



wwPDB EM Validation Summary Report ⓘ

Jan 25, 2023 – 04:19 AM EST

PDB ID : 4V6X
EMDB ID : EMD-5592
Title : Structure of the human 80S ribosome
Authors : Anger, A.M.; Armache, J.-P.; Berninghausen, O.; Habeck, M.; Subklewe, M.;
Wilson, D.N.; Beckmann, R.
Deposited on : 2013-02-27
Resolution : 5.00 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

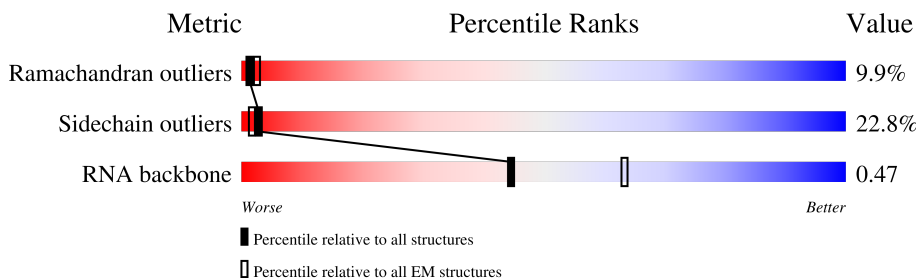
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 5.00 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	Az	858	68% 74% 19% 5% .
2	Ag	317	65% 74% 20% . . .
3	AU	119	53% 48% 30% 5% . 13%
4	AK	165	25% 31% 16% 8% . 41%
5	AO	151	44% 60% 27% . . 10%
6	AX	143	45% 68% 26% 6% .
7	AM	132	75% 62% 26% 6% 6%
8	AS	152	41% 60% 20% 9% . 10%

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Mol	Chain	Length	Quality of chain
9	Ad	56	23% 66% 27% 5%
10	AN	151	43% 67% 30% ..
11	AL	158	44% 66% 26% . .
12	AR	135	59% 65% 18% 7% . 7%
13	AP	145	50% 50% 27% 8% . 12%
14	AT	145	34% 70% 22% 5% ..
15	AB	264	37% 55% 23% . 19%
16	AA	295	36% 47% 20% . . 29%
17	AV	83	49% 54% 28% 13% . .
18	AY	133	32% 59% 26% 8% . 5%
19	AZ	125	32% 38% 15% 6% . 40%
20	Aa	115	44% 62% 23% 7% . 7%
21	Ab	84	51% 65% 24% 11%
22	Ac	69	55% 65% 20% 7% 7%
23	AD	243	57% 63% 25% 5% 7%
24	Ae	59	39% 39% 41% 19% .
25	Af	80	52% 36% 35% 15% . 11%
26	AJ	194	33% 58% 26% 8% . 6%
27	AE	263	44% 67% 29% .
28	AC	293	34% 53% 20% . . 23%
29	AG	249	57% 64% 28% . 5%
30	AF	204	48% 67% 21% . . 6%
31	AH	194	49% 61% 26% 7% . .
32	AW	130	38% 81% 16% ..
33	AI	208	48% 70% 20% 8% ..

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Mol	Chain	Length	Quality of chain
34	AQ	146	47% 68% 23% 5% . .
35	Ah	408	15% 7% 8% . 82%
36	B2	1869	14% 9% 63% 28%
37	BC	75	52% 76% 21%
38	Cz	217	94% 83% 12% . .
39	Cq	317	69% 58% 20% 7% . 12%
40	CK	165	72% 48% 32% 15% . .
41	CO	203	32% 74% 24% .
42	CL	211	36% 62% 26% 8% .
43	CV	140	49% 74% 19% . 5%
44	CM	215	17% 39% 20% . . 35%
45	Ca	148	28% 70% 24% . .
46	CN	204	24% 72% 24% . .
47	CI	214	34% 68% 22% 7% .
48	CD	297	32% 71% 18% 7% . .
49	CQ	188	33% 62% 27% 10% .
50	CR	196	33% 69% 24% . .
51	CA	257	39% 74% 22% . .
52	CS	176	24% 53% 31% 11% . .
53	CT	160	29% 56% 29% 12% . .
54	CP	184	20% 56% 21% 5% . 17%
55	CU	128	38% 61% 21% 5% . 12%
56	CX	156	28% 45% 28% . . 22%
57	CY	145	23% 61% 25% 5% . 8%
58	CW	157	50% 48% 19% 10% . 21%

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Mol	Chain	Length	Quality of chain
59	CZ	136	23% 63% 26% 9% ..
60	Cr	137	36% 51% 33% 10% 6%
61	Ch	123	20% 63% 25% 10% .
62	Cb	159	23% 25% 21% .. 51%
63	CB	403	31% 68% 21% 8% ..
64	CF	248	27% 73% 16% .. 8%
65	Cc	115	34% 70% 13% . 13%
66	Cd	125	24% 53% 26% 8% . 10%
67	Ce	135	33% 61% 25% 11% ..
68	Cf	110	30% 55% 25% 15% ..
69	Cg	117	31% 54% 34% 7% ..
70	Ci	105	32% 51% 35% 9% ..
71	Cj	97	23% 68% 19% .. 7%
72	Ck	70	51% 61% 33% ..
73	Cl	51	31% 63% 31% ..
74	CC	427	26% 48% 25% 8% 5% 14%
75	Cm	52	25% 60% 31% 8% .
76	Cn	25	52% 56% 44%
77	Cp	92	24% 68% 27% ..
78	Co	106	24% 53% 36% 8% ..
79	CJ	178	43% 77% 15% . 6%
80	CH	192	49% 79% 17% ..
81	CE	288	45% 40% 28% 15% 8% 9%
82	CG	266	36% 52% 27% 11% . 8%
83	Cs	114	50% 45% 5%

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Mol	Chain	Length	Quality of chain
83	Ct	114	
84	Cu	115	
84	Cv	115	
85	A5	5070	
86	A7	121	
87	A8	157	

2 Entry composition [i](#)

There are 87 unique types of molecules in this entry. The entry contains 237685 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	Az	856	6673	4234	1148	1247	44	0	0

- Molecule 2 is a protein called Guanine nucleotide-binding protein subunit beta-2-like 1.

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

- Molecule 3 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	AU	104	822	514	156	148	4	0	0

- Molecule 4 is a protein called 40S ribosomal protein S10.

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

- Molecule 5 is a protein called 40S ribosomal protein S14.

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

- Molecule 6 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	AX	142	1106	698	220	184	4	0	0

- Molecule 7 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	AM	124	960	600	171	181	8	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AM	52	GLN	LEU	conflict	UNP P25398
AM	69	LEU	CYS	conflict	UNP P25398
AM	99	ASN	LYS	conflict	UNP P25398

- Molecule 8 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	AS	137	1139	714	231	193	1	0	0

- Molecule 9 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	Ad	53	445	278	90	72	5	0	0

- Molecule 10 is a protein called 40S ribosomal protein S13.

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

- Molecule 11 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	AL	158	1296	827	241	221	7	0	0

- Molecule 12 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	AR	126	1019	639	188	187	5	0	0

- Molecule 13 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	AP	127	1062	674	202	179	7	0	0

- Molecule 14 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	AT	141	1101	690	212	196	3	0	0

- Molecule 15 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	AB	215	1747	1110	313	310	14	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	AA	208	1642	1045	289	300	8	0	0

- Molecule 17 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	AV	82	625	384	116	120	5	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	AY	126	1023	646	200	172	5	0	0

- Molecule 19 is a protein called 40S ribosomal protein S25.

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

- Molecule 20 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	Aa	107	Total	C	N	O	S	0	0
			847	528	176	138	5		

- Molecule 21 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Ab	84	Total	C	N	O	S	0	0
			659	413	122	116	8		

- Molecule 22 is a protein called 40S ribosomal protein S28.

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

- Molecule 23 is a protein called 40S ribosomal protein S3.

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

- Molecule 24 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Ae	59	Total	C	N	O	S	0	0
			468	290	102	75	1		

- Molecule 25 is a protein called 40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Af	71	Total	C	N	O	S	0	0
			581	367	109	98	7		

- Molecule 26 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AJ	182	Total	C	N	O	S	0	0
			1498	952	300	244	2		

- Molecule 27 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	AE	263	2084	1329	387	359	9	0	0

- Molecule 28 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	AC	226	1751	1130	301	310	10	0	0

- Molecule 29 is a protein called 40S ribosomal protein S6.

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

- Molecule 30 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	AF	191	1509	943	286	273	7	0	0

- Molecule 31 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	AH	190	1530	975	281	273	1	0	0

- Molecule 32 is a protein called 40S ribosomal protein S15a.

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

- Molecule 33 is a protein called 40S ribosomal protein S8.

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

- Molecule 34 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AQ	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 35 is a protein called Plasminogen activator inhibitor 1 RNA-binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ah	73	Total	C	N	O	S	0	0
			566	340	116	108	2		

- Molecule 36 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	B2	1861	Total	C	N	O	P	0	0
			38377	17073	6745	12699	1860		

- Molecule 37 is a RNA chain called E-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BC	75	Total	C	N	O	P	0	0
			1604	717	298	515	74		

- Molecule 38 is a protein called 60S ribosomal protein L10a.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Cz	217	Total	C	N	O	S	0	0
			1741	1113	312	307	9		

- Molecule 39 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Cq	280	Total	C	N	O	S	0	0
			2138	1367	366	395	10		

- Molecule 40 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	CK	163	Total	C	N	O	S	0	0
			1238	773	230	230	5		

- Molecule 41 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	CO	202	Total	C	N	O	S	0	0
			1655	1066	322	262	5		

- Molecule 42 is a protein called 60S ribosomal protein L13.

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

- Molecule 43 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	CV	133	Total	C	N	O	S	0	0
			989	623	186	175	5		

- Molecule 44 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	CM	139	Total	C	N	O	S	0	0
			1139	730	218	183	8		

- Molecule 45 is a protein called 60S ribosomal protein L27a.

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

- Molecule 46 is a protein called 60S ribosomal protein L15.

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

- Molecule 47 is a protein called 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	CI	213	Total	C	N	O	S	0	0
			1711	1082	329	285	15		

- Molecule 48 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	CD	289	2353	1483	429	427	14	0	0

- Molecule 49 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	CQ	188	1521	949	315	251	6	0	0

- Molecule 50 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	CR	189	1580	979	338	253	10	0	0

- Molecule 51 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
51	CA	255	1957	1225	399	327	6	0	0

- Molecule 52 is a protein called 60S ribosomal protein L18a.

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

- Molecule 53 is a protein called 60S ribosomal protein L21.

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

- Molecule 54 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
54	CP	152	1233	771	240	213	9	0	0

- Molecule 55 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CU	112	Total	C	N	O	S	0	0
			921	583	159	177	2		

- Molecule 56 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	CX	121	Total	C	N	O	S	0	0
			994	636	187	170	1		

- Molecule 57 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	CY	133	Total	C	N	O	S	0	0
			1107	695	225	185	2		

- Molecule 58 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	CW	124	Total	C	N	O	S	0	0
			1015	634	207	170	4		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
60	Cr	137	Total	C	N	O	S	0	0
			1104	682	231	185	6		

- Molecule 61 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	Ch	123	Total	C	N	O	S	0	0
			1023	646	206	169	2		

- Molecule 62 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Cb	78	Total	C	N	O	S	0	0
			635	395	135	102	3		

- Molecule 63 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	CB	397	Total	C	N	O	S	0	0
			3202	2039	602	547	14		

- Molecule 64 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	CF	229	Total	C	N	O	S	0	0
			1910	1226	370	305	9		

- Molecule 65 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Cc	100	Total	C	N	O	S	0	0
			776	492	136	141	7		

- Molecule 66 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Cd	113	Total	C	N	O	S	0	0
			931	586	181	162	2		

- Molecule 67 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Ce	133	Total	C	N	O	S	0	0
			1096	691	224	175	6		

- Molecule 68 is a protein called 60S ribosomal protein L35a.

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

- Molecule 69 is a protein called 60S ribosomal protein L34.

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

- Molecule 70 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Ci	103	Total	C	N	O	S	0	0
			840	526	178	130	6		

- Molecule 71 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Cj	90	Total	C	N	O	S	0	0
			733	451	162	115	5		

- Molecule 72 is a protein called 60S ribosomal protein L38.

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

- Molecule 73 is a protein called 60S ribosomal protein L39.

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

- Molecule 74 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	CC	368	Total	C	N	O	S	0	0
			2925	1840	583	489	13		

- Molecule 75 is a protein called 60S ribosomal protein L40.

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

- Molecule 76 is a protein called 60S ribosomal protein L41.

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

- Molecule 77 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Cp	90	Total	C	N	O	S	0	0
			703	442	135	119	7		

- Molecule 78 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Co	105	Total	C	N	O	S	0	0
			863	542	175	140	6		

- Molecule 79 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	CJ	168	Total	C	N	O	S	0	0
			1349	853	251	239	6		

- Molecule 80 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	CH	191	Total	C	N	O	S	0	0
			1526	960	285	275	6		

- Molecule 81 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	CE	262	Total	C	N	O	S	0	0
			2113	1357	403	349	4		

- Molecule 82 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	CG	246	Total	C	N	O	S	0	0
			1973	1256	379	334	4		

- Molecule 83 is a protein called 60S acidic ribosomal protein P1.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	Cs	57	Total	C	N	O	S	0	0
			426	277	68	79	2		
83	Ct	57	Total	C	N	O	S	0	0
			426	277	68	79	2		

- Molecule 84 is a protein called 60S acidic ribosomal protein P2.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Cu	56	Total	C	N	O	S	0	0
			419	261	71	86	1		
84	Cv	56	Total	C	N	O	S	0	0
			419	261	71	86	1		

- Molecule 85 is a RNA chain called 28S ribosomal RNA.

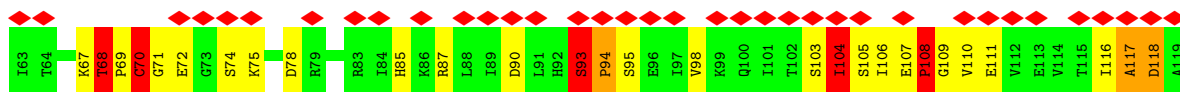
Mol	Chain	Residues	Atoms					AltConf	Trace
85	A5	4298	Total	C	N	O	P	0	0
			84946	37522	14767	28360	4297		

- Molecule 86 is a RNA chain called 5S ribosomal RNA.

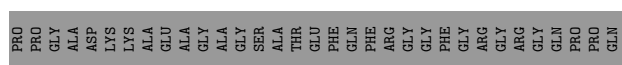
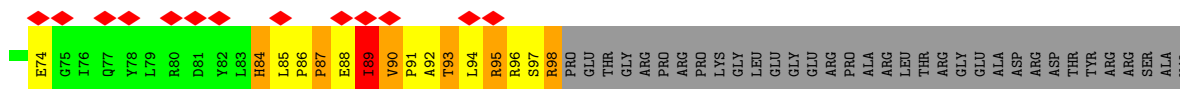
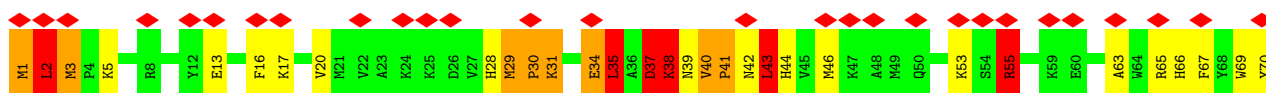
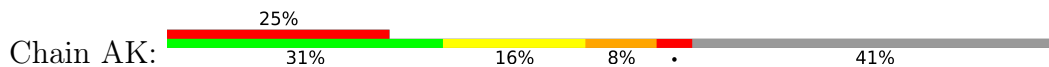
Mol	Chain	Residues	Atoms					AltConf	Trace
86	A7	121	Total	C	N	O	P	0	0
			2578	1150	458	850	120		

- Molecule 87 is a RNA chain called 5.8S ribosomal RNA.

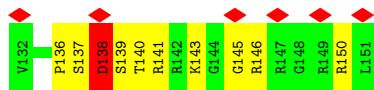
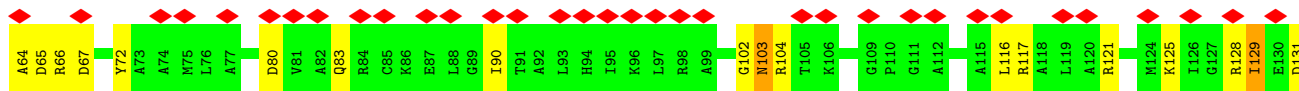
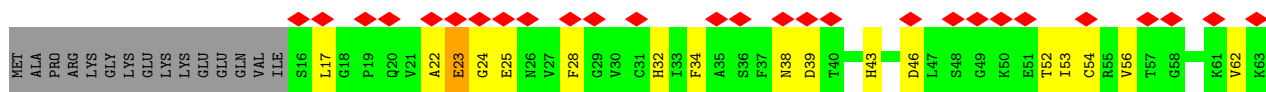
Mol	Chain	Residues	Atoms					AltConf	Trace
87	A8	157	Total	C	N	O	P	0	0
			3334	1489	587	1102	156		



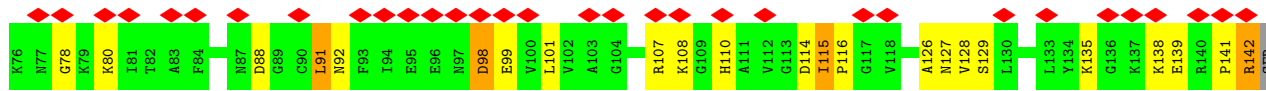
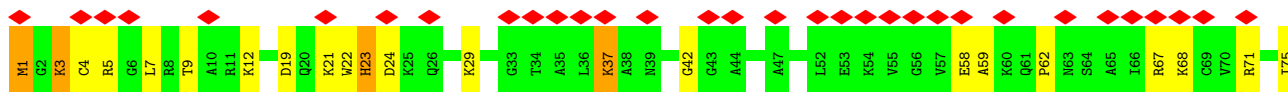
• Molecule 4: 40S ribosomal protein S10



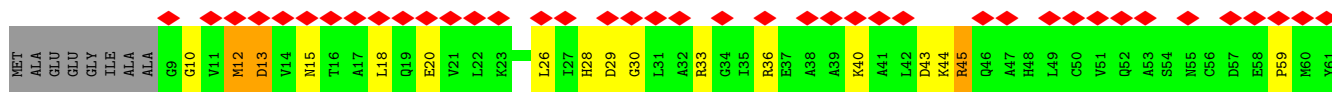
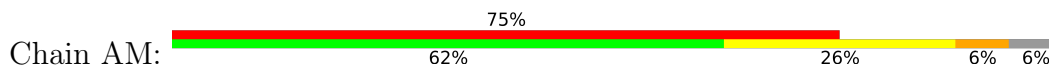
• Molecule 5: 40S ribosomal protein S14

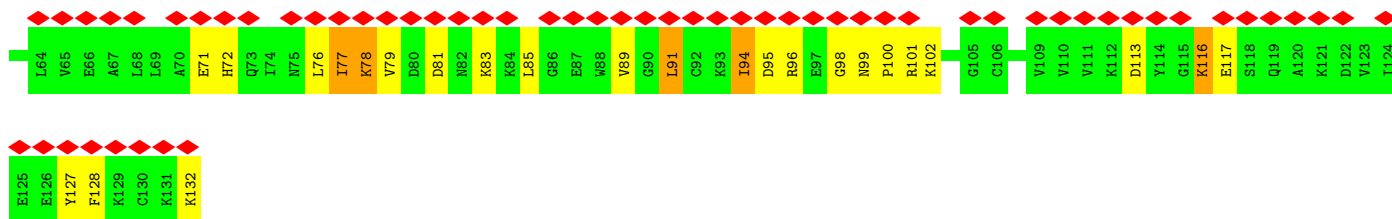


• Molecule 6: 40S ribosomal protein S23

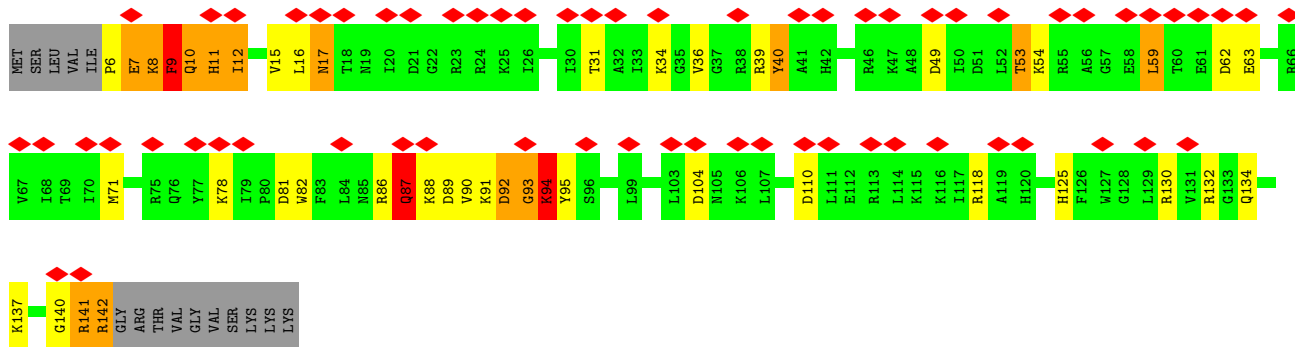
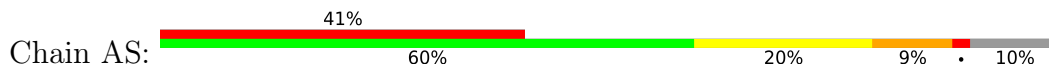


• Molecule 7: 40S ribosomal protein S12

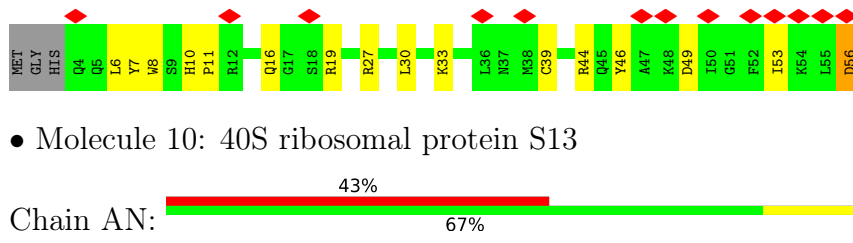




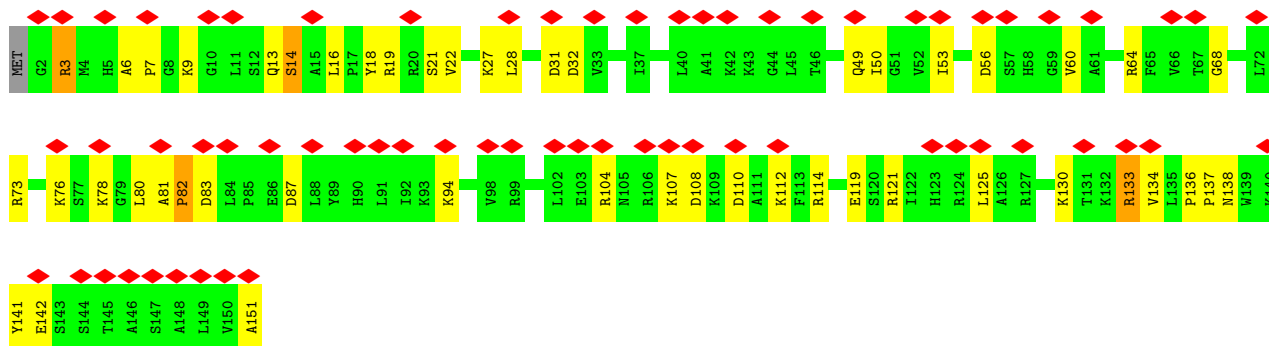
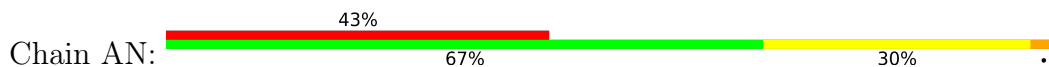
• Molecule 8: 40S ribosomal protein S18



• Molecule 9: 40S ribosomal protein S29



• Molecule 10: 40S ribosomal protein S13

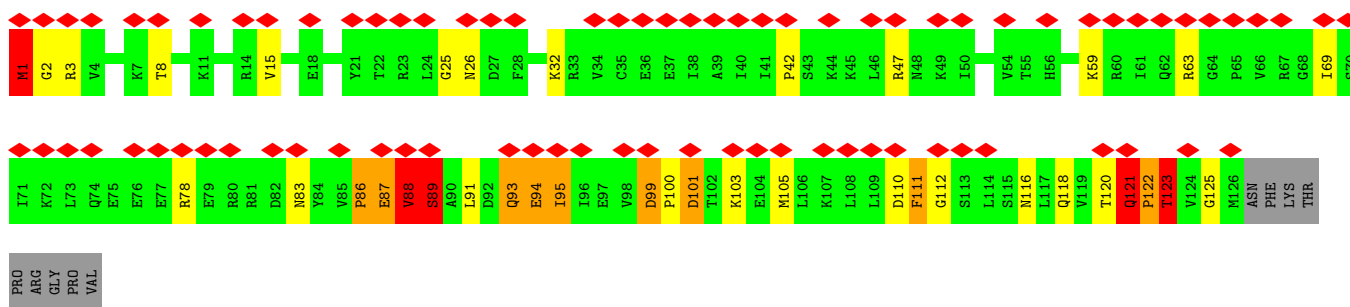


• Molecule 11: 40S ribosomal protein S11

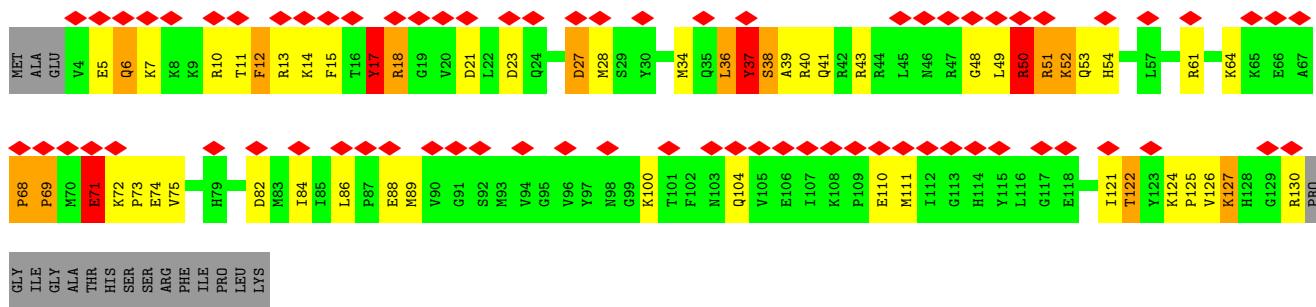




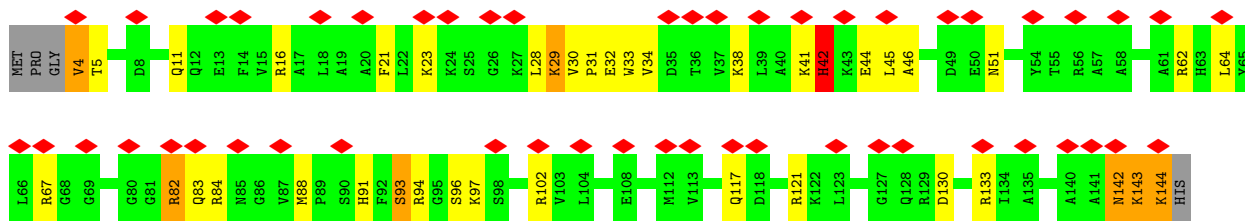
• Molecule 12: 40S ribosomal protein S17



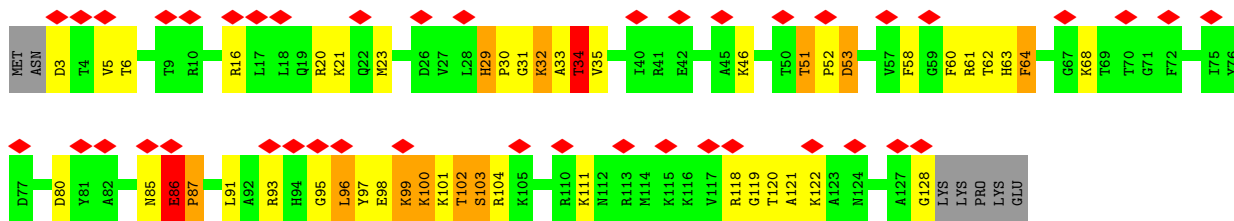
• Molecule 13: 40S ribosomal protein S15



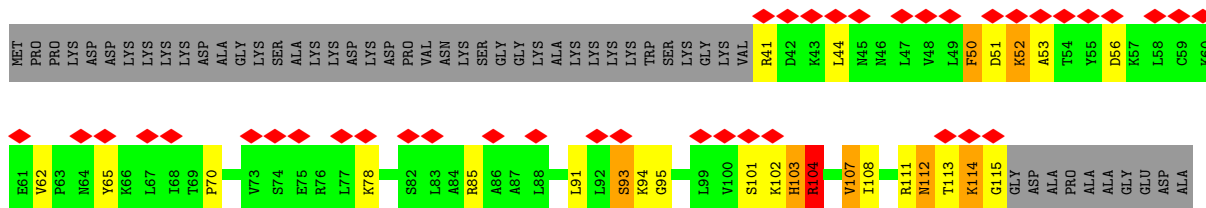
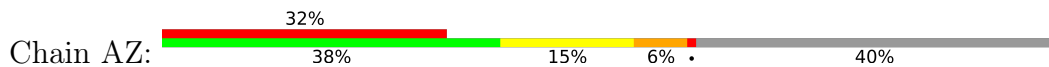
• Molecule 14: 40S ribosomal protein S19



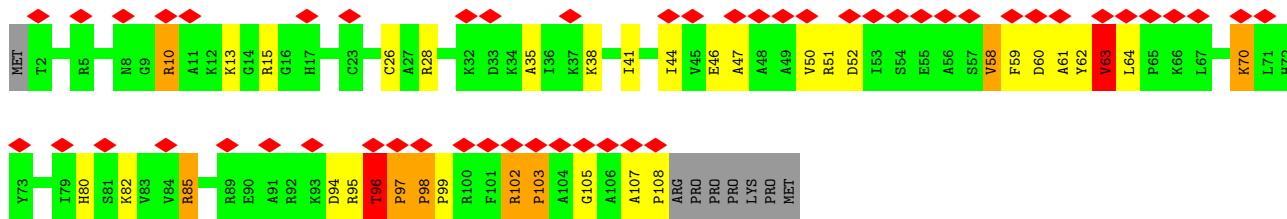
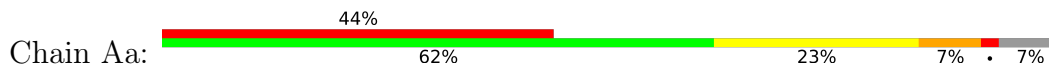
• Molecule 15: 40S ribosomal protein S3a



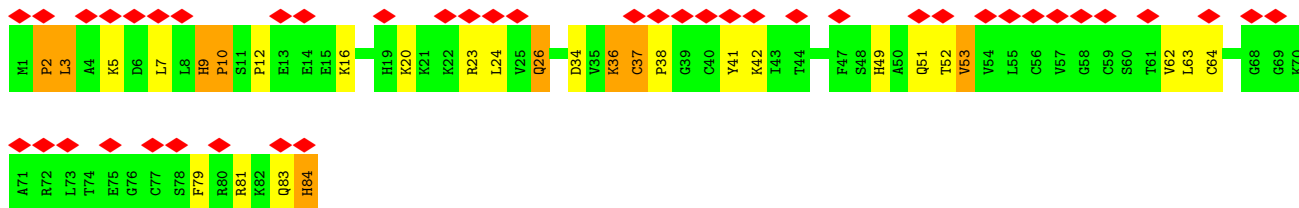
• Molecule 19: 40S ribosomal protein S25



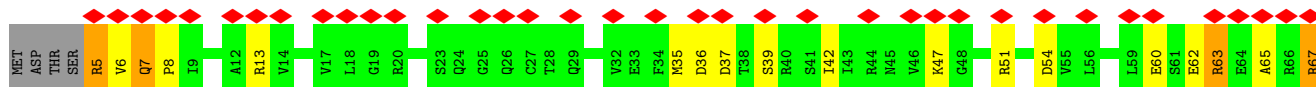
• Molecule 20: 40S ribosomal protein S26



• Molecule 21: 40S ribosomal protein S27

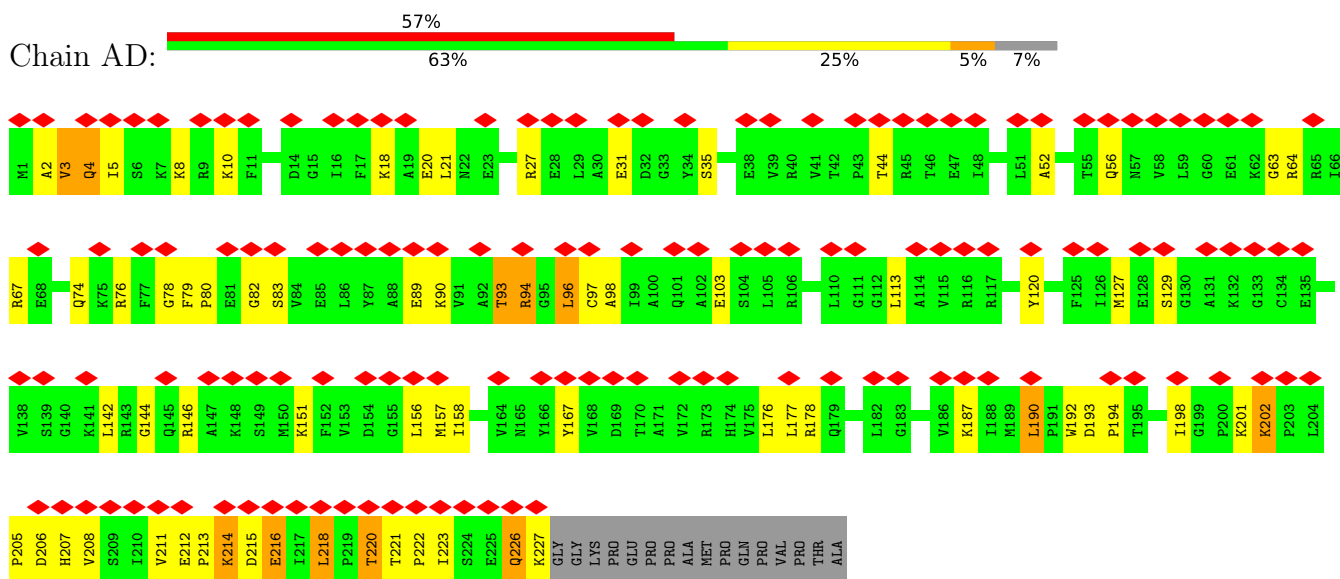


• Molecule 22: 40S ribosomal protein S28

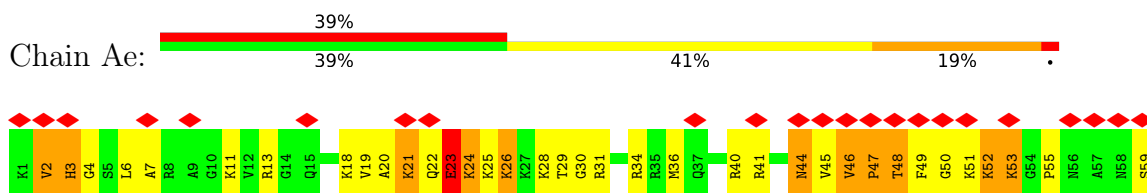


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ARG

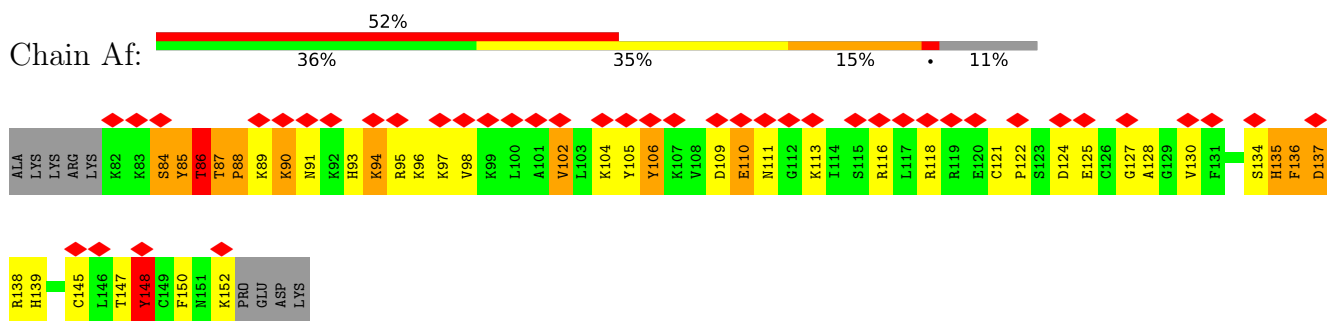
• Molecule 23: 40S ribosomal protein S3



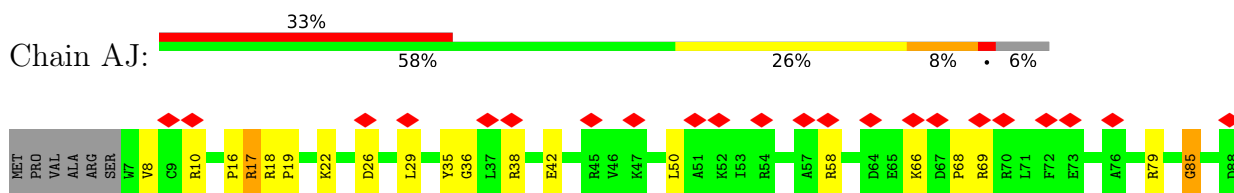
• Molecule 24: 40S ribosomal protein S30

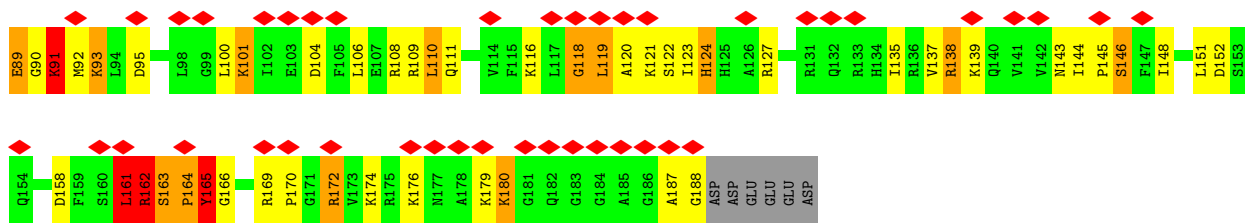


• Molecule 25: 40S ribosomal protein S27a

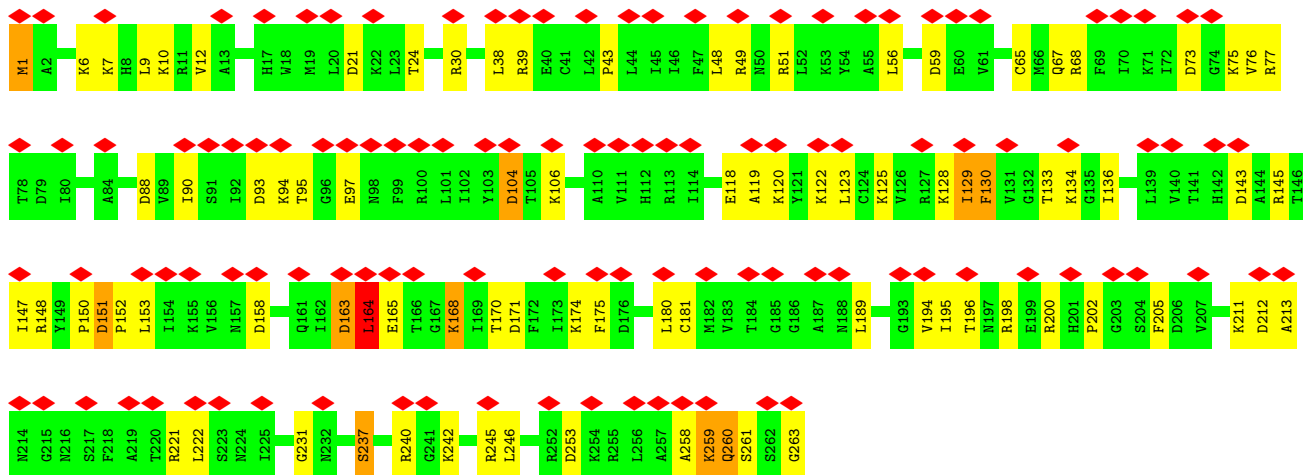
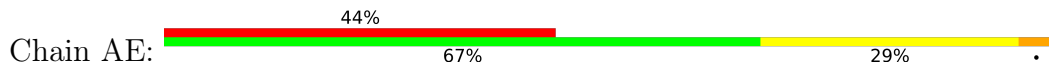


• Molecule 26: 40S ribosomal protein S9

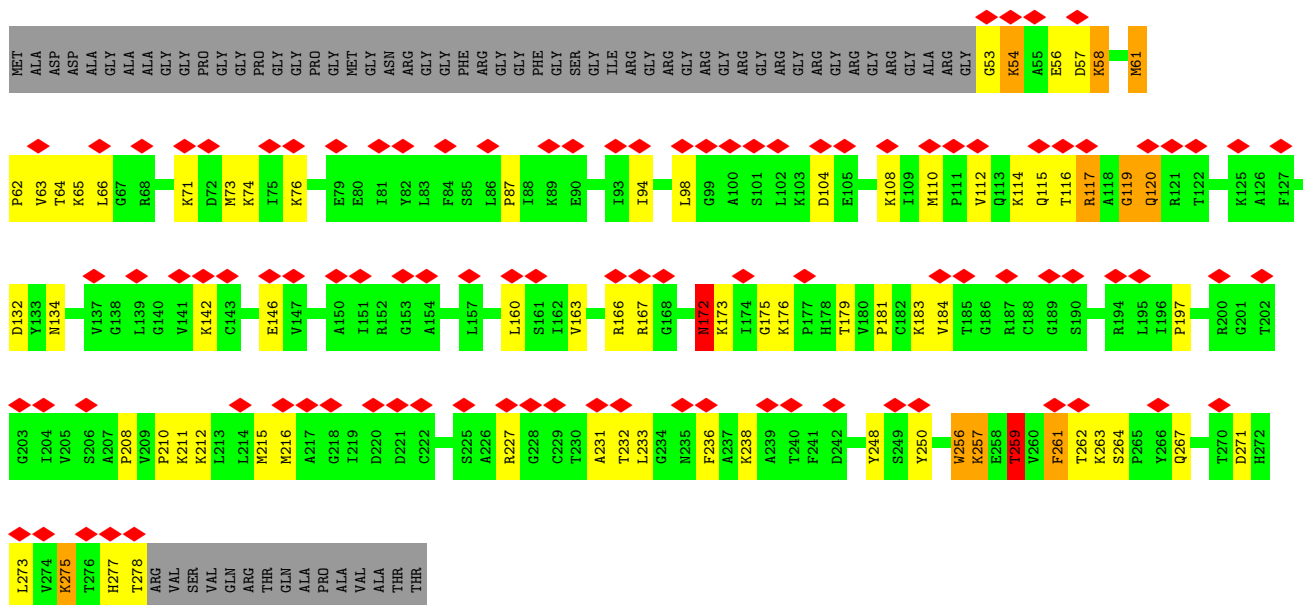




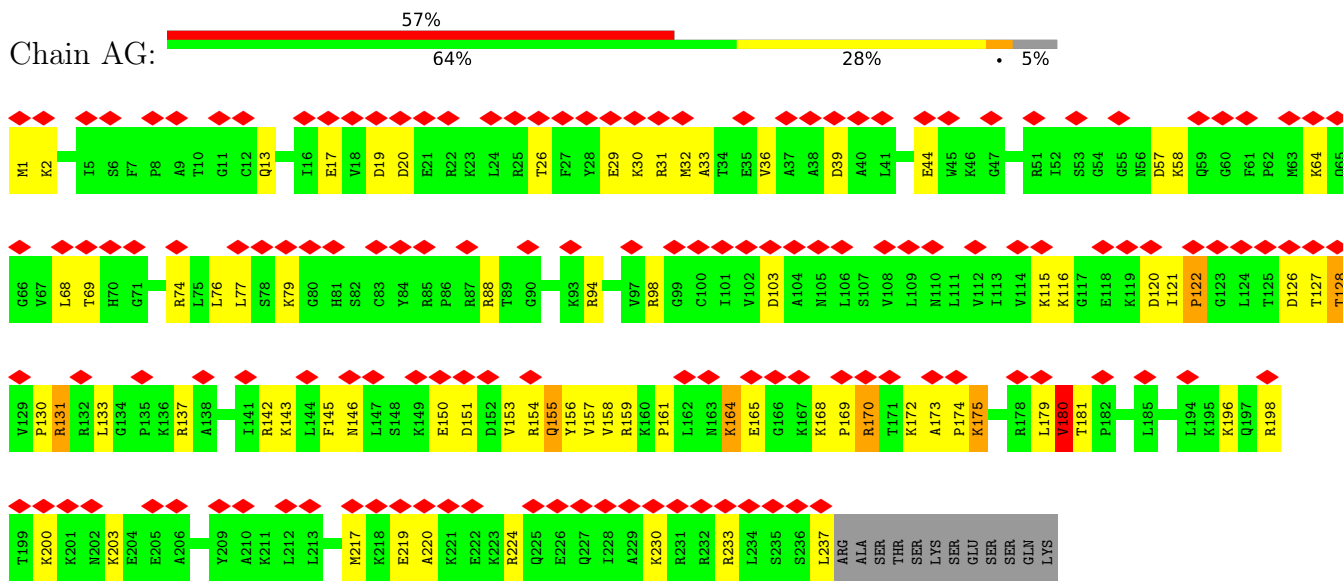
• Molecule 27: 40S ribosomal protein S4, X isoform



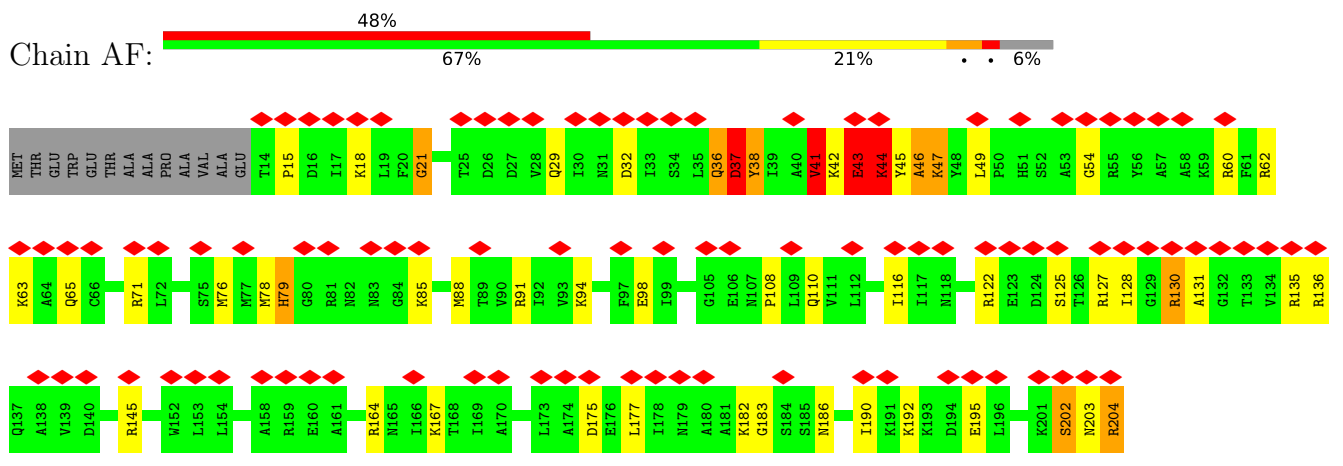
• Molecule 28: 40S ribosomal protein S2



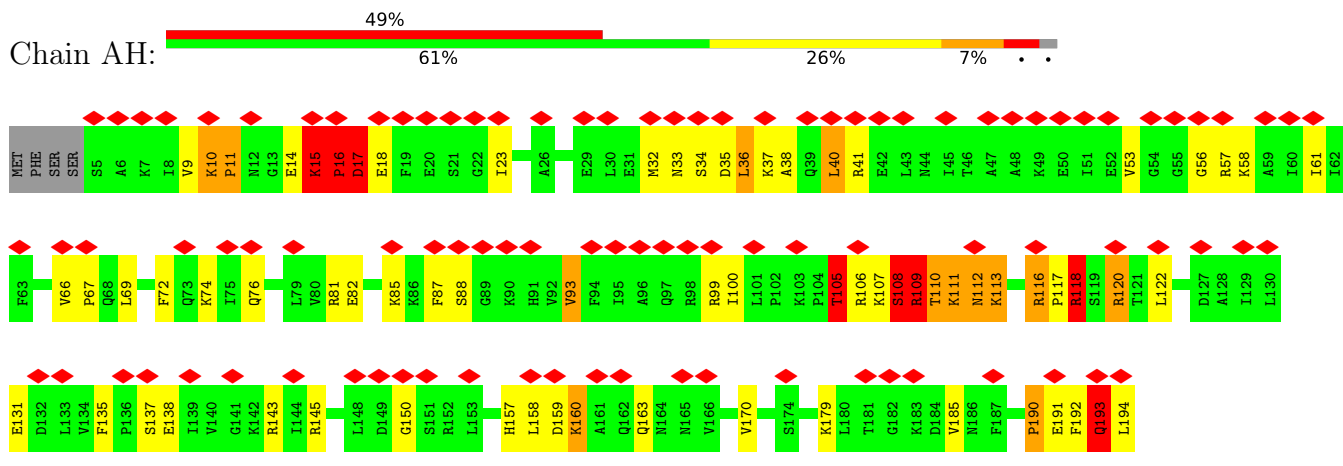
• Molecule 29: 40S ribosomal protein S6



• Molecule 30: 40S ribosomal protein S5

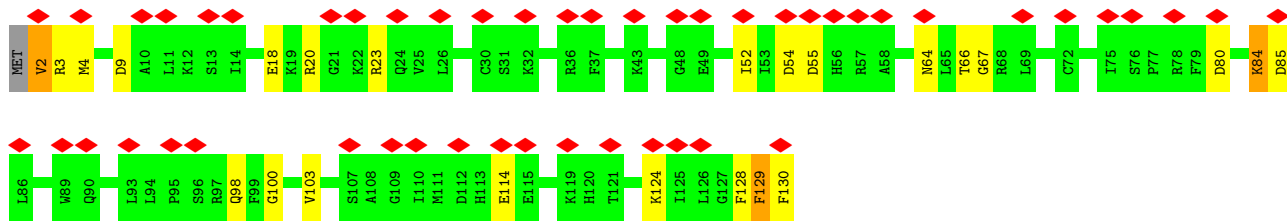


• Molecule 31: 40S ribosomal protein S7

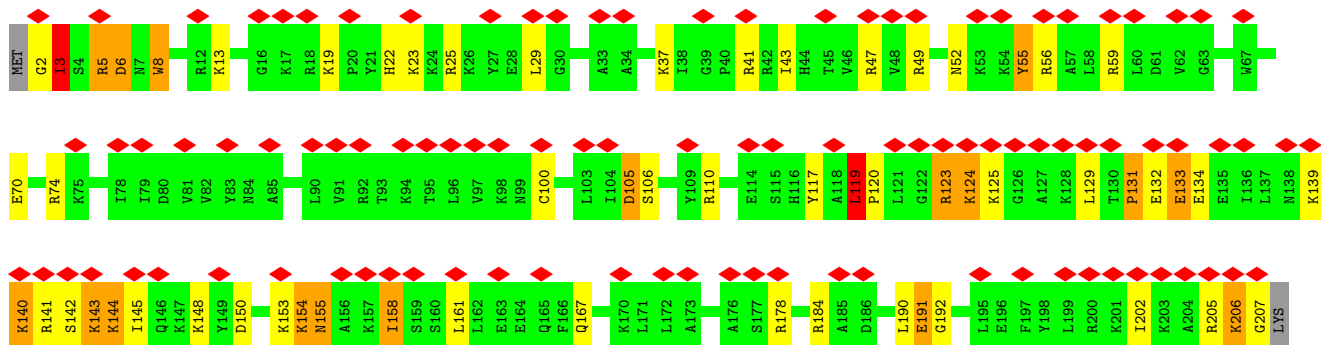


• Molecule 32: 40S ribosomal protein S15a

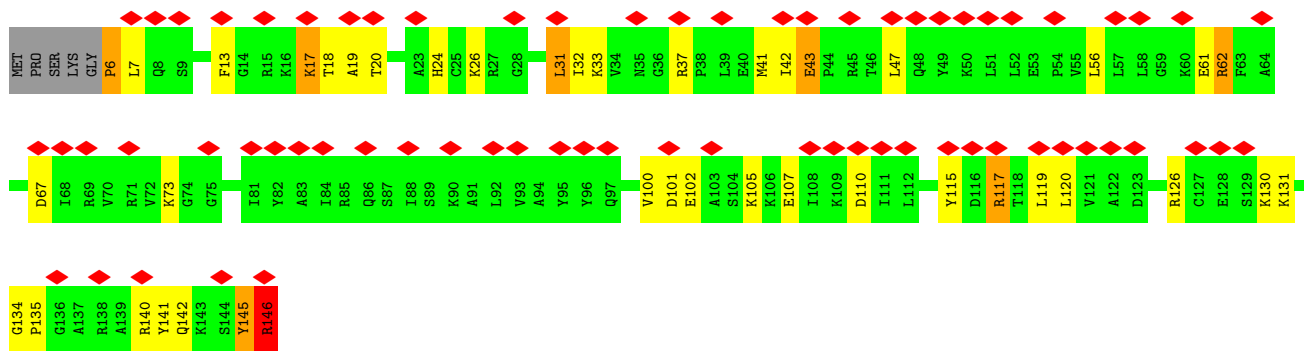




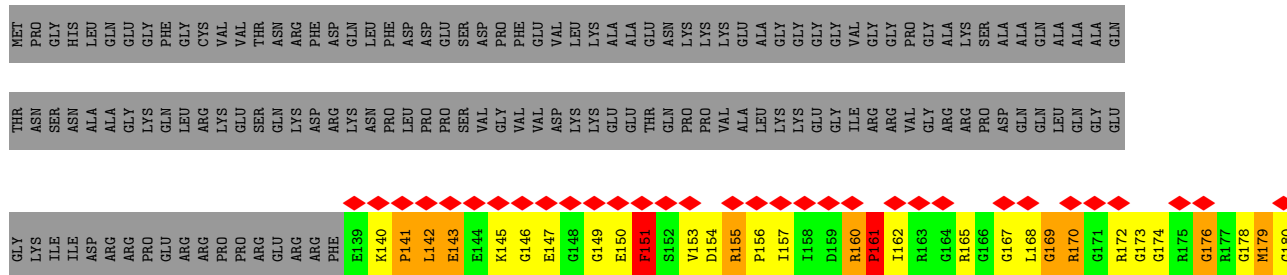
• Molecule 33: 40S ribosomal protein S8

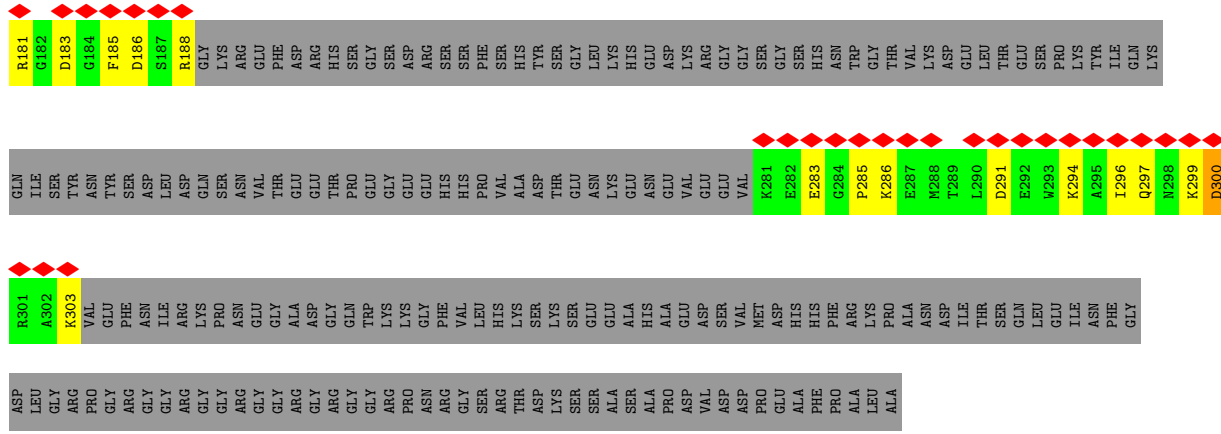


• Molecule 34: 40S ribosomal protein S16

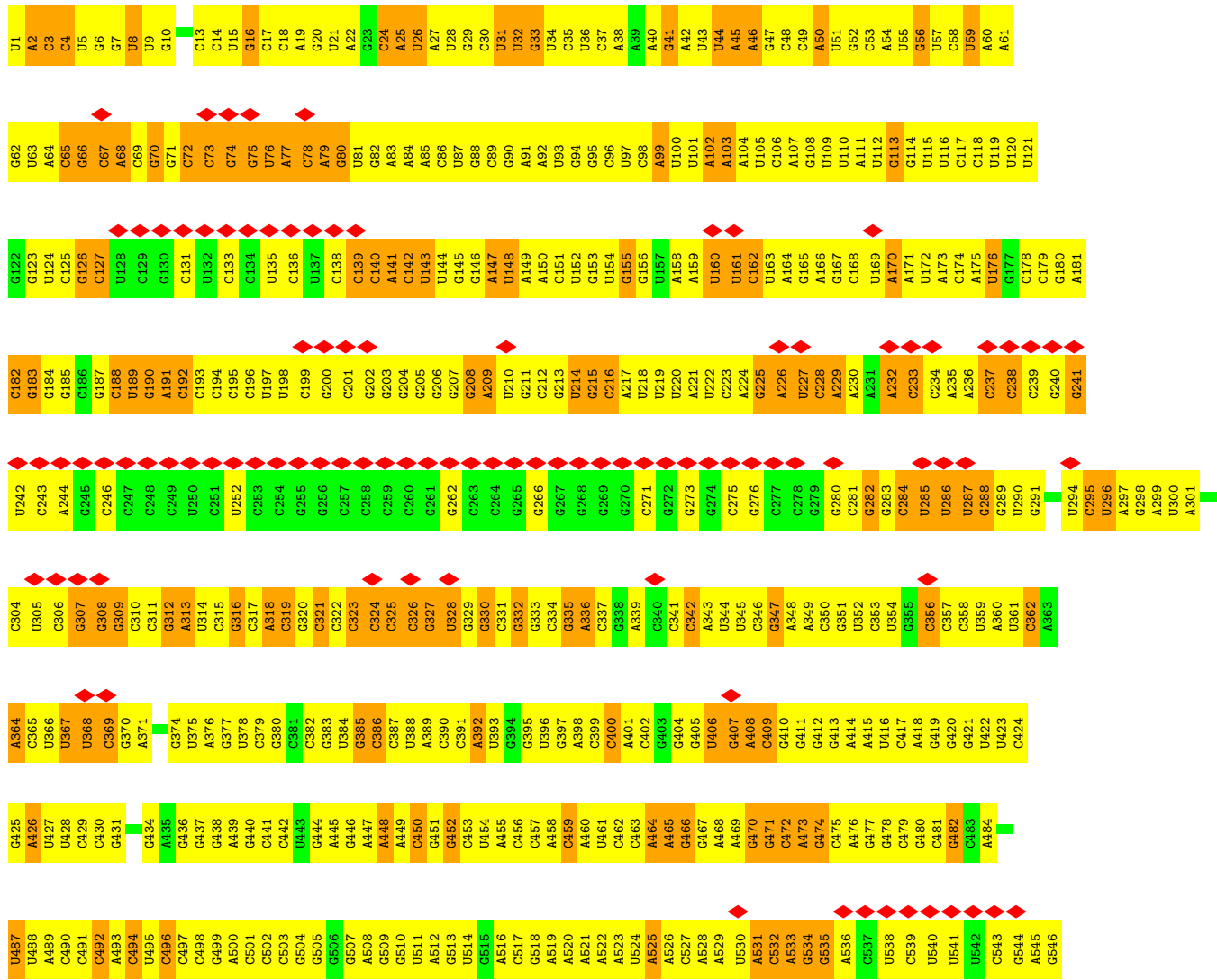
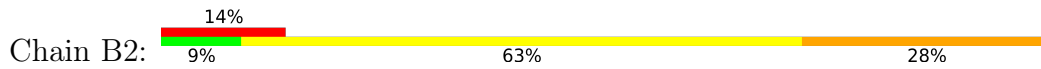


• Molecule 35: Plasminogen activator inhibitor 1 RNA-binding protein

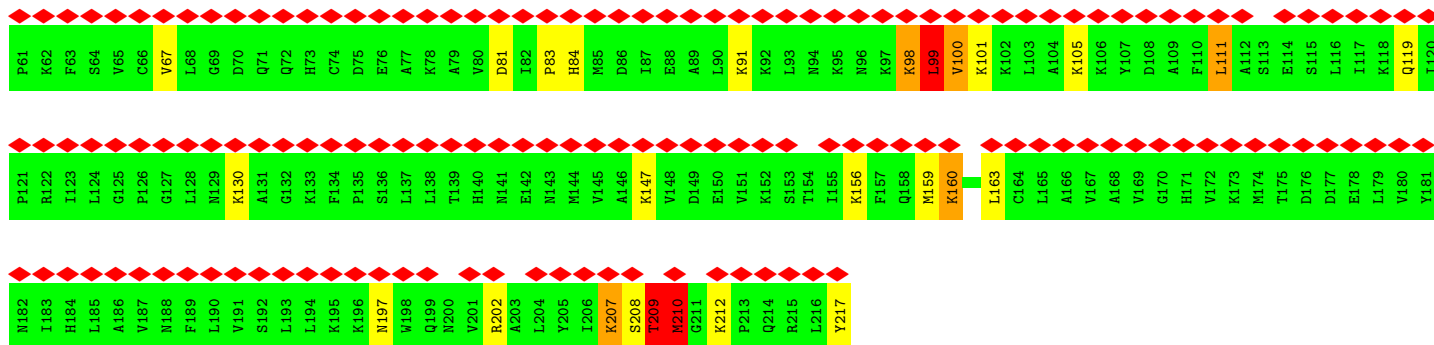




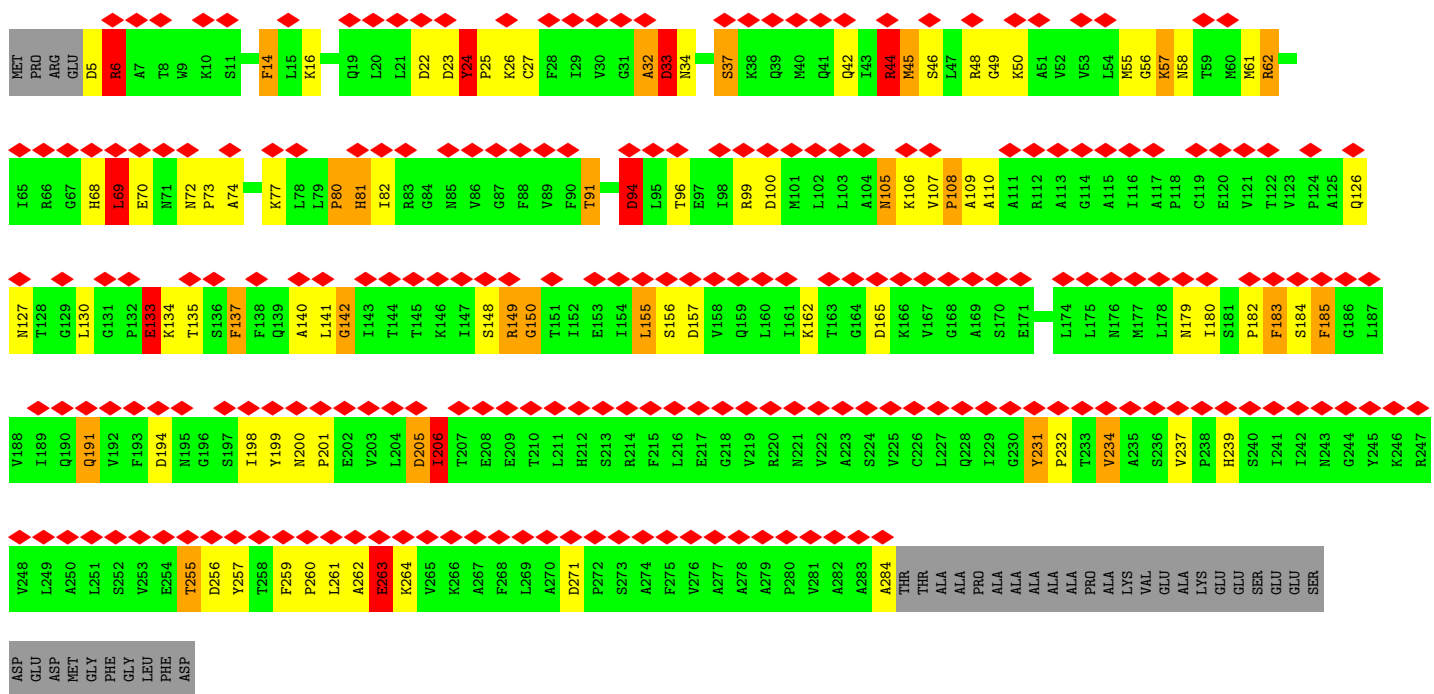
● Molecule 36: 18S ribosomal RNA



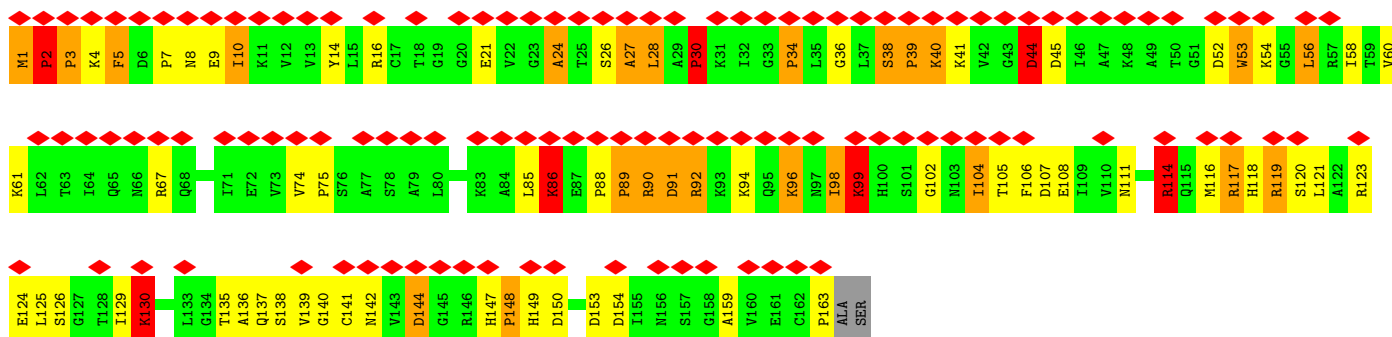
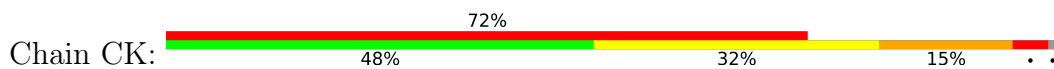
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C1335	C549	U609	A669	C729	G789	C850	G910	A972	G1033	A1093	C1153	C1215	G1275	C1335
G1336	C550	G610	A670	C730	G790	C851	C911	C973	A1034	C1094	U1154	C1216	U1276	G1336
C1337	U611	U612	A671	C731	C791	C852	C912	C974	A1035	G1095	U1155	A1217	G1277	C1337
G1338	U613	G614	A672	C732	C792	C853	A913	G975	A1036	G1096	U1156	C1218	U1278	G1338
U1339	U614	C615	A673	C733	C793	A854	U914	G976	G1037	G1097	G1157	C1219	C1279	U1339
C1340	C616	U615	A674	C734	C794	G855	G915	C977	U1038	C1098	G1158	A1220	G1280	U1340
U1341	U616	A555	A675	C735	C795	G856	A916	G978	C1039	G1099	U1160	G1221	G1281	C1341
C1342	G617	U556	A676	C736	C796	G857	U917	C979	G1040	C1100	U1161	G1222	A1282	U1342
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C1346	C621	A560	A680	C740	C800	G861	G921	A983	G1044	G1104	G1165	G1226	G1286	U1346
U1347	C622	U561	A681	C741	C801	A862	A922	G984	U1045	U1045	G1166	G1227	A1287	U1347
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C1362	C638	U577	A696	C756	C816	A877	U939	G999	A1060	U1120	A1181	U1242	A1302	U1362
U1363	U639	C570	A697	C757	C817	A878	U940	A1001	U1061	U1121	A1182	U1243	C1303	U1363
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C1372	U648	A587	A706	C766	C826	A887	C949	G1010	A1070	C1130	U1192	U1253	A1313	U1372
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C1378	U654	A593	A712	C772	C832	A893	U955	G1016	A1076	U1136	U1198	A1259	G1318	U1378
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U1391			A725	C785	C845	A906	U968	U962	G1029	U1147	G1211	C1272	C1331	U1392
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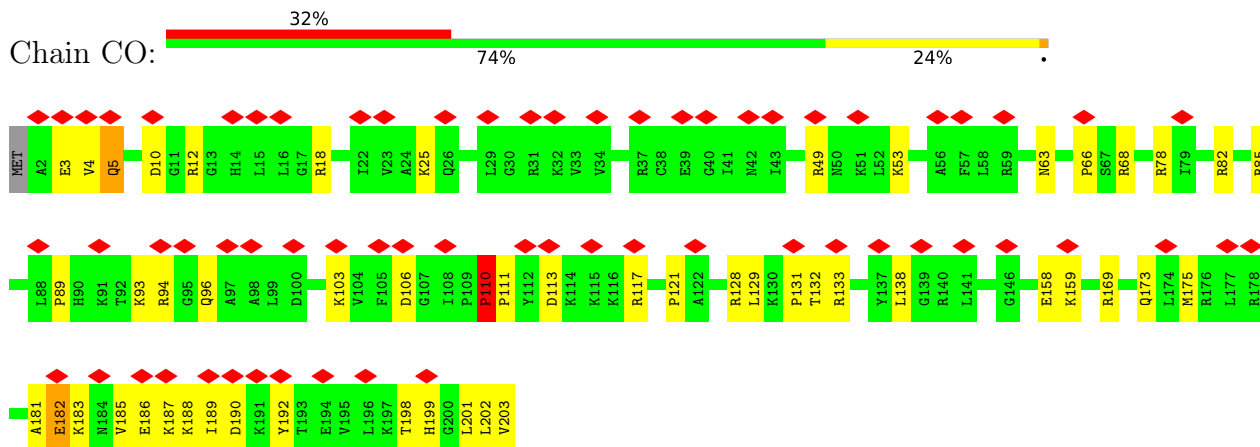
• Molecule 39: 60S acidic ribosomal protein P0



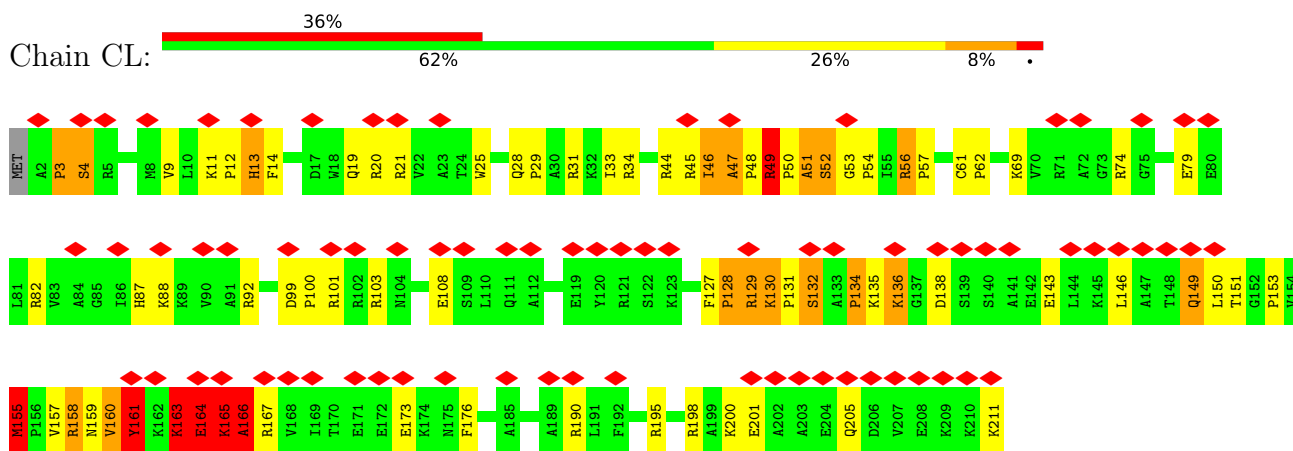
• Molecule 40: 60S ribosomal protein L12



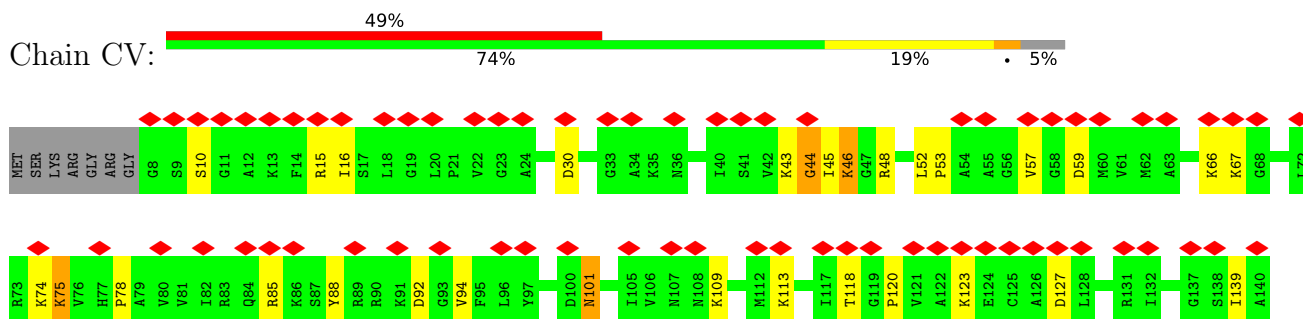
- Molecule 41: 60S ribosomal protein L13a



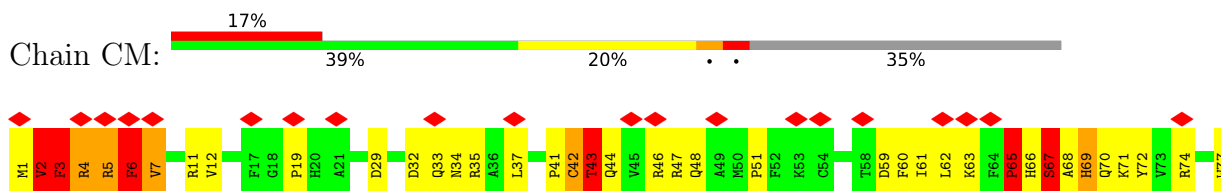
- Molecule 42: 60S ribosomal protein L13

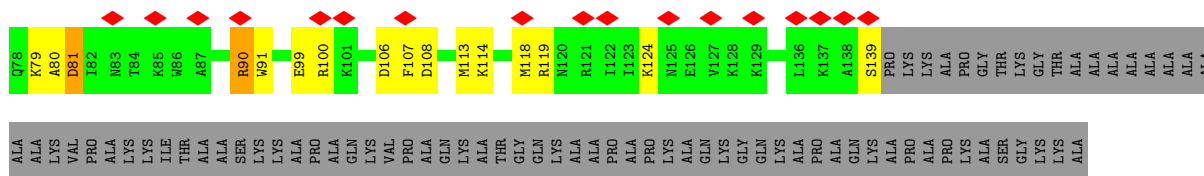


- Molecule 43: 60S ribosomal protein L23

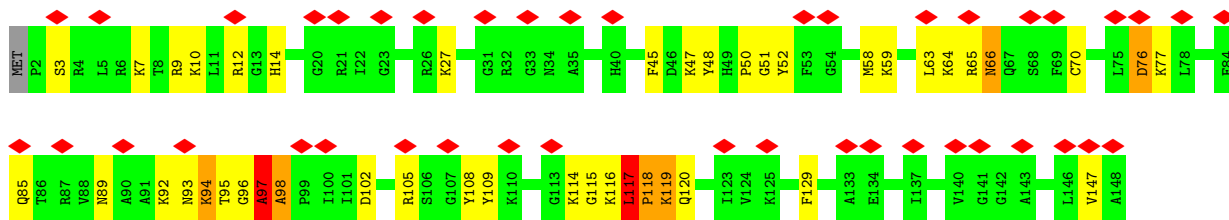


- Molecule 44: 60S ribosomal protein L14

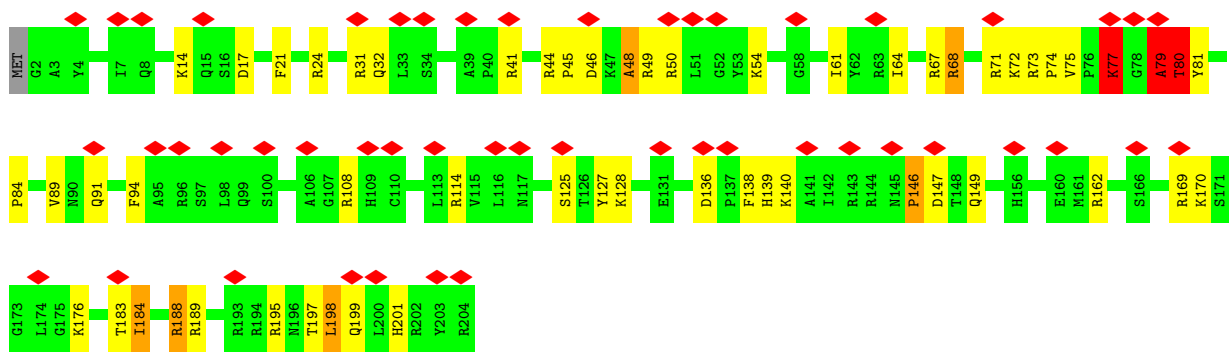
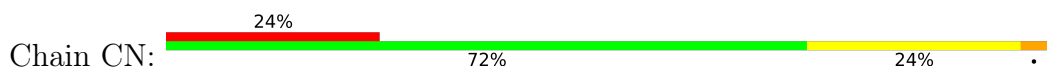




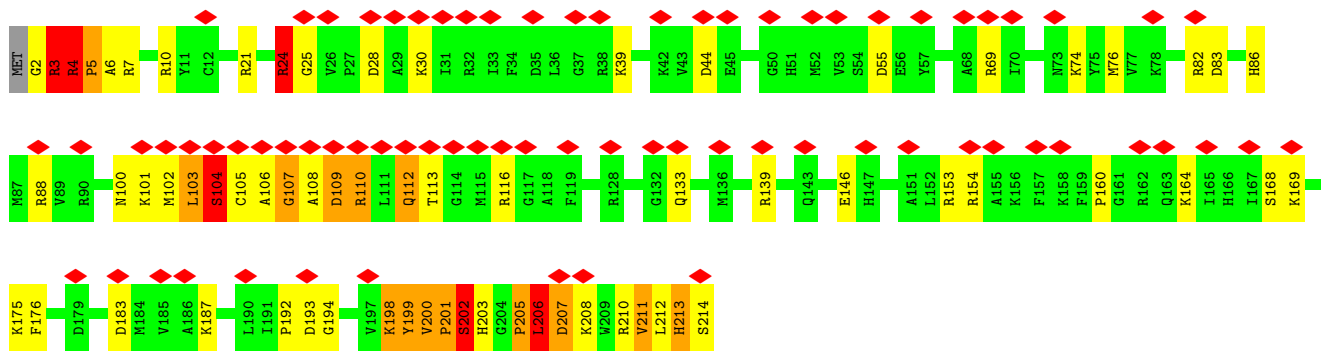
• Molecule 45: 60S ribosomal protein L27a



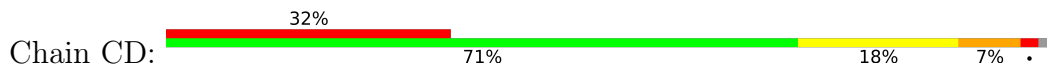
• Molecule 46: 60S ribosomal protein L15

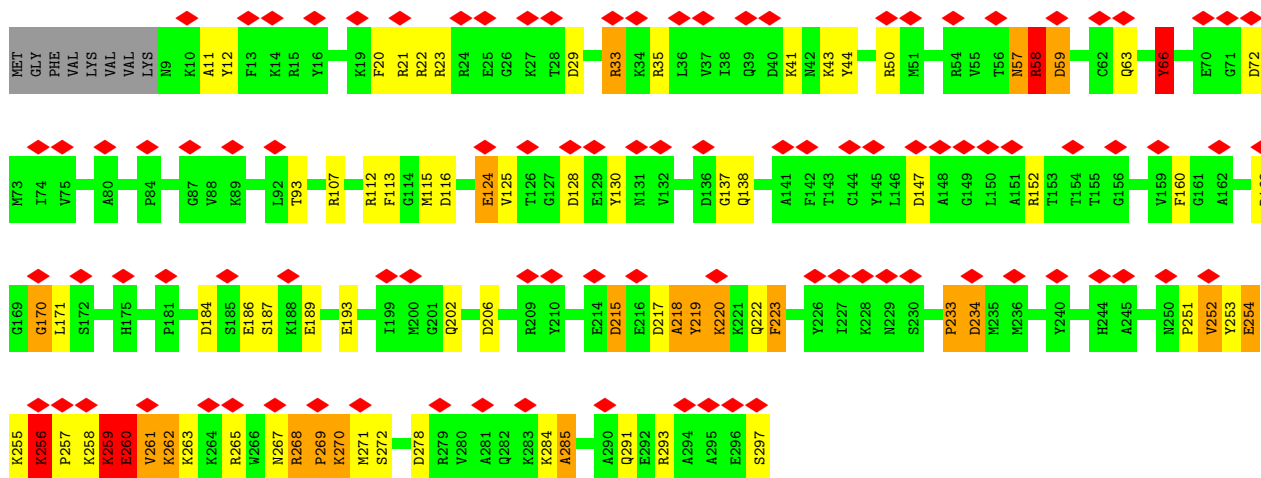


• Molecule 47: 60S ribosomal protein L10-like

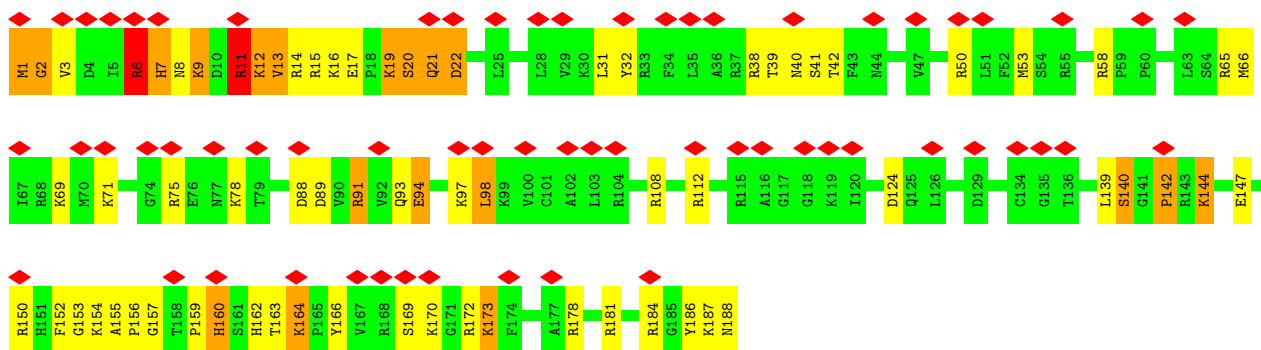


• Molecule 48: 60S ribosomal protein L5

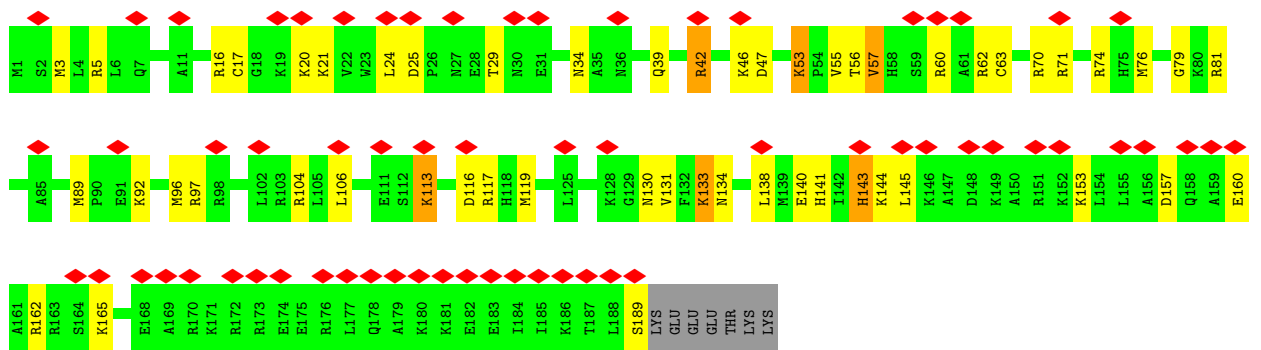




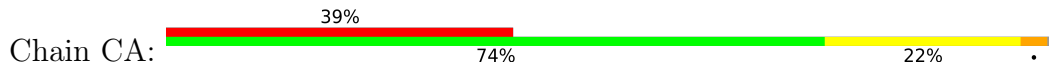
• Molecule 49: 60S ribosomal protein L18

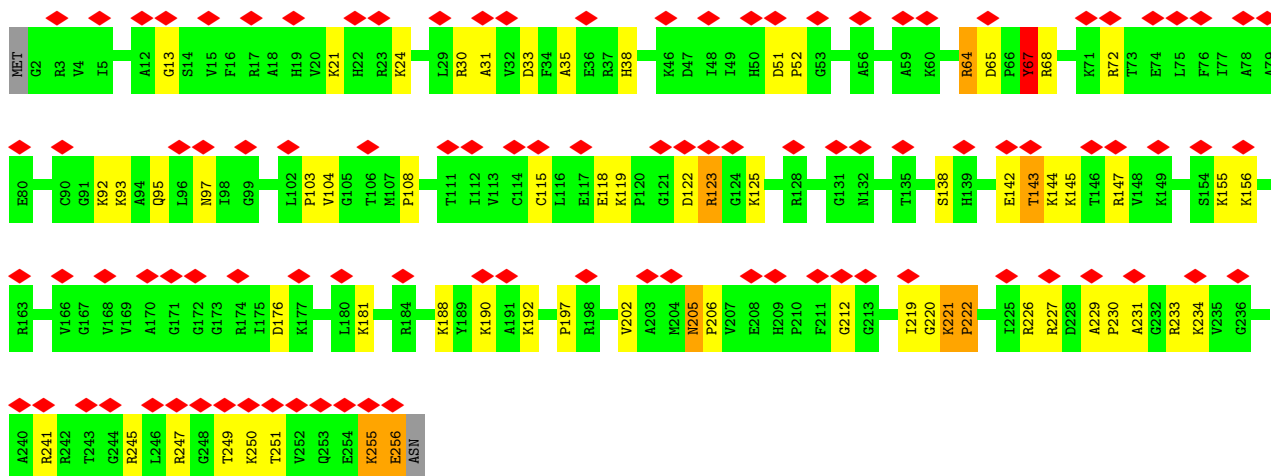


• Molecule 50: 60S ribosomal protein L19

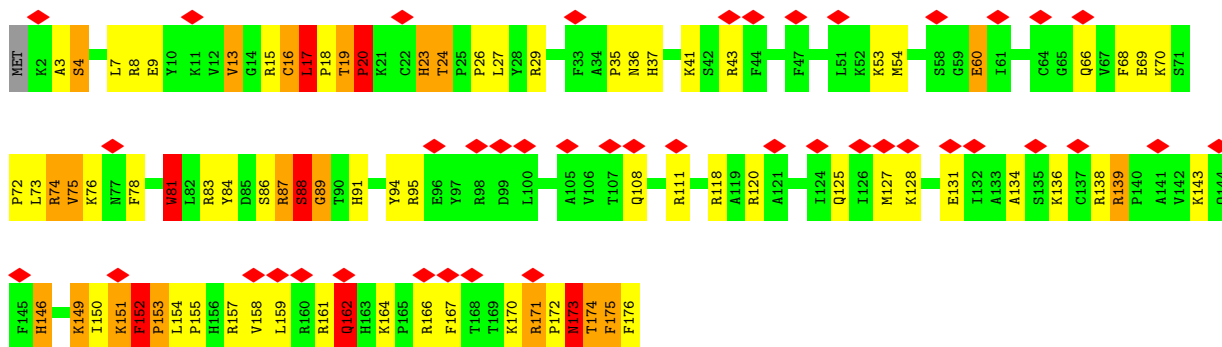


• Molecule 51: 60S ribosomal protein L8

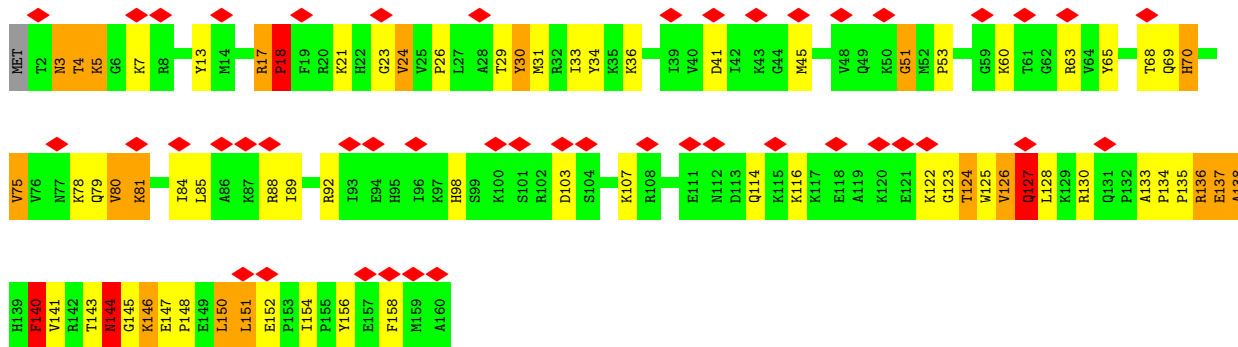




• Molecule 52: 60S ribosomal protein L18a

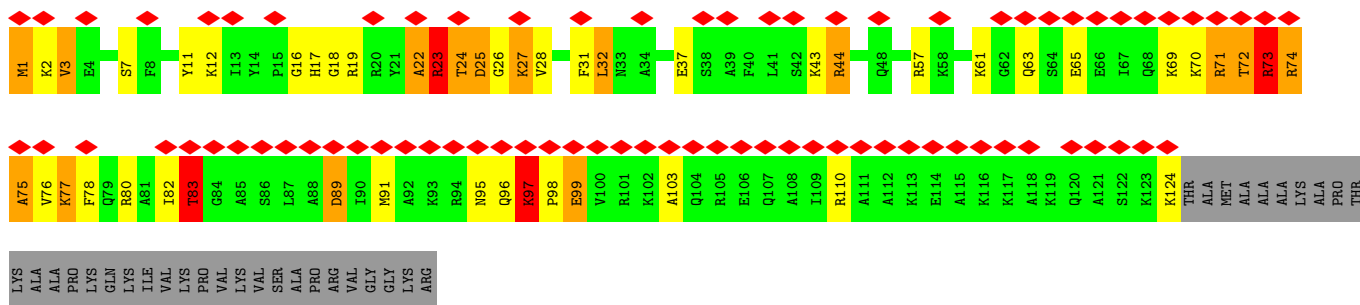


• Molecule 53: 60S ribosomal protein L21

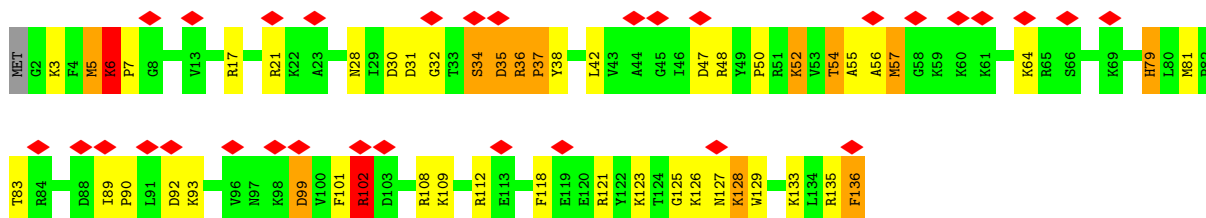


• Molecule 54: 60S ribosomal protein L17

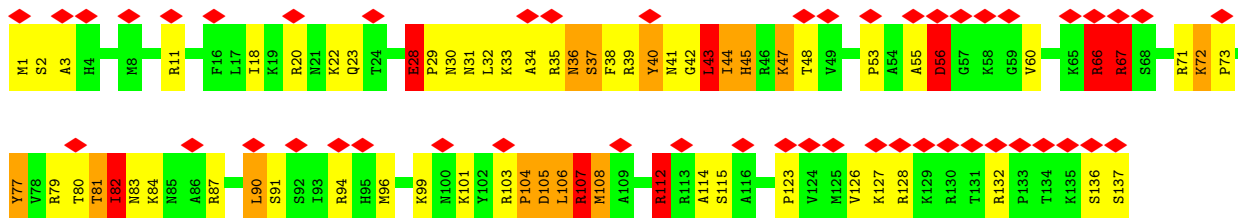




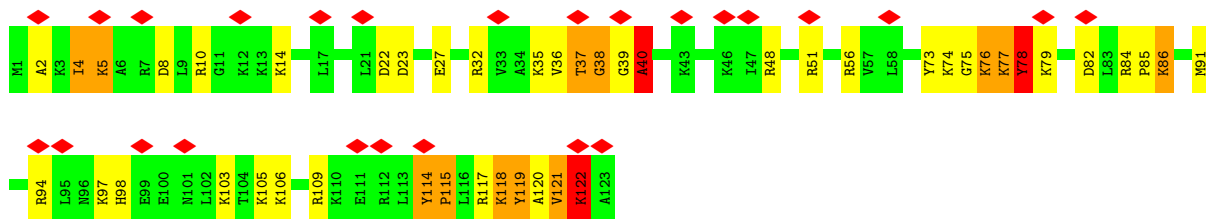
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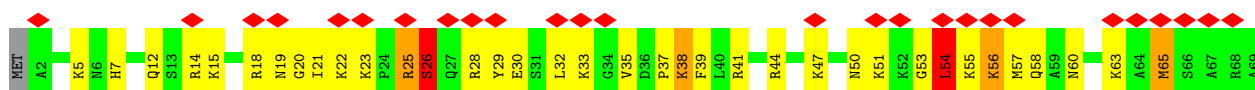
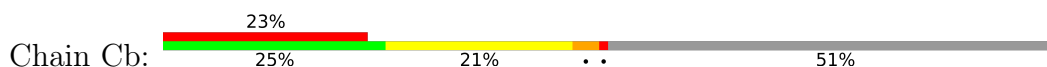
• Molecule 60: 60S ribosomal protein L28

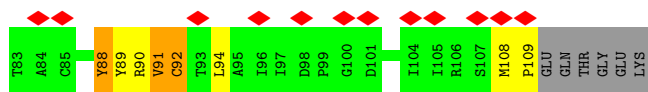


• Molecule 61: 60S ribosomal protein L35

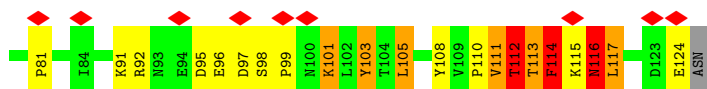
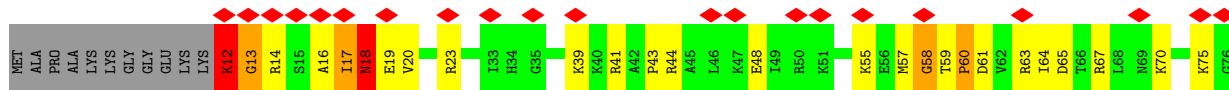


• Molecule 62: 60S ribosomal protein L29

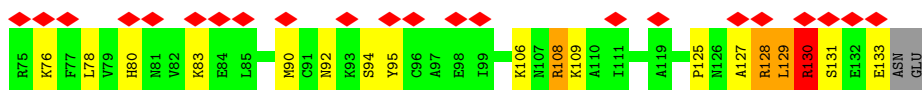




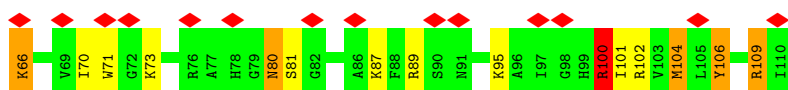
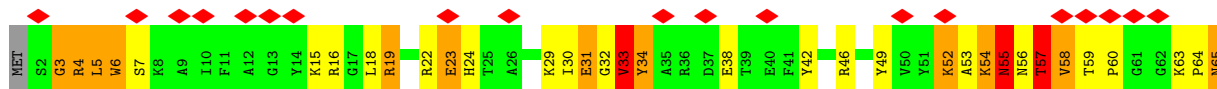
• Molecule 66: 60S ribosomal protein L31



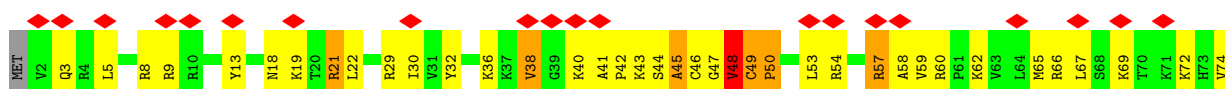
• Molecule 67: 60S ribosomal protein L32



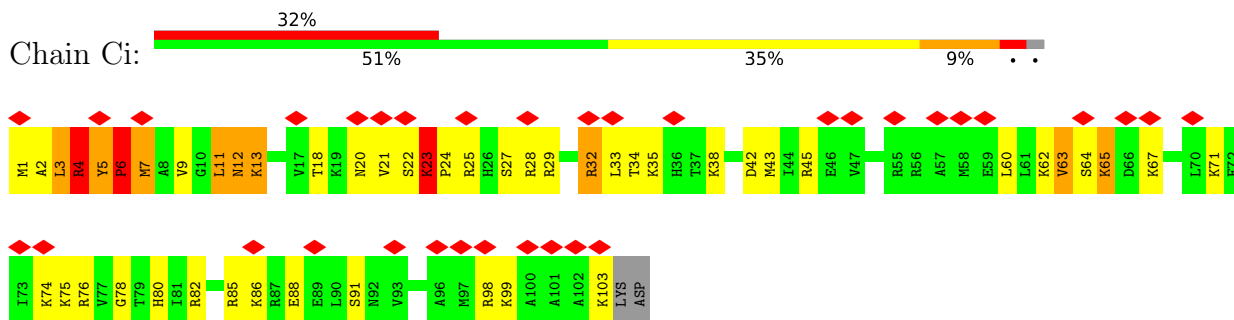
• Molecule 68: 60S ribosomal protein L35a



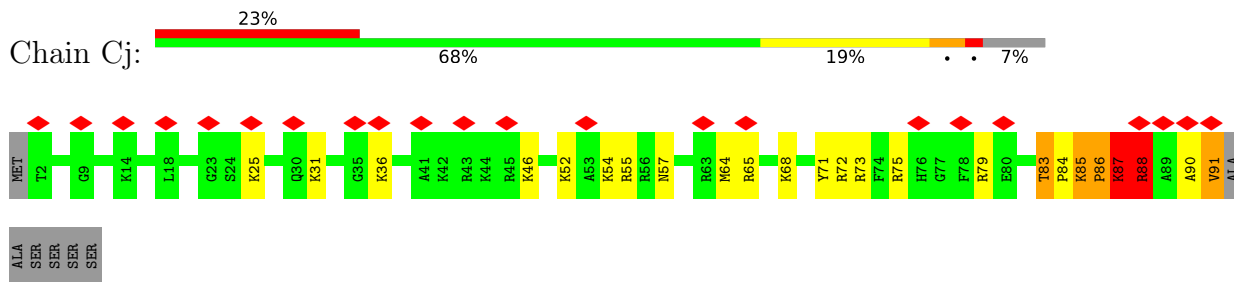
• Molecule 69: 60S ribosomal protein L34



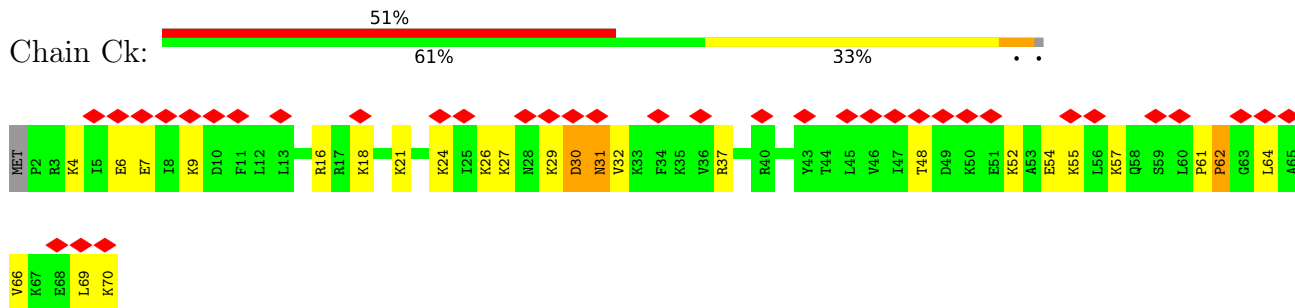
• Molecule 70: 60S ribosomal protein L36



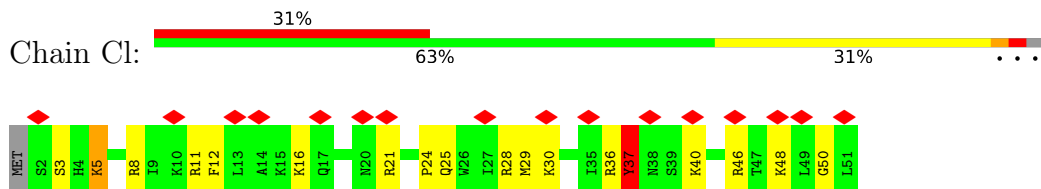
• Molecule 71: 60S ribosomal protein L37



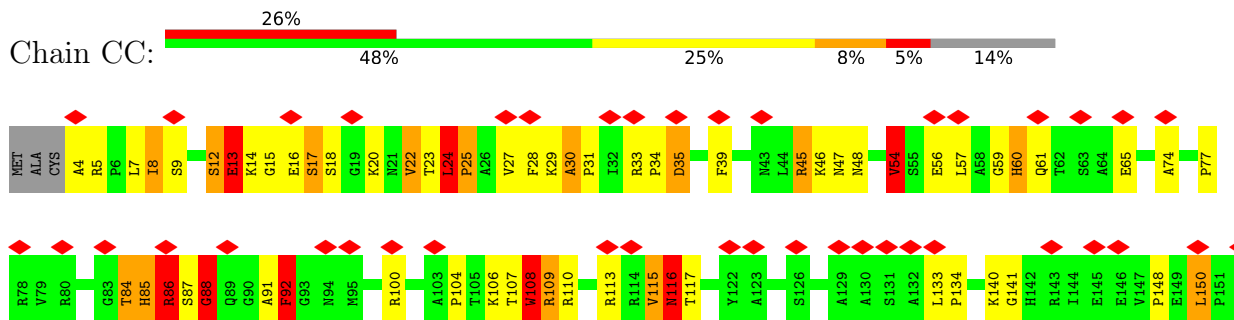
• Molecule 72: 60S ribosomal protein L38

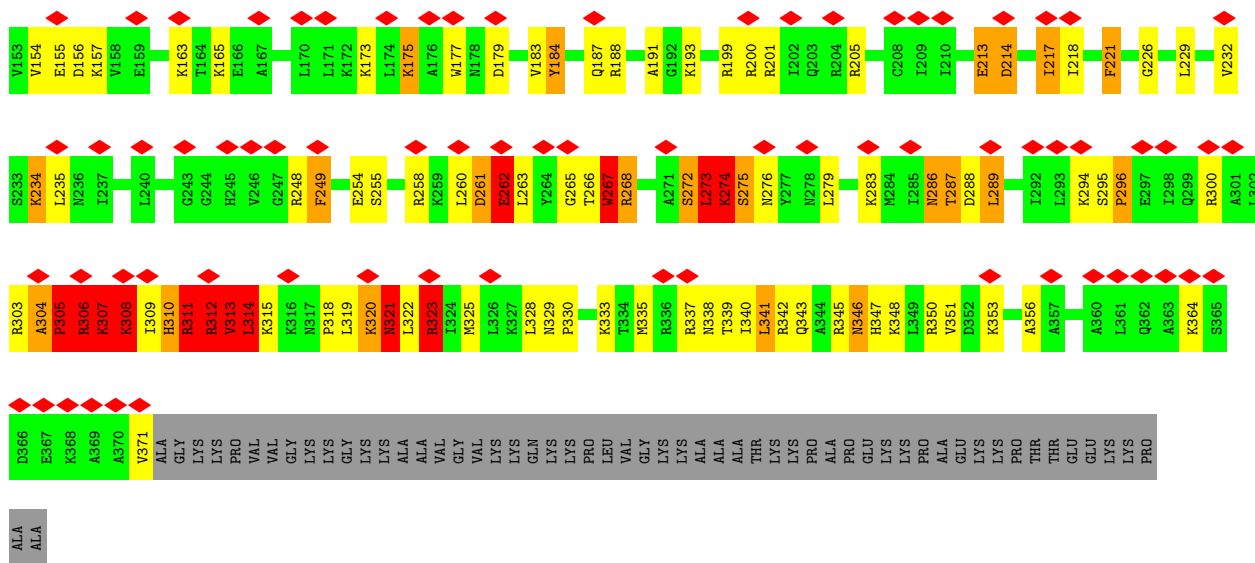


• Molecule 73: 60S ribosomal protein L39

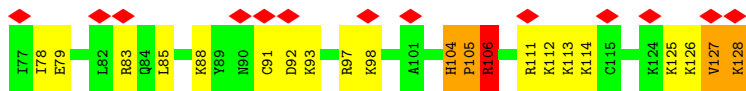


• Molecule 74: 60S ribosomal protein L4

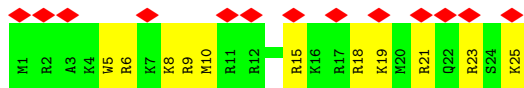




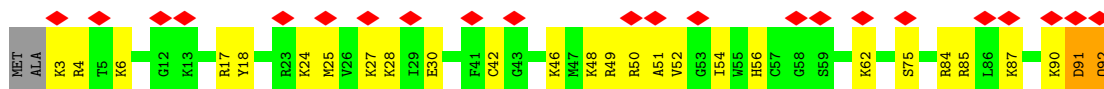
• Molecule 75: 60S ribosomal protein L40



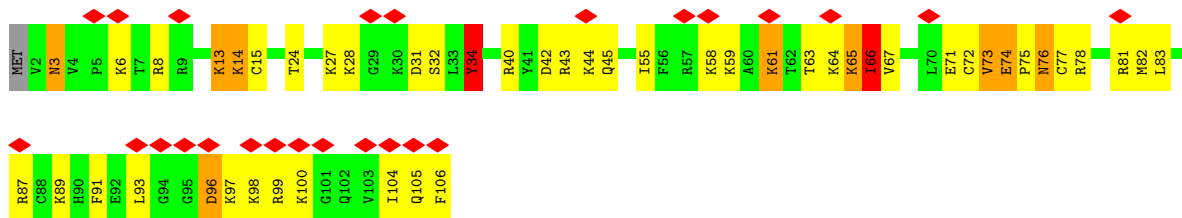
• Molecule 76: 60S ribosomal protein L41



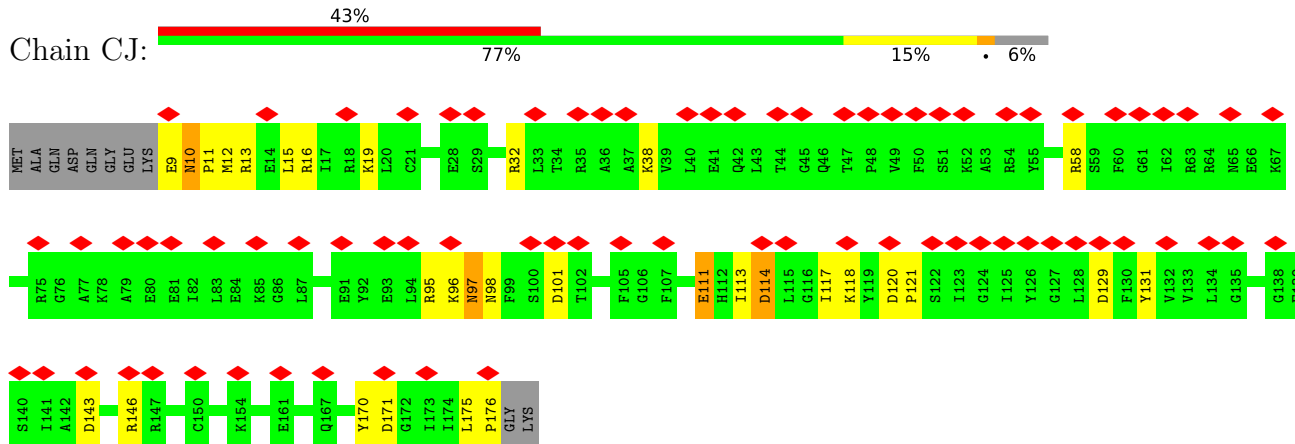
• Molecule 77: 60S ribosomal protein L37a



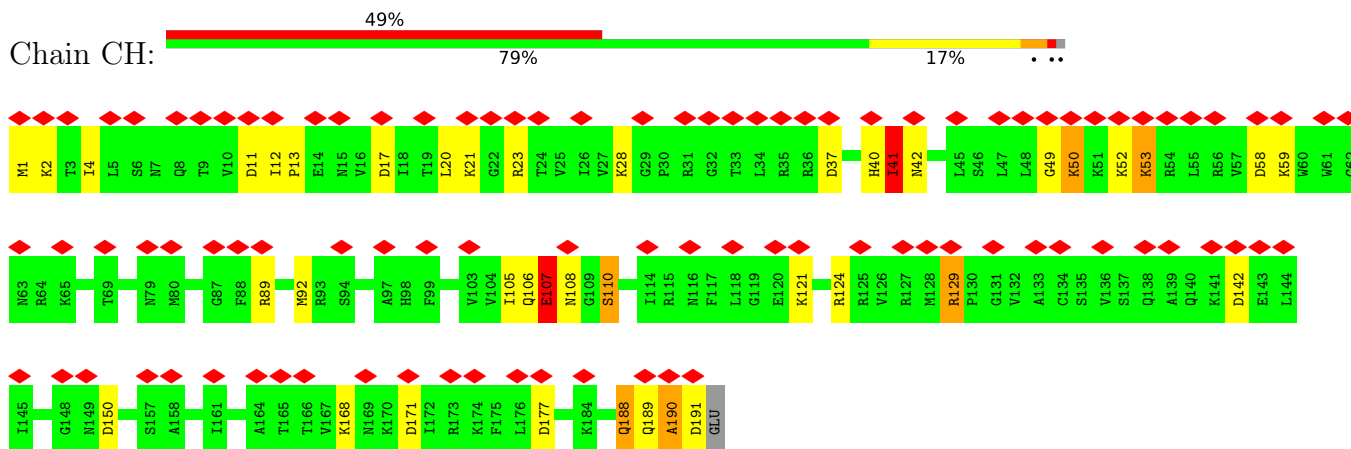
• Molecule 78: 60S ribosomal protein L36a



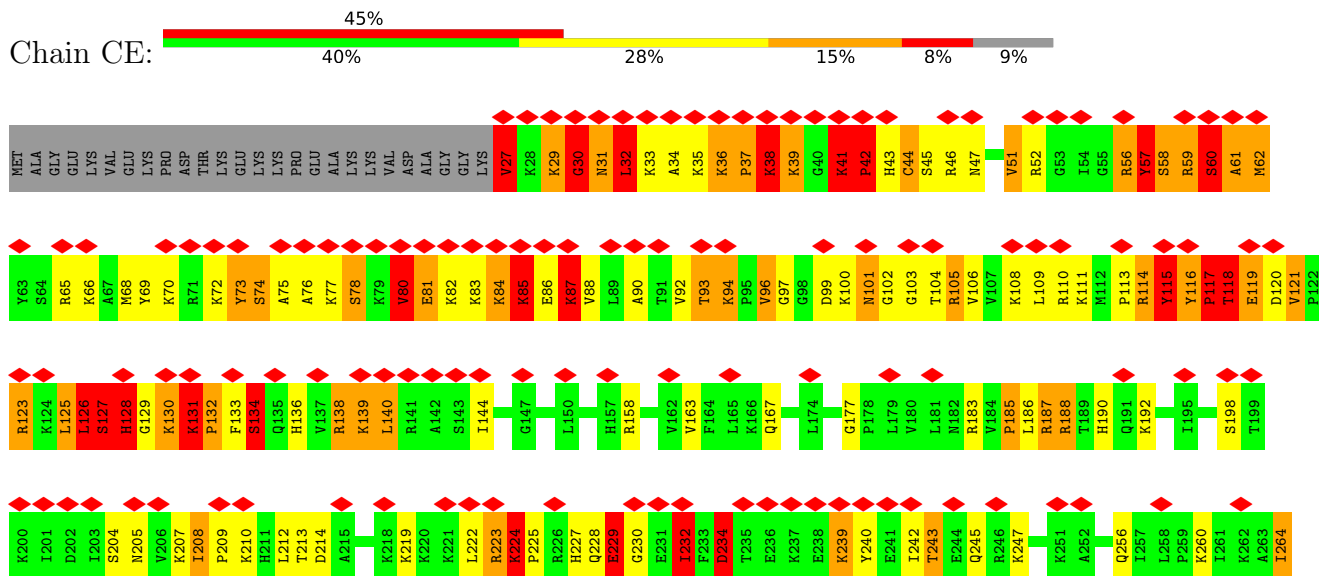
• Molecule 79: 60S ribosomal protein L11

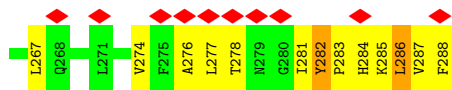


• Molecule 80: 60S ribosomal protein L9

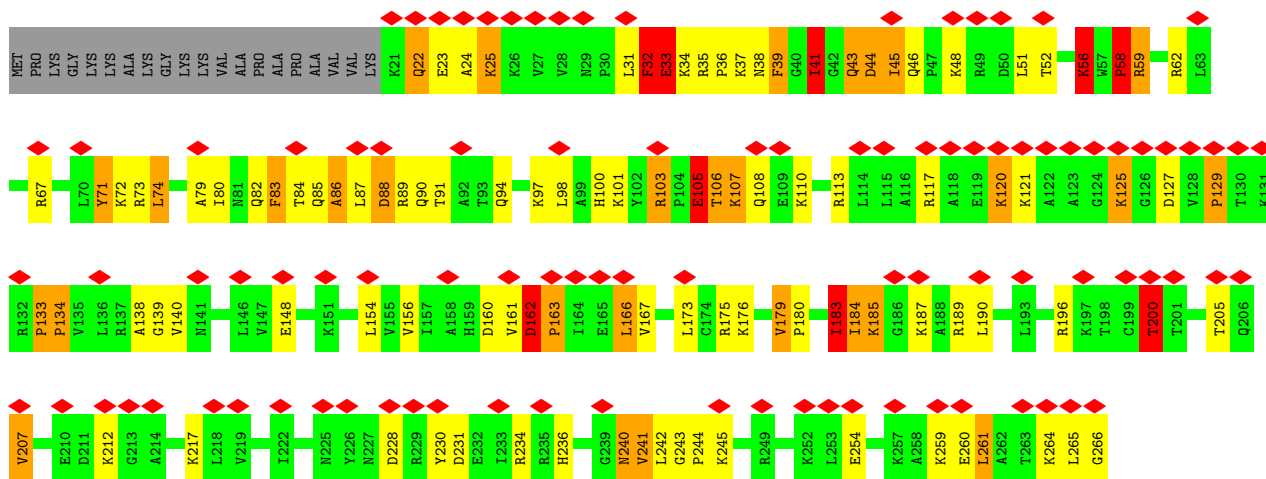


• Molecule 81: 60S ribosomal protein L6

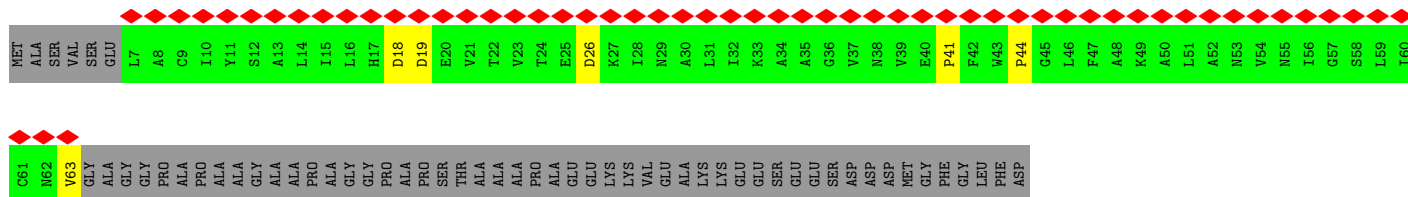




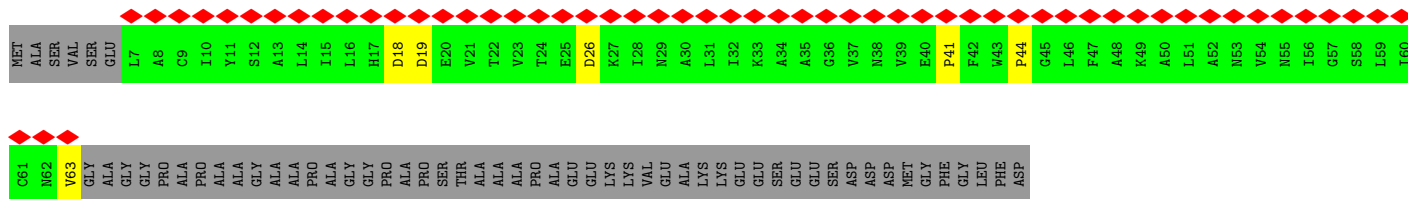
• Molecule 82: 60S ribosomal protein L7a



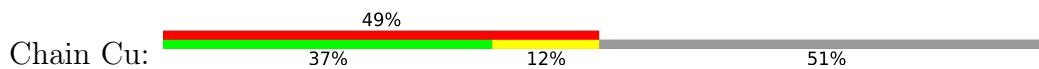
• Molecule 83: 60S acidic ribosomal protein P1



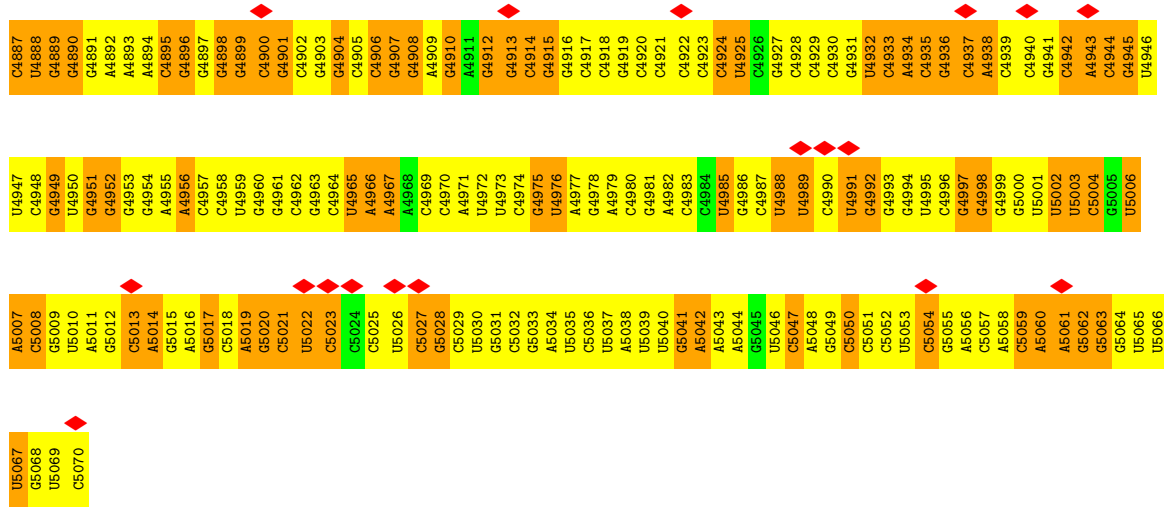
• Molecule 83: 60S acidic ribosomal protein P1



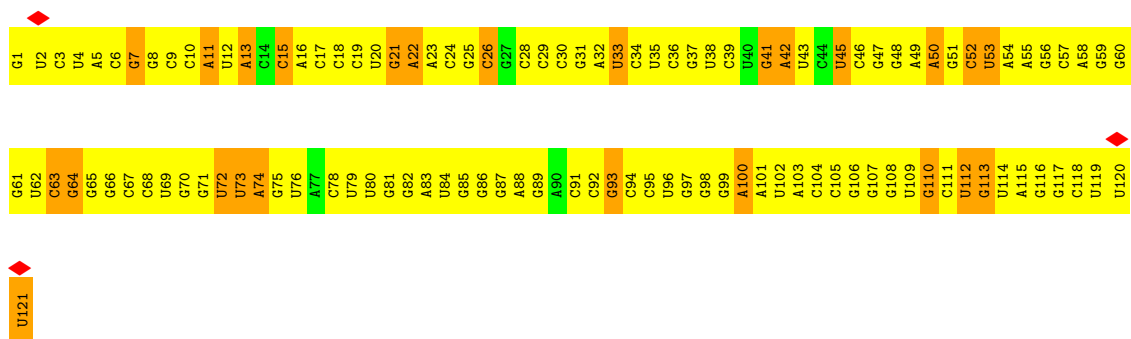
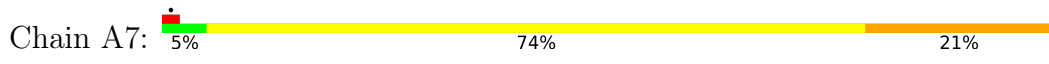
• Molecule 84: 60S acidic ribosomal protein P2



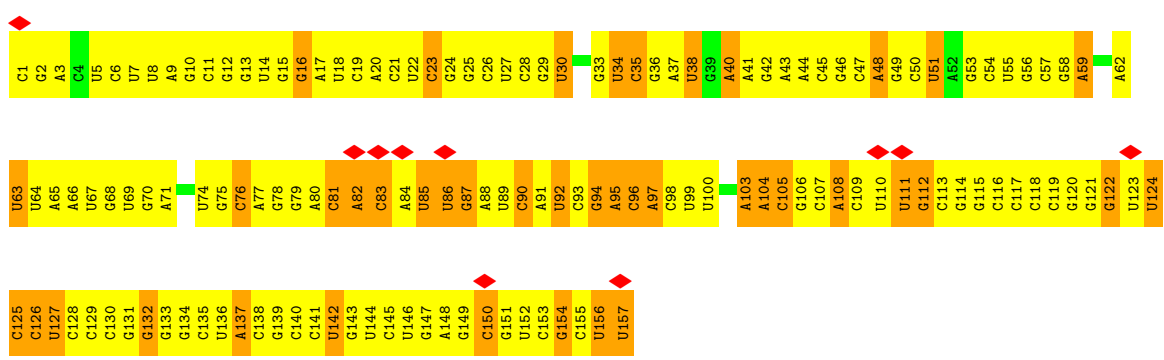
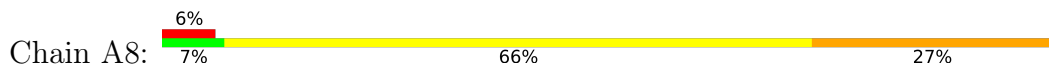
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U971	C972	G973	C974	C975	G976	C977	G978	C979	U980	C981	U982	C983	C984	C985	C986	C987	U988	C989	C990	C991	C992	C993	A994	A995	C996	U997	C998	C999	A1000	C1001	C1002	C1003	C1004	C1005	G1006	C1007	G1008	G1009	G1010	G1011	A1012	U1013	U1014	U1015	C1016	C1017	C1018	C1019	C1020	C1021	C1022	C1023	C1024	C1025	C1026	C1027	C1028	C1029	C1030																																																																																																																								
G911	G912	G913	U914	C915	G916	G917	G918	G919	G920	G921	G922	G923	G924	G925	G926	G927	G928	G929	G930	C931	A932	C933	A934	A935	C936	U937	C938	G939	C940	C941	G942	A943	U944	U945	C946	C947	C948	C949	C950	G951	G952	C953	C954	G955	A956	G957	G958	G959	A960	C961	C962	C963	A964	G965	A966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999																																																																																											
G871	C872	C873	G874	C875	G876	C877	C878	C879	G880	G881	G882	G883	G884	G885	A886	U887	U888	U889	C890	C891	A892	C893	U894	G895	C896	G897	G898	C899	G900	G901	U902	G903	C904	C905	C906	C907	C908	C909	C910	C911	C912	C913	C914	C915	C916	C917	C918	C919	C920	C921	C922	C923	C924	C925	C926	C927	C928	C929	C930	C931	C932	C933	C934	C935	C936	C937	C938	C939	C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999																																																			
G731	A732	A733	G734	G735	C736	C737	C738	G739	G740	C741	G742	G743	G744	G745	A746	U747	G748	G749	U750	G751	A752	C753	U754	C755	G756	G757	C758	G759	G760	G761	C762	C763	C764	C765	G766	U767	C768	C769	C770	C771	U772	G773	C774	U775	C776	C777	C778	U779	C780	C781	C782	C783	C784	C785	C786	C787	C788	C789	C790	C791	C792	C793	C794	C795	C796	C797	C798	C799	C800	C801	C802	C803	C804	C805	C806	C807	C808	C809	C810	C811	C812	C813	C814	C815	C816	C817	C818	C819	C820	C821	C822	C823	C824	C825	C826	C827	C828	C829	C830	C831	C832	C833	C834	C835	C836	C837	C838	C839	C840	C841	C842	C843	C844	C845	C846	C847	C848	C849	C850	C851	C852	C853	C854	C855	C856	C857	C858	C859	C860	C861	C862	C863	C864	C865	C866	C867	C868	C869	C870	C871	C872	C873	C874	C875	C876	C877	C878	C879	C880	C881	C882	C883	C884	C885	C886	C887	C888	C889	C890	C891	C892	C893	C894	C895	C896	C897	C898	C899	C900	C901	C902	C903	C904	C905	C906	C907	C908	C909	C910
G611	G612	G613	U614	G615	G616	G617	C618	G619	G620	G621	C622	G623	G624	G625	G626	C627	C628	G629	G630	G631	G632	G633	U634	G635	G636	G637	G638	U639	C640	G641	G642	C643	G644	G645	G646	G647	G648	A649	C650	C651	U652	C653	C654	C655	C656	C657	C658	C659	A660	C661	C662	G663	G664	G665	G666	A667	C668	C669	G670																																																																																																																								



• Molecule 86: 5S ribosomal RNA



• Molecule 87: 5.8S ribosomal RNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	343343	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	each subvolume	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	90000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	3.075	Depositor
Minimum map value	-0.773	Depositor
Average map value	0.080	Depositor
Map value standard deviation	0.258	Depositor
Recommended contour level	0.7	Depositor
Map size (\AA)	309.375, 339.07498, 322.9875	wwPDB
Map dimensions	274, 250, 261	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.2375, 1.2375, 1.2375	Depositor

5 Model quality i

5.1 Standard geometry i

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	Az	1.04	25/6804 (0.4%)	1.36	96/9189 (1.0%)
2	Ag	0.91	1/2493 (0.0%)	1.29	27/3394 (0.8%)
3	AU	0.96	1/832 (0.1%)	1.59	30/1117 (2.7%)
4	AK	1.21	7/851 (0.8%)	1.78	32/1147 (2.8%)
5	AO	0.61	0/1029	1.05	12/1380 (0.9%)
6	AX	0.99	8/1124 (0.7%)	1.24	21/1500 (1.4%)
7	AM	0.99	3/970 (0.3%)	1.22	6/1300 (0.5%)
8	AS	1.21	11/1157 (1.0%)	1.60	36/1548 (2.3%)
9	Ad	0.89	2/455 (0.4%)	0.79	3/603 (0.5%)
10	AN	0.82	4/1232 (0.3%)	1.00	14/1656 (0.8%)
11	AL	1.10	6/1319 (0.5%)	1.40	17/1761 (1.0%)
12	AR	1.23	10/1031 (1.0%)	1.64	30/1383 (2.2%)
13	AP	0.74	1/1081 (0.1%)	1.43	32/1440 (2.2%)
14	AT	0.96	3/1119 (0.3%)	1.27	13/1499 (0.9%)
15	AB	0.79	7/1774 (0.4%)	1.08	23/2372 (1.0%)
16	AA	0.76	2/1679 (0.1%)	1.05	17/2283 (0.7%)
17	AV	1.20	6/631 (1.0%)	1.69	24/844 (2.8%)
18	AY	0.92	3/1040 (0.3%)	1.42	21/1382 (1.5%)
19	AZ	1.04	6/604 (1.0%)	1.35	17/810 (2.1%)
20	Aa	0.96	5/863 (0.6%)	1.62	21/1159 (1.8%)
21	Ab	1.02	2/673 (0.3%)	1.36	13/902 (1.4%)
22	Ac	0.80	1/508 (0.2%)	1.17	8/680 (1.2%)
23	AD	1.03	6/1793 (0.3%)	1.30	22/2414 (0.9%)
24	Ae	1.50	5/474 (1.1%)	1.47	11/623 (1.8%)
25	Af	1.10	4/593 (0.7%)	1.49	16/786 (2.0%)
26	AJ	1.27	19/1522 (1.2%)	1.51	42/2031 (2.1%)
27	AE	0.76	4/2126 (0.2%)	0.98	23/2859 (0.8%)
28	AC	1.03	7/1788 (0.4%)	1.26	22/2414 (0.9%)
29	AG	1.05	17/1946 (0.9%)	1.28	29/2590 (1.1%)
30	AF	0.99	5/1531 (0.3%)	1.21	17/2059 (0.8%)
31	AH	1.09	8/1553 (0.5%)	2.20	29/2079 (1.4%)
32	AW	0.84	4/1051 (0.4%)	0.85	9/1406 (0.6%)
33	AI	1.11	7/1715 (0.4%)	1.51	33/2287 (1.4%)
34	AQ	0.70	3/1142 (0.3%)	1.11	15/1528 (1.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	Ah	1.51	9/572 (1.6%)	2.04	32/752 (4.3%)
36	B2	2.42	1909/42821 (4.5%)	2.23	2680/66606 (4.0%)
37	BC	2.31	82/1795 (4.6%)	2.06	106/2798 (3.8%)
38	Cz	1.50	16/1768 (0.9%)	1.87	43/2368 (1.8%)
39	Cq	1.02	14/2176 (0.6%)	1.48	58/2951 (2.0%)
40	CK	1.65	17/1257 (1.4%)	2.18	72/1697 (4.2%)
41	CO	0.83	5/1687 (0.3%)	0.87	12/2257 (0.5%)
42	CL	0.99	10/1732 (0.6%)	1.44	41/2315 (1.8%)
43	CV	0.71	3/1003 (0.3%)	0.84	6/1345 (0.4%)
44	CM	0.97	4/1161 (0.3%)	1.45	35/1552 (2.3%)
45	Ca	1.08	14/1191 (1.2%)	1.21	15/1591 (0.9%)
46	CN	0.71	3/1746 (0.2%)	0.96	16/2338 (0.7%)
47	CI	1.23	17/1751 (1.0%)	1.39	51/2340 (2.2%)
48	CD	0.90	11/2398 (0.5%)	1.30	50/3210 (1.6%)
49	CQ	1.40	14/1545 (0.9%)	1.74	36/2062 (1.7%)
50	CR	0.83	5/1596 (0.3%)	0.93	12/2109 (0.6%)
51	CA	0.77	9/1995 (0.5%)	1.07	18/2674 (0.7%)
52	CS	1.10	6/1493 (0.4%)	1.61	40/2003 (2.0%)
53	CT	1.33	17/1326 (1.3%)	1.51	35/1770 (2.0%)
54	CP	0.98	10/1259 (0.8%)	1.19	16/1689 (0.9%)
55	CU	0.89	4/935 (0.4%)	1.25	17/1253 (1.4%)
56	CX	1.19	7/1011 (0.7%)	1.51	29/1356 (2.1%)
57	CY	0.91	6/1124 (0.5%)	1.09	14/1494 (0.9%)
58	CW	1.29	14/1030 (1.4%)	1.76	36/1364 (2.6%)
59	CZ	1.01	6/1130 (0.5%)	1.29	21/1507 (1.4%)
60	Cr	1.43	16/1120 (1.4%)	2.15	65/1497 (4.3%)
61	Ch	0.87	6/1031 (0.6%)	1.39	26/1361 (1.9%)
62	Cb	1.13	4/646 (0.6%)	1.23	12/853 (1.4%)
63	CB	1.06	13/3270 (0.4%)	1.43	35/4377 (0.8%)
64	CF	1.18	11/1945 (0.6%)	1.27	24/2589 (0.9%)
65	Cc	1.04	4/787 (0.5%)	1.12	8/1057 (0.8%)
66	Cd	1.18	6/946 (0.6%)	1.38	26/1272 (2.0%)
67	Ce	0.98	8/1114 (0.7%)	1.34	20/1485 (1.3%)
68	Cf	1.21	3/895 (0.3%)	1.76	29/1198 (2.4%)
69	Cg	1.23	8/916 (0.9%)	1.39	20/1220 (1.6%)
70	Ci	1.17	3/851 (0.4%)	1.25	13/1125 (1.2%)
71	Cj	0.71	1/748 (0.1%)	0.89	4/990 (0.4%)
72	Ck	1.06	3/575 (0.5%)	1.09	4/761 (0.5%)
73	Cl	1.26	8/454 (1.8%)	1.39	6/599 (1.0%)
74	CC	1.25	30/2979 (1.0%)	1.72	111/4001 (2.8%)
75	Cm	1.07	2/435 (0.5%)	1.04	6/575 (1.0%)
76	Cn	1.12	2/241 (0.8%)	0.46	1/305 (0.3%)
77	Cp	0.88	3/713 (0.4%)	0.93	4/946 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
78	Co	1.11	6/877 (0.7%)	1.26	10/1156 (0.9%)
79	CJ	0.51	1/1372 (0.1%)	0.76	8/1836 (0.4%)
80	CH	0.67	4/1545 (0.3%)	0.85	9/2077 (0.4%)
81	CE	1.59	39/2153 (1.8%)	2.38	153/2878 (5.3%)
82	CG	1.26	10/2006 (0.5%)	1.39	43/2697 (1.6%)
83	Cs	0.73	1/433 (0.2%)	0.84	6/592 (1.0%)
83	Ct	0.72	1/433 (0.2%)	0.85	6/592 (1.0%)
84	Cu	0.74	1/421 (0.2%)	1.08	10/566 (1.8%)
84	Cv	0.71	1/421 (0.2%)	1.26	9/566 (1.6%)
85	A5	2.47	4305/94517 (4.6%)	2.18	5688/146662 (3.9%)
86	A7	2.55	144/2880 (5.0%)	2.04	177/4489 (3.9%)
87	A8	2.37	168/3723 (4.5%)	2.08	216/5800 (3.7%)
All	All	1.98	7227/254452 (2.8%)	1.92	11021/371948 (3.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	Az	2	41
2	Ag	0	13
3	AU	0	8
4	AK	0	11
5	AO	0	1
6	AX	0	4
7	AM	0	1
8	AS	1	10
10	AN	0	4
11	AL	0	7
12	AR	1	5
13	AP	0	10
14	AT	1	6
15	AB	0	4
16	AA	0	11
17	AV	0	11
18	AY	1	6
19	AZ	0	6
20	Aa	0	3
21	Ab	0	3
23	AD	0	5
24	Ae	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
25	Af	0	6
26	AJ	1	11
27	AE	1	2
28	AC	1	7
29	AG	0	1
30	AF	0	3
31	AH	0	10
32	AW	0	2
33	AI	0	8
34	AQ	0	4
35	Ah	0	4
36	B2	6	0
37	BC	1	0
38	Cz	2	6
39	Cq	0	14
40	CK	1	8
41	CO	0	2
42	CL	0	19
43	CV	0	2
44	CM	0	8
45	Ca	1	9
46	CN	1	3
47	CI	0	13
48	CD	1	15
49	CQ	0	10
50	CR	0	2
51	CA	0	1
52	CS	0	12
53	CT	0	13
54	CP	0	2
55	CU	0	4
56	CX	0	5
57	CY	0	6
58	CW	2	11
59	CZ	1	5
60	Cr	0	14
61	Ch	1	8
62	Cb	0	3
63	CB	0	18
64	CF	1	4
65	Cc	0	3
66	Cd	0	10

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Mol	Chain	#Chirality outliers	#Planarity outliers
67	Ce	1	5
68	Cf	0	14
69	Cg	0	4
70	Ci	0	6
71	Cj	0	1
72	Ck	0	2
74	CC	0	29
75	Cm	0	4
77	Cp	0	1
78	Co	0	4
80	CH	0	8
81	CE	5	36
82	CG	1	10
84	Cu	1	0
85	A5	7	0
All	All	42	587

The worst 5 of 7227 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	A5	1359	G	C2'-C1'	-36.90	1.12	1.53
49	CQ	6	ARG	NE-CZ	30.14	1.72	1.33
40	CK	2	PRO	CA-CB	28.43	2.10	1.53
85	A5	1266	G	C2'-C1'	-27.46	1.23	1.53
74	CC	348	LYS	C-N	-26.18	0.73	1.34

The worst 5 of 11021 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	AH	109	ARG	NE-CZ-NH2	-53.46	93.57	120.30
31	AH	109	ARG	NE-CZ-NH1	42.77	141.69	120.30
63	CB	248	LEU	O-C-N	-38.89	60.47	122.70
36	B2	1780	G	P-O3'-C3'	38.27	165.63	119.70
49	CQ	6	ARG	NE-CZ-NH2	-36.36	102.12	120.30

5 of 42 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	Az	73	THR	CA
1	Az	854	PHE	CA
8	AS	92	ASP	CA
12	AR	3	ARG	CA

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Mol	Chain	Res	Type	Atom
14	AT	93	SER	CA

5 of 587 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	Az	102	LEU	Mainchain
1	Az	108	HIS	Peptide
1	Az	4	PHE	Peptide
1	Az	42	LYS	Mainchain
1	Az	55	ARG	Peptide

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	
1	Az	854/858 (100%)	766 (90%)	51 (6%)	37 (4%)	2	24
2	Ag	311/317 (98%)	271 (87%)	23 (7%)	17 (6%)	2	21
3	AU	102/119 (86%)	77 (76%)	9 (9%)	16 (16%)	0	4
4	AK	96/165 (58%)	67 (70%)	11 (12%)	18 (19%)	0	2
5	AO	134/151 (89%)	101 (75%)	14 (10%)	19 (14%)	0	4
6	AX	140/143 (98%)	121 (86%)	11 (8%)	8 (6%)	1	20
7	AM	122/132 (92%)	85 (70%)	16 (13%)	21 (17%)	0	3
8	AS	135/152 (89%)	106 (78%)	20 (15%)	9 (7%)	1	17
9	Ad	51/56 (91%)	46 (90%)	3 (6%)	2 (4%)	3	26
10	AN	148/151 (98%)	124 (84%)	18 (12%)	6 (4%)	3	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	AL	156/158 (99%)	132 (85%)	10 (6%)	14 (9%)	1	12
12	AR	124/135 (92%)	96 (77%)	13 (10%)	15 (12%)	0	6
13	AP	125/145 (86%)	92 (74%)	16 (13%)	17 (14%)	0	4
14	AT	139/145 (96%)	121 (87%)	8 (6%)	10 (7%)	1	16
15	AB	213/264 (81%)	174 (82%)	24 (11%)	15 (7%)	1	16
16	AA	206/295 (70%)	156 (76%)	23 (11%)	27 (13%)	0	4
17	AV	80/83 (96%)	59 (74%)	10 (12%)	11 (14%)	0	4
18	AY	124/133 (93%)	91 (73%)	15 (12%)	18 (14%)	0	4
19	AZ	73/125 (58%)	52 (71%)	12 (16%)	9 (12%)	0	5
20	Aa	105/115 (91%)	74 (70%)	13 (12%)	18 (17%)	0	3
21	Ab	82/84 (98%)	57 (70%)	14 (17%)	11 (13%)	0	4
22	Ac	62/69 (90%)	44 (71%)	13 (21%)	5 (8%)	1	13
23	AD	225/243 (93%)	180 (80%)	24 (11%)	21 (9%)	0	11
24	Ae	57/59 (97%)	39 (68%)	5 (9%)	13 (23%)	0	1
25	Af	69/80 (86%)	38 (55%)	13 (19%)	18 (26%)	0	1
26	AJ	180/194 (93%)	138 (77%)	18 (10%)	24 (13%)	0	4
27	AE	261/263 (99%)	210 (80%)	29 (11%)	22 (8%)	1	12
28	AC	224/293 (76%)	203 (91%)	10 (4%)	11 (5%)	2	22
29	AG	235/249 (94%)	202 (86%)	18 (8%)	15 (6%)	1	18
30	AF	189/204 (93%)	162 (86%)	15 (8%)	12 (6%)	1	18
31	AH	188/194 (97%)	146 (78%)	11 (6%)	31 (16%)	0	3
32	AW	127/130 (98%)	111 (87%)	14 (11%)	2 (2%)	9	44
33	AI	204/208 (98%)	169 (83%)	13 (6%)	22 (11%)	0	8
34	AQ	139/146 (95%)	110 (79%)	19 (14%)	10 (7%)	1	16
35	Ah	69/408 (17%)	31 (45%)	15 (22%)	23 (33%)	0	0
38	Cz	213/217 (98%)	189 (89%)	16 (8%)	8 (4%)	3	26
39	Cq	278/317 (88%)	197 (71%)	31 (11%)	50 (18%)	0	2
40	CK	161/165 (98%)	77 (48%)	35 (22%)	49 (30%)	0	0
41	CO	200/203 (98%)	183 (92%)	12 (6%)	5 (2%)	5	34
42	CL	208/211 (99%)	165 (79%)	18 (9%)	25 (12%)	0	6
43	CV	131/140 (94%)	116 (88%)	11 (8%)	4 (3%)	4	30

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	CM	137/215 (64%)	112 (82%)	16 (12%)	9 (7%)	1	17
45	Ca	145/148 (98%)	120 (83%)	14 (10%)	11 (8%)	1	15
46	CN	201/204 (98%)	179 (89%)	9 (4%)	13 (6%)	1	18
47	CI	211/214 (99%)	165 (78%)	27 (13%)	19 (9%)	1	12
48	CD	287/297 (97%)	237 (83%)	24 (8%)	26 (9%)	1	12
49	CQ	186/188 (99%)	152 (82%)	18 (10%)	16 (9%)	1	12
50	CR	187/196 (95%)	165 (88%)	15 (8%)	7 (4%)	3	27
51	CA	253/257 (98%)	210 (83%)	23 (9%)	20 (8%)	1	14
52	CS	173/176 (98%)	137 (79%)	15 (9%)	21 (12%)	0	6
53	CT	157/160 (98%)	131 (83%)	11 (7%)	15 (10%)	0	10
54	CP	150/184 (82%)	134 (89%)	9 (6%)	7 (5%)	2	23
55	CU	110/128 (86%)	90 (82%)	13 (12%)	7 (6%)	1	18
56	CX	119/156 (76%)	98 (82%)	14 (12%)	7 (6%)	1	19
57	CY	131/145 (90%)	116 (88%)	11 (8%)	4 (3%)	4	30
58	CW	122/157 (78%)	94 (77%)	13 (11%)	15 (12%)	0	5
59	CZ	133/136 (98%)	109 (82%)	14 (10%)	10 (8%)	1	15
60	Cr	135/137 (98%)	86 (64%)	22 (16%)	27 (20%)	0	2
61	Ch	121/123 (98%)	93 (77%)	14 (12%)	14 (12%)	0	6
62	Cb	76/159 (48%)	58 (76%)	9 (12%)	9 (12%)	0	6
63	CB	395/403 (98%)	322 (82%)	34 (9%)	39 (10%)	0	10
64	CF	227/248 (92%)	209 (92%)	6 (3%)	12 (5%)	2	21
65	Cc	98/115 (85%)	90 (92%)	5 (5%)	3 (3%)	4	30
66	Cd	111/125 (89%)	75 (68%)	20 (18%)	16 (14%)	0	4
67	Ce	131/135 (97%)	102 (78%)	14 (11%)	15 (12%)	0	6
68	Cf	107/110 (97%)	82 (77%)	12 (11%)	13 (12%)	0	6
69	Cg	112/117 (96%)	91 (81%)	7 (6%)	14 (12%)	0	5
70	Ci	101/105 (96%)	78 (77%)	7 (7%)	16 (16%)	0	3
71	Cj	88/97 (91%)	74 (84%)	7 (8%)	7 (8%)	1	14
72	Ck	67/70 (96%)	59 (88%)	5 (8%)	3 (4%)	2	24
73	Cl	48/51 (94%)	37 (77%)	8 (17%)	3 (6%)	1	18
74	CC	366/427 (86%)	259 (71%)	41 (11%)	66 (18%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
75	Cm	50/52 (96%)	44 (88%)	3 (6%)	3 (6%)	1	19
76	Cn	23/25 (92%)	21 (91%)	2 (9%)	0	100	100
77	Cp	88/92 (96%)	75 (85%)	9 (10%)	4 (4%)	2	24
78	Co	103/106 (97%)	74 (72%)	14 (14%)	15 (15%)	0	4
79	CJ	166/178 (93%)	132 (80%)	20 (12%)	14 (8%)	1	12
80	CH	189/192 (98%)	163 (86%)	18 (10%)	8 (4%)	3	25
81	CE	260/288 (90%)	164 (63%)	39 (15%)	57 (22%)	0	1
82	CG	244/266 (92%)	165 (68%)	31 (13%)	48 (20%)	0	2
83	Cs	55/114 (48%)	53 (96%)	2 (4%)	0	100	100
83	Ct	55/114 (48%)	55 (100%)	0	0	100	100
84	Cu	54/115 (47%)	49 (91%)	1 (2%)	4 (7%)	1	15
84	Cv	54/115 (47%)	51 (94%)	0	3 (6%)	2	20
All	All	13166/14959 (88%)	10588 (80%)	1270 (10%)	1308 (10%)	1	10

5 of 1308 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	Az	4	PHE
1	Az	43	ALA
1	Az	44	GLY
1	Az	45	ILE
1	Az	47	ALA

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Az	728/730 (100%)	586 (80%)	142 (20%)	1	9
2	Ag	272/275 (99%)	223 (82%)	49 (18%)	1	11
3	AU	94/107 (88%)	74 (79%)	20 (21%)	1	6
4	AK	89/136 (65%)	61 (68%)	28 (32%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	AO	106/119 (89%)	87 (82%)	19 (18%)	2	11
6	AX	114/115 (99%)	91 (80%)	23 (20%)	1	8
7	AM	104/108 (96%)	81 (78%)	23 (22%)	1	6
8	AS	119/132 (90%)	95 (80%)	24 (20%)	1	8
9	Ad	47/49 (96%)	35 (74%)	12 (26%)	0	4
10	AN	130/131 (99%)	103 (79%)	27 (21%)	1	7
11	AL	142/142 (100%)	105 (74%)	37 (26%)	0	4
12	AR	114/122 (93%)	90 (79%)	24 (21%)	1	7
13	AP	116/130 (89%)	84 (72%)	32 (28%)	0	3
14	AT	112/115 (97%)	85 (76%)	27 (24%)	0	5
15	AB	196/231 (85%)	154 (79%)	42 (21%)	1	6
16	AA	174/243 (72%)	140 (80%)	34 (20%)	1	9
17	AV	66/67 (98%)	47 (71%)	19 (29%)	0	3
18	AY	108/115 (94%)	85 (79%)	23 (21%)	1	6
19	AZ	66/103 (64%)	53 (80%)	13 (20%)	1	8
20	Aa	90/98 (92%)	75 (83%)	15 (17%)	2	13
21	Ab	76/76 (100%)	63 (83%)	13 (17%)	2	12
22	Ac	57/62 (92%)	46 (81%)	11 (19%)	1	9
23	AD	190/202 (94%)	144 (76%)	46 (24%)	0	5
24	Ae	48/48 (100%)	24 (50%)	24 (50%)	0	0
25	Af	64/72 (89%)	43 (67%)	21 (33%)	0	2
26	AJ	157/168 (94%)	128 (82%)	29 (18%)	1	10
27	AE	225/225 (100%)	172 (76%)	53 (24%)	1	5
28	AC	190/225 (84%)	145 (76%)	45 (24%)	1	5
29	AG	207/218 (95%)	157 (76%)	50 (24%)	0	5
30	AF	161/170 (95%)	117 (73%)	44 (27%)	0	3
31	AH	170/174 (98%)	125 (74%)	45 (26%)	0	4
32	AW	112/113 (99%)	98 (88%)	14 (12%)	4	21
33	AI	178/180 (99%)	142 (80%)	36 (20%)	1	8
34	AQ	117/121 (97%)	89 (76%)	28 (24%)	0	5
35	Ah	55/328 (17%)	41 (74%)	14 (26%)	0	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
38	Cz	195/196 (100%)	174 (89%)	21 (11%)	6 25
39	Cq	232/258 (90%)	194 (84%)	38 (16%)	2 14
40	CK	136/137 (99%)	110 (81%)	26 (19%)	1 9
41	CO	173/174 (99%)	137 (79%)	36 (21%)	1 7
42	CL	176/177 (99%)	135 (77%)	41 (23%)	1 5
43	CV	102/107 (95%)	83 (81%)	19 (19%)	1 10
44	CM	118/161 (73%)	85 (72%)	33 (28%)	0 3
45	Ca	120/121 (99%)	100 (83%)	20 (17%)	2 13
46	CN	171/172 (99%)	132 (77%)	39 (23%)	1 6
47	CI	180/181 (99%)	150 (83%)	30 (17%)	2 13
48	CD	243/250 (97%)	210 (86%)	33 (14%)	3 19
49	CQ	165/165 (100%)	119 (72%)	46 (28%)	0 3
50	CR	168/175 (96%)	126 (75%)	42 (25%)	0 4
51	CA	197/199 (99%)	161 (82%)	36 (18%)	1 10
52	CS	156/157 (99%)	97 (62%)	59 (38%)	0 1
53	CT	139/140 (99%)	102 (73%)	37 (27%)	0 3
54	CP	133/163 (82%)	94 (71%)	39 (29%)	0 2
55	CU	102/115 (89%)	82 (80%)	20 (20%)	1 9
56	CX	109/133 (82%)	78 (72%)	31 (28%)	0 3
57	CY	123/135 (91%)	95 (77%)	28 (23%)	1 6
58	CW	103/126 (82%)	75 (73%)	28 (27%)	0 3
59	CZ	117/118 (99%)	82 (70%)	35 (30%)	0 2
60	Cr	121/121 (100%)	91 (75%)	30 (25%)	0 4
61	Ch	110/110 (100%)	81 (74%)	29 (26%)	0 4
62	Cb	66/126 (52%)	41 (62%)	25 (38%)	0 1
63	CB	345/349 (99%)	261 (76%)	84 (24%)	0 4
64	CF	198/215 (92%)	172 (87%)	26 (13%)	4 20
65	Cc	85/97 (88%)	73 (86%)	12 (14%)	3 18
66	Cd	102/110 (93%)	78 (76%)	24 (24%)	1 5
67	Ce	119/121 (98%)	87 (73%)	32 (27%)	0 3
68	Cf	88/89 (99%)	57 (65%)	31 (35%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
69	Cg	98/100 (98%)	63 (64%)	35 (36%)	0	1
70	Ci	87/89 (98%)	51 (59%)	36 (41%)	0	0
71	Cj	75/80 (94%)	55 (73%)	20 (27%)	0	3
72	Ck	64/65 (98%)	45 (70%)	19 (30%)	0	2
73	Cl	47/48 (98%)	33 (70%)	14 (30%)	0	2
74	CC	305/348 (88%)	222 (73%)	83 (27%)	0	3
75	Cm	48/48 (100%)	31 (65%)	17 (35%)	0	1
76	Cn	24/24 (100%)	14 (58%)	10 (42%)	0	0
77	Cp	74/75 (99%)	53 (72%)	21 (28%)	0	3
78	Co	93/94 (99%)	60 (64%)	33 (36%)	0	1
79	CJ	142/149 (95%)	130 (92%)	12 (8%)	10	36
80	CH	170/171 (99%)	146 (86%)	24 (14%)	3	18
81	CE	232/252 (92%)	156 (67%)	76 (33%)	0	2
82	CG	209/223 (94%)	141 (68%)	68 (32%)	0	2
83	Cs	46/81 (57%)	46 (100%)	0	100	100
83	Ct	46/81 (57%)	46 (100%)	0	100	100
84	Cu	46/83 (55%)	45 (98%)	1 (2%)	52	71
84	Cv	46/83 (55%)	45 (98%)	1 (2%)	52	71
All	All	11438/12642 (90%)	8832 (77%)	2606 (23%)	3	6

5 of 2606 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
60	Cr	45	HIS
74	CC	179	ASP
62	Cb	18	ARG
60	Cr	43	LEU
67	Ce	21	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 308 such sidechains are listed below:

Mol	Chain	Res	Type
63	CB	68	ASN
81	CE	47	ASN
63	CB	376	HIS

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Mol	Chain	Res	Type
69	Cg	112	GLN
82	CG	159	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
36	B2	1760/1869 (94%)	503 (28%)	128 (7%)
37	BC	74/75 (98%)	13 (17%)	3 (4%)
85	A5	3761/5070 (74%)	1048 (27%)	337 (8%)
86	A7	120/121 (99%)	24 (20%)	2 (1%)
87	A8	156/157 (99%)	38 (24%)	12 (7%)
All	All	5871/7292 (80%)	1626 (27%)	482 (8%)

5 of 1626 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
36	B2	2	A
36	B2	3	C
36	B2	4	C
36	B2	8	U
36	B2	16	G

5 of 482 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
85	A5	1267	C
85	A5	4869	U
85	A5	1698	C
85	A5	4738	C
87	A8	48	A

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
74	CC	5
63	CB	4
82	CG	3
26	AJ	3
81	CE	3
47	CI	2
1	Az	2
66	Cd	2
8	AS	2
29	AG	2
58	CW	2
64	CF	2
38	Cz	1
23	AD	1
41	CO	1
70	Ci	1
53	CT	1
24	Ae	1
33	AI	1
61	Ch	1
3	AU	1
56	CX	1
73	Cl	1
69	Cg	1
28	AC	1
12	AR	1
35	Ah	1

The worst 5 of 47 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Cz	100:VAL	C	101:LYS	N	2.08
1	AD	5:ILE	C	6:SER	N	1.82
1	CI	205:PRO	C	206:LEU	N	1.82
1	CO	202:LEU	C	203:VAL	N	1.80
1	Ci	78:GLY	C	79:THR	N	1.80

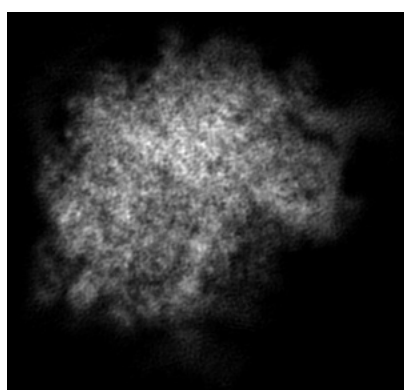
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5592. These allow visual inspection of the internal detail of the map and identification of artifacts.

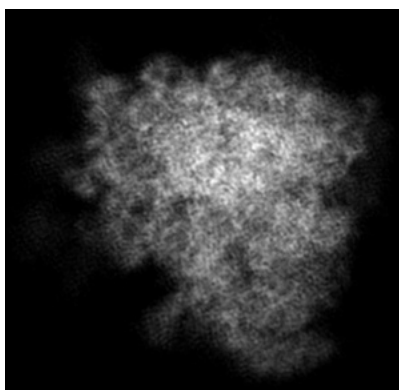
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

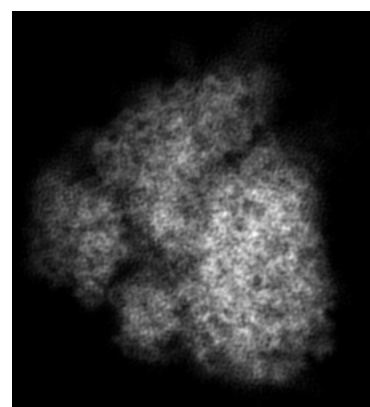
6.1.1 Primary map



X



Y

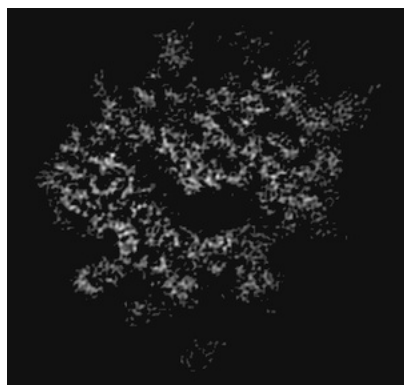


Z

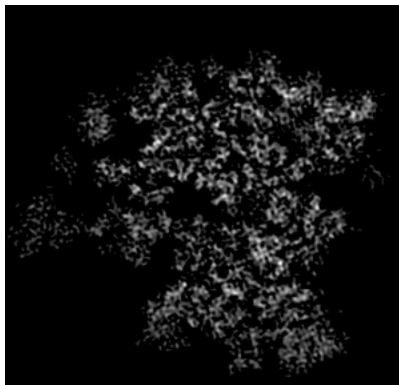
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

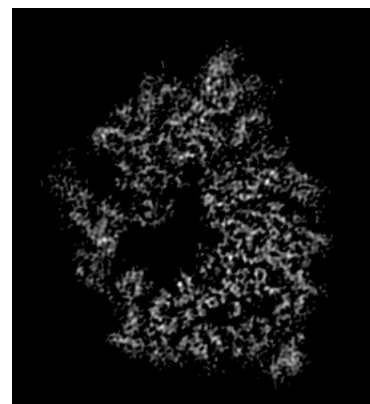
6.2.1 Primary map



X Index: 125



Y Index: 137

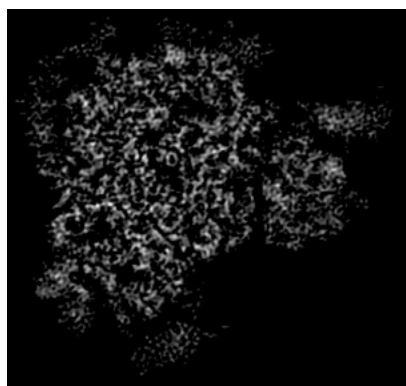


Z Index: 130

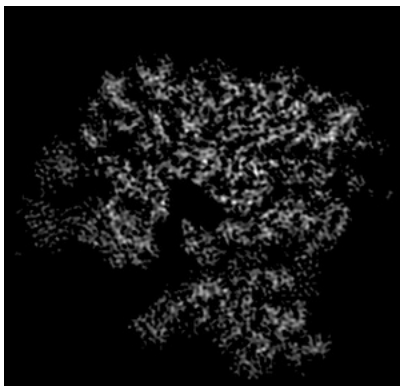
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

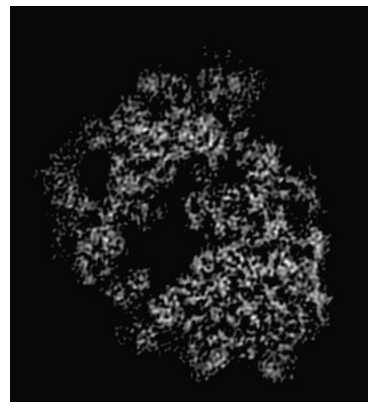
6.3.1 Primary map



X Index: 156



Y Index: 127



Z Index: 137

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

6.4 Orthogonal surface views [i](#)

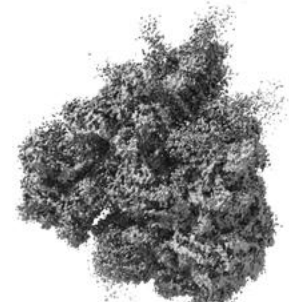
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.7. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

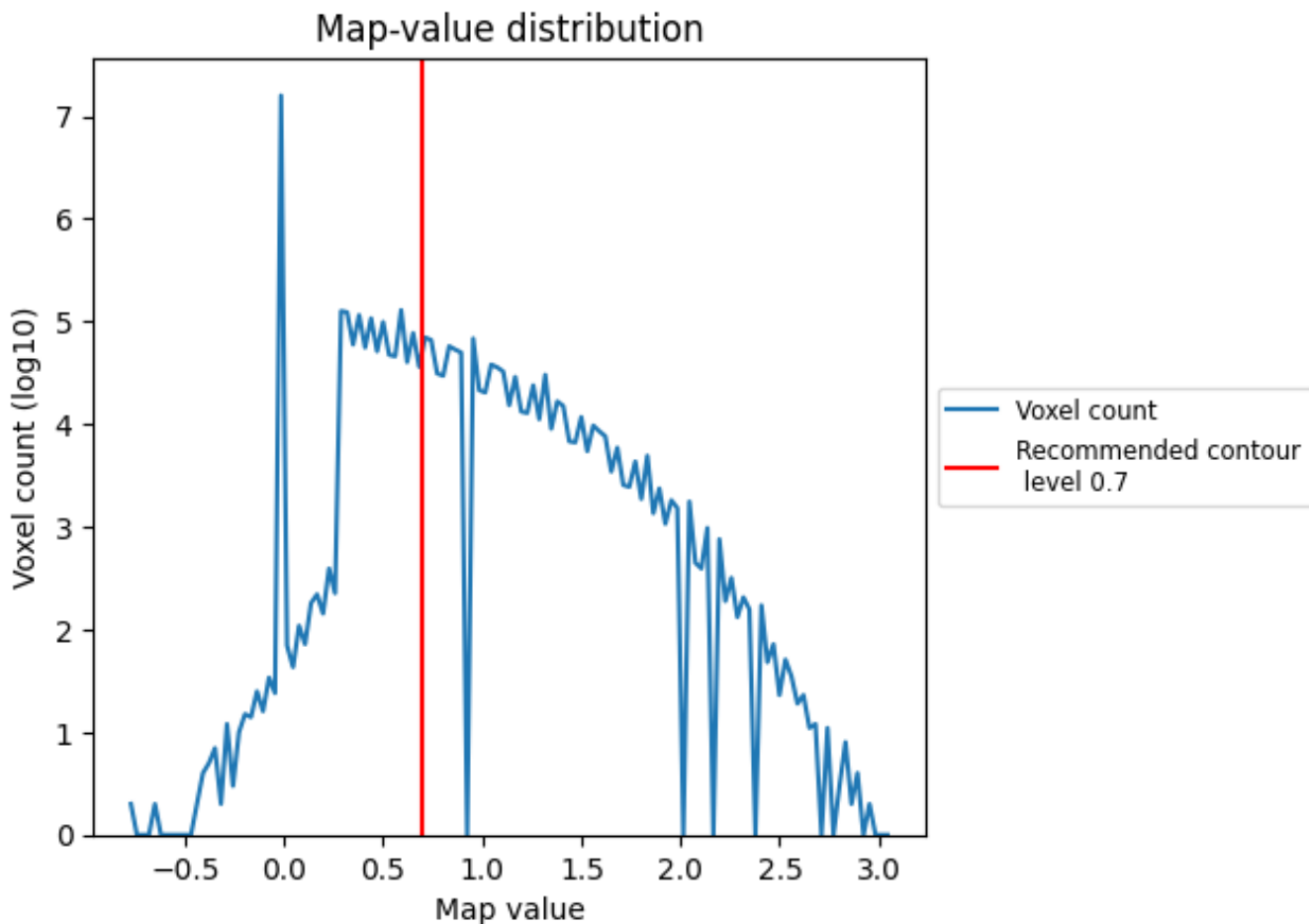
6.5 Mask visualisation

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

7 Map analysis [i](#)

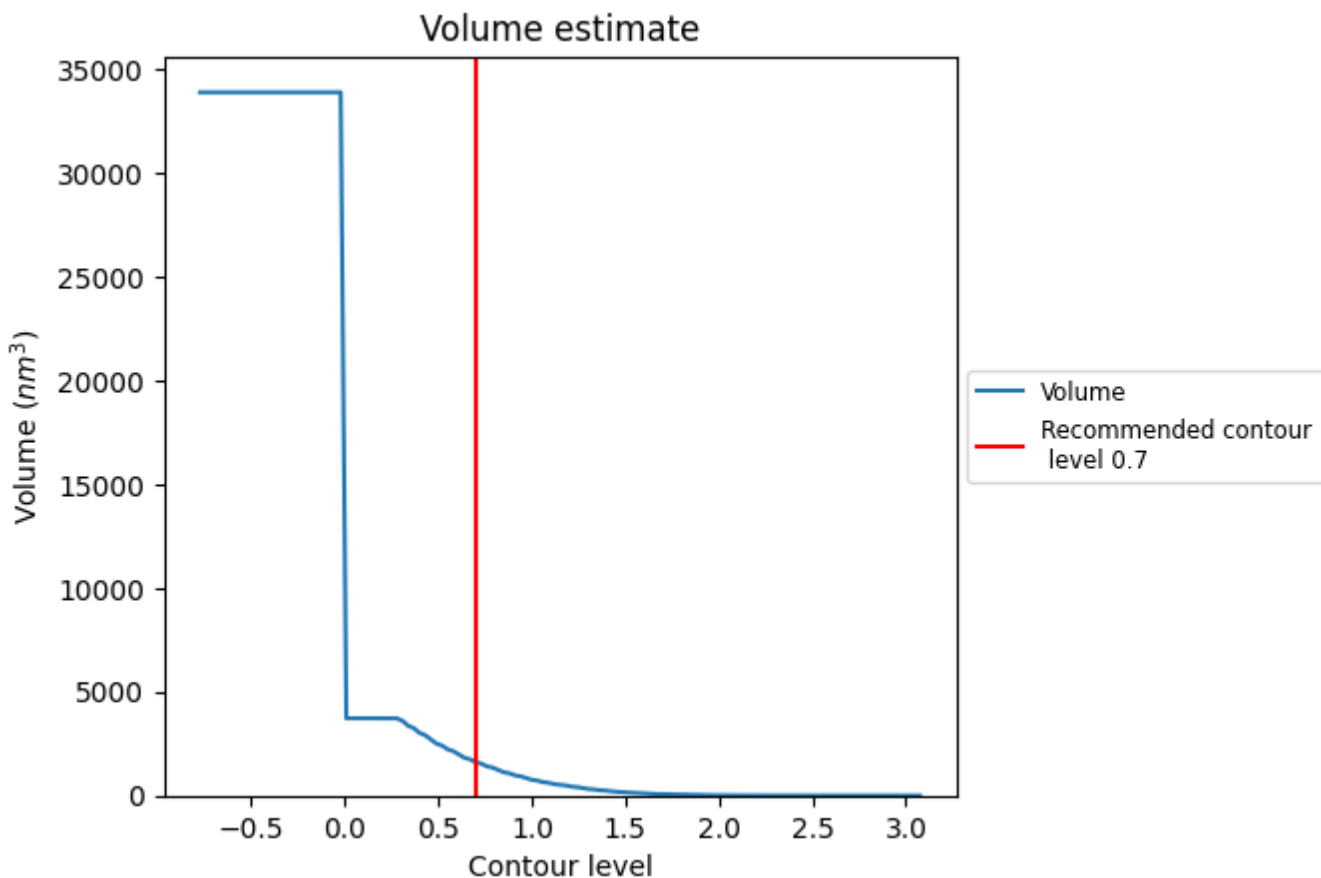
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1606 nm³; this corresponds to an approximate mass of 1451 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](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

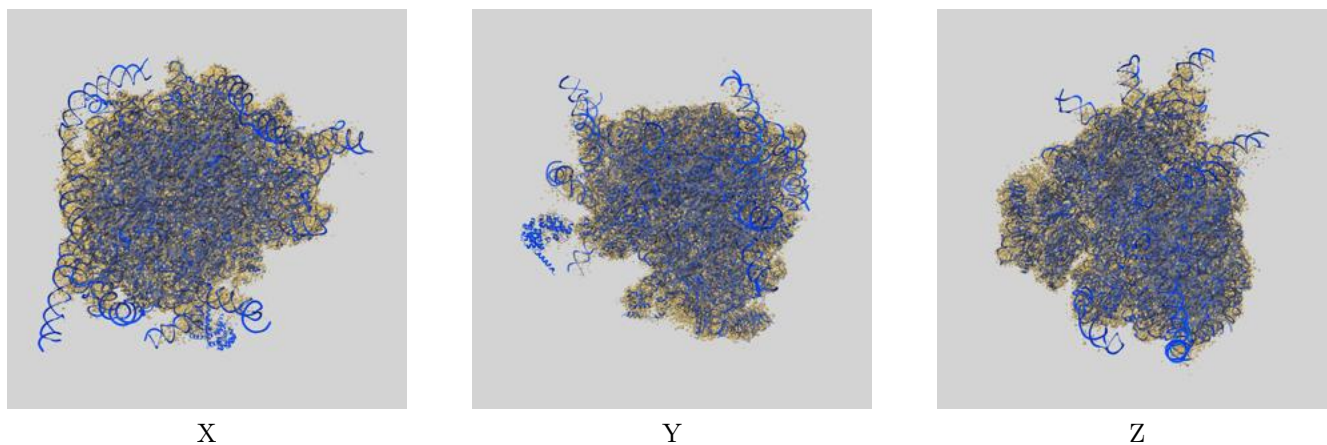
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

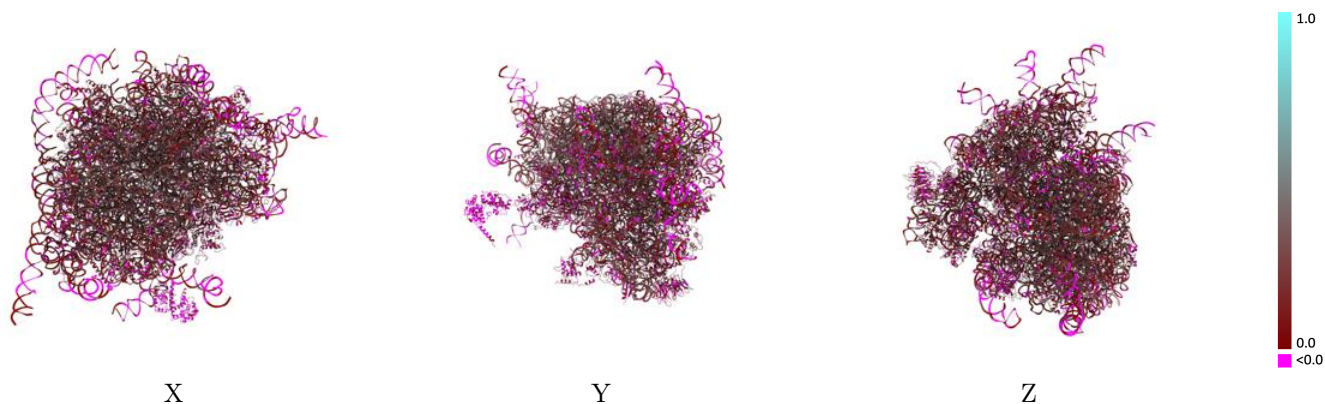
This section contains information regarding the fit between EMDB map EMD-5592 and PDB model 4V6X. Per-residue inclusion information can be found in section 3 on page 20.

9.1 Map-model overlay [i](#)



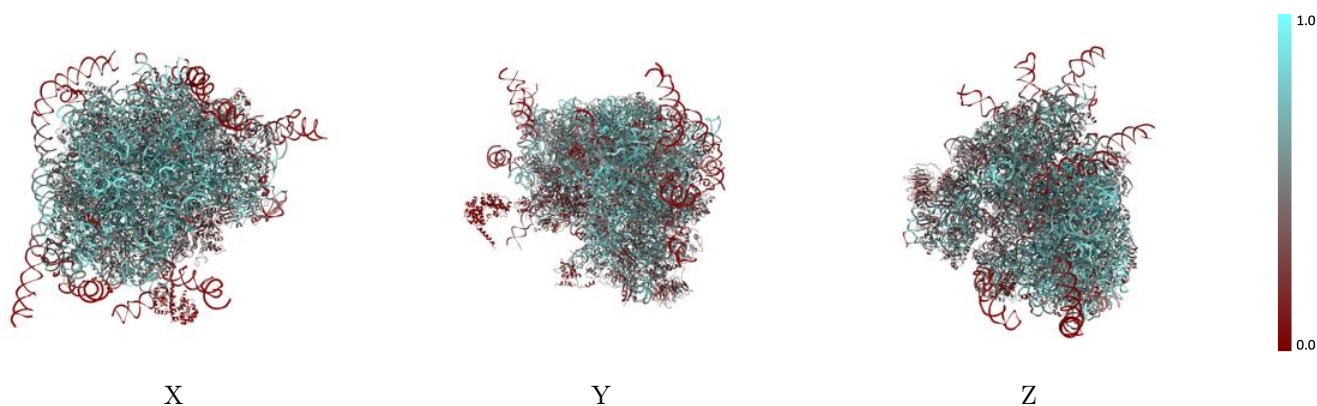
The images above show the 3D surface view of the map at the recommended contour level 0.7 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



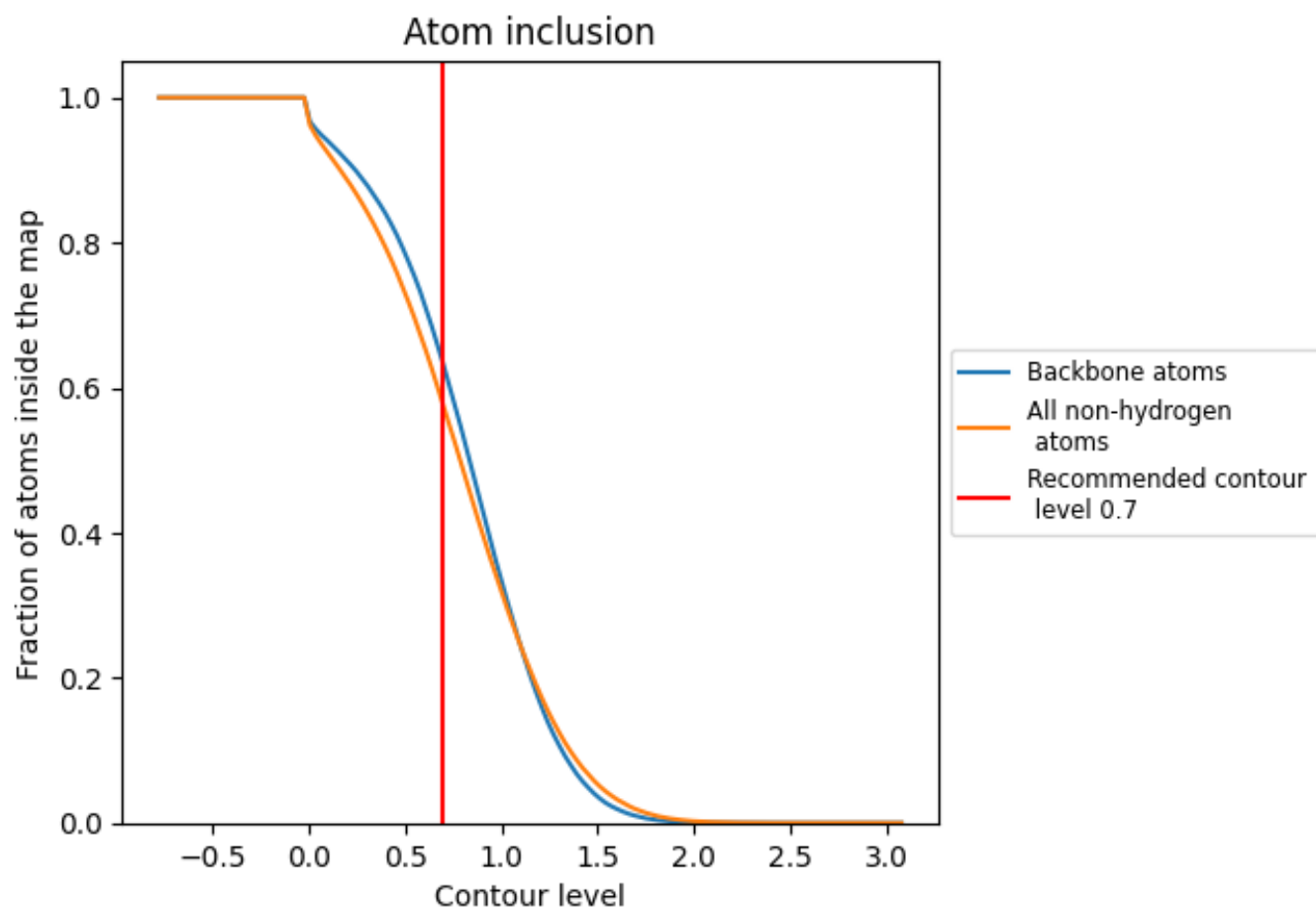
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.7).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 63% of all backbone atoms, 58% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.7) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5760	 0.2200
A5	 0.6923	 0.2410
A7	 0.7995	 0.2610
A8	 0.7525	 0.2580
AA	 0.4179	 0.1840
AB	 0.4444	 0.2060
AC	 0.4351	 0.2170
AD	 0.3455	 0.1920
AE	 0.4427	 0.1820
AF	 0.4094	 0.1580
AG	 0.3784	 0.1510
AH	 0.4064	 0.2060
AI	 0.4370	 0.1800
AJ	 0.5083	 0.1950
AK	 0.4696	 0.2000
AL	 0.4140	 0.2350
AM	 0.2368	 0.0930
AN	 0.4488	 0.1920
AO	 0.4174	 0.1860
AP	 0.3784	 0.1600
AQ	 0.4118	 0.1930
AR	 0.3380	 0.1640
AS	 0.4507	 0.1900
AT	 0.4865	 0.2080
AU	 0.3695	 0.2080
AV	 0.4255	 0.2210
AW	 0.4644	 0.2290
AX	 0.4393	 0.2380
AY	 0.4914	 0.2130
AZ	 0.3911	 0.1750
Aa	 0.4423	 0.2090
Ab	 0.4111	 0.2280
Ac	 0.3354	 0.1740
Ad	 0.5293	 0.2270
Ae	 0.4547	 0.2860





























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Chain	Atom inclusion	Q-score
Af	0.3746	0.1780
Ag	0.3392	0.1580
Ah	0.1657	0.1290
Az	0.3146	0.1840
B2	0.6854	0.2240
BC	0.4034	0.1640
CA	0.4625	0.2400
CB	0.5042	0.2580
CC	0.5293	0.2470
CD	0.5291	0.1920
CE	0.4157	0.1750
CF	0.5225	0.2430
CG	0.4950	0.2200
CH	0.4261	0.1790
CI	0.4828	0.2490
CJ	0.4365	0.1350
CK	0.2574	0.1450
CL	0.4853	0.2420
CM	0.5487	0.2360
CN	0.5407	0.2460
CO	0.4947	0.2180
CP	0.5622	0.2760
CQ	0.4815	0.2220
CR	0.5036	0.2240
CS	0.5675	0.2640
CT	0.5479	0.3120
CU	0.4419	0.1920
CV	0.4209	0.2480
CW	0.3082	0.1930
CX	0.5119	0.2550
CY	0.5486	0.2140
CZ	0.5433	0.2490
Ca	0.5336	0.2650
Cb	0.4459	0.2260
Cc	0.4783	0.2200
Cd	0.5579	0.2800
Ce	0.4792	0.2510
Cf	0.5036	0.2510
Cg	0.5351	0.2690
Ch	0.5470	0.2380
Ci	0.5000	0.2400
Cj	0.5673	0.2740

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Chain	Atom inclusion	Q-score
Ck	 0.4219	 0.1630
Cl	 0.5319	 0.2540
Cm	 0.5229	 0.2620
Cn	 0.4429	 0.2520
Co	 0.5460	 0.2610
Cp	 0.5095	 0.2620
Cq	 0.2269	 0.0780
Cr	 0.4863	 0.2410
Cs	 0.0189	 -0.0450
Ct	 0.0000	 -0.0960
Cu	 0.0266	 -0.0610
Cv	 0.0024	 -0.0450
Cz	 0.0939	 -0.0200