	G4945	U4946	U4947	C4948	G4949	U4950	G4951	G4952	A4966	A4967	U4976	U4985	C4986	U4988	U4989	C4990	U4991	C4992								



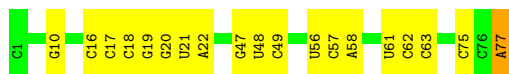
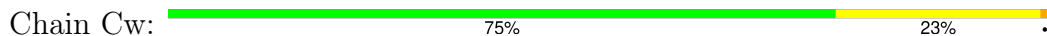
• Molecule 75: 5S ribosomal RNA



• Molecule 76: 5.8S ribosomal RNA



• Molecule 77: tRNA



• Molecule 78: mRNA



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	42298	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 ( $e^-/\text{\AA}^2$ )	40	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.028	Depositor
Minimum map value	-0.008	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.004	Depositor
Map size (Å)	392.0, 392.0, 392.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.98, 0.98, 0.98	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	AO	0.25	0/960	0.62	0/1286
2	AX	0.26	0/1112	0.59	0/1485
3	AN	0.26	0/1232	0.61	0/1656
4	AL	0.21	0/1238	0.50	0/1652
5	AB	0.24	0/1774	0.57	0/2372
6	AA	0.30	0/1661	0.66	0/2259
7	AV	0.30	0/623	0.76	0/834
8	AY	0.25	0/1040	0.61	0/1382
9	Aa	0.21	0/794	0.48	0/1065
10	Ab	0.24	0/673	0.59	0/902
11	Ae	0.29	0/467	0.73	0/615
12	AJ	0.22	0/1483	0.50	0/1980
13	AE	0.23	0/2115	0.54	0/2846
14	AC	0.26	0/1728	0.61	0/2333
15	AG	0.23	0/1946	0.49	0/2590
16	AH	0.28	0/1471	0.65	0/1969
17	AW	0.26	0/1051	0.60	0/1406
18	AI	0.25	0/1672	0.61	0/2228
19	B2	0.15	0/42050	0.37	10/65520 (0.0%)
20	CW	0.26	0/979	0.60	0/1295
21	Ag	0.22	0/2389	0.49	0/3249
22	AU	0.26	0/827	0.58	0/1110
23	AK	0.35	0/823	0.76	2/1111 (0.2%)
24	AS	0.24	0/1157	0.58	0/1548
25	Ad	0.27	0/455	0.61	0/603
26	AR	0.27	0/866	0.60	1/1154 (0.1%)
27	AP	0.25	0/1056	0.58	0/1406
28	AT	0.23	0/1119	0.56	0/1499
29	AZ	0.25	0/600	0.56	0/805
30	Ac	0.22	0/508	0.55	0/680
31	AD	0.29	0/1793	0.57	0/2414
32	AF	0.22	0/1531	0.50	0/2059
33	AQ	0.26	0/1142	0.54	0/1528
34	CO	0.30	0/1666	0.64	0/2228

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
35	CL	0.32	1/1680 (0.1%)	0.65	0/2249
36	CV	0.26	0/983	0.61	0/1319
37	CM	0.24	0/1161	0.59	0/1552
38	Ca	0.23	0/1191	0.61	0/1591
39	CN	0.25	0/1746	0.52	0/2338
40	CI	0.32	0/1673	0.76	3/2233 (0.1%)
41	CD	0.29	0/2398	0.66	5/3210 (0.2%)
42	CQ	0.27	0/1537	0.64	0/2052
43	CA	0.25	0/1995	0.61	2/2674 (0.1%)
44	CS	0.28	0/1493	0.70	2/2003 (0.1%)
45	CT	0.25	0/1326	0.58	0/1770
46	CP	0.26	0/1259	0.56	0/1689
47	CU	0.23	0/849	0.57	0/1137
48	CX	0.28	0/1011	0.61	0/1356
49	CY	0.21	0/1124	0.49	0/1494
50	CZ	0.22	0/1130	0.50	0/1507
51	Cr	0.35	0/1098	0.89	1/1467 (0.1%)
52	Ch	0.25	0/1031	0.62	2/1361 (0.1%)
53	Cb	0.27	0/569	0.64	0/750
54	CB	0.25	0/3246	0.62	0/4345
55	CF	0.25	0/1945	0.58	0/2589
56	Cc	0.30	0/787	0.65	0/1057
57	Cd	0.24	0/946	0.60	0/1272
58	Ce	0.25	0/1079	0.60	0/1439
59	Cf	0.28	0/895	0.68	0/1198
60	Cg	0.29	0/916	0.64	1/1220 (0.1%)
61	Ci	0.26	0/851	0.61	0/1125
62	Cj	0.29	0/731	0.62	0/966
63	Ck	0.23	0/575	0.51	0/761
64	Cl	0.28	0/441	0.62	0/583
65	CC	0.28	0/2921	0.67	1/3924 (0.0%)
66	Cm	0.26	0/425	0.63	0/564
67	Cn	0.17	0/241	0.44	0/305
68	Cp	0.25	0/713	0.60	0/946
69	Co	0.30	0/840	0.69	0/1107
70	CJ	0.27	0/1372	0.58	0/1836
71	CH	0.23	0/1545	0.54	0/2077
72	CE	0.35	0/2076	0.81	6/2778 (0.2%)
73	CG	0.25	0/2006	0.55	0/2697
74	A5	0.15	0/90934	0.38	6/141664 (0.0%)
75	A7	0.14	0/2880	0.32	0/4489
76	A8	0.16	0/3701	0.38	0/5766
77	Cw	0.13	0/1836	0.28	0/2859

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
78	Dd	0.15	0/153	0.36	0/234
All	All	0.20	1/231310 (0.0%)	0.47	42/340622 (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
4	AL	0	1
7	AV	0	2
11	Ae	0	1
12	AJ	0	1
20	CW	0	2
22	AU	0	1
23	AK	0	1
34	CO	0	1
40	CI	0	1
42	CQ	0	2
51	Cr	0	2
54	CB	0	2
59	Cf	0	1
62	Cj	0	2
70	CJ	0	2
72	CE	0	9
74	A5	1	0
All	All	1	31

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	CL	11	LYS	C-N	7.17	1.42	1.33

The worst 5 of 42 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	CI	114	GLY	CA-C-N	10.87	140.11	123.05
40	CI	114	GLY	C-N-CA	10.87	140.11	123.05
74	A5	2097	U	O4'-C1'-N1	8.32	120.69	108.20
74	A5	2097	U	N1-C1'-C2'	8.19	126.28	114.00
74	A5	4942	C	N1-C1'-C2'	7.84	125.77	114.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
74	A5	2126	G	C1'

5 of 31 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	AJ	38	ARG	Sidechain
4	AL	151	THR	Peptide
7	AV	48	GLY	Peptide
7	AV	61	ARG	Sidechain
11	Ae	46	VAL	Peptide

## 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	AO	948	973	976	14	0
2	AX	1094	1163	1164	13	0
3	AN	1208	1294	1294	7	0
4	AL	1216	1279	1280	6	0
5	AB	1747	1820	1829	24	0
6	AA	1624	1626	1632	21	0
7	AV	617	615	614	5	0
8	AY	1023	1088	1090	14	0
9	Aa	781	832	830	6	0
10	Ab	659	680	683	3	0
11	Ae	461	511	514	4	0
12	AJ	1459	1566	1575	8	0
13	AE	2073	2181	2181	18	0
14	AC	1692	1777	1783	15	0
15	AG	1923	2085	2089	16	0
16	AH	1449	1534	1537	15	0
17	AW	1034	1079	1080	6	0
18	AI	1644	1720	1718	11	0
19	B2	37619	18948	18979	47	0
20	CW	965	1023	1029	1	0
21	Ag	2334	2289	2288	16	0
22	AU	817	882	882	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	AK	799	822	823	9	0
24	AS	1139	1188	1191	8	0
25	Ad	445	442	442	7	0
26	AR	858	910	917	12	0
27	AP	1037	1099	1098	12	0
28	AT	1101	1135	1135	13	0
29	AZ	594	649	653	12	0
30	Ac	506	535	536	6	0
31	AD	1765	1857	1865	28	0
32	AF	1509	1558	1563	15	0
33	AQ	1124	1192	1193	8	0
34	CO	1634	1776	1779	17	0
35	CL	1649	1757	1760	15	0
36	CV	969	1030	1031	7	0
37	CM	1139	1209	1209	10	0
38	Ca	1162	1210	1213	8	0
39	CN	1701	1747	1749	17	0
40	CI	1634	1666	1671	13	0
41	CD	2353	2370	2372	23	0
42	CQ	1513	1629	1628	17	0
43	CA	1957	2051	2055	16	0
44	CS	1453	1485	1490	21	0
45	CT	1298	1363	1366	10	0
46	CP	1233	1260	1263	15	0
47	CU	835	863	865	10	0
48	CX	994	1078	1079	10	0
49	CY	1107	1193	1193	6	0
50	CZ	1107	1182	1182	9	0
51	Cr	1083	1164	1168	19	0
52	Ch	1023	1160	1160	9	0
53	Cb	559	590	590	9	0
54	CB	3178	3306	3314	31	0
55	CF	1910	2046	2048	18	0
56	Cc	776	812	812	12	0
57	Cd	931	979	980	6	0
58	Ce	1061	1158	1159	12	0
59	Cf	876	910	912	8	0
60	Cg	906	999	999	4	0
61	Ci	840	925	929	9	0
62	Cj	716	754	750	9	0
63	Ck	569	637	637	4	0
64	Cl	431	469	469	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
65	CC	2867	3033	3039	43	0
66	Cm	419	456	452	5	0
67	Cn	240	289	289	1	0
68	Cp	703	755	755	8	0
69	Co	827	893	892	6	0
70	CJ	1349	1383	1381	12	0
71	CH	1526	1603	1605	10	0
72	CE	2036	2217	2222	32	0
73	CG	1973	2120	2128	25	0
74	A5	81401	40870	40887	101	0
75	A7	2578	1306	1306	6	0
76	A8	3314	1682	1683	3	0
77	Cw	1644	837	837	1	0
78	Dd	140	69	71	0	0
79	B2	2	0	0	0	0
79	Cw	4	0	0	0	0
79	Dd	1	0	0	0	0
All	All	214885	156643	156842	891	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 2.

The worst 5 of 891 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:A5:3653:A:N6	74:A5:3691:G:C2	2.17	1.13
19:B2:191:A:H62	19:B2:208:G:H21	1.12	0.98
74:A5:664:G:N2	74:A5:667:A:C2	2.37	0.92
74:A5:3653:A:N6	74:A5:3691:G:N3	2.16	0.92
70:CJ:24:ILE:HD11	74:A5:4251:A:H62	1.37	0.87

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	AO	124/151 (82%)	106 (86%)	15 (12%)	3 (2%)	5	27
2	AX	138/143 (96%)	121 (88%)	16 (12%)	1 (1%)	19	56
3	AN	148/151 (98%)	127 (86%)	19 (13%)	2 (1%)	9	40
4	AL	143/158 (90%)	123 (86%)	18 (13%)	2 (1%)	9	40
5	AB	213/264 (81%)	186 (87%)	23 (11%)	4 (2%)	6	32
6	AA	204/295 (69%)	177 (87%)	25 (12%)	2 (1%)	13	49
7	AV	79/83 (95%)	63 (80%)	13 (16%)	3 (4%)	2	19
8	AY	124/133 (93%)	108 (87%)	13 (10%)	3 (2%)	5	27
9	Aa	96/115 (84%)	80 (83%)	15 (16%)	1 (1%)	13	49
10	Ab	82/84 (98%)	71 (87%)	9 (11%)	2 (2%)	5	27
11	Ae	56/59 (95%)	46 (82%)	8 (14%)	2 (4%)	3	20
12	AJ	172/194 (89%)	161 (94%)	10 (6%)	1 (1%)	22	60
13	AE	259/263 (98%)	224 (86%)	30 (12%)	5 (2%)	6	32
14	AC	216/293 (74%)	199 (92%)	17 (8%)	0	100	100
15	AG	235/249 (94%)	217 (92%)	15 (6%)	3 (1%)	10	42
16	AH	177/194 (91%)	160 (90%)	13 (7%)	4 (2%)	5	28
17	AW	127/130 (98%)	111 (87%)	15 (12%)	1 (1%)	16	54
18	AI	196/208 (94%)	169 (86%)	20 (10%)	7 (4%)	3	20
20	CW	114/157 (73%)	98 (86%)	13 (11%)	3 (3%)	4	26
21	Ag	293/317 (92%)	253 (86%)	38 (13%)	2 (1%)	19	56
22	AU	101/119 (85%)	87 (86%)	13 (13%)	1 (1%)	13	49
23	AK	93/165 (56%)	67 (72%)	23 (25%)	3 (3%)	3	21
24	AS	135/152 (89%)	115 (85%)	18 (13%)	2 (2%)	8	39
25	Ad	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
26	AR	99/135 (73%)	90 (91%)	9 (9%)	0	100	100
27	AP	122/145 (84%)	93 (76%)	26 (21%)	3 (2%)	4	26
28	AT	139/145 (96%)	126 (91%)	10 (7%)	3 (2%)	5	29
29	AZ	72/125 (58%)	57 (79%)	14 (19%)	1 (1%)	9	40
30	Ac	62/69 (90%)	53 (86%)	9 (14%)	0	100	100
31	AD	225/243 (93%)	185 (82%)	37 (16%)	3 (1%)	10	42

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	AF	189/204 (93%)	170 (90%)	19 (10%)	0	100	100
33	AQ	139/146 (95%)	120 (86%)	14 (10%)	5 (4%)	3	20
34	CO	197/203 (97%)	179 (91%)	15 (8%)	3 (2%)	8	39
35	CL	202/211 (96%)	169 (84%)	23 (11%)	10 (5%)	1	16
36	CV	127/140 (91%)	119 (94%)	7 (6%)	1 (1%)	16	54
37	CM	137/215 (64%)	121 (88%)	12 (9%)	4 (3%)	3	23
38	Ca	145/148 (98%)	120 (83%)	23 (16%)	2 (1%)	9	40
39	CN	201/204 (98%)	180 (90%)	21 (10%)	0	100	100
40	CI	198/214 (92%)	177 (89%)	21 (11%)	0	100	100
41	CD	287/297 (97%)	258 (90%)	24 (8%)	5 (2%)	7	36
42	CQ	185/188 (98%)	157 (85%)	25 (14%)	3 (2%)	8	38
43	CA	253/257 (98%)	231 (91%)	21 (8%)	1 (0%)	30	68
44	CS	173/176 (98%)	143 (83%)	27 (16%)	3 (2%)	7	36
45	CT	157/160 (98%)	143 (91%)	13 (8%)	1 (1%)	22	60
46	CP	150/184 (82%)	137 (91%)	11 (7%)	2 (1%)	10	42
47	CU	100/128 (78%)	86 (86%)	13 (13%)	1 (1%)	13	49
48	CX	119/156 (76%)	101 (85%)	15 (13%)	3 (2%)	4	26
49	CY	131/145 (90%)	118 (90%)	12 (9%)	1 (1%)	16	54
50	CZ	133/136 (98%)	121 (91%)	12 (9%)	0	100	100
51	Cr	130/137 (95%)	102 (78%)	24 (18%)	4 (3%)	3	22
52	Ch	121/123 (98%)	107 (88%)	11 (9%)	3 (2%)	4	26
53	Cb	66/159 (42%)	59 (89%)	7 (11%)	0	100	100
54	CB	392/403 (97%)	355 (91%)	32 (8%)	5 (1%)	10	42
55	CF	227/248 (92%)	208 (92%)	17 (8%)	2 (1%)	14	51
56	Cc	98/115 (85%)	90 (92%)	7 (7%)	1 (1%)	13	49
57	Cd	111/125 (89%)	95 (86%)	15 (14%)	1 (1%)	14	51
58	Ce	127/135 (94%)	112 (88%)	14 (11%)	1 (1%)	16	54
59	Cf	107/110 (97%)	88 (82%)	19 (18%)	0	100	100
60	Cg	112/117 (96%)	95 (85%)	16 (14%)	1 (1%)	14	51
61	Ci	101/105 (96%)	91 (90%)	8 (8%)	2 (2%)	6	32
62	Cj	85/97 (88%)	73 (86%)	11 (13%)	1 (1%)	11	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
63	Ck	67/70 (96%)	61 (91%)	5 (8%)	1 (2%)	8	39
64	Cl	46/51 (90%)	43 (94%)	3 (6%)	0	100	100
65	CC	358/427 (84%)	298 (83%)	53 (15%)	7 (2%)	6	32
66	Cm	49/52 (94%)	45 (92%)	3 (6%)	1 (2%)	6	32
67	Cn	23/25 (92%)	23 (100%)	0	0	100	100
68	Cp	88/92 (96%)	79 (90%)	9 (10%)	0	100	100
69	Co	99/106 (93%)	81 (82%)	13 (13%)	5 (5%)	1	16
70	CJ	166/178 (93%)	154 (93%)	9 (5%)	3 (2%)	7	34
71	CH	189/192 (98%)	173 (92%)	15 (8%)	1 (0%)	25	64
72	CE	250/288 (87%)	188 (75%)	49 (20%)	13 (5%)	1	15
73	CG	244/266 (92%)	211 (86%)	30 (12%)	3 (1%)	11	44
All	All	10774/12128 (89%)	9398 (87%)	1209 (11%)	167 (2%)	10	38

5 of 167 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AN	138	ASN
7	AV	50	PHE
9	Aa	98	PRO
11	Ae	45	VAL
11	Ae	47	PRO

### 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	AO	99/119 (83%)	92 (93%)	7 (7%)	12	32
2	AX	113/115 (98%)	107 (95%)	6 (5%)	19	41
3	AN	130/131 (99%)	128 (98%)	2 (2%)	60	75
4	AL	134/142 (94%)	130 (97%)	4 (3%)	36	56
5	AB	196/231 (85%)	191 (97%)	5 (3%)	41	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	AA	172/243 (71%)	162 (94%)	10 (6%)	17	38
7	AV	65/67 (97%)	62 (95%)	3 (5%)	23	45
8	AY	108/115 (94%)	106 (98%)	2 (2%)	52	70
9	Aa	85/98 (87%)	85 (100%)	0	100	100
10	Ab	76/76 (100%)	75 (99%)	1 (1%)	65	77
11	Ae	47/48 (98%)	44 (94%)	3 (6%)	14	36
12	AJ	156/168 (93%)	151 (97%)	5 (3%)	34	54
13	AE	224/225 (100%)	222 (99%)	2 (1%)	75	83
14	AC	184/225 (82%)	172 (94%)	12 (6%)	14	36
15	AG	207/218 (95%)	200 (97%)	7 (3%)	32	53
16	AH	161/174 (92%)	153 (95%)	8 (5%)	20	42
17	AW	112/113 (99%)	107 (96%)	5 (4%)	23	46
18	AI	174/180 (97%)	166 (95%)	8 (5%)	23	45
20	CW	97/126 (77%)	97 (100%)	0	100	100
21	Ag	259/275 (94%)	253 (98%)	6 (2%)	45	65
22	AU	94/107 (88%)	89 (95%)	5 (5%)	19	41
23	AK	86/136 (63%)	82 (95%)	4 (5%)	22	45
24	AS	119/132 (90%)	117 (98%)	2 (2%)	56	73
25	Ad	47/49 (96%)	47 (100%)	0	100	100
26	AR	95/122 (78%)	93 (98%)	2 (2%)	48	67
27	AP	113/130 (87%)	108 (96%)	5 (4%)	24	46
28	AT	112/115 (97%)	107 (96%)	5 (4%)	23	46
29	AZ	66/103 (64%)	66 (100%)	0	100	100
30	Ac	57/62 (92%)	57 (100%)	0	100	100
31	AD	190/202 (94%)	183 (96%)	7 (4%)	29	51
32	AF	161/170 (95%)	154 (96%)	7 (4%)	25	47
33	AQ	117/121 (97%)	115 (98%)	2 (2%)	56	73
34	CO	171/174 (98%)	169 (99%)	2 (1%)	67	79
35	CL	170/177 (96%)	169 (99%)	1 (1%)	84	88
36	CV	100/107 (94%)	97 (97%)	3 (3%)	36	56
37	CM	118/161 (73%)	116 (98%)	2 (2%)	56	73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	Ca	120/121 (99%)	117 (98%)	3 (2%)	42	62
39	CN	171/172 (99%)	165 (96%)	6 (4%)	31	52
40	CI	172/181 (95%)	164 (95%)	8 (5%)	22	45
41	CD	243/250 (97%)	233 (96%)	10 (4%)	26	48
42	CQ	164/165 (99%)	158 (96%)	6 (4%)	29	51
43	CA	197/199 (99%)	192 (98%)	5 (2%)	42	62
44	CS	156/157 (99%)	151 (97%)	5 (3%)	34	54
45	CT	139/140 (99%)	138 (99%)	1 (1%)	81	87
46	CP	133/163 (82%)	129 (97%)	4 (3%)	36	56
47	CU	92/115 (80%)	91 (99%)	1 (1%)	70	80
48	CX	109/133 (82%)	104 (95%)	5 (5%)	23	45
49	CY	123/135 (91%)	120 (98%)	3 (2%)	44	63
50	CZ	117/118 (99%)	117 (100%)	0	100	100
51	Cr	119/121 (98%)	108 (91%)	11 (9%)	7	24
52	Ch	110/110 (100%)	108 (98%)	2 (2%)	54	71
53	Cb	58/126 (46%)	56 (97%)	2 (3%)	32	53
54	CB	343/349 (98%)	325 (95%)	18 (5%)	19	41
55	CF	198/215 (92%)	193 (98%)	5 (2%)	42	62
56	Cc	85/97 (88%)	85 (100%)	0	100	100
57	Cd	102/110 (93%)	101 (99%)	1 (1%)	73	82
58	Ce	115/121 (95%)	109 (95%)	6 (5%)	19	41
59	Cf	88/89 (99%)	86 (98%)	2 (2%)	45	65
60	Cg	98/100 (98%)	95 (97%)	3 (3%)	35	55
61	Ci	87/89 (98%)	84 (97%)	3 (3%)	32	53
62	Cj	74/80 (92%)	71 (96%)	3 (4%)	26	48
63	Ck	64/65 (98%)	62 (97%)	2 (3%)	35	55
64	Cl	46/48 (96%)	42 (91%)	4 (9%)	8	26
65	CC	299/348 (86%)	286 (96%)	13 (4%)	25	47
66	Cm	47/48 (98%)	43 (92%)	4 (8%)	8	28
67	Cn	24/24 (100%)	24 (100%)	0	100	100
68	Cp	74/75 (99%)	72 (97%)	2 (3%)	40	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
69	Co	89/94 (95%)	88 (99%)	1 (1%)	70	80
70	CJ	142/149 (95%)	137 (96%)	5 (4%)	31	52
71	CH	170/171 (99%)	164 (96%)	6 (4%)	31	52
72	CE	224/252 (89%)	211 (94%)	13 (6%)	17	38
73	CG	209/223 (94%)	204 (98%)	5 (2%)	44	63
All	All	9416/10310 (91%)	9105 (97%)	311 (3%)	35	54

5 of 311 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
54	CB	347	LEU
70	CJ	169	LYS
57	Cd	27	ILE
64	Cl	16	LYS
72	CE	130	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 34 such sidechains are listed below:

Mol	Chain	Res	Type
65	CC	48	ASN
70	CJ	104	ASN
72	CE	284	HIS
27	AP	114	HIS
27	AP	103	ASN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
19	B2	1752/1803 (97%)	410 (23%)	53 (3%)
74	A5	3736/4010 (93%)	878 (23%)	150 (4%)
75	A7	120/121 (99%)	18 (15%)	1 (0%)
76	A8	155/157 (98%)	39 (25%)	7 (4%)
77	Cw	76/77 (98%)	19 (25%)	0
78	Dd	6/7 (85%)	3 (50%)	0
All	All	5845/6175 (94%)	1367 (23%)	211 (3%)

5 of 1367 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
19	B2	3	C
19	B2	4	C
19	B2	25	A
19	B2	26	U
19	B2	33	G

5 of 211 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
74	A5	1440	U
74	A5	2260	C
74	A5	4991	U
74	A5	1481	C
74	A5	2088	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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
74	A5	4
19	B2	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B2	698:G	O3'	730:C	P	20.24
1	A5	3292:G	O3'	3572:G	P	18.88
1	A5	4795:C	O3'	4837:G	P	18.31
1	A5	763:C	O3'	886:C	P	18.27
1	A5	2133:C	O3'	2238:G	P	16.40

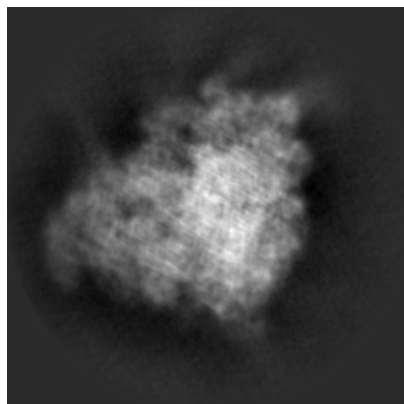
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-72483. These allow visual inspection of the internal detail of the map and identification of artifacts.

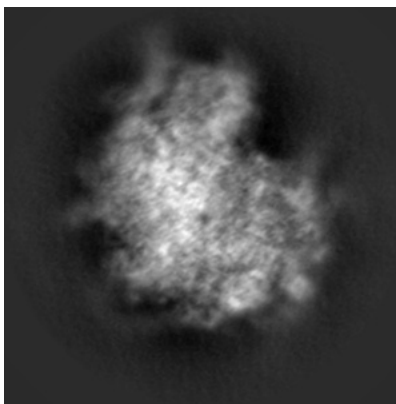
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

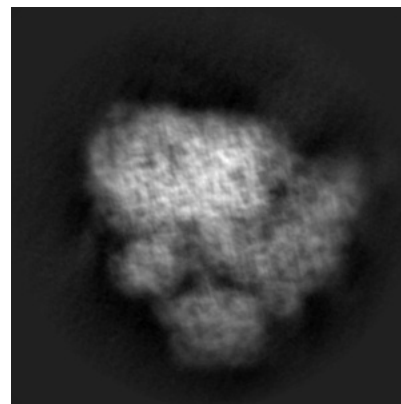
#### 6.1.1 Primary map



X

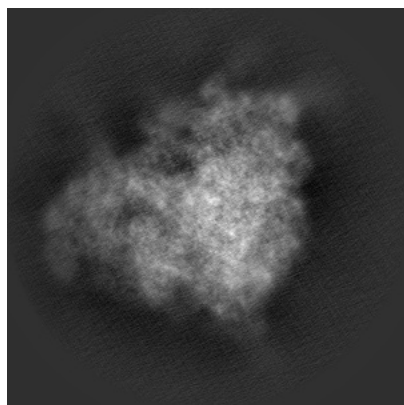


Y

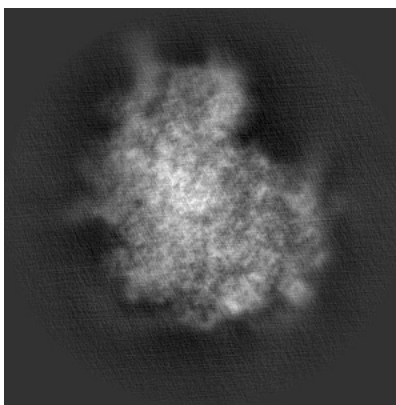


Z

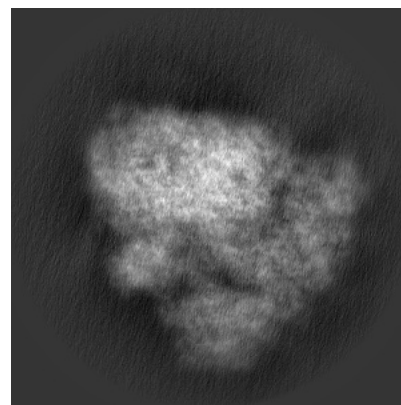
#### 6.1.2 Raw map



X



Y

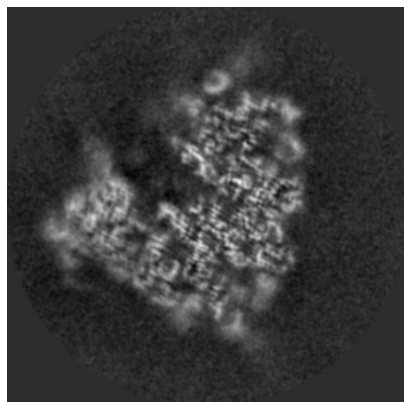


Z

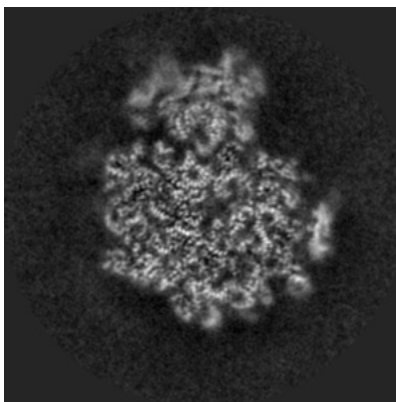
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

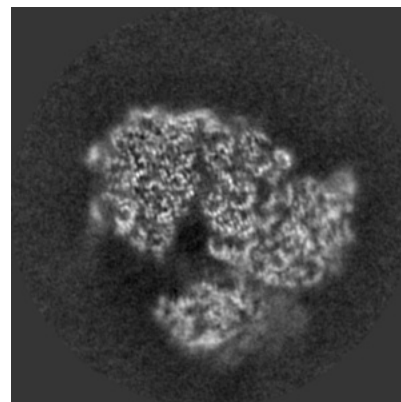
### 6.2.1 Primary map



X Index: 200

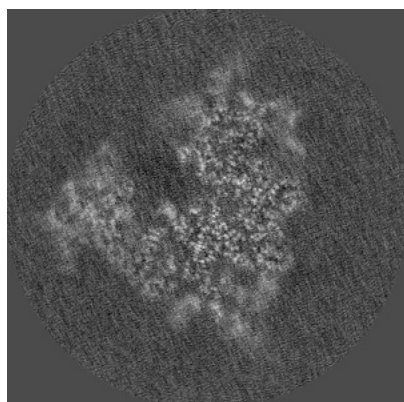


Y Index: 200

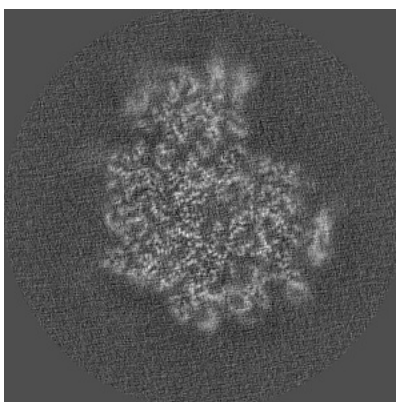


Z Index: 200

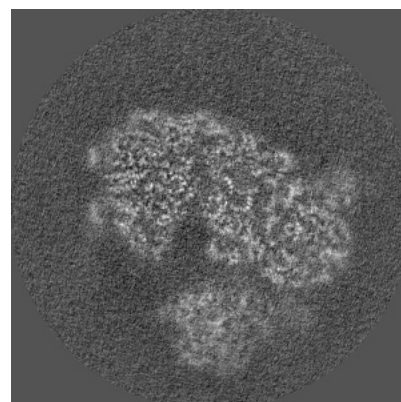
### 6.2.2 Raw map



X Index: 200



Y Index: 200

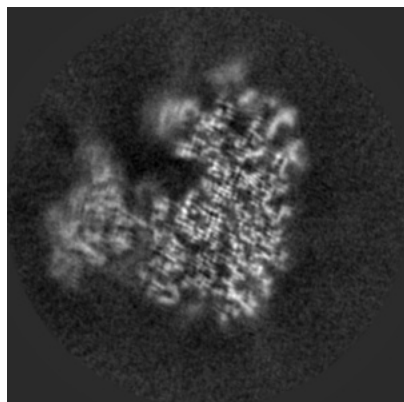


Z Index: 200

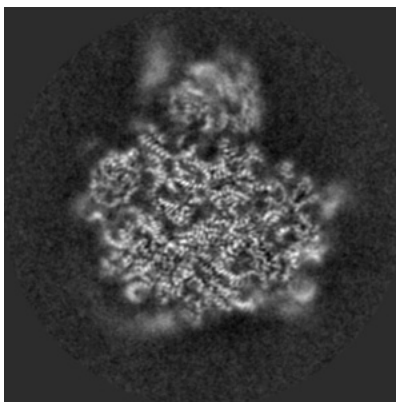
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

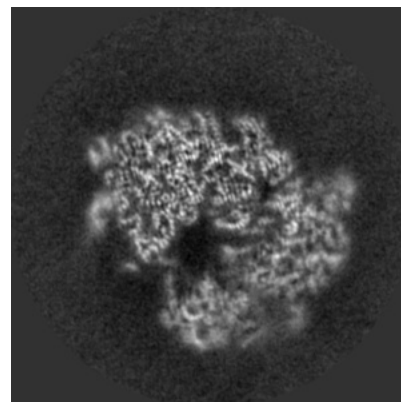
### 6.3.1 Primary map



X Index: 213

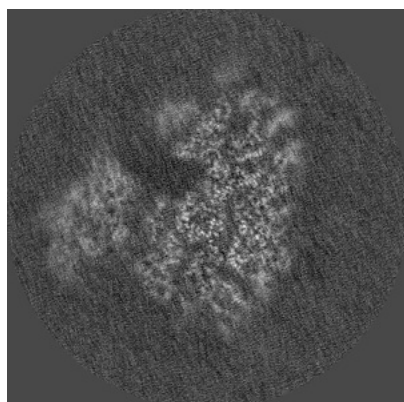


Y Index: 218

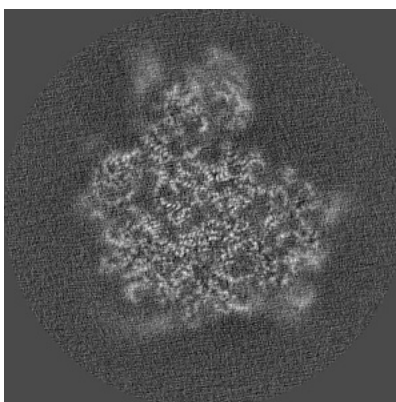


Z Index: 208

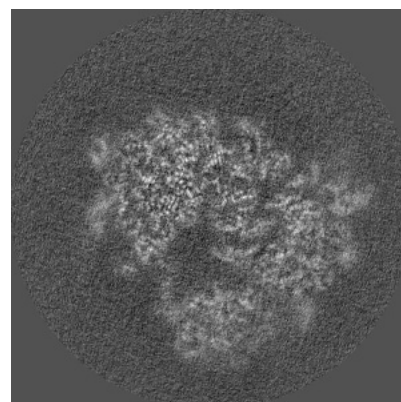
### 6.3.2 Raw map



X Index: 211



Y Index: 217

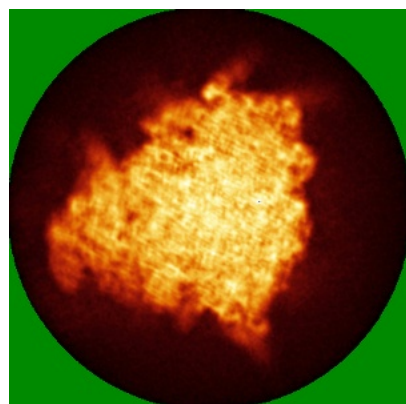


Z Index: 208

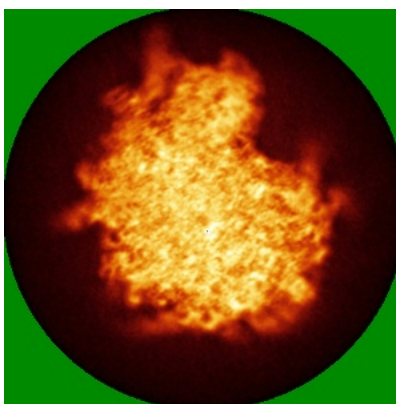
The images above show the largest variance slices of the map in three orthogonal directions.

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

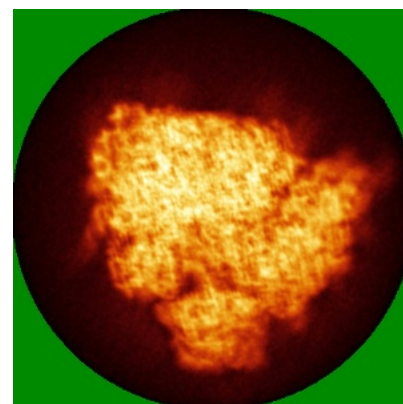
### 6.4.1 Primary map



X

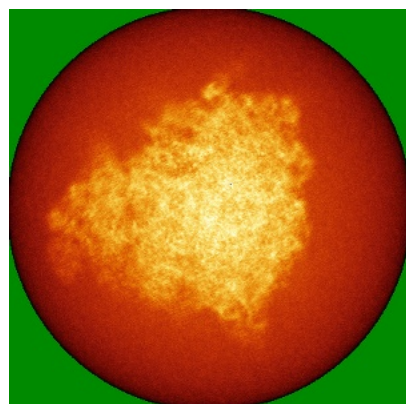


Y

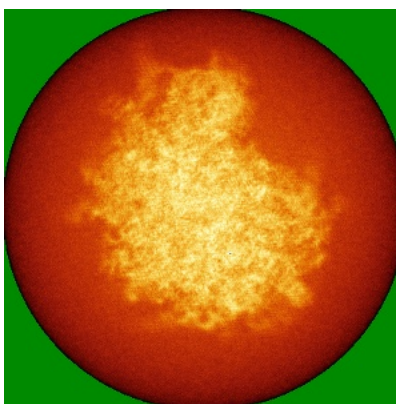


Z

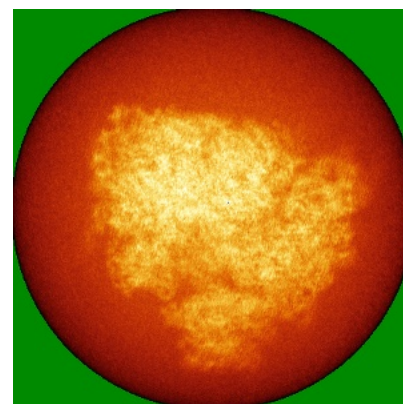
### 6.4.2 Raw map



X



Y

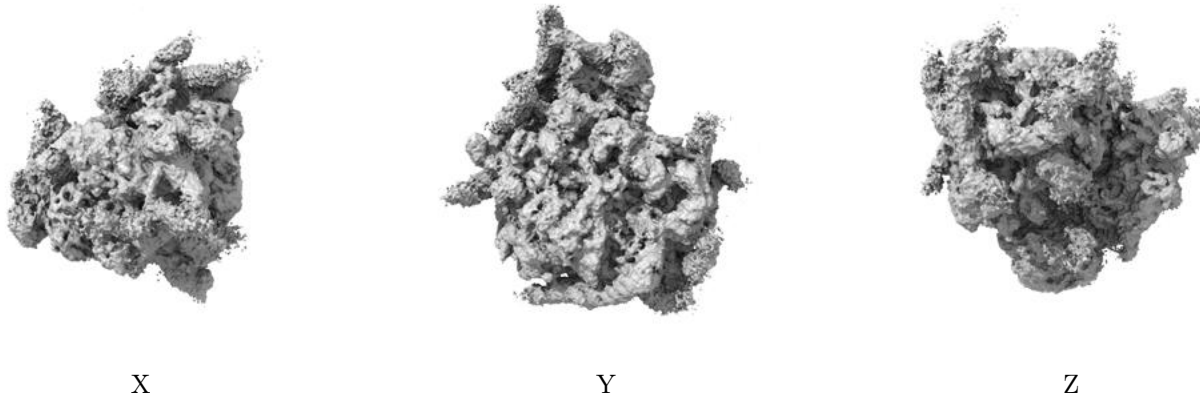


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

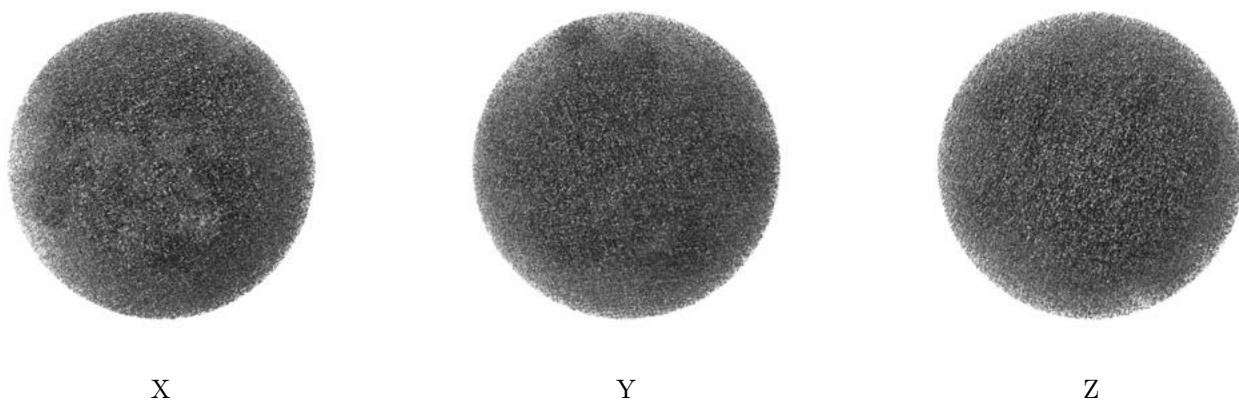
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.004. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

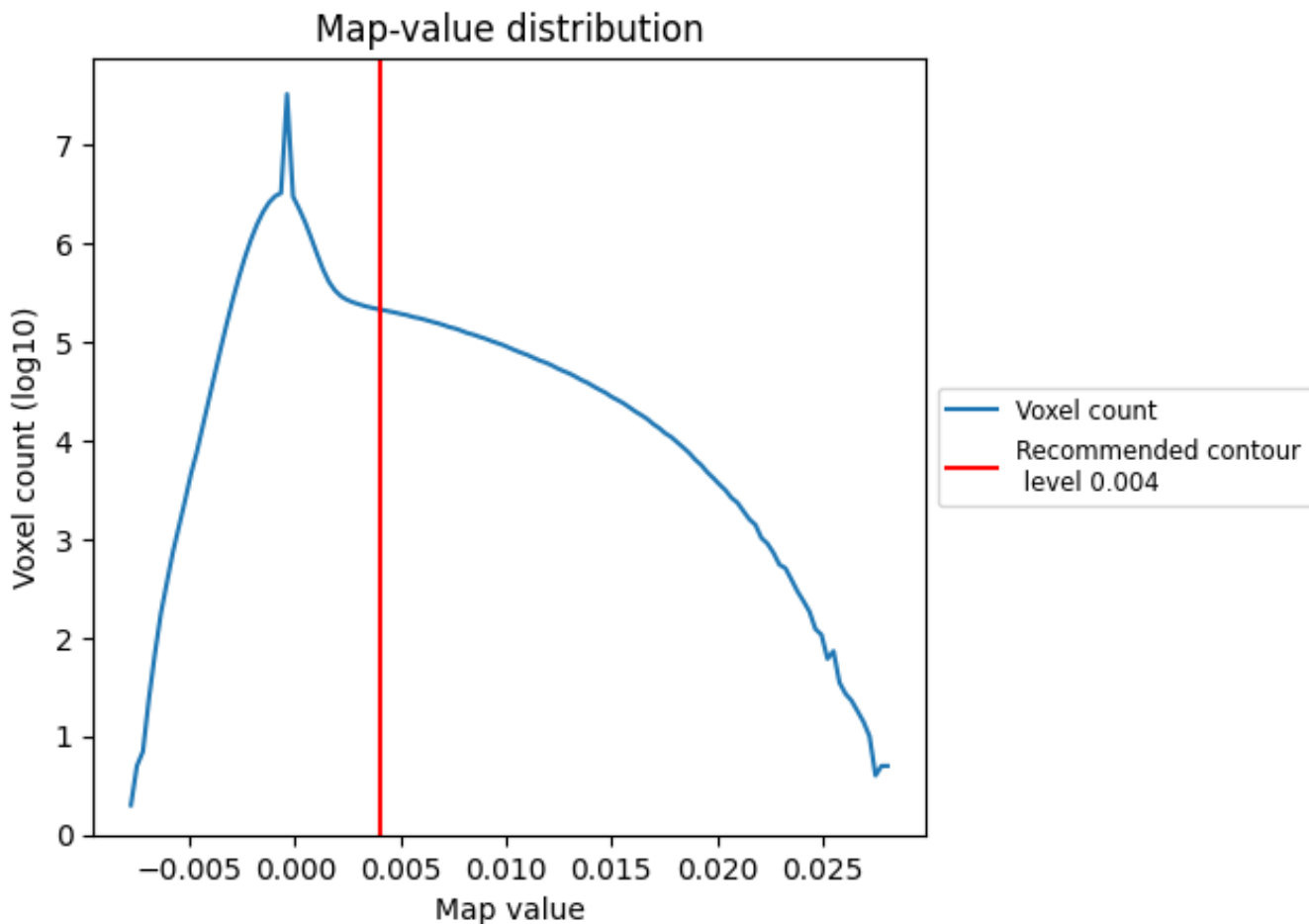
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

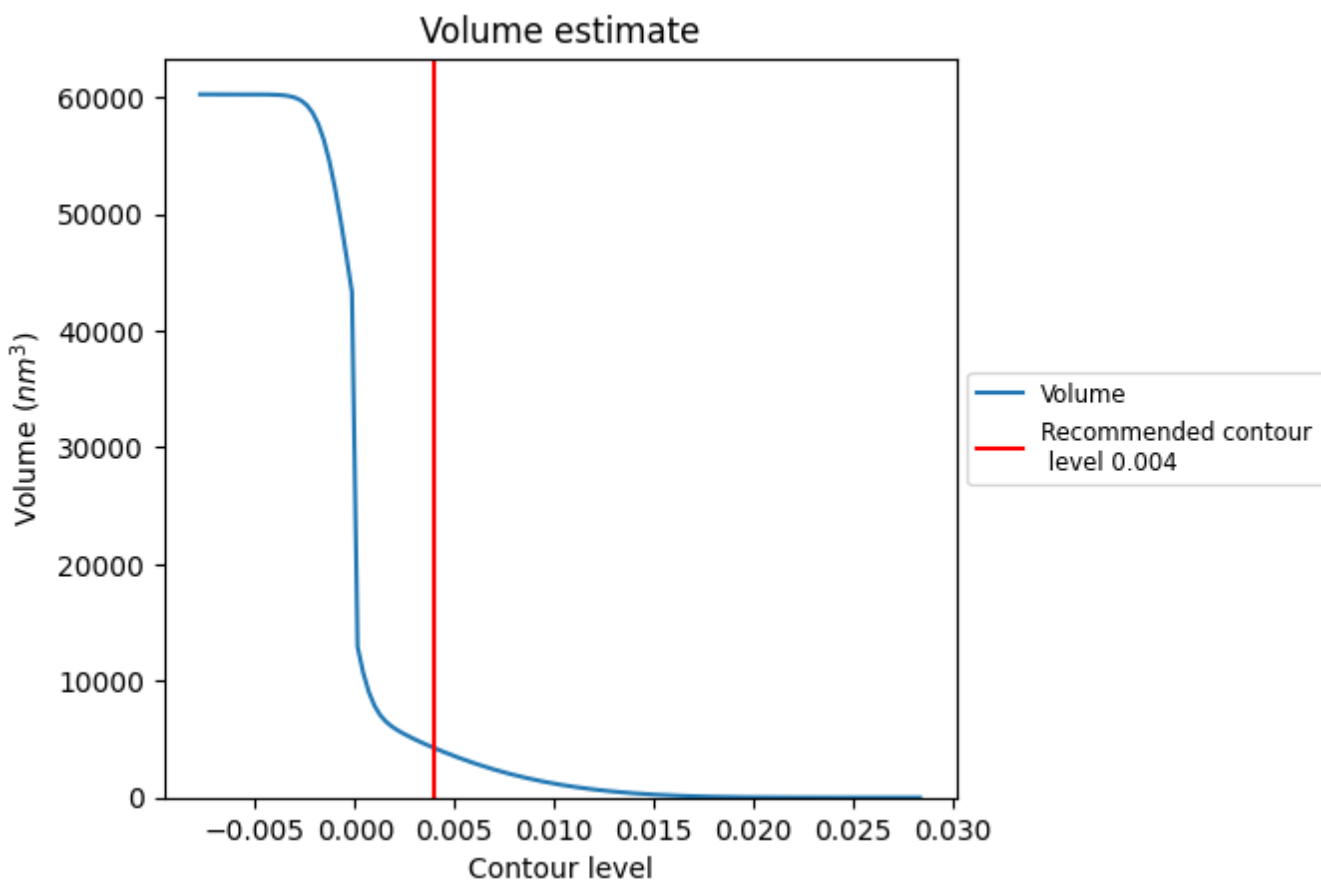
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

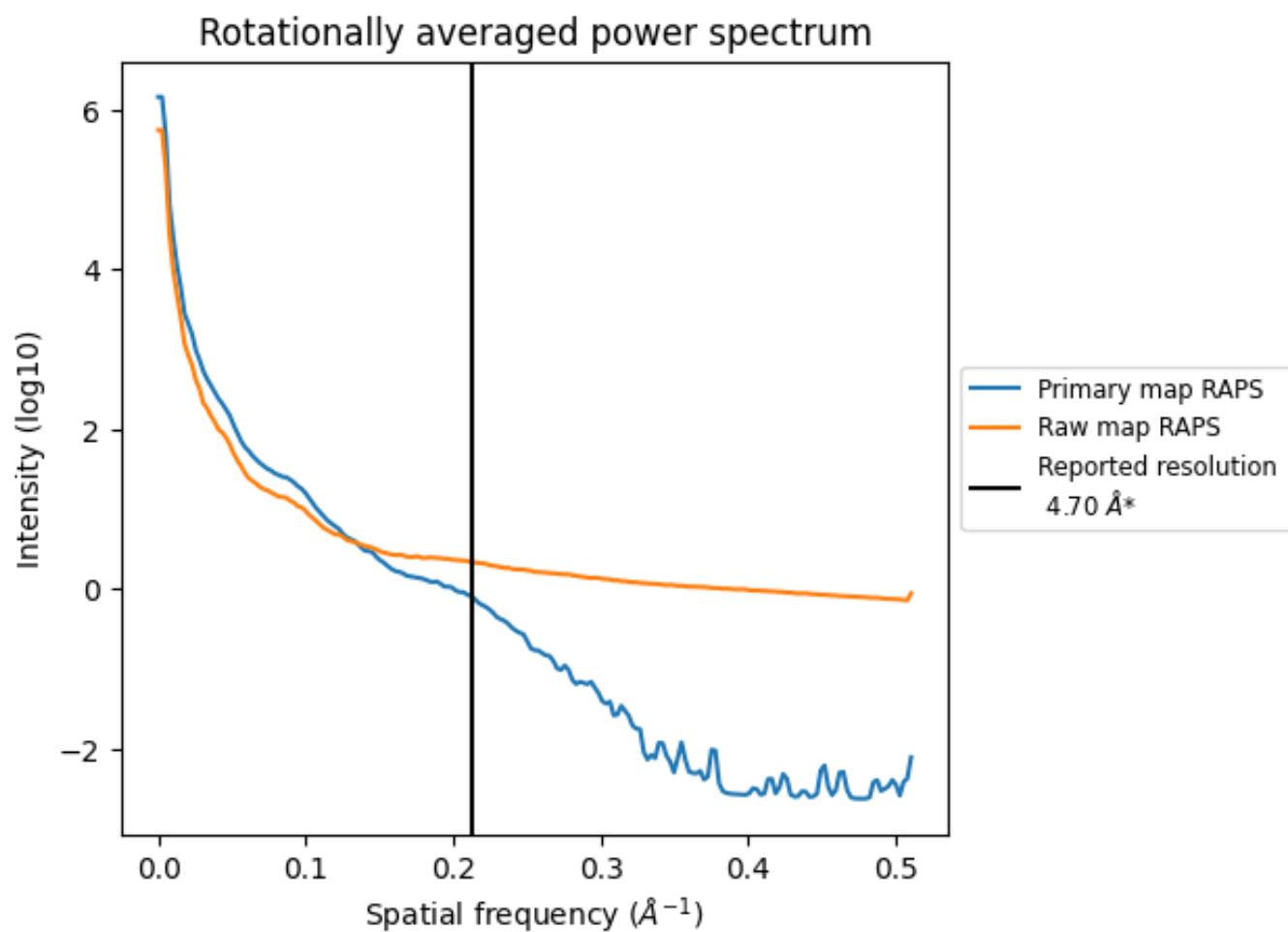
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 4233  $\text{nm}^3$ ; this corresponds to an approximate mass of 3824 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

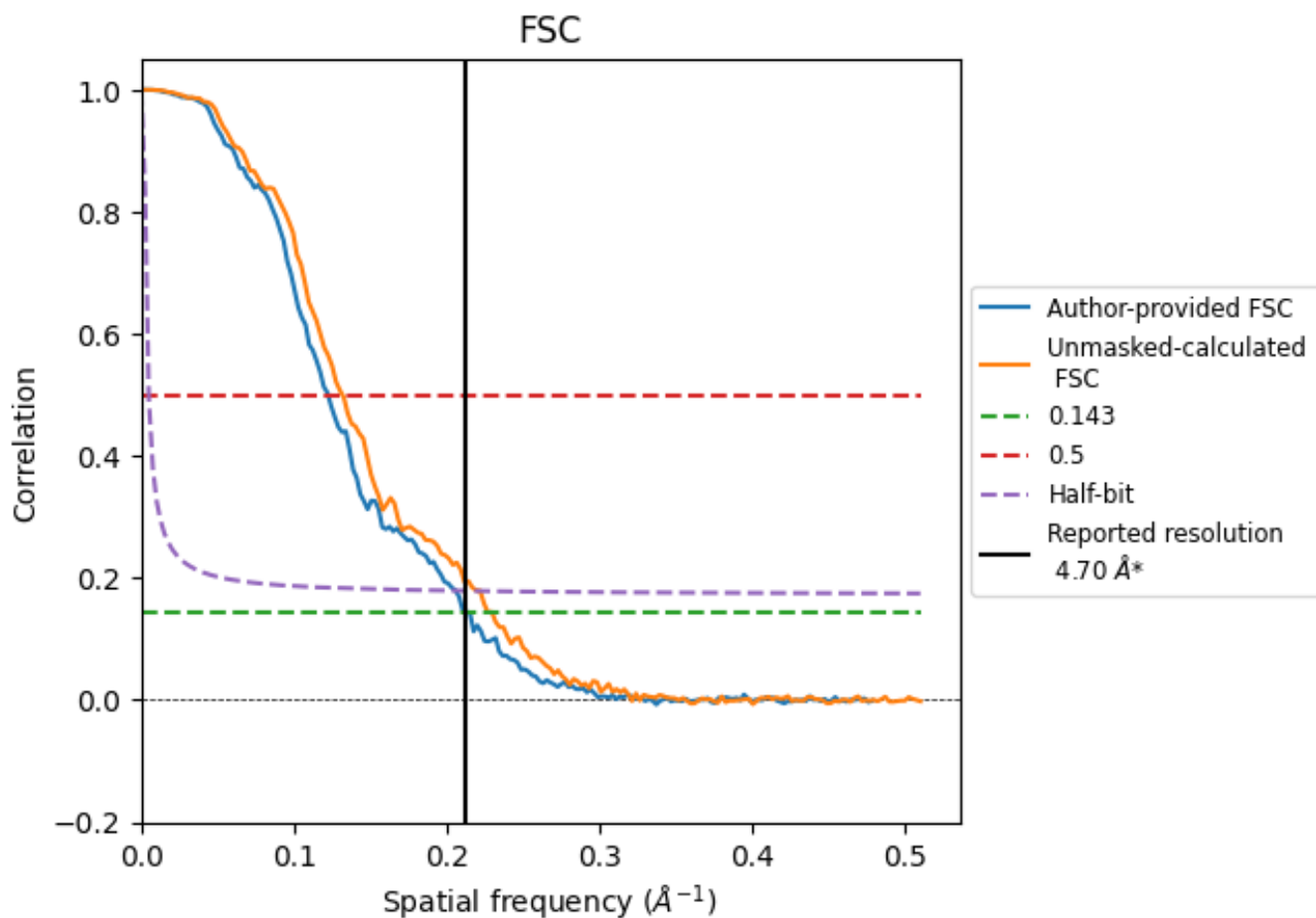


\*Reported resolution corresponds to spatial frequency of 0.213 Å<sup>-1</sup>

## 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 0.213 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

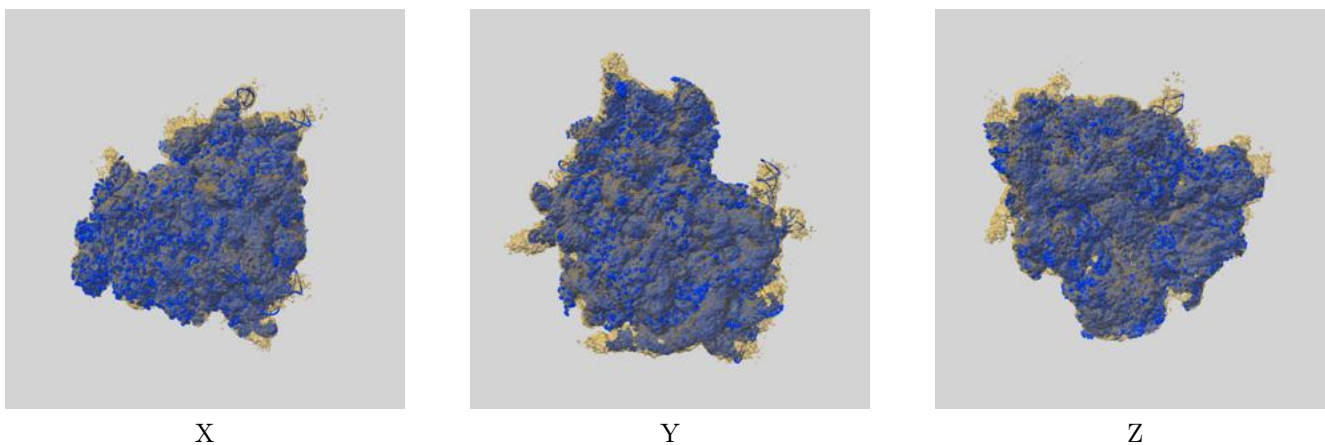
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.70	-	-
Author-provided FSC curve	4.66	8.17	4.85
Unmasked-calculated*	4.35	7.59	4.50

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

## 9 Map-model fit [i](#)

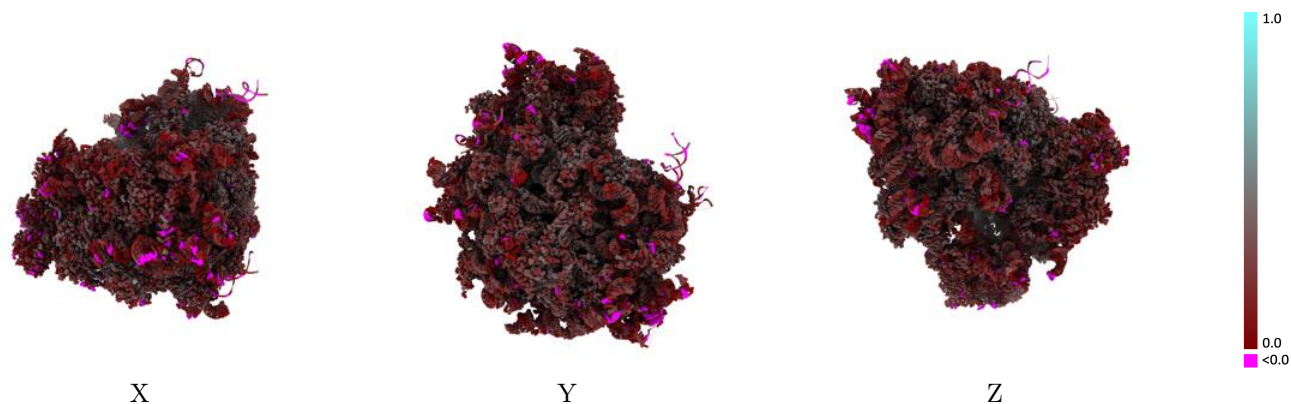
This section contains information regarding the fit between EMDB map EMD-72483 and PDB model 9Y4H. Per-residue inclusion information can be found in section 3 on page 18.

### 9.1 Map-model overlay [i](#)



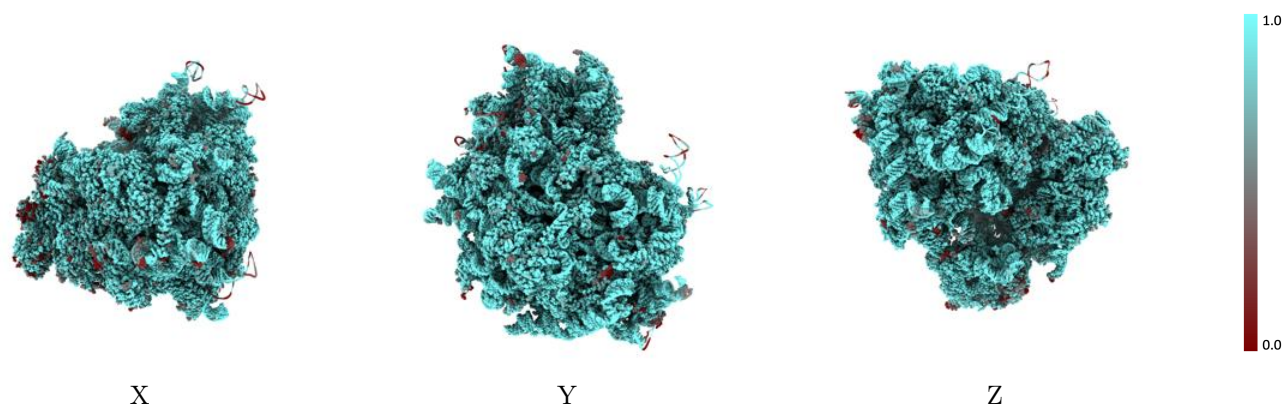
The images above show the 3D surface view of the map at the recommended contour level 0.004 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



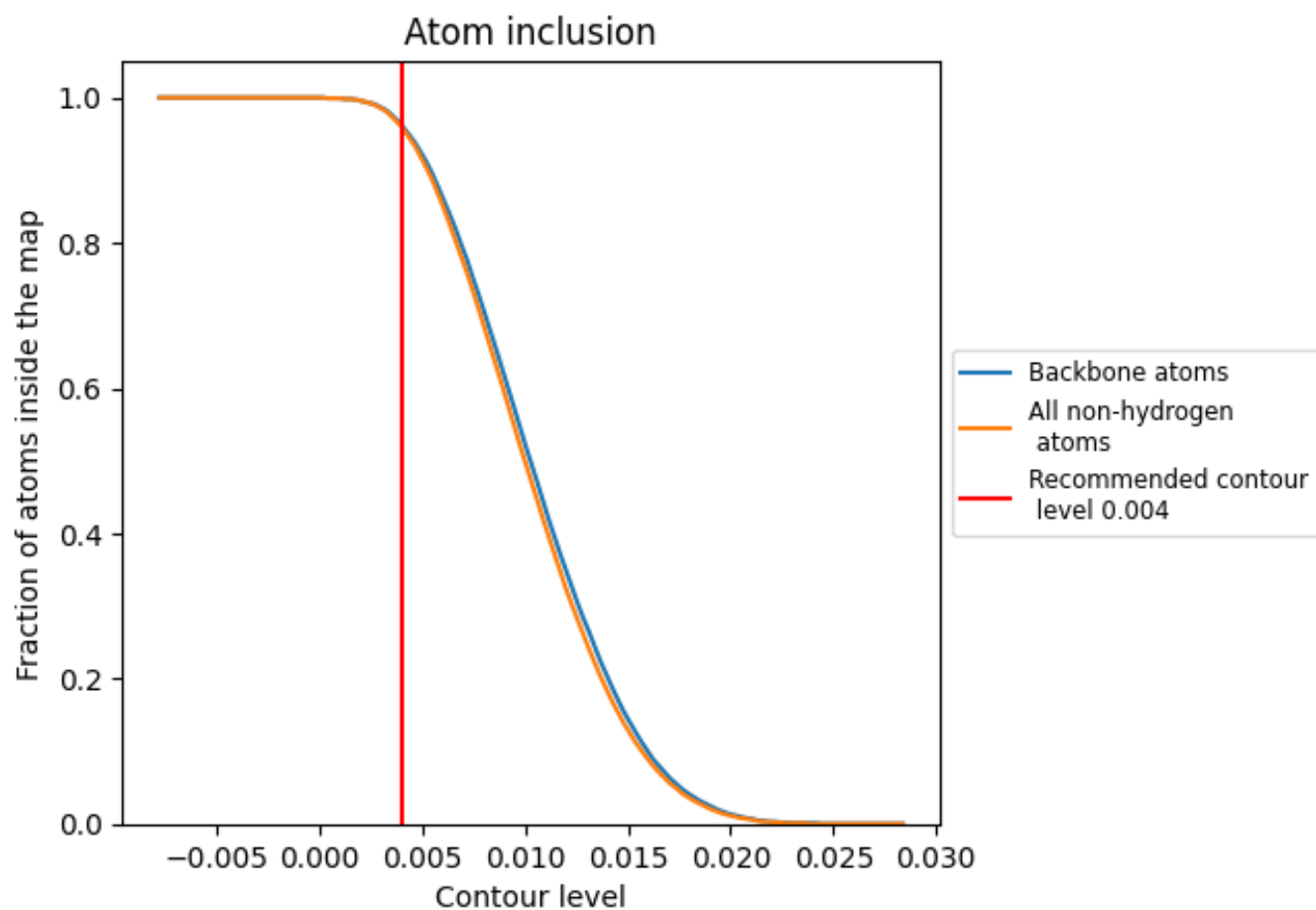
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.004).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 96% 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 (0.004) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9600	 0.2880
A5	 0.9810	 0.3090
A7	 0.9910	 0.3400
A8	 0.9920	 0.3110
AA	 0.9180	 0.2710
AB	 0.9440	 0.2740
AC	 0.9340	 0.2920
AD	 0.8660	 0.1960
AE	 0.9580	 0.2350
AF	 0.8900	 0.2040
AG	 0.9470	 0.1960
AH	 0.8950	 0.2840
AI	 0.9580	 0.2890
AJ	 0.9360	 0.1910
AK	 0.8460	 0.1660
AL	 0.9050	 0.2900
AN	 0.8980	 0.2930
AO	 0.9770	 0.3110
AP	 0.9220	 0.1830
AQ	 0.9160	 0.1550
AR	 0.8270	 0.1380
AS	 0.9650	 0.2010
AT	 0.9630	 0.1850
AU	 0.7940	 0.1750
AV	 0.9020	 0.2920
AW	 0.9390	 0.2850
AX	 0.9160	 0.3100
AY	 0.9690	 0.1890
AZ	 0.8890	 0.1760
Aa	 0.9570	 0.2950
Ab	 0.8980	 0.2650
Ac	 0.8150	 0.1860
Ad	 0.9560	 0.1780
Ae	 0.9010	 0.2420
Ag	 0.8700	 0.1470







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Chain	Atom inclusion	Q-score
B2	 0.9800	 0.2580
CA	 0.9220	 0.3560
CB	 0.9510	 0.3720
CC	 0.9630	 0.3360
CD	 0.9800	 0.3170
CE	 0.9610	 0.2480
CF	 0.9440	 0.3140
CG	 0.9340	 0.2720
CH	 0.9430	 0.3120
CI	 0.9520	 0.3500
CJ	 0.9580	 0.3050
CL	 0.9550	 0.2820
CM	 0.9740	 0.2830
CN	 0.9640	 0.3440
CO	 0.9370	 0.3530
CP	 0.9630	 0.3320
CQ	 0.9590	 0.3450
CS	 0.9560	 0.2930
CT	 0.9590	 0.3370
CU	 0.9560	 0.2410
CV	 0.8990	 0.3890
CW	 0.9140	 0.2580
CX	 0.9480	 0.2750
CY	 0.9700	 0.2700
CZ	 0.9660	 0.2860
Ca	 0.9670	 0.3480
Cb	 0.9740	 0.3480
Cc	 0.9620	 0.3060
Cd	 0.9200	 0.3170
Ce	 0.9430	 0.3570
Cf	 0.9390	 0.3170
Cg	 0.9690	 0.2920
Ch	 0.9750	 0.2650
Ci	 0.9520	 0.2660
Cj	 0.9790	 0.3530
Ck	 0.9190	 0.2730
Cl	 0.9980	 0.3510
Cm	 0.9630	 0.3570
Cn	 0.9220	 0.3220
Co	 0.9550	 0.3620
Cp	 0.9340	 0.3540
Cr	 0.8930	 0.2740

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Chain	Atom inclusion	Q-score
Cw	 0.9640	 0.2540
Dd	 0.9930	 0.2180