wwPDB EM Validation Summary Report

Jun 8, 2026 – 05:45 PM EDT

PDB ID	:	9Q2O / pdb_00009q2o
EMDB ID	:	EMD-72170
Title	:	NediV IRES in complex with Rabbit 80S ribosome with A site Ala-tRNA
Authors	:	De, S.; Altomare, C.G.; Abaeva, I.S.; Dadhwal, P.; Garg, P.; Acosta-Reyes, F.; Brown, Z.P.; Pestova, T.V.; Hellen, C.U.T.; Frank, J.
Deposited on	:	2025-08-15
Resolution	:	4.10 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:

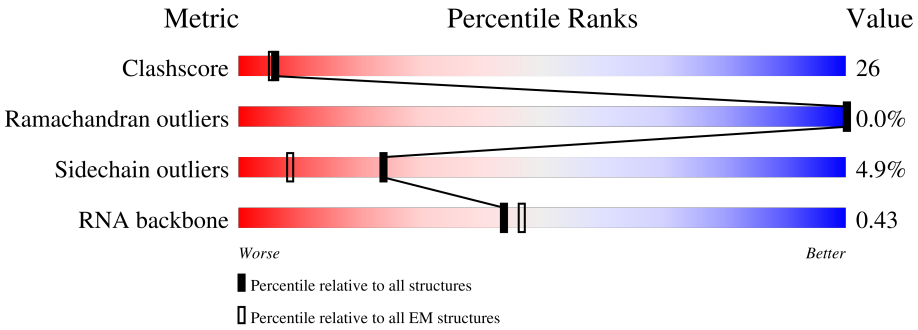
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

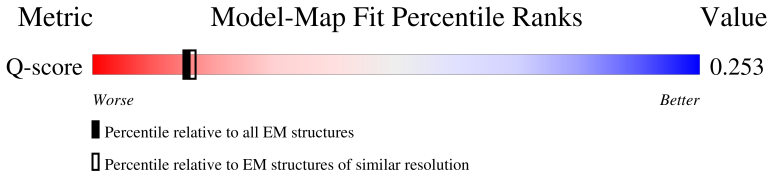
1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.10 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	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	6458 (3.60 - 4.60)

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

Mol	Chain	Length	Quality of chain
1	R	180	42% 55%
2	W	106	11% 56% 42%
3	9	1773	25% 57% 13%

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Mol	Chain	Length	Quality of chain
4	AA	217	42% 53%
5	BB	213	39% 59%
6	CC	221	43% 56%
7	EE	262	41% 57%
8	GG	237	43% 56%
9	HH	189	6% 47% 49%
10	II	206	47% 50%
11	JJ	185	37% 60%
12	LL	151	42% 50% 5%
13	NN	149	45% 53%
14	OO	136	35% 63%
15	VV	83	43% 53%
16	WW	129	40% 57%
17	XX	141	38% 56% 6%
18	YY	124	45% 52%
19	aa	101	46% 53%
20	bb	83	64% 35%
21	ee	57	11% 54% 46%
22	DD	228	45% 53%
23	FF	191	43% 52%
24	KK	96	46% 54%
25	MM	117	45% 51%
26	PP	129	8% 46% 53%
27	QQ	142	34% 64%
28	RR	132	8% 45% 53%

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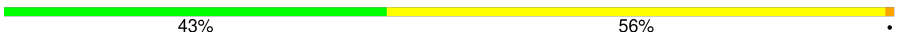
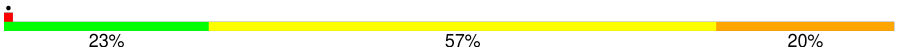
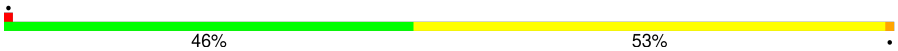
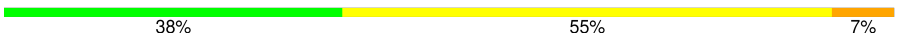
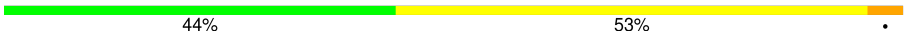
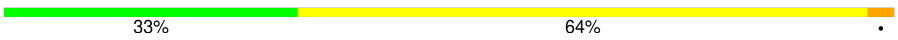
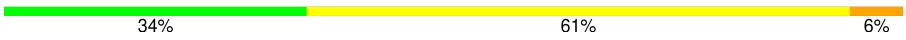
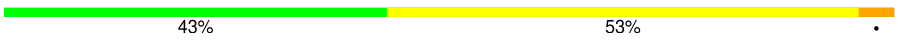
Mol	Chain	Length	Quality of chain
29	SS	144	
30	TT	141	
31	UU	100	
32	ZZ	75	
33	cc	62	
34	dd	55	
35	ff	68	
36	gg	313	
37	A	248	
38	B	394	
39	C	362	
40	D	293	
41	E	216	
42	F	225	
43	G	240	
44	H	190	
45	I	213	
46	J	170	
47	L	210	
48	M	138	
49	N	203	
50	O	199	
51	P	153	
52	Q	187	
53	S	176	

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Mol	Chain	Length	Quality of chain
54	T	159	42% 55%
55	U	99	39% 58%
56	V	139	42% 55%
57	X	118	42% 53%
58	Y	134	43% 55%
59	Z	135	48% 50%
60	a	147	44% 54%
61	b	104	47% 50%
62	c	98	37% 62%
63	d	107	45% 50% 5%
64	e	128	50% 45% 5%
65	f	109	45% 52%
66	g	114	48% 48%
67	h	122	34% 61% 6%
68	i	102	54% 43%
69	j	86	49% 48%
70	k	69	33% 65%
71	l	50	42% 56%
72	m	52	44% 54%
73	n	25	28% 64% 8%
74	o	104	44% 55%
75	p	91	41% 55%
76	r	124	46% 52%
77	s	87	7% 51% 39% 10%
78	t	133	30% 42% 51% 7%

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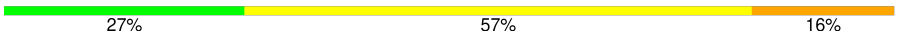
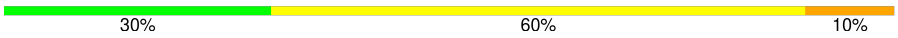
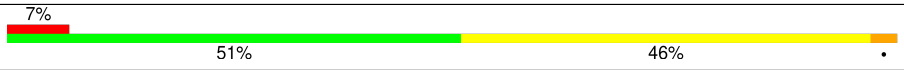
Mol	Chain	Length	Quality of chain
79	5	3543	
80	7	119	
81	8	156	
82	AT	76	
83	1	166	

2 Entry composition (i)

There are 85 unique types of molecules in this entry. The entry contains 219061 atoms, of which 2574 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 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	180	Total	C	N	O	S	0	0
			1508	933	328	238	9		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	38	ARG	HIS	conflict	UNP G1TYL6
R	151	ARG	HIS	conflict	UNP G1TYL6

- Molecule 2 is a protein called uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	W	106	Total	C	N	O	S	0	0
			860	538	174	144	4		

- Molecule 3 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	9	1697	Total	C	N	O	P	0	0
			36229	16171	6506	11856	1696		

- Molecule 4 is a protein called 40S_SA_C domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AA	217	Total	C	N	O	S	0	0
			1710	1086	300	316	8		

- Molecule 5 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	BB	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		

- Molecule 6 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	CC	221	Total	C	N	O	S	0	0
			1716	1111	295	301	9		

- Molecule 7 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	EE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 8 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	GG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 9 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	HH	185	Total	C	N	O	S	0	0
			1488	952	271	264	1		

- Molecule 10 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	II	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
II	47	ARG	GLY	conflict	UNP G1TJW1

- Molecule 11 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	JJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 12 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LL	143	Total	C	N	O	S	0	0
			1175	749	222	198	6		

- Molecule 13 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	NN	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 14 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	OO	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 15 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	VV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
VV	3	ASN	SER	conflict	UNP G1TM82
VV	4	ASP	ASN	conflict	UNP G1TM82
VV	33	GLN	PRO	conflict	UNP G1TM82
VV	50	PHE	SER	conflict	UNP G1TM82
VV	75	ALA	SER	conflict	UNP G1TM82
VV	76	ASP	HIS	conflict	UNP G1TM82
VV	81	LYS	GLN	conflict	UNP G1TM82

- Molecule 16 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	WW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 17 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	XX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 18 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	YY	124	Total	C	N	O	S	0	0
			1011	640	198	168	5		

- Molecule 19 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	aa	101	Total	C	N	O	S	0	0
			814	507	170	132	5		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
aa	28	ARG	CYS	conflict	UNP G1TFE8
aa	56	ALA	VAL	conflict	UNP G1TFE8

- Molecule 20 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	bb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 21 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	ee	57	Total	C	N	O	S	0	0
			457	282	101	73	1		

- Molecule 22 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	DD	228	Total	C	N	O	S	0	0
			1768	1126	318	316	8		

- Molecule 23 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	FF	185	Total	C	N	O	S	0	0
			1471	921	277	266	7		

- Molecule 24 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	KK	96	Total	C	N	O	S	0	0
			810	530	143	131	6		

- Molecule 25 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	MM	117	Total	C	N	O	S	0	0
			908	570	161	169	8		

- Molecule 26 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	PP	129	Total	C	N	O	S	0	0
			1058	670	201	180	7		

- Molecule 27 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	QQ	142	Total	C	N	O	S	0	0
			1128	717	213	195	3		

- Molecule 28 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	RR	132	Total	C	N	O	S	0	0
			1068	670	199	195	4		

- Molecule 29 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	SS	144	Total	C	N	O	S	0	0
			1190	746	241	202	1		

- Molecule 30 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	TT	141	Total	C	N	O	S	0	0
			1097	688	211	195	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
TT	119	GLY	TRP	conflict	UNP G1TN62

- Molecule 31 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	UU	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 32 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	ZZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 33 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	cc	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 34 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	dd	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 35 is a protein called 40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	ff	68	Total	C	N	O	S	0	0
			555	351	103	94	7		

- Molecule 36 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	gg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 37 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	A	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 38 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	B	394	Total	C	N	O	S	0	0
			3172	2020	597	542	13		

- Molecule 39 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	C	362	Total	C	N	O	S	0	0
			2883	1812	577	480	14		

- Molecule 40 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	D	293	Total	C	N	O	S	0	0
			2391	1512	438	427	14		

- Molecule 41 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	E	216	Total	C	N	O	S	0	0
			1729	1115	329	282	3		

- Molecule 42 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	F	225	Total	C	N	O	S	0	0
			1875	1205	358	303	9		

- Molecule 43 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	G	233	Total	C	N	O	S	0	0
			1879	1199	361	315	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	244	GLY	CYS	conflict	UNP G1STW0

- Molecule 44 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	H	190	Total	C	N	O	S	0	0
			1516	954	284	272	6		

- Molecule 45 is a protein called Ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	I	205	Total	C	N	O	S	0	0
			1664	1056	321	274	13		

- Molecule 46 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	J	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 47 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	L	210	Total	C	N	O	S	0	0
			1702	1065	354	279	4		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	74	ARG	HIS	conflict	UNP G1TKB3
L	190	ARG	HIS	conflict	UNP G1TKB3

- Molecule 48 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	M	138	Total	C	N	O	S	0	0
			1137	727	221	182	7		

- Molecule 49 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	N	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 50 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	O	199	Total	C	N	O	S	0	0
			1630	1051	319	255	5		

- Molecule 51 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	P	153	Total	C	N	O	S	0	0
			1242	777	241	215	9		

- Molecule 52 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Q	187	Total	C	N	O	S	0	0
			1515	946	315	250	4		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Q	4	ASP	ASN	conflict	UNP G1TFE0
Q	14	ARG	TRP	conflict	UNP G1TFE0
Q	53	MET	LEU	conflict	UNP G1TFE0
Q	58	ARG	TRP	conflict	UNP G1TFE0
Q	75	ARG	GLN	conflict	UNP G1TFE0
Q	80	ALA	PRO	conflict	UNP G1TFE0
Q	86	VAL	ILE	conflict	UNP G1TFE0
Q	104	ARG	HIS	conflict	UNP G1TFE0
Q	110	ARG	CYS	conflict	UNP G1TFE0
Q	137	VAL	GLY	conflict	UNP G1TFE0
Q	157	GLY	ARG	conflict	UNP G1TFE0
Q	181	ARG	TRP	conflict	UNP G1TFE0

- Molecule 53 is a protein called eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	S	176	Total	C	N	O	S	0	0
			1462	930	285	236	11		

- Molecule 54 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	T	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 55 is a protein called Large ribosomal subunit protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	U	99	Total	C	N	O	S	0	0
			809	519	141	147	2		

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
U	18	LEU	VAL	conflict	UNP G1TSG1
U	32	GLY	ARG	conflict	UNP G1TSG1
U	36	ALA	GLU	conflict	UNP G1TSG1
U	39	PHE	SER	conflict	UNP G1TSG1
U	54	GLY	ARG	conflict	UNP G1TSG1
U	60	VAL	ALA	conflict	UNP G1TSG1
U	62	SER	THR	conflict	UNP G1TSG1
U	63	LEU	ILE	conflict	UNP G1TSG1
U	97	ARG	HIS	conflict	UNP G1TSG1
U	106	THR	SER	conflict	UNP G1TSG1

- Molecule 56 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	V	139	Total	C	N	O	S	0	0
			1034	648	199	182	5		

- Molecule 57 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	X	118	Total	C	N	O	S	0	0
			967	618	181	167	1		

- Molecule 58 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Y	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 59 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	Z	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
60	a	147	Total	C	N	O	S	0	0
			1162	734	239	185	4		

- Molecule 61 is a protein called eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	b	104	Total	C	N	O	S	0	0
			848	527	189	129	3		

- Molecule 62 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	c	98	Total	C	N	O	S	0	0
			761	481	134	140	6		

- Molecule 63 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	d	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 64 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	e	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
e	3	ALA	SER	conflict	UNP G1TUN8
e	13	VAL	ILE	conflict	UNP G1TUN8
e	16	ARG	TRP	conflict	UNP G1TUN8
e	81	ASN	SER	conflict	UNP G1TUN8
e	98	GLU	LYS	conflict	UNP G1TUN8
e	108	ARG	CYS	conflict	UNP G1TUN8
e	115	ALA	VAL	conflict	UNP G1TUN8

- Molecule 65 is a protein called Large ribosomal subunit protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	f	109	Total	C	N	O	S	0	0
			876	555	174	143	4		

- Molecule 66 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	g	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 67 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	h	122	Total	C	N	O	S	0	0
			1013	640	204	168	1		

- Molecule 68 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	i	102	Total	C	N	O	S	0	0
			830	520	176	129	5		

- Molecule 69 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	j	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 70 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	k	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
k	24	LYS	ASN	conflict	UNP G1U001

- Molecule 71 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	l	50	Total	C	N	O	S	0	0
			447	286	96	64	1		

- Molecule 72 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	m	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 73 is a protein called eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	n	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 74 is a protein called eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	o	104	Total	C	N	O	S	0	0
			851	533	174	138	6		

- Molecule 75 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	p	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 76 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	r	124	Total 994	C 616	N 205	O 167	S 6	0	0

- Molecule 77 is a protein called Large ribosomal subunit protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	s	87	Total 695	C 444	N 128	O 117	S 6	0	0

- Molecule 78 is a protein called uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	t	133	Total 993	C 619	N 182	O 189	S 3	0	0

- Molecule 79 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	5	3543	Total 75955	C 33826	N 13895	O 24691	P 3543	0	0

- Molecule 80 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	7	119	Total 2538	C 1132	N 454	O 834	P 118	0	0

- Molecule 81 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	8	151	Total 3208	C 1432	N 564	O 1062	P 150	0	0

- Molecule 82 is a RNA chain called Ala-tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
82	AT	76	Total 2413	C 722	H 792	N 290	O 533	P 76	0	0

- Molecule 83 is a RNA chain called NediV IRES.

Mol	Chain	Residues	Atoms						AltConf	Trace
83	1	166	Total	C	H	N	O	P	0	0
			5305	1577	1782	619	1161	166		

- Molecule 84 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
84	9	1	Total	Mg	0
			1	1	
84	I	1	Total	Mg	0
			1	1	
84	L	1	Total	Mg	0
			1	1	
84	P	1	Total	Mg	0
			1	1	
84	V	1	Total	Mg	0
			1	1	
84	X	1	Total	Mg	0
			1	1	
84	a	2	Total	Mg	0
			2	2	
84	e	1	Total	Mg	0
			1	1	
84	g	1	Total	Mg	0
			1	1	
84	j	1	Total	Mg	0
			1	1	
84	5	184	Total	Mg	0
			184	184	
84	7	6	Total	Mg	0
			6	6	
84	8	5	Total	Mg	0
			5	5	

- Molecule 85 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
85	aa	1	Total	Zn	0
			1	1	
85	dd	1	Total	Zn	0
			1	1	
85	ff	1	Total	Zn	0
			1	1	
85	g	1	Total	Zn	0
			1	1	

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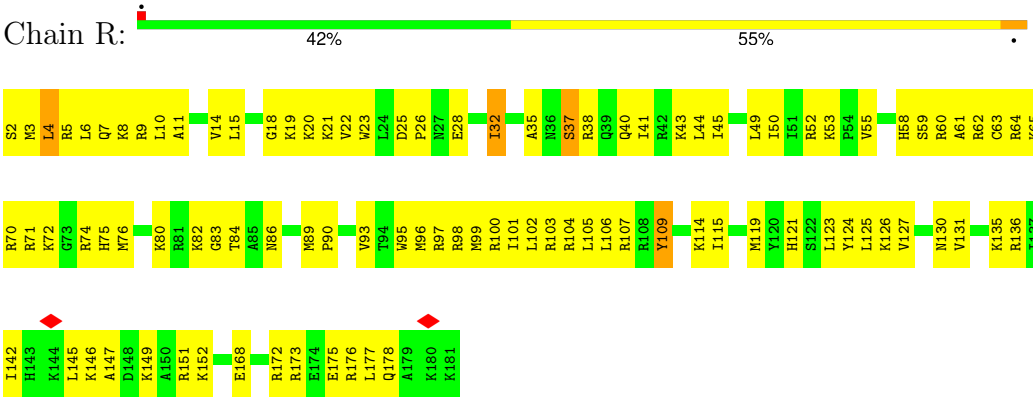
Mol	Chain	Residues	Atoms	AltConf
85	j	1	Total Zn 1 1	0
85	m	1	Total Zn 1 1	0
85	o	1	Total Zn 1 1	0
85	p	1	Total Zn 1 1	0

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.

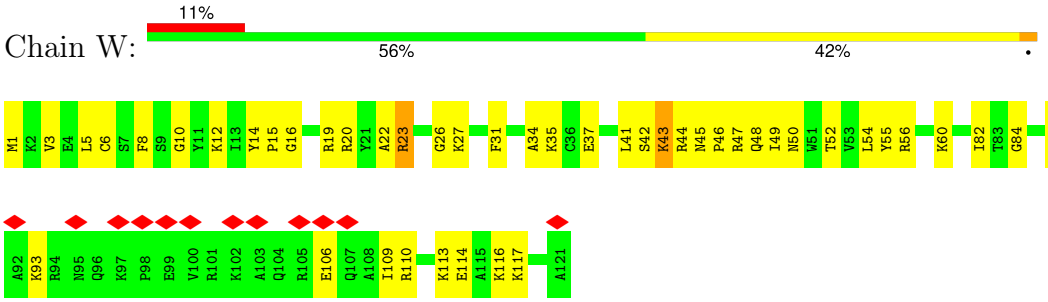
• Molecule 1: 60S ribosomal protein L19

Chain R:



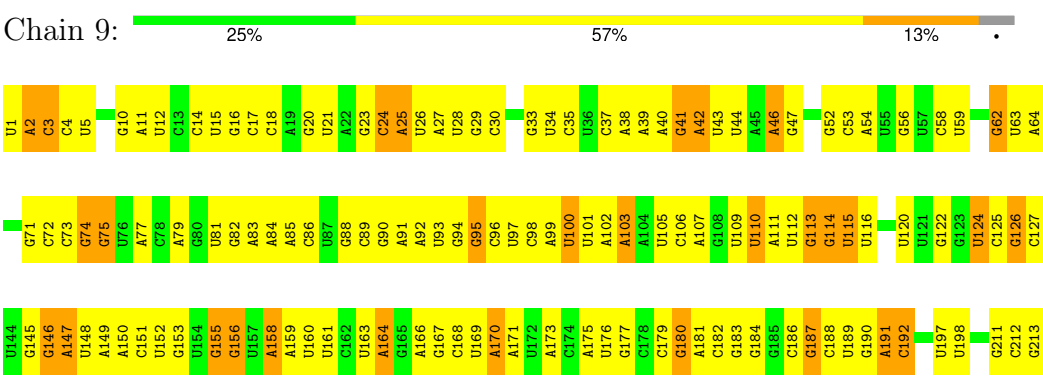
• Molecule 2: uL24

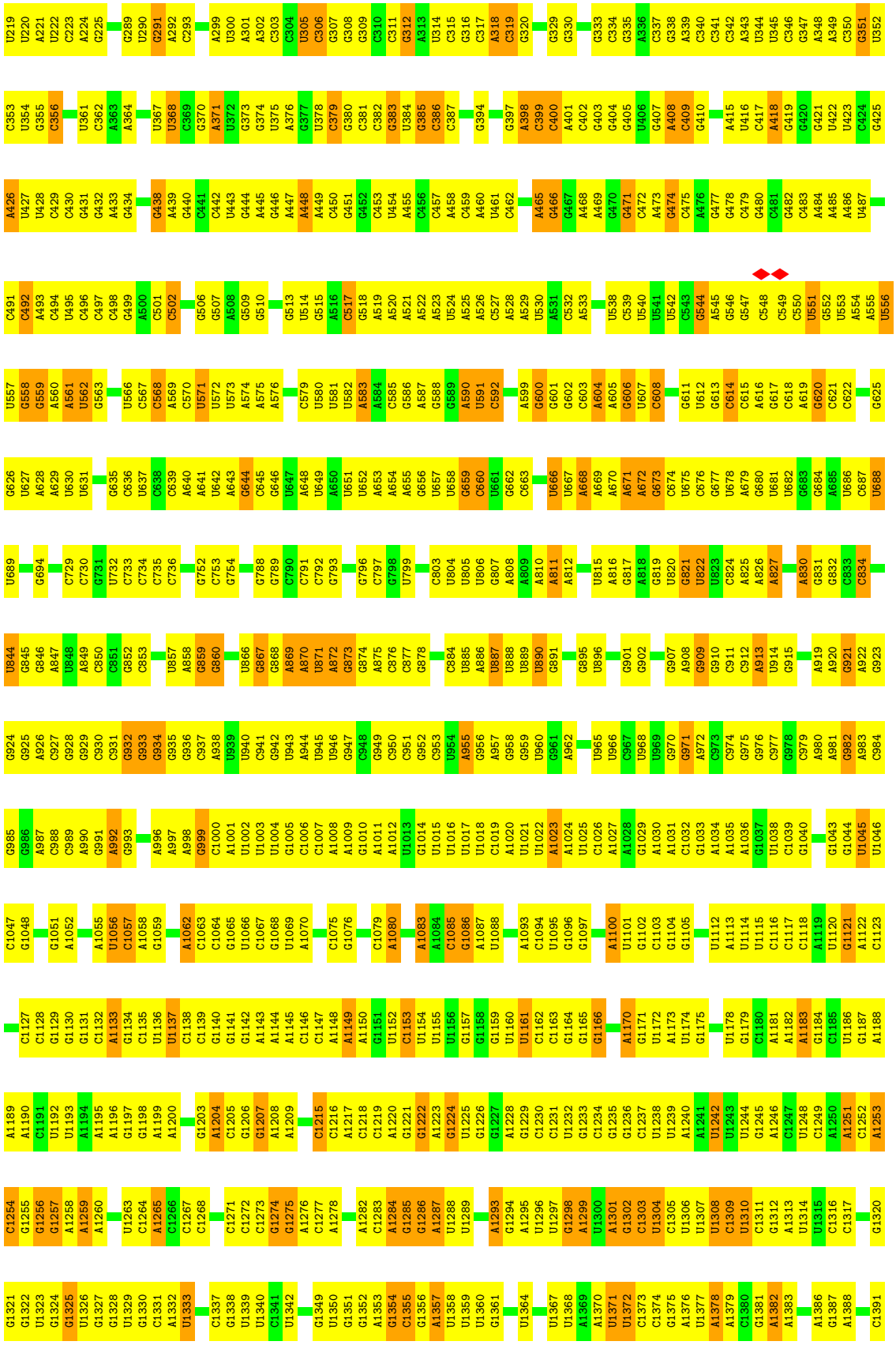
Chain W:

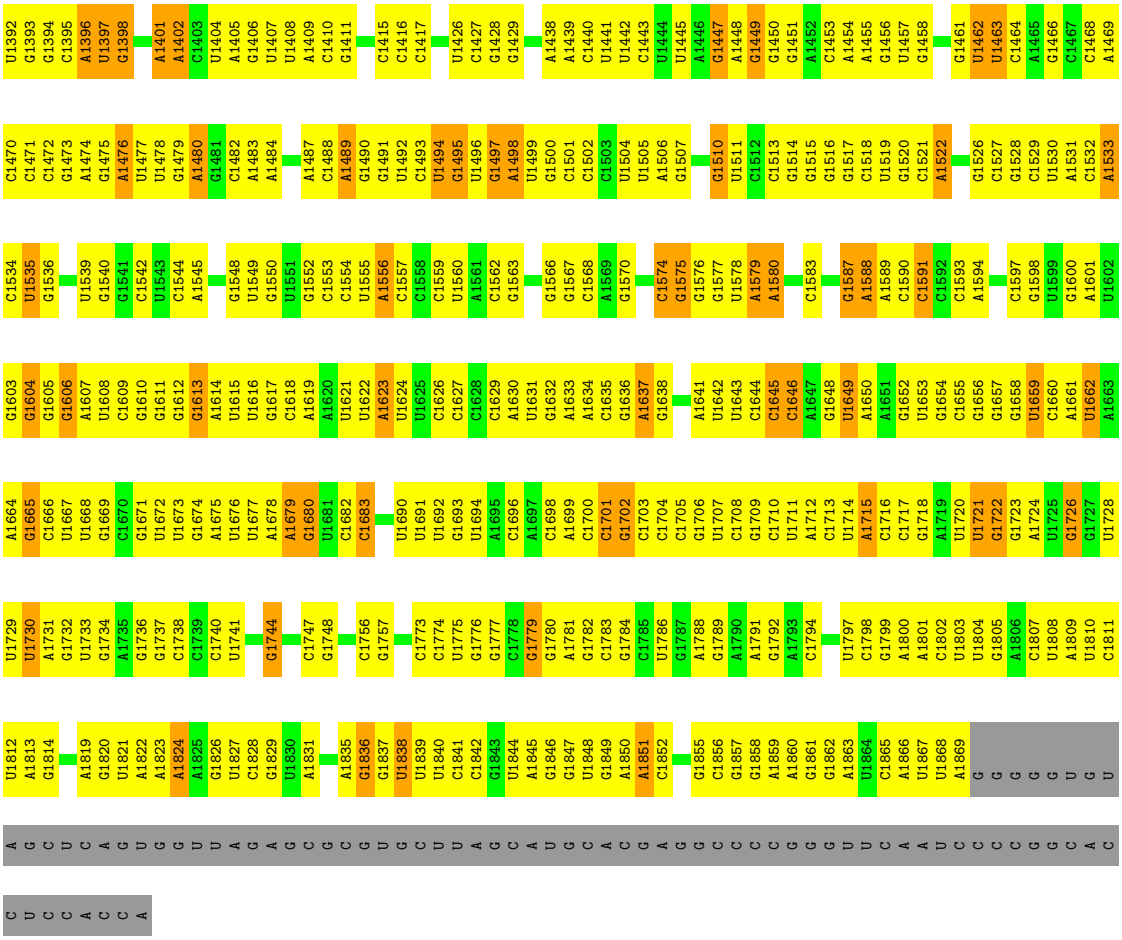


• Molecule 3: 18S rRNA

Chain 9:

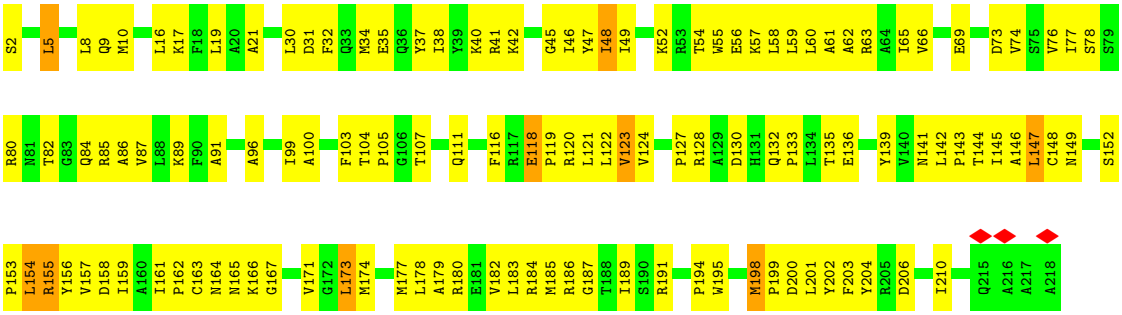






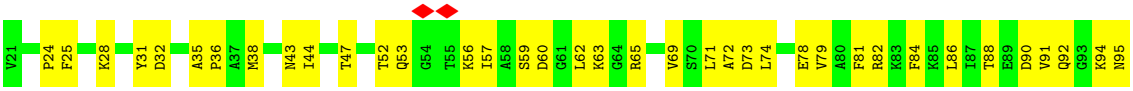
• Molecule 4: 40S_SA_C domain-containing protein

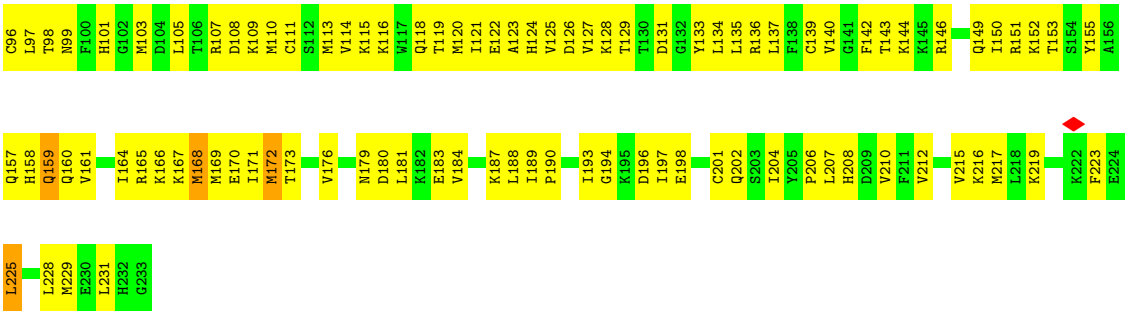
Chain AA:



• Molecule 5: 40S ribosomal protein S3a

Chain BB:



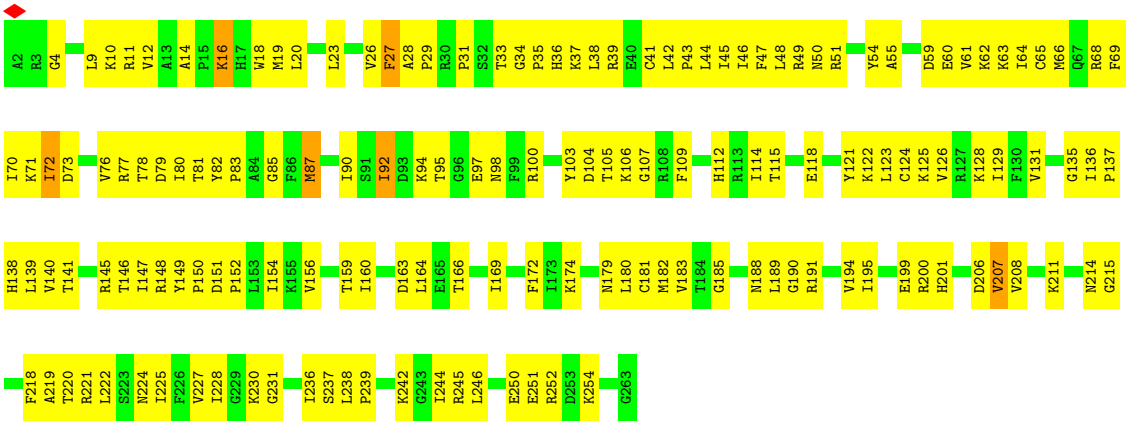


• Molecule 6: 40S ribosomal protein S2

Chain CC:

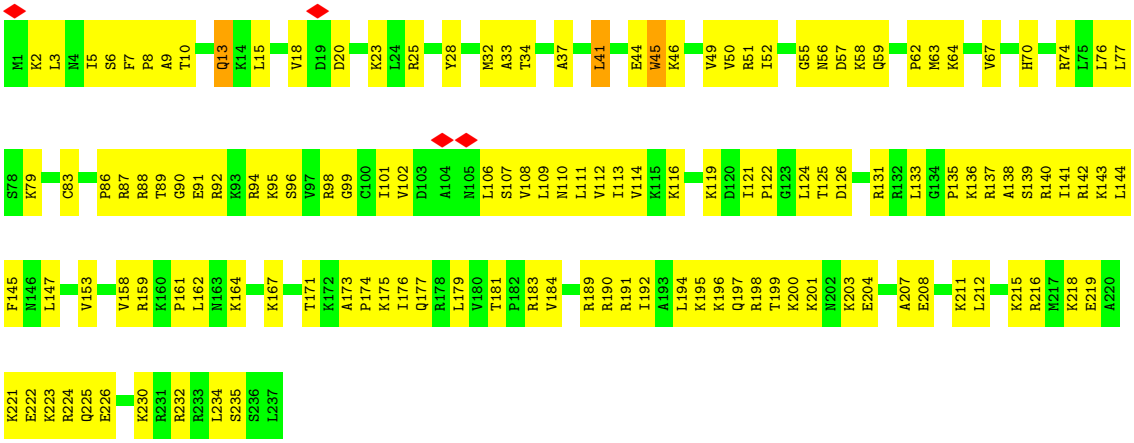
• Molecule 7: 40S ribosomal protein S4

Chain EE:



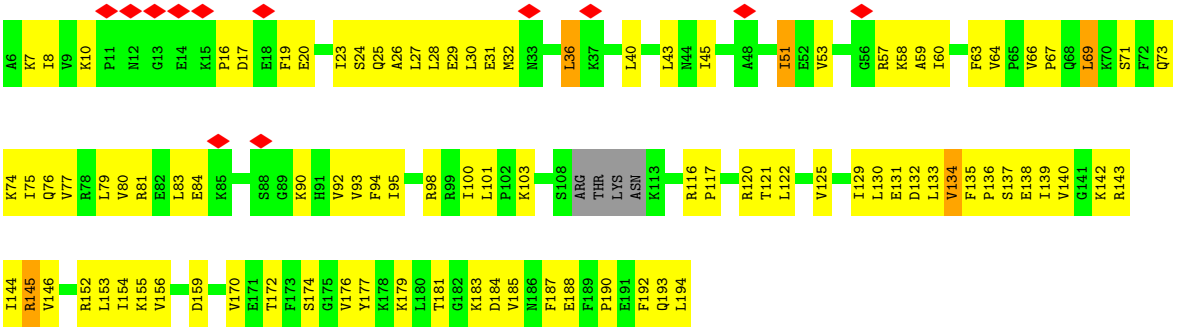
• Molecule 8: 40S ribosomal protein S6

Chain GG:



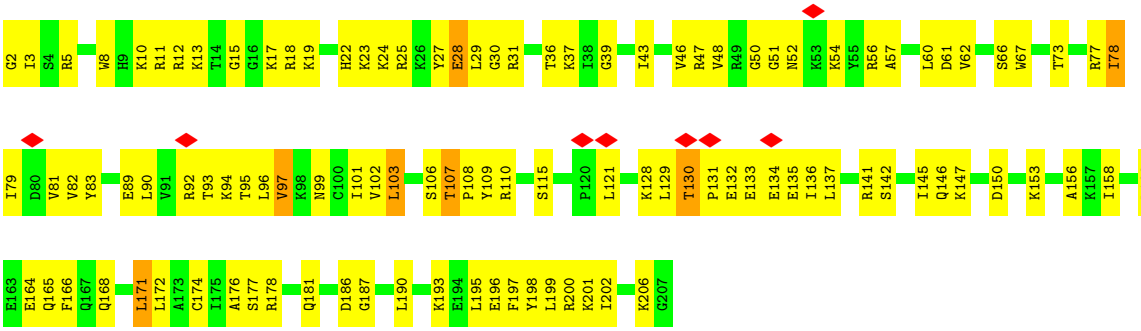
• Molecule 9: Small ribosomal subunit protein eS7

Chain HH:



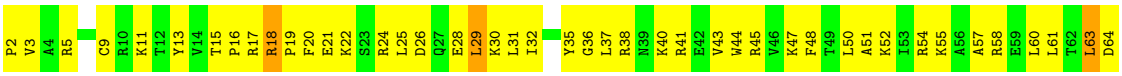
• Molecule 10: 40S ribosomal protein S8

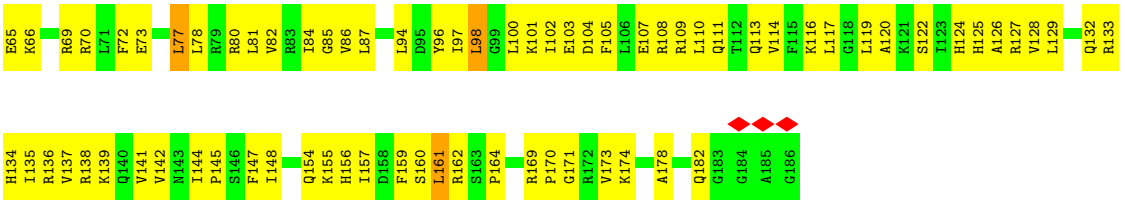
Chain II:



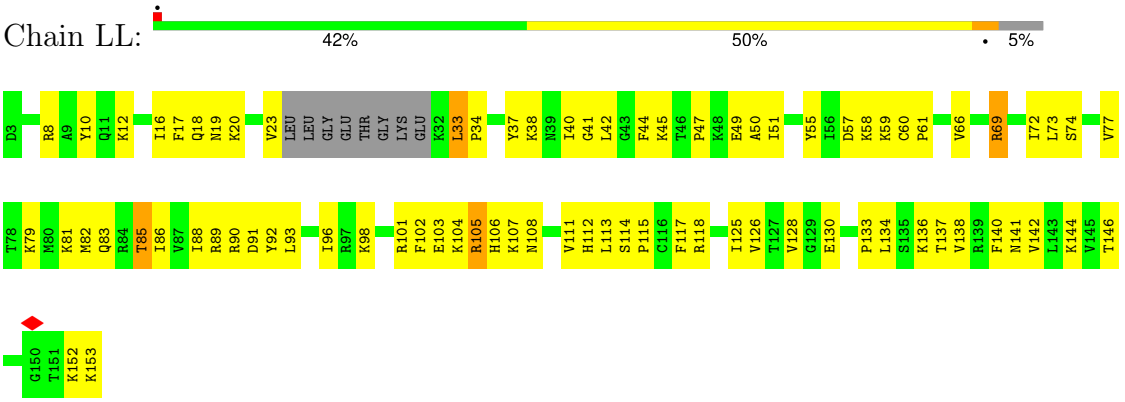
• Molecule 11: 40S ribosomal protein S9

Chain JJ:



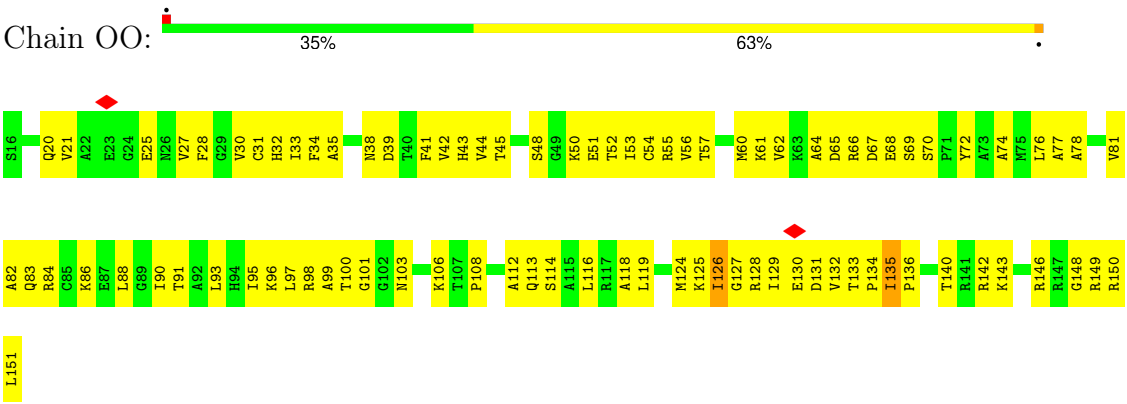


• Molecule 12: Small ribosomal subunit protein uS17



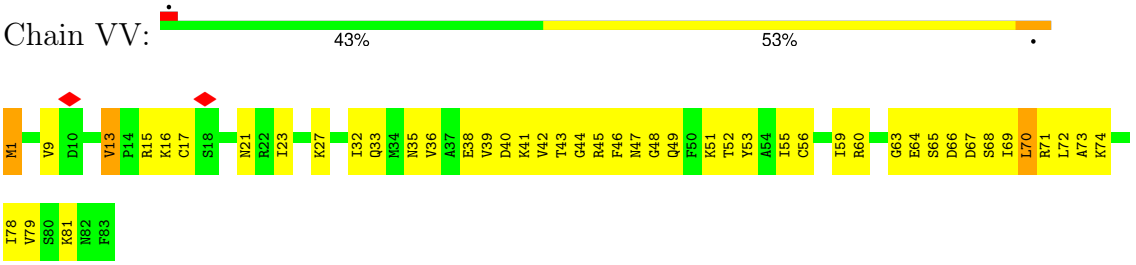
• Molecule 13: 40S ribosomal protein S13

• Molecule 14: Small ribosomal subunit protein uS11



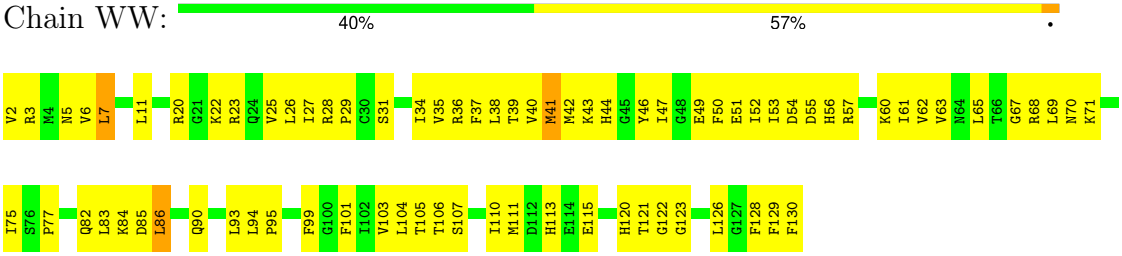
• Molecule 15: eS21

Chain VV:



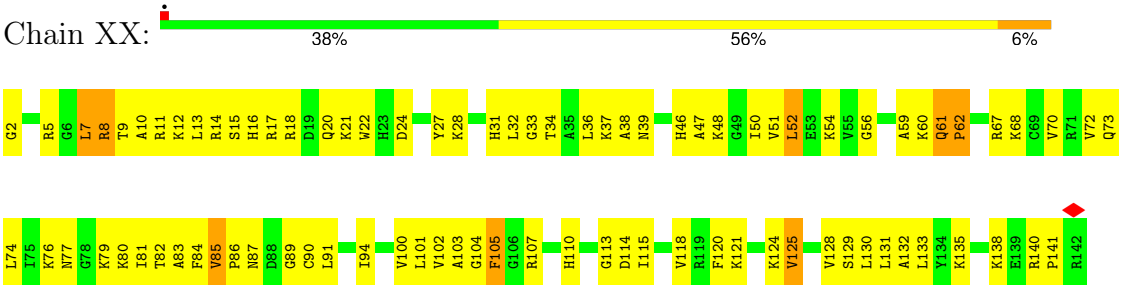
• Molecule 16: 40S ribosomal protein S15a

Chain WW:



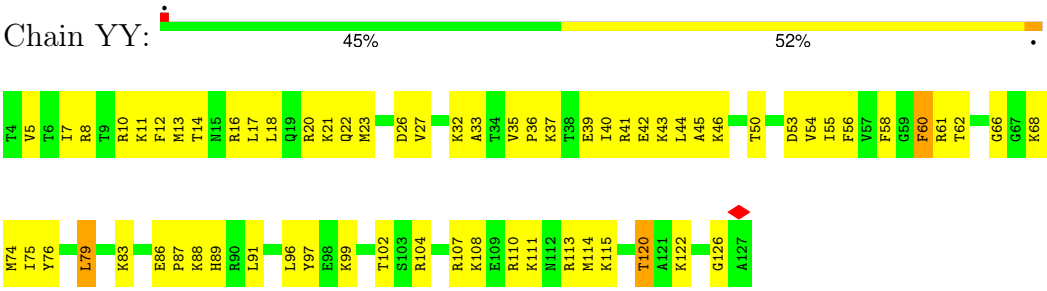
• Molecule 17: 40S ribosomal protein S23

Chain XX:



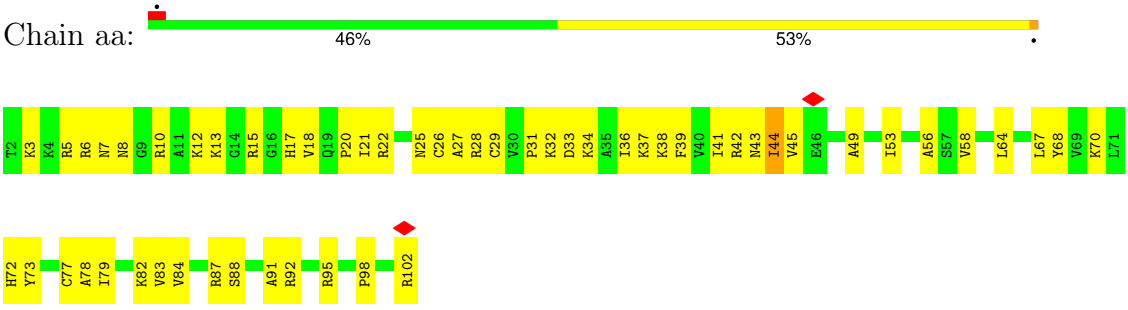
• Molecule 18: 40S ribosomal protein S24

Chain YY:



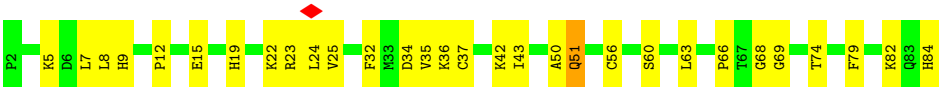
• Molecule 19: eS26

Chain aa:



• Molecule 20: 40S ribosomal protein S27

Chain bb:

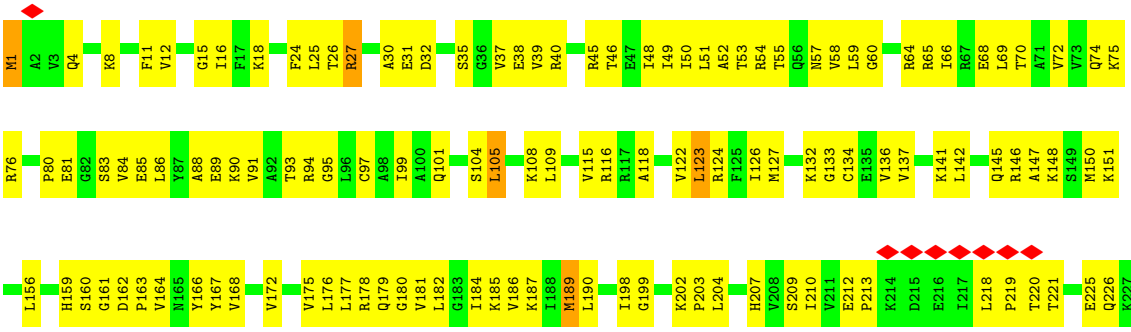


• Molecule 21: Small ribosomal subunit protein eS30

Chain ee:

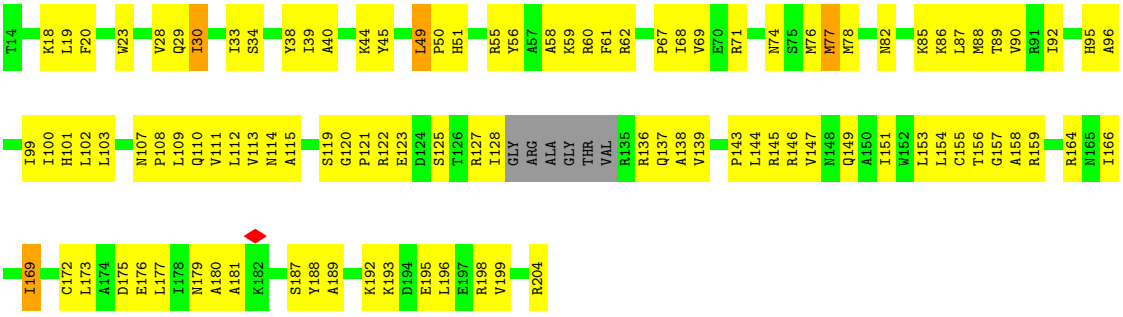
• Molecule 22: 40S ribosomal protein S3

Chain DD:



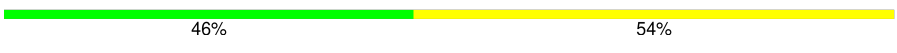
• Molecule 23: Small ribosomal subunit protein uS7

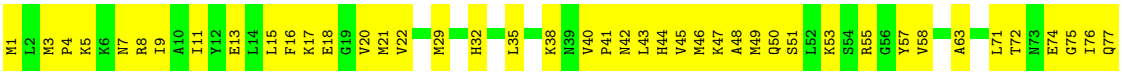
Chain FF:

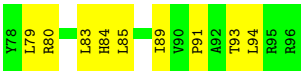


• Molecule 24: 40S ribosomal protein S10

Chain KK:

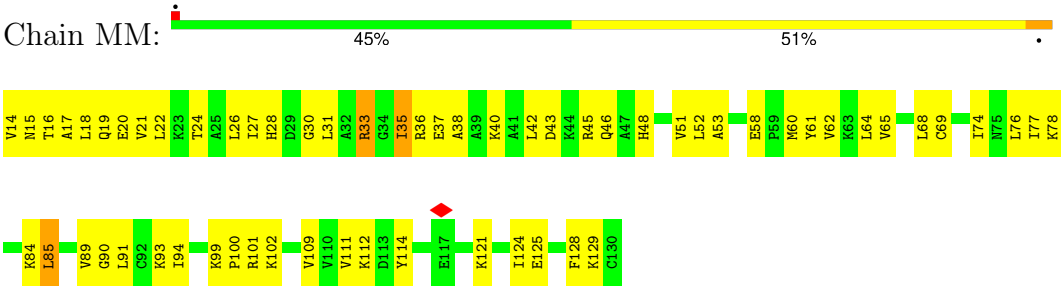






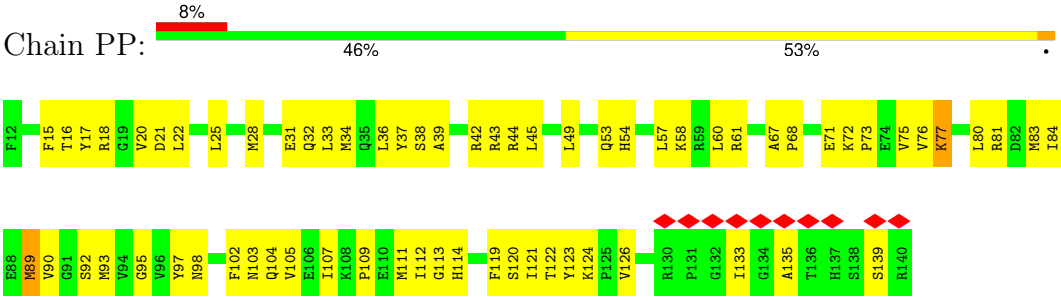
• Molecule 25: 40S ribosomal protein S12

Chain MM:



• Molecule 26: Small ribosomal subunit protein uS19

Chain PP:

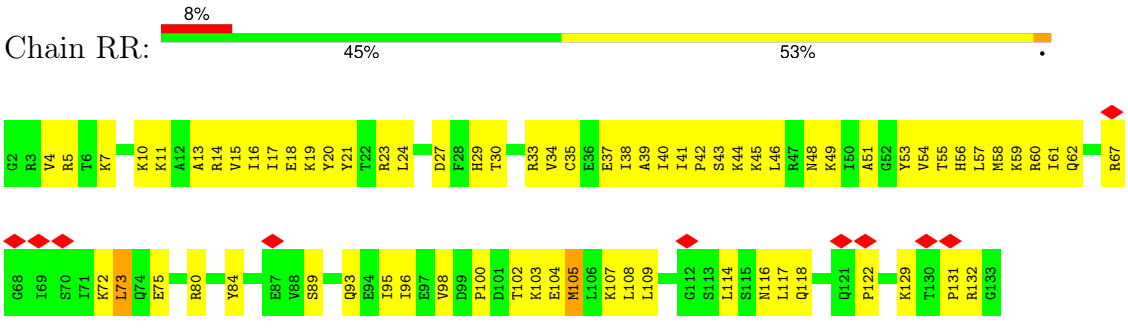


• Molecule 27: Small ribosomal subunit protein uS9

Chain QQ:

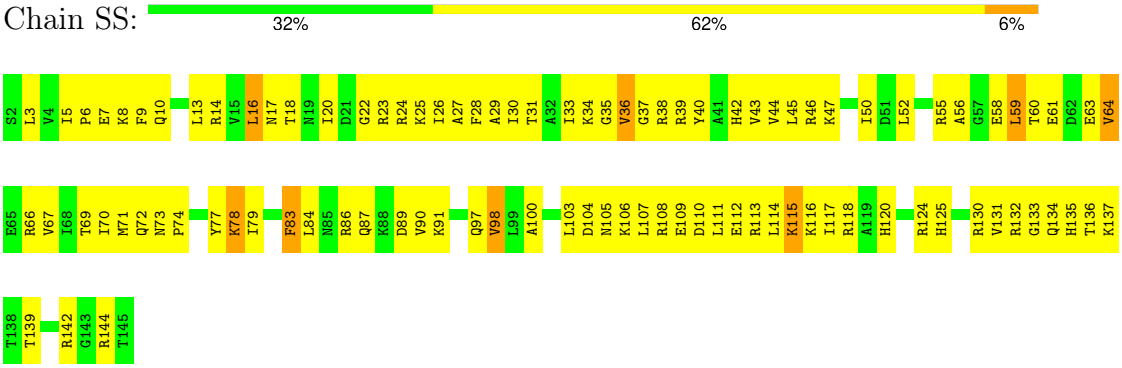
• Molecule 28: 40S ribosomal protein S17

Chain RR:



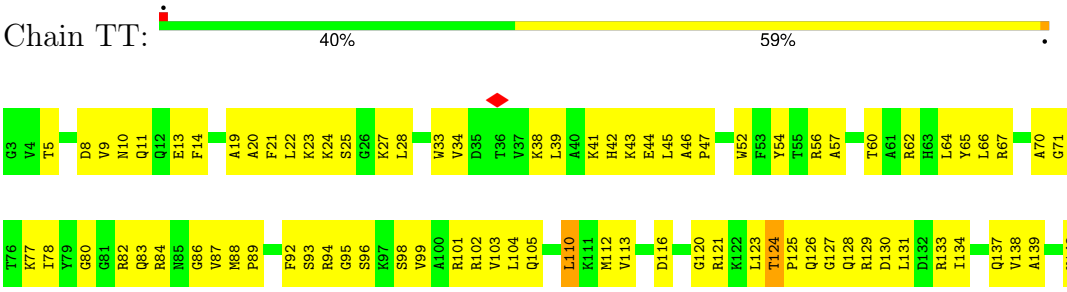
• Molecule 29: 40S ribosomal protein S18

Chain SS:



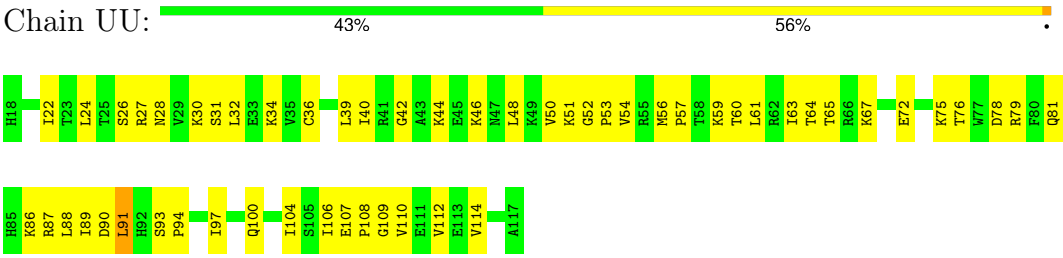
• Molecule 30: Small ribosomal subunit protein eS19

Chain TT:



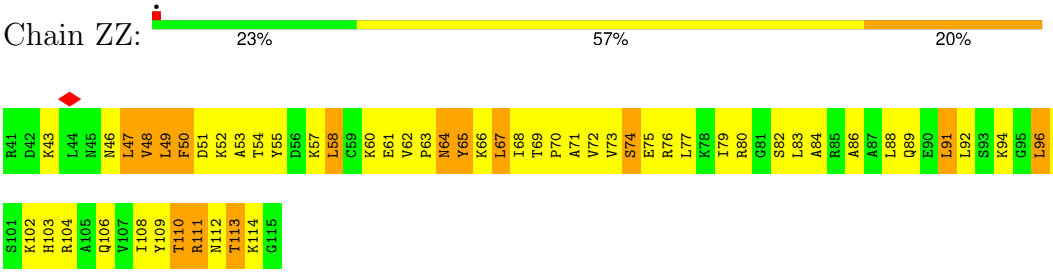
• Molecule 31: 40S ribosomal protein S20

Chain UU:



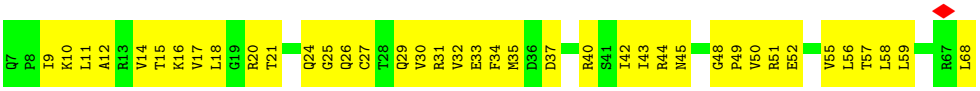
• Molecule 32: 40S ribosomal protein S25

Chain ZZ:



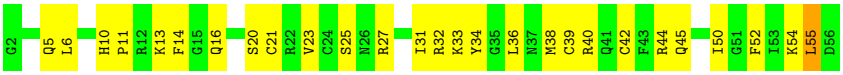
• Molecule 33: 40S ribosomal protein S28

Chain cc:



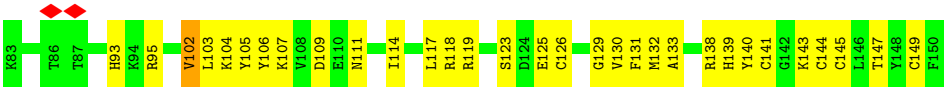
• Molecule 34: 40S ribosomal protein S29

Chain dd:



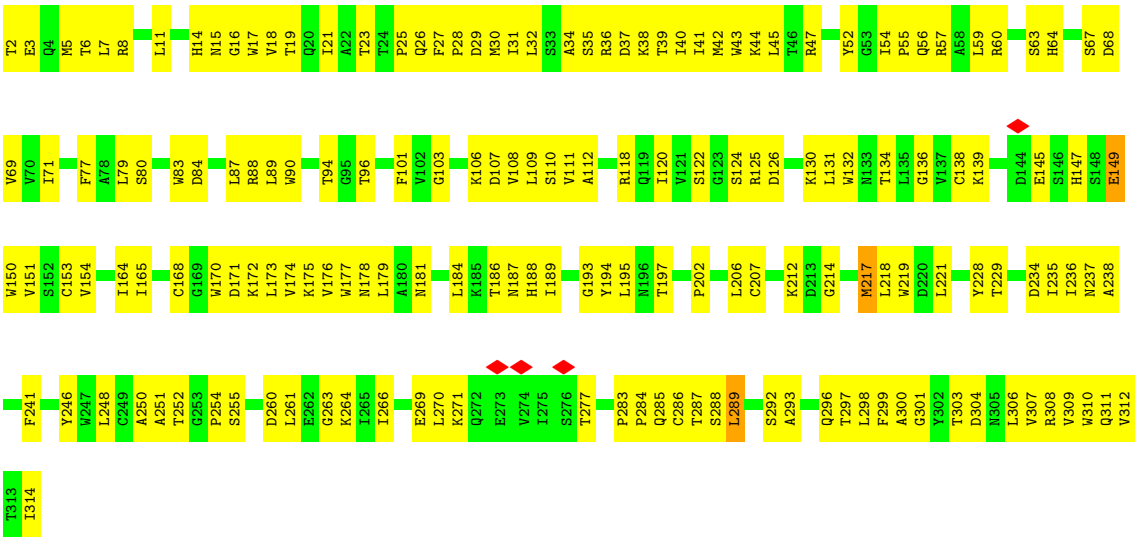
• Molecule 35: 40S ribosomal protein S27a

Chain ff:



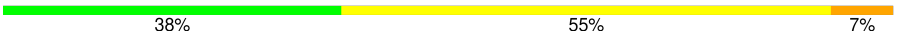
• Molecule 36: Receptor of activated protein C kinase 1

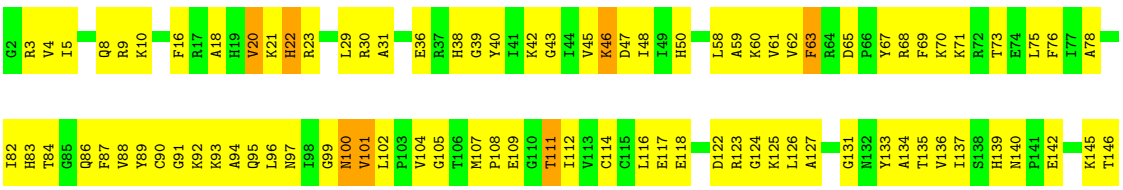
Chain gg:

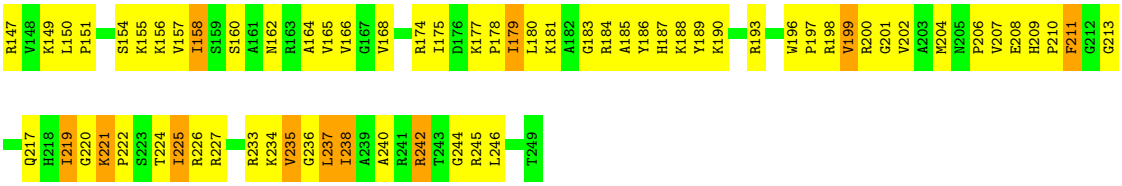


• Molecule 37: 60S ribosomal protein L8

Chain A:

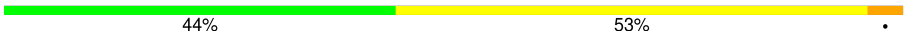


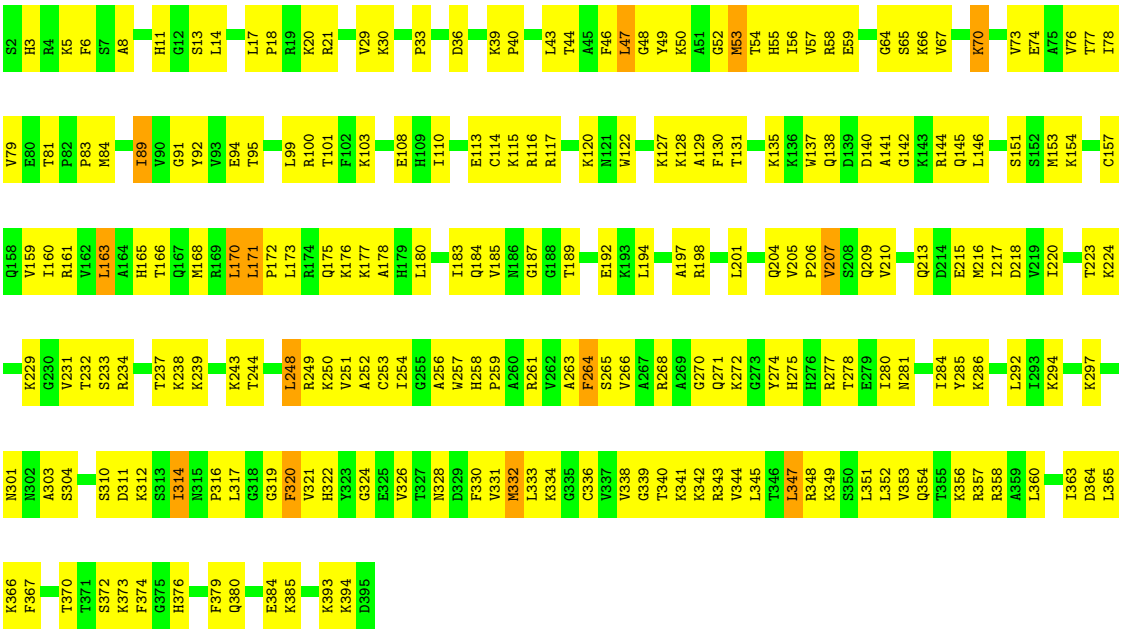




• Molecule 38: 60S ribosomal protein L3

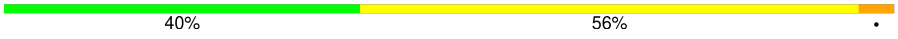
Chain B:

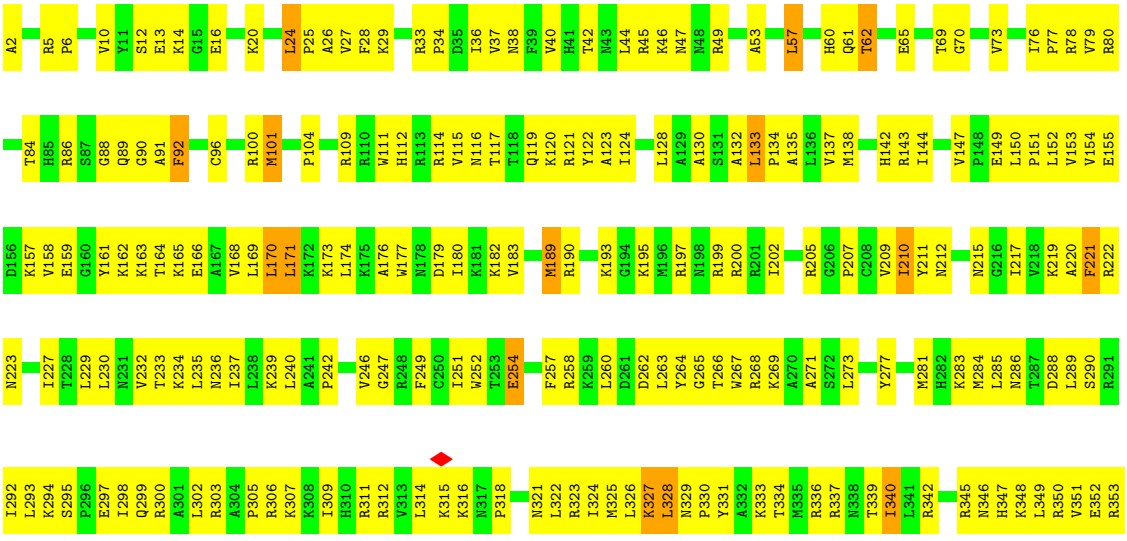


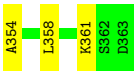


• Molecule 39: 60S ribosomal protein L4

Chain C:

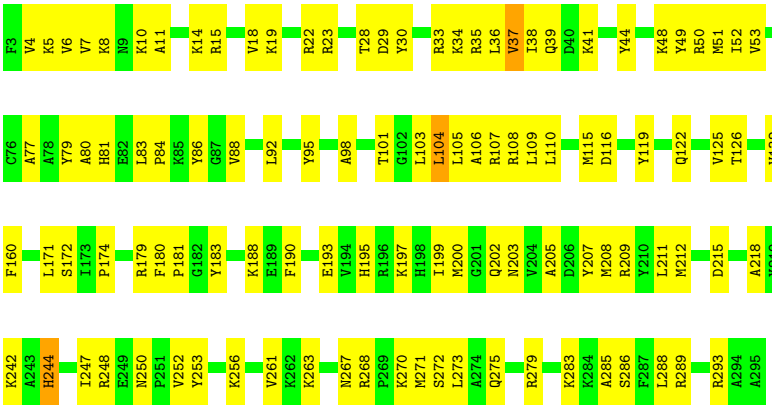






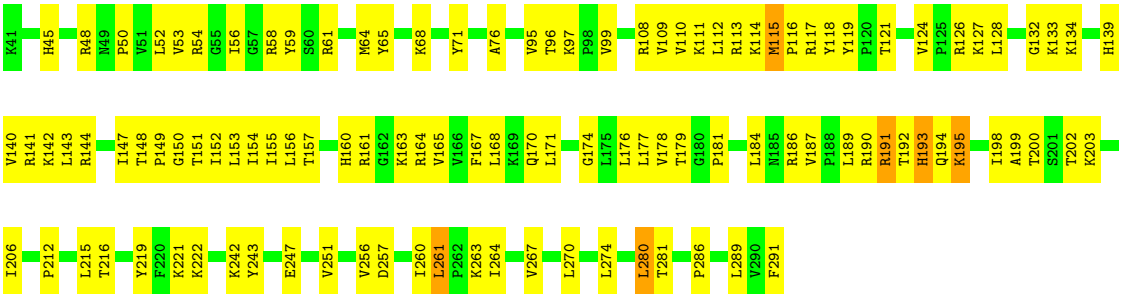
• Molecule 40: 60S ribosomal protein L5

Chain D:



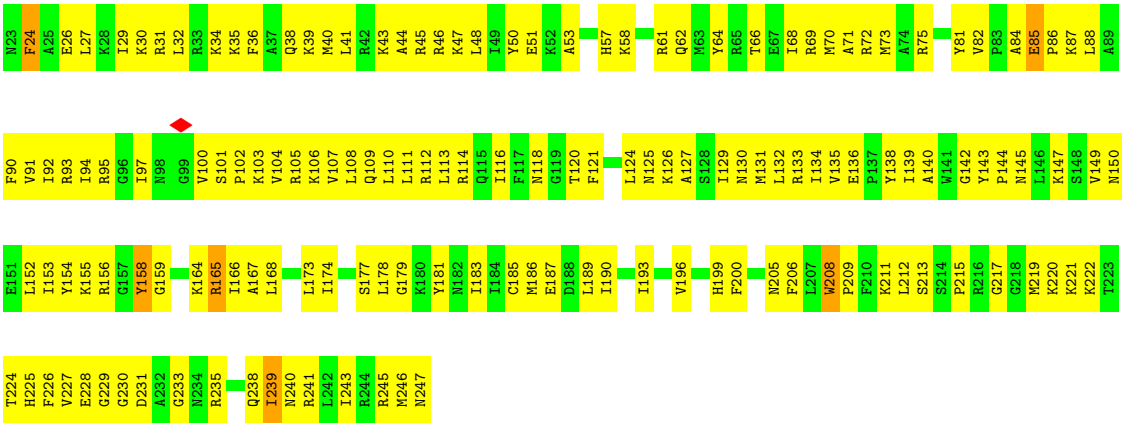
• Molecule 41: 60S ribosomal protein L6

Chain E:



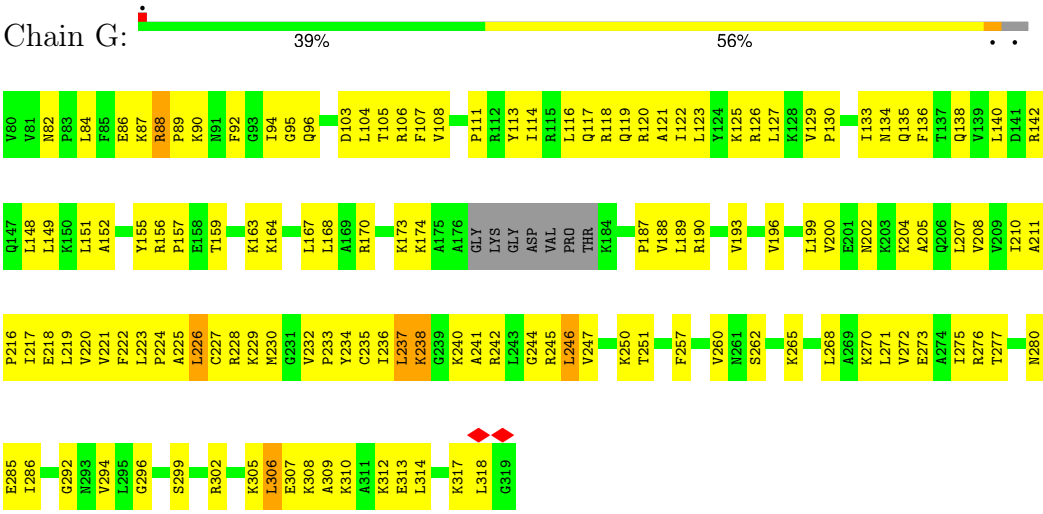
• Molecule 42: 60S ribosomal protein L7

Chain F:



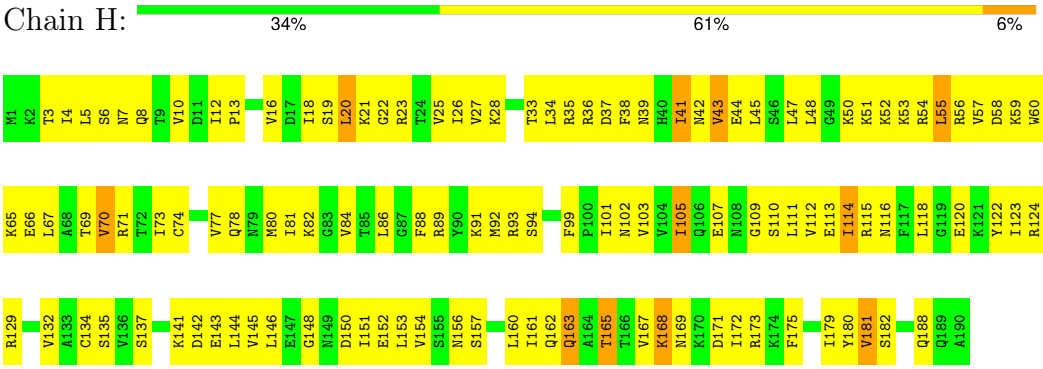
• Molecule 43: Large ribosomal subunit protein eL8

Chain G:



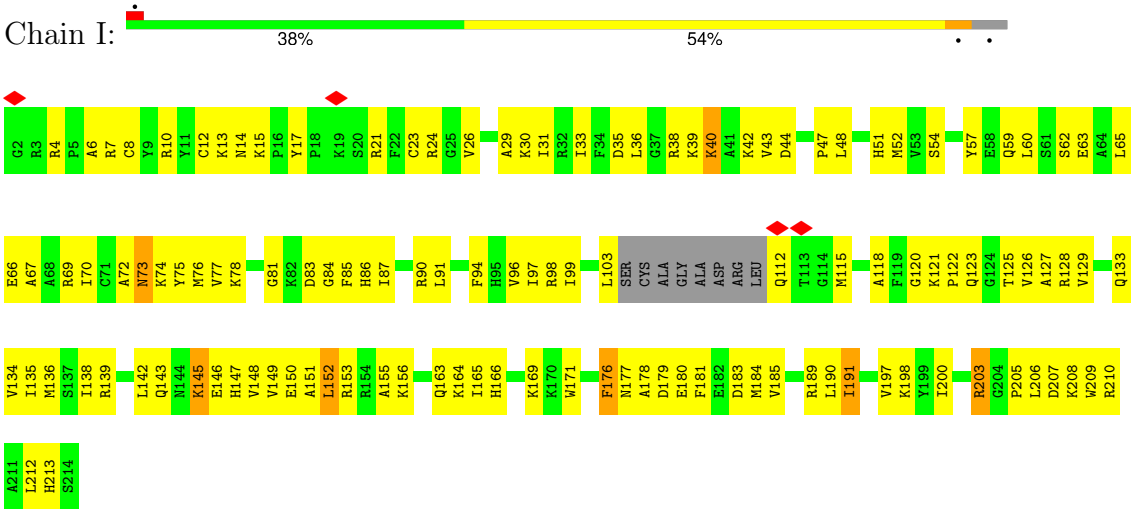
• Molecule 44: 60S ribosomal protein L9

Chain H:



• Molecule 45: Ribosomal protein L10

Chain I:

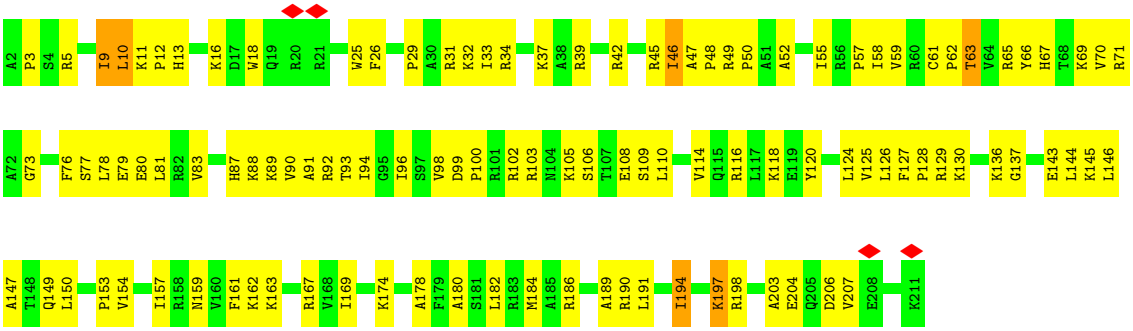


• Molecule 46: 60S ribosomal protein L11

Chain J:

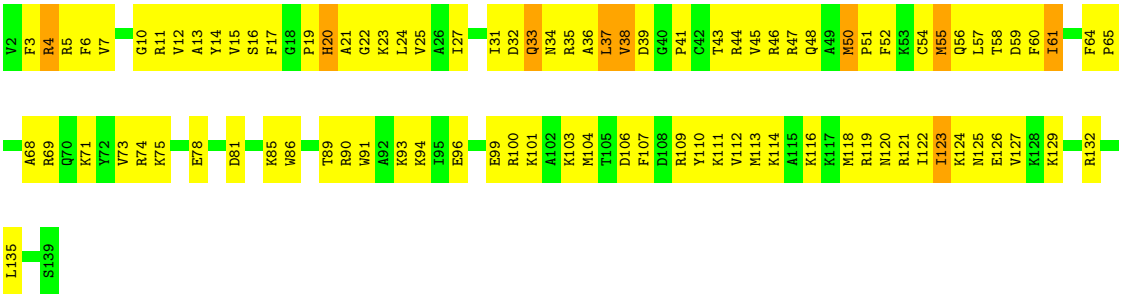
• Molecule 47: Large ribosomal subunit protein eL13

Chain L:



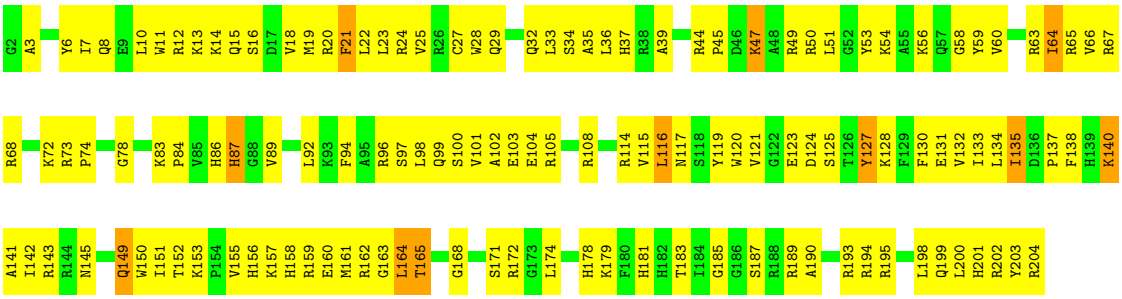
• Molecule 48: 60S ribosomal protein L14

Chain M:



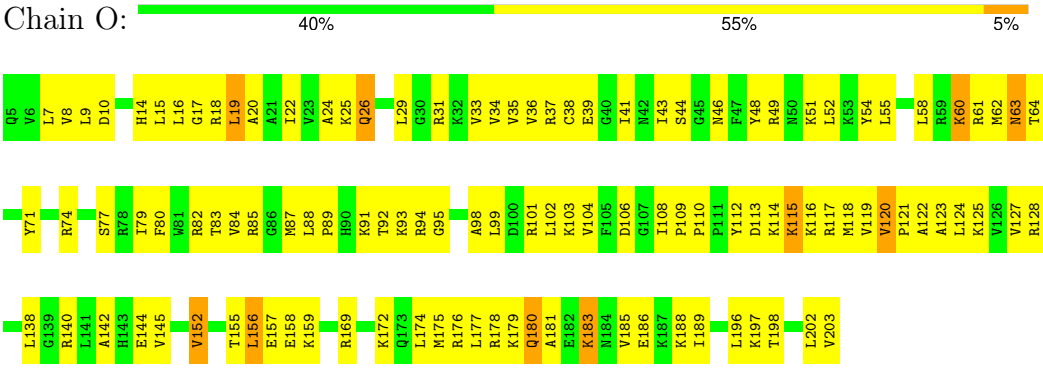
• Molecule 49: 60S ribosomal protein L15

Chain N:



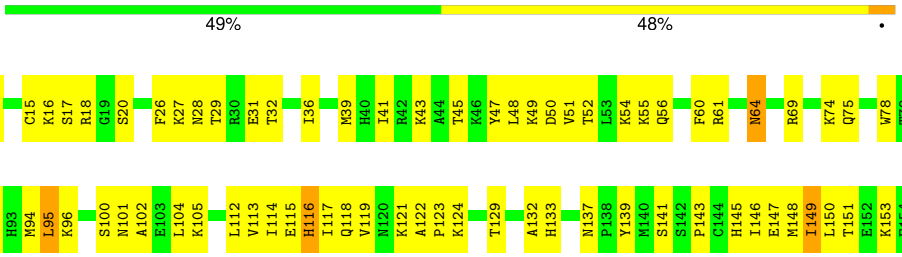
• Molecule 50: Large ribosomal subunit protein uL13

Chain O:



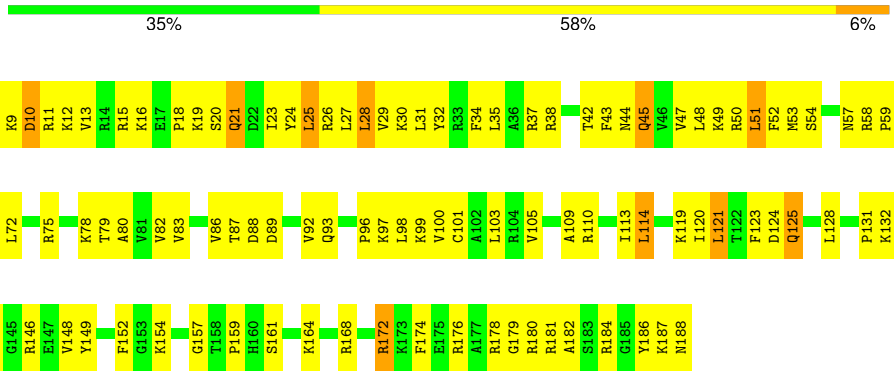
• Molecule 51: 60S ribosomal protein L17

Chain P:



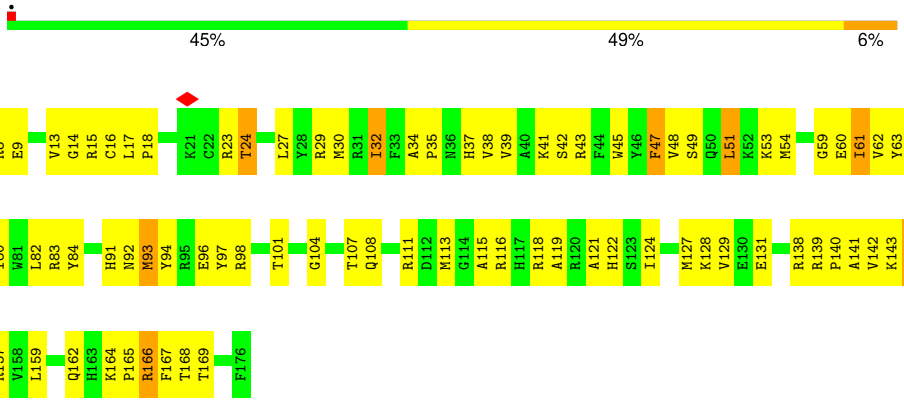
• Molecule 52: Large ribosomal subunit protein eL18

Chain Q:



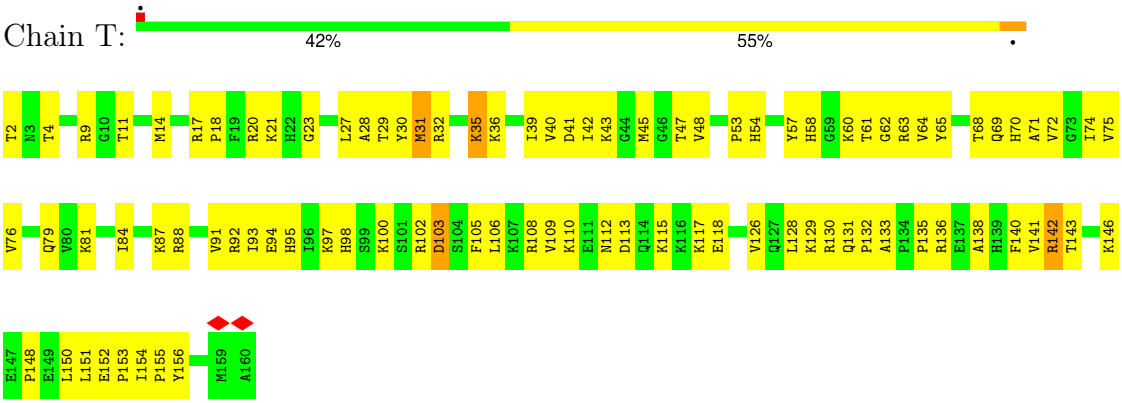
• Molecule 53: eL20

Chain S:



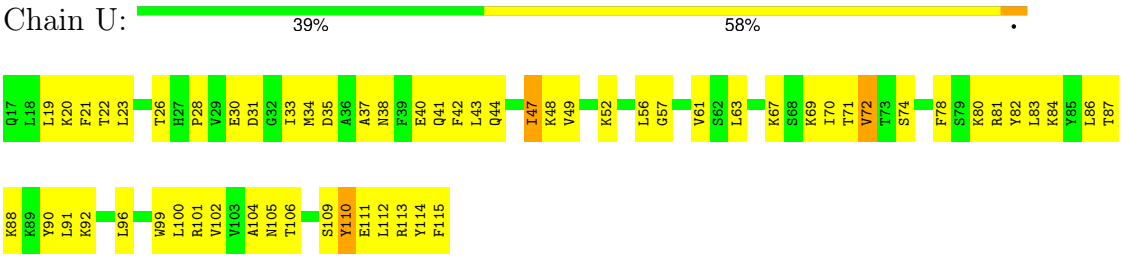
• Molecule 54: 60S ribosomal protein L21

Chain T:



• Molecule 55: Large ribosomal subunit protein eL22

Chain U:

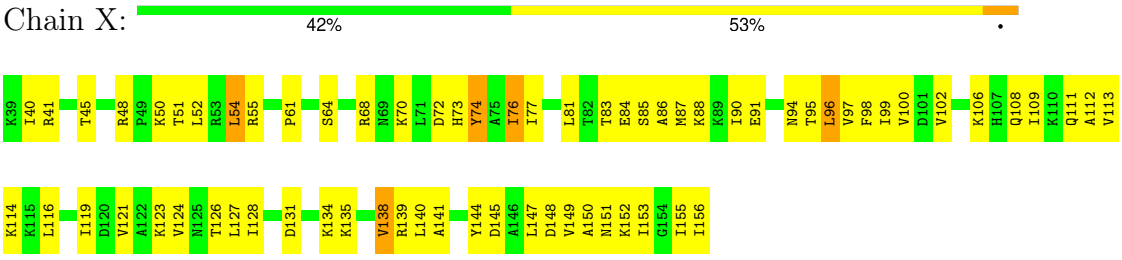


• Molecule 56: Large ribosomal subunit protein uL14

Chain V:

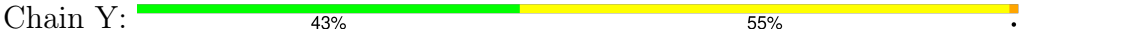
• Molecule 57: Large ribosomal subunit protein uL23

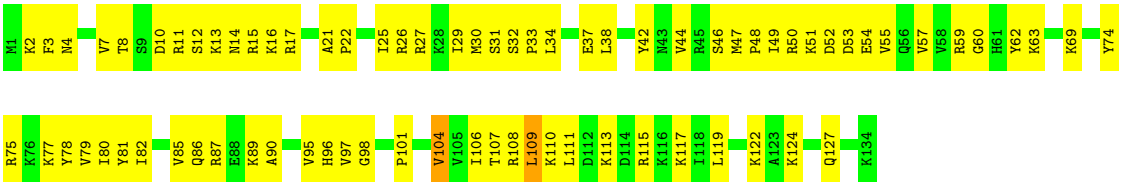
Chain X:



• Molecule 58: 60S ribosomal protein L26

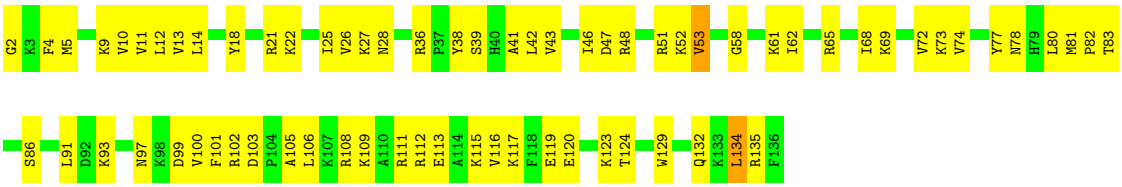
Chain Y:





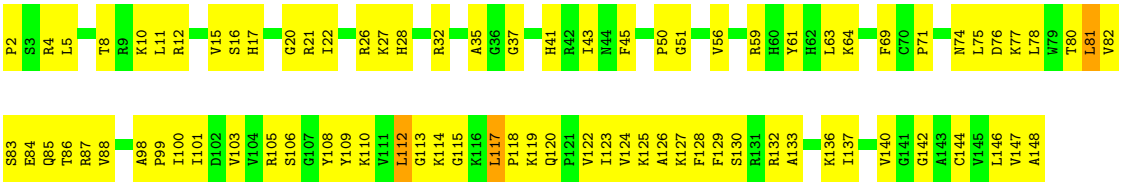
• Molecule 59: 60S ribosomal protein L27

Chain Z:



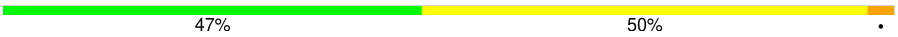
• Molecule 60: 60S ribosomal protein L27a

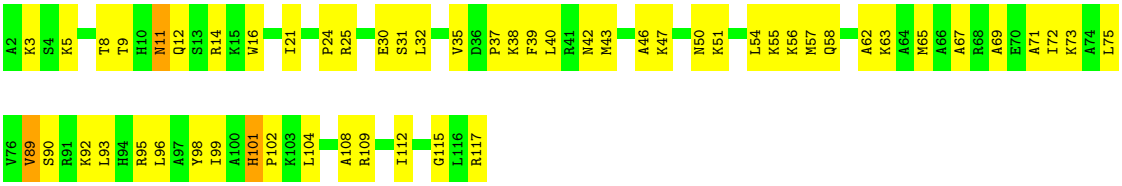
Chain a:



• Molecule 61: eL29

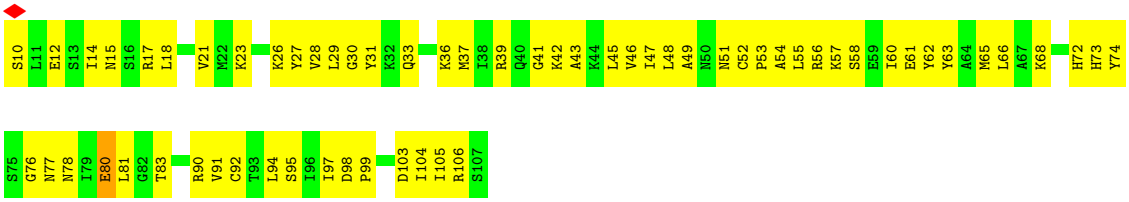
Chain b:





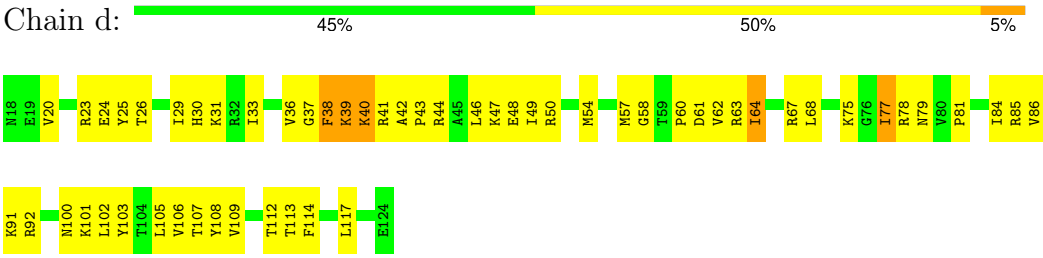
• Molecule 62: 60S ribosomal protein L30

Chain c:



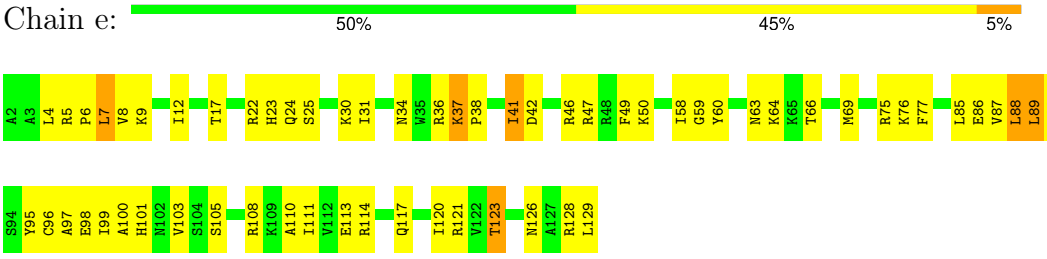
• Molecule 63: 60S ribosomal protein L31

Chain d:



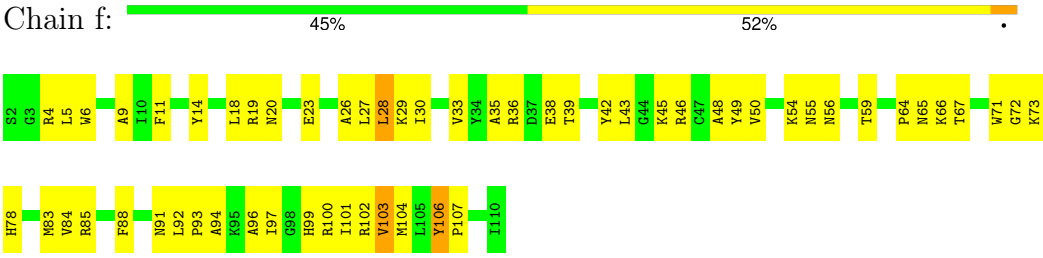
• Molecule 64: Large ribosomal subunit protein eL32

Chain e:



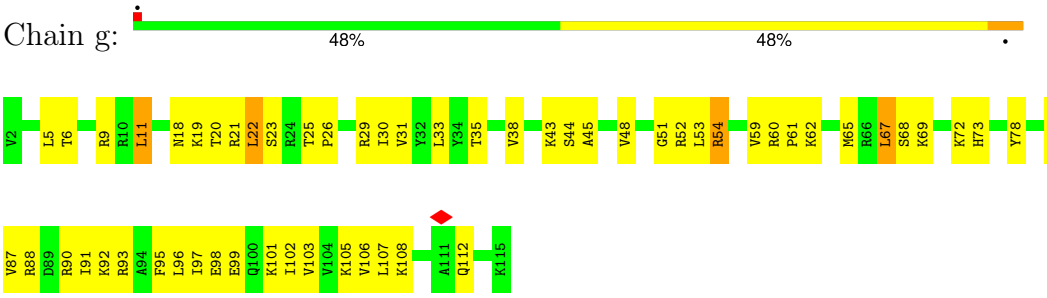
• Molecule 65: Large ribosomal subunit protein eL33

Chain f:



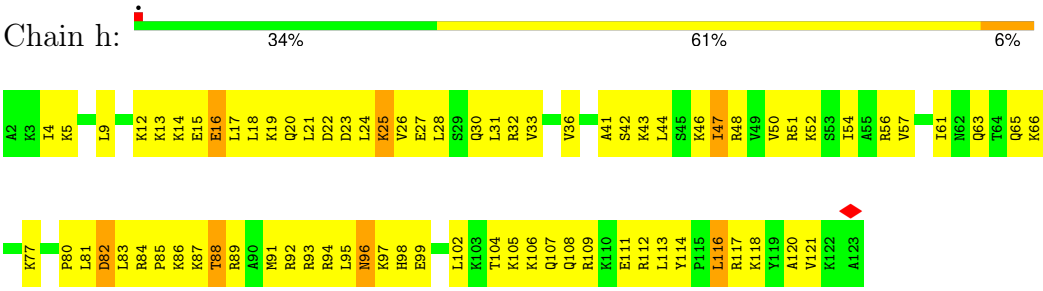
• Molecule 66: 60S ribosomal protein L34

Chain g:



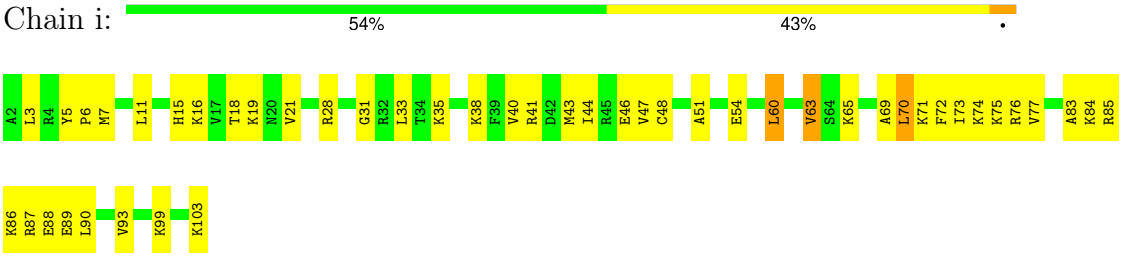
• Molecule 67: 60S ribosomal protein L35

Chain h:



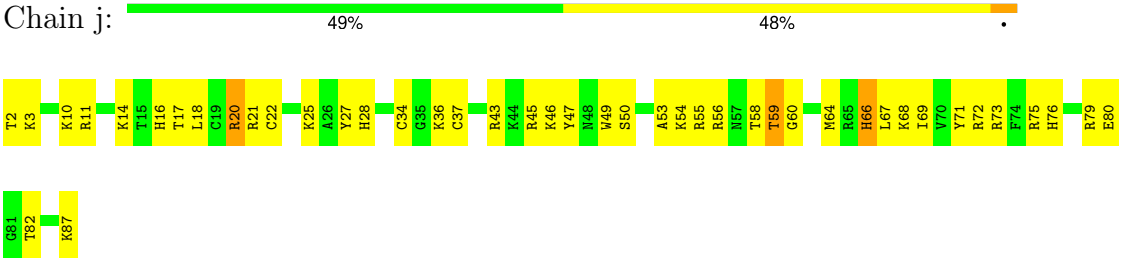
• Molecule 68: 60S ribosomal protein L36

Chain i:



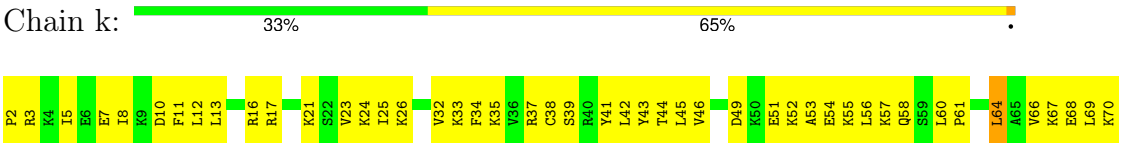
• Molecule 69: 60S ribosomal protein L37

Chain j:



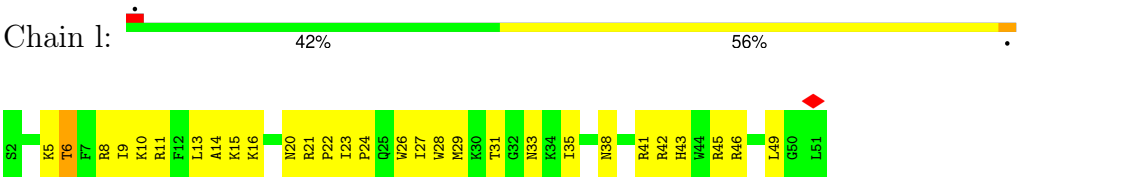
• Molecule 70: Large ribosomal subunit protein eL38

Chain k:



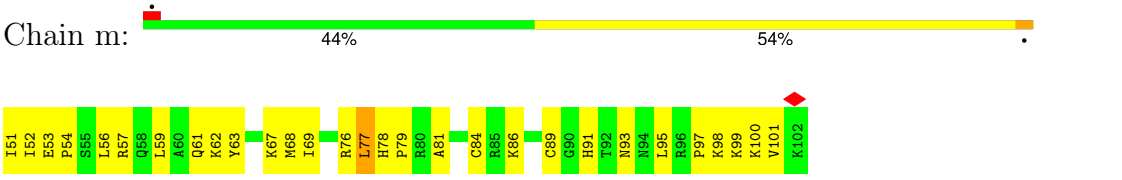
• Molecule 71: 60S ribosomal protein L39

Chain l:



• Molecule 72: Large ribosomal subunit protein eL40

Chain m:

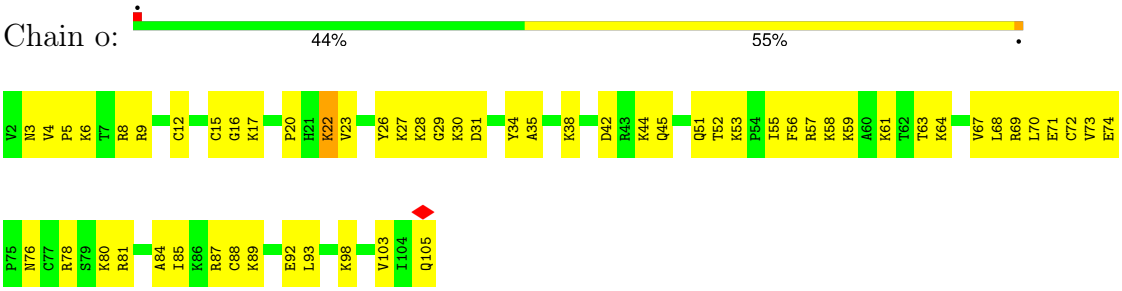


• Molecule 73: eL41

Chain n:

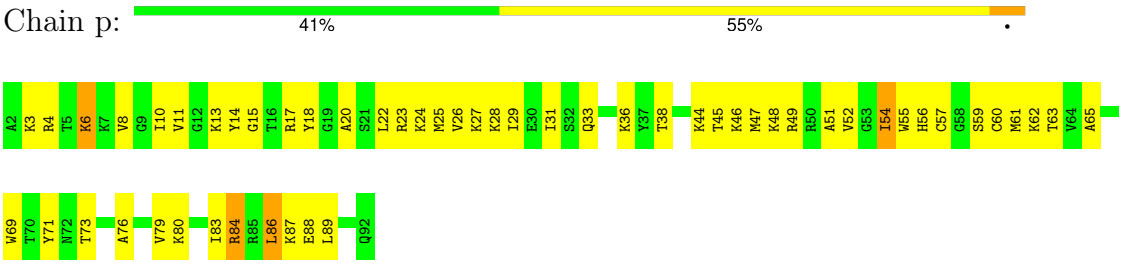
• Molecule 74: eL42

Chain o:



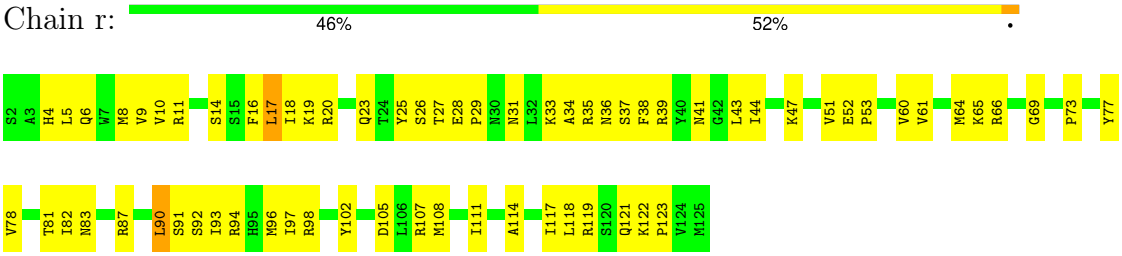
• Molecule 75: 60S ribosomal protein L37a

Chain p:



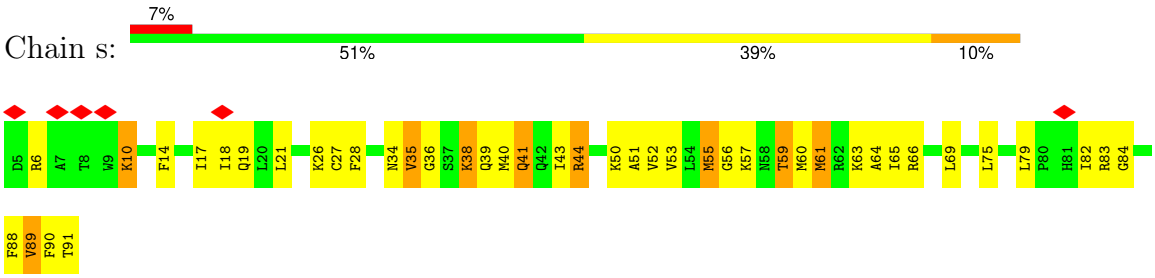
• Molecule 76: 60S ribosomal protein L28

Chain r:



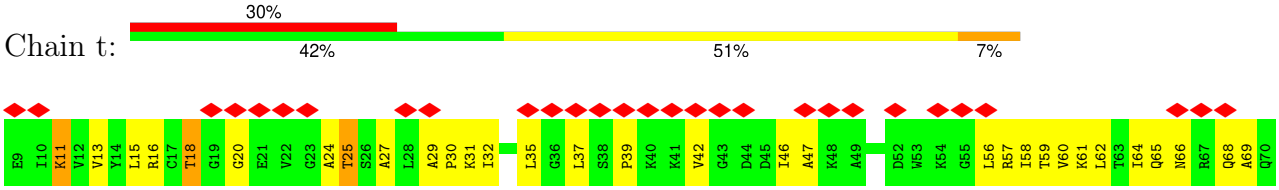
• Molecule 77: Large ribosomal subunit protein uL10

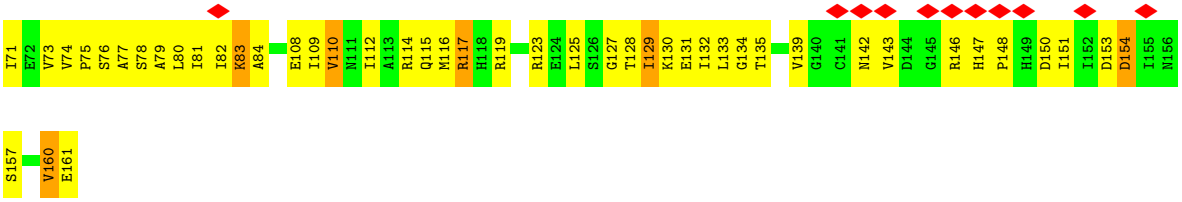
Chain s:



• Molecule 78: uL11

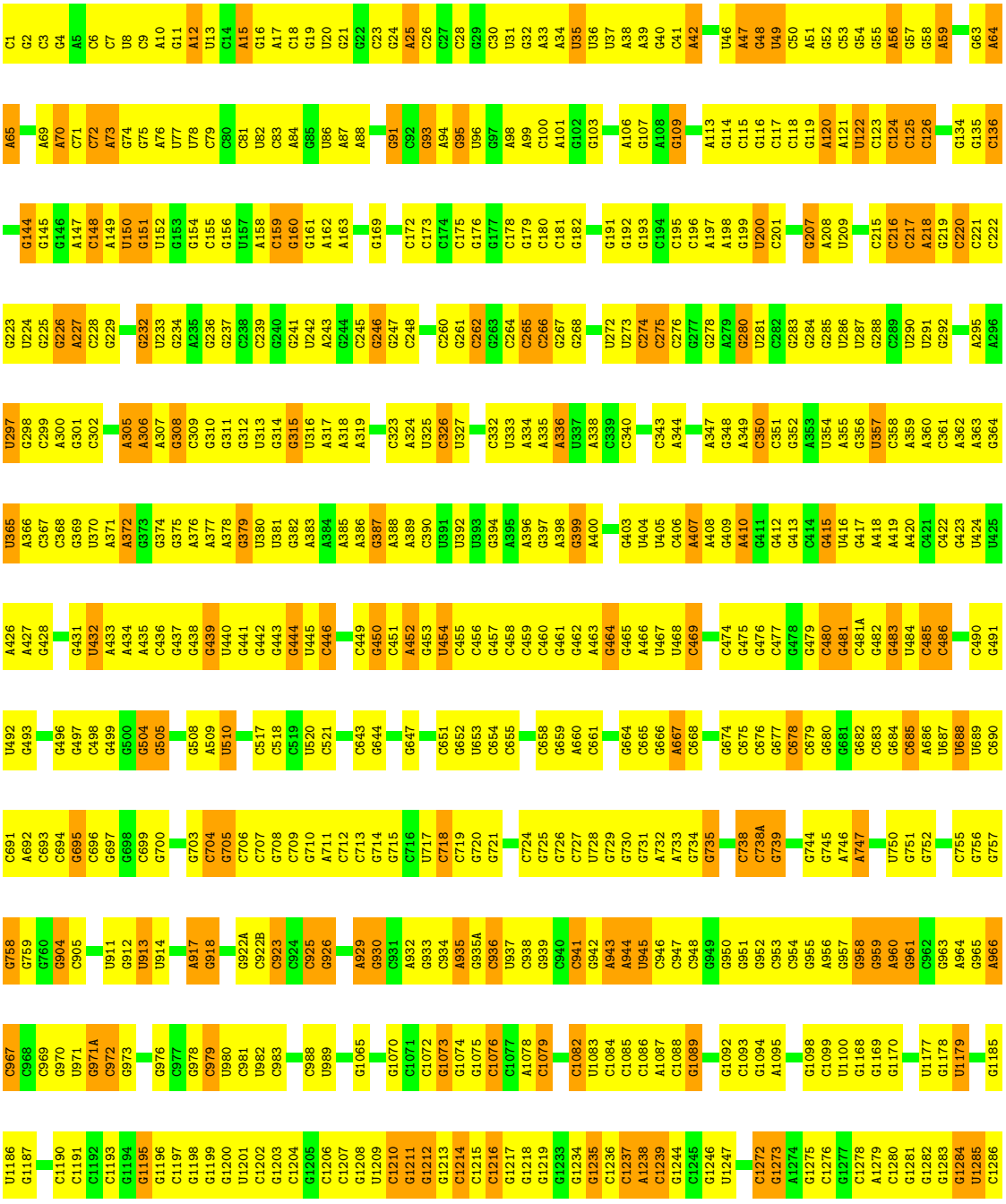
Chain t:

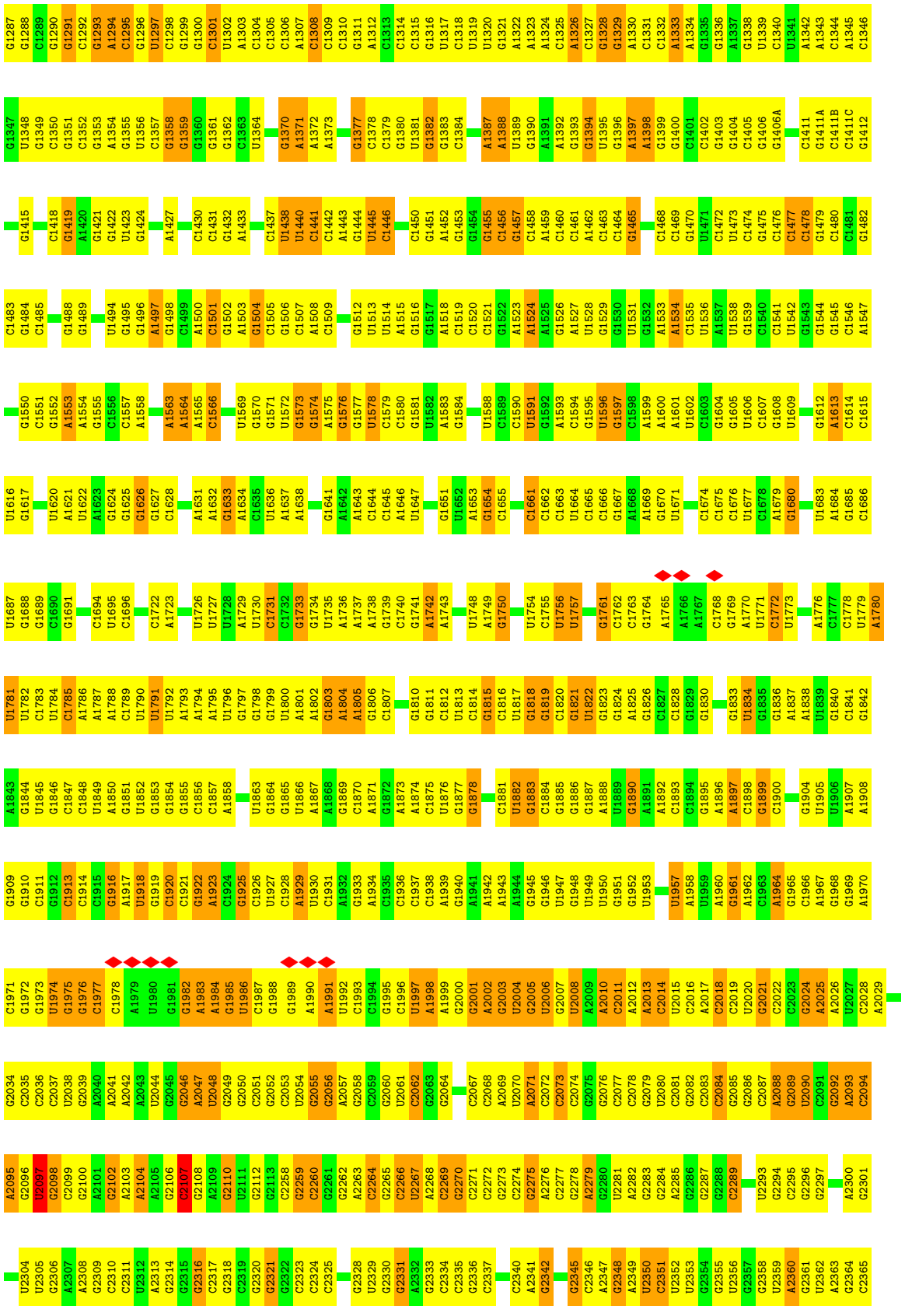


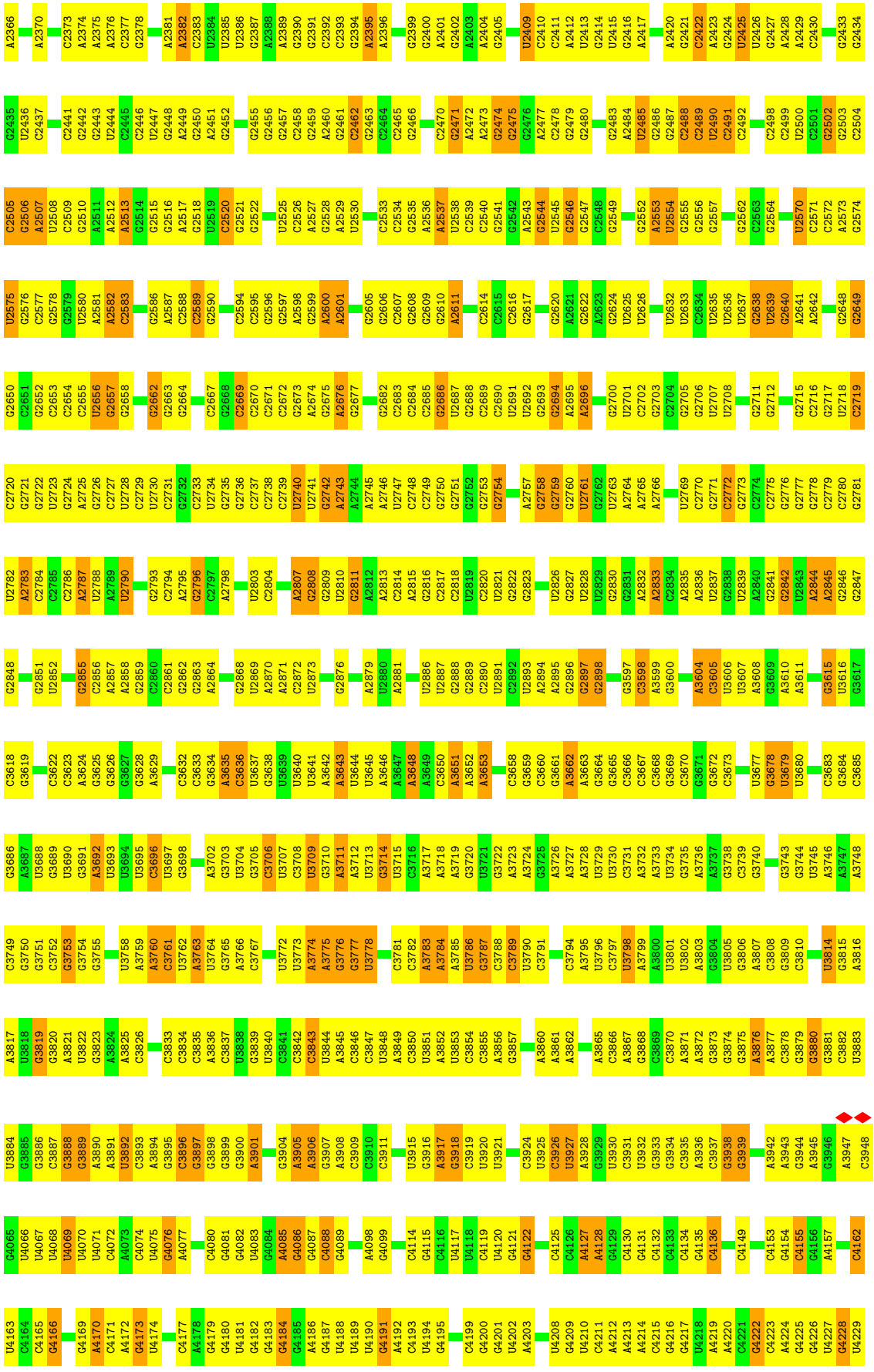


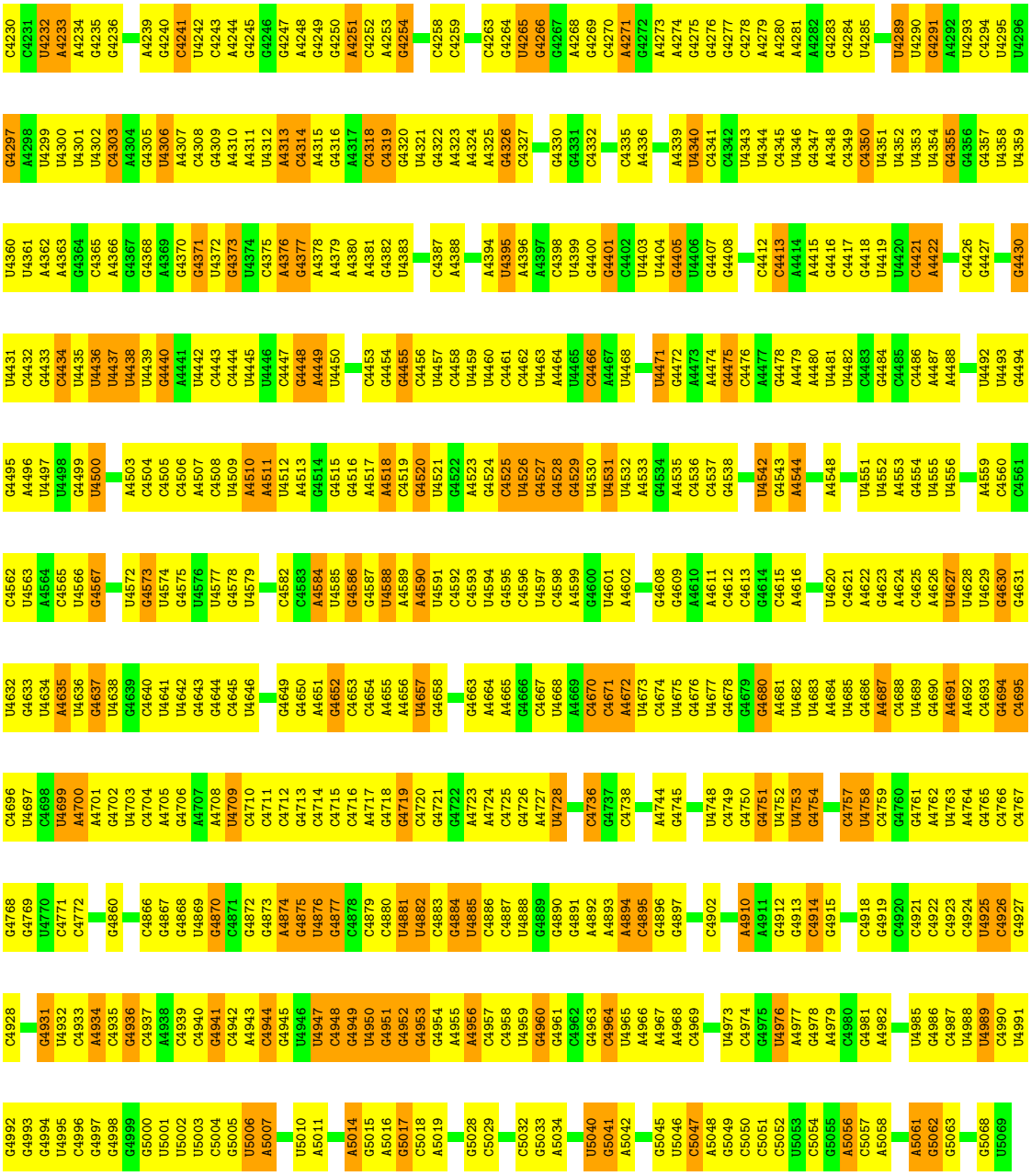
• Molecule 79: 28S rRNA

Chain 5:



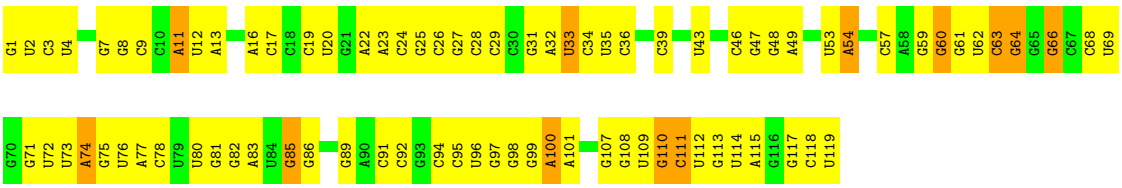






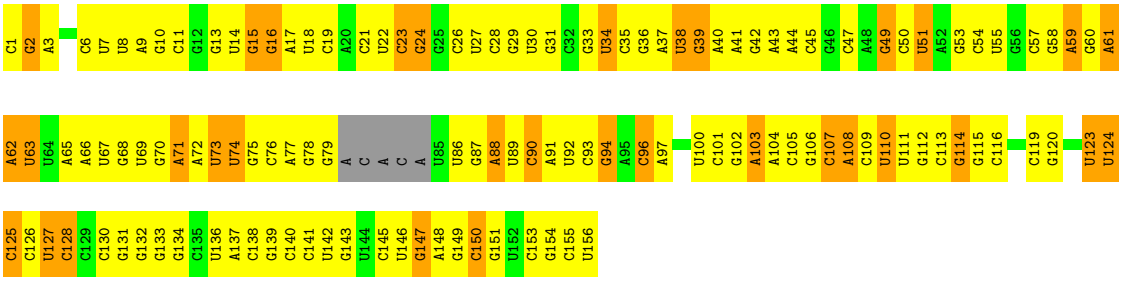
• Molecule 80: 5S rRNA

Chain 7:



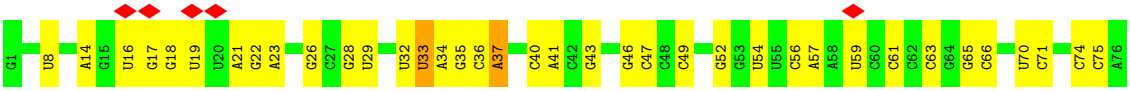
• Molecule 81: 5.8S rRNA

Chain 8:



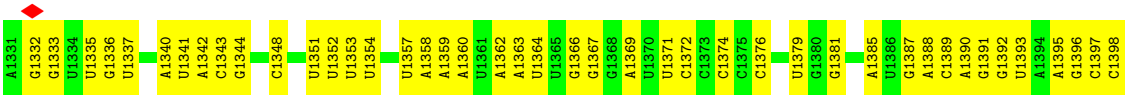
• Molecule 82: Ala-tRNA

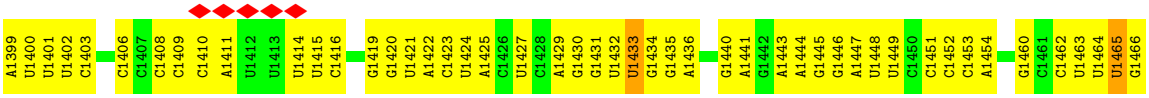
Chain AT:

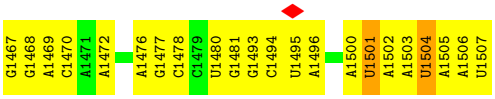


• Molecule 83: NediV IRES

Chain 1:







4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	23922	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	64	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	2.293	Depositor
Minimum map value	-0.912	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.079	Depositor
Recommended contour level	0.193	Depositor
Map size (Å)	849.92, 849.92, 849.92	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.66, 1.66, 1.66	Depositor

5 Model quality

5.1 Standard geometry

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

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	R	0.10	0/1524	0.26	0/2013
2	W	0.12	0/873	0.35	0/1158
3	9	0.12	0/40500	0.26	0/63092
4	AA	0.09	0/1747	0.25	0/2374
5	BB	0.08	0/1756	0.24	0/2350
6	CC	0.09	0/1753	0.27	0/2369
7	EE	0.09	0/2118	0.28	0/2849
8	GG	0.07	0/1946	0.22	0/2590
9	HH	0.09	0/1510	0.23	0/2022
10	II	0.10	0/1715	0.28	0/2287
11	JJ	0.10	0/1550	0.27	0/2069
12	LL	0.09	0/1195	0.27	0/1597
13	NN	0.08	0/1226	0.23	0/1649
14	OO	0.09	0/1029	0.24	0/1380
15	VV	0.09	0/643	0.25	0/860
16	WW	0.09	0/1051	0.25	0/1406
17	XX	0.14	0/1116	0.38	0/1490
18	YY	0.08	0/1028	0.26	0/1366
19	aa	0.09	0/828	0.28	0/1109
20	bb	0.11	0/665	0.26	0/891
21	ee	0.09	0/462	0.25	0/607
22	DD	0.11	0/1796	0.31	0/2417
23	FF	0.11	0/1492	0.31	0/2005
24	KK	0.08	0/834	0.24	0/1125
25	MM	0.11	0/918	0.30	0/1233
26	PP	0.09	0/1079	0.25	0/1441
27	QQ	0.10	0/1146	0.26	0/1534
28	RR	0.08	0/1082	0.23	0/1452
29	SS	0.12	0/1208	0.34	0/1618
30	TT	0.09	0/1115	0.25	0/1493
31	UU	0.08	0/805	0.25	0/1081
32	ZZ	0.18	0/604	0.65	0/810

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	cc	0.08	0/490	0.24	0/656
34	dd	0.09	0/470	0.29	0/623
35	ff	0.08	0/567	0.23	0/753
36	gg	0.09	0/2493	0.27	0/3394
37	A	0.11	0/1936	0.31	0/2596
38	B	0.11	0/3240	0.31	0/4339
39	C	0.11	0/2937	0.30	0/3946
40	D	0.11	0/2437	0.29	0/3264
41	E	0.10	0/1762	0.29	0/2362
42	F	0.13	0/1911	0.35	0/2549
43	G	0.11	0/1910	0.26	0/2569
44	H	0.12	0/1535	0.32	0/2063
45	I	0.11	0/1702	0.28	0/2272
46	J	0.10	0/1385	0.29	0/1852
47	L	0.11	0/1733	0.29	0/2316
48	M	0.11	0/1158	0.29	0/1547
49	N	0.11	0/1746	0.29	0/2338
50	O	0.13	0/1662	0.32	0/2222
51	P	0.11	0/1268	0.31	0/1700
52	Q	0.10	0/1539	0.30	0/2054
53	S	0.11	0/1501	0.29	0/2012
54	T	0.11	0/1326	0.30	0/1770
55	U	0.13	0/823	0.35	0/1104
56	V	0.11	0/1048	0.28	0/1402
57	X	0.11	0/984	0.28	0/1323
58	Y	0.11	0/1132	0.27	0/1504
59	Z	0.10	0/1130	0.27	0/1507
60	a	0.10	0/1191	0.28	0/1590
61	b	0.09	0/861	0.25	0/1138
62	c	0.12	0/771	0.30	0/1034
63	d	0.12	0/903	0.30	0/1216
64	e	0.11	0/1071	0.32	0/1429
65	f	0.11	0/895	0.35	0/1198
66	g	0.10	0/916	0.26	0/1220
67	h	0.11	0/1021	0.27	0/1348
68	i	0.11	0/841	0.29	0/1112
69	j	0.11	0/720	0.32	0/952
70	k	0.12	0/575	0.30	0/761
71	l	0.10	0/459	0.30	0/608
72	m	0.12	0/435	0.34	0/575
73	n	0.14	0/240	0.28	0/305
74	o	0.10	0/864	0.26	0/1140
75	p	0.11	0/718	0.30	0/953

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	r	0.12	0/1010	0.35	0/1354
77	s	0.20	0/707	0.55	0/947
78	t	0.15	0/1003	0.41	0/1354
79	5	0.13	7/84949 (0.0%)	0.27	0/132467
80	7	0.11	0/2836	0.23	0/4421
81	8	0.11	0/3581	0.26	0/5577
82	AT	0.27	1/1810 (0.1%)	0.48	0/2820
83	1	0.27	0/3936	0.57	2/6125 (0.0%)
All	All	0.12	8/232452 (0.0%)	0.29	2/341418 (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
17	XX	0	1
38	B	0	1
65	f	0	1
All	All	0	3

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	5	904	G	C1'-N9	-6.66	1.38	1.48
82	AT	32	U	C1'-N1	6.38	1.58	1.48
79	5	2097	U	C1'-N1	6.36	1.56	1.47
79	5	4876	U	C1'-N1	5.96	1.56	1.47
79	5	2107	C	C1'-N1	5.92	1.57	1.48

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	1	1433	U	P-O3'-C3'	6.01	129.21	120.20
83	1	1433	U	C4'-C3'-O3'	5.60	117.80	109.40

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
38	B	258	HIS	Peptide

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Mol	Chain	Res	Type	Group
17	XX	61	GLN	Peptide
65	f	106	TYR	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	R	1508	0	1664	110	0
2	W	860	0	903	51	0
3	9	36229	0	18308	1270	0
4	AA	1710	0	1708	142	0
5	BB	1729	0	1803	160	0
6	CC	1716	0	1806	137	0
7	EE	2076	0	2177	179	0
8	GG	1923	0	2089	145	0
9	HH	1488	0	1582	108	0
10	II	1686	0	1772	115	0
11	JJ	1525	0	1640	140	0
12	LL	1175	0	1249	89	0
13	NN	1202	0	1289	82	0
14	OO	1016	0	1039	109	0
15	VV	636	0	637	58	0
16	WW	1034	0	1080	95	0
17	XX	1098	0	1167	93	0
18	YY	1011	0	1083	77	0
19	aa	814	0	863	71	0
20	bb	651	0	672	31	0
21	ee	457	0	502	41	0
22	DD	1768	0	1866	128	0
23	FF	1471	0	1522	123	0
24	KK	810	0	836	58	0
25	MM	908	0	939	78	0
26	PP	1058	0	1104	89	0
27	QQ	1128	0	1195	105	0
28	RR	1068	0	1121	91	0
29	SS	1190	0	1249	125	0
30	TT	1097	0	1132	98	0
31	UU	795	0	862	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	ZZ	598	0	656	79	0
33	cc	488	0	514	52	0
34	dd	459	0	448	32	0
35	ff	555	0	564	44	0
36	gg	2436	0	2393	170	0
37	A	1898	0	1993	199	0
38	B	3172	0	3310	258	0
39	C	2883	0	3053	256	0
40	D	2391	0	2424	161	0
41	E	1729	0	1887	132	0
42	F	1875	0	1995	183	0
43	G	1879	0	2027	151	0
44	H	1516	0	1597	133	0
45	I	1664	0	1712	139	0
46	J	1362	0	1399	100	0
47	L	1702	0	1820	116	0
48	M	1137	0	1211	117	0
49	N	1701	0	1749	161	0
50	O	1630	0	1778	138	0
51	P	1242	0	1274	85	0
52	Q	1515	0	1634	144	0
53	S	1462	0	1508	115	0
54	T	1298	0	1366	116	0
55	U	809	0	833	65	0
56	V	1034	0	1097	97	0
57	X	967	0	1040	75	0
58	Y	1115	0	1205	88	0
59	Z	1107	0	1182	76	0
60	a	1162	0	1209	97	0
61	b	848	0	920	61	0
62	c	761	0	794	72	0
63	d	888	0	930	74	0
64	e	1053	0	1147	79	0
65	f	876	0	912	66	0
66	g	906	0	998	69	0
67	h	1013	0	1147	96	0
68	i	830	0	916	44	0
69	j	705	0	737	52	0
70	k	569	0	637	52	0
71	l	447	0	480	28	0
72	m	429	0	465	25	0
73	n	239	0	289	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
74	o	851	0	920	67	0
75	p	708	0	756	66	0
76	r	994	0	1051	70	0
77	s	695	0	727	56	0
78	t	993	0	1034	99	0
79	5	75955	0	38377	2542	0
80	7	2538	0	1286	80	0
81	8	3208	0	1629	151	0
82	AT	1621	792	823	6	0
83	1	3523	1782	1783	5	0
84	5	184	0	0	0	0
84	7	6	0	0	0	0
84	8	5	0	0	0	0
84	9	1	0	0	0	0
84	I	1	0	0	0	0
84	L	1	0	0	0	0
84	P	1	0	0	0	0
84	V	1	0	0	0	0
84	X	1	0	0	0	0
84	a	2	0	0	0	0
84	e	1	0	0	0	0
84	g	1	0	0	0	0
84	j	1	0	0	0	0
85	aa	1	0	0	0	0
85	dd	1	0	0	0	0
85	ff	1	0	0	0	0
85	g	1	0	0	0	0
85	j	1	0	0	0	0
85	m	1	0	0	0	0
85	o	1	0	0	0	0
85	p	1	0	0	0	0
All	All	216487	2574	160495	9922	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 26.

The worst 5 of 9922 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)
79:5:759:G:O6	79:5:904:G:O6	1.66	1.13
79:5:169:G:N2	79:5:267:G:C6	2.28	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XX:46:HIS:HB3	17:XX:101:LEU:HD11	1.43	1.00
79:5:2845:A:H61	79:5:3843:C:H42	0.99	0.98
79:5:1750:G:H1	79:5:1780:A:H61	0.98	0.97

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	R	178/180 (99%)	174 (98%)	4 (2%)	0	100	100
2	W	102/106 (96%)	98 (96%)	4 (4%)	0	100	100
4	AA	215/217 (99%)	210 (98%)	5 (2%)	0	100	100
5	BB	211/213 (99%)	201 (95%)	10 (5%)	0	100	100
6	CC	219/221 (99%)	217 (99%)	2 (1%)	0	100	100
7	EE	260/262 (99%)	252 (97%)	8 (3%)	0	100	100
8	GG	235/237 (99%)	230 (98%)	5 (2%)	0	100	100
9	HH	181/189 (96%)	178 (98%)	3 (2%)	0	100	100
10	II	204/206 (99%)	194 (95%)	10 (5%)	0	100	100
11	JJ	183/185 (99%)	182 (100%)	1 (0%)	0	100	100
12	LL	139/151 (92%)	138 (99%)	1 (1%)	0	100	100
13	NN	147/149 (99%)	146 (99%)	1 (1%)	0	100	100
14	OO	134/136 (98%)	131 (98%)	3 (2%)	0	100	100
15	VV	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
16	WW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
17	XX	139/141 (99%)	134 (96%)	4 (3%)	1 (1%)	18	55
18	YY	122/124 (98%)	120 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	aa	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
20	bb	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
21	ee	55/57 (96%)	53 (96%)	2 (4%)	0	100	100
22	DD	226/228 (99%)	222 (98%)	4 (2%)	0	100	100
23	FF	181/191 (95%)	177 (98%)	4 (2%)	0	100	100
24	KK	94/96 (98%)	93 (99%)	1 (1%)	0	100	100
25	MM	115/117 (98%)	108 (94%)	7 (6%)	0	100	100
26	PP	127/129 (98%)	121 (95%)	6 (5%)	0	100	100
27	QQ	140/142 (99%)	133 (95%)	7 (5%)	0	100	100
28	RR	130/132 (98%)	127 (98%)	3 (2%)	0	100	100
29	SS	142/144 (99%)	138 (97%)	4 (3%)	0	100	100
30	TT	139/141 (99%)	136 (98%)	3 (2%)	0	100	100
31	UU	98/100 (98%)	97 (99%)	1 (1%)	0	100	100
32	ZZ	73/75 (97%)	64 (88%)	9 (12%)	0	100	100
33	cc	60/62 (97%)	60 (100%)	0	0	100	100
34	dd	53/55 (96%)	52 (98%)	1 (2%)	0	100	100
35	ff	66/68 (97%)	64 (97%)	2 (3%)	0	100	100
36	gg	311/313 (99%)	300 (96%)	11 (4%)	0	100	100
37	A	246/248 (99%)	235 (96%)	11 (4%)	0	100	100
38	B	392/394 (100%)	381 (97%)	11 (3%)	0	100	100
39	C	360/362 (99%)	349 (97%)	11 (3%)	0	100	100
40	D	291/293 (99%)	283 (97%)	7 (2%)	1 (0%)	36	70
41	E	208/216 (96%)	201 (97%)	7 (3%)	0	100	100
42	F	223/225 (99%)	216 (97%)	7 (3%)	0	100	100
43	G	229/240 (95%)	225 (98%)	4 (2%)	0	100	100
44	H	188/190 (99%)	182 (97%)	6 (3%)	0	100	100
45	I	201/213 (94%)	194 (96%)	7 (4%)	0	100	100
46	J	168/170 (99%)	166 (99%)	2 (1%)	0	100	100
47	L	208/210 (99%)	203 (98%)	5 (2%)	0	100	100
48	M	136/138 (99%)	131 (96%)	5 (4%)	0	100	100
49	N	201/203 (99%)	197 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	O	197/199 (99%)	190 (96%)	7 (4%)	0	100	100
51	P	151/153 (99%)	148 (98%)	3 (2%)	0	100	100
52	Q	185/187 (99%)	177 (96%)	8 (4%)	0	100	100
53	S	174/176 (99%)	165 (95%)	9 (5%)	0	100	100
54	T	157/159 (99%)	151 (96%)	6 (4%)	0	100	100
55	U	97/99 (98%)	97 (100%)	0	0	100	100
56	V	137/139 (99%)	133 (97%)	4 (3%)	0	100	100
57	X	116/118 (98%)	113 (97%)	3 (3%)	0	100	100
58	Y	132/134 (98%)	130 (98%)	2 (2%)	0	100	100
59	Z	133/135 (98%)	125 (94%)	8 (6%)	0	100	100
60	a	145/147 (99%)	142 (98%)	3 (2%)	0	100	100
61	b	100/104 (96%)	98 (98%)	2 (2%)	0	100	100
62	c	96/98 (98%)	95 (99%)	1 (1%)	0	100	100
63	d	105/107 (98%)	97 (92%)	8 (8%)	0	100	100
64	e	126/128 (98%)	120 (95%)	6 (5%)	0	100	100
65	f	107/109 (98%)	101 (94%)	6 (6%)	0	100	100
66	g	112/114 (98%)	112 (100%)	0	0	100	100
67	h	120/122 (98%)	119 (99%)	1 (1%)	0	100	100
68	i	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
69	j	84/86 (98%)	78 (93%)	6 (7%)	0	100	100
70	k	67/69 (97%)	67 (100%)	0	0	100	100
71	l	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
72	m	50/52 (96%)	47 (94%)	3 (6%)	0	100	100
73	n	23/25 (92%)	23 (100%)	0	0	100	100
74	o	102/104 (98%)	99 (97%)	3 (3%)	0	100	100
75	p	89/91 (98%)	84 (94%)	5 (6%)	0	100	100
76	r	122/124 (98%)	119 (98%)	3 (2%)	0	100	100
77	s	85/87 (98%)	76 (89%)	9 (11%)	0	100	100
78	t	129/133 (97%)	117 (91%)	11 (8%)	1 (1%)	16	52
All	All	11407/11616 (98%)	11055 (97%)	349 (3%)	3 (0%)	100	100

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
17	XX	62	PRO
78	t	160	VAL
40	D	125	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	R	159/159 (100%)	153 (96%)	6 (4%)	29	51
2	W	86/86 (100%)	83 (96%)	3 (4%)	32	54
4	AA	180/181 (99%)	171 (95%)	9 (5%)	22	45
5	BB	194/194 (100%)	189 (97%)	5 (3%)	40	61
6	CC	187/187 (100%)	184 (98%)	3 (2%)	55	69
7	EE	224/224 (100%)	217 (97%)	7 (3%)	35	56
8	GG	207/207 (100%)	202 (98%)	5 (2%)	43	63
9	HH	165/169 (98%)	160 (97%)	5 (3%)	36	57
10	II	178/178 (100%)	168 (94%)	10 (6%)	19	43
11	JJ	161/161 (100%)	155 (96%)	6 (4%)	30	52
12	LL	130/136 (96%)	122 (94%)	8 (6%)	16	41
13	NN	130/130 (100%)	127 (98%)	3 (2%)	44	64
14	OO	106/106 (100%)	103 (97%)	3 (3%)	38	59
15	VV	67/67 (100%)	63 (94%)	4 (6%)	17	42
16	WW	112/112 (100%)	108 (96%)	4 (4%)	31	53
17	XX	113/113 (100%)	107 (95%)	6 (5%)	20	44
18	YY	107/107 (100%)	101 (94%)	6 (6%)	19	43
19	aa	88/88 (100%)	86 (98%)	2 (2%)	44	64
20	bb	75/75 (100%)	73 (97%)	2 (3%)	39	60
21	ee	47/47 (100%)	47 (100%)	0	100	100
22	DD	190/190 (100%)	184 (97%)	6 (3%)	34	56
23	FF	158/161 (98%)	152 (96%)	6 (4%)	29	51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
24	KK	87/87 (100%)	86 (99%)	1 (1%)	65 74
25	MM	99/99 (100%)	94 (95%)	5 (5%)	21 45
26	PP	115/115 (100%)	113 (98%)	2 (2%)	53 68
27	QQ	117/117 (100%)	113 (97%)	4 (3%)	32 55
28	RR	119/119 (100%)	117 (98%)	2 (2%)	53 68
29	SS	125/125 (100%)	117 (94%)	8 (6%)	16 40
30	TT	111/111 (100%)	109 (98%)	2 (2%)	51 67
31	UU	92/92 (100%)	89 (97%)	3 (3%)	33 55
32	ZZ	66/66 (100%)	48 (73%)	18 (27%)	0 3
33	cc	55/55 (100%)	55 (100%)	0	100 100
34	dd	48/48 (100%)	46 (96%)	2 (4%)	26 49
35	ff	61/61 (100%)	60 (98%)	1 (2%)	55 69
36	gg	272/272 (100%)	269 (99%)	3 (1%)	65 74
37	A	190/190 (100%)	168 (88%)	22 (12%)	5 21
38	B	342/342 (100%)	327 (96%)	15 (4%)	25 48
39	C	302/302 (100%)	284 (94%)	18 (6%)	17 42
40	D	247/247 (100%)	240 (97%)	7 (3%)	38 59
41	E	190/190 (100%)	182 (96%)	8 (4%)	26 49
42	F	196/196 (100%)	186 (95%)	10 (5%)	21 45
43	G	200/205 (98%)	190 (95%)	10 (5%)	22 45
44	H	169/169 (100%)	157 (93%)	12 (7%)	13 37
45	I	175/180 (97%)	165 (94%)	10 (6%)	18 43
46	J	143/143 (100%)	135 (94%)	8 (6%)	19 43
47	L	175/175 (100%)	167 (95%)	8 (5%)	24 47
48	M	117/117 (100%)	107 (92%)	10 (8%)	10 32
49	N	171/171 (100%)	157 (92%)	14 (8%)	10 33
50	O	171/171 (100%)	159 (93%)	12 (7%)	14 38
51	P	134/134 (100%)	127 (95%)	7 (5%)	21 45
52	Q	164/164 (100%)	150 (92%)	14 (8%)	10 32
53	S	157/157 (100%)	144 (92%)	13 (8%)	10 32
54	T	139/139 (100%)	131 (94%)	8 (6%)	18 42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
55	U	89/89 (100%)	86 (97%)	3 (3%)	32 55
56	V	106/106 (100%)	101 (95%)	5 (5%)	23 47
57	X	106/106 (100%)	98 (92%)	8 (8%)	12 35
58	Y	124/124 (100%)	121 (98%)	3 (2%)	43 63
59	Z	117/117 (100%)	114 (97%)	3 (3%)	40 61
60	a	119/119 (100%)	113 (95%)	6 (5%)	22 45
61	b	84/84 (100%)	78 (93%)	6 (7%)	13 37
62	c	84/84 (100%)	81 (96%)	3 (4%)	31 53
63	d	98/98 (100%)	93 (95%)	5 (5%)	21 45
64	e	114/114 (100%)	107 (94%)	7 (6%)	17 41
65	f	88/88 (100%)	85 (97%)	3 (3%)	32 55
66	g	98/98 (100%)	90 (92%)	8 (8%)	10 33
67	h	109/109 (100%)	100 (92%)	9 (8%)	10 32
68	i	86/86 (100%)	80 (93%)	6 (7%)	14 38
69	j	73/73 (100%)	70 (96%)	3 (4%)	27 50
70	k	64/64 (100%)	62 (97%)	2 (3%)	35 56
71	l	47/47 (100%)	45 (96%)	2 (4%)	26 49
72	m	48/48 (100%)	45 (94%)	3 (6%)	16 40
73	n	24/24 (100%)	22 (92%)	2 (8%)	10 32
74	o	92/92 (100%)	90 (98%)	2 (2%)	45 64
75	p	74/74 (100%)	68 (92%)	6 (8%)	11 33
76	r	108/108 (100%)	102 (94%)	6 (6%)	19 43
77	s	75/75 (100%)	63 (84%)	12 (16%)	2 14
78	t	107/107 (100%)	97 (91%)	10 (9%)	8 28
All	All	9947/9971 (100%)	9458 (95%)	489 (5%)	24 46

5 of 489 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
42	F	51	GLU
69	j	66	HIS
47	L	194	ILE
68	i	63	VAL
77	s	44	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 127 such sidechains are listed below:

Mol	Chain	Res	Type
37	A	95	GLN
65	f	78	HIS
41	E	194	GLN
65	f	56	ASN
71	l	17	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	9	1683/1773 (94%)	370 (21%)	20 (1%)
79	5	3518/3543 (99%)	852 (24%)	59 (1%)
80	7	118/119 (99%)	17 (14%)	0
81	8	149/156 (95%)	41 (27%)	1 (0%)
82	AT	75/76 (98%)	34 (45%)	1 (1%)
83	1	165/166 (99%)	111 (67%)	7 (4%)
All	All	5708/5833 (97%)	1425 (24%)	88 (1%)

5 of 1425 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	9	2	A
3	9	3	C
3	9	4	C
3	9	25	A
3	9	33	G

5 of 88 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
79	5	2089	G
79	5	4542	U
79	5	2474	G
79	5	3625	G
79	5	4925	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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 214 ligands modelled in this entry, 214 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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
79	5	30
3	9	20
41	E	3
2	W	1
61	b	1
83	1	1
78	t	1

The worst 5 of 57 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	2113:G	O3'	2258:C	P	42.79
1	W	63:GLN	C	79:GLN	N	40.82
1	b	76:VAL	C	89:VAL	N	37.15
1	5	1252:C	O3'	1271:G	P	36.89
1	E	77:ALA	C	92:LEU	N	29.57

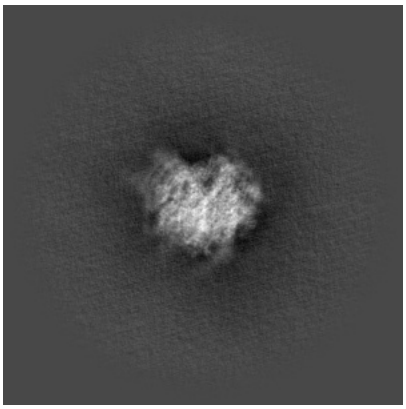
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-72170. These allow visual inspection of the internal detail of the map and identification of artifacts.

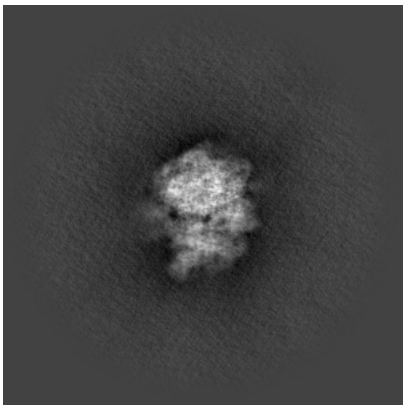
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

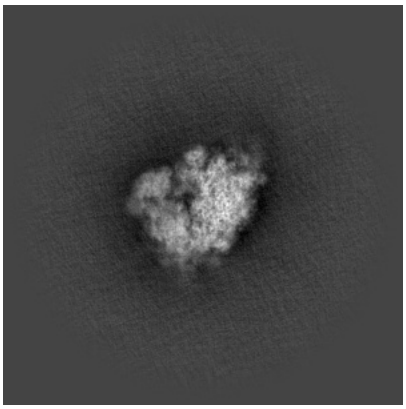
6.1.1 Primary map



X

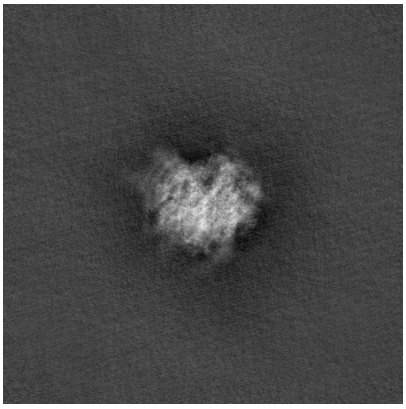


Y

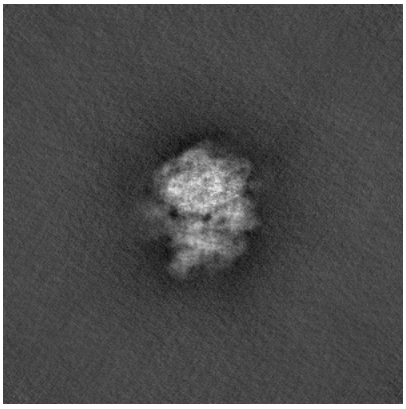


Z

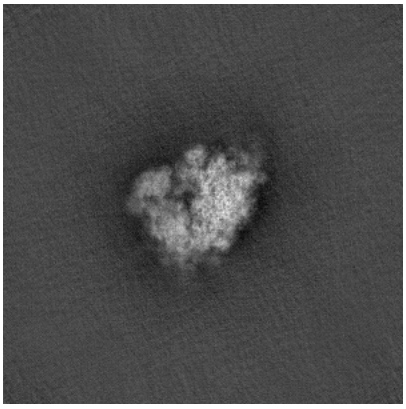
6.1.2 Raw map



X



Y

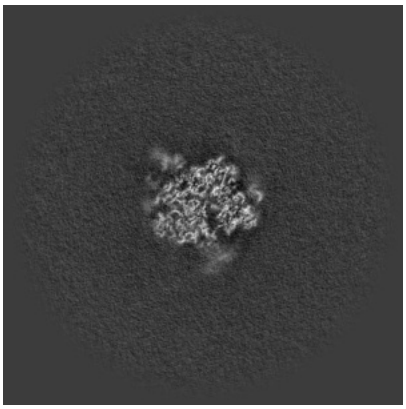


Z

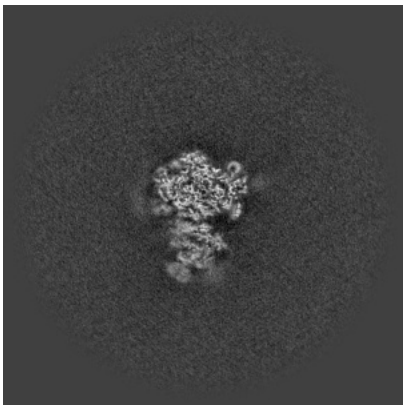
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

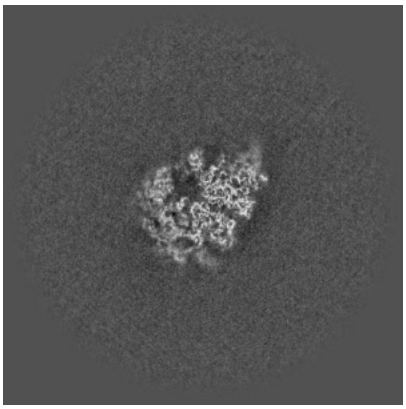
6.2.1 Primary map



X Index: 256

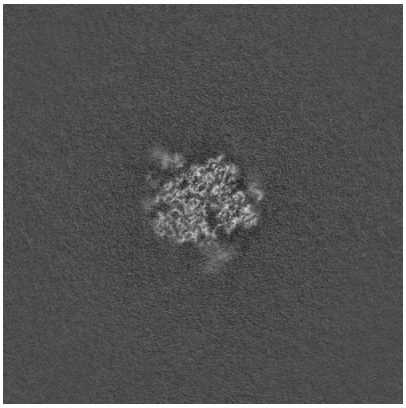


Y Index: 256

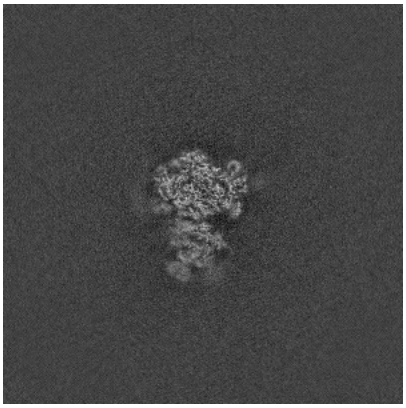


Z Index: 256

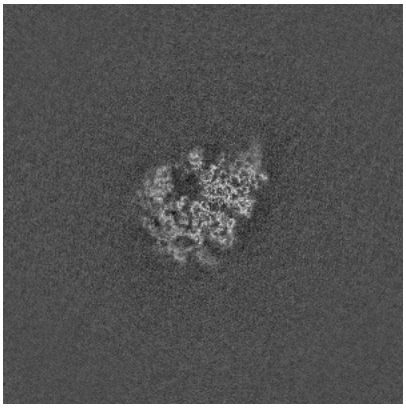
6.2.2 Raw map



X Index: 256



Y Index: 256

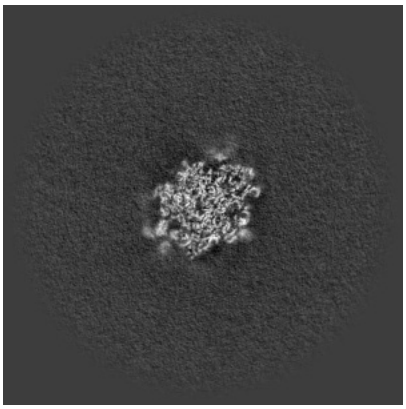


Z Index: 256

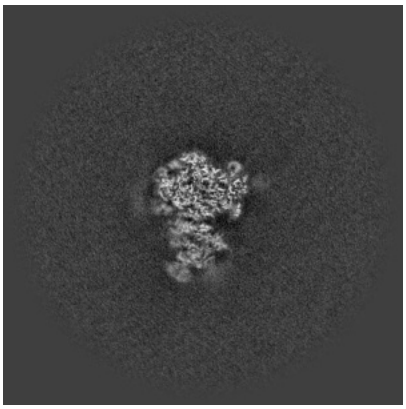
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

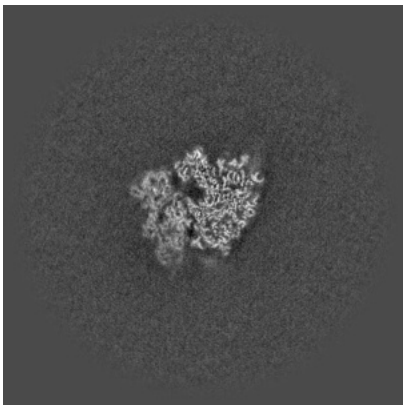
6.3.1 Primary map



X Index: 275

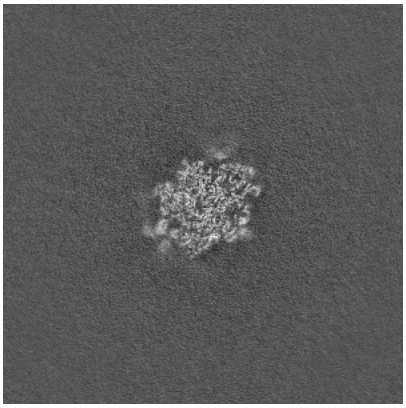


Y Index: 255

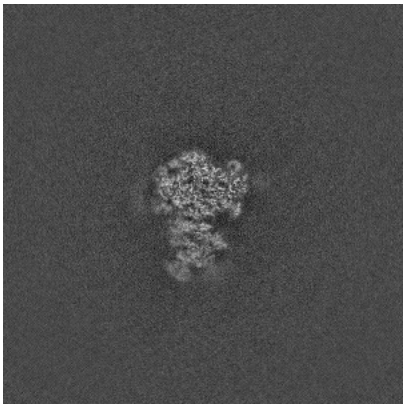


Z Index: 246

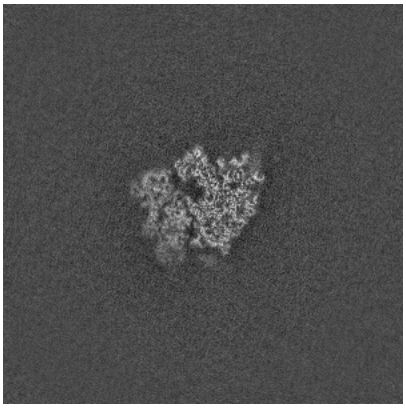
6.3.2 Raw map



X Index: 275



Y Index: 255

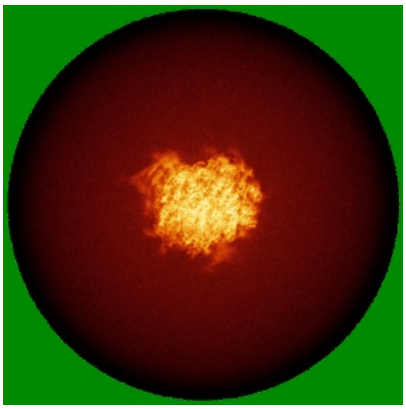


Z Index: 247

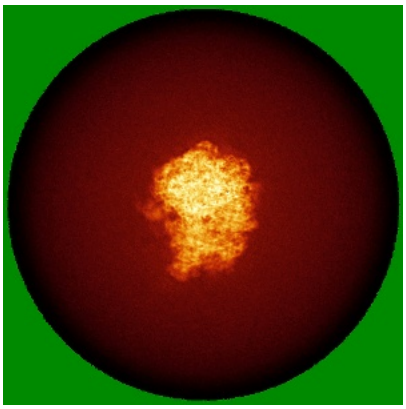
The images above show the largest variance slices of the map in three orthogonal directions.

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

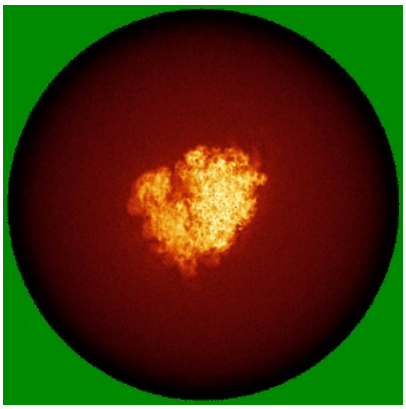
6.4.1 Primary map



X

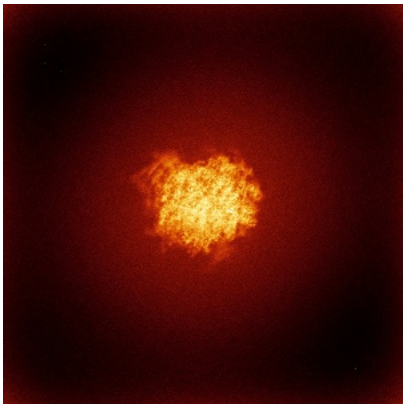


Y

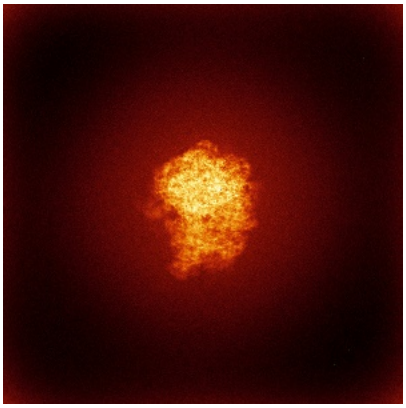


Z

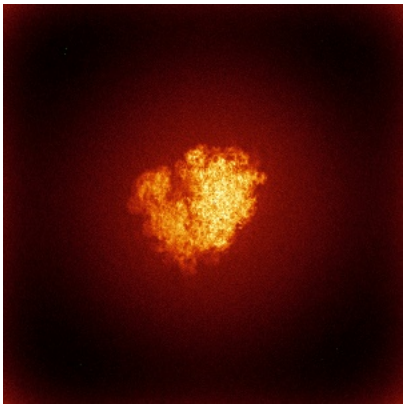
6.4.2 Raw map



X



Y

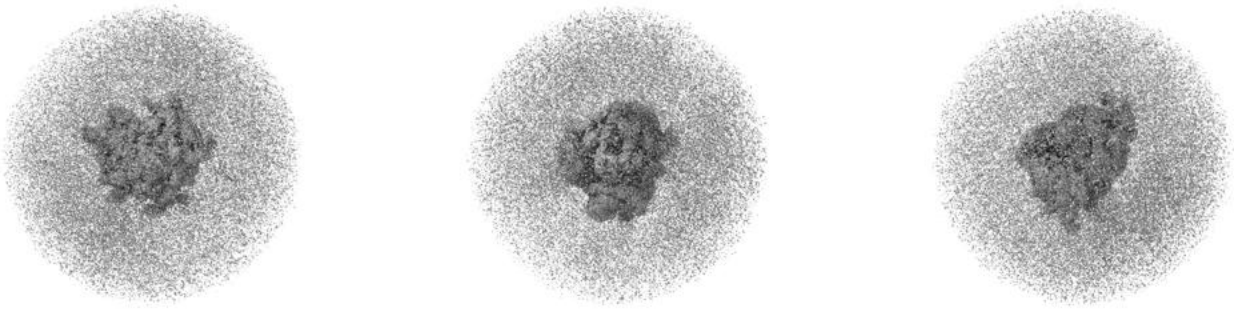


Z

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)

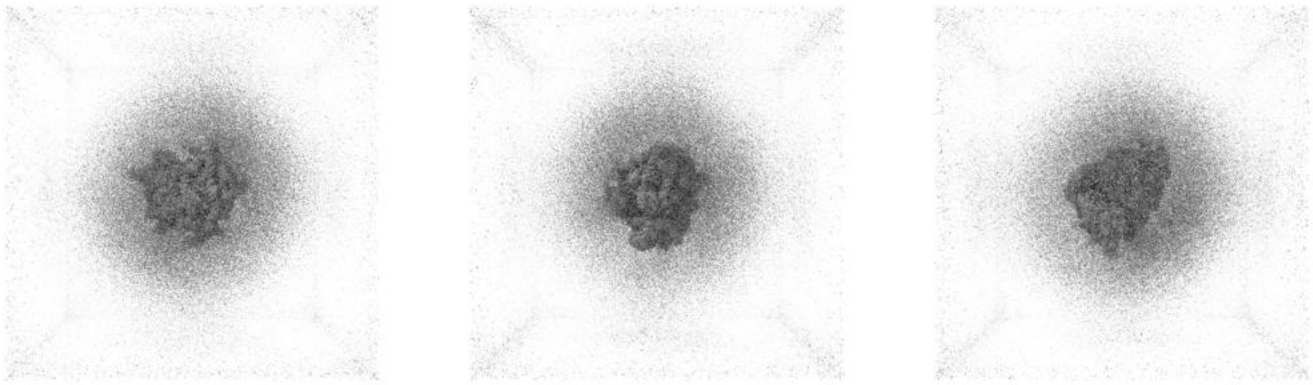
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.193. 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



X Y Z

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.

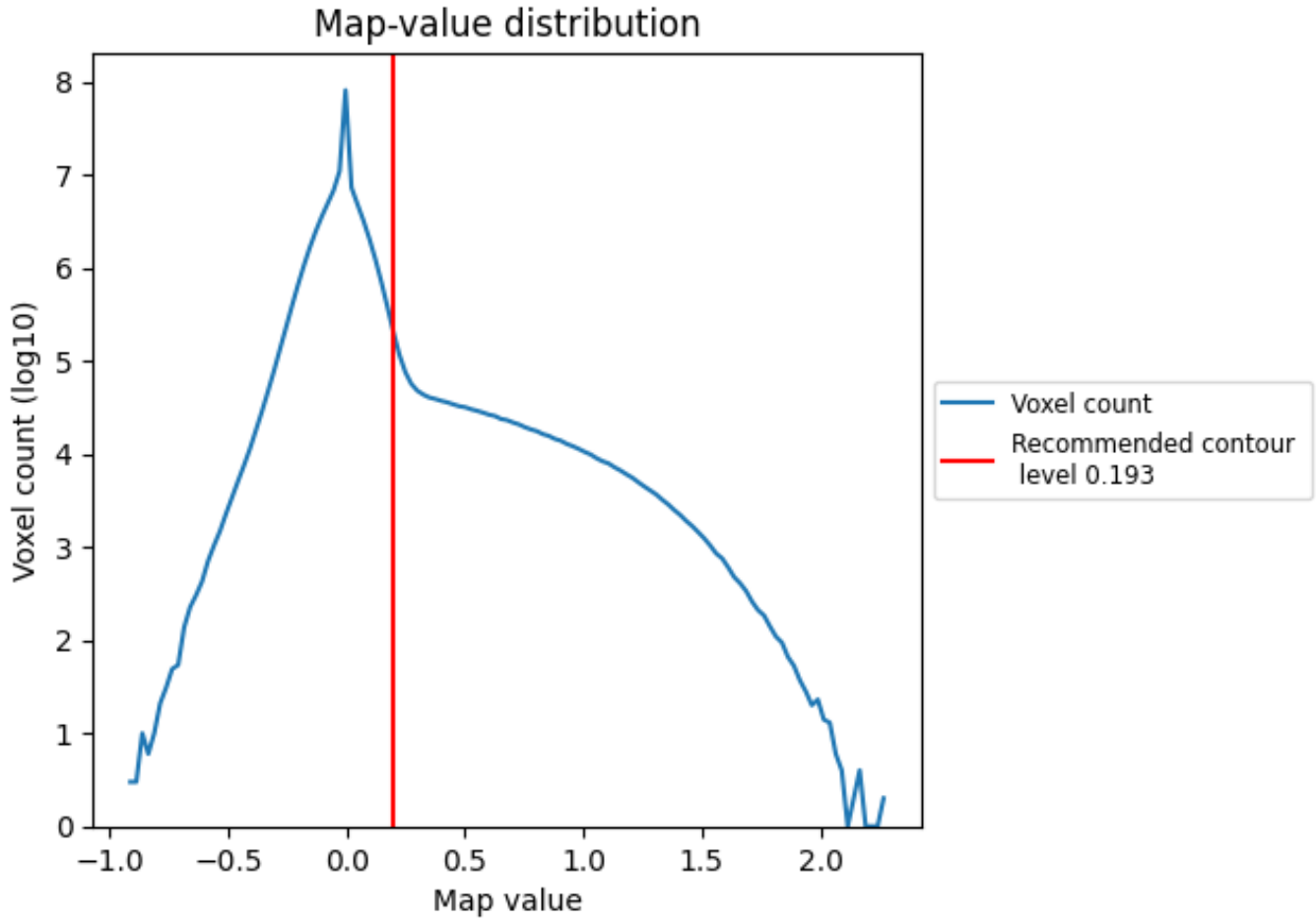
6.6 Mask visualisation (i)

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

7 Map analysis

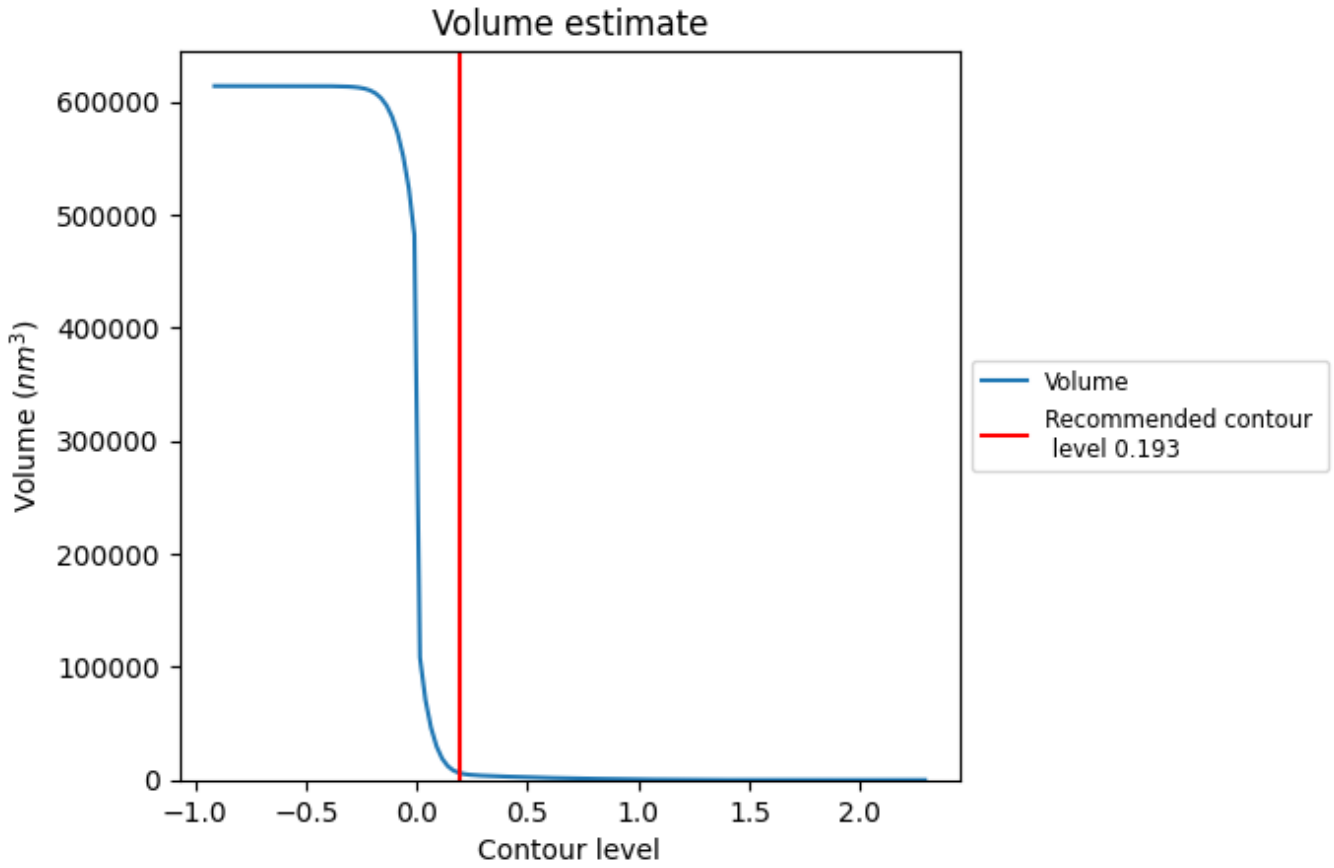
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

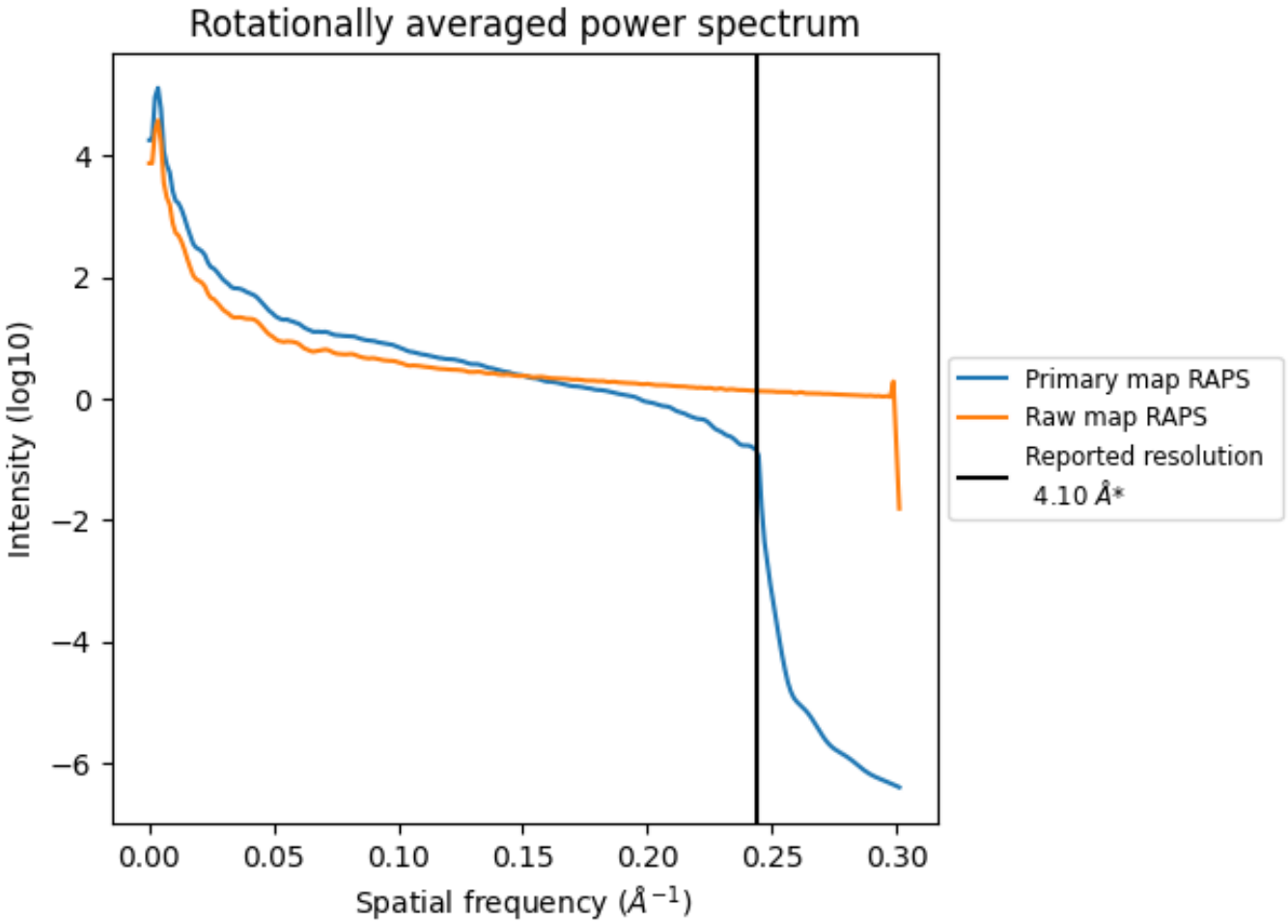
7.2 Volume estimate (i)



The volume at the recommended contour level is 6203 nm^3; this corresponds to an approximate mass of 5603 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)

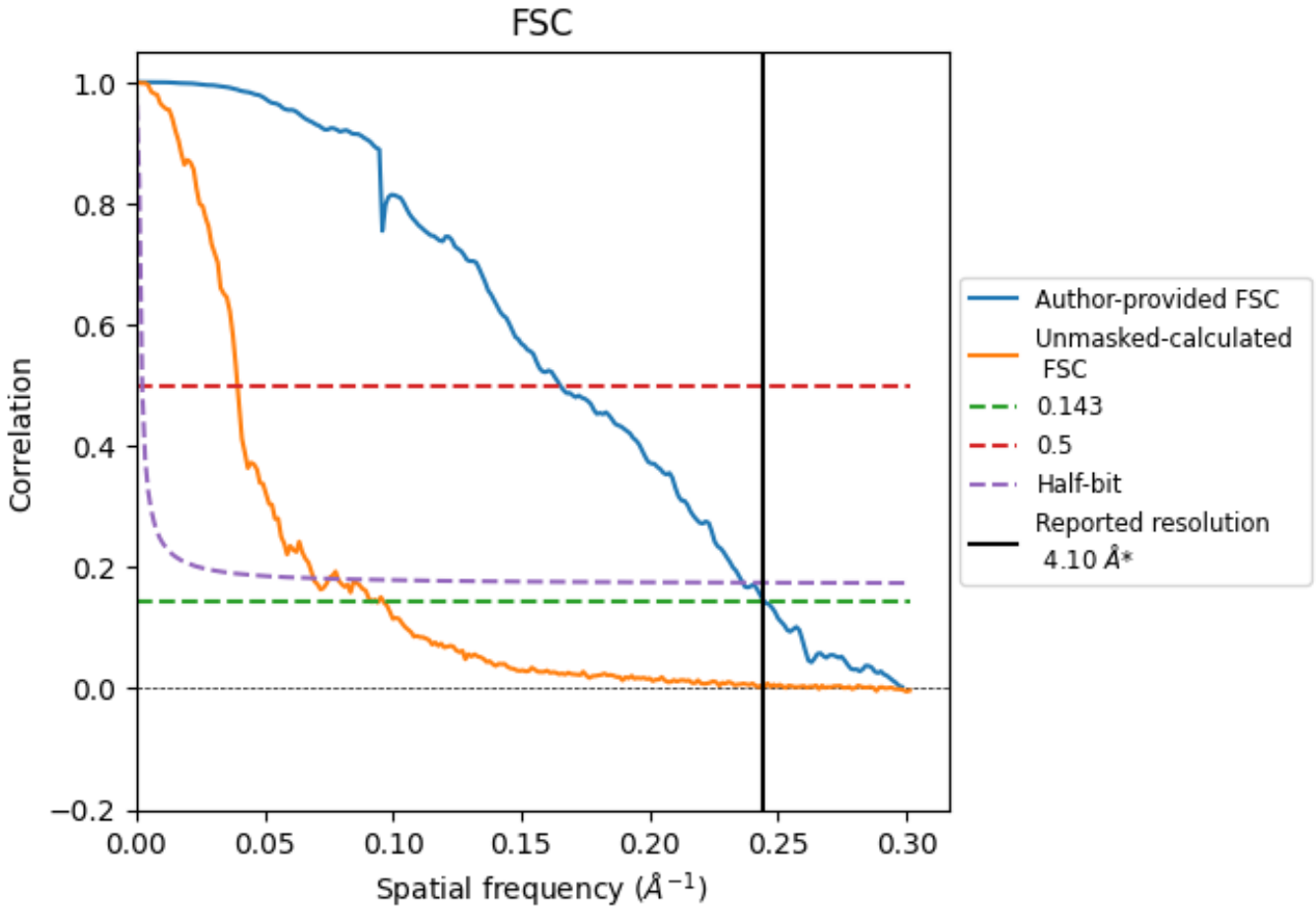


*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

8.2 Resolution estimates (i)

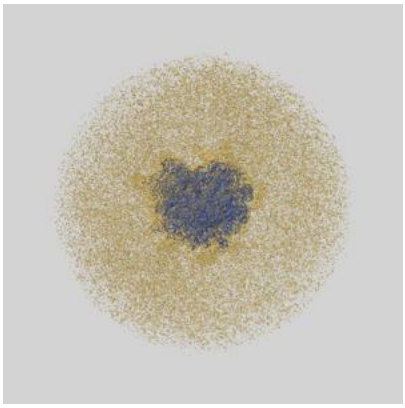
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	4.08	6.06	4.24
Unmasked-calculated*	10.91	25.38	14.47

*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 10.91 differs from the reported value 4.1 by more than 10 %

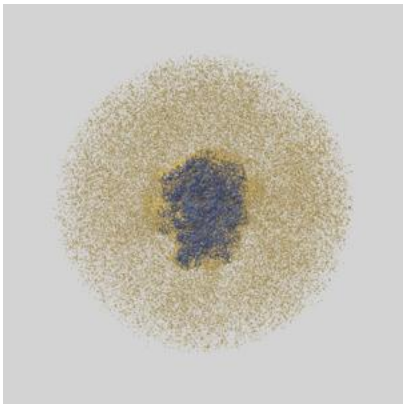
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-72170 and PDB model 9Q2O. Per-residue inclusion information can be found in section 3 on page 23.

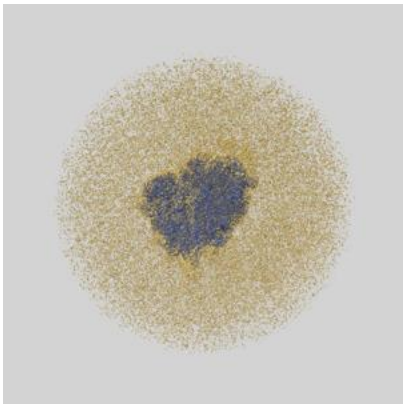
9.1 Map-model overlay



X



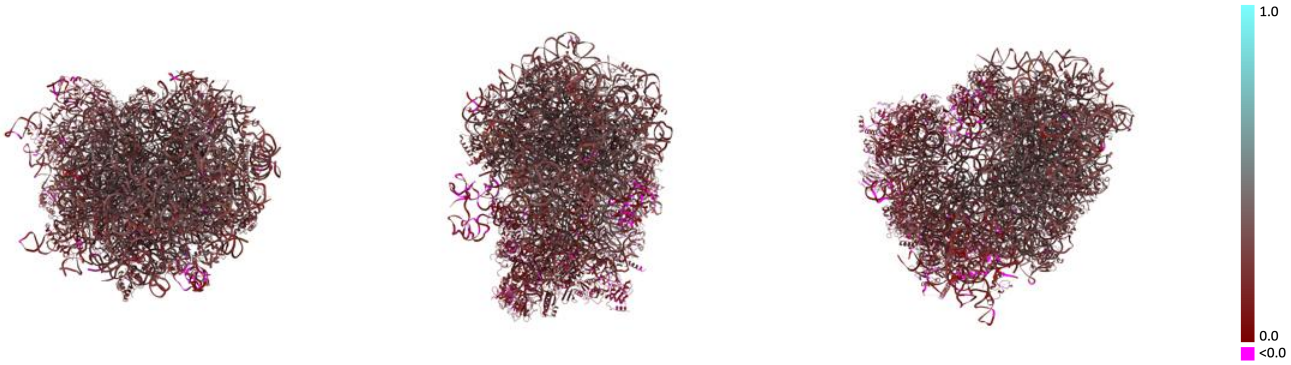
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.193 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

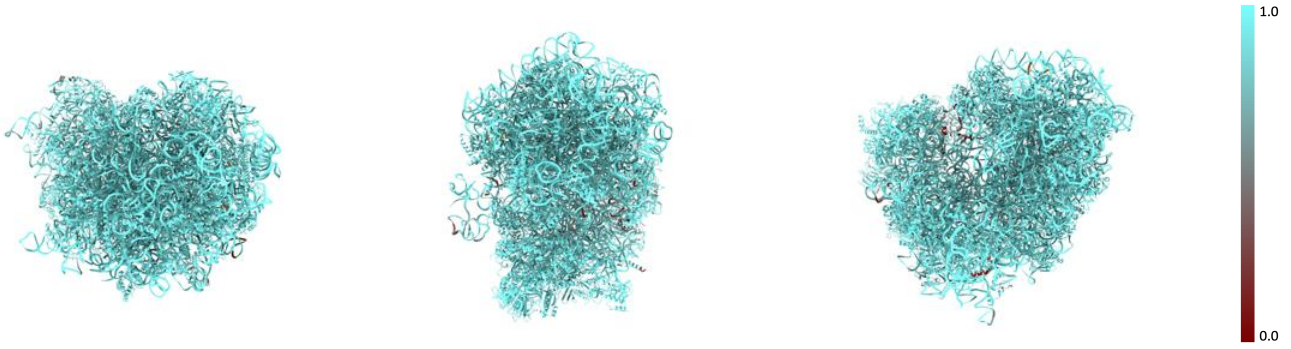
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

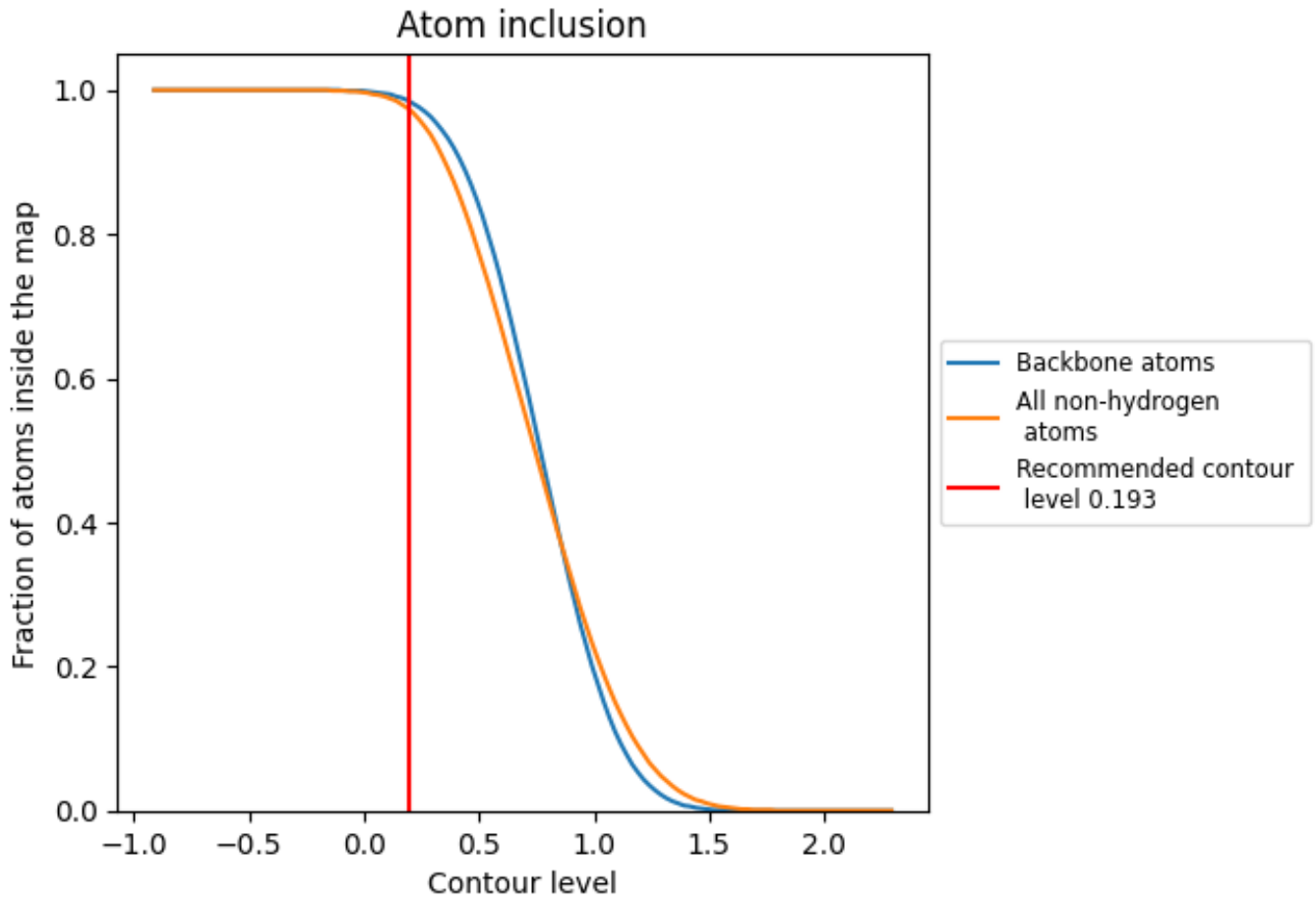
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.193).

9.4 Atom inclusion (i)



At the recommended contour level, 98% of all backbone atoms, 97% 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 (0.193) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9740	0.2530
1	0.8990	0.1030
5	0.9910	0.2960
7	0.9980	0.3120
8	0.9980	0.2960
9	0.9880	0.2250
A	0.9660	0.2790
AA	0.9540	0.1940
AT	0.8500	0.1920
B	0.9740	0.3040
BB	0.9780	0.1610
C	0.9680	0.2920
CC	0.9200	0.2240
D	0.9930	0.2600
DD	0.9330	0.2160
E	0.9800	0.2900
EE	0.9710	0.2040
F	0.9280	0.2730
FF	0.9690	0.1620
G	0.9690	0.2510
GG	0.9480	0.1740
H	0.9700	0.2960
HH	0.8890	0.1770
I	0.9340	0.2930
II	0.9320	0.1830
J	0.9690	0.2490
JJ	0.9670	0.2000
KK	0.9950	0.1810
L	0.9650	0.2750
LL	0.9590	0.2250
M	0.9780	0.2910
MM	0.9680	0.1300
N	0.9720	0.2560
NN	0.9580	0.1920
O	0.9420	0.2880

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Chain	Atom inclusion	Q-score
OO	0.9710	0.1510
P	0.9880	0.2900
PP	0.9330	0.1630
Q	0.9630	0.2910
QQ	0.9890	0.1660
R	0.9390	0.1900
RR	0.8560	0.1610
S	0.9650	0.3010
SS	0.9770	0.1830
T	0.9530	0.2940
TT	0.9600	0.1610
U	0.9940	0.2500
UU	0.9860	0.2060
V	0.9300	0.2850
VV	0.9240	0.2010
W	0.8420	0.1960
WW	0.9540	0.2230
X	0.9830	0.2780
XX	0.9490	0.2380
Y	0.9930	0.2730
YY	0.9830	0.1900
Z	0.9910	0.2330
ZZ	0.9660	0.1920
a	0.9790	0.2920
aa	0.9590	0.1850
b	0.9760	0.2540
bb	0.9720	0.1820
c	0.9560	0.2410
cc	0.9400	0.1580
d	0.9830	0.2840
dd	0.9960	0.1780
e	0.9770	0.3140
ee	0.8660	0.1750
f	0.9370	0.3160
ff	0.9630	0.1420
g	0.9690	0.2590
gg	0.9720	0.1360
h	0.9790	0.2470
i	0.9770	0.2560
j	0.9930	0.2620
k	0.9770	0.2610
l	0.9770	0.2730

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Chain	Atom inclusion	Q-score
m	0.9660	0.2860
n	0.9310	0.2230
o	0.9310	0.2690
p	0.9390	0.2560
r	0.9790	0.3080
s	0.8620	0.1410
t	0.6800	0.0940