



wwPDB EM Validation Summary Report ⓘ

Apr 22, 2024 – 03:30 PM EDT

PDB ID : 8V87
EMDB ID : EMD-43027
Title : 60S ribosome biogenesis intermediate (Dbp10 post-catalytic structure - Overall map)
Authors : Cruz, V.E.; Weirich, C.S.; Peddada, N.; Erzberger, J.P.
Deposited on : 2023-12-04
Resolution : 2.66 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

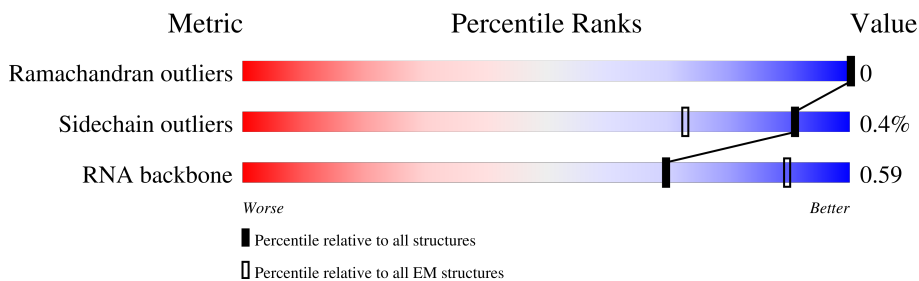
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

1 Overall quality at a glance

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

The reported resolution of this entry is 2.66 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 $\leq 5\%$. 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	1	3396	
2	2	158	
3	3	995	
4	6	232	
5	7	204	
6	8	710	
7	A	291	
8	B	387	

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Mol	Chain	Length	Quality of chain
9	C	362	9% 99%
10	D	505	63% 86% 14%
11	E	176	21% 88% 11%
12	F	244	9% 88% 12%
13	G	256	9% 77% 23%
14	H	191	15% 98%
15	I	663	73% 79% 21%
16	J	427	24% 34% 66%
17	K	376	59% 74% 26%
18	L	199	6% 61% 39%
19	M	138	13% 99%
20	N	204	93% 7%
21	O	199	8% 98%
22	P	184	18% 89% 11%
23	Q	186	10% 68% 32%
24	R	189	57% 71% 29%
25	S	172	31% 98%
26	U	121	84% 84% 16%
27	V	137	48% 93% 7%
28	W	236	93% 98%
29	X	142	24% 96%
30	Y	127	7% 98%
31	Z	136	88% 99%
32	a	217	99% 98%
33	b	647	37% 72% 28%

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Mol	Chain	Length	Quality of chain
34	c	105	90% 92% 8%
35	d	113	77% 95% 5%
36	e	130	5% 96% .
37	f	107	. 99% .
38	g	121	40% 93% 7%
39	h	120	11% 99% .
40	i	100	. 72% 28%
41	j	88	. 83% 17%
42	k	78	77% 99% .
43	l	181	50% 97% ..
44	m	807	56% 82% 17%
45	n	605	32% 70% 30%
46	o	220	31% 60% 40%
47	p	460	67% 66% 33%
48	q	618	47% 60% 40%
49	r	261	42% 82% 18%
50	s	520	. 7% 93%
51	t	322	49% 89% 11%
52	u	199	33% 57% 43%
53	v	231	6% 56% 44%
54	w	841	20% 33% 67%
55	y	245	47% 100%
56	z	106	35% 52% 48%

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 150186 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 RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	1	2489	53292	23794	9638	17371	2489	0	0

- Molecule 2 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	2	155	3291	1472	577	1087	155	0	0

- Molecule 3 is a protein called ATP-dependent RNA helicase DBP10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	656	5253	3347	925	960	21	0	0

- Molecule 4 is a RNA chain called ITS2 RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	6	87	1838	823	309	619	87	0	0

- Molecule 5 is a protein called 60S ribosomal subunit assembly/export protein LOC1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	7	134	1093	679	211	203	0	0

- Molecule 6 is a protein called Nucleolar complex protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	8	477	3868	2478	667	710	13	0	0

- Molecule 7 is a protein called Ribosome biogenesis protein BRX1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	A	248	2032	1294	359	373	6	0	0

- Molecule 8 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	B	336	2670	1696	493	475	6	0	0

- Molecule 9 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	C	358	2725	1717	517	488	3	0	0

- Molecule 10 is a protein called ATP-dependent RNA helicase HAS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	D	432	3451	2227	591	621	12	0	0

- Molecule 11 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	E	156	1239	800	222	216	1	0	0

- Molecule 12 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	F	215	1735	1122	316	296	1	0	0

- Molecule 13 is a protein called Large ribosomal subunit protein eL8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	G	198	1549	998	271	277	3	0	0

- Molecule 14 is a protein called Large ribosomal subunit protein uL6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	H	189	Total	C	N	O	S	0	0
			1502	953	272	273	4		

- Molecule 15 is a protein called Nucleolar complex-associated protein 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	I	526	Total	C	N	O	S	0	0
			4201	2665	717	799	20		

- Molecule 16 is a protein called rRNA-processing protein EBP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	J	145	Total	C	N	O	S	0	0
			1215	759	225	228	3		

- Molecule 17 is a protein called Proteasome-interacting protein CIC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	K	280	Total	C	N	O	S	0	0
			2248	1448	368	428	4		

- Molecule 18 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	L	121	Total	C	N	O	S	0	0
			991	623	208	160			

- Molecule 19 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	M	136	Total	C	N	O	S	0	0
			1053	675	199	177	2		

- Molecule 20 is a protein called Large ribosomal subunit protein eL15A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	N	189	Total	C	N	O	S	0	0
			1621	1015	343	262	1		

- Molecule 21 is a protein called Large ribosomal subunit protein uL13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	O	197	1555	1003	289	262	1	0	0

- Molecule 22 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	P	164	1292	804	253	235		0	0

- Molecule 23 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	Q	127	973	625	180	167	1	0	0

- Molecule 24 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	R	134	1082	679	220	183		0	0

- Molecule 25 is a protein called Large ribosomal subunit protein eL20A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	S	170	1432	922	265	242	3	0	0

- Molecule 26 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	U	102	808	524	132	152		0	0

- Molecule 27 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	V	127	939	593	173	166	7	0	0

- Molecule 28 is a protein called Ribosome assembly factor MRT4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	W	232	1870	1184	321	360	5	0	0

- Molecule 29 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	X	137	1068	682	192	192	2	0	0

- Molecule 30 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
30	Y	126	993	625	192	176	0	0

- Molecule 31 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
31	Z	135	1092	710	202	180	0	0

- Molecule 32 is a protein called Large ribosomal subunit protein uL1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	a	214	1695	1083	295	308	9	0	0

- Molecule 33 is a protein called Nucleolar GTP-binding protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	b	469	3806	2419	662	708	17	0	0

- Molecule 34 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	c	97	743	479	124	139	1	0	0

- Molecule 35 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	d	107	Total	C	N	O	S	0	0
			873	553	165	154	1		

- Molecule 36 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	e	125	Total	C	N	O	S	0	0
			1009	641	203	164	1		

- Molecule 37 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	f	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 38 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	g	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 39 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	h	119	Total	C	N	O	S	0	0
			969	615	186	167	1		

- Molecule 40 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	i	72	Total	C	N	O	S	0	0
			578	358	121	98	1		

- Molecule 41 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	j	73	Total	C	N	O	S	0	0
			580	353	126	96	5		

- Molecule 42 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	k	77	Total	C	N	O	0	0
			612	391	115	106		

- Molecule 43 is a protein called 60S ribosome subunit biogenesis protein NIP7.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	l	176	Total	C	N	O	S	0	0
			1394	896	244	247	7		

- Molecule 44 is a protein called Ribosome biogenesis protein ERB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	m	666	Total	C	N	O	S	0	0
			5377	3421	936	1005	15		

- Molecule 45 is a protein called Pescadillo homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	n	425	Total	C	N	O	S	0	0
			3470	2241	600	615	14		

- Molecule 46 is a protein called Ribosome biogenesis protein 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	o	133	Total	C	N	O	S	0	0
			1107	716	198	189	4		

- Molecule 47 is a protein called YTM1 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	p	307	Total	C	N	O	S	0	0
			2391	1492	422	471	6		

- Molecule 48 is a protein called 25S rRNA (cytosine(2870)-C(5))-methyltransferase.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	q	371	Total	C	N	O	S	0	0
			2902	1842	504	543	13		

- Molecule 49 is a protein called Ribosome biogenesis protein NSA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	r	214	Total	C	N	O	S	0	0
			1738	1096	332	304	6		

- Molecule 50 is a protein called Nuclear GTP-binding protein NUG1.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	s	36	Total	C	N	O	S	0	0
			301	184	69	46	2		

- Molecule 51 is a protein called Ribosome biogenesis protein RLP7.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	t	285	Total	C	N	O	S	0	0
			2293	1453	425	412	3		

- Molecule 52 is a protein called Ribosome biogenesis protein RLP24.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	u	114	Total	C	N	O	S	0	0
			959	602	196	152	9		

- Molecule 53 is a protein called Nucleolar protein 16.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	v	130	Total	C	N	O	S	0	0
			1087	678	211	195	3		

- Molecule 54 is a protein called 27S pre-rRNA (guanosine(2922)-2'-O)-methyltransferase.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	w	280	Total	C	N	O	S	0	0
			2241	1395	419	417	10		

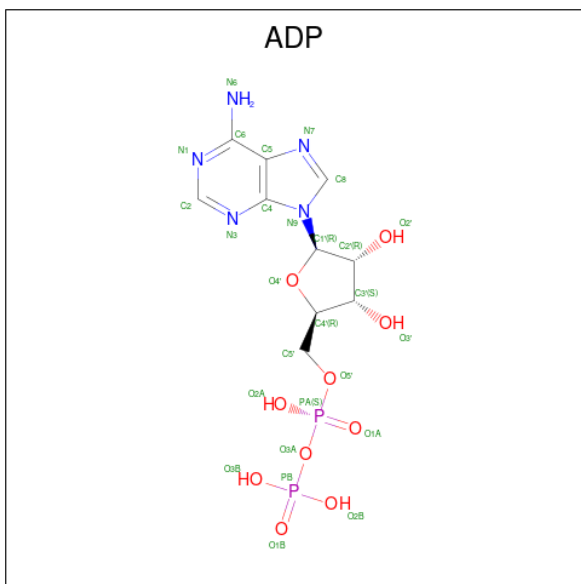
- Molecule 55 is a protein called Eukaryotic translation initiation factor 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	y	245	Total	C	N	O	S	0	0
			1855	1149	320	379	7		

- Molecule 56 is a protein called UPF0642 protein YBL028C.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
56	z	55	444	273	88	83	0	0

- Molecule 57 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
57	3	1	27	10	5	10	2	0

- Molecule 58 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
58	3	1	1	1	0
58	b	1	1	1	0

- Molecule 59 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



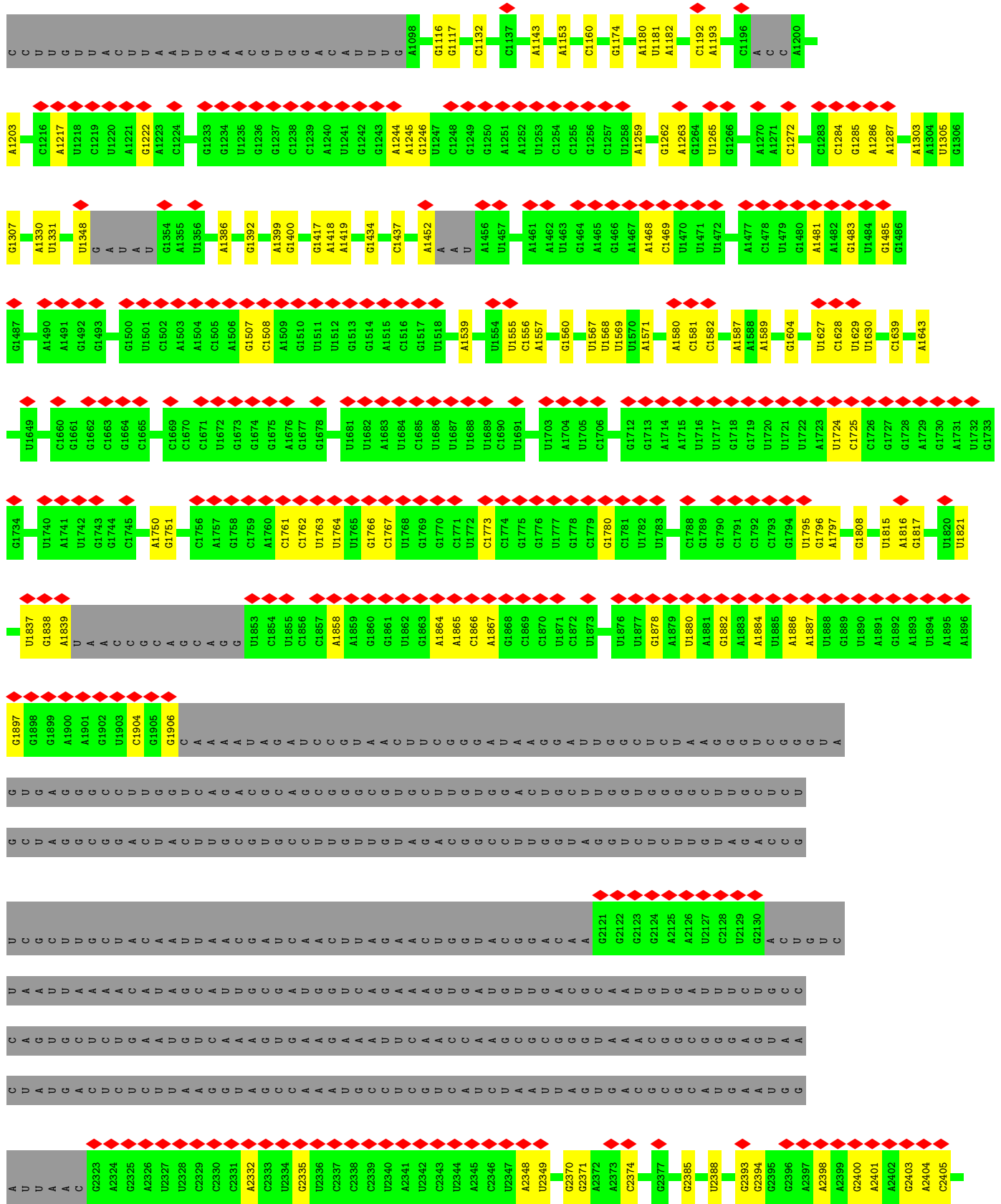
Mol	Chain	Residues	Atoms					AltConf
59	b	1	Total	C	N	O	P	0
			28	10	5	11	2	

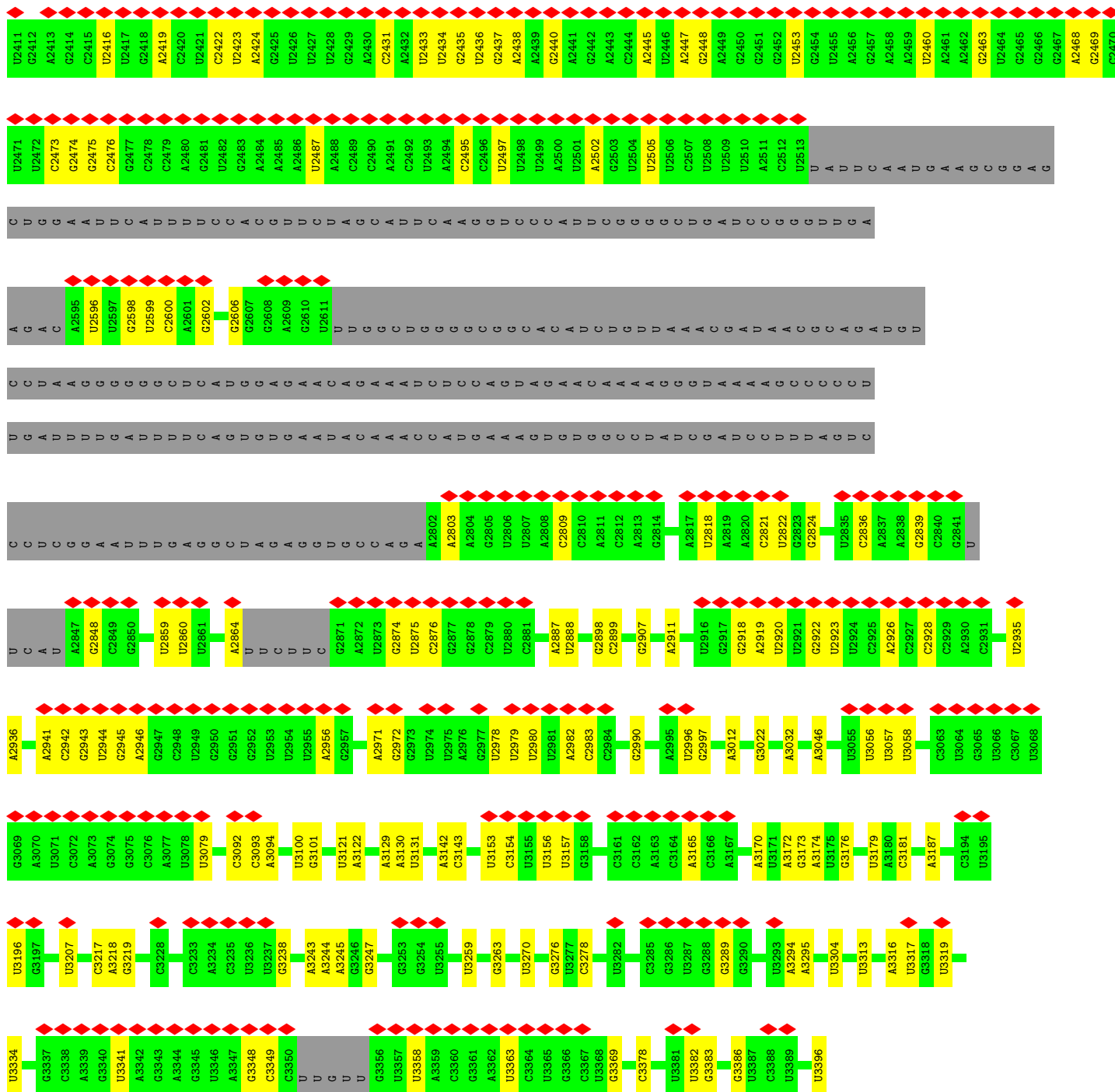
- Molecule 60 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		AltConf
60	b	1	Total	K	0
			1	1	

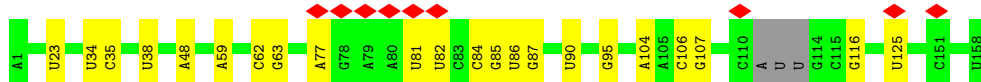
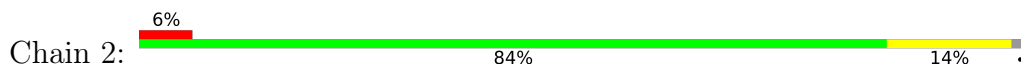
- Molecule 61 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
61	g	1	Total	Zn	0
			1	1	
61	j	1	Total	Zn	0
			1	1	





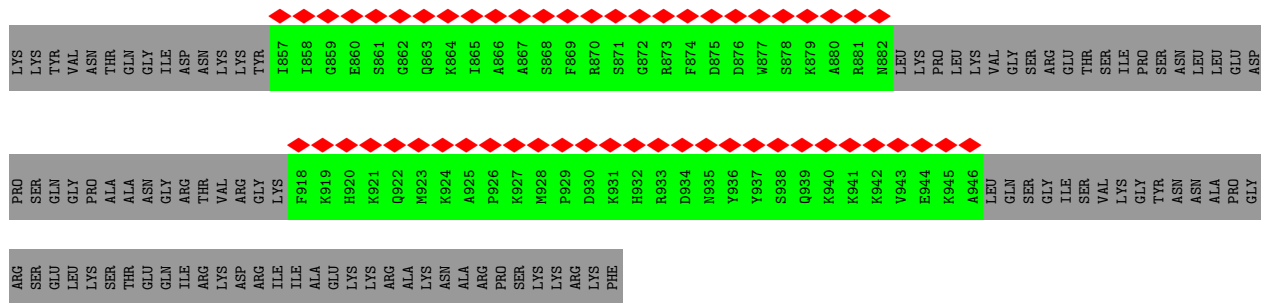
- Molecule 2: 5.8S ribosomal RNA



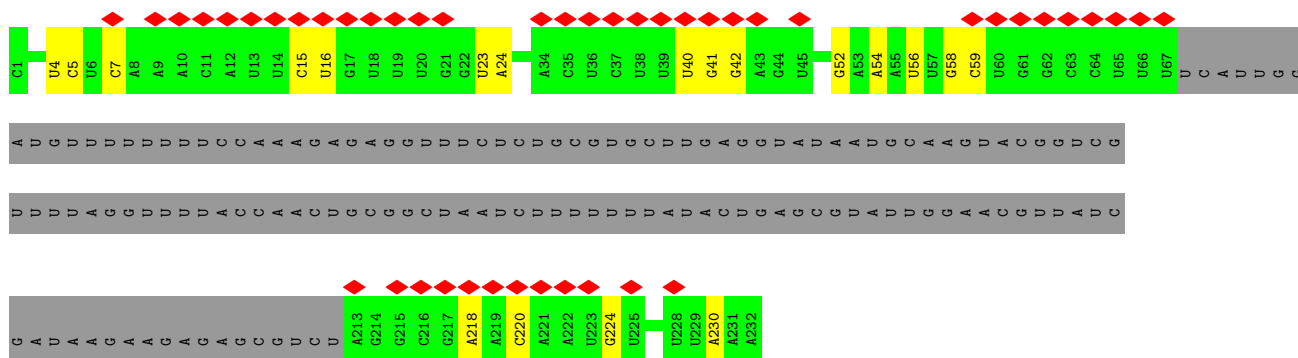
- Molecule 3: ATP-dependent RNA helicase DBP10



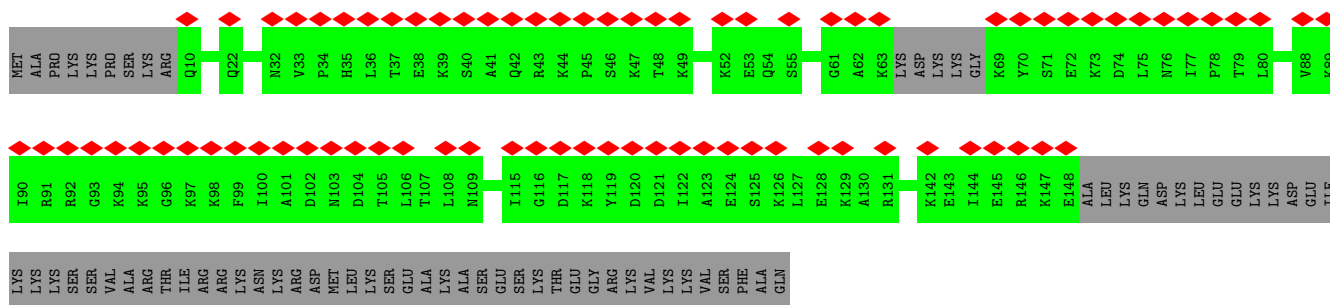
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ILE	GLU	TYR	PHE	SER	THR	ASN	ASN	GLU	LEU	GLY	VAL	VAL	ASN	ASN	LYS	LYS	LYS	ALA	ASN	ALA	ASN	GLY	SER	GLU	ILE	ILE	ALA	ALA	PHE	PRO	ASP	LEU	GLU	VAL																													
ASN	GLU	PHE	THR	THR	ASN	ASN	GLU	LEU	GLY	VAL	VAL	ASN	ASN	LYS	LYS	LYS	ALA	ASN	ALA	ASN	GLY	SER	GLU	ILE	ILE	ALA	ALA	PHE	PRO	ASP	LEU	GLU	VAL																														
A181	R192	R183	G184	S185	G186	L187	T188	E189	A190	F191	I192	G193	P194	M195	V196	E197	K198	L199	K200	H201	H202	S203	G204	V148	L149	K205	L206	G207	A208	R209	A210	V211	L212	L213	S214	P215	S216	R217	E218	L219	A220	M221	Q222	T223	F224	M225	I168	P169	L170	I171	K228	D229	F230	S174	R175	D176	G233	T234	E235	L236	R237	V239	L240
L241	T242	G243	G244	D245	S246	L247	E248	E249	Q250	F251	G252	M253	M254	M255	T256	M257	P258	D259	V260	I261	I262	A263	T264	P265	G266	R267	F268	L269	H270	L271	K272	L273	E274	M275	N276	L277	D278	L279	K280	S281	Q282	E283	Y284	V285	V286	F287	D288	E289	A290	D291	R292	L293	F294	E295	M296	G297	F298	Q299	E300				
Q301	L302	N303	E304	L305	L306	A307	S308	L309	P310	T311	T312	R313	Q314	T315	L316	L317	F318	S319	A320	T321	L322	A263	T264	S325	Y447	L326	V327	D328	F329	V330	R331	A332	G333	V335	N336	P337	V338	L339	V340	R341	L342	D343	A344	E345	L346	D467	Q468	R347	V348	S349	N351	L352	E353	M354	L355	F356	L357	S359	K360				
N361	A362	D363	R364	E365	A366	N367	L368	L369	Y370	I371	L372	Q373	E374	I375	I376	K377	I378	P379	L380	A381	T382	S383	E384	Q385	L386	Q387	K388	L389	Q390	N391	A392	G393	V395	N396	ASP	SER	ASP	ASP	ASP	GLU	ASN	ASP	ARG	GLN	LYS	LYS	ARG	R347	V348	S349	N351	L352	E353	M354	L355	F356	L357	S359	K360				
GLN	LYS	MET	PRO	ALA	ALA	ASN	GLU	P430	S431	E432	K433	A434	I436	I437	F438	V439	P440	T441	R442	H443	H444	V445	E446	Y447	I448	S449	Q450	L451	L452	R453	D454	C455	G456	Y457	L458	I459	S460	Y461	I462	Y463	G464	T465	A524	L466	D467	Q468	H469	A470	R471	K472	R473	Q474	L475	Y476	N477	F478	R479	A480					
G481	L482	T483	S484	I485	L486	V487	V488	L489	D490	V491	A492	A493	R494	G495	V496	D497	I498	P499	M500	A501	A502	N503	V504	I505	N506	Y507	T508	L509	P510	G511	S512	S513	K514	I515	F516	V517	H518	R519	V520	G521	R522	T523	A524	L466	D467	Q468	H469	A470	R471	K472	R473	Q474	L475	Y476	N477	F478	R479	A480					
L541	P542	Y543	L544	L545	L546	L547	E548	L549	F550	L551	G552	K553	K554	I555	L556	L557	T558	P559	M560	Y561	D562	S563	L564	V565	D566	V567	M568	K569	K570	R571	W572	L573	D574	E575	G576	K577	P578	E579	Y580	Q581	F582	Q583	P584	P585	P586	L587	L588	Y589	E590	K591	R592	L593	V594	L595	G596	S597	E598	P599	R600				
L601	D602	V603	E604	L605	L606	G607	D608	L609	Y610	K611	M612	L613	M614	S615	S616	M617	F618	D619	L620	Q621	L622	A623	K624	K625	T626	A627	M628	K629	A630	E631	K632	L633	Y634	Y635	R636	T637	R638	T639	S640	A641	R642	P643	E644	S645	L646	K647	L648	Y649	L650	P651	I652	L653	S654	L655	G656	W657	R658	A659	Q660				
N661	A662	F663	F664	G665	K666	N667	E668	E669	K670	E671	K672	L673	D674	F675	L676	A677	K678	L679	Q680	R681	R682	R683	N684	K685	E686	E690	F691	T692	R693	N694	A695	D696	D697	E698	M699	A700	F701	F702	M703	K704	R705	R706	R707	K708	Q709	L710	A711	P712	I713	Q714	R715	K716	A717	T718	R719	R720	R721	E722					
L723	L724	E725	K726	E727	R728	M729	ALA	GLY	LEU	SER	HIS	SER	ILE	ASP	GLU	GLY	ILE	GLN	LYS	ASP	GLY	ASP	GLN	LEU	M808	G809	F810	A811	N812	D813	A814	A815	Q816	A817	A818	Y819	D820	L821	M822	S823	D824	D825	K826	V827	Q828	V829	H830	K831	Q832	L833	A834	THR	VAL	LYS	TRP	ASP	LYS	LYS	ARG				
F783	K784	D785	P786	T787	F788	F789	L790	S791	H792	Y793	A794	P795	A796	GLY	ASP	ILE	GLN	LYS	ASP	GLN	LEU	LEU	LEU	I808	G809	F810	A811	N812	D813	A814	A815	Q816	A817	A818	Y819	D820	L821	M822	S823	D824	D825	K826	V827	Q828	V829	H830	K831	Q832	L833	A834	THR	VAL	LYS	TRP	ASP	LYS	LYS	ARG					



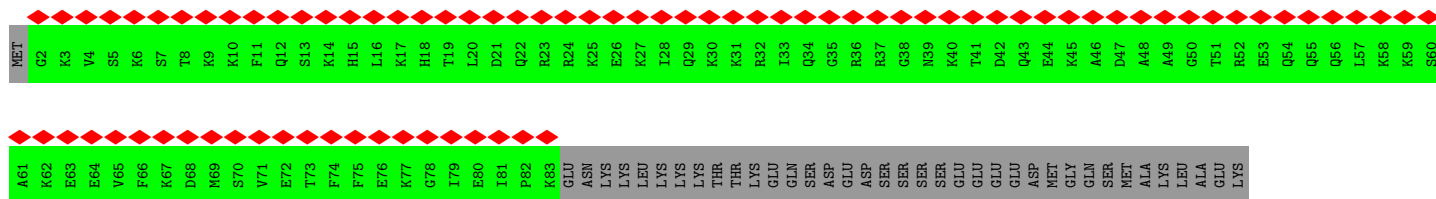
• Molecule 4: ITS2 RNA

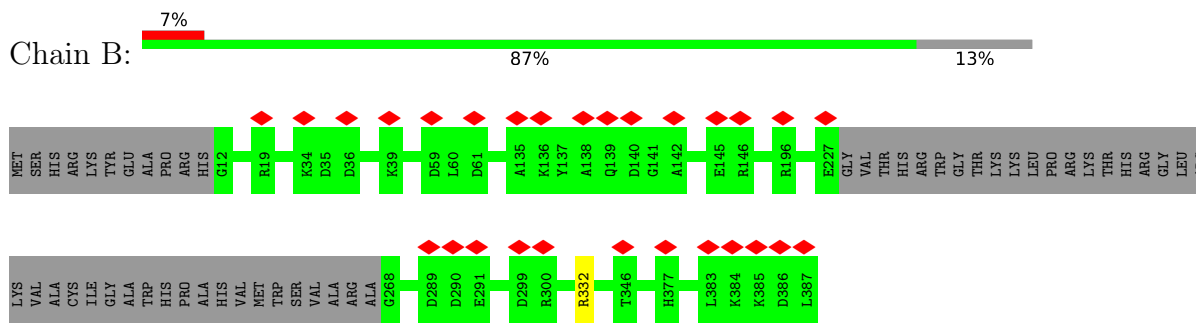


• Molecule 5: 60S ribosomal subunit assembly/export protein LOC1

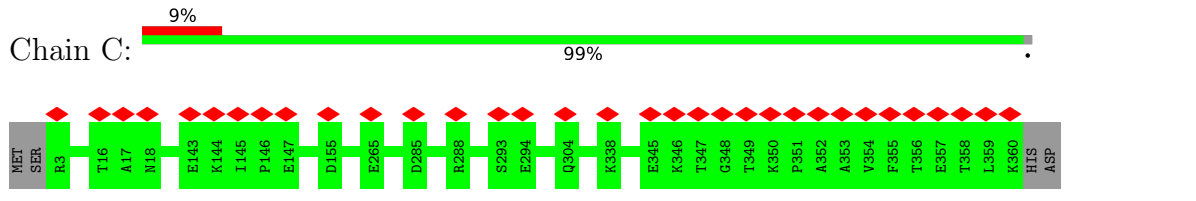


• Molecule 6: Nucleolar complex protein 2

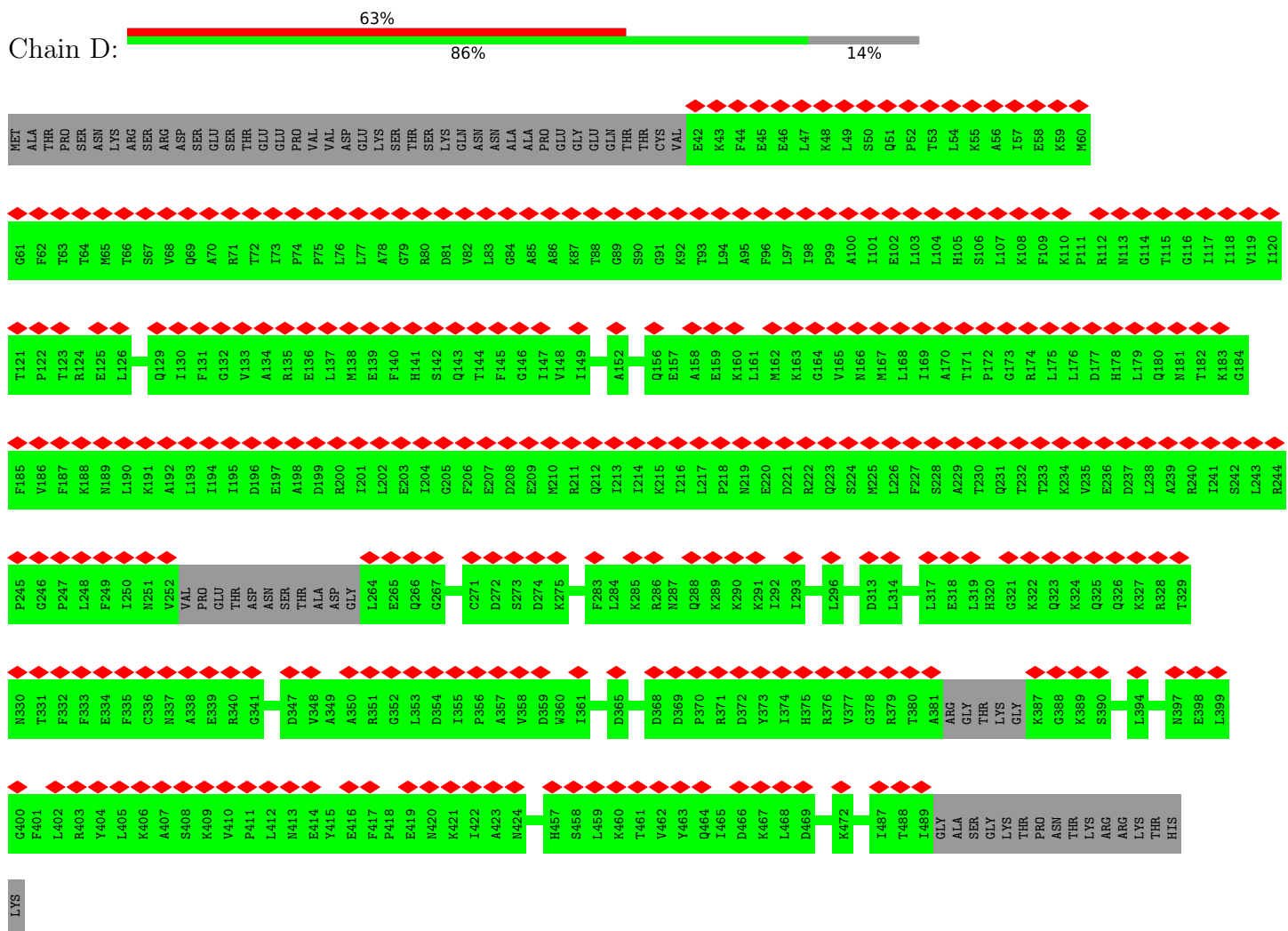




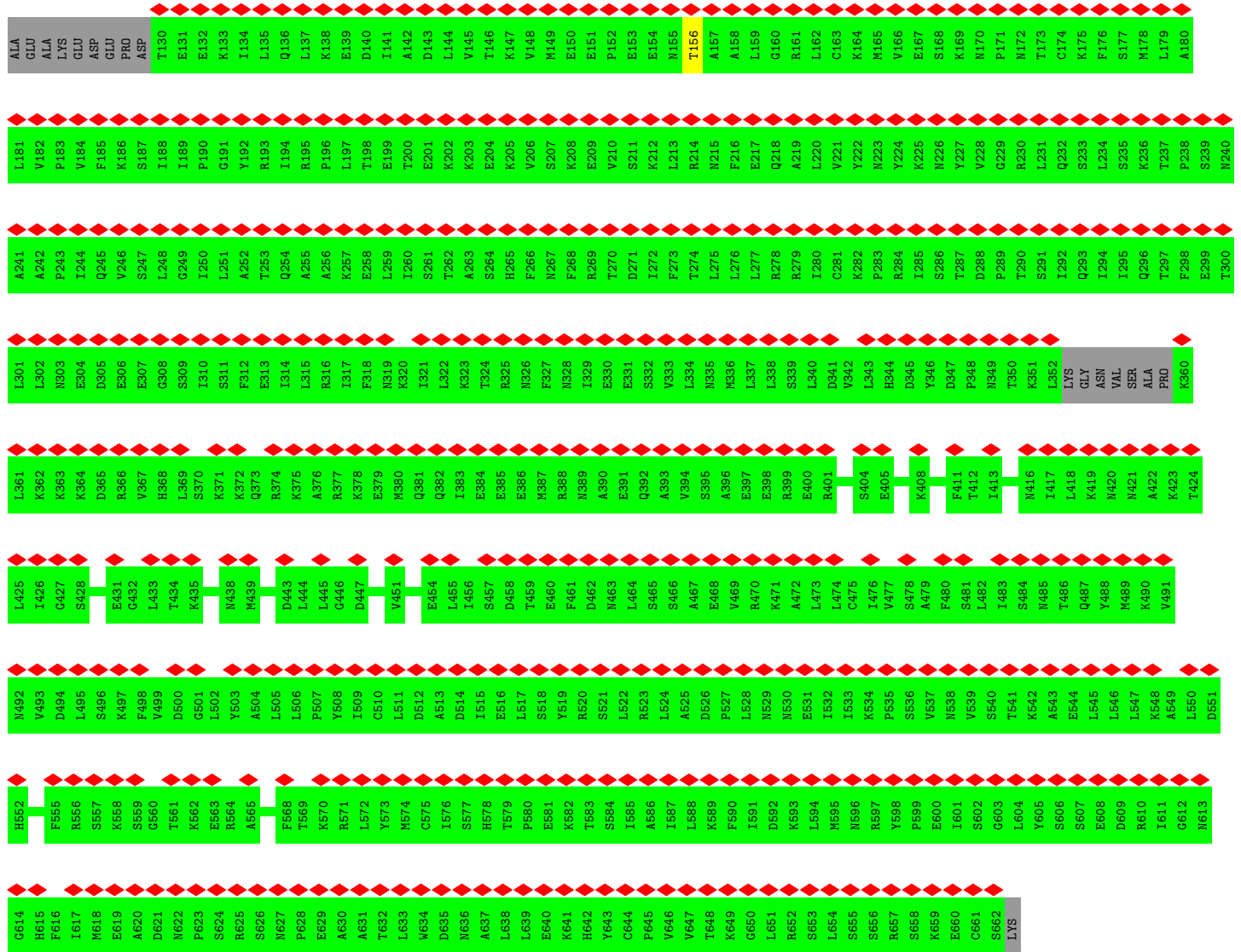
• Molecule 9: 60S ribosomal protein L4-A



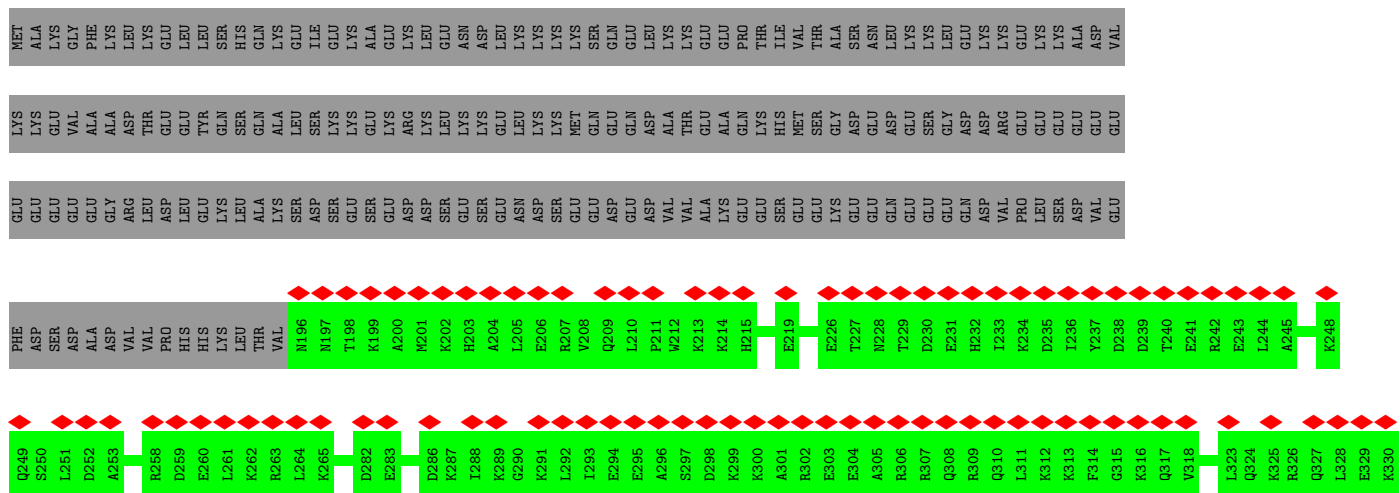
• Molecule 10: ATP-dependent RNA helicase HAS1

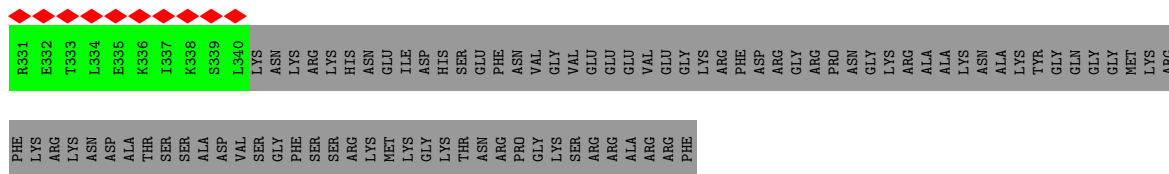


• Molecule 11: 60S ribosomal protein L6-A

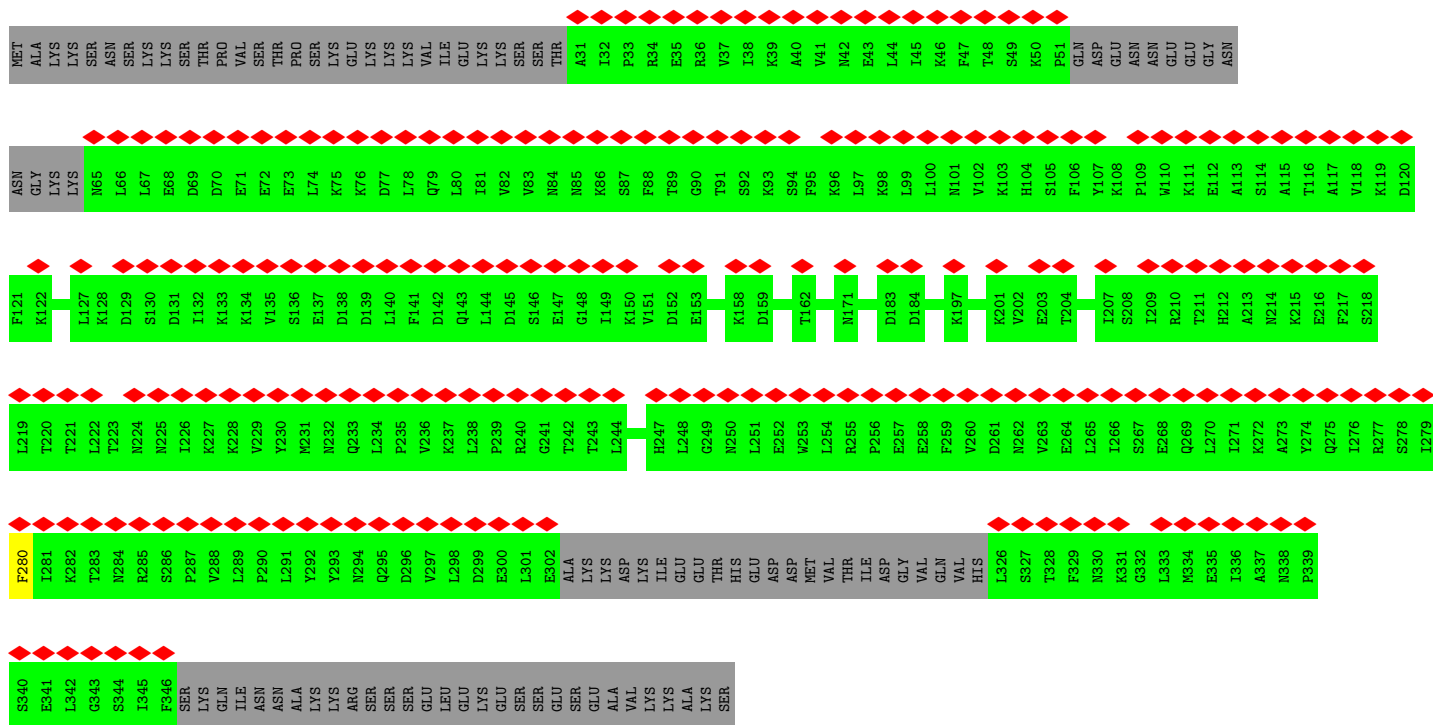
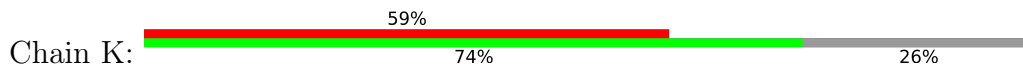


• Molecule 16: rRNA-processing protein EBP2

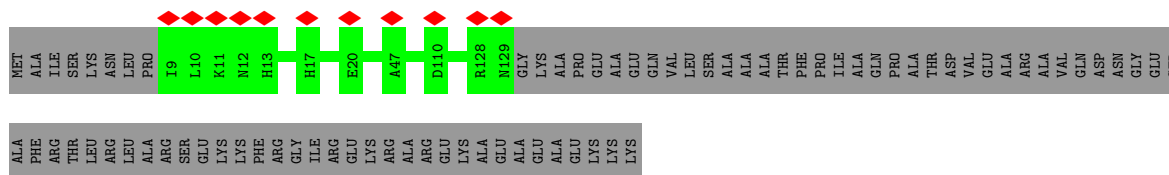




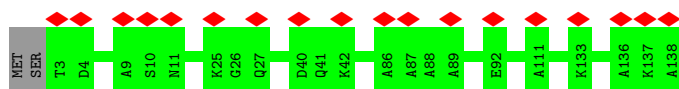
• Molecule 17: Proteasome-interacting protein CIC1



• Molecule 18: 60S ribosomal protein L13-A

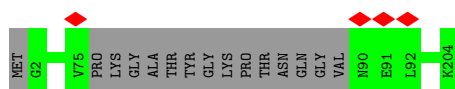


• Molecule 19: 60S ribosomal protein L14-A



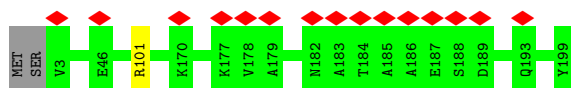
• Molecule 20: Large ribosomal subunit protein eL15A

Chain N:  93% 7%




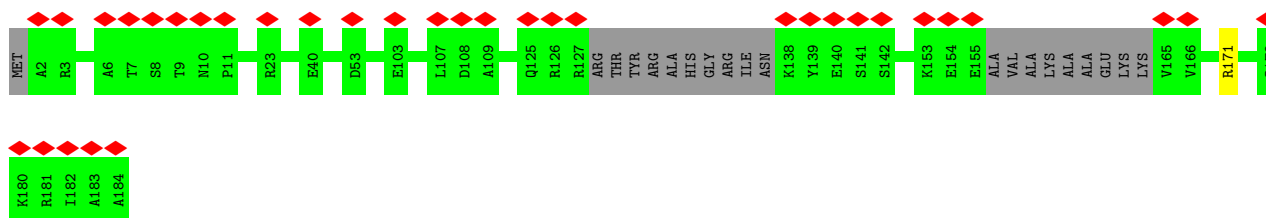
- Molecule 21: Large ribosomal subunit protein uL13A

Chain O:  8% 98%



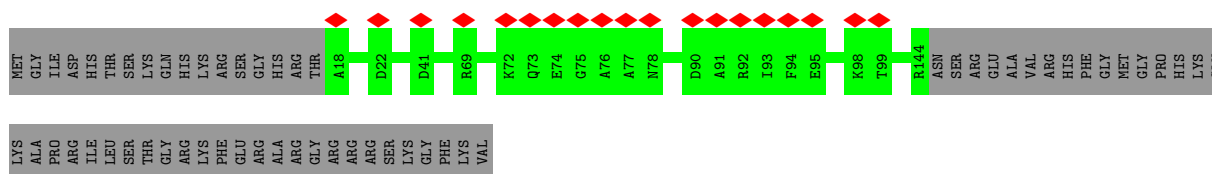
- Molecule 22: 60S ribosomal protein L17-A

Chain P:  18% 89% 11%



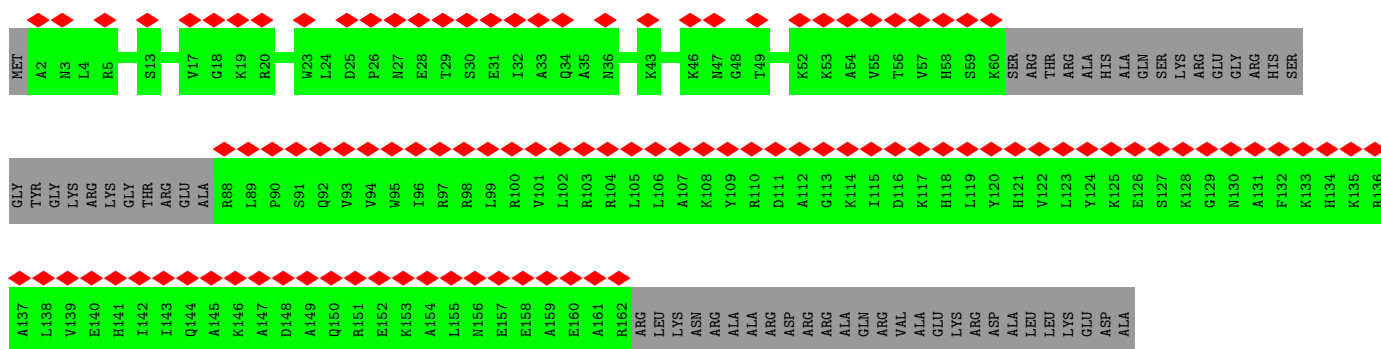
- Molecule 23: 60S ribosomal protein L18-A

Chain Q:  10% 68% 32%

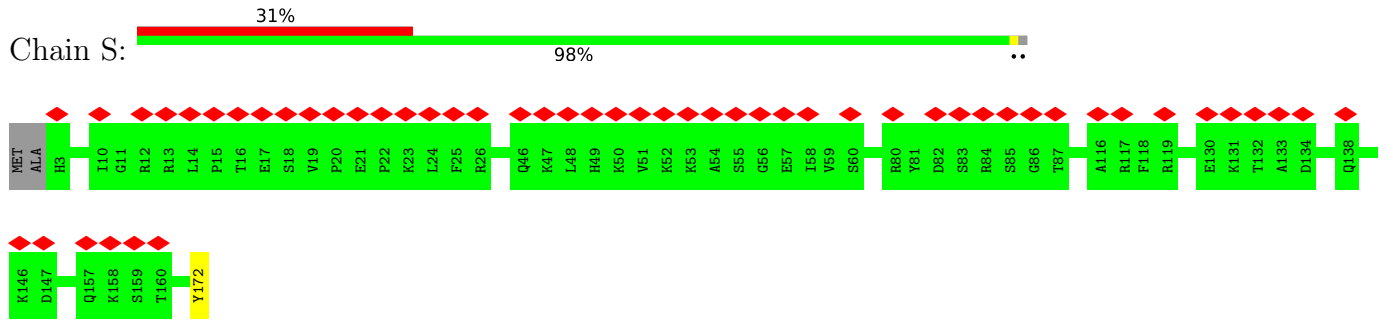


- Molecule 24: 60S ribosomal protein L19-A

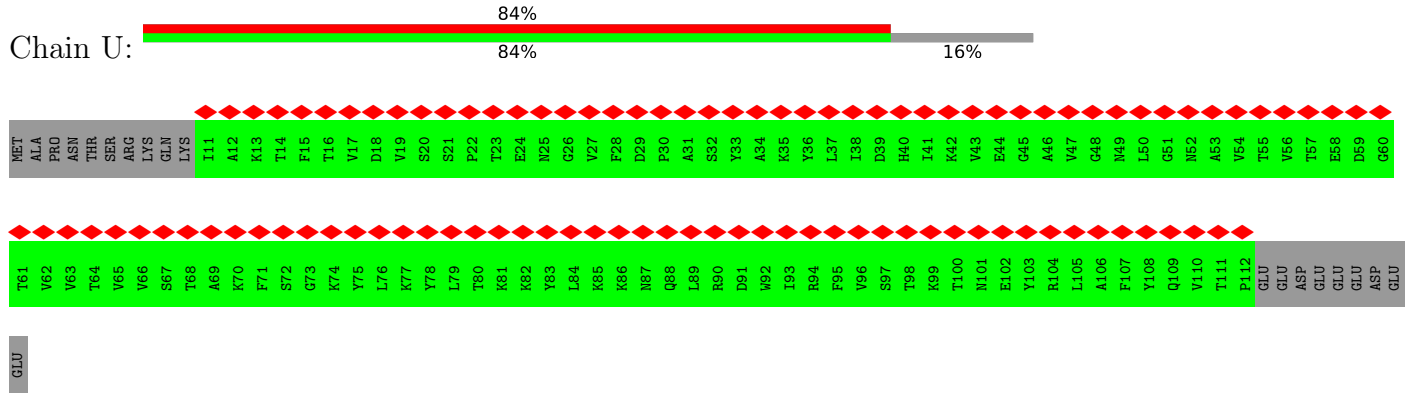
Chain R:  57% 71% 29%



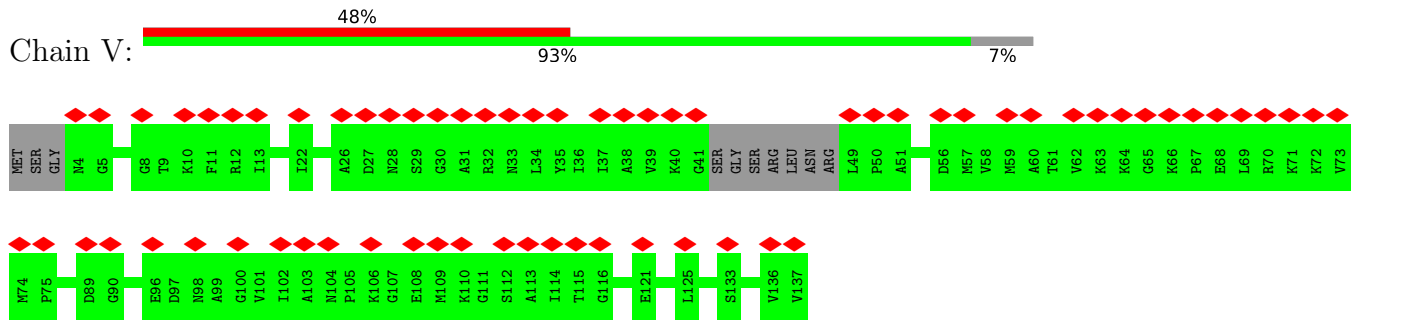
- Molecule 25: Large ribosomal subunit protein eL20A



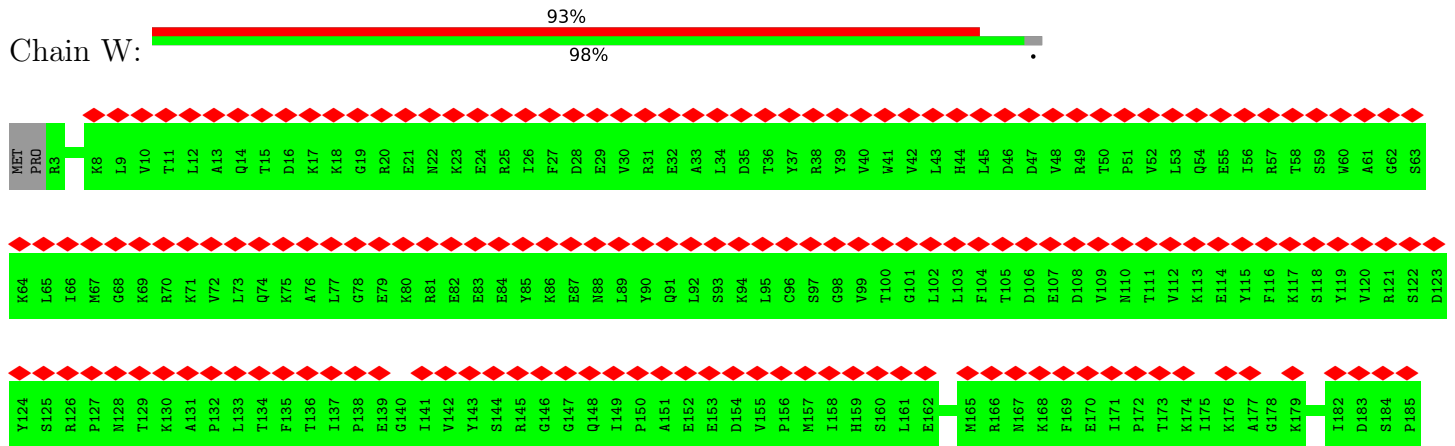
• Molecule 26: 60S ribosomal protein L22-A

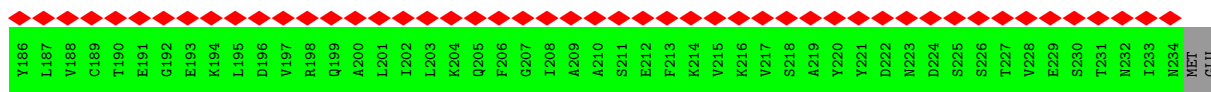


• Molecule 27: 60S ribosomal protein L23-A

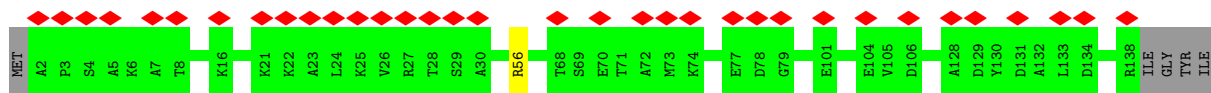


• Molecule 28: Ribosome assembly factor MRT4

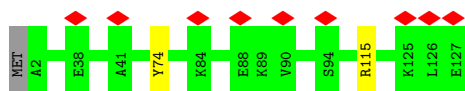




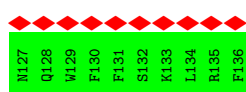
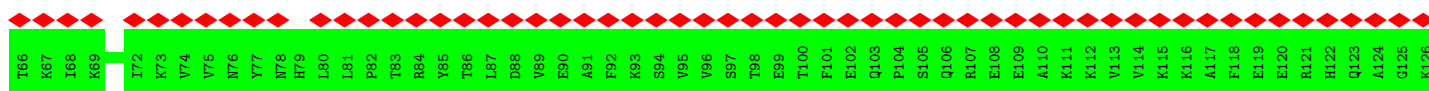
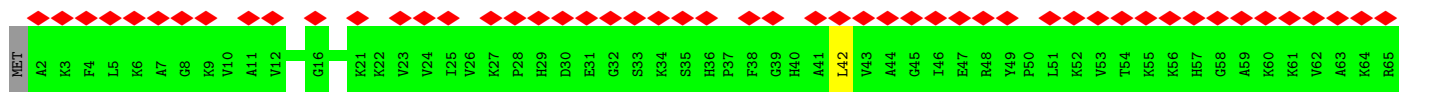
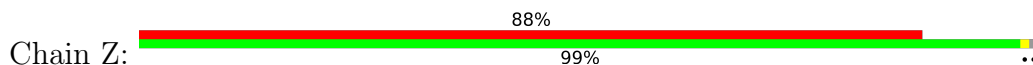
• Molecule 29: 60S ribosomal protein L25



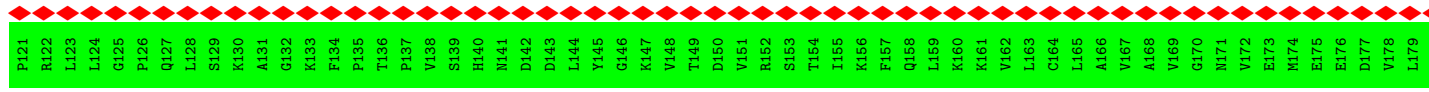
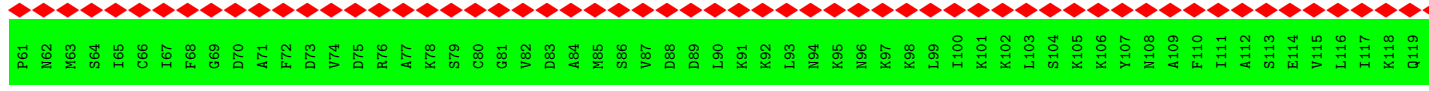
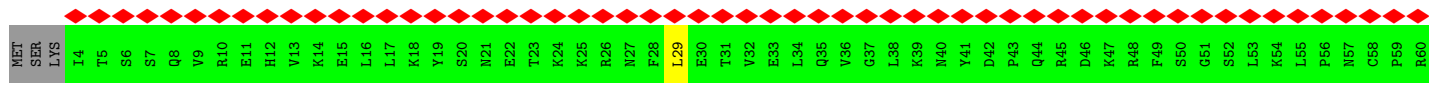
• Molecule 30: 60S ribosomal protein L26-A

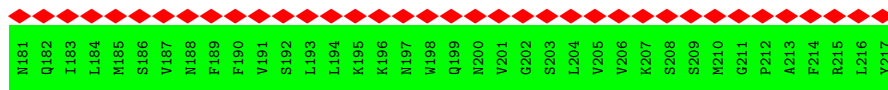


• Molecule 31: 60S ribosomal protein L27-A

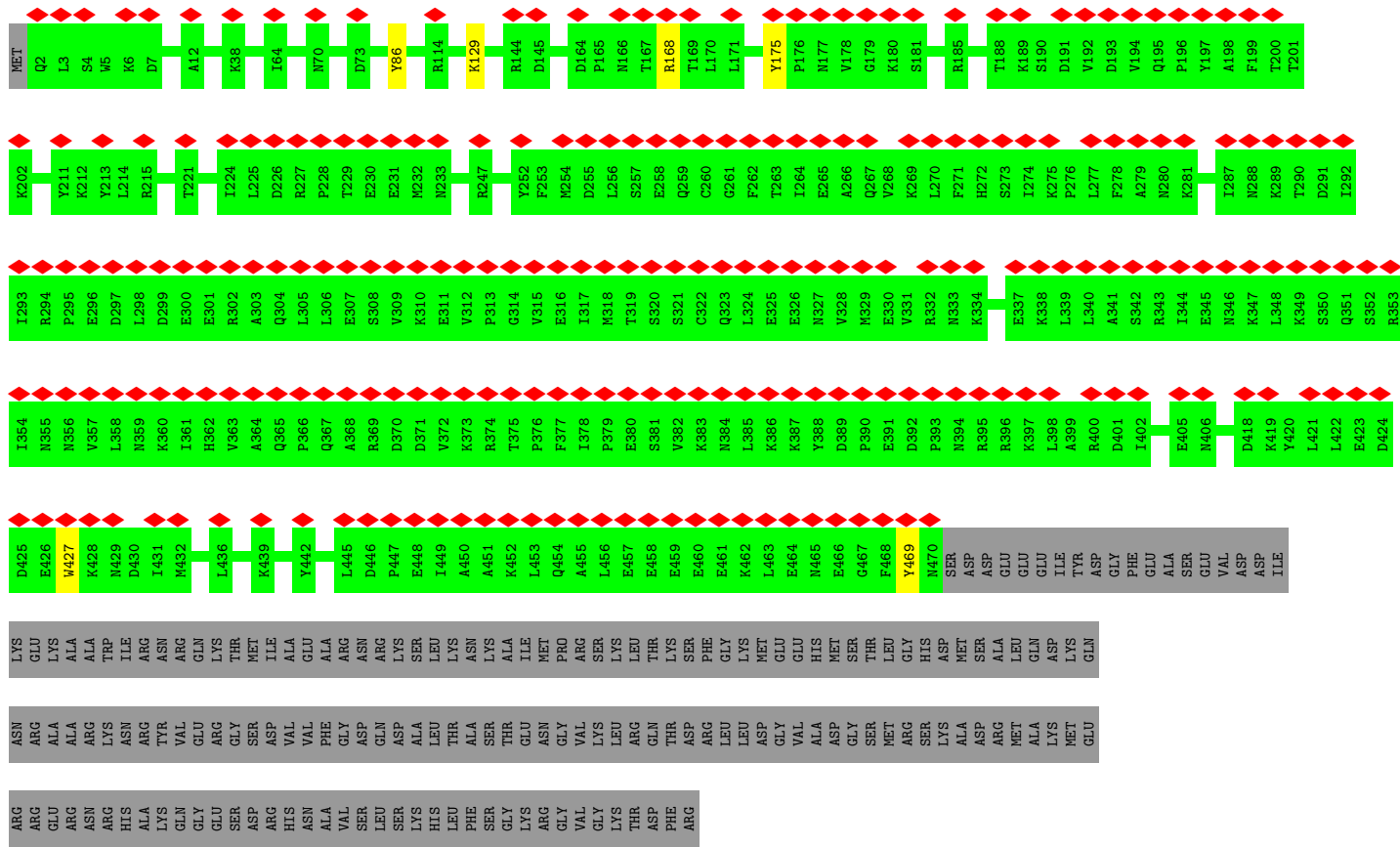


• Molecule 32: Large ribosomal subunit protein uL1A

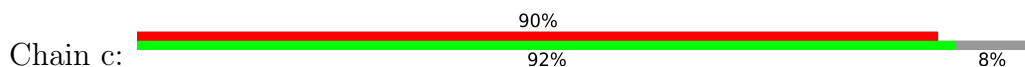




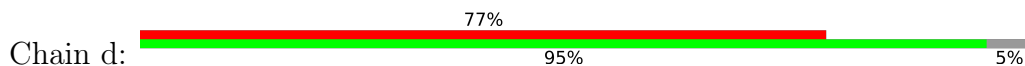
• Molecule 33: Nucleolar GTP-binding protein 1



• Molecule 34: 60S ribosomal protein L30

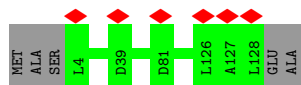


• Molecule 35: 60S ribosomal protein L31-A





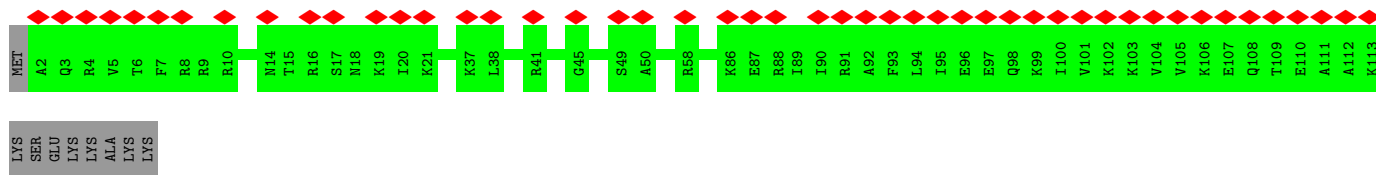
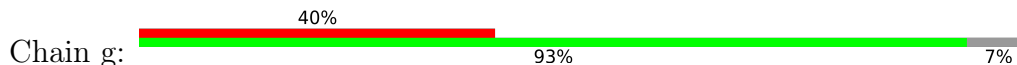
• Molecule 36: 60S ribosomal protein L32



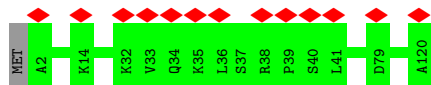
• Molecule 37: 60S ribosomal protein L33-A



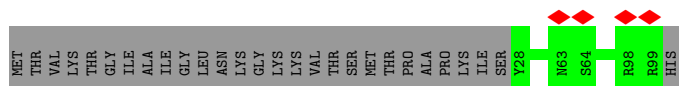
• Molecule 38: 60S ribosomal protein L34-A



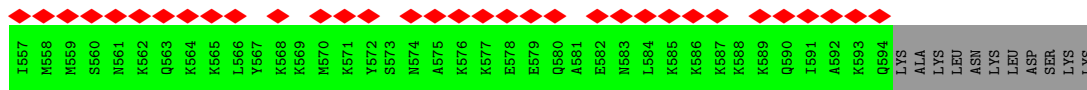
• Molecule 39: 60S ribosomal protein L35-A



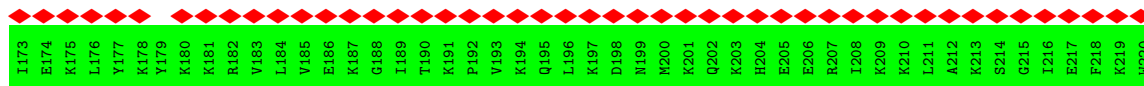
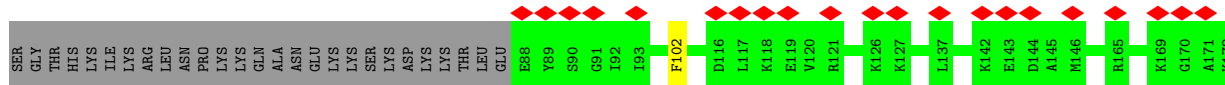
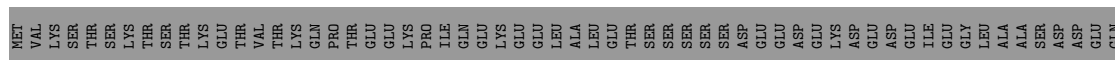
• Molecule 40: 60S ribosomal protein L36-A



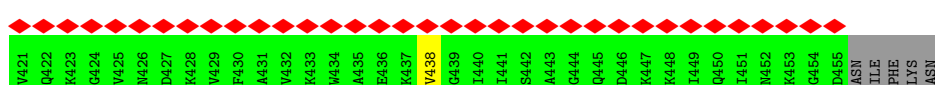
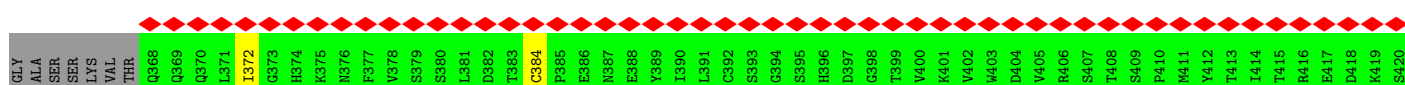
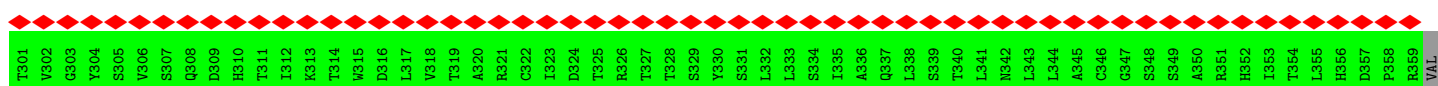
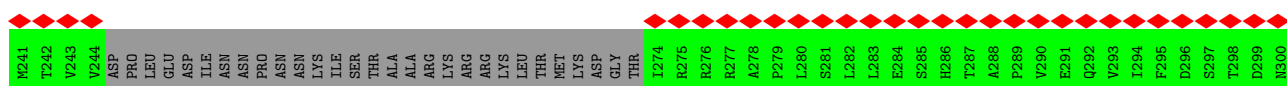
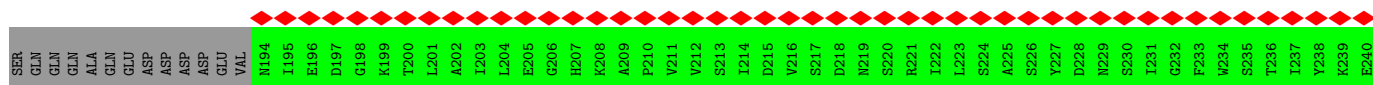
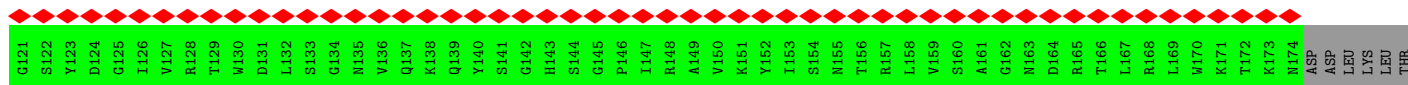
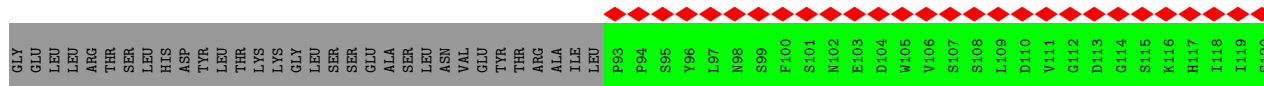
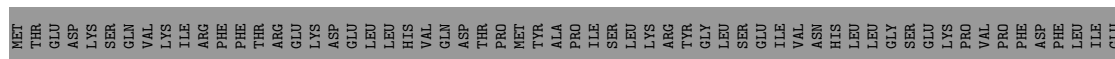
• Molecule 41: 60S ribosomal protein L37-A



• Molecule 46: Ribosome biogenesis protein 15

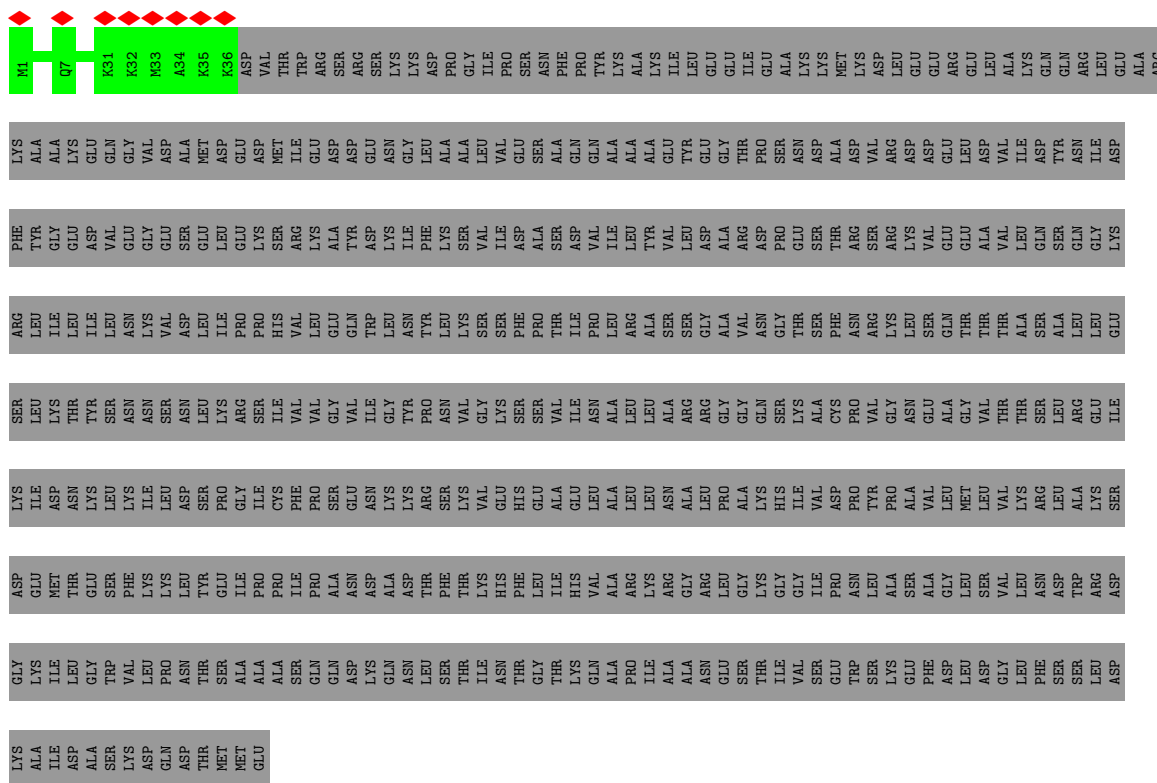


• Molecule 47: YTM1 isoform 1

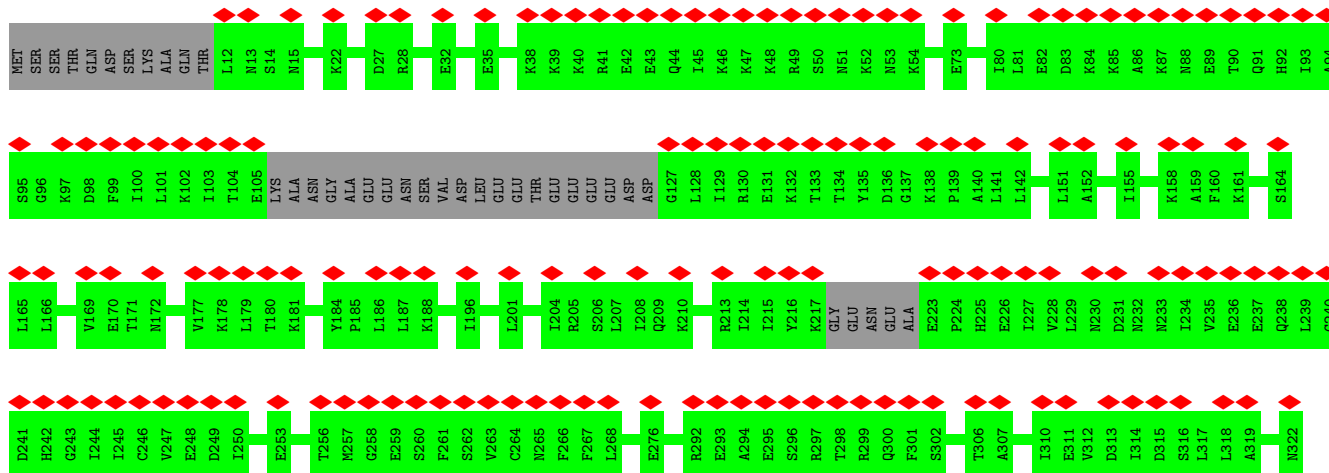
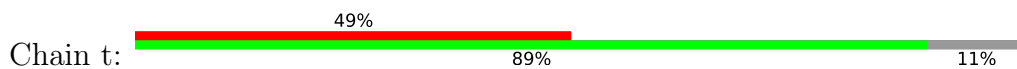


• Molecule 48: 25S rRNA (cytosine(2870)-C(5))-methyltransferase

● Molecule 50: Nuclear GTP-binding protein NUG1

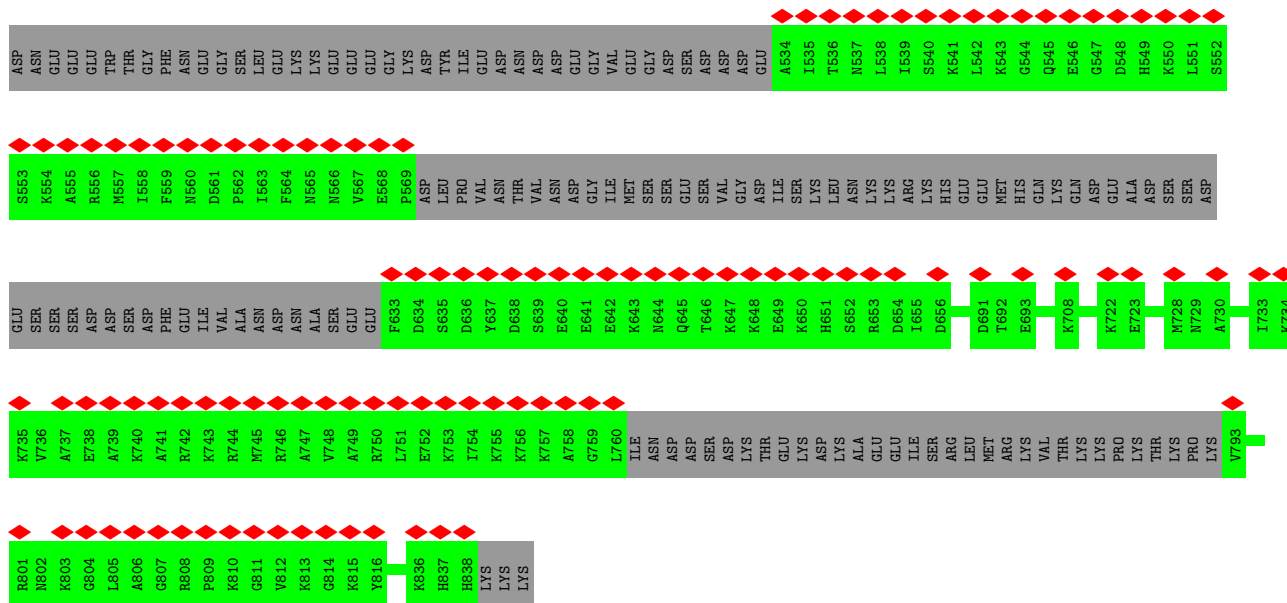


● Molecule 51: Ribosome biogenesis protein RLP7

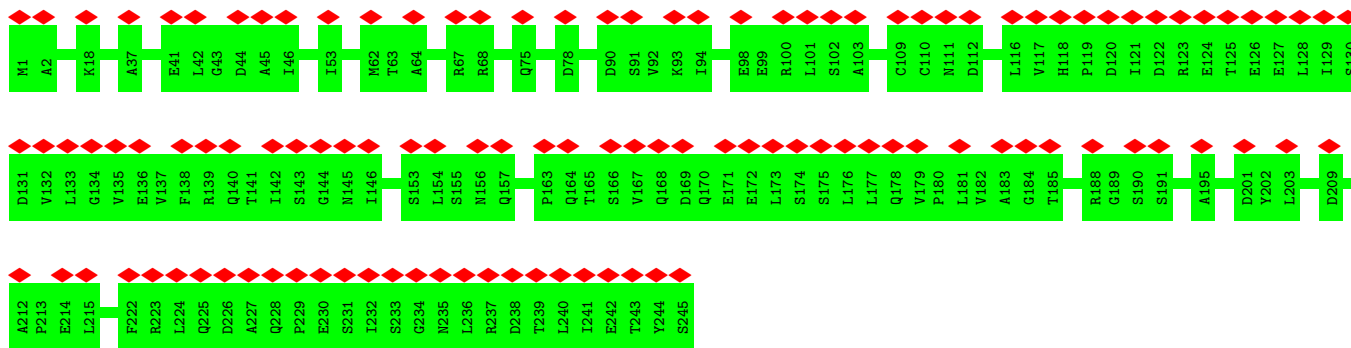


● Molecule 52: Ribosome biogenesis protein RLP24

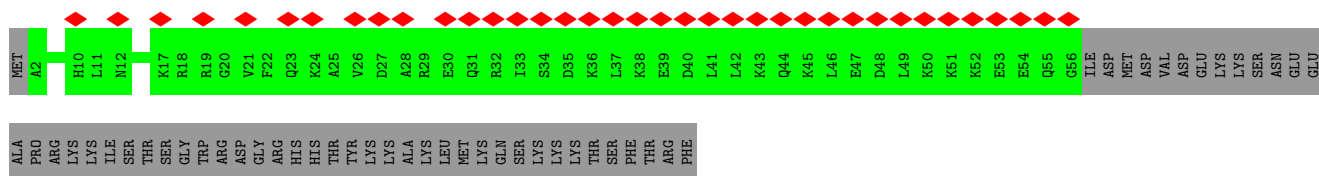




● Molecule 55: Eukaryotic translation initiation factor 6



● Molecule 56: UPF0642 protein YBL028C



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	19700	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 ($e^-/\text{\AA}^2$)	39.3	Depositor
Minimum defocus (nm)	900	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.348	Depositor
Minimum map value	-0.191	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.04	Depositor
Map size (\AA)	388.80002, 388.80002, 388.80002	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.08, 1.08, 1.08	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: MG, K, ZN, GDP, ADP

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	1	0.21	0/59643	0.76	2/92963 (0.0%)
2	2	0.23	0/3676	0.77	0/5721
3	3	0.24	0/5348	0.47	0/7191
4	6	0.18	0/2050	0.75	0/3186
5	7	0.23	0/1102	0.50	0/1468
6	8	0.24	0/3937	0.44	0/5301
7	A	0.25	0/2078	0.47	0/2803
8	B	0.25	0/2724	0.51	0/3659
9	C	0.24	0/2776	0.49	0/3758
10	D	0.24	0/3516	0.46	0/4741
11	E	0.25	0/1260	0.48	0/1694
12	F	0.25	0/1772	0.48	0/2384
13	G	0.24	0/1575	0.45	0/2125
14	H	0.25	0/1523	0.50	0/2051
15	I	0.24	0/4262	0.44	0/5740
16	J	0.24	0/1232	0.45	0/1642
17	K	0.24	0/2284	0.44	0/3082
18	L	0.24	0/1009	0.55	0/1355
19	M	0.24	0/1068	0.49	0/1438
20	N	0.24	0/1654	0.57	0/2212
21	O	0.25	0/1585	0.49	0/2128
22	P	0.24	0/1311	0.52	0/1760
23	Q	0.25	0/987	0.50	0/1335
24	R	0.23	0/1095	0.48	0/1465
25	S	0.24	0/1468	0.50	0/1973
26	U	0.25	0/825	0.45	0/1120
27	V	0.26	0/953	0.51	0/1282
28	W	0.24	0/1902	0.48	0/2564
29	X	0.24	0/1083	0.46	0/1458
30	Y	0.24	0/1004	0.52	0/1341
31	Z	0.24	0/1118	0.45	0/1497
32	a	0.24	0/1722	0.46	0/2313

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	b	0.24	0/3877	0.46	0/5232
34	c	0.24	0/751	0.42	0/1008
35	d	0.24	0/887	0.52	0/1191
36	e	0.23	0/1030	0.50	0/1379
37	f	0.26	0/868	0.53	0/1168
38	g	0.24	0/891	0.53	0/1191
39	h	0.24	0/978	0.49	0/1301
40	i	0.25	0/582	0.54	0/770
41	j	0.25	0/592	0.58	0/785
42	k	0.24	0/618	0.50	0/826
43	l	0.24	0/1425	0.48	0/1922
44	m	0.24	0/5511	0.47	0/7471
45	n	0.25	0/3544	0.45	0/4766
46	o	0.24	0/1129	0.47	0/1502
47	p	0.24	0/2434	0.49	0/3299
48	q	0.24	0/2958	0.47	0/4000
49	r	0.24	0/1765	0.48	0/2353
50	s	0.24	0/301	0.55	0/386
51	t	0.24	0/2319	0.49	0/3108
52	u	0.25	0/979	0.53	0/1302
53	v	0.23	0/1100	0.49	0/1456
54	w	0.24	0/2265	0.46	0/3009
55	y	0.23	0/1878	0.51	0/2556
56	z	0.23	0/445	0.45	0/585
All	All	0.23	0/158669	0.62	2/227316 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	406	G	O4'-C1'-N9	7.31	114.05	108.20
1	1	1904	C	C2-N1-C1'	5.05	124.36	118.80

There are no chirality outliers.

There are no planarity outliers.

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

5.3.1 Protein backbone

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	
3	3	644/995 (65%)	632 (98%)	12 (2%)	0	100	100
5	7	130/204 (64%)	129 (99%)	1 (1%)	0	100	100
6	8	469/710 (66%)	466 (99%)	3 (1%)	0	100	100
7	A	246/291 (84%)	245 (100%)	1 (0%)	0	100	100
8	B	332/387 (86%)	325 (98%)	7 (2%)	0	100	100
9	C	356/362 (98%)	350 (98%)	6 (2%)	0	100	100
10	D	426/505 (84%)	419 (98%)	7 (2%)	0	100	100
11	E	152/176 (86%)	147 (97%)	5 (3%)	0	100	100
12	F	213/244 (87%)	210 (99%)	3 (1%)	0	100	100
13	G	194/256 (76%)	193 (100%)	1 (0%)	0	100	100
14	H	187/191 (98%)	182 (97%)	5 (3%)	0	100	100
15	I	522/663 (79%)	515 (99%)	7 (1%)	0	100	100
16	J	143/427 (34%)	143 (100%)	0	0	100	100
17	K	274/376 (73%)	270 (98%)	4 (2%)	0	100	100
18	L	119/199 (60%)	116 (98%)	3 (2%)	0	100	100
19	M	134/138 (97%)	131 (98%)	3 (2%)	0	100	100
20	N	185/204 (91%)	183 (99%)	2 (1%)	0	100	100
21	O	195/199 (98%)	194 (100%)	1 (0%)	0	100	100
22	P	158/184 (86%)	153 (97%)	5 (3%)	0	100	100
23	Q	125/186 (67%)	125 (100%)	0	0	100	100
24	R	130/189 (69%)	126 (97%)	4 (3%)	0	100	100
25	S	168/172 (98%)	163 (97%)	5 (3%)	0	100	100
26	U	100/121 (83%)	97 (97%)	3 (3%)	0	100	100
27	V	123/137 (90%)	123 (100%)	0	0	100	100
28	W	230/236 (98%)	225 (98%)	5 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	X	135/142 (95%)	133 (98%)	2 (2%)	0	100	100
30	Y	124/127 (98%)	120 (97%)	4 (3%)	0	100	100
31	Z	133/136 (98%)	132 (99%)	1 (1%)	0	100	100
32	a	212/217 (98%)	207 (98%)	5 (2%)	0	100	100
33	b	467/647 (72%)	458 (98%)	9 (2%)	0	100	100
34	c	95/105 (90%)	95 (100%)	0	0	100	100
35	d	105/113 (93%)	104 (99%)	1 (1%)	0	100	100
36	e	123/130 (95%)	119 (97%)	4 (3%)	0	100	100
37	f	104/107 (97%)	101 (97%)	3 (3%)	0	100	100
38	g	110/121 (91%)	108 (98%)	2 (2%)	0	100	100
39	h	117/120 (98%)	113 (97%)	4 (3%)	0	100	100
40	i	70/100 (70%)	68 (97%)	2 (3%)	0	100	100
41	j	71/88 (81%)	70 (99%)	1 (1%)	0	100	100
42	k	75/78 (96%)	74 (99%)	1 (1%)	0	100	100
43	l	174/181 (96%)	169 (97%)	5 (3%)	0	100	100
44	m	658/807 (82%)	636 (97%)	22 (3%)	0	100	100
45	n	417/605 (69%)	409 (98%)	8 (2%)	0	100	100
46	o	131/220 (60%)	128 (98%)	3 (2%)	0	100	100
47	p	299/460 (65%)	291 (97%)	8 (3%)	0	100	100
48	q	367/618 (59%)	358 (98%)	9 (2%)	0	100	100
49	r	206/261 (79%)	205 (100%)	1 (0%)	0	100	100
50	s	34/520 (6%)	34 (100%)	0	0	100	100
51	t	279/322 (87%)	275 (99%)	4 (1%)	0	100	100
52	u	112/199 (56%)	112 (100%)	0	0	100	100
53	v	124/231 (54%)	122 (98%)	2 (2%)	0	100	100
54	w	270/841 (32%)	266 (98%)	4 (2%)	0	100	100
55	y	243/245 (99%)	236 (97%)	7 (3%)	0	100	100
56	z	53/106 (50%)	52 (98%)	1 (2%)	0	100	100
All	All	11263/15599 (72%)	11057 (98%)	206 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	3	573/870 (66%)	572 (100%)	1 (0%)	93	97
5	7	119/181 (66%)	119 (100%)	0	100	100
6	8	435/647 (67%)	435 (100%)	0	100	100
7	A	227/263 (86%)	227 (100%)	0	100	100
8	B	282/323 (87%)	281 (100%)	1 (0%)	91	95
9	C	285/289 (99%)	285 (100%)	0	100	100
10	D	378/440 (86%)	378 (100%)	0	100	100
11	E	134/153 (88%)	133 (99%)	1 (1%)	84	91
12	F	182/205 (89%)	182 (100%)	0	100	100
13	G	161/208 (77%)	161 (100%)	0	100	100
14	H	169/171 (99%)	167 (99%)	2 (1%)	71	84
15	I	479/602 (80%)	478 (100%)	1 (0%)	93	97
16	J	133/383 (35%)	133 (100%)	0	100	100
17	K	258/346 (75%)	257 (100%)	1 (0%)	91	95
18	L	100/159 (63%)	100 (100%)	0	100	100
19	M	107/109 (98%)	107 (100%)	0	100	100
20	N	165/176 (94%)	165 (100%)	0	100	100
21	O	160/162 (99%)	159 (99%)	1 (1%)	86	92
22	P	132/146 (90%)	131 (99%)	1 (1%)	81	89
23	Q	103/151 (68%)	103 (100%)	0	100	100
24	R	112/154 (73%)	112 (100%)	0	100	100
25	S	155/156 (99%)	154 (99%)	1 (1%)	86	92
26	U	89/107 (83%)	89 (100%)	0	100	100
27	V	97/105 (92%)	97 (100%)	0	100	100
28	W	209/213 (98%)	209 (100%)	0	100	100
29	X	114/118 (97%)	113 (99%)	1 (1%)	78	87

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	Y	109/110 (99%)	107 (98%)	2 (2%)	59	75
31	Z	115/116 (99%)	114 (99%)	1 (1%)	78	87
32	a	195/198 (98%)	194 (100%)	1 (0%)	88	94
33	b	423/573 (74%)	417 (99%)	6 (1%)	67	81
34	c	81/88 (92%)	81 (100%)	0	100	100
35	d	94/97 (97%)	94 (100%)	0	100	100
36	e	108/111 (97%)	108 (100%)	0	100	100
37	f	90/91 (99%)	90 (100%)	0	100	100
38	g	95/103 (92%)	95 (100%)	0	100	100
39	h	104/105 (99%)	104 (100%)	0	100	100
40	i	59/82 (72%)	59 (100%)	0	100	100
41	j	60/71 (84%)	60 (100%)	0	100	100
42	k	68/69 (99%)	68 (100%)	0	100	100
43	l	151/156 (97%)	150 (99%)	1 (1%)	84	91
44	m	599/723 (83%)	593 (99%)	6 (1%)	76	86
45	n	381/548 (70%)	380 (100%)	1 (0%)	92	96
46	o	118/199 (59%)	117 (99%)	1 (1%)	81	89
47	p	273/413 (66%)	270 (99%)	3 (1%)	73	85
48	q	316/535 (59%)	313 (99%)	3 (1%)	78	87
49	r	190/229 (83%)	190 (100%)	0	100	100
50	s	32/445 (7%)	32 (100%)	0	100	100
51	t	256/287 (89%)	256 (100%)	0	100	100
52	u	99/180 (55%)	99 (100%)	0	100	100
53	v	116/205 (57%)	115 (99%)	1 (1%)	78	87
54	w	237/745 (32%)	237 (100%)	0	100	100
55	y	211/211 (100%)	211 (100%)	0	100	100
56	z	48/95 (50%)	48 (100%)	0	100	100
All	All	9986/13622 (73%)	9949 (100%)	37 (0%)	91	95

5 of 37 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
45	n	131	ASP

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Mol	Chain	Res	Type
48	q	362	TYR
46	o	102	PHE
47	p	438	VAL
30	Y	115	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
14	H	5	GLN
14	H	9	GLN
14	H	59	ASN
17	K	269	GLN
48	q	391	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	2469/3396 (72%)	407 (16%)	3 (0%)
2	2	153/158 (96%)	22 (14%)	0
4	6	85/232 (36%)	19 (22%)	0
All	All	2707/3786 (71%)	448 (16%)	3 (0%)

5 of 448 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	5	G
1	1	7	C
1	1	14	U
1	1	26	A
1	1	40	A

All (3) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	1	116	A
1	1	263	C
1	1	3121	U

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 7 ligands modelled in this entry, 5 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
57	ADP	3	1000	-	24,29,29	0.96	1 (4%)	29,45,45	1.45	4 (13%)
59	GDP	b	701	60,58	24,30,30	0.95	1 (4%)	30,47,47	1.30	4 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	ADP	3	1000	-	-	1/12/32/32	0/3/3/3
59	GDP	b	701	60,58	-	0/12/32/32	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	3	1000	ADP	C5-C4	2.51	1.47	1.40
59	b	701	GDP	C6-N1	-2.39	1.34	1.37

The worst 5 of 8 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	3	1000	ADP	PA-O3A-PB	-3.53	120.72	132.83
59	b	701	GDP	PA-O3A-PB	-3.51	120.80	132.83
57	3	1000	ADP	C3'-C2'-C1'	3.22	105.82	100.98
57	3	1000	ADP	N3-C2-N1	-3.14	123.78	128.68
59	b	701	GDP	C3'-C2'-C1'	3.05	105.57	100.98

There are no chirality outliers.

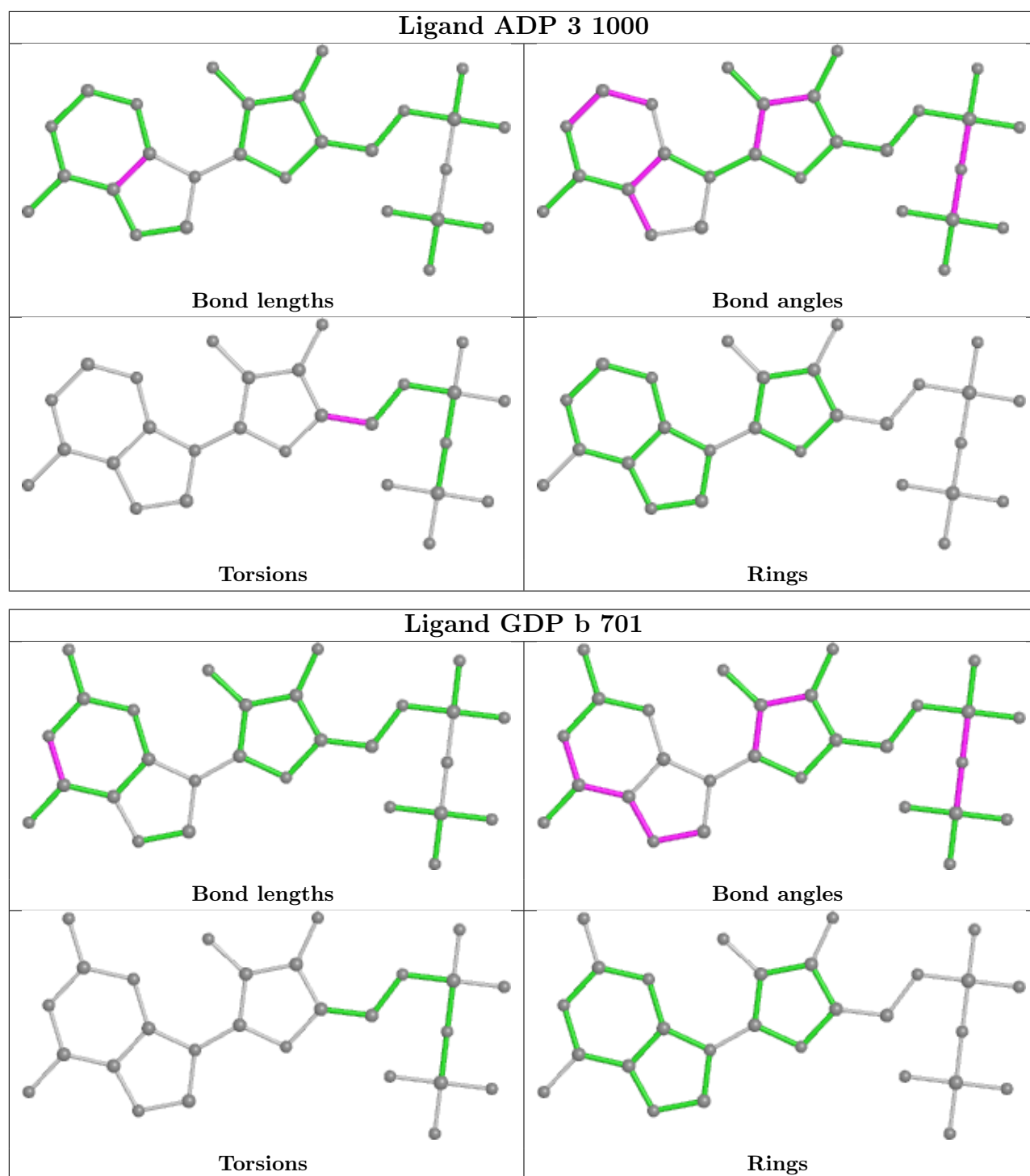
All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
57	3	1000	ADP	C3'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

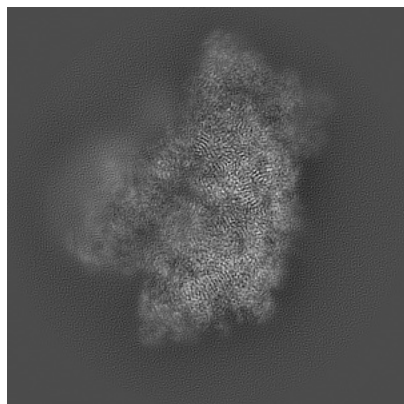
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-43027. These allow visual inspection of the internal detail of the map and identification of artifacts.

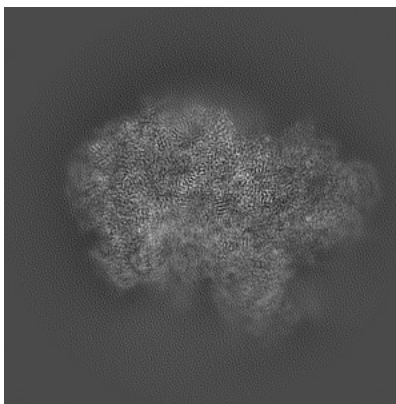
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

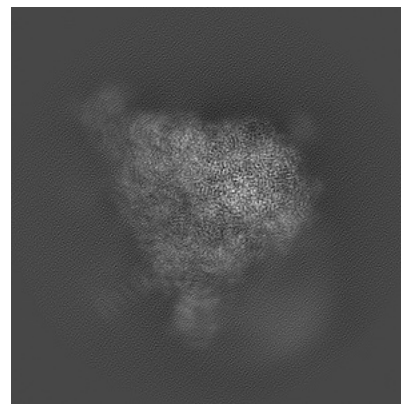
6.1.1 Primary map



X

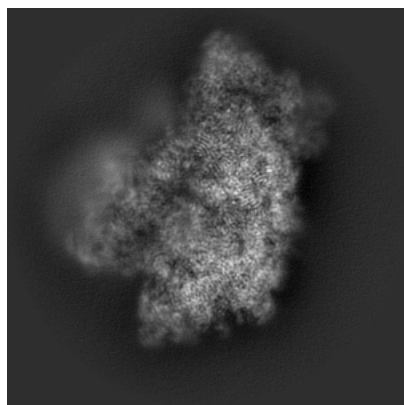


Y

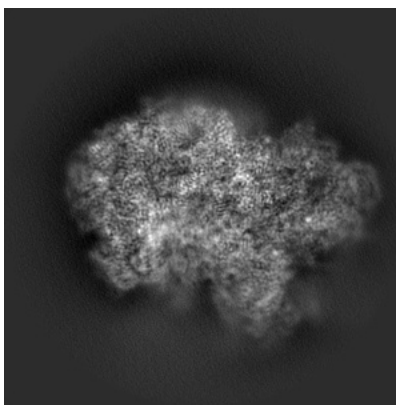


Z

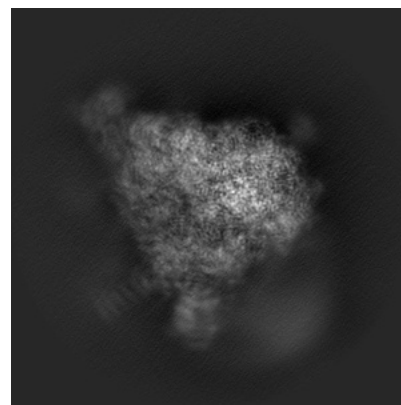
6.1.2 Raw map



X



Y

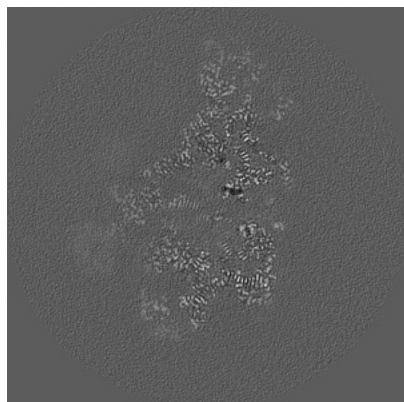


Z

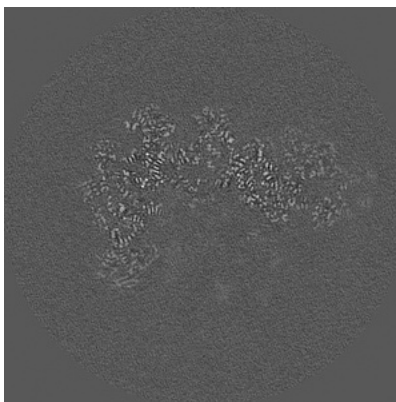
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

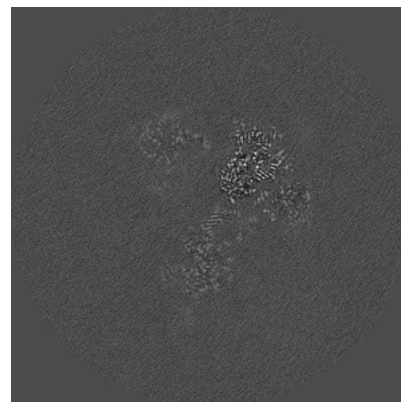
6.2.1 Primary map



X Index: 180

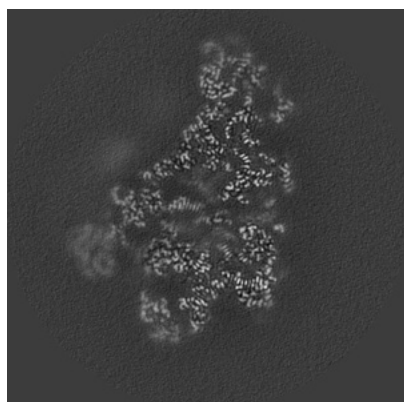


Y Index: 180

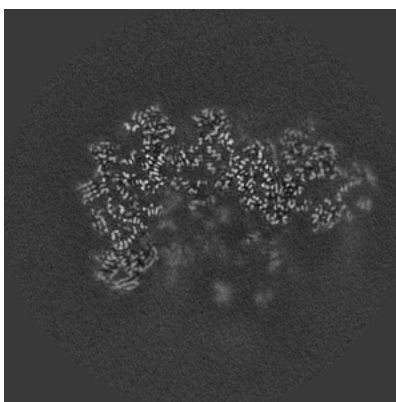


Z Index: 180

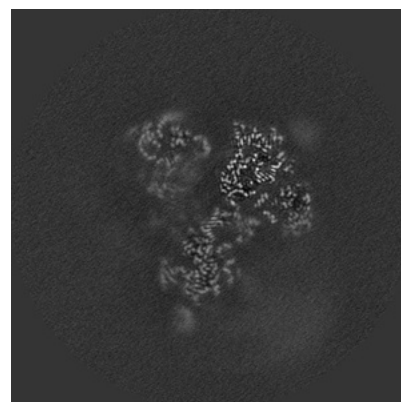
6.2.2 Raw map



X Index: 180



Y Index: 180

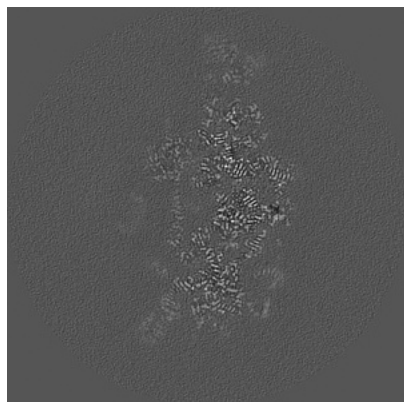


Z Index: 180

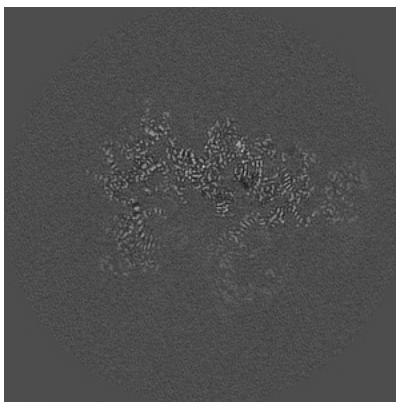
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

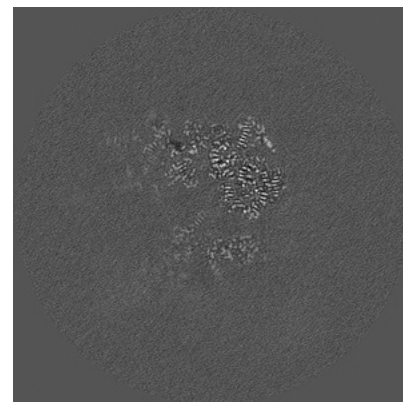
6.3.1 Primary map



X Index: 206

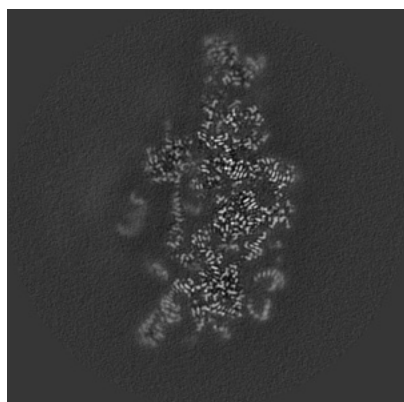


Y Index: 203

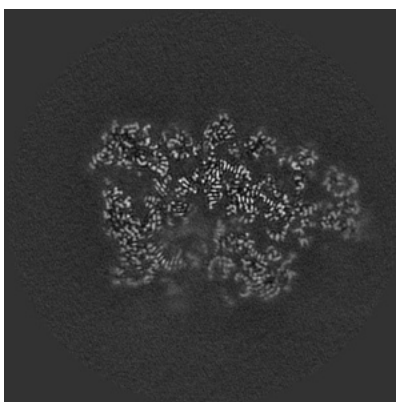


Z Index: 212

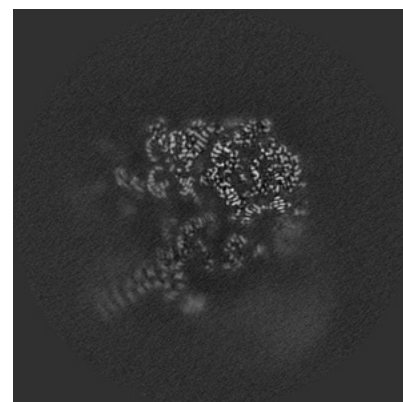
6.3.2 Raw map



X Index: 206



Y Index: 216

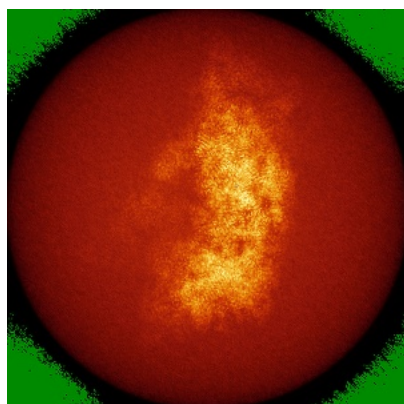


Z Index: 204

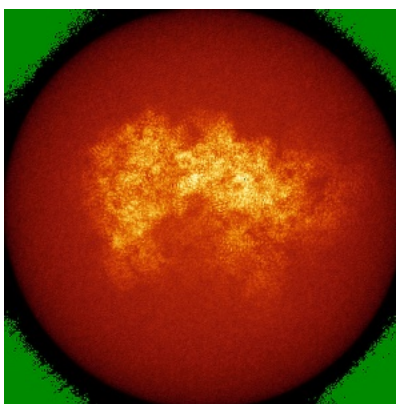
The images above show the largest variance slices of the map in three orthogonal directions.

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

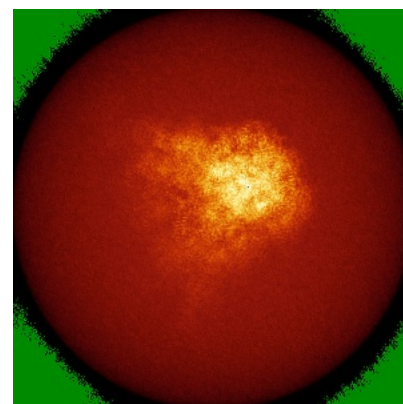
6.4.1 Primary map



X

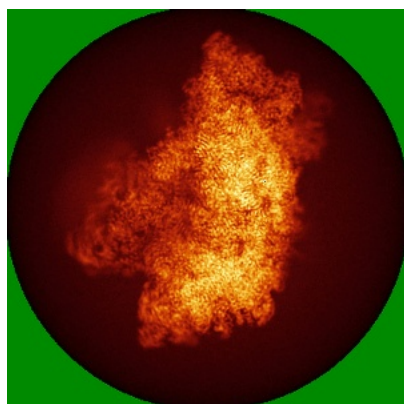


Y

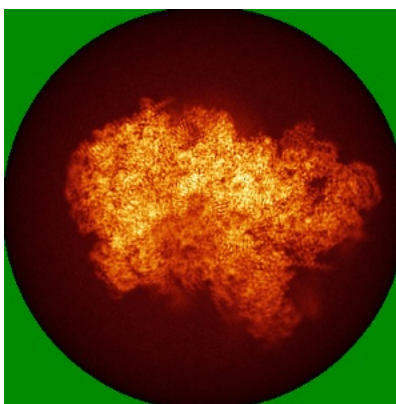


Z

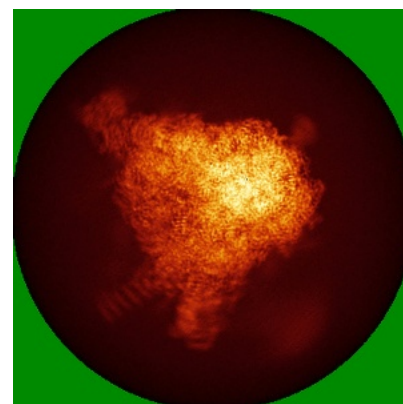
6.4.2 Raw map



X



Y

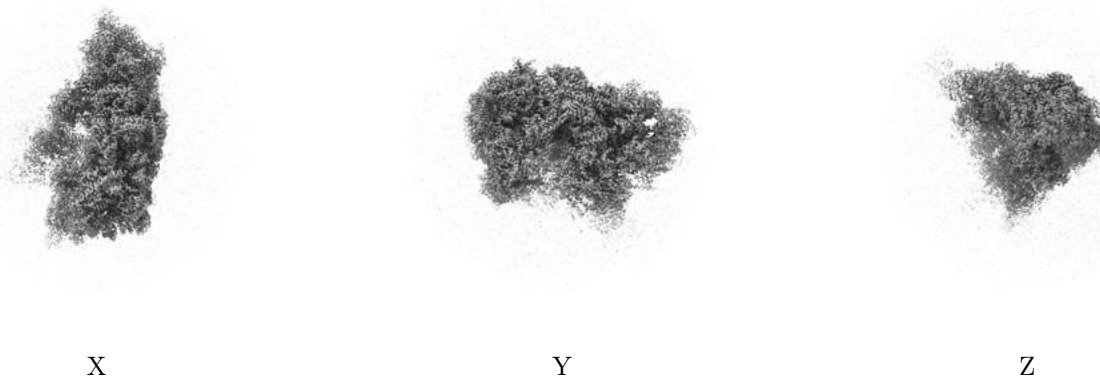


Z

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 0.04. 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.

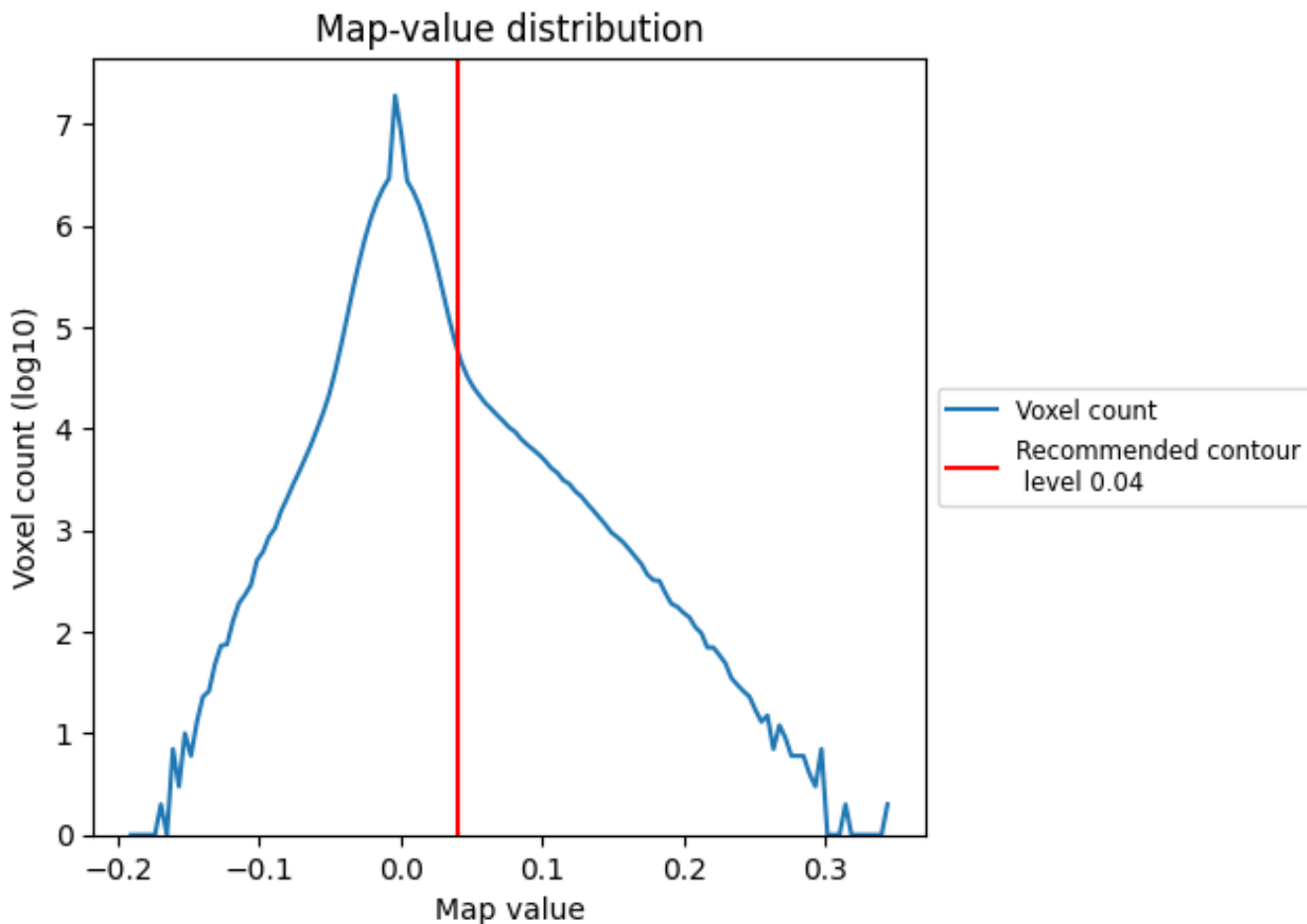
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

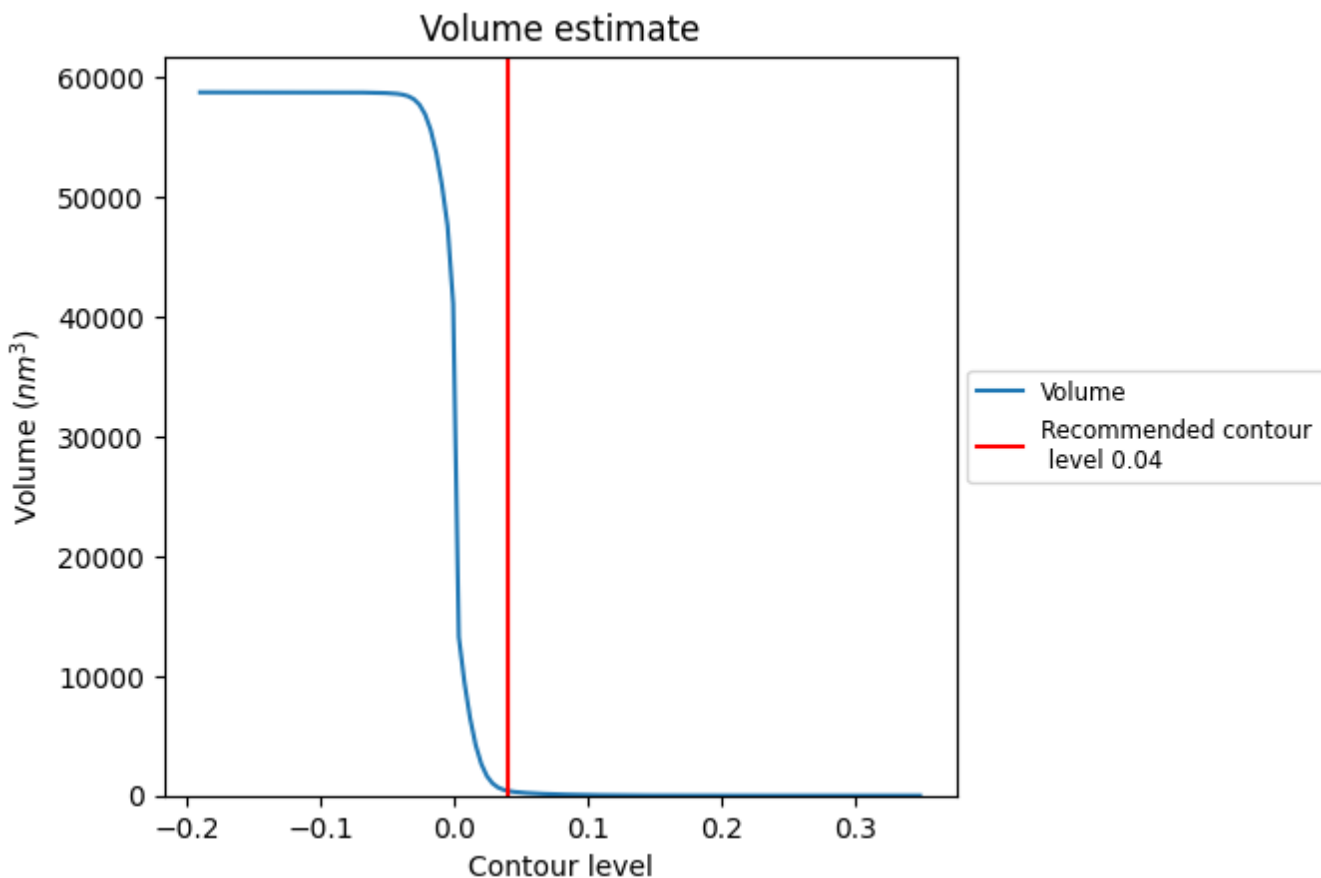
This section contains the results of statistical analysis of the map.

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.

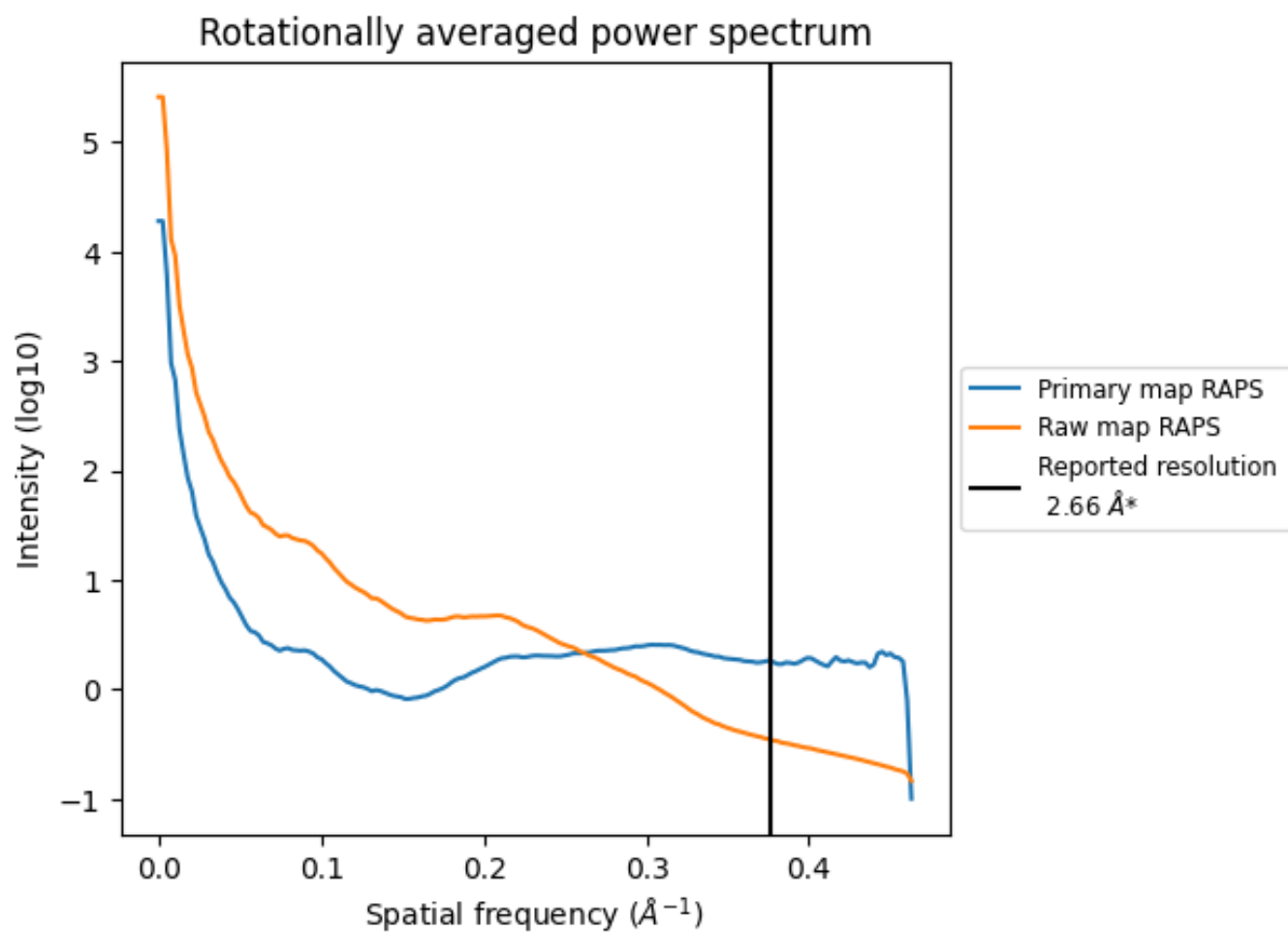
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 395 nm³; this corresponds to an approximate mass of 357 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

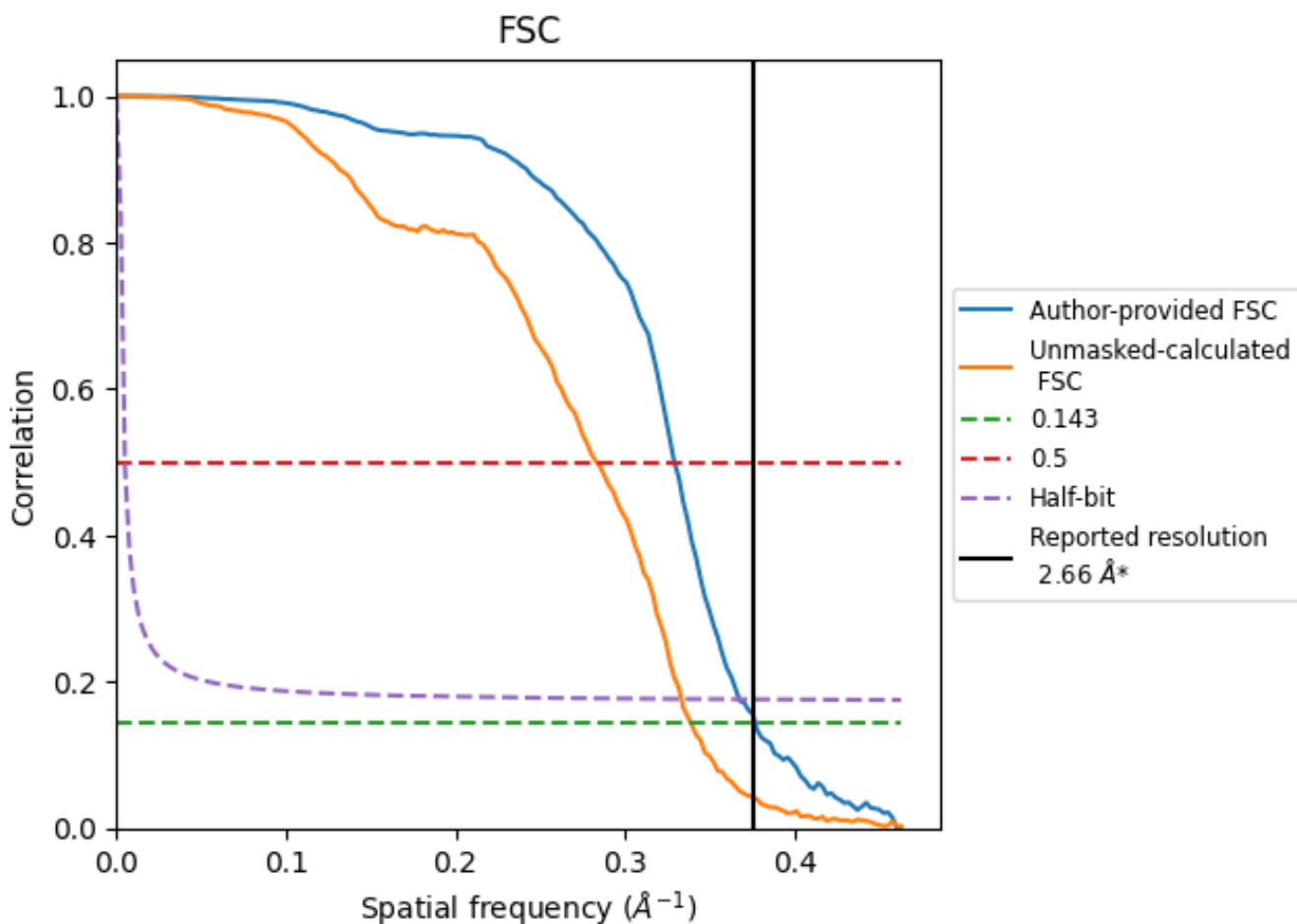


*Reported resolution corresponds to spatial frequency of 0.376 \AA^{-1}

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.376 Å⁻¹

8.2 Resolution estimates [i](#)

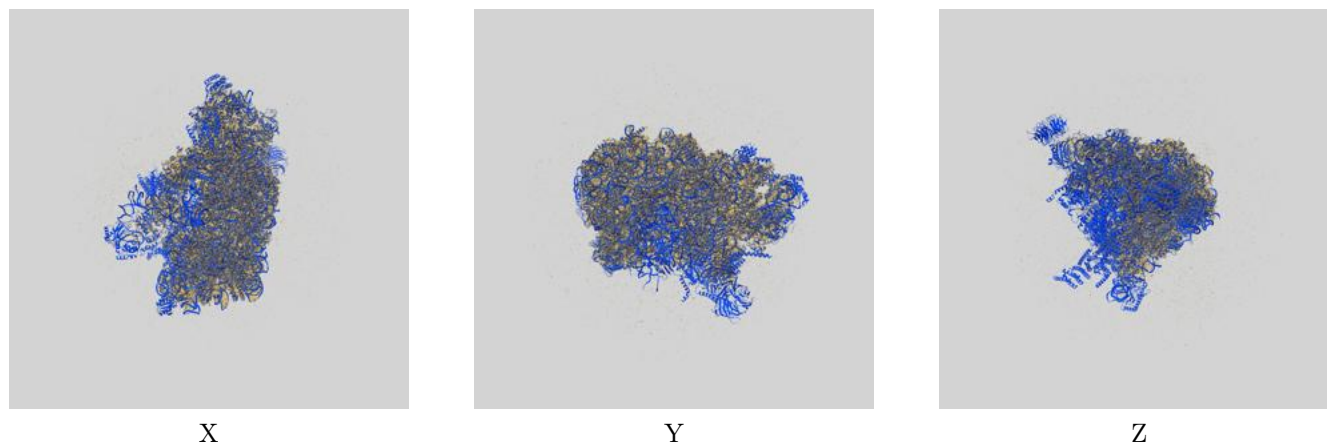
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.66	-	-
Author-provided FSC curve	2.65	3.04	2.72
Unmasked-calculated*	2.95	3.53	3.00

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.95 differs from the reported value 2.66 by more than 10 %

9 Map-model fit [i](#)

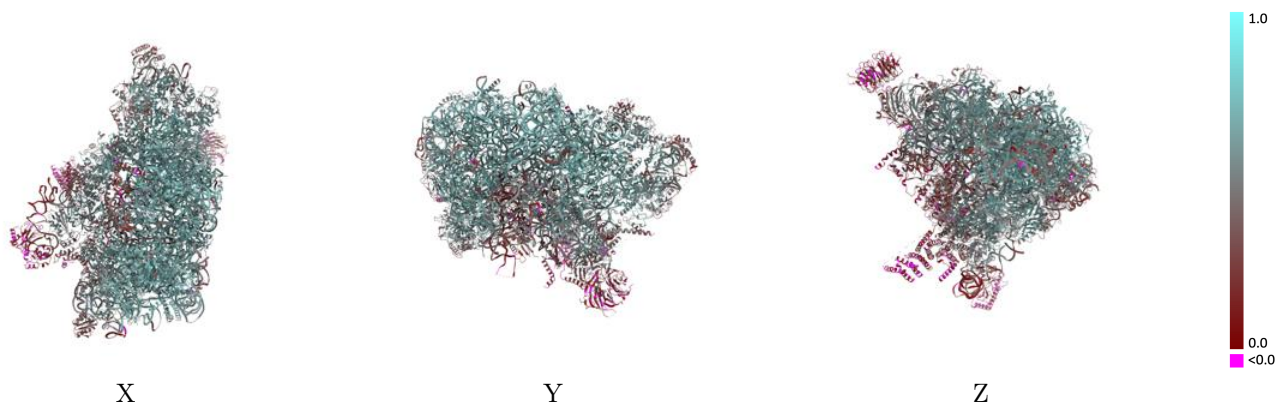
This section contains information regarding the fit between EMDB map EMD-43027 and PDB model 8V87. Per-residue inclusion information can be found in section 3 on page 15.

9.1 Map-model overlay [i](#)



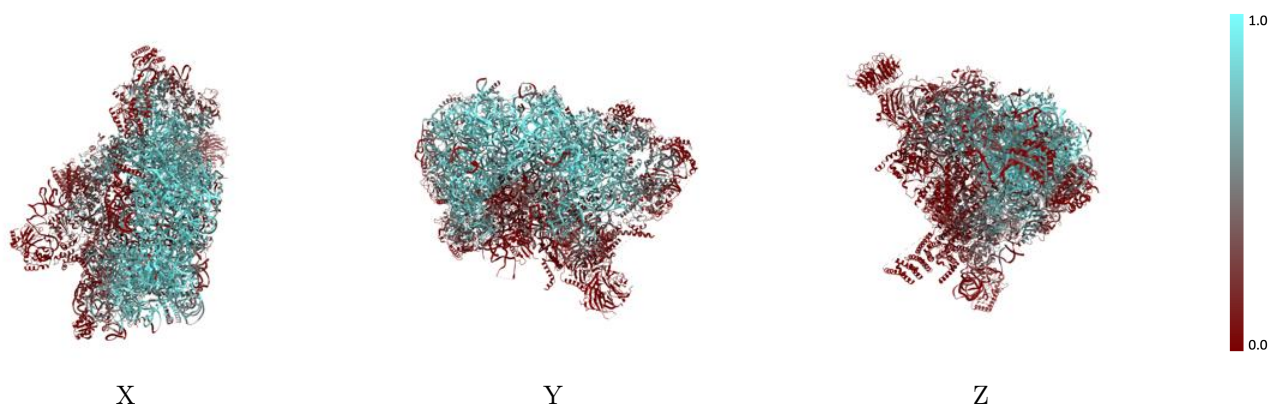
The images above show the 3D surface view of the map at the recommended contour level 0.04 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



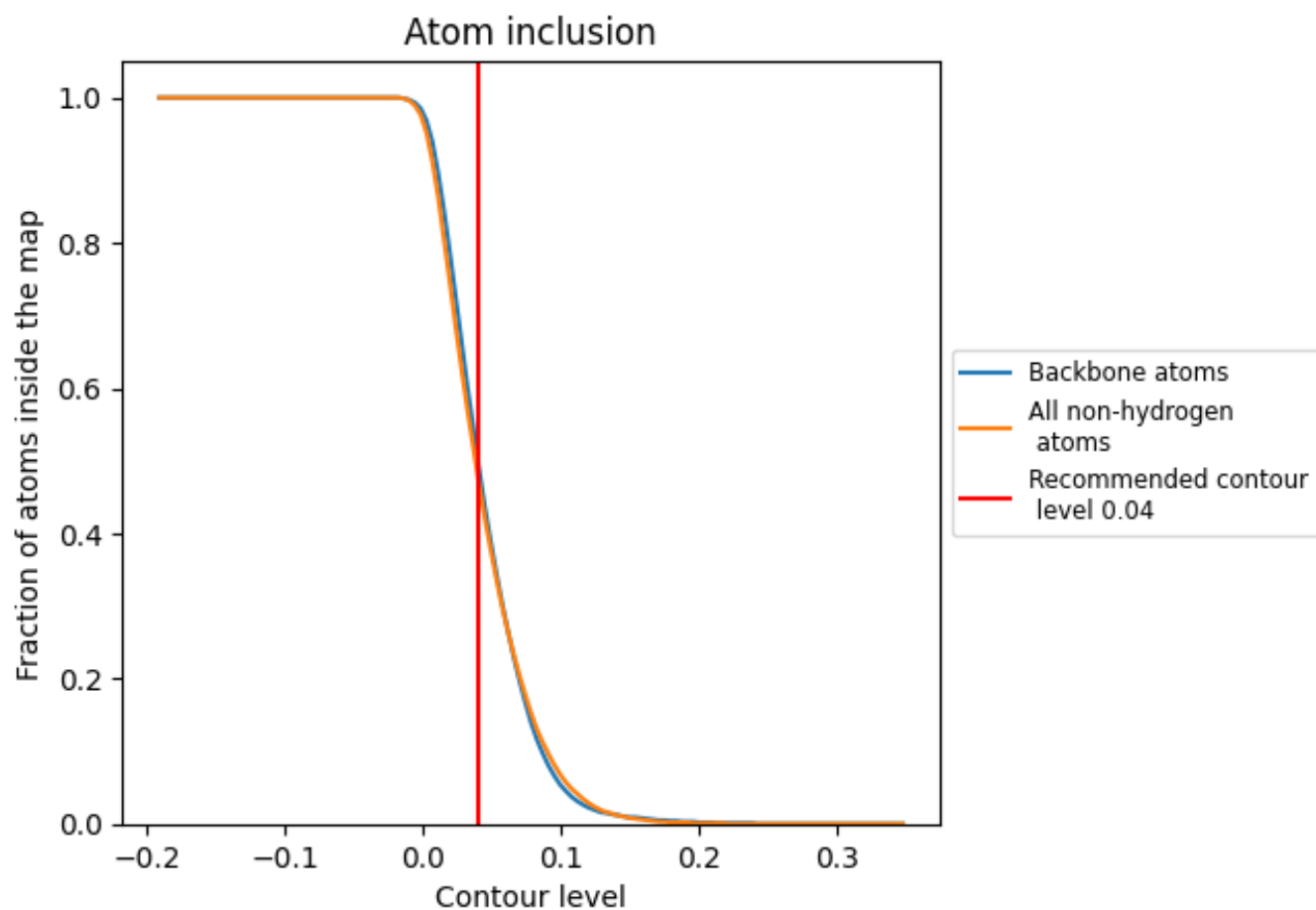
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.04).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 50% of all backbone atoms, 48% 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 (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.4800	 0.5190
1	 0.6010	 0.5470
2	 0.8620	 0.6460
3	 0.0410	 0.3290
6	 0.3890	 0.5130
7	 0.3320	 0.4960
8	 0.0040	 0.1930
A	 0.4790	 0.5330
B	 0.7530	 0.6430
C	 0.7980	 0.6590
D	 0.2690	 0.4800
E	 0.6360	 0.6090
F	 0.7420	 0.6340
G	 0.7620	 0.6460
H	 0.6480	 0.6170
I	 0.1320	 0.4130
J	 0.3270	 0.4980
K	 0.2240	 0.4770
L	 0.7810	 0.6500
M	 0.7030	 0.6330
N	 0.9010	 0.6930
O	 0.8320	 0.6650
P	 0.7140	 0.6320
Q	 0.7030	 0.6270
R	 0.1710	 0.4040
S	 0.5580	 0.5790
U	 0.0470	 0.3510
V	 0.3910	 0.5580
W	 0.0940	 0.3840
X	 0.6470	 0.6070
Y	 0.7840	 0.6500
Z	 0.1770	 0.4600
a	 0.0010	 0.1180
b	 0.3920	 0.5160
c	 0.0290	 0.3270



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Chain	Atom inclusion	Q-score
d	 0.2670	 0.4980
e	 0.8200	 0.6660
f	 0.8960	 0.6940
g	 0.4230	 0.5410
h	 0.7430	 0.6430
i	 0.7080	 0.6380
j	 0.8850	 0.6940
k	 0.2440	 0.4690
l	 0.4130	 0.5590
m	 0.3060	 0.4860
n	 0.4800	 0.5660
o	 0.4040	 0.5080
p	 0.0030	 0.1780
q	 0.2190	 0.4680
r	 0.4000	 0.5310
s	 0.5920	 0.6200
t	 0.3810	 0.5380
u	 0.4050	 0.5380
v	 0.6860	 0.6080
w	 0.3340	 0.4460
y	 0.4060	 0.5270
z	 0.2930	 0.5090