



wwPDB X-ray Structure Validation Summary Report ⓘ

Mar 6, 2026 – 01:23 PM UTC

PDB ID : 4LT8 / pdb_00004lt8
Title : Crystal Structure of tRNA Proline (CGG) Bound to Codon CCC-G on the Ribosome
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2013-07-23
Resolution : 3.14 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 ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtrriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

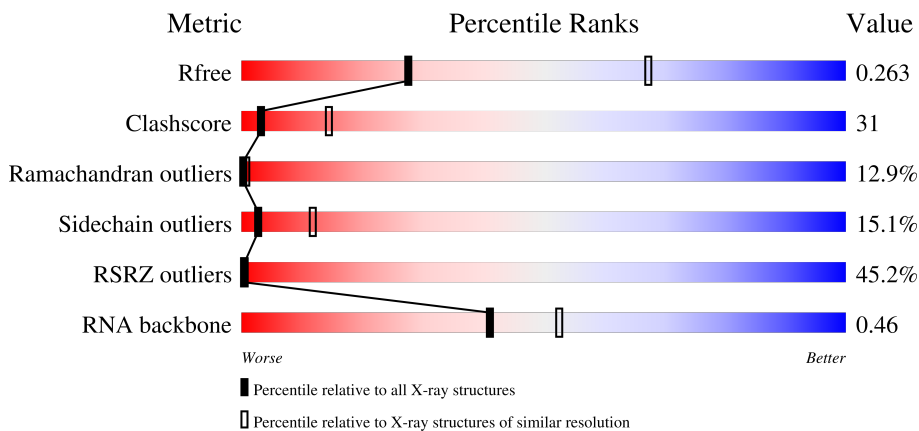
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.14 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}	180053	2351 (3.18-3.10)
Clashscore	190562	2452 (3.18-3.10)
Ramachandran outliers	187476	2324 (3.18-3.10)
Sidechain outliers	187428	2324 (3.18-3.10)
RSRZ outliers	180081	2351 (3.18-3.10)
RNA backbone	3983	1040 (3.38-2.90)

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 $\leq 5\%$. 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	QA	1522	
1	XA	1522	
2	QB	256	
2	XB	256	

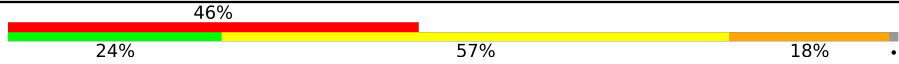

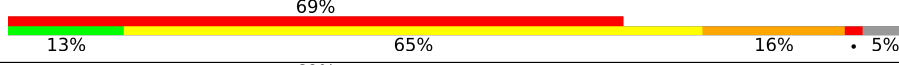


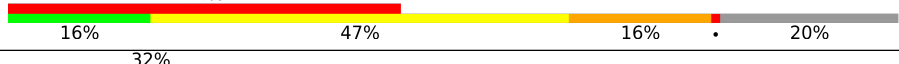
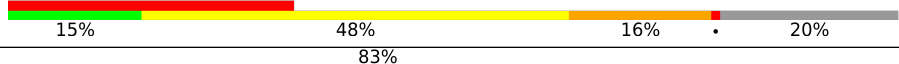


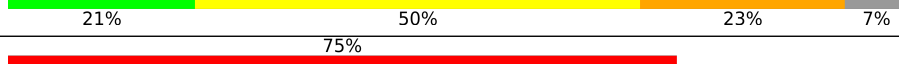

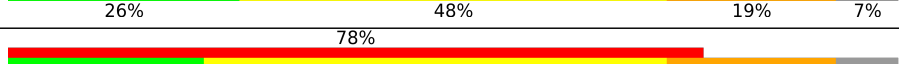
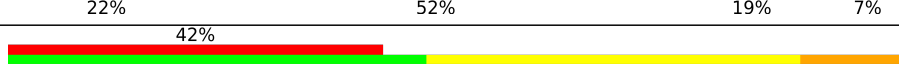
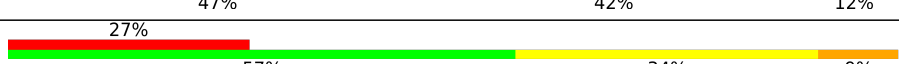

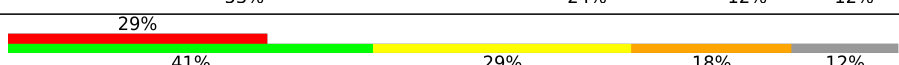

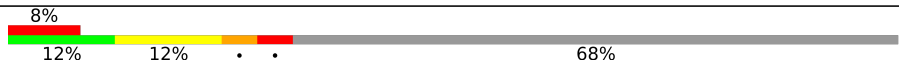
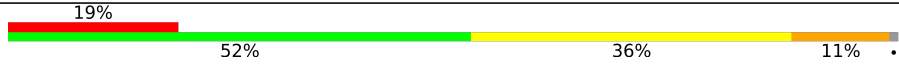


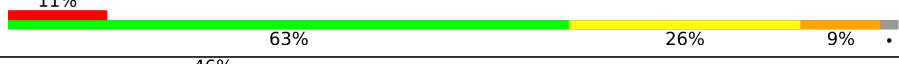
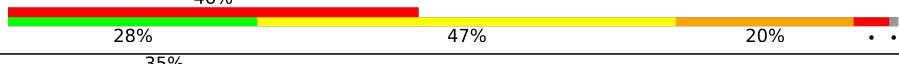
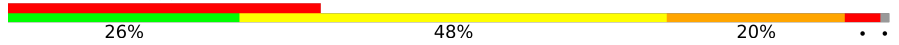

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Mol	Chain	Length	Quality of chain
3	QC	239	71% 21% 53% 10% 14%
3	XC	239	57% 21% 54% 9% 14%
4	QD	209	69% 23% 57% 18%
4	XD	209	70% 22% 58% 17%
5	QE	162	69% 25% 49% 19% 7%
5	XE	162	54% 26% 47% 20% 7%
6	QF	101	61% 24% 58% 18%
6	XF	101	58% 21% 60% 19%
7	QG	156	65% 26% 61% 12%
7	XG	156	61% 28% 59% 12%
8	QH	138	72% 23% 60% 14%
8	XH	138	63% 22% 62% 14%
9	QI	128	80% 18% 60% 20% ..
9	XI	128	79% 16% 63% 18% ..
10	QJ	105	91% 18% 61% 14% 6%
10	XJ	105	77% 17% 62% 14% 6%
11	QK	129	68% 27% 51% 12% 8%
11	XK	129	57% 29% 50% 12% 8%
12	QL	132	56% 29% 45% 18% 5%
12	XL	132	47% 28% 45% 19% 5%
13	QM	126	71% 13% 58% 22% ..
13	XM	126	68% 17% 53% 23% ..
14	QN	61	75% 15% 56% 20% 8%
14	XN	61	72% 16% 54% 23% 5%
15	QO	89	62% 24% 57% 18%

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Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QY	17	
23	XY	17	
24	QX	25	
24	XX	25	
25	RA	2916	
25	YA	2916	
26	RB	122	
26	YB	122	
27	RD	276	
27	YD	276	

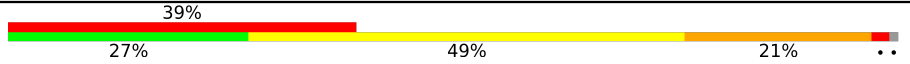
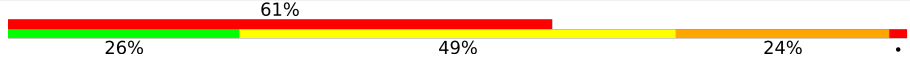
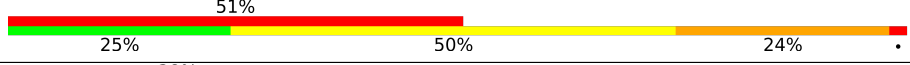
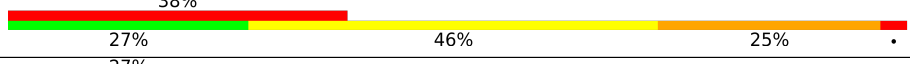
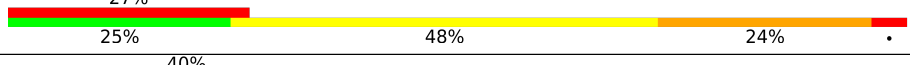
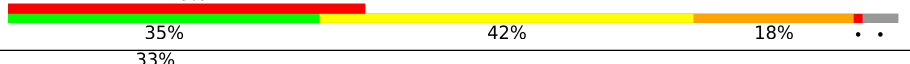
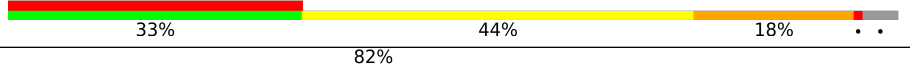




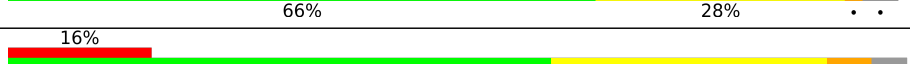

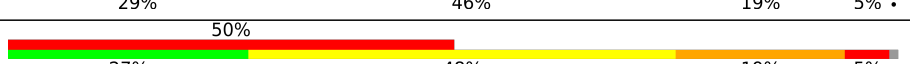
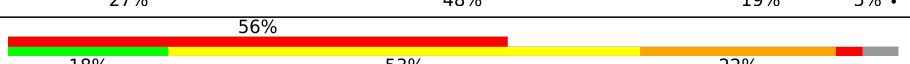


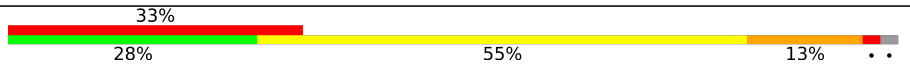
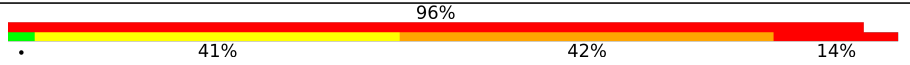
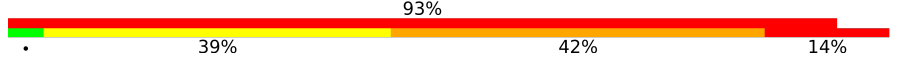

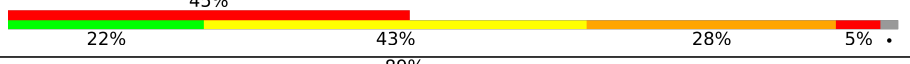



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Mol	Chain	Length	Quality of chain
28	RE	206	52% 21% 43% 28% 8%
28	YE	206	54% 22% 42% 28% 8%
29	RF	210	58% 30% 48% 15% . .
29	YF	210	39% 29% 49% 16% . .
30	RG	182	99% 21% 57% 19% ..
30	YG	182	93% 22% 57% 18% ..
31	RH	180	85% 22% 41% 24% 8% 6%
31	YH	180	72% 22% 41% 23% 9% 6%
32	RI	148	67% 47% 36% 14% ..
32	YI	148	56% 47% 34% 16% ..
33	RN	140	57% 16% 51% 31% ..
33	YN	140	45% 16% 52% 30% ..
34	RO	122	60% 29% 58% 12% .
34	YO	122	48% 29% 58% 12% .
35	RP	150	71% 17% 43% 31% 9%
35	YP	150	56% 18% 43% 31% 8%
36	RQ	141	62% 28% 48% 19% 5%
36	YQ	141	54% 27% 50% 18% 5%
37	RR	118	40% 31% 49% 15% .
37	YR	118	46% 32% 48% 15% .
38	RS	112	59% 13% 57% 22% 6% .
38	YS	112	48% 12% 60% 21% 6% .
39	RT	146	66% 18% 49% 23% . 6%
39	YT	146	62% 18% 50% 23% . 6%
40	RU	118	47% 27% 50% 20% ..

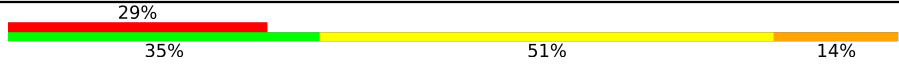


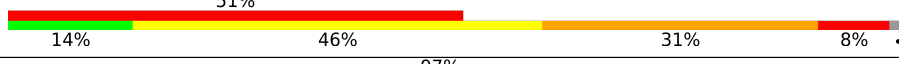
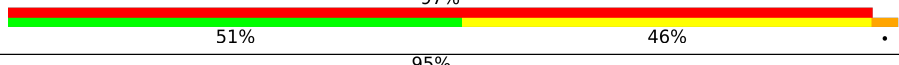

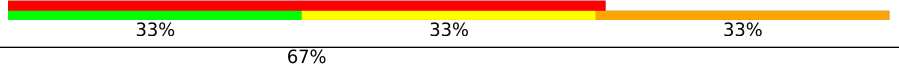

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Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	
52	R6	54	
52	Y6	54	

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Mol	Chain	Length	Quality of chain
53	R7	49	
53	Y7	49	
54	R8	65	
54	Y8	65	
55	R9	37	
55	Y9	37	
56	Z6	3	
56	Z8	3	

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
57	MG	RA	3222	-	-	-	X
57	MG	YA	3120	-	-	-	X

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291998 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 RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	QA	1500	Total 32247	C 14353	N 5981	O 10414	P 1499	0	0	0
1	XA	1500	Total 32249	C 14354	N 5984	O 10412	P 1499	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	QB	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0
2	XB	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	QC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0
3	XC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	QD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0
4	XD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	XE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	QF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	XF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	QG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	XG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	XH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	QI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
9	XI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	XJ	99	801	504	157	139	1	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	QK	119	885	549	168	165	3	0	0	0
11	XK	119	885	549	168	165	3	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	QL	125	975	614	196	164	1	0	0	0
12	XL	125	975	614	196	164	1	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	QM	121	964	597	199	166	2	0	0	0
13	XM	121	964	597	199	166	2	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	QN	60	492	312	104	72	4	0	0	0
14	XN	60	492	312	104	72	4	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	QO	88	734	459	147	126	2	0	0	0
15	XO	88	734	459	147	126	2	0	0	0

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	XP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	XQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	XR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	QT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	XT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	XU	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called P-site tRNA fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QY	15	Total	C	N	O	P	0	0	0
			323	144	58	106	15			
23	XY	15	Total	C	N	O	P	0	0	0
			323	144	58	106	15			

- Molecule 24 is a RNA chain called A-site ASL Pro.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			
24	XX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2882	Total	C	N	O	P	0	0	0
			62071	27627	11611	19952	2881			
25	YA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
26	YB	120	2573	1146	476	832	119	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	RD	272	2115	1335	420	357	3	0	0	0
27	YD	272	2115	1335	420	357	3	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	RE	205	1568	991	300	271	6	0	0	0
28	YE	205	1568	991	300	271	6	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	RF	202	1585	1011	297	275	2	0	0	0
29	YF	202	1585	1011	297	275	2	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	RG	181	1474	942	268	260	4	0	0	0
30	YG	181	1474	942	268	260	4	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	RH	170	1307	829	245	232	1	0	0	0
31	YH	170	1307	829	245	232	1	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	RI	146	1136	726	201	208	1	0	0	0
32	YI	146	1136	726	201	208	1	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	RN	138	1104	712	206	182	4	0	0	0
33	YN	138	1104	712	206	182	4	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	RO	122	933	588	171	170	4	0	0	0
34	YO	122	933	588	171	170	4	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	RP	150	1145	712	232	198	3	0	0	0
35	YP	150	1145	712	232	198	3	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	RQ	141	1122	715	212	188	7	0	0	0
36	YQ	141	1122	715	212	188	7	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				
38	YS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
39	YT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
40	YU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
41	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 42 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	YW	113	900	566	177	155	2	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
			Total	C	N	O				
43	RX	92	725	471	131	123		0	0	0
43	YX	92	725	471	131	123		0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	RY	102	785	505	150	125	5	0	0	0
44	YY	102	785	505	150	125	5	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	RZ	183	1461	933	260	265	3	0	0	0
45	YZ	183	1461	933	260	265	3	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	R0	82	648	401	138	108	1	0	0	0
46	Y0	82	648	401	138	108	1	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	R1	97	763	481	150	131	1	0	0	0
47	Y1	97	763	481	150	131	1	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	R2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			
48	Y2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	R3	59	Total	C	N	O	0	0	0
			469	298	90	81			
49	Y3	59	Total	C	N	O	0	0	0
			469	298	90	81			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			
50	Y4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	Y5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
52	Y6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
53	Y7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
54	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is a RNA chain called tRNA acceptor end mimic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	Z6	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	Z8	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 57 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

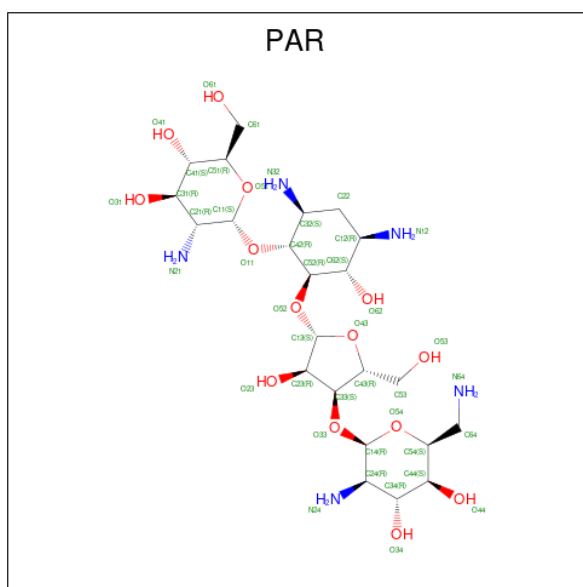
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	69	Total	Mg	0	0
			69	69		
57	QF	1	Total	Mg	0	0
			1	1		
57	QH	1	Total	Mg	0	0
			1	1		
57	QM	1	Total	Mg	0	0
			1	1		
57	QV	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	RA	240	Total 240	Mg 240	0	0
57	RB	2	Total 2	Mg 2	0	0
57	RD	1	Total 1	Mg 1	0	0
57	RE	2	Total 2	Mg 2	0	0
57	RF	1	Total 1	Mg 1	0	0
57	RP	1	Total 1	Mg 1	0	0
57	RR	2	Total 2	Mg 2	0	0
57	R0	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	XA	74	Total 74	Mg 74	0	0
57	XV	2	Total 2	Mg 2	0	0
57	XX	1	Total 1	Mg 1	0	0
57	YA	265	Total 265	Mg 265	0	0
57	YB	3	Total 3	Mg 3	0	0
57	YE	2	Total 2	Mg 2	0	0
57	YP	1	Total 1	Mg 1	0	0
57	YQ	1	Total 1	Mg 1	0	0
57	Y0	1	Total 1	Mg 1	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	Y7	1	Total 1	Mg 1	0	0

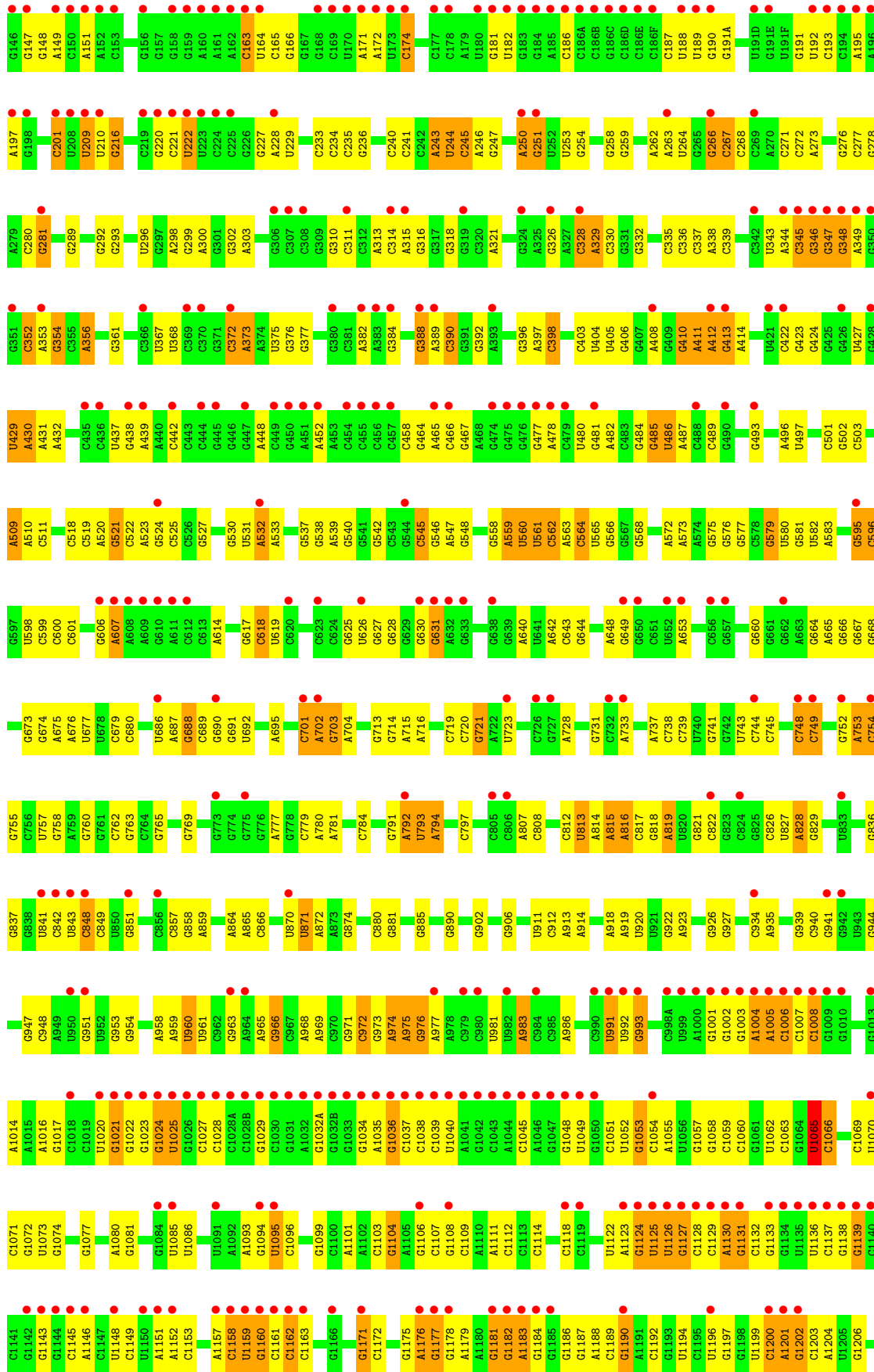
- Molecule 58 is PAROMOMYCIN (CCD ID: PAR) (formula: C₂₃H₄₅N₅O₁₄).

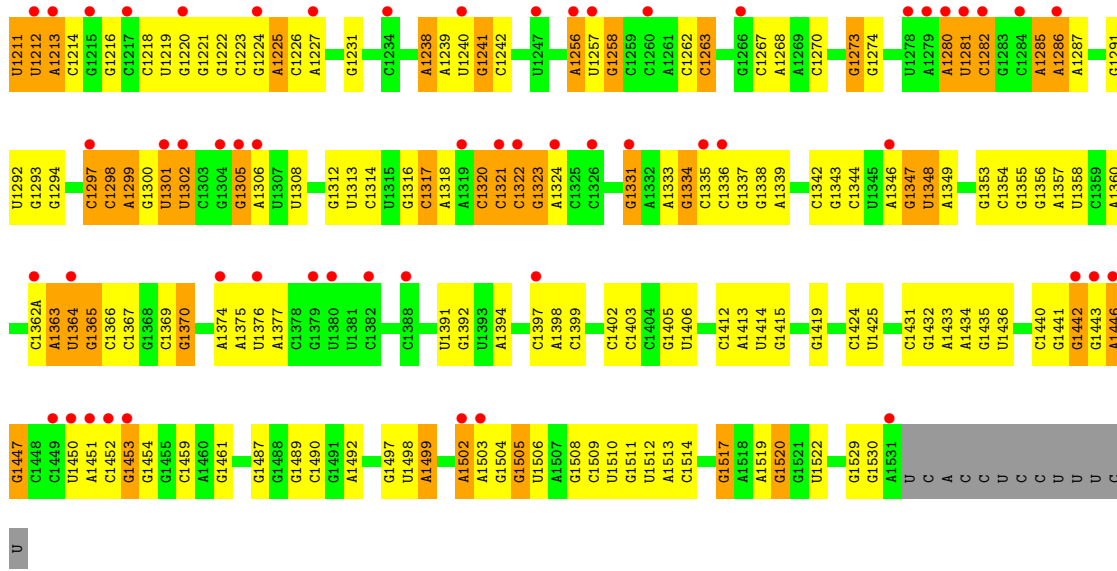


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
58	QA	1	42	23	5	14	0	0
58	XA	1	42	23	5	14	0	0

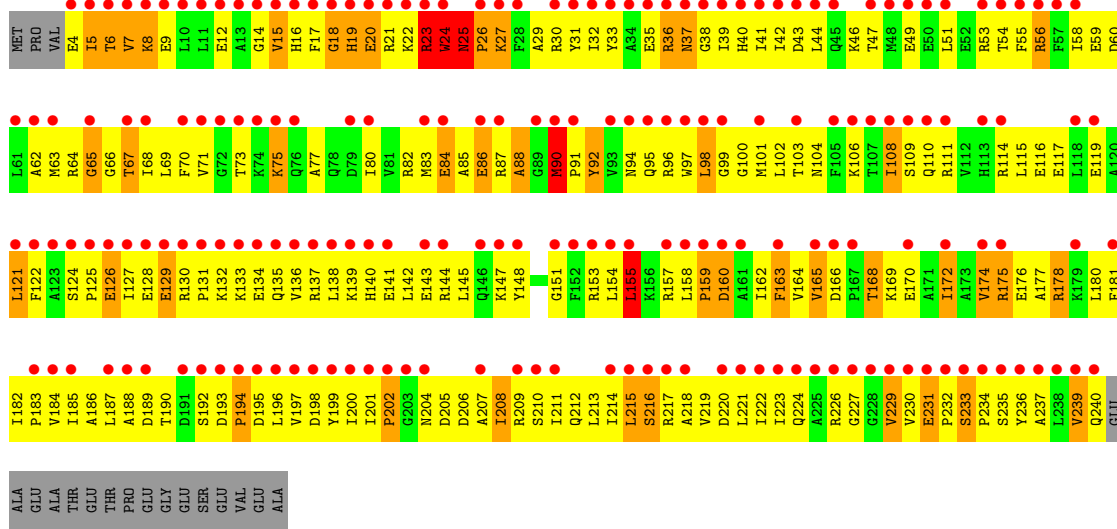
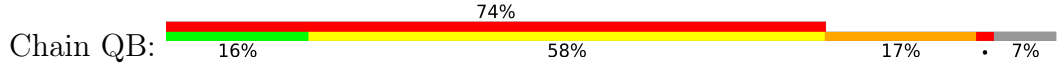
- Molecule 59 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
59	QD	1	1	1	0	0
59	QN	1	1	1	0	0
59	XD	1	1	1	0	0
59	XN	1	1	1	0	0

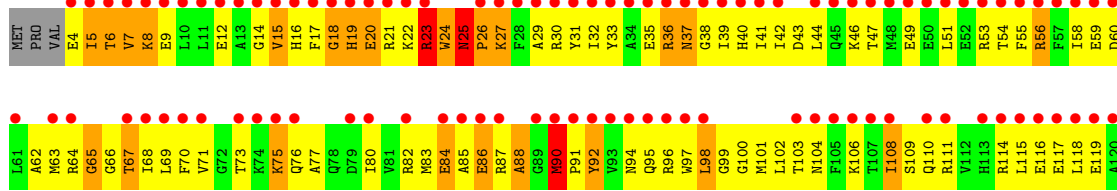
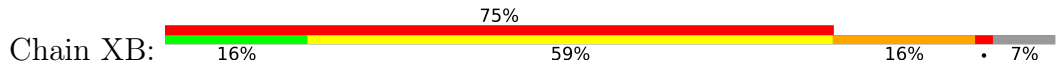


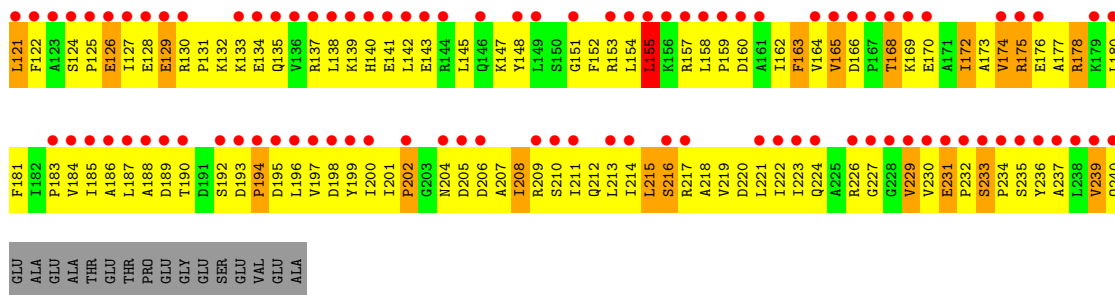


Molecule 2: 30S ribosomal protein S2

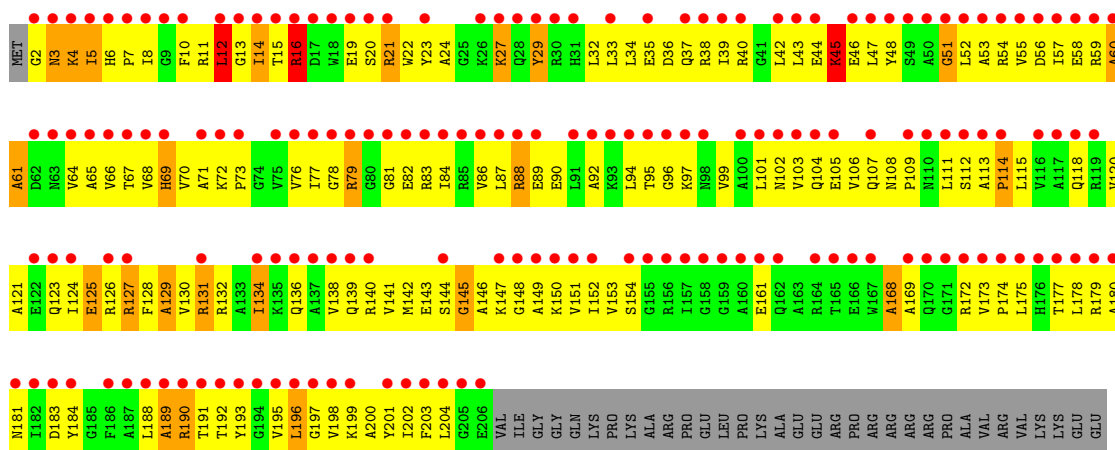
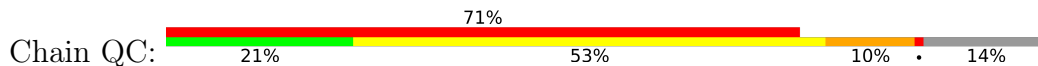


Molecule 2: 30S ribosomal protein S2

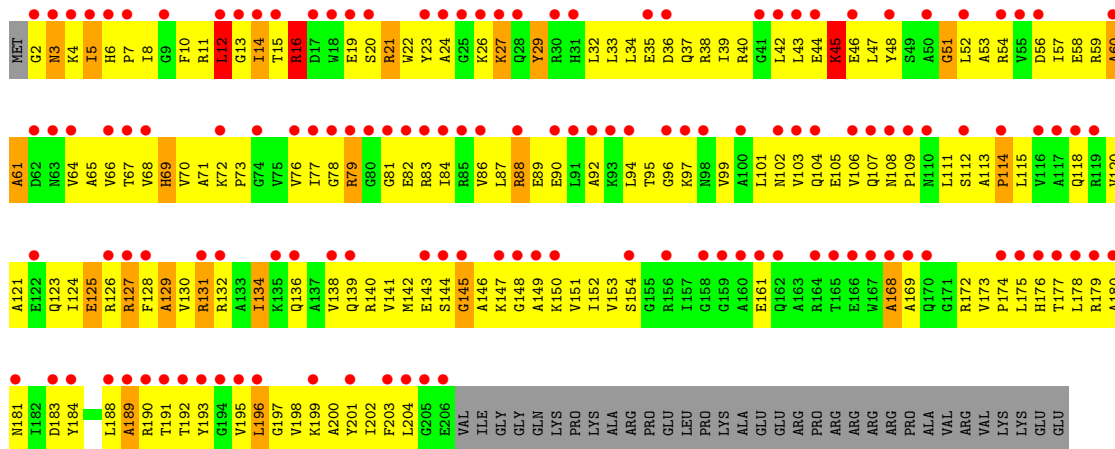




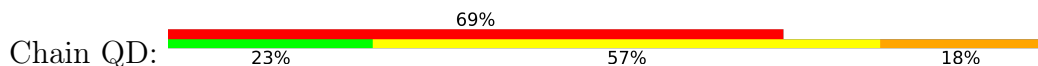
• Molecule 3: 30S ribosomal protein S3

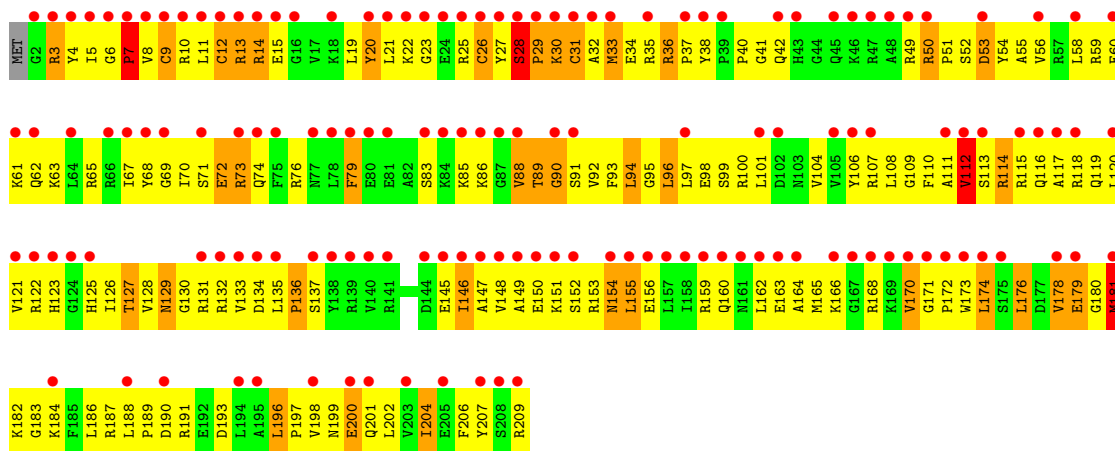


• Molecule 3: 30S ribosomal protein S3

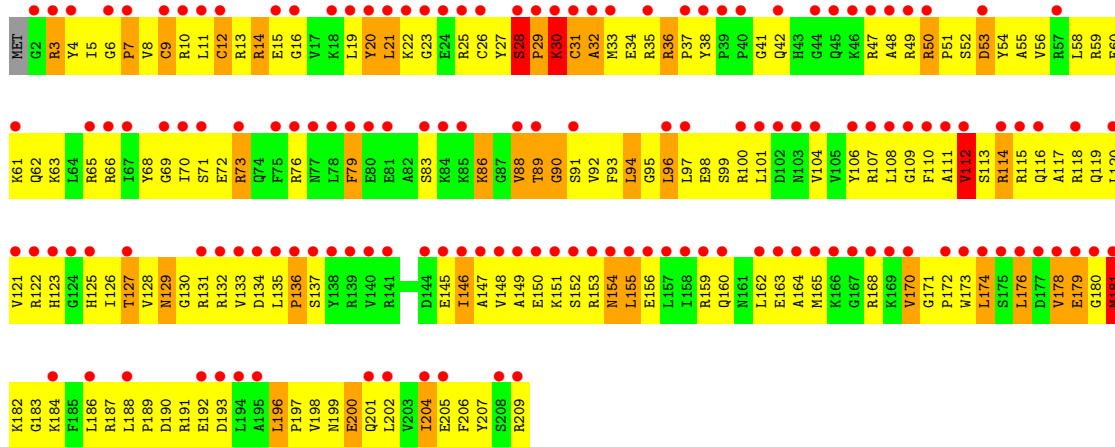
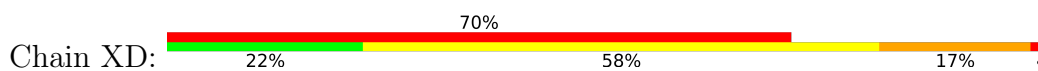


• Molecule 4: 30S ribosomal protein S4

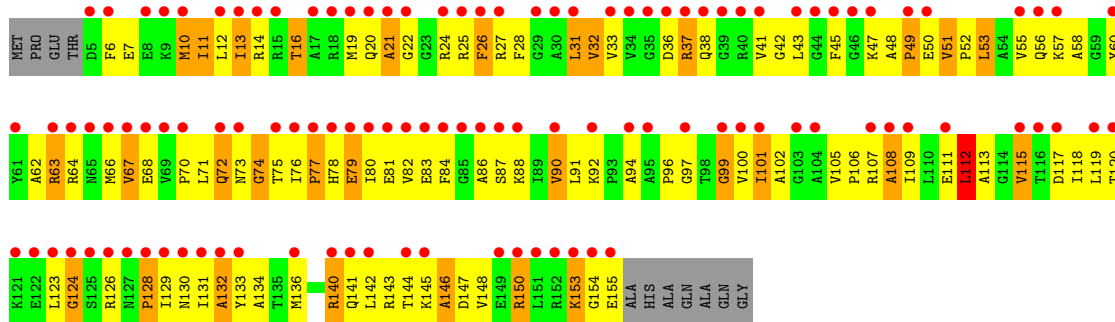




• Molecule 4: 30S ribosomal protein S4

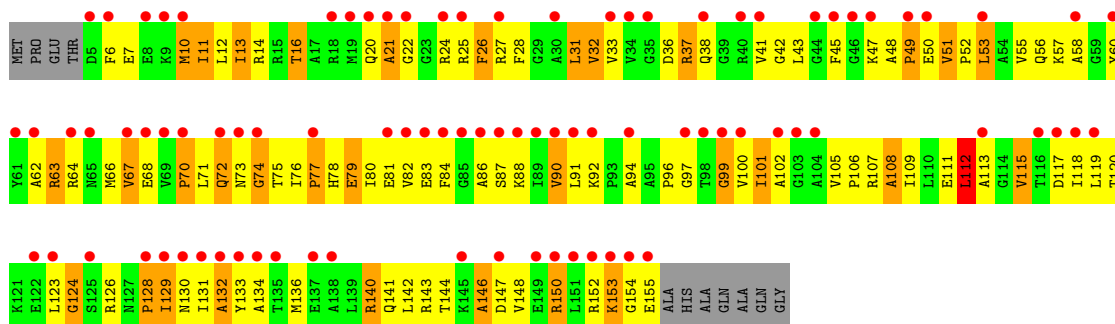


• Molecule 5: 30S ribosomal protein S5

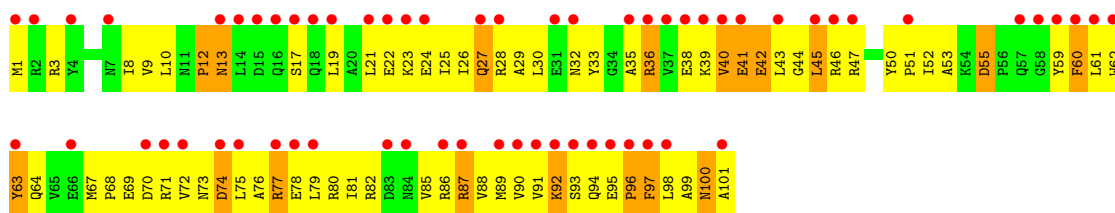


• Molecule 5: 30S ribosomal protein S5

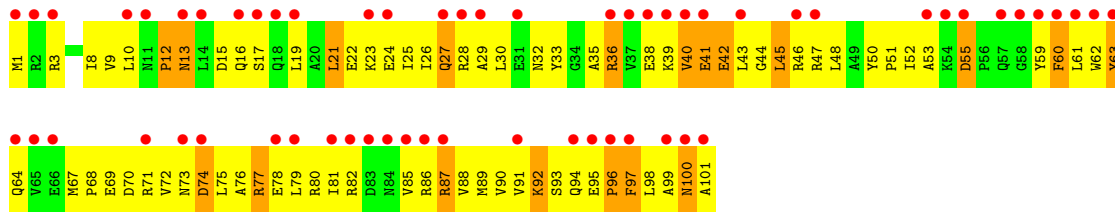




• Molecule 6: 30S ribosomal protein S6



• Molecule 6: 30S ribosomal protein S6



• Molecule 7: 30S ribosomal protein S7

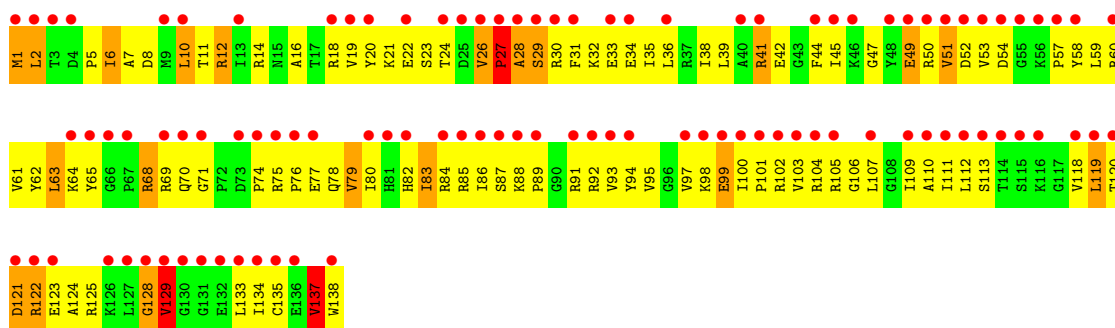
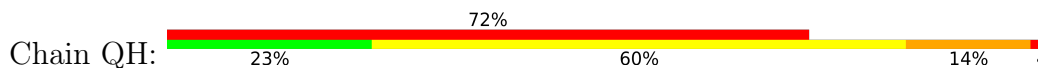


• Molecule 7: 30S ribosomal protein S7

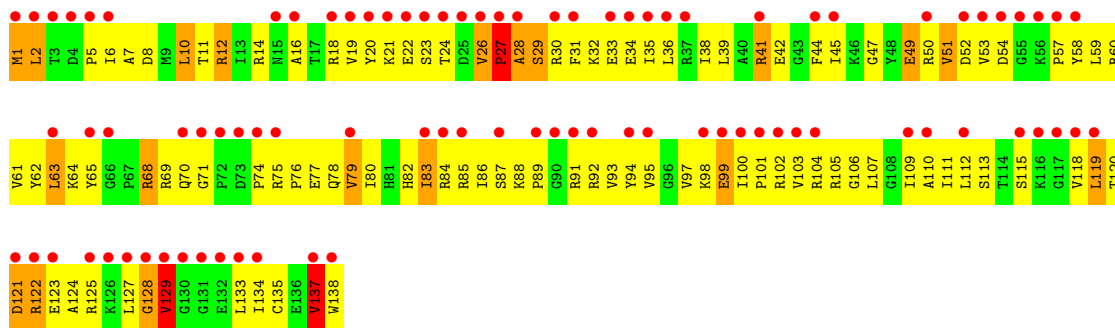




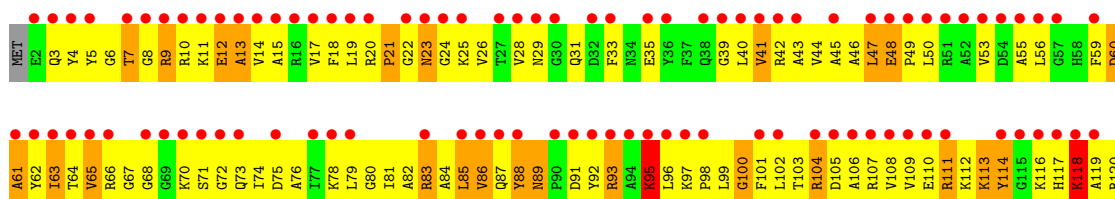
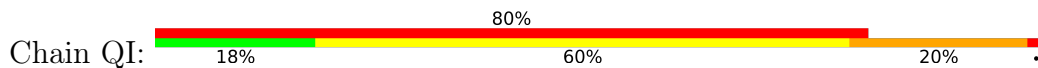
• Molecule 8: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S8

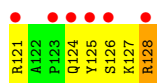
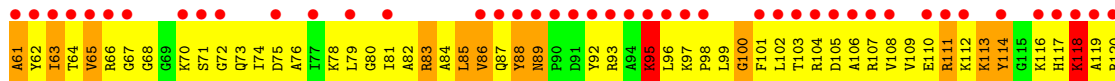
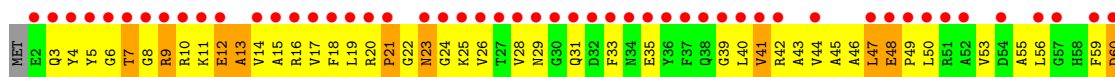
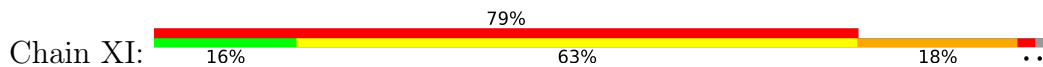


• Molecule 9: 30S ribosomal protein S9

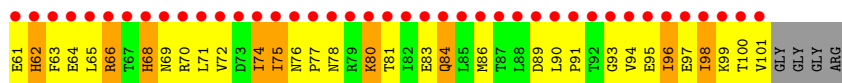
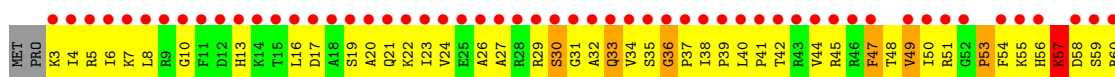




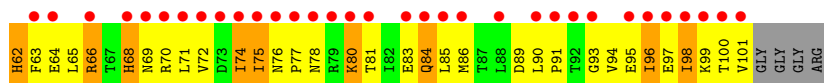
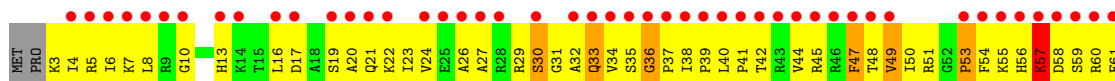
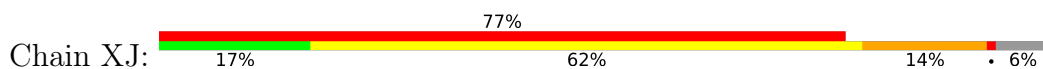
- Molecule 9: 30S ribosomal protein S9



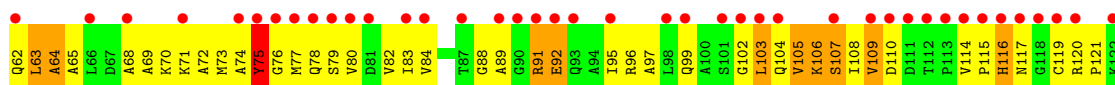
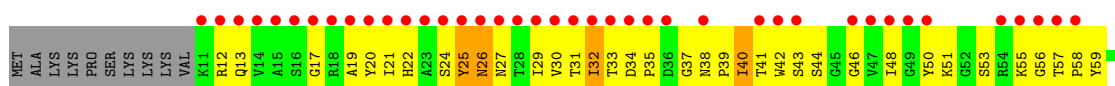
- Molecule 10: 30S ribosomal protein S10

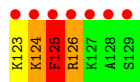


- Molecule 10: 30S ribosomal protein S10

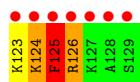
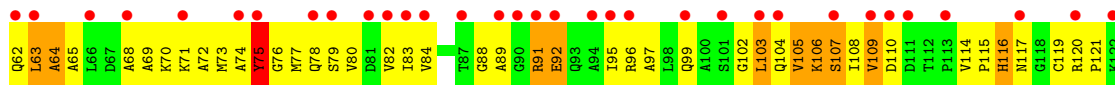
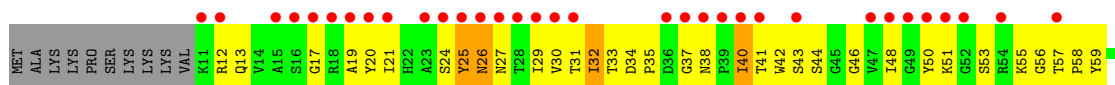


- Molecule 11: 30S ribosomal protein S11

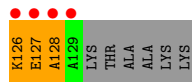
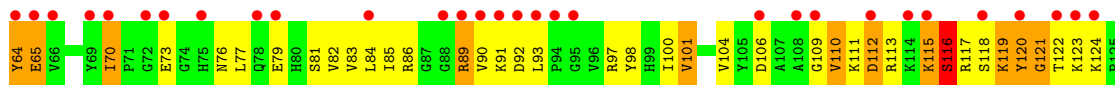
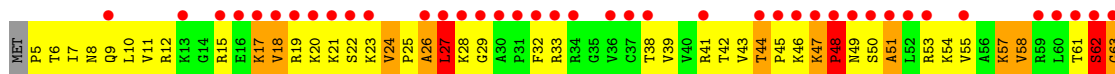




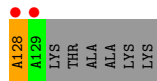
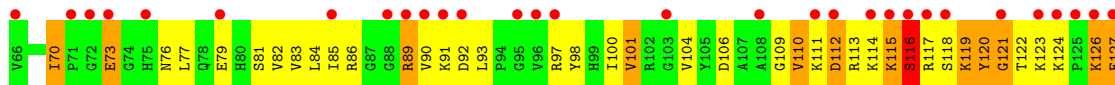
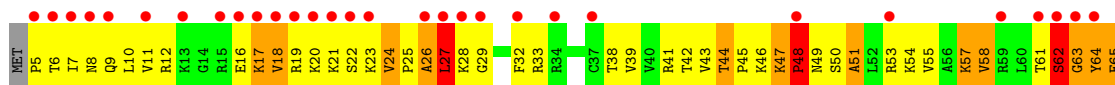
• Molecule 11: 30S ribosomal protein S11



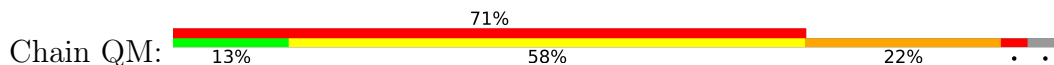
• Molecule 12: 30S ribosomal protein S12

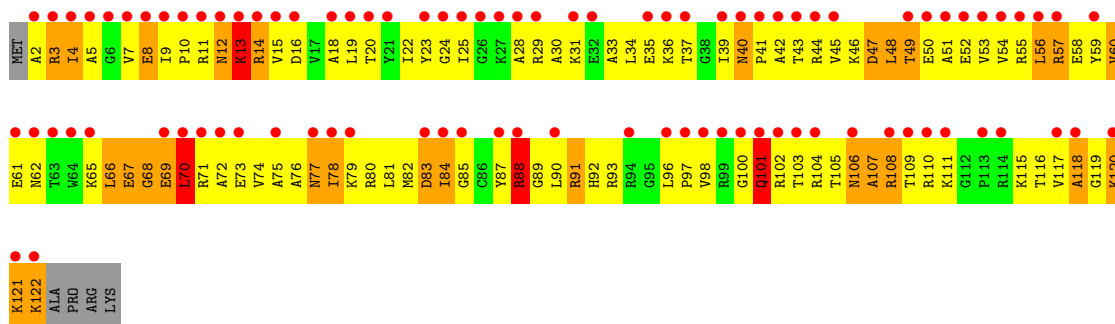


• Molecule 12: 30S ribosomal protein S12

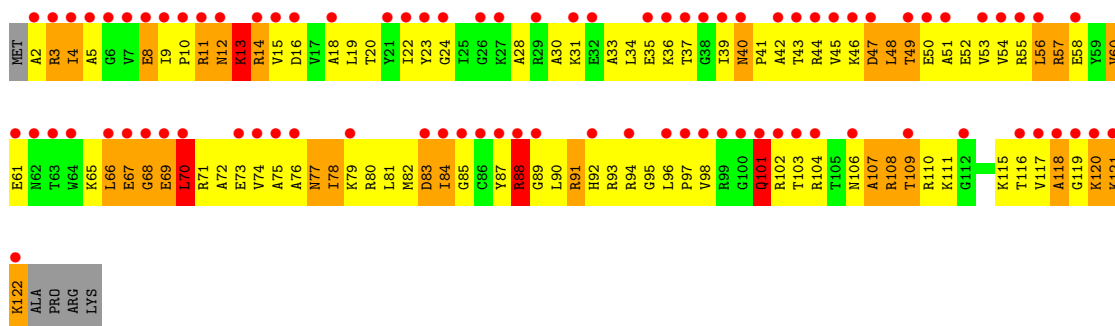
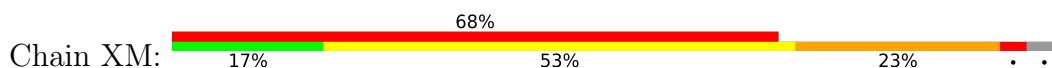


• Molecule 13: 30S ribosomal protein S13

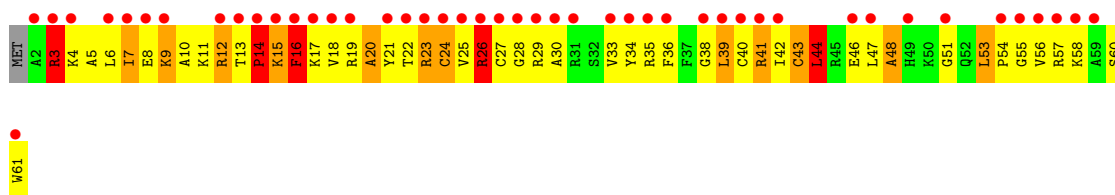
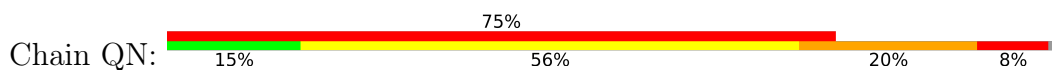




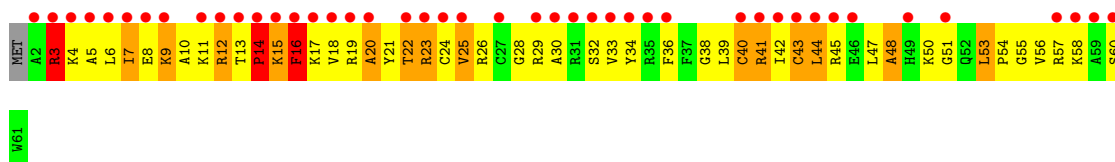
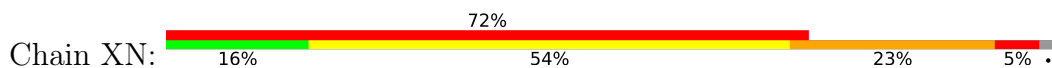
- Molecule 13: 30S ribosomal protein S13



- Molecule 14: 30S ribosomal protein S14

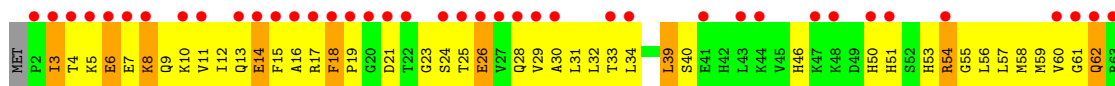


- Molecule 14: 30S ribosomal protein S14

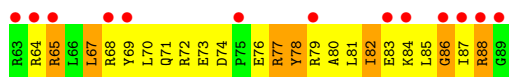
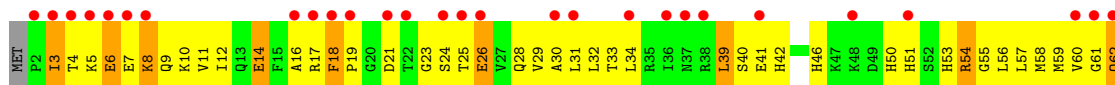


- Molecule 15: 30S ribosomal protein S15

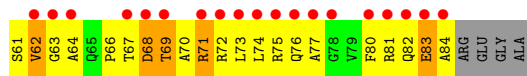
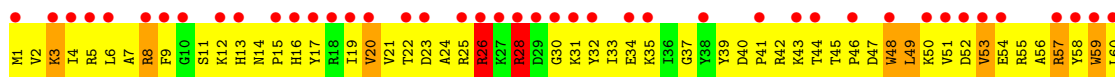
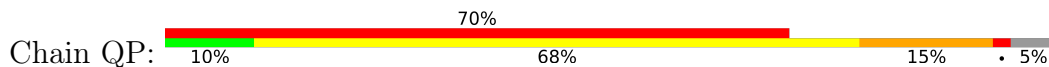




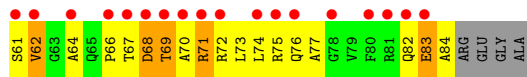
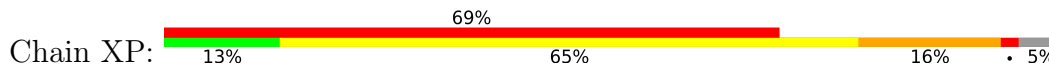
• Molecule 15: 30S ribosomal protein S15



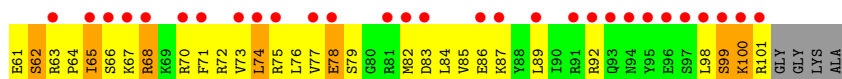
• Molecule 16: 30S ribosomal protein S16



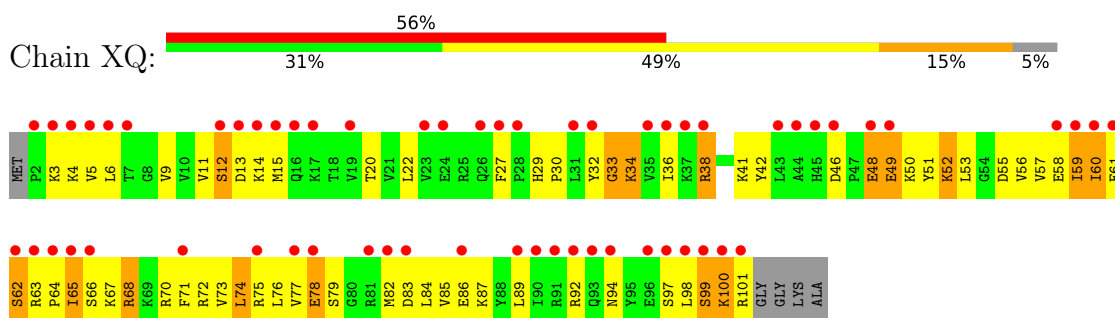
• Molecule 16: 30S ribosomal protein S16



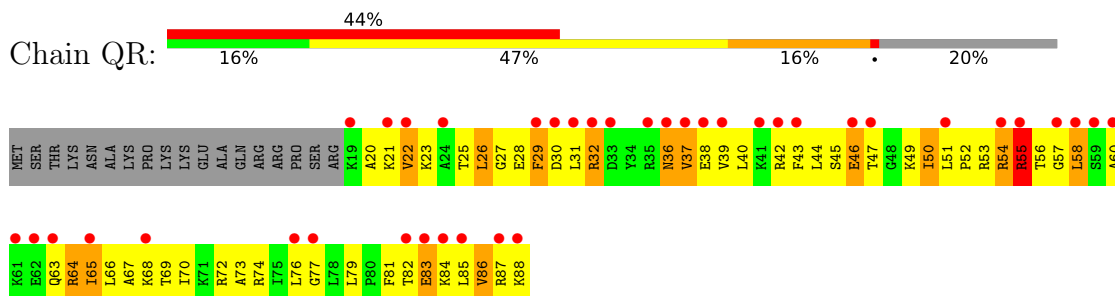
• Molecule 17: 30S ribosomal protein S17



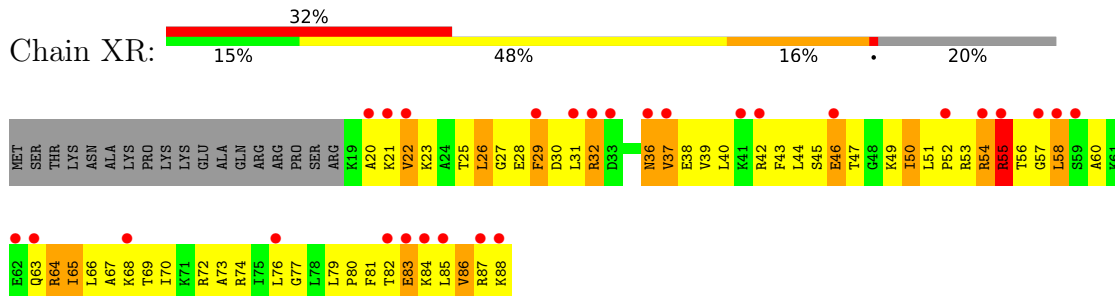
• Molecule 17: 30S ribosomal protein S17



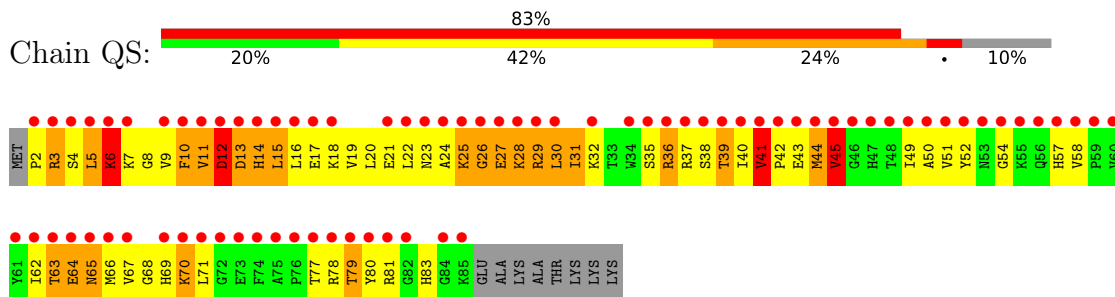
- Molecule 18: 30S ribosomal protein S18



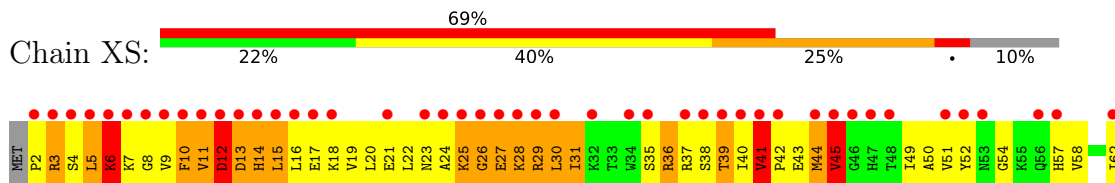
- Molecule 18: 30S ribosomal protein S18

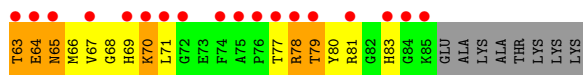


- Molecule 19: 30S ribosomal protein S19

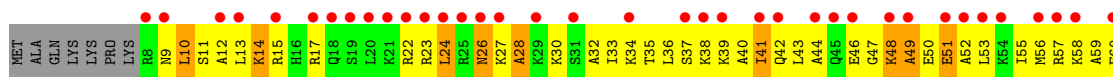


- Molecule 19: 30S ribosomal protein S19

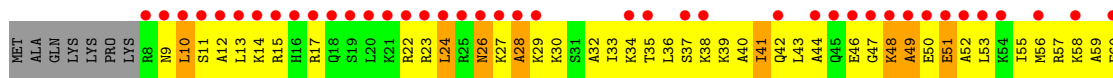
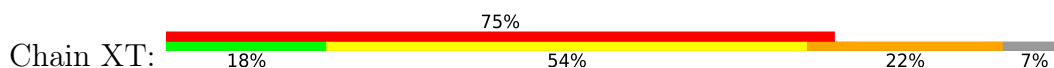




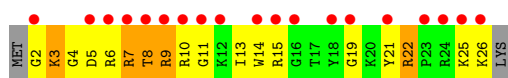
- Molecule 20: 30S ribosomal protein S20



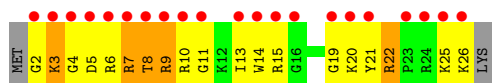
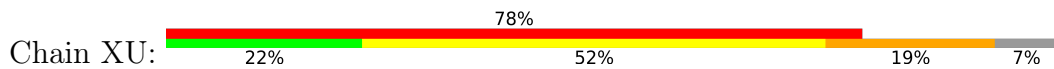
- Molecule 20: 30S ribosomal protein S20



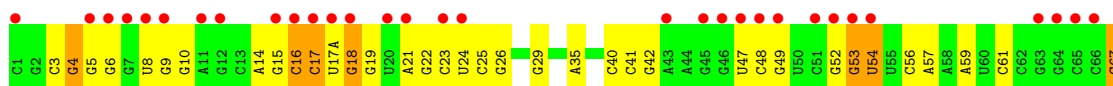
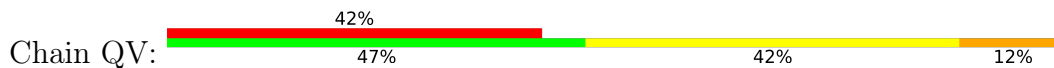
- Molecule 21: 30S ribosomal protein S21



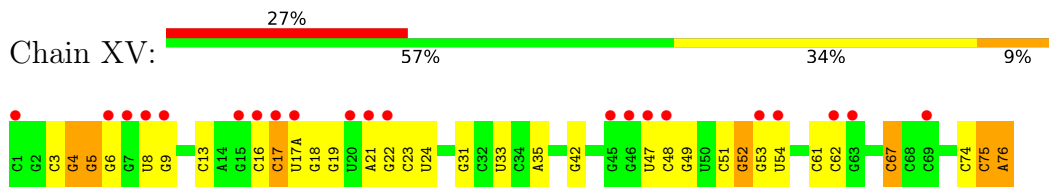
- Molecule 21: 30S ribosomal protein S21



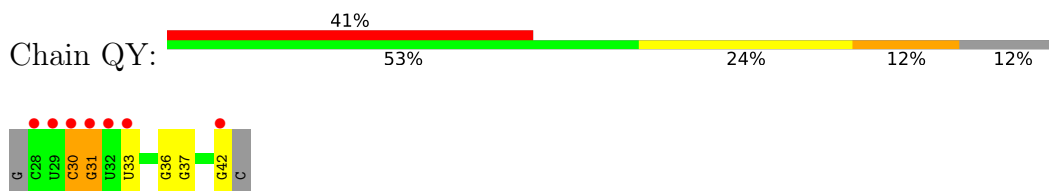
- Molecule 22: P-site tRNA fMet



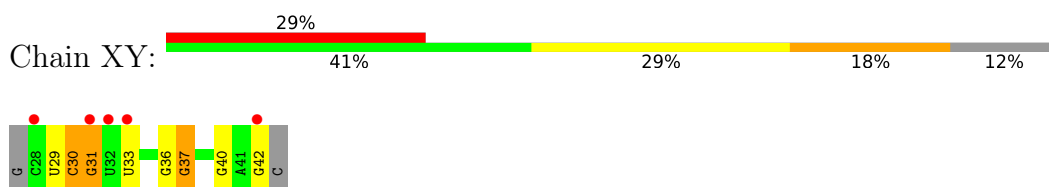
● Molecule 22: P-site tRNA fMet



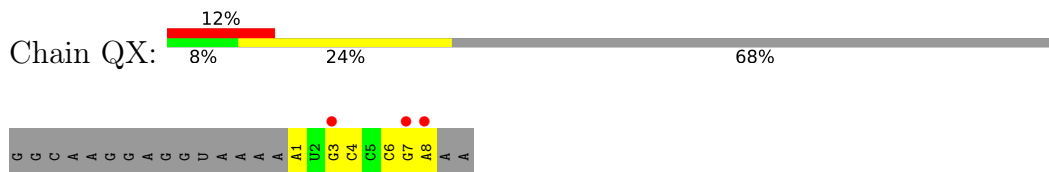
● Molecule 23: messenger RNA



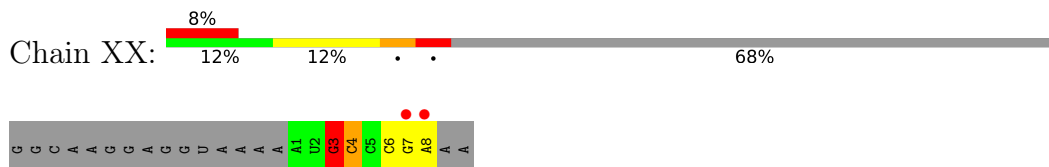
● Molecule 23: messenger RNA



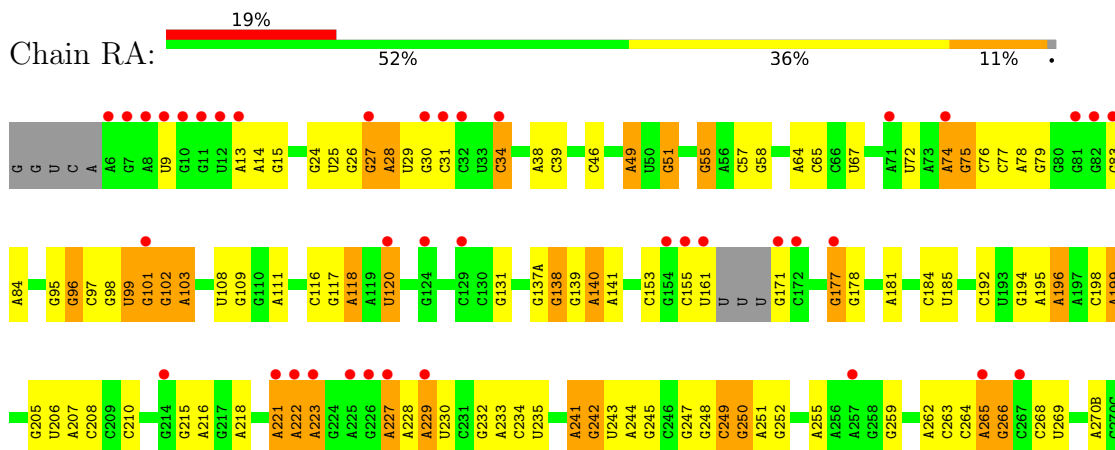
● Molecule 24: A-site ASL Pro

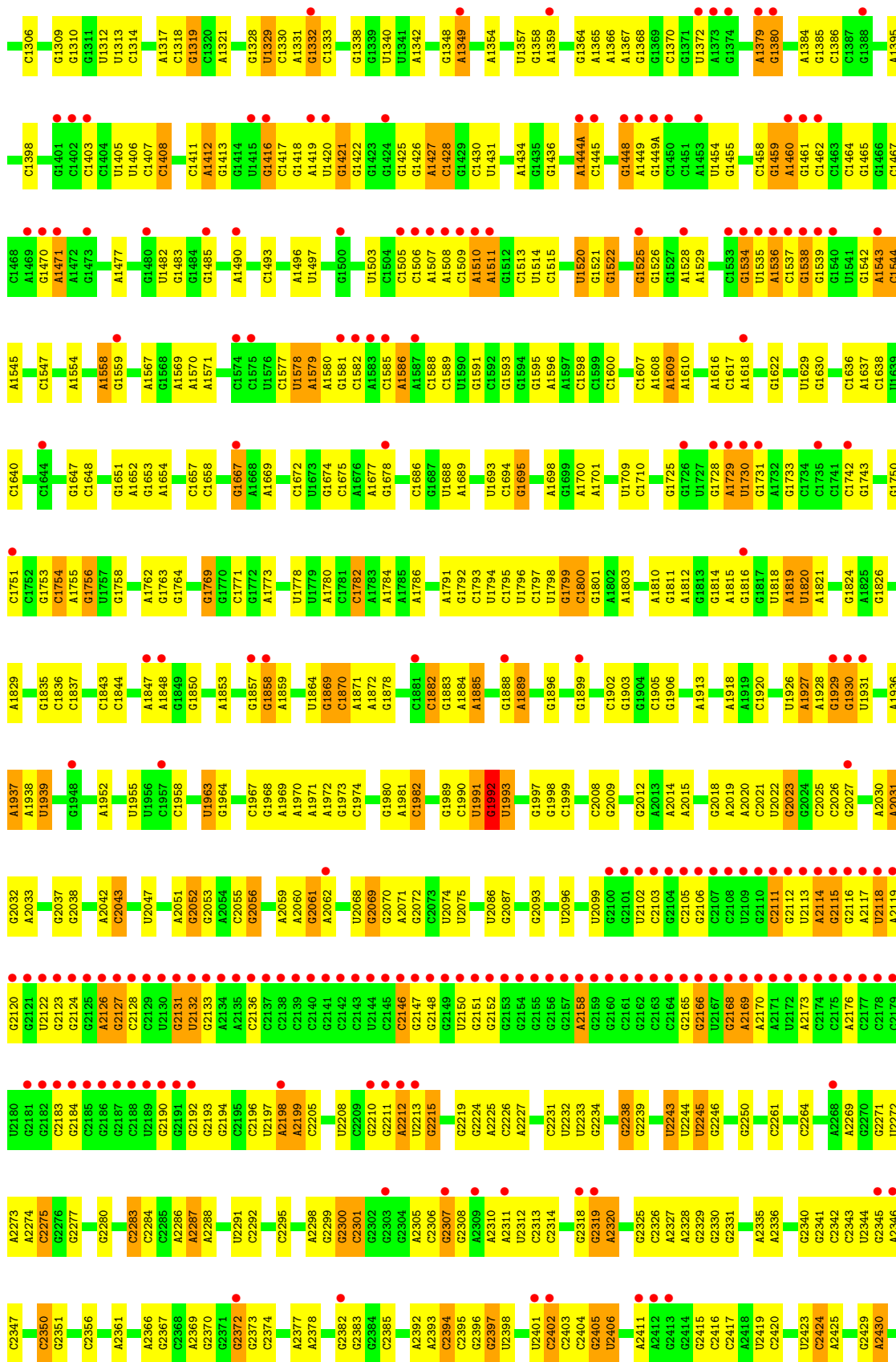


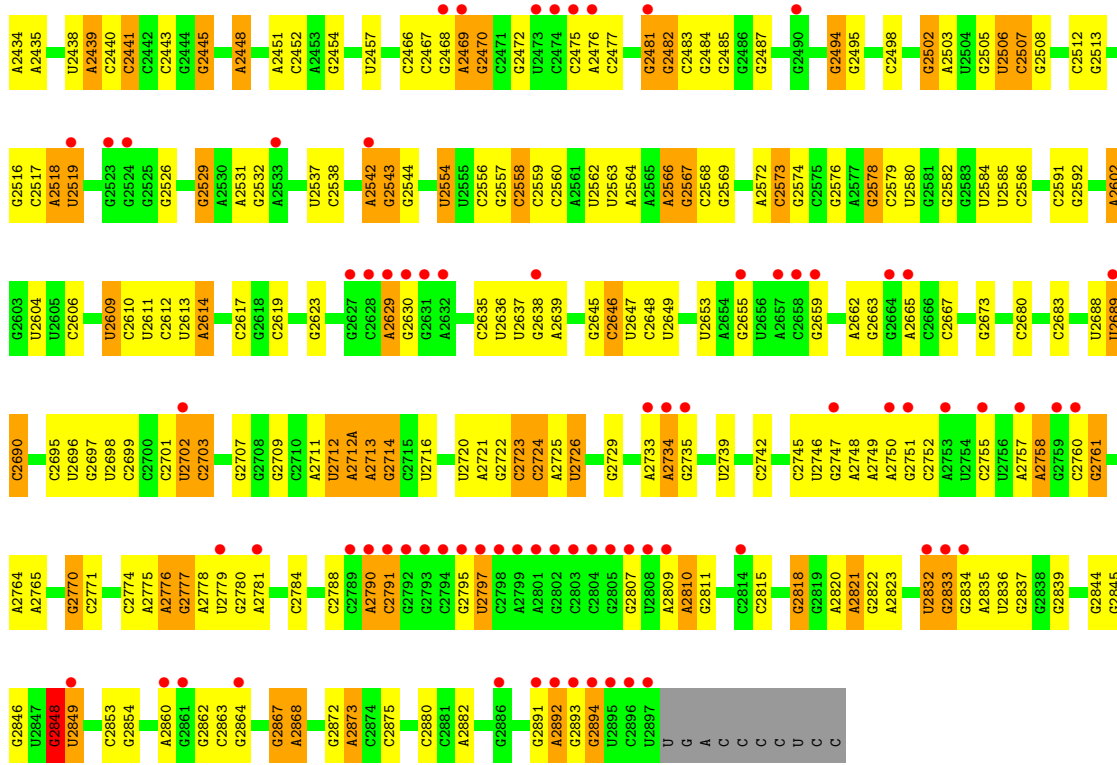
● Molecule 24: A-site ASL Pro



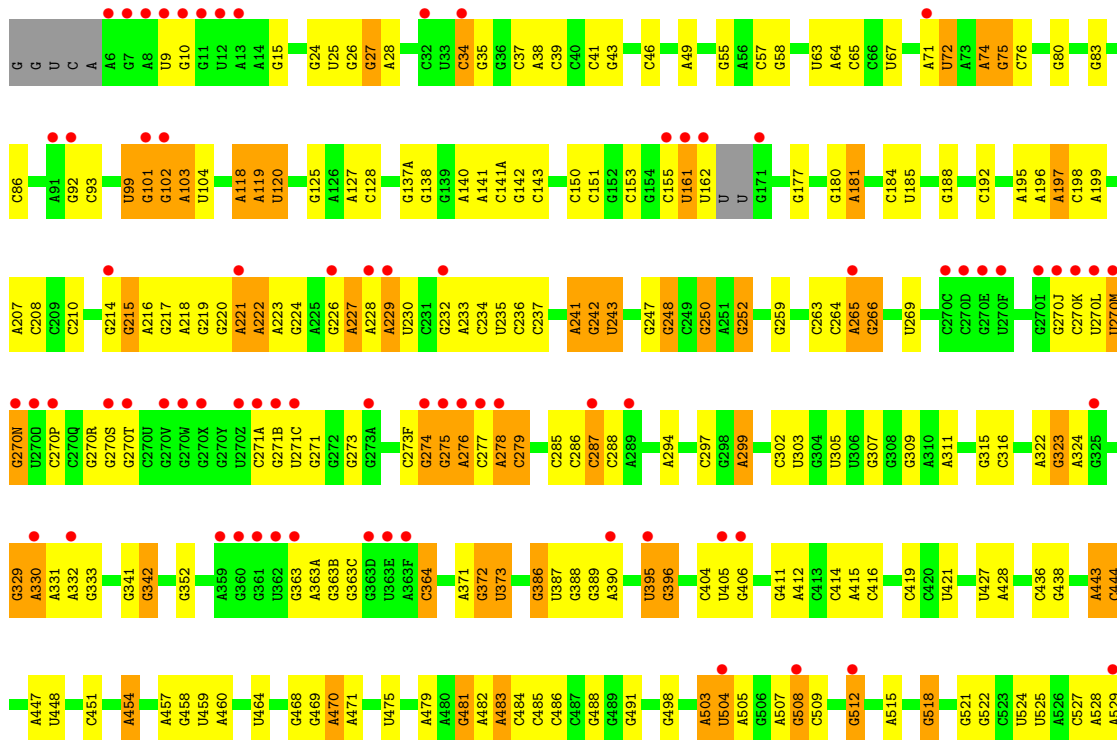
● Molecule 25: 23S rRNA

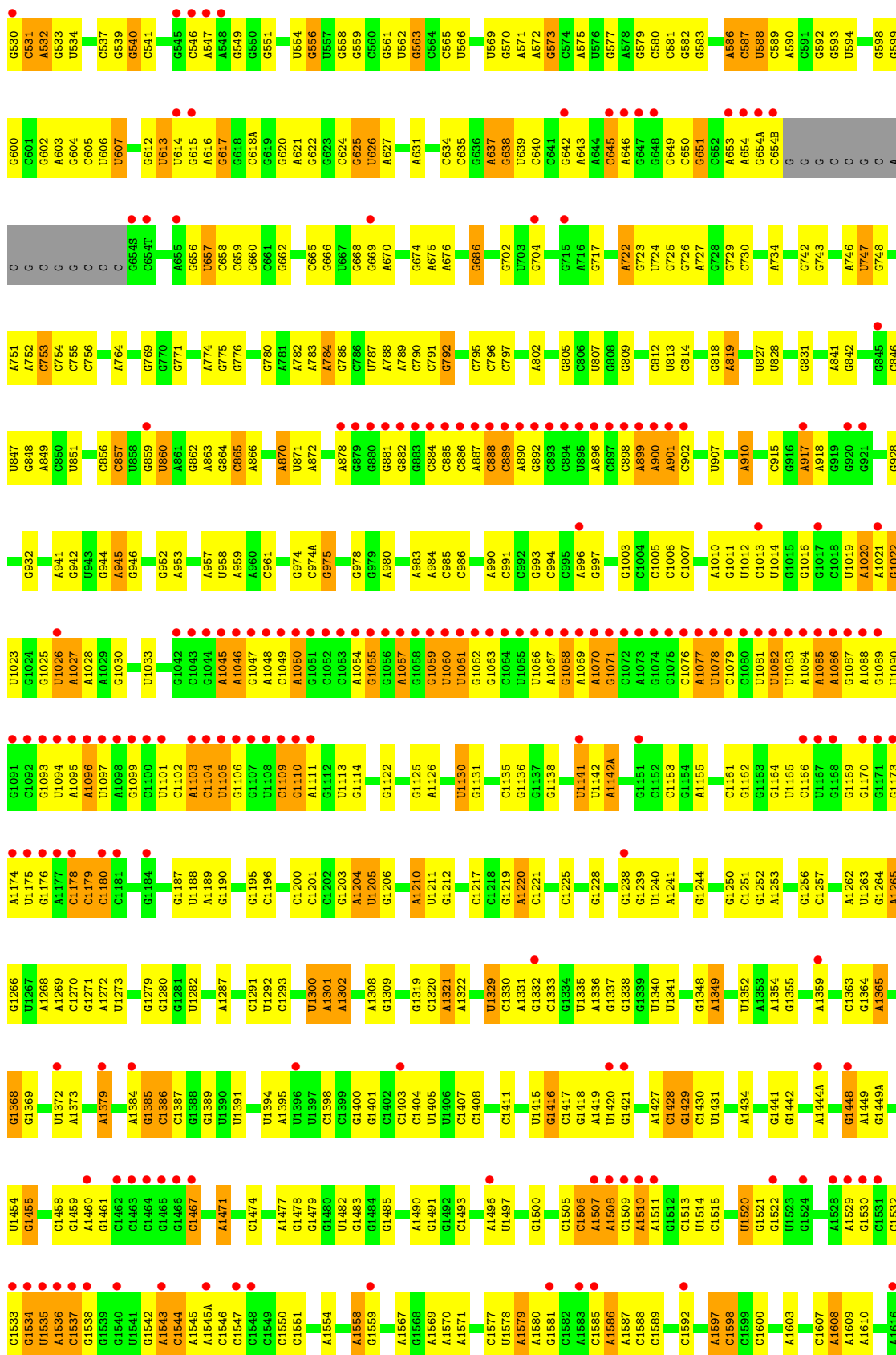


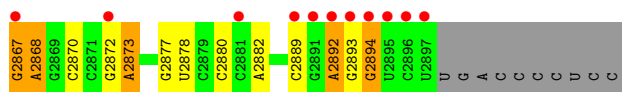
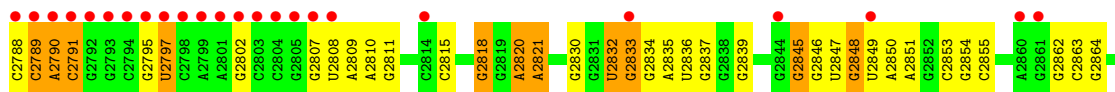




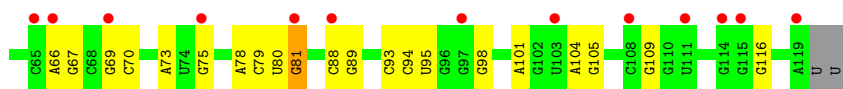
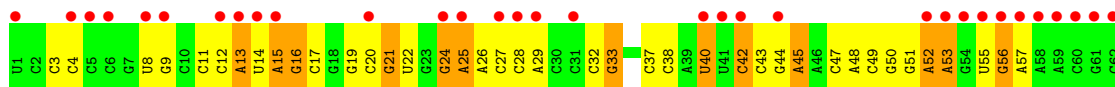
• Molecule 25: 23S rRNA



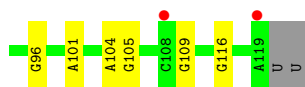
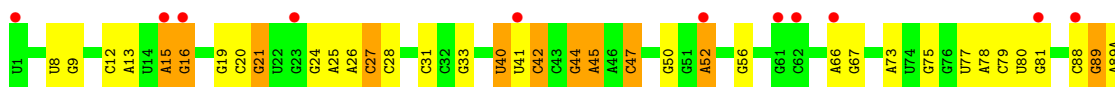




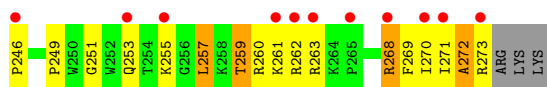
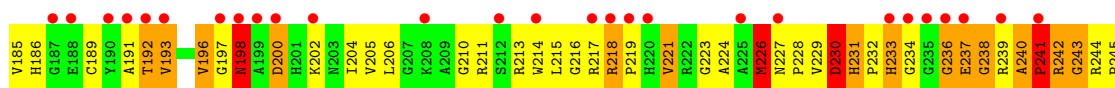
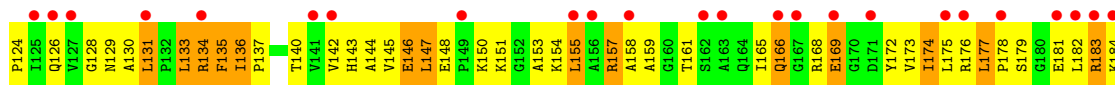
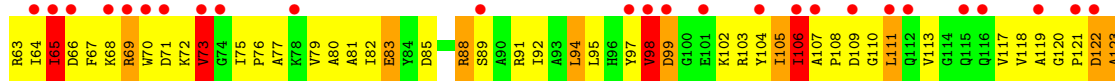
• Molecule 26: 5S rRNA



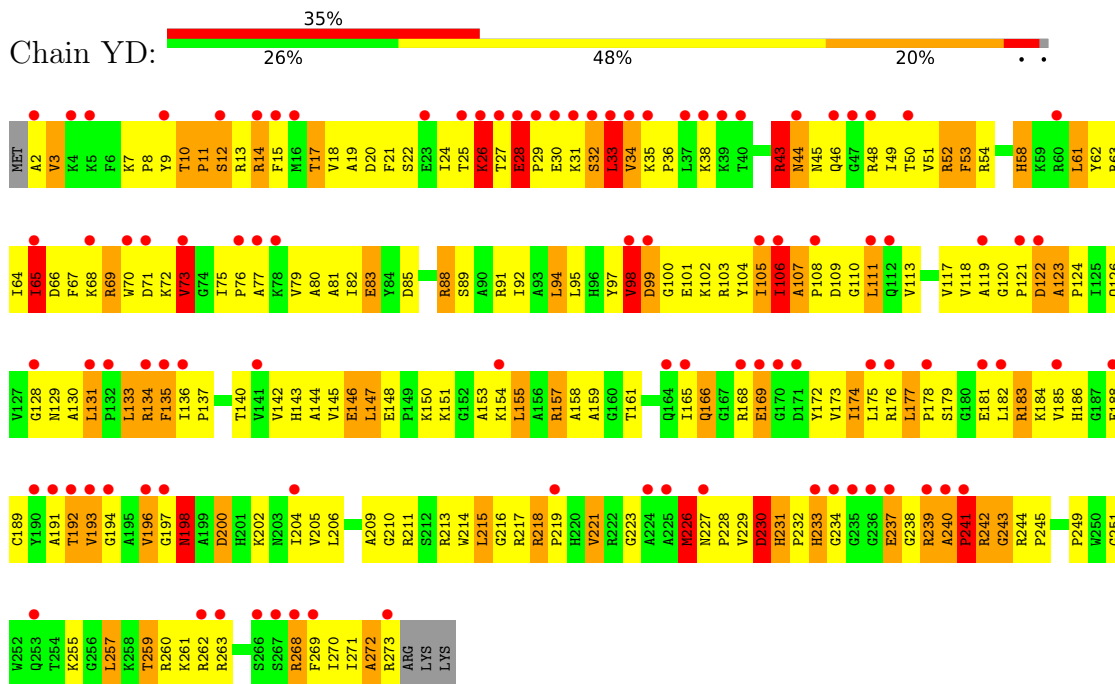
• Molecule 26: 5S rRNA



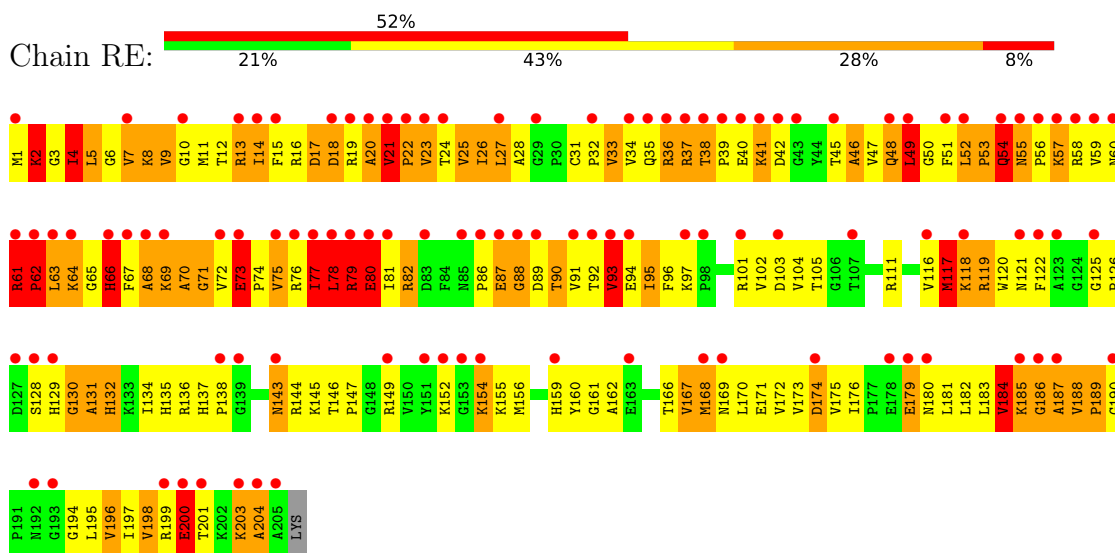
• Molecule 27: 50S ribosomal protein L2

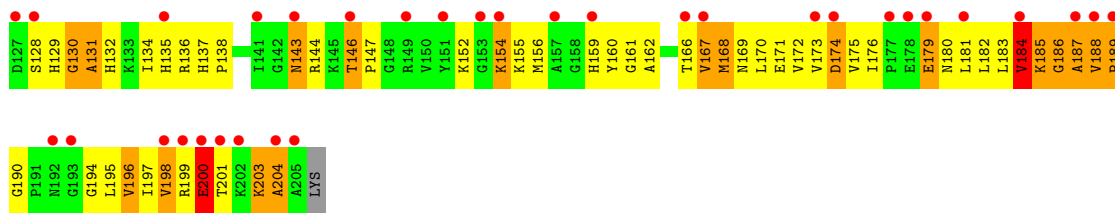


• Molecule 27: 50S ribosomal protein L2

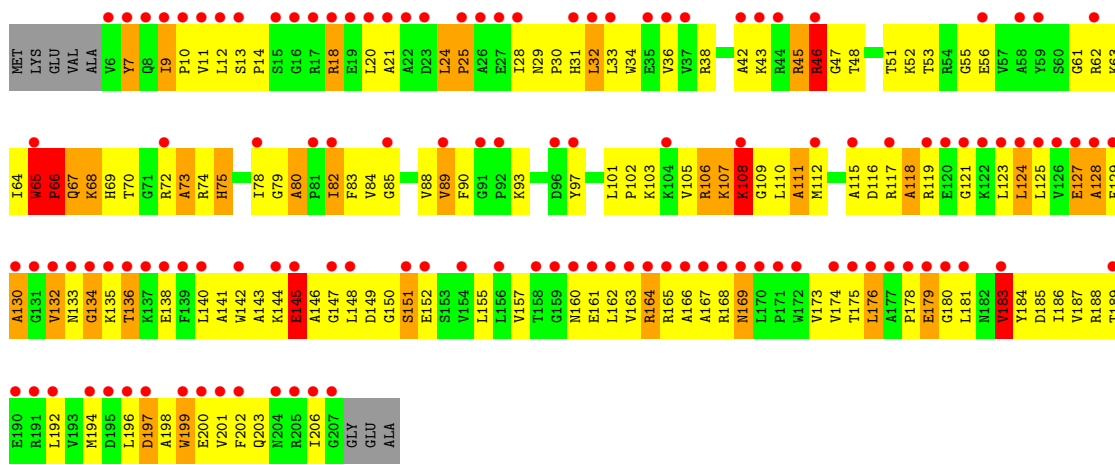


• Molecule 28: 50S ribosomal protein L3

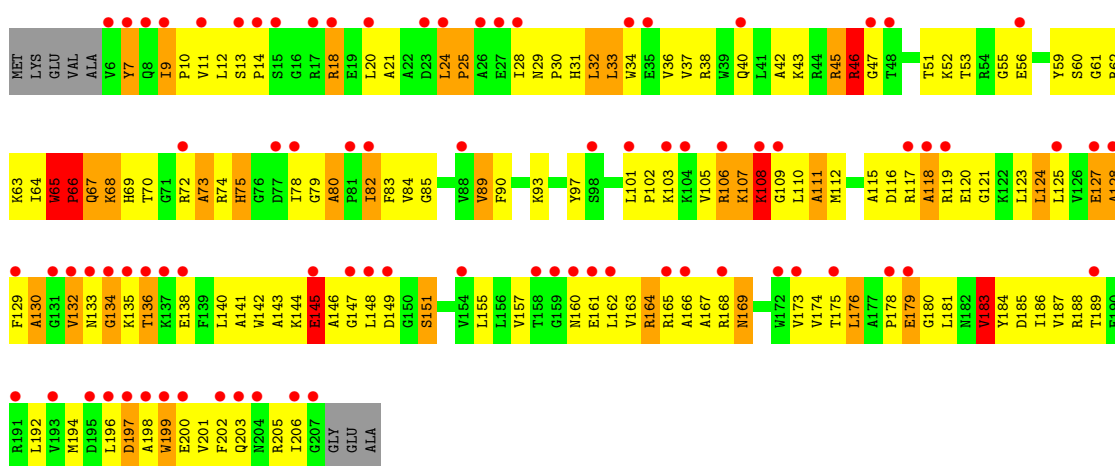




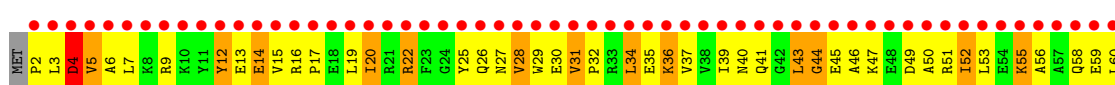
• Molecule 29: 50S ribosomal protein L4

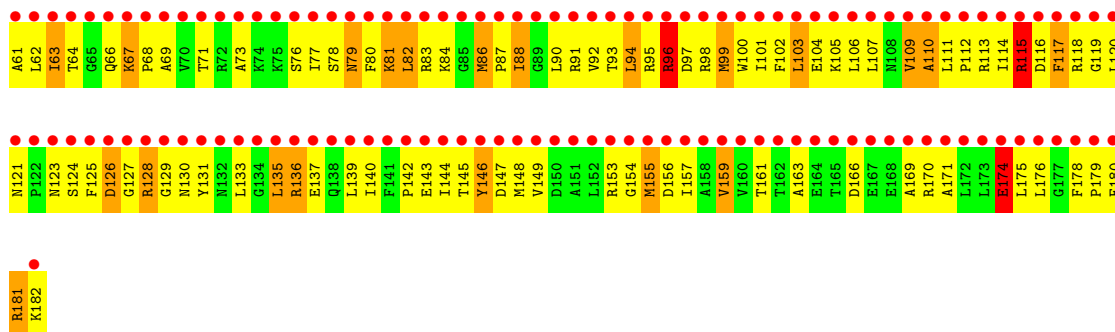


• Molecule 29: 50S ribosomal protein L4

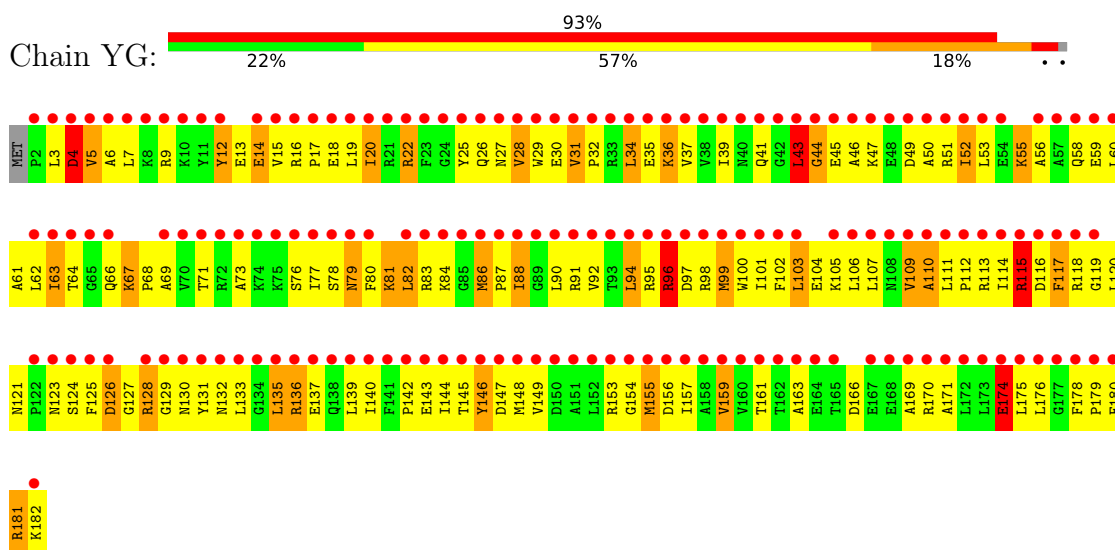


• Molecule 30: 50S ribosomal protein L5

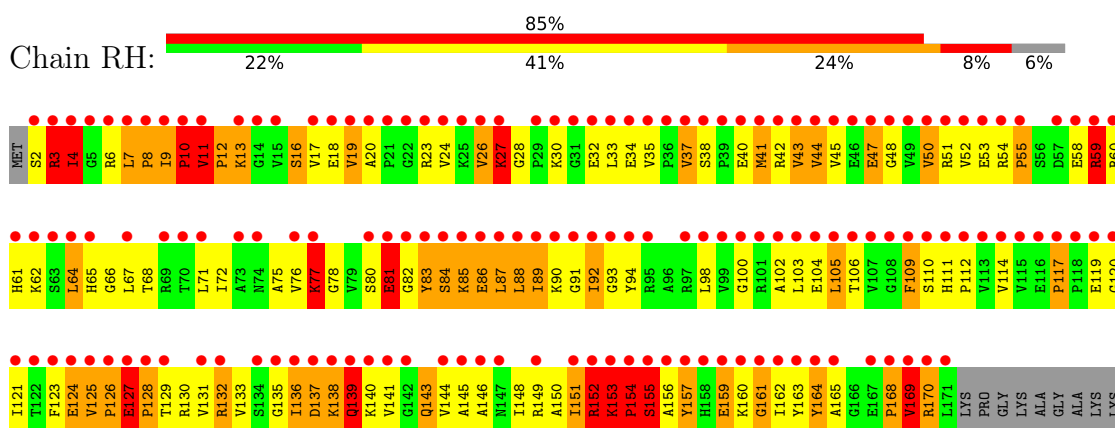




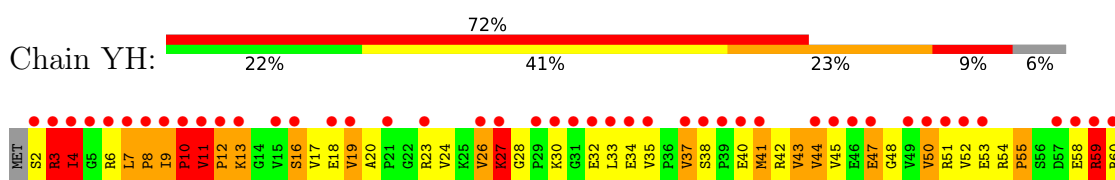
- Molecule 30: 50S ribosomal protein L5

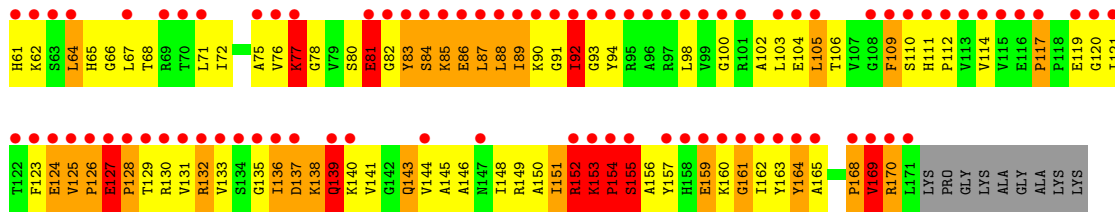


- Molecule 31: 50S ribosomal protein L6

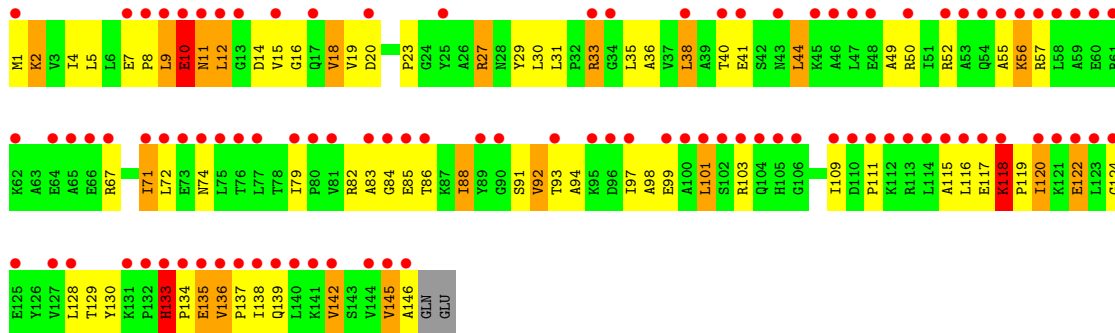


- Molecule 31: 50S ribosomal protein L6

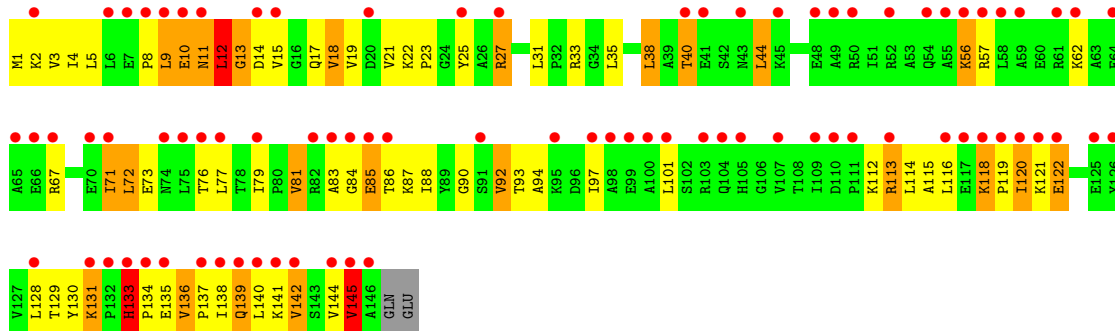




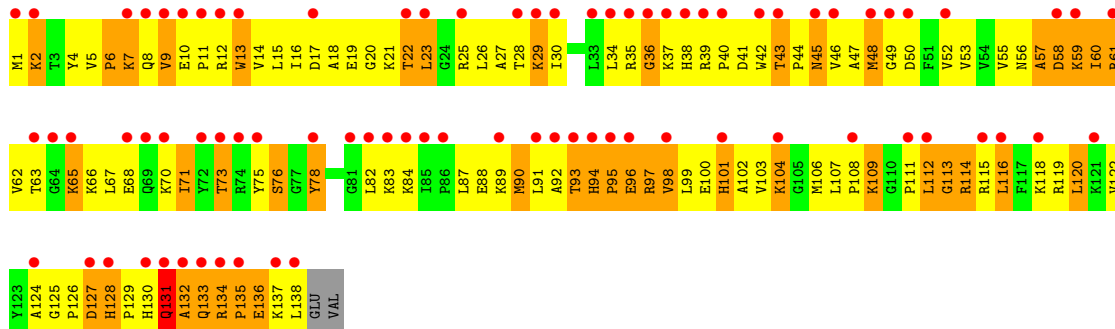
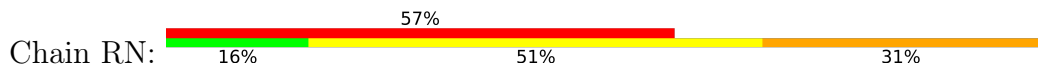
● Molecule 32: 50S ribosomal protein L9



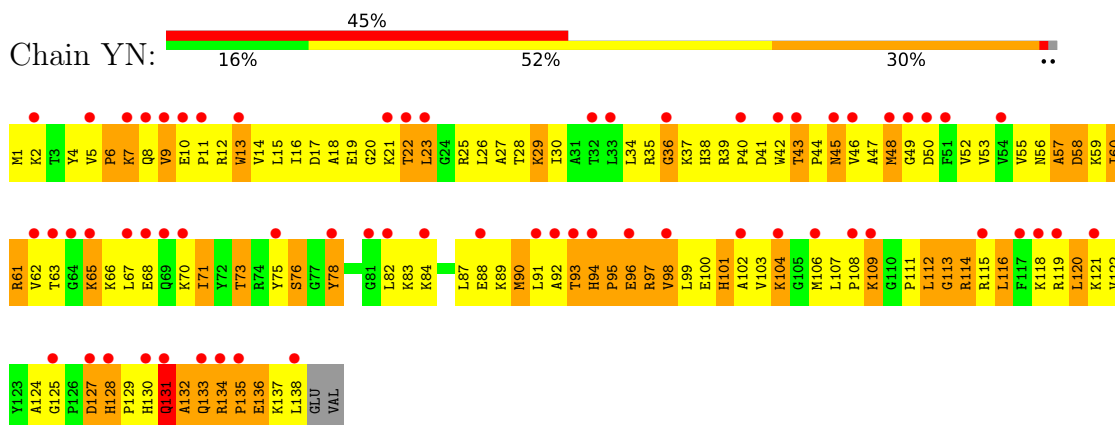
● Molecule 32: 50S ribosomal protein L9



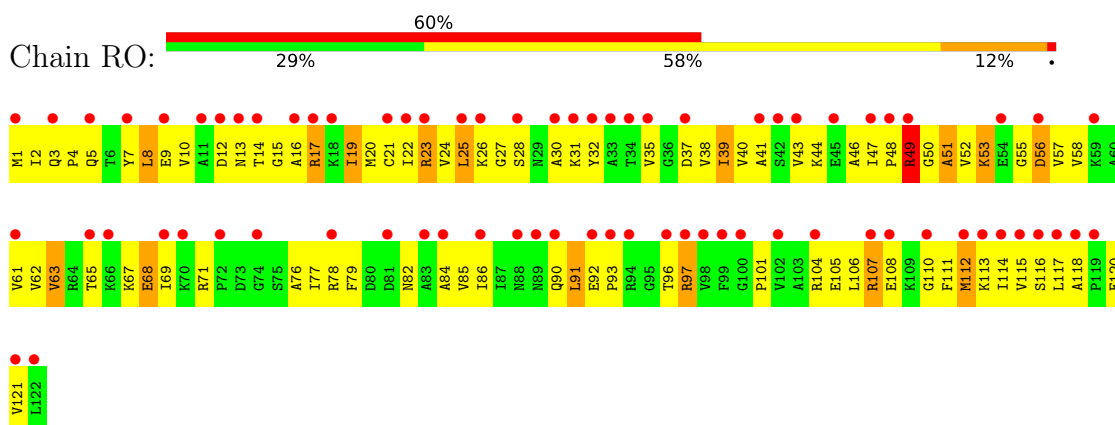
● Molecule 33: 50S ribosomal protein L11



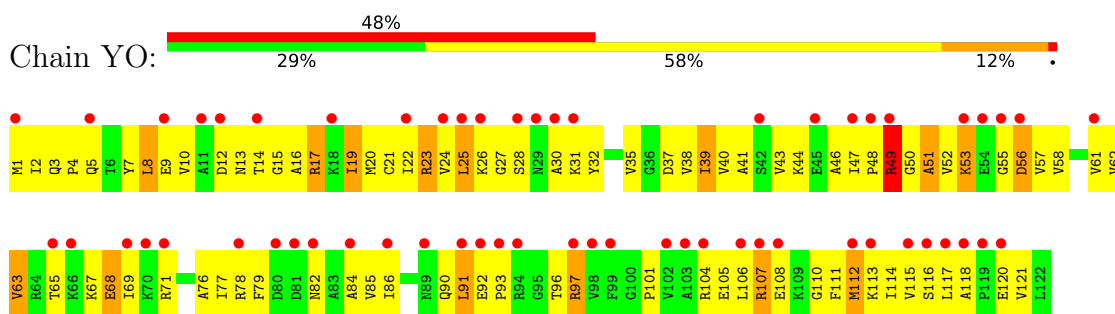
- Molecule 33: 50S ribosomal protein L11



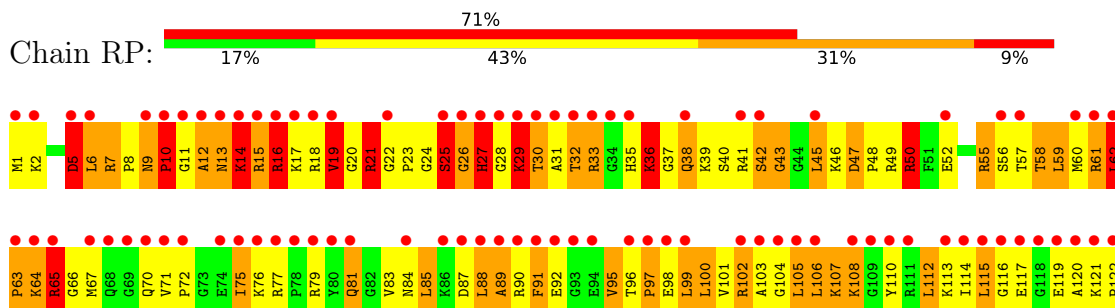
- Molecule 34: 50S ribosomal protein L13

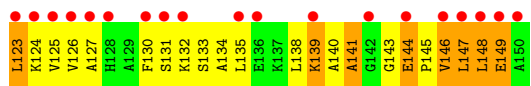


- Molecule 34: 50S ribosomal protein L13

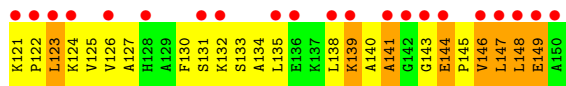
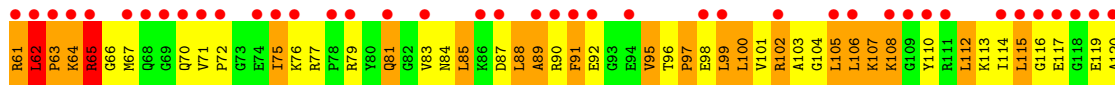
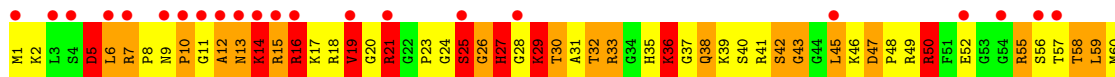
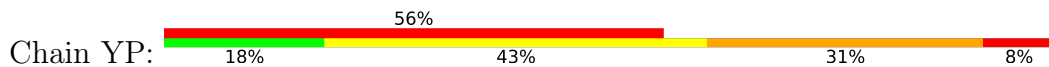


- Molecule 35: 50S ribosomal protein L14

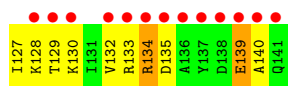
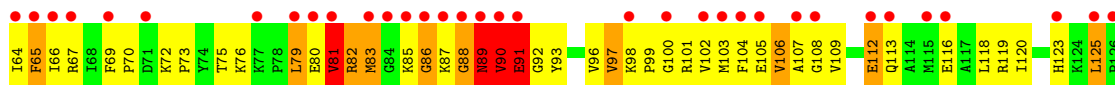
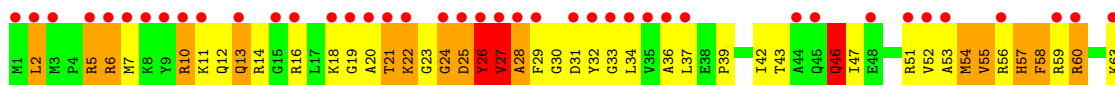




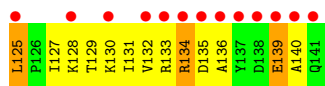
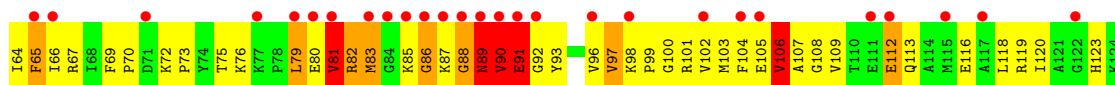
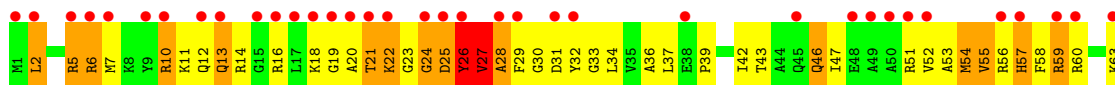
• Molecule 35: 50S ribosomal protein L14



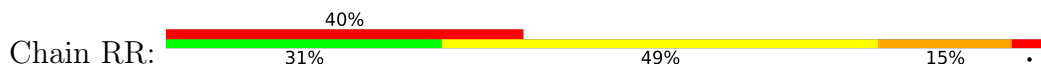
• Molecule 36: 50S ribosomal protein L15

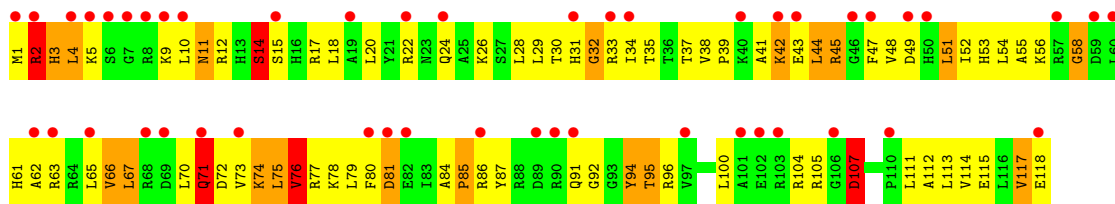


• Molecule 36: 50S ribosomal protein L15

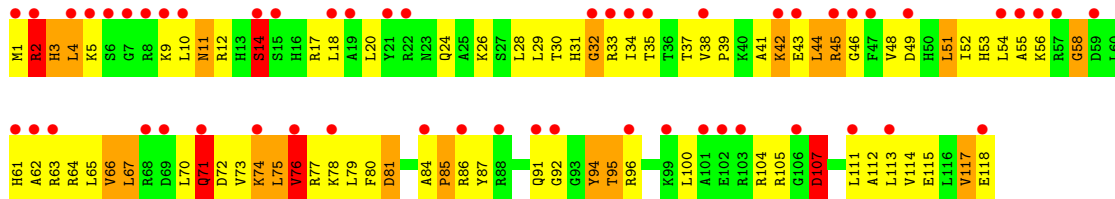


• Molecule 37: 50S ribosomal protein L16

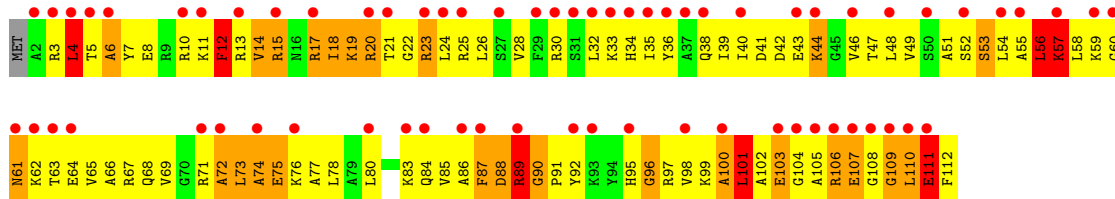
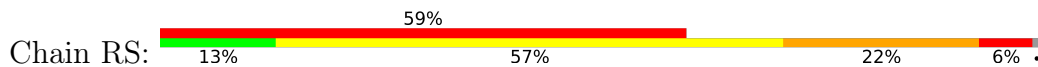




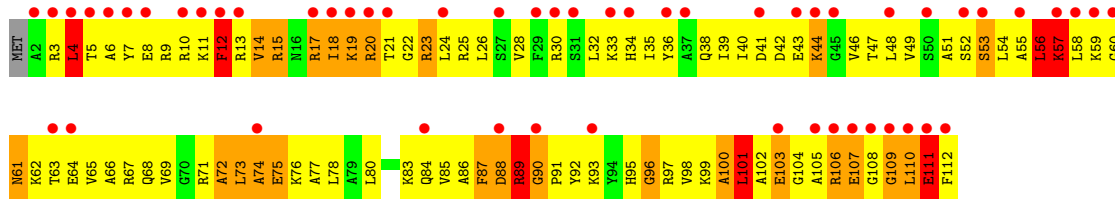
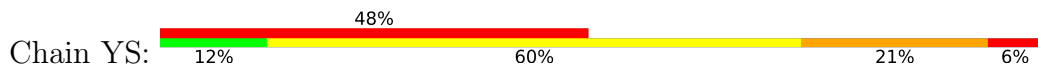
• Molecule 37: 50S ribosomal protein L16



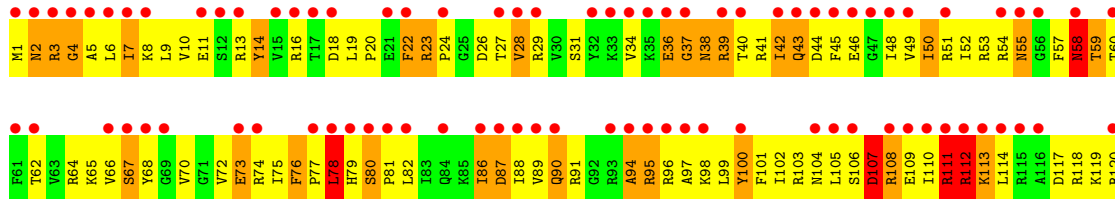
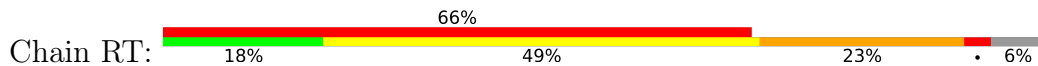
• Molecule 38: 50S ribosomal protein L17

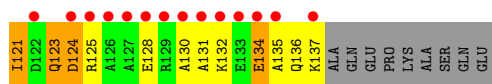


• Molecule 38: 50S ribosomal protein L17

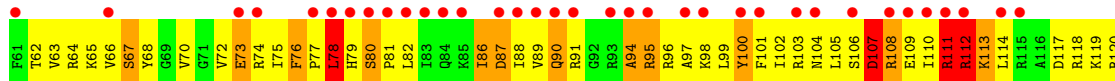
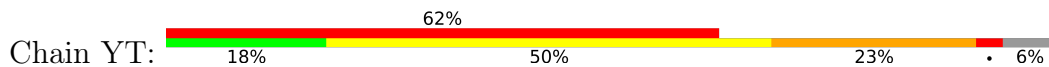


• Molecule 39: 50S ribosomal protein L18

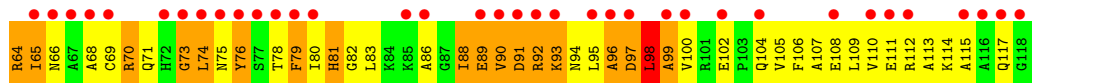
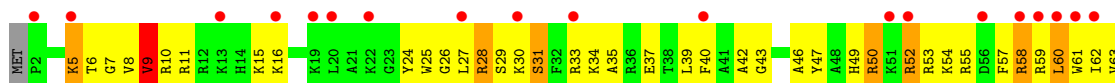




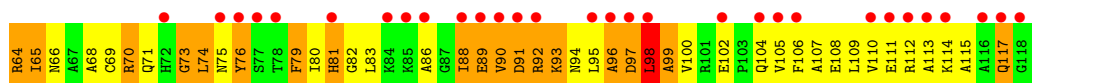
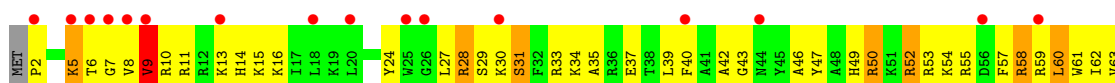
• Molecule 39: 50S ribosomal protein L18



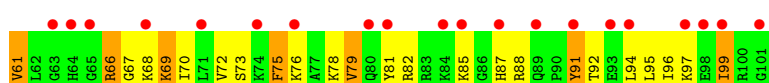
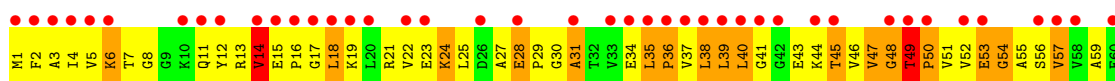
• Molecule 40: 50S ribosomal protein L19



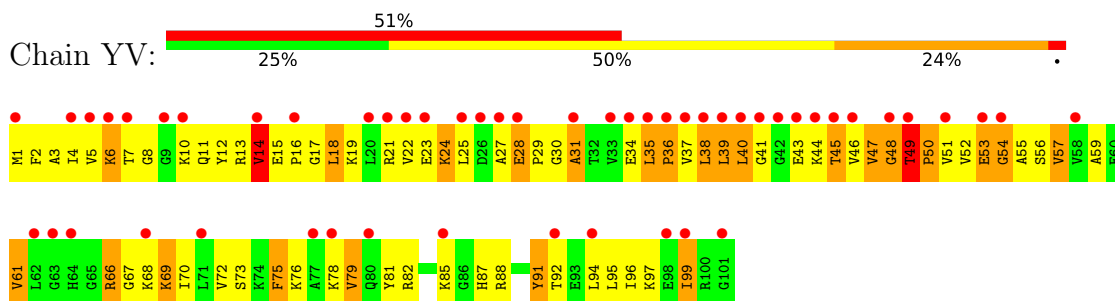
• Molecule 40: 50S ribosomal protein L19



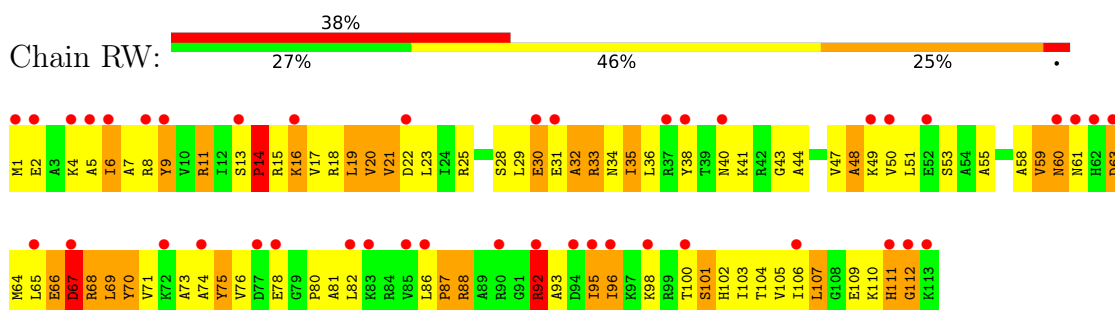
• Molecule 41: 50S ribosomal protein L20



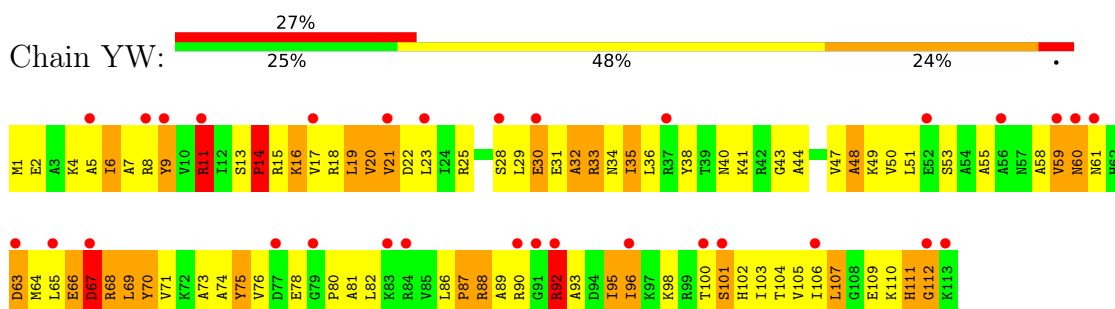
- Molecule 41: 50S ribosomal protein L20



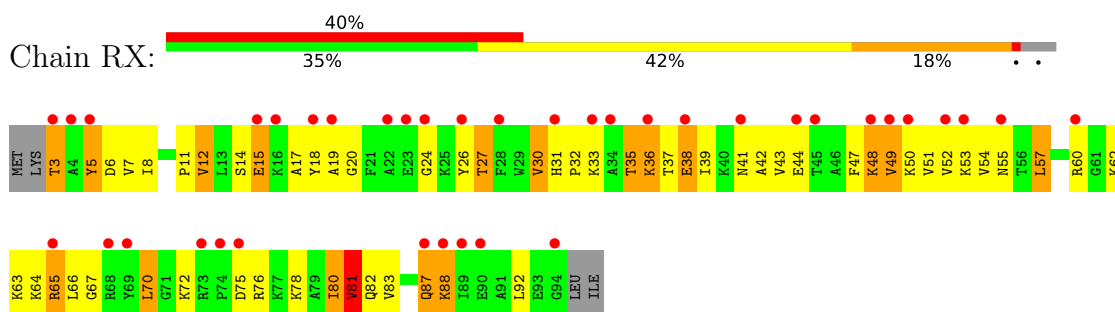
- Molecule 42: 50S ribosomal protein L21



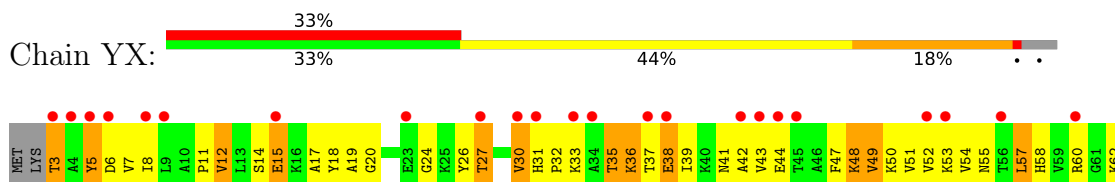
- Molecule 42: 50S ribosomal protein L21

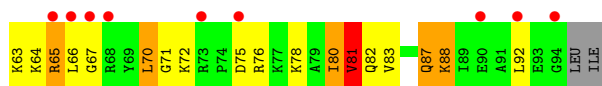


- Molecule 43: 50S ribosomal protein L22

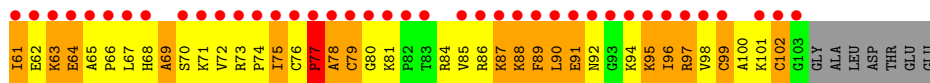
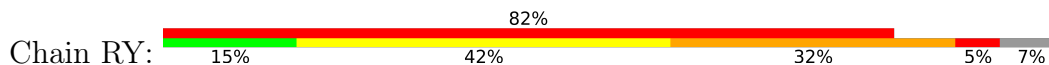


- Molecule 43: 50S ribosomal protein L22

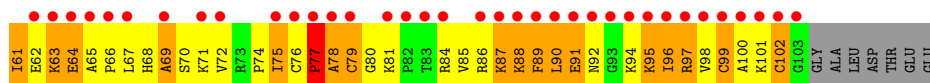
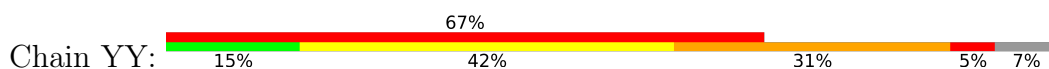




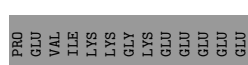
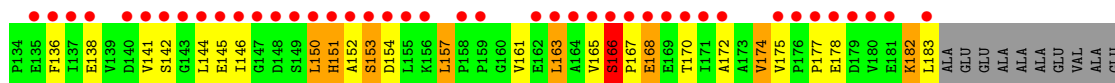
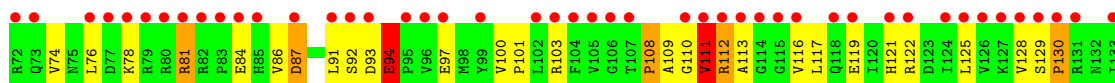
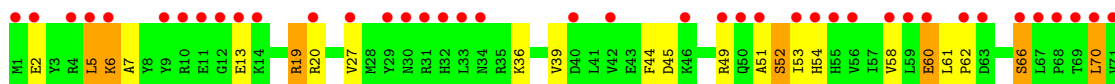
• Molecule 44: 50S ribosomal protein L23



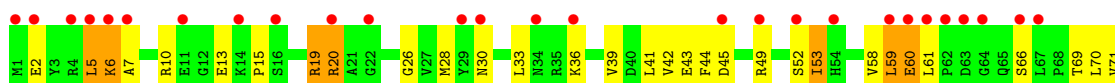
• Molecule 44: 50S ribosomal protein L23

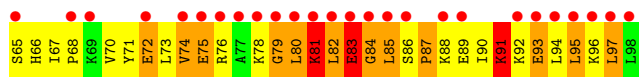


• Molecule 45: 50S ribosomal protein L24

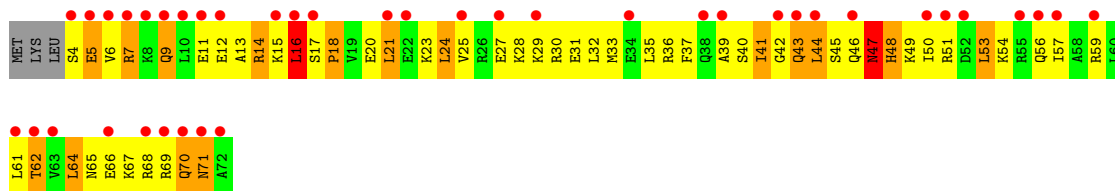
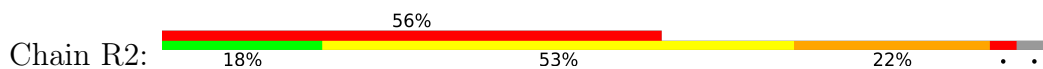


• Molecule 45: 50S ribosomal protein L24

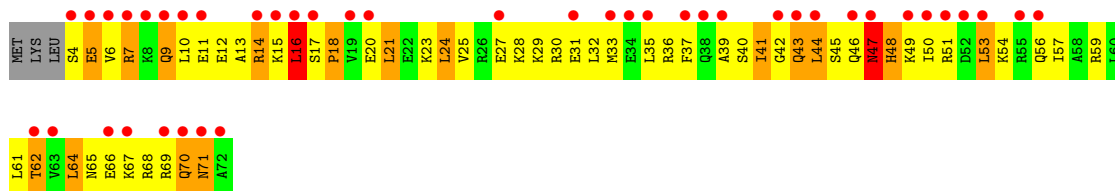
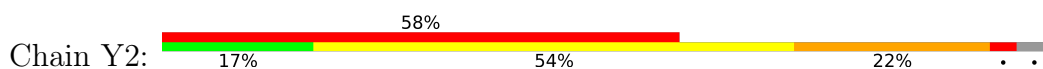




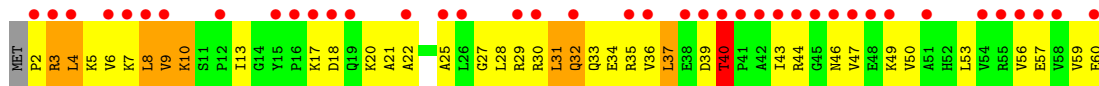
- Molecule 48: 50S ribosomal protein L28



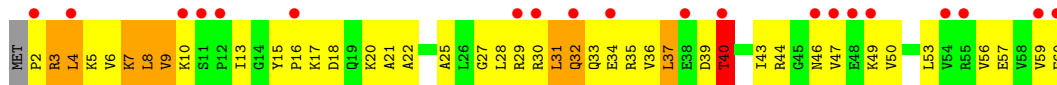
- Molecule 48: 50S ribosomal protein L28



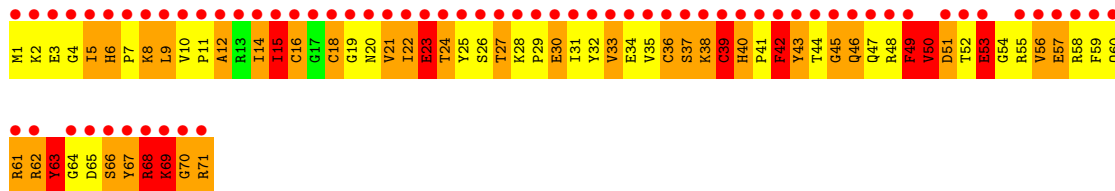
- Molecule 49: 50S ribosomal protein L29



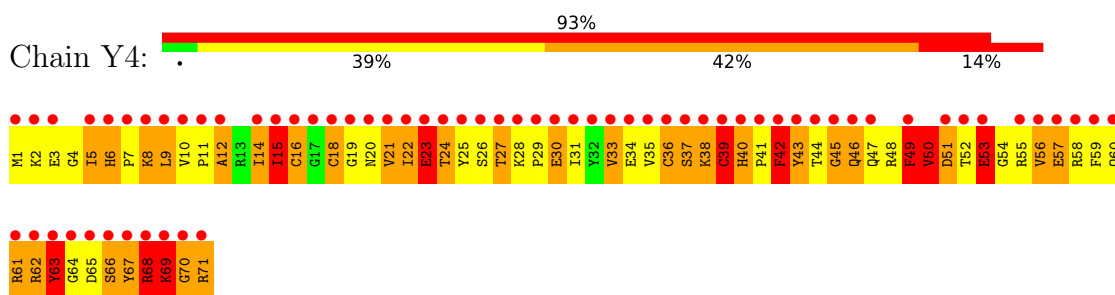
- Molecule 49: 50S ribosomal protein L29



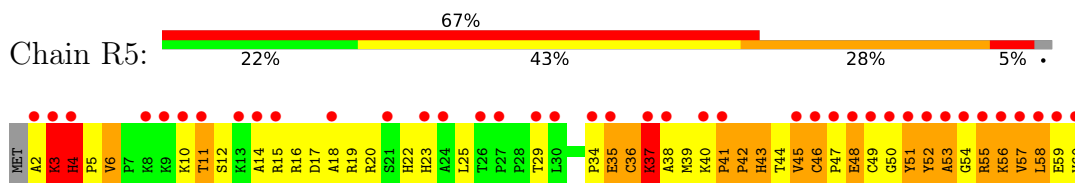
- Molecule 50: 50S ribosomal protein L30



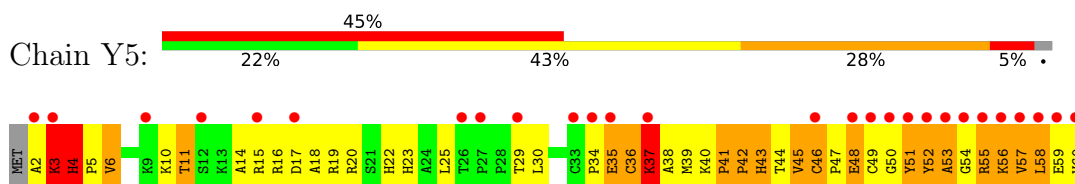
- Molecule 50: 50S ribosomal protein L30



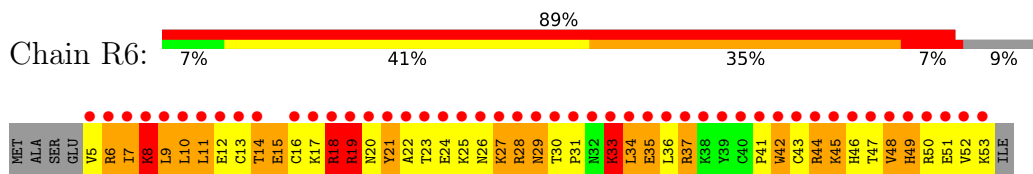
- Molecule 51: 50S ribosomal protein L32



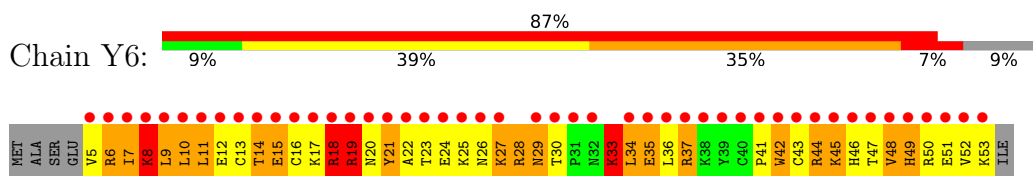
- Molecule 51: 50S ribosomal protein L32



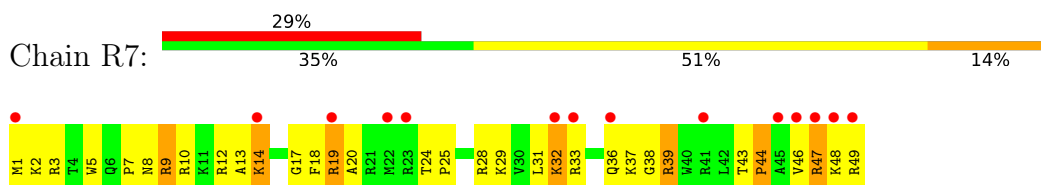
- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33

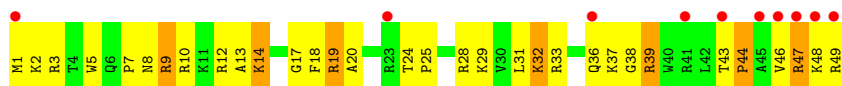


- Molecule 53: 50S ribosomal protein L34

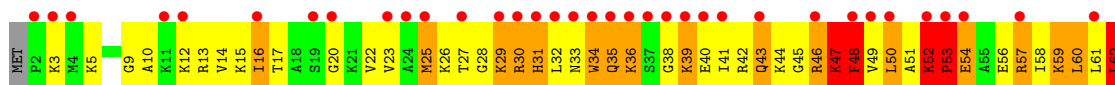
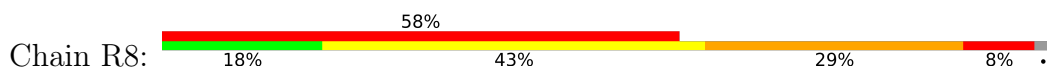


- Molecule 53: 50S ribosomal protein L34

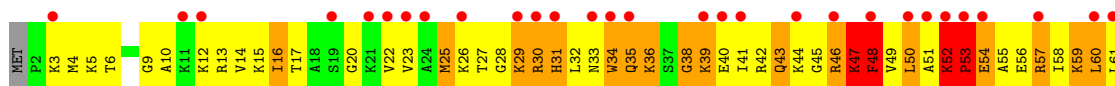
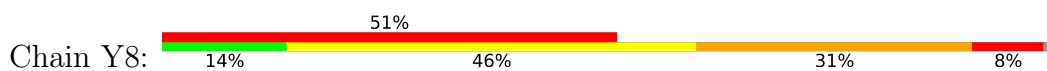




- Molecule 54: 50S ribosomal protein L35



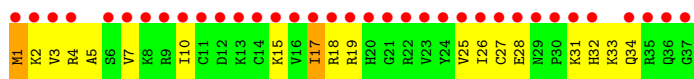
- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



- Molecule 56: tRNA acceptor end mimic



- Molecule 56: tRNA acceptor end mimic





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.21Å 448.45Å 619.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	189.60 – 3.14 189.60 – 3.14	Depositor EDS
% Data completeness (in resolution range)	99.6 (189.60-3.14) 99.7 (189.60-3.14)	Depositor EDS
R_{merge}	0.27	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.51 (at 3.07Å)	Xtrriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.230 , 0.262 0.232 , 0.263	Depositor DCC
R_{free} test set	49008 reflections (4.68%)	wwPDB-VP
Wilson B-factor (Å ²)	54.4	Xtrriage
Anisotropy	0.278	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.44 , 999.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.82	EDS
Total number of atoms	291998	wwPDB-VP
Average B, all atoms (Å ²)	69.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.57% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, 1MG, MG, PAR, PPU

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	QA	0.21	0/36098	0.43	0/56341
1	XA	0.21	0/36101	0.43	3/56346 (0.0%)
2	QB	0.42	0/1959	1.07	15/2642 (0.6%)
2	XB	0.42	0/1959	1.05	10/2642 (0.4%)
3	QC	0.44	0/1629	0.93	1/2195 (0.0%)
3	XC	0.44	0/1629	0.93	1/2195 (0.0%)
4	QD	0.49	0/1733	1.06	12/2318 (0.5%)
4	XD	0.54	0/1733	1.06	14/2318 (0.6%)
5	QE	0.45	0/1171	1.02	9/1576 (0.6%)
5	XE	0.46	0/1171	1.02	9/1576 (0.6%)
6	QF	0.49	0/856	0.97	3/1154 (0.3%)
6	XF	0.50	0/856	0.97	3/1154 (0.3%)
7	QG	0.43	0/1276	0.90	1/1709 (0.1%)
7	XG	0.43	0/1276	0.90	1/1709 (0.1%)
8	QH	0.49	0/1136	1.05	5/1527 (0.3%)
8	XH	0.50	0/1136	1.06	5/1527 (0.3%)
9	QI	0.40	0/1029	1.02	8/1379 (0.6%)
9	XI	0.40	0/1029	1.03	9/1379 (0.7%)
10	QJ	0.46	0/814	0.91	1/1095 (0.1%)
10	XJ	0.46	0/814	0.91	1/1095 (0.1%)
11	QK	0.47	0/900	1.05	6/1213 (0.5%)
11	XK	0.47	0/900	1.04	6/1213 (0.5%)
12	QL	0.55	0/991	1.74	11/1327 (0.8%)
12	XL	0.55	0/991	1.74	11/1327 (0.8%)
13	QM	0.43	0/974	1.04	9/1303 (0.7%)
13	XM	0.43	0/974	1.04	9/1303 (0.7%)
14	QN	0.47	0/501	1.08	6/664 (0.9%)
14	XN	0.65	1/501 (0.2%)	1.07	4/664 (0.6%)
15	QO	0.48	0/745	0.99	3/992 (0.3%)
15	XO	0.48	0/745	0.99	3/992 (0.3%)
16	QP	0.46	0/721	1.03	4/970 (0.4%)
16	XP	0.46	0/721	1.04	4/970 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.43	0/847	1.07	6/1131 (0.5%)
17	XQ	0.43	0/847	1.06	6/1131 (0.5%)
18	QR	0.46	0/579	1.04	3/768 (0.4%)
18	XR	0.46	0/579	1.04	3/768 (0.4%)
19	QS	0.46	0/689	1.21	7/926 (0.8%)
19	XS	0.46	0/689	1.21	7/926 (0.8%)
20	QT	0.42	0/765	1.09	5/1007 (0.5%)
20	XT	0.42	0/765	1.09	4/1007 (0.4%)
21	QU	0.42	0/221	1.01	1/288 (0.3%)
21	XU	0.42	0/221	1.01	1/288 (0.3%)
22	QV	0.17	0/1836	0.33	0/2859
22	XV	0.20	0/1836	0.37	0/2859
23	QY	0.31	0/333	0.34	0/517
23	XY	0.31	0/333	0.34	0/517
24	QX	0.34	0/189	0.68	0/292
24	XX	0.25	0/189	0.67	1/292 (0.3%)
25	RA	0.22	0/69521	0.41	3/108529 (0.0%)
25	YA	0.24	0/69543	0.44	3/108563 (0.0%)
26	RB	0.19	0/2878	0.38	0/4490
26	YB	0.21	0/2878	0.42	0/4490
27	RD	0.79	2/2165 (0.1%)	1.30	34/2919 (1.2%)
27	YD	0.72	1/2165 (0.0%)	1.30	33/2919 (1.1%)
28	RE	0.62	0/1601	1.35	29/2160 (1.3%)
28	YE	0.62	0/1601	1.35	29/2160 (1.3%)
29	RF	0.62	0/1620	1.19	18/2194 (0.8%)
29	YF	0.62	0/1620	1.20	19/2194 (0.9%)
30	RG	0.47	0/1499	0.99	8/2016 (0.4%)
30	YG	0.47	0/1499	0.99	9/2016 (0.4%)
31	RH	0.58	0/1332	1.22	14/1802 (0.8%)
31	YH	0.57	0/1332	1.22	15/1802 (0.8%)
32	RI	0.41	0/1151	0.88	3/1558 (0.2%)
32	YI	0.41	0/1151	0.90	3/1558 (0.2%)
33	RN	0.55	0/1131	1.18	10/1525 (0.7%)
33	YN	0.54	0/1131	1.18	9/1525 (0.6%)
34	RO	0.65	0/943	1.03	5/1269 (0.4%)
34	YO	0.65	0/943	1.04	5/1269 (0.4%)
35	RP	0.63	0/1162	1.37	17/1544 (1.1%)
35	YP	0.63	1/1162 (0.1%)	1.37	17/1544 (1.1%)
36	RQ	0.71	0/1143	1.36	19/1527 (1.2%)
36	YQ	0.71	0/1143	1.35	19/1527 (1.2%)
37	RR	0.55	0/982	1.17	10/1312 (0.8%)
37	YR	0.55	0/982	1.17	10/1312 (0.8%)
38	RS	0.53	0/892	1.18	8/1187 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YS	0.52	0/892	1.18	8/1187 (0.7%)
39	RT	0.56	0/1155	1.18	16/1542 (1.0%)
39	YT	0.56	0/1155	1.18	17/1542 (1.1%)
40	RU	0.59	0/982	1.21	10/1306 (0.8%)
40	YU	0.60	0/982	1.21	10/1306 (0.8%)
41	RV	0.55	0/790	1.10	6/1057 (0.6%)
41	YV	0.55	0/790	1.10	6/1057 (0.6%)
42	RW	0.58	0/911	1.18	13/1220 (1.1%)
42	YW	0.57	0/911	1.18	13/1220 (1.1%)
43	RX	0.62	0/739	1.14	5/993 (0.5%)
43	YX	0.62	0/739	1.14	5/993 (0.5%)
44	RY	0.64	0/798	1.17	4/1064 (0.4%)
44	YY	0.64	0/798	1.16	3/1064 (0.3%)
45	RZ	0.36	0/1493	0.89	7/2026 (0.3%)
45	YZ	0.38	0/1493	0.92	4/2026 (0.2%)
46	R0	0.36	0/657	0.84	1/874 (0.1%)
46	Y0	0.40	0/657	0.82	0/874
47	R1	0.59	0/770	1.20	9/1022 (0.9%)
47	Y1	0.58	0/770	1.20	9/1022 (0.9%)
48	R2	0.60	0/583	1.32	8/771 (1.0%)
48	Y2	0.60	0/583	1.32	8/771 (1.0%)
49	R3	0.62	1/474 (0.2%)	1.04	0/635
49	Y3	0.54	0/474	1.04	1/635 (0.2%)
50	R4	0.47	0/594	1.24	10/795 (1.3%)
50	Y4	0.47	0/594	1.24	10/795 (1.3%)
51	R5	0.65	0/473	1.22	6/639 (0.9%)
51	Y5	0.65	0/473	1.21	7/639 (1.1%)
52	R6	0.53	0/431	1.06	3/575 (0.5%)
52	Y6	0.53	0/431	1.06	3/575 (0.5%)
53	R7	0.73	0/438	1.19	2/575 (0.3%)
53	Y7	0.74	0/438	1.19	2/575 (0.3%)
54	R8	0.79	0/525	1.41	9/691 (1.3%)
54	Y8	0.79	0/525	1.41	9/691 (1.3%)
55	R9	0.42	0/310	0.92	1/407 (0.2%)
55	Y9	0.45	0/310	0.92	1/407 (0.2%)
56	Z6	0.46	0/40	0.62	0/60
56	Z8	0.45	0/40	0.63	0/60
All	All	0.35	6/316375 (0.0%)	0.69	806/472993 (0.2%)

The worst 5 of 6 bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	RD	236	GLY	C-N	14.34	1.53	1.33
49	R3	10	LYS	C-O	-5.38	1.17	1.23
14	XN	25	VAL	C-N	5.36	1.44	1.33
27	RD	241	PRO	N-CD	5.26	1.55	1.47
35	YP	19	VAL	CA-C	5.10	1.59	1.52

The worst 5 of 806 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	QL	47	LYS	CA-C-N	31.37	159.05	119.84
12	QL	47	LYS	C-N-CA	31.37	159.05	119.84
12	XL	47	LYS	CA-C-N	31.25	158.91	119.84
12	XL	47	LYS	C-N-CA	31.25	158.91	119.84
35	RP	59	LEU	N-CA-C	-14.64	91.36	111.56

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	QA	32247	0	16278	574	0
1	XA	32249	0	16279	580	1
2	QB	1924	0	1975	306	0
2	XB	1924	0	1975	311	0
3	QC	1605	0	1668	217	0
3	XC	1605	0	1668	217	2
4	QD	1703	0	1765	277	0
4	XD	1703	0	1764	237	0
5	QE	1155	0	1213	156	0
5	XE	1155	0	1213	151	0
6	QF	843	0	857	103	0
6	XF	843	0	857	109	0
7	QG	1257	0	1296	156	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	XG	1257	0	1296	151	0
8	QH	1116	0	1175	157	0
8	XH	1116	0	1177	160	0
9	QI	1010	0	1037	152	0
9	XI	1010	0	1037	158	0
10	QJ	801	0	849	153	0
10	XJ	801	0	849	143	0
11	QK	885	0	904	113	2
11	XK	885	0	904	112	0
12	QL	975	0	1062	113	0
12	XL	975	0	1062	113	0
13	QM	964	0	1034	172	0
13	XM	964	0	1034	160	0
14	QN	492	0	529	103	0
14	XN	492	0	529	97	0
15	QO	734	0	771	80	0
15	XO	734	0	771	81	0
16	QP	705	0	725	120	0
16	XP	705	0	725	117	0
17	QQ	834	0	904	87	0
17	XQ	834	0	904	83	0
18	QR	574	0	644	76	0
18	XR	574	0	644	75	0
19	QS	674	0	699	108	0
19	XS	674	0	699	141	0
20	QT	763	0	860	113	0
20	XT	763	0	861	113	0
21	QU	217	0	234	28	0
21	XU	217	0	234	29	0
22	QV	1644	0	836	23	0
22	XV	1644	0	836	16	0
23	QY	323	0	165	2	0
23	XY	323	0	165	6	0
24	QX	170	0	88	2	0
24	XX	170	0	88	1	0
25	RA	62071	0	31288	999	0
25	YA	62091	0	31296	947	0
26	RB	2573	0	1306	66	0
26	YB	2573	0	1306	25	0
27	RD	2115	0	2195	327	0
27	YD	2115	0	2195	337	0
28	RE	1568	0	1634	286	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	YE	1568	0	1634	280	0
29	RF	1585	0	1632	194	0
29	YF	1585	0	1632	195	0
30	RG	1474	0	1535	226	0
30	YG	1474	0	1535	207	0
31	RH	1307	0	1382	231	0
31	YH	1307	0	1382	227	0
32	RI	1136	0	1223	42	1
32	YI	1136	0	1223	40	0
33	RN	1104	0	1180	198	0
33	YN	1104	0	1180	193	0
34	RO	933	0	996	132	0
34	YO	933	0	996	132	0
35	RP	1145	0	1228	258	0
35	YP	1145	0	1228	253	0
36	RQ	1122	0	1179	167	0
36	YQ	1122	0	1179	166	0
37	RR	968	0	1033	116	0
37	YR	968	0	1033	115	0
38	RS	882	0	943	171	0
38	YS	882	0	943	163	0
39	RT	1141	0	1202	158	0
39	YT	1141	0	1202	158	0
40	RU	964	0	1022	146	0
40	YU	964	0	1022	148	0
41	RV	779	0	852	137	0
41	YV	779	0	852	140	3
42	RW	900	0	964	103	0
42	YW	900	0	964	106	0
43	RX	725	0	778	71	0
43	YX	725	0	778	75	0
44	RY	785	0	878	170	0
44	YY	785	0	878	162	0
45	RZ	1461	0	1493	46	0
45	YZ	1461	0	1493	58	0
46	R0	648	0	672	20	0
46	Y0	648	0	672	28	0
47	R1	763	0	848	151	0
47	Y1	763	0	848	147	0
48	R2	581	0	629	85	0
48	Y2	581	0	629	80	0
49	R3	469	0	518	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	Y3	469	0	518	44	0
50	R4	581	0	574	158	0
50	Y4	581	0	574	170	0
51	R5	459	0	480	79	0
51	Y5	459	0	480	77	3
52	R6	424	0	450	93	0
52	Y6	424	0	450	89	0
53	R7	430	0	480	44	0
53	Y7	430	0	480	45	0
54	R8	517	0	582	107	0
54	Y8	517	0	582	109	0
55	R9	307	0	338	21	0
55	Y9	307	0	338	21	0
56	Z6	74	0	51	6	0
56	Z8	74	0	51	7	0
57	QA	69	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	1	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	RA	240	0	0	0	0
57	RB	2	0	0	0	0
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	1	0	0	0	0
57	RR	2	0	0	0	0
57	XA	74	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y0	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	265	0	0	0	0
57	YB	3	0	0	0	0
57	YE	2	0	0	0	0
57	YP	1	0	0	0	0
57	YQ	1	0	0	0	0
58	QA	42	0	45	3	0
58	XA	42	0	45	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
All	All	291998	0	198367	15074	6

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 31.

The worst 5 of 15074 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)
14:XN:32:SER:CB	14:XN:41:ARG:HB3	1.23	1.55
14:XN:32:SER:HB3	14:XN:41:ARG:CB	1.28	1.54
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.35	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49

The worst 5 of 6 symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4_555]	1.49	0.71
41:YV:51:VAL:N	51:Y5:60:VAL:O[4_445]	1.70	0.50
11:QK:99:GLN:OE1	3:XC:79:ARG:NE[4_555]	2.04	0.16
41:YV:50:PRO:CG	51:Y5:60:VAL:O[4_445]	2.14	0.06
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.15	0.05

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	
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	1
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	1
3	QC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0	2
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0	2
4	QD	206/209 (99%)	136 (66%)	50 (24%)	20 (10%)	0	2
4	XD	206/209 (99%)	135 (66%)	49 (24%)	22 (11%)	0	2
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	2
5	XE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	2
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	0	2
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	0	2
7	QG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	0	2
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	0	2
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	2
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	2
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	1
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	1
10	QJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	0	2
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0	2
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	4
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	4
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	1
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	1
13	QM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	0
13	XM	119/126 (94%)	71 (60%)	26 (22%)	22 (18%)	0	0
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0	0
14	XN	58/61 (95%)	32 (55%)	14 (24%)	12 (21%)	0	0
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	4
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	4
16	QP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	0	1
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	1
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	0	3
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	QR	68/88 (77%)	45 (66%)	15 (22%)	8 (12%)	0	1
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	1
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	0
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	0
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0	0
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0	0
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	0
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	0
27	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1	4
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	4
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	0
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	0
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	2
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	2
30	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	1
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	1
31	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	0
31	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	0
32	RI	144/148 (97%)	102 (71%)	27 (19%)	15 (10%)	0	2
32	YI	144/148 (97%)	103 (72%)	25 (17%)	16 (11%)	0	1
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	4
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	4
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	0
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	0
36	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0	2
36	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0	2
37	RR	116/118 (98%)	83 (72%)	19 (16%)	14 (12%)	0	1
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	1
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	0
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	0
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	0
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	3
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	3
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	2
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	2
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	1
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	1
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	1	7
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	1	7
44	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0	0
44	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	0
45	RZ	181/206 (88%)	126 (70%)	35 (19%)	20 (11%)	0	2
45	YZ	181/206 (88%)	135 (75%)	28 (16%)	18 (10%)	0	2
46	R0	80/85 (94%)	71 (89%)	7 (9%)	2 (2%)	4	19
46	Y0	80/85 (94%)	72 (90%)	6 (8%)	2 (2%)	4	19
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	1
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	1
48	R2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	1
48	Y2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	1
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	1	8
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	1	8
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	0
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	0
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	5
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	0
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	0
55	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	11470/12128 (95%)	7666 (67%)	2321 (20%)	1483 (13%)	0	1

5 of 1483 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
2	QB	205/220 (93%)	182 (89%)	23 (11%)	6	21
2	XB	205/220 (93%)	182 (89%)	23 (11%)	6	21
3	QC	159/188 (85%)	142 (89%)	17 (11%)	6	23
3	XC	159/188 (85%)	142 (89%)	17 (11%)	6	23
4	QD	180/181 (99%)	156 (87%)	24 (13%)	4	15
4	XD	180/181 (99%)	162 (90%)	18 (10%)	7	25
5	QE	116/123 (94%)	105 (90%)	11 (10%)	8	27
5	XE	116/123 (94%)	105 (90%)	11 (10%)	8	27
6	QF	90/90 (100%)	77 (86%)	13 (14%)	3	13
6	XF	90/90 (100%)	77 (86%)	13 (14%)	3	13
7	QG	126/127 (99%)	112 (89%)	14 (11%)	6	21
7	XG	126/127 (99%)	112 (89%)	14 (11%)	6	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	QH	119/119 (100%)	105 (88%)	14 (12%)	5	19
8	XH	119/119 (100%)	105 (88%)	14 (12%)	5	19
9	QI	98/99 (99%)	85 (87%)	13 (13%)	4	15
9	XI	98/99 (99%)	85 (87%)	13 (13%)	4	15
10	QJ	89/92 (97%)	80 (90%)	9 (10%)	7	25
10	XJ	89/92 (97%)	80 (90%)	9 (10%)	7	25
11	QK	90/99 (91%)	81 (90%)	9 (10%)	7	25
11	XK	90/99 (91%)	81 (90%)	9 (10%)	7	25
12	QL	104/109 (95%)	87 (84%)	17 (16%)	2	10
12	XL	104/109 (95%)	87 (84%)	17 (16%)	2	10
13	QM	97/101 (96%)	83 (86%)	14 (14%)	3	13
13	XM	97/101 (96%)	83 (86%)	14 (14%)	3	13
14	QN	49/50 (98%)	40 (82%)	9 (18%)	1	7
14	XN	49/50 (98%)	44 (90%)	5 (10%)	7	25
15	QO	79/80 (99%)	70 (89%)	9 (11%)	5	20
15	XO	79/80 (99%)	70 (89%)	9 (11%)	5	20
16	QP	72/74 (97%)	64 (89%)	8 (11%)	6	21
16	XP	72/74 (97%)	64 (89%)	8 (11%)	6	21
17	QQ	95/97 (98%)	86 (90%)	9 (10%)	8	27
17	XQ	95/97 (98%)	86 (90%)	9 (10%)	8	27
18	QR	61/77 (79%)	51 (84%)	10 (16%)	2	10
18	XR	61/77 (79%)	51 (84%)	10 (16%)	2	10
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3	12
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3	12
20	QT	76/82 (93%)	69 (91%)	7 (9%)	8	28
20	XT	76/82 (93%)	69 (91%)	7 (9%)	8	28
21	QU	20/22 (91%)	20 (100%)	0	100	100
21	XU	20/22 (91%)	20 (100%)	0	100	100
27	RD	214/218 (98%)	174 (81%)	40 (19%)	1	7
27	YD	214/218 (98%)	174 (81%)	40 (19%)	1	7
28	RE	165/166 (99%)	125 (76%)	40 (24%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	YE	165/166 (99%)	125 (76%)	40 (24%)	1	3
29	RF	161/166 (97%)	138 (86%)	23 (14%)	3	13
29	YF	161/166 (97%)	138 (86%)	23 (14%)	3	13
30	RG	155/156 (99%)	133 (86%)	22 (14%)	3	13
30	YG	155/156 (99%)	134 (86%)	21 (14%)	4	14
31	RH	142/148 (96%)	111 (78%)	31 (22%)	1	4
31	YH	142/148 (96%)	111 (78%)	31 (22%)	1	4
32	RI	122/124 (98%)	96 (79%)	26 (21%)	1	4
32	YI	122/124 (98%)	96 (79%)	26 (21%)	1	4
33	RN	117/119 (98%)	97 (83%)	20 (17%)	2	9
33	YN	117/119 (98%)	97 (83%)	20 (17%)	2	9
34	RO	100/100 (100%)	89 (89%)	11 (11%)	6	21
34	YO	100/100 (100%)	89 (89%)	11 (11%)	6	21
35	RP	116/116 (100%)	88 (76%)	28 (24%)	1	3
35	YP	116/116 (100%)	88 (76%)	28 (24%)	1	3
36	RQ	111/111 (100%)	95 (86%)	16 (14%)	3	13
36	YQ	111/111 (100%)	96 (86%)	15 (14%)	4	14
37	RR	101/101 (100%)	85 (84%)	16 (16%)	2	10
37	YR	101/101 (100%)	85 (84%)	16 (16%)	2	10
38	RS	87/88 (99%)	73 (84%)	14 (16%)	2	10
38	YS	87/88 (99%)	73 (84%)	14 (16%)	2	10
39	RT	120/127 (94%)	99 (82%)	21 (18%)	2	8
39	YT	120/127 (94%)	99 (82%)	21 (18%)	2	8
40	RU	93/94 (99%)	81 (87%)	12 (13%)	4	16
40	YU	93/94 (99%)	81 (87%)	12 (13%)	4	16
41	RV	82/82 (100%)	67 (82%)	15 (18%)	2	7
41	YV	82/82 (100%)	67 (82%)	15 (18%)	2	7
42	RW	92/92 (100%)	76 (83%)	16 (17%)	2	8
42	YW	92/92 (100%)	76 (83%)	16 (17%)	2	8
43	RX	74/78 (95%)	61 (82%)	13 (18%)	2	8
43	YX	74/78 (95%)	61 (82%)	13 (18%)	2	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	RY	85/91 (93%)	67 (79%)	18 (21%)	1	4
44	YY	85/91 (93%)	66 (78%)	19 (22%)	1	4
45	RZ	162/179 (90%)	141 (87%)	21 (13%)	4	16
45	YZ	162/179 (90%)	139 (86%)	23 (14%)	3	13
46	R0	65/67 (97%)	59 (91%)	6 (9%)	8	28
46	Y0	65/67 (97%)	62 (95%)	3 (5%)	24	51
47	R1	82/83 (99%)	70 (85%)	12 (15%)	3	12
47	Y1	82/83 (99%)	70 (85%)	12 (15%)	3	12
48	R2	64/67 (96%)	56 (88%)	8 (12%)	4	17
48	Y2	64/67 (96%)	56 (88%)	8 (12%)	4	17
49	R3	51/52 (98%)	41 (80%)	10 (20%)	1	6
49	Y3	51/52 (98%)	41 (80%)	10 (20%)	1	6
50	R4	63/63 (100%)	46 (73%)	17 (27%)	0	2
50	Y4	63/63 (100%)	46 (73%)	17 (27%)	0	2
51	R5	51/52 (98%)	40 (78%)	11 (22%)	1	4
51	Y5	51/52 (98%)	40 (78%)	11 (22%)	1	4
52	R6	48/52 (92%)	36 (75%)	12 (25%)	0	2
52	Y6	48/52 (92%)	36 (75%)	12 (25%)	0	2
53	R7	42/42 (100%)	38 (90%)	4 (10%)	8	27
53	Y7	42/42 (100%)	38 (90%)	4 (10%)	8	27
54	R8	54/55 (98%)	40 (74%)	14 (26%)	0	2
54	Y8	54/55 (98%)	40 (74%)	14 (26%)	0	2
55	R9	34/34 (100%)	32 (94%)	2 (6%)	18	44
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	18	44
All	All	9702/10066 (96%)	8234 (85%)	1468 (15%)	3	12

5 of 1468 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
16	XP	11	SER
32	YI	135	GLU
19	XS	5	LEU
15	XO	82	ILE
28	YE	117	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 154 such sidechains are listed below:

Mol	Chain	Res	Type
31	YH	147	ASN
47	Y1	66	HIS
33	YN	101	HIS
39	YT	90	GLN
52	Y6	49	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	295 (19%)	45 (3%)
1	XA	1498/1522 (98%)	299 (19%)	47 (3%)
22	QV	76/77 (98%)	21 (27%)	1 (1%)
22	XV	76/77 (98%)	21 (27%)	1 (1%)
23	QY	14/17 (82%)	4 (28%)	1 (7%)
23	XY	14/17 (82%)	4 (28%)	1 (7%)
24	QX	7/25 (28%)	4 (57%)	0
24	XX	7/25 (28%)	3 (42%)	2 (28%)
25	RA	2879/2916 (98%)	620 (21%)	67 (2%)
25	YA	2880/2916 (98%)	615 (21%)	64 (2%)
26	RB	119/122 (97%)	24 (20%)	2 (1%)
26	YB	119/122 (97%)	29 (24%)	1 (0%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9190/9364 (98%)	1939 (21%)	232 (2%)

5 of 1939 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	32	A
1	QA	39	G
1	QA	47	C

5 of 232 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
26	RB	66	A
25	YA	2566	A
1	XA	703	G

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Mol	Chain	Res	Type
25	YA	2481	G
25	YA	1085	A

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

4 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	1MG	QY	37	23	23,26,27	2.52	4 (17%)	33,39,42	2.05	7 (21%)
56	PPU	Z8	76	56,25	37,40,41	2.57	8 (21%)	47,57,60	2.56	15 (31%)
56	PPU	Z6	76	56,25	37,40,41	2.58	8 (21%)	47,57,60	2.57	15 (31%)
23	1MG	XY	37	23	23,26,27	2.48	4 (17%)	33,39,42	1.95	7 (21%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	1MG	QY	37	23	-	0/7/25/26	0/3/3/3
56	PPU	Z8	76	56,25	-	2/25/43/44	0/4/4/4
56	PPU	Z6	76	56,25	-	2/25/43/44	0/4/4/4
23	1MG	XY	37	23	-	0/7/25/26	0/3/3/3

The worst 5 of 24 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	O-C	9.62	1.41	1.23
56	Z8	76	PPU	O-C	9.54	1.41	1.23
23	QY	37	1MG	C2-N2	7.81	1.47	1.34
23	XY	37	1MG	C2-N2	7.75	1.47	1.34
23	QY	37	1MG	C4-N3	6.65	1.49	1.34

The worst 5 of 44 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C3'-N3'-C	-8.56	110.18	123.20
56	Z8	76	PPU	C3'-N3'-C	-8.55	110.19	123.20
23	QY	37	1MG	N2-C2-N1	6.82	124.27	118.79
56	Z6	76	PPU	C2'-C1'-N9	-5.96	98.50	113.30
56	Z8	76	PPU	C2'-C1'-N9	-5.95	98.52	113.30

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	Z6	76	PPU	O-C-CA-N
56	Z8	76	PPU	O-C-CA-N
56	Z6	76	PPU	N3'-C-CA-N
56	Z8	76	PPU	N3'-C-CA-N

There are no ring outliers.

3 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	Z8	76	PPU	7	0
56	Z6	76	PPU	5	0
23	XY	37	1MG	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 682 ligands modelled in this entry, 680 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
58	PAR	XA	1675	-	44,45,45	1.33	6 (13%)	63,67,67	1.30	4 (6%)
58	PAR	QA	1670	-	44,45,45	1.27	6 (13%)	63,67,67	1.33	7 (11%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	PAR	XA	1675	-	-	6/18/94/94	0/4/4/4
58	PAR	QA	1670	-	-	8/18/94/94	0/4/4/4

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1670	PAR	C52-C42	3.14	1.58	1.52
58	XA	1675	PAR	C52-C42	3.04	1.58	1.52
58	QA	1670	PAR	O54-C14	2.90	1.49	1.41
58	XA	1675	PAR	O54-C14	2.85	1.49	1.41
58	XA	1675	PAR	C11-C21	2.83	1.57	1.52

The worst 5 of 11 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	XA	1675	PAR	O33-C14-C24	5.00	116.26	108.08
58	XA	1675	PAR	C14-O54-C54	4.32	122.16	113.72
58	QA	1670	PAR	O33-C14-C24	4.04	114.69	108.08
58	QA	1670	PAR	C14-O54-C54	3.81	121.16	113.72
58	QA	1670	PAR	O11-C42-C52	3.16	115.45	107.42

There are no chirality outliers.

5 of 14 torsion outliers are listed below:

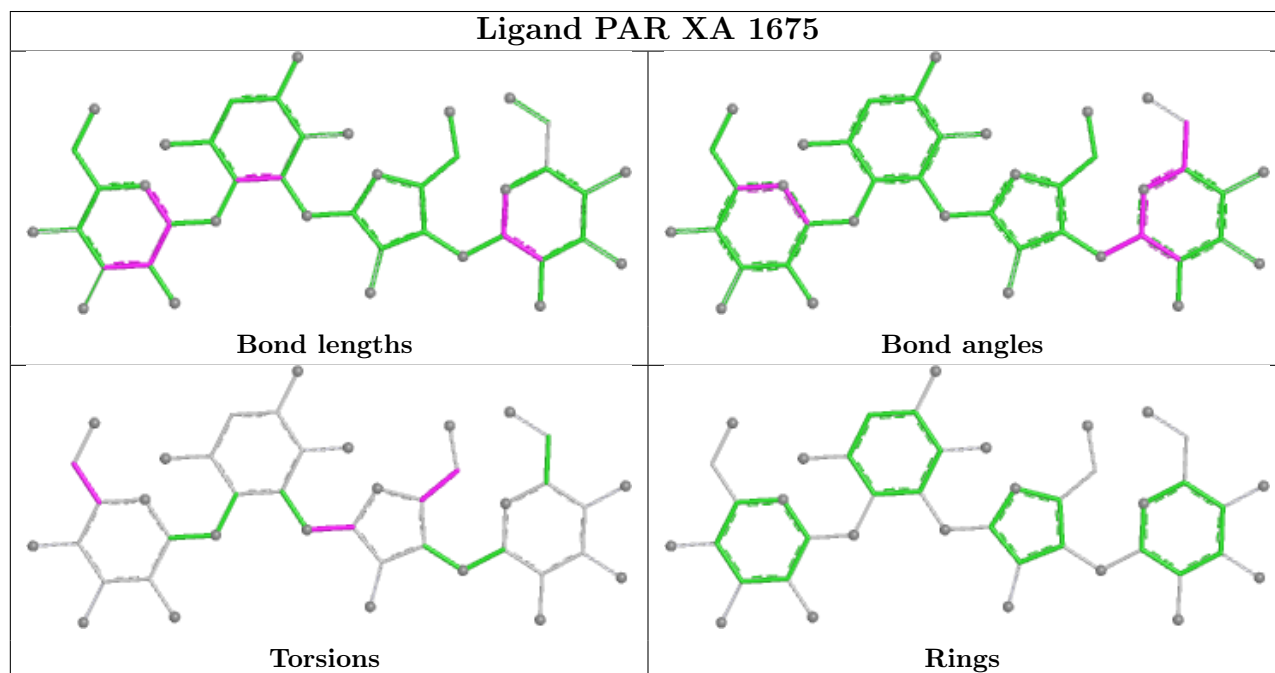
Mol	Chain	Res	Type	Atoms
58	QA	1670	PAR	C44-C54-C64-N64
58	QA	1670	PAR	O54-C54-C64-N64
58	XA	1675	PAR	O51-C51-C61-O61
58	QA	1670	PAR	O51-C51-C61-O61
58	XA	1675	PAR	C41-C51-C61-O61

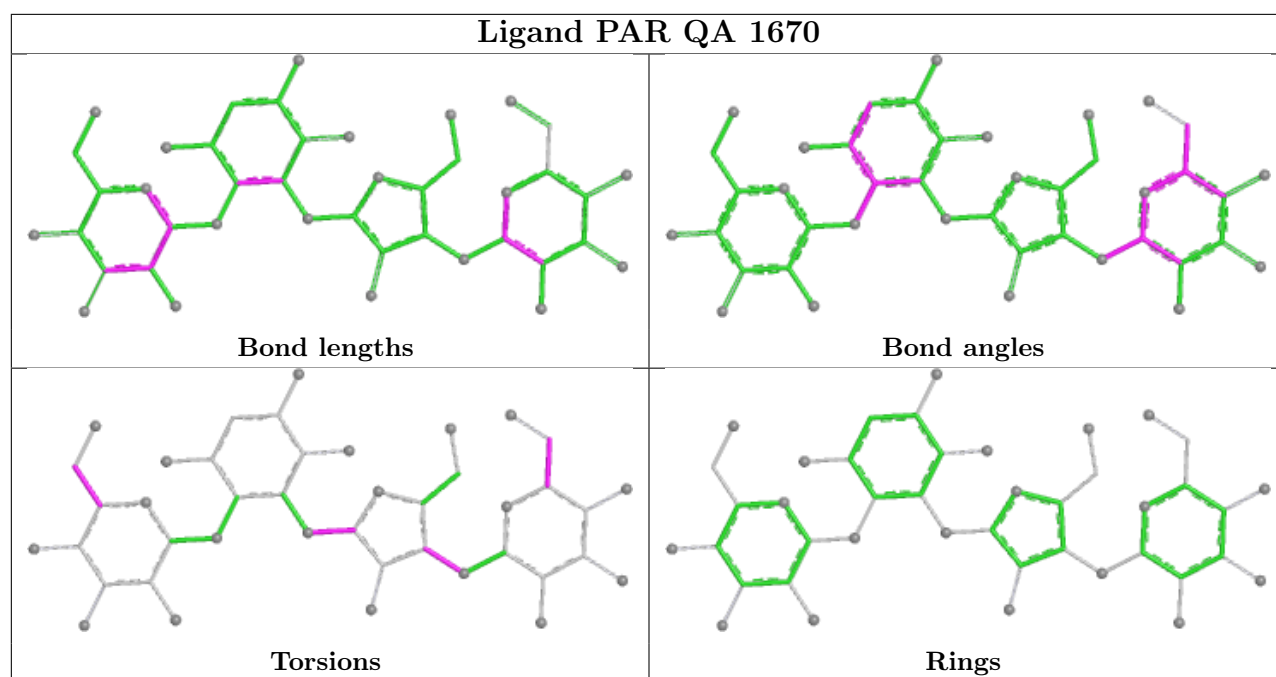
There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	XA	1675	PAR	1	0
58	QA	1670	PAR	3	0

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





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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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, 95th 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	QA	1500/1522 (98%)	1.76	479 (31%)	1 1	27, 67, 148, 352	0
1	XA	1500/1522 (98%)	1.57	417 (27%)	1 1	18, 55, 149, 326	0
2	QB	237/256 (92%)	3.49	189 (79%)	0 0	54, 126, 215, 288	0
2	XB	237/256 (92%)	3.29	193 (81%)	0 0	43, 102, 177, 293	0
3	QC	205/239 (85%)	3.14	170 (82%)	0 0	56, 108, 175, 255	0
3	XC	205/239 (85%)	2.68	136 (66%)	0 0	30, 78, 132, 181	0
4	QD	208/209 (99%)	3.02	145 (69%)	0 0	41, 79, 136, 185	0
4	XD	208/209 (99%)	3.08	147 (70%)	0 0	30, 74, 134, 231	0
5	QE	151/162 (93%)	2.89	112 (74%)	0 0	42, 85, 148, 260	0
5	XE	151/162 (93%)	2.28	88 (58%)	0 0	23, 61, 121, 196	0
6	QF	101/101 (100%)	2.48	62 (61%)	0 0	30, 74, 112, 155	0
6	XF	101/101 (100%)	2.35	59 (58%)	0 0	26, 69, 110, 146	0
7	QG	155/156 (99%)	3.19	101 (65%)	0 0	46, 97, 158, 302	0
7	XG	155/156 (99%)	2.76	95 (61%)	0 0	35, 82, 149, 230	0
8	QH	138/138 (100%)	2.88	100 (72%)	0 0	39, 83, 130, 174	0
8	XH	138/138 (100%)	2.57	87 (63%)	0 0	34, 68, 117, 169	0
9	QI	127/128 (99%)	3.65	103 (81%)	0 0	48, 117, 170, 243	0
9	XI	127/128 (99%)	3.20	101 (79%)	0 0	33, 91, 152, 203	0
10	QJ	99/105 (94%)	4.66	96 (96%)	0 0	53, 140, 243, 282	0
10	XJ	99/105 (94%)	3.54	81 (81%)	0 0	21, 100, 169, 213	0
11	QK	119/129 (92%)	3.31	88 (73%)	0 0	42, 77, 149, 228	0
11	XK	119/129 (92%)	2.66	73 (61%)	0 0	28, 70, 134, 196	0
12	QL	125/132 (94%)	2.90	74 (59%)	0 0	35, 69, 140, 262	0
12	XL	125/132 (94%)	2.29	62 (49%)	0 0	22, 51, 113, 282	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	3.36	90 (74%)	0	0	43, 108, 185, 410	0
13	XM	121/126 (96%)	3.01	86 (71%)	0	0	36, 86, 141, 273	0
14	QN	60/61 (98%)	3.30	46 (76%)	0	0	59, 101, 150, 166	0
14	XN	60/61 (98%)	3.00	44 (73%)	0	0	36, 67, 127, 143	0
15	QO	88/89 (98%)	2.55	55 (62%)	0	0	32, 78, 150, 180	0
15	XO	88/89 (98%)	2.06	41 (46%)	0	0	27, 62, 111, 129	0
16	QP	84/88 (95%)	2.87	62 (73%)	0	0	38, 71, 115, 186	0
16	XP	84/88 (95%)	2.79	61 (72%)	0	0	39, 73, 119, 211	0
17	QQ	100/105 (95%)	2.99	72 (72%)	0	0	44, 79, 131, 161	0
17	XQ	100/105 (95%)	2.69	59 (59%)	0	0	35, 75, 127, 166	0
18	QR	70/88 (79%)	2.42	39 (55%)	0	0	28, 73, 141, 149	0
18	XR	70/88 (79%)	2.09	28 (40%)	1	0	27, 66, 118, 171	0
19	QS	84/93 (90%)	3.68	77 (91%)	0	0	80, 119, 195, 275	0
19	XS	84/93 (90%)	3.05	64 (76%)	0	0	47, 88, 168, 219	0
20	QT	99/106 (93%)	3.04	72 (72%)	0	0	37, 82, 140, 220	0
20	XT	99/106 (93%)	3.22	80 (80%)	0	0	28, 86, 149, 177	0
21	QU	25/27 (92%)	3.81	19 (76%)	0	0	45, 98, 150, 185	0
21	XU	25/27 (92%)	3.49	21 (84%)	0	0	43, 69, 139, 153	0
22	QV	77/77 (100%)	1.94	32 (41%)	0	0	27, 73, 146, 212	0
22	XV	77/77 (100%)	1.52	21 (27%)	1	1	17, 59, 103, 207	0
23	QY	14/17 (82%)	2.68	7 (50%)	0	0	69, 116, 169, 189	0
23	XY	14/17 (82%)	2.41	5 (35%)	1	0	41, 102, 143, 157	0
24	QX	8/25 (32%)	2.86	3 (37%)	1	0	49, 58, 151, 164	0
24	XX	8/25 (32%)	1.51	2 (25%)	2	1	32, 38, 89, 104	0
25	RA	2882/2916 (98%)	1.30	565 (19%)	3	1	13, 44, 212, 472	0
25	YA	2883/2916 (98%)	1.04	450 (15%)	5	2	7, 35, 201, 461	0
26	RB	120/122 (98%)	1.92	45 (37%)	1	0	43, 69, 105, 120	0
26	YB	120/122 (98%)	1.02	13 (10%)	11	5	29, 51, 71, 110	0
27	RD	272/276 (98%)	2.11	126 (46%)	0	0	9, 42, 81, 176	0
27	YD	272/276 (98%)	1.82	97 (35%)	1	0	5, 35, 71, 188	0
28	RE	205/206 (99%)	2.54	107 (52%)	0	0	11, 56, 123, 335	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9	
28	YE	205/206 (99%)	2.39	112 (54%)	0	0	2, 52, 123, 250	0
29	RF	202/210 (96%)	2.50	122 (60%)	0	0	15, 62, 132, 185	0
29	YF	202/210 (96%)	1.97	82 (40%)	0	0	8, 45, 121, 194	0
30	RG	181/182 (99%)	6.69	180 (99%)	0	0	79, 156, 284, 386	0
30	YG	181/182 (99%)	4.19	169 (93%)	0	0	30, 89, 155, 309	0
31	RH	170/180 (94%)	3.89	153 (90%)	0	0	79, 145, 235, 306	0
31	YH	170/180 (94%)	3.42	130 (76%)	0	0	31, 79, 122, 167	0
32	RI	146/148 (98%)	2.79	99 (67%)	0	0	25, 87, 178, 297	0
32	YI	146/148 (98%)	2.53	83 (56%)	0	0	22, 83, 152, 183	0
33	RN	138/140 (98%)	2.51	80 (57%)	0	0	26, 64, 124, 179	0
33	YN	138/140 (98%)	2.21	63 (45%)	0	0	16, 54, 108, 166	0
34	RO	122/122 (100%)	2.58	73 (59%)	0	0	22, 55, 103, 142	0
34	YO	122/122 (100%)	2.11	58 (47%)	0	0	16, 48, 78, 126	0
35	RP	150/150 (100%)	3.10	106 (70%)	0	0	18, 68, 154, 247	0
35	YP	150/150 (100%)	2.53	84 (56%)	0	0	9, 53, 126, 253	0
36	RQ	141/141 (100%)	3.13	88 (62%)	0	0	28, 67, 128, 178	0
36	YQ	141/141 (100%)	2.63	76 (53%)	0	0	14, 47, 124, 154	0
37	RR	118/118 (100%)	1.92	47 (39%)	1	0	18, 48, 81, 170	0
37	YR	118/118 (100%)	1.98	54 (45%)	0	0	20, 46, 85, 137	0
38	RS	111/112 (99%)	2.55	66 (59%)	0	0	38, 76, 131, 184	0
38	YS	111/112 (99%)	2.09	54 (48%)	0	0	28, 58, 106, 195	0
39	RT	137/146 (93%)	3.09	97 (70%)	0	0	29, 67, 161, 259	0
39	YT	137/146 (93%)	2.90	90 (65%)	0	0	27, 61, 152, 303	0
40	RU	117/118 (99%)	2.34	55 (47%)	0	0	20, 54, 114, 221	0
40	YU	117/118 (99%)	2.12	46 (39%)	1	0	19, 39, 97, 221	0
41	RV	101/101 (100%)	2.63	62 (61%)	0	0	21, 77, 140, 320	0
41	YV	101/101 (100%)	2.39	52 (51%)	0	0	13, 63, 124, 304	0
42	RW	113/113 (100%)	1.74	43 (38%)	1	0	19, 41, 99, 220	0
42	YW	113/113 (100%)	1.45	31 (27%)	1	1	15, 41, 95, 193	0
43	RX	92/96 (95%)	1.95	38 (41%)	0	0	26, 53, 87, 135	0
43	YX	92/96 (95%)	1.56	32 (34%)	1	0	12, 39, 76, 116	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9	
44	RY	102/110 (92%)	4.99	90 (88%)	0	0	40, 99, 177, 285	0
44	YY	102/110 (92%)	3.29	74 (72%)	0	0	31, 73, 155, 210	0
45	RZ	183/206 (88%)	3.06	128 (69%)	0	0	41, 93, 178, 292	0
45	YZ	183/206 (88%)	2.70	107 (58%)	0	0	32, 71, 179, 271	0
46	R0	82/85 (96%)	1.70	23 (28%)	1	1	18, 49, 71, 179	0
46	Y0	82/85 (96%)	1.12	14 (17%)	4	2	11, 34, 60, 87	0
47	R1	97/98 (98%)	3.06	67 (69%)	0	0	21, 51, 160, 335	0
47	Y1	97/98 (98%)	2.43	49 (50%)	0	0	16, 49, 139, 210	0
48	R2	69/72 (95%)	2.51	40 (57%)	0	0	28, 69, 143, 169	0
48	Y2	69/72 (95%)	2.82	42 (60%)	0	0	19, 59, 119, 177	0
49	R3	59/60 (98%)	2.71	40 (67%)	0	0	31, 71, 112, 169	0
49	Y3	59/60 (98%)	1.76	20 (33%)	1	0	22, 49, 91, 198	0
50	R4	71/71 (100%)	5.31	68 (95%)	0	0	107, 211, 311, 396	0
50	Y4	71/71 (100%)	5.26	66 (92%)	0	0	66, 156, 274, 384	0
51	R5	59/60 (98%)	3.13	40 (67%)	0	0	8, 49, 223, 238	0
51	Y5	59/60 (98%)	2.39	27 (45%)	0	0	11, 49, 223, 335	0
52	R6	49/54 (90%)	5.49	48 (97%)	0	0	86, 175, 268, 291	0
52	Y6	49/54 (90%)	5.06	47 (95%)	0	0	76, 163, 229, 312	0
53	R7	49/49 (100%)	1.65	14 (28%)	1	1	16, 29, 87, 168	0
53	Y7	49/49 (100%)	1.32	10 (20%)	3	1	8, 23, 87, 176	0
54	R8	64/65 (98%)	2.86	38 (59%)	0	0	20, 53, 102, 208	0
54	Y8	64/65 (98%)	2.50	33 (51%)	0	0	16, 44, 97, 214	0
55	R9	37/37 (100%)	4.92	36 (97%)	0	0	82, 138, 203, 344	0
55	Y9	37/37 (100%)	4.62	35 (94%)	0	0	57, 119, 223, 246	0
56	Z6	2/3 (66%)	2.87	2 (100%)	0	0	33, 33, 33, 47	0
56	Z8	2/3 (66%)	2.63	2 (100%)	0	0	24, 24, 24, 36	0
All	All	20873/21492 (97%)	2.20	9432 (45%)	0	0	2, 61, 174, 472	0

The worst 5 of 9432 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	QK	129	SER	23.1
30	RG	154	GLY	17.8

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Mol	Chain	Res	Type	RSRZ
7	QG	81	GLY	17.7
7	QG	82	GLY	16.7
30	RG	72	ARG	16.3

6.2 Non-standard residues in protein, DNA, RNA chains [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, 95th 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
56	PPU	Z8	76	37/38	0.85	0.24	37,37,37,37	0
56	PPU	Z6	76	37/38	0.86	0.26	41,41,41,41	0
23	1MG	QY	37	24/25	0.92	0.12	63,63,63,63	0
23	1MG	XY	37	24/25	0.92	0.13	45,45,45,45	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides 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, 95th 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
57	MG	RA	3222	1/1	0.26	0.56	93,93,93,93	0
57	MG	YA	3105	1/1	0.31	0.21	21,21,21,21	0
57	MG	YA	3120	1/1	0.32	0.54	63,63,63,63	0
57	MG	RA	3192	1/1	0.33	0.25	79,79,79,79	0
57	MG	YA	3139	1/1	0.33	0.28	70,70,70,70	0
57	MG	RA	3091	1/1	0.36	0.40	73,73,73,73	0
57	MG	RA	3120	1/1	0.37	0.37	60,60,60,60	0
57	MG	YA	3165	1/1	0.38	0.34	54,54,54,54	0
57	MG	QA	1657	1/1	0.50	0.25	58,58,58,58	0
57	MG	QA	1627	1/1	0.52	0.10	26,26,26,26	0
57	MG	RA	3195	1/1	0.54	0.23	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	QA	1637	1/1	0.54	0.25	57,57,57,57	0
57	MG	QA	1629	1/1	0.58	0.23	43,43,43,43	0
57	MG	QA	1626	1/1	0.60	0.20	59,59,59,59	0
57	MG	XA	1655	1/1	0.64	0.30	81,81,81,81	0
57	MG	QA	1609	1/1	0.65	0.15	34,34,34,34	0
57	MG	RA	3207	1/1	0.66	0.36	47,47,47,47	0
57	MG	RA	3212	1/1	0.67	0.19	42,42,42,42	0
57	MG	XA	1672	1/1	0.67	0.15	40,40,40,40	0
57	MG	YE	302	1/1	0.68	0.15	10,10,10,10	0
57	MG	RA	3139	1/1	0.69	0.24	49,49,49,49	0
57	MG	YA	3084	1/1	0.70	0.20	10,10,10,10	0
57	MG	QA	1645	1/1	0.70	0.23	53,53,53,53	0
57	MG	XA	1621	1/1	0.70	0.20	29,29,29,29	0
57	MG	RA	3226	1/1	0.71	0.19	48,48,48,48	0
57	MG	RA	3101	1/1	0.71	0.15	7,7,7,7	0
57	MG	RA	3204	1/1	0.72	0.27	82,82,82,82	0
57	MG	RA	3135	1/1	0.72	0.16	16,16,16,16	0
57	MG	YA	3222	1/1	0.73	0.14	34,34,34,34	0
57	MG	RA	3194	1/1	0.74	0.17	44,44,44,44	0
57	MG	YA	3127	1/1	0.75	0.17	26,26,26,26	0
57	MG	RA	3058	1/1	0.75	0.21	37,37,37,37	0
57	MG	YA	3164	1/1	0.75	0.16	36,36,36,36	0
57	MG	YA	3130	1/1	0.76	0.15	17,17,17,17	0
57	MG	QA	1658	1/1	0.76	0.18	63,63,63,63	0
57	MG	RA	3232	1/1	0.76	0.14	30,30,30,30	0
57	MG	RA	3221	1/1	0.76	0.18	62,62,62,62	0
57	MG	RA	3200	1/1	0.76	0.11	38,38,38,38	0
57	MG	XA	1663	1/1	0.76	0.12	44,44,44,44	0
57	MG	XA	1631	1/1	0.77	0.18	35,35,35,35	0
57	MG	YA	3172	1/1	0.77	0.14	43,43,43,43	0
57	MG	YA	3158	1/1	0.78	0.13	24,24,24,24	0
57	MG	XA	1671	1/1	0.79	0.14	71,71,71,71	0
57	MG	RA	3130	1/1	0.79	0.10	46,46,46,46	0
58	PAR	QA	1670	42/42	0.79	0.30	56,56,56,56	0
57	MG	YA	3259	1/1	0.80	0.36	43,43,43,43	0
57	MG	XA	1630	1/1	0.80	0.18	16,16,16,16	0
57	MG	YA	3237	1/1	0.80	0.14	44,44,44,44	0
57	MG	YA	3220	1/1	0.81	0.16	52,52,52,52	0
57	MG	QA	1668	1/1	0.81	0.08	42,42,42,42	0
57	MG	YA	3229	1/1	0.81	0.08	24,24,24,24	0
57	MG	QA	1663	1/1	0.81	0.13	82,82,82,82	0
57	MG	YA	3241	1/1	0.81	0.15	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	XA	1633	1/1	0.81	0.22	37,37,37,37	0
57	MG	XA	1624	1/1	0.81	0.17	55,55,55,55	0
57	MG	YA	3135	1/1	0.81	0.22	21,21,21,21	0
57	MG	YA	3244	1/1	0.82	0.12	25,25,25,25	0
57	MG	YA	3196	1/1	0.82	0.19	28,28,28,28	0
57	MG	RA	3227	1/1	0.83	0.19	73,73,73,73	0
57	MG	RA	3218	1/1	0.83	0.23	29,29,29,29	0
57	MG	XA	1647	1/1	0.83	0.17	49,49,49,49	0
57	MG	XA	1654	1/1	0.83	0.19	53,53,53,53	0
57	MG	QA	1664	1/1	0.83	0.13	40,40,40,40	0
57	MG	RA	3061	1/1	0.83	0.07	9,9,9,9	0
57	MG	YA	3204	1/1	0.83	0.09	19,19,19,19	0
57	MG	QH	201	1/1	0.83	0.09	58,58,58,58	0
57	MG	XA	1610	1/1	0.84	0.10	42,42,42,42	0
57	MG	RA	3193	1/1	0.84	0.39	51,51,51,51	0
57	MG	RB	201	1/1	0.84	0.11	59,59,59,59	0
57	MG	YA	3174	1/1	0.84	0.10	19,19,19,19	0
57	MG	YA	3145	1/1	0.84	0.09	11,11,11,11	0
57	MG	YA	3155	1/1	0.84	0.21	53,53,53,53	0
57	MG	YA	3071	1/1	0.84	0.16	10,10,10,10	0
57	MG	YA	3221	1/1	0.84	0.15	19,19,19,19	0
58	PAR	XA	1675	42/42	0.84	0.25	49,49,49,49	0
57	MG	XA	1667	1/1	0.85	0.11	32,32,32,32	0
57	MG	YA	3228	1/1	0.85	0.07	22,22,22,22	0
57	MG	YA	3170	1/1	0.85	0.12	38,38,38,38	0
57	MG	YA	3171	1/1	0.85	0.31	32,32,32,32	0
57	MG	YA	3144	1/1	0.85	0.23	35,35,35,35	0
57	MG	RD	301	1/1	0.85	0.18	41,41,41,41	0
57	MG	XA	1609	1/1	0.85	0.12	22,22,22,22	0
57	MG	RA	3155	1/1	0.85	0.16	24,24,24,24	0
57	MG	YA	3161	1/1	0.85	0.13	25,25,25,25	0
57	MG	RA	3034	1/1	0.85	0.34	30,30,30,30	0
57	MG	YA	3129	1/1	0.86	0.19	27,27,27,27	0
57	MG	RA	3164	1/1	0.86	0.29	36,36,36,36	0
57	MG	YA	3024	1/1	0.86	0.28	16,16,16,16	0
57	MG	YA	3064	1/1	0.86	0.11	39,39,39,39	0
57	MG	YA	3236	1/1	0.86	0.21	40,40,40,40	0
57	MG	QA	1618	1/1	0.86	0.25	42,42,42,42	0
57	MG	YA	3239	1/1	0.86	0.20	46,46,46,46	0
57	MG	YA	3173	1/1	0.86	0.11	43,43,43,43	0
57	MG	RA	3115	1/1	0.86	0.13	7,7,7,7	0
57	MG	YA	3246	1/1	0.86	0.21	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	XA	1665	1/1	0.86	0.10	44,44,44,44	0
57	MG	RA	3119	1/1	0.86	0.13	56,56,56,56	0
57	MG	Y0	101	1/1	0.86	0.12	7,7,7,7	0
57	MG	YA	3207	1/1	0.86	0.41	80,80,80,80	0
57	MG	QA	1654	1/1	0.86	0.16	79,79,79,79	0
57	MG	YA	3072	1/1	0.87	0.19	17,17,17,17	0
57	MG	RA	3112	1/1	0.87	0.22	25,25,25,25	0
57	MG	YA	3189	1/1	0.87	0.15	23,23,23,23	0
57	MG	RA	3215	1/1	0.87	0.16	48,48,48,48	0
57	MG	YA	3111	1/1	0.87	0.21	34,34,34,34	0
57	MG	RA	3050	1/1	0.87	0.22	31,31,31,31	0
57	MG	YA	3208	1/1	0.87	0.15	55,55,55,55	0
57	MG	RA	3173	1/1	0.87	0.08	15,15,15,15	0
57	MG	YA	3128	1/1	0.87	0.20	26,26,26,26	0
57	MG	RA	3176	1/1	0.87	0.09	24,24,24,24	0
57	MG	XA	1649	1/1	0.87	0.17	30,30,30,30	0
57	MG	RA	3187	1/1	0.87	0.27	63,63,63,63	0
57	MG	QA	1638	1/1	0.87	0.16	27,27,27,27	0
57	MG	XA	1658	1/1	0.87	0.34	46,46,46,46	0
57	MG	XA	1661	1/1	0.87	0.10	48,48,48,48	0
57	MG	QA	1656	1/1	0.87	0.15	52,52,52,52	0
57	MG	YA	3242	1/1	0.87	0.32	72,72,72,72	0
57	MG	RA	3127	1/1	0.87	0.15	23,23,23,23	0
57	MG	RA	3072	1/1	0.87	0.12	13,13,13,13	0
57	MG	RE	302	1/1	0.87	0.21	23,23,23,23	0
57	MG	YA	3265	1/1	0.87	0.25	27,27,27,27	0
57	MG	YB	201	1/1	0.87	0.23	35,35,35,35	0
57	MG	RR	202	1/1	0.87	0.08	19,19,19,19	0
57	MG	RA	3023	1/1	0.87	0.32	14,14,14,14	0
57	MG	QA	1620	1/1	0.87	0.21	28,28,28,28	0
57	MG	RA	3151	1/1	0.87	0.11	18,18,18,18	0
57	MG	RA	3153	1/1	0.88	0.22	51,51,51,51	0
57	MG	YA	3227	1/1	0.88	0.18	13,13,13,13	0
57	MG	RA	3219	1/1	0.88	0.17	63,63,63,63	0
57	MG	RA	3062	1/1	0.88	0.11	56,56,56,56	0
57	MG	RA	3156	1/1	0.88	0.24	44,44,44,44	0
57	MG	RA	3223	1/1	0.88	0.09	23,23,23,23	0
57	MG	QA	1662	1/1	0.88	0.14	53,53,53,53	0
57	MG	RA	3167	1/1	0.88	0.09	29,29,29,29	0
57	MG	RA	3123	1/1	0.88	0.17	28,28,28,28	0
57	MG	YA	3243	1/1	0.88	0.12	42,42,42,42	0
57	MG	YA	3195	1/1	0.88	0.15	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	RA	3234	1/1	0.88	0.20	48,48,48,48	0
57	MG	YA	3198	1/1	0.88	0.23	59,59,59,59	0
57	MG	YA	3202	1/1	0.88	0.17	59,59,59,59	0
57	MG	RA	3142	1/1	0.88	0.12	39,39,39,39	0
57	MG	YB	203	1/1	0.88	0.15	37,37,37,37	0
57	MG	RA	3177	1/1	0.88	0.18	38,38,38,38	0
57	MG	RA	3056	1/1	0.88	0.26	17,17,17,17	0
57	MG	YA	3160	1/1	0.88	0.09	12,12,12,12	0
57	MG	XA	1656	1/1	0.88	0.12	31,31,31,31	0
57	MG	QA	1639	1/1	0.89	0.17	36,36,36,36	0
57	MG	RB	202	1/1	0.89	0.09	54,54,54,54	0
57	MG	YA	3075	1/1	0.89	0.20	28,28,28,28	0
57	MG	YA	3162	1/1	0.89	0.10	20,20,20,20	0
57	MG	RA	3084	1/1	0.89	0.10	9,9,9,9	0
57	MG	RA	3132	1/1	0.89	0.16	22,22,22,22	0
57	MG	RA	3220	1/1	0.89	0.18	56,56,56,56	0
57	MG	RA	3160	1/1	0.89	0.20	51,51,51,51	0
57	MG	YA	3126	1/1	0.89	0.17	22,22,22,22	0
57	MG	XA	1660	1/1	0.89	0.07	30,30,30,30	0
57	MG	QA	1660	1/1	0.89	0.17	35,35,35,35	0
57	MG	RA	3137	1/1	0.89	0.14	10,10,10,10	0
57	MG	YA	3192	1/1	0.89	0.14	30,30,30,30	0
57	MG	XA	1622	1/1	0.89	0.15	26,26,26,26	0
57	MG	RA	3069	1/1	0.89	0.09	21,21,21,21	0
57	MG	RA	3108	1/1	0.89	0.19	24,24,24,24	0
57	MG	RA	3209	1/1	0.89	0.16	50,50,50,50	0
57	MG	RA	3124	1/1	0.89	0.19	23,23,23,23	0
57	MG	YA	3146	1/1	0.89	0.33	57,57,57,57	0
57	MG	YP	201	1/1	0.89	0.11	23,23,23,23	0
57	MG	XA	1635	1/1	0.89	0.24	41,41,41,41	0
57	MG	YA	3215	1/1	0.89	0.11	25,25,25,25	0
57	MG	YA	3216	1/1	0.89	0.22	59,59,59,59	0
57	MG	YA	3209	1/1	0.90	0.14	27,27,27,27	0
57	MG	YA	3151	1/1	0.90	0.16	25,25,25,25	0
57	MG	YA	3068	1/1	0.90	0.24	17,17,17,17	0
57	MG	YA	3219	1/1	0.90	0.51	52,52,52,52	0
57	MG	RA	3002	1/1	0.90	0.28	36,36,36,36	0
57	MG	RA	3178	1/1	0.90	0.12	22,22,22,22	0
57	MG	RA	3180	1/1	0.90	0.14	34,34,34,34	0
57	MG	RP	201	1/1	0.90	0.28	30,30,30,30	0
57	MG	YA	3103	1/1	0.90	0.17	31,31,31,31	0
57	MG	RA	3128	1/1	0.90	0.23	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3233	1/1	0.90	0.08	34,34,34,34	0
57	MG	YA	3107	1/1	0.90	0.13	11,11,11,11	0
57	MG	RA	3078	1/1	0.90	0.16	22,22,22,22	0
57	MG	RA	3118	1/1	0.90	0.09	33,33,33,33	0
57	MG	RA	3010	1/1	0.90	0.26	78,78,78,78	0
57	MG	QA	1650	1/1	0.90	0.21	49,49,49,49	0
57	MG	YA	3179	1/1	0.90	0.15	35,35,35,35	0
57	MG	QA	1649	1/1	0.90	0.15	39,39,39,39	0
57	MG	QA	1655	1/1	0.90	0.14	51,51,51,51	0
57	MG	YA	3247	1/1	0.90	0.09	30,30,30,30	0
57	MG	RA	3205	1/1	0.90	0.12	46,46,46,46	0
57	MG	YA	3263	1/1	0.90	0.19	33,33,33,33	0
57	MG	RA	3175	1/1	0.90	0.10	21,21,21,21	0
57	MG	YA	3197	1/1	0.90	0.10	44,44,44,44	0
57	MG	YA	3137	1/1	0.90	0.10	6,6,6,6	0
57	MG	YA	3016	1/1	0.90	0.14	8,8,8,8	0
57	MG	YA	3203	1/1	0.90	0.10	27,27,27,27	0
57	MG	RA	3149	1/1	0.90	0.17	32,32,32,32	0
57	MG	YA	3029	1/1	0.90	0.18	12,12,12,12	0
57	MG	XA	1645	1/1	0.90	0.18	29,29,29,29	0
57	MG	YA	3052	1/1	0.91	0.10	21,21,21,21	0
57	MG	RA	3197	1/1	0.91	0.16	55,55,55,55	0
57	MG	YA	3065	1/1	0.91	0.16	8,8,8,8	0
57	MG	RA	3228	1/1	0.91	0.28	58,58,58,58	0
57	MG	XA	1638	1/1	0.91	0.17	16,16,16,16	0
57	MG	RA	3174	1/1	0.91	0.07	38,38,38,38	0
57	MG	RA	3201	1/1	0.91	0.09	24,24,24,24	0
57	MG	RA	3045	1/1	0.91	0.16	16,16,16,16	0
57	MG	YA	3166	1/1	0.91	0.30	58,58,58,58	0
57	MG	YA	3102	1/1	0.91	0.21	12,12,12,12	0
57	MG	YA	3235	1/1	0.91	0.08	29,29,29,29	0
57	MG	QA	1613	1/1	0.91	0.22	21,21,21,21	0
57	MG	RA	3076	1/1	0.91	0.18	15,15,15,15	0
57	MG	QA	1659	1/1	0.91	0.22	39,39,39,39	0
57	MG	RA	3179	1/1	0.91	0.09	15,15,15,15	0
57	MG	YA	3178	1/1	0.91	0.17	35,35,35,35	0
57	MG	RA	3134	1/1	0.91	0.19	44,44,44,44	0
57	MG	RA	3183	1/1	0.91	0.07	19,19,19,19	0
57	MG	QA	1644	1/1	0.91	0.09	40,40,40,40	0
57	MG	XA	1617	1/1	0.91	0.20	14,14,14,14	0
57	MG	YA	3254	1/1	0.91	0.13	7,7,7,7	0
57	MG	RA	3190	1/1	0.91	0.08	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3260	1/1	0.91	0.11	14,14,14,14	0
57	MG	RA	3090	1/1	0.91	0.15	23,23,23,23	0
57	MG	RA	3025	1/1	0.91	0.12	15,15,15,15	0
57	MG	YA	3200	1/1	0.91	0.18	26,26,26,26	0
57	MG	YB	202	1/1	0.91	0.11	20,20,20,20	0
57	MG	XA	1626	1/1	0.91	0.12	19,19,19,19	0
57	MG	YA	3138	1/1	0.91	0.06	10,10,10,10	0
57	MG	RA	3171	1/1	0.91	0.12	33,33,33,33	0
57	MG	QA	1602	1/1	0.91	0.15	18,18,18,18	0
57	MG	YA	3044	1/1	0.91	0.34	7,7,7,7	0
57	MG	YA	3046	1/1	0.91	0.15	8,8,8,8	0
57	MG	RA	3199	1/1	0.92	0.08	29,29,29,29	0
57	MG	RA	3099	1/1	0.92	0.23	24,24,24,24	0
57	MG	RA	3169	1/1	0.92	0.17	35,35,35,35	0
57	MG	XA	1664	1/1	0.92	0.31	51,51,51,51	0
57	MG	RA	3131	1/1	0.92	0.26	41,41,41,41	0
57	MG	XA	1666	1/1	0.92	0.10	43,43,43,43	0
57	MG	YA	3214	1/1	0.92	0.08	35,35,35,35	0
57	MG	RA	3100	1/1	0.92	0.15	9,9,9,9	0
57	MG	R0	101	1/1	0.92	0.09	11,11,11,11	0
57	MG	QA	1634	1/1	0.92	0.16	20,20,20,20	0
57	MG	YA	3140	1/1	0.92	0.16	20,20,20,20	0
57	MG	YA	3012	1/1	0.92	0.29	9,9,9,9	0
57	MG	RA	3044	1/1	0.92	0.15	24,24,24,24	0
57	MG	RA	3070	1/1	0.92	0.24	26,26,26,26	0
57	MG	YA	3147	1/1	0.92	0.10	8,8,8,8	0
57	MG	RA	3214	1/1	0.92	0.14	18,18,18,18	0
57	MG	YA	3037	1/1	0.92	0.12	1,1,1,1	0
57	MG	YA	3039	1/1	0.92	0.15	19,19,19,19	0
57	MG	YA	3042	1/1	0.92	0.13	19,19,19,19	0
57	MG	RA	3138	1/1	0.92	0.13	12,12,12,12	0
57	MG	RA	3217	1/1	0.92	0.08	28,28,28,28	0
57	MG	RA	3113	1/1	0.92	0.26	32,32,32,32	0
57	MG	QA	1619	1/1	0.92	0.17	33,33,33,33	0
57	MG	RA	3143	1/1	0.92	0.17	40,40,40,40	0
57	MG	RA	3013	1/1	0.92	0.21	20,20,20,20	0
57	MG	YA	3069	1/1	0.92	0.18	15,15,15,15	0
57	MG	QA	1669	1/1	0.92	0.09	45,45,45,45	0
57	MG	RA	3188	1/1	0.92	0.13	39,39,39,39	0
57	MG	RA	3224	1/1	0.92	0.18	52,52,52,52	0
57	MG	RA	3081	1/1	0.92	0.16	30,30,30,30	0
57	MG	YA	3085	1/1	0.92	0.11	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3188	1/1	0.92	0.09	32,32,32,32	0
57	MG	RA	3154	1/1	0.92	0.16	22,22,22,22	0
57	MG	QA	1651	1/1	0.92	0.20	35,35,35,35	0
57	MG	YA	3194	1/1	0.92	0.06	41,41,41,41	0
57	MG	RA	3059	1/1	0.92	0.12	2,2,2,2	0
57	MG	RA	3026	1/1	0.92	0.12	8,8,8,8	0
57	MG	XA	1657	1/1	0.92	0.15	31,31,31,31	0
57	MG	YA	3117	1/1	0.92	0.12	18,18,18,18	0
57	MG	RA	3092	1/1	0.92	0.10	9,9,9,9	0
59	ZN	XD	301	1/1	0.92	0.27	45,45,45,45	0
57	MG	YA	3186	1/1	0.93	0.19	39,39,39,39	0
57	MG	XA	1641	1/1	0.93	0.08	40,40,40,40	0
57	MG	XA	1644	1/1	0.93	0.08	27,27,27,27	0
57	MG	QA	1632	1/1	0.93	0.12	35,35,35,35	0
57	MG	XA	1646	1/1	0.93	0.23	45,45,45,45	0
57	MG	RA	3145	1/1	0.93	0.15	27,27,27,27	0
57	MG	QA	1633	1/1	0.93	0.19	44,44,44,44	0
57	MG	XA	1653	1/1	0.93	0.15	60,60,60,60	0
57	MG	YA	3106	1/1	0.93	0.07	9,9,9,9	0
57	MG	QA	1614	1/1	0.93	0.16	26,26,26,26	0
57	MG	RA	3073	1/1	0.93	0.18	24,24,24,24	0
57	MG	YA	3116	1/1	0.93	0.17	36,36,36,36	0
57	MG	QA	1666	1/1	0.93	0.16	36,36,36,36	0
57	MG	RA	3230	1/1	0.93	0.20	18,18,18,18	0
57	MG	QA	1615	1/1	0.93	0.09	23,23,23,23	0
57	MG	RA	3047	1/1	0.93	0.16	9,9,9,9	0
57	MG	YA	3210	1/1	0.93	0.13	37,37,37,37	0
57	MG	YA	3213	1/1	0.93	0.07	29,29,29,29	0
57	MG	RA	3239	1/1	0.93	0.11	19,19,19,19	0
57	MG	XA	1662	1/1	0.93	0.08	11,11,11,11	0
57	MG	RA	3158	1/1	0.93	0.22	51,51,51,51	0
57	MG	QA	1612	1/1	0.93	0.13	13,13,13,13	0
57	MG	YA	3136	1/1	0.93	0.10	18,18,18,18	0
57	MG	RA	3163	1/1	0.93	0.16	38,38,38,38	0
57	MG	RA	3088	1/1	0.93	0.15	19,19,19,19	0
57	MG	RA	3202	1/1	0.93	0.09	21,21,21,21	0
57	MG	XA	1670	1/1	0.93	0.12	29,29,29,29	0
57	MG	RA	3053	1/1	0.93	0.18	16,16,16,16	0
57	MG	QA	1605	1/1	0.93	0.27	30,30,30,30	0
57	MG	XA	1603	1/1	0.93	0.21	38,38,38,38	0
57	MG	XA	1606	1/1	0.93	0.18	17,17,17,17	0
57	MG	YA	3150	1/1	0.93	0.18	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3018	1/1	0.93	0.25	13,13,13,13	0
57	MG	YA	3152	1/1	0.93	0.17	51,51,51,51	0
57	MG	QA	1640	1/1	0.93	0.16	51,51,51,51	0
57	MG	YA	3156	1/1	0.93	0.16	33,33,33,33	0
57	MG	RA	3208	1/1	0.93	0.08	19,19,19,19	0
57	MG	YA	3159	1/1	0.93	0.09	18,18,18,18	0
57	MG	YA	3030	1/1	0.93	0.19	20,20,20,20	0
57	MG	YA	3249	1/1	0.93	0.11	26,26,26,26	0
57	MG	YA	3253	1/1	0.93	0.24	18,18,18,18	0
57	MG	RA	3098	1/1	0.93	0.14	10,10,10,10	0
57	MG	YA	3258	1/1	0.93	0.16	11,11,11,11	0
57	MG	RA	3133	1/1	0.93	0.07	28,28,28,28	0
57	MG	RA	3213	1/1	0.93	0.09	29,29,29,29	0
57	MG	QA	1630	1/1	0.93	0.18	48,48,48,48	0
57	MG	QA	1631	1/1	0.93	0.08	46,46,46,46	0
57	MG	YA	3048	1/1	0.93	0.21	10,10,10,10	0
57	MG	QA	1647	1/1	0.93	0.09	23,23,23,23	0
57	MG	RA	3068	1/1	0.93	0.08	21,21,21,21	0
57	MG	XA	1632	1/1	0.93	0.14	17,17,17,17	0
57	MG	RA	3110	1/1	0.93	0.12	9,9,9,9	0
57	MG	RA	3111	1/1	0.93	0.16	22,22,22,22	0
57	MG	RA	3181	1/1	0.93	0.18	48,48,48,48	0
57	MG	YA	3180	1/1	0.93	0.28	49,49,49,49	0
57	MG	YA	3183	1/1	0.93	0.11	30,30,30,30	0
57	MG	RA	3152	1/1	0.94	0.12	14,14,14,14	0
57	MG	RA	3012	1/1	0.94	0.11	8,8,8,8	0
57	MG	QA	1661	1/1	0.94	0.05	38,38,38,38	0
57	MG	YA	3115	1/1	0.94	0.13	17,17,17,17	0
57	MG	RA	3185	1/1	0.94	0.14	25,25,25,25	0
57	MG	XA	1620	1/1	0.94	0.18	17,17,17,17	0
57	MG	RA	3022	1/1	0.94	0.14	16,16,16,16	0
57	MG	YA	3123	1/1	0.94	0.11	9,9,9,9	0
57	MG	YA	3201	1/1	0.94	0.06	14,14,14,14	0
57	MG	YA	3125	1/1	0.94	0.11	11,11,11,11	0
57	MG	XA	1669	1/1	0.94	0.19	41,41,41,41	0
57	MG	QA	1606	1/1	0.94	0.14	22,22,22,22	0
57	MG	XA	1623	1/1	0.94	0.33	40,40,40,40	0
57	MG	RA	3189	1/1	0.94	0.07	34,34,34,34	0
57	MG	XA	1674	1/1	0.94	0.12	25,25,25,25	0
57	MG	XX	101	1/1	0.94	0.08	22,22,22,22	0
57	MG	YA	3009	1/1	0.94	0.20	12,12,12,12	0
57	MG	RA	3157	1/1	0.94	0.19	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	QF	201	1/1	0.94	0.06	39,39,39,39	0
57	MG	RA	3075	1/1	0.94	0.06	15,15,15,15	0
57	MG	YA	3217	1/1	0.94	0.05	29,29,29,29	0
57	MG	RA	3161	1/1	0.94	0.07	27,27,27,27	0
57	MG	YA	3141	1/1	0.94	0.06	16,16,16,16	0
57	MG	YA	3142	1/1	0.94	0.08	28,28,28,28	0
57	MG	RA	3057	1/1	0.94	0.16	11,11,11,11	0
57	MG	QA	1622	1/1	0.94	0.09	32,32,32,32	0
57	MG	YA	3034	1/1	0.94	0.20	9,9,9,9	0
57	MG	RA	3229	1/1	0.94	0.17	5,5,5,5	0
57	MG	YA	3230	1/1	0.94	0.15	32,32,32,32	0
57	MG	YA	3149	1/1	0.94	0.07	16,16,16,16	0
57	MG	YA	3234	1/1	0.94	0.07	21,21,21,21	0
57	MG	XA	1639	1/1	0.94	0.13	35,35,35,35	0
57	MG	YA	3040	1/1	0.94	0.18	8,8,8,8	0
57	MG	RA	3079	1/1	0.94	0.12	17,17,17,17	0
57	MG	YA	3153	1/1	0.94	0.11	21,21,21,21	0
57	MG	YA	3240	1/1	0.94	0.12	43,43,43,43	0
57	MG	QA	1643	1/1	0.94	0.12	22,22,22,22	0
57	MG	YA	3045	1/1	0.94	0.22	2,2,2,2	0
57	MG	RA	3170	1/1	0.94	0.05	25,25,25,25	0
57	MG	RA	3082	1/1	0.94	0.12	42,42,42,42	0
57	MG	YA	3049	1/1	0.94	0.31	14,14,14,14	0
57	MG	YA	3050	1/1	0.94	0.27	9,9,9,9	0
57	MG	RA	3240	1/1	0.94	0.14	25,25,25,25	0
57	MG	YA	3063	1/1	0.94	0.10	13,13,13,13	0
57	MG	XA	1648	1/1	0.94	0.15	39,39,39,39	0
57	MG	RA	3060	1/1	0.94	0.24	8,8,8,8	0
57	MG	YA	3169	1/1	0.94	0.07	20,20,20,20	0
57	MG	XA	1652	1/1	0.94	0.06	32,32,32,32	0
57	MG	RA	3085	1/1	0.94	0.12	16,16,16,16	0
57	MG	RA	3087	1/1	0.94	0.14	34,34,34,34	0
57	MG	RA	3042	1/1	0.94	0.12	3,3,3,3	0
57	MG	RA	3148	1/1	0.94	0.23	36,36,36,36	0
57	MG	RA	3210	1/1	0.94	0.13	30,30,30,30	0
57	MG	RA	3122	1/1	0.94	0.18	29,29,29,29	0
57	MG	YA	3091	1/1	0.94	0.08	21,21,21,21	0
57	MG	YQ	201	1/1	0.94	0.05	25,25,25,25	0
57	MG	YA	3182	1/1	0.94	0.12	24,24,24,24	0
57	MG	XA	1659	1/1	0.94	0.09	34,34,34,34	0
57	MG	QA	1617	1/1	0.94	0.12	19,19,19,19	0
57	MG	XA	1604	1/1	0.94	0.10	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	ZN	XN	101	1/1	0.94	0.12	65,65,65,65	0
57	MG	RA	3095	1/1	0.95	0.15	14,14,14,14	0
57	MG	YA	3191	1/1	0.95	0.17	24,24,24,24	0
57	MG	QA	1623	1/1	0.95	0.13	37,37,37,37	0
57	MG	YA	3193	1/1	0.95	0.14	27,27,27,27	0
57	MG	XA	1612	1/1	0.95	0.14	13,13,13,13	0
57	MG	XA	1614	1/1	0.95	0.19	7,7,7,7	0
57	MG	RA	3211	1/1	0.95	0.20	43,43,43,43	0
57	MG	YA	3118	1/1	0.95	0.22	25,25,25,25	0
57	MG	RA	3172	1/1	0.95	0.06	23,23,23,23	0
57	MG	YA	3199	1/1	0.95	0.37	18,18,18,18	0
57	MG	RA	3003	1/1	0.95	0.14	14,14,14,14	0
57	MG	RA	3008	1/1	0.95	0.08	27,27,27,27	0
57	MG	YA	3001	1/1	0.95	0.15	9,9,9,9	0
57	MG	YA	3003	1/1	0.95	0.19	10,10,10,10	0
57	MG	QA	1624	1/1	0.95	0.08	27,27,27,27	0
57	MG	YA	3205	1/1	0.95	0.44	38,38,38,38	0
57	MG	YA	3206	1/1	0.95	0.06	15,15,15,15	0
57	MG	RA	3102	1/1	0.95	0.14	14,14,14,14	0
57	MG	YA	3015	1/1	0.95	0.25	8,8,8,8	0
57	MG	YA	3132	1/1	0.95	0.05	18,18,18,18	0
57	MG	RA	3103	1/1	0.95	0.07	8,8,8,8	0
57	MG	YA	3211	1/1	0.95	0.04	14,14,14,14	0
57	MG	XA	1628	1/1	0.95	0.16	27,27,27,27	0
57	MG	YA	3023	1/1	0.95	0.19	16,16,16,16	0
57	MG	XA	1629	1/1	0.95	0.17	29,29,29,29	0
57	MG	YA	3028	1/1	0.95	0.19	9,9,9,9	0
57	MG	RA	3105	1/1	0.95	0.17	18,18,18,18	0
57	MG	RA	3140	1/1	0.95	0.19	26,26,26,26	0
57	MG	YA	3032	1/1	0.95	0.20	4,4,4,4	0
57	MG	RA	3107	1/1	0.95	0.12	25,25,25,25	0
57	MG	RA	3048	1/1	0.95	0.06	1,1,1,1	0
57	MG	YA	3225	1/1	0.95	0.16	9,9,9,9	0
57	MG	RA	3144	1/1	0.95	0.22	17,17,17,17	0
57	MG	RA	3109	1/1	0.95	0.06	8,8,8,8	0
57	MG	YA	3148	1/1	0.95	0.08	14,14,14,14	0
57	MG	RA	3049	1/1	0.95	0.09	8,8,8,8	0
57	MG	YA	3232	1/1	0.95	0.07	23,23,23,23	0
57	MG	RA	3011	1/1	0.95	0.32	32,32,32,32	0
57	MG	XA	1643	1/1	0.95	0.13	29,29,29,29	0
57	MG	QA	1665	1/1	0.95	0.10	18,18,18,18	0
57	MG	QA	1635	1/1	0.95	0.06	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3154	1/1	0.95	0.06	9,9,9,9	0
57	MG	YA	3238	1/1	0.95	0.11	24,24,24,24	0
57	MG	RA	3191	1/1	0.95	0.11	21,21,21,21	0
57	MG	QA	1601	1/1	0.95	0.14	33,33,33,33	0
57	MG	QA	1653	1/1	0.95	0.07	36,36,36,36	0
57	MG	QA	1607	1/1	0.95	0.08	40,40,40,40	0
57	MG	RA	3086	1/1	0.95	0.17	14,14,14,14	0
57	MG	QA	1646	1/1	0.95	0.10	39,39,39,39	0
57	MG	RA	3030	1/1	0.95	0.18	12,12,12,12	0
57	MG	YA	3163	1/1	0.95	0.10	28,28,28,28	0
57	MG	RA	3159	1/1	0.95	0.10	30,30,30,30	0
57	MG	YA	3251	1/1	0.95	0.19	20,20,20,20	0
57	MG	RA	3089	1/1	0.95	0.06	8,8,8,8	0
57	MG	RA	3125	1/1	0.95	0.18	28,28,28,28	0
57	MG	YA	3073	1/1	0.95	0.12	7,7,7,7	0
57	MG	YA	3074	1/1	0.95	0.04	6,6,6,6	0
57	MG	RA	3203	1/1	0.95	0.17	35,35,35,35	0
57	MG	YA	3262	1/1	0.95	0.12	38,38,38,38	0
57	MG	YA	3077	1/1	0.95	0.20	16,16,16,16	0
57	MG	RA	3126	1/1	0.95	0.29	33,33,33,33	0
57	MG	R5	101	1/1	0.95	0.09	19,19,19,19	0
57	MG	YA	3175	1/1	0.95	0.22	37,37,37,37	0
57	MG	YA	3177	1/1	0.95	0.05	20,20,20,20	0
57	MG	YA	3087	1/1	0.95	0.20	15,15,15,15	0
57	MG	RA	3001	1/1	0.95	0.10	11,11,11,11	0
57	MG	YA	3099	1/1	0.95	0.13	7,7,7,7	0
57	MG	RA	3066	1/1	0.95	0.12	24,24,24,24	0
57	MG	XA	1605	1/1	0.95	0.10	16,16,16,16	0
57	MG	YA	3185	1/1	0.95	0.05	10,10,10,10	0
57	MG	RA	3035	1/1	0.95	0.21	11,11,11,11	0
57	MG	XA	1608	1/1	0.95	0.20	23,23,23,23	0
57	MG	RA	3021	1/1	0.96	0.18	2,2,2,2	0
57	MG	YA	3021	1/1	0.96	0.21	9,9,9,9	0
57	MG	YA	3022	1/1	0.96	0.21	7,7,7,7	0
57	MG	XA	1637	1/1	0.96	0.29	24,24,24,24	0
57	MG	YA	3124	1/1	0.96	0.22	9,9,9,9	0
57	MG	RA	3004	1/1	0.96	0.17	15,15,15,15	0
57	MG	YA	3027	1/1	0.96	0.20	0,0,0,0	0
57	MG	RA	3007	1/1	0.96	0.12	6,6,6,6	0
57	MG	QA	1616	1/1	0.96	0.05	40,40,40,40	0
57	MG	RA	3071	1/1	0.96	0.15	19,19,19,19	0
57	MG	QA	1611	1/1	0.96	0.13	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RF	301	1/1	0.96	0.07	40,40,40,40	0
57	MG	YA	3133	1/1	0.96	0.05	18,18,18,18	0
57	MG	YA	3036	1/1	0.96	0.11	5,5,5,5	0
57	MG	RA	3093	1/1	0.96	0.14	9,9,9,9	0
57	MG	RA	3146	1/1	0.96	0.13	33,33,33,33	0
57	MG	RA	3027	1/1	0.96	0.18	3,3,3,3	0
57	MG	YA	3041	1/1	0.96	0.13	5,5,5,5	0
57	MG	RA	3096	1/1	0.96	0.15	23,23,23,23	0
57	MG	XA	1650	1/1	0.96	0.10	26,26,26,26	0
57	MG	XA	1602	1/1	0.96	0.10	30,30,30,30	0
57	MG	RA	3150	1/1	0.96	0.07	25,25,25,25	0
57	MG	RA	3028	1/1	0.96	0.09	4,4,4,4	0
57	MG	RA	3055	1/1	0.96	0.09	7,7,7,7	0
57	MG	RA	3182	1/1	0.96	0.06	10,10,10,10	0
57	MG	XA	1607	1/1	0.96	0.26	31,31,31,31	0
57	MG	YA	3224	1/1	0.96	0.05	24,24,24,24	0
57	MG	YA	3053	1/1	0.96	0.17	5,5,5,5	0
57	MG	YA	3054	1/1	0.96	0.09	49,49,49,49	0
57	MG	YA	3058	1/1	0.96	0.13	12,12,12,12	0
57	MG	YA	3061	1/1	0.96	0.11	15,15,15,15	0
57	MG	YA	3062	1/1	0.96	0.09	9,9,9,9	0
57	MG	RA	3077	1/1	0.96	0.20	6,6,6,6	0
57	MG	RA	3184	1/1	0.96	0.15	13,13,13,13	0
57	MG	QA	1641	1/1	0.96	0.10	24,24,24,24	0
57	MG	QA	1652	1/1	0.96	0.07	37,37,37,37	0
57	MG	XA	1613	1/1	0.96	0.20	13,13,13,13	0
57	MG	RA	3129	1/1	0.96	0.08	21,21,21,21	0
57	MG	XA	1615	1/1	0.96	0.08	15,15,15,15	0
57	MG	XA	1616	1/1	0.96	0.05	17,17,17,17	0
57	MG	QA	1628	1/1	0.96	0.13	25,25,25,25	0
57	MG	RA	3040	1/1	0.96	0.20	21,21,21,21	0
57	MG	RA	3106	1/1	0.96	0.13	11,11,11,11	0
57	MG	YA	3079	1/1	0.96	0.11	12,12,12,12	0
57	MG	YA	3081	1/1	0.96	0.08	5,5,5,5	0
57	MG	RA	3083	1/1	0.96	0.14	11,11,11,11	0
57	MG	RA	3225	1/1	0.96	0.06	27,27,27,27	0
57	MG	YA	3248	1/1	0.96	0.20	26,26,26,26	0
57	MG	RA	3041	1/1	0.96	0.15	2,2,2,2	0
57	MG	YA	3250	1/1	0.96	0.10	40,40,40,40	0
57	MG	YA	3090	1/1	0.96	0.12	5,5,5,5	0
57	MG	XA	1673	1/1	0.96	0.07	26,26,26,26	0
57	MG	YA	3096	1/1	0.96	0.15	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3255	1/1	0.96	0.20	13,13,13,13	0
57	MG	XA	1625	1/1	0.96	0.10	16,16,16,16	0
57	MG	YA	3100	1/1	0.96	0.17	13,13,13,13	0
57	MG	YA	3101	1/1	0.96	0.22	8,8,8,8	0
57	MG	YA	3261	1/1	0.96	0.18	8,8,8,8	0
57	MG	RA	3018	1/1	0.96	0.11	9,9,9,9	0
57	MG	YA	3181	1/1	0.96	0.25	34,34,34,34	0
57	MG	RA	3136	1/1	0.96	0.07	9,9,9,9	0
57	MG	YA	3104	1/1	0.96	0.16	24,24,24,24	0
57	MG	YA	3184	1/1	0.96	0.18	20,20,20,20	0
57	MG	RA	3196	1/1	0.96	0.10	15,15,15,15	0
57	MG	YA	3007	1/1	0.96	0.12	9,9,9,9	0
57	MG	YA	3187	1/1	0.96	0.04	29,29,29,29	0
57	MG	RA	3165	1/1	0.96	0.06	19,19,19,19	0
57	MG	RA	3198	1/1	0.96	0.07	20,20,20,20	0
57	MG	YA	3113	1/1	0.96	0.13	19,19,19,19	0
57	MG	YA	3114	1/1	0.96	0.08	8,8,8,8	0
59	ZN	QD	301	1/1	0.96	0.20	47,47,47,47	0
57	MG	RA	3043	1/1	0.96	0.14	4,4,4,4	0
57	MG	RA	3235	1/1	0.96	0.19	22,22,22,22	0
57	MG	RA	3080	1/1	0.97	0.17	19,19,19,19	0
57	MG	YA	3070	1/1	0.97	0.16	8,8,8,8	0
57	MG	YA	3004	1/1	0.97	0.13	5,5,5,5	0
57	MG	QA	1604	1/1	0.97	0.14	12,12,12,12	0
57	MG	YA	3143	1/1	0.97	0.06	17,17,17,17	0
57	MG	QA	1610	1/1	0.97	0.06	11,11,11,11	0
57	MG	YA	3011	1/1	0.97	0.23	20,20,20,20	0
57	MG	RA	3104	1/1	0.97	0.07	16,16,16,16	0
57	MG	YA	3076	1/1	0.97	0.21	7,7,7,7	0
57	MG	YA	3013	1/1	0.97	0.19	1,1,1,1	0
57	MG	YA	3078	1/1	0.97	0.13	19,19,19,19	0
57	MG	XA	1601	1/1	0.97	0.13	4,4,4,4	0
57	MG	YA	3218	1/1	0.97	0.04	10,10,10,10	0
57	MG	RA	3186	1/1	0.97	0.05	20,20,20,20	0
57	MG	YA	3082	1/1	0.97	0.08	8,8,8,8	0
57	MG	YA	3083	1/1	0.97	0.20	7,7,7,7	0
57	MG	RA	3216	1/1	0.97	0.17	43,43,43,43	0
57	MG	YA	3223	1/1	0.97	0.10	25,25,25,25	0
57	MG	RA	3024	1/1	0.97	0.08	5,5,5,5	0
57	MG	QM	201	1/1	0.97	0.07	55,55,55,55	0
57	MG	YA	3226	1/1	0.97	0.09	3,3,3,3	0
57	MG	YA	3088	1/1	0.97	0.08	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3063	1/1	0.97	0.26	6,6,6,6	0
57	MG	RA	3064	1/1	0.97	0.15	5,5,5,5	0
57	MG	YA	3095	1/1	0.97	0.10	7,7,7,7	0
57	MG	YA	3025	1/1	0.97	0.19	8,8,8,8	0
57	MG	YA	3097	1/1	0.97	0.16	19,19,19,19	0
57	MG	QA	1636	1/1	0.97	0.04	16,16,16,16	0
57	MG	RA	3162	1/1	0.97	0.04	18,18,18,18	0
57	MG	RA	3046	1/1	0.97	0.09	12,12,12,12	0
57	MG	YA	3167	1/1	0.97	0.09	21,21,21,21	0
57	MG	XA	1611	1/1	0.97	0.17	23,23,23,23	0
57	MG	QA	1648	1/1	0.97	0.09	12,12,12,12	0
57	MG	QA	1603	1/1	0.97	0.08	7,7,7,7	0
57	MG	RA	3029	1/1	0.97	0.08	2,2,2,2	0
57	MG	RA	3114	1/1	0.97	0.17	20,20,20,20	0
57	MG	RA	3017	1/1	0.97	0.18	8,8,8,8	0
57	MG	YA	3110	1/1	0.97	0.05	15,15,15,15	0
57	MG	YA	3245	1/1	0.97	0.12	38,38,38,38	0
57	MG	YA	3176	1/1	0.97	0.08	6,6,6,6	0
57	MG	RA	3141	1/1	0.97	0.11	33,33,33,33	0
57	MG	XA	1618	1/1	0.97	0.17	7,7,7,7	0
57	MG	RA	3116	1/1	0.97	0.10	1,1,1,1	0
57	MG	YA	3043	1/1	0.97	0.20	15,15,15,15	0
57	MG	RA	3117	1/1	0.97	0.09	3,3,3,3	0
57	MG	RA	3051	1/1	0.97	0.12	3,3,3,3	0
57	MG	QA	1625	1/1	0.97	0.13	36,36,36,36	0
57	MG	YA	3119	1/1	0.97	0.17	31,31,31,31	0
57	MG	YA	3047	1/1	0.97	0.23	6,6,6,6	0
57	MG	YA	3121	1/1	0.97	0.05	18,18,18,18	0
57	MG	YA	3122	1/1	0.97	0.12	9,9,9,9	0
57	MG	RA	3236	1/1	0.97	0.16	33,33,33,33	0
57	MG	RA	3237	1/1	0.97	0.10	26,26,26,26	0
57	MG	XA	1668	1/1	0.97	0.10	19,19,19,19	0
57	MG	RA	3238	1/1	0.97	0.26	32,32,32,32	0
57	MG	RA	3019	1/1	0.97	0.15	19,19,19,19	0
57	MG	RA	3121	1/1	0.97	0.07	29,29,29,29	0
57	MG	YA	3055	1/1	0.97	0.05	10,10,10,10	0
57	MG	YE	301	1/1	0.97	0.13	7,7,7,7	0
57	MG	RA	3206	1/1	0.97	0.29	15,15,15,15	0
57	MG	YA	3131	1/1	0.97	0.13	35,35,35,35	0
57	MG	RA	3097	1/1	0.97	0.15	14,14,14,14	0
57	MG	RA	3037	1/1	0.97	0.09	11,11,11,11	0
57	MG	Y7	101	1/1	0.97	0.31	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3134	1/1	0.97	0.09	21,21,21,21	0
57	MG	XV	101	1/1	0.97	0.17	9,9,9,9	0
57	MG	RA	3039	1/1	0.97	0.12	2,2,2,2	0
59	ZN	QN	101	1/1	0.97	0.07	80,80,80,80	0
57	MG	RA	3006	1/1	0.97	0.21	18,18,18,18	0
57	MG	YA	3002	1/1	0.97	0.23	9,9,9,9	0
57	MG	YA	3093	1/1	0.98	0.06	13,13,13,13	0
57	MG	YA	3231	1/1	0.98	0.04	19,19,19,19	0
57	MG	YA	3094	1/1	0.98	0.09	2,2,2,2	0
57	MG	YA	3017	1/1	0.98	0.12	2,2,2,2	0
57	MG	RA	3031	1/1	0.98	0.06	16,16,16,16	0
57	MG	YA	3019	1/1	0.98	0.11	1,1,1,1	0
57	MG	YA	3098	1/1	0.98	0.08	16,16,16,16	0
57	MG	YA	3020	1/1	0.98	0.21	7,7,7,7	0
57	MG	YA	3056	1/1	0.98	0.13	8,8,8,8	0
57	MG	RA	3032	1/1	0.98	0.12	15,15,15,15	0
57	MG	YA	3060	1/1	0.98	0.13	4,4,4,4	0
57	MG	RA	3016	1/1	0.98	0.14	1,1,1,1	0
57	MG	RA	3052	1/1	0.98	0.10	4,4,4,4	0
57	MG	RA	3166	1/1	0.98	0.11	43,43,43,43	0
57	MG	QV	101	1/1	0.98	0.09	26,26,26,26	0
57	MG	RA	3168	1/1	0.98	0.09	22,22,22,22	0
57	MG	YA	3108	1/1	0.98	0.10	3,3,3,3	0
57	MG	YA	3109	1/1	0.98	0.20	10,10,10,10	0
57	MG	YA	3066	1/1	0.98	0.10	16,16,16,16	0
57	MG	YA	3067	1/1	0.98	0.08	22,22,22,22	0
57	MG	YA	3112	1/1	0.98	0.07	15,15,15,15	0
57	MG	YA	3157	1/1	0.98	0.12	30,30,30,30	0
57	MG	YA	3252	1/1	0.98	0.21	25,25,25,25	0
57	MG	XA	1651	1/1	0.98	0.04	12,12,12,12	0
57	MG	RA	3036	1/1	0.98	0.11	4,4,4,4	0
57	MG	RA	3065	1/1	0.98	0.05	16,16,16,16	0
57	MG	YA	3256	1/1	0.98	0.14	7,7,7,7	0
57	MG	YA	3257	1/1	0.98	0.11	3,3,3,3	0
57	MG	XV	102	1/1	0.98	0.06	0,0,0,0	0
57	MG	YA	3033	1/1	0.98	0.15	4,4,4,4	0
57	MG	QA	1608	1/1	0.98	0.05	13,13,13,13	0
57	MG	RE	301	1/1	0.98	0.10	1,1,1,1	0
57	MG	YA	3212	1/1	0.98	0.07	9,9,9,9	0
57	MG	RA	3067	1/1	0.98	0.11	9,9,9,9	0
57	MG	YA	3264	1/1	0.98	0.04	24,24,24,24	0
57	MG	YA	3038	1/1	0.98	0.10	6,6,6,6	0

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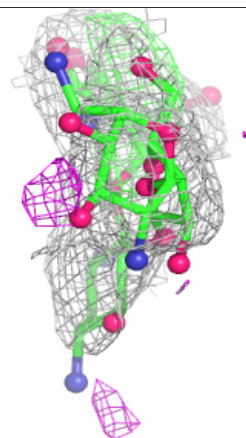
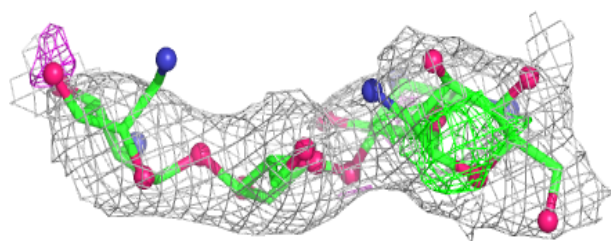
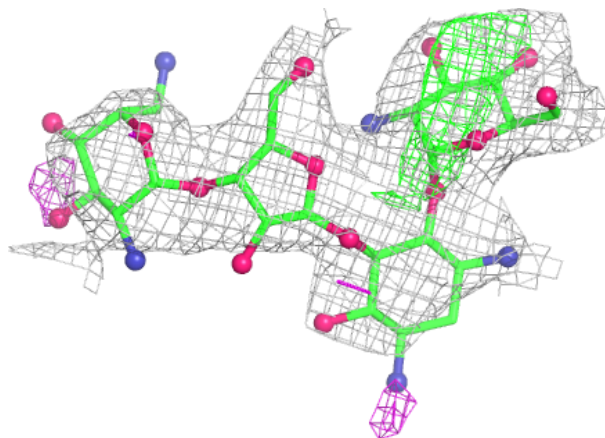
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3147	1/1	0.98	0.06	21,21,21,21	0
57	MG	RA	3014	1/1	0.98	0.19	9,9,9,9	0
57	MG	YA	3006	1/1	0.98	0.23	9,9,9,9	0
57	MG	RR	201	1/1	0.98	0.12	7,7,7,7	0
57	MG	RA	3231	1/1	0.98	0.21	9,9,9,9	0
57	MG	YA	3010	1/1	0.98	0.11	4,4,4,4	0
57	MG	RA	3020	1/1	0.98	0.13	1,1,1,1	0
57	MG	XA	1640	1/1	0.98	0.05	31,31,31,31	0
57	MG	Y5	101	1/1	0.98	0.08	26,26,26,26	0
57	MG	YA	3086	1/1	0.98	0.14	6,6,6,6	0
57	MG	RA	3233	1/1	0.98	0.08	24,24,24,24	0
57	MG	YA	3014	1/1	0.98	0.11	3,3,3,3	0
57	MG	YA	3089	1/1	0.98	0.13	8,8,8,8	0
57	MG	XA	1642	1/1	0.98	0.21	23,23,23,23	0
57	MG	XA	1619	1/1	0.98	0.10	18,18,18,18	0
57	MG	YA	3092	1/1	0.98	0.10	30,30,30,30	0
57	MG	YA	3190	1/1	0.99	0.04	2,2,2,2	0
57	MG	YA	3168	1/1	0.99	0.04	13,13,13,13	0
57	MG	YA	3026	1/1	0.99	0.20	8,8,8,8	0
57	MG	RA	3094	1/1	0.99	0.03	9,9,9,9	0
57	MG	XA	1636	1/1	0.99	0.06	5,5,5,5	0
57	MG	RA	3009	1/1	0.99	0.07	9,9,9,9	0
57	MG	RA	3033	1/1	0.99	0.14	3,3,3,3	0
57	MG	YA	3031	1/1	0.99	0.13	2,2,2,2	0
57	MG	RA	3015	1/1	0.99	0.10	2,2,2,2	0
57	MG	XA	1627	1/1	0.99	0.04	7,7,7,7	0
57	MG	YA	3051	1/1	0.99	0.09	2,2,2,2	0
57	MG	RA	3005	1/1	0.99	0.23	13,13,13,13	0
57	MG	YA	3035	1/1	0.99	0.09	5,5,5,5	0
57	MG	QA	1642	1/1	0.99	0.04	21,21,21,21	0
57	MG	QA	1667	1/1	0.99	0.07	32,32,32,32	0
57	MG	RA	3054	1/1	0.99	0.04	0,0,0,0	0
57	MG	YA	3057	1/1	0.99	0.17	6,6,6,6	0
57	MG	YA	3008	1/1	0.99	0.13	9,9,9,9	0
57	MG	YA	3059	1/1	0.99	0.09	6,6,6,6	0
57	MG	YA	3080	1/1	0.99	0.18	10,10,10,10	0
57	MG	RA	3038	1/1	0.99	0.14	9,9,9,9	0
57	MG	QA	1621	1/1	0.99	0.03	14,14,14,14	0
57	MG	XA	1634	1/1	0.99	0.02	15,15,15,15	0
57	MG	RA	3074	1/1	1.00	0.04	4,4,4,4	0
57	MG	YA	3005	1/1	1.00	0.03	1,1,1,1	0

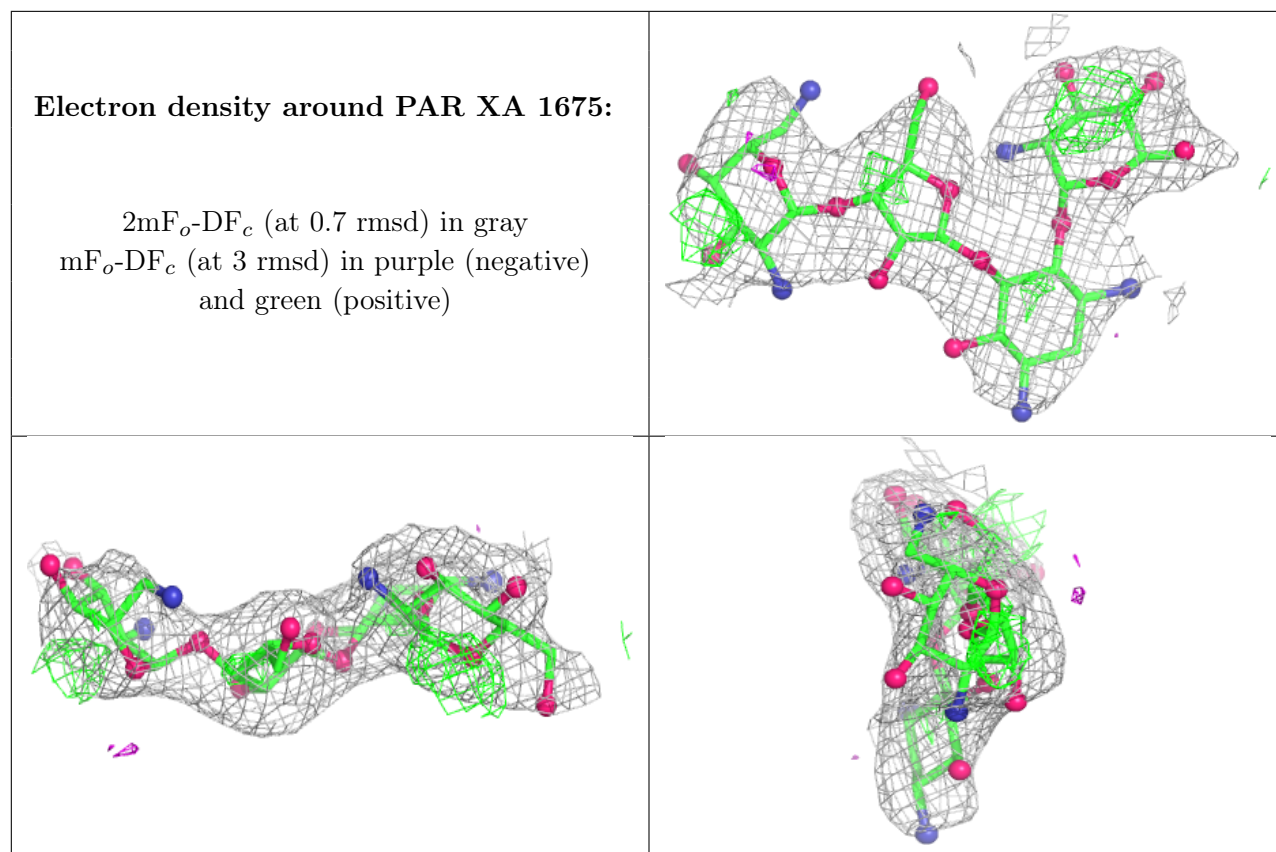
The following is a graphical depiction of the model fit to experimental electron density of all

instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around PAR QA 1670:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.