wwPDB EM Validation Summary Report (i)

Dec 10, 2022 – 12:45 pm GMT

PDB ID	:	4UJD
EMDB ID	:	EMD-2682
Title	:	mammalian 80S HCV-IRES initiation complex with eIF5B PRE-like state
Authors	:	Yamamoto, H.; Unbehaun, A.; Loerke, J.; Behrmann, E.; Marianne, C.; Burger, J.; Mielke, T.; Spahn, C.M.T.
Deposited on	:	2014-06-18
Resolution	:	8.90 Å(reported)
Based on initial model	:	4CXC

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

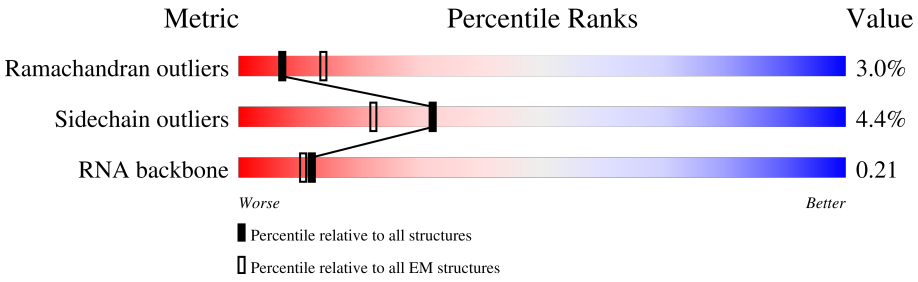
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 8.90 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	A2	5025	8% 30% 41% · 28%
2	A3	194	6% 38% 41% · 19%
3	A4	121	40% 56% · ·
4	AA	257	58% 93% · ·
5	AB	403	43% 90% 7% ·
6	AC	427	35% 78% 6% · 15%
7	AD	297	24% 93% · ·
8	AE	158	44% 91% 9%

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Mol	Chain	Length	Quality of chain
9	AF	248	37% 90% 6%
10	AG	266	44% 83% 5% 12%
11	AH	192	48% 95% 5%
12	AI	214	33% 86% 6% 8%
13	AJ	178	30% 85% 10%
14	AL	211	44% 84% 9% 5%
15	AM	215	22% 62% 35%
16	AN	204	46% 98%
17	AO	203	35% 94%
18	AP	184	23% 78% 5% 17%
19	AQ	188	39% 92% 6%
20	AR	196	31% 86% 7% 7%
21	AS	176	41% 91% 7%
22	AT	160	45% 95%
23	AU	128	38% 77% 20%
24	AV	140	64% 89% 9%
25	AW	157	15% 39% 59%
26	AX	156	34% 75% 24%
27	AY	145	25% 83% 6% 12%
28	AZ	136	45% 93% 7%
29	Aa	148	33% 94% 5%
30	Ab	159	18% 40% 57%
31	Ac	115	32% 88% 10%
32	Ad	125	26% 83% 13%
33	Ae	135	40% 90% 5%

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Mol	Chain	Length	Quality of chain
34	Af	110	45% 86% 10%
35	Ag	117	51% 87% 10%
36	Ah	123	31% 94% 5%
37	Ai	105	31% 83% 8% 8%
38	Aj	97	22% 84% 12%
39	Ak	70	51% 97%
40	Al	51	39% 94%
41	Am	128	14% 38% 59%
42	An	25	36% 100%
43	Ao	106	39% 93% 7%
44	Ap	92	46% 93% 5%
45	At	137	47% 86% 7% 5%
46	Au	210	100% 92% 8%
47	BA	76	34% 67% 32%
48	BB	627	48% 86% 10%
49	BC	504	32% 15% 22% 12% 48%
50	C1	1869	13% 36% 55% 7%
51	CA	295	37% 72% 26%
52	CB	264	42% 71% 8% 19%
53	CC	293	35% 72% 24%
54	CD	243	56% 81% 6% 13%
55	CE	263	43% 92% 6%
56	CF	204	47% 84% 8% 8%
57	CG	249	45% 87% 6% 7%
58	CH	194	65% 94%

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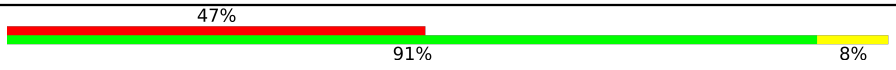
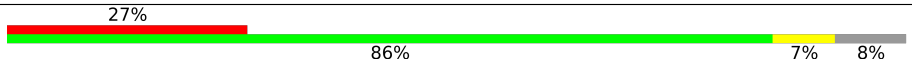
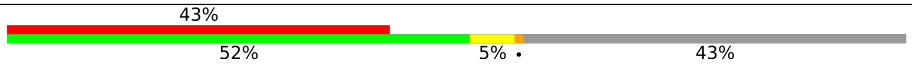
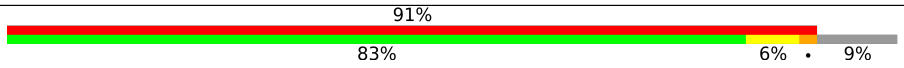
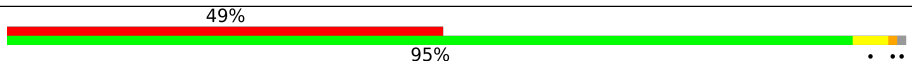
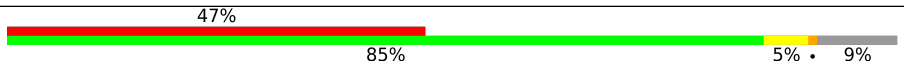
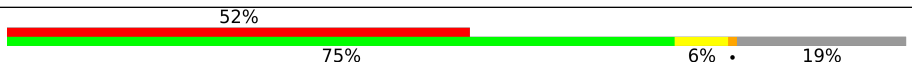
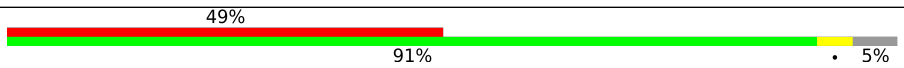
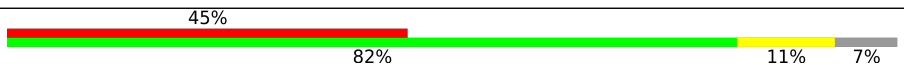
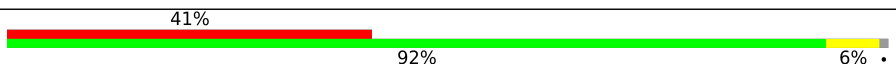
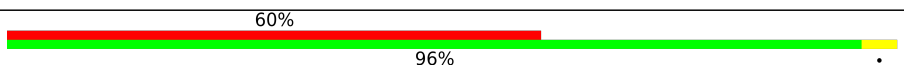
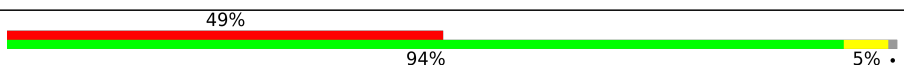
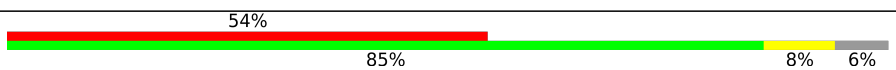
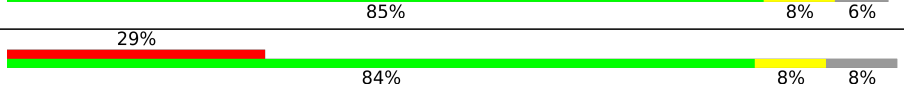
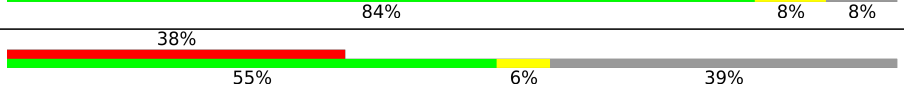
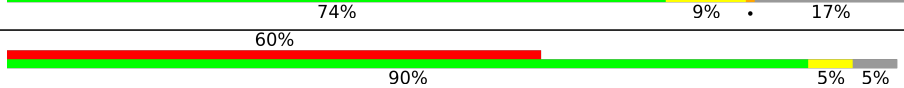
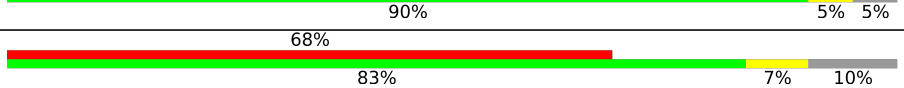
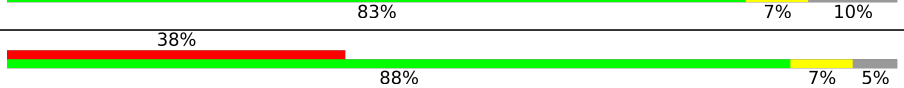
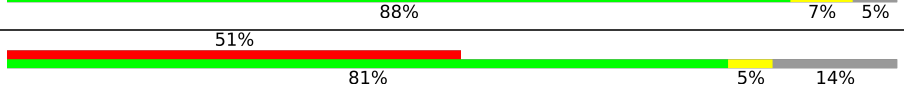
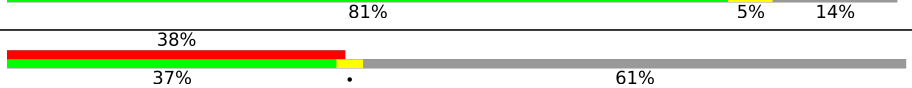
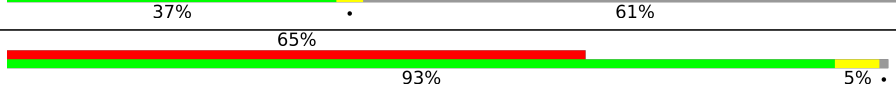
Mol	Chain	Length	Quality of chain
59	CI	208	
60	CJ	194	
61	CK	165	
62	CL	158	
63	CM	132	
64	CN	151	
65	CO	151	
66	CP	145	
67	CQ	146	
68	CR	135	
69	CS	152	
70	CT	145	
71	CU	119	
72	CV	83	
73	CW	130	
74	CX	143	
75	CY	133	
76	CZ	125	
77	Ca	115	
78	Cb	84	
79	Cc	69	
80	Cd	56	
81	Ce	59	
82	Cf	156	
83	Cg	317	

2 Entry composition (i)

There are 85 unique types of molecules in this entry. The entry contains 223911 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 28S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A2	3616	77488	34508	14153	25212	3615	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	A3	157	3334	1489	587	1102	156	0	0

- Molecule 3 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	A4	119	2538	1132	454	834	118	0	0

- Molecule 4 is a protein called 60S RIBOSOMAL PROTEIN L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	AA	247	1888	1183	388	311	6	0	1

- Molecule 5 is a protein called 60S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AB	396	3190	2030	601	545	14	0	1

- Molecule 6 is a protein called 60S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	AC	364	2889	1817	578	480	14	0	1

- Molecule 7 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AD	290	Total	C	N	O	S	0	0
			2362	1489	431	428	14		

- Molecule 8 is a protein called 60S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	AE	158	Total	C	N	O	0	0
			1287	834	238	215		

- Molecule 9 is a protein called 60S RIBOSOMAL PROTEIN L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AF	234	Total	C	N	O	S	0	0
			1950	1252	376	313	9		

- Molecule 10 is a protein called 60S RIBOSOMAL PROTEIN L7A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AG	235	Total	C	N	O	S	0	1
			1881	1197	363	317	4		

- Molecule 11 is a protein called 60S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AH	192	Total	C	N	O	S	0	0
			1536	965	286	279	6		

- Molecule 12 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AI	196	Total	C	N	O	S	0	0
			1605	1022	308	263	12		

- Molecule 13 is a protein called 60S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AJ	170	Total	C	N	O	S	0	0
			1363	861	254	242	6		

- Molecule 14 is a protein called 60S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AL	200	Total	C	N	O	S	0	1
			1617	1013	335	265	4		

- Molecule 15 is a protein called 60S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AM	140	Total	C	N	O	S	0	1
			1139	730	219	183	7		

- Molecule 16 is a protein called 60S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AN	204	Total	C	N	O	S	0	0
			1709	1077	360	267	5		

- Molecule 17 is a protein called 60S RIBOSOMAL PROTEIN L13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AO	196	Total	C	N	O	S	0	1
			1607	1034	316	252	5		

- Molecule 18 is a protein called 60S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AP	153	Total	C	N	O	S	0	1
			1234	771	241	213	9		

- Molecule 19 is a protein called 60S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AQ	184	Total	C	N	O	S	0	0
			1494	933	311	245	5		

- Molecule 20 is a protein called 60S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AR	183	Total	C	N	O	S	0	1
			1526	943	331	242	10		

- Molecule 21 is a protein called 60S RIBOSOMAL PROTEIN L18A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AS	173	Total	C	N	O	S	0	0
			1439	916	280	233	10		

- Molecule 22 is a protein called 60S RIBOSOMAL PROTEIN L21.

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

- Molecule 23 is a protein called 60S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AU	102	Total	C	N	O	S	0	1
			827	529	146	150	2		

- Molecule 24 is a protein called 60S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AV	128	Total	C	N	O	S	0	0
			964	610	181	168	5		

- Molecule 25 is a protein called 60S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AW	64	Total	C	N	O	S	0	1
			529	337	104	85	3		

- Molecule 26 is a protein called 60S RIBOSOMAL PROTEIN L23A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AX	119	Total	C	N	O	S	0	0
			976	624	183	168	1		

- Molecule 27 is a protein called 60S RIBOSOMAL PROTEIN L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AY	128	Total	C	N	O	S	0	1
			1065	668	217	177	3		

- Molecule 28 is a protein called 60S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AZ	136	Total	C	N	O	S	0	0
			1115	719	209	183	4		

- Molecule 29 is a protein called 60S RIBOSOMAL PROTEIN L27A.

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

- Molecule 30 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Ab	69	Total	C	N	O	S	0	1
			560	344	123	90	3		

- Molecule 31 is a protein called 60S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ac	104	Total	C	N	O	S	0	1
			802	508	142	145	7		

- Molecule 32 is a protein called 60S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ad	109	Total	C	N	O	S	0	0
			905	570	174	159	2		

- Molecule 33 is a protein called 60S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Ae	128	Total	C	N	O	S	0	1
			1053	664	219	165	5		

- Molecule 34 is a protein called 60S RIBOSOMAL PROTEIN L35A.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Af	107	Total	C	N	O	S	0	0
			866	550	172	141	3		

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ag	115	Total	C	N	O	S	0	1
			907	566	188	147	6		

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L35.

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

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Ai	97	Total	C	N	O	S	0	1
			783	488	168	122	5		

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Aj	85	Total	C	N	O	S	0	1
			690	423	153	109	5		

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L38.

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

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L39.

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

- Molecule 41 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

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

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	An	25	Total	C	N	O	S	0	0
			240	145	64	28	3		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ao	106	Total	C	N	O	S	0	0
			871	547	176	141	7		

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L37A.

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

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	At	130	Total	C	N	O	S	0	1
			1043	646	220	172	5		

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Au	210	Total	C	N	O	S	0	0
			1622	990	278	348	6		

- Molecule 47 is a RNA chain called TRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BA	76	Total	C	N	O	P	0	0
			1619	723	290	531	75		

- Molecule 48 is a protein called EIF5B.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BB	611	Total	C	N	O	S	0	0
			4846	3084	834	906	22		

- Molecule 49 is a RNA chain called HCV-IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BC	261	Total	C	N	O	P	0	0
			5574	2485	1001	1828	260		

- Molecule 50 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	C1	1742	Total	C	N	O	P	0	0
			37159	16589	6665	12164	1741		

- Molecule 51 is a protein called 40S RIBOSOMAL PROTEIN US2.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	CA	218	Total	C	N	O	S	0	0
			1719	1091	301	319	8		

- Molecule 52 is a protein called 40S RIBOSOMAL PROTEIN ES1.

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

- Molecule 53 is a protein called 40S RIBOSOMAL PROTEIN US5.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	CC	222	Total	C	N	O	S	0	0
			1724	1114	296	304	10		

- Molecule 54 is a protein called 40S RIBOSOMAL PROTEIN US3.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	CD	212	Total	C	N	O	S	0	0
			1646	1050	299	290	7		

- Molecule 55 is a protein called 40S RIBOSOMAL PROTEIN ES4.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CE	257	Total	C	N	O	S	0	0
			2031	1298	381	344	8		

- Molecule 56 is a protein called 40S RIBOSOMAL PROTEIN US7.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	CF	188	Total	C	N	O	S	0	0
			1486	930	283	266	7		

- Molecule 57 is a protein called 40S RIBOSOMAL PROTEIN ES6.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	CG	232	Total	C	N	O	S	0	0
			1884	1176	379	322	7		

- Molecule 58 is a protein called 40S RIBOSOMAL PROTEIN ES7.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	CH	191	Total	C	N	O	S	0	0
			1535	978	282	274	1		

- Molecule 59 is a protein called 40S RIBOSOMAL PROTEIN ES8.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	CI	207	Total	C	N	O	S	0	0
			1695	1064	334	292	5		

- Molecule 60 is a protein called 40S RIBOSOMAL PROTEIN US4.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	CJ	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 61 is a protein called 40S RIBOSOMAL PROTEIN ES10.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	CK	94	Total	C	N	O	S	0	0
			791	519	138	129	5		

- Molecule 62 is a protein called 40S RIBOSOMAL PROTEIN US17.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	CL	146	Total	C	N	O	S	0	0
			1199	764	224	205	6		

- Molecule 63 is a protein called 40S RIBOSOMAL PROTEIN ES12.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	CM	120	Total	C	N	O	S	0	0
			931	584	164	174	9		

- Molecule 64 is a protein called 40S RIBOSOMAL PROTEIN ES15.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	CN	150	Total	C	N	O	S	0	0
			1207	773	229	204	1		

- Molecule 65 is a protein called 40S RIBOSOMAL PROTEIN ES11.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	CO	137	Total	C	N	O	S	0	0
			1023	627	200	190	6		

- Molecule 66 is a protein called 40S RIBOSOMAL PROTEIN US19.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	CP	118	Total	C	N	O	S	0	0
			981	625	183	166	7		

- Molecule 67 is a protein called 40S RIBOSOMAL PROTEIN US9.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	CQ	139	Total	C	N	O	S	0	0
			1108	704	210	191	3		

- Molecule 68 is a protein called 40S RIBOSOMAL PROTEIN ES17.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	CR	109	Total	C	N	O	S	0	0
			893	561	170	159	3		

- Molecule 69 is a protein called 40S RIBOSOMAL PROTEIN US13.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	CS	142	Total	C	N	O	S	0	0
			1172	736	236	199	1		

- Molecule 70 is a protein called 40S RIBOSOMAL PROTEIN ES19.

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

- Molecule 71 is a protein called 40S RIBOSOMAL PROTEIN US10.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	CU	101	Total	C	N	O	S	0	0
			803	502	153	144	4		

- Molecule 72 is a protein called 40S RIBOSOMAL PROTEIN ES21.

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

- Molecule 73 is a protein called 40S RIBOSOMAL PROTEIN US8.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	CW	129	Total	C	N	O	S	0	0
			1033	659	193	175	6		

- Molecule 74 is a protein called 40S RIBOSOMAL PROTEIN US12.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	CX	134	Total	C	N	O	S	0	0
			1046	663	205	176	2		

- Molecule 75 is a protein called 40S RIBOSOMAL PROTEIN ES24.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	CY	122	Total	C	N	O	S	0	0
			1002	635	196	166	5		

- Molecule 76 is a protein called 40S RIBOSOMAL PROTEIN ES25.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	CZ	76	Total	C	N	O	S	0	0
			605	387	112	105	1		

- Molecule 77 is a protein called 40S RIBOSOMAL PROTEIN ES26.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Ca	96	Total	C	N	O	S	0	0
			767	476	159	127	5		

- Molecule 78 is a protein called 40S RIBOSOMAL PROTEIN ES27.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Cb	80	Total	C	N	O	S	0	0
			625	391	116	111	7		

- Molecule 79 is a protein called 40S RIBOSOMAL PROTEIN ES28.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Cc	62	Total	C	N	O	S	0	0
			490	298	99	91	2		

- Molecule 80 is a protein called 40S RIBOSOMAL PROTEIN US14.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Cd	53	Total	C	N	O	S	0	0
			444	278	90	71	5		

- Molecule 81 is a protein called 40S RIBOSOMAL PROTEIN ES30.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Ce	51	Total	C	N	O	S	0	0
			412	258	90	63	1		

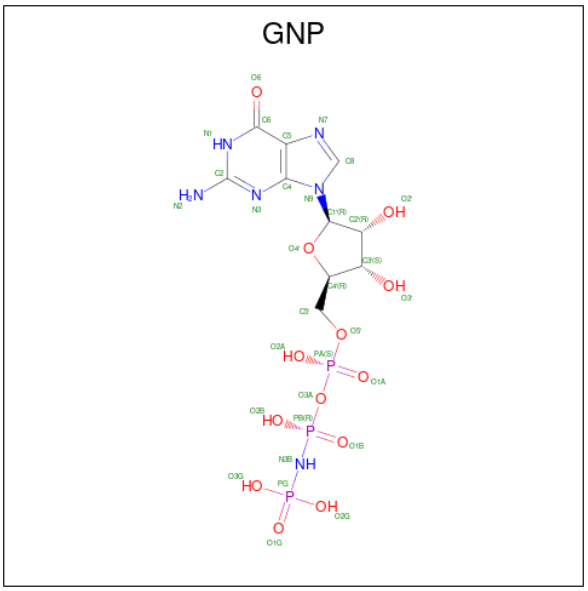
- Molecule 82 is a protein called 40S RIBOSOMAL PROTEIN ES31.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Cf	61	Total	C	N	O	S	0	0
			497	312	94	84	7		

- Molecule 83 is a protein called 40S RIBOSOMAL PROTEIN RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	Cg	314	Total	C	N	O	S	0	0
			2440	1537	425	466	12		

- Molecule 84 is PHOSPHOAMINOPHOSPHONIC ACID-GUANYLATE ESTER (three-letter code: GNP) (formula: $C_{10}H_{17}N_6O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
84	BB	1	Total	C	N	O	P	0
			32	10	6	13	3	

- Molecule 85 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

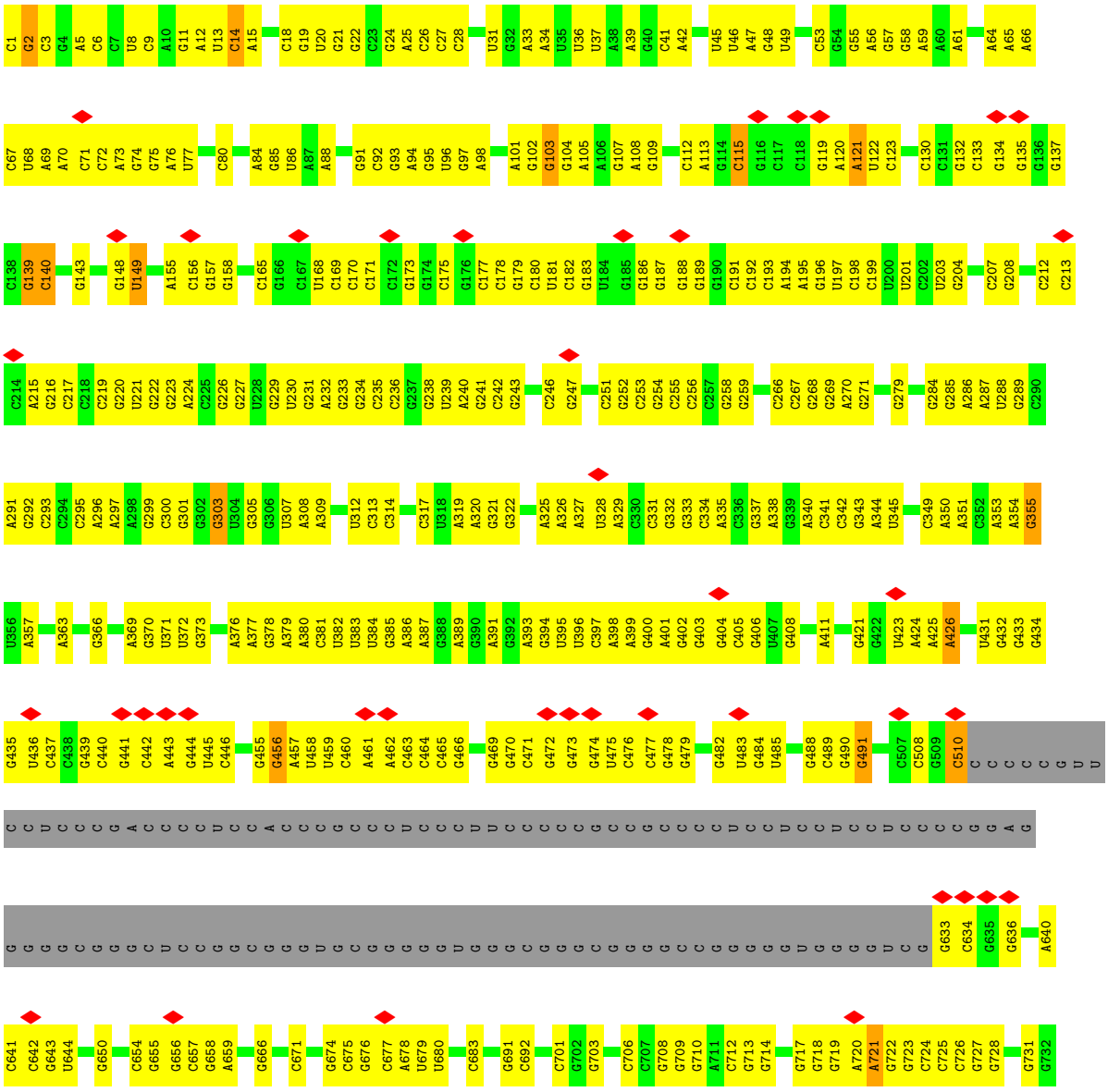
Mol	Chain	Residues	Atoms		AltConf
85	BB	1	Total	Mg	0
			1	1	

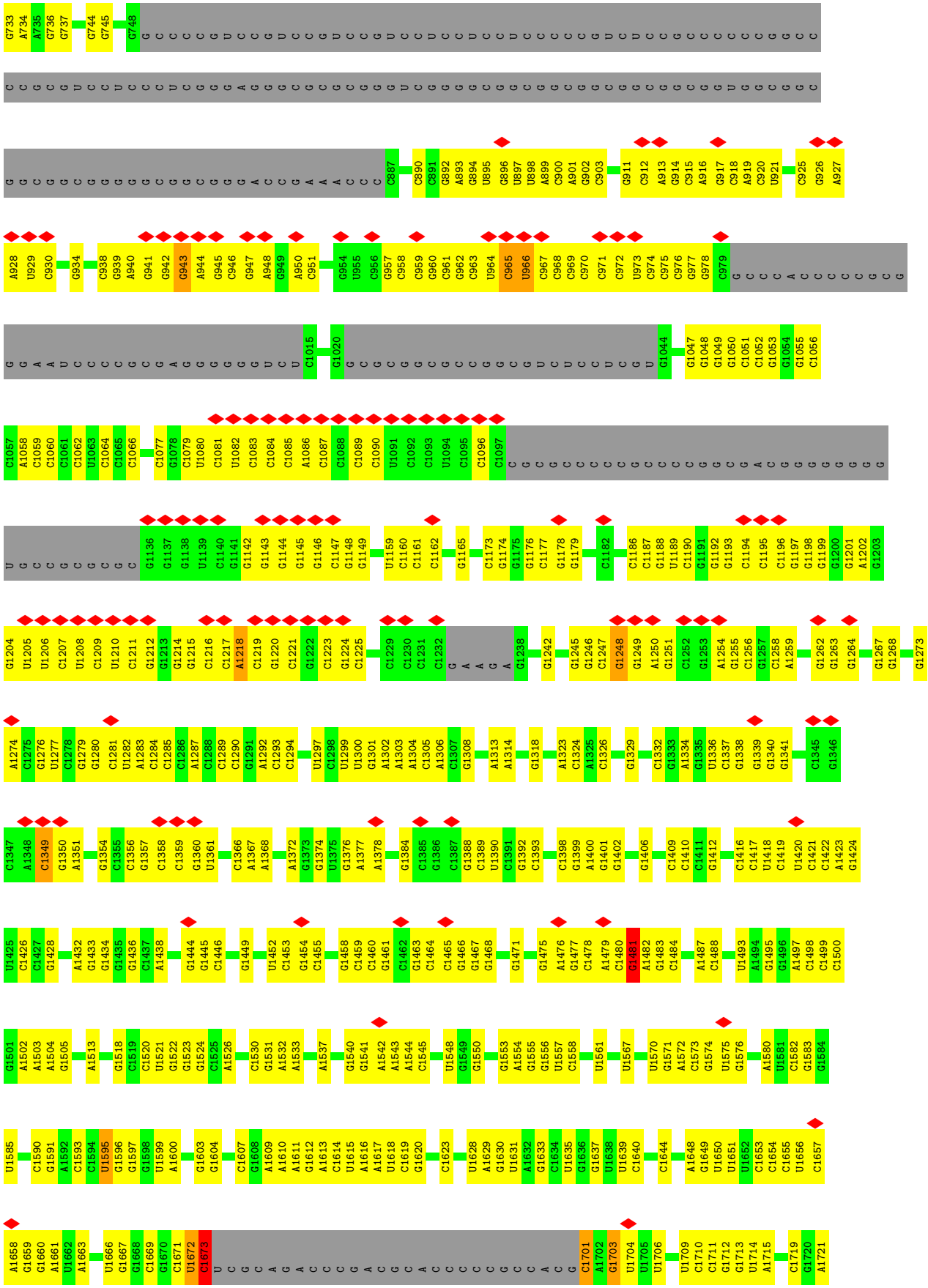
3 Residue-property plots (i)

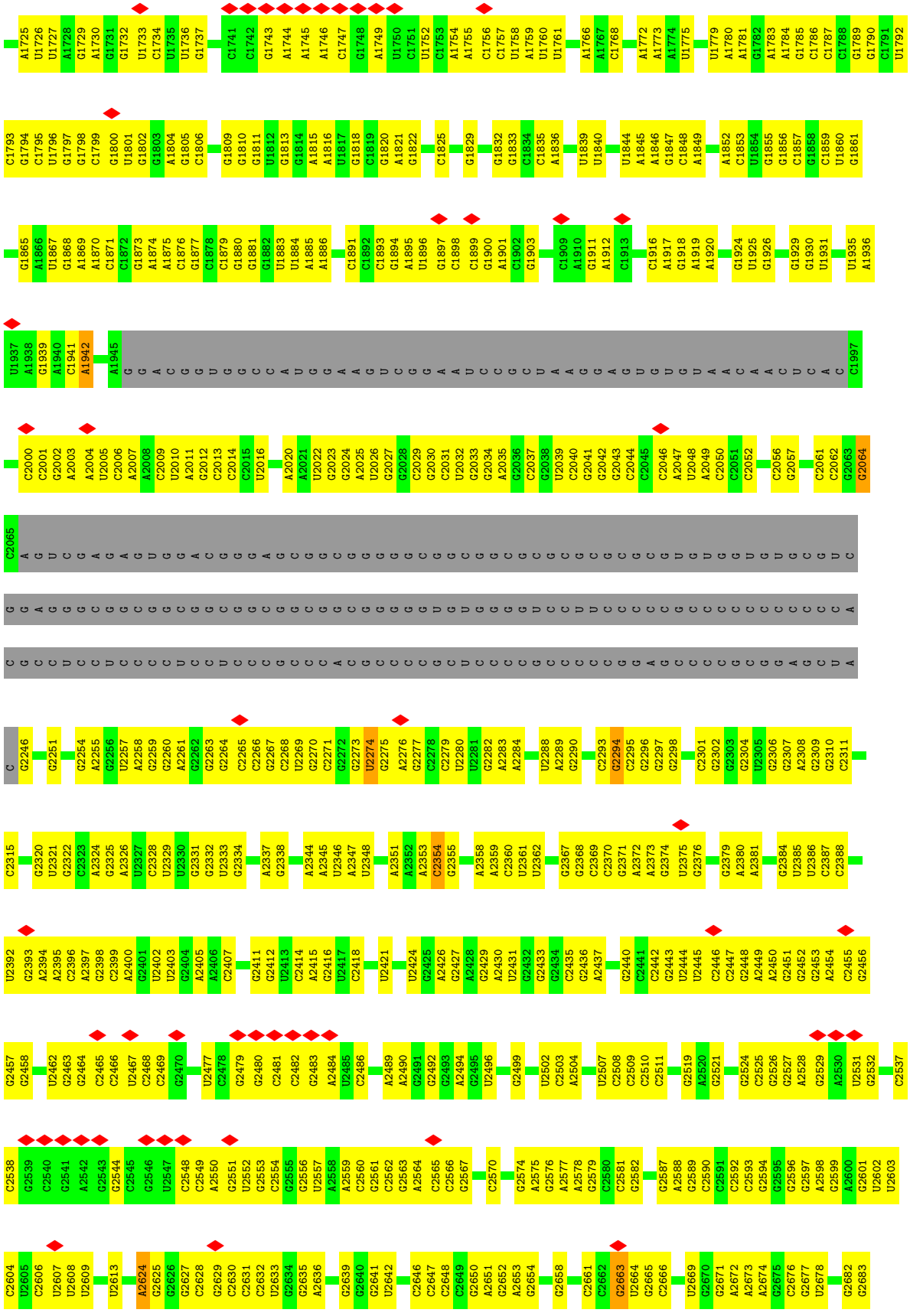
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

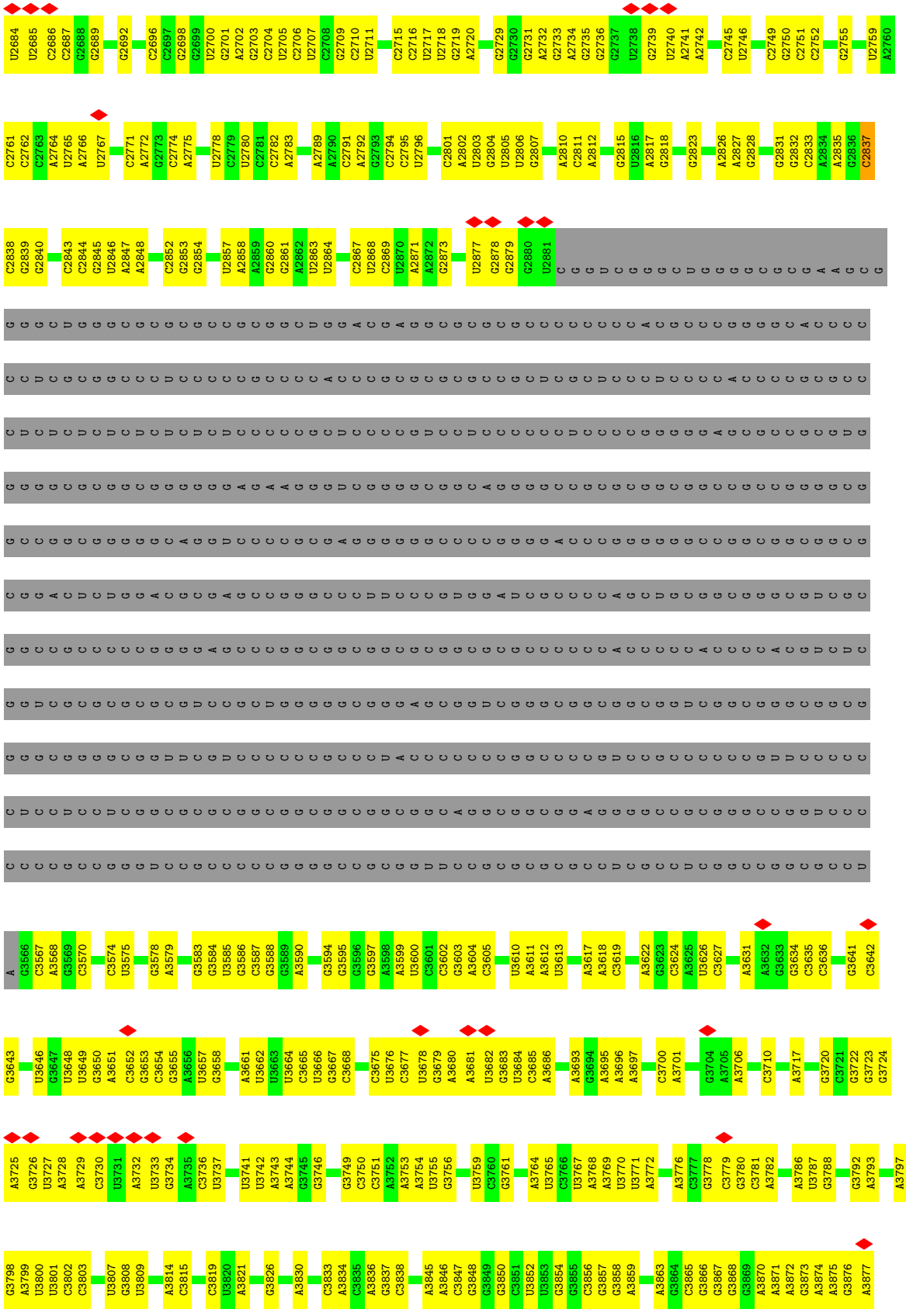
- Molecule 1: 28S Ribosomal RNA

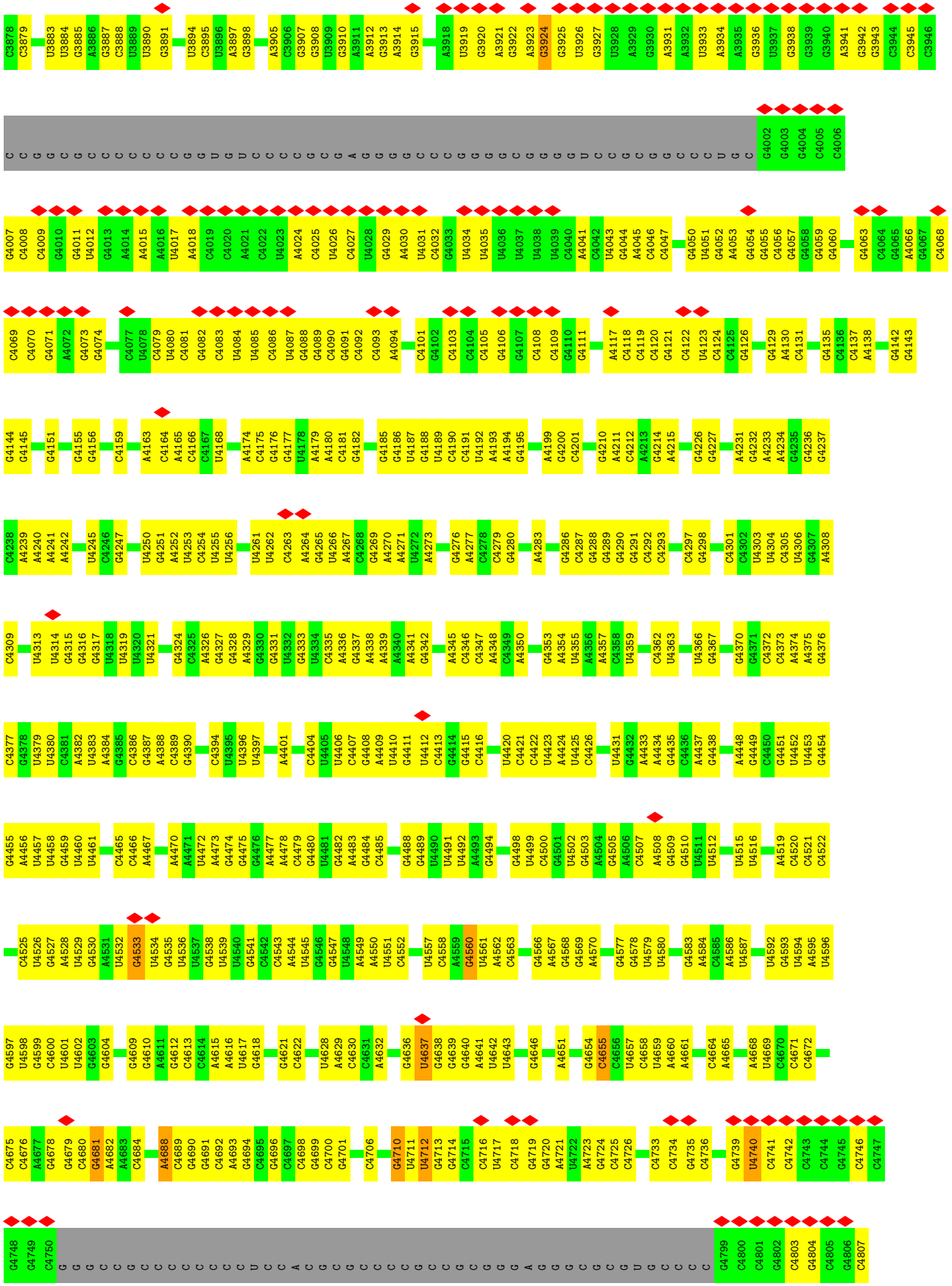
Chain A2:

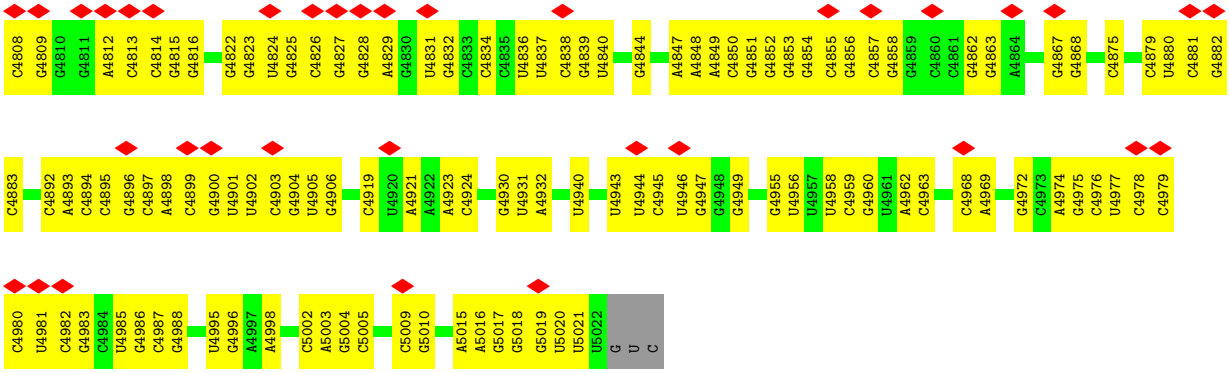






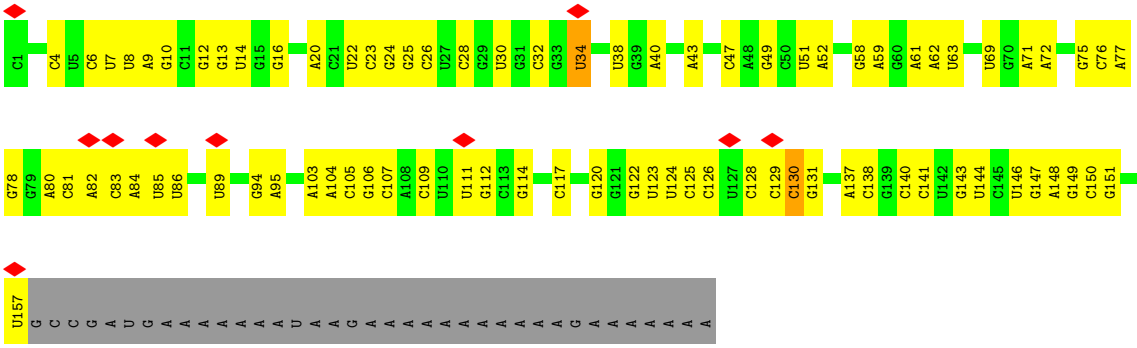

U2684 U2685 C2686 C2687 G2688 G2689 G2692 C2696 C2697 G2698 G2699 U2700 G2701 A2702 G2703 C2704 U2705 C2706 U2707 C2708 G2709 C2710 U2711 C2715 C2716 U2717 U2718 G2719 A2720 G2729 G2730 G2731 A2732 G2733 A2734 G2735 G2736 G2737 U2738 G2739 U2740 A2741 A2742 C2745 U2746 C2749 G2750 C2751 C2752 G2755 U2759 A2760
C2761 C2762 G2763 A2764 U2765 A2766 U2767 C2771 A2772 G2773 C2774 A2775 U2778 C2779 U2780 C2781 C2782 A2783 A2789 A2790 C2791 A2792 G2793 C2794 C2795 U2796 C2801 A2802 U2803 G2804 U2805 U2806 G2807 A2810 C2811 A2812 G2815 U2816 A2817 G2818 G2823 A2826 A2827 G2828 G2831 G2832 C2833 A2834 A2835 G2836 C2837
C2838 G2839 G2840 C2843 C2844 G2845 U2846 A2847 A2848 C2852 G2853 G2854 U2857 A2858 A2859 G2860 G2861 A2862 U2863 U2864 C2867 U2868 C2869 U2870 A2871 A2872 G2873 U2877 G2878 G2879 G2880 U2881 C G G U C G C G C G





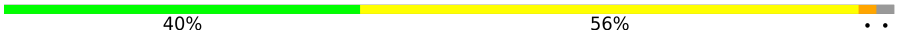
• Molecule 2: 5.8S Ribosomal RNA

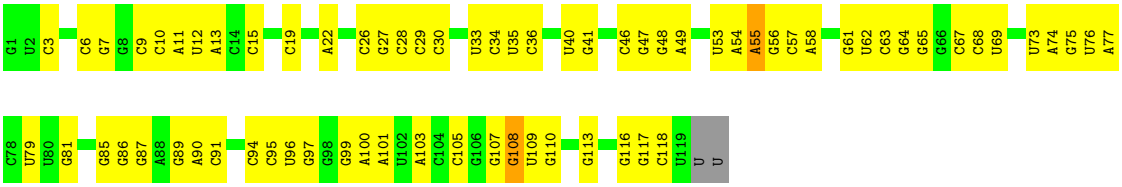
Chain A3:



• Molecule 3: 5S Ribosomal RNA

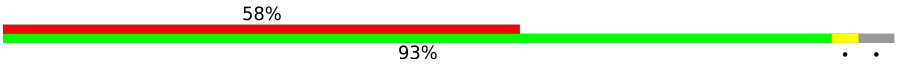
Chain A4:

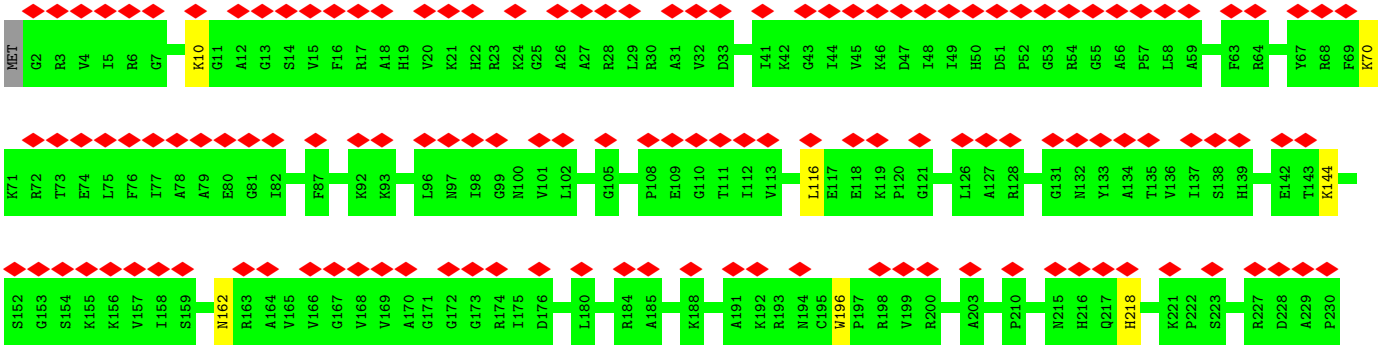


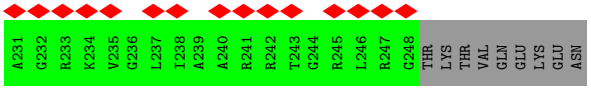


• Molecule 4: 60S RIBOSOMAL PROTEIN L8

Chain AA:

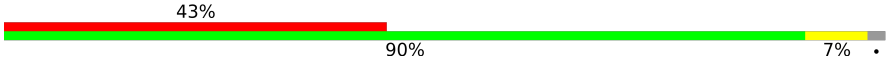


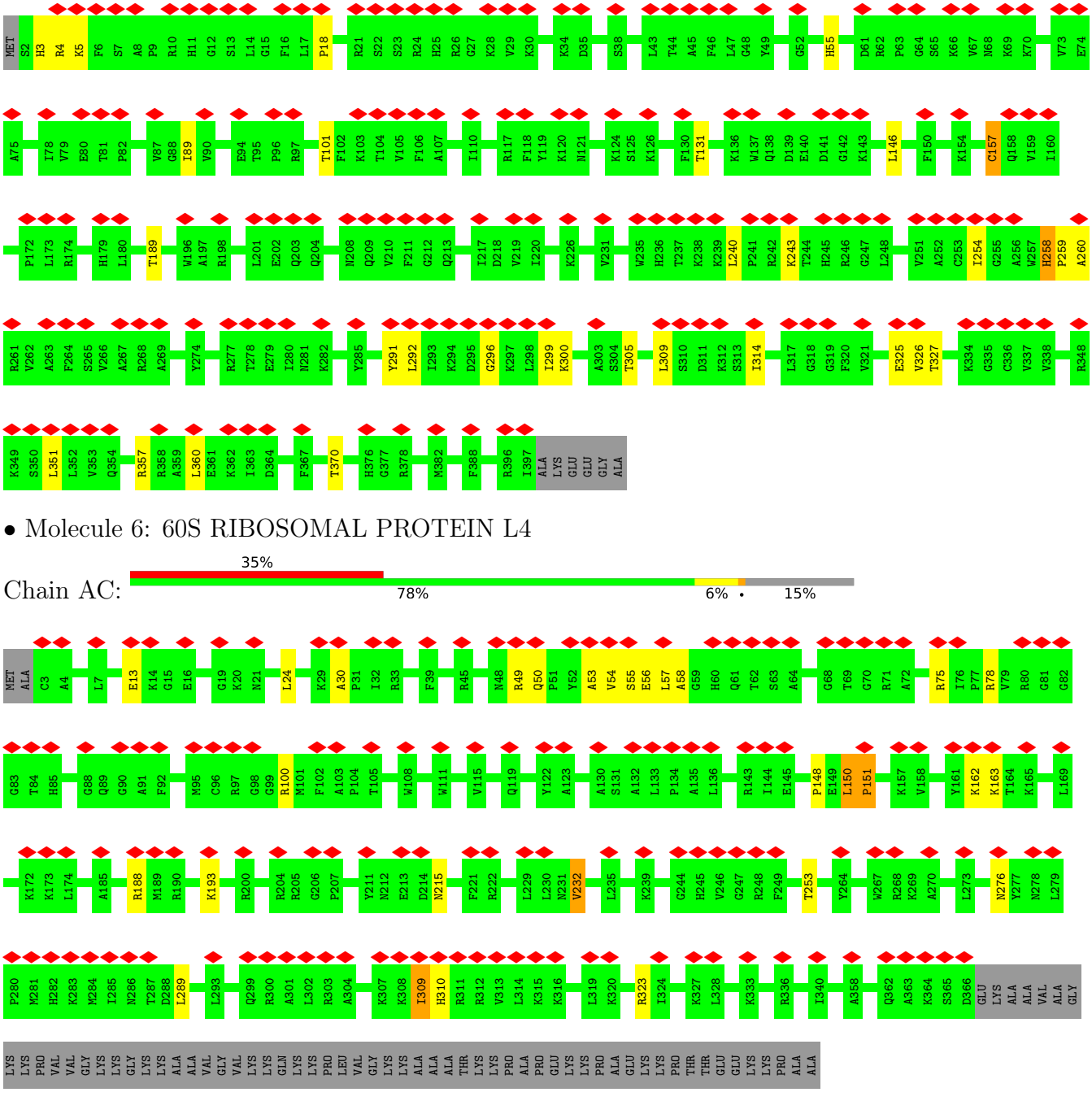




• Molecule 5: 60S RIBOSOMAL PROTEIN L3

Chain AB:



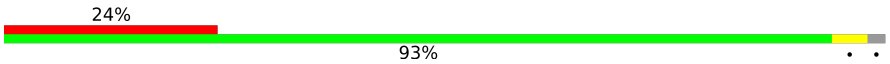


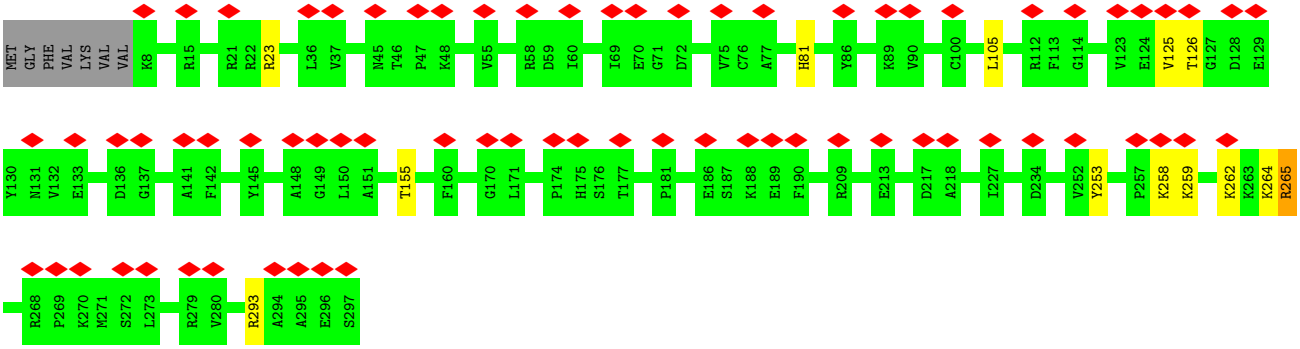
• Molecule 6: 60S RIBOSOMAL PROTEIN L4

Chain AC:

• Molecule 7: 60S RIBOSOMAL PROTEIN L5

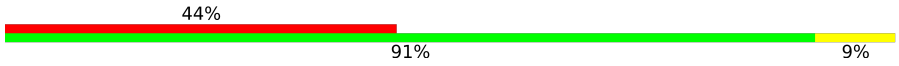
Chain AD:

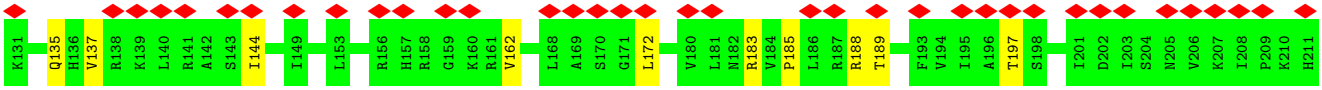


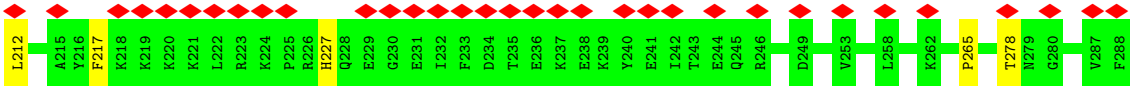


• Molecule 8: 60S RIBOSOMAL PROTEIN L6

Chain AE:

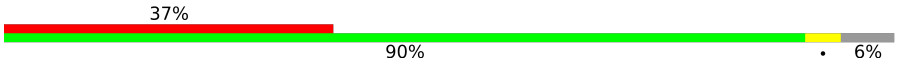


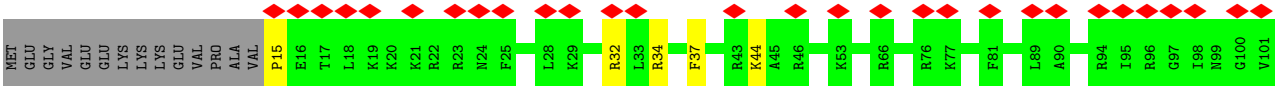


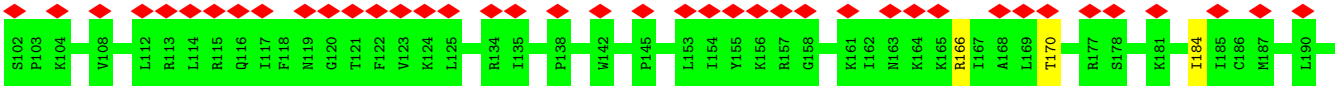


• Molecule 9: 60S RIBOSOMAL PROTEIN L7

Chain AF:

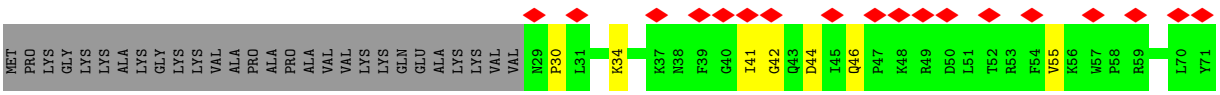


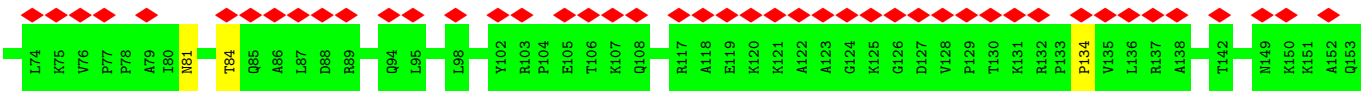


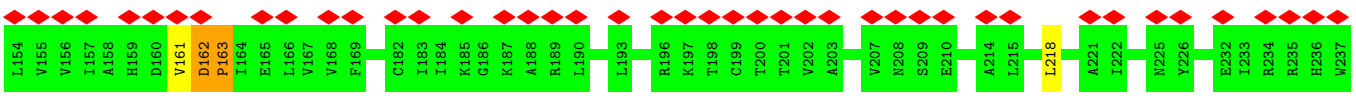


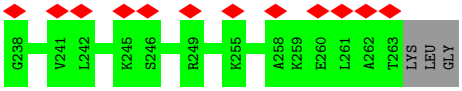
• Molecule 10: 60S RIBOSOMAL PROTEIN L7A

Chain AG:



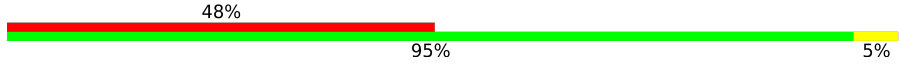


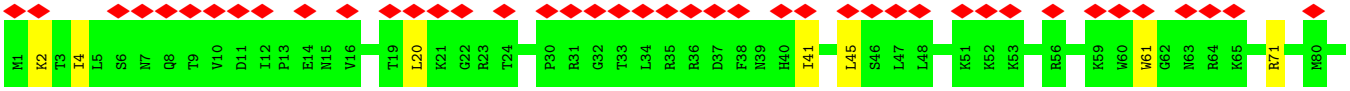


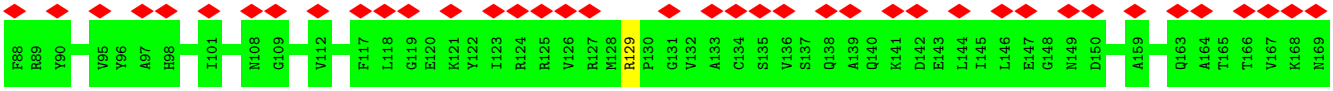


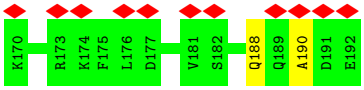
• Molecule 11: 60S RIBOSOMAL PROTEIN L9

Chain AH:



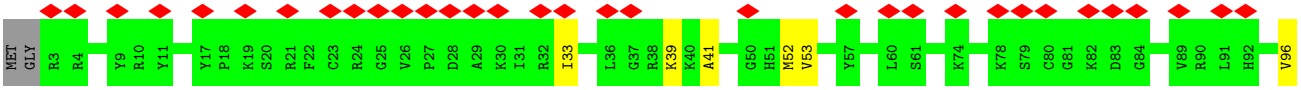


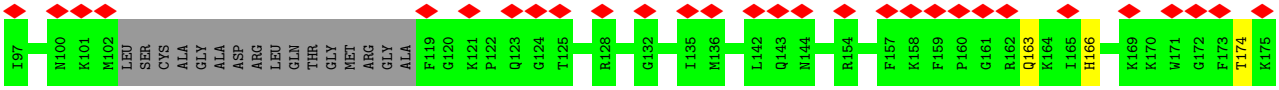


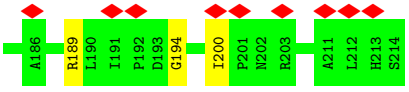


• Molecule 12: 60S RIBOSOMAL PROTEIN L10

Chain AI:

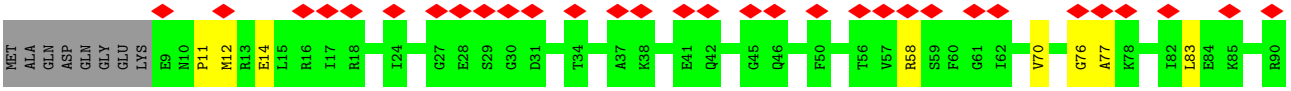


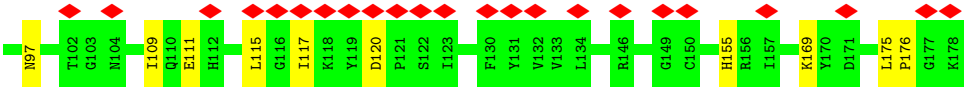




• Molecule 13: 60S RIBOSOMAL PROTEIN L11

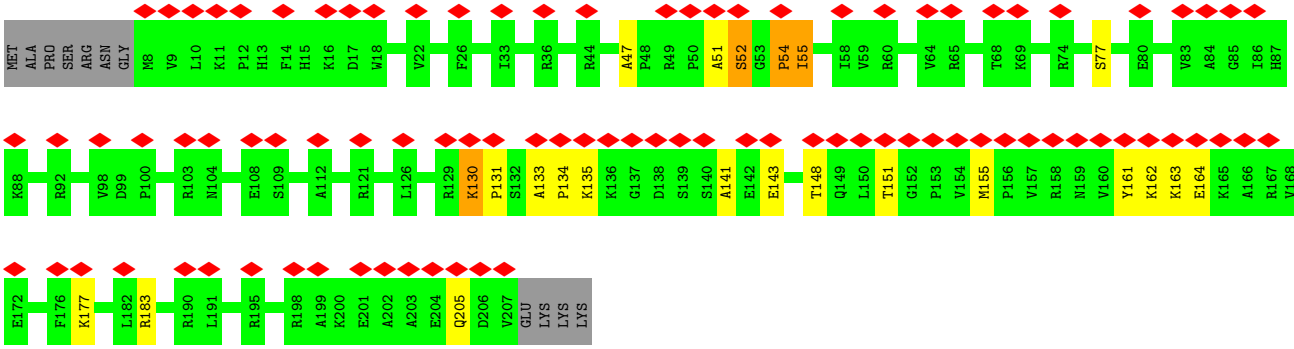
Chain AJ:





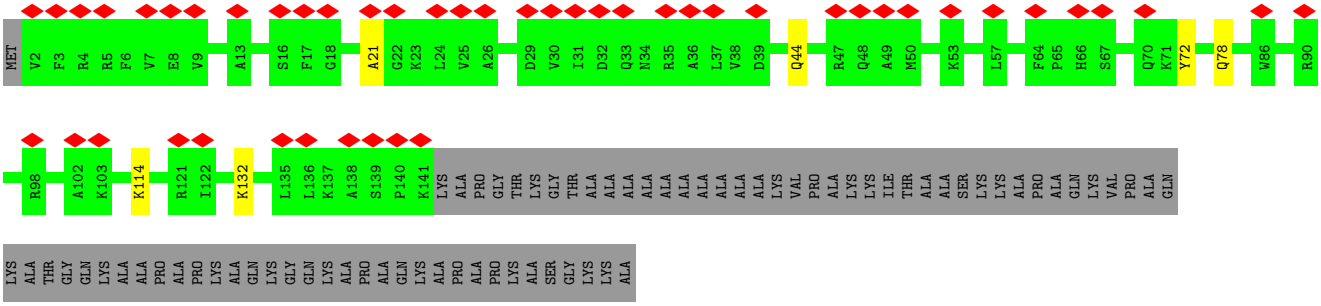
• Molecule 14: 60S RIBOSOMAL PROTEIN L13

Chain AL:



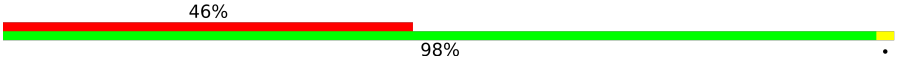
• Molecule 15: 60S RIBOSOMAL PROTEIN L14

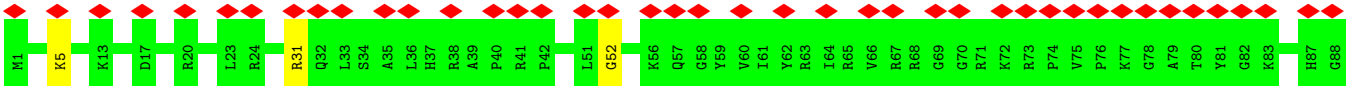
Chain AM:

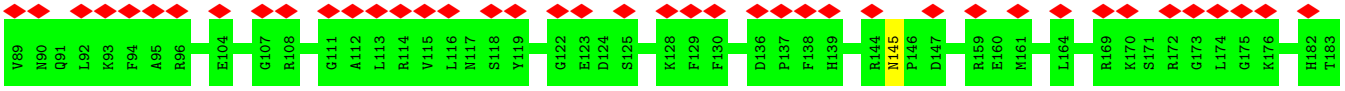


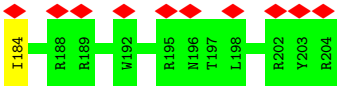
• Molecule 16: 60S RIBOSOMAL PROTEIN L15

Chain AN:



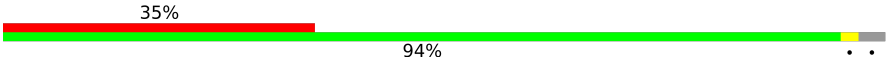


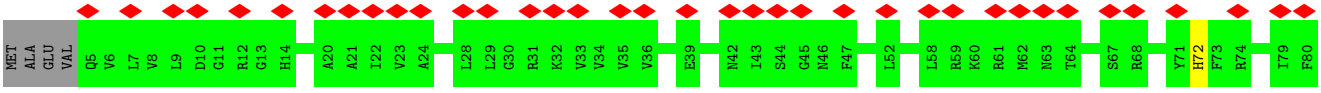


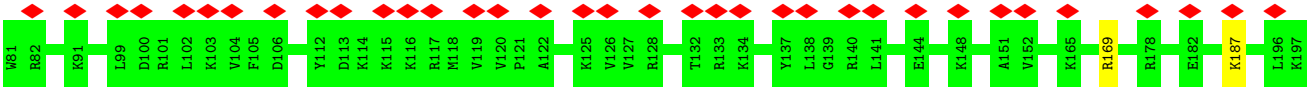


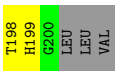
• Molecule 17: 60S RIBOSOMAL PROTEIN L13A

Chain AO:



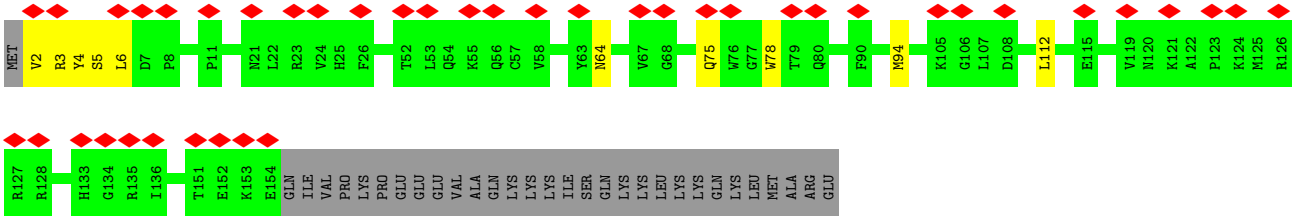






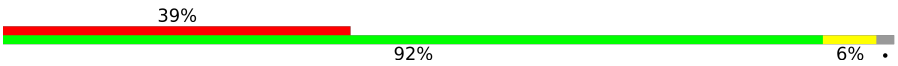
• Molecule 18: 60S RIBOSOMAL PROTEIN L17

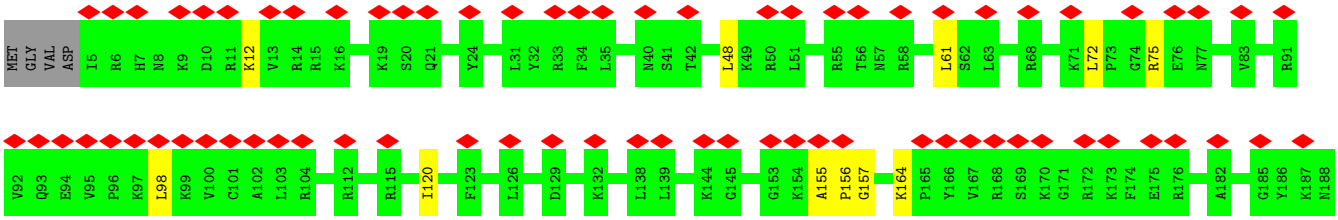
Chain AP:



• Molecule 19: 60S RIBOSOMAL PROTEIN L18

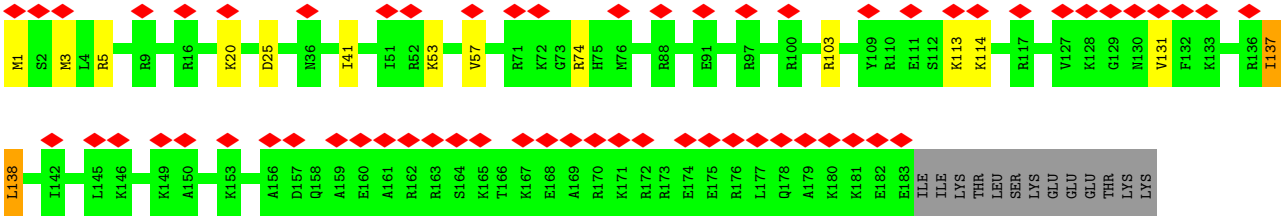
Chain AQ:





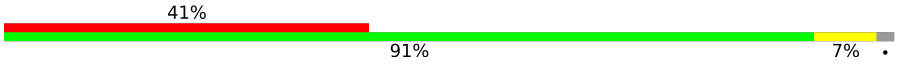
• Molecule 20: 60S RIBOSOMAL PROTEIN L19

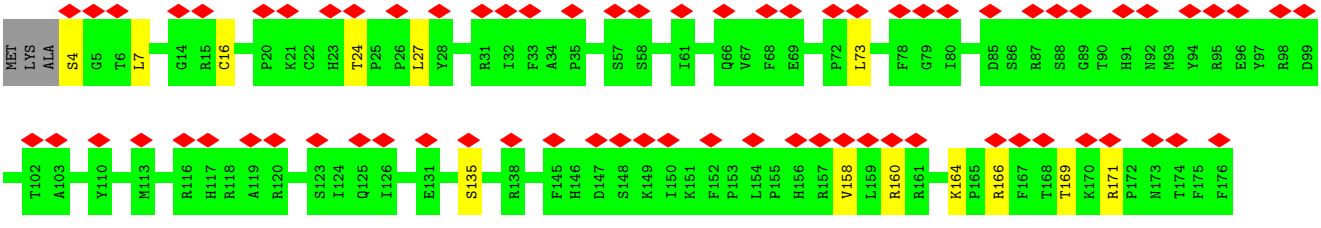
Chain AR:



• Molecule 21: 60S RIBOSOMAL PROTEIN L18A

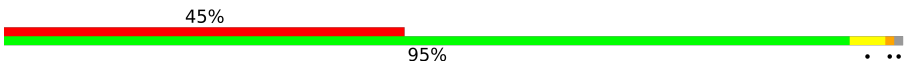
Chain AS:

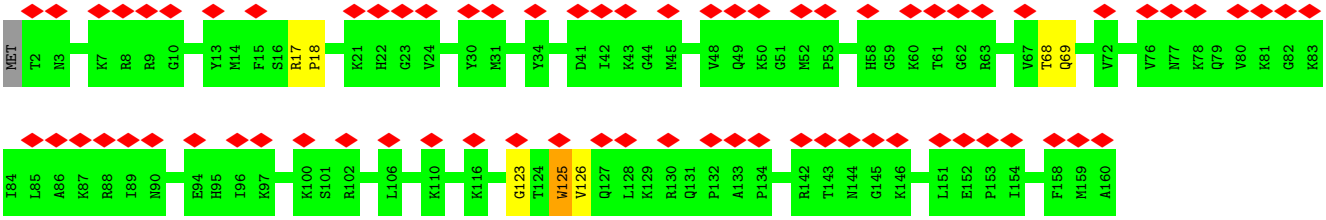




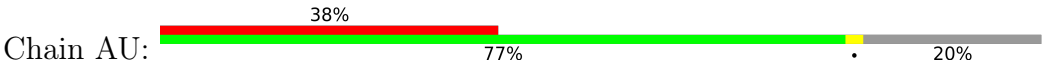
• Molecule 22: 60S RIBOSOMAL PROTEIN L21

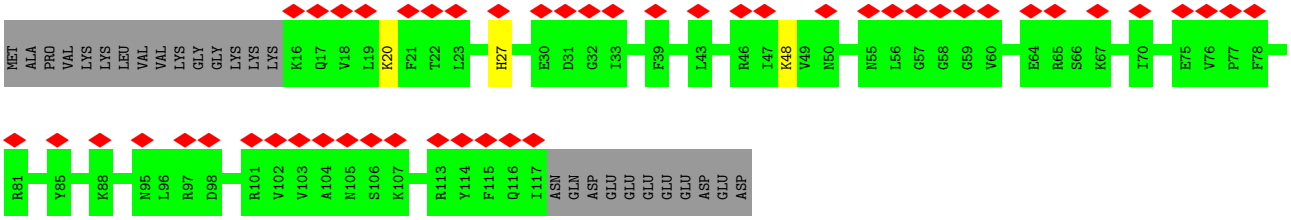
Chain AT:



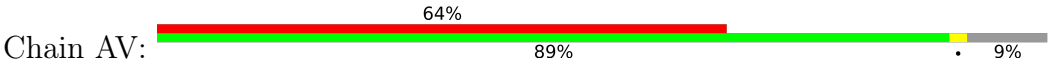


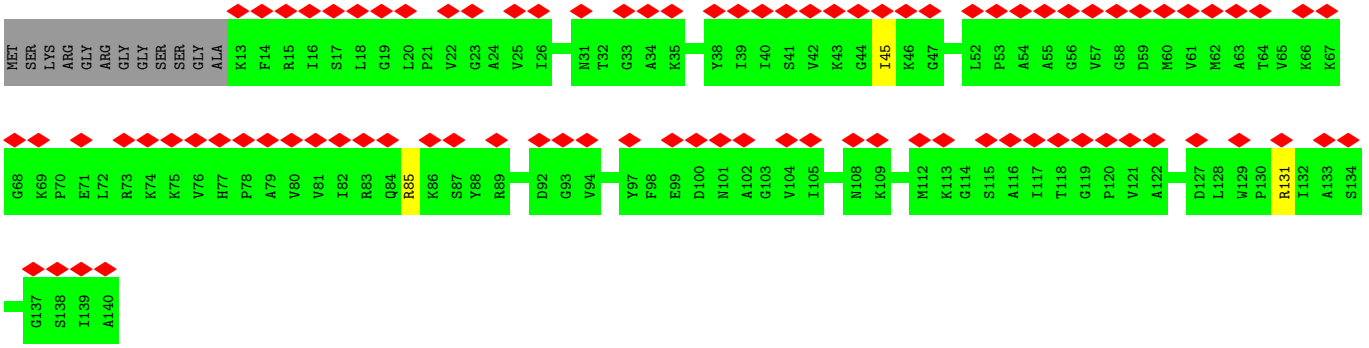
• Molecule 23: 60S RIBOSOMAL PROTEIN L22



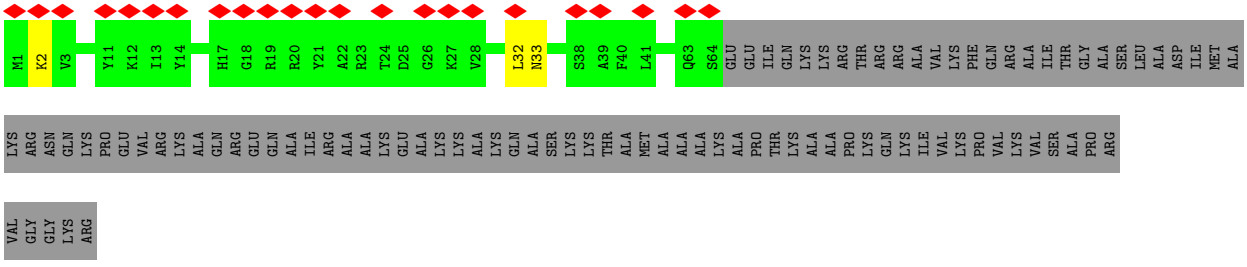


• Molecule 24: 60S RIBOSOMAL PROTEIN L23

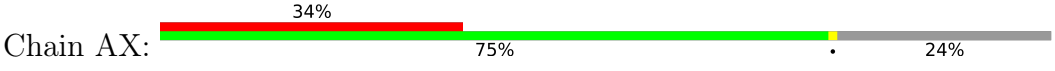


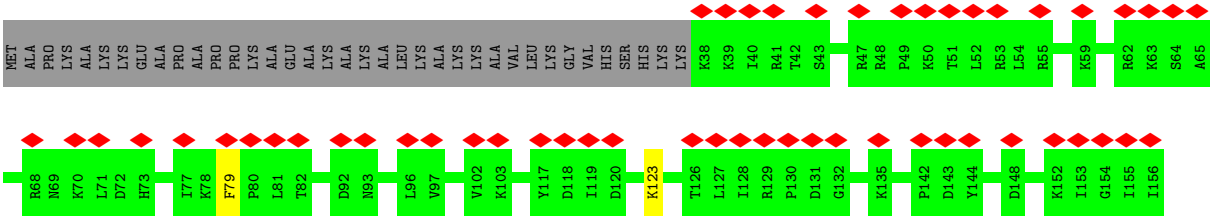


• Molecule 25: 60S RIBOSOMAL PROTEIN L24

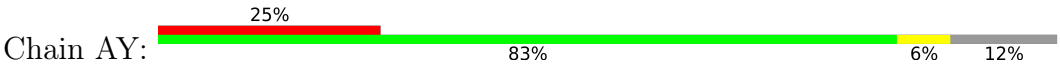


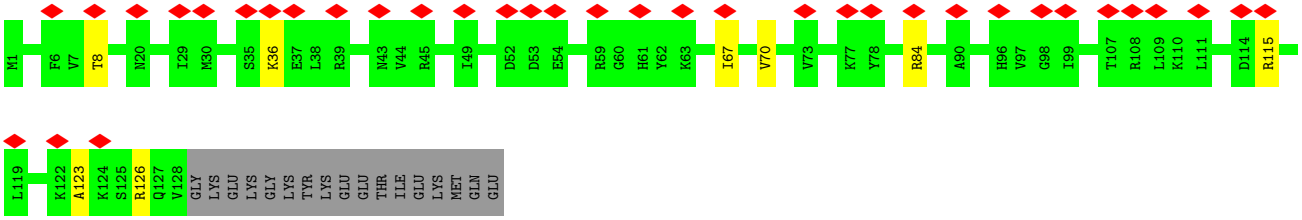
• Molecule 26: 60S RIBOSOMAL PROTEIN L23A



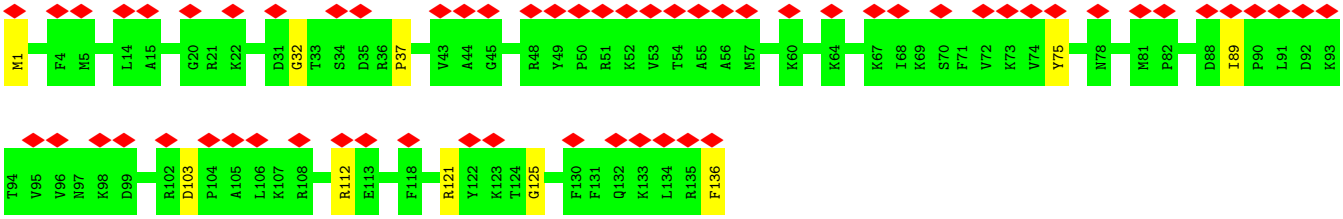


• Molecule 27: 60S RIBOSOMAL PROTEIN L26

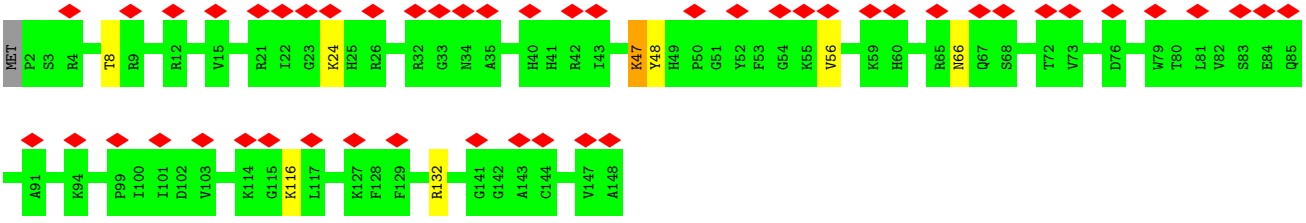




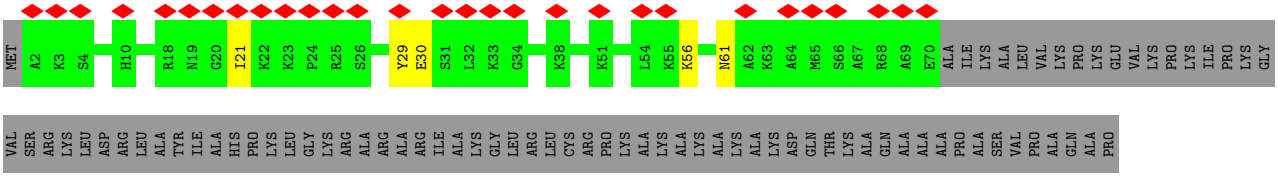
• Molecule 28: 60S RIBOSOMAL PROTEIN L27



• Molecule 29: 60S RIBOSOMAL PROTEIN L27A

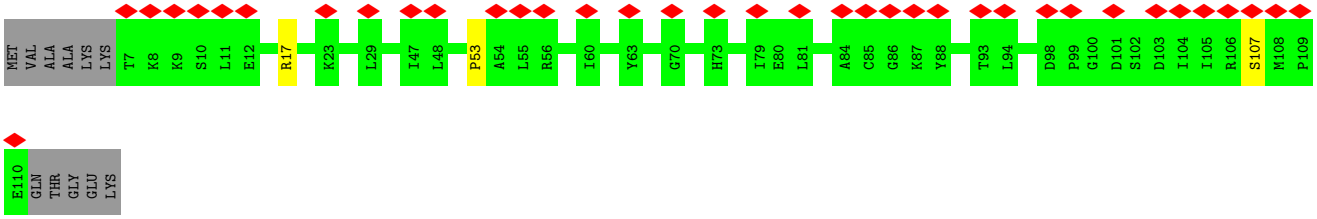


• Molecule 30: 60S RIBOSOMAL PROTEIN L29



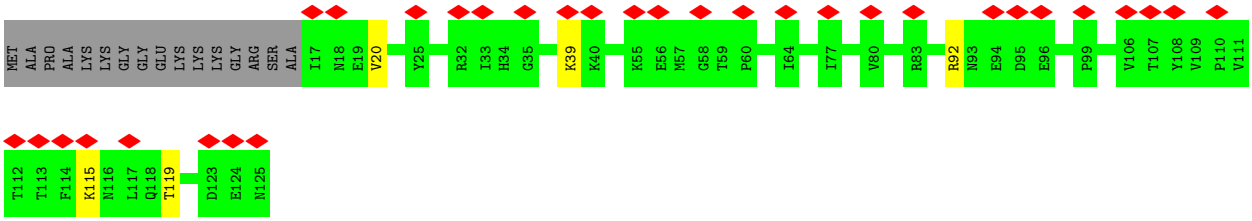
• Molecule 31: 60S RIBOSOMAL PROTEIN L30

Chain Ac:



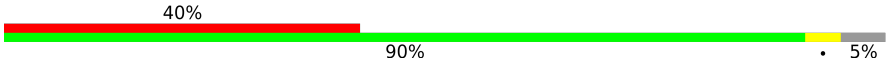
• Molecule 32: 60S RIBOSOMAL PROTEIN L31

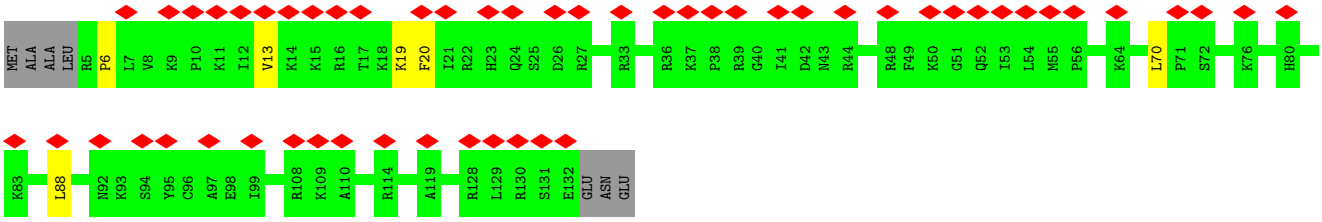
Chain Ad:



• Molecule 33: 60S RIBOSOMAL PROTEIN L32

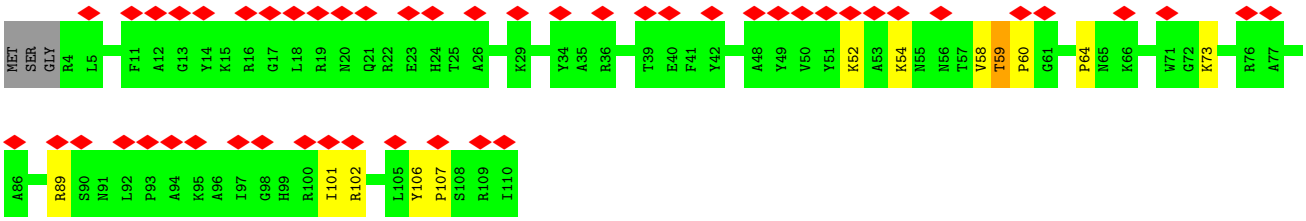
Chain Ae:





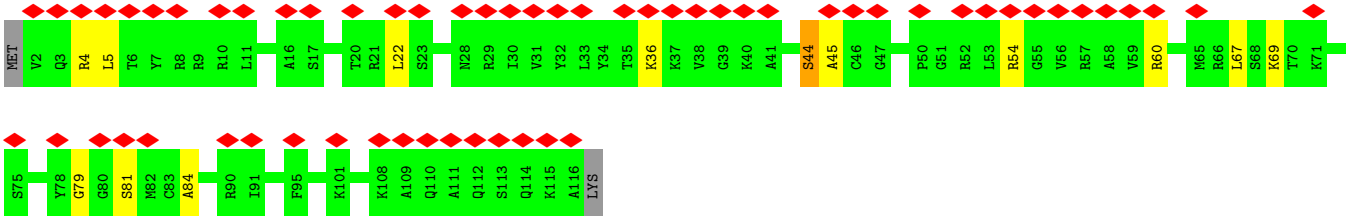
• Molecule 34: 60S RIBOSOMAL PROTEIN L35A

Chain Af:



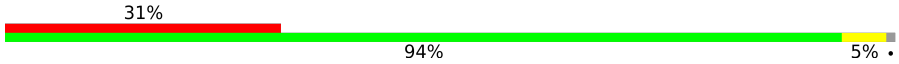
• Molecule 35: 60S RIBOSOMAL PROTEIN L34

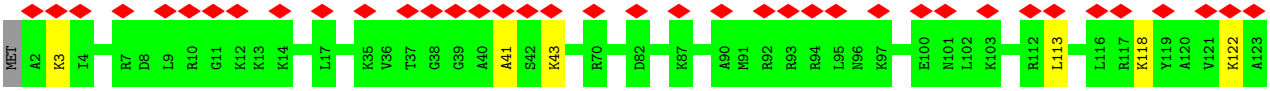
Chain Ag:



• Molecule 36: 60S RIBOSOMAL PROTEIN L35

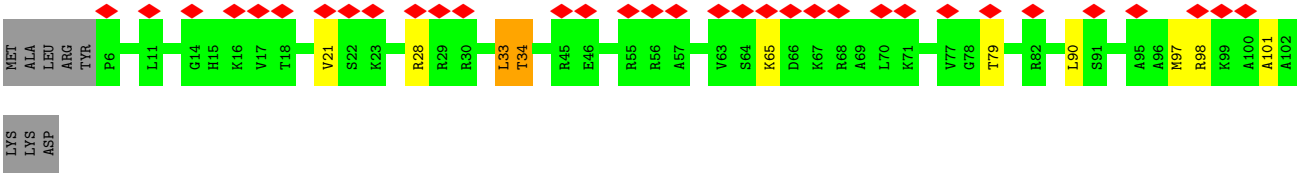
Chain Ah:





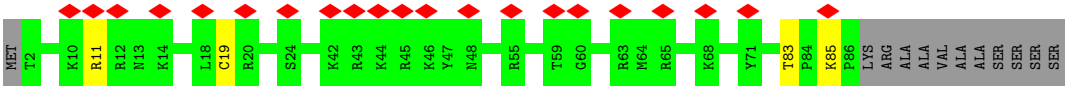
• Molecule 37: 60S RIBOSOMAL PROTEIN L36

Chain Ai:



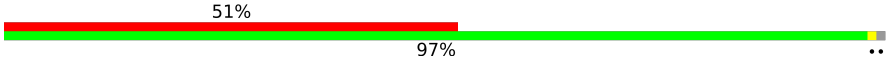
• Molecule 38: 60S RIBOSOMAL PROTEIN L37

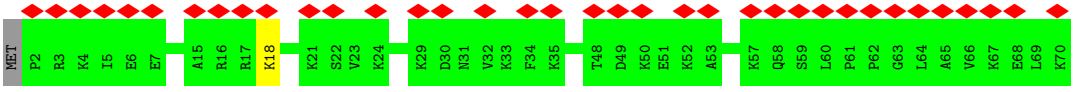
Chain Aj:



• Molecule 39: 60S RIBOSOMAL PROTEIN L38

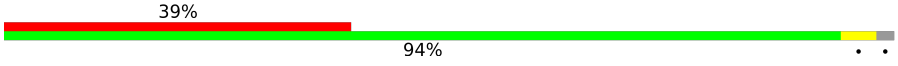
Chain Ak:

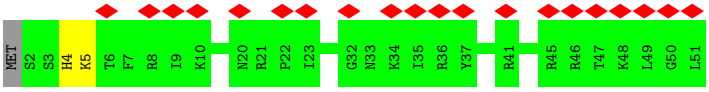




• Molecule 40: 60S RIBOSOMAL PROTEIN L39

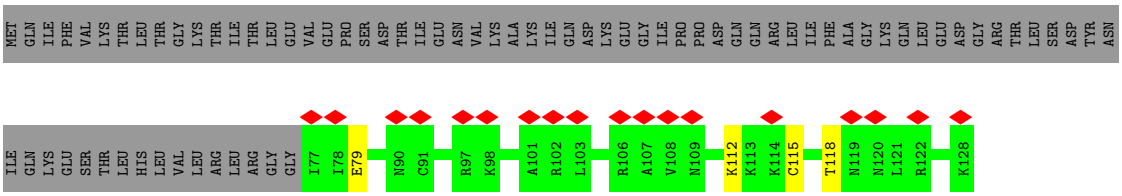
Chain Al:



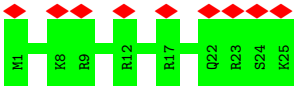


• Molecule 41: UBIQUITIN-60S RIBOSOMAL PROTEIN L40

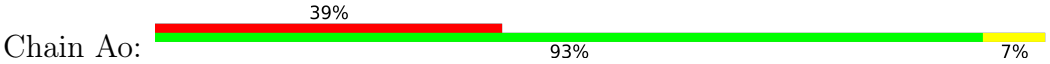
Chain Am:

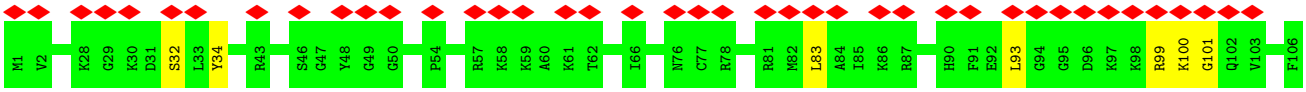


• Molecule 42: 60S RIBOSOMAL PROTEIN L41

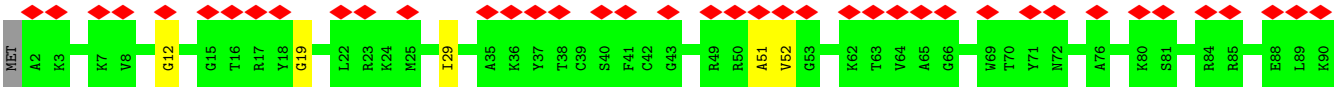


• Molecule 43: 60S RIBOSOMAL PROTEIN L36A

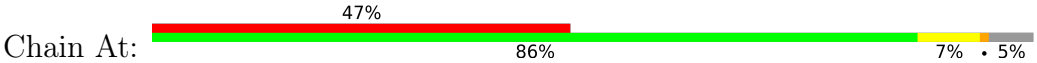


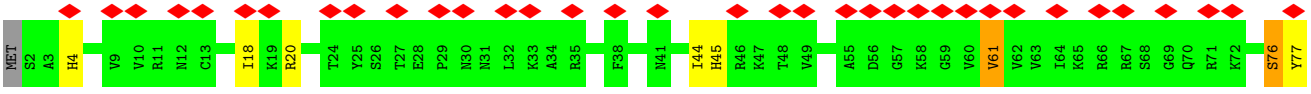


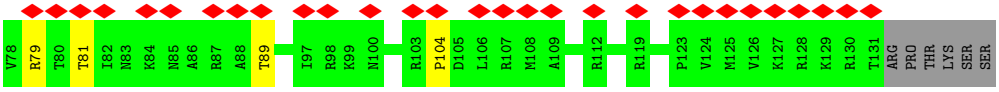
• Molecule 44: 60S RIBOSOMAL PROTEIN L37A



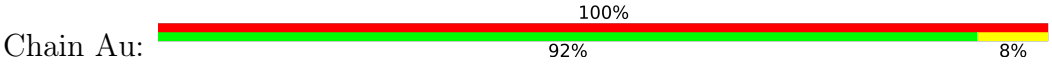
• Molecule 45: 60S RIBOSOMAL PROTEIN L28

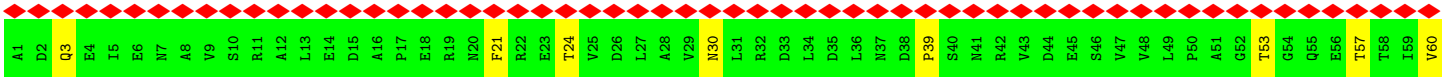


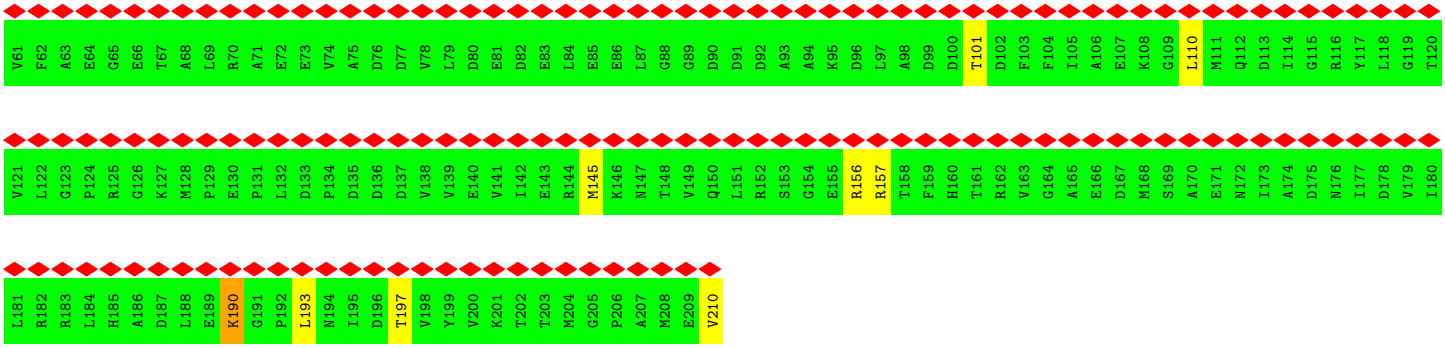




• Molecule 46: 60S RIBOSOMAL PROTEIN L10A

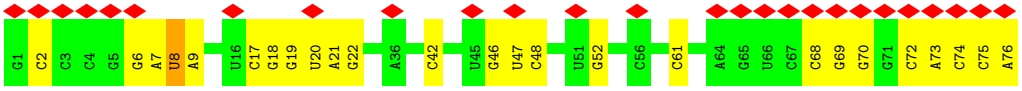






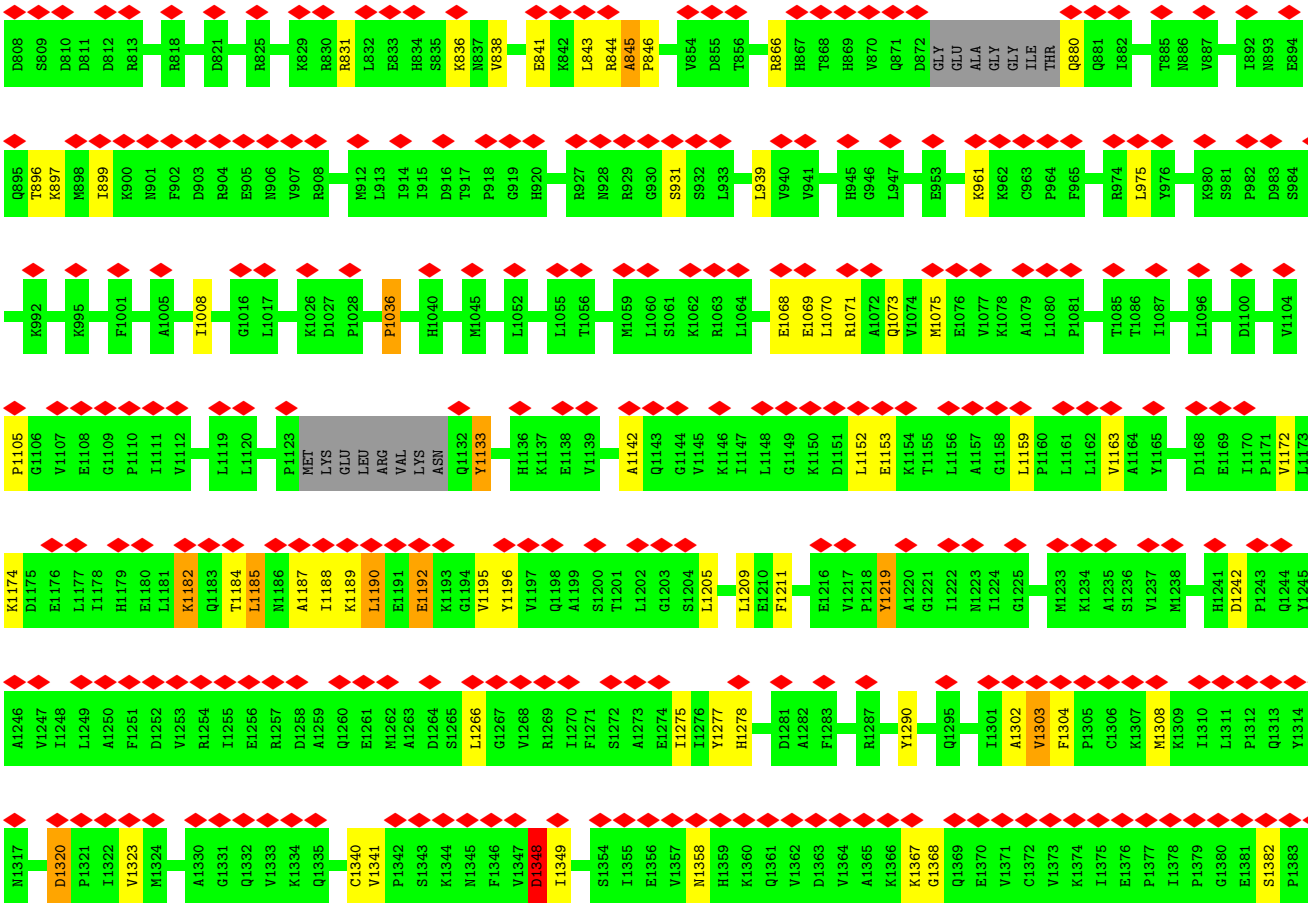
• Molecule 47: TRNA

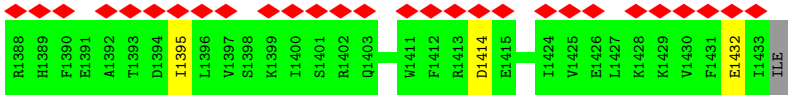
Chain BA:



• Molecule 48: EIF5B

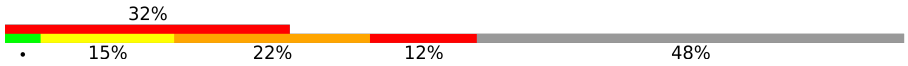
Chain BB:

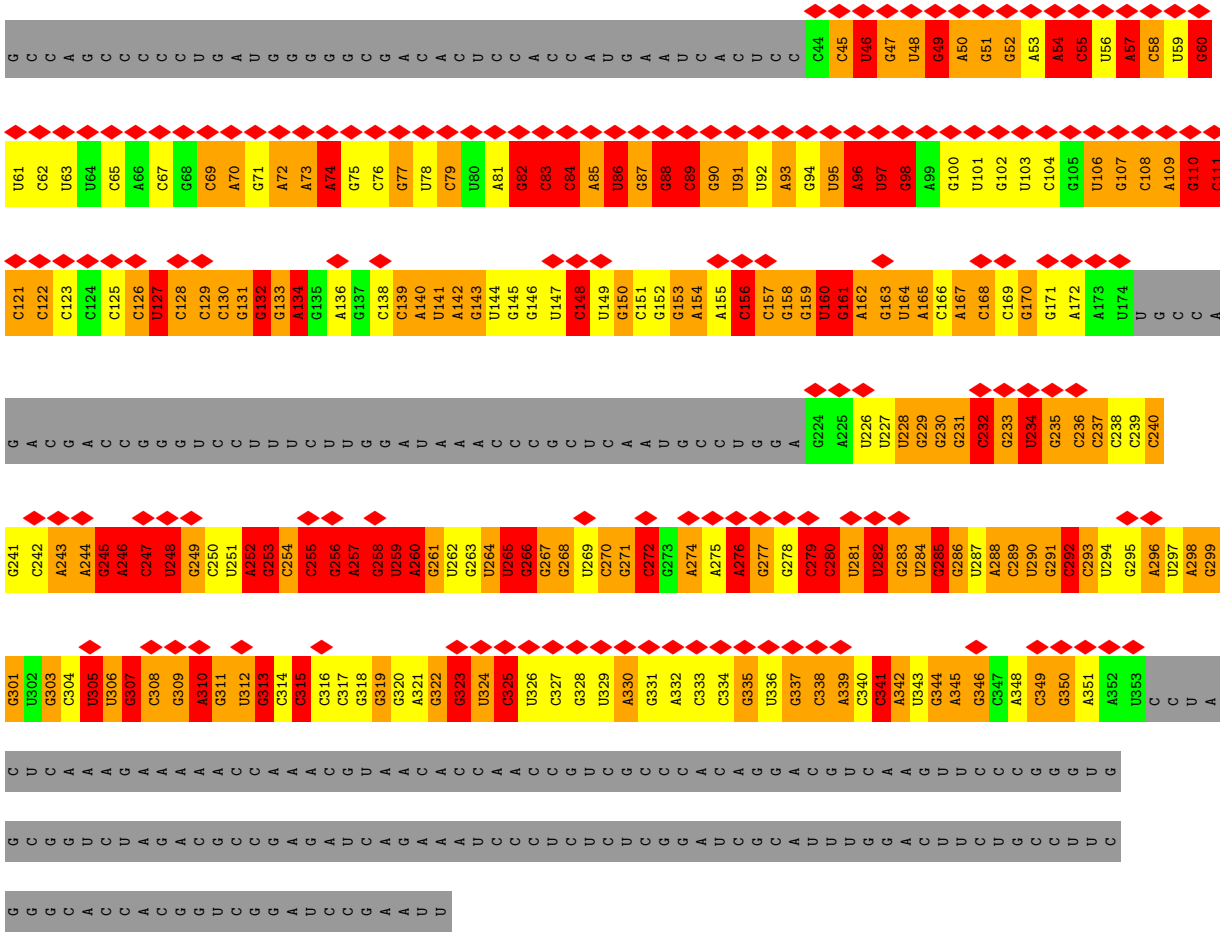




• Molecule 49: HCV-IRES

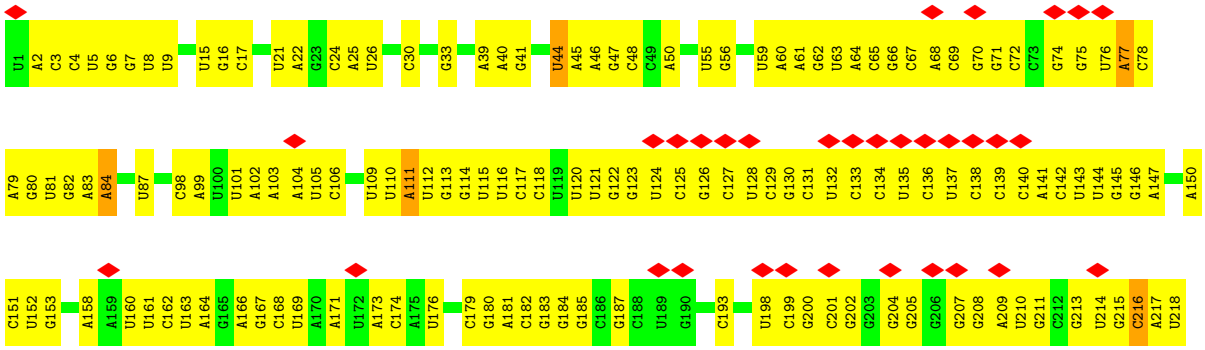
Chain BC:

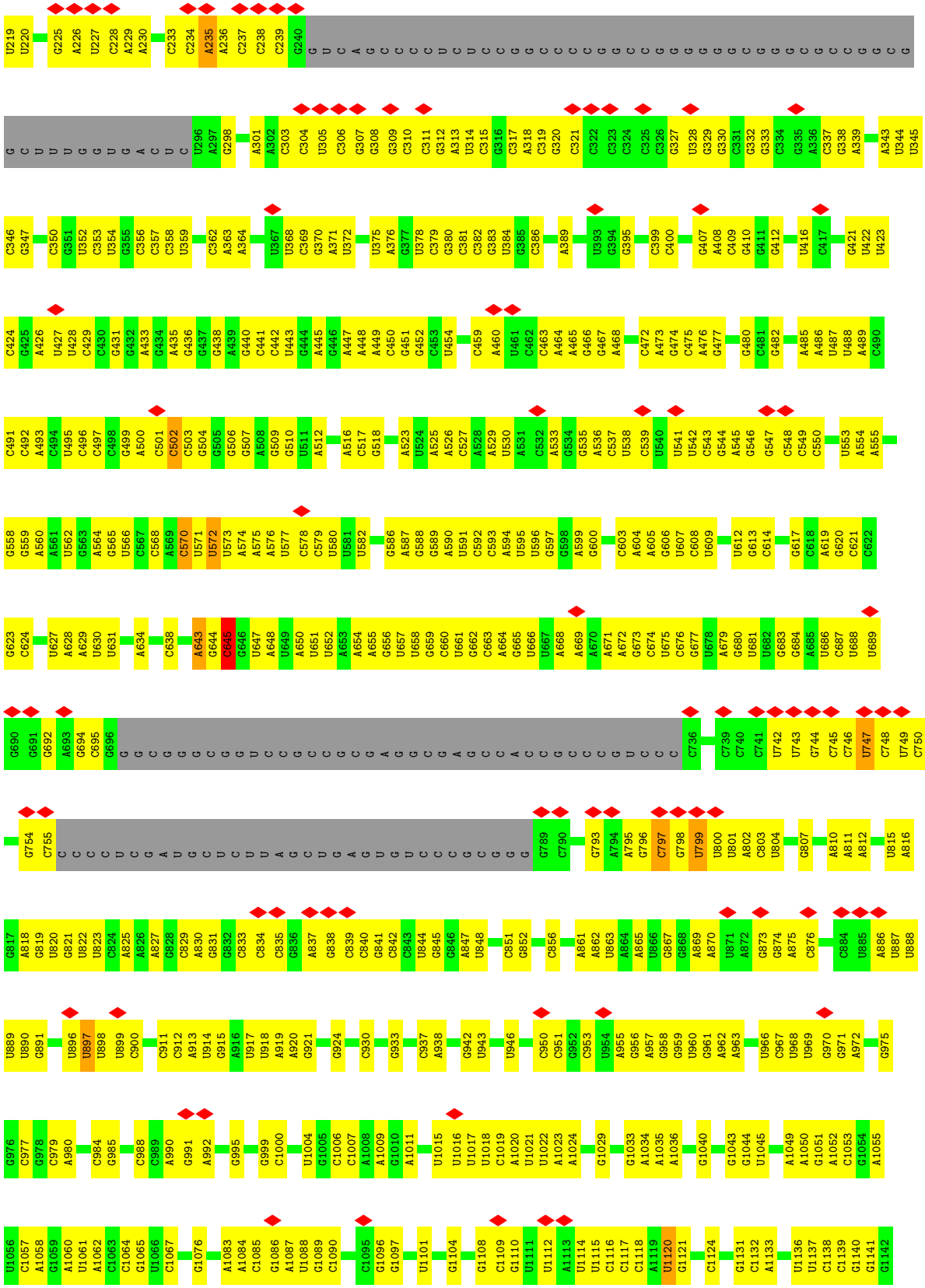


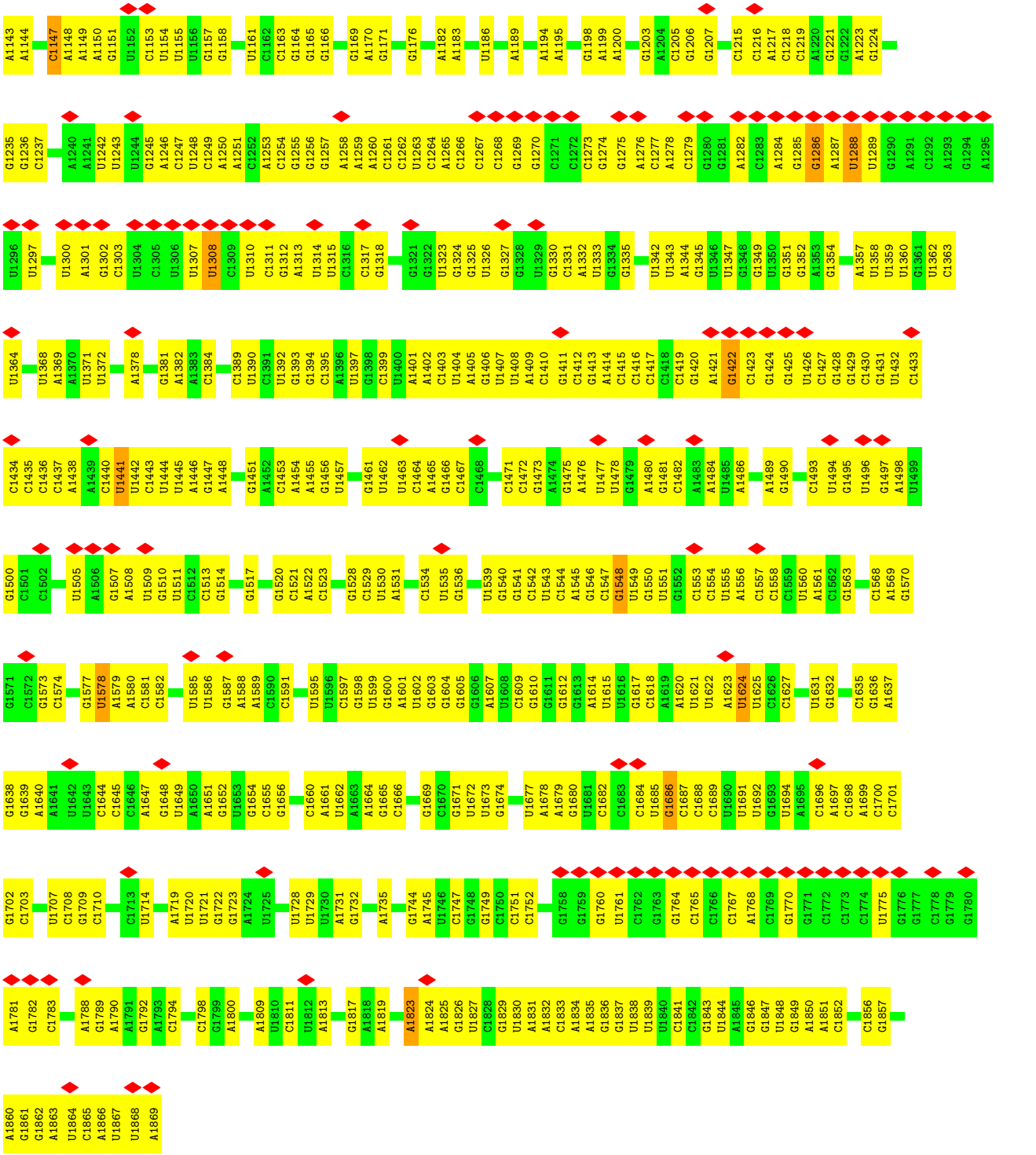


• Molecule 50: 18S Ribosomal RNA

Chain C1:

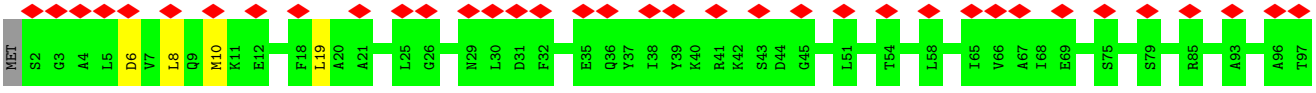


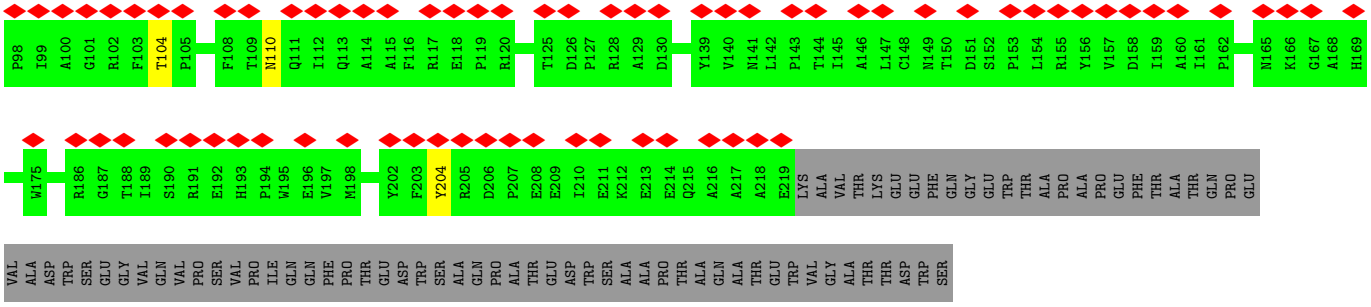




• Molecule 51: 40S RIBOSOMAL PROTEIN US2

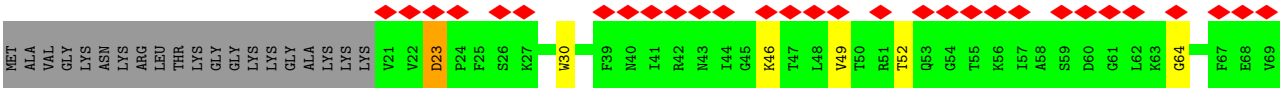
Chain CA:

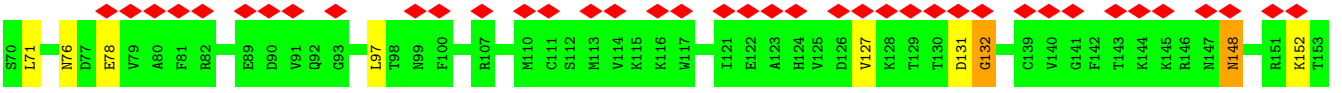


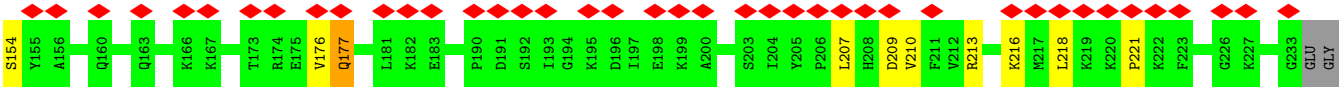


• Molecule 52: 40S RIBOSOMAL PROTEIN ES1

Chain CB:

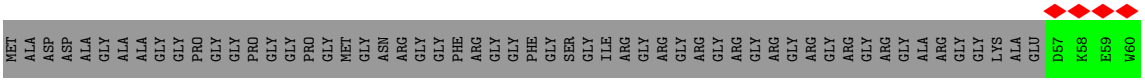


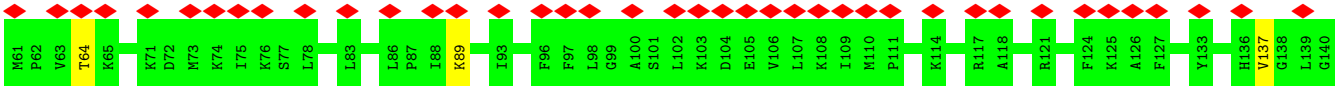


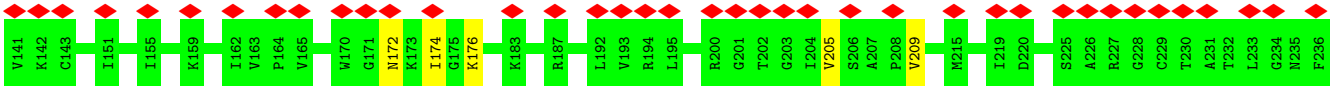


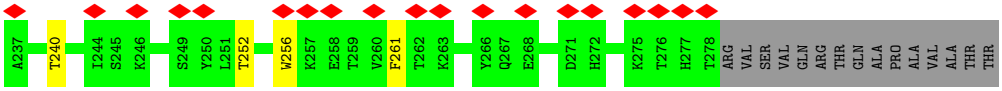
• Molecule 53: 40S RIBOSOMAL PROTEIN US5

Chain CC:



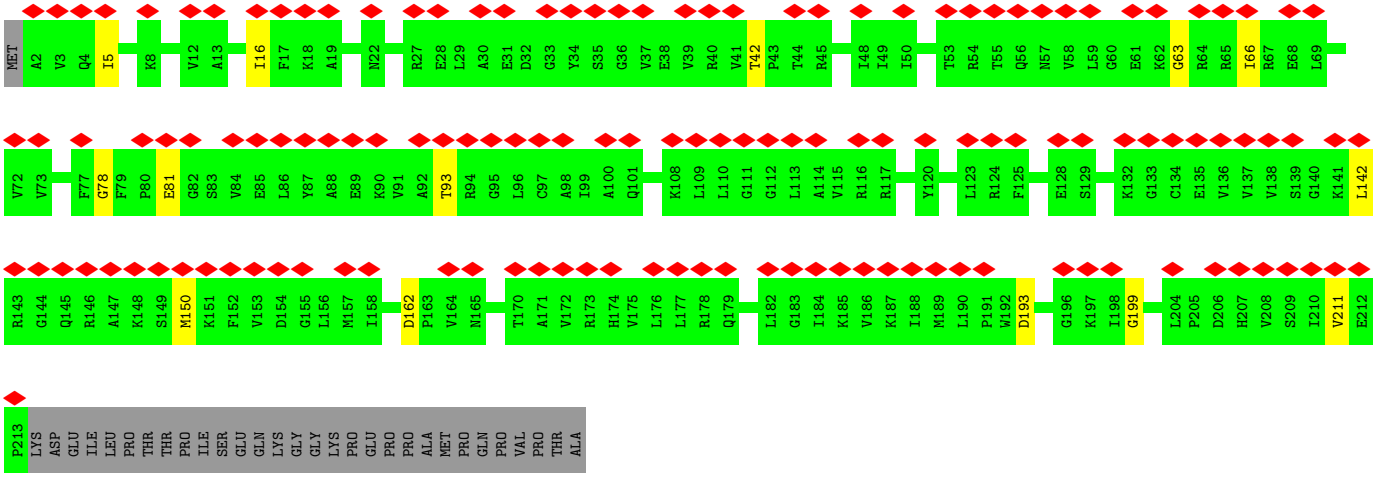






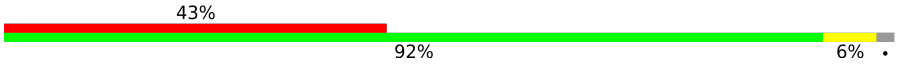
• Molecule 54: 40S RIBOSOMAL PROTEIN US3

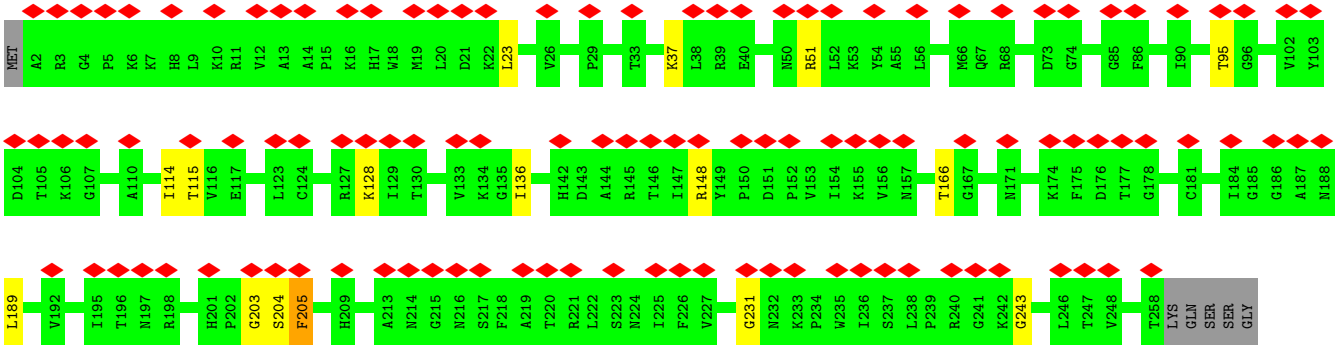
Chain CD:



• Molecule 55: 40S RIBOSOMAL PROTEIN ES4

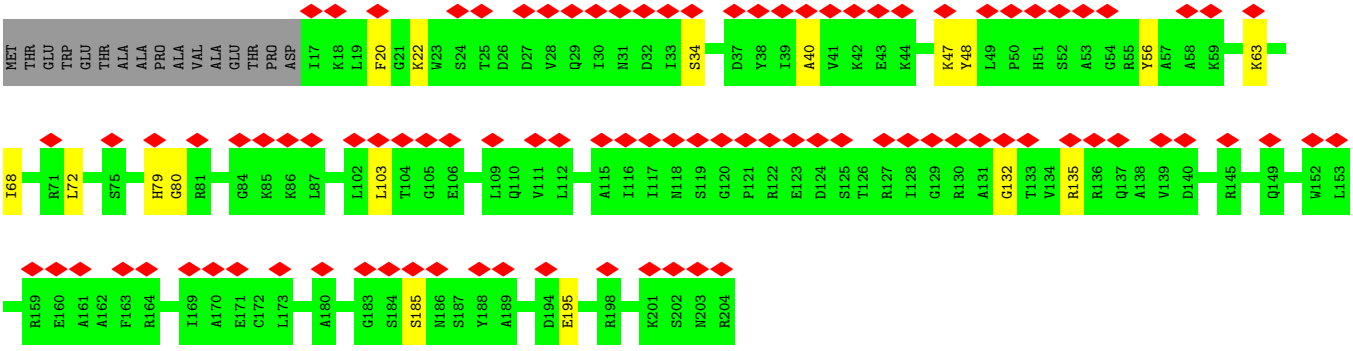
Chain CE:





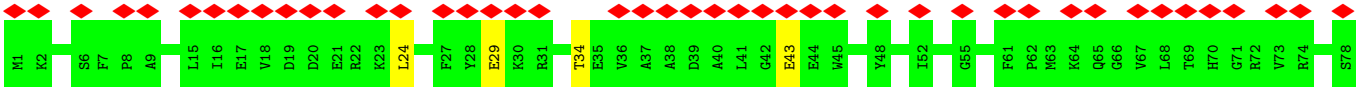
• Molecule 56: 40S RIBOSOMAL PROTEIN US7

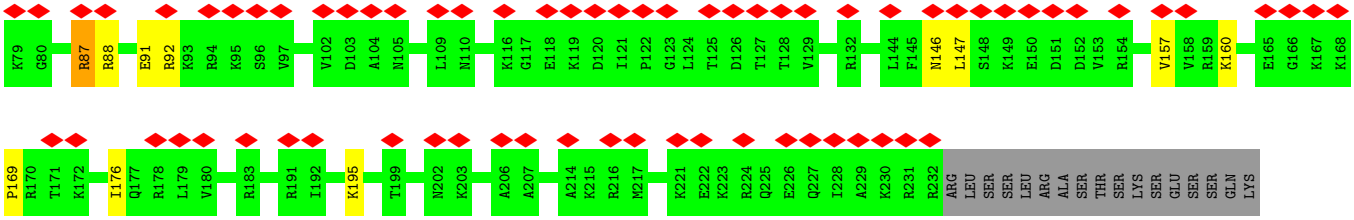
Chain CF:



• Molecule 57: 40S RIBOSOMAL PROTEIN ES6

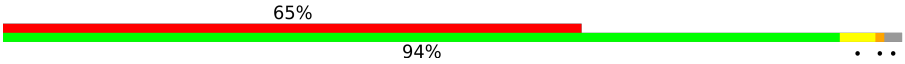
Chain CG:

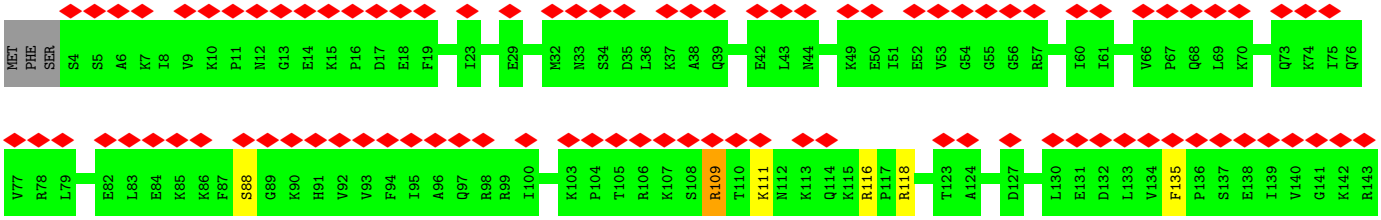




• Molecule 58: 40S RIBOSOMAL PROTEIN ES7

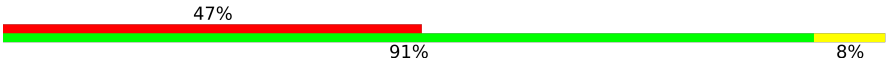
Chain CH:

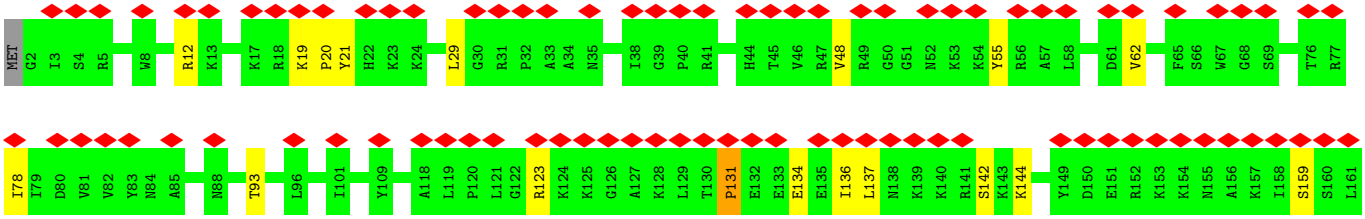




• Molecule 59: 40S RIBOSOMAL PROTEIN ES8

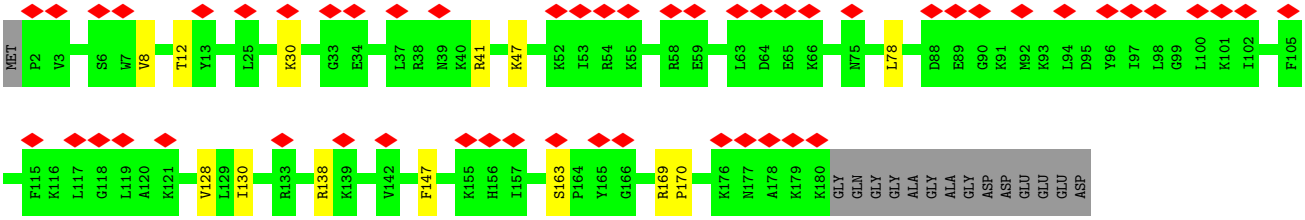
Chain CI:





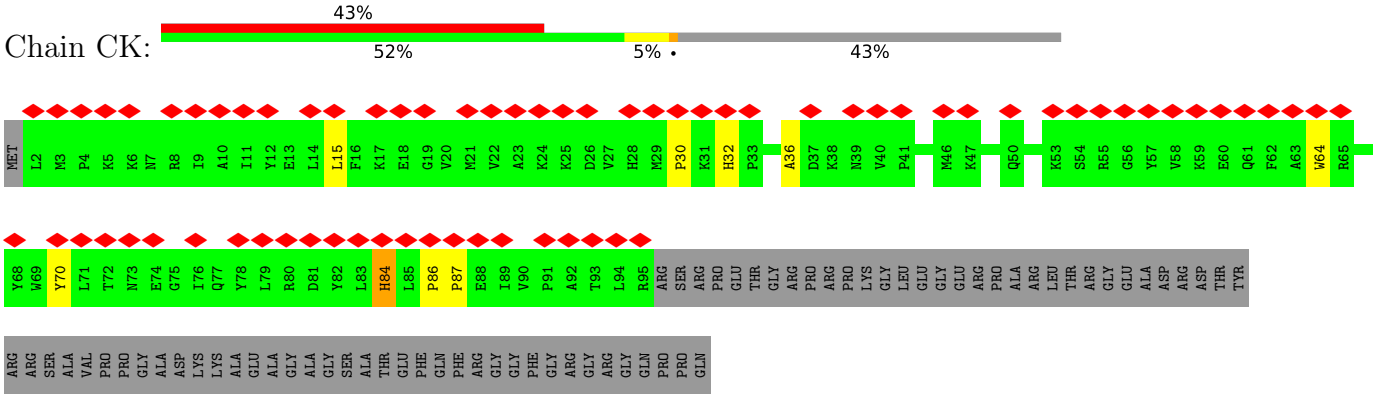
• Molecule 60: 40S RIBOSOMAL PROTEIN US4

Chain CJ:



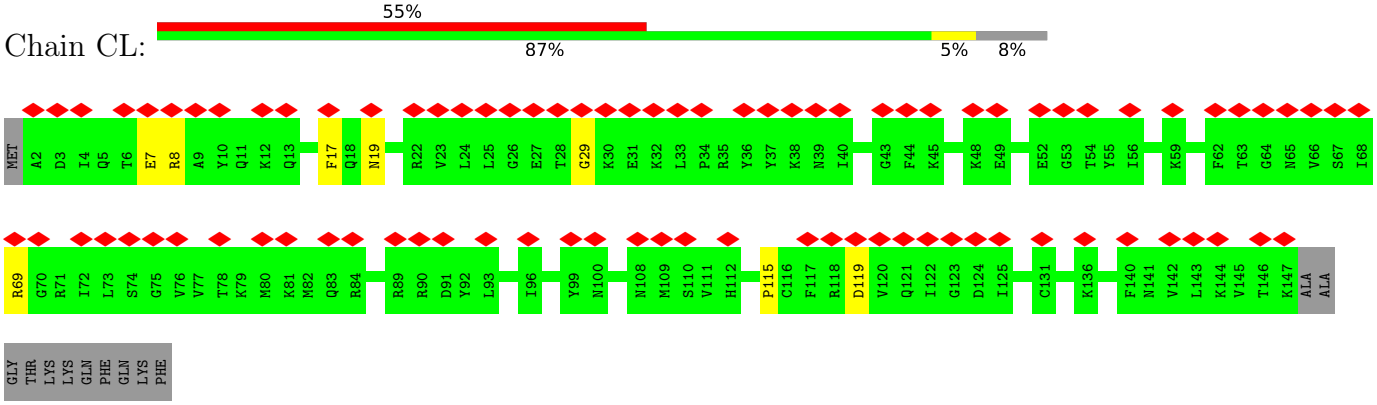
• Molecule 61: 40S RIBOSOMAL PROTEIN ES10

Chain CK:



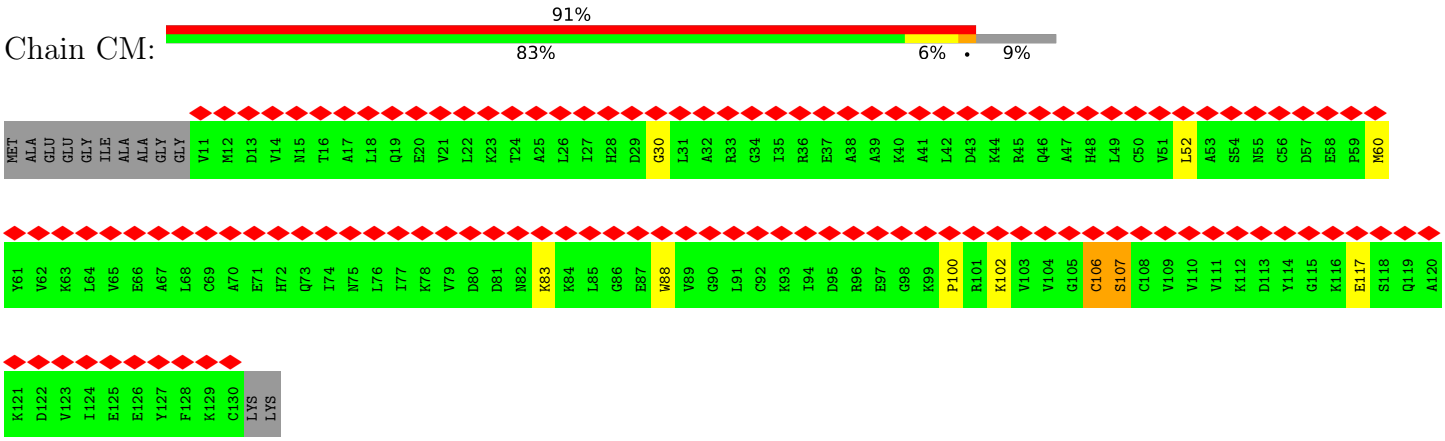
• Molecule 62: 40S RIBOSOMAL PROTEIN US17

Chain CL:



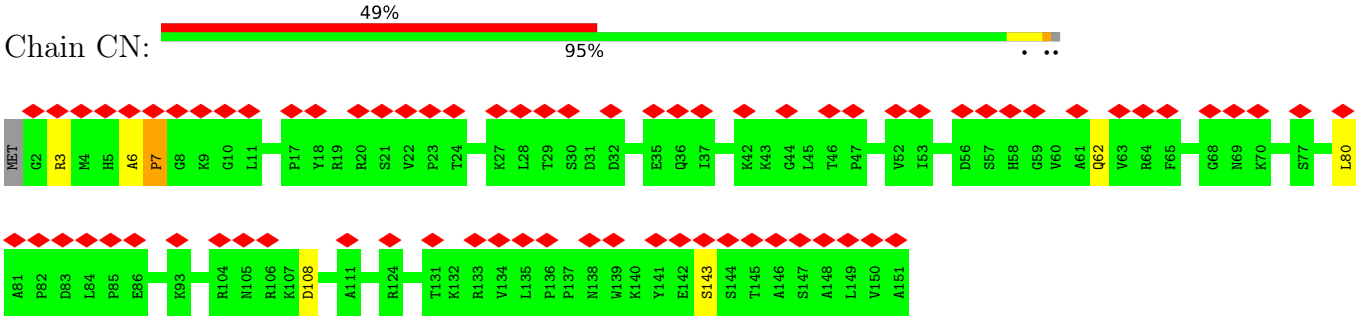
• Molecule 63: 40S RIBOSOMAL PROTEIN ES12

Chain CM:



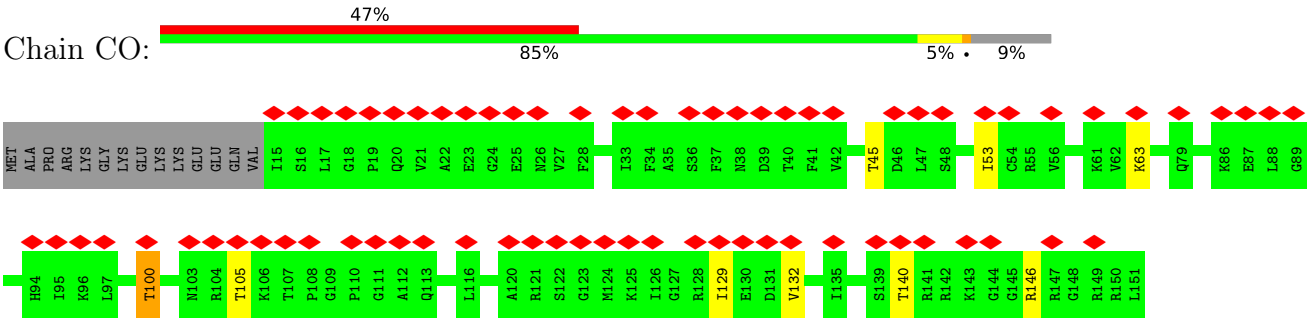
• Molecule 64: 40S RIBOSOMAL PROTEIN ES15

Chain CN:



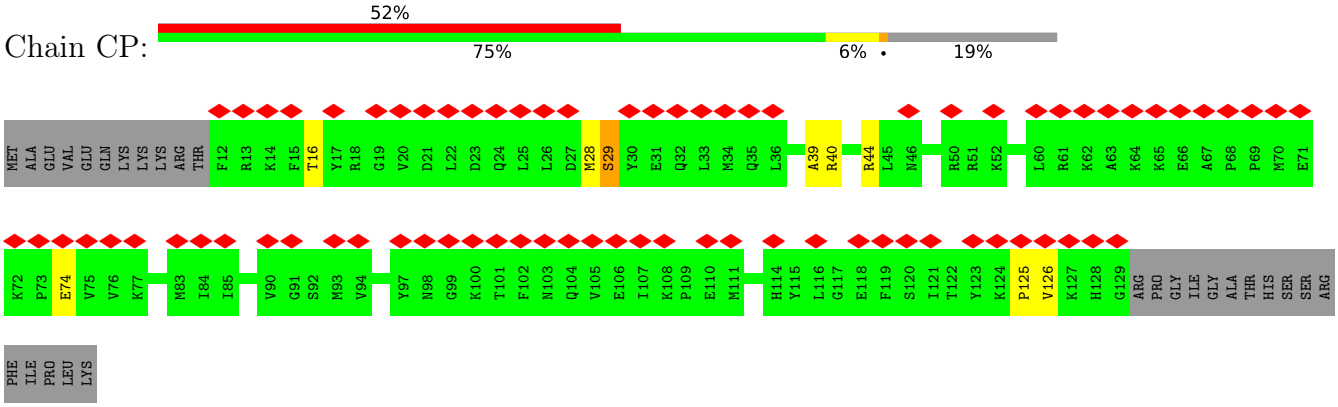
• Molecule 65: 40S RIBOSOMAL PROTEIN ES11

Chain CO:



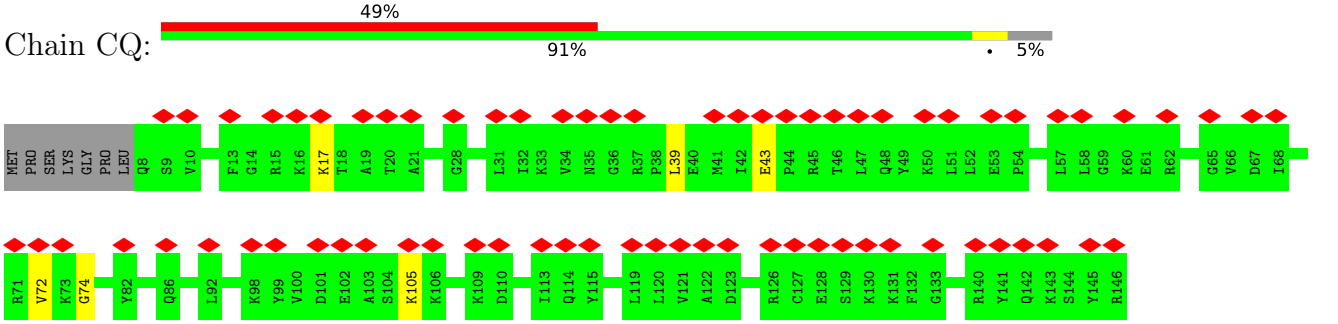
• Molecule 66: 40S RIBOSOMAL PROTEIN US19

Chain CP:



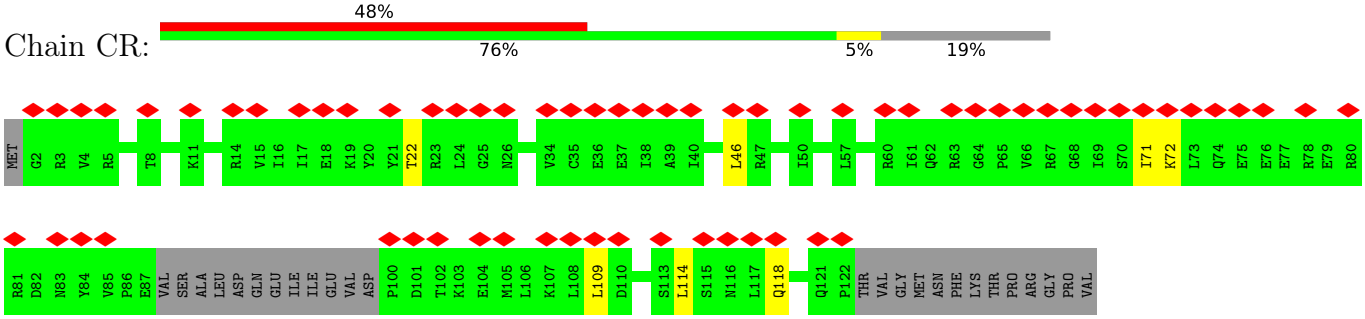
• Molecule 67: 40S RIBOSOMAL PROTEIN US9

Chain CQ:



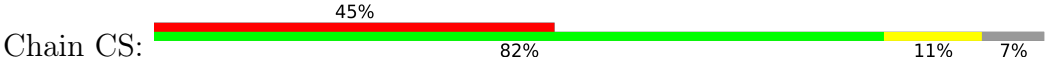
• Molecule 68: 40S RIBOSOMAL PROTEIN ES17

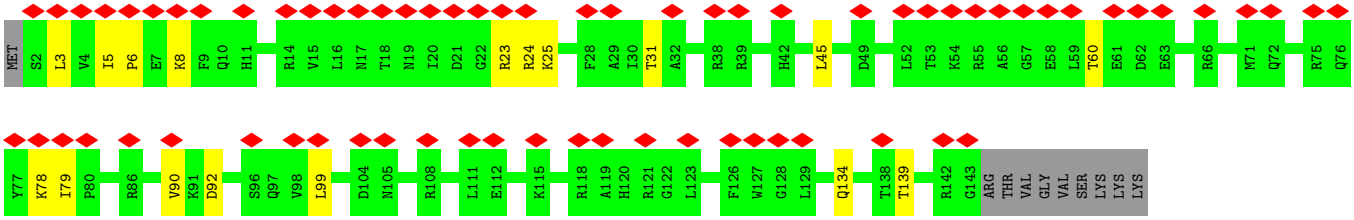
Chain CR:



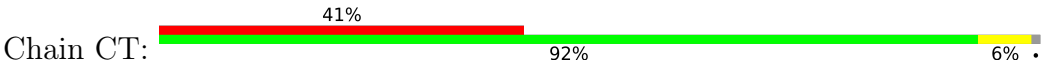
• Molecule 69: 40S RIBOSOMAL PROTEIN US13

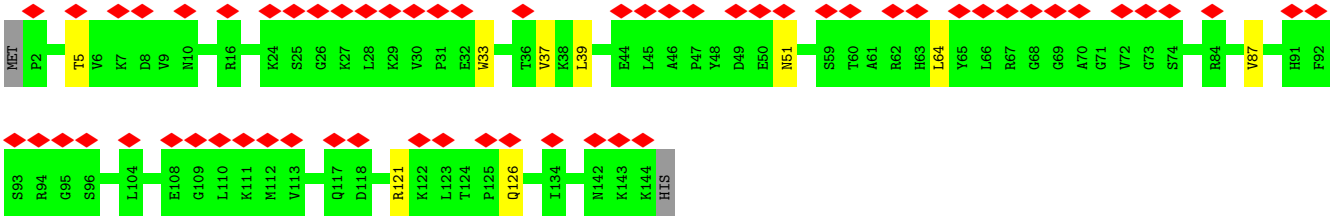
Chain CS:



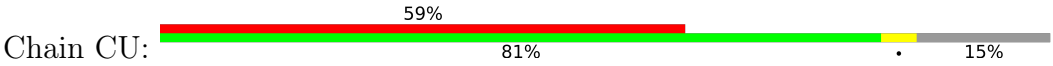


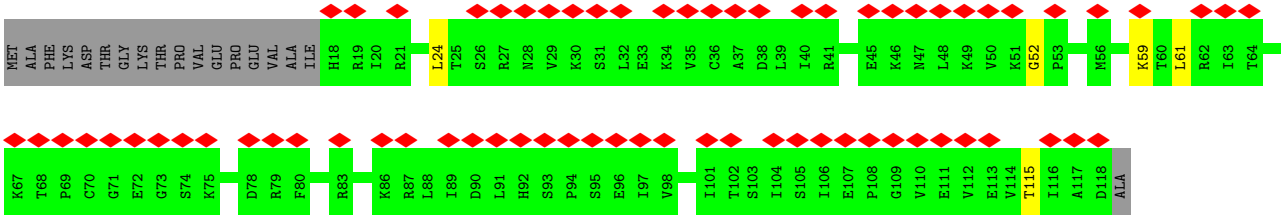
• Molecule 70: 40S RIBOSOMAL PROTEIN ES19



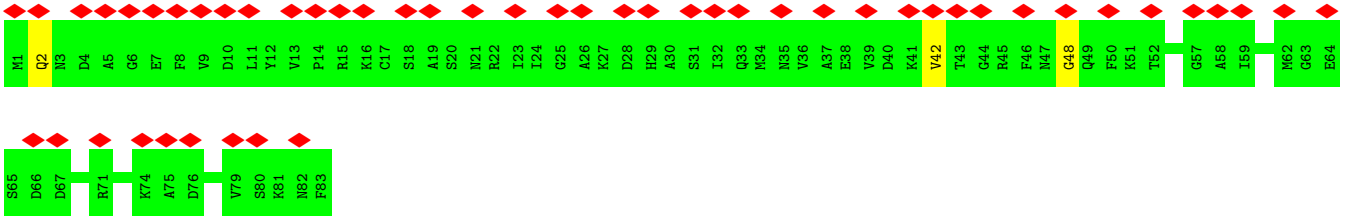


• Molecule 71: 40S RIBOSOMAL PROTEIN US10

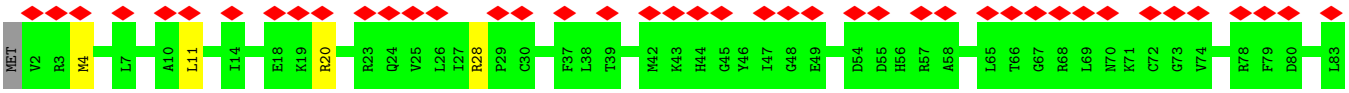


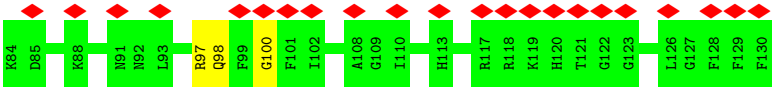


• Molecule 72: 40S RIBOSOMAL PROTEIN ES21



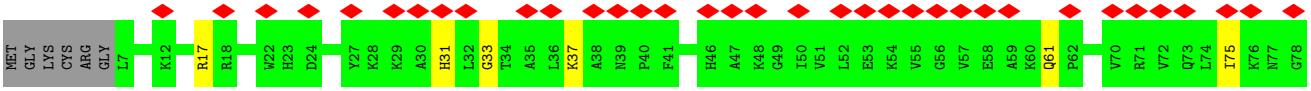
• Molecule 73: 40S RIBOSOMAL PROTEIN US8

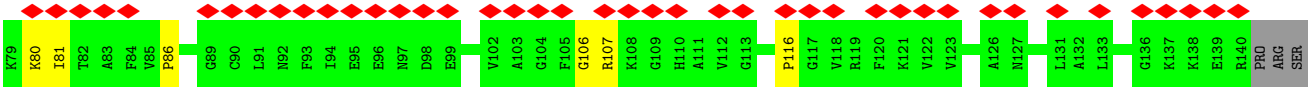




• Molecule 74: 40S RIBOSOMAL PROTEIN US12

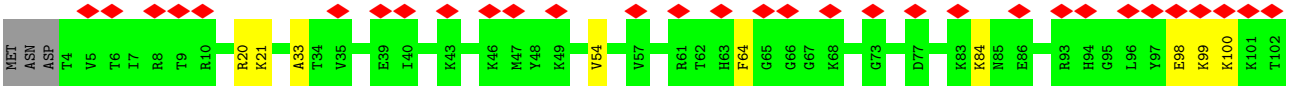
Chain CX:





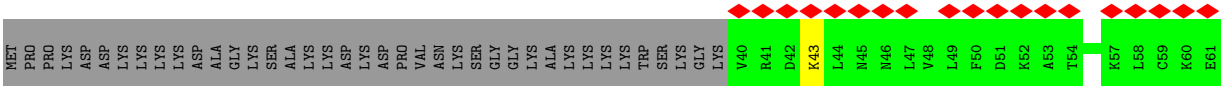
• Molecule 75: 40S RIBOSOMAL PROTEIN ES24

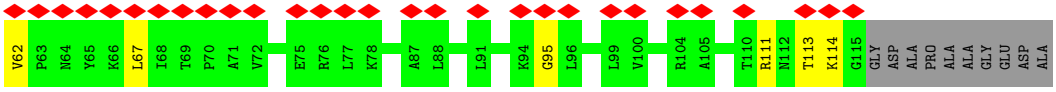
Chain CY:



• Molecule 76: 40S RIBOSOMAL PROTEIN ES25

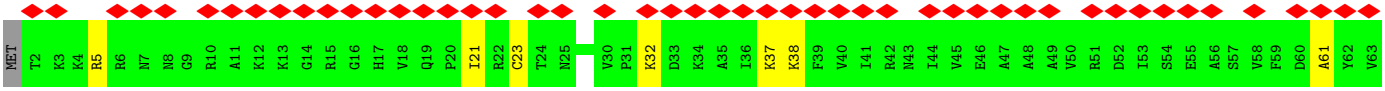
Chain CZ:

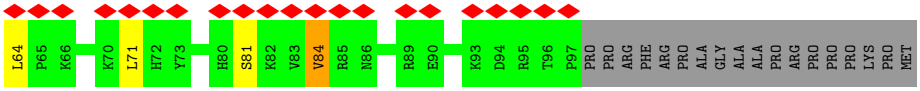




• Molecule 77: 40S RIBOSOMAL PROTEIN ES26

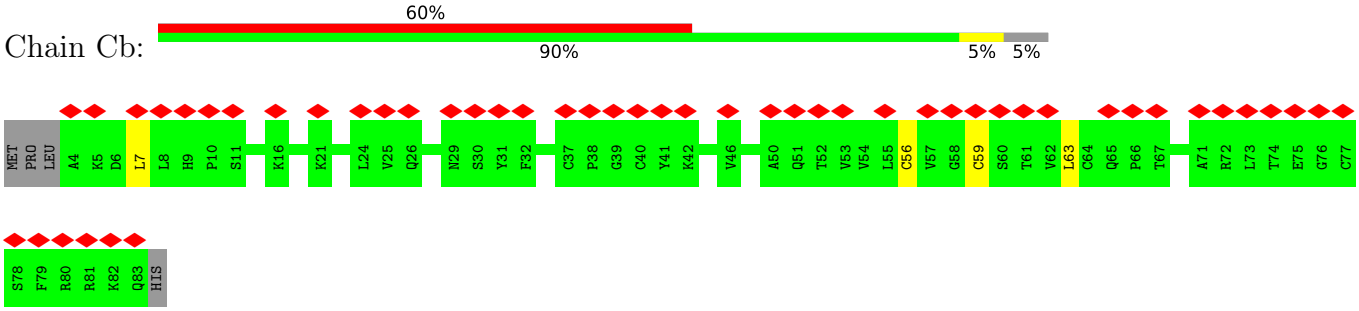
Chain Ca:





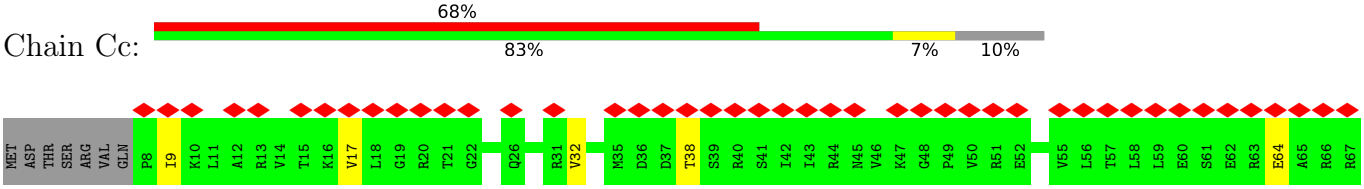
• Molecule 78: 40S RIBOSOMAL PROTEIN ES27

Chain Cb:



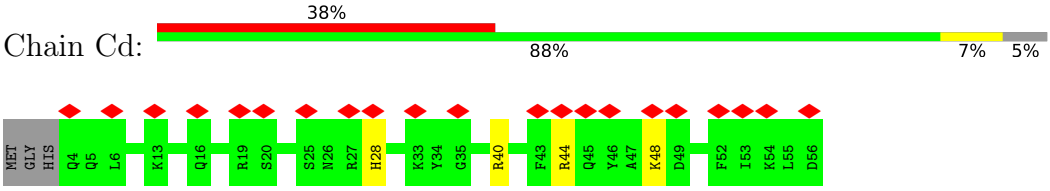
• Molecule 79: 40S RIBOSOMAL PROTEIN ES28

Chain Cc:



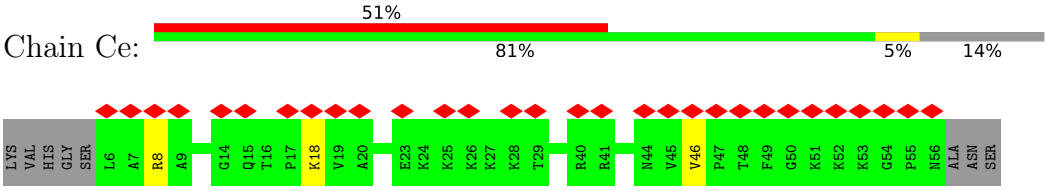
• Molecule 80: 40S RIBOSOMAL PROTEIN US14

Chain Cd:



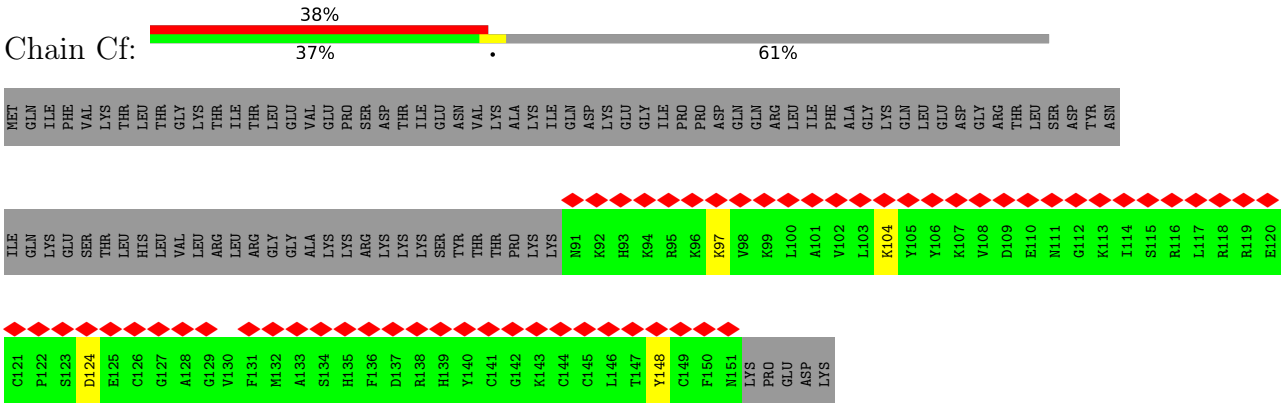
• Molecule 81: 40S RIBOSOMAL PROTEIN ES30

Chain Ce:



• Molecule 82: 40S RIBOSOMAL PROTEIN ES31

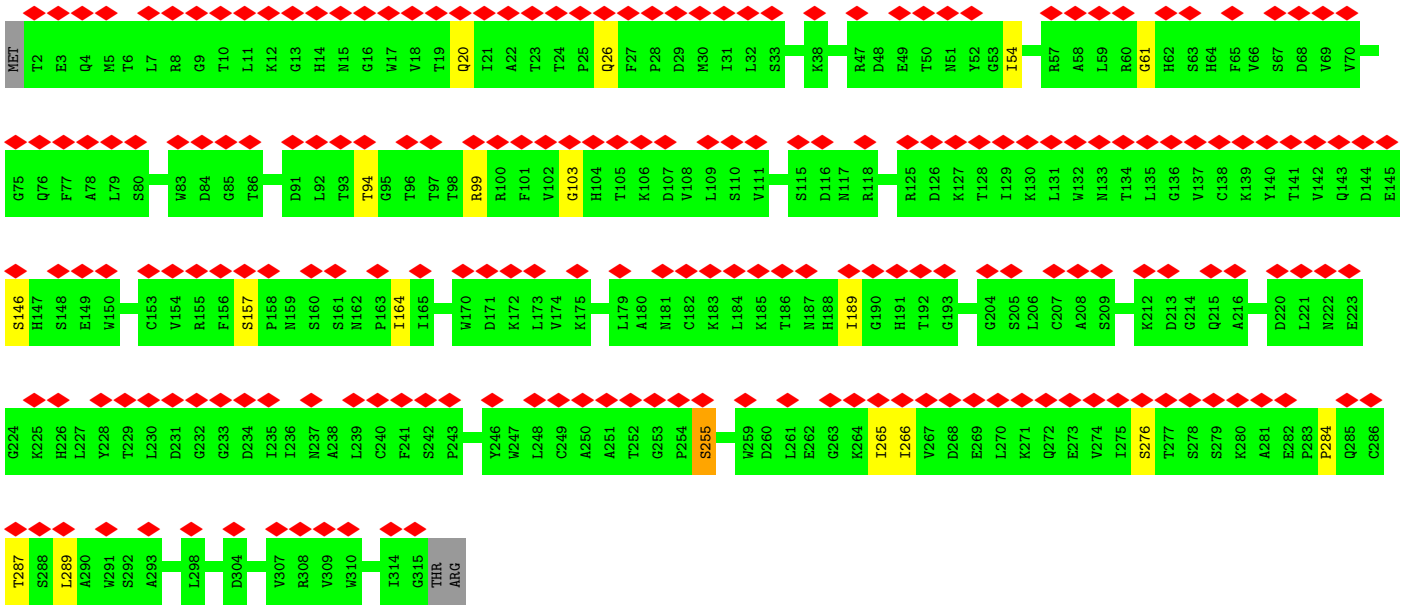
Chain Cf:



• Molecule 83: 40S RIBOSOMAL PROTEIN RACK1

Chain Cg:


65%
93%
5%


MET T2 E3 Q4 M5 T6 L7 R8 G9 T10 L11 K12 G13 H14 N15 G16 W17 V18 T19 Q20 I21 A22 T23 T24 P25 Q26 F27 P28 D29 M30 I31 L32 S33 K38 R47 D48 E49 T50 N51 Y52 G53 I54 R57 A58 L59 R60 G61 H62 S63 H64 F65 V66 S67 D68 V69 V70
G75 Q76 F77 A78 L79 S80 W83 D84 G85 T86 D91 L92 T93 T94 G95 T96 T97 T98 R99 R100 F101 V102 G103 H104 T105 K106 D107 V108 L109 S110 V111 S115 D116 N117 R118 R125 D126 K127 T128 I129 K130 L131 W132 N133 T134 L135 G136 V137 C138 K139 Y140 T141 V142 Q143 D144 E145
S146 H147 S148 E149 W150 C153 V154 R155 F156 S157 P158 N159 S160 S161 N162 P163 I164 I165 W170 D171 K172 L173 V174 K175 L179 A180 N181 C182 K183 L184 K185 T186 N187 H188 I189 G190 H191 T192 G193 G204 S205 L206 C207 A208 S209 K212 D213 G214 Q215 A216 D220 L221 N222 E223
G224 K225 H226 L227 Y228 T229 L230 D231 G232 G233 D234 I235 I236 N237 A238 L239 C240 F241 S242 P243 Y246 W247 L248 C249 A250 A251 T252 G253 P254 S255 W259 D260 L261 E262 G263 K264 I265 I266 V267 D268 E269 L270 K271 Q272 E273 V274 I275 S276 T277 S278 S279 K280 A281 E282 P283 P284 Q285 C286
T287 S288 L289 A290 W291 S292 A293 L298 D304 V307 R308 V309 W310 I314 G315 THR ARG

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	541570	Depositor
Resolution determination method	Not provided	
CTF correction method	CTFFIND3	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4500	Depositor
Magnification	194805	Depositor
Image detector	TVIPS TEMCAM-F416 (4k x 4k)	Depositor
Maximum map value	11974.922	Depositor
Minimum map value	-3949.843	Depositor
Average map value	-27.770	Depositor
Map value standard deviation	1021.781	Depositor
Recommended contour level	4000.0	Depositor
Map size (Å)	453.6, 453.6, 453.6	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.26, 1.26, 1.26	Depositor

5 Model quality

5.1 Standard geometry

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

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	A2	0.43	33/86671 (0.0%)	0.83	82/135194 (0.1%)
2	A3	0.36	0/3723	0.79	1/5800 (0.0%)
3	A4	0.38	0/2836	0.82	3/4421 (0.1%)
4	AA	0.44	0/1926	0.67	0/2583
5	AB	0.45	0/3258	0.73	2/4361 (0.0%)
6	AC	0.47	0/2943	0.73	0/3953
7	AD	0.49	2/2407 (0.1%)	0.70	1/3221 (0.0%)
8	AE	0.52	0/1312	0.73	0/1763
9	AF	0.44	0/1986	0.68	0/2644
10	AG	0.46	0/1914	0.72	0/2578
11	AH	0.43	0/1555	0.69	0/2089
12	AI	0.42	0/1643	0.67	0/2194
13	AJ	0.49	0/1386	0.71	0/1852
14	AL	0.53	2/1647 (0.1%)	0.73	3/2205 (0.1%)
15	AM	0.49	0/1162	0.70	0/1556
16	AN	0.43	0/1754	0.65	0/2348
17	AO	0.44	0/1639	0.69	0/2193
18	AP	0.44	0/1260	0.70	0/1691
19	AQ	0.45	0/1518	0.74	0/2026
20	AR	0.39	0/1541	0.64	0/2035
21	AS	0.45	0/1479	0.73	0/1985
22	AT	0.46	0/1326	0.71	0/1770
23	AU	0.47	0/841	0.71	0/1128
24	AV	0.44	0/978	0.63	0/1312
25	AW	0.43	0/542	0.60	0/722
26	AX	0.42	0/993	0.67	0/1334
27	AY	0.47	0/1082	0.72	1/1441 (0.1%)
28	AZ	0.47	0/1138	0.79	0/1517
29	Aa	0.45	0/1191	0.71	0/1591
30	Ab	0.45	0/570	0.72	0/752
31	Ac	0.46	0/813	0.70	0/1091
32	Ad	0.45	0/920	0.67	0/1238

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Ae	0.46	0/1071	0.68	0/1428
34	Af	0.50	0/885	0.81	0/1185
35	Ag	0.48	0/917	0.74	0/1222
36	Ah	0.38	0/1023	0.64	0/1351
37	Ai	0.43	0/793	0.75	0/1048
38	Aj	0.50	0/704	0.76	0/931
39	Ak	0.43	0/575	0.73	0/761
40	Al	0.41	0/454	0.61	0/599
41	Am	0.42	0/435	0.70	0/575
42	An	0.40	0/241	0.51	0/305
43	Ao	0.45	0/885	0.74	0/1166
44	Ap	0.40	0/718	0.61	0/953
45	At	0.48	0/1058	0.75	0/1416
46	Au	0.45	0/1639	0.69	1/2222 (0.0%)
47	BA	0.53	0/1809	1.02	17/2819 (0.6%)
48	BB	0.65	1/4926 (0.0%)	1.15	29/6641 (0.4%)
49	BC	1.53	11/6230 (0.2%)	2.37	540/9712 (5.6%)
50	C1	0.37	2/41550 (0.0%)	0.80	6/64763 (0.0%)
51	CA	0.51	0/1756	0.68	0/2386
52	CB	0.51	0/1756	0.75	1/2350 (0.0%)
53	CC	0.42	0/1761	0.65	0/2379
54	CD	0.40	0/1672	0.66	0/2250
55	CE	0.47	0/2072	0.70	0/2793
56	CF	0.43	0/1507	0.74	0/2026
57	CG	0.48	0/1907	0.74	0/2538
58	CH	0.46	0/1558	0.74	1/2087 (0.0%)
59	CI	0.47	0/1724	0.72	0/2298
60	CJ	0.45	0/1520	0.77	0/2030
61	CK	0.48	0/815	0.68	0/1101
62	CL	0.45	0/1220	0.72	0/1633
63	CM	0.48	0/941	0.72	0/1264
64	CN	0.43	0/1231	0.73	1/1656 (0.1%)
65	CO	0.46	0/1036	0.71	0/1391
66	CP	0.43	0/1000	0.67	0/1335
67	CQ	0.43	0/1125	0.66	0/1506
68	CR	0.42	0/904	0.67	0/1208
69	CS	0.42	0/1190	0.68	0/1594
70	CT	0.44	0/1131	0.69	0/1515
71	CU	0.50	0/813	0.70	0/1092
72	CV	0.47	0/643	0.71	0/860
73	CW	0.44	0/1050	0.69	0/1406
74	CX	0.46	0/1063	0.70	0/1421
75	CY	0.45	0/1019	0.70	0/1354

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	CZ	0.46	0/611	0.71	0/820
77	Ca	0.48	0/778	0.75	1/1041 (0.1%)
78	Cb	0.48	0/637	0.68	0/854
79	Cc	0.46	0/492	0.74	0/657
80	Cd	0.51	0/454	0.77	0/603
81	Ce	0.45	0/417	0.69	0/548
82	Cf	0.53	0/507	0.84	1/673 (0.1%)
83	Cg	0.45	0/2497	0.67	0/3399
All	All	0.49	51/240674 (0.0%)	0.87	691/353753 (0.2%)

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	A2	0	35
2	A3	0	2
48	BB	0	12
49	BC	0	105
50	C1	0	23
All	All	0	177

The worst 5 of 51 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A2	1701	C	C5'-C4'	18.41	1.73	1.51
1	A2	1673	C	C3'-O3'	15.36	1.63	1.42
1	A2	1701	C	O5'-C5'	14.50	1.67	1.44
1	A2	1673	C	O3'-P	14.08	1.78	1.61
1	A2	1701	C	P-O5'	13.46	1.73	1.59

The worst 5 of 691 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A2	3919	U	N1-C2-O2	-33.15	99.59	122.80
1	A2	3919	U	N3-C2-O2	32.84	145.19	122.20
1	A2	1701	C	O4'-C4'-C3'	-15.18	88.82	104.00
1	A2	3914	A	O4'-C1'-N9	15.11	120.28	108.20
48	BB	1133	TYR	CB-CG-CD2	-14.74	112.15	121.00

There are no chirality outliers.

5 of 177 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A2	1	C	Sidechain
1	A2	115	C	Sidechain
1	A2	121	A	Sidechain
1	A2	140	C	Sidechain
1	A2	2	G	Sidechain

5.2 Too-close contacts (i)

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

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	AA	245/257 (95%)	236 (96%)	6 (2%)	3 (1%)	13	50
5	AB	394/403 (98%)	369 (94%)	11 (3%)	14 (4%)	3	25
6	AC	362/427 (85%)	338 (93%)	9 (2%)	15 (4%)	3	23
7	AD	288/297 (97%)	279 (97%)	4 (1%)	5 (2%)	9	42
8	AE	156/158 (99%)	141 (90%)	8 (5%)	7 (4%)	2	22
9	AF	232/248 (94%)	225 (97%)	3 (1%)	4 (2%)	9	42
10	AG	233/266 (88%)	216 (93%)	8 (3%)	9 (4%)	3	23
11	AH	190/192 (99%)	184 (97%)	3 (2%)	3 (2%)	9	44
12	AI	192/214 (90%)	187 (97%)	2 (1%)	3 (2%)	9	44
13	AJ	168/178 (94%)	153 (91%)	3 (2%)	12 (7%)	1	14
14	AL	198/211 (94%)	178 (90%)	9 (4%)	11 (6%)	2	19
15	AM	138/215 (64%)	132 (96%)	4 (3%)	2 (1%)	11	46
16	AN	202/204 (99%)	193 (96%)	6 (3%)	3 (2%)	10	46
17	AO	194/203 (96%)	187 (96%)	4 (2%)	3 (2%)	10	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	AP	151/184 (82%)	141 (93%)	7 (5%)	3 (2%)	7 38
19	AQ	182/188 (97%)	169 (93%)	7 (4%)	6 (3%)	4 26
20	AR	180/196 (92%)	172 (96%)	3 (2%)	5 (3%)	5 30
21	AS	171/176 (97%)	158 (92%)	7 (4%)	6 (4%)	3 25
22	AT	157/160 (98%)	150 (96%)	4 (2%)	3 (2%)	8 38
23	AU	100/128 (78%)	97 (97%)	3 (3%)	0	100 100
24	AV	126/140 (90%)	119 (94%)	5 (4%)	2 (2%)	9 44
25	AW	62/157 (40%)	61 (98%)	1 (2%)	0	100 100
26	AX	117/156 (75%)	113 (97%)	4 (3%)	0	100 100
27	AY	126/145 (87%)	119 (94%)	4 (3%)	3 (2%)	6 33
28	AZ	134/136 (98%)	125 (93%)	5 (4%)	4 (3%)	4 28
29	Aa	145/148 (98%)	134 (92%)	6 (4%)	5 (3%)	3 26
30	Ab	67/159 (42%)	60 (90%)	3 (4%)	4 (6%)	1 17
31	Ac	102/115 (89%)	99 (97%)	1 (1%)	2 (2%)	7 38
32	Ad	107/125 (86%)	103 (96%)	3 (3%)	1 (1%)	17 57
33	Ae	126/135 (93%)	117 (93%)	6 (5%)	3 (2%)	6 33
34	Af	105/110 (96%)	96 (91%)	4 (4%)	5 (5%)	2 21
35	Ag	113/117 (97%)	103 (91%)	6 (5%)	4 (4%)	3 25
36	Ah	120/123 (98%)	112 (93%)	5 (4%)	3 (2%)	5 32
37	Ai	95/105 (90%)	85 (90%)	4 (4%)	6 (6%)	1 17
38	Aj	83/97 (86%)	75 (90%)	6 (7%)	2 (2%)	6 33
39	Ak	67/70 (96%)	64 (96%)	2 (3%)	1 (2%)	10 46
40	Al	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	7 36
41	Am	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	7 38
42	An	23/25 (92%)	23 (100%)	0	0	100 100
43	Ao	104/106 (98%)	98 (94%)	4 (4%)	2 (2%)	8 38
44	Ap	89/92 (97%)	83 (93%)	3 (3%)	3 (3%)	3 26
45	At	128/137 (93%)	112 (88%)	9 (7%)	7 (6%)	2 19
46	Au	208/210 (99%)	199 (96%)	6 (3%)	3 (1%)	11 46
48	BB	605/627 (96%)	523 (86%)	51 (8%)	31 (5%)	2 19
51	CA	216/295 (73%)	209 (97%)	5 (2%)	2 (1%)	17 57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	CB	211/264 (80%)	176 (83%)	18 (8%)	17 (8%)	1	12
53	CC	220/293 (75%)	213 (97%)	2 (1%)	5 (2%)	6	34
54	CD	210/243 (86%)	201 (96%)	4 (2%)	5 (2%)	6	33
55	CE	255/263 (97%)	237 (93%)	13 (5%)	5 (2%)	7	38
56	CF	186/204 (91%)	163 (88%)	13 (7%)	10 (5%)	2	19
57	CG	230/249 (92%)	216 (94%)	5 (2%)	9 (4%)	3	23
58	CH	189/194 (97%)	178 (94%)	7 (4%)	4 (2%)	7	36
59	CI	205/208 (99%)	184 (90%)	14 (7%)	7 (3%)	3	26
60	CJ	177/194 (91%)	169 (96%)	5 (3%)	3 (2%)	9	42
61	CK	92/165 (56%)	84 (91%)	1 (1%)	7 (8%)	1	13
62	CL	144/158 (91%)	133 (92%)	5 (4%)	6 (4%)	3	22
63	CM	118/132 (89%)	111 (94%)	1 (1%)	6 (5%)	2	19
64	CN	148/151 (98%)	138 (93%)	5 (3%)	5 (3%)	3	26
65	CO	135/151 (89%)	129 (96%)	3 (2%)	3 (2%)	6	35
66	CP	116/145 (80%)	106 (91%)	5 (4%)	5 (4%)	2	22
67	CQ	137/146 (94%)	129 (94%)	6 (4%)	2 (2%)	10	46
68	CR	105/135 (78%)	99 (94%)	4 (4%)	2 (2%)	8	38
69	CS	140/152 (92%)	125 (89%)	7 (5%)	8 (6%)	1	18
70	CT	141/145 (97%)	135 (96%)	4 (3%)	2 (1%)	11	46
71	CU	99/119 (83%)	95 (96%)	3 (3%)	1 (1%)	15	55
72	CV	81/83 (98%)	78 (96%)	1 (1%)	2 (2%)	5	32
73	CW	127/130 (98%)	118 (93%)	7 (6%)	2 (2%)	9	44
74	CX	132/143 (92%)	120 (91%)	5 (4%)	7 (5%)	2	19
75	CY	120/133 (90%)	114 (95%)	2 (2%)	4 (3%)	4	26
76	CZ	74/125 (59%)	71 (96%)	0	3 (4%)	3	23
77	Ca	94/115 (82%)	85 (90%)	5 (5%)	4 (4%)	2	22
78	Cb	78/84 (93%)	70 (90%)	8 (10%)	0	100	100
79	Cc	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	4	26
80	Cd	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
81	Ce	49/59 (83%)	43 (88%)	5 (10%)	1 (2%)	7	38
82	Cf	59/156 (38%)	53 (90%)	6 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
83	Cg	312/317 (98%)	291 (93%)	14 (4%)	7 (2%)	6 35
All	All	11794/13395 (88%)	10996 (93%)	442 (4%)	356 (3%)	7 28

5 of 356 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	AA	144	LYS
4	AA	196	TRP
5	AB	4	ARG
5	AB	5	LYS
5	AB	157	CYS

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	AA	189/199 (95%)	185 (98%)	4 (2%)	53 72
5	AB	344/349 (99%)	326 (95%)	18 (5%)	23 48
6	AC	302/348 (87%)	284 (94%)	18 (6%)	19 44
7	AD	244/250 (98%)	237 (97%)	7 (3%)	42 64
8	AE	143/143 (100%)	135 (94%)	8 (6%)	21 46
9	AF	203/215 (94%)	196 (97%)	7 (3%)	37 60
10	AG	199/223 (89%)	192 (96%)	7 (4%)	36 59
11	AH	171/171 (100%)	164 (96%)	7 (4%)	30 55
12	AI	170/181 (94%)	161 (95%)	9 (5%)	22 47
13	AJ	143/149 (96%)	137 (96%)	6 (4%)	30 54
14	AL	167/177 (94%)	156 (93%)	11 (7%)	16 41
15	AM	118/161 (73%)	114 (97%)	4 (3%)	37 60
16	AN	172/172 (100%)	170 (99%)	2 (1%)	71 83
17	AO	168/174 (97%)	166 (99%)	2 (1%)	71 83
18	AP	133/163 (82%)	126 (95%)	7 (5%)	22 47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	AQ	162/165 (98%)	157 (97%)	5 (3%)	40	62
20	AR	161/175 (92%)	149 (92%)	12 (8%)	13	38
21	AS	155/157 (99%)	148 (96%)	7 (4%)	27	52
22	AT	139/140 (99%)	134 (96%)	5 (4%)	35	59
23	AU	91/115 (79%)	88 (97%)	3 (3%)	38	61
24	AV	100/107 (94%)	99 (99%)	1 (1%)	76	86
25	AW	55/126 (44%)	52 (94%)	3 (6%)	21	47
26	AX	107/133 (80%)	105 (98%)	2 (2%)	57	75
27	AY	119/135 (88%)	115 (97%)	4 (3%)	37	60
28	AZ	118/118 (100%)	112 (95%)	6 (5%)	24	48
29	Aa	120/121 (99%)	116 (97%)	4 (3%)	38	61
30	Ab	58/126 (46%)	57 (98%)	1 (2%)	60	78
31	Ac	88/97 (91%)	87 (99%)	1 (1%)	73	84
32	Ad	100/110 (91%)	96 (96%)	4 (4%)	31	55
33	Ae	115/121 (95%)	112 (97%)	3 (3%)	46	66
34	Af	87/89 (98%)	79 (91%)	8 (9%)	9	29
35	Ag	98/100 (98%)	88 (90%)	10 (10%)	7	25
36	Ah	109/110 (99%)	106 (97%)	3 (3%)	43	65
37	Ai	82/89 (92%)	76 (93%)	6 (7%)	14	39
38	Aj	71/80 (89%)	69 (97%)	2 (3%)	43	65
39	Ak	64/65 (98%)	64 (100%)	0	100	100
40	Al	47/48 (98%)	46 (98%)	1 (2%)	53	72
41	Am	48/116 (41%)	45 (94%)	3 (6%)	18	43
42	An	24/24 (100%)	24 (100%)	0	100	100
43	Ao	94/94 (100%)	89 (95%)	5 (5%)	22	47
44	Ap	74/75 (99%)	72 (97%)	2 (3%)	44	65
45	At	113/121 (93%)	106 (94%)	7 (6%)	18	43
46	Au	177/177 (100%)	163 (92%)	14 (8%)	12	35
48	BB	540/552 (98%)	519 (96%)	21 (4%)	32	56
51	CA	181/243 (74%)	176 (97%)	5 (3%)	43	65
52	CB	194/231 (84%)	183 (94%)	11 (6%)	20	45

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	CC	188/225 (84%)	181 (96%)	7 (4%)	34	58
54	CD	175/202 (87%)	166 (95%)	9 (5%)	24	48
55	CE	220/225 (98%)	208 (94%)	12 (6%)	21	47
56	CF	158/170 (93%)	151 (96%)	7 (4%)	28	53
57	CG	202/218 (93%)	195 (96%)	7 (4%)	36	59
58	CH	171/174 (98%)	167 (98%)	4 (2%)	50	70
59	CI	179/180 (99%)	167 (93%)	12 (7%)	16	41
60	CJ	160/168 (95%)	150 (94%)	10 (6%)	18	43
61	CK	85/136 (62%)	82 (96%)	3 (4%)	36	59
62	CL	133/142 (94%)	131 (98%)	2 (2%)	65	80
63	CM	102/108 (94%)	96 (94%)	6 (6%)	19	45
64	CN	130/131 (99%)	128 (98%)	2 (2%)	65	80
65	CO	107/119 (90%)	100 (94%)	7 (6%)	17	42
66	CP	107/130 (82%)	102 (95%)	5 (5%)	26	51
67	CQ	115/121 (95%)	111 (96%)	4 (4%)	36	59
68	CR	99/122 (81%)	94 (95%)	5 (5%)	24	48
69	CS	123/132 (93%)	114 (93%)	9 (7%)	14	39
70	CT	113/115 (98%)	106 (94%)	7 (6%)	18	43
71	CU	93/107 (87%)	89 (96%)	4 (4%)	29	53
72	CV	67/67 (100%)	66 (98%)	1 (2%)	65	80
73	CW	112/113 (99%)	107 (96%)	5 (4%)	27	52
74	CX	108/115 (94%)	103 (95%)	5 (5%)	27	52
75	CY	107/115 (93%)	101 (94%)	6 (6%)	21	46
76	CZ	67/103 (65%)	63 (94%)	4 (6%)	19	44
77	Ca	83/98 (85%)	76 (92%)	7 (8%)	11	33
78	Cb	72/76 (95%)	68 (94%)	4 (6%)	21	46
79	Cc	55/62 (89%)	52 (94%)	3 (6%)	21	47
80	Cd	47/49 (96%)	43 (92%)	4 (8%)	10	33
81	Ce	42/48 (88%)	40 (95%)	2 (5%)	25	51
82	Cf	54/140 (39%)	51 (94%)	3 (6%)	21	46
83	Cg	272/275 (99%)	260 (96%)	12 (4%)	28	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	10303/11421 (90%)	9849 (96%)	454 (4%)	32 53

5 of 454 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
46	Au	101	THR
83	Cg	26	GLN
54	CD	66	ILE
81	Ce	46	VAL
73	CW	4	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 228 such sidechains are listed below:

Mol	Chain	Res	Type
41	Am	90	ASN
80	Cd	41	GLN
51	CA	215	GLN
80	Cd	16	GLN
69	CS	87	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A2	3604/5025 (71%)	2040 (56%)	324 (8%)
2	A3	156/194 (80%)	82 (52%)	6 (3%)
3	A4	118/121 (97%)	68 (57%)	9 (7%)
47	BA	75/76 (98%)	14 (18%)	1 (1%)
49	BC	259/504 (51%)	135 (52%)	40 (15%)
50	C1	1738/1869 (92%)	1038 (59%)	152 (8%)
All	All	5950/7789 (76%)	3377 (56%)	532 (8%)

5 of 3377 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A2	2	G
1	A2	3	C
1	A2	5	A
1	A2	6	C
1	A2	8	U

5 of 532 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
50	C1	1115	U
50	C1	1264	C
50	C1	1114	U
50	C1	1721	U
1	A2	2607	U

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 2 ligands modelled in this entry, 1 is monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
84	GNP	BB	2435	85	29,34,34	2.16	8 (27%)	33,54,54	2.26	8 (24%)

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
84	GNP	BB	2435	85	-	2/14/38/38	0/3/3/3

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	BB	2435	GNP	C2'-C1'	-6.46	1.44	1.53
84	BB	2435	GNP	C6-N1	5.34	1.42	1.33
84	BB	2435	GNP	C4-N3	2.86	1.40	1.35
84	BB	2435	GNP	PB-O3A	-2.61	1.55	1.59
84	BB	2435	GNP	PB-N3B	-2.47	1.56	1.63

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

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	BB	2435	GNP	C5-C6-N1	-7.05	113.79	123.43
84	BB	2435	GNP	C2-N1-C6	5.20	124.19	115.93
84	BB	2435	GNP	N3-C2-N1	-3.58	122.44	127.22
84	BB	2435	GNP	O1B-PB-N3B	3.38	116.75	111.77
84	BB	2435	GNP	C4-C5-C6	-2.99	117.95	120.80

There are no chirality outliers.

All (2) torsion outliers are listed below:

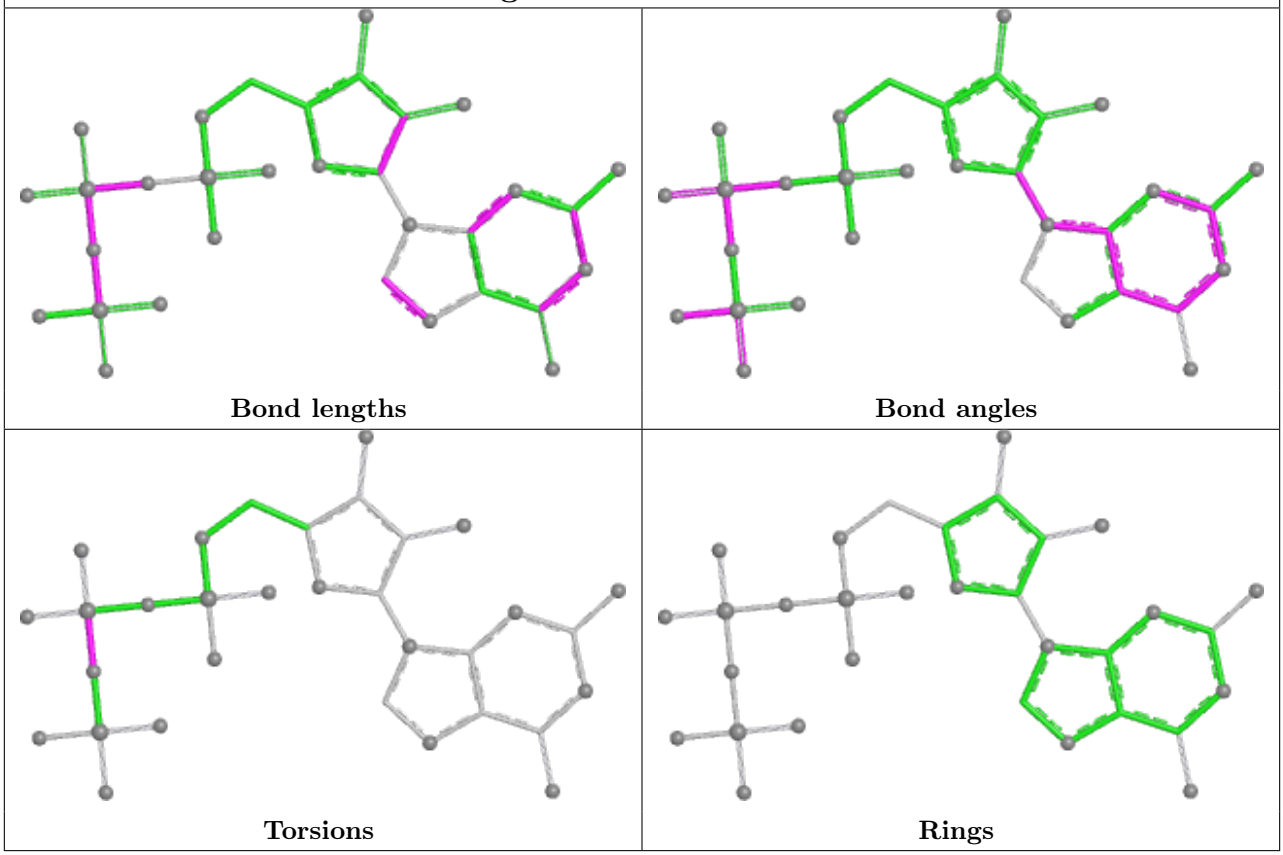
Mol	Chain	Res	Type	Atoms
84	BB	2435	GNP	PG-N3B-PB-O1B
84	BB	2435	GNP	PG-N3B-PB-O3A

There are no ring outliers.

No monomer is involved in short contacts.

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

Ligand GNP BB 2435



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
20	AR	1
1	A2	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AR	182:GLU	C	183:GLU	N	5.96
1	A2	4036:U	O3'	4037:U	P	4.57

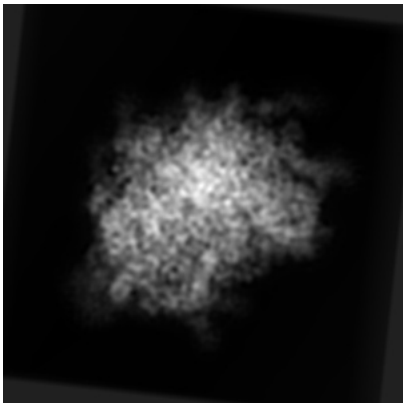
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2682. These allow visual inspection of the internal detail of the map and identification of artifacts.

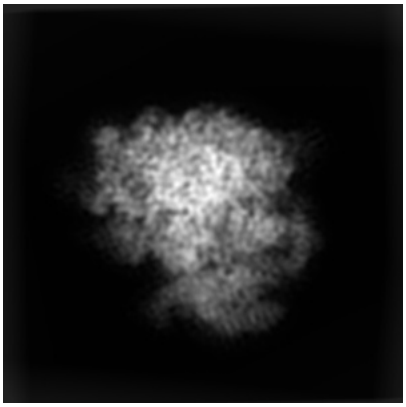
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

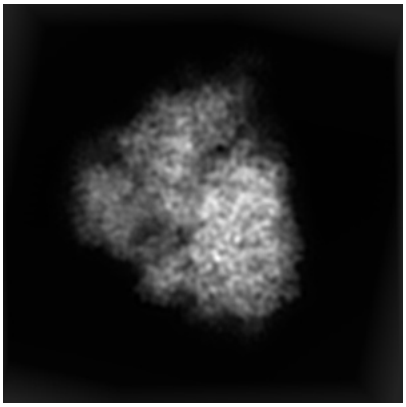
6.1.1 Primary map



X



Y

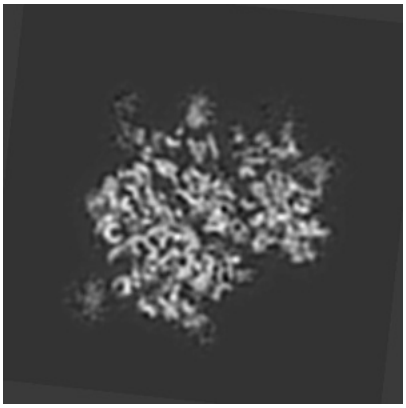


Z

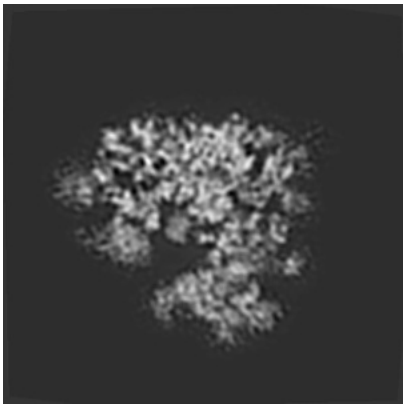
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map



X Index: 180



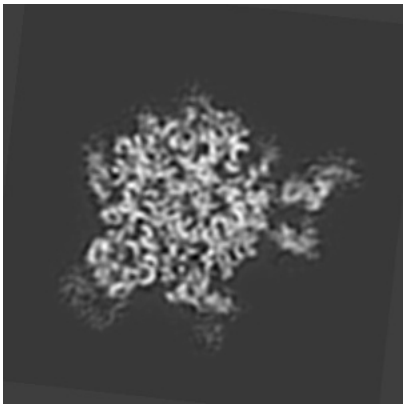
Y Index: 180

Z Index: 180

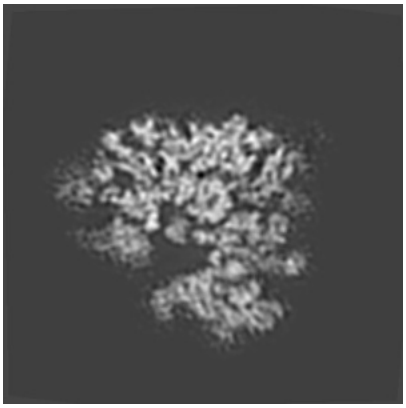
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

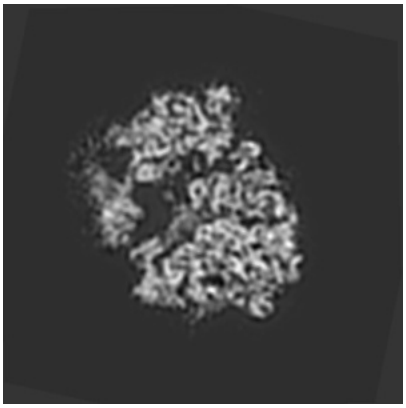
6.3.1 Primary map



X Index: 214



Y Index: 182



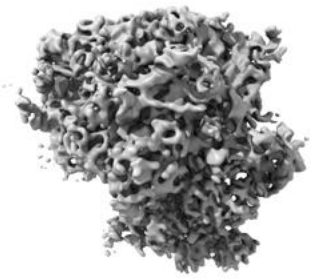
Z Index: 169

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

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X



Y

Z

The images above show the 3D surface view of the map at the recommended contour level 4000.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

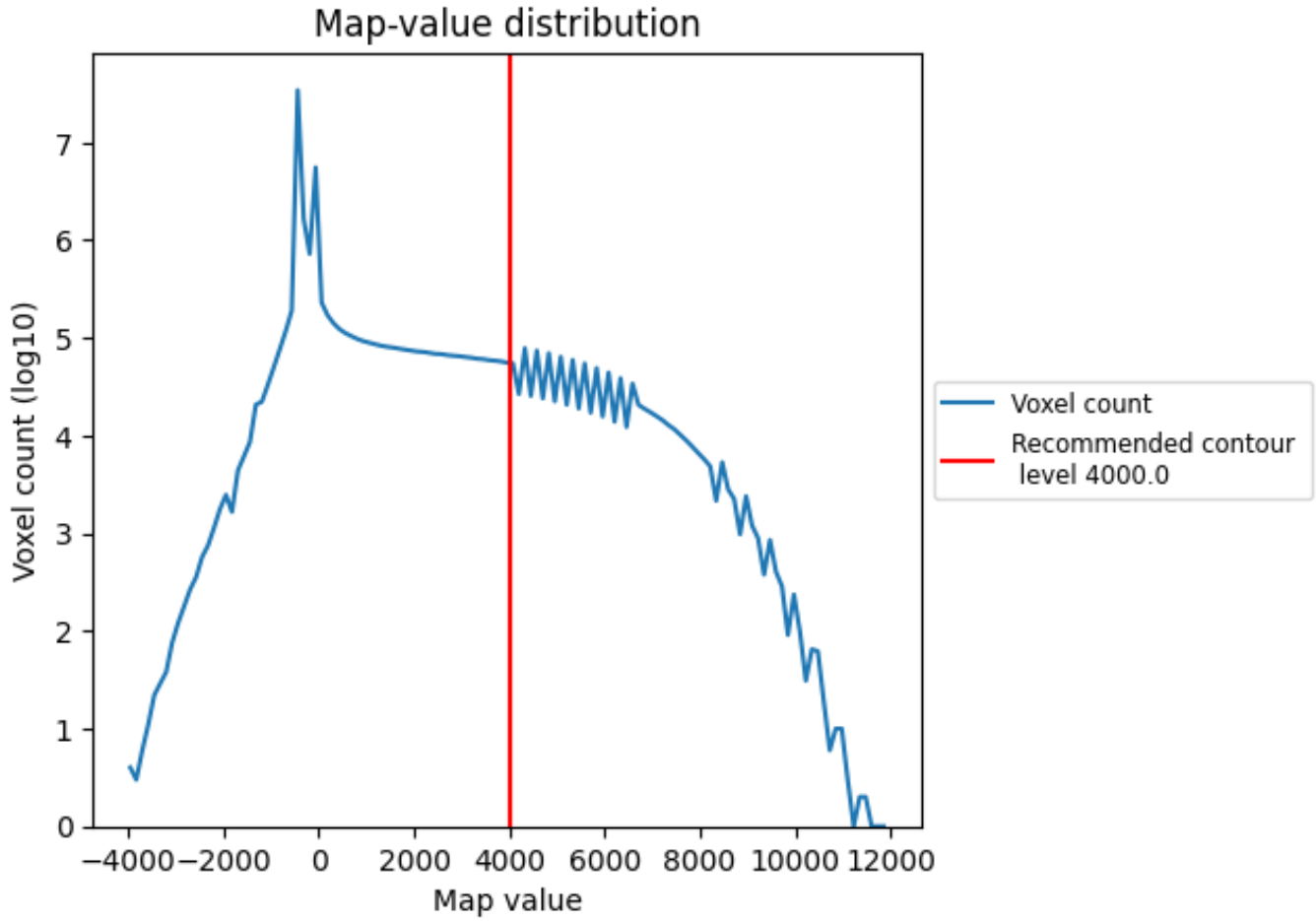
6.5 Mask visualisation (i)

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

7 Map analysis

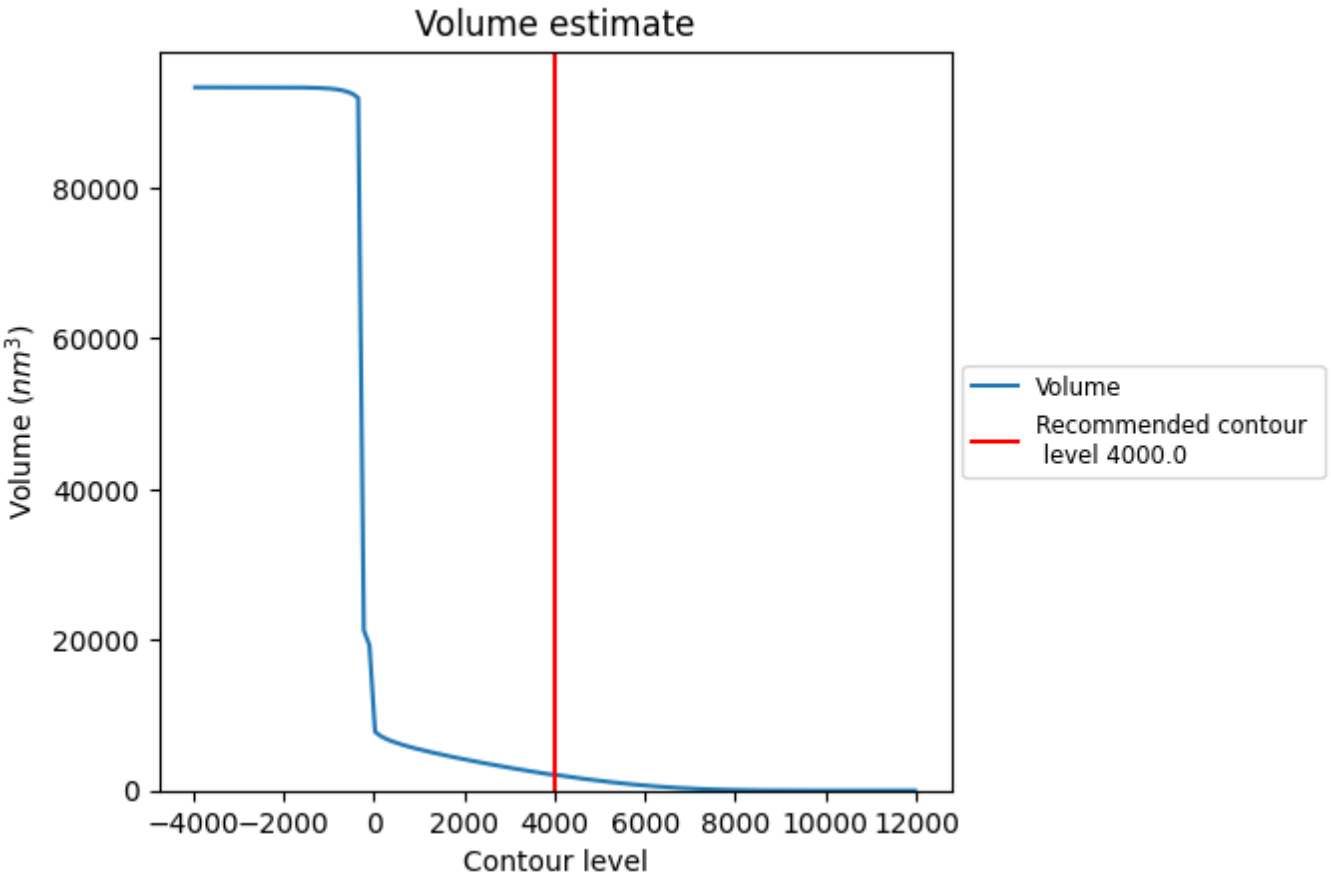
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

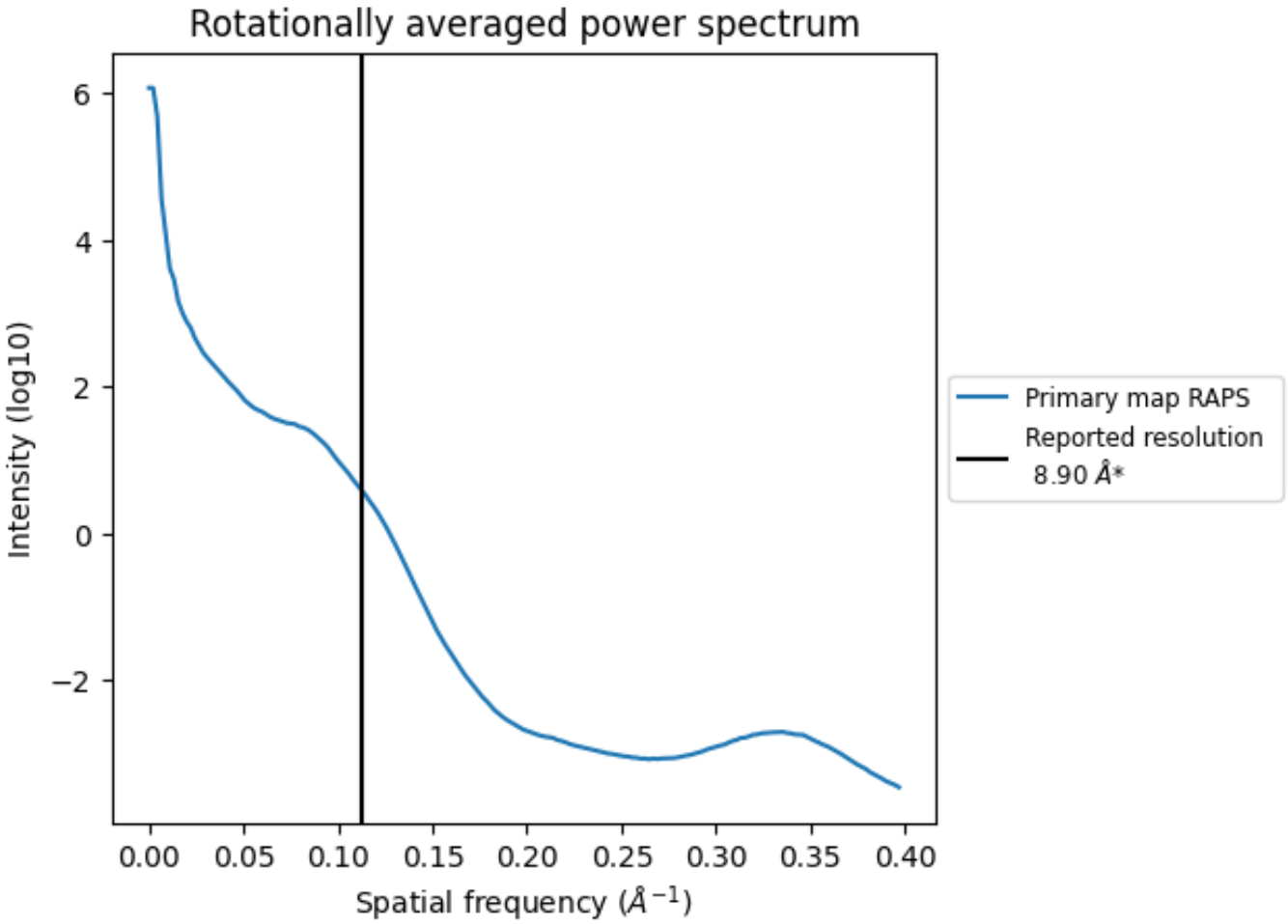
7.2 Volume estimate (i)



The volume at the recommended contour level is 2109 nm^3; this corresponds to an approximate mass of 1905 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.112 Å^{-1}

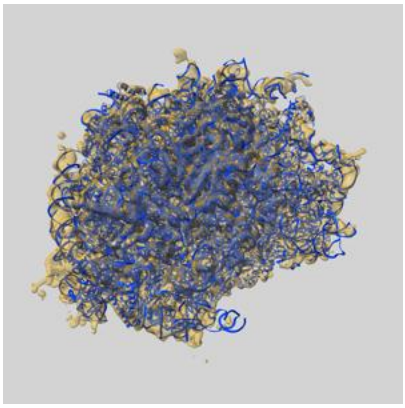
8 Fourier-Shell correlation

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

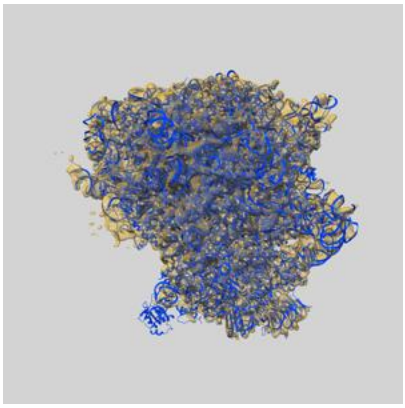
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2682 and PDB model 4UJD. Per-residue inclusion information can be found in section 3 on page 19.

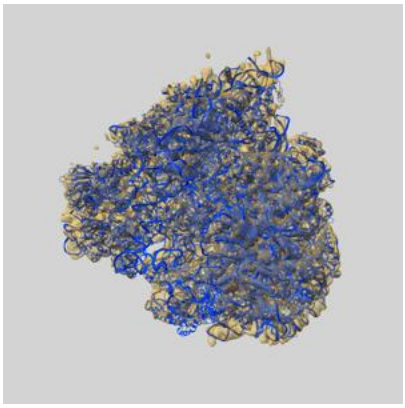
9.1 Map-model overlay



X



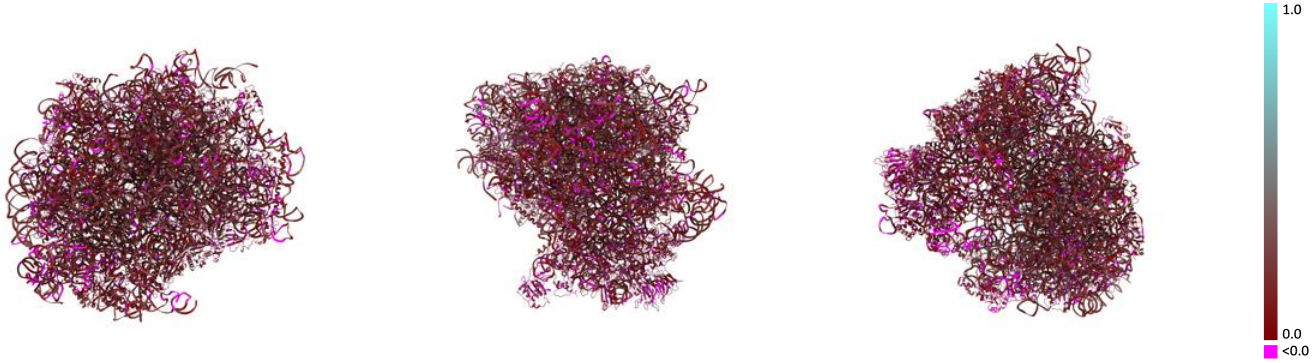
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 4000.0 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.

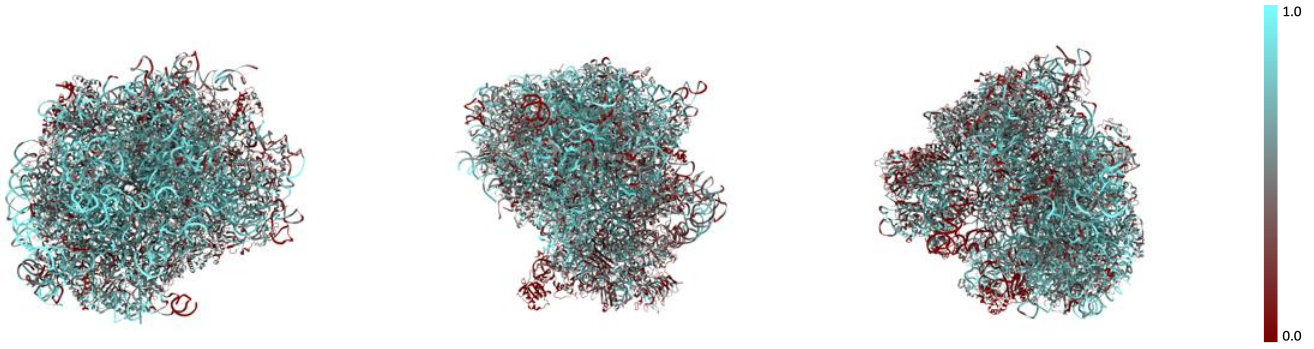
9.2 Q-score mapped to coordinate model



X Y Z

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

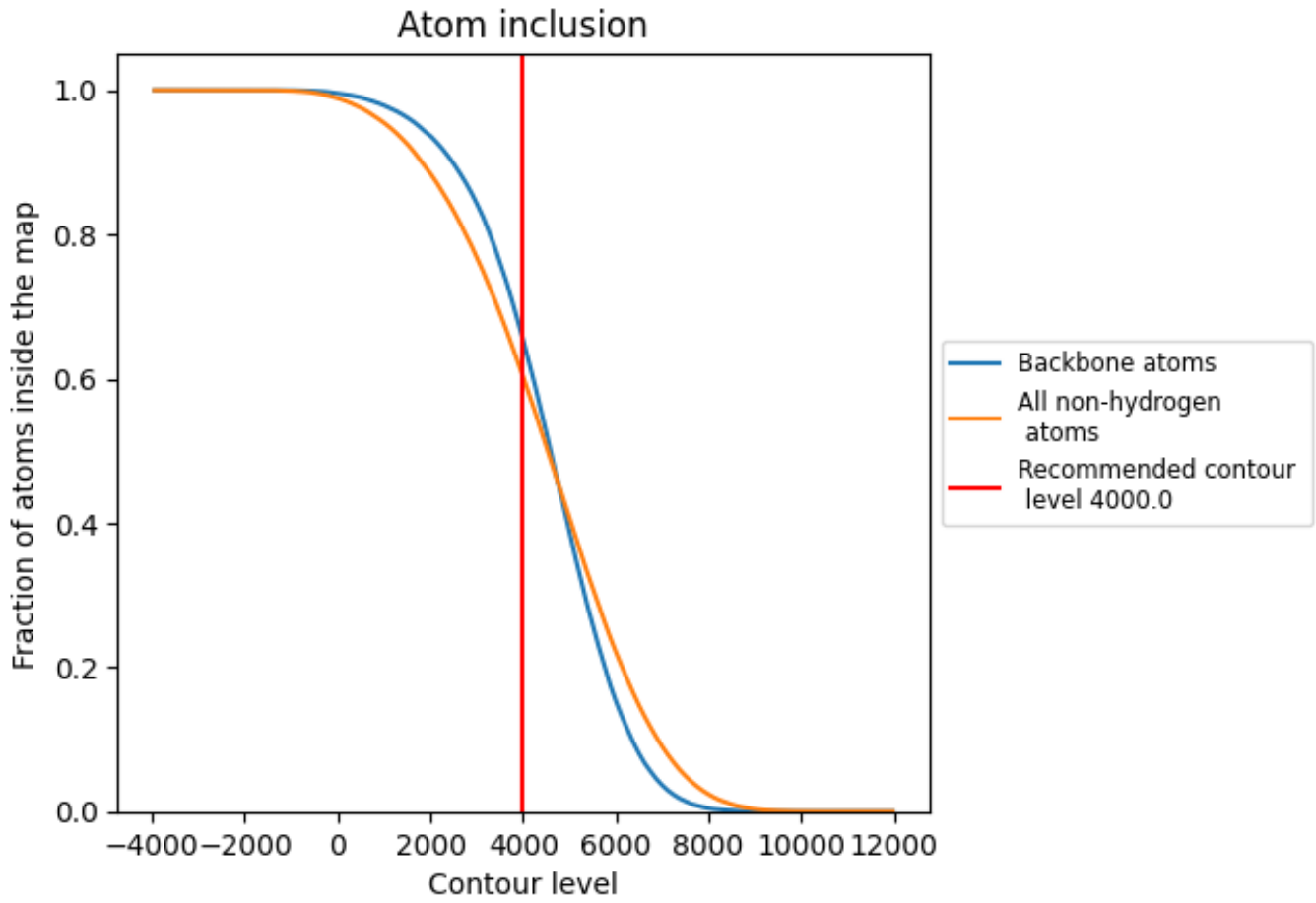
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (4000.0).

9.4 Atom inclusion (i)



At the recommended contour level, 65% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (4000.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6029	0.1400
A2	0.7733	0.1740
A3	0.8107	0.1810
A4	0.8822	0.1860
AA	0.3693	0.0980
AB	0.4364	0.1060
AC	0.4688	0.0950
AD	0.5646	0.1180
AE	0.4257	0.1110
AF	0.4721	0.1090
AG	0.3941	0.1190
AH	0.4052	0.1260
AI	0.4695	0.1190
AJ	0.5454	0.1210
AL	0.4472	0.1070
AM	0.5298	0.1270
AN	0.4681	0.0890
AO	0.4752	0.1200
AP	0.5309	0.0990
AQ	0.4913	0.1120
AR	0.5058	0.1100
AS	0.4448	0.1100
AT	0.4347	0.1120
AU	0.4153	0.1150
AV	0.2601	0.1050
AW	0.5118	0.1190
AX	0.4563	0.1250
AY	0.5554	0.1120
AZ	0.4366	0.1140
Aa	0.5159	0.1030
Ab	0.4945	0.0950
Ac	0.5096	0.1340
Ad	0.5355	0.1220
Ae	0.4443	0.1190
Af	0.4339	0.0890

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Chain	Atom inclusion	Q-score
Ag	0.3805	0.0930
Ah	0.4985	0.1240
Ai	0.5053	0.1240
Aj	0.5890	0.0940
Ak	0.4039	0.1290
Al	0.4586	0.1280
Am	0.5108	0.1350
An	0.4566	0.0870
Ao	0.4627	0.1150
Ap	0.4360	0.1160
At	0.4660	0.0870
Au	0.0050	0.0190
BA	0.5503	0.1590
BB	0.4055	0.1210
BC	0.3357	0.0940
C1	0.7245	0.1580
CA	0.4017	0.1280
CB	0.3902	0.1300
CC	0.4196	0.1220
CD	0.2820	0.1000
CE	0.4545	0.0970
CF	0.3952	0.0940
CG	0.4274	0.0970
CH	0.2742	0.1210
CI	0.4108	0.0920
CJ	0.5185	0.1270
CK	0.2264	0.0740
CL	0.3600	0.1090
CM	0.0022	0.0180
CN	0.4082	0.1170
CO	0.4074	0.1010
CP	0.2881	0.0910
CQ	0.3983	0.0730
CR	0.3445	0.1000
CS	0.4260	0.0970
CT	0.4787	0.0800
CU	0.2864	0.0850
CV	0.3746	0.1200
CW	0.4133	0.1270
CX	0.3500	0.1280
CY	0.5463	0.0980
CZ	0.3169	0.1280

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Chain	Atom inclusion	Q-score
Ca	0.2575	0.0590
Cb	0.3295	0.1140
Cc	0.2468	0.0720
Cd	0.5587	0.0860
Ce	0.3501	0.1000
Cf	0.0290	0.0390
Cg	0.2939	0.0750