wwPDB EM Validation Summary Report ⓘ

Apr 21, 2025 – 03:37 PM EDT

PDB ID	:	9AZC / pdb_00009azc
EMDB ID	:	EMD-44014
Title	:	In situ human 80S ribosome (Consensus map)
Authors	:	Wei, Z.; Yong, X.
Deposited on	:	2024-03-11
Resolution	:	2.19 Å(reported)

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

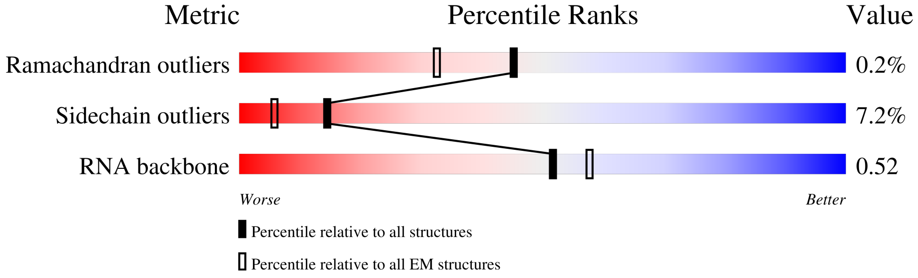
EMDB validation analysis	:	0.0.1.dev117
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.42

1 Overall quality at a glance

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

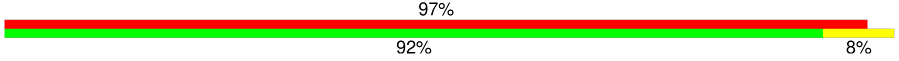
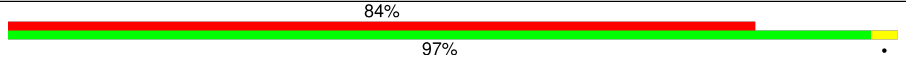
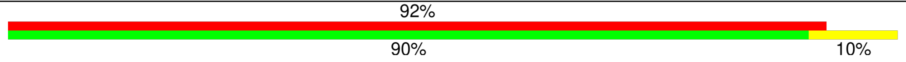
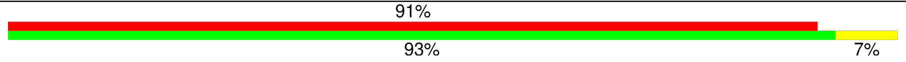
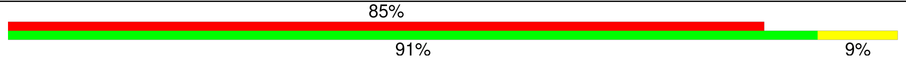
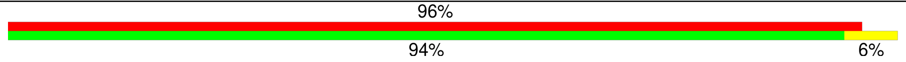
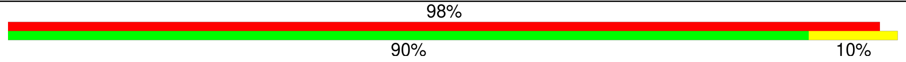
The reported resolution of this entry is 2.19 Å.

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	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

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	CD	36	
2	CI	31	
3	LR	187	
4	SE	262	
5	SI	206	
6	SL	153	
7	SX	141	
8	SG	237	

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Mol	Chain	Length	Quality of chain
9	SJ	185	98% 94% 6%
10	SY	131	99% 89% 11%
11	Se	58	98% 88% 12%
12	SA	221	100% 95% 5%
13	SB	214	100% 96% •
14	SH	186	99% 90% 10%
15	SV	83	98% 89% 11%
16	Sa	102	100% 92% 8%
17	SC	222	97% 92% 8%
18	SN	150	99% 95% 5%
19	SO	140	100% 95% 5%
20	SW	129	94% 92% 8%
21	Sb	83	100% 95% 5%
22	L5	3740	96% 77% 22% •
23	L7	120	98% 90% 10%
24	L8	156	89% 81% 19%
25	LA	248	100% 94% 6%
26	LB	402	85% 95% •
27	LC	368	93% 95% 5%
28	LD	293	100% 94% 5%
29	LE	236	94% 94% 6%
30	LF	225	100% 98% •
31	LG	241	100% 95% 5%
32	LH	190	99% 93% 7%
33	LI	202	93% 93% 6%

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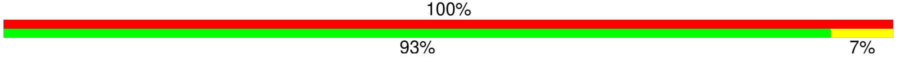
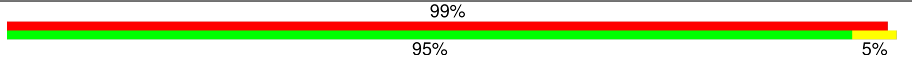
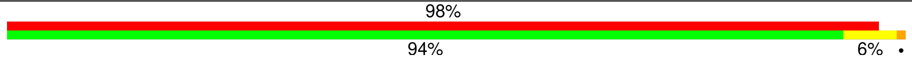
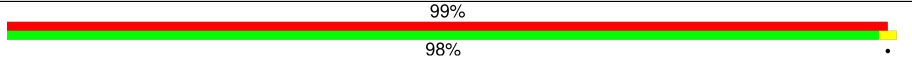
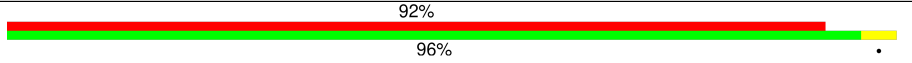
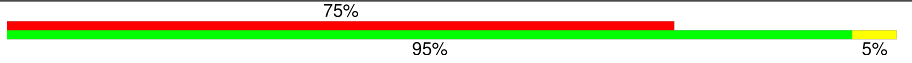
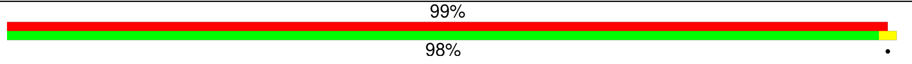
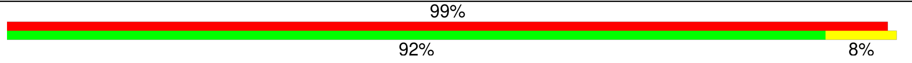
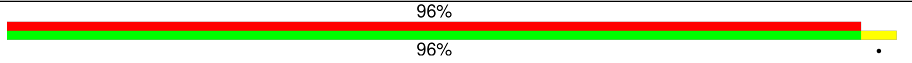
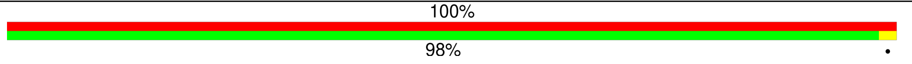
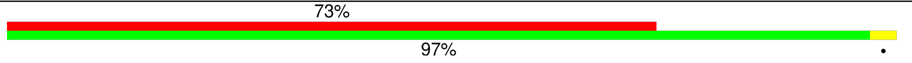
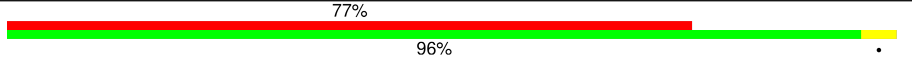
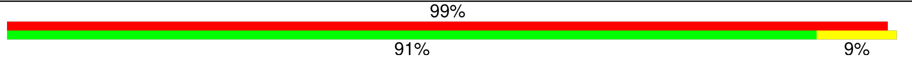
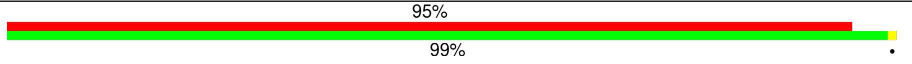
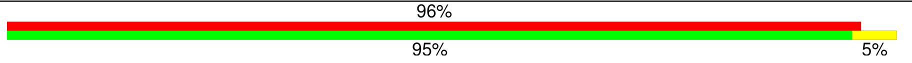
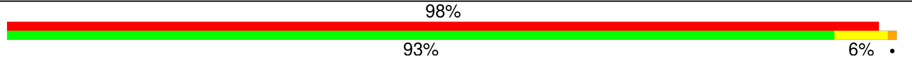
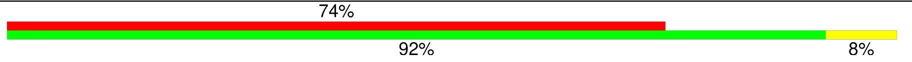
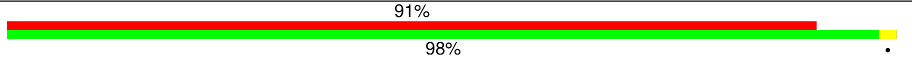
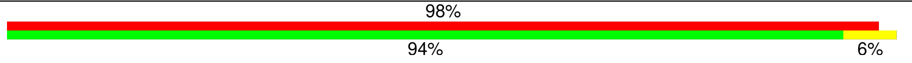
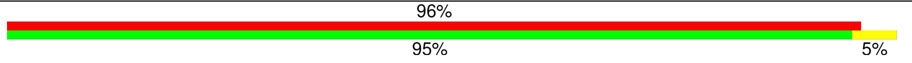
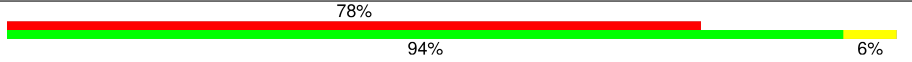
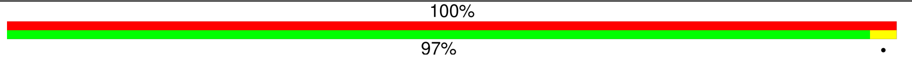
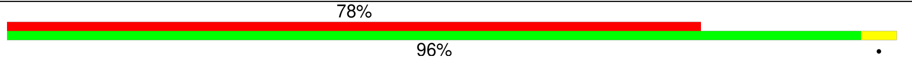
Mol	Chain	Length	Quality of chain
34	LJ	176	 100% 93% 7%
35	LL	210	 99% 95% 5%
36	LM	139	 98% 94% 6% •
37	LN	203	 99% 98% •
38	LO	201	 92% 96% •
39	LP	153	 75% 95% 5%
40	LQ	187	 99% 98% •
41	LS	175	 99% 92% 8%
42	LT	159	 96% 96% •
43	LU	101	 70% 90% 10%
44	LV	131	 100% 98% •
45	LX	120	 73% 97% •
46	LY	134	 77% 96% •
47	LZ	135	 99% 91% 9%
48	La	147	 95% 99% •
49	Lb	109	 96% 95% 5%
50	Lc	98	 98% 93% 6% •
51	Ld	107	 74% 92% 8%
52	Le	128	 91% 98% •
53	Lf	109	 98% 94% 6%
54	Lg	114	 96% 95% 5%
55	Lh	122	 78% 94% 6%
56	Li	102	 100% 97% •
57	Lj	86	 83% 91% 9%
58	Lk	69	 78% 96% •

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Mol	Chain	Length	Quality of chain
59	Ll	50	76% 92% 8%
60	Lm	52	100% 98% •
61	Ln	24	100% 88% 12%
62	Lo	105	100% 92% 8%
63	Lp	91	100% 96% •
64	Lr	125	96% 90% 10%
65	SR	135	100% 88% 12%
66	SD	227	100% 92% 8%
67	SF	189	100% 91% 8% •
68	SK	98	100% 91% 9%
69	SP	121	100% 90% 9% •
70	SQ	144	100% 90% 10%
71	SS	145	100% 96% •
72	ST	143	100% 93% 7%
73	SU	104	100% 92% 8%
74	Sc	64	100% 91% 9%
75	Sd	55	100% 89% 11%
76	Sg	313	100% 91% 9%
77	SM	122	100% 89% 11%
78	SZ	75	100% 88% 12%
79	Sf	67	100% 91% 9%
80	S2	1740	99% 76% 24% •
81	AT	76	100% 62% 36% •
82	CF	441	100% 91% 9%
83	Pt	74	97% 80% 20%

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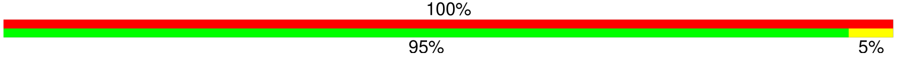
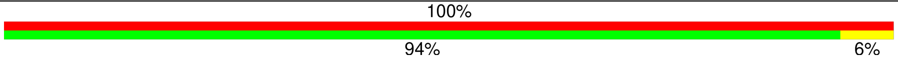
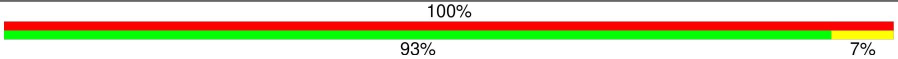
Mol	Chain	Length	Quality of chain
84	Lt	141	
85	Ls	196	
86	LW	118	

2 Entry composition

There are 88 unique types of molecules in this entry. The entry contains 224908 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Serbp1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	CD	36	284	177	47	59	1	0	0

- Molecule 2 is a protein called NAC-beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	CI	31	245	151	54	39	1	0	0

- Molecule 3 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	LR	187	1566	971	336	250	9	0	0

- Molecule 4 is a protein called Small ribosomal subunit protein eS4, X isoform.

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

- Molecule 5 is a protein called 40S ribosomal protein S8.

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

- Molecule 6 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	SL	153	1247	793	234	214	6	0	0

- Molecule 7 is a protein called 40S ribosomal protein S23.

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

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

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

- Molecule 9 is a protein called 40S ribosomal protein S9.

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

- Molecule 10 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	SY	131	1065	673	209	178	5	0	0

- Molecule 11 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	Se	58	459	284	100	74	1	0	0

- Molecule 12 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	SA	221	1741	1106	305	322	8	0	0

- Molecule 13 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	SB	214	1738	1103	310	311	14	0	0

- Molecule 14 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	SH	186	Total 1497	C 956	N 274	O 266	S 1	0	0

- Molecule 15 is a protein called 40S ribosomal protein S21.

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

- Molecule 16 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Sa	102	Total 821	C 512	N 171	O 133	S 5	0	0

- Molecule 17 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	SC	222	Total 1725	C 1115	N 298	O 302	S 10	0	0

- Molecule 18 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	SN	150	Total 1208	C 773	N 229	O 205	S 1	0	0

- Molecule 19 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	SO	140	Total 1049	C 642	N 204	O 197	S 6	0	0

- Molecule 20 is a protein called 40S ribosomal protein S15a.

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

- Molecule 21 is a protein called Small ribosomal subunit protein eS27.

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

- Molecule 22 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
22	L5	3740	79860	35549	14585	25987	3739	0	0

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
23	L7	120	2561	1141	456	844	120	0	0

- Molecule 24 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
24	L8	156	3314	1480	585	1094	155	0	0

- Molecule 25 is a protein called 60S ribosomal protein L8.

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

- Molecule 26 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	LB	402	3238	2060	608	556	14	0	0

- Molecule 27 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	LC	368	2927	1840	583	489	15	0	0

- Molecule 28 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	LD	293	2382	1507	434	427	14	0	0

- Molecule 29 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	LE	236	1904	1222	361	317	4	0	0

- Molecule 30 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	LF	225	1870	1202	358	301	9	0	0

- Molecule 31 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	LG	241	1927	1228	371	324	4	0	0

- Molecule 32 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	LH	190	1518	956	284	272	6	0	0

- Molecule 33 is a protein called 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	LI	202	1634	1037	314	269	14	0	0

- Molecule 34 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	LJ	176	1410	888	263	253	6	0	0

- Molecule 35 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	LL	210	1701	1064	352	281	4	0	0

- Molecule 36 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	LM	139	1138	730	218	183	7	0	0

- Molecule 37 is a protein called 60S ribosomal protein L15.

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

- Molecule 38 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	LO	201	1650	1063	321	261	5	0	0

- Molecule 39 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	LP	153	1242	776	241	216	9	0	0

- Molecule 40 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	LQ	187	1513	944	314	250	5	0	0

- Molecule 41 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	LS	175	1453	925	283	235	10	0	0

- Molecule 42 is a protein called 60S ribosomal protein L21.

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

- Molecule 43 is a protein called Heparin-binding protein HBp15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	LU	101	825	529	144	150	2	0	0

- Molecule 44 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	LV	131	979	618	184	172	5	0	0

- Molecule 45 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	LX	120	985	630	185	169	1	0	0

- Molecule 46 is a protein called 60S ribosomal protein L26.

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

- Molecule 47 is a protein called 60S ribosomal protein L27.

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

- Molecule 48 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	La	147	1162	736	237	186	3	0	0

- Molecule 49 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	Lb	109	876	546	189	137	4	0	0

- Molecule 50 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	Lc	98	764	485	135	138	6	0	0

- Molecule 51 is a protein called 60S ribosomal protein L31.

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

- Molecule 52 is a protein called 60S ribosomal protein L32.

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

- Molecule 53 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
53	Lf	109	876	555	174	144	3	0	0

- Molecule 54 is a protein called 60S ribosomal protein L34.

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

- Molecule 55 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
55	Lh	122	1015	641	205	168	1	0	0

- Molecule 56 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	Li	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 57 is a protein called 60S ribosomal protein L37.

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

- Molecule 58 is a protein called 60S ribosomal protein L38.

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

- Molecule 59 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 60 is a protein called Large ribosomal subunit protein eL40.

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

- Molecule 61 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 62 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Lo	105	Total	C	N	O	S	0	0
			862	542	175	139	6		

- Molecule 63 is a protein called 60S ribosomal protein L37a.

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

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	Lr	125	1002	622	207	168	5	0	0

- Molecule 65 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
65	SR	135	1090	685	202	198	5	0	0

- Molecule 66 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
66	SD	227	1765	1125	317	315	8	0	0

- Molecule 67 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
67	SF	189	1495	934	284	270	7	0	0

- Molecule 68 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
68	SK	98	827	539	148	134	6	0	0

- Molecule 69 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
69	SP	121	985	623	185	170	7	0	0

- Molecule 70 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
70	SQ	144	1142	726	216	197	3	0	0

- Molecule 71 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
71	SS	145	1198	751	242	203	2	0	0

- Molecule 72 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
72	ST	143	1112	697	214	198	3	0	0

- Molecule 73 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
73	SU	104	821	514	155	148	4	0	0

- Molecule 74 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
74	Sc	64	506	308	102	94	2	0	0

- Molecule 75 is a protein called 40S ribosomal protein S29.

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

- Molecule 76 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 77 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
77	SM	122	940	590	164	177	9	0	0

- Molecule 78 is a protein called Small ribosomal subunit protein eS25.

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

- Molecule 79 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
79	Sf	67	548	346	102	93	7	0	0

- Molecule 80 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
80	S2	1740	36898	16459	6599	12101	1739	0	0

- Molecule 81 is a RNA chain called AT site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
81	AT	76	1616	723	291	527	75	0	0

- Molecule 82 is a protein called eEF1A.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	N	O	P	S		
82	CF	441	3383	2148	581	636	1	17	0	0

- Molecule 83 is a RNA chain called P site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
83	Pt	74	1576	705	286	512	73	0	0

- Molecule 84 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Lt	141	Total 1046	C 652	N 191	O 199	S 4	0	0

- Molecule 85 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	Ls	196	Total 1496	C 952	N 259	O 276	S 9	0	0

- Molecule 86 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	LW	118	Total 965	C 604	N 199	O 158	S 4	0	0

- Molecule 87 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
87	Sa	1	Total 1	Zn 1	0
87	Lg	1	Total 1	Zn 1	0
87	Lj	1	Total 1	Zn 1	0
87	Lm	1	Total 1	Zn 1	0
87	Lo	1	Total 1	Zn 1	0
87	Lp	1	Total 1	Zn 1	0

- Molecule 88 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
88	L5	214	Total 214	Mg 214	0
88	L7	3	Total 3	Mg 3	0
88	L8	3	Total 3	Mg 3	0

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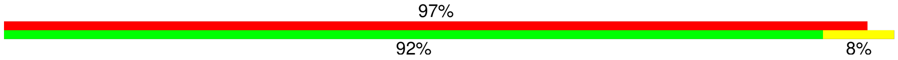
Mol	Chain	Residues	Atoms	AltConf
88	LA	1	Total Mg 1 1	0
88	LP	1	Total Mg 1 1	0
88	LV	1	Total Mg 1 1	0
88	Le	1	Total Mg 1 1	0
88	Lg	2	Total Mg 2 2	0
88	S2	29	Total Mg 29 29	0

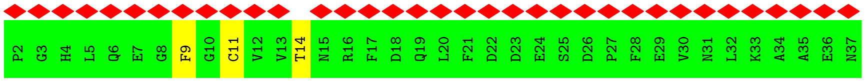
3 Residue-property plots ⓘ

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: Serbp1

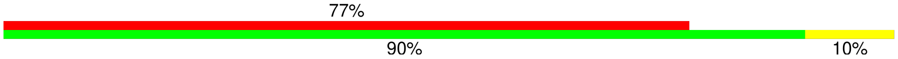
Chain CD:

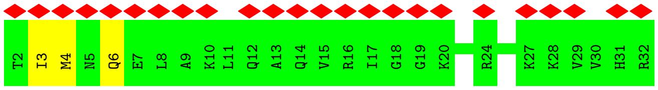




- Molecule 2: NAC-beta

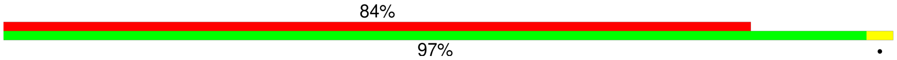
Chain CI:

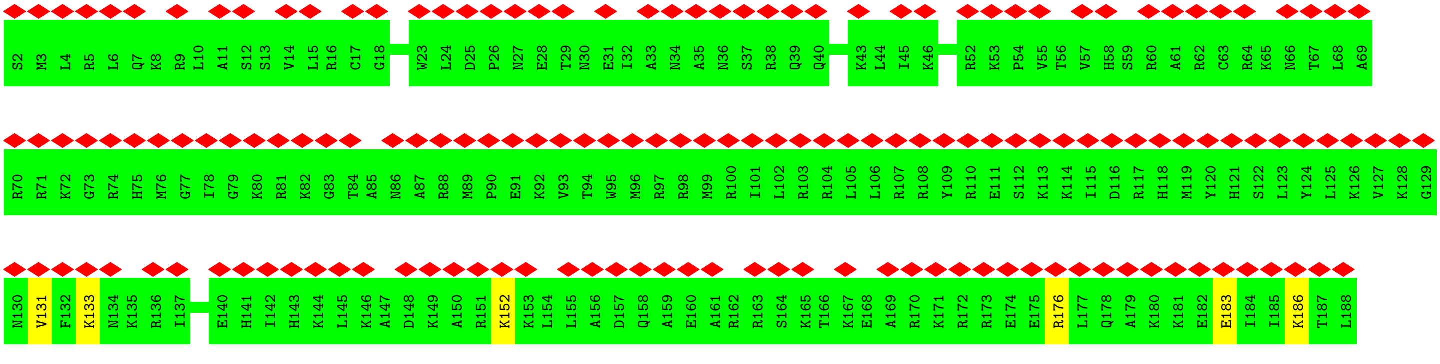




- Molecule 3: 60S ribosomal protein L19

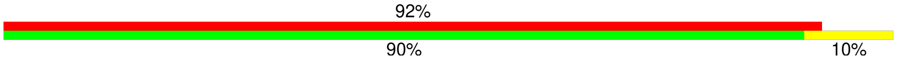
Chain LR:

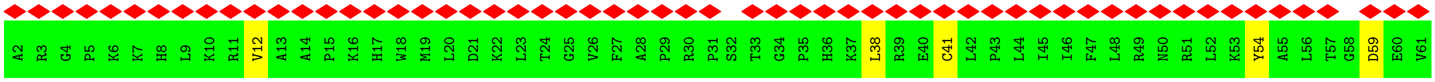


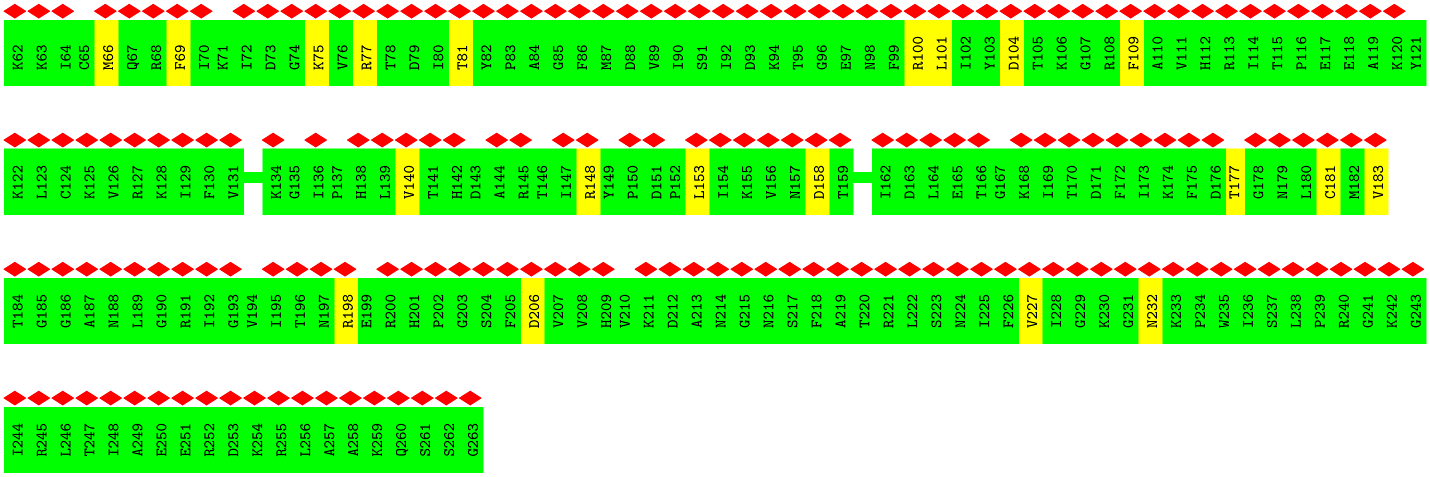


- Molecule 4: Small ribosomal subunit protein eS4, X isoform

Chain SE:

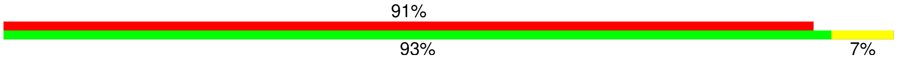


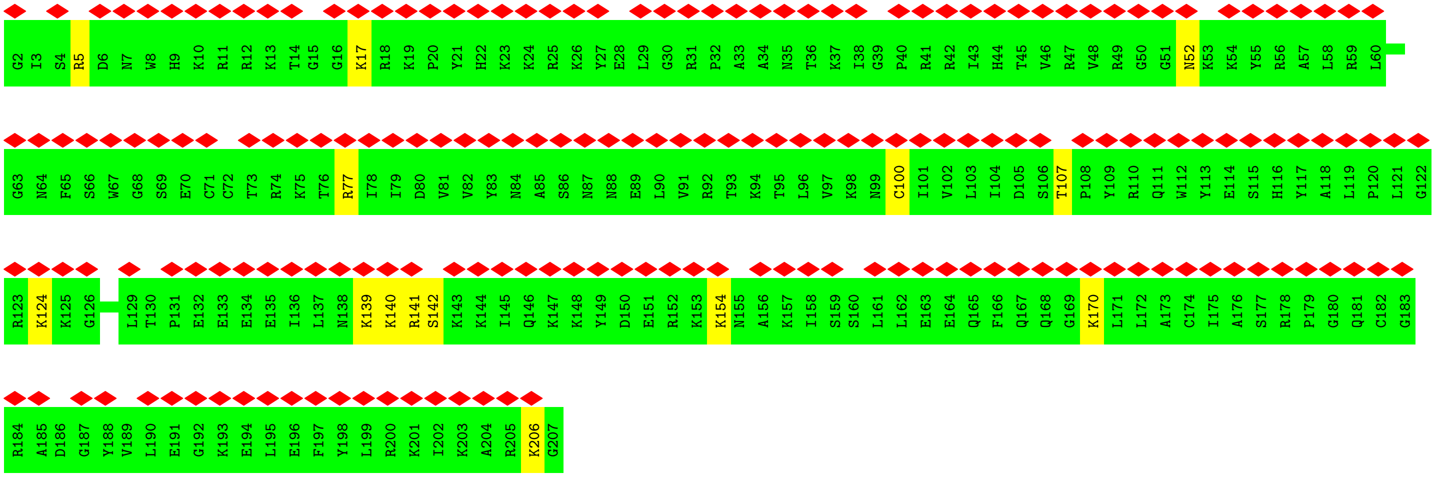




- Molecule 5: 40S ribosomal protein S8

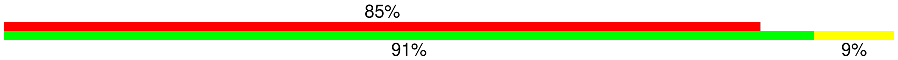
Chain SI:

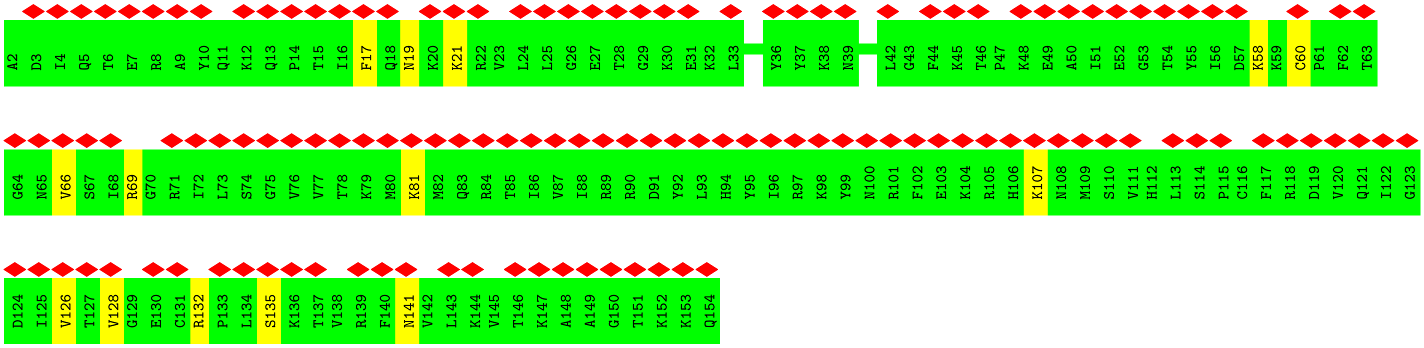




- Molecule 6: 40S ribosomal protein S11

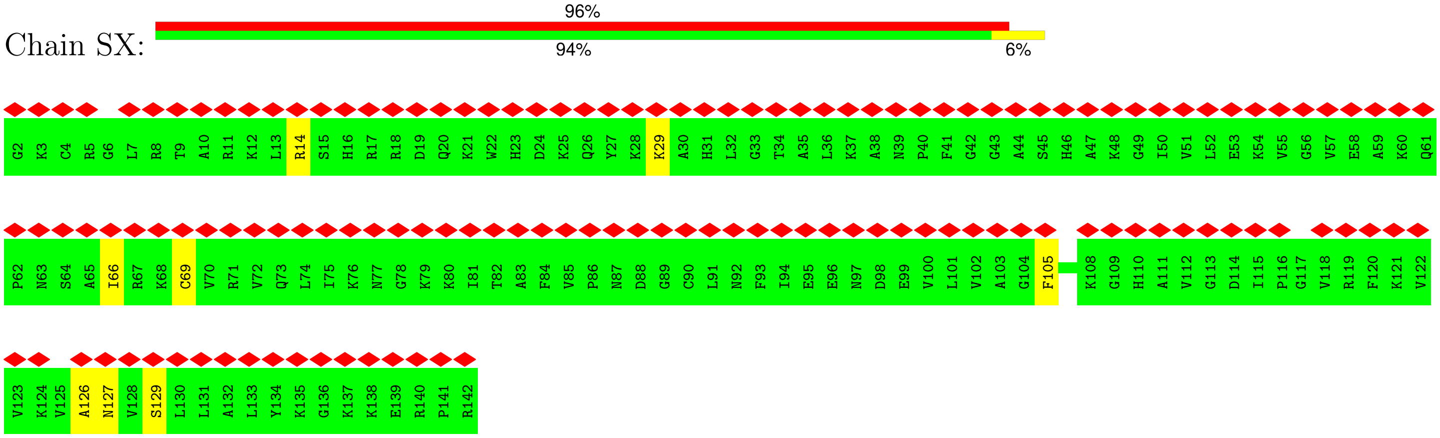
Chain SL:





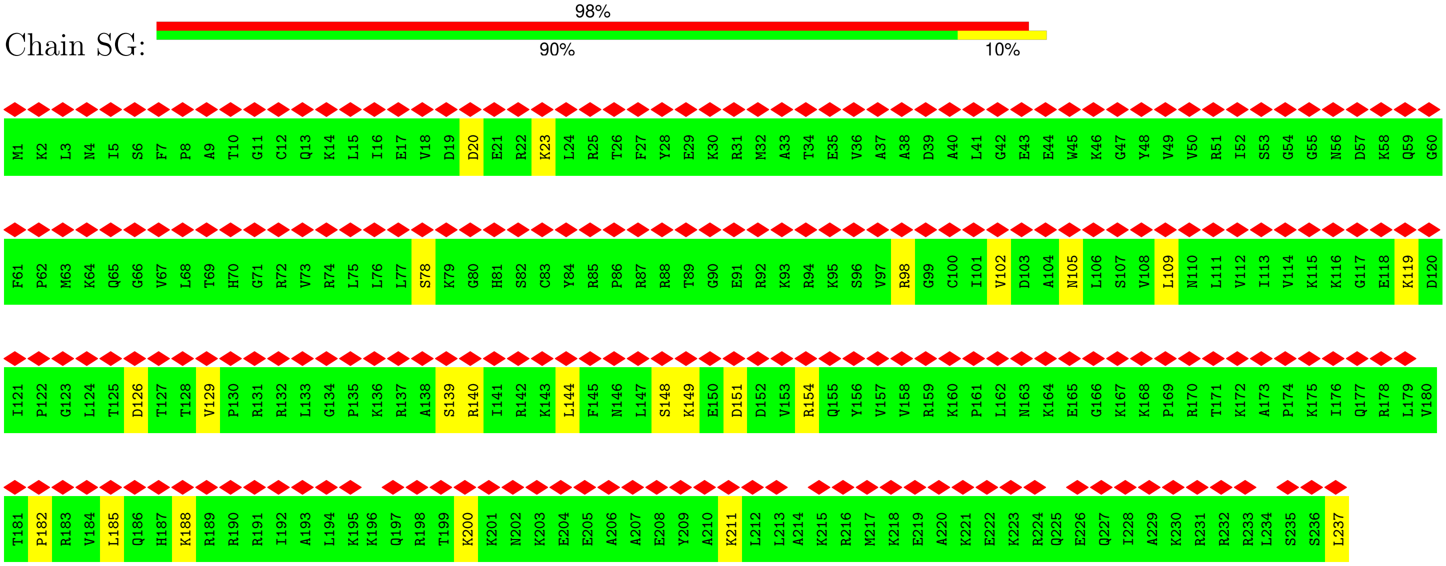
- Molecule 7: 40S ribosomal protein S23

Chain SX:



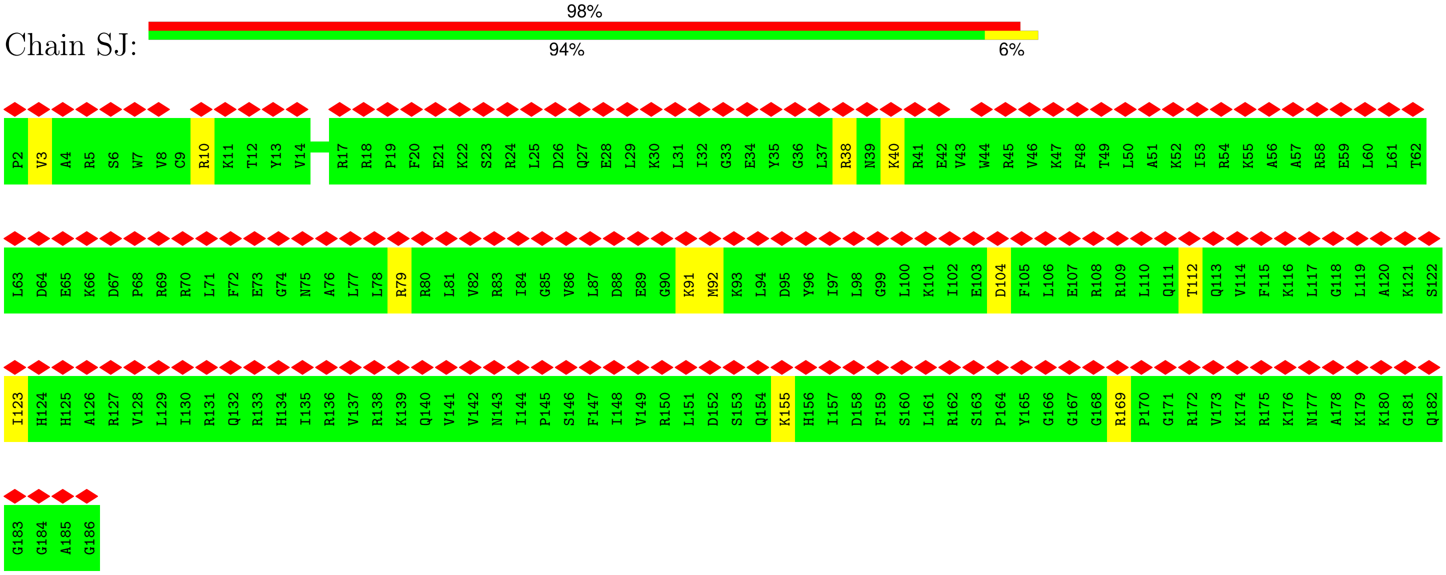
- Molecule 8: 40S ribosomal protein S6

Chain SG:

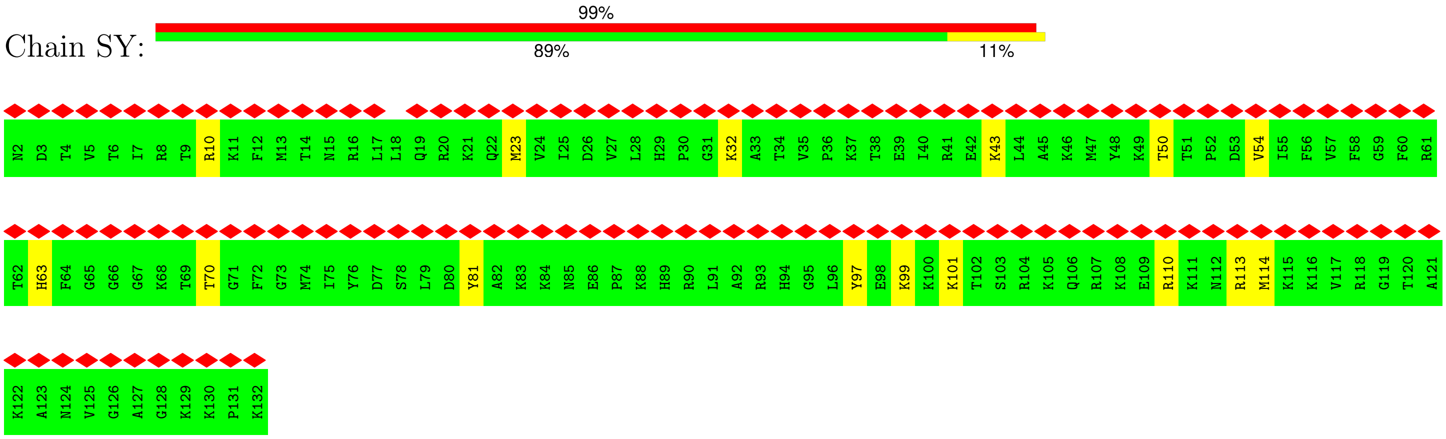


- Molecule 9: 40S ribosomal protein S9

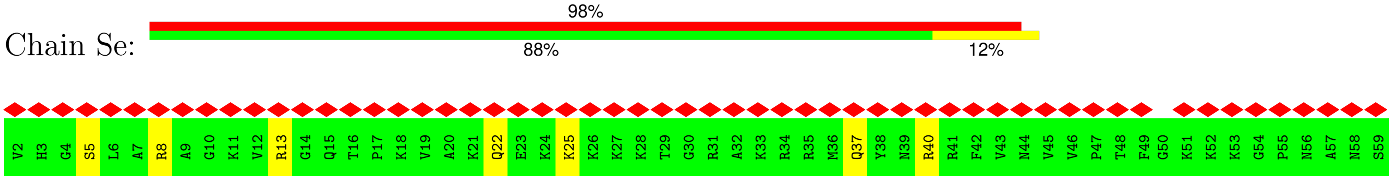
Chain SJ:



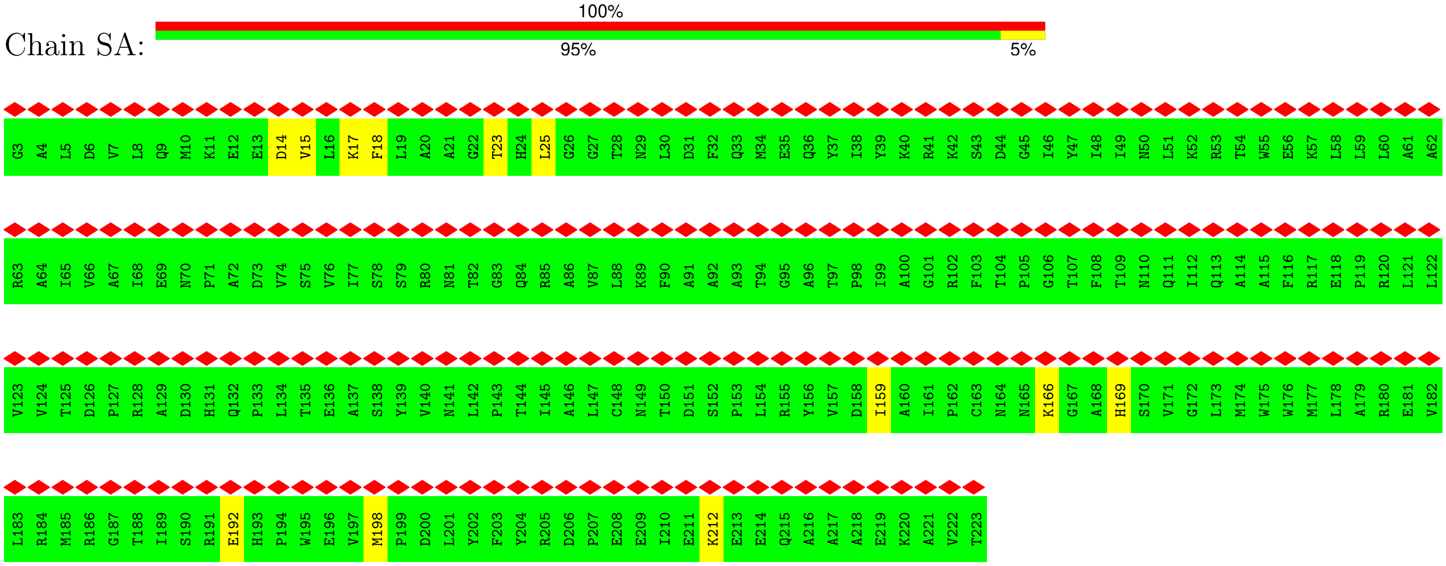
- Molecule 10: 40S ribosomal protein S24



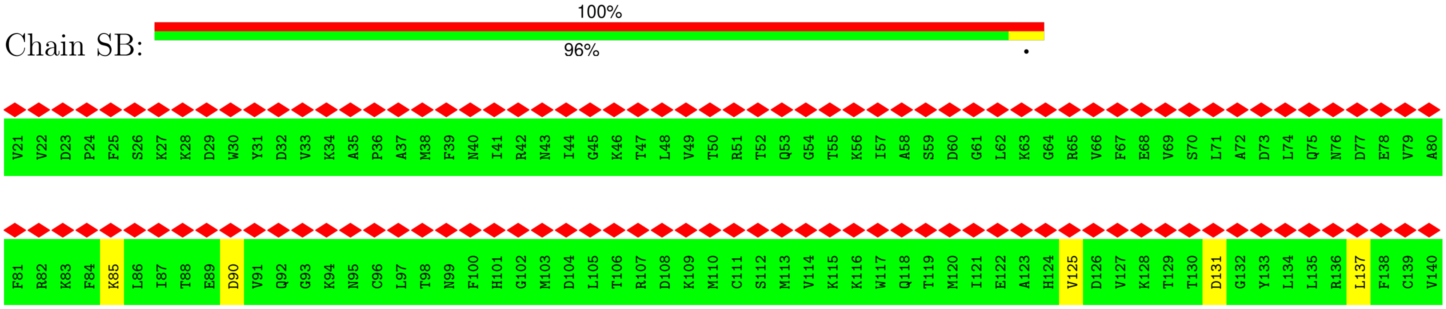
- Molecule 11: Small ribosomal subunit protein eS30

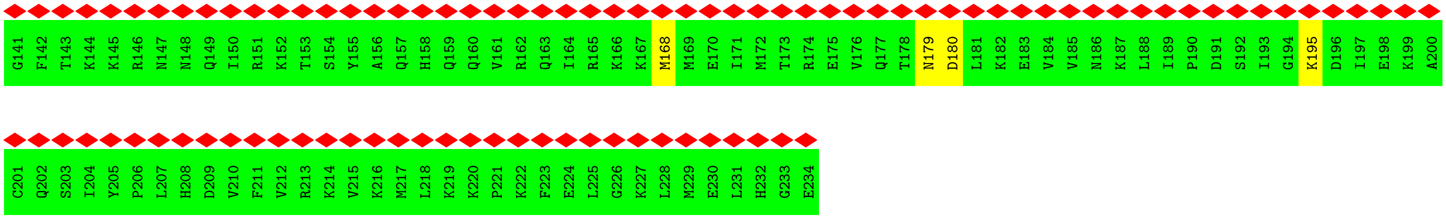


- Molecule 12: 40S ribosomal protein SA



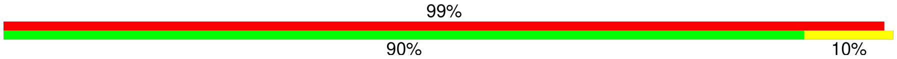
- Molecule 13: 40S ribosomal protein S3a

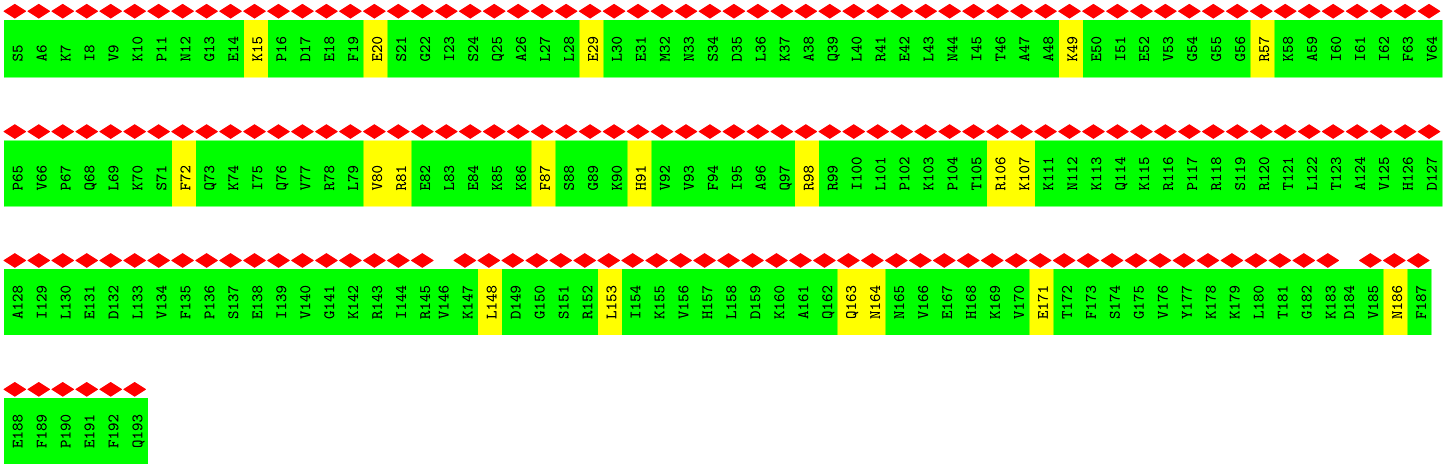




- Molecule 14: 40S ribosomal protein S7

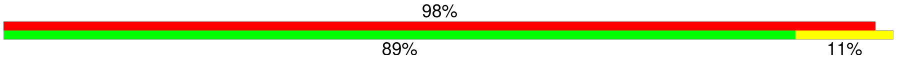
Chain SH:





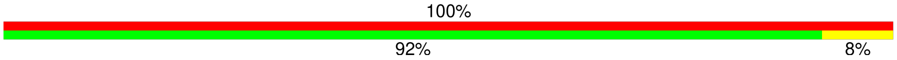
- Molecule 15: 40S ribosomal protein S21

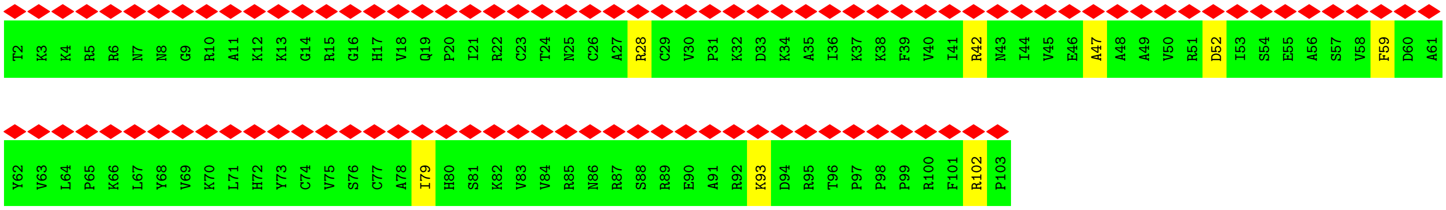
Chain SV:



- Molecule 16: 40S ribosomal protein S26

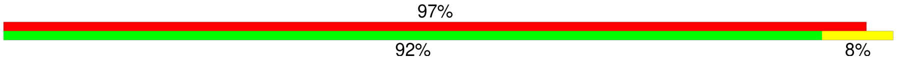
Chain Sa:

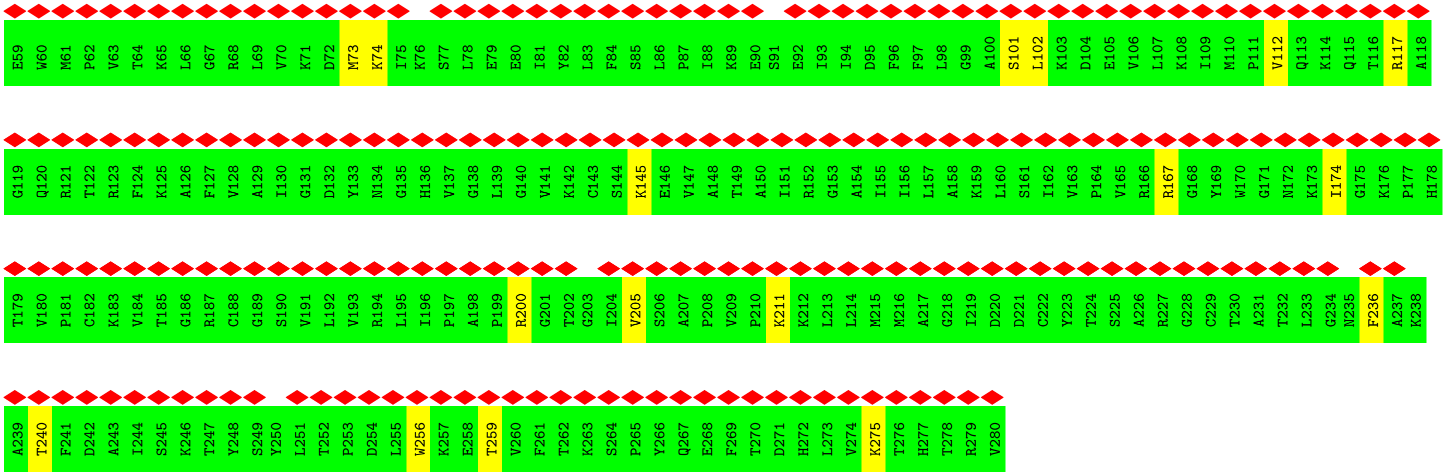




- Molecule 17: 40S ribosomal protein S2

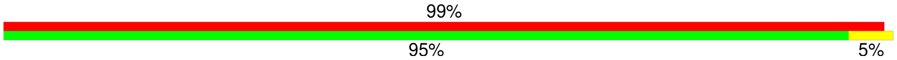
Chain SC:

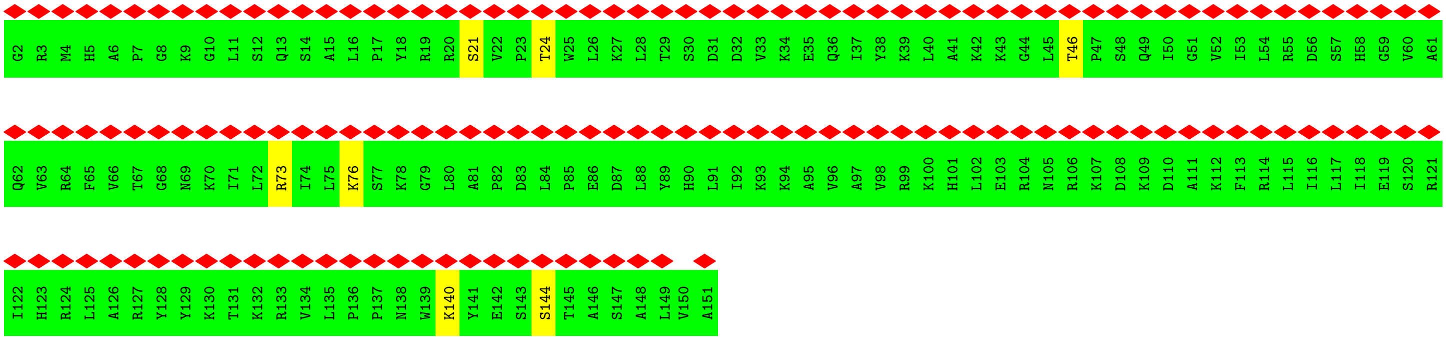




- Molecule 18: 40S ribosomal protein S13

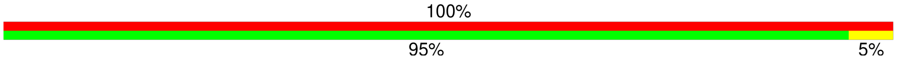
Chain SN:

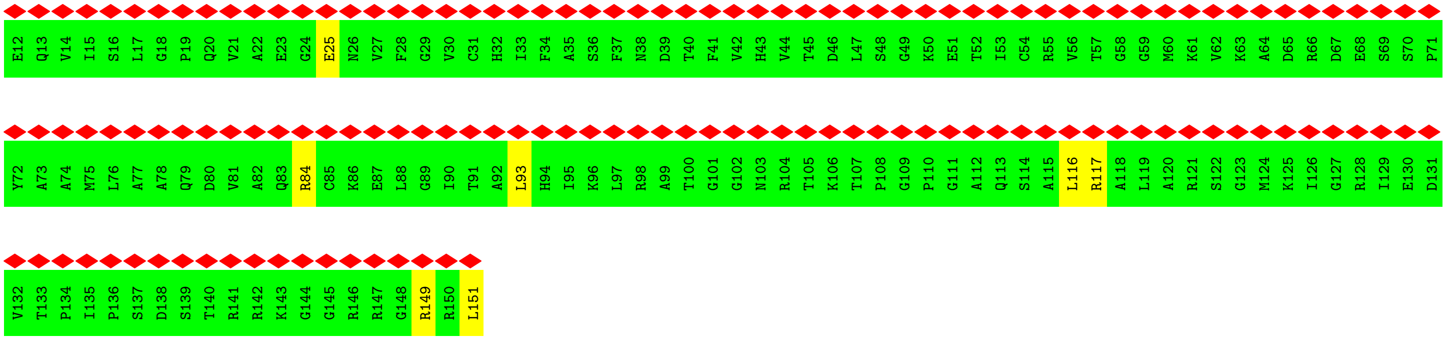




- Molecule 19: Small ribosomal subunit protein uS11

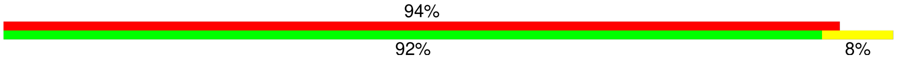
Chain SO:

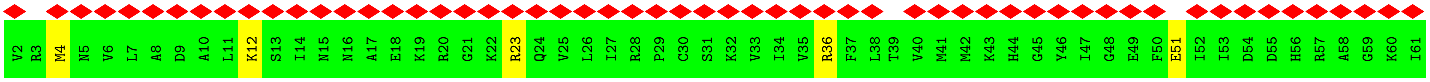




- Molecule 20: 40S ribosomal protein S15a

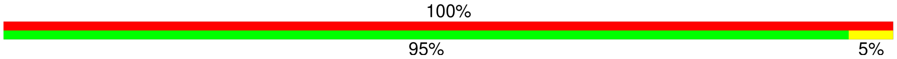
Chain SW:





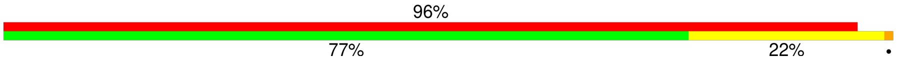
- Molecule 21: Small ribosomal subunit protein eS27

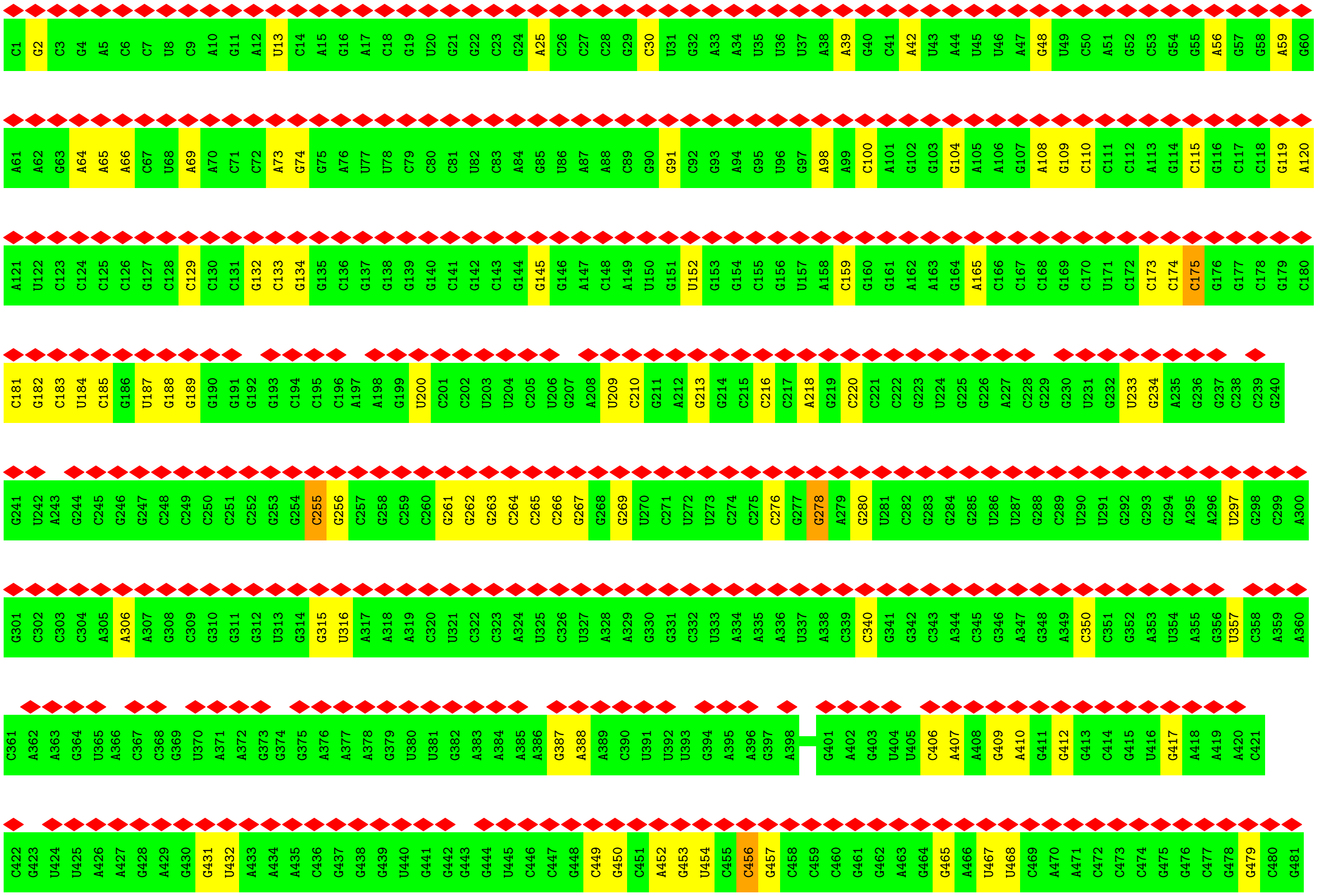
Chain Sb:

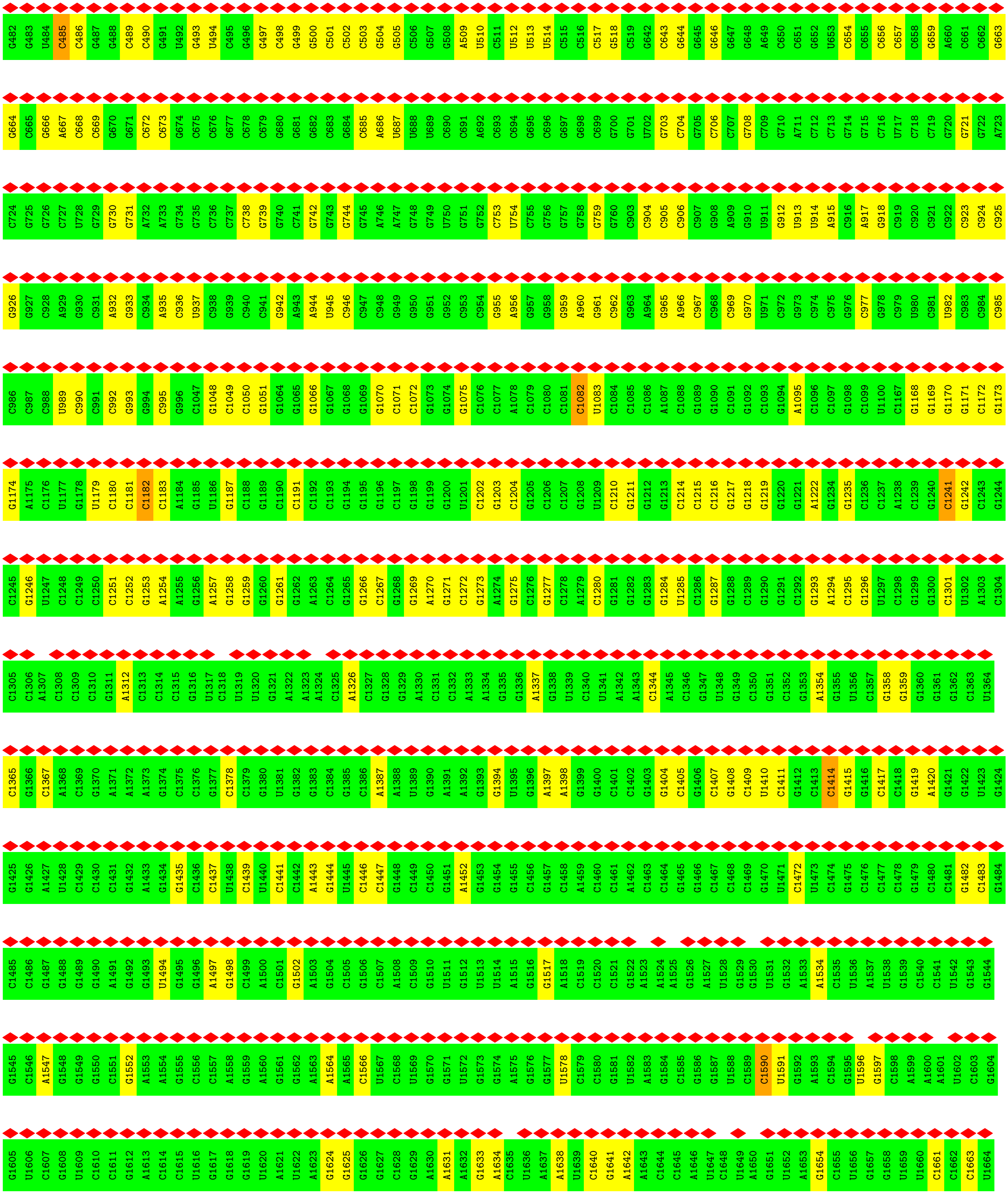


- Molecule 22: 28S rRNA

Chain L5:



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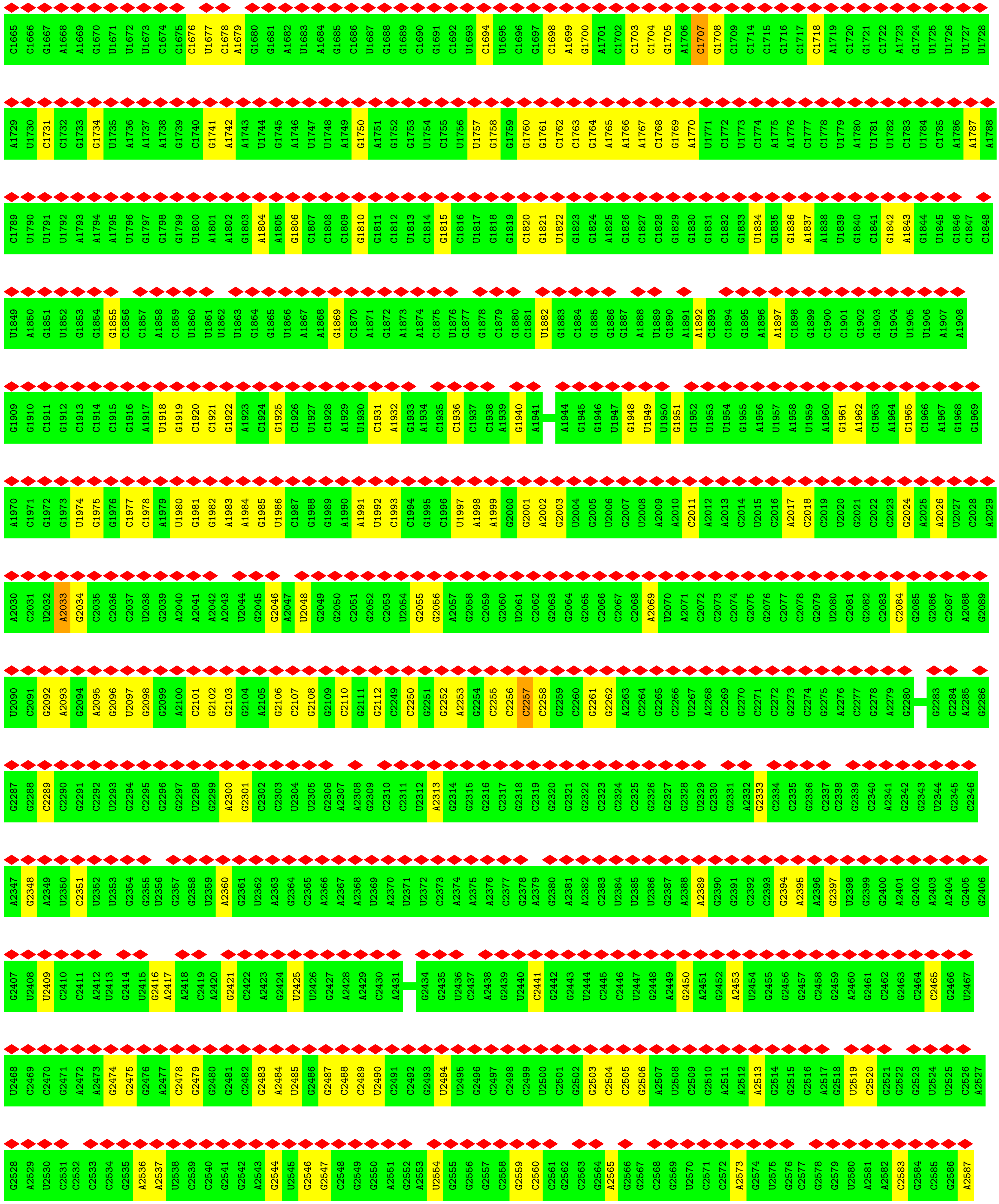
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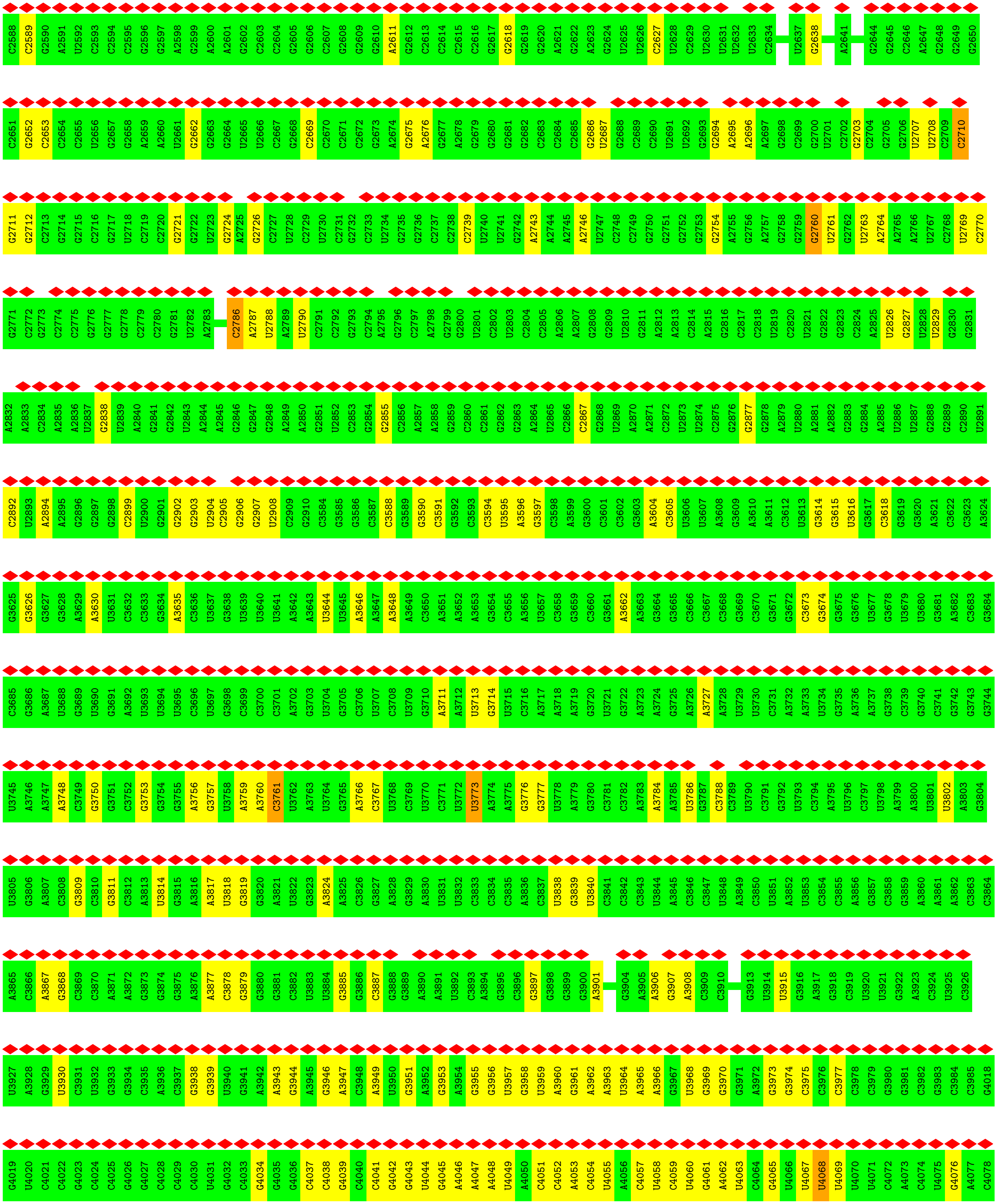
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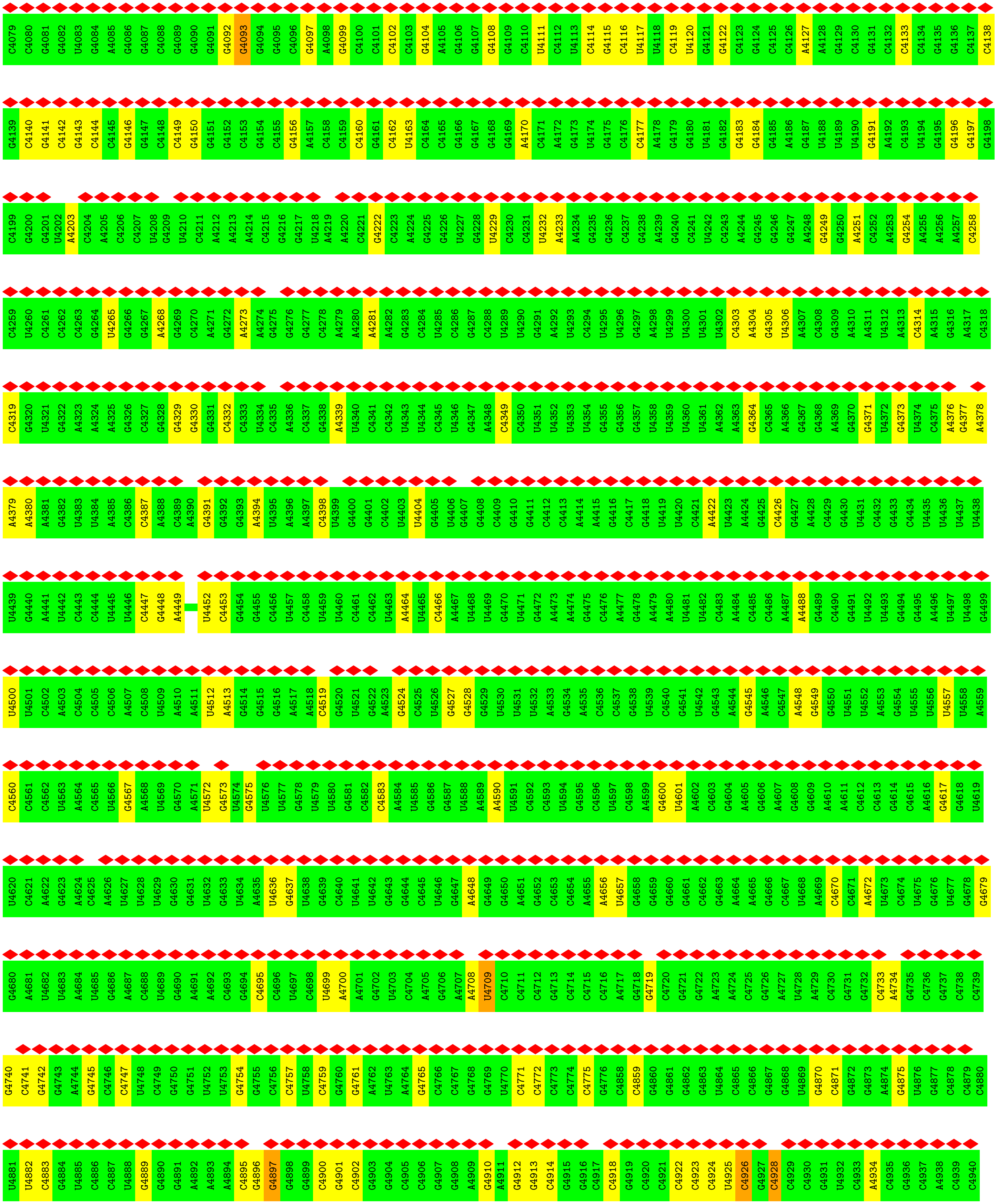
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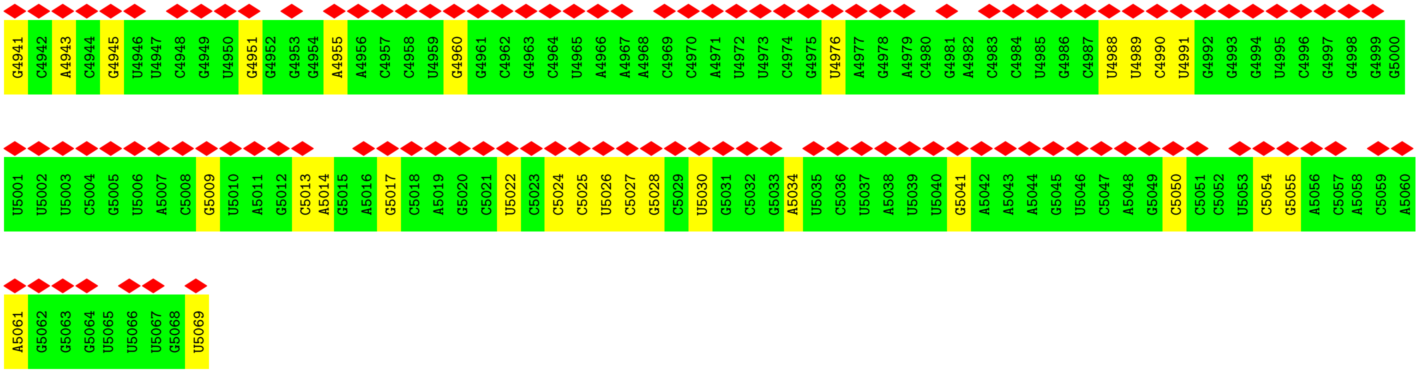
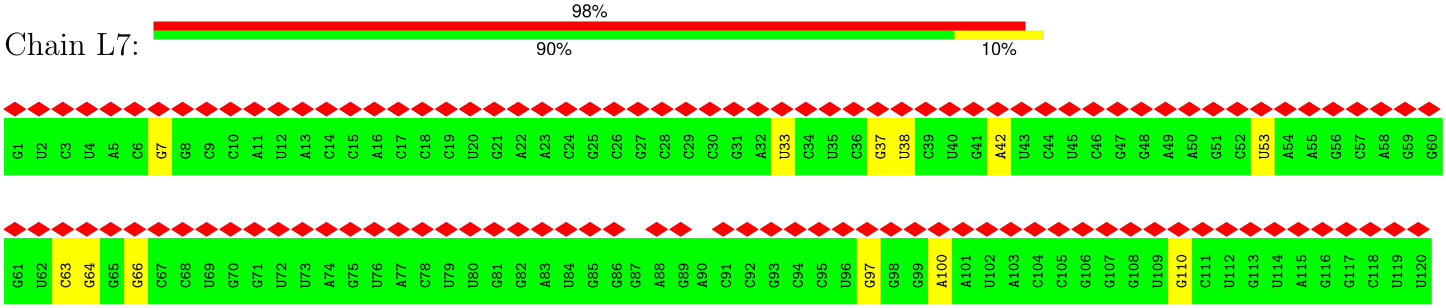
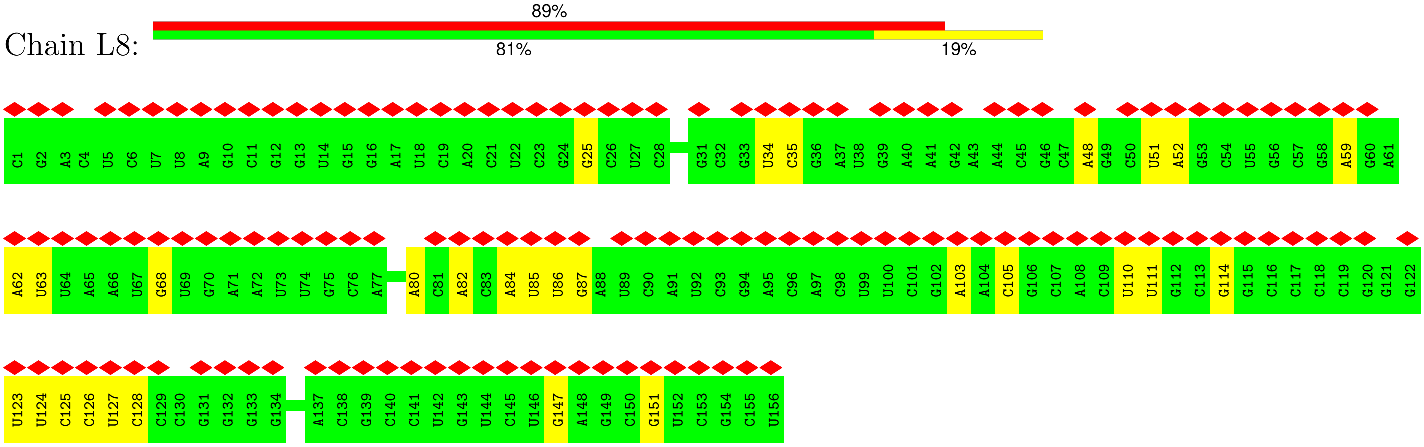


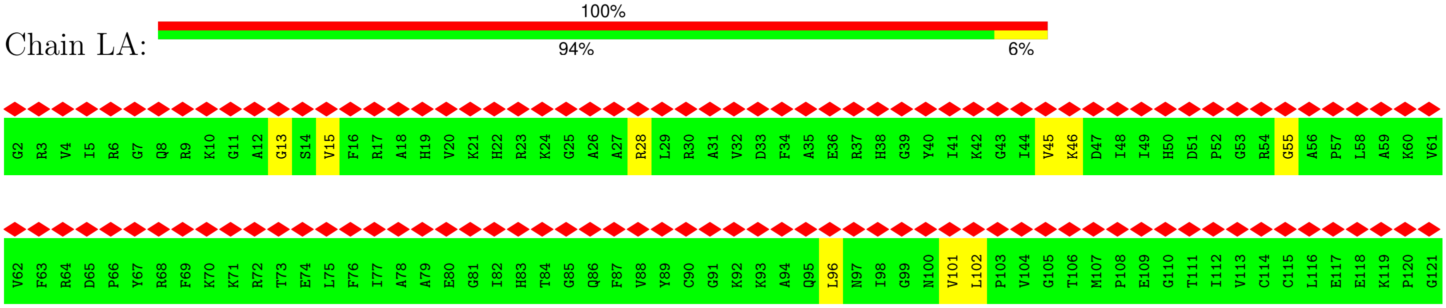
- Molecule 23: 5S rRNA

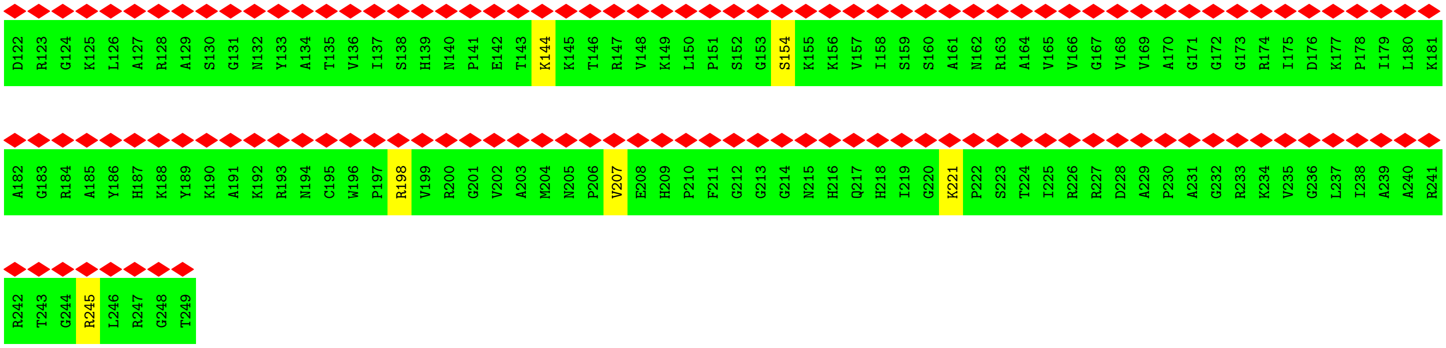


- Molecule 24: 5.8S rRNA



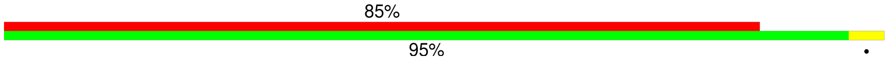
- Molecule 25: 60S ribosomal protein L8

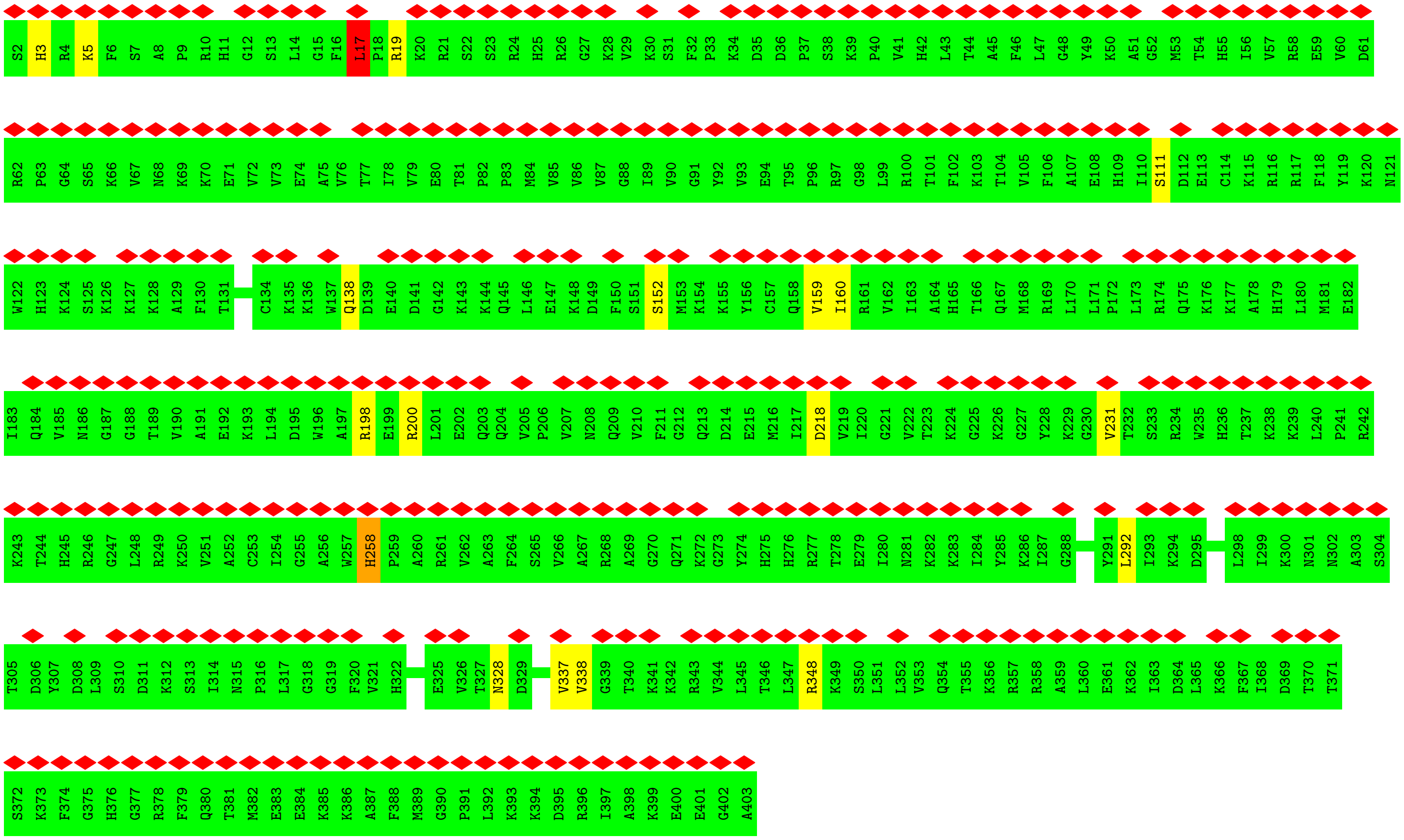




- Molecule 26: Large ribosomal subunit protein uL3

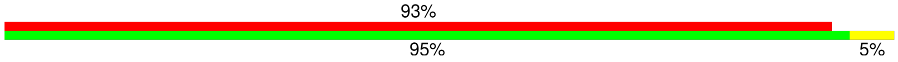
Chain LB:

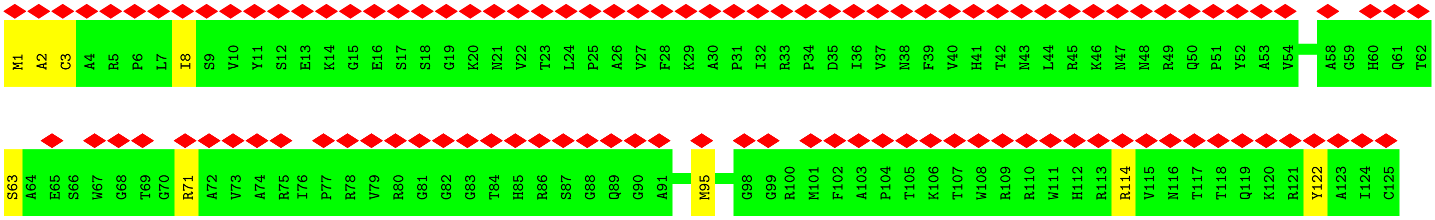


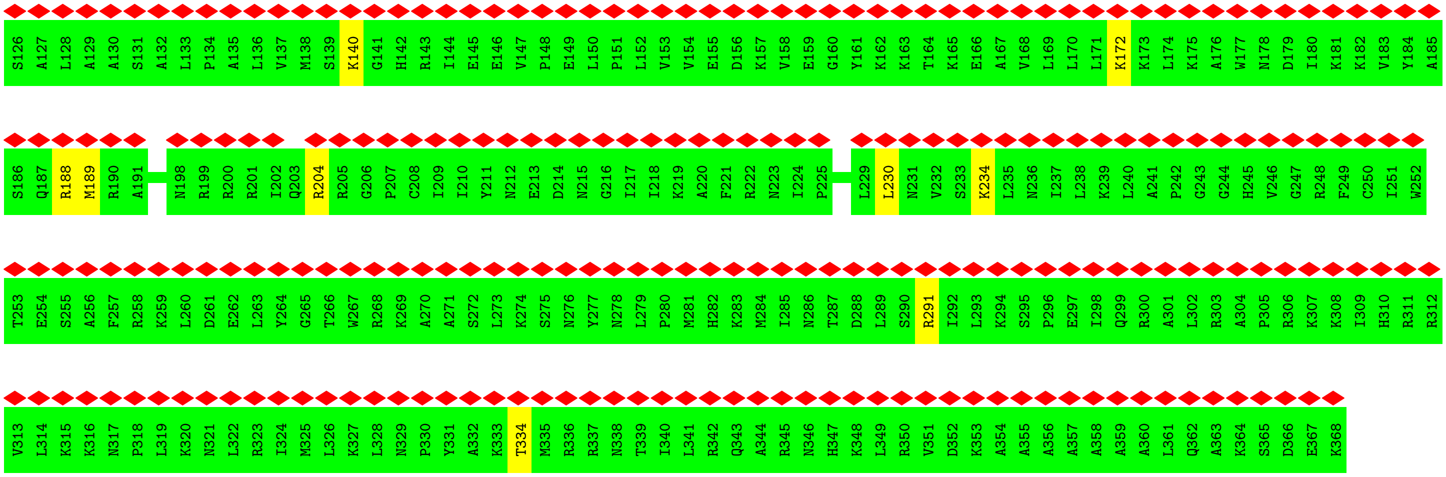


- Molecule 27: 60S ribosomal protein L4

Chain LC:

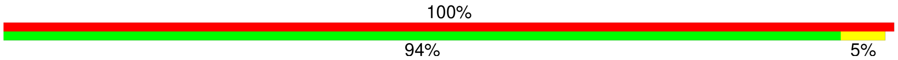


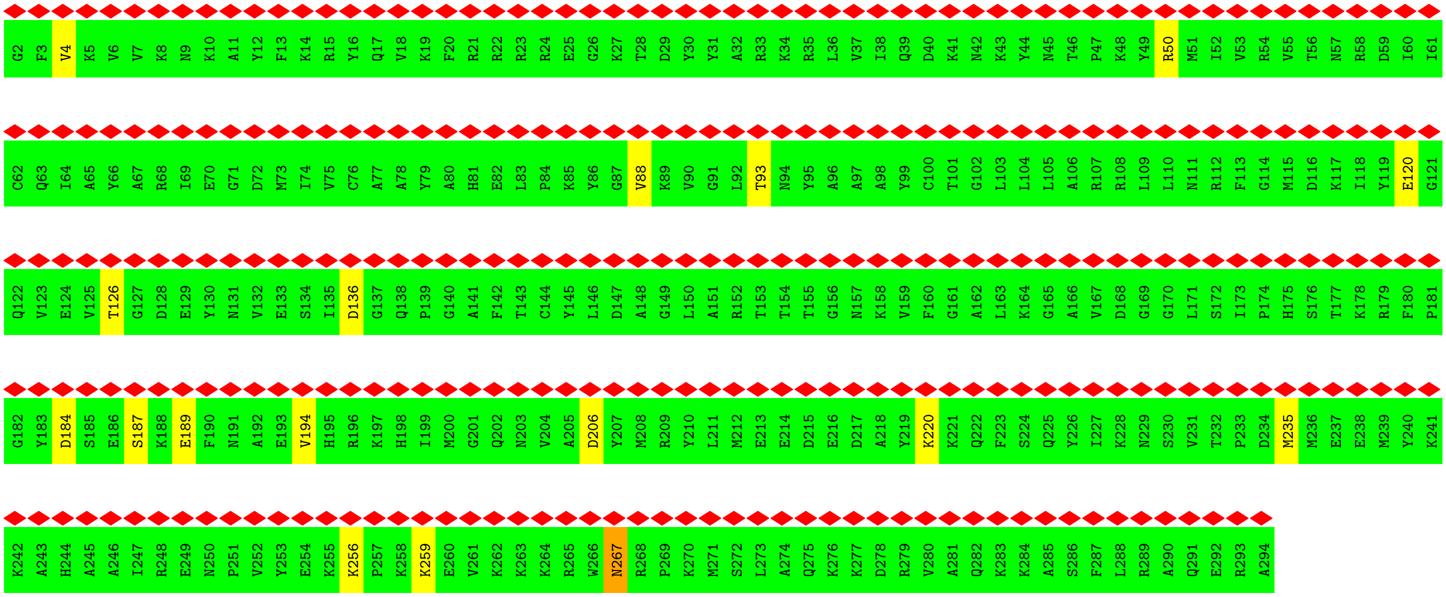




- Molecule 28: Large ribosomal subunit protein uL18

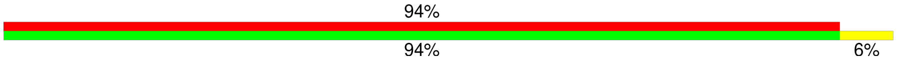
Chain LD:

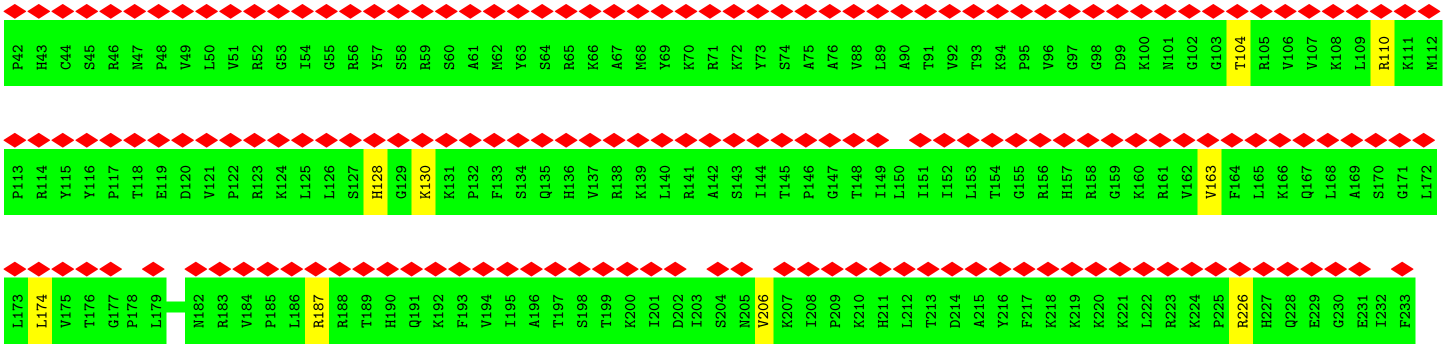


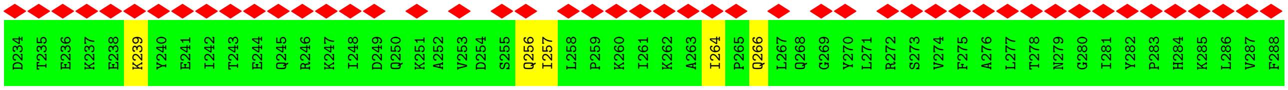


- Molecule 29: 60S ribosomal protein L6

Chain LE:

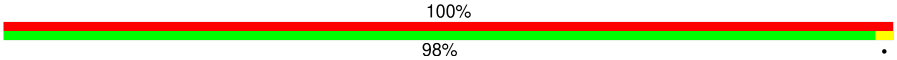


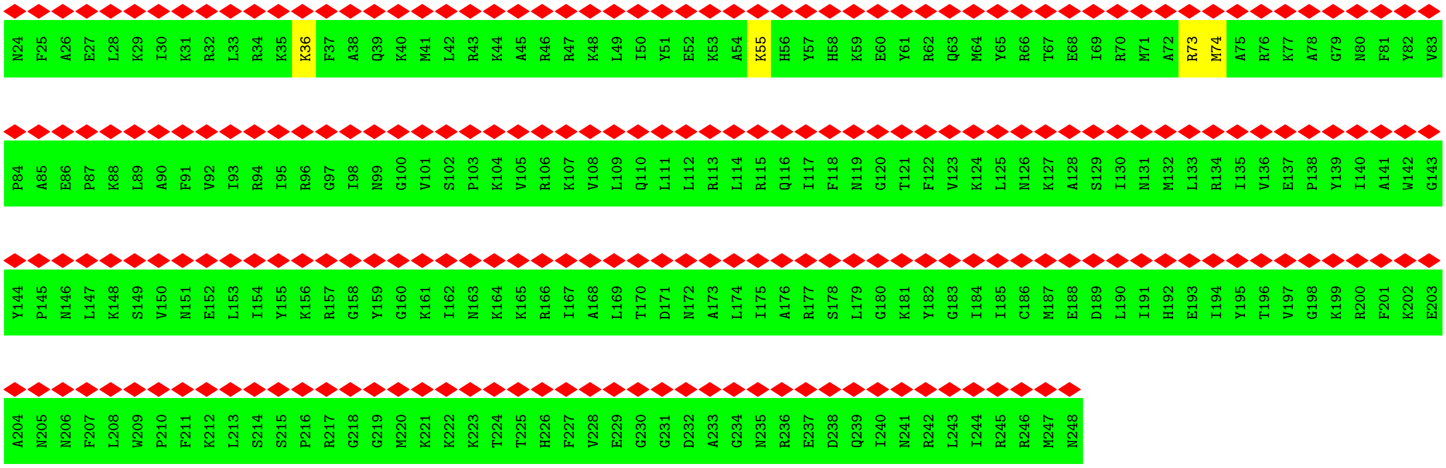




- Molecule 30: 60S ribosomal protein L7

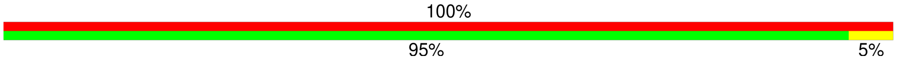
Chain LF:





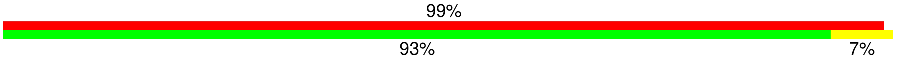
- Molecule 31: 60S ribosomal protein L7a

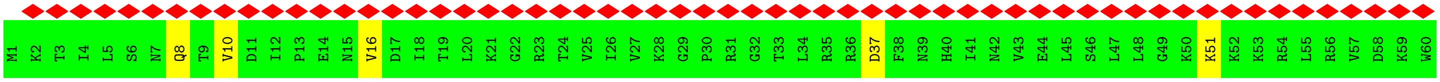
Chain LG:

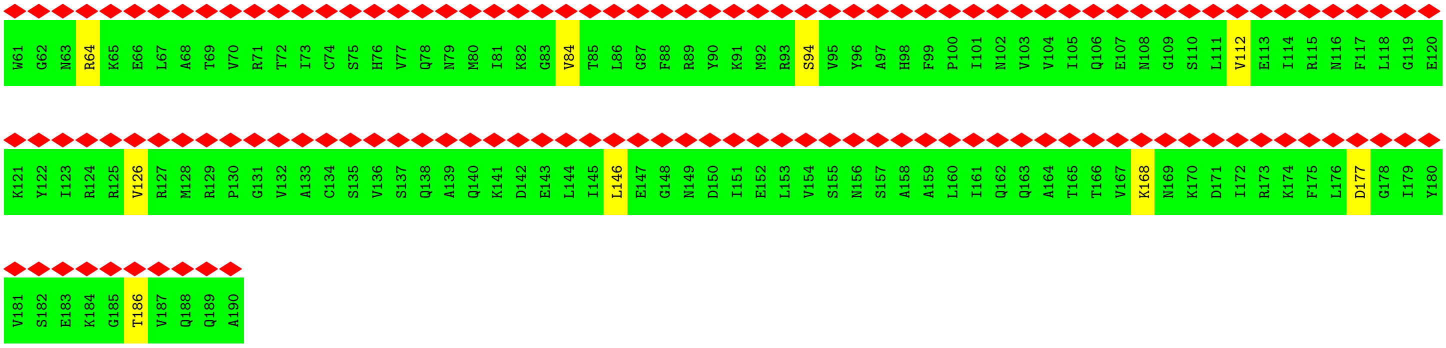


- Molecule 32: 60S ribosomal protein L9

Chain LH:

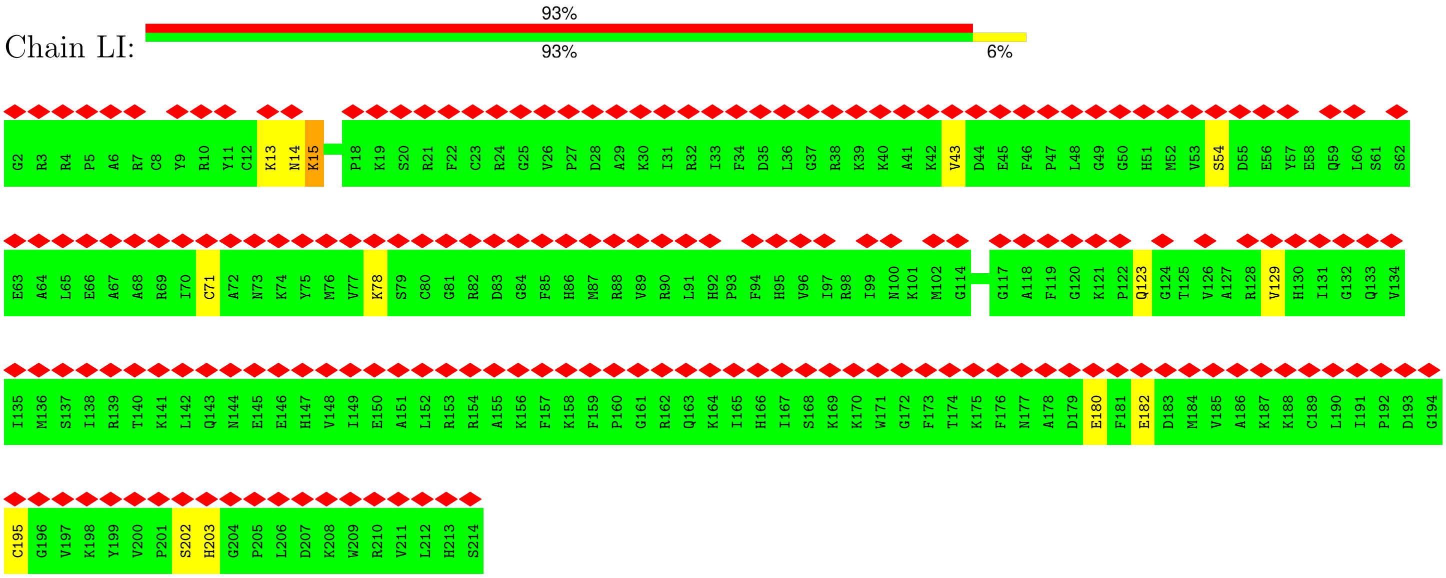






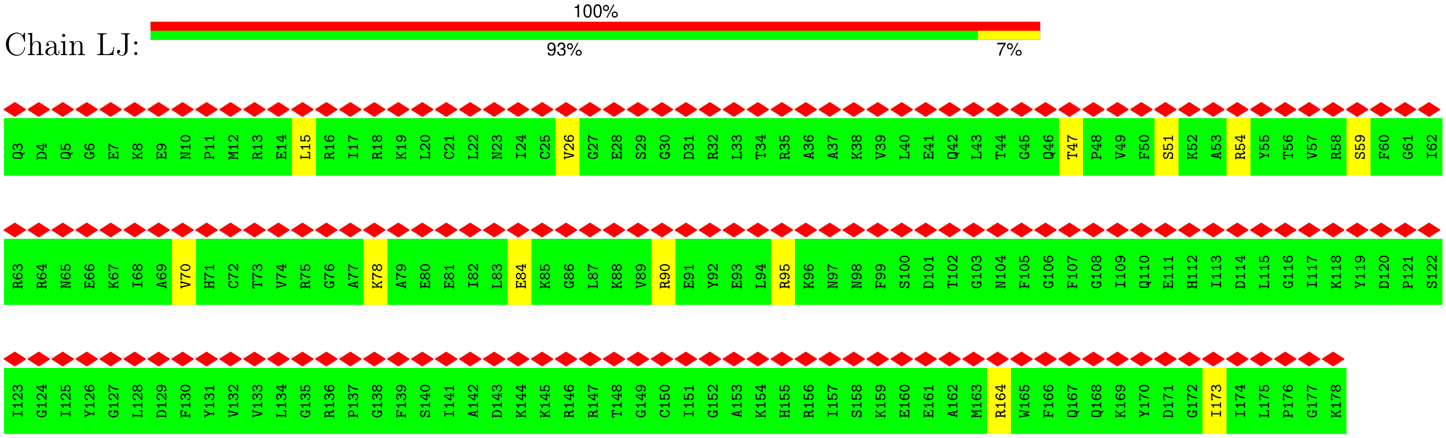
- Molecule 33: 60S ribosomal protein L10-like

Chain LI:



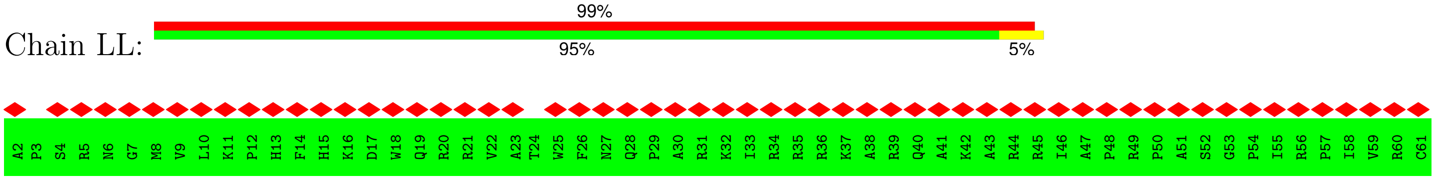
- Molecule 34: 60S ribosomal protein L11

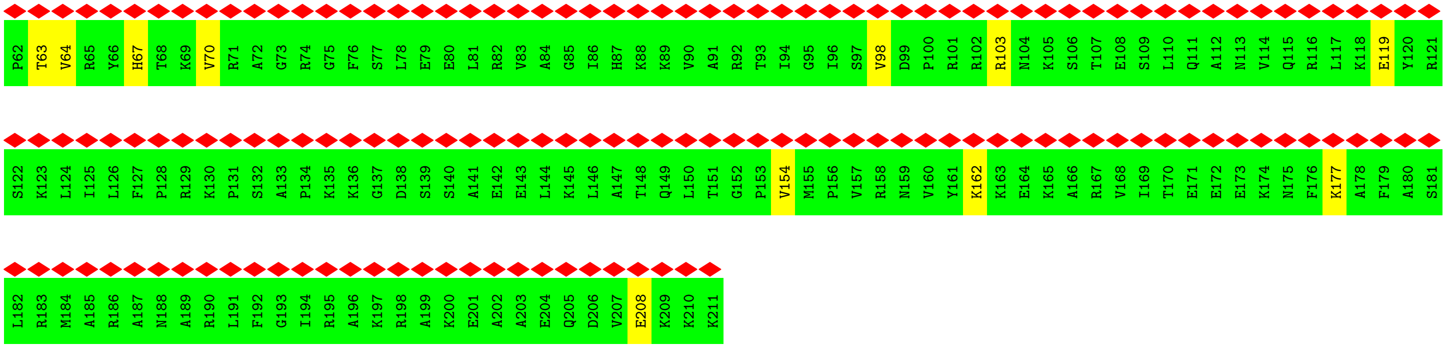
Chain LJ:



- Molecule 35: Large ribosomal subunit protein eL13

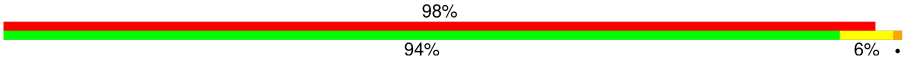
Chain LL:

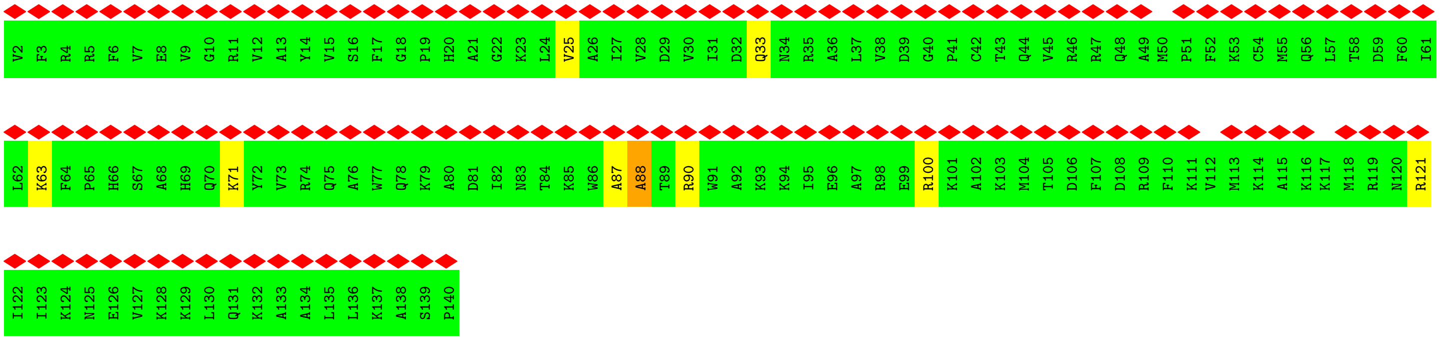




- Molecule 36: 60S ribosomal protein L14

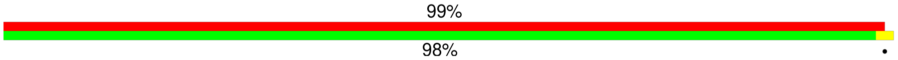
Chain LM:

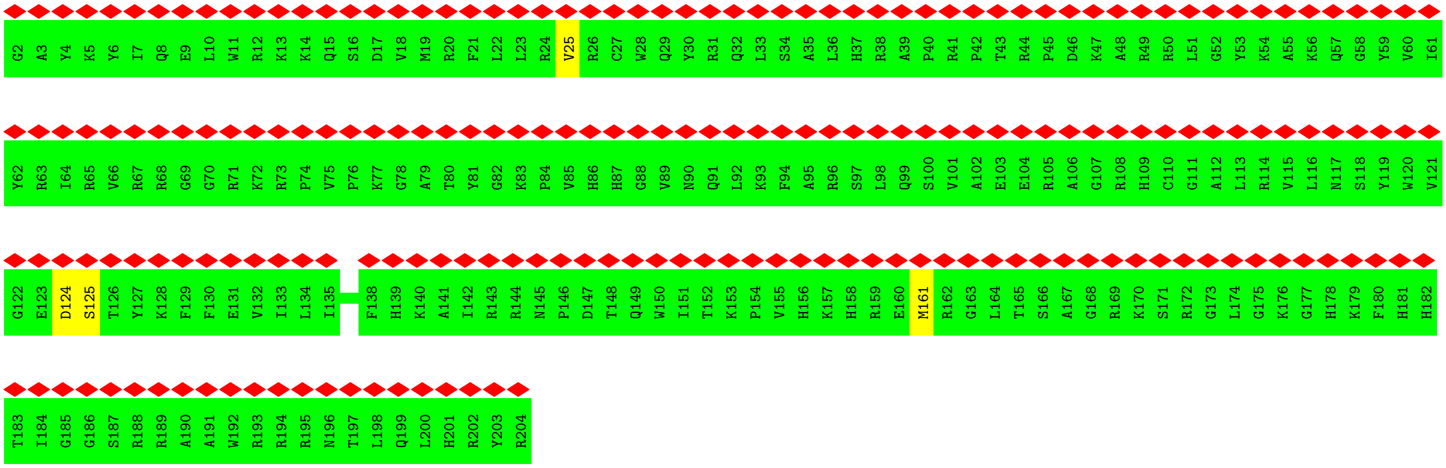




- Molecule 37: 60S ribosomal protein L15

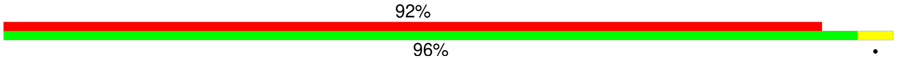
Chain LN:

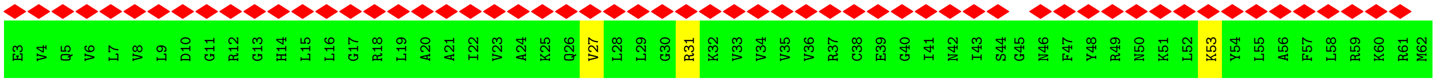


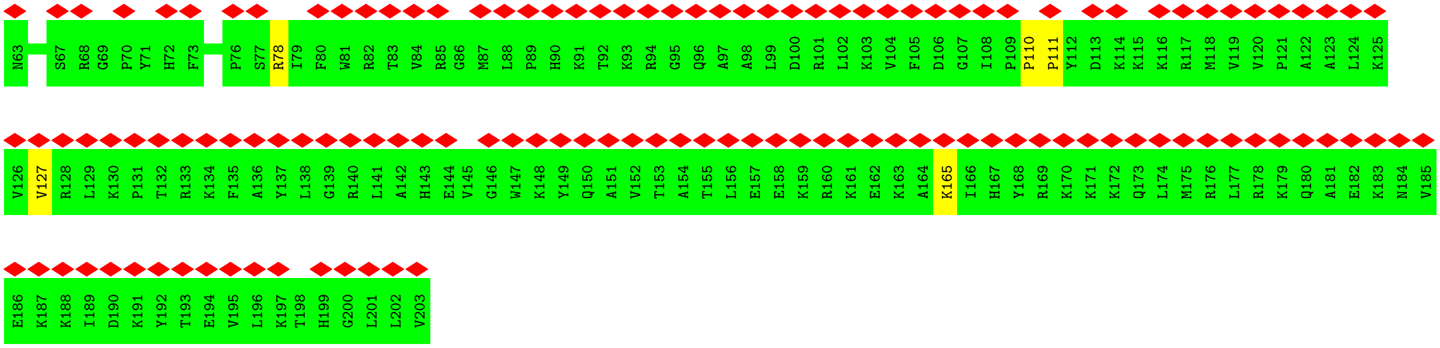


- Molecule 38: 60S ribosomal protein L13a

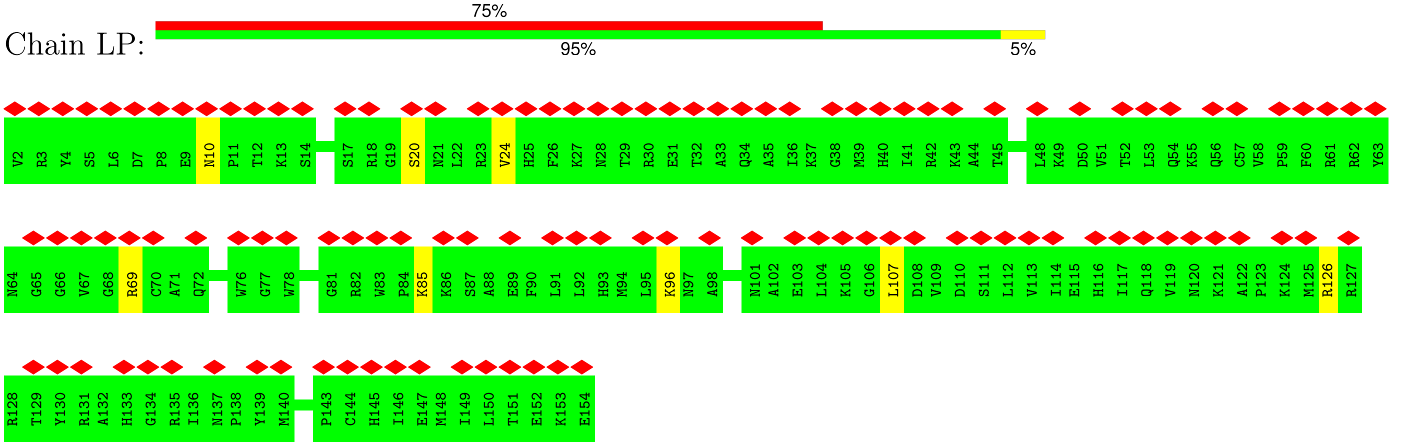
Chain LO:



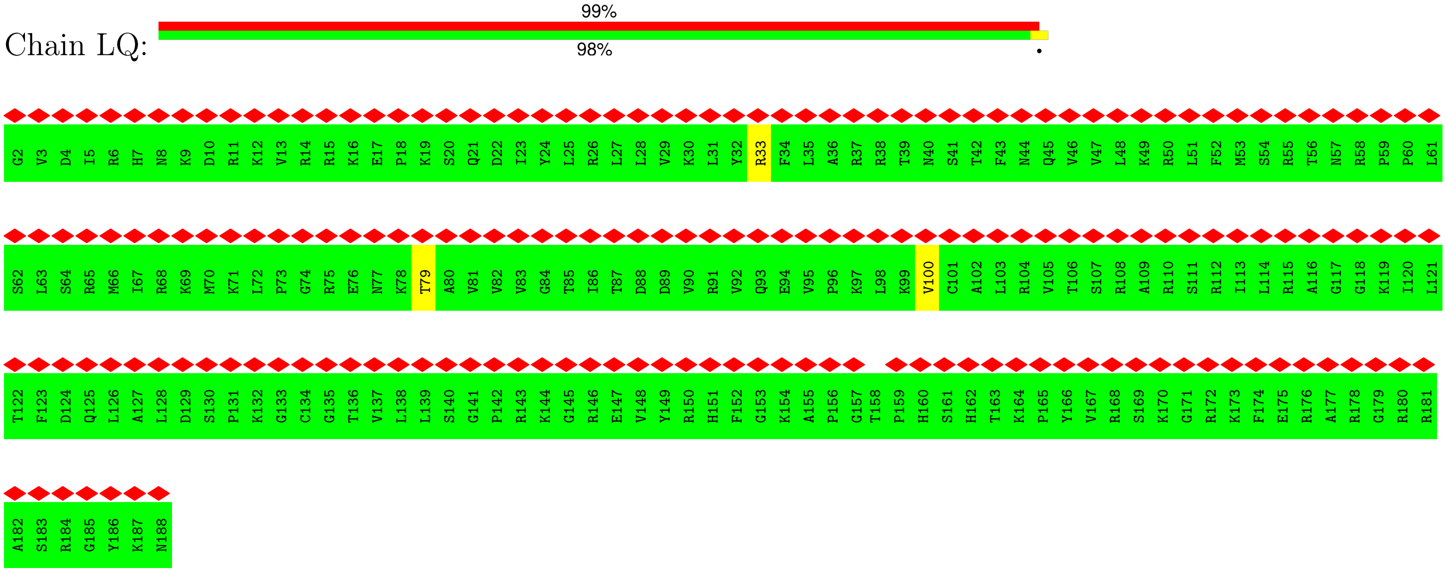




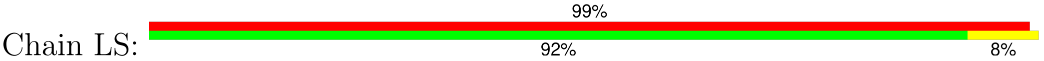
- Molecule 39: 60S ribosomal protein L17

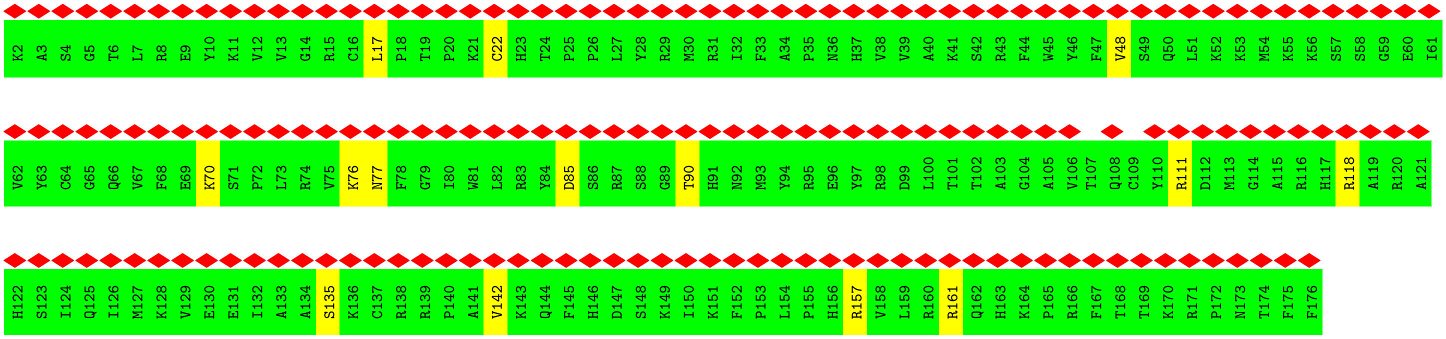


- Molecule 40: 60S ribosomal protein L18



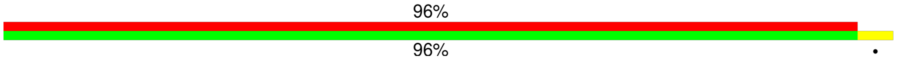
- Molecule 41: 60S ribosomal protein L18a

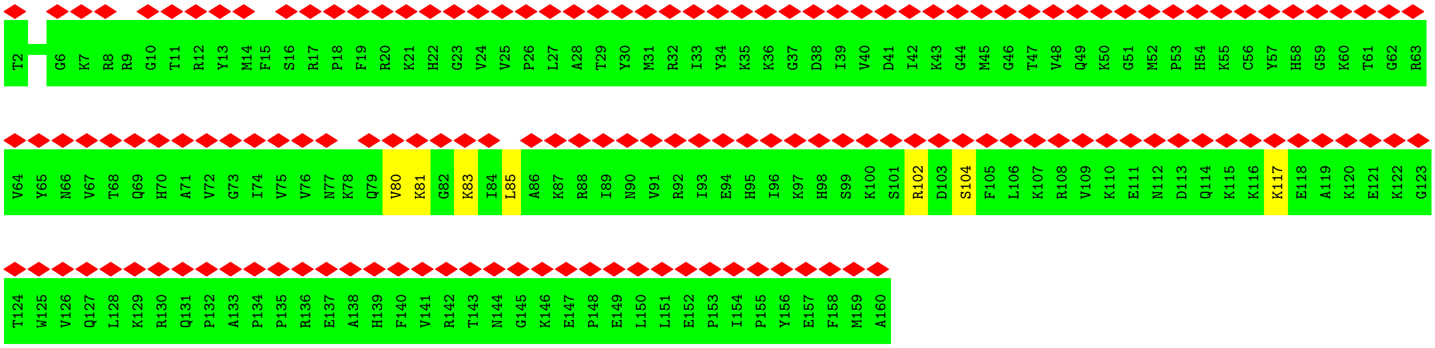




- Molecule 42: 60S ribosomal protein L21

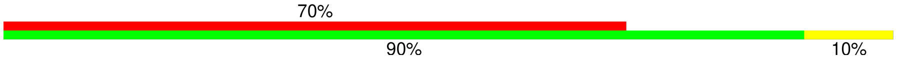
Chain LT:

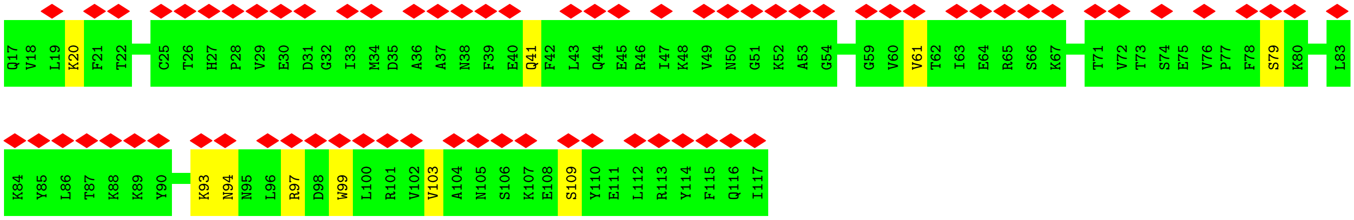




- Molecule 43: Heparin-binding protein HBp15

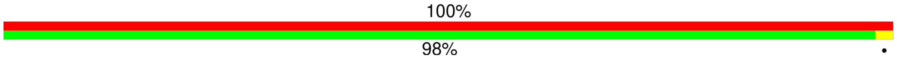
Chain LU:

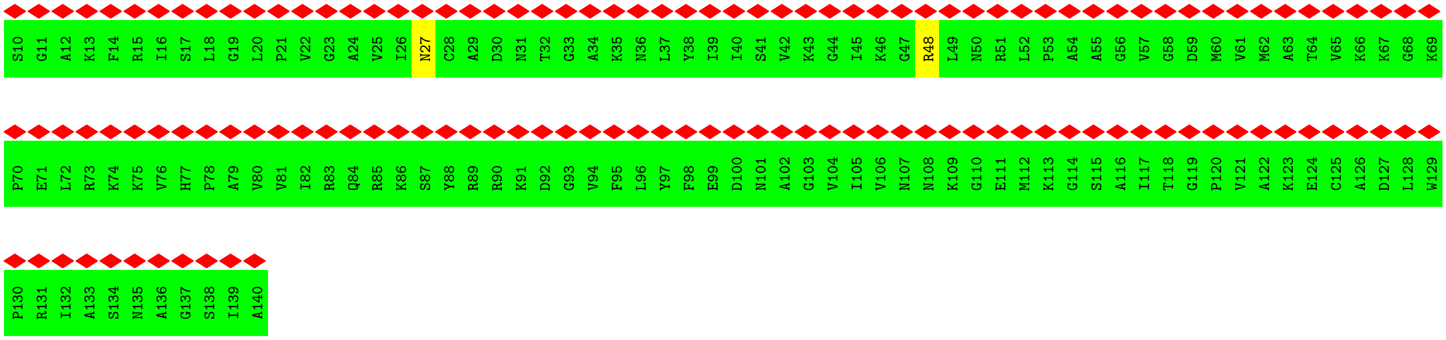




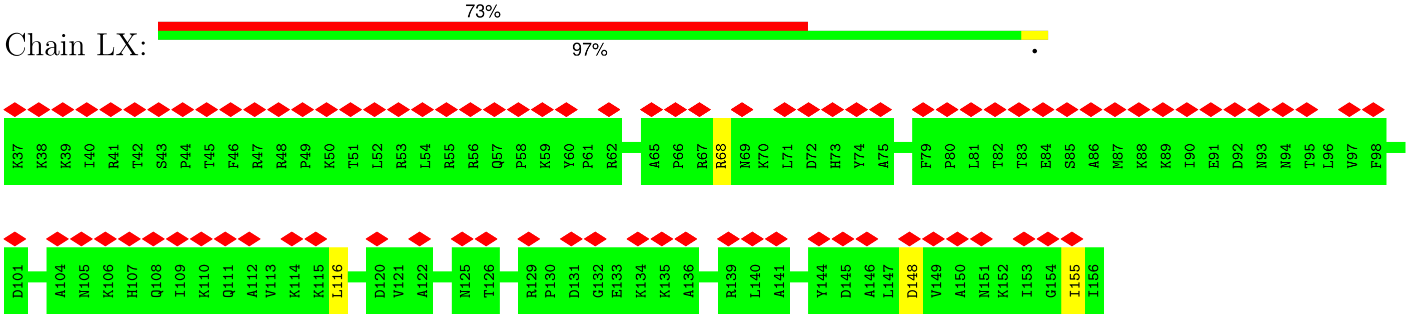
- Molecule 44: 60S ribosomal protein L23

Chain LV:

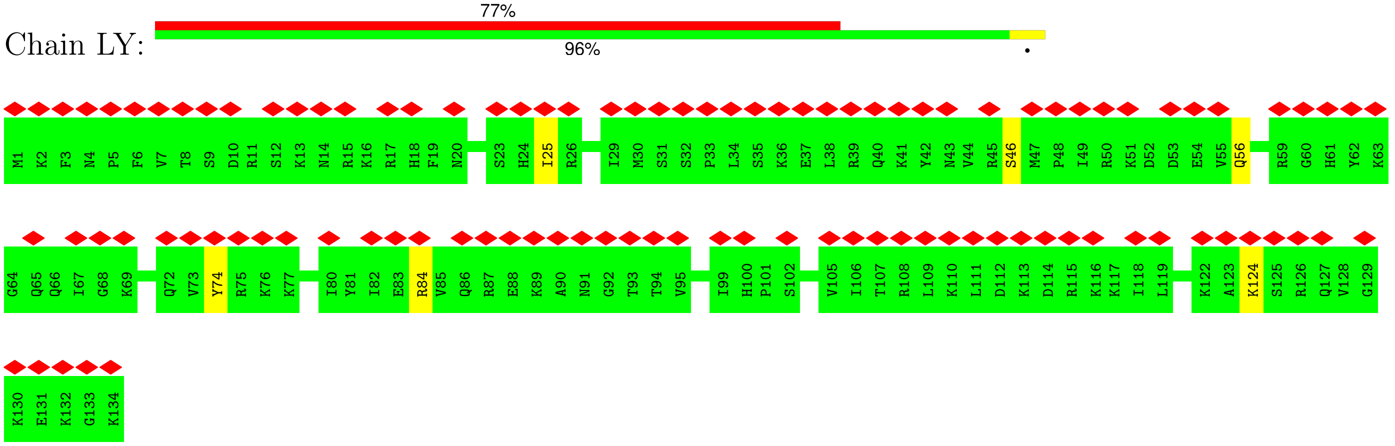




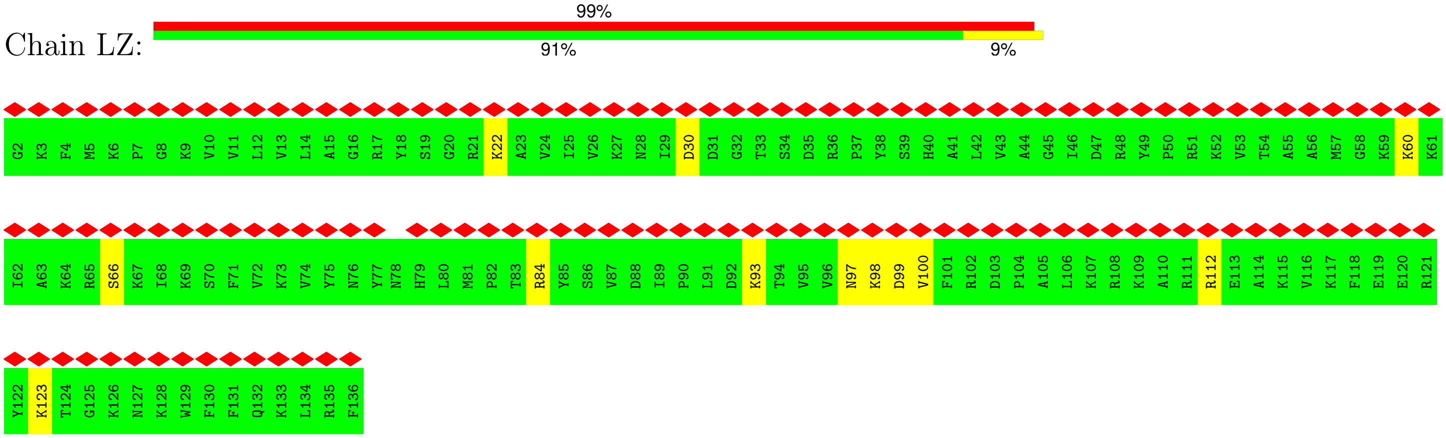
• Molecule 45: 60S ribosomal protein L23a



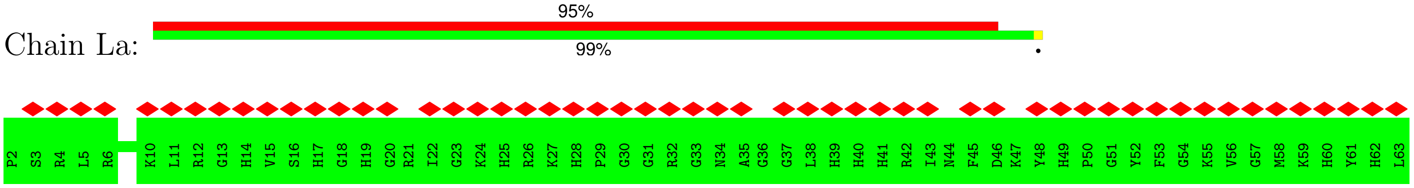
• Molecule 46: 60S ribosomal protein L26

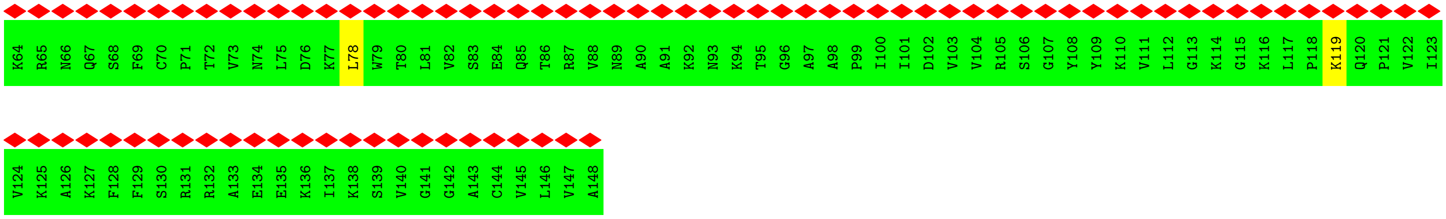


• Molecule 47: 60S ribosomal protein L27



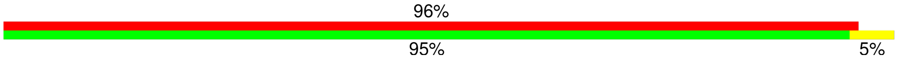
• Molecule 48: 60S ribosomal protein L27a

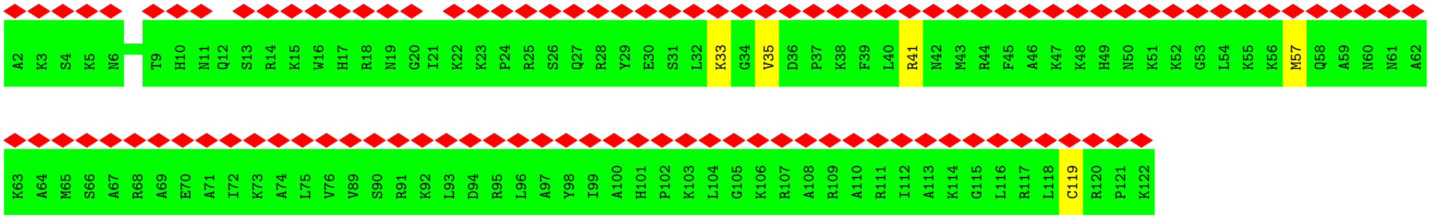




- Molecule 49: 60S ribosomal protein L29

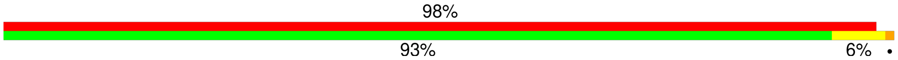
Chain Lb:

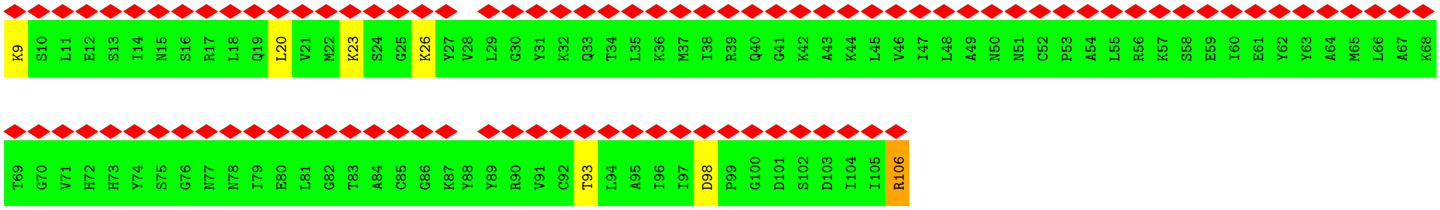




- Molecule 50: 60S ribosomal protein L30

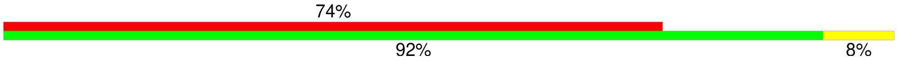
Chain Lc:

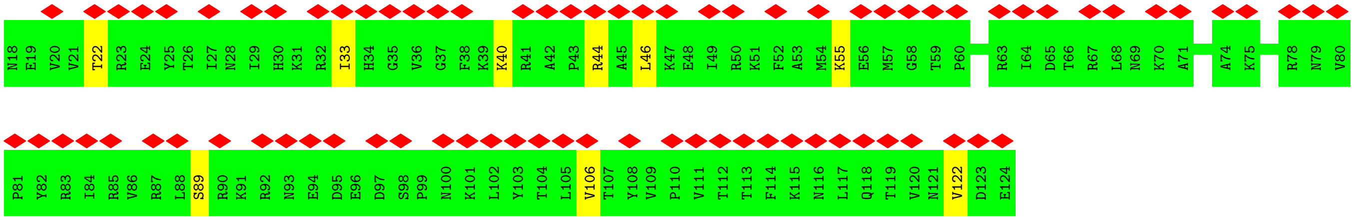




- Molecule 51: 60S ribosomal protein L31

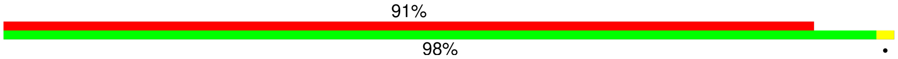
Chain Ld:

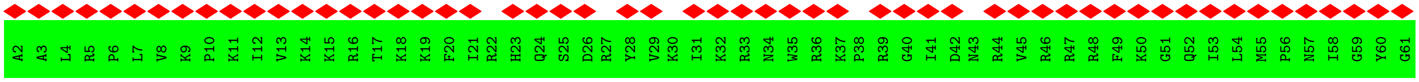


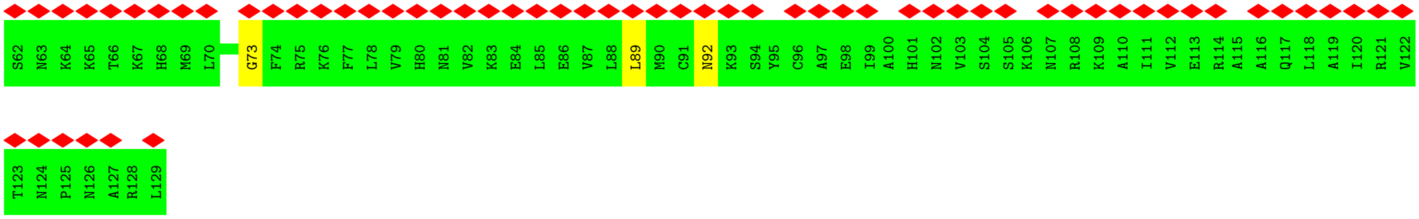


- Molecule 52: 60S ribosomal protein L32

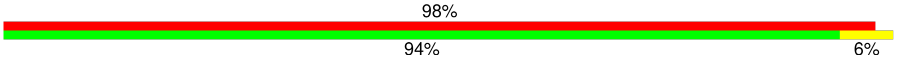
Chain Le:

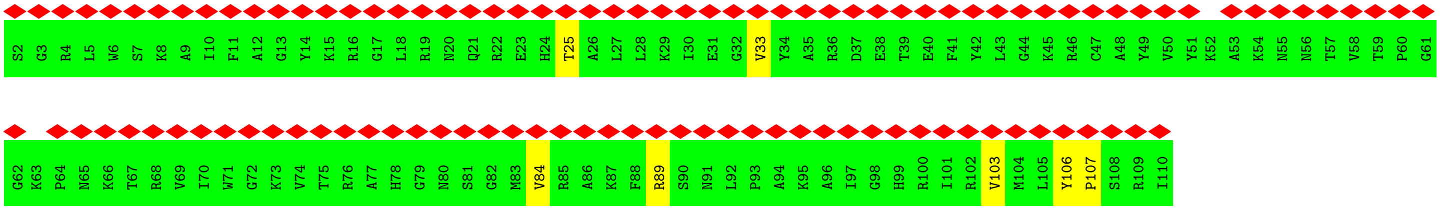




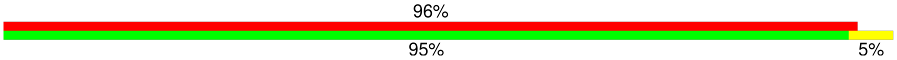


- Molecule 53: 60S ribosomal protein L35a

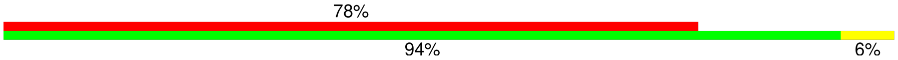
Chain Lf:


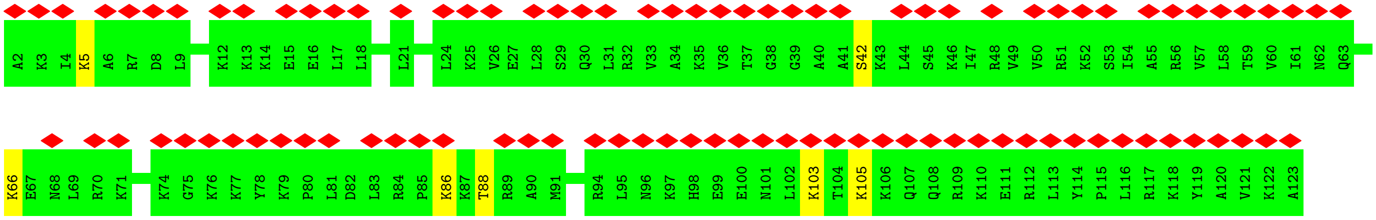


- Molecule 54: 60S ribosomal protein L34

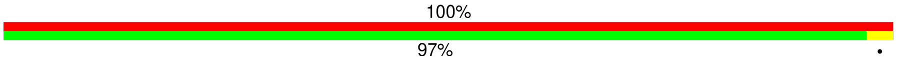
Chain Lg:


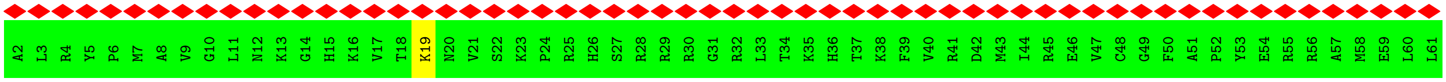
- Molecule 55: 60S ribosomal protein L35

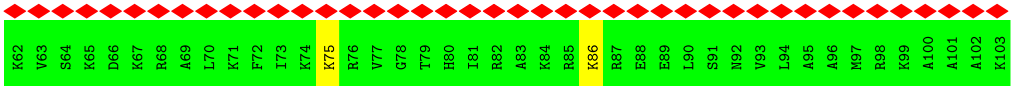
Chain Lh:




- Molecule 56: 60S ribosomal protein L36

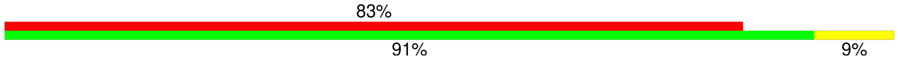
Chain Li:


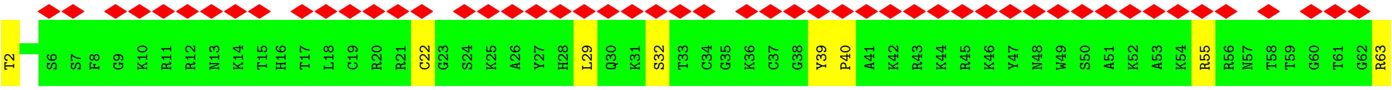


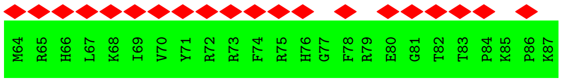


- Molecule 57: 60S ribosomal protein L37

Chain Lj:

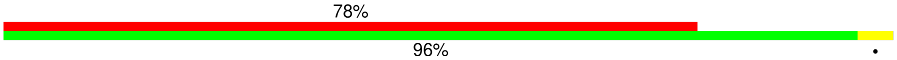


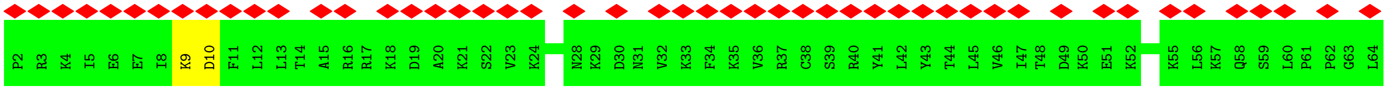


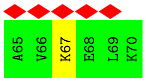


- Molecule 58: 60S ribosomal protein L38

Chain Lk:

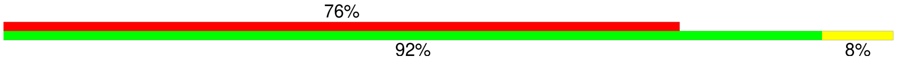


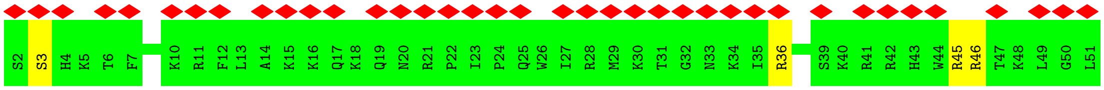




- Molecule 59: 60S ribosomal protein L39

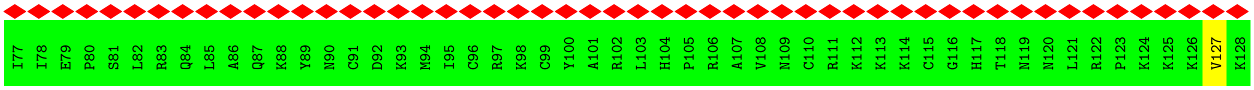
Chain Ll:





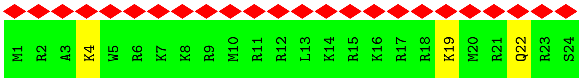
- Molecule 60: Large ribosomal subunit protein eL40

Chain Lm:



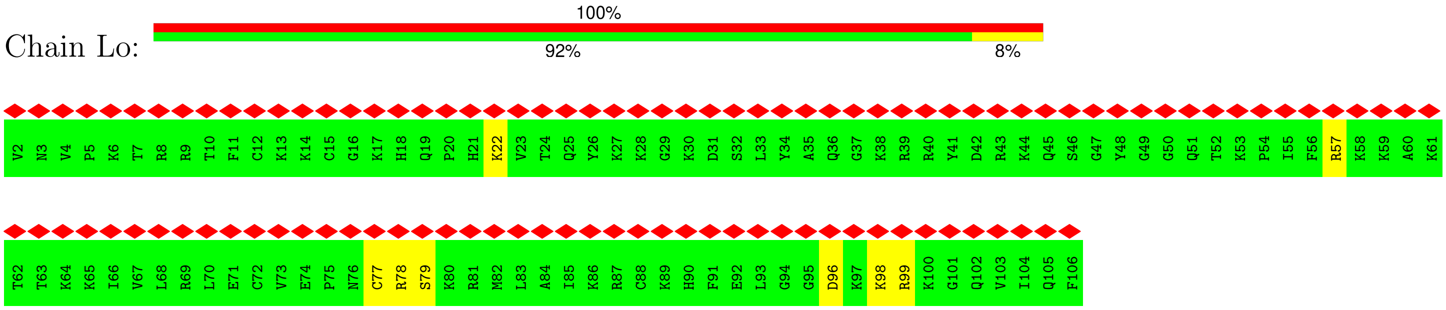
- Molecule 61: 60S ribosomal protein L41

Chain Ln:



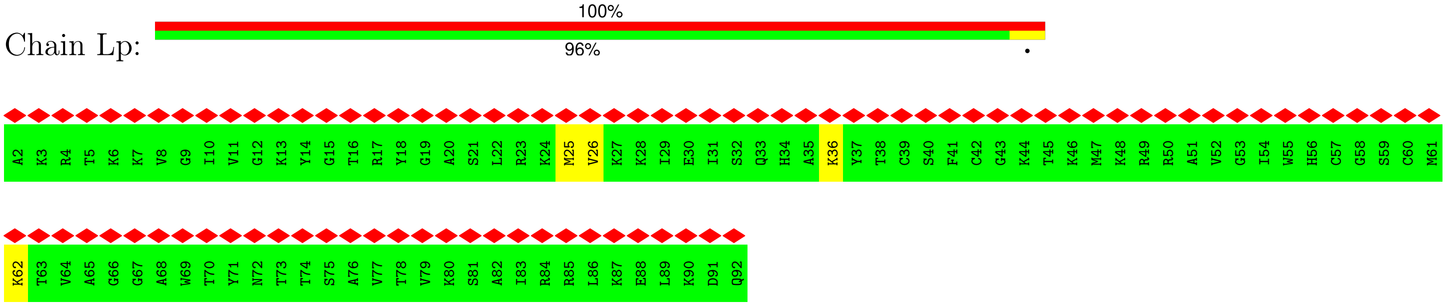
- Molecule 62: 60S ribosomal protein L36a

Chain Lo:



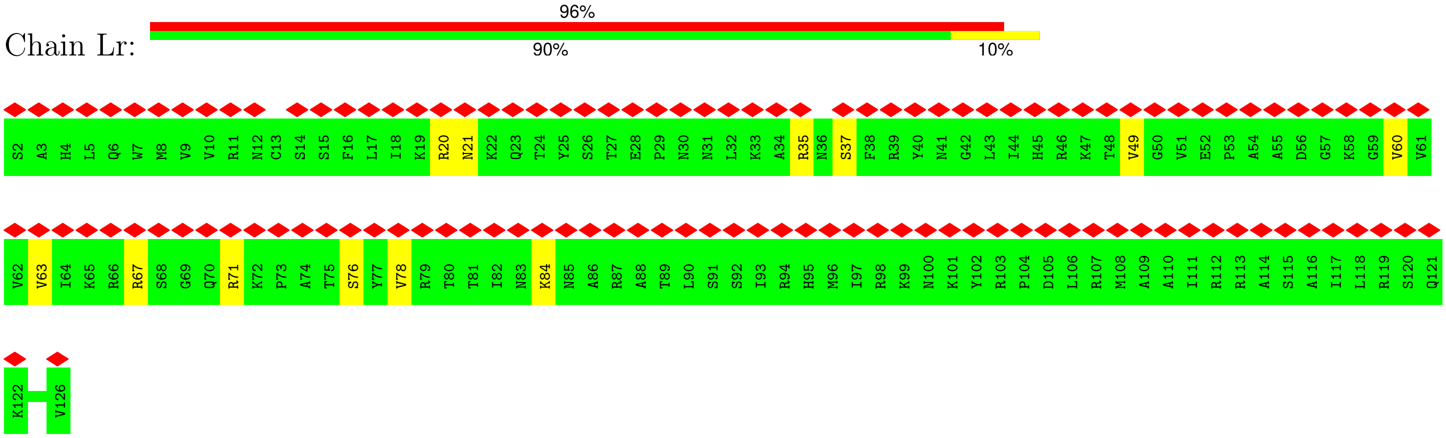
- Molecule 63: 60S ribosomal protein L37a

Chain Lp:



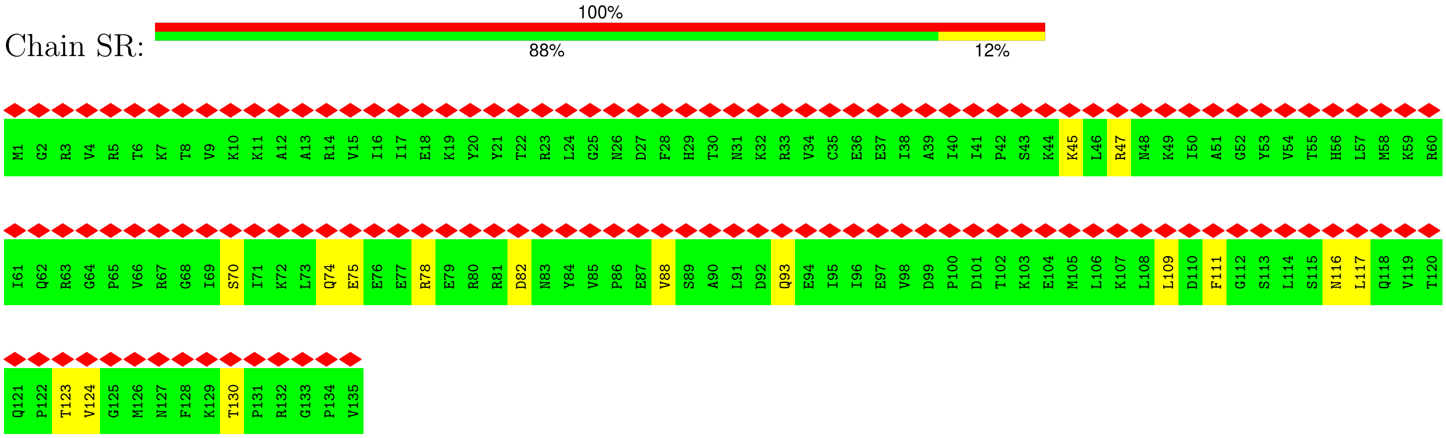
- Molecule 64: 60S ribosomal protein L28

Chain Lr:

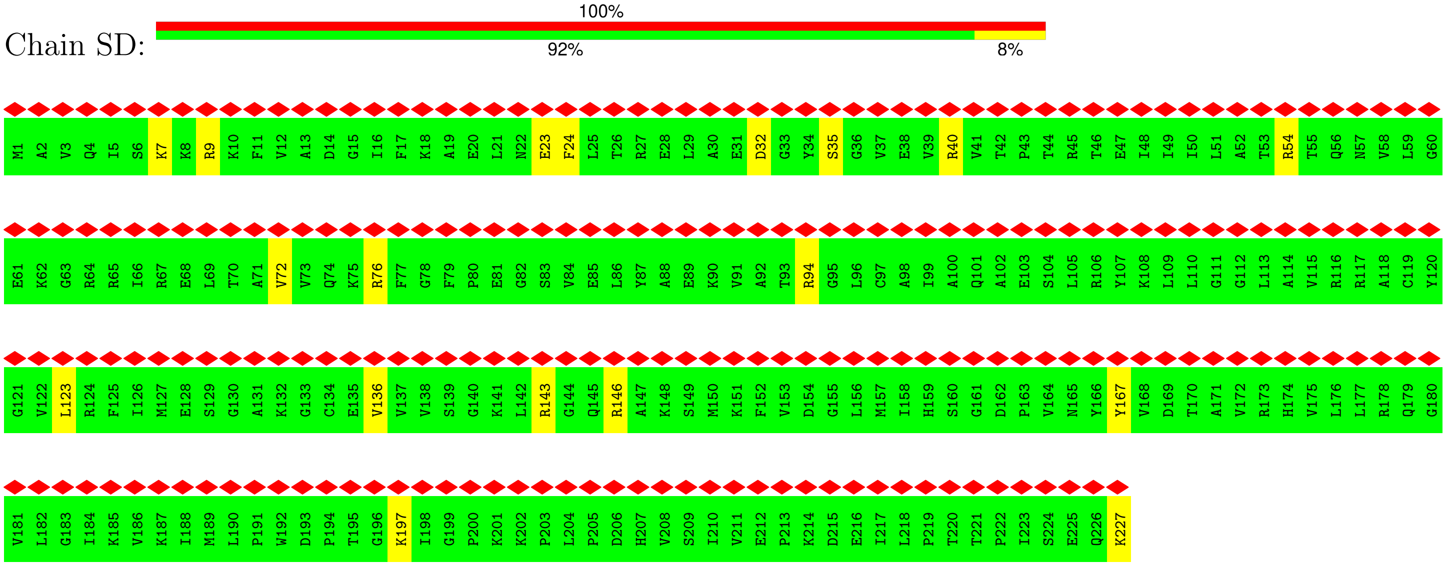


- Molecule 65: 40S ribosomal protein S17

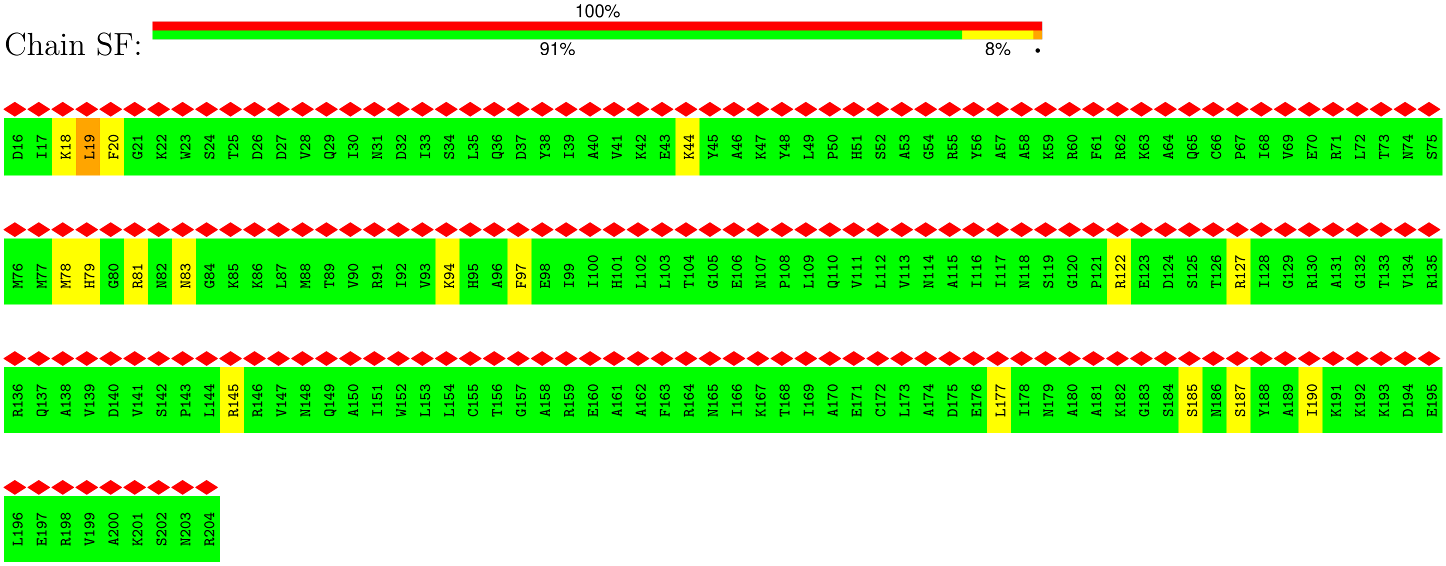
Chain SR:



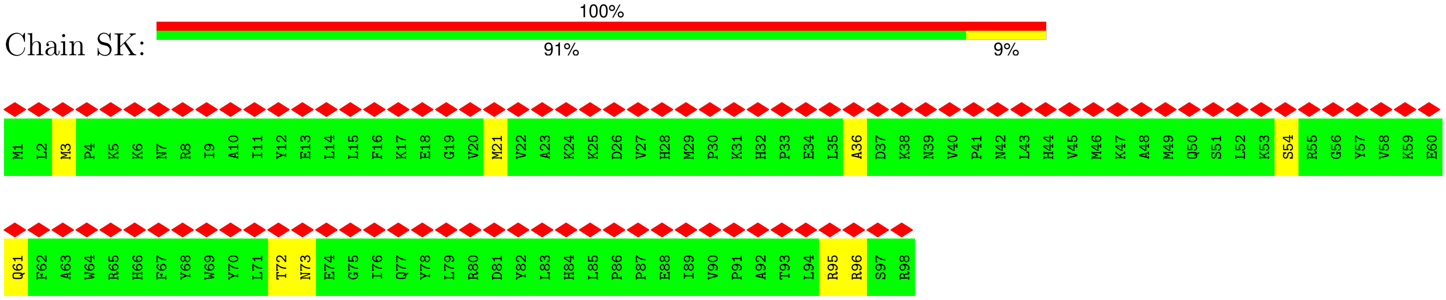
- Molecule 66: Small ribosomal subunit protein uS3



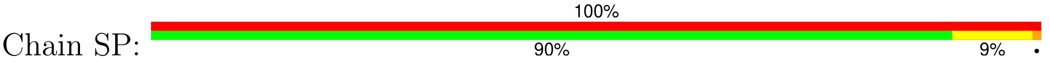
- Molecule 67: 40S ribosomal protein S5

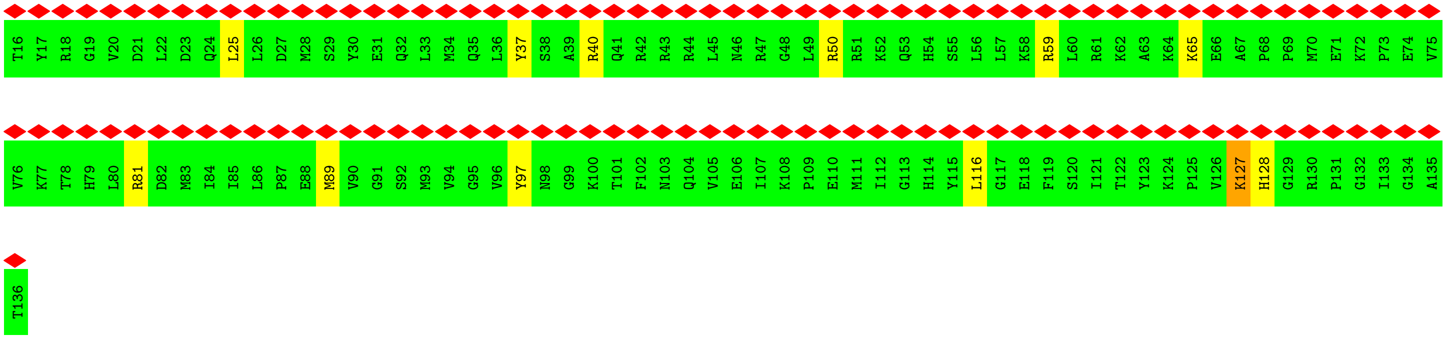


- Molecule 68: 40S ribosomal protein S10



- Molecule 69: Small ribosomal subunit protein uS19

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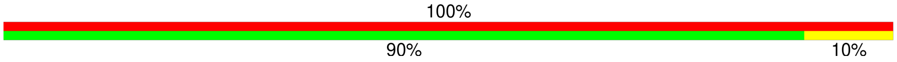
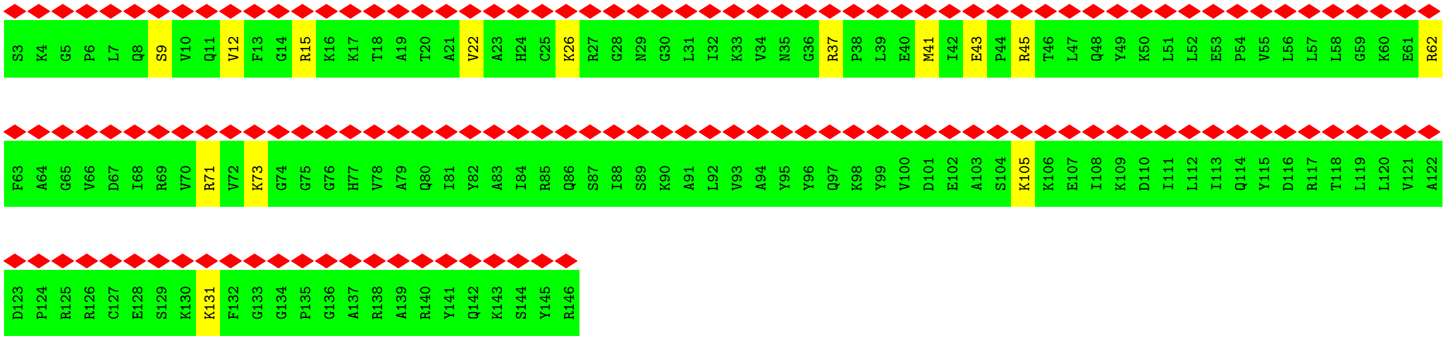
V76 K77 T78 H79 L80 R81 D82 M83 I84 I85 L86 P87 E88 M89 V90 G91 S92 M93 V94 G95 V96 Y97 N98 G99 K100 T101 F102 N103 Q104 V105 E106 I107 K108 P109 E110 M111 I112 G113 H114 Y115 L116 G117 E118 F119 S120 I121 T122 Y123 K124 P125 V126 K127 H128 G129 R130 P131 G132 I133 G134 A135

T136

- Molecule 70: Small ribosomal subunit protein uS9

Chain SQ:



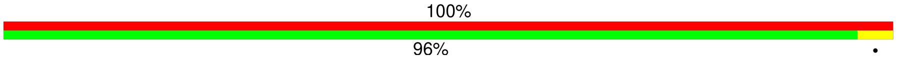

S3 K4 G5 P6 L7 Q8 S9 V10 Q11 V12 F13 G14 R15 K16 K17 T18 A19 T20 A21 V22 A23 H24 C25 K26 R27 G28 N29 G30 L31 I32 K33 V34 N35 G36 R37 P38 L39 E40 M41 I42 E43 P44 R45 T46 L47 Q48 Y49 K50 L51 L52 E53 P54 V55 L56 L57 L58 G59 K60 E61 R62

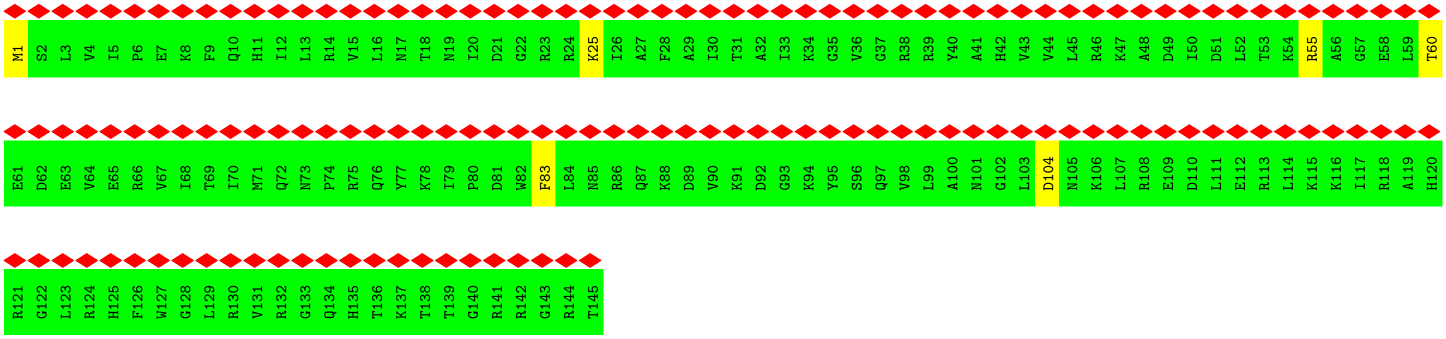
F63 A64 G65 V66 D67 I68 R69 V70 R71 V72 K73 G74 G75 G76 H77 V78 A79 Q80 I81 Y82 A83 I84 R85 Q86 S87 I88 S89 K90 A91 L92 V93 A94 Y95 Y96 Q97 K98 Y99 V100 D101 E102 A103 S104 K105 K106 E107 I108 K109 D110 I111 L112 I113 Q114 Y115 D116 R117 T118 L119 L120 V121 A122

D123 P124 R125 R126 C127 E128 S129 K130 K131 F132 G133 G134 P135 G136 A137 R138 A139 R140 Y141 Q142 K143 S144 Y145 R146

- Molecule 71: 40S ribosomal protein S18

Chain SS:



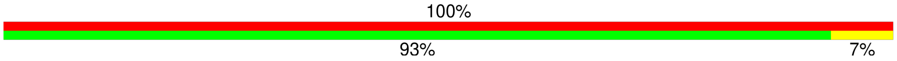

M1 S2 L3 V4 I5 P6 E7 K8 F9 Q10 H11 I12 L13 R14 V15 L16 N17 T18 N19 I20 D21 G22 R23 R24 K25 I26 A27 F28 A29 I30 T31 A32 I33 K34 G35 V36 G37 R38 R39 Y40 A41 H42 V43 V44 L45 R46 K47 A48 D49 I50 D51 L52 T53 K54 R55 A56 G57 E58 L59 T60

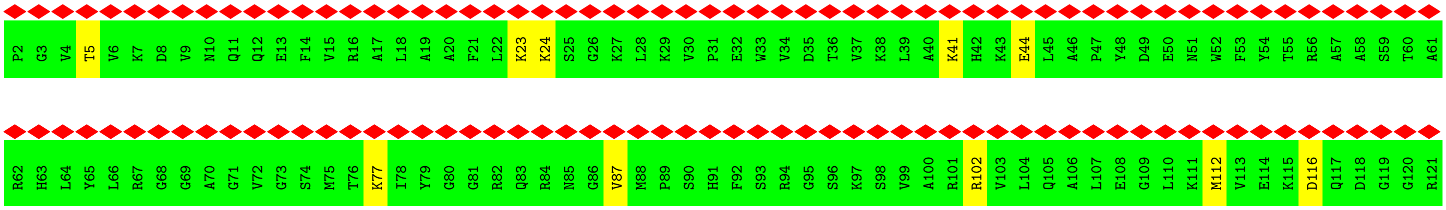
E61 D62 E63 V64 E65 R66 V67 I68 T69 I70 M71 Q72 N73 P74 R75 Q76 Y77 K78 I79 P80 D81 W82 F83 L84 N85 R86 Q87 K88 D89 V90 K91 D92 G93 K94 Y95 S96 Q97 V98 L99 A100 N101 G102 L103 D104 N105 K106 L107 R108 E109 D110 L111 E112 R113 L114 K115 K116 I117 R118 A119 H120

R121 G122 L123 R124 H125 F126 W127 G128 L129 R130 V131 R132 G133 Q134 H135 T136 K137 T138 T139 G140 R141 R142 G143 R144 T145

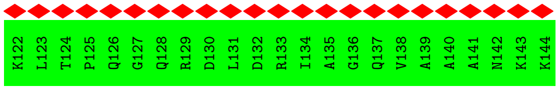
- Molecule 72: 40S ribosomal protein S19

Chain ST:

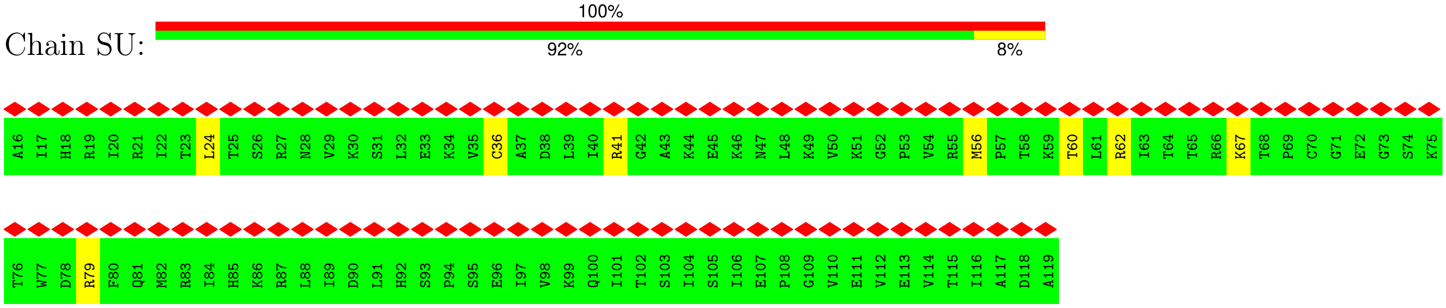



P2 G3 V4 T5 V6 K7 D8 V9 N10 Q11 Q12 E13 F14 V15 R16 A17 L18 A19 A20 F21 L22 K23 K24 S25 G26 K27 L28 K29 V30 P31 E32 W33 V34 D35 T36 V37 K38 L39 A40 K41 H42 K43 E44 L45 A46 P47 Y48 D49 E50 N51 W52 F53 Y54 T55 R56 A57 A58 S59 T60 A61

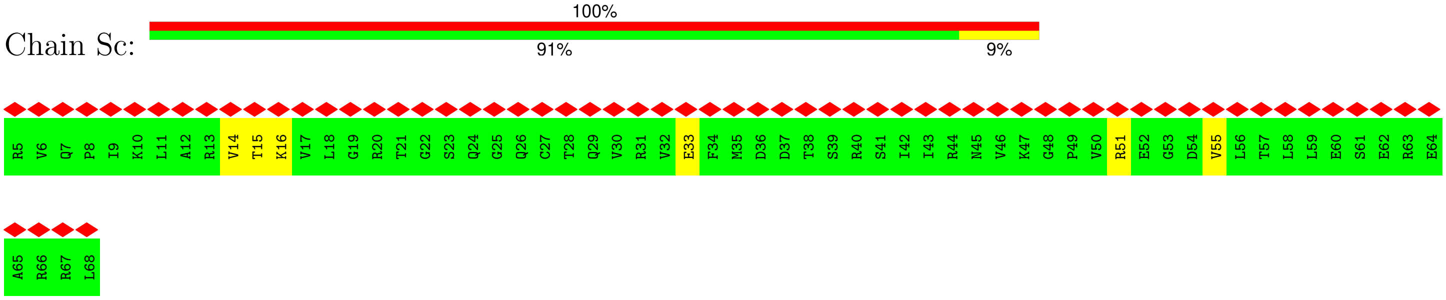
R62 H63 L64 Y65 L66 R67 G68 G69 A70 G71 V72 G73 S74 M75 T76 K77 I78 Y79 G80 G81 R82 Q83 R84 N85 G86 V87 M88 P89 S90 H91 F92 S93 R94 G95 S96 K97 S98 V99 A100 R101 R102 V103 L104 Q105 A106 L107 E108 G109 L110 K111 M112 V113 E114 K115 D116 Q117 D118 G119 G120 R121



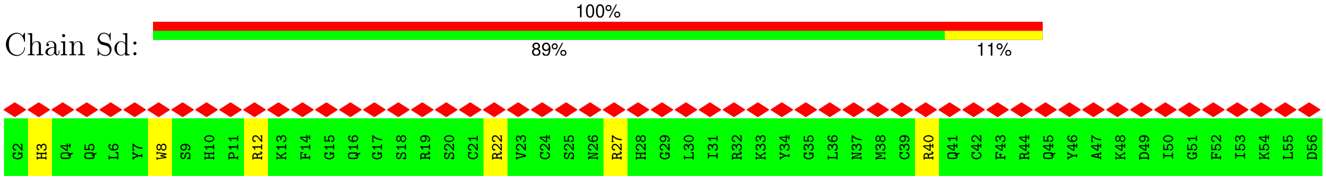
- Molecule 73: 40S ribosomal protein S20



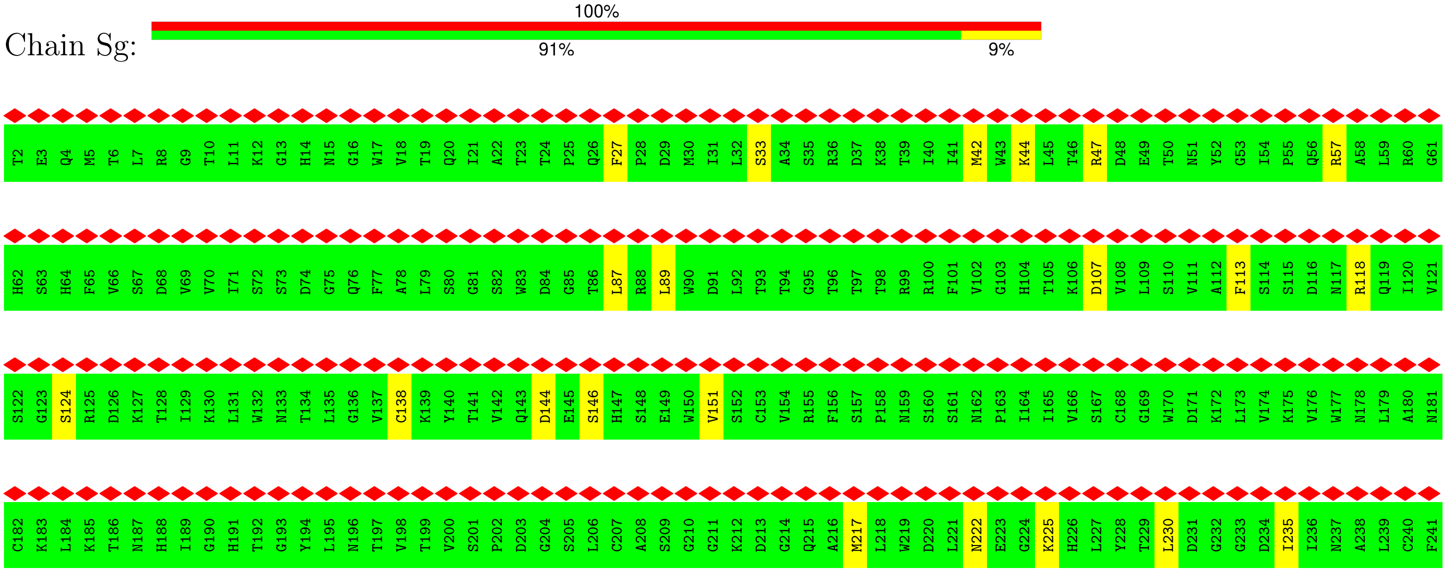
- Molecule 74: 40S ribosomal protein S28

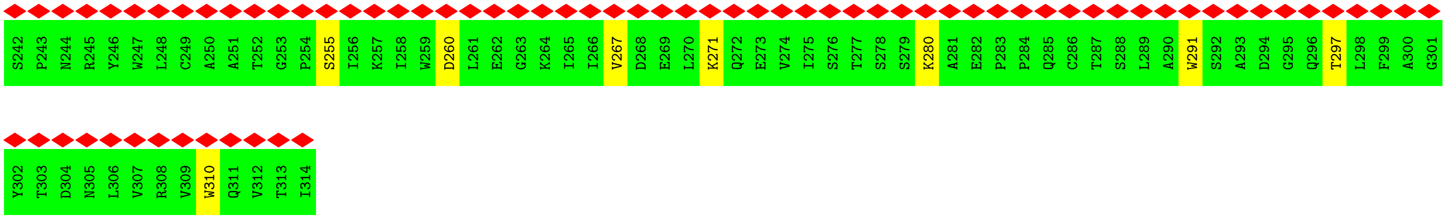


- Molecule 75: 40S ribosomal protein S29



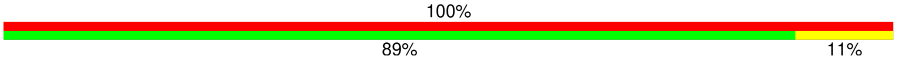
- Molecule 76: Receptor of activated protein C kinase 1

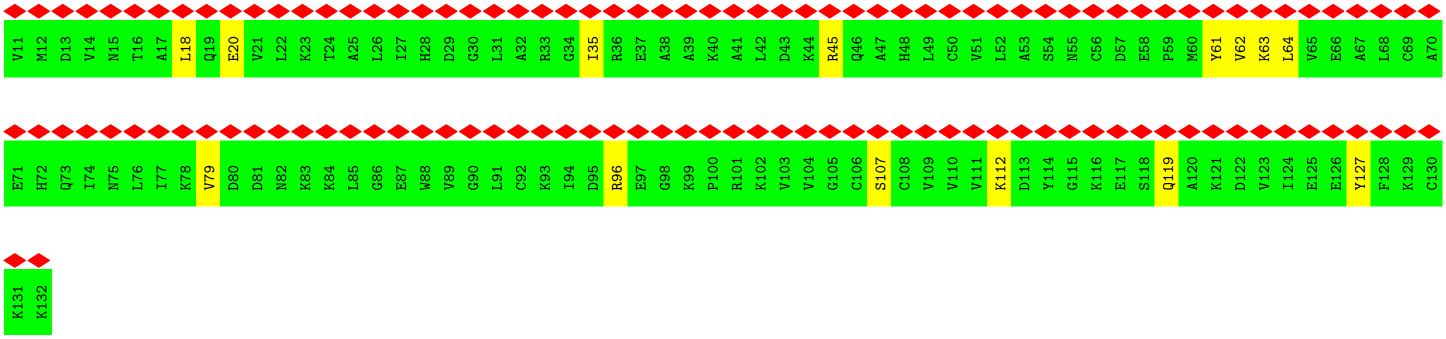




- Molecule 77: Small ribosomal subunit protein eS12

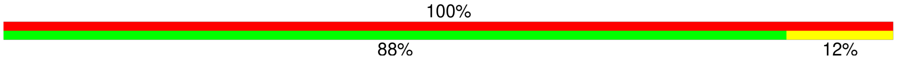
Chain SM:

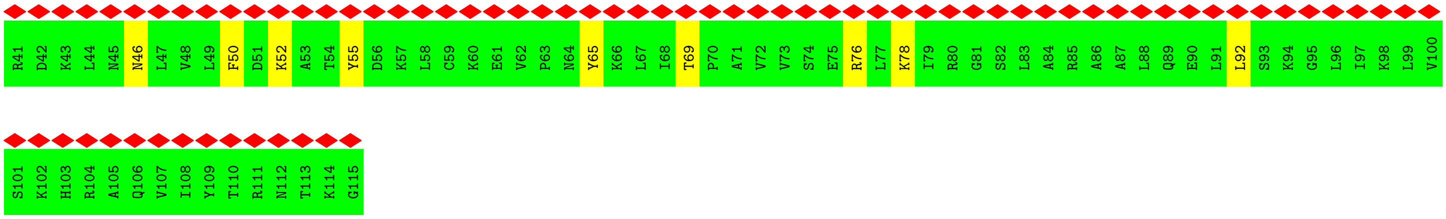




- Molecule 78: Small ribosomal subunit protein eS25

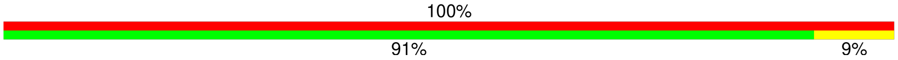
Chain SZ:

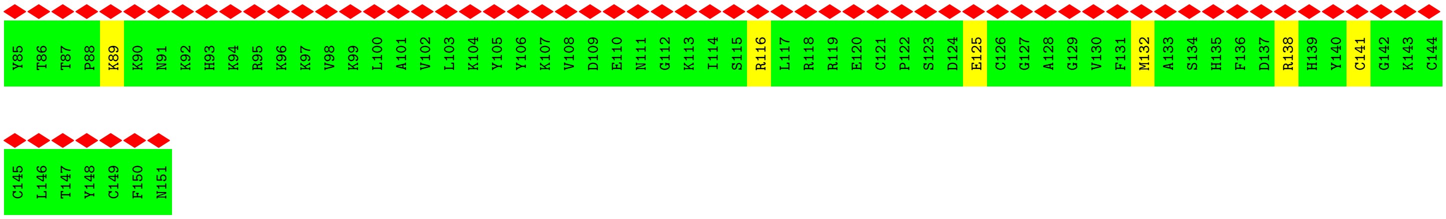




- Molecule 79: Ubiquitin-40S ribosomal protein S27a

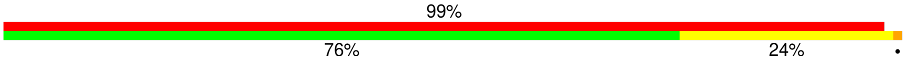
Chain Sf:

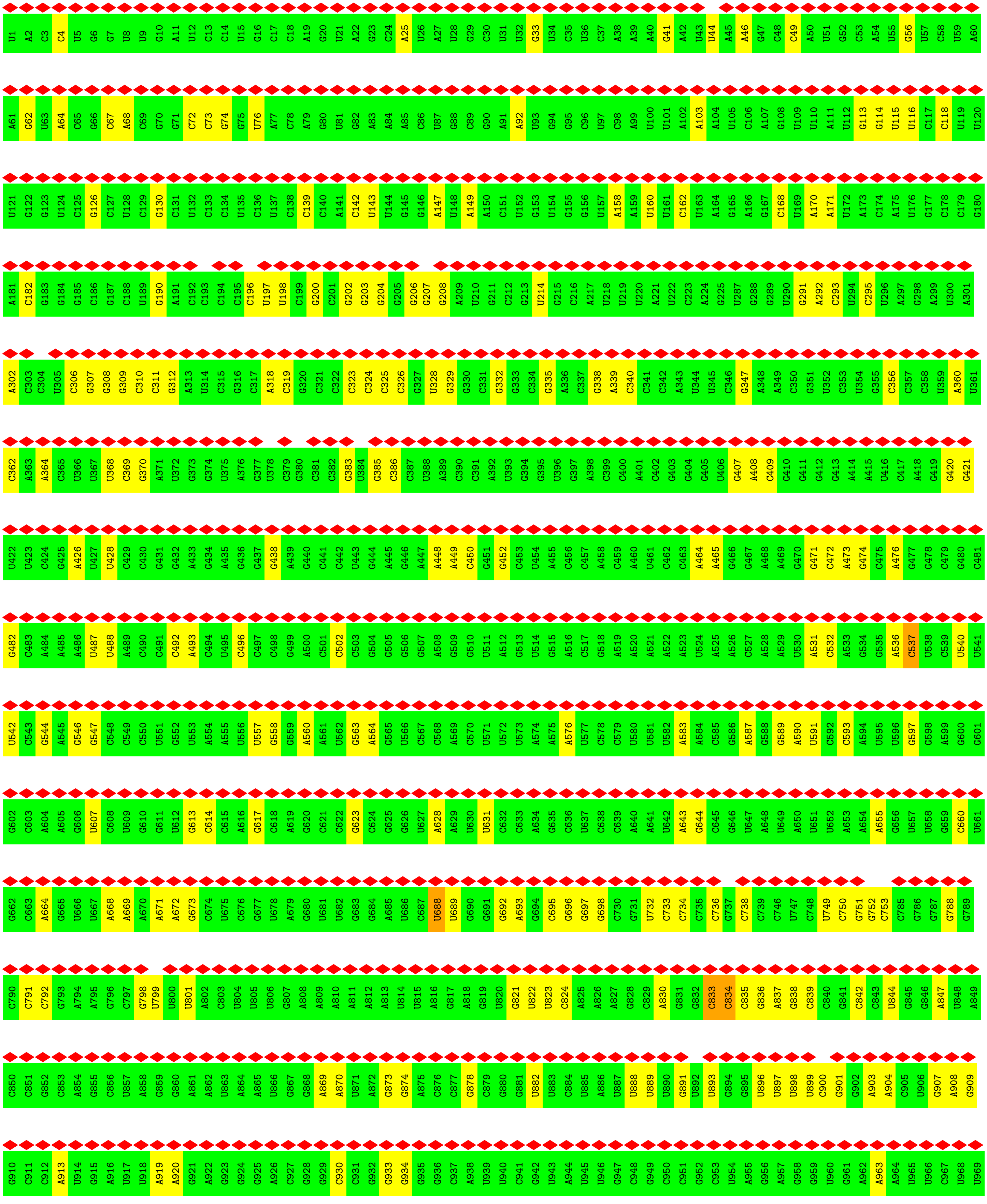




- Molecule 80: 18S rRNA

Chain S2:

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A61 G62 U63 A64 C65 G66 C67 A68 C69 G70 G71 C72 C73 G74 G75 U76 A77 C78 A79 G80 U81 G82 A83 A84 A85 C86 U87 G88 C89 G90 A91 A92 U93 G94 G95 C96 U97 C98 A99 U100 U101 A102 A103 A104 U105 C106 A107 G108 U109 U110 A111 U112 G113 G114 U115 U116 C117 C118 U119 U120
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A302 C303 C304 U305 C306 G307 G308 G309 C310 C311 G312 A313 U314 C315 G316 C317 A318 C319 G320 C321 C322 C323 C324 C325 C326 G327 U328 G329 C330 C331 G332 G333 C334 G335 A336 C337 G338 A339 C340 C341 G342 A343 U344 C345 C346 G347 A348 A349 C350 G351 C352 C353 U354 G355 C356 C357 C358 U359 A360 U361
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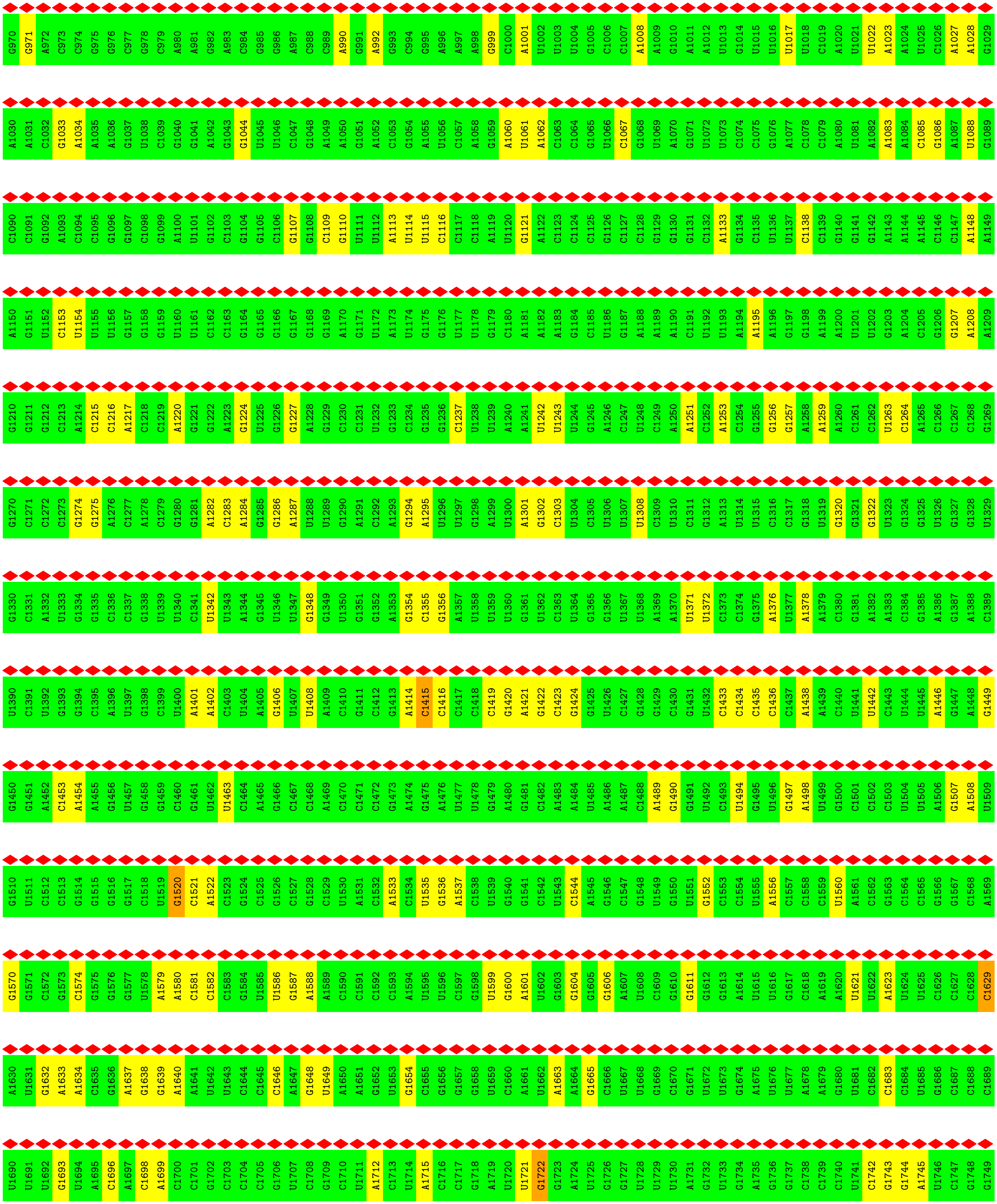
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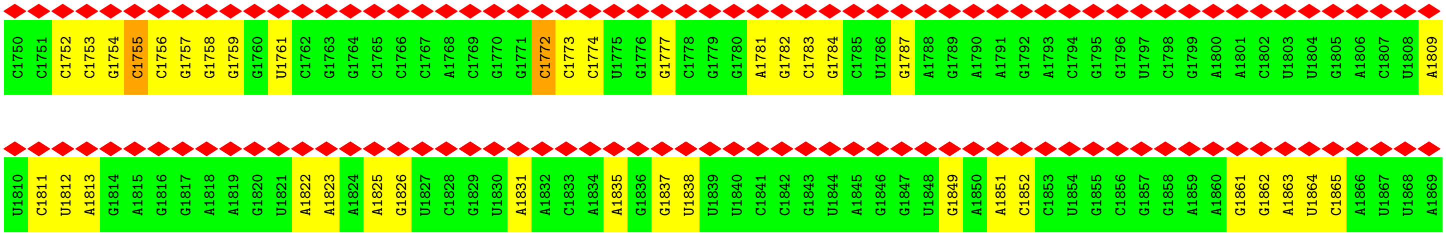
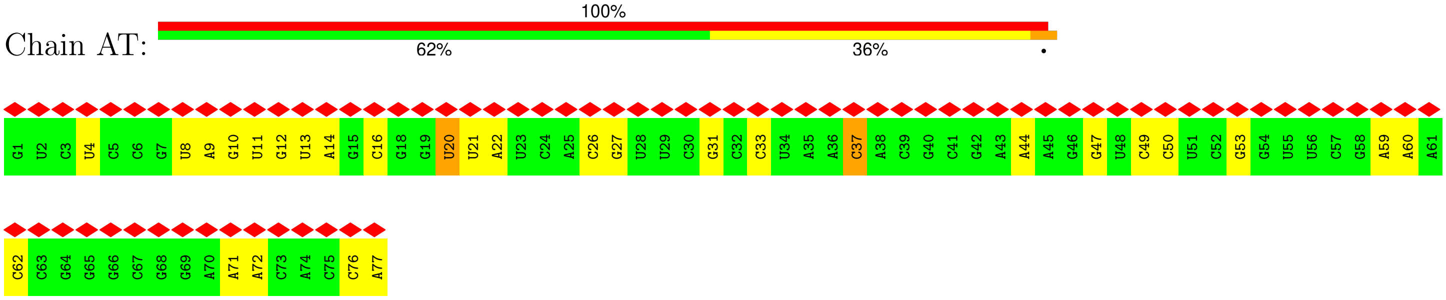


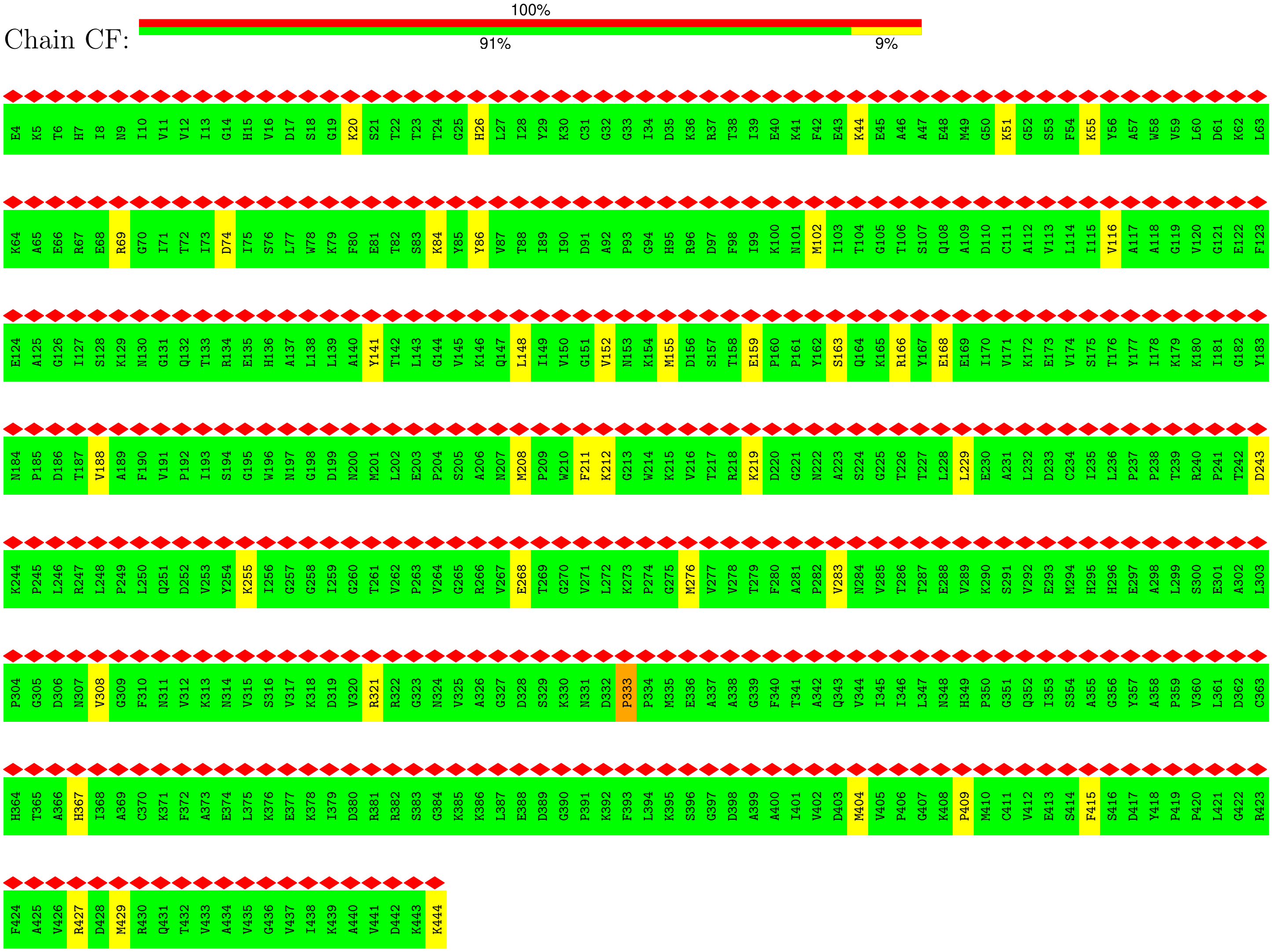
- Molecule 81: AT site tRNA

Chain AT:

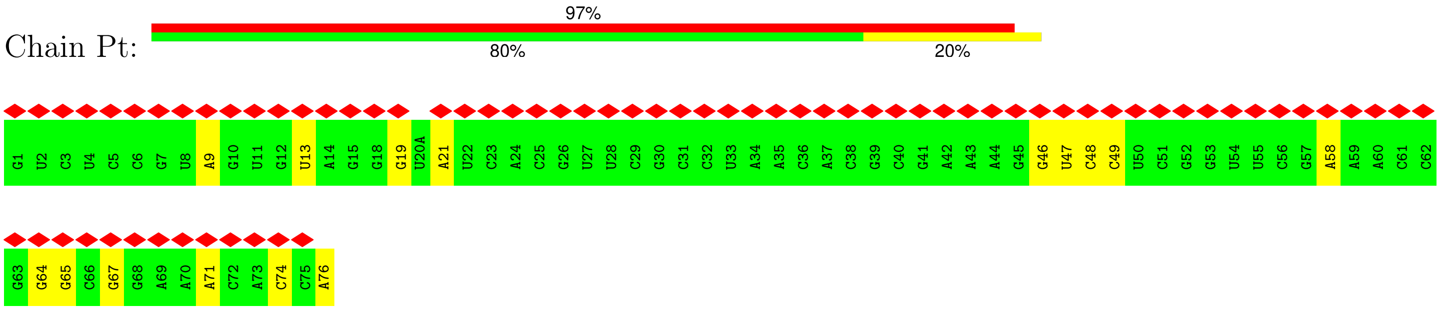


- Molecule 82: eEF1A

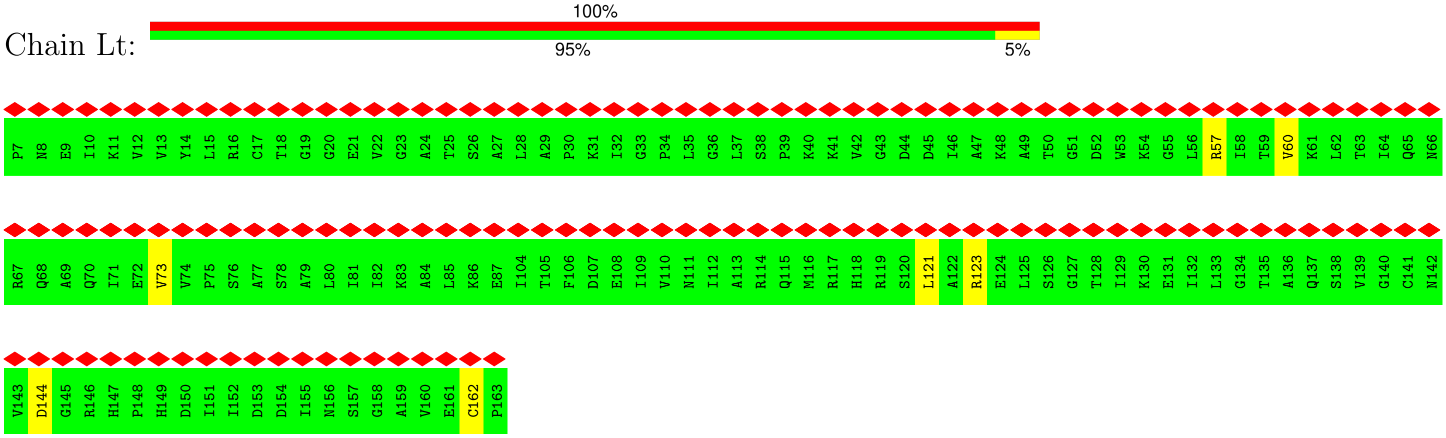
Chain CF:



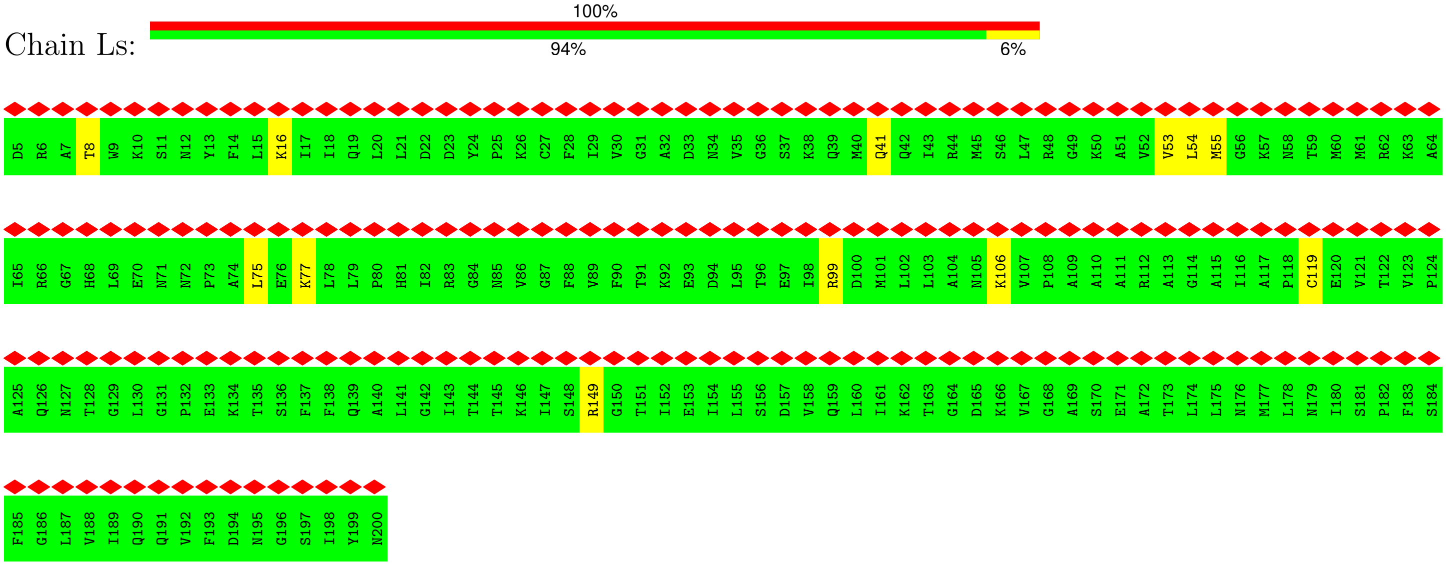
- Molecule 83: P site tRNA



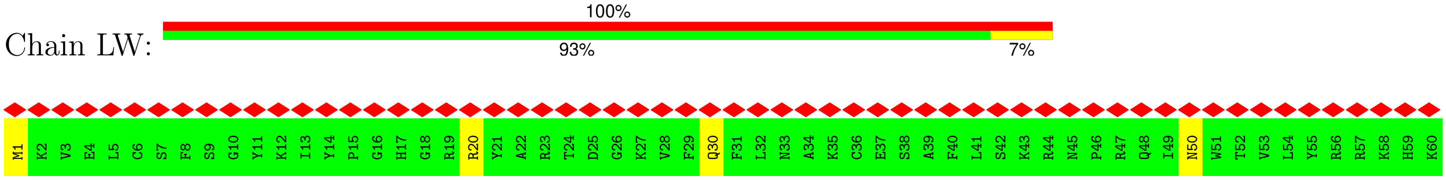
- Molecule 84: 60S ribosomal protein L12

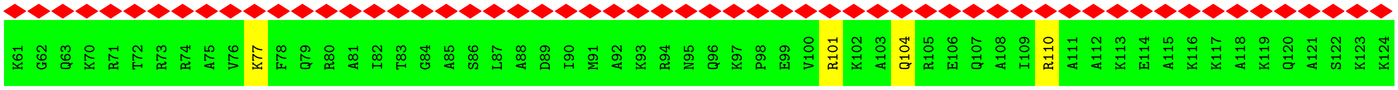


- Molecule 85: 60S acidic ribosomal protein P0



- Molecule 86: 60S ribosomal protein L24




K61
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Q63
K70
R71
T72
R73
R74
A75
V76
K77
F78
Q79
R80
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T83
G84
A85
S86
L87
A88
D89
I90
M91
A92
K93
R94
N95
Q96
K97
P98
E99
V100
R101
K102
A103
Q104
R105
E106
Q107
A108
I109
R110
A111
A112
K113
E114
A115
K116
K117
A118
K119
Q120
A121
S122
K123
K124

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1272627	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.289	Depositor
Minimum map value	-0.724	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.024	Depositor
Recommended contour level	0.0729	Depositor
Map size (Å)	615.16797, 615.16797, 615.16797	wwPDB
Map dimensions	576, 576, 576	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.068, 1.068, 1.068	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, SEP

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	CD	0.38	0/290	0.64	0/391
2	CI	0.27	0/245	0.72	0/322
3	LR	0.27	0/1582	0.60	0/2091
4	SE	0.25	0/2118	0.55	0/2849
5	SI	0.26	0/1715	0.56	0/2287
6	SL	0.29	0/1268	0.58	0/1696
7	SX	0.27	0/1116	0.55	0/1490
8	SG	0.29	0/1946	0.61	0/2590
9	SJ	0.25	0/1550	0.57	0/2069
10	SY	0.25	0/1083	0.54	0/1438
11	Se	0.27	0/465	0.59	0/612
12	SA	0.28	0/1778	0.59	1/2416 (0.0%)
13	SB	0.26	0/1765	0.52	0/2362
14	SH	0.27	0/1519	0.58	2/2033 (0.1%)
15	SV	0.26	0/643	0.57	0/860
16	Sa	0.29	0/836	0.62	0/1121
17	SC	0.27	0/1762	0.55	0/2381
18	SN	0.25	0/1232	0.53	0/1656
19	SO	0.26	0/1062	0.59	0/1425
20	SW	0.26	0/1051	0.54	0/1406
21	Sb	0.27	0/665	0.54	0/891
22	L5	0.54	0/89312	0.88	91/139287 (0.1%)
23	L7	0.50	0/2861	0.81	0/4459
24	L8	0.54	0/3701	0.82	2/5766 (0.0%)
25	LA	0.33	0/1936	0.67	0/2596
26	LB	0.33	0/3306	0.61	1/4424 (0.0%)
27	LC	0.31	0/2981	0.62	1/4002 (0.0%)
28	LD	0.32	0/2428	0.57	2/3252 (0.1%)
29	LE	0.30	0/1942	0.60	0/2606
30	LF	0.33	0/1905	0.56	0/2539
31	LG	0.29	0/1960	0.55	0/2637
32	LH	0.31	0/1537	0.60	0/2066

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	LI	0.32	0/1673	0.58	0/2233
34	LJ	0.30	0/1433	0.59	0/1915
35	LL	0.29	0/1732	0.61	0/2315
36	LM	0.31	0/1161	0.58	0/1554
37	LN	0.33	0/1746	0.63	0/2338
38	LO	0.32	0/1682	0.57	0/2250
39	LP	0.33	0/1268	0.58	0/1701
40	LQ	0.32	0/1537	0.65	0/2052
41	LS	0.34	0/1493	0.61	0/2003
42	LT	0.32	0/1326	0.57	0/1770
43	LU	0.36	0/839	0.59	0/1126
44	LV	0.32	0/993	0.58	0/1332
45	LX	0.30	0/1002	0.56	0/1345
46	LY	0.31	0/1132	0.59	0/1504
47	LZ	0.34	0/1130	0.56	0/1507
48	La	0.32	0/1191	0.59	1/1591 (0.1%)
49	Lb	0.30	0/889	0.61	0/1175
50	Lc	0.37	0/774	0.69	3/1038 (0.3%)
51	Ld	0.30	0/903	0.60	0/1216
52	Le	0.34	0/1071	0.61	0/1429
53	Lf	0.35	0/895	0.67	0/1198
54	Lg	0.30	0/916	0.58	0/1220
55	Lh	0.29	0/1023	0.58	0/1351
56	Li	0.30	0/843	0.58	0/1115
57	Lj	0.34	0/720	0.66	0/952
58	Lk	0.30	0/575	0.54	0/761
59	Ll	0.30	0/454	0.62	0/599
60	Lm	0.30	0/435	0.56	0/575
61	Ln	0.26	0/231	0.74	0/294
62	Lo	0.33	0/876	0.62	0/1156
63	Lp	0.32	0/718	0.53	0/953
64	Lr	0.31	0/1017	0.60	0/1364
65	SR	0.28	0/1105	0.58	0/1484
66	SD	0.26	0/1793	0.54	0/2414
67	SF	0.28	0/1516	0.59	1/2037 (0.0%)
68	SK	0.27	0/851	0.55	0/1147
69	SP	0.26	0/1003	0.60	0/1342
70	SQ	0.26	0/1160	0.66	0/1553
71	SS	0.26	0/1216	0.59	0/1628
72	ST	0.25	0/1131	0.57	0/1515
73	SU	0.24	0/831	0.57	0/1115
74	Sc	0.26	0/508	0.64	0/680
75	Sd	0.26	0/470	0.54	0/623

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
76	Sg	0.29	0/2493	0.59	1/3394 (0.0%)
77	SM	0.25	0/950	0.52	0/1275
78	SZ	0.26	0/604	0.69	0/810
79	Sf	0.24	0/560	0.58	0/745
80	S2	0.27	0/41242	0.82	38/64255 (0.1%)
81	AT	0.23	0/1805	0.85	5/2809 (0.2%)
82	CF	0.56	4/3442 (0.1%)	0.84	7/4656 (0.2%)
83	Pt	0.23	0/1761	0.79	0/2741
84	Lt	0.25	0/1058	0.58	0/1430
85	Ls	0.26	0/1519	0.53	1/2052 (0.0%)
86	LW	0.29	0/979	0.60	0/1295
All	All	0.41	4/241235 (0.0%)	0.77	157/353952 (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
1	CD	0	2
7	SX	0	1
14	SH	0	1
25	LA	0	1
26	LB	0	2
33	LI	0	1
35	LL	0	1
36	LM	0	2
38	LO	0	1
42	LT	0	1
53	Lf	0	2
55	Lh	0	1
57	Lj	0	1
64	Lr	0	1
67	SF	0	1
69	SP	0	1
70	SQ	0	1
78	SZ	0	1
All	All	0	22

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	CF	333	PRO	CG-CD	-23.55	0.72	1.50
82	CF	409	PRO	CB-CG	-11.35	0.93	1.50
82	CF	409	PRO	CG-CD	-7.02	1.27	1.50
82	CF	333	PRO	N-CA	5.04	1.55	1.47

The worst 5 of 157 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	CF	409	PRO	CA-CB-CG	-21.15	63.81	104.00
82	CF	409	PRO	N-CD-CG	-19.94	73.28	103.20
82	CF	333	PRO	CB-CG-CD	18.83	179.95	106.50
82	CF	333	PRO	N-CD-CG	-16.60	78.30	103.20
82	CF	333	PRO	CA-CB-CG	-15.13	75.26	104.00

There are no chirality outliers.

5 of 22 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	CD	11	CYS	Peptide
1	CD	9	PHE	Peptide
25	LA	13	GLY	Peptide
14	SH	15	LYS	Peptide
7	SX	126	ALA	Peptide

5.2 Too-close contacts ⓘ

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	
1	CD	34/36 (94%)	27 (79%)	7 (21%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	CI	29/31 (94%)	27 (93%)	1 (3%)	1 (3%)	3	1
3	LR	185/187 (99%)	179 (97%)	6 (3%)	0	100	100
4	SE	260/262 (99%)	244 (94%)	16 (6%)	0	100	100
5	SI	204/206 (99%)	197 (97%)	7 (3%)	0	100	100
6	SL	151/153 (99%)	140 (93%)	11 (7%)	0	100	100
7	SX	139/141 (99%)	128 (92%)	10 (7%)	1 (1%)	19	19
8	SG	235/237 (99%)	223 (95%)	12 (5%)	0	100	100
9	SJ	183/185 (99%)	173 (94%)	9 (5%)	1 (0%)	25	28
10	SY	129/131 (98%)	121 (94%)	8 (6%)	0	100	100
11	Se	56/58 (97%)	52 (93%)	4 (7%)	0	100	100
12	SA	219/221 (99%)	198 (90%)	21 (10%)	0	100	100
13	SB	212/214 (99%)	207 (98%)	5 (2%)	0	100	100
14	SH	182/186 (98%)	163 (90%)	19 (10%)	0	100	100
15	SV	81/83 (98%)	75 (93%)	6 (7%)	0	100	100
16	Sa	100/102 (98%)	91 (91%)	8 (8%)	1 (1%)	13	12
17	SC	220/222 (99%)	204 (93%)	16 (7%)	0	100	100
18	SN	148/150 (99%)	146 (99%)	2 (1%)	0	100	100
19	SO	138/140 (99%)	128 (93%)	10 (7%)	0	100	100
20	SW	127/129 (98%)	124 (98%)	3 (2%)	0	100	100
21	Sb	81/83 (98%)	70 (86%)	11 (14%)	0	100	100
25	LA	246/248 (99%)	222 (90%)	23 (9%)	1 (0%)	30	34
26	LB	400/402 (100%)	380 (95%)	20 (5%)	0	100	100
27	LC	366/368 (100%)	345 (94%)	21 (6%)	0	100	100
28	LD	291/293 (99%)	278 (96%)	13 (4%)	0	100	100
29	LE	232/236 (98%)	209 (90%)	23 (10%)	0	100	100
30	LF	223/225 (99%)	213 (96%)	10 (4%)	0	100	100
31	LG	239/241 (99%)	227 (95%)	12 (5%)	0	100	100
32	LH	188/190 (99%)	178 (95%)	10 (5%)	0	100	100
33	LI	198/202 (98%)	189 (96%)	8 (4%)	1 (0%)	25	28
34	LJ	174/176 (99%)	162 (93%)	12 (7%)	0	100	100
35	LL	208/210 (99%)	193 (93%)	15 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	LM	137/139 (99%)	129 (94%)	7 (5%)	1 (1%)	19	19
37	LN	201/203 (99%)	194 (96%)	6 (3%)	1 (0%)	25	28
38	LO	199/201 (99%)	192 (96%)	6 (3%)	1 (0%)	25	28
39	LP	151/153 (99%)	142 (94%)	9 (6%)	0	100	100
40	LQ	185/187 (99%)	178 (96%)	7 (4%)	0	100	100
41	LS	173/175 (99%)	164 (95%)	9 (5%)	0	100	100
42	LT	157/159 (99%)	149 (95%)	8 (5%)	0	100	100
43	LU	99/101 (98%)	84 (85%)	15 (15%)	0	100	100
44	LV	129/131 (98%)	125 (97%)	4 (3%)	0	100	100
45	LX	118/120 (98%)	117 (99%)	1 (1%)	0	100	100
46	LY	132/134 (98%)	129 (98%)	3 (2%)	0	100	100
47	LZ	133/135 (98%)	120 (90%)	13 (10%)	0	100	100
48	La	145/147 (99%)	139 (96%)	6 (4%)	0	100	100
49	Lb	105/109 (96%)	99 (94%)	6 (6%)	0	100	100
50	Lc	96/98 (98%)	88 (92%)	8 (8%)	0	100	100
51	Ld	105/107 (98%)	100 (95%)	5 (5%)	0	100	100
52	Le	126/128 (98%)	118 (94%)	6 (5%)	2 (2%)	8	6
53	Lf	107/109 (98%)	100 (94%)	6 (6%)	1 (1%)	14	14
54	Lg	112/114 (98%)	111 (99%)	1 (1%)	0	100	100
55	Lh	120/122 (98%)	117 (98%)	3 (2%)	0	100	100
56	Li	100/102 (98%)	96 (96%)	4 (4%)	0	100	100
57	Lj	84/86 (98%)	79 (94%)	4 (5%)	1 (1%)	11	9
58	Lk	67/69 (97%)	65 (97%)	2 (3%)	0	100	100
59	Ll	48/50 (96%)	45 (94%)	3 (6%)	0	100	100
60	Lm	50/52 (96%)	50 (100%)	0	0	100	100
61	Ln	22/24 (92%)	22 (100%)	0	0	100	100
62	Lo	103/105 (98%)	98 (95%)	5 (5%)	0	100	100
63	Lp	89/91 (98%)	85 (96%)	4 (4%)	0	100	100
64	Lr	123/125 (98%)	118 (96%)	5 (4%)	0	100	100
65	SR	133/135 (98%)	122 (92%)	10 (8%)	1 (1%)	16	16
66	SD	225/227 (99%)	205 (91%)	20 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
67	SF	187/189 (99%)	171 (91%)	16 (9%)	0	100	100
68	SK	96/98 (98%)	83 (86%)	11 (12%)	2 (2%)	5	3
69	SP	119/121 (98%)	112 (94%)	7 (6%)	0	100	100
70	SQ	142/144 (99%)	124 (87%)	18 (13%)	0	100	100
71	SS	143/145 (99%)	138 (96%)	5 (4%)	0	100	100
72	ST	141/143 (99%)	129 (92%)	11 (8%)	1 (1%)	19	19
73	SU	102/104 (98%)	96 (94%)	6 (6%)	0	100	100
74	Sc	62/64 (97%)	54 (87%)	8 (13%)	0	100	100
75	Sd	53/55 (96%)	50 (94%)	3 (6%)	0	100	100
76	Sg	311/313 (99%)	273 (88%)	38 (12%)	0	100	100
77	SM	120/122 (98%)	111 (92%)	8 (7%)	1 (1%)	16	16
78	SZ	73/75 (97%)	59 (81%)	14 (19%)	0	100	100
79	Sf	65/67 (97%)	54 (83%)	11 (17%)	0	100	100
82	CF	438/441 (99%)	415 (95%)	23 (5%)	0	100	100
84	Lt	137/141 (97%)	108 (79%)	28 (20%)	1 (1%)	19	19
85	Ls	194/196 (99%)	179 (92%)	15 (8%)	0	100	100
86	LW	114/118 (97%)	109 (96%)	5 (4%)	0	100	100
All	All	12149/12322 (99%)	11358 (94%)	772 (6%)	19 (0%)	45	52

5 of 19 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
37	LN	124	ASP
7	SX	127	ASN
36	LM	88	ALA
65	SR	124	VAL
68	SK	36	ALA

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	CD	31/31 (100%)	30 (97%)	1 (3%)	34	45
2	CI	25/25 (100%)	23 (92%)	2 (8%)	10	10
3	LR	166/166 (100%)	160 (96%)	6 (4%)	30	40
4	SE	224/224 (100%)	199 (89%)	25 (11%)	5	4
5	SI	178/178 (100%)	164 (92%)	14 (8%)	10	11
6	SL	137/137 (100%)	123 (90%)	14 (10%)	6	6
7	SX	113/113 (100%)	107 (95%)	6 (5%)	19	24
8	SG	207/207 (100%)	184 (89%)	23 (11%)	5	4
9	SJ	161/161 (100%)	150 (93%)	11 (7%)	13	15
10	SY	113/113 (100%)	98 (87%)	15 (13%)	3	2
11	Se	47/47 (100%)	40 (85%)	7 (15%)	2	2
12	SA	183/183 (100%)	172 (94%)	11 (6%)	16	19
13	SB	195/195 (100%)	186 (95%)	9 (5%)	23	30
14	SH	166/166 (100%)	150 (90%)	16 (10%)	7	6
15	SV	67/67 (100%)	58 (87%)	9 (13%)	3	2
16	Sa	89/89 (100%)	82 (92%)	7 (8%)	10	11
17	SC	188/188 (100%)	171 (91%)	17 (9%)	8	8
18	SN	130/130 (100%)	123 (95%)	7 (5%)	18	23
19	SO	110/110 (100%)	103 (94%)	7 (6%)	14	17
20	SW	112/112 (100%)	102 (91%)	10 (9%)	8	8
21	Sb	75/75 (100%)	71 (95%)	4 (5%)	19	24
25	LA	190/190 (100%)	177 (93%)	13 (7%)	13	15
26	LB	348/348 (100%)	329 (94%)	19 (6%)	18	22
27	LC	306/306 (100%)	289 (94%)	17 (6%)	17	21
28	LD	246/247 (100%)	230 (94%)	16 (6%)	14	16
29	LE	209/209 (100%)	195 (93%)	14 (7%)	13	15
30	LF	194/194 (100%)	190 (98%)	4 (2%)	48	63
31	LG	203/205 (99%)	192 (95%)	11 (5%)	18	23
32	LH	169/169 (100%)	155 (92%)	14 (8%)	9	9
33	LI	172/172 (100%)	159 (92%)	13 (8%)	11	12
34	LJ	148/148 (100%)	135 (91%)	13 (9%)	8	8
35	LL	176/176 (100%)	166 (94%)	10 (6%)	17	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	LM	118/118 (100%)	111 (94%)	7 (6%)	16	20
37	LN	171/171 (100%)	168 (98%)	3 (2%)	54	69
38	LO	173/173 (100%)	167 (96%)	6 (4%)	31	41
39	LP	134/134 (100%)	126 (94%)	8 (6%)	16	19
40	LQ	164/164 (100%)	161 (98%)	3 (2%)	54	69
41	LS	156/156 (100%)	142 (91%)	14 (9%)	8	8
42	LT	139/139 (100%)	133 (96%)	6 (4%)	25	32
43	LU	91/91 (100%)	81 (89%)	10 (11%)	5	4
44	LV	101/101 (100%)	99 (98%)	2 (2%)	50	65
45	LX	108/108 (100%)	104 (96%)	4 (4%)	29	39
46	LY	124/124 (100%)	118 (95%)	6 (5%)	21	28
47	LZ	117/117 (100%)	105 (90%)	12 (10%)	6	5
48	La	120/120 (100%)	119 (99%)	1 (1%)	79	88
49	Lb	88/90 (98%)	83 (94%)	5 (6%)	17	21
50	Lc	83/83 (100%)	77 (93%)	6 (7%)	12	13
51	Ld	98/98 (100%)	89 (91%)	9 (9%)	7	7
52	Le	114/114 (100%)	113 (99%)	1 (1%)	75	86
53	Lf	88/88 (100%)	84 (96%)	4 (4%)	23	30
54	Lg	98/98 (100%)	92 (94%)	6 (6%)	15	18
55	Lh	109/109 (100%)	103 (94%)	6 (6%)	18	22
56	Li	86/86 (100%)	83 (96%)	3 (4%)	31	41
57	Lj	73/73 (100%)	67 (92%)	6 (8%)	9	9
58	Lk	64/64 (100%)	61 (95%)	3 (5%)	22	29
59	Ll	47/47 (100%)	43 (92%)	4 (8%)	8	9
60	Lm	48/48 (100%)	47 (98%)	1 (2%)	48	63
61	Ln	23/23 (100%)	20 (87%)	3 (13%)	3	3
62	Lo	93/93 (100%)	85 (91%)	8 (9%)	8	9
63	Lp	74/74 (100%)	70 (95%)	4 (5%)	18	23
64	Lr	109/109 (100%)	98 (90%)	11 (10%)	6	6
65	SR	122/122 (100%)	107 (88%)	15 (12%)	4	3
66	SD	190/190 (100%)	172 (90%)	18 (10%)	7	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
67	SF	159/159 (100%)	143 (90%)	16 (10%)	6	6
68	SK	89/89 (100%)	82 (92%)	7 (8%)	10	11
69	SP	107/107 (100%)	95 (89%)	12 (11%)	5	4
70	SQ	119/119 (100%)	106 (89%)	13 (11%)	5	5
71	SS	126/126 (100%)	120 (95%)	6 (5%)	21	28
72	ST	113/113 (100%)	104 (92%)	9 (8%)	10	10
73	SU	94/94 (100%)	86 (92%)	8 (8%)	8	9
74	Sc	57/57 (100%)	51 (90%)	6 (10%)	5	5
75	Sd	48/48 (100%)	42 (88%)	6 (12%)	3	3
76	Sg	272/272 (100%)	244 (90%)	28 (10%)	6	5
77	SM	102/104 (98%)	89 (87%)	13 (13%)	3	3
78	SZ	66/66 (100%)	58 (88%)	8 (12%)	4	3
79	Sf	60/60 (100%)	54 (90%)	6 (10%)	6	6
82	CF	365/366 (100%)	327 (90%)	38 (10%)	5	5
84	Lt	112/115 (97%)	106 (95%)	6 (5%)	18	23
85	Ls	162/164 (99%)	151 (93%)	11 (7%)	13	15
86	LW	97/97 (100%)	89 (92%)	8 (8%)	9	9
All	All	10549/10562 (100%)	9788 (93%)	761 (7%)	14	13

5 of 761 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
51	Ld	55	LYS
67	SF	185	SER
54	Lg	105	LYS
51	Ld	46	LEU
64	Lr	60	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 26 such sidechains are listed below:

Mol	Chain	Res	Type
37	LN	8	GLN
68	SK	7	ASN
86	LW	104	GLN
47	LZ	97	ASN

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Mol	Chain	Res	Type
69	SP	104	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	L5	3704/3740 (99%)	819 (22%)	23 (0%)
23	L7	119/120 (99%)	12 (10%)	0
24	L8	155/156 (99%)	28 (18%)	1 (0%)
80	S2	1715/1740 (98%)	408 (23%)	7 (0%)
81	AT	74/76 (97%)	27 (36%)	1 (1%)
83	Pt	72/74 (97%)	15 (20%)	0
All	All	5839/5906 (98%)	1309 (22%)	32 (0%)

5 of 1309 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
22	L5	2	G
22	L5	13	U
22	L5	25	A
22	L5	30	C
22	L5	39	A

5 of 32 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
80	S2	1355	C
80	S2	1434	C
22	L5	2416	G
22	L5	2033	A
80	S2	1781	A

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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
82	SEP	CF	163	82	8,9,10	1.61	1 (12%)	7,12,14	1.40	1 (14%)

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
82	SEP	CF	163	82	-	5/6/8/10	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	CF	163	SEP	P-O1P	3.54	1.61	1.50

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	CF	163	SEP	OG-CB-CA	3.12	111.18	108.14

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	CF	163	SEP	N-CA-CB-OG
82	CF	163	SEP	C-CA-CB-OG
82	CF	163	SEP	CB-OG-P-O1P
82	CF	163	SEP	CB-OG-P-O2P
82	CF	163	SEP	CB-OG-P-O3P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 261 ligands modelled in this entry, 261 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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
22	L5	12
80	S2	6
49	Lb	1
29	LE	1
86	LW	1
14	SH	1
83	Pt	1
84	Lt	1
33	LI	1
81	AT	1

The worst 5 of 26 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Lb	76:VAL	C	89:VAL	N	33.49
1	S2	753:C	O3’	785:C	P	27.14
1	LE	76:ALA	C	88:VAL	N	23.89
1	L5	2910:G	O3’	3584:C	P	21.19
1	S2	698:G	O3’	730:C	P	16.74

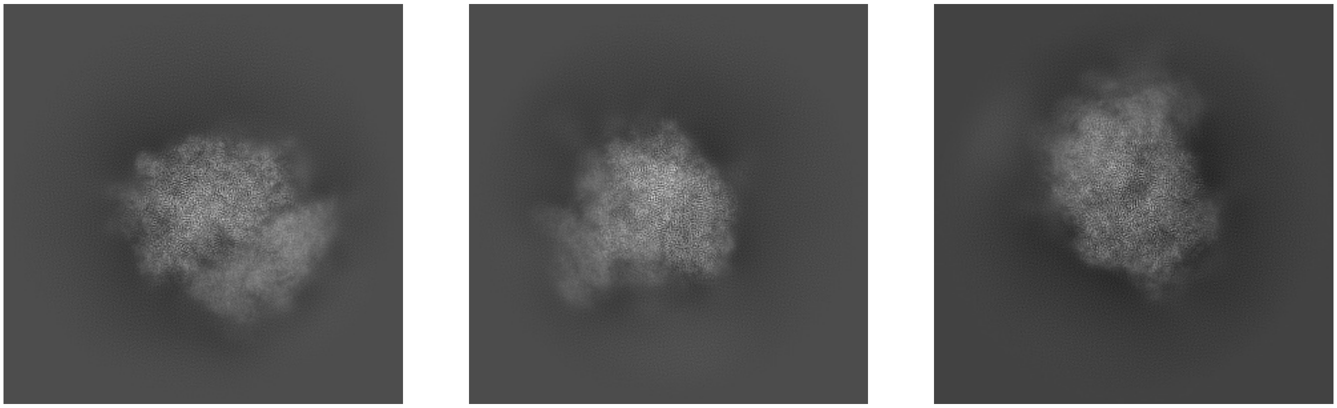
6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-44014. 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.

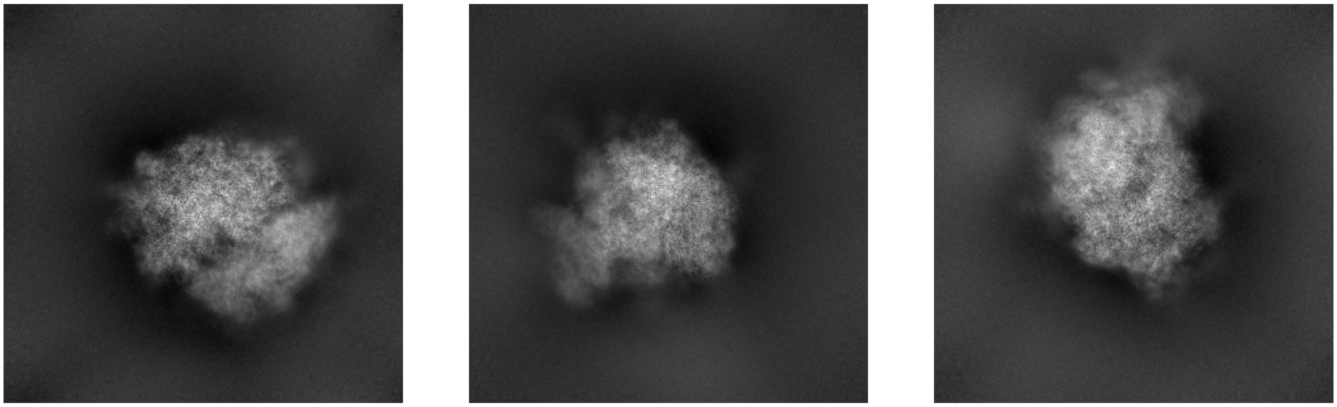
6.1 Orthogonal projections ⓘ

6.1.1 Primary map



X Y Z

6.1.2 Raw map

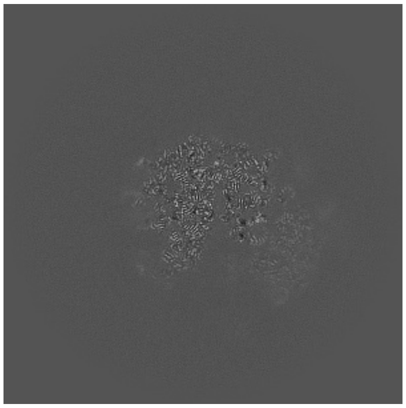


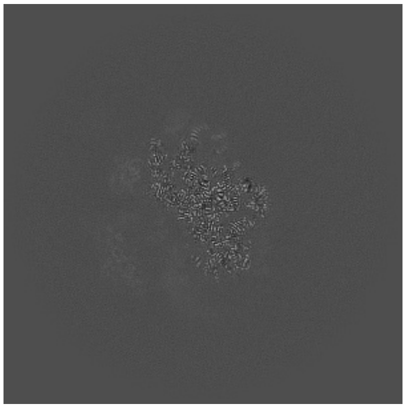
X Y Z

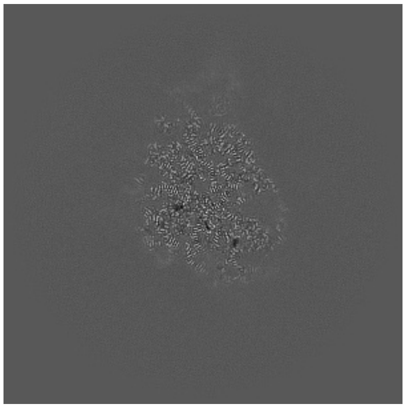
The images above show the map projected in three orthogonal directions.

6.2 Central slices

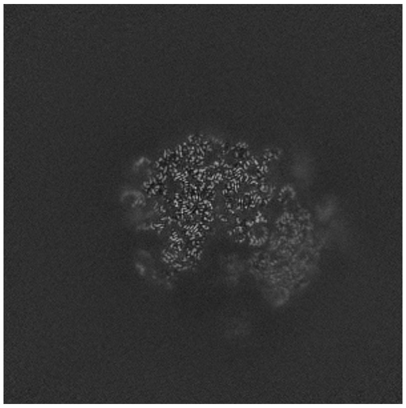
6.2.1 Primary map

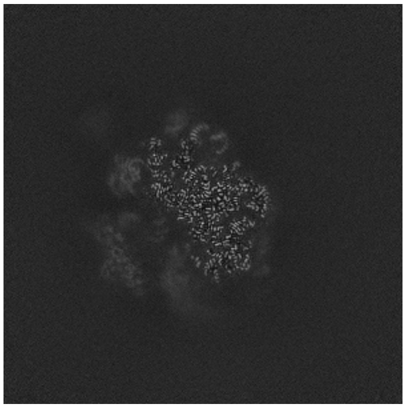

X Index: 288

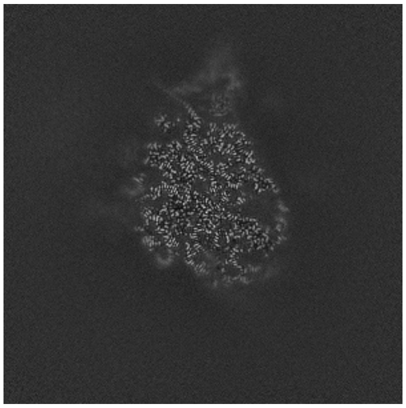

Y Index: 288


Z Index: 288

6.2.2 Raw map


X Index: 288

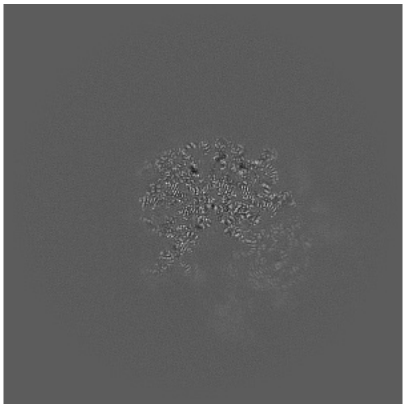

Y Index: 288

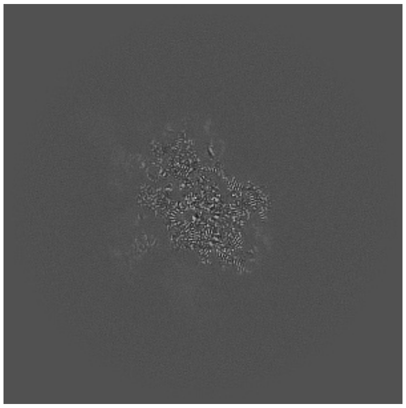

Z Index: 288

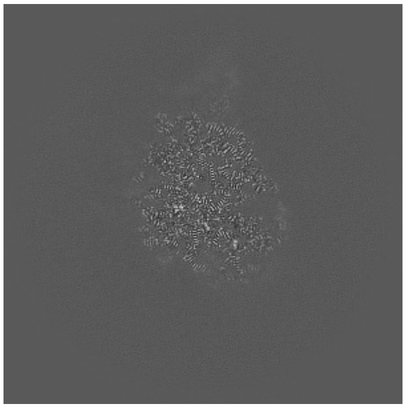
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices

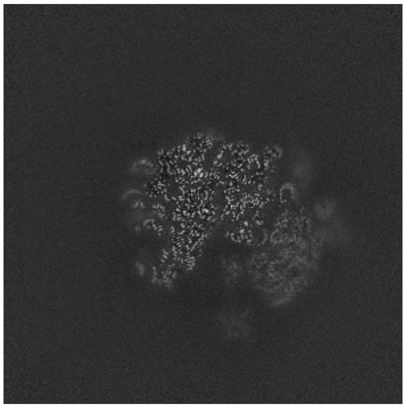
6.3.1 Primary map

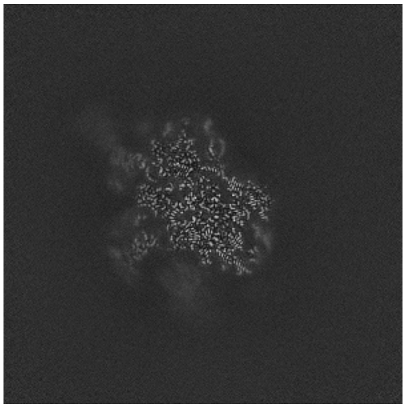

X Index: 272

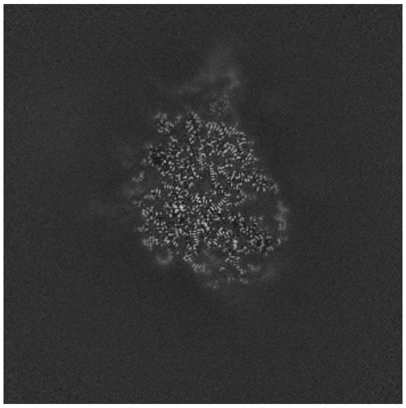

Y Index: 272


Z Index: 290

6.3.2 Raw map


X Index: 285

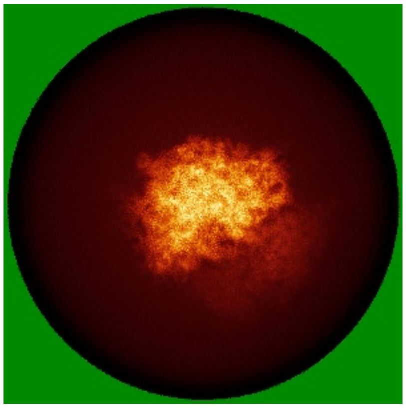

Y Index: 272

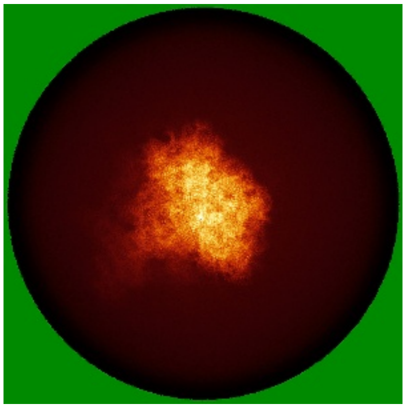

Z Index: 290

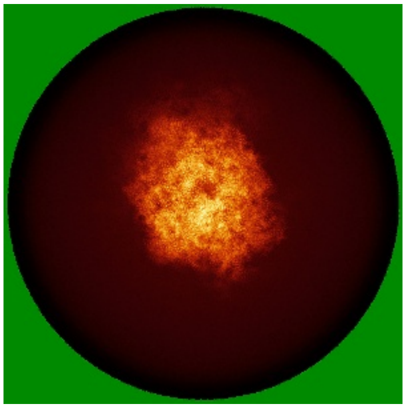
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color)

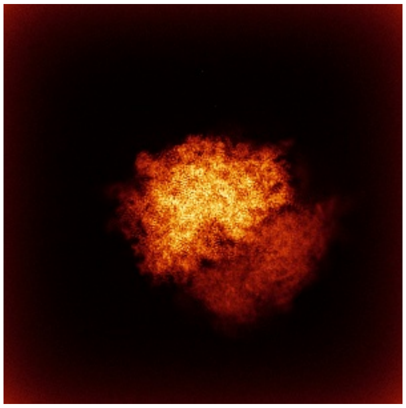
6.4.1 Primary map

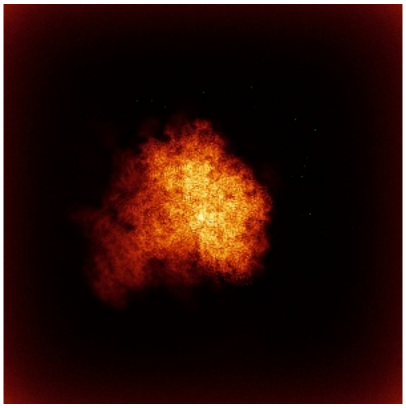

X

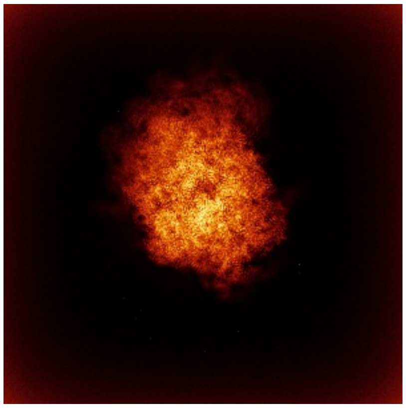

Y


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 ⓘ

6.5.1 Primary map

X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.0729. 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.

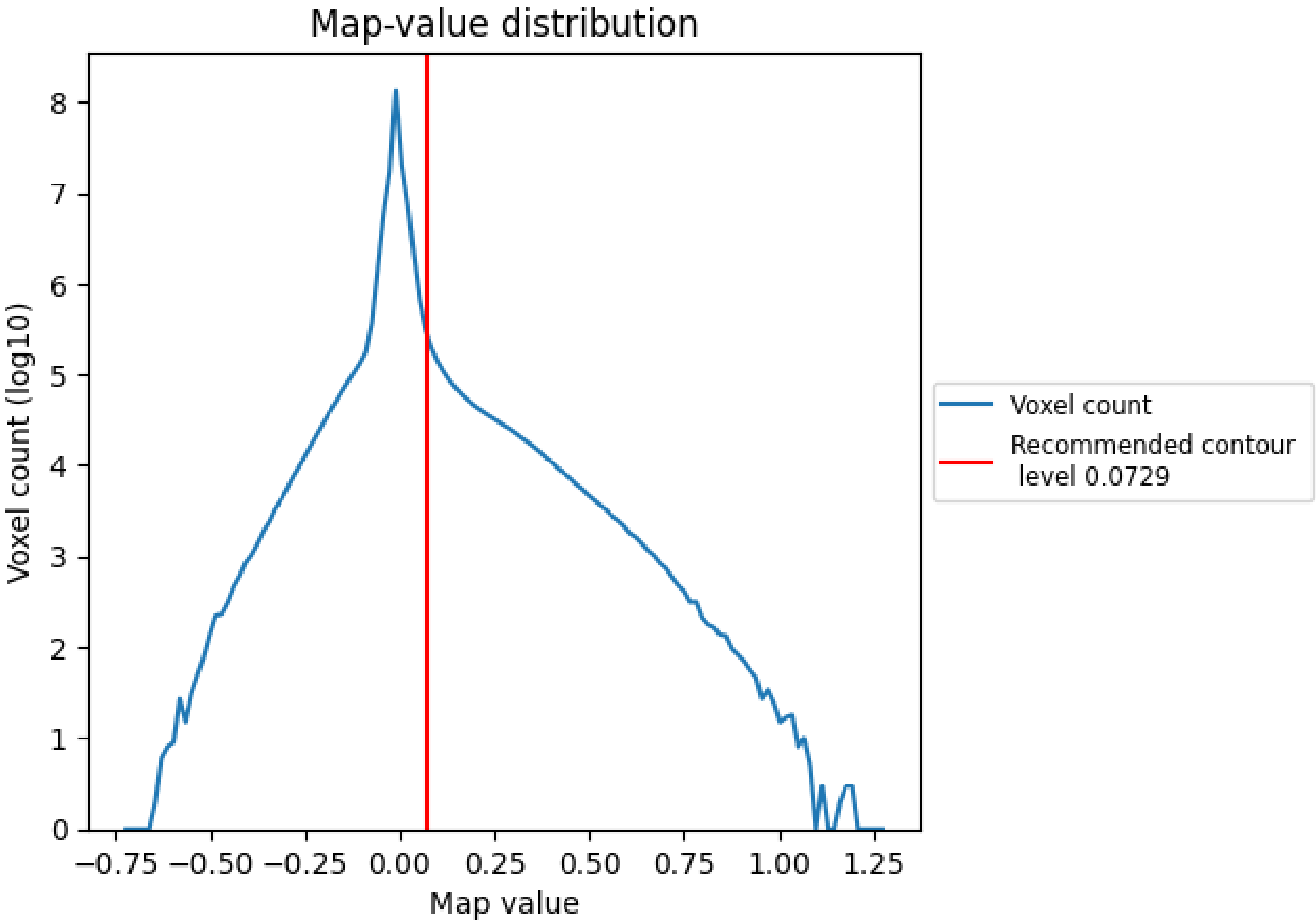
6.6 Mask visualisation ⓘ

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

7 Map analysis (i)

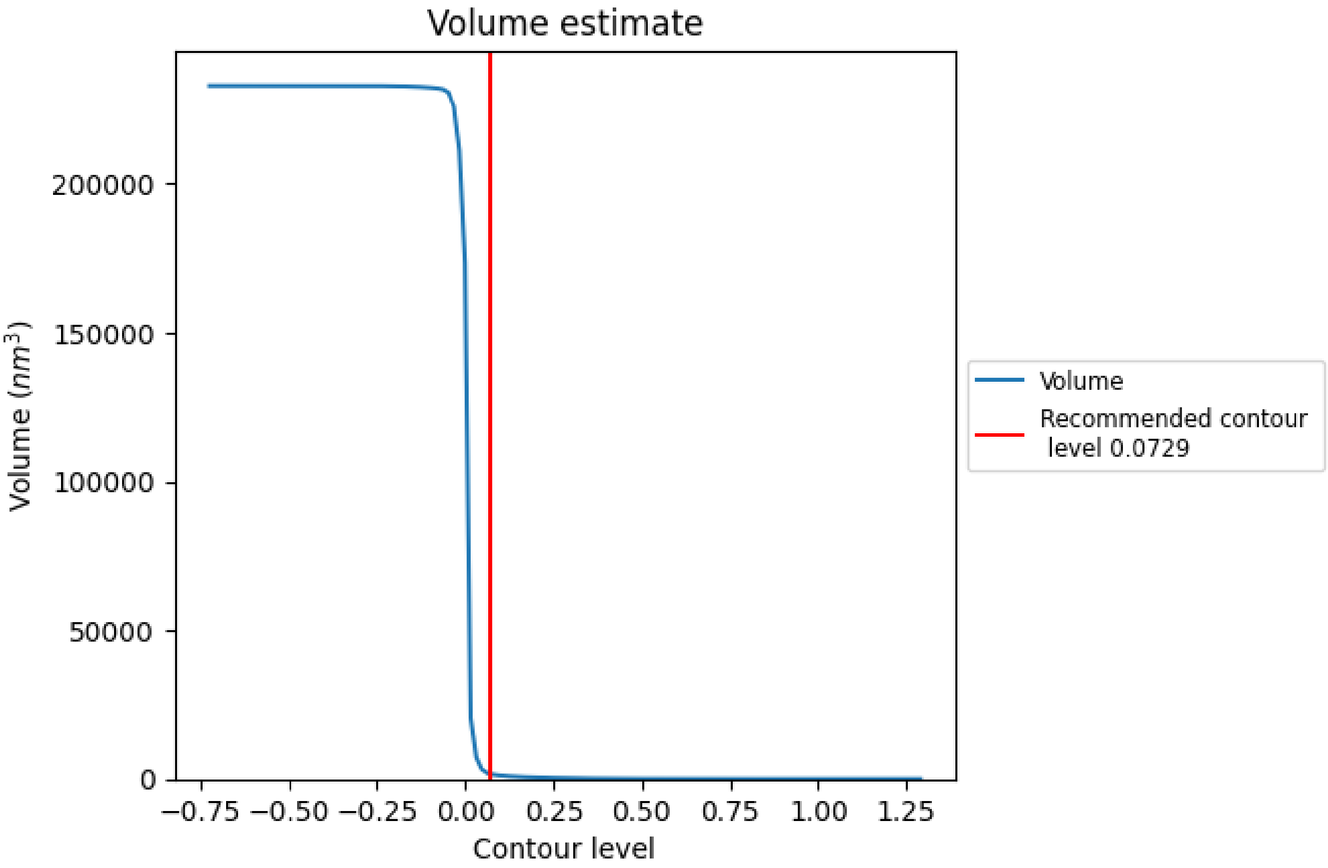
This section contains the results of statistical analysis of the map.

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.

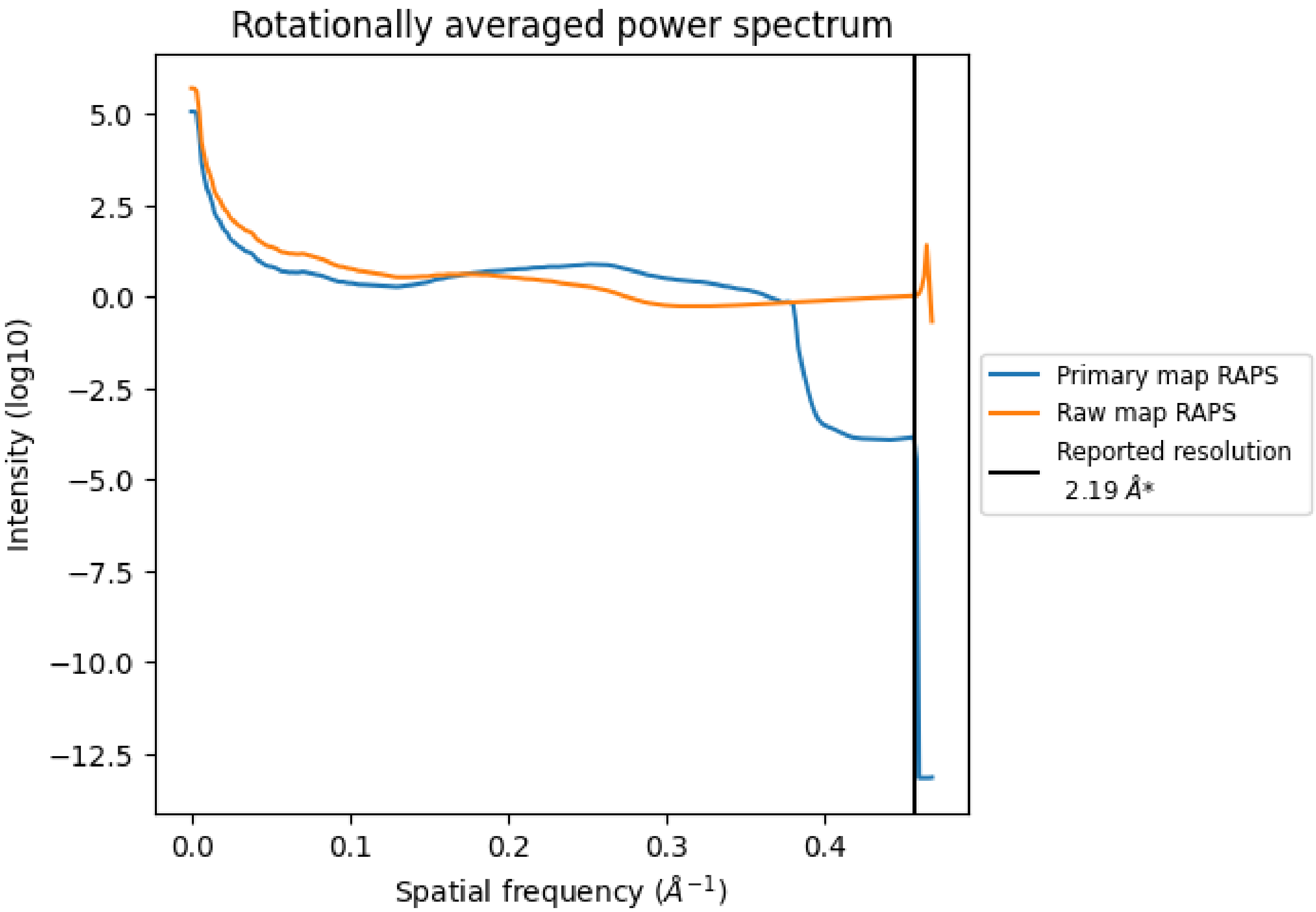
7.2 Volume estimate (i)



The volume at the recommended contour level is 1673 nm^3; this corresponds to an approximate mass of 1511 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

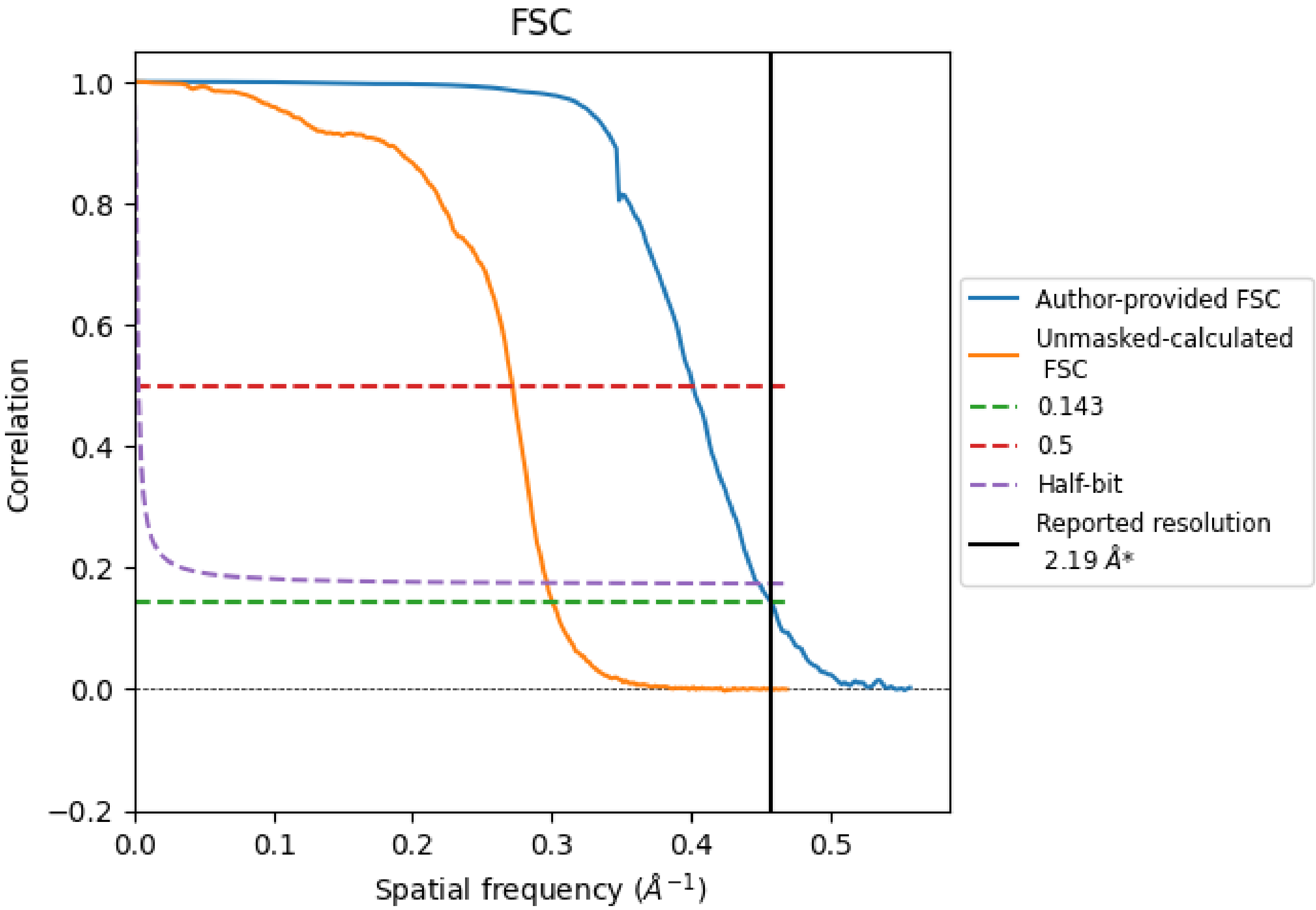


*Reported resolution corresponds to spatial frequency of 0.457 Å^{-1}

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 0.457 $Å^{-1}$

8.2 Resolution estimates ⓘ

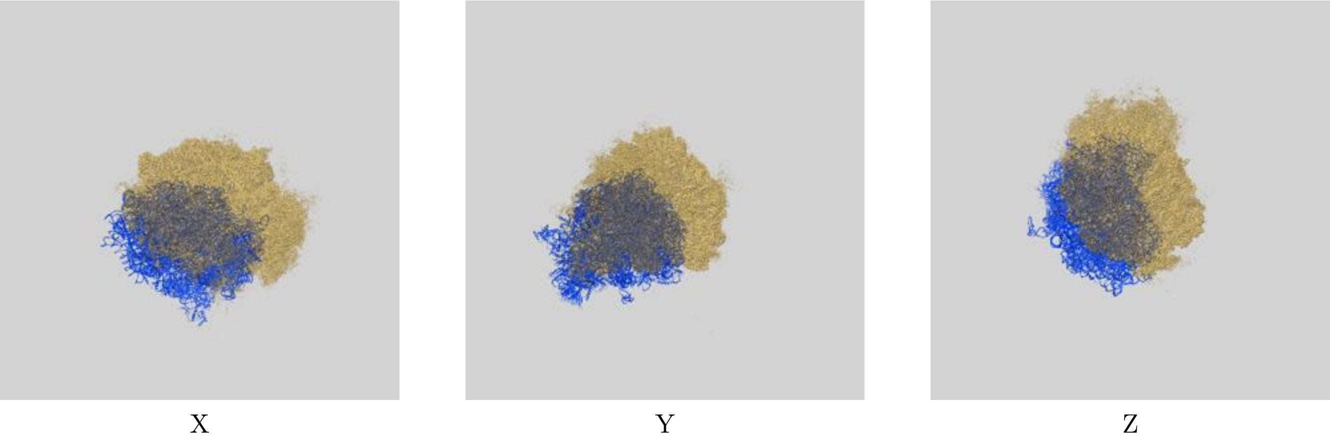
Resolution estimate (Å)	**Estimation criterion (FSC cut-off)**		
	0.143	0.5	Half-bit
Reported by author	2.19	-	-
Author-provided FSC curve	2.19	2.49	2.23
Unmasked-calculated*	3.33	3.68	3.37

*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 3.33 differs from the reported value 2.19 by more than 10 %

9 Map-model fit ⓘ

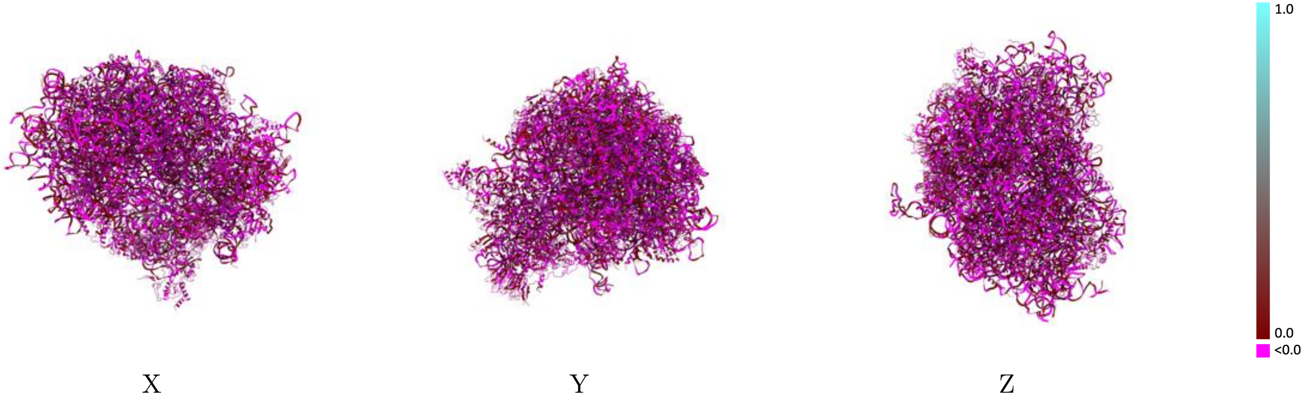
This section contains information regarding the fit between EMDB map EMD-44014 and PDB model 9AZC. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay ⓘ



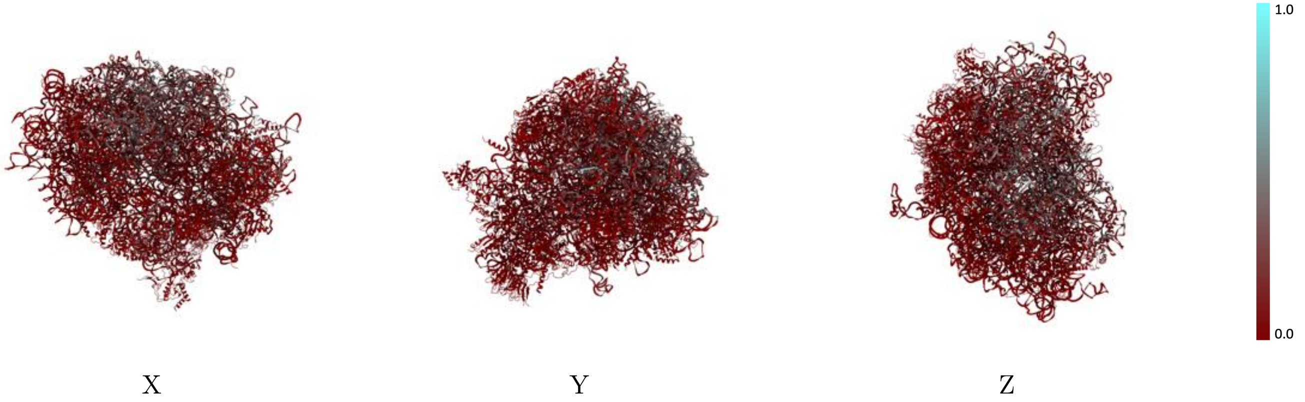
The images above show the 3D surface view of the map at the recommended contour level 0.0729 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ



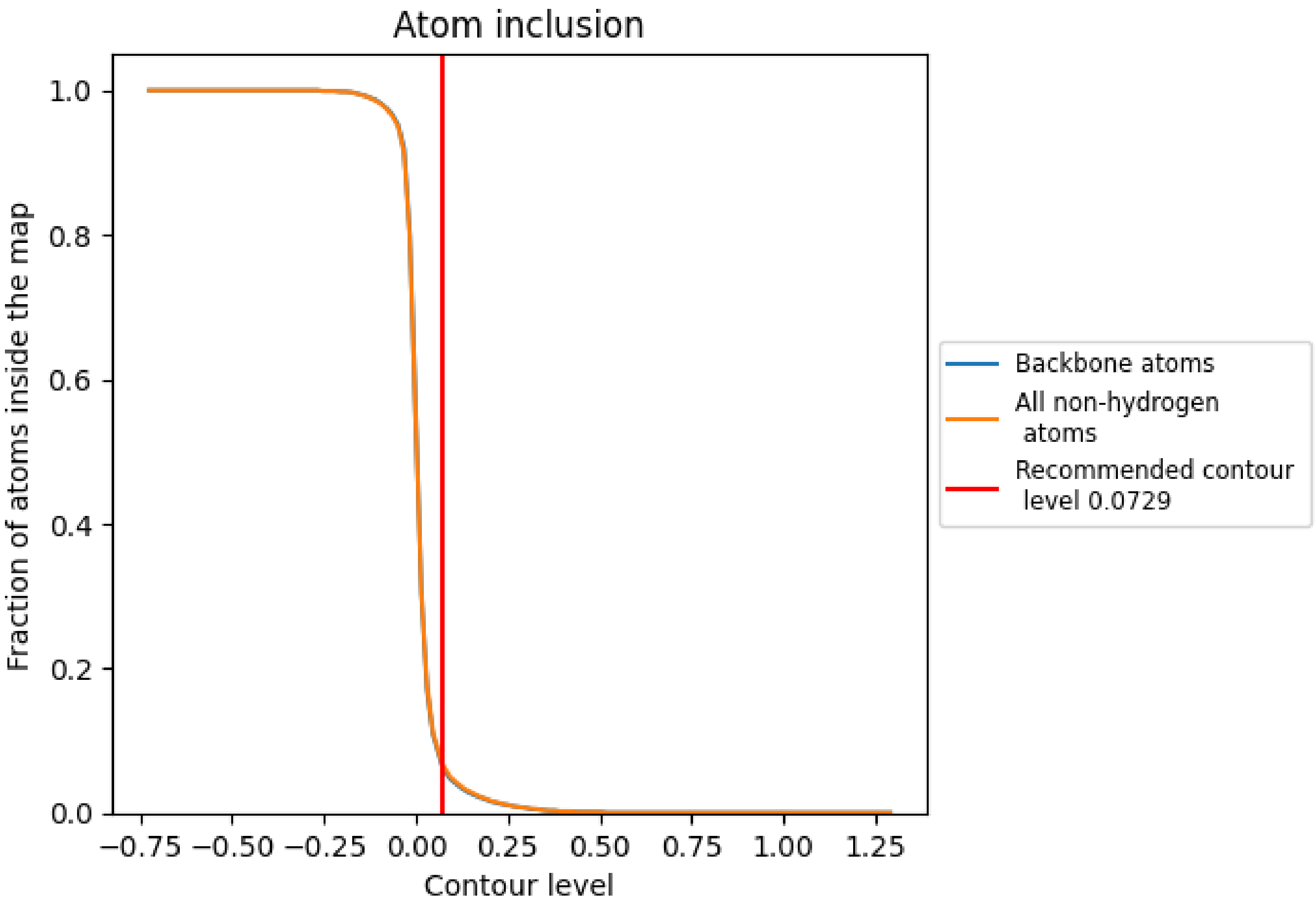
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



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 (0.0729).

9.4 Atom inclusion ⓘ



At the recommended contour level, 6% of all backbone atoms, 7% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.0729) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.0670	-0.0070
AT	0.0040	0.0030
CD	0.0210	-0.0590
CF	0.0020	-0.0020
CI	0.1770	-0.0580
L5	0.0880	-0.0090
L7	0.0440	0.0090
L8	0.1950	-0.0150
LA	0.0010	0.0160
LB	0.1910	-0.0120
LC	0.0590	-0.0080
LD	0.0000	-0.0100
LE	0.0560	0.0130
LF	0.0030	0.0000
LG	0.0000	0.0070
LH	0.0050	-0.0150
LI	0.0790	-0.0000
LJ	0.0000	-0.0110
LL	0.0120	-0.0010
LM	0.0440	0.0210
LN	0.0090	-0.0180
LO	0.1030	-0.0140
LP	0.2820	-0.0040
LQ	0.0050	-0.0050
LR	0.1750	-0.0410
LS	0.0390	0.0040
LT	0.0390	-0.0130
LU	0.3170	0.0110
LV	0.0000	-0.0040
LW	0.0020	-0.0250
LX	0.2610	0.0120
LY	0.2250	-0.0260
LZ	0.0240	-0.0110
La	0.0530	-0.0140
Lb	0.0470	-0.0010

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Chain	Atom inclusion	Q-score
Lc	0.0840	-0.0410
Ld	0.2660	-0.0100
Le	0.1290	-0.0110
Lf	0.0260	-0.0060
Lg	0.0760	-0.0070
Lh	0.2120	-0.0300
Li	0.0000	0.0060
Lj	0.1930	-0.0420
Lk	0.2100	-0.0120
Ll	0.2810	-0.0260
Lm	0.0410	-0.0210
Ln	0.0290	0.0380
Lo	0.0000	-0.0040
Lp	0.0020	-0.0250
Lr	0.0400	-0.0120
Ls	0.0000	-0.0010
Lt	0.0000	-0.0030
Pt	0.0490	0.0030
S2	0.0460	-0.0040
SA	0.0050	-0.0050
SB	0.0010	-0.0040
SC	0.0820	-0.0100
SD	0.0040	0.0110
SE	0.1150	-0.0150
SF	0.0000	-0.0130
SG	0.0380	-0.0040
SH	0.0220	-0.0190
SI	0.1190	-0.0110
SJ	0.0450	-0.0040
SK	0.0000	0.0110
SL	0.1810	-0.0380
SM	0.0000	-0.0100
SN	0.0220	-0.0160
SO	0.0000	0.0000
SP	0.0000	-0.0130
SQ	0.0000	-0.0190
SR	0.0000	-0.0220
SS	0.0000	0.0050
ST	0.0000	-0.0080
SU	0.0000	0.0060
SV	0.0450	0.0260
SW	0.0920	-0.0000

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Chain	Atom inclusion	Q-score
SX	🟥 0.0800	🟥 0.0000
SY	🟥 0.0130	🟪 -0.0100
SZ	🟥 0.0000	🟥 0.0050
Sa	🟥 0.0250	🟥 0.0020
Sb	🟥 0.0170	🟪 -0.0100
Sc	🟥 0.0000	🟪 -0.0270
Sd	🟥 0.0000	🟥 0.0170
Se	🟥 0.0270	🟪 -0.0120
Sf	🟥 0.0000	🟥 0.0110
Sg	🟥 0.0000	🟪 -0.0040