wwPDB X-ray Structure Validation Summary Report (i)

Jan 4, 2024 – 03:55 pm GMT

PDB ID	:	4V5O
Title	:	CRYSTAL STRUCTURE OF THE EUKARYOTIC 40S RIBOSOMAL SUBUNIT IN COMPLEX WITH INITIATION FACTOR 1.
Authors	:	Rabl, J.; Leibundgut, M.; Ataide, S.F.; Haag, A.; Ban, N.
Deposited on	:	2010-11-26
Resolution	:	3.93 Å(reported)

This is a wwPDB X-ray Structure 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/XrayValidationReportHelp
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 (1)) were used in the production of this report:

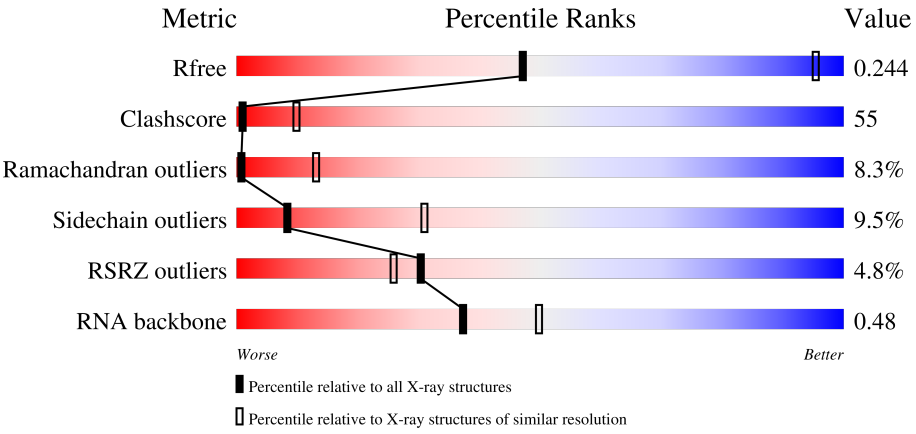
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.93 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.



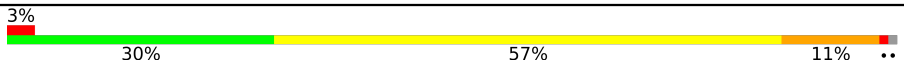
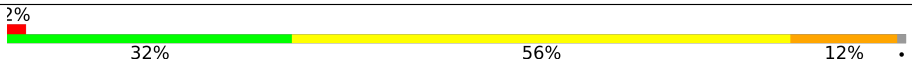
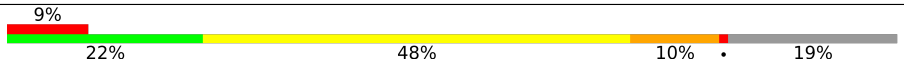
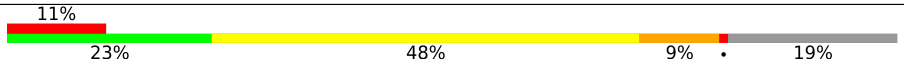
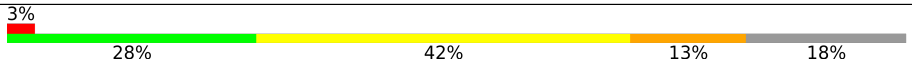
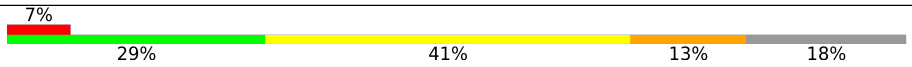
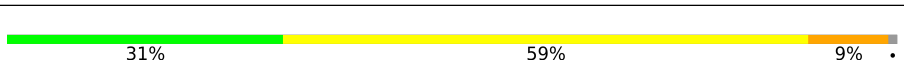
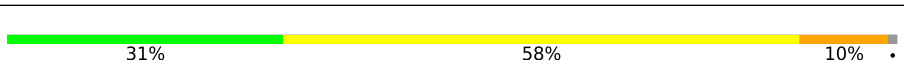
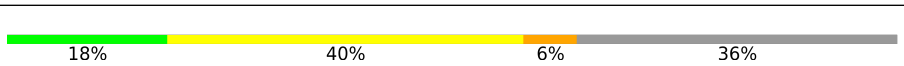
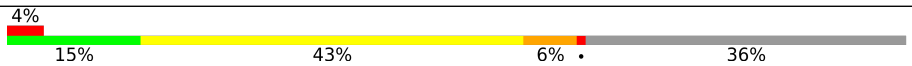
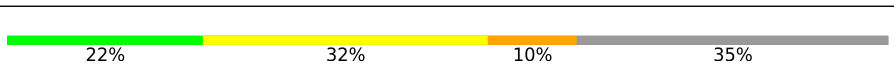
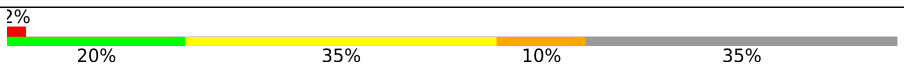
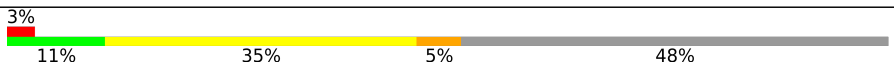
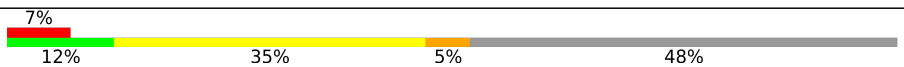
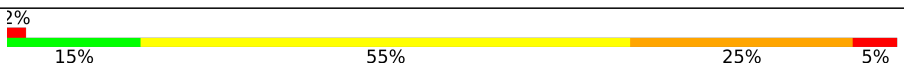
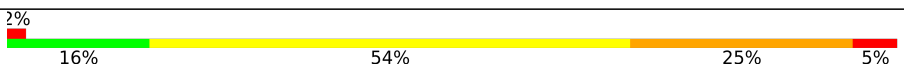
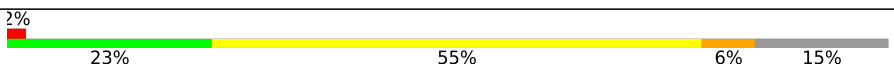
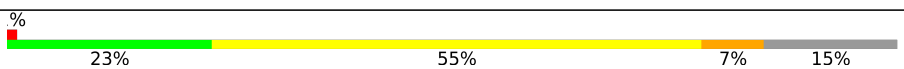
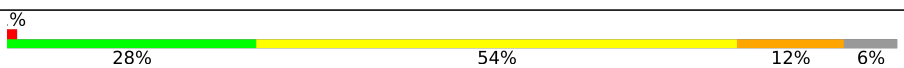
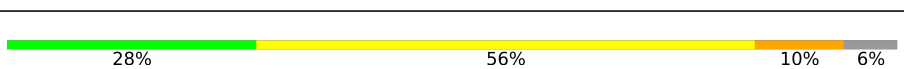
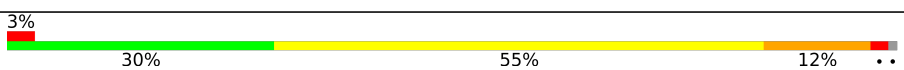
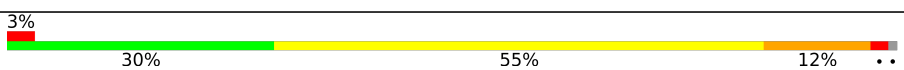
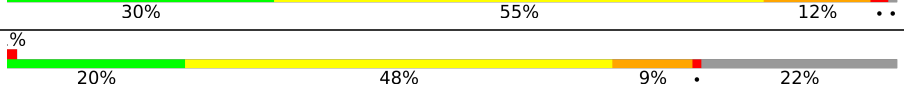
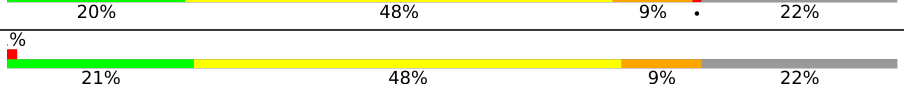
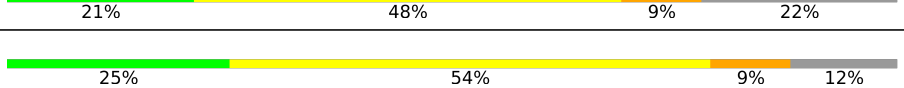
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1036 (4.20-3.68)
Clashscore	141614	1009 (4.18-3.70)
Ramachandran outliers	138981	1057 (4.20-3.68)
Sidechain outliers	138945	1049 (4.20-3.68)
RSRZ outliers	127900	1007 (4.24-3.64)
RNA backbone	3102	1041 (4.84-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A1	68	31% 51% 16%
1	B1	68	26% 59% 13%
2	A2	208	27% 20% 66% 13%
2	B2	208	8% 19% 67% 13%

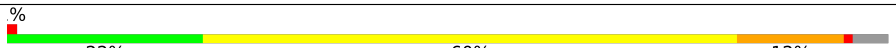
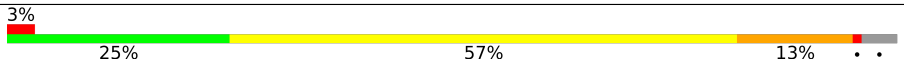
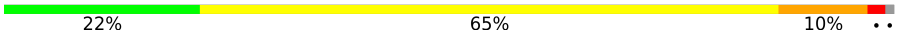
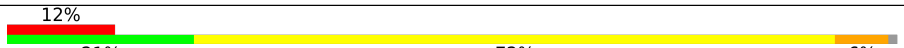
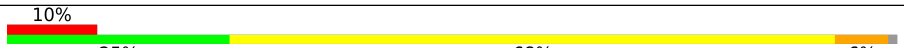
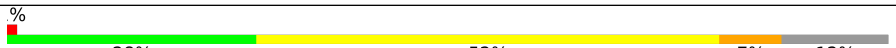
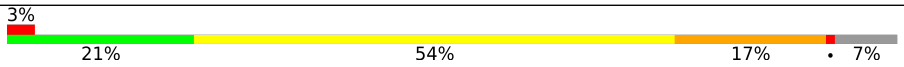
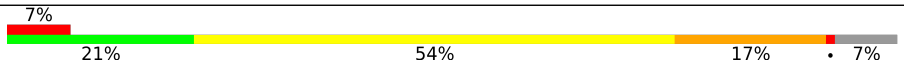
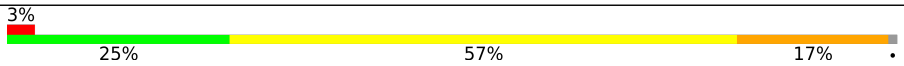
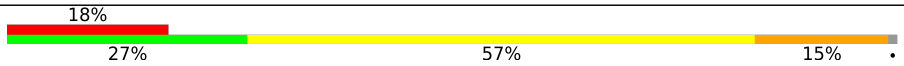
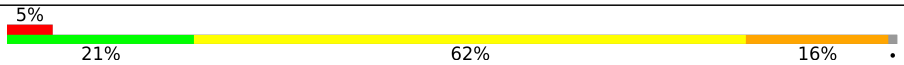
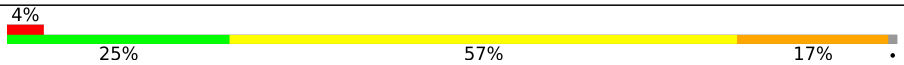
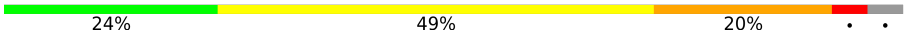
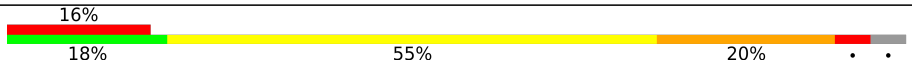
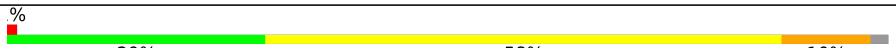
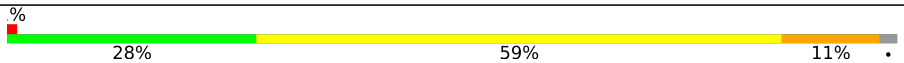
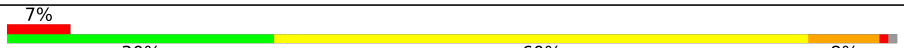
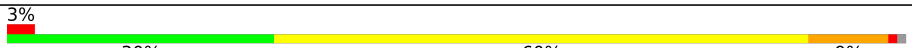
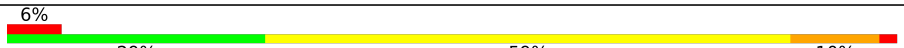
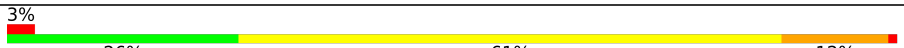
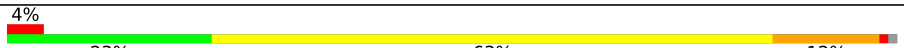
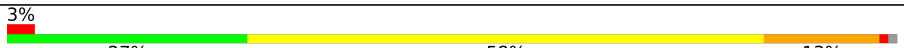
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
3	A3	197	
3	B3	197	
4	A4	265	
4	B4	265	
5	A5	119	
5	B5	119	
6	A6	81	
6	B6	81	
7	A7	162	
7	B7	162	
8	A8	143	
8	B8	143	
9	A9	189	
9	B9	189	
10	AA	1753	
10	BA	1753	
11	AB	241	
11	BB	241	
12	AC	243	
12	BC	243	
13	AD	181	
13	BD	181	
14	AE	296	
14	BE	296	
15	AF	101	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
15	BF	101	
16	AG	200	
16	BG	200	
17	AH	130	
17	BH	130	
18	AI	145	
18	BI	145	
19	AJ	120	
19	BJ	120	
20	AK	151	
20	BK	151	
21	AL	142	
21	BL	142	
22	AM	155	
22	BM	155	
23	AN	55	
23	BN	55	
24	AO	153	
24	BO	153	
25	AP	149	
25	BP	149	
26	AQ	157	
26	BQ	157	
27	AR	343	
27	BR	343	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
28	AS	144	3% 30% 51% 6% 13%
28	BS	144	31% 26% 53% 6% 13%
29	AT	155	17% 26% 57% 14%
29	BT	155	13% 27% 57% 12%
30	AU	126	18% 30% 56% 11%
30	BU	126	17% 24% 64% 10%
31	AV	130	4% 29% 57% 6% 7%
31	BV	130	2% 29% 56% 7% 7%
32	AW	260	27% 58% 14%
32	BW	260	28% 57% 13%
33	AX	80	4% 29% 48% 9% 15%
33	BX	80	11% 30% 49% 6% 15%
34	AY	293	14% 23% 50% 5% 20%
34	BY	293	9% 24% 50% 5% 20%
35	AZ	97	23% 61% 16%
35	BZ	97	2% 27% 57% 16%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
36	MG	AA	1870	-	-	-	X
36	MG	AA	1882	-	-	-	X
36	MG	AA	1883	-	-	-	X
36	MG	BA	1838	-	-	-	X
36	MG	BA	1842	-	-	-	X
36	MG	BA	1855	-	-	-	X
36	MG	BA	1872	-	-	-	X
36	MG	BA	1873	-	-	-	X
36	MG	BA	1875	-	-	-	X
36	MG	BA	1883	-	-	-	X

2 Entry composition (i)

There are 38 unique types of molecules in this entry. The entry contains 157632 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 RIBOSOMAL PROTEIN S28E CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A1	67	Total	C	N	O	S	0	0	0
			519	312	105	98	4			
1	B1	67	Total	C	N	O	S	0	0	0
			519	312	105	98	4			

- Molecule 2 is a protein called 40S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			
2	B2	207	Total	C	N	O	S	0	0	0
			1693	1057	336	296	4			

- Molecule 3 is a protein called RPS7E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			
3	B3	196	Total	C	N	O	S	0	0	0
			1629	1048	286	294	1			

- Molecule 4 is a protein called 40S RIBOSOMAL PROTEIN S3A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	A4	215	Total	C	N	O	S	0	0	0
			1724	1090	314	316	4			
4	B4	215	Total	C	N	O	S	0	0	0
			1724	1090	314	316	4			

- Molecule 5 is a protein called RIBOSOMAL PROTEIN S26E CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	A5	98	Total	C	N	O	S	0	0	0
			797	485	170	136	6			
5	B5	98	Total	C	N	O	S	0	0	0
			797	485	170	136	6			

- Molecule 6 is a protein called RPS27E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	A6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			
6	B6	80	Total	C	N	O	S	0	0	0
			632	398	110	116	8			

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B6	54	CYS	-	expression tag	UNP Q22CK0
B6	55	GLU	-	expression tag	UNP Q22CK0
B6	56	LYS	-	expression tag	UNP Q22CK0
B6	57	CYS	-	expression tag	UNP Q22CK0
B6	58	SER	-	expression tag	UNP Q22CK0
B6	59	ALA	-	expression tag	UNP Q22CK0
B6	60	ILE	-	expression tag	UNP Q22CK0
B6	61	LEU	-	expression tag	UNP Q22CK0
B6	62	CYS	-	expression tag	UNP Q22CK0
B6	63	LYS	-	expression tag	UNP Q22CK0
B6	64	PRO	-	expression tag	UNP Q22CK0
B6	65	THR	-	expression tag	UNP Q22CK0
B6	66	GLY	-	expression tag	UNP Q22CK0
B6	67	GLY	-	expression tag	UNP Q22CK0
B6	68	LYS	-	expression tag	UNP Q22CK0
B6	69	VAL	-	expression tag	UNP Q22CK0
B6	70	GLN	-	expression tag	UNP Q22CK0
B6	71	ILE	-	expression tag	UNP Q22CK0
B6	72	GLN	-	expression tag	UNP Q22CK0
B6	73	ALA	-	expression tag	UNP Q22CK0
B6	74	GLY	-	expression tag	UNP Q22CK0
B6	75	CYS	-	expression tag	UNP Q22CK0
B6	76	ALA	-	expression tag	UNP Q22CK0
B6	77	PHE	-	expression tag	UNP Q22CK0
B6	78	LYS	-	expression tag	UNP Q22CK0
B6	79	ILE	-	expression tag	UNP Q22CK0
B6	80	LYS	-	expression tag	UNP Q22CK0

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
B6	81	ASN	-	expression tag	UNP Q22CK0

- Molecule 7 is a protein called PLECTIN/S10 DOMAIN CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	A7	104	Total	C	N	O	S	0	0	0
			859	560	142	155	2			
7	B7	104	Total	C	N	O	S	0	0	0
			859	560	142	155	2			

- Molecule 8 is a protein called RPS25E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	A8	93	Total	C	N	O	S	0	0	0
			725	460	135	128	2			
8	B8	93	Total	C	N	O	S	0	0	0
			725	460	135	128	2			

- Molecule 9 is a protein called RPS31E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	A9	98	Total	C	N	O	S	0	0	0
			742	479	139	119	5			
9	B9	98	Total	C	N	O	S	0	0	0
			742	479	139	119	5			

- Molecule 10 is a RNA chain called 18S RRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AA	1745	Total	C	N	O	P	0	0	0
			37231	16654	6651	12181	1745			
10	BA	1745	Total	C	N	O	P	0	0	0
			37231	16654	6651	12181	1745			

- Molecule 11 is a protein called RPS0E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AB	204	Total	C	N	O	S	0	0	0
			1642	1039	288	304	11			
11	BB	204	Total	C	N	O	S	0	0	0
			1642	1039	288	304	11			

- Molecule 12 is a protein called KH DOMAIN CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AC	229	Total	C	N	O	S	0	0	0
			1820	1173	320	319	8			
12	BC	229	Total	C	N	O	S	0	0	0
			1820	1173	320	319	8			

- Molecule 13 is a protein called RIBOSOMAL PROTEIN S4 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AD	179	Total	C	N	O	S	0	0	0
			1475	931	286	252	6			
13	BD	179	Total	C	N	O	S	0	0	0
			1475	931	286	252	6			

- Molecule 14 is a protein called RIBOSOMAL PROTEIN S5 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AE	230	Total	C	N	O	S	0	0	0
			1827	1176	323	325	3			
14	BE	230	Total	C	N	O	S	0	0	0
			1827	1176	323	325	3			

- Molecule 15 is a protein called EIF1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			
15	BF	89	Total	C	N	O	S	0	0	0
			736	465	131	137	3			

- Molecule 16 is a protein called RIBOSOMAL PROTEIN S7 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			
16	BG	192	Total	C	N	O	S	0	0	0
			1520	961	281	270	8			

- Molecule 17 is a protein called RIBOSOMAL PROTEIN S8 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			
17	BH	129	Total	C	N	O	S	0	0	0
			1040	671	184	180	5			

- Molecule 18 is a protein called RPS16E, 40S RIBOSOMAL PROTEIN RPS16E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			
18	BI	143	Total	C	N	O	S	0	0	0
			1135	715	217	198	5			

- Molecule 19 is a protein called RIBOSOMAL PROTEIN S10 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AJ	105	Total	C	N	O	S	0	0	0
			833	525	150	152	6			
19	BJ	105	Total	C	N	O	S	0	0	0
			833	525	150	152	6			

- Molecule 20 is a protein called RPS14E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			
20	BK	140	Total	C	N	O	S	0	0	0
			1063	654	206	197	6			

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AL	141	Total	C	N	O	S	0	0	0
			1097	691	221	180	5			
21	BL	141	Total	C	N	O	S	0	0	0
			1097	691	221	180	5			

- Molecule 22 is a protein called RPS18E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AM	154	Total	C	N	O	S	0	0	0
			1239	780	237	216	6			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BM	154	Total	C	N	O	S	0	0	0
			1239	780	237	216	6			

- Molecule 23 is a protein called RPS29E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AN	53	Total	C	N	O	S	0	0	0
			447	278	91	72	6			
23	BN	53	Total	C	N	O	S	0	0	0
			447	278	91	72	6			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BN	54	TYR	-	expression tag	UNP Q22MB0
BN	55	ARG	-	expression tag	UNP Q22MB0

- Molecule 24 is a protein called RPS13E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AO	150	Total	C	N	O	S	0	0	0
			1214	782	228	200	4			
24	BO	150	Total	C	N	O	S	0	0	0
			1214	782	228	200	4			

- Molecule 25 is a protein called RPS24E.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	AP	148	Total	C	N	O	0	0	0
			1197	763	221	213			
25	BP	148	Total	C	N	O	0	0	0
			1197	763	221	213			

- Molecule 26 is a protein called RIBOSOMAL PROTEIN S17 CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	AQ	157	Total	C	N	O	S	0	0	0
			1275	818	235	217	5			
26	BQ	157	Total	C	N	O	S	0	0	0
			1275	818	235	217	5			

- Molecule 27 is a protein called RACK1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	AR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			
27	BR	338	Total	C	N	O	S	0	0	0
			2682	1711	462	501	8			

- Molecule 28 is a protein called RPS15E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AS	125	Total	C	N	O	S	0	0	0
			985	632	173	176	4			
28	BS	125	Total	C	N	O	S	0	0	0
			985	632	173	176	4			

- Molecule 29 is a protein called RPS19E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AT	150	Total	C	N	O	S	0	0	0
			1211	769	227	213	2			
29	BT	150	Total	C	N	O	S	0	0	0
			1211	769	227	213	2			

- Molecule 30 is a protein called RIBOSOMAL PROTEIN L7AE CONTAINING PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	AU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			
30	BU	124	Total	C	N	O	S	0	0	0
			952	599	166	182	5			

- Molecule 31 is a protein called RPS17E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	AV	121	Total	C	N	O	S	0	0	0
			979	619	182	176	2			
31	BV	121	Total	C	N	O	S	0	0	0
			979	619	182	176	2			

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BW	259	Total	C	N	O	S	0	0	0
			2079	1322	383	370	4			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BW	1	MET	-	expression tag	UNP P0C233
BW	70	GLN	GLY	conflict	UNP P0C233
BW	236	SER	LEU	conflict	UNP P0C233
BW	237	TRP	TYR	conflict	UNP P0C233

- Molecule 33 is a protein called RPS30E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	AX	68	Total	C	N	O	S	0	0	0
			554	350	113	90	1			
33	BX	68	Total	C	N	O	S	0	0	0
			554	350	113	90	1			

- Molecule 34 is a protein called RPS6E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	AY	235	Total	C	N	O	S	0	0	0
			1868	1184	347	326	11			
34	BY	235	Total	C	N	O	S	0	0	0
			1868	1184	347	326	11			

- Molecule 35 is a protein called RPS21E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	AZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			
35	BZ	97	Total	C	N	O	S	0	0	0
			747	458	139	146	4			

- Molecule 36 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	A4	1	Total	Mg	0	0
			1	1		
36	AA	90	Total	Mg	0	0
			90	90		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	AL	1	Total Mg 1 1	0	0
36	B4	1	Total Mg 1 1	0	0
36	BA	89	Total Mg 89 89	0	0
36	BD	1	Total Mg 1 1	0	0
36	BW	1	Total Mg 1 1	0	0

- Molecule 37 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	A5	1	Total Zn 1 1	0	0
37	A6	1	Total Zn 1 1	0	0
37	A9	1	Total Zn 1 1	0	0
37	AN	1	Total Zn 1 1	0	0
37	B5	1	Total Zn 1 1	0	0
37	B6	1	Total Zn 1 1	0	0
37	B9	1	Total Zn 1 1	0	0
37	BN	1	Total Zn 1 1	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	A2	2	Total O 2 2	0	0
38	A4	2	Total O 2 2	0	0
38	A5	1	Total O 1 1	0	0
38	AA	516	Total O 516 516	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	AC	1	Total O 1 1	0	0
38	AD	4	Total O 4 4	0	0
38	AE	3	Total O 3 3	0	0
38	AL	3	Total O 3 3	0	0
38	AM	4	Total O 4 4	0	0
38	AO	1	Total O 1 1	0	0
38	AP	1	Total O 1 1	0	0
38	AQ	2	Total O 2 2	0	0
38	AT	4	Total O 4 4	0	0
38	AW	4	Total O 4 4	0	0
38	AY	4	Total O 4 4	0	0
38	B2	2	Total O 2 2	0	0
38	B4	2	Total O 2 2	0	0
38	B5	1	Total O 1 1	0	0
38	BA	512	Total O 512 512	0	0
38	BC	2	Total O 2 2	0	0
38	BD	2	Total O 2 2	0	0
38	BE	5	Total O 5 5	0	0
38	BK	1	Total O 1 1	0	0
38	BL	2	Total O 2 2	0	0
38	BM	6	Total O 6 6	0	0

Continued on next page...

Continued from previous page...

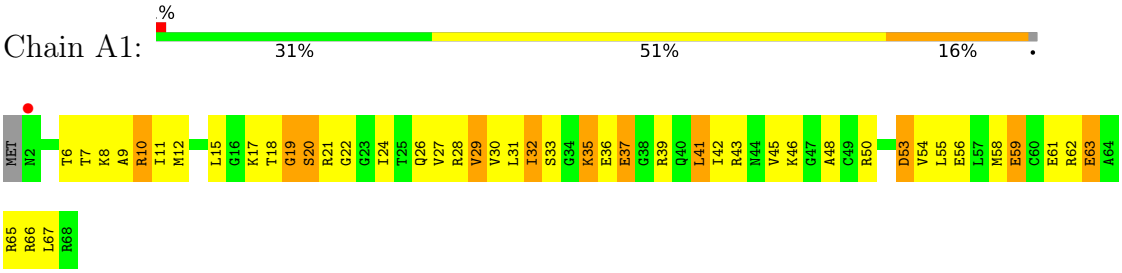
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	BO	1	Total O 1 1	0	0
38	BP	1	Total O 1 1	0	0
38	BQ	1	Total O 1 1	0	0
38	BT	6	Total O 6 6	0	0
38	BW	5	Total O 5 5	0	0
38	BY	3	Total O 3 3	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

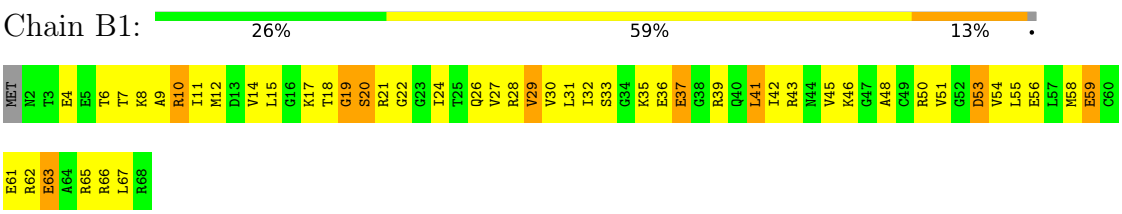
• Molecule 1: RIBOSOMAL PROTEIN S28E CONTAINING PROTEIN

Chain A1:



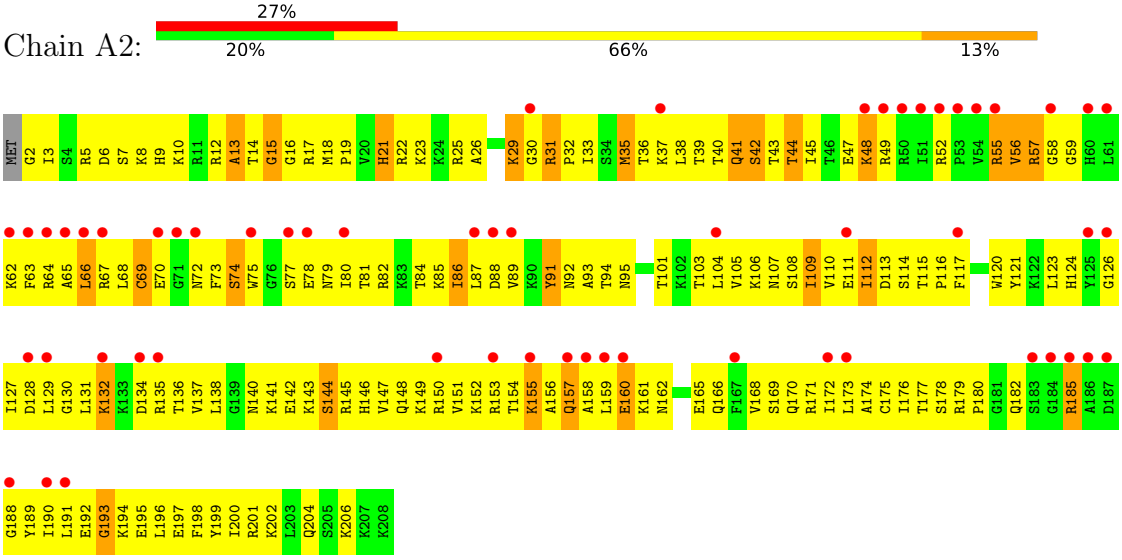
• Molecule 1: RIBOSOMAL PROTEIN S28E CONTAINING PROTEIN

Chain B1:



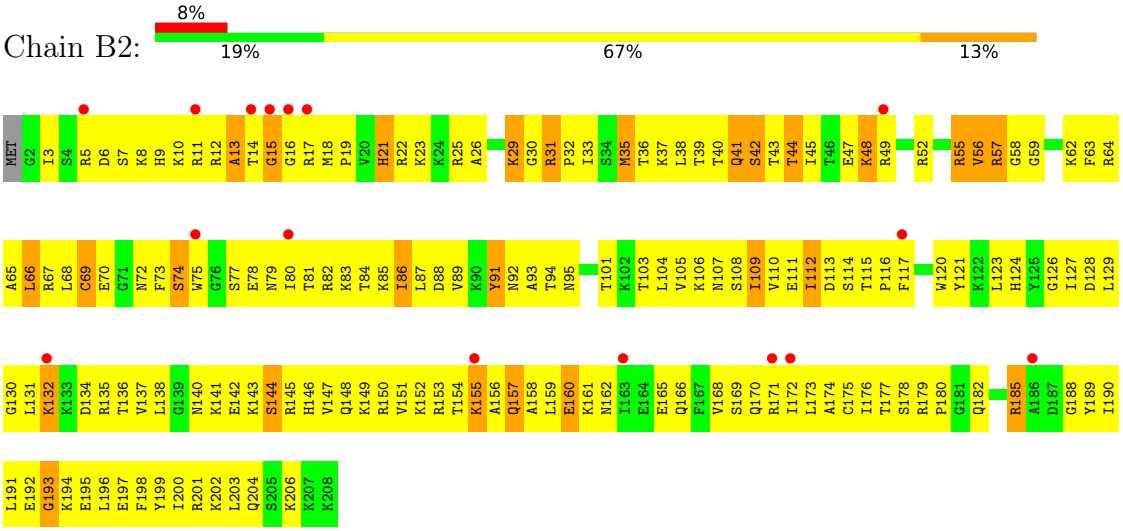
• Molecule 2: 40S RIBOSOMAL PROTEIN S8

Chain A2:



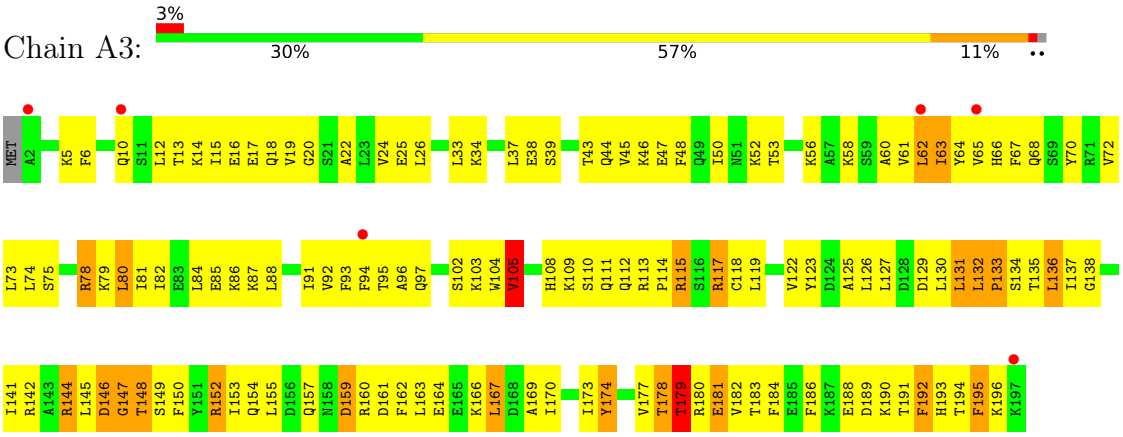
• Molecule 2: 40S RIBOSOMAL PROTEIN S8

Chain B2:



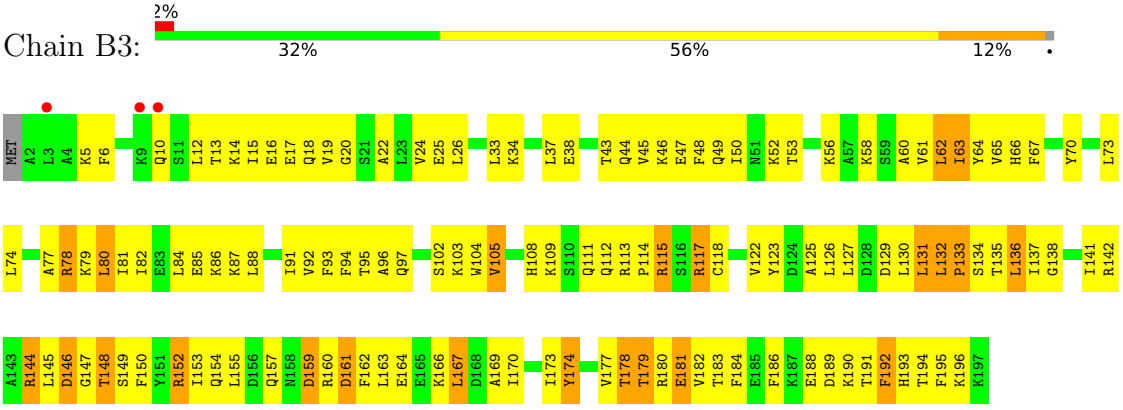
• Molecule 3: RPS7E

Chain A3:



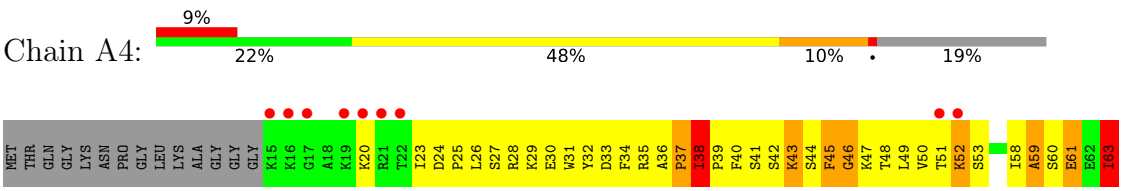
• Molecule 3: RPS7E

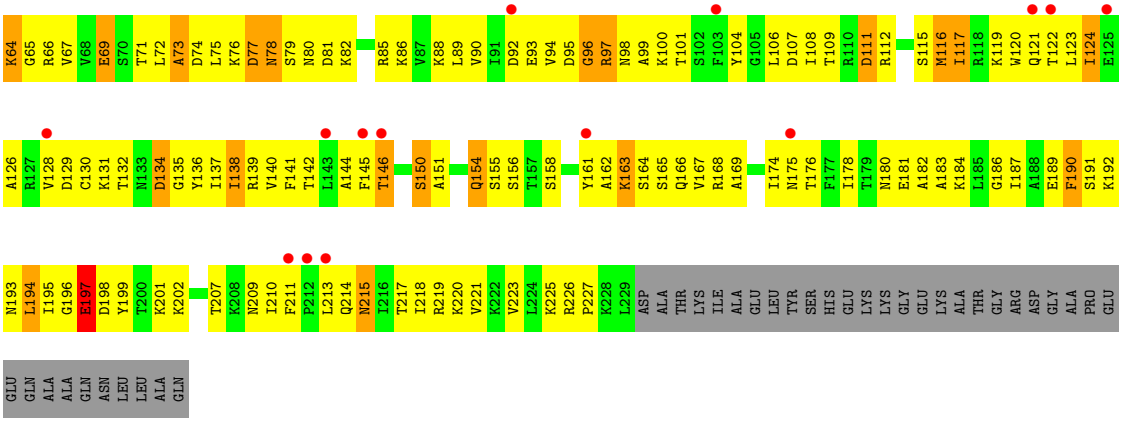
Chain B3:



• Molecule 4: 40S RIBOSOMAL PROTEIN S3A

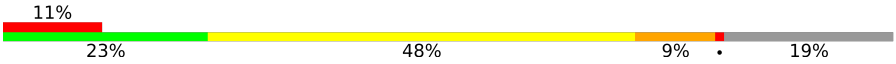
Chain A4:

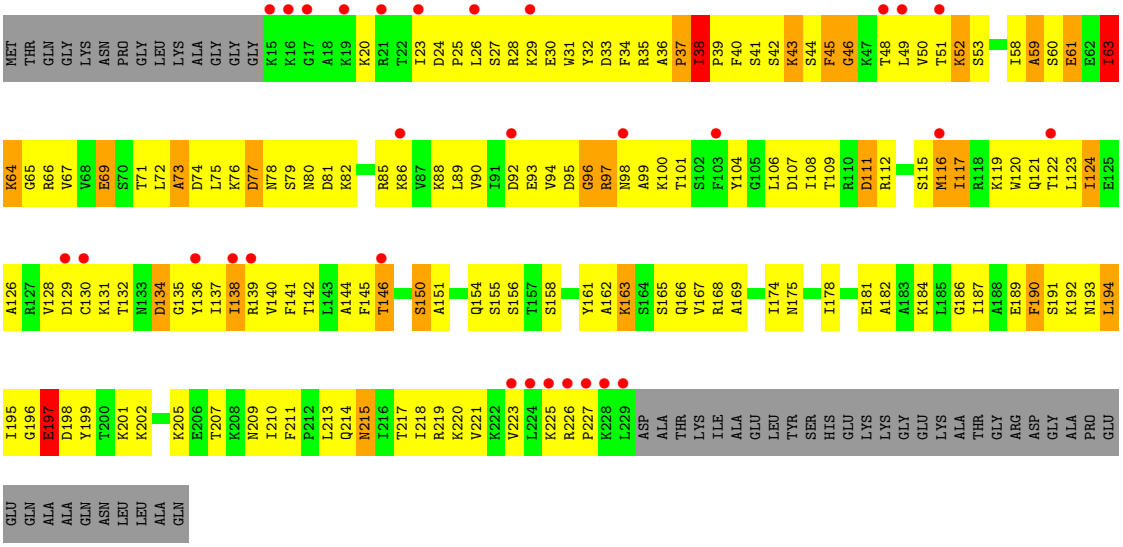




• Molecule 4: 40S RIBOSOMAL PROTEIN S3A

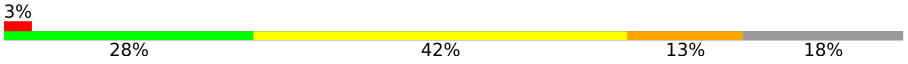
Chain B4:

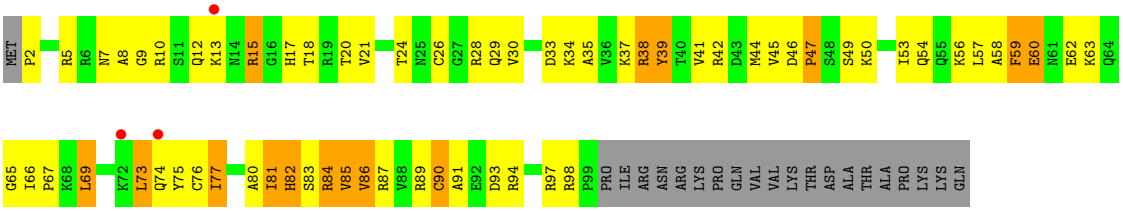




• Molecule 5: RIBOSOMAL PROTEIN S26E CONTAINING PROTEIN

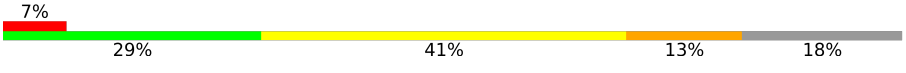
Chain A5:

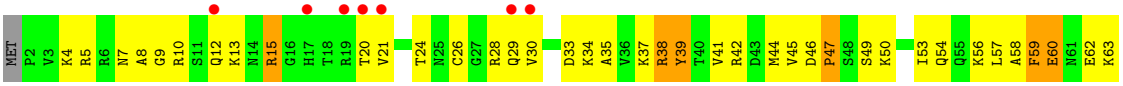


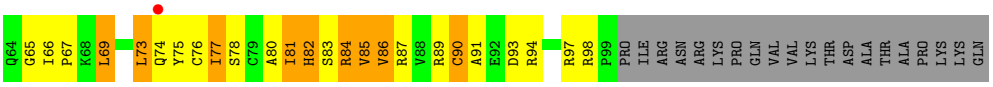


• Molecule 5: RIBOSOMAL PROTEIN S26E CONTAINING PROTEIN

Chain B5:

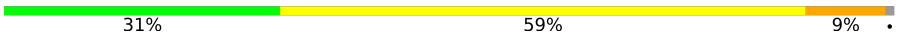


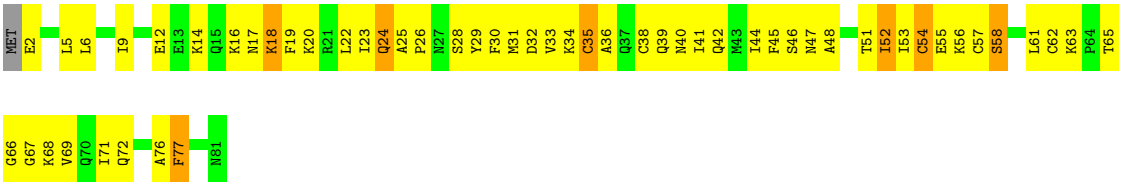




• Molecule 6: RPS27E

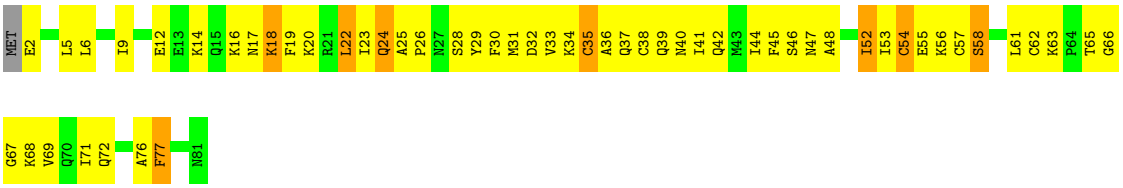
Chain A6:





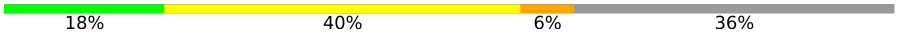
• Molecule 6: RPS27E

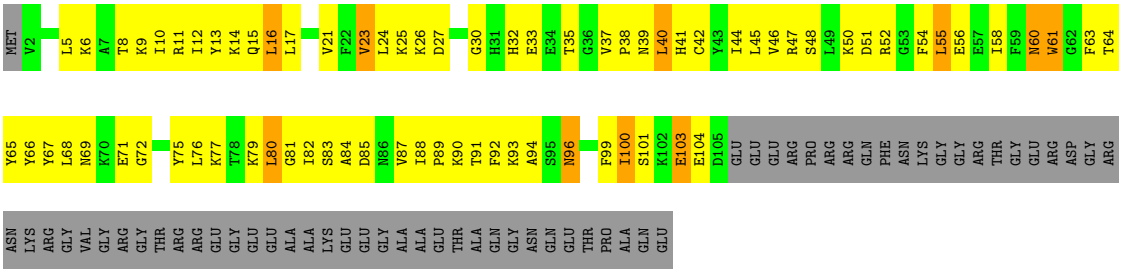
Chain B6:



• Molecule 7: PLECTIN/S10 DOMAIN CONTAINING PROTEIN

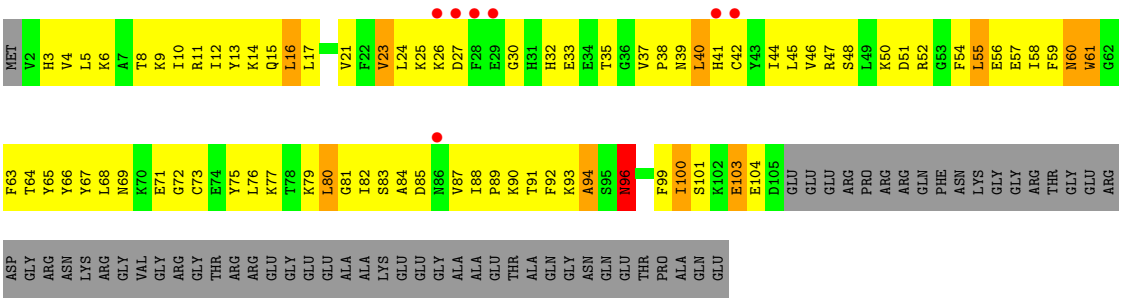
Chain A7:





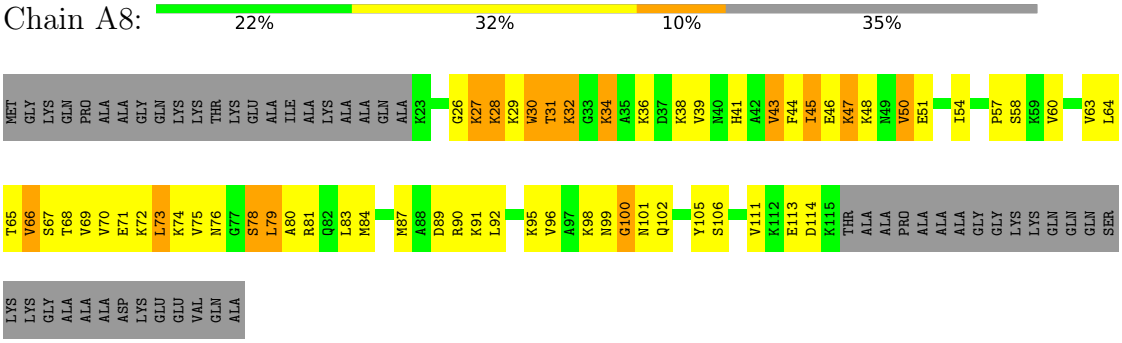
• Molecule 7: PLECTIN/S10 DOMAIN CONTAINING PROTEIN

Chain B7:



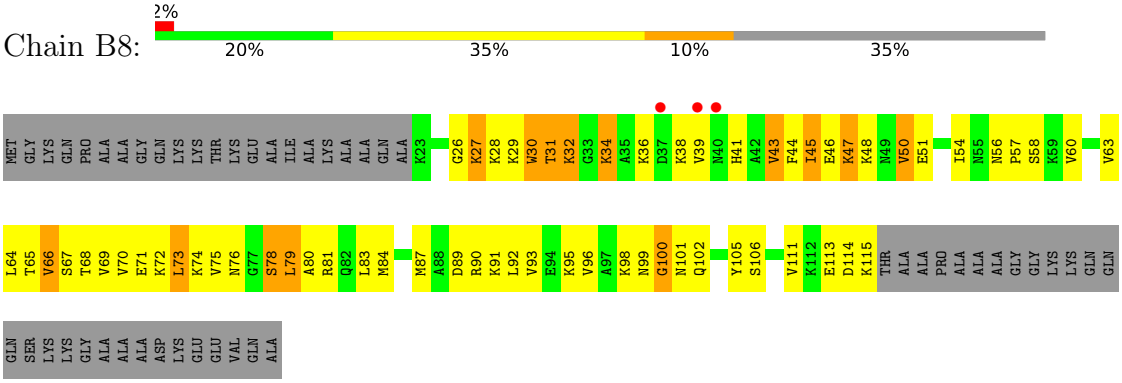
• Molecule 8: RPS25E

Chain A8:



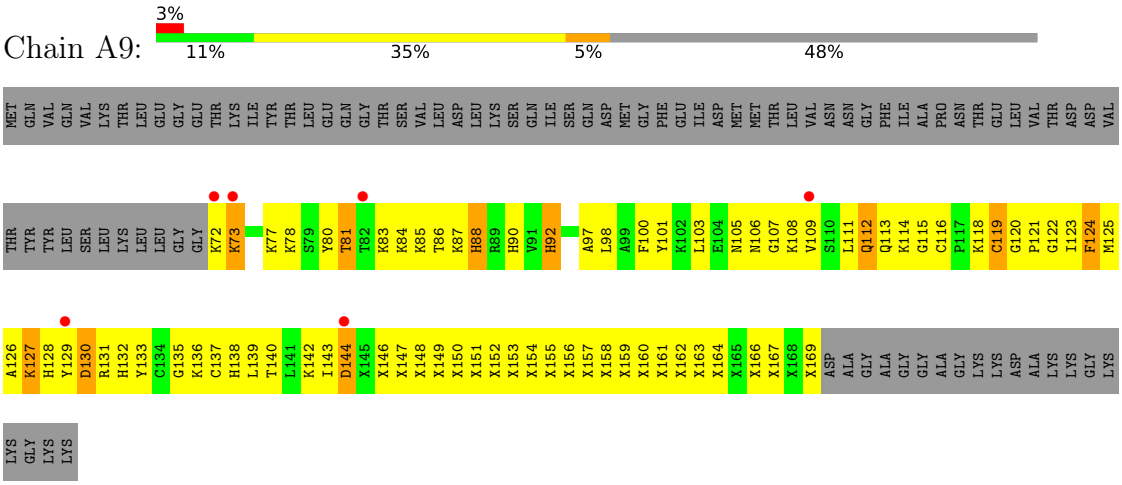
• Molecule 8: RPS25E

Chain B8:



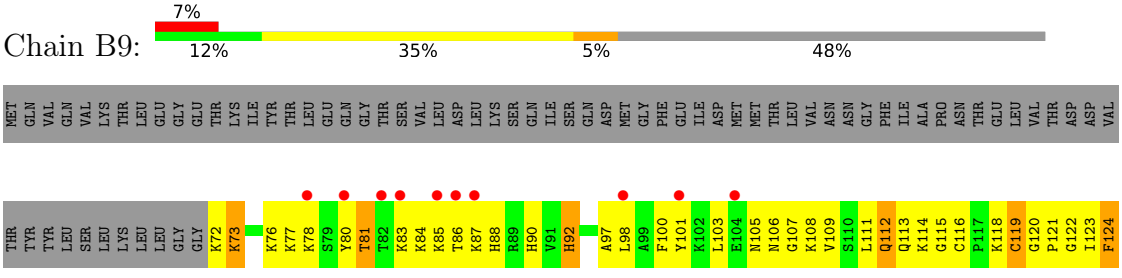
• Molecule 9: RPS31E

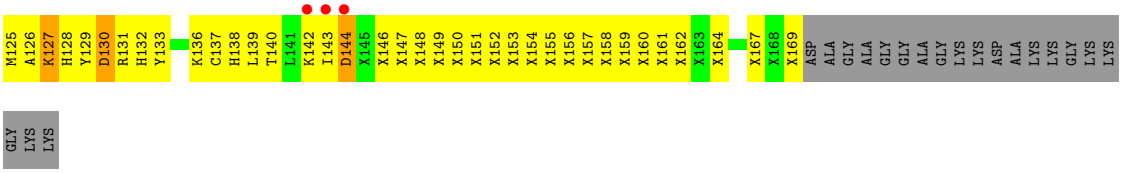
Chain A9:



• Molecule 9: RPS31E

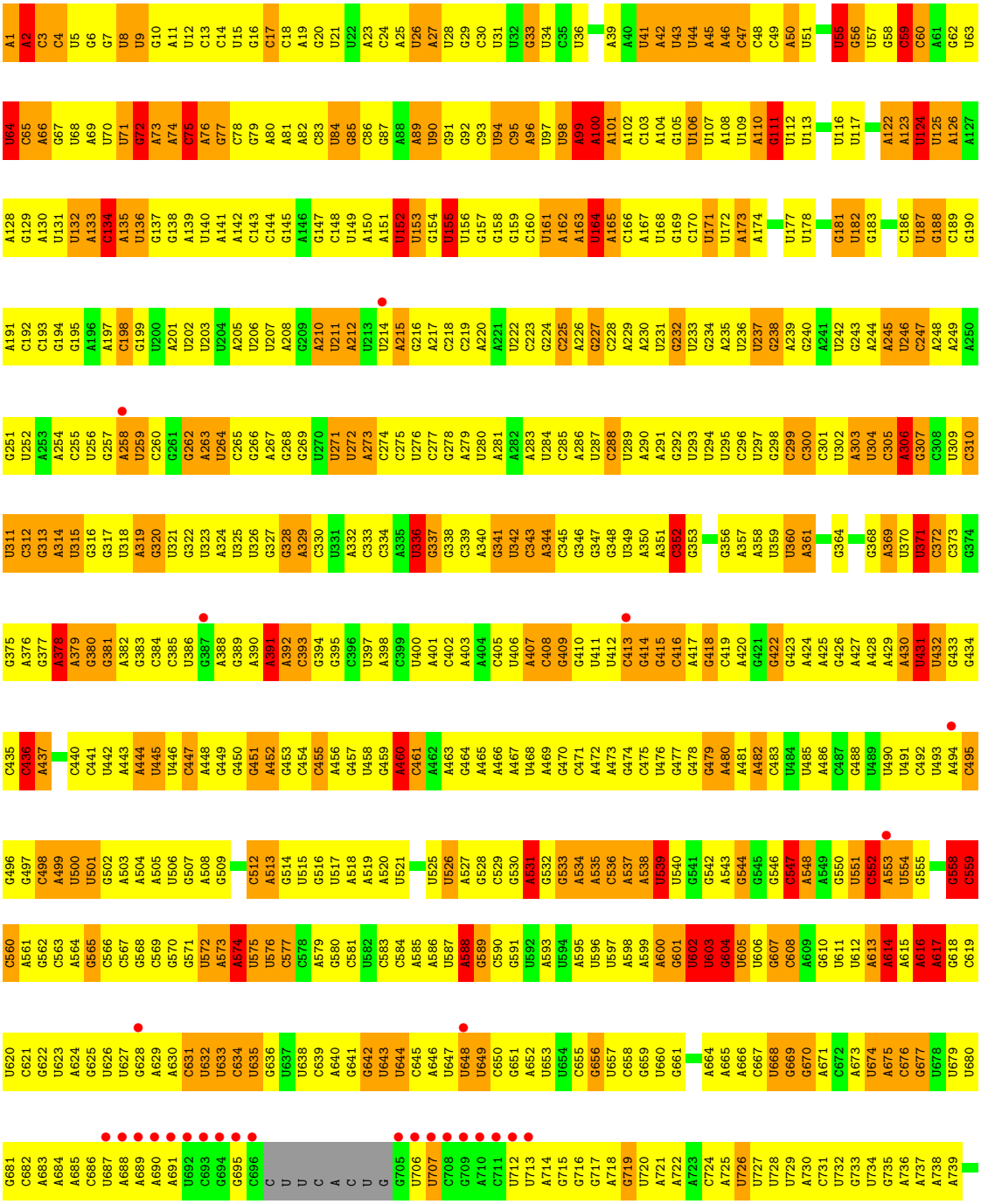
Chain B9:

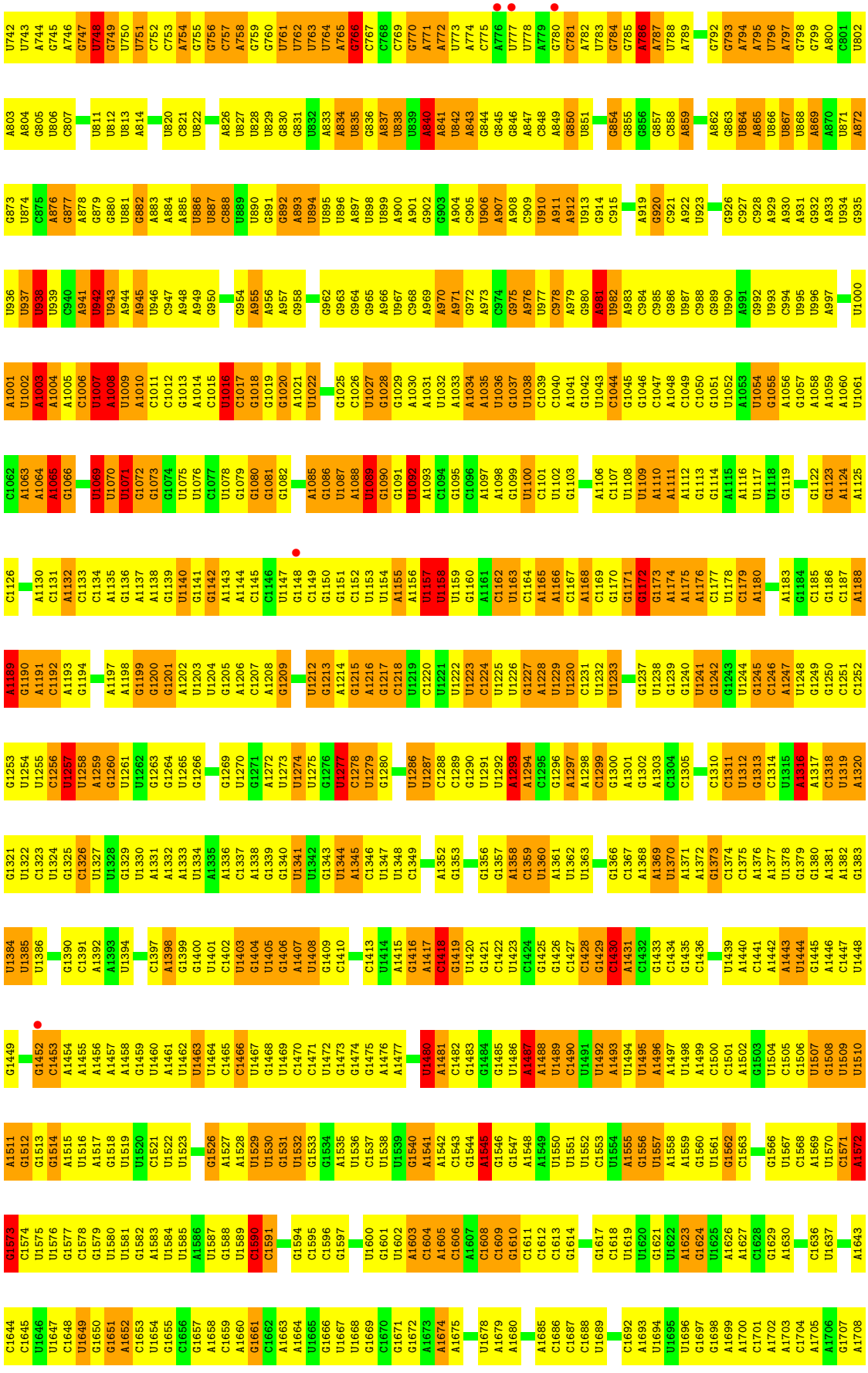




• Molecule 10: 18S RRNA

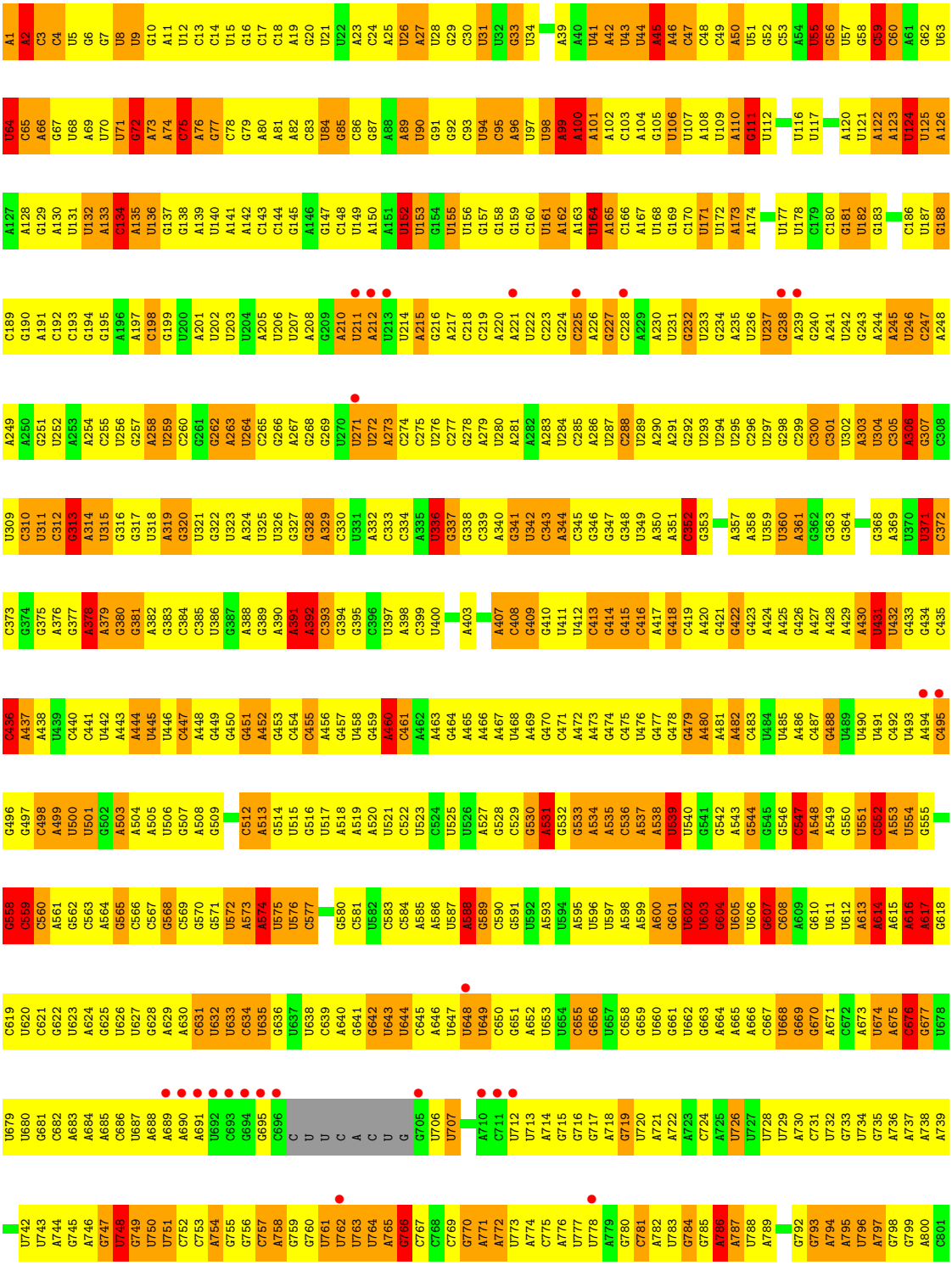
Chain AA:

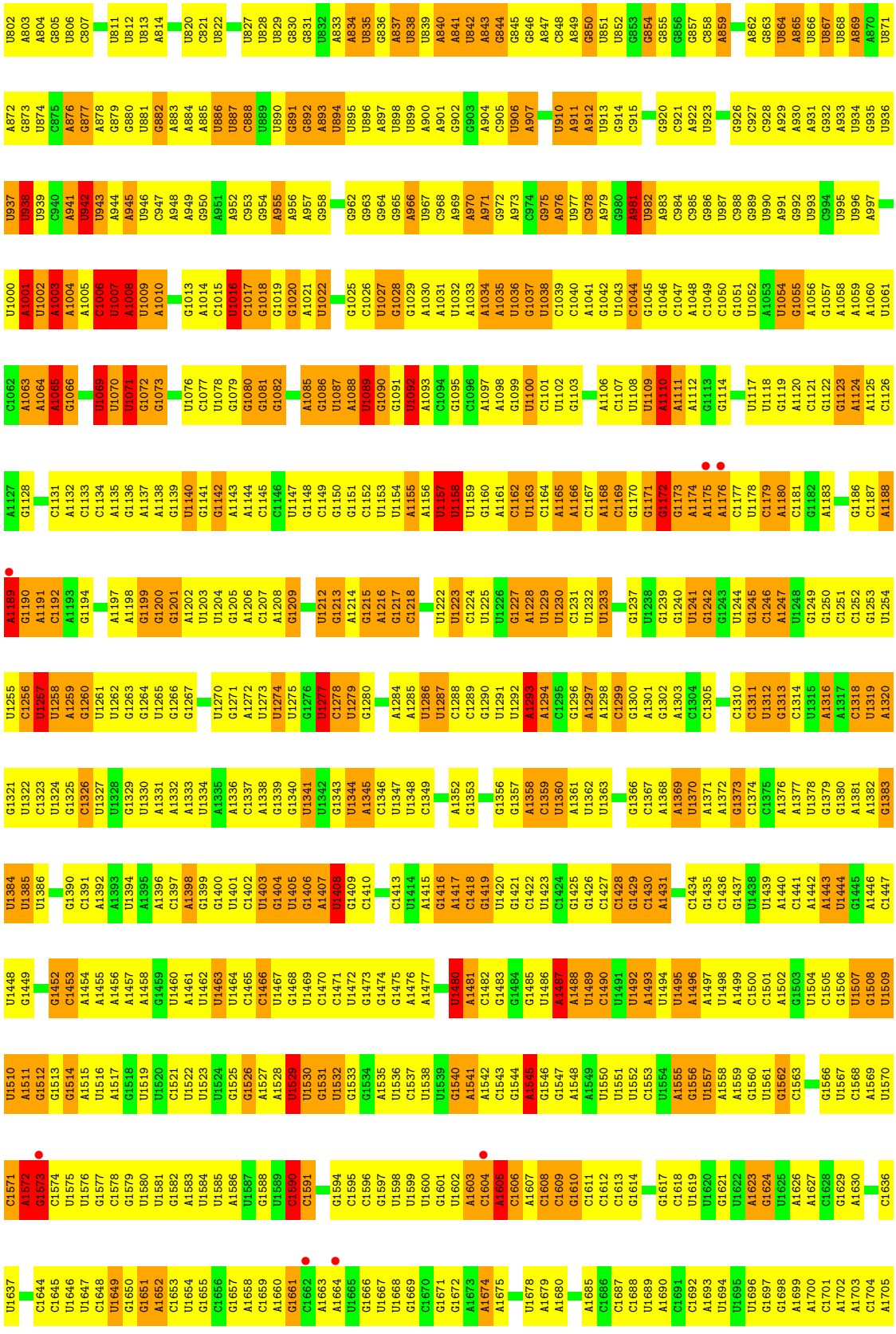


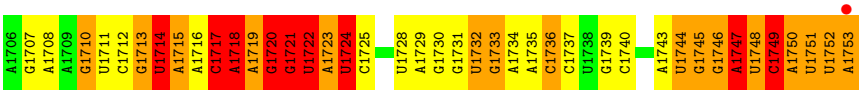


• Molecule 10: 18S RRNA

Chain BA:

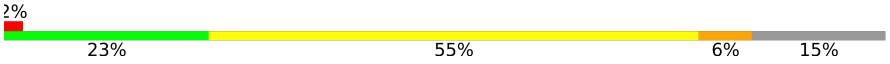


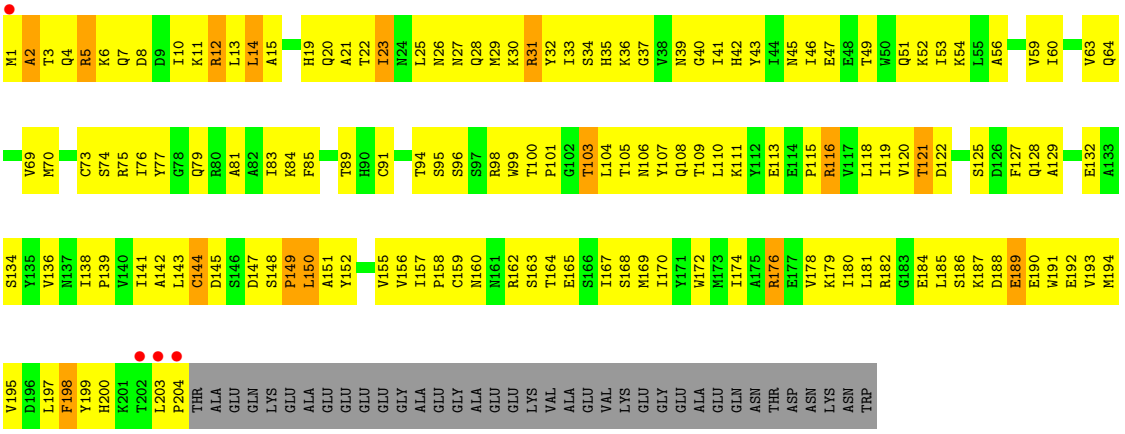

U802 A803 A804 G805 U806 C807 U811 U812 U813 A814 U820 C821 U822 U827 U828 U829 G830 G831 U832 A833 A834 U835 G836 A837 U838 U839 A840 A841 U842 A843 G844 G845 G846 A847 C848 A849 G850 U851 U852 G853 G854 G855 G856 G857 C858 A859 A862 G863 U864 A865 U866 U867 U868 A869 A870 U871
A872 G873 U874 C875 A876 G877 A878 G879 G880 U881 G882 A883 A884 A885 U886 U887 C888 U889 U890 G891 G892 A893 U894 U895 U896 A897 U898 U899 A900 A901 G902 G903 A904 C905 U906 A907 U910 A911 A912 U913 G914 C915 G920 C921 A922 U923 G926 C927 G928 A929 A930 A931 G932 A933 U934 G935 U936
U937 U938 U939 C940 A941 U942 U943 A944 A945 U946 C947 A948 A949 G950 A951 A952 C953 G954 A955 A956 A957 G958 G962 G963 G964 G965 A966 U967 C968 A969 A970 A971 G972 A973 G974 G975 A976 U977 C978 A979 G980 A981 U982 A983 C984 C985 G986 U987 C988 G989 U990 A991 G992 U993 C994 U995 U996 A997
U1000 A1001 U1002 A1003 A1004 A1005 C1006 U1007 A1008 U1009 A1010 G1013 A1014 C1015 U1016 C1017 G1018 G1019 G1020 A1021 U1022 G1025 C1026 U1027 G1028 G1029 A1030 A1031 U1032 A1033 A1034 A1035 U1036 G1037 U1038 C1039 C1040 A1041 G1042 U1043 C1044 G1045 G1046 C1047 A1048 C1049 C1050 G1051 U1052 A1053 U1054 G1055 A1056 G1057 A1058 A1059 A1060 U1061
C1062 A1063 A1064 A1065 G1066 U1069 U1070 U1071 G1072 G1073 U1076 C1077 U1078 G1079 G1080 G1081 G1082 A1085 G1086 U1087 A1088 U1089 G1090 G1091 U1092 A1093 C1094 G1095 C1096 A1097 A1098 G1099 U1100 C1101 U1102 G1103 A1106 C1107 U1108 U1109 A1110 A1111 A1112 G1113 G1114 U1117 U1118 G1119 A1120 C1121 G1122 G1123 A1124 A1125 C1126
A1127 G1128 C1131 A1132 C1133 C1134 A1135 G1136 A1137 A1138 G1139 U1140 G1141 G1142 A1143 A1144 C1145 C1146 U1147 G1148 C1149 G1150 G1151 C1152 U1153 U1154 A1155 A1156 U1157 U1158 U1159 G1160 A1161 C1162 U1163 C1164 A1165 A1166 C1167 A1168 C1169 G1170 G1171 G1172 G1173 A1174 A1175 A1176 C1177 U1178 C1179 A1180 C1181 G1182 A1183 G1186 C1187 A1188
A1189 G1190 A1191 C1192 A1193 G1194 A1197 A1198 G1199 G1200 G1201 A1202 U1203 U1204 G1205 A1206 C1207 A1208 G1209 U1212 G1213 A1214 G1215 A1216 G1217 C1218 U1222 U1223 C1224 U1225 U1226 G1227 A1228 U1229 U1230 C1231 U1232 U1233 G1237 U1238 G1239 G1240 U1241 G1242 G1243 U1244 G1245 C1246 A1247 U1248 G1249 G1250 C1251 C1252 G1253 U1254
U1255 C1256 U1257 U1258 A1259 G1260 U1261 U1262 G1263 G1264 U1265 G1266 G1267 U1270 G1271 A1272 U1273 U1274 U1275 G1276 U1277 C1278 U1279 G1280 A1284 A1285 U1286 U1287 C1288 C1289 G1290 U1291 U1292 A1293 A1294 C1295 G1296 A1297 A1298 C1299 G1300 A1301 G1302 A1303 C1304 C1305 C1310 C1311 U1312 G1313 C1314 U1315 A1316 A1317 C1318 U1319 A1320
G1321 U1322 C1323 U1324 G1325 C1326 U1327 U1328 G1329 U1330 A1331 A1332 A1333 U1334 A1335 A1336 C1337 A1338 G1339 G1340 U1341 U1342 G1343 U1344 A1345 C1346 U1347 U1348 C1349 A1352 G1353 G1356 G1357 A1358 C1359 U1360 A1361 U1362 U1363 G1366 C1367 A1368 A1369 U1370 A1371 A1372 G1373 C1374 C1375 A1376 A1377 U1378 G1379 G1380 A1381 A1382 G1383
U1384 U1385 U1386 G1390 C1391 A1392 A1393 U1394 A1395 A1396 C1397 A1398 G1399 G1400 U1401 C1402 U1403 G1404 U1405 G1406 A1407 U1408 G1409 C1410 C1413 U1414 A1415 G1416 A1417 C1418 G1419 U1420 G1421 C1422 U1423 C1424 G1425 G1426 C1427 C1428 G1429 C1430 A1431 C1434 G1435 C1436 G1437 U1438 U1439 A1440 C1441 A1442 A1443 U1444 G1445 A1446 C1447
U1448 G1449 G1452 C1453 A1454 A1455 A1456 A1457 A1458 G1459 U1460 A1461 U1462 U1463 U1464 C1465 C1466 U1467 G1468 U1469 C1470 C1471 U1472 G1473 G1474 G1475 A1476 A1477 U1480 A1481 C1482 G1483 G1484 G1485 U1486 A1487 A1488 U1489 C1490 U1491 U1492 A1493 U1494 U1495 A1496 A1497 U1498 A1499 C1500 C1501 A1502 G1503 U1504 C1505 G1506 U1507 G1508 U1509
U1510 A1511 G1512 G1513 G1514 A1515 U1516 A1517 G1518 U1519 U1520 C1521 U1522 U1523 U1524 G1525 G1526 A1527 A1528 U1529 U1530 G1531 U1532 G1533 G1534 A1535 U1536 C1537 U1538 U1539 G1540 A1541 A1542 C1543 G1544 A1545 G1546 G1547 A1548 A1549 U1550 U1551 U1552 C1553 U1554 A1555 G1556 U1557 A1558 A1559 G1560 U1561 G1562 C1563 G1566 U1567 C1568 U1569 U1570
C1571 A1572 G1573 C1574 U1575 U1576 G1577 C1578 G1579 U1580 U1581 G1582 A1583 U1584 U1585 A1586 U1587 G1588 U1589 C1590 C1591 G1594 C1595 C1596 G1597 U1598 U1599 U1600 G1601 U1602 A1603 C1604 A1605 C1606 A1607 C1608 C1609 G1610 C1611 C1612 C1613 G1614 G1617 C1618 U1619 U1620 G1621 U1622 A1623 G1624 U1625 A1626 A1627 C1628 G1629 A1630 C1636
U1637 C1644 C1645 U1646 U1647 C1648 U1649 G1650 G1651 A1652 C1653 U1654 G1655 C1656 G1657 A1658 C1659 A1660 G1661 C1662 A1663 A1664 U1665 G1666 U1667 U1668 G1669 C1670 G1671 G1672 A1673 A1674 A1675 U1678 A1679 A1680 A1685 C1686 C1687 C1688 U1689 A1690 C1691 C1692 A1693 U1694 U1695 U1696 G1697 G1698 A1699 A1700 C1701 A1702 A1703 C1704 A1705



• Molecule 11: RPS0E

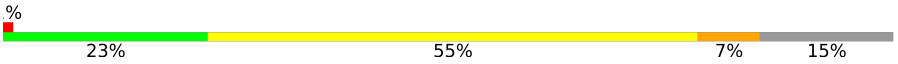
Chain AB:

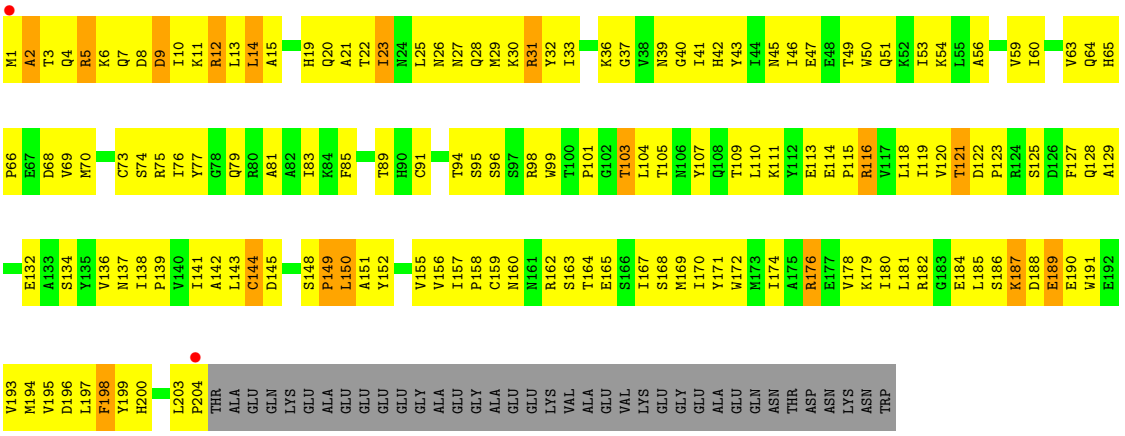




• Molecule 11: RPS0E

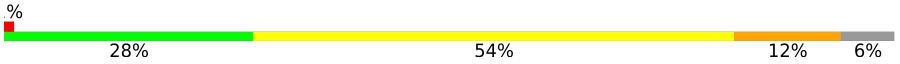
Chain BB:

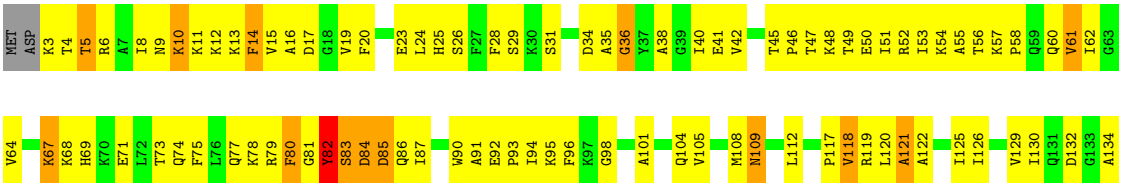


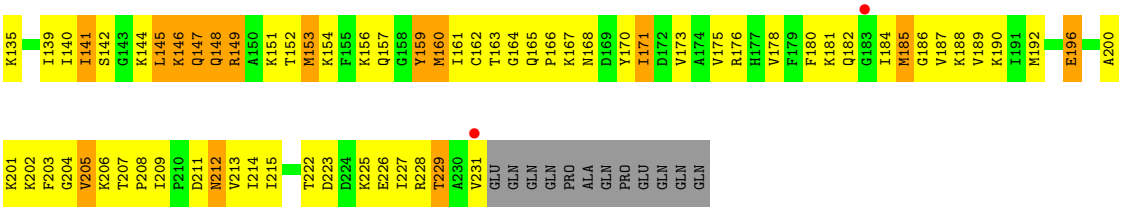


• Molecule 12: KH DOMAIN CONTAINING PROTEIN

Chain AC:

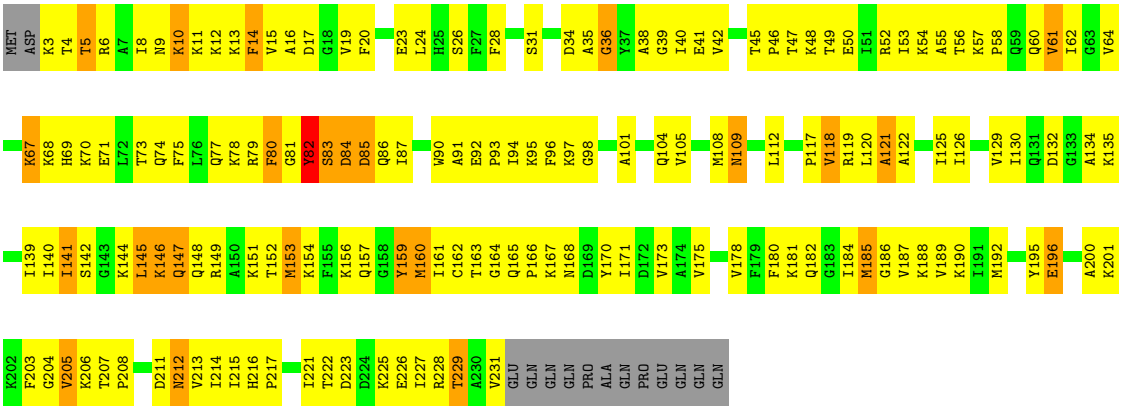






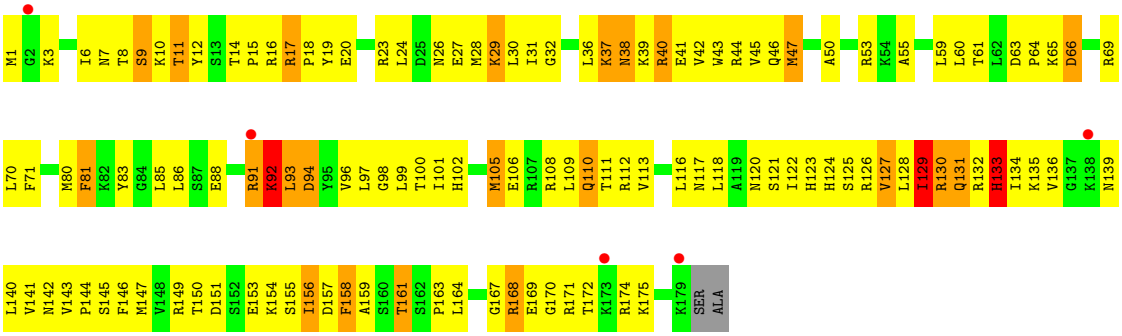
• Molecule 12: KH DOMAIN CONTAINING PROTEIN

Chain BC:



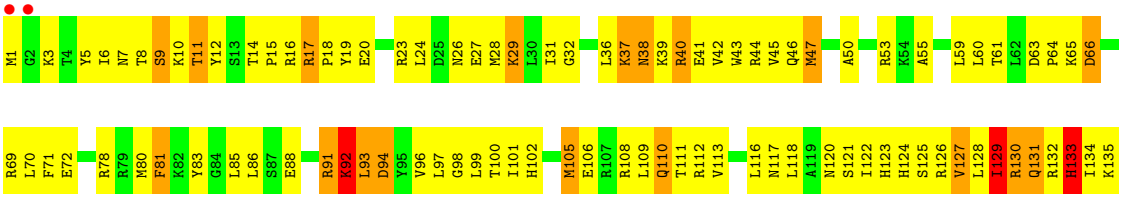
• Molecule 13: RIBOSOMAL PROTEIN S4 CONTAINING PROTEIN

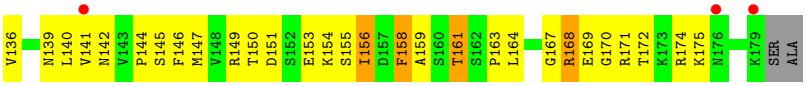
Chain AD:



• Molecule 13: RIBOSOMAL PROTEIN S4 CONTAINING PROTEIN

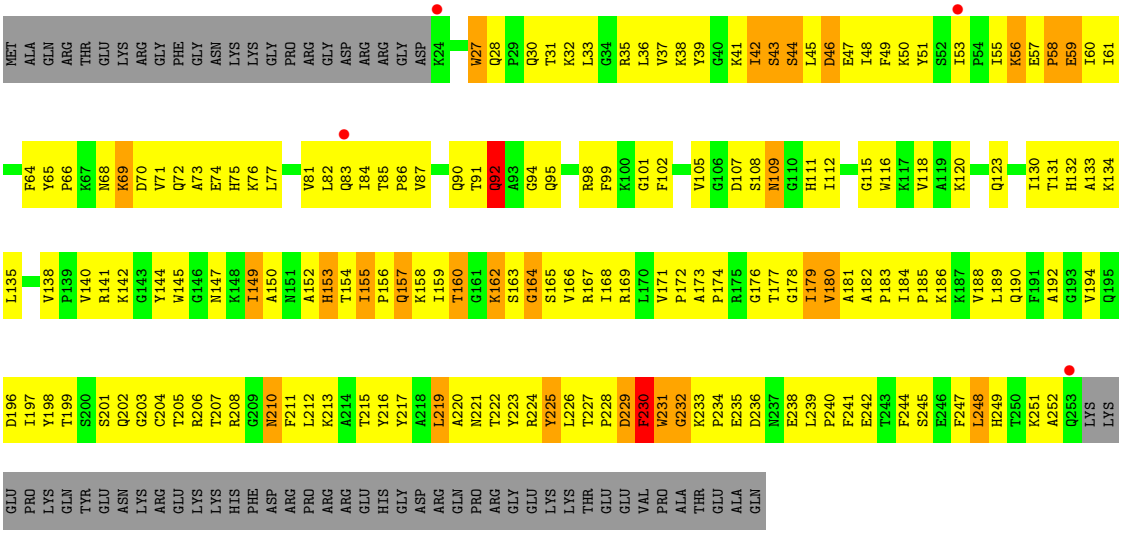
Chain BD:





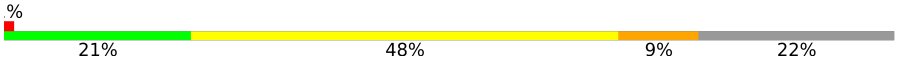
• Molecule 14: RIBOSOMAL PROTEIN S5 CONTAINING PROTEIN

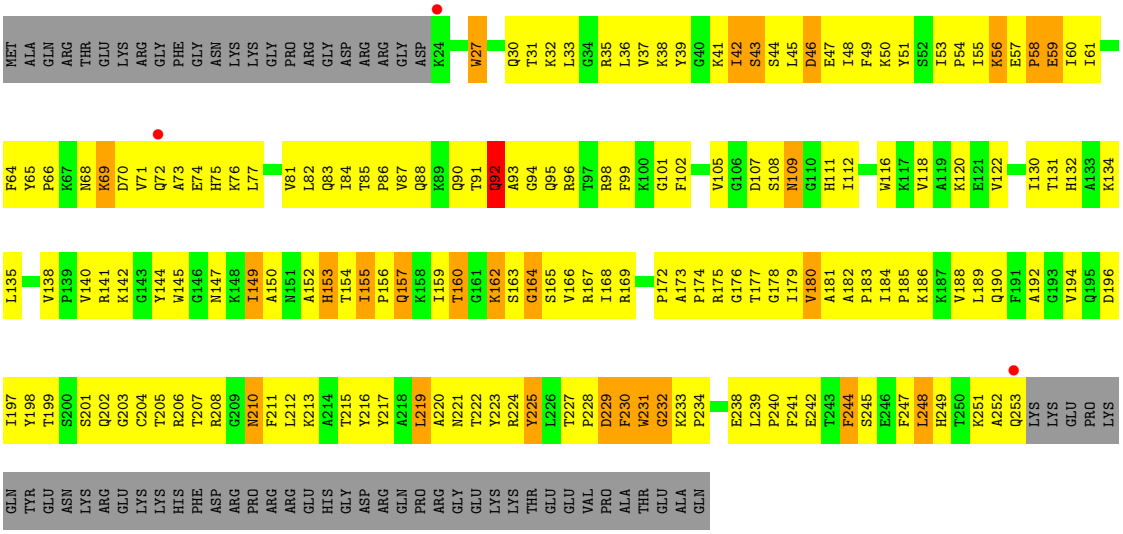
Chain AE:



• Molecule 14: RIBOSOMAL PROTEIN S5 CONTAINING PROTEIN

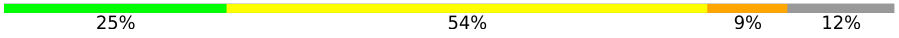
Chain BE:

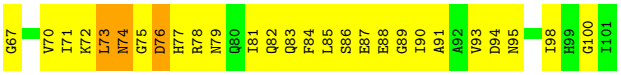




• Molecule 15: EIF1

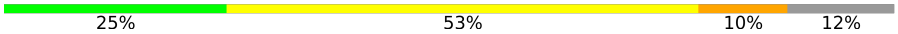
Chain AF:

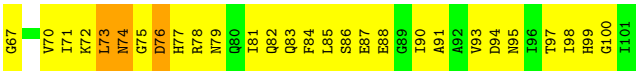




• Molecule 15: EIF1

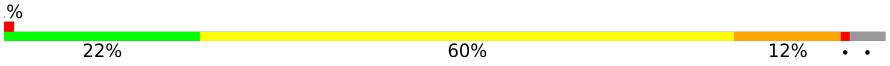
Chain BF:

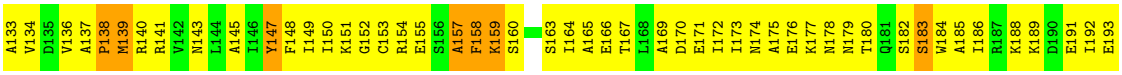


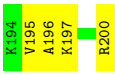


• Molecule 16: RIBOSOMAL PROTEIN S7 CONTAINING PROTEIN

Chain AG:

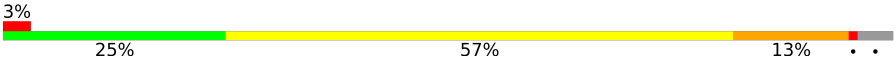


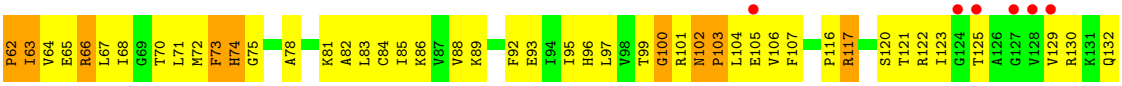




• Molecule 16: RIBOSOMAL PROTEIN S7 CONTAINING PROTEIN

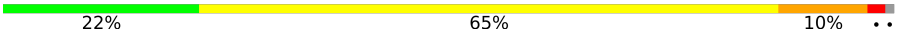
Chain BG:

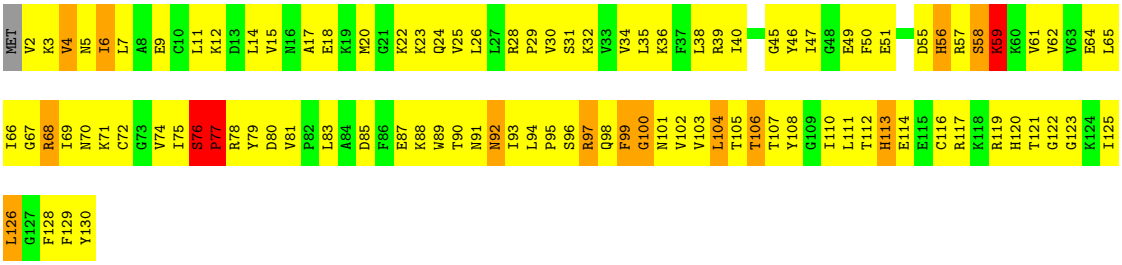




• Molecule 17: RIBOSOMAL PROTEIN S8 CONTAINING PROTEIN

Chain AH:





• Molecule 17: RIBOSOMAL PROTEIN S8 CONTAINING PROTEIN

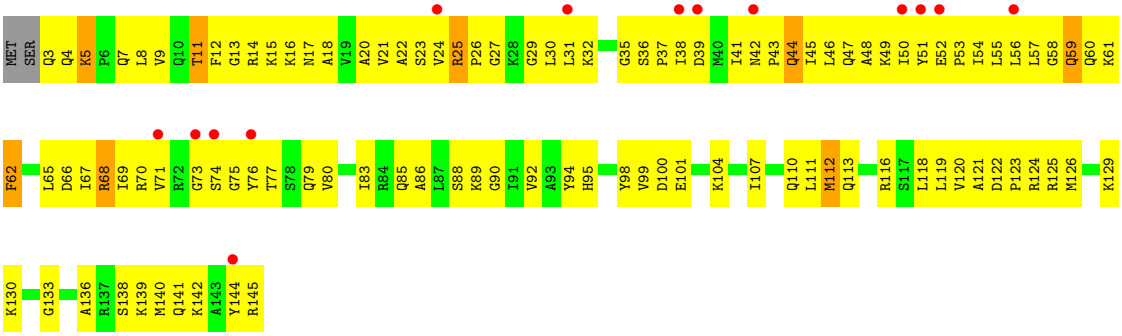
Chain BH:

• Molecule 18: RPS16E, 40S RIBOSOMAL PROTEIN RPS16E

Chain AI:

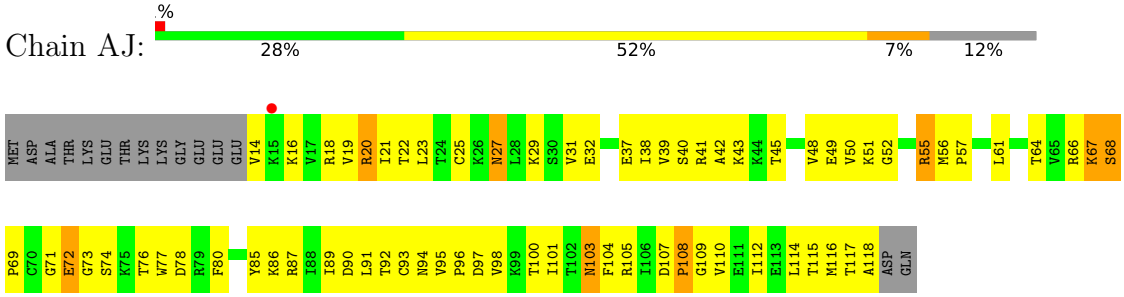
• Molecule 18: RPS16E, 40S RIBOSOMAL PROTEIN RPS16E

Chain BI:



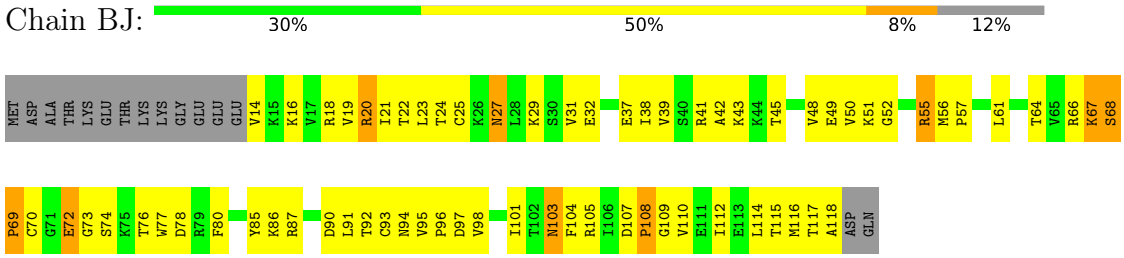
• Molecule 19: RIBOSOMAL PROTEIN S10 CONTAINING PROTEIN

Chain AJ:



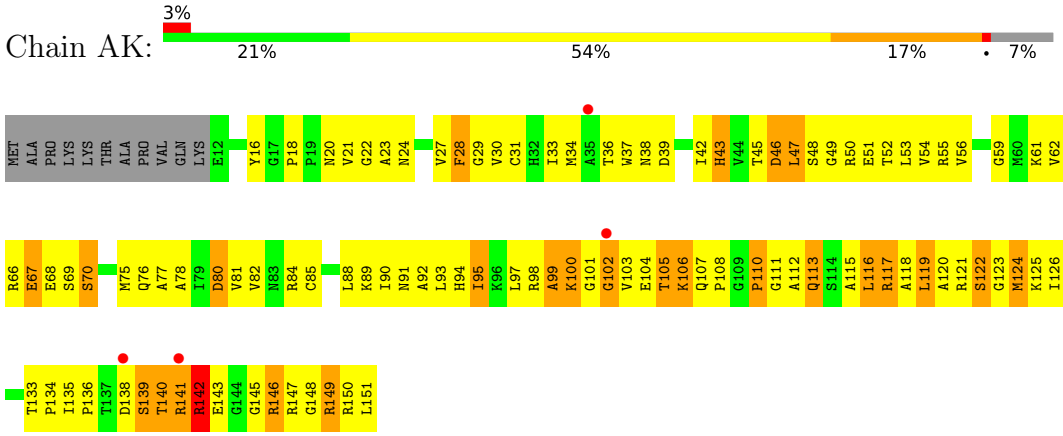
• Molecule 19: RIBOSOMAL PROTEIN S10 CONTAINING PROTEIN

Chain BJ:



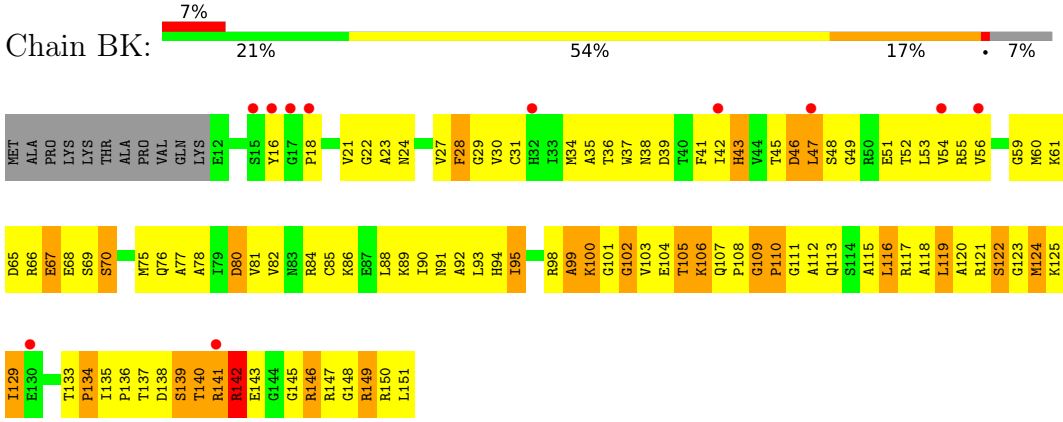
• Molecule 20: RPS14E

Chain AK:



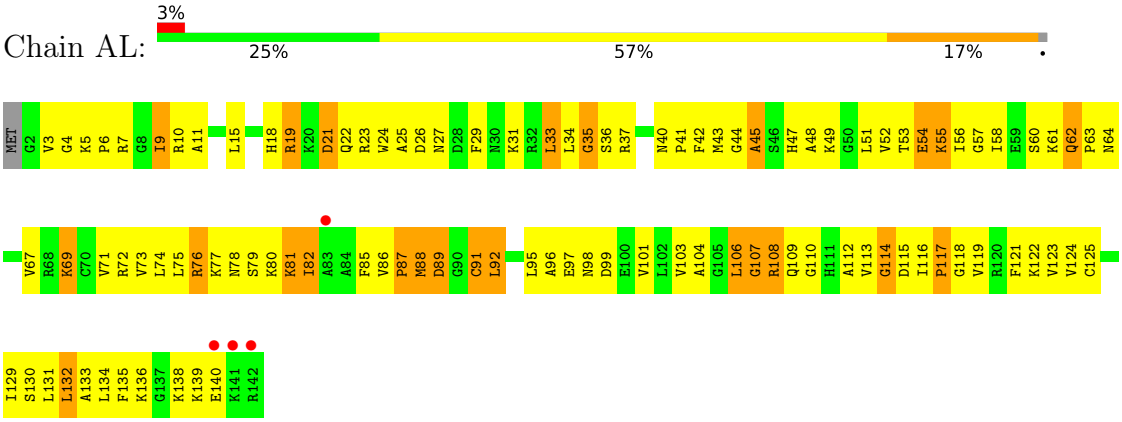
• Molecule 20: RPS14E

Chain BK:



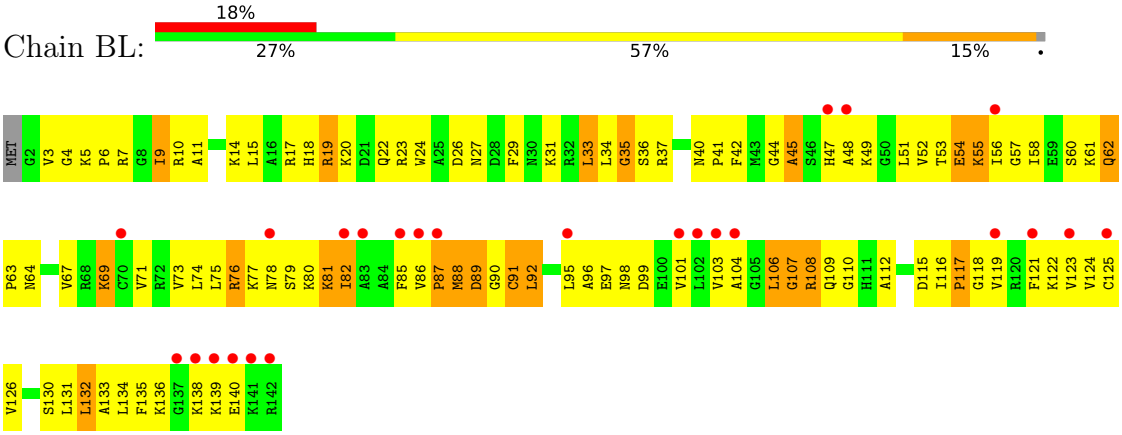
• Molecule 21: 40S RIBOSOMAL PROTEIN S12

Chain AL:



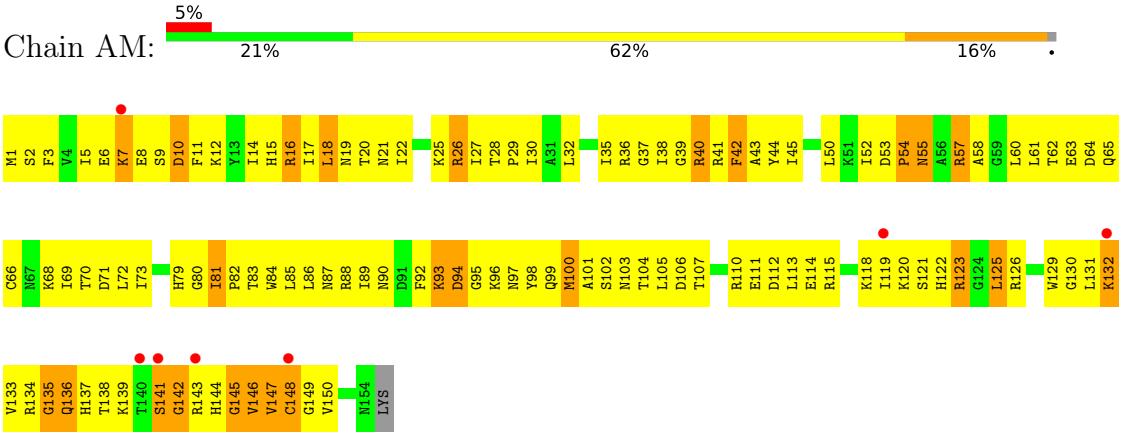
• Molecule 21: 40S RIBOSOMAL PROTEIN S12

Chain BL:



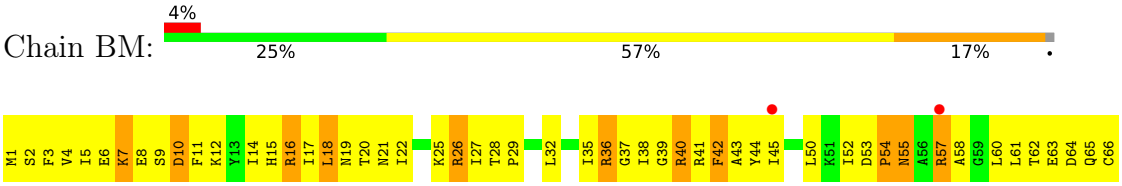
• Molecule 22: RPS18E

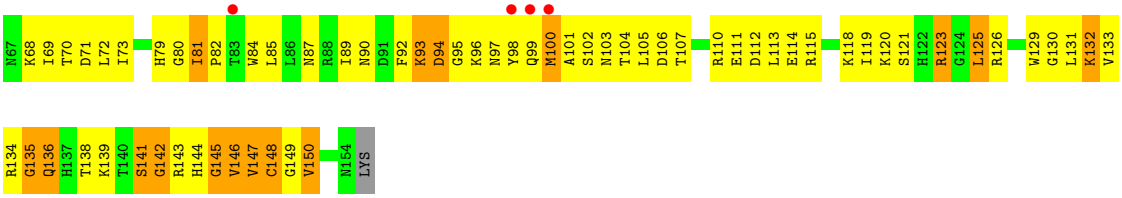
Chain AM:



• Molecule 22: RPS18E

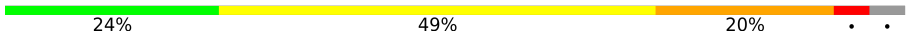
Chain BM:

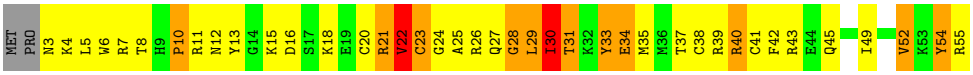




• Molecule 23: RPS29E

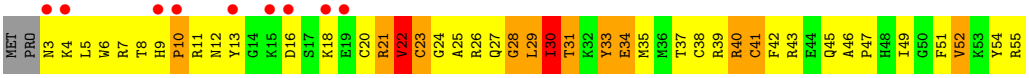
Chain AN:





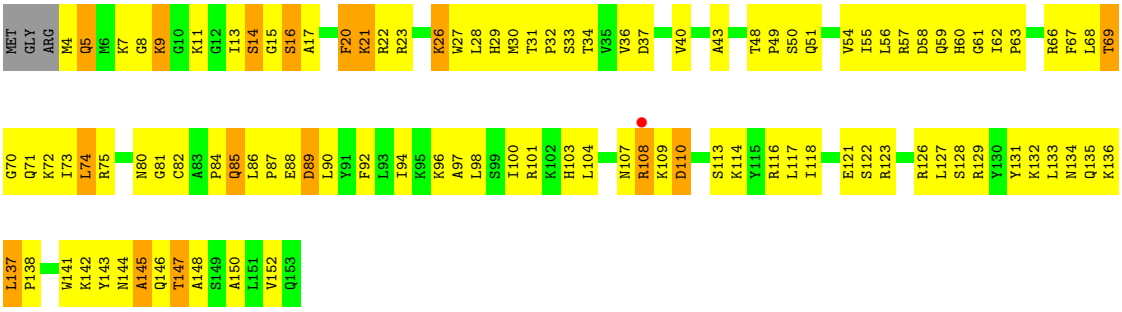
• Molecule 23: RPS29E

Chain BN:



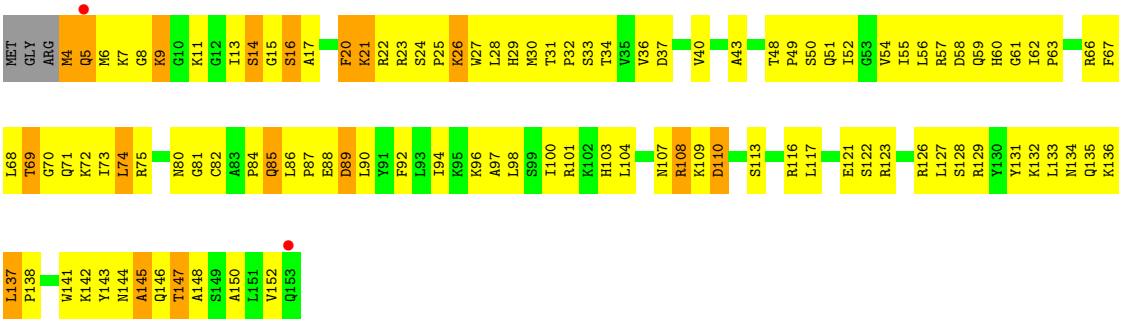
• Molecule 24: RPS13E

Chain AO:



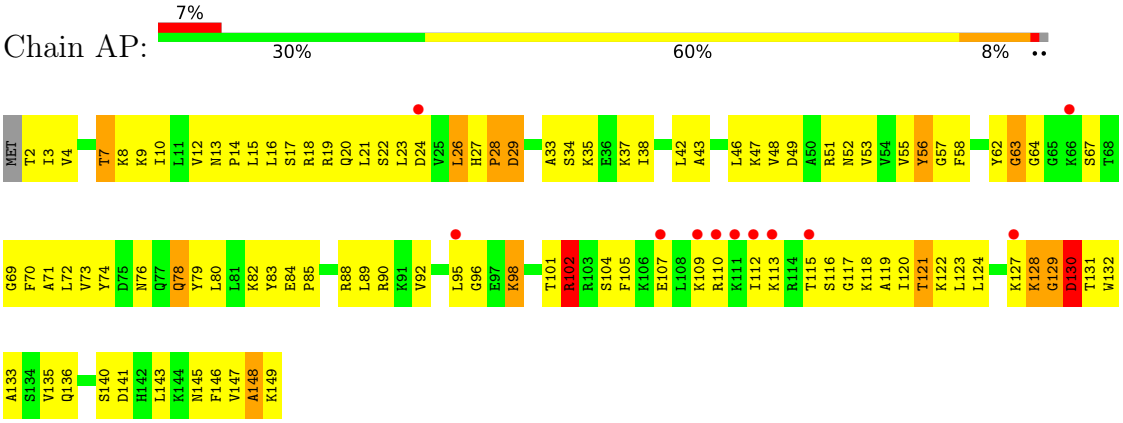
• Molecule 24: RPS13E

Chain BO:



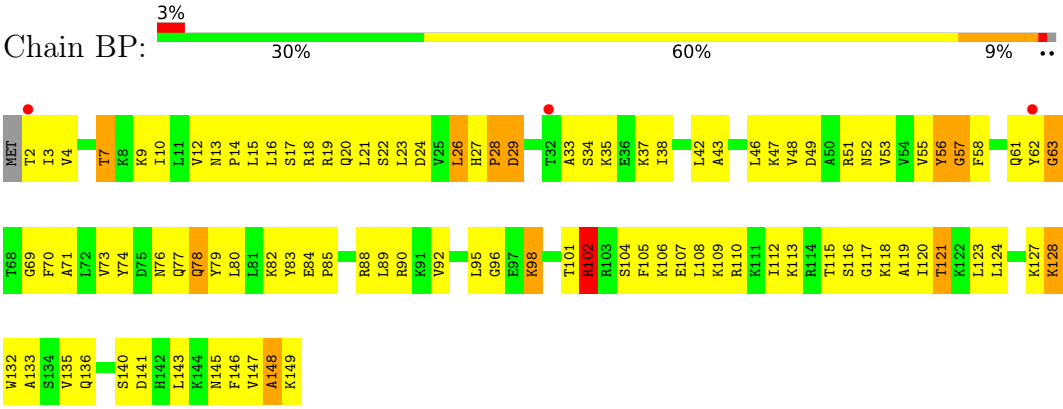
• Molecule 25: RPS24E

Chain AP:



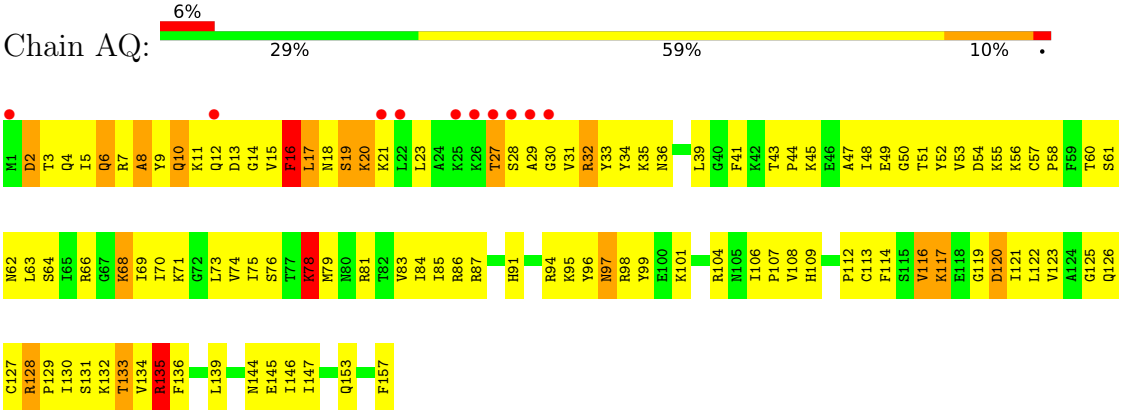
• Molecule 25: RPS24E

Chain BP:



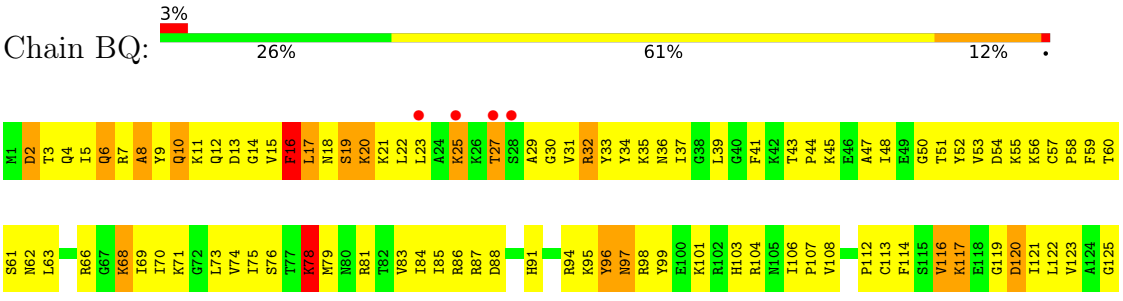
• Molecule 26: RIBOSOMAL PROTEIN S17 CONTAINING PROTEIN

Chain AQ:



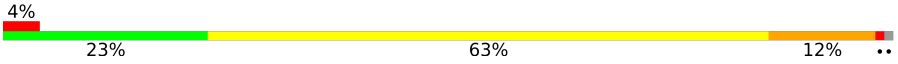
• Molecule 26: RIBOSOMAL PROTEIN S17 CONTAINING PROTEIN

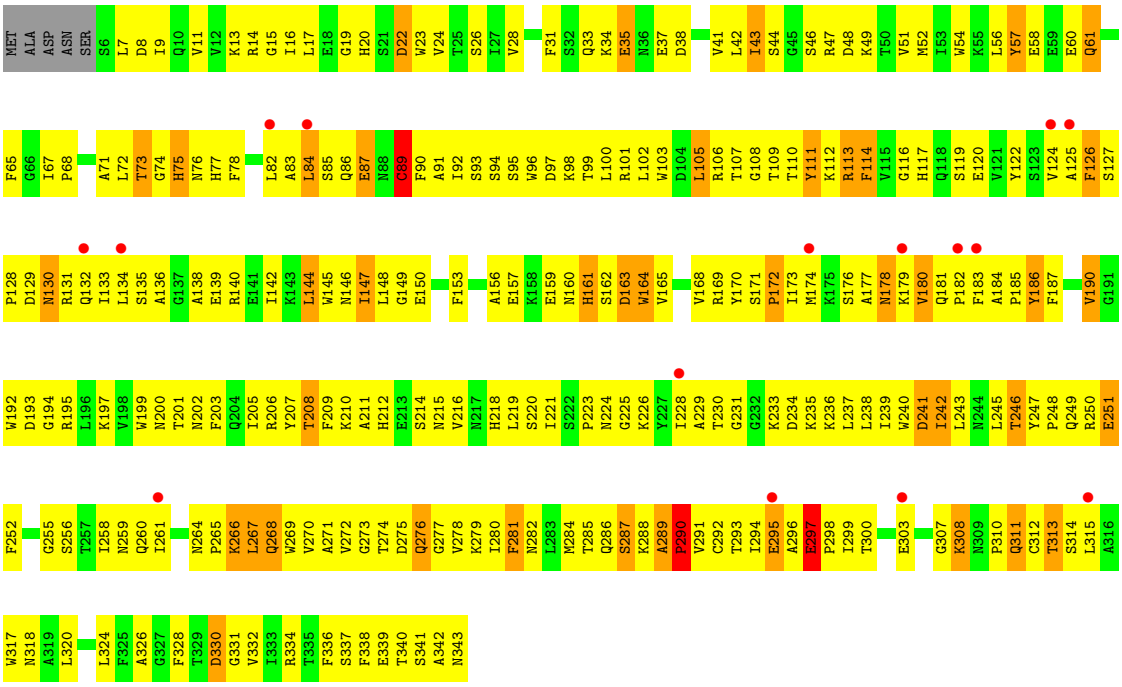
Chain BQ:



• Molecule 27: RACK1

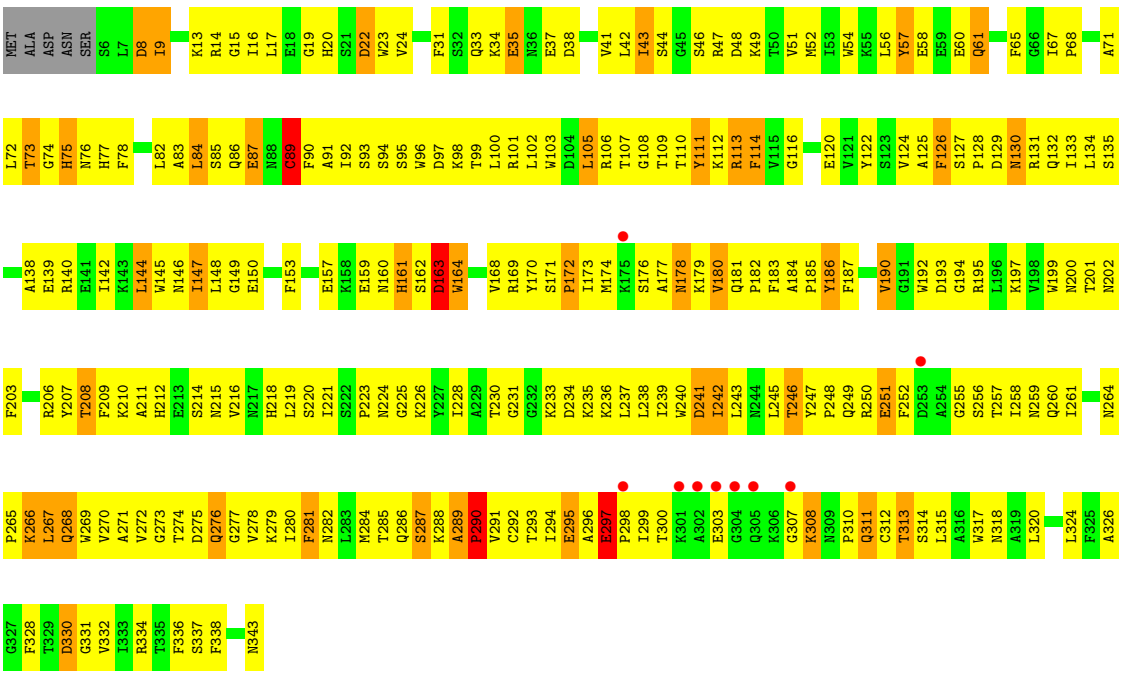
Chain AR:





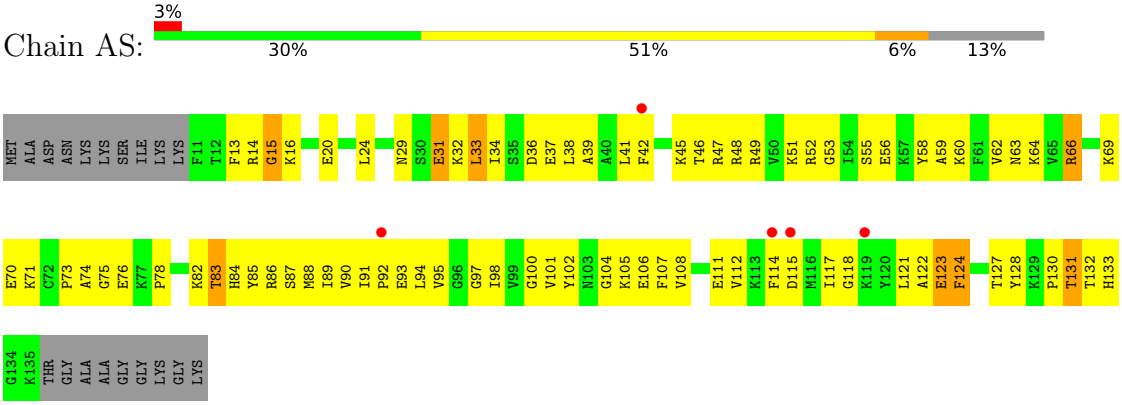
• Molecule 27: RACK1

Chain BR:



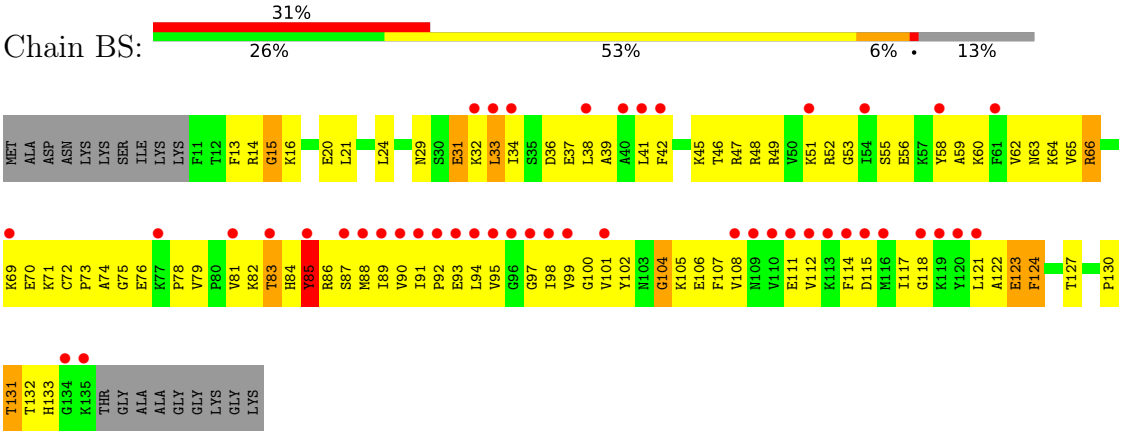
• Molecule 28: RPS15E

Chain AS:



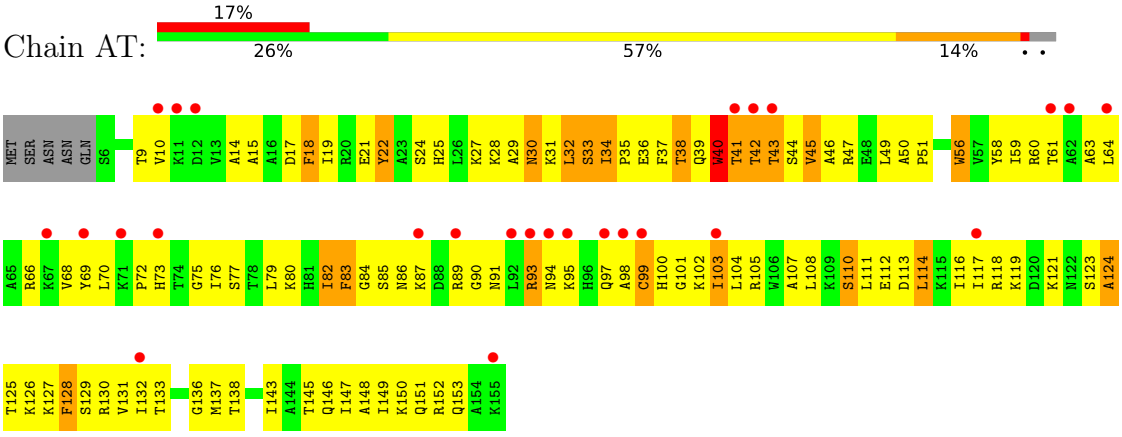
• Molecule 28: RPS15E

Chain BS:



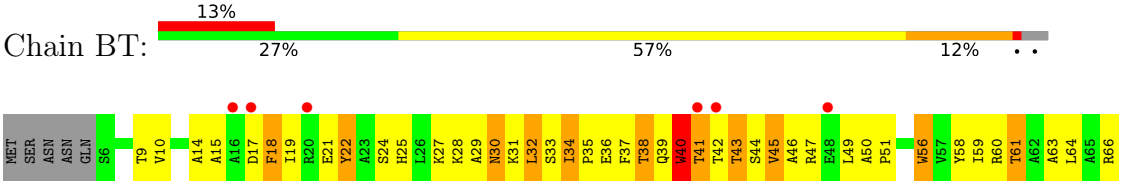
• Molecule 29: RPS19E

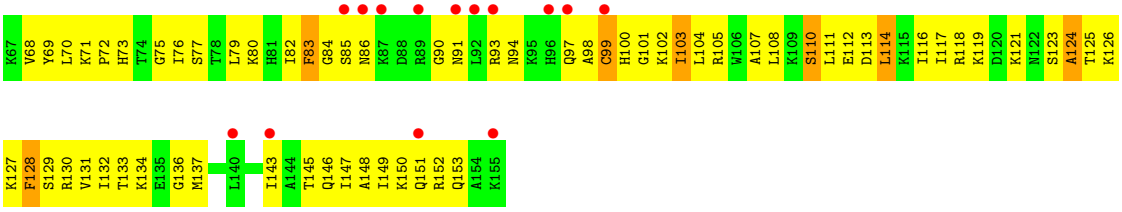
Chain AT:



• Molecule 29: RPS19E

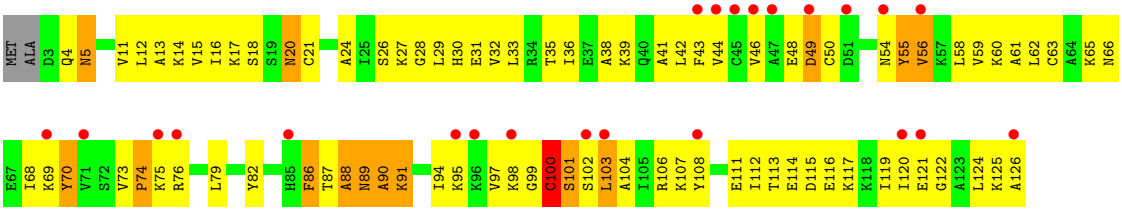
Chain BT:





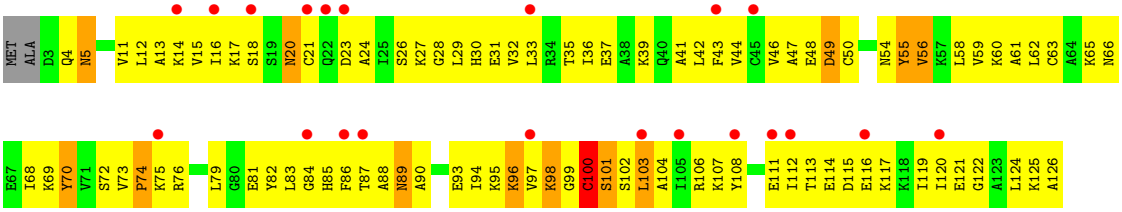
• Molecule 30: RIBOSOMAL PROTEIN L7AE CONTAINING PROTEIN

Chain AU:



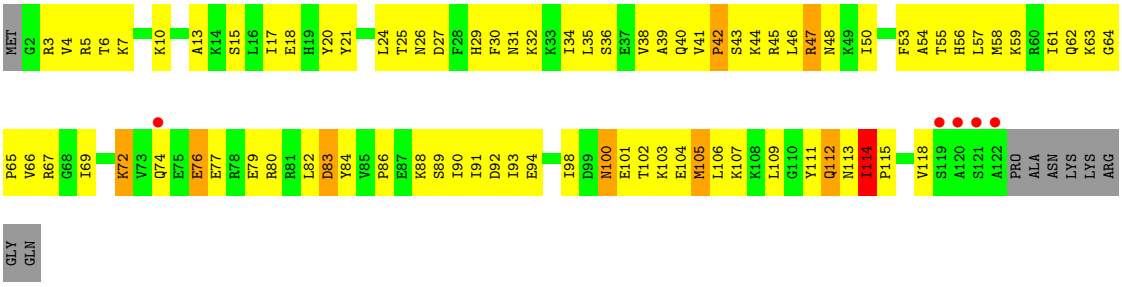
• Molecule 30: RIBOSOMAL PROTEIN L7AE CONTAINING PROTEIN

Chain BU:



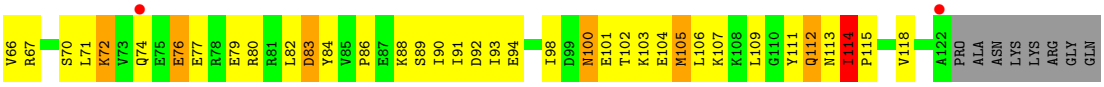
• Molecule 31: RPS17E

Chain AV:



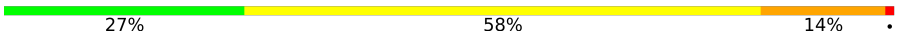
• Molecule 31: RPS17E

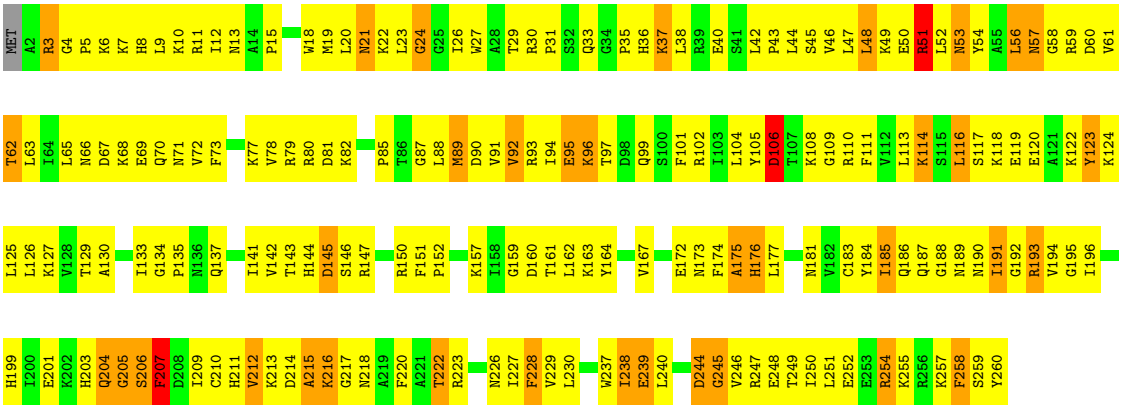
Chain BV:



• Molecule 32: 40S RIBOSOMAL PROTEIN S4

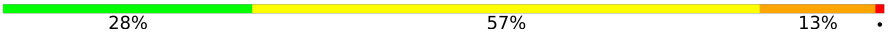
Chain AW:

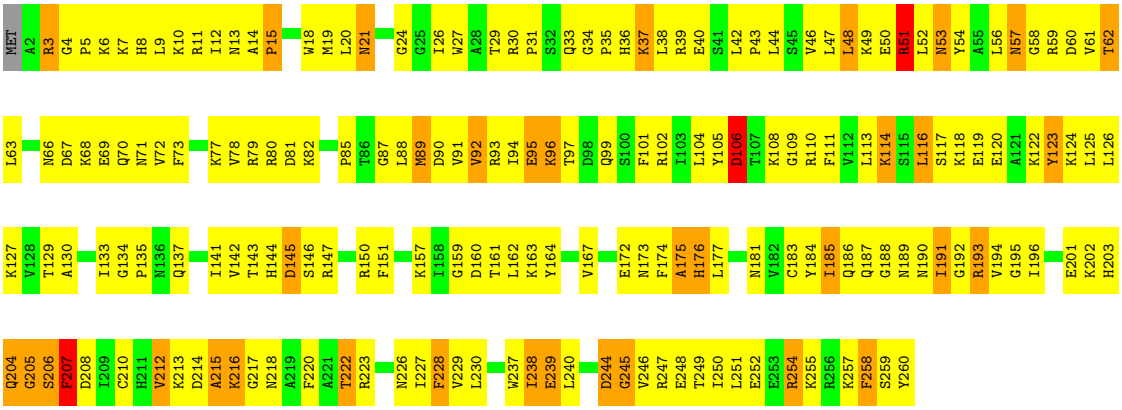




• Molecule 32: 40S RIBOSOMAL PROTEIN S4

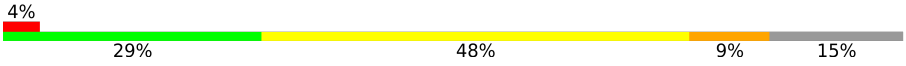
Chain BW:

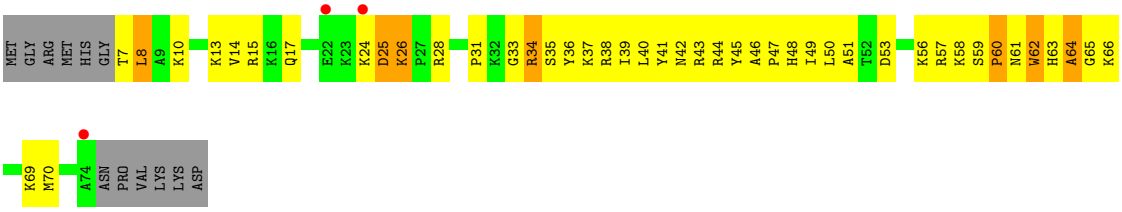




• Molecule 33: RPS30E

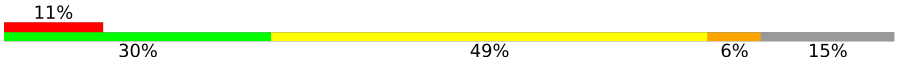
Chain AX:

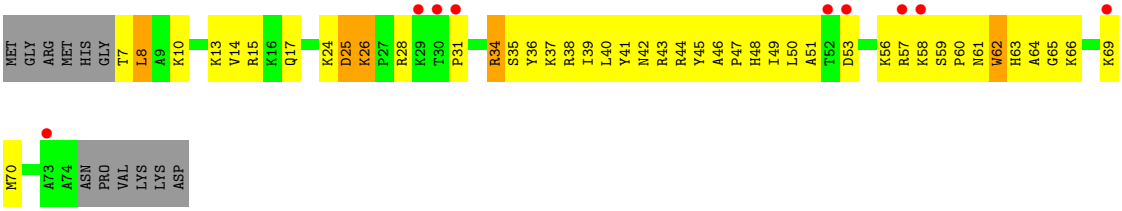




• Molecule 33: RPS30E

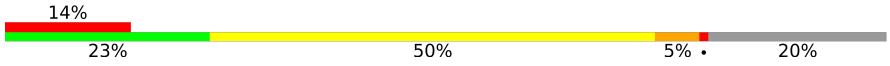
Chain BX:

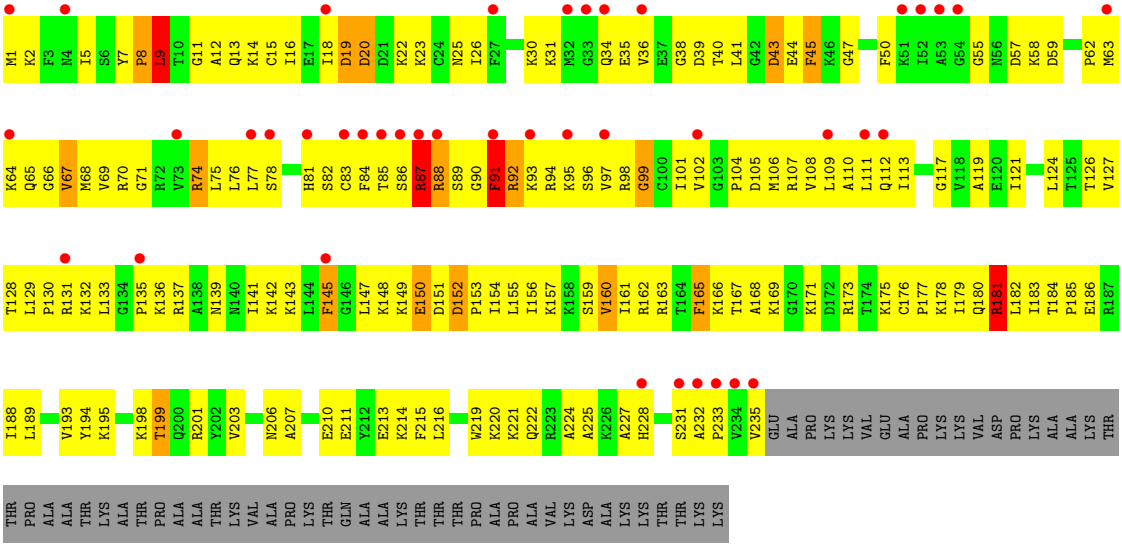




• Molecule 34: RPS6E

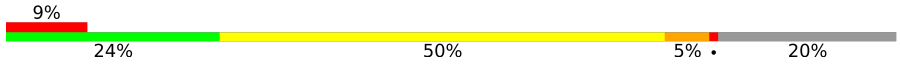
Chain AY:

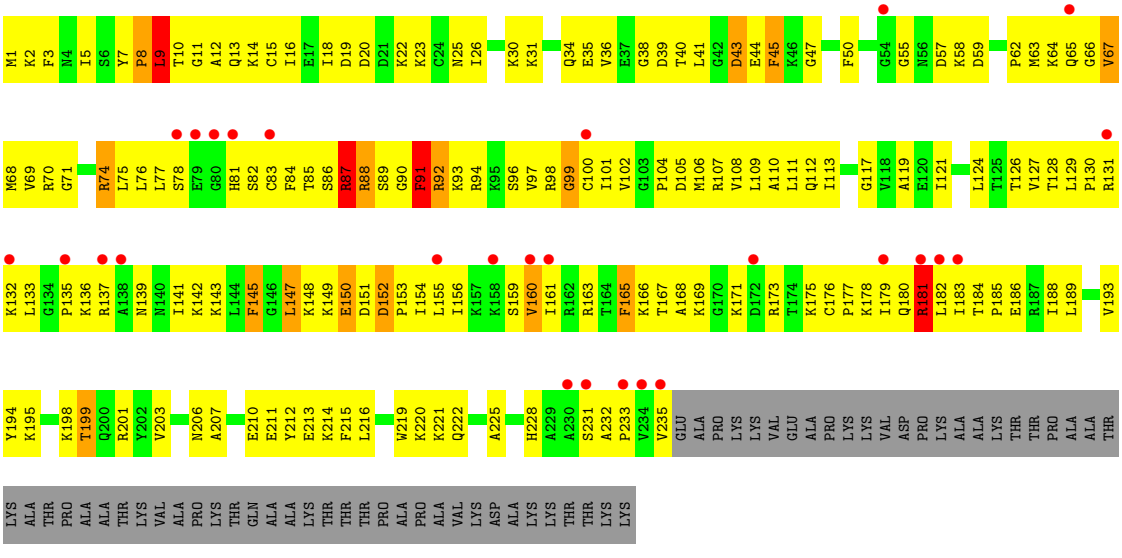




• Molecule 34: RPS6E

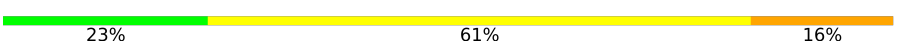
Chain BY:





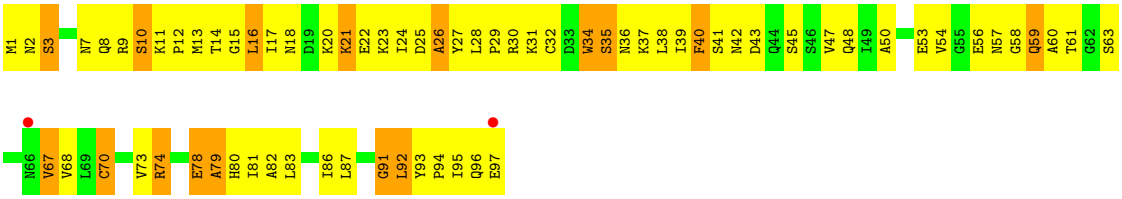
• Molecule 35: RPS21E

Chain AZ:



• Molecule 35: RPS21E

Chain BZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	320.52Å 362.21Å 412.11Å 90.00° 109.61° 90.00°	Depositor
Resolution (Å)	25.00 – 3.93 97.05 – 3.93	Depositor EDS
% Data completeness (in resolution range)	85.1 (25.00-3.93) 85.1 (97.05-3.93)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.24 (at 3.89Å)	Xtriage
Refinement program	CNS 1.3	Depositor
R, R_{free}	0.206 , 0.243 0.211 , 0.244	Depositor DCC
R_{free} test set	7292 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å^2)	126.5	Xtriage
Anisotropy	0.335	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 99.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	157632	wwPDB-VP
Average B, all atoms (Å^2)	148.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.78% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

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	A1	0.38	0/518	0.74	0/688
1	B1	0.37	0/518	0.73	0/688
2	A2	0.38	0/1717	0.70	1/2288 (0.0%)
2	B2	0.39	0/1717	0.71	1/2288 (0.0%)
3	A3	0.41	0/1656	0.70	0/2223
3	B3	0.42	0/1656	0.71	0/2223
4	A4	0.40	0/1748	0.71	1/2340 (0.0%)
4	B4	0.40	0/1748	0.71	1/2340 (0.0%)
5	A5	0.42	0/807	0.77	0/1077
5	B5	0.43	0/807	0.77	0/1077
6	A6	0.46	0/640	0.71	0/855
6	B6	0.48	0/640	0.71	0/855
7	A7	0.40	0/879	0.73	0/1183
7	B7	0.43	0/879	0.73	0/1183
8	A8	0.38	0/732	0.66	0/974
8	B8	0.37	0/732	0.65	0/974
9	A9	0.39	0/605	0.69	0/799
9	B9	0.39	0/605	0.69	0/799
10	AA	0.59	6/41668 (0.0%)	0.86	69/64931 (0.1%)
10	BA	0.58	6/41668 (0.0%)	0.86	70/64931 (0.1%)
11	AB	0.41	0/1676	0.66	0/2273
11	BB	0.40	0/1676	0.66	0/2273
12	AC	0.43	0/1855	0.71	0/2490
12	BC	0.42	0/1855	0.71	0/2490
13	AD	0.43	0/1498	0.69	0/1998
13	BD	0.41	0/1498	0.68	0/1998
14	AE	0.47	0/1873	0.75	1/2533 (0.0%)
14	BE	0.46	0/1873	0.74	1/2533 (0.0%)
15	AF	0.43	0/751	0.68	0/1010
15	BF	0.44	0/751	0.68	0/1010
16	AG	0.45	0/1546	0.71	0/2079
16	BG	0.45	0/1546	0.71	0/2079

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AH	0.48	0/1058	0.83	0/1421
17	BH	0.49	0/1058	0.85	1/1421 (0.1%)
18	AI	0.42	0/1151	0.68	0/1540
18	BI	0.41	0/1151	0.68	0/1540
19	AJ	0.38	0/842	0.77	0/1133
19	BJ	0.39	0/842	0.77	0/1133
20	AK	0.42	0/1078	0.73	0/1452
20	BK	0.41	0/1078	0.73	0/1452
21	AL	0.41	0/1114	0.73	0/1485
21	BL	0.43	0/1114	0.74	0/1485
22	AM	0.37	0/1260	0.67	0/1690
22	BM	0.39	0/1260	0.67	0/1690
23	AN	0.46	0/457	0.74	0/608
23	BN	0.49	0/457	0.75	0/608
24	AO	0.43	0/1238	0.74	1/1658 (0.1%)
24	BO	0.41	0/1238	0.73	1/1658 (0.1%)
25	AP	0.41	0/1215	0.70	0/1626
25	BP	0.41	0/1215	0.69	0/1626
26	AQ	0.46	0/1298	0.74	0/1741
26	BQ	0.44	0/1298	0.74	0/1741
27	AR	0.38	0/2750	0.69	0/3726
27	BR	0.38	0/2750	0.69	0/3726
28	AS	0.37	0/1003	0.65	1/1342 (0.1%)
28	BS	0.39	0/1003	0.66	1/1342 (0.1%)
29	AT	0.43	0/1233	0.66	0/1656
29	BT	0.42	0/1233	0.66	0/1656
30	AU	0.35	0/961	0.63	0/1288
30	BU	0.35	0/961	0.62	0/1288
31	AV	0.40	0/992	0.69	0/1326
31	BV	0.42	0/992	0.68	0/1326
32	AW	0.42	0/2119	0.74	0/2849
32	BW	0.42	0/2119	0.73	0/2849
33	AX	0.36	0/566	0.70	0/753
33	BX	0.36	0/566	0.71	0/753
34	AY	0.38	0/1895	0.67	0/2523
34	BY	0.38	0/1895	0.67	0/2523
35	AZ	0.42	0/755	0.75	0/1013
35	BZ	0.42	0/755	0.76	0/1013
All	All	0.51	12/166308 (0.0%)	0.79	150/241142 (0.1%)

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
5	A5	0	1
5	B5	0	1
10	AA	1	70
10	BA	1	74
26	BQ	0	1
27	AR	0	1
27	BR	0	1
All	All	2	149

The worst 5 of 12 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	AA	1109	U	O3'-P	7.44	1.70	1.61
10	BA	1	A	OP3-P	-7.12	1.52	1.61
10	AA	1	A	OP3-P	-6.89	1.52	1.61
10	BA	1109	U	O3'-P	-6.87	1.52	1.61
10	AA	1721	G	O3'-P	6.41	1.68	1.61

The worst 5 of 150 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AA	1718	A	N9-C1'-C2'	11.64	129.13	114.00
10	BA	1718	A	N9-C1'-C2'	11.45	128.89	114.00
10	BA	1749	C	N1-C1'-C2'	10.71	127.93	114.00
10	BA	391	A	N9-C1'-C2'	10.52	127.67	114.00
10	AA	391	A	N9-C1'-C2'	10.36	127.47	114.00

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
10	AA	1718	A	C1'
10	BA	1718	A	C1'

5 of 149 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	A5	39	TYR	Sidechain
10	AA	43	U	Sidechain
10	AA	55	U	Sidechain
10	AA	59	C	Sidechain
10	AA	64	U	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A1	519	0	550	78	0
1	B1	519	0	550	80	0
2	A2	1693	0	1795	257	0
2	B2	1693	0	1795	265	0
3	A3	1629	0	1708	185	0
3	B3	1629	0	1708	178	0
4	A4	1724	0	1822	197	0
4	B4	1724	0	1822	191	0
5	A5	797	0	836	121	0
5	B5	797	0	837	108	0
6	A6	632	0	646	88	0
6	B6	632	0	646	97	0
7	A7	859	0	860	123	0
7	B7	859	0	860	129	0
8	A8	725	0	795	134	0
8	B8	725	0	795	124	0
9	A9	742	0	785	148	0
9	B9	742	0	787	134	0
10	AA	37231	0	18715	3076	0
10	BA	37231	0	18715	3025	0
11	AB	1642	0	1653	207	0
11	BB	1642	0	1653	216	0
12	AC	1820	0	1920	241	0
12	BC	1820	0	1920	236	0
13	AD	1475	0	1571	213	0
13	BD	1475	0	1571	211	0
14	AE	1827	0	1861	287	0
14	BE	1827	0	1861	282	0
15	AF	736	0	722	78	0
15	BF	736	0	722	88	0
16	AG	1520	0	1572	231	0
16	BG	1520	0	1572	231	0
17	AH	1040	0	1096	166	0
17	BH	1040	0	1096	170	0
18	AI	1135	0	1204	159	0
18	BI	1135	0	1204	146	0
19	AJ	833	0	903	82	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	BJ	833	0	903	81	0
20	AK	1063	0	1088	184	0
20	BK	1063	0	1088	178	0
21	AL	1097	0	1169	138	0
21	BL	1097	0	1169	135	0
22	AM	1239	0	1288	192	0
22	BM	1239	0	1288	192	0
23	AN	447	0	446	74	0
23	BN	447	0	446	81	0
24	AO	1214	0	1322	131	0
24	BO	1214	0	1322	131	0
25	AP	1197	0	1285	152	0
25	BP	1197	0	1285	142	0
26	AQ	1275	0	1354	213	0
26	BQ	1275	0	1354	199	0
27	AR	2682	0	2629	355	0
27	BR	2682	0	2629	327	0
28	AS	985	0	1026	114	0
28	BS	985	0	1026	122	0
29	AT	1211	0	1265	159	0
29	BT	1211	0	1265	162	0
30	AU	952	0	993	107	0
30	BU	952	0	993	124	0
31	AV	979	0	1041	136	0
31	BV	979	0	1041	141	0
32	AW	2079	0	2151	286	0
32	BW	2079	0	2151	293	0
33	AX	554	0	604	64	0
33	BX	554	0	604	72	0
34	AY	1868	0	1999	256	0
34	BY	1868	0	1999	242	0
35	AZ	747	0	758	107	0
35	BZ	747	0	758	109	0
36	A4	1	0	0	0	0
36	AA	90	0	0	0	0
36	AL	1	0	0	0	0
36	B4	1	0	0	0	0
36	BA	89	0	0	0	0
36	BD	1	0	0	0	0
36	BW	1	0	0	0	0
37	A5	1	0	0	0	0
37	A6	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	A9	1	0	0	0	0
37	AN	1	0	0	0	0
37	B5	1	0	0	0	0
37	B6	1	0	0	0	0
37	B9	1	0	0	0	0
37	BN	1	0	0	0	0
38	A2	2	0	0	0	0
38	A4	2	0	0	0	0
38	A5	1	0	0	0	0
38	AA	516	0	0	14	0
38	AC	1	0	0	0	0
38	AD	4	0	0	0	0
38	AE	3	0	0	0	0
38	AL	3	0	0	0	0
38	AM	4	0	0	1	0
38	AO	1	0	0	0	0
38	AP	1	0	0	0	0
38	AQ	2	0	0	0	0
38	AT	4	0	0	0	0
38	AW	4	0	0	0	0
38	AY	4	0	0	0	0
38	B2	2	0	0	0	0
38	B4	2	0	0	0	0
38	B5	1	0	0	0	0
38	BA	512	0	0	5	0
38	BC	2	0	0	0	0
38	BD	2	0	0	0	0
38	BE	5	0	0	0	0
38	BK	1	0	0	0	0
38	BL	2	0	0	0	0
38	BM	6	0	0	0	0
38	BO	1	0	0	0	0
38	BP	1	0	0	0	0
38	BQ	1	0	0	0	0
38	BT	6	0	0	0	0
38	BW	5	0	0	0	0
38	BY	3	0	0	0	0
All	All	157632	0	122867	15288	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 55.

The worst 5 of 15288 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AA:604:G:H1	10:AA:1080:G:N2	1.23	1.36
4:A4:207:THR:HG21	4:A4:213:LEU:HG	1.21	1.21
10:BA:604:G:H1	10:BA:1080:G:N2	1.40	1.19
21:AL:9:ILE:H	21:AL:9:ILE:HD12	1.02	1.18
10:AA:534:A:H3'	10:AA:535:A:H5'	1.18	1.18

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	A1	65/68 (96%)	45 (69%)	11 (17%)	9 (14%)	0 4
1	B1	65/68 (96%)	44 (68%)	12 (18%)	9 (14%)	0 4
2	A2	205/208 (99%)	147 (72%)	38 (18%)	20 (10%)	0 10
2	B2	205/208 (99%)	146 (71%)	39 (19%)	20 (10%)	0 10
3	A3	194/197 (98%)	159 (82%)	25 (13%)	10 (5%)	2 21
3	B3	194/197 (98%)	159 (82%)	24 (12%)	11 (6%)	1 19
4	A4	213/265 (80%)	161 (76%)	33 (16%)	19 (9%)	1 12
4	B4	213/265 (80%)	161 (76%)	34 (16%)	18 (8%)	1 12
5	A5	96/119 (81%)	66 (69%)	20 (21%)	10 (10%)	0 8
5	B5	96/119 (81%)	65 (68%)	21 (22%)	10 (10%)	0 8
6	A6	78/81 (96%)	57 (73%)	15 (19%)	6 (8%)	1 15
6	B6	78/81 (96%)	57 (73%)	15 (19%)	6 (8%)	1 15
7	A7	102/162 (63%)	78 (76%)	17 (17%)	7 (7%)	1 16
7	B7	102/162 (63%)	78 (76%)	17 (17%)	7 (7%)	1 16
8	A8	91/143 (64%)	71 (78%)	13 (14%)	7 (8%)	1 15
8	B8	91/143 (64%)	71 (78%)	13 (14%)	7 (8%)	1 15

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	A9	72/189 (38%)	50 (69%)	17 (24%)	5 (7%)	1 16
9	B9	72/189 (38%)	50 (69%)	17 (24%)	5 (7%)	1 16
11	AB	202/241 (84%)	168 (83%)	28 (14%)	6 (3%)	4 32
11	BB	202/241 (84%)	167 (83%)	28 (14%)	7 (4%)	3 29
12	AC	227/243 (93%)	177 (78%)	31 (14%)	19 (8%)	1 12
12	BC	227/243 (93%)	176 (78%)	32 (14%)	19 (8%)	1 12
13	AD	177/181 (98%)	132 (75%)	36 (20%)	9 (5%)	2 22
13	BD	177/181 (98%)	130 (73%)	38 (22%)	9 (5%)	2 22
14	AE	228/296 (77%)	170 (75%)	40 (18%)	18 (8%)	1 14
14	BE	228/296 (77%)	172 (75%)	39 (17%)	17 (8%)	1 15
15	AF	87/101 (86%)	70 (80%)	12 (14%)	5 (6%)	1 19
15	BF	87/101 (86%)	70 (80%)	12 (14%)	5 (6%)	1 19
16	AG	190/200 (95%)	141 (74%)	33 (17%)	16 (8%)	1 12
16	BG	190/200 (95%)	142 (75%)	31 (16%)	17 (9%)	1 12
17	AH	127/130 (98%)	98 (77%)	24 (19%)	5 (4%)	3 26
17	BH	127/130 (98%)	98 (77%)	26 (20%)	3 (2%)	6 36
18	AI	141/145 (97%)	111 (79%)	25 (18%)	5 (4%)	3 29
18	BI	141/145 (97%)	110 (78%)	26 (18%)	5 (4%)	3 29
19	AJ	103/120 (86%)	89 (86%)	6 (6%)	8 (8%)	1 15
19	BJ	103/120 (86%)	89 (86%)	6 (6%)	8 (8%)	1 15
20	AK	138/151 (91%)	96 (70%)	28 (20%)	14 (10%)	0 9
20	BK	138/151 (91%)	95 (69%)	27 (20%)	16 (12%)	0 6
21	AL	139/142 (98%)	106 (76%)	17 (12%)	16 (12%)	0 6
21	BL	139/142 (98%)	106 (76%)	18 (13%)	15 (11%)	0 8
22	AM	152/155 (98%)	109 (72%)	22 (14%)	21 (14%)	0 4
22	BM	152/155 (98%)	110 (72%)	21 (14%)	21 (14%)	0 4
23	AN	51/55 (93%)	30 (59%)	11 (22%)	10 (20%)	0 2
23	BN	51/55 (93%)	31 (61%)	11 (22%)	9 (18%)	0 2
24	AO	148/153 (97%)	112 (76%)	20 (14%)	16 (11%)	0 8
24	BO	148/153 (97%)	113 (76%)	19 (13%)	16 (11%)	0 8
25	AP	146/149 (98%)	115 (79%)	20 (14%)	11 (8%)	1 15

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
25	BP	146/149 (98%)	115 (79%)	20 (14%)	11 (8%)	1 15
26	AQ	155/157 (99%)	115 (74%)	26 (17%)	14 (9%)	1 12
26	BQ	155/157 (99%)	112 (72%)	27 (17%)	16 (10%)	0 9
27	AR	336/343 (98%)	255 (76%)	48 (14%)	33 (10%)	0 10
27	BR	336/343 (98%)	256 (76%)	48 (14%)	32 (10%)	0 11
28	AS	123/144 (85%)	91 (74%)	25 (20%)	7 (6%)	1 19
28	BS	123/144 (85%)	90 (73%)	25 (20%)	8 (6%)	1 18
29	AT	148/155 (96%)	114 (77%)	17 (12%)	17 (12%)	0 6
29	BT	148/155 (96%)	113 (76%)	20 (14%)	15 (10%)	0 9
30	AU	122/126 (97%)	91 (75%)	20 (16%)	11 (9%)	1 12
30	BU	122/126 (97%)	89 (73%)	22 (18%)	11 (9%)	1 12
31	AV	119/130 (92%)	94 (79%)	16 (13%)	9 (8%)	1 15
31	BV	119/130 (92%)	96 (81%)	14 (12%)	9 (8%)	1 15
32	AW	257/260 (99%)	193 (75%)	40 (16%)	24 (9%)	0 11
32	BW	257/260 (99%)	195 (76%)	38 (15%)	24 (9%)	0 11
33	AX	66/80 (82%)	48 (73%)	12 (18%)	6 (9%)	1 12
33	BX	66/80 (82%)	48 (73%)	12 (18%)	6 (9%)	1 12
34	AY	233/293 (80%)	188 (81%)	31 (13%)	14 (6%)	1 19
34	BY	233/293 (80%)	187 (80%)	32 (14%)	14 (6%)	1 19
35	AZ	95/97 (98%)	70 (74%)	13 (14%)	12 (13%)	0 5
35	BZ	95/97 (98%)	69 (73%)	14 (15%)	12 (13%)	0 5
All	All	10052/11358 (88%)	7627 (76%)	1588 (16%)	837 (8%)	1 13

5 of 837 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A1	20	SER
1	A1	35	LYS
1	A1	37	GLU
1	A1	59	GLU
1	A1	63	GLU

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 X-ray entries followed by that with respect to entries of similar resolution.

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	A1	56/57 (98%)	53 (95%)	3 (5%)	22 50
1	B1	56/57 (98%)	53 (95%)	3 (5%)	22 50
2	A2	184/185 (100%)	171 (93%)	13 (7%)	14 43
2	B2	184/185 (100%)	171 (93%)	13 (7%)	14 43
3	A3	182/183 (100%)	164 (90%)	18 (10%)	8 29
3	B3	182/183 (100%)	165 (91%)	17 (9%)	9 32
4	A4	191/225 (85%)	166 (87%)	25 (13%)	4 22
4	B4	191/225 (85%)	166 (87%)	25 (13%)	4 22
5	A5	88/107 (82%)	80 (91%)	8 (9%)	9 33
5	B5	88/107 (82%)	80 (91%)	8 (9%)	9 33
6	A6	71/72 (99%)	67 (94%)	4 (6%)	21 49
6	B6	71/72 (99%)	67 (94%)	4 (6%)	21 49
7	A7	94/136 (69%)	84 (89%)	10 (11%)	6 27
7	B7	94/136 (69%)	84 (89%)	10 (11%)	6 27
8	A8	80/109 (73%)	68 (85%)	12 (15%)	3 18
8	B8	80/109 (73%)	68 (85%)	12 (15%)	3 18
9	A9	64/138 (46%)	56 (88%)	8 (12%)	4 23
9	B9	64/138 (46%)	56 (88%)	8 (12%)	4 23
11	AB	183/211 (87%)	167 (91%)	16 (9%)	10 35
11	BB	183/211 (87%)	167 (91%)	16 (9%)	10 35
12	AC	197/210 (94%)	178 (90%)	19 (10%)	8 30
12	BC	197/210 (94%)	179 (91%)	18 (9%)	9 33
13	AD	161/162 (99%)	137 (85%)	24 (15%)	3 18
13	BD	161/162 (99%)	137 (85%)	24 (15%)	3 18
14	AE	194/250 (78%)	171 (88%)	23 (12%)	5 24
14	BE	194/250 (78%)	171 (88%)	23 (12%)	5 24

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
15	AF	80/92 (87%)	72 (90%)	8 (10%)	7 29
15	BF	80/92 (87%)	71 (89%)	9 (11%)	6 25
16	AG	163/169 (96%)	147 (90%)	16 (10%)	8 29
16	BG	163/169 (96%)	146 (90%)	17 (10%)	7 28
17	AH	116/117 (99%)	101 (87%)	15 (13%)	4 22
17	BH	116/117 (99%)	102 (88%)	14 (12%)	5 23
18	AI	120/122 (98%)	115 (96%)	5 (4%)	30 56
18	BI	120/122 (98%)	115 (96%)	5 (4%)	30 56
19	AJ	98/111 (88%)	93 (95%)	5 (5%)	24 51
19	BJ	98/111 (88%)	93 (95%)	5 (5%)	24 51
20	AK	112/121 (93%)	96 (86%)	16 (14%)	3 19
20	BK	112/121 (93%)	96 (86%)	16 (14%)	3 19
21	AL	113/114 (99%)	101 (89%)	12 (11%)	6 27
21	BL	113/114 (99%)	102 (90%)	11 (10%)	8 30
22	AM	134/135 (99%)	121 (90%)	13 (10%)	8 30
22	BM	134/135 (99%)	121 (90%)	13 (10%)	8 30
23	AN	47/49 (96%)	41 (87%)	6 (13%)	4 22
23	BN	47/49 (96%)	41 (87%)	6 (13%)	4 22
24	AO	134/136 (98%)	127 (95%)	7 (5%)	23 51
24	BO	134/136 (98%)	127 (95%)	7 (5%)	23 51
25	AP	133/134 (99%)	124 (93%)	9 (7%)	16 44
25	BP	133/134 (99%)	124 (93%)	9 (7%)	16 44
26	AQ	141/141 (100%)	125 (89%)	16 (11%)	6 25
26	BQ	141/141 (100%)	126 (89%)	15 (11%)	6 27
27	AR	291/295 (99%)	261 (90%)	30 (10%)	7 28
27	BR	291/295 (99%)	260 (89%)	31 (11%)	6 27
28	AS	105/117 (90%)	102 (97%)	3 (3%)	42 64
28	BS	105/117 (90%)	101 (96%)	4 (4%)	33 58
29	AT	129/134 (96%)	117 (91%)	12 (9%)	9 32
29	BT	129/134 (96%)	116 (90%)	13 (10%)	7 29
30	AU	103/104 (99%)	97 (94%)	6 (6%)	20 48

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	BU	103/104 (99%)	99 (96%)	4 (4%)	32 58
31	AV	108/115 (94%)	100 (93%)	8 (7%)	13 41
31	BV	108/115 (94%)	99 (92%)	9 (8%)	11 38
32	AW	226/227 (100%)	196 (87%)	30 (13%)	4 22
32	BW	226/227 (100%)	197 (87%)	29 (13%)	4 22
33	AX	57/67 (85%)	55 (96%)	2 (4%)	36 61
33	BX	57/67 (85%)	55 (96%)	2 (4%)	36 61
34	AY	201/244 (82%)	187 (93%)	14 (7%)	15 43
34	BY	201/244 (82%)	187 (93%)	14 (7%)	15 43
35	AZ	82/82 (100%)	76 (93%)	6 (7%)	14 42
35	BZ	82/82 (100%)	76 (93%)	6 (7%)	14 42
All	All	8876/9742 (91%)	8034 (90%)	842 (10%)	8 31

5 of 842 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	B4	92	ASP
13	BD	130	ARG
32	BW	89	MET
4	B4	190	PHE
4	B4	81	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 276 such sidechains are listed below:

Mol	Chain	Res	Type
25	BP	20	GLN
26	BQ	153	GLN
31	BV	112	GLN
25	AP	20	GLN
23	AN	12	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	AA	1743/1753 (99%)	452 (25%)	194 (11%)
10	BA	1743/1753 (99%)	453 (25%)	194 (11%)

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
All	All	3486/3506 (99%)	905 (25%)	388 (11%)

5 of 905 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
10	AA	2	A
10	AA	3	C
10	AA	4	C
10	AA	9	U
10	AA	17	C

5 of 388 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
10	BA	336	U
10	BA	771	A
10	BA	380	G
10	BA	558	G
10	BA	911	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)

Of 192 ligands modelled in this entry, 192 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A1	67/68 (98%)	-0.28	1 (1%) 73 64	99, 157, 220, 262	0
1	B1	67/68 (98%)	-0.52	0 100 100	99, 157, 220, 262	0
2	A2	207/208 (99%)	1.20	57 (27%) 0 0	96, 144, 194, 231	0
2	B2	207/208 (99%)	0.59	16 (7%) 13 11	98, 145, 194, 231	0
3	A3	196/197 (99%)	-0.00	6 (3%) 49 38	82, 138, 187, 267	0
3	B3	196/197 (99%)	-0.09	3 (1%) 73 64	75, 138, 186, 266	0
4	A4	215/265 (81%)	0.62	23 (10%) 6 6	80, 146, 201, 228	0
4	B4	215/265 (81%)	0.76	30 (13%) 2 3	77, 145, 202, 229	0
5	A5	98/119 (82%)	0.11	3 (3%) 49 38	71, 124, 201, 246	0
5	B5	98/119 (82%)	0.53	8 (8%) 11 10	68, 124, 201, 246	0
6	A6	80/81 (98%)	0.10	0 100 100	86, 130, 172, 187	0
6	B6	80/81 (98%)	-0.24	0 100 100	86, 128, 172, 186	0
7	A7	104/162 (64%)	-0.12	0 100 100	100, 150, 201, 249	0
7	B7	104/162 (64%)	0.20	7 (6%) 17 14	104, 151, 199, 249	0
8	A8	93/143 (65%)	0.08	0 100 100	112, 159, 219, 255	0
8	B8	93/143 (65%)	0.10	3 (3%) 47 37	110, 159, 218, 256	0
9	A9	73/189 (38%)	0.26	6 (8%) 11 10	146, 185, 238, 253	0
9	B9	73/189 (38%)	0.61	13 (17%) 1 2	148, 186, 238, 254	0
10	AA	1745/1753 (99%)	0.07	33 (1%) 66 58	80, 134, 291, 454	0
10	BA	1745/1753 (99%)	0.05	34 (1%) 66 58	80, 134, 291, 454	0
11	AB	204/241 (84%)	-0.30	4 (1%) 65 56	82, 136, 177, 225	0
11	BB	204/241 (84%)	-0.05	2 (0%) 82 74	78, 136, 177, 224	0
12	AC	229/243 (94%)	-0.21	2 (0%) 84 77	89, 131, 194, 244	0
12	BC	229/243 (94%)	-0.34	0 100 100	87, 132, 194, 246	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AD	179/181 (98%)	0.18	5 (2%) 53 42	77, 122, 182, 214	0
13	BD	179/181 (98%)	-0.03	5 (2%) 53 42	82, 125, 184, 215	0
14	AE	230/296 (77%)	0.00	4 (1%) 70 60	62, 114, 194, 243	0
14	BE	230/296 (77%)	-0.16	3 (1%) 77 68	65, 116, 194, 244	0
15	AF	89/101 (88%)	-0.31	0 100 100	87, 136, 190, 230	0
15	BF	89/101 (88%)	-0.37	0 100 100	86, 137, 190, 229	0
16	AG	192/200 (96%)	0.02	2 (1%) 82 74	86, 140, 191, 286	0
16	BG	192/200 (96%)	-0.13	6 (3%) 49 38	86, 140, 191, 287	0
17	AH	129/130 (99%)	-0.21	0 100 100	65, 105, 154, 194	0
17	BH	129/130 (99%)	-0.09	0 100 100	62, 106, 154, 193	0
18	AI	143/145 (98%)	0.57	18 (12%) 3 5	87, 135, 188, 222	0
18	BI	143/145 (98%)	0.67	14 (9%) 7 7	87, 135, 189, 221	0
19	AJ	105/120 (87%)	-0.14	1 (0%) 82 74	84, 132, 199, 218	0
19	BJ	105/120 (87%)	-0.08	0 100 100	86, 133, 198, 218	0
20	AK	140/151 (92%)	0.05	4 (2%) 51 41	93, 144, 191, 223	0
20	BK	140/151 (92%)	0.48	11 (7%) 12 11	90, 144, 192, 224	0
21	AL	141/142 (99%)	0.18	4 (2%) 53 42	71, 126, 169, 213	0
21	BL	141/142 (99%)	0.93	25 (17%) 1 2	74, 128, 169, 212	0
22	AM	154/155 (99%)	0.42	7 (4%) 33 28	94, 154, 204, 233	0
22	BM	154/155 (99%)	0.32	6 (3%) 39 31	95, 155, 205, 233	0
23	AN	53/55 (96%)	0.23	0 100 100	83, 124, 156, 193	0
23	BN	53/55 (96%)	0.80	9 (16%) 1 2	83, 126, 157, 192	0
24	AO	150/153 (98%)	-0.17	1 (0%) 87 82	73, 124, 223, 287	0
24	BO	150/153 (98%)	0.03	2 (1%) 77 68	71, 124, 222, 288	0
25	AP	148/149 (99%)	0.30	11 (7%) 14 12	92, 141, 168, 200	0
25	BP	148/149 (99%)	0.04	4 (2%) 54 44	94, 141, 170, 200	0
26	AQ	157/157 (100%)	0.12	10 (6%) 19 15	69, 129, 214, 227	0
26	BQ	157/157 (100%)	0.20	4 (2%) 57 47	65, 128, 208, 258	0
27	AR	338/343 (98%)	0.17	15 (4%) 34 29	93, 146, 218, 268	0
27	BR	338/343 (98%)	-0.05	9 (2%) 54 44	94, 145, 209, 244	0
28	AS	125/144 (86%)	0.07	5 (4%) 38 31	117, 164, 222, 245	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	BS	125/144 (86%)	1.57	45 (36%) 0 0	119, 165, 222, 245	0
29	AT	150/155 (96%)	1.01	26 (17%) 1 2	80, 152, 191, 230	0
29	BT	150/155 (96%)	0.70	20 (13%) 3 4	79, 151, 192, 229	0
30	AU	124/126 (98%)	0.66	23 (18%) 1 1	117, 177, 213, 227	0
30	BU	124/126 (98%)	0.95	21 (16%) 1 2	136, 185, 221, 250	0
31	AV	121/130 (93%)	-0.18	5 (4%) 37 30	78, 143, 206, 254	0
31	BV	121/130 (93%)	0.19	3 (2%) 57 47	76, 142, 206, 253	0
32	AW	259/260 (99%)	-0.21	0 100 100	84, 125, 166, 200	0
32	BW	259/260 (99%)	-0.45	0 100 100	87, 126, 167, 199	0
33	AX	68/80 (85%)	0.39	3 (4%) 34 29	106, 155, 242, 271	0
33	BX	68/80 (85%)	0.74	9 (13%) 3 4	107, 158, 243, 271	0
34	AY	235/293 (80%)	0.81	41 (17%) 1 2	108, 159, 237, 316	0
34	BY	235/293 (80%)	0.46	27 (11%) 4 5	110, 159, 237, 315	0
35	AZ	97/97 (100%)	-0.22	0 100 100	74, 129, 185, 209	0
35	BZ	97/97 (100%)	-0.39	2 (2%) 63 54	77, 129, 184, 210	0
All	All	13676/14864 (92%)	0.15	661 (4%) 30 26	62, 139, 215, 454	0

The worst 5 of 661 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
10	BA	213	U	12.7
10	BA	211	U	12.1
4	B4	229	LEU	10.0
34	AY	235	VAL	10.0
4	B4	15	LYS	9.7

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	MG	BA	1875	1/1	0.17	0.44	193,193,193,193	0
36	MG	BA	1855	1/1	0.56	0.79	275,275,275,275	0
36	MG	BA	1842	1/1	0.63	0.50	210,210,210,210	0
36	MG	BA	1849	1/1	0.63	0.23	198,198,198,198	0
36	MG	BA	1867	1/1	0.67	0.14	180,180,180,180	0
36	MG	BA	1845	1/1	0.69	0.24	225,225,225,225	0
36	MG	BA	1807	1/1	0.70	0.38	210,210,210,210	0
36	MG	AA	1870	1/1	0.73	0.43	195,195,195,195	0
36	MG	AA	1888	1/1	0.74	0.30	205,205,205,205	0
36	MG	BA	1847	1/1	0.75	0.26	204,204,204,204	0
36	MG	BA	1876	1/1	0.75	0.25	184,184,184,184	0
36	MG	BA	1873	1/1	0.76	0.60	218,218,218,218	0
36	MG	BA	1837	1/1	0.76	0.26	178,178,178,178	0
36	MG	BA	1872	1/1	0.76	0.61	200,200,200,200	0
36	MG	BA	1883	1/1	0.76	0.60	187,187,187,187	0
36	MG	BA	1886	1/1	0.76	0.22	214,214,214,214	0
36	MG	AA	1882	1/1	0.77	0.43	181,181,181,181	0
36	MG	AA	1866	1/1	0.77	0.17	197,197,197,197	0
36	MG	AA	1883	1/1	0.78	0.41	209,209,209,209	0
36	MG	BA	1854	1/1	0.78	0.26	189,189,189,189	0
36	MG	BA	1887	1/1	0.78	0.35	206,206,206,206	0
36	MG	BA	1838	1/1	0.79	0.47	172,172,172,172	0
36	MG	AA	1876	1/1	0.79	0.14	180,180,180,180	0
36	MG	BA	1843	1/1	0.79	0.22	196,196,196,196	0
36	MG	BA	1878	1/1	0.79	0.17	177,177,177,177	0
36	MG	AA	1813	1/1	0.79	0.12	191,191,191,191	0
36	MG	BA	1871	1/1	0.79	0.19	209,209,209,209	0
36	MG	AA	1852	1/1	0.79	0.10	173,173,173,173	0
36	MG	AA	1809	1/1	0.80	0.40	193,193,193,193	0
36	MG	AA	1859	1/1	0.80	0.09	193,193,193,193	0
36	MG	BW	301	1/1	0.80	0.13	166,166,166,166	0
36	MG	BA	1884	1/1	0.81	0.13	219,219,219,219	0
36	MG	BA	1836	1/1	0.81	0.36	175,175,175,175	0
36	MG	AA	1855	1/1	0.81	0.61	214,214,214,214	0
36	MG	BA	1820	1/1	0.81	0.15	170,170,170,170	0
36	MG	AA	1841	1/1	0.82	0.21	170,170,170,170	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	MG	BA	1829	1/1	0.82	0.12	163,163,163,163	0
36	MG	AA	1868	1/1	0.82	0.99	197,197,197,197	0
36	MG	AA	1834	1/1	0.82	0.24	182,182,182,182	0
36	MG	AA	1871	1/1	0.82	0.38	201,201,201,201	0
36	MG	AA	1874	1/1	0.82	0.30	194,194,194,194	0
36	MG	BA	1881	1/1	0.83	0.09	149,149,149,149	0
36	MG	AA	1845	1/1	0.83	0.21	193,193,193,193	0
36	MG	BA	1825	1/1	0.84	0.13	153,153,153,153	0
36	MG	AA	1869	1/1	0.84	0.33	209,209,209,209	0
36	MG	AA	1836	1/1	0.84	0.17	166,166,166,166	0
36	MG	AA	1861	1/1	0.84	0.20	204,204,204,204	0
36	MG	BA	1866	1/1	0.84	0.30	186,186,186,186	0
36	MG	AA	1890	1/1	0.84	0.11	218,218,218,218	0
36	MG	AA	1848	1/1	0.84	0.14	183,183,183,183	0
36	MG	AA	1858	1/1	0.84	0.08	162,162,162,162	0
36	MG	BA	1888	1/1	0.84	2.04	227,227,227,227	0
36	MG	BA	1824	1/1	0.84	0.08	172,172,172,172	0
36	MG	BA	1801	1/1	0.85	0.12	186,186,186,186	0
36	MG	BA	1859	1/1	0.86	0.25	194,194,194,194	0
36	MG	BA	1853	1/1	0.86	0.09	194,194,194,194	0
36	MG	AL	201	1/1	0.86	0.17	182,182,182,182	0
36	MG	BA	1851	1/1	0.86	0.17	169,169,169,169	0
36	MG	BA	1865	1/1	0.87	0.20	183,183,183,183	0
36	MG	AA	1879	1/1	0.87	0.21	193,193,193,193	0
36	MG	BA	1848	1/1	0.87	0.36	206,206,206,206	0
36	MG	AA	1830	1/1	0.87	0.16	183,183,183,183	0
36	MG	BA	1880	1/1	0.87	0.09	193,193,193,193	0
36	MG	BA	1889	1/1	0.87	0.13	209,209,209,209	0
36	MG	BA	1835	1/1	0.87	0.23	187,187,187,187	0
36	MG	BA	1862	1/1	0.88	0.07	177,177,177,177	0
36	MG	AA	1854	1/1	0.88	0.14	158,158,158,158	0
36	MG	AA	1863	1/1	0.88	0.12	183,183,183,183	0
36	MG	AA	1850	1/1	0.88	0.17	185,185,185,185	0
36	MG	BA	1879	1/1	0.88	0.41	221,221,221,221	0
36	MG	B4	301	1/1	0.88	0.07	165,165,165,165	0
36	MG	AA	1886	1/1	0.88	0.21	148,148,148,148	0
36	MG	AA	1807	1/1	0.89	0.07	194,194,194,194	0
36	MG	BA	1869	1/1	0.89	0.15	188,188,188,188	0
36	MG	AA	1814	1/1	0.89	0.07	197,197,197,197	0
36	MG	BA	1827	1/1	0.89	0.22	199,199,199,199	0
36	MG	AA	1826	1/1	0.89	0.11	155,155,155,155	0
36	MG	AA	1806	1/1	0.89	0.13	151,151,151,151	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	MG	BA	1811	1/1	0.89	0.21	170,170,170,170	0
36	MG	AA	1812	1/1	0.89	0.55	173,173,173,173	0
36	MG	BA	1850	1/1	0.89	0.48	221,221,221,221	0
36	MG	AA	1887	1/1	0.90	0.08	198,198,198,198	0
36	MG	AA	1838	1/1	0.90	0.12	144,144,144,144	0
36	MG	AA	1889	1/1	0.90	0.71	200,200,200,200	0
36	MG	AA	1875	1/1	0.90	0.27	152,152,152,152	0
36	MG	BA	1852	1/1	0.90	0.22	170,170,170,170	0
36	MG	BA	1834	1/1	0.90	0.14	138,138,138,138	0
36	MG	AA	1802	1/1	0.90	0.19	175,175,175,175	0
36	MG	AA	1878	1/1	0.90	0.10	160,160,160,160	0
36	MG	AA	1860	1/1	0.90	0.12	176,176,176,176	0
36	MG	BA	1806	1/1	0.90	0.22	168,168,168,168	0
36	MG	BA	1864	1/1	0.90	0.16	182,182,182,182	0
36	MG	AA	1835	1/1	0.90	0.15	159,159,159,159	0
36	MG	AA	1824	1/1	0.90	0.06	148,148,148,148	0
36	MG	AA	1873	1/1	0.90	0.57	196,196,196,196	0
36	MG	BA	1822	1/1	0.90	0.13	151,151,151,151	0
36	MG	BA	1870	1/1	0.90	0.10	205,205,205,205	0
36	MG	BA	1877	1/1	0.91	0.13	177,177,177,177	0
36	MG	BA	1830	1/1	0.91	0.34	204,204,204,204	0
36	MG	BA	1814	1/1	0.91	0.10	214,214,214,214	0
36	MG	AA	1884	1/1	0.91	0.47	190,190,190,190	0
36	MG	BA	1821	1/1	0.91	0.11	160,160,160,160	0
36	MG	AA	1823	1/1	0.91	0.20	130,130,130,130	0
36	MG	AA	1872	1/1	0.91	0.31	196,196,196,196	0
36	MG	AA	1820	1/1	0.91	0.13	157,157,157,157	0
36	MG	BA	1826	1/1	0.91	0.07	185,185,185,185	0
36	MG	AA	1856	1/1	0.91	0.74	182,182,182,182	0
36	MG	BA	1861	1/1	0.91	0.18	181,181,181,181	0
36	MG	BD	201	1/1	0.91	0.61	233,233,233,233	0
36	MG	AA	1832	1/1	0.91	0.07	189,189,189,189	0
36	MG	AA	1842	1/1	0.92	0.12	175,175,175,175	0
36	MG	BA	1802	1/1	0.92	0.10	169,169,169,169	0
36	MG	AA	1844	1/1	0.92	0.36	166,166,166,166	0
36	MG	BA	1868	1/1	0.92	0.20	208,208,208,208	0
36	MG	BA	1860	1/1	0.92	0.07	177,177,177,177	0
36	MG	AA	1864	1/1	0.92	0.17	176,176,176,176	0
36	MG	AA	1839	1/1	0.92	0.12	143,143,143,143	0
36	MG	AA	1837	1/1	0.92	0.12	149,149,149,149	0
36	MG	BA	1882	1/1	0.93	0.57	196,196,196,196	0
36	MG	AA	1885	1/1	0.93	0.20	223,223,223,223	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	MG	BA	1856	1/1	0.93	0.11	173,173,173,173	0
36	MG	BA	1858	1/1	0.93	0.05	163,163,163,163	0
36	MG	BA	1833	1/1	0.93	0.14	172,172,172,172	0
36	MG	AA	1843	1/1	0.93	0.09	182,182,182,182	0
36	MG	AA	1846	1/1	0.93	0.13	161,161,161,161	0
36	MG	AA	1847	1/1	0.93	0.27	186,186,186,186	0
36	MG	BA	1810	1/1	0.93	0.41	188,188,188,188	0
36	MG	BA	1803	1/1	0.94	0.40	169,169,169,169	0
36	MG	BA	1804	1/1	0.94	0.10	191,191,191,191	0
36	MG	AA	1865	1/1	0.94	0.12	184,184,184,184	0
36	MG	BA	1823	1/1	0.94	0.15	123,123,123,123	0
36	MG	AA	1880	1/1	0.94	0.09	193,193,193,193	0
36	MG	AA	1827	1/1	0.94	0.43	178,178,178,178	0
36	MG	AA	1811	1/1	0.94	0.12	154,154,154,154	0
36	MG	AA	1857	1/1	0.94	0.09	140,140,140,140	0
36	MG	BA	1816	1/1	0.94	0.14	127,127,127,127	0
36	MG	BA	1817	1/1	0.94	0.07	134,134,134,134	0
36	MG	AA	1822	1/1	0.95	0.14	139,139,139,139	0
36	MG	BA	1809	1/1	0.95	0.18	172,172,172,172	0
36	MG	BA	1828	1/1	0.95	0.18	145,145,145,145	0
36	MG	BA	1839	1/1	0.95	0.11	140,140,140,140	0
36	MG	BA	1840	1/1	0.95	0.14	128,128,128,128	0
36	MG	AA	1851	1/1	0.95	0.32	187,187,187,187	0
36	MG	AA	1803	1/1	0.95	0.08	147,147,147,147	0
36	MG	BA	1885	1/1	0.95	0.23	161,161,161,161	0
36	MG	BA	1857	1/1	0.95	0.18	130,130,130,130	0
36	MG	BA	1832	1/1	0.95	0.03	194,194,194,194	0
36	MG	BA	1846	1/1	0.95	0.07	147,147,147,147	0
36	MG	BA	1812	1/1	0.95	0.65	166,166,166,166	0
36	MG	AA	1881	1/1	0.95	0.29	198,198,198,198	0
36	MG	AA	1805	1/1	0.95	0.49	175,175,175,175	0
37	ZN	B9	500	1/1	0.95	0.06	247,247,247,247	0
36	MG	AA	1808	1/1	0.96	0.36	136,136,136,136	0
36	MG	A4	301	1/1	0.96	0.16	174,174,174,174	0
36	MG	AA	1815	1/1	0.96	0.39	144,144,144,144	0
36	MG	AA	1818	1/1	0.96	0.13	121,121,121,121	0
36	MG	AA	1801	1/1	0.96	0.06	160,160,160,160	0
36	MG	BA	1841	1/1	0.96	0.11	129,129,129,129	0
36	MG	AA	1831	1/1	0.96	0.20	111,111,111,111	0
36	MG	AA	1821	1/1	0.96	0.17	144,144,144,144	0
36	MG	AA	1804	1/1	0.96	0.12	150,150,150,150	0
36	MG	AA	1862	1/1	0.97	0.05	191,191,191,191	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	MG	AA	1829	1/1	0.97	0.05	160,160,160,160	0
36	MG	AA	1833	1/1	0.97	0.10	135,135,135,135	0
36	MG	AA	1810	1/1	0.97	0.28	175,175,175,175	0
36	MG	BA	1813	1/1	0.97	0.07	187,187,187,187	0
36	MG	AA	1853	1/1	0.97	0.09	177,177,177,177	0
36	MG	AA	1828	1/1	0.97	0.14	133,133,133,133	0
36	MG	BA	1874	1/1	0.97	0.38	164,164,164,164	0
36	MG	AA	1849	1/1	0.97	0.21	159,159,159,159	0
36	MG	BA	1863	1/1	0.97	0.11	166,166,166,166	0
36	MG	BA	1819	1/1	0.97	0.12	122,122,122,122	0
36	MG	BA	1808	1/1	0.97	0.48	140,140,140,140	0
36	MG	BA	1831	1/1	0.97	0.14	115,115,115,115	0
36	MG	BA	1818	1/1	0.98	0.07	111,111,111,111	0
36	MG	AA	1816	1/1	0.98	0.09	96,96,96,96	0
36	MG	AA	1867	1/1	0.98	0.07	193,193,193,193	0
36	MG	AA	1825	1/1	0.98	0.13	115,115,115,115	0
36	MG	AA	1819	1/1	0.98	0.11	136,136,136,136	0
36	MG	BA	1805	1/1	0.98	0.09	150,150,150,150	0
36	MG	BA	1844	1/1	0.98	0.08	157,157,157,157	0
36	MG	AA	1817	1/1	0.98	0.19	126,126,126,126	0
36	MG	BA	1815	1/1	0.98	0.33	155,155,155,155	0
36	MG	AA	1877	1/1	0.98	0.20	170,170,170,170	0
36	MG	AA	1840	1/1	0.98	0.09	124,124,124,124	0
37	ZN	A6	500	1/1	0.99	0.11	118,118,118,118	0
37	ZN	A9	500	1/1	0.99	0.10	169,169,169,169	0
37	ZN	B5	500	1/1	0.99	0.16	87,87,87,87	0
37	ZN	B6	500	1/1	0.99	0.13	108,108,108,108	0
37	ZN	A5	500	1/1	0.99	0.11	95,95,95,95	0
37	ZN	BN	500	1/1	0.99	0.12	113,113,113,113	0
37	ZN	AN	500	1/1	1.00	0.12	105,105,105,105	0

6.5 Other polymers (i)

There are no such residues in this entry.