Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 03:35 am GMT

PDB ID	:	6FXC
EMDB ID	:	EMD-3637
Title	:	The cryo-EM structure of hibernating 100S ribosome dimer from pathogenic Staphylococcus aureus
Authors	:	Matzov, D.; Aibara, S.; Zimmerman, E.; Bashan, A.; Kidmose, R.; Amunts, A.; Yonath, A.
Deposited on	:	2018-03-08
Resolution	:	6.76 Å(reported)

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

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

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

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

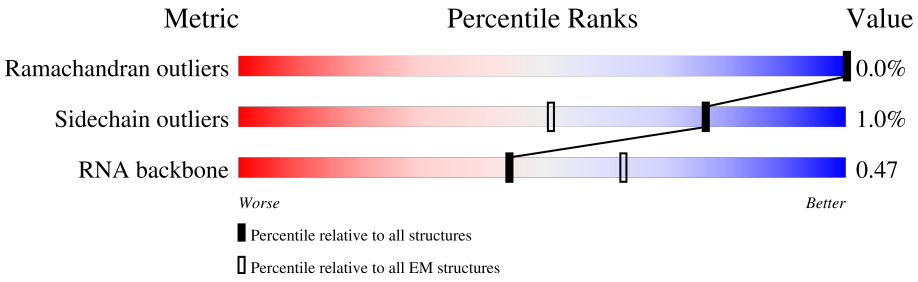
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 6.76 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	Aa	1539	5% 68% 30%
1	Ba	1539	5% 68% 30%
2	Ab	226	64% 99%
2	Bb	226	64% 99%
3	Ac	202	73% 100%
3	Bc	202	73% 100%
4	Ad	198	41% 99%
4	Bd	198	41% 99%

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Mol	Chain	Length	Quality of chain
5	Ae	156	74% 99%
5	Be	156	74% 99%
6	Af	95	59% 99%
6	Bf	95	59% 99%
7	Ag	152	68% 100%
7	Bg	152	68% 100%
8	Ah	131	51% 98%
8	Bh	131	51% 98%
9	Ai	127	55% 97%
9	Bi	127	55% 97%
10	Aj	97	56% 99%
10	Bj	97	56% 99%
11	Ak	114	54% 100%
11	Bk	114	54% 100%
12	Al	135	66% 98%
12	Bl	135	66% 98%
13	Am	121	49% 85% 14%
13	Bm	121	49% 85% 14%
14	An	60	22% 97%
14	Bn	60	22% 97%
15	Ao	88	40% 99%
15	Bo	88	40% 99%
16	Ap	89	42% 98%
16	Bp	89	42% 98%
17	Aq	80	52% 100%

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Mol	Chain	Length	Quality of chain
17	Bq	80	54% 100%
18	Ar	54	59% 98%
18	Br	54	59% 98%
19	As	80	32% 99%
19	Bs	80	32% 99%
20	At	81	33% 99%
20	Bt	81	33% 99%
21	Au	52	94% 100%
21	Bu	52	94% 100%
22	Av	190	57% 82% 15%
22	Bv	190	57% 82% 15%
23	AA	2923	7% 70% 27%
23	BA	2923	7% 70% 27%
24	AB	115	6% 82% 17%
24	BB	115	6% 81% 17%
25	AC	274	56% 99%
25	BC	274	56% 99%
26	AD	215	33% 99%
26	BD	215	33% 99%
27	AE	206	46% 100%
27	BE	206	46% 100%
28	AF	175	59% 99%
28	BF	175	59% 99%
29	AG	175	55% 99%
29	BG	175	55% 99%

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Mol	Chain	Length	Quality of chain
30	AH	145	27% 99%
30	BH	145	27% 99%
31	AI	122	64% 97%
31	BI	122	64% 97%
32	AJ	146	47% 97%
32	BJ	146	47% 97%
33	AK	137	36% 99%
33	BK	137	36% 99%
34	AL	120	31% 99%
34	BL	120	31% 99%
35	AM	119	30% 96%
35	BM	119	30% 97%
36	AN	114	46% 98%
36	BN	114	46% 98%
37	AO	116	20% 99%
37	BO	116	20% 99%
38	AP	102	42% 98%
38	BP	102	42% 98%
39	AQ	112	41% 99%
39	BQ	112	41% 99%
40	AR	89	31% 98%
40	BR	89	31% 98%
41	AS	103	52% 99%
41	BS	103	52% 99%
42	AT	94	76% 99%

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Mol	Chain	Length	Quality of chain
42	BT	94	76% 99%
43	AU	82	18% 95% 5%
43	BU	82	18% 95% 5%
44	AV	58	59% 98%
44	BV	58	59% 98%
45	AW	67	48% 100%
45	BW	67	48% 100%
46	AX	58	62% 100%
46	BX	58	62% 100%
47	AY	59	90% 100%
47	BY	59	90% 100%
48	AZ	48	40% 100%
48	BZ	48	40% 100%
49	A1	47	83% 100%
49	B1	47	83% 100%
50	A2	43	30% 100%
50	B2	43	30% 100%
51	A3	64	27% 100%
51	B3	64	27% 100%
52	A4	37	11% 97%
52	B4	37	11% 97%

2 Entry composition

There are 52 unique types of molecules in this entry. The entry contains 281510 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Aa	1539	Total	C	N	O	P	0	0
			32969	14719	6017	10694	1539		
1	Ba	1539	Total	C	N	O	P	0	0
			32969	14719	6017	10694	1539		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Ab	226	Total	C	N	O	S	0	0
			1813	1156	314	335	8		
2	Bb	226	Total	C	N	O	S	0	0
			1813	1156	314	335	8		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	Ac	202	Total	C	N	O	S	0	0
			1501	945	284	271	1		
3	Bc	202	Total	C	N	O	S	0	0
			1501	945	284	271	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	Ad	198	Total	C	N	O	S	0	0
			1497	952	275	268	2		
4	Bd	198	Total	C	N	O	S	0	0
			1497	952	275	268	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Ae	156	Total	C	N	O	S	0	0
			1145	723	211	209	2		
5	Be	156	Total	C	N	O	S	0	0
			1145	723	211	209	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Af	95	Total	C	N	O	S	0	0
			778	493	138	145	2		
6	Bf	95	Total	C	N	O	S	0	0
			778	493	138	145	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	Ag	152	Total	C	N	O	S	0	0
			1161	722	218	217	4		
7	Bg	152	Total	C	N	O	S	0	0
			1161	722	218	217	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	Ah	131	Total	C	N	O	S	0	0
			1026	650	183	189	4		
8	Bh	131	Total	C	N	O	S	0	0
			1026	650	183	189	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
9	Ai	127	Total	C	N	O	S	0	0
			922	576	179	166	1		
9	Bi	127	Total	C	N	O	S	0	0
			922	576	179	166	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	Aj	97	Total	C	N	O	S	0	0
			752	475	140	136	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	Bj	97	Total 752	C 475	N 140	O 136	S 1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
11	Ak	114	Total 810	C 498	N 151	O 159	S 2	0	0
11	Bk	114	Total 810	C 498	N 151	O 159	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	Al	135	Total 1037	C 646	N 211	O 178	S 2	0	0
12	Bl	135	Total 1037	C 646	N 211	O 178	S 2	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
13	Am	104	Total 727	C 453	N 139	O 135	0	0
13	Bm	104	Total 727	C 453	N 139	O 135	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
14	An	60	Total 487	C 307	N 98	O 77	S 5	0	0
14	Bn	60	Total 487	C 307	N 98	O 77	S 5	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Ao	88	Total 723	C 448	N 150	O 124	S 1	0	0
15	Bo	88	Total 723	C 448	N 150	O 124	S 1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Ap	89	Total	C	N	O	S	0	0
			694	436	128	129	1		
16	Bp	89	Total	C	N	O	S	0	0
			694	436	128	129	1		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Aq	80	Total	C	N	O	0	0
			621	392	112	117		
17	Bq	80	Total	C	N	O	0	0
			621	392	112	117		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Ar	54	Total	C	N	O	S	0	0
			446	284	86	74	2		
18	Br	54	Total	C	N	O	S	0	0
			446	284	86	74	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
19	As	80	Total	C	N	O	S	0	0
			636	410	113	111	2		
19	Bs	80	Total	C	N	O	S	0	0
			636	410	113	111	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
20	At	81	Total	C	N	O	S	0	0
			591	358	117	115	1		
20	Bt	81	Total	C	N	O	S	0	0
			591	358	117	115	1		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
21	Au	52	Total	C	N	O	0	0
			400	249	79	72		
21	Bu	52	Total	C	N	O	0	0
			400	249	79	72		

- Molecule 22 is a protein called Ribosome hibernation promotion factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Av	162	Total	C	N	O	S	0	0
			1333	835	242	254	2		
22	Bv	162	Total	C	N	O	S	0	0
			1333	835	242	254	2		

- Molecule 23 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AA	2905	Total	C	N	O	P	0	0
			62277	27803	11387	20182	2905		
23	BA	2905	Total	C	N	O	P	0	0
			62277	27803	11387	20182	2905		

- Molecule 24 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AB	115	Total	C	N	O	P	0	0
			2445	1094	436	801	114		
24	BB	115	Total	C	N	O	P	0	0
			2445	1094	436	801	114		

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AC	274	Total	C	N	O	S	0	0
			2094	1303	415	371	5		
25	BC	274	Total	C	N	O	S	0	0
			2094	1303	415	371	5		

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AD	215	Total	C	N	O	S	0	0
			1627	1018	299	305	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
26	BD	215	Total	C	N	O	S	0	0
			1627	1018	299	305	5		

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AE	206	Total	C	N	O	S	0	0
			1572	986	288	296	2		
27	BE	206	Total	C	N	O	S	0	0
			1572	986	288	296	2		

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AF	175	Total	C	N	O	S	0	0
			1325	837	227	255	6		
28	BF	175	Total	C	N	O	S	0	0
			1325	837	227	255	6		

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AG	175	Total	C	N	O	S	0	0
			1263	790	239	231	3		
29	BG	175	Total	C	N	O	S	0	0
			1263	790	239	231	3		

- Molecule 30 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AH	145	Total	C	N	O	S	0	0
			1143	714	208	218	3		
30	BH	145	Total	C	N	O	S	0	0
			1143	714	208	218	3		

- Molecule 31 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AI	122	Total	C	N	O	S	0	0
			918	572	174	168	4		
31	BI	122	Total	C	N	O	S	0	0
			918	572	174	168	4		

- Molecule 32 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	AJ	146	Total	C	N	O	S	0	0
			1086	674	214	197	1		
32	BJ	146	Total	C	N	O	S	0	0
			1086	674	214	197	1		

- Molecule 33 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	AK	137	Total	C	N	O	S	0	0
			1071	689	203	175	4		
33	BK	137	Total	C	N	O	S	0	0
			1071	689	203	175	4		

- Molecule 34 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AL	120	Total	C	N	O	S	0	0
			932	576	182	173	1		
34	BL	120	Total	C	N	O	S	0	0
			932	576	182	173	1		

- Molecule 35 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	AM	119	Total	C	N	O	S	0	0
			891	557	174	159	1		
35	BM	119	Total	C	N	O	S	0	0
			891	557	174	159	1		

- Molecule 36 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
36	AN	114	Total	C	N	O	0	0
			889	563	175	151		
36	BN	114	Total	C	N	O	0	0
			889	563	175	151		

- Molecule 37 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	AO	116	Total	C	N	O	S	0	0
			942	593	189	156	4		
37	BO	116	Total	C	N	O	S	0	0
			942	593	189	156	4		

- Molecule 38 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	AP	102	Total	C	N	O	S	0	0
			790	503	142	144	1		
38	BP	102	Total	C	N	O	S	0	0
			790	503	142	144	1		

- Molecule 39 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	AQ	112	Total	C	N	O	S	0	0
			854	534	164	153	3		
39	BQ	112	Total	C	N	O	S	0	0
			854	534	164	153	3		

- Molecule 40 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	AR	89	Total	C	N	O	S	0	0
			715	453	127	131	4		
40	BR	89	Total	C	N	O	S	0	0
			715	453	127	131	4		

- Molecule 41 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	AS	103	Total	C	N	O	S	0	0
			770	486	142	141	1		
41	BS	103	Total	C	N	O	S	0	0
			770	486	142	141	1		

- Molecule 42 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	AT	94	Total	C	N	O	0	0
			722	463	130	129		

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Mol	Chain	Residues	Atoms				AltConf	Trace
42	BT	94	Total 722	C 463	N 130	O 129	0	0

- Molecule 43 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	AU	82	Total 622	C 385	N 122	O 115	0	0
43	BU	82	Total 622	C 385	N 122	O 115	0	0

- Molecule 44 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	AV	58	Total 445	C 277	N 96	O 72	0	0
44	BV	58	Total 445	C 277	N 96	O 72	0	0

- Molecule 45 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	AW	67	Total 541	C 333	N 102	O 106	0	0
45	BW	67	Total 541	C 333	N 102	O 106	0	0

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	AX	58	Total 449	C 280	N 85	O 84	0	0
46	BX	58	Total 449	C 280	N 85	O 84	0	0

- Molecule 47 is a protein called 50S ribosomal protein L31 type B.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	AY	59	Total 370	C 225	N 68	O 76	S 1	0	0
47	BY	59	Total 370	C 225	N 68	O 76	S 1	0	0

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	AZ	48	Total	C	N	O	S	0	0
			360	222	77	59	2		
48	BZ	48	Total	C	N	O	S	0	0
			360	222	77	59	2		

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	A1	47	Total	C	N	O	S	0	0
			390	238	78	70	4		
49	B1	47	Total	C	N	O	S	0	0
			390	238	78	70	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	A2	43	Total	C	N	O	S	0	0
			367	225	89	52	1		
50	B2	43	Total	C	N	O	S	0	0
			367	225	89	52	1		

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	A3	64	Total	C	N	O	S	0	0
			521	324	113	82	2		
51	B3	64	Total	C	N	O	S	0	0
			521	324	113	82	2		

- Molecule 52 is a protein called 50S ribosomal protein L36.

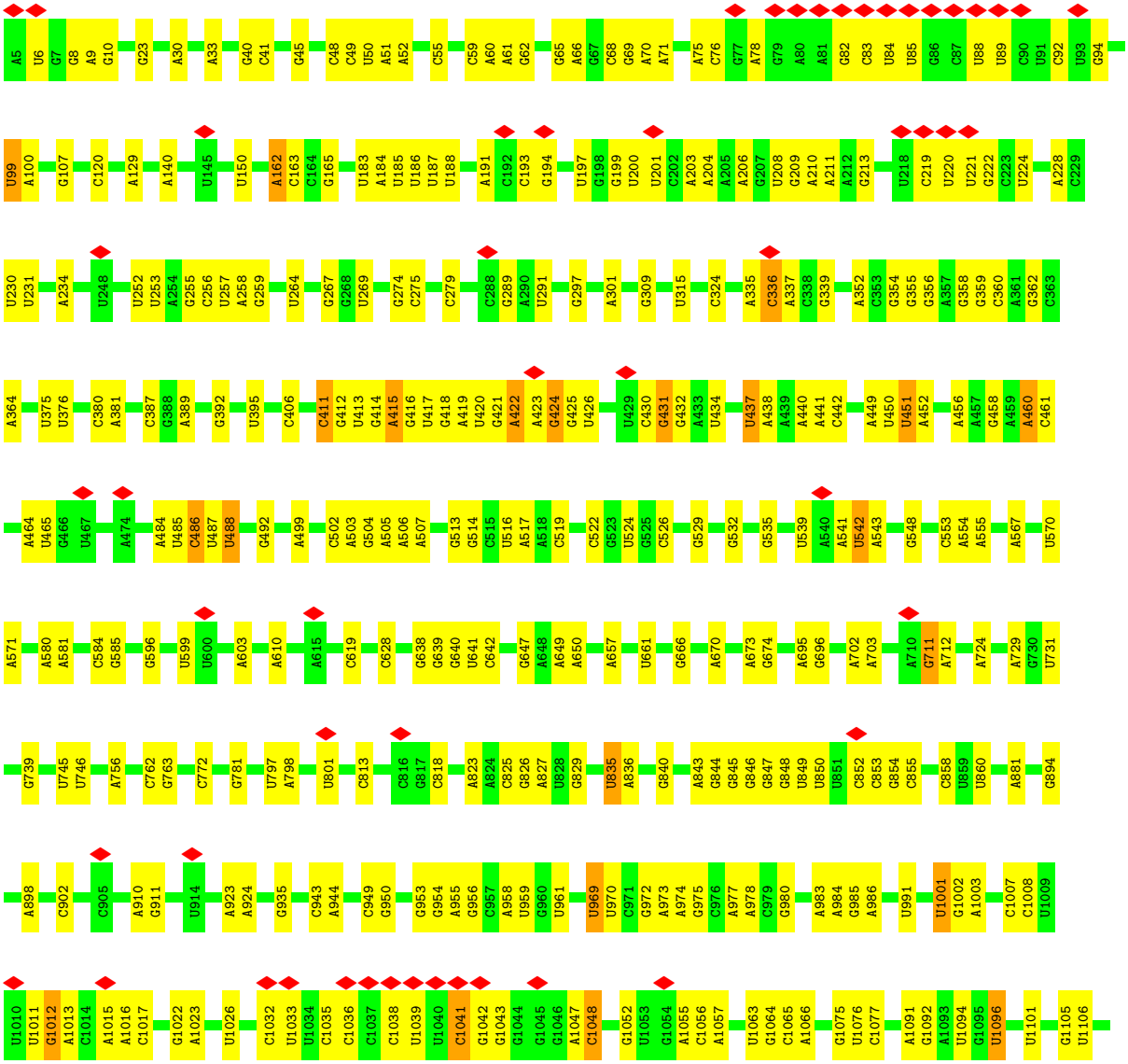
Mol	Chain	Residues	Atoms					AltConf	Trace
52	A4	37	Total	C	N	O	S	0	0
			295	186	60	44	5		
52	B4	37	Total	C	N	O	S	0	0
			295	186	60	44	5		

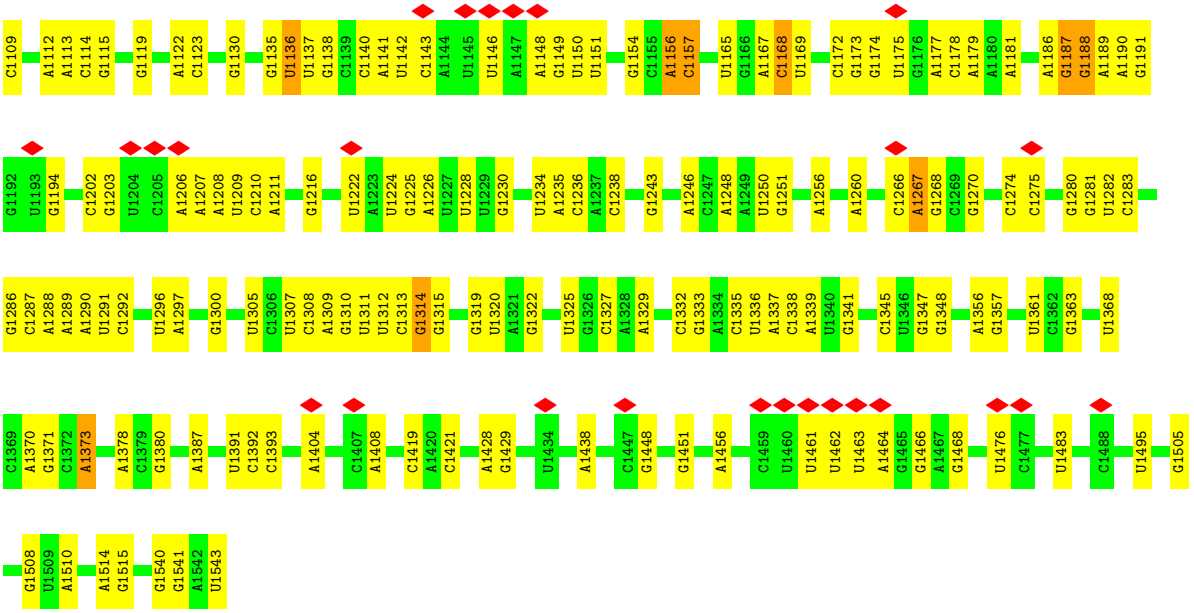
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

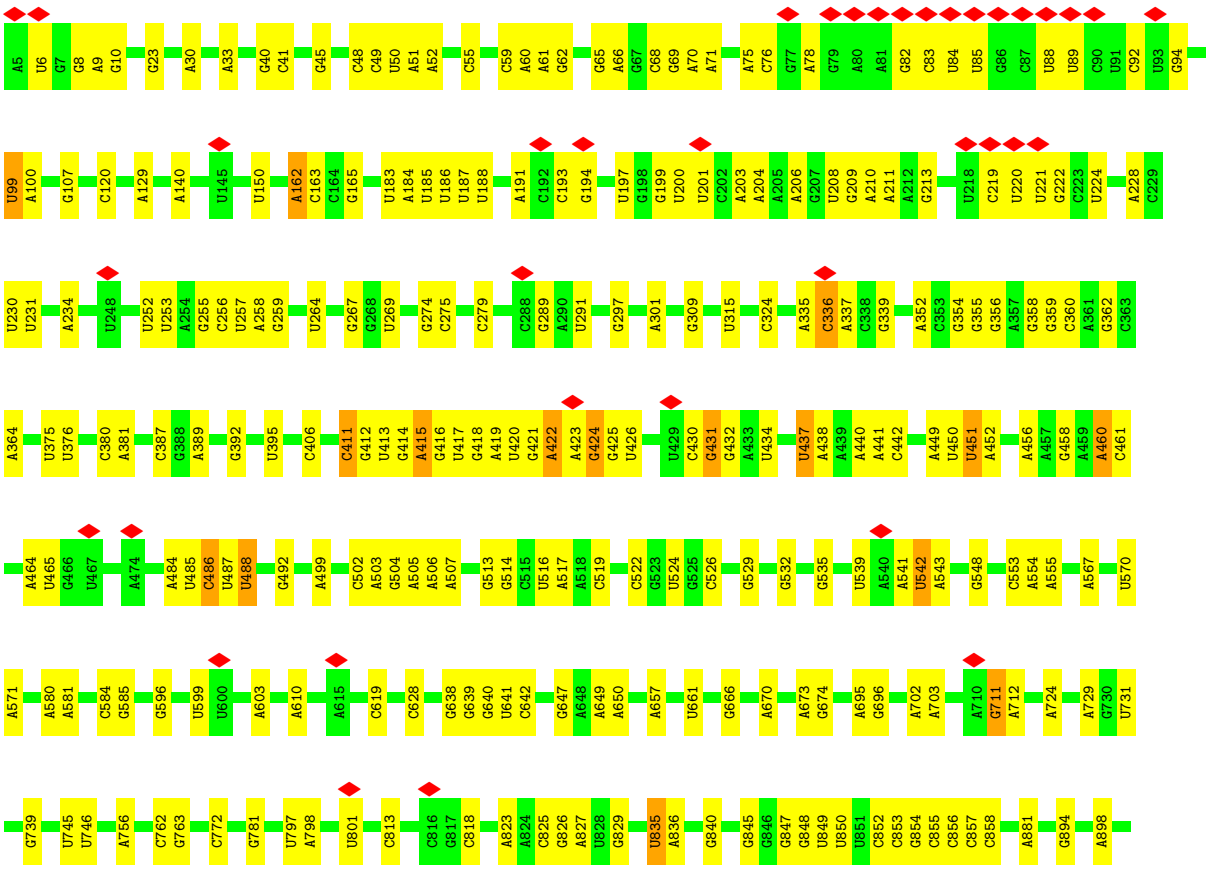
Chain Aa:

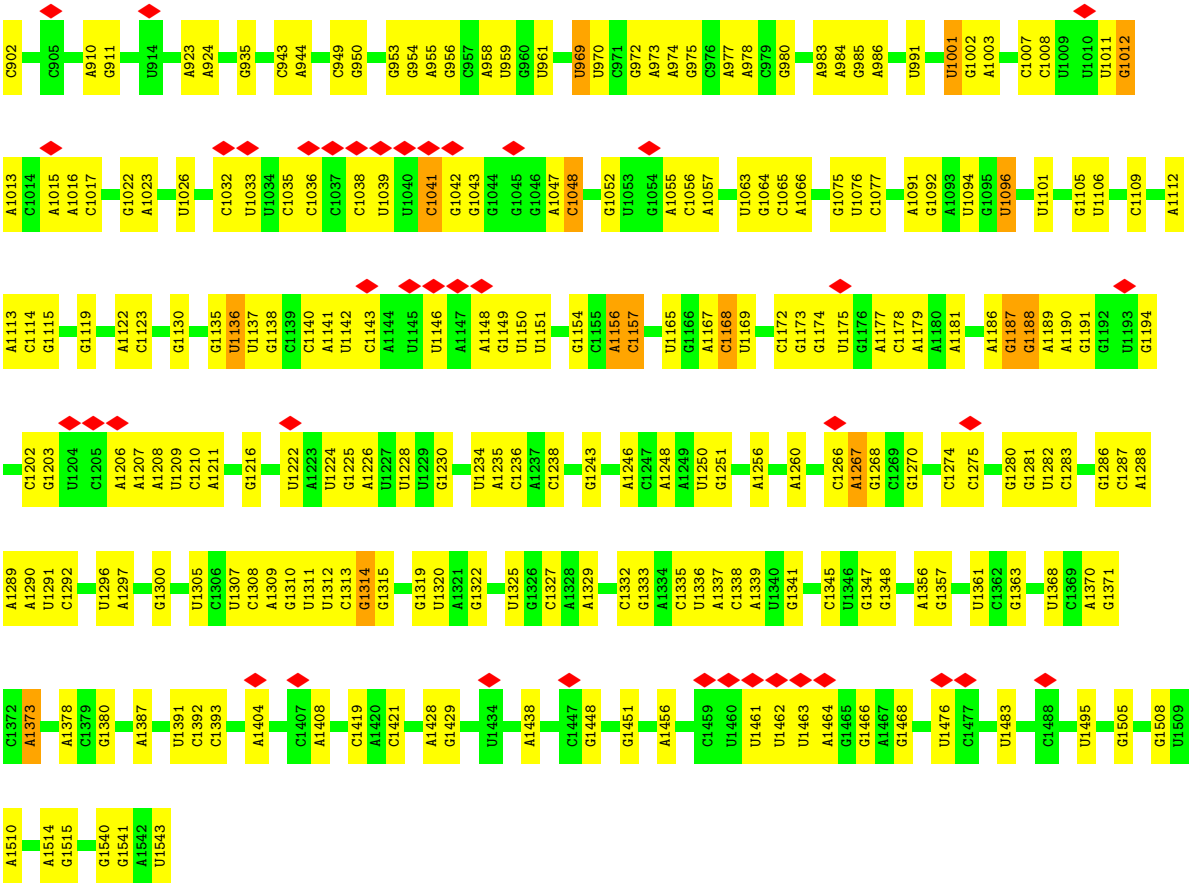




• Molecule 1: 16S ribosomal RNA

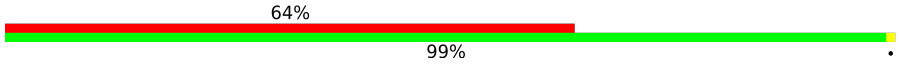
Chain Ba:

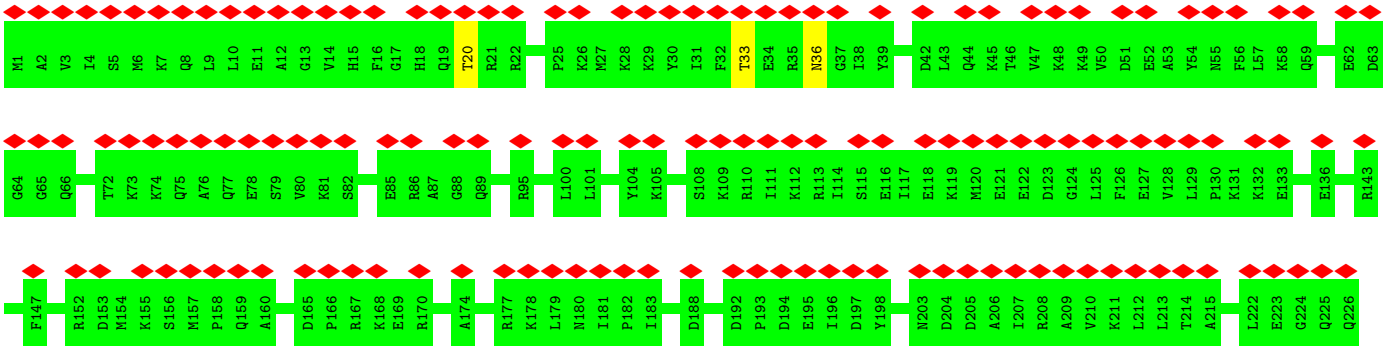




• Molecule 2: 30S ribosomal protein S2

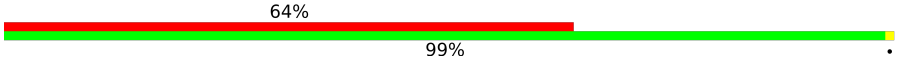
Chain Ab:

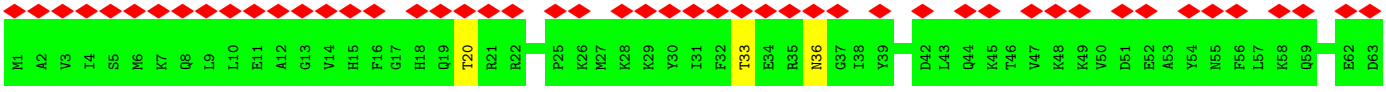


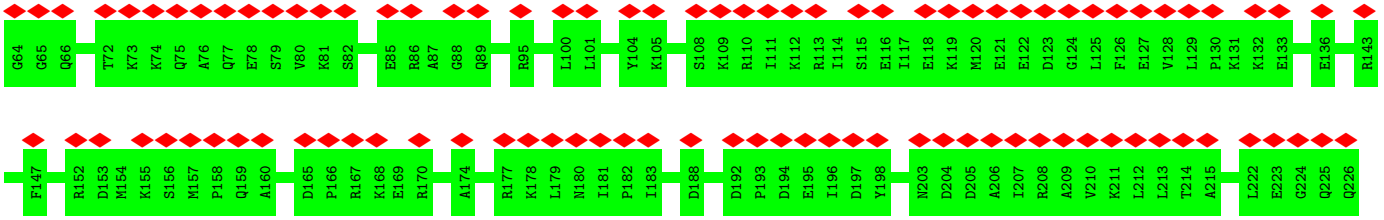


• Molecule 2: 30S ribosomal protein S2

Chain Bb:

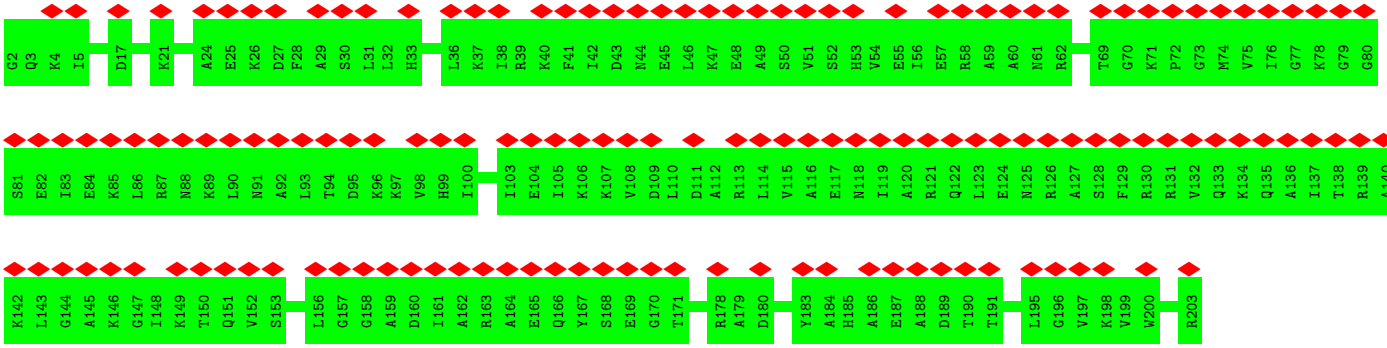






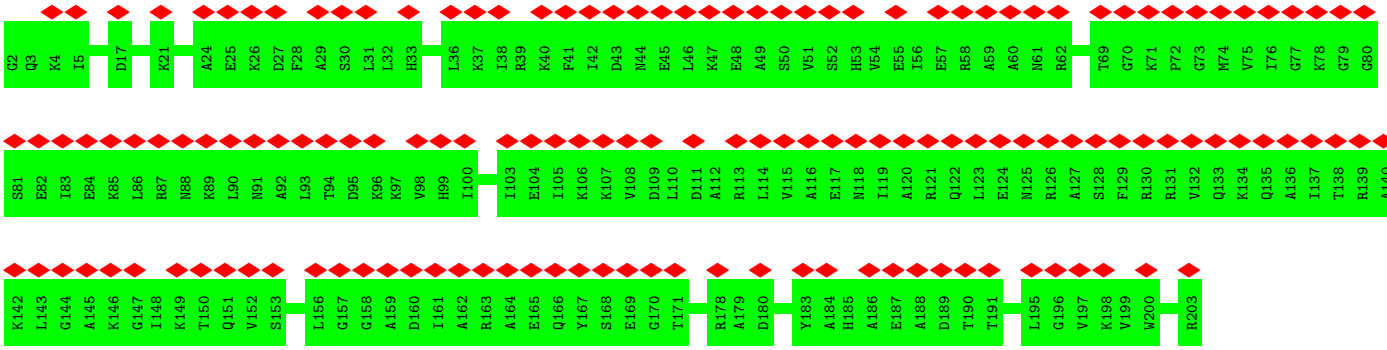
• Molecule 3: 30S ribosomal protein S3

Chain Ac:



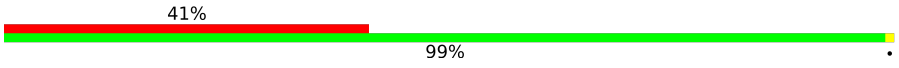
• Molecule 3: 30S ribosomal protein S3

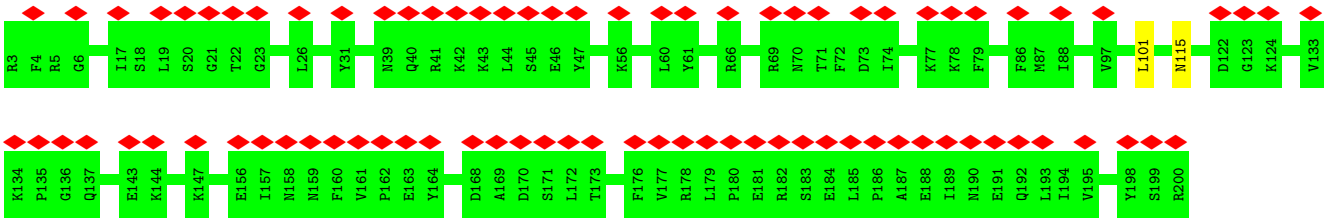
Chain Bc:



• Molecule 4: 30S ribosomal protein S4

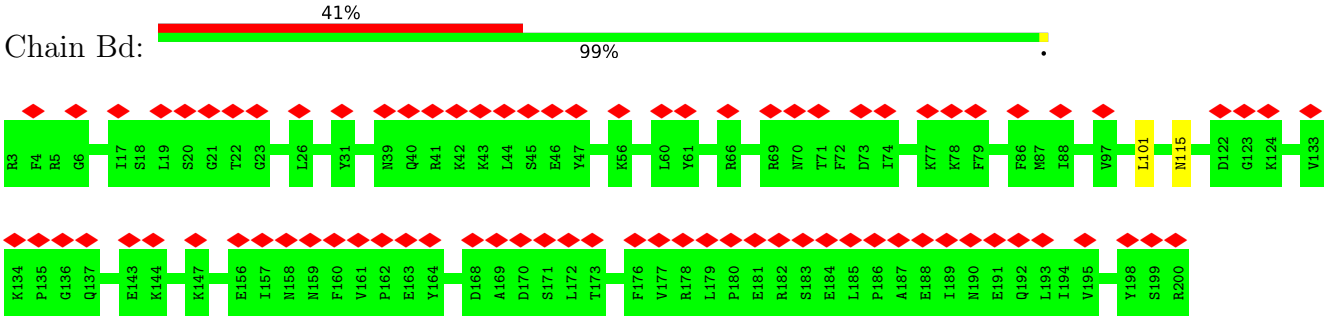
Chain Ad:





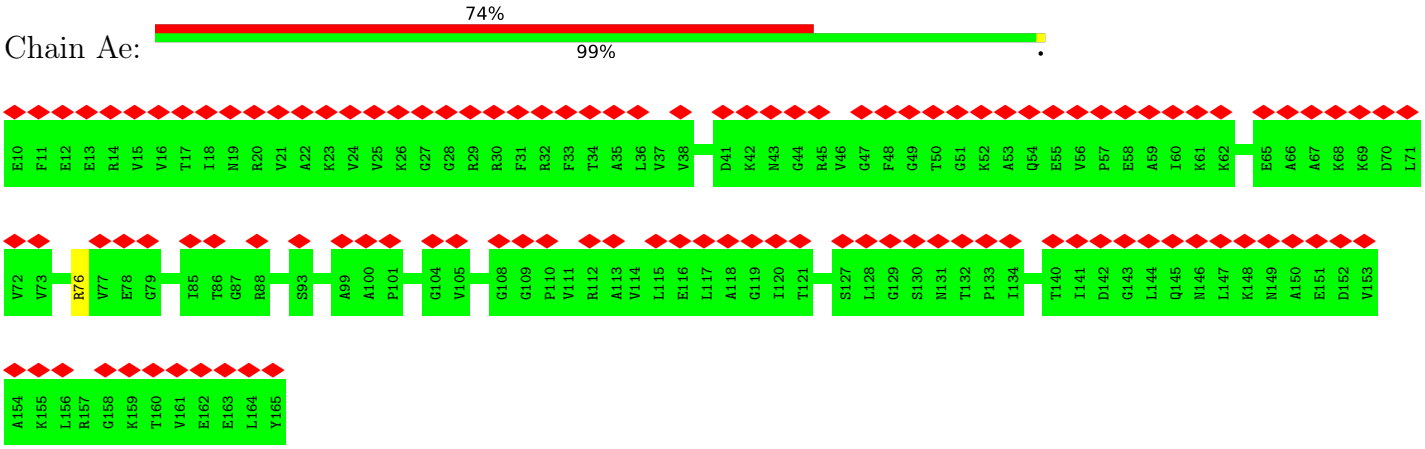
• Molecule 4: 30S ribosomal protein S4

Chain Bd:



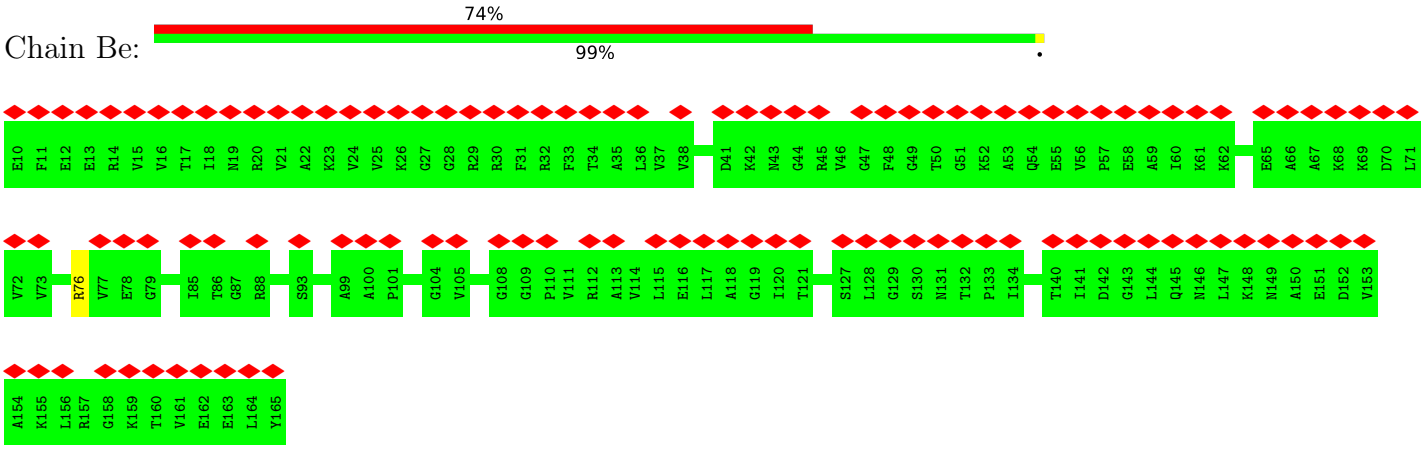
• Molecule 5: 30S ribosomal protein S5

Chain Ae:



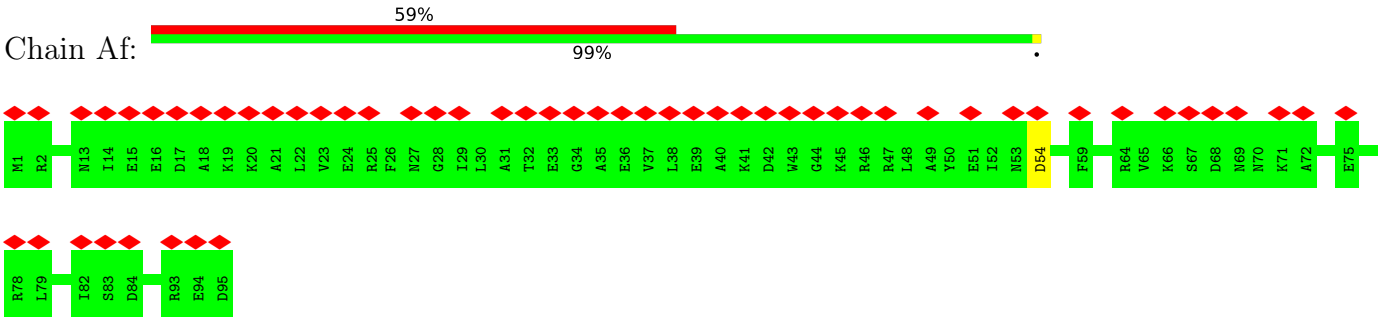
• Molecule 5: 30S ribosomal protein S5

Chain Be:



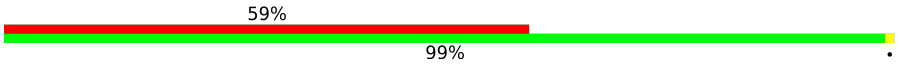
• Molecule 6: 30S ribosomal protein S6

Chain Af:



• Molecule 6: 30S ribosomal protein S6

Chain Bf:



• Molecule 7: 30S ribosomal protein S7

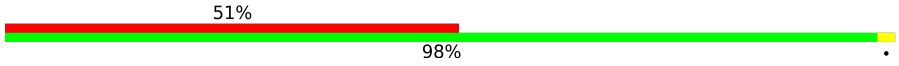
Chain Ag:

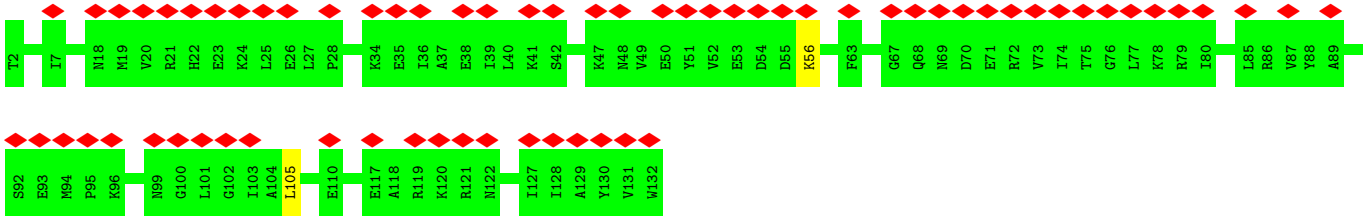
• Molecule 7: 30S ribosomal protein S7

Chain Bg:

• Molecule 8: 30S ribosomal protein S8

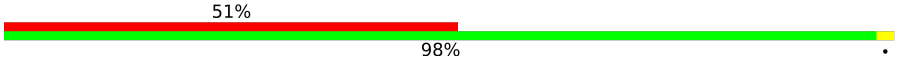
Chain Ah:

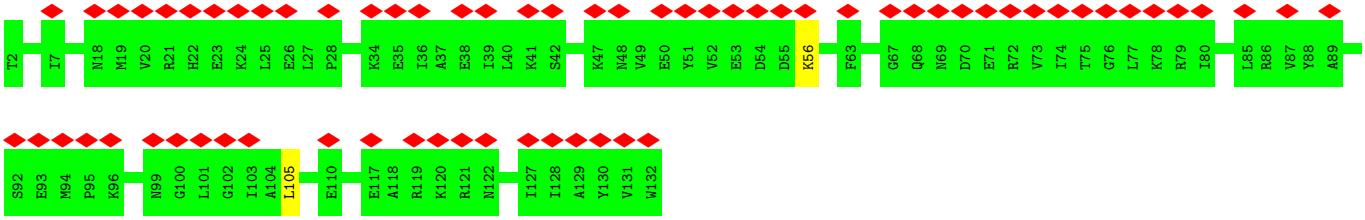




• Molecule 8: 30S ribosomal protein S8

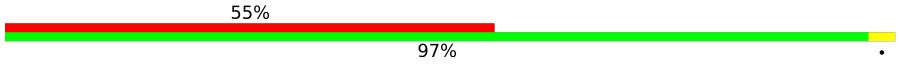
Chain Bh:

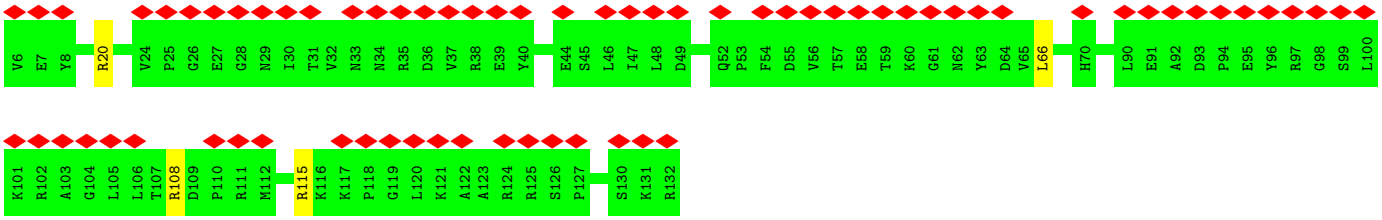




• Molecule 9: 30S ribosomal protein S9

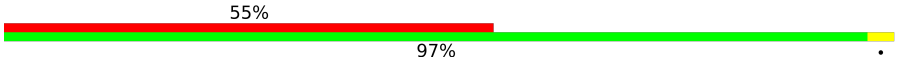
Chain Ai:

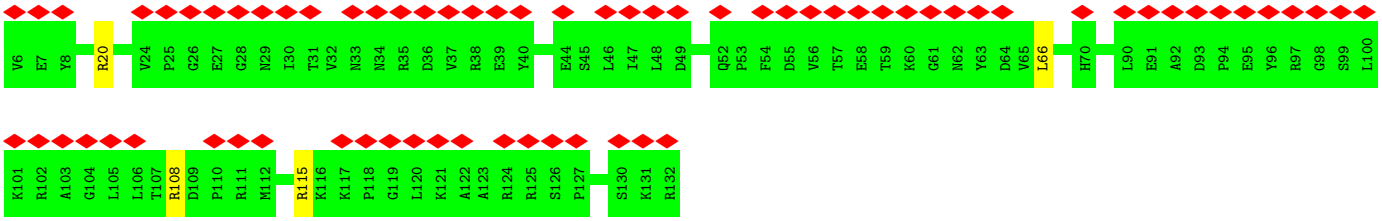




• Molecule 9: 30S ribosomal protein S9

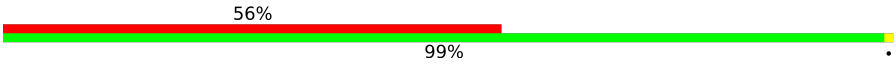
Chain Bi:

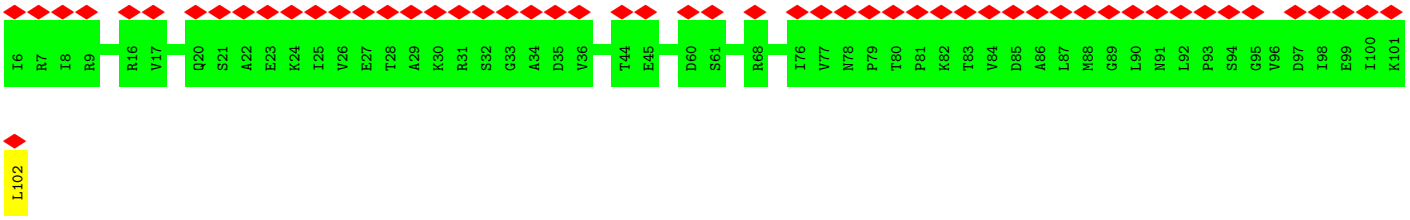




• Molecule 10: 30S ribosomal protein S10

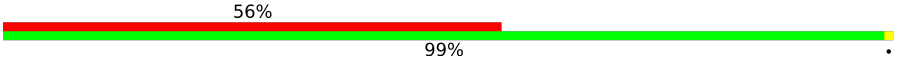
Chain Aj:

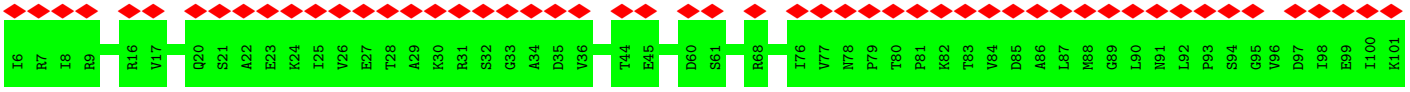




• Molecule 10: 30S ribosomal protein S10

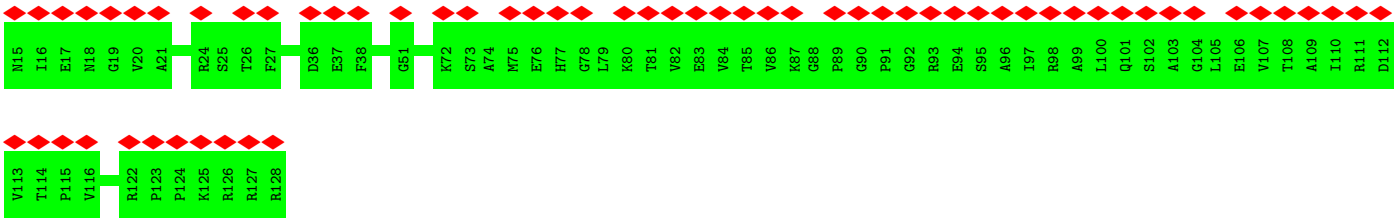
Chain Bj:





• Molecule 11: 30S ribosomal protein S11

Chain Ak:

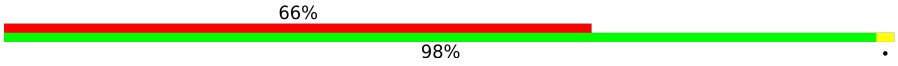


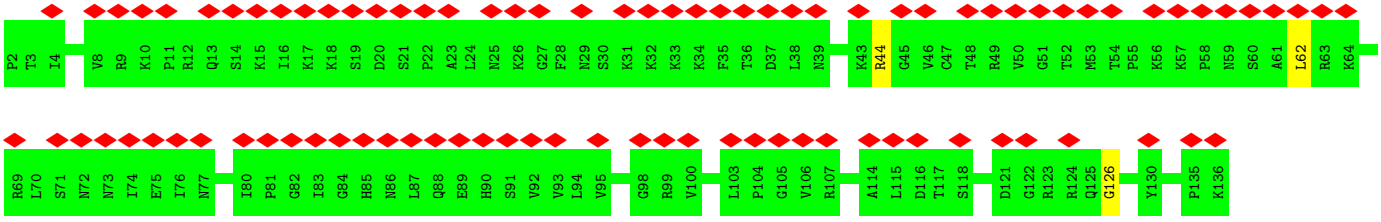
• Molecule 11: 30S ribosomal protein S11

Chain Bk:

• Molecule 12: 30S ribosomal protein S12

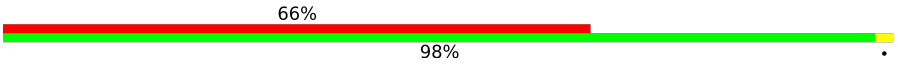
Chain Al:

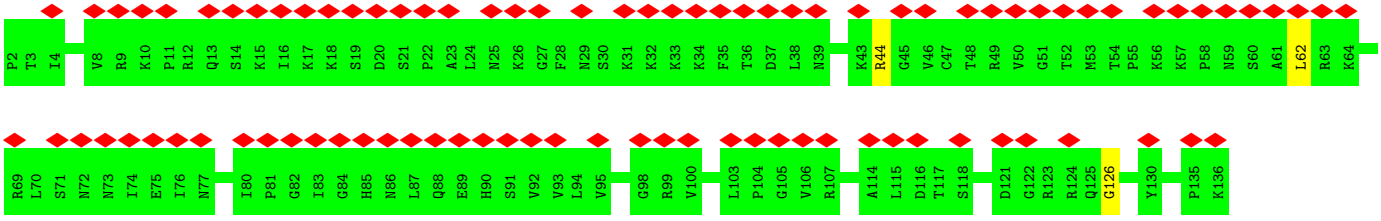




• Molecule 12: 30S ribosomal protein S12

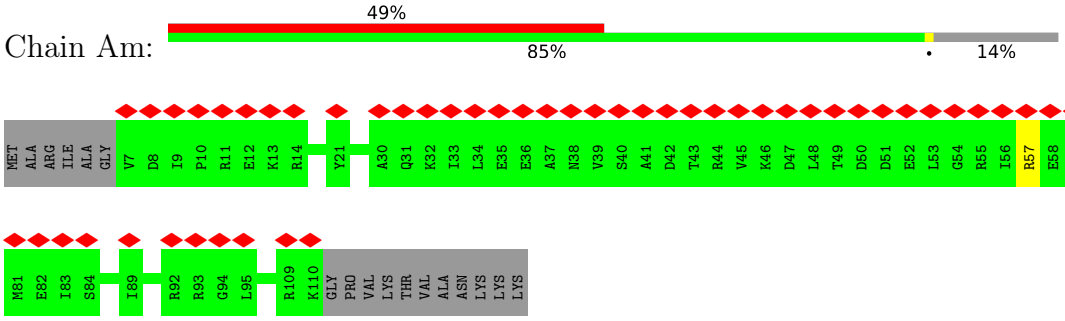
Chain Bl:





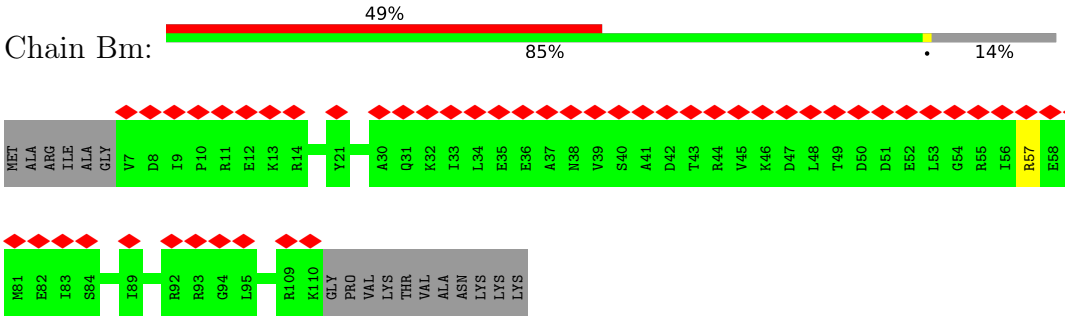
• Molecule 13: 30S ribosomal protein S13

Chain Am:



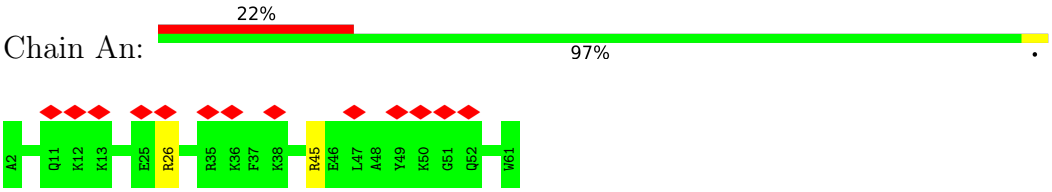
• Molecule 13: 30S ribosomal protein S13

Chain Bm:



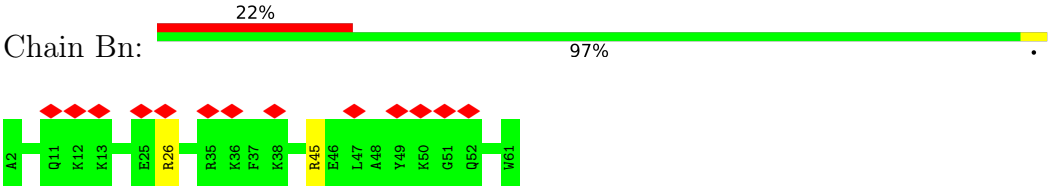
• Molecule 14: 30S ribosomal protein S14 type Z

Chain An:



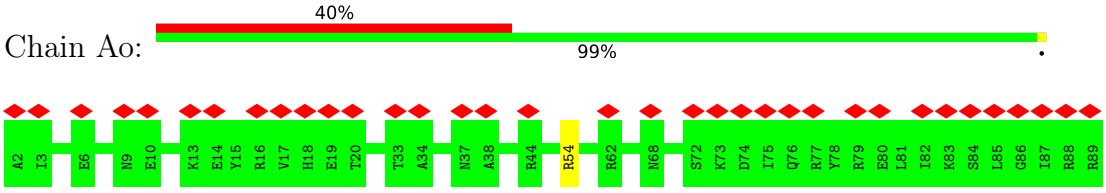
• Molecule 14: 30S ribosomal protein S14 type Z

Chain Bn:



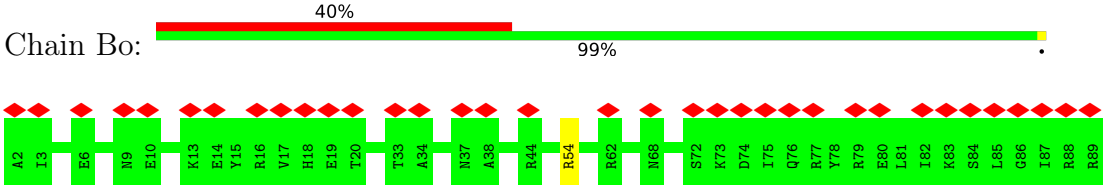
• Molecule 15: 30S ribosomal protein S15

Chain Ao:



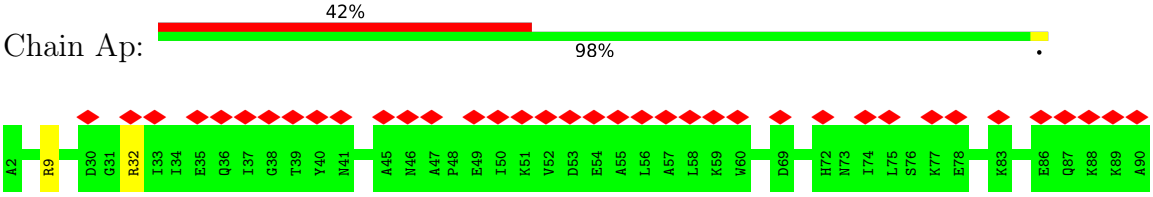
• Molecule 15: 30S ribosomal protein S15

Chain Bo:



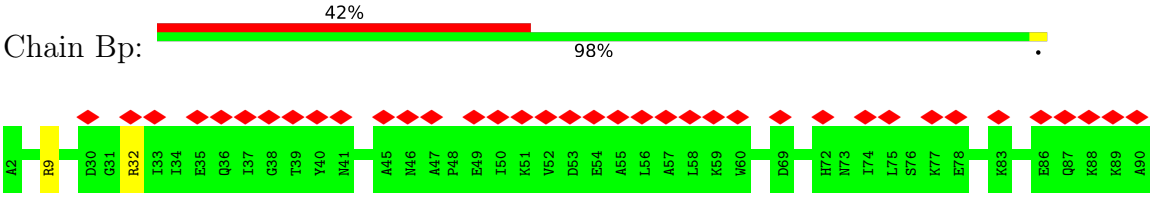
• Molecule 16: 30S ribosomal protein S16

Chain Ap:



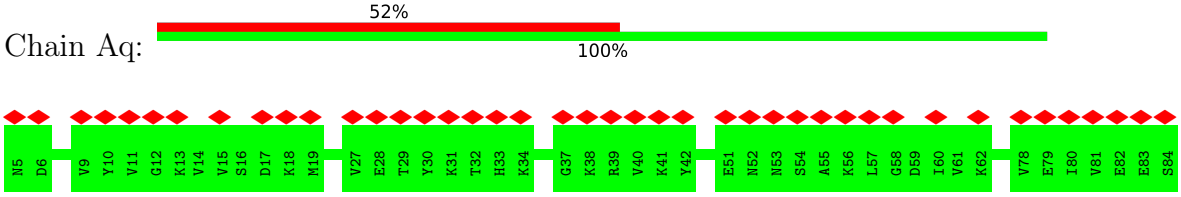
• Molecule 16: 30S ribosomal protein S16

Chain Bp:



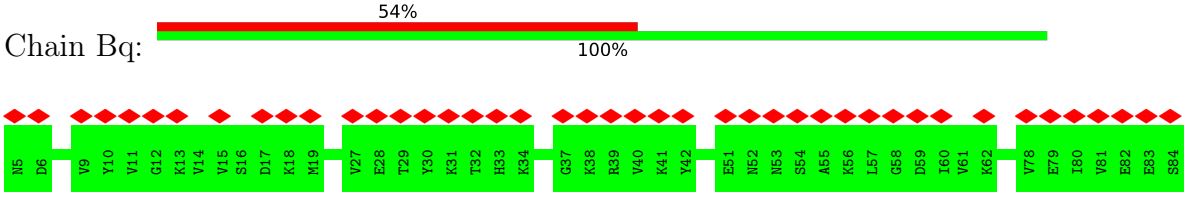
• Molecule 17: 30S ribosomal protein S17

Chain Aq:



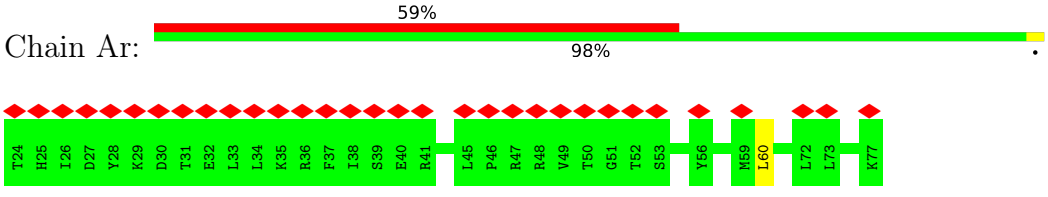
• Molecule 17: 30S ribosomal protein S17

Chain Bq:



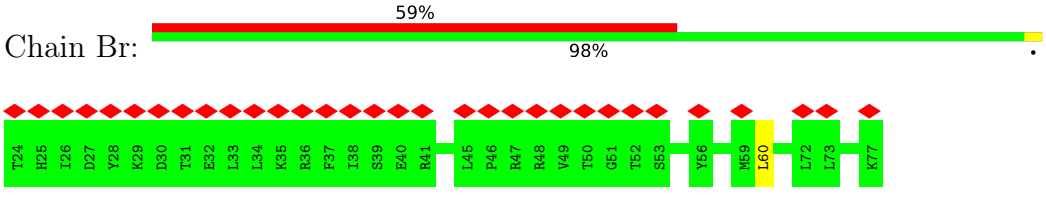
• Molecule 18: 30S ribosomal protein S18

Chain Ar:



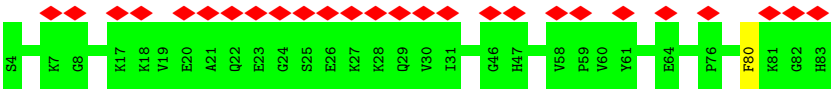
• Molecule 18: 30S ribosomal protein S18

Chain Br:

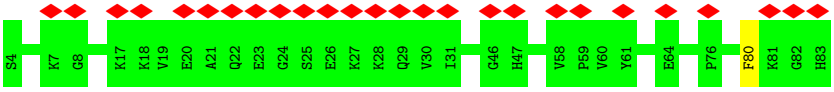


• Molecule 19: 30S ribosomal protein S19

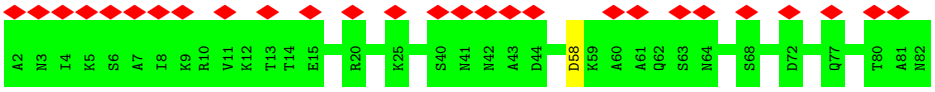
Chain As:



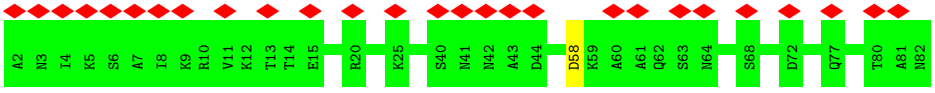
• Molecule 19: 30S ribosomal protein S19



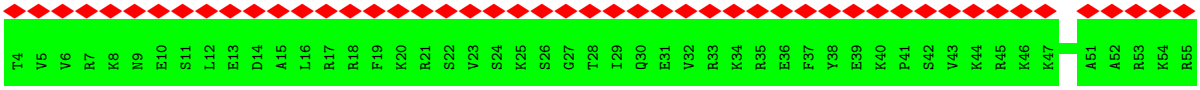
• Molecule 20: 30S ribosomal protein S20



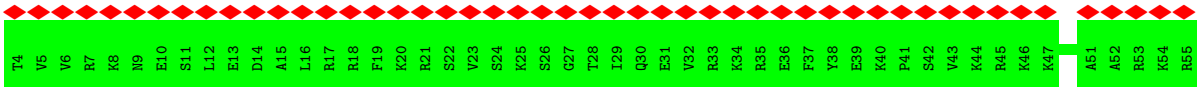
• Molecule 20: 30S ribosomal protein S20



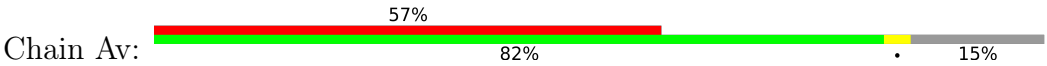
• Molecule 21: 30S ribosomal protein S21

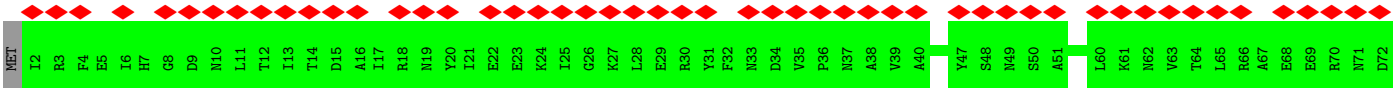


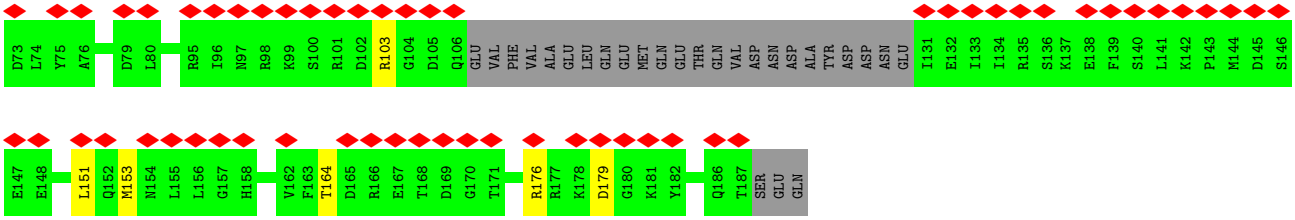
• Molecule 21: 30S ribosomal protein S21



• Molecule 22: Ribosome hibernation promotion factor

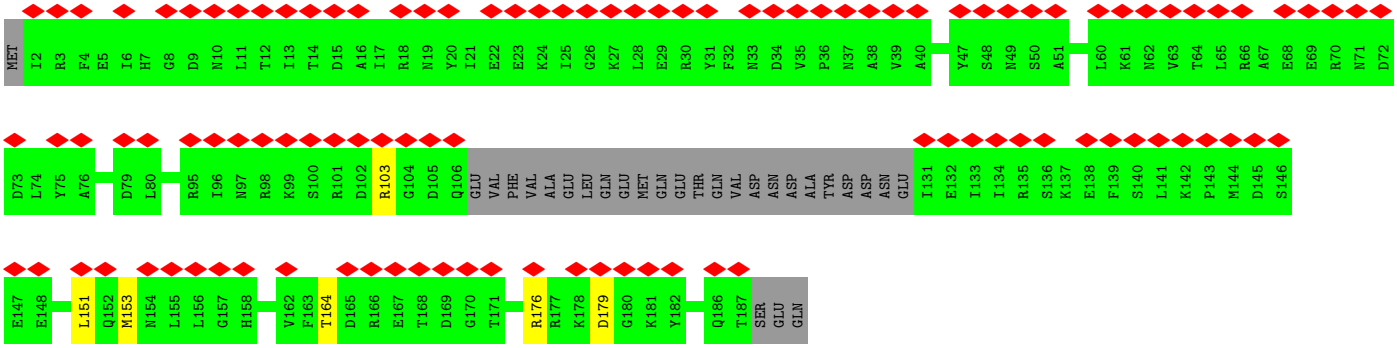






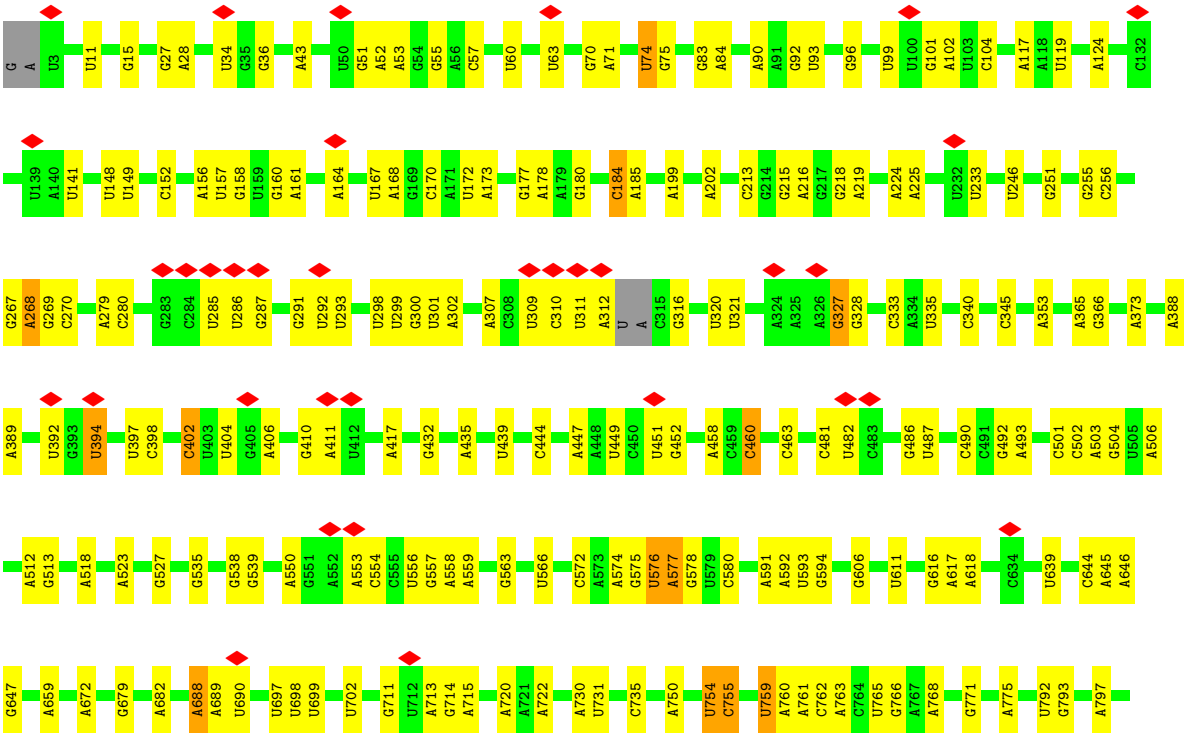
• Molecule 22: Ribosome hibernation promotion factor

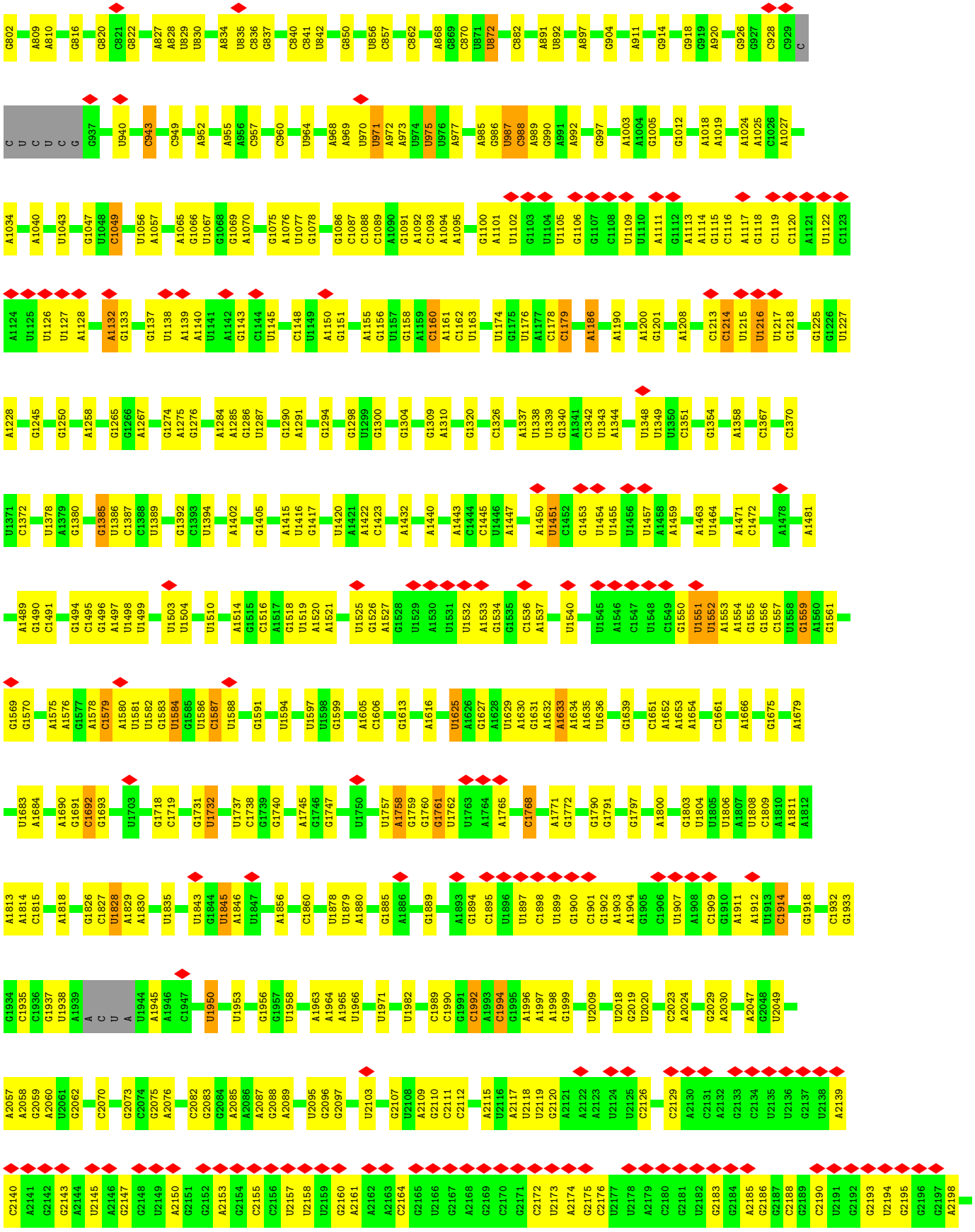
Chain Bv:

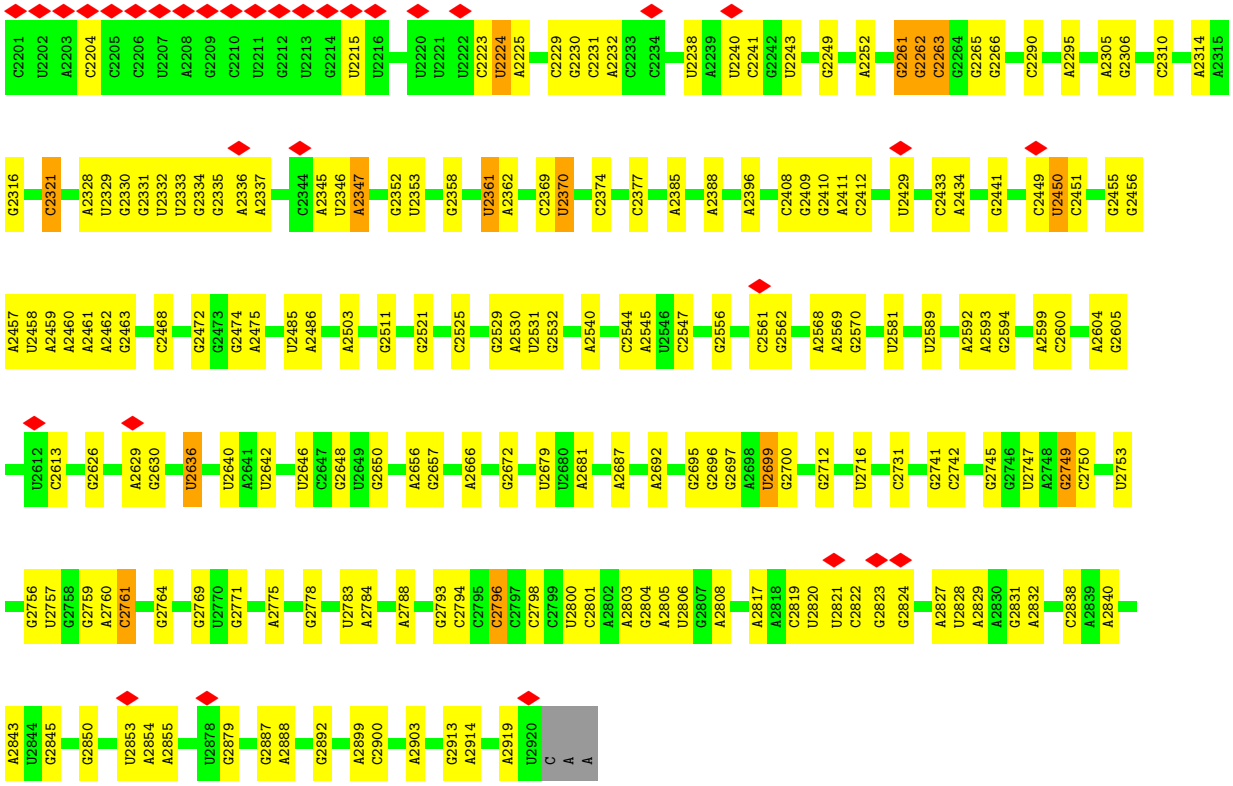


• Molecule 23: 23S ribosomal RNA

Chain AA:

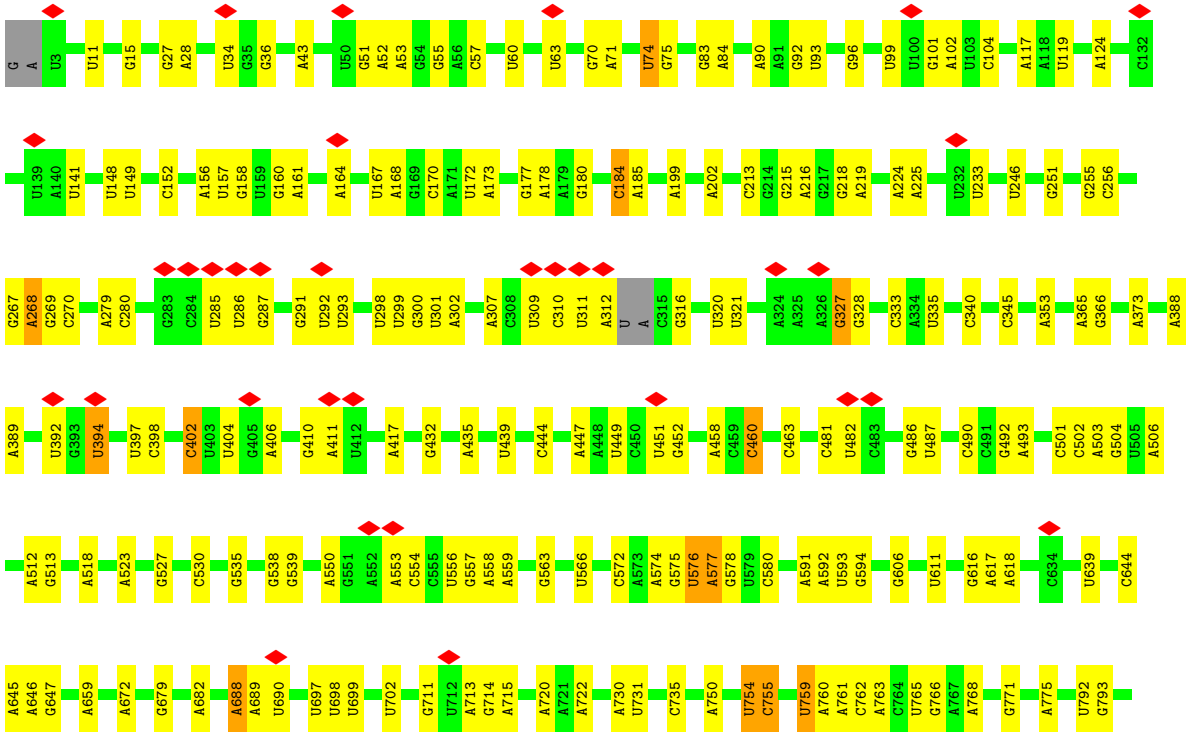


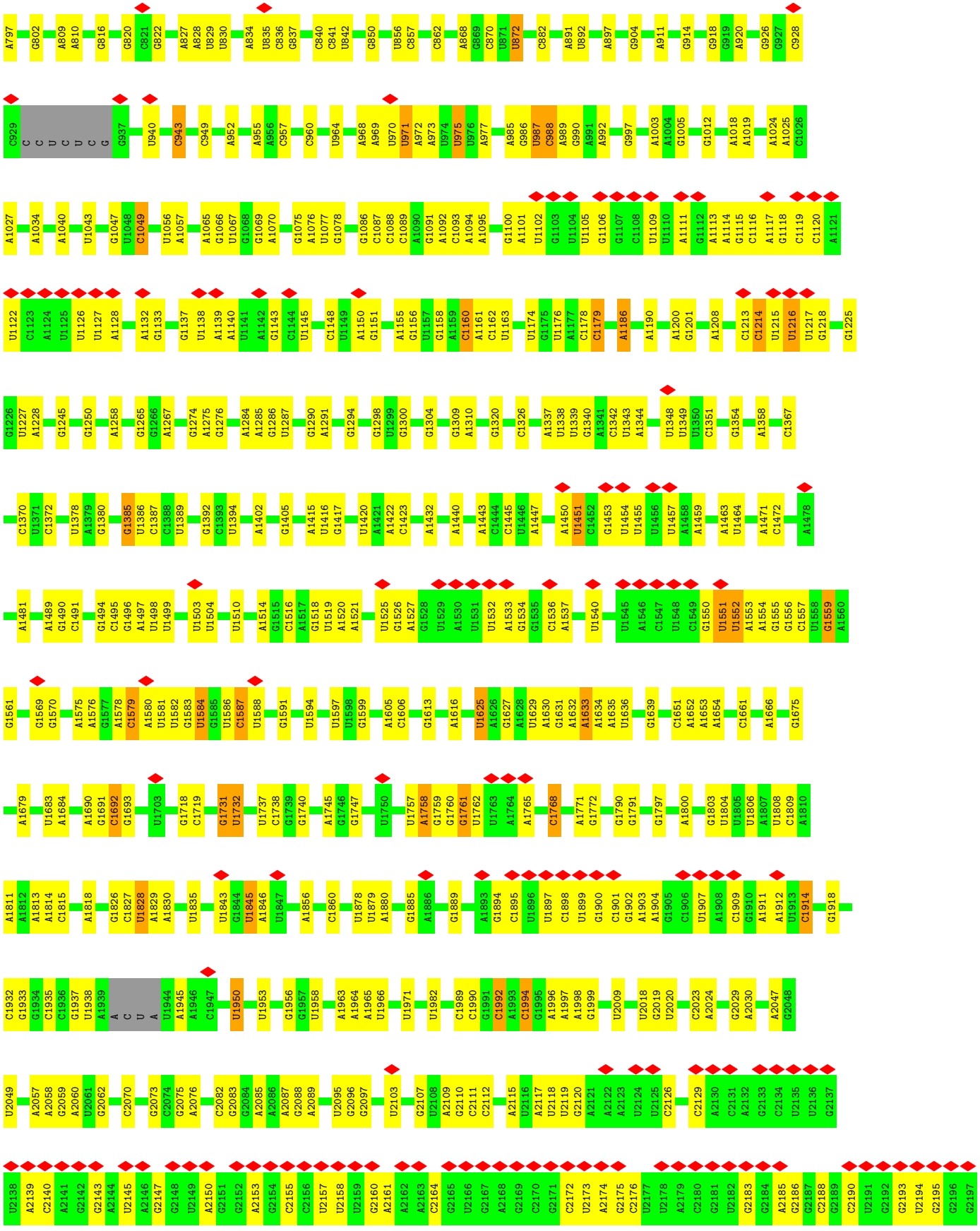




• Molecule 23: 23S ribosomal RNA

Chain BA:

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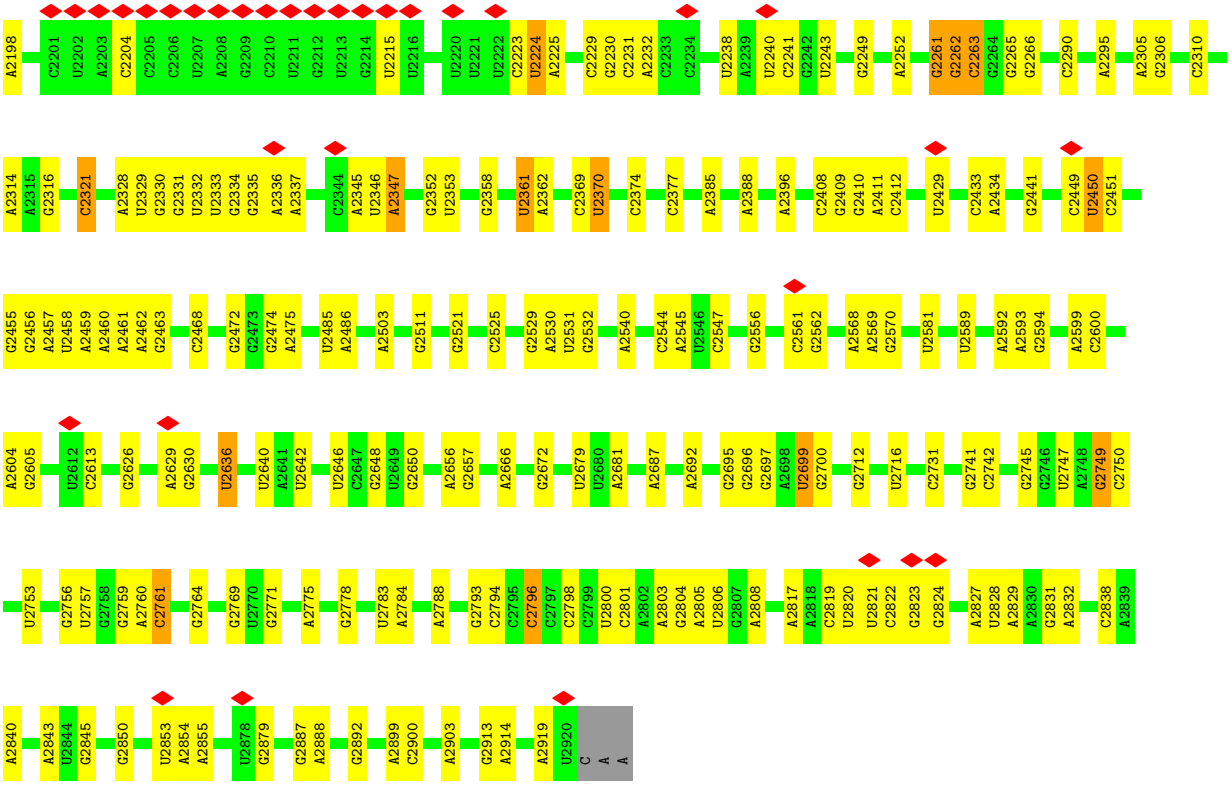
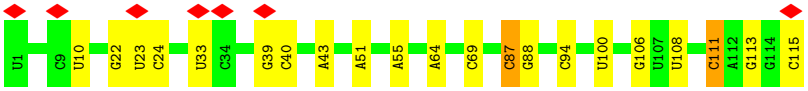


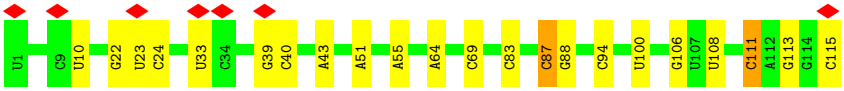
- Molecule 24: 5S ribosomal RNA

Chain AB:



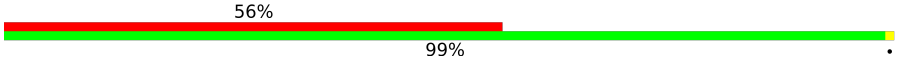
- Molecule 24: 5S ribosomal RNA

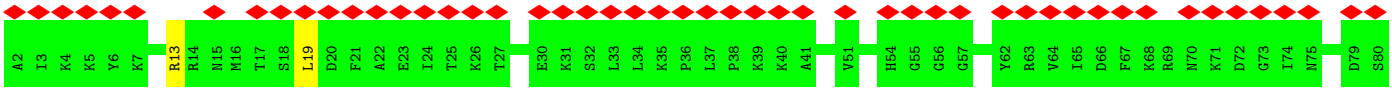
Chain BB:

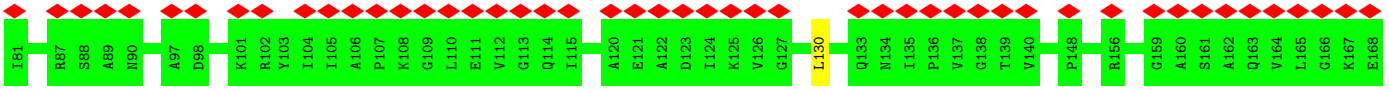


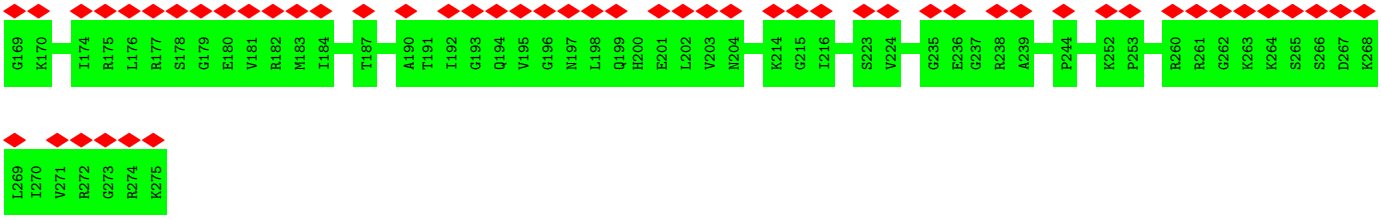
- Molecule 25: 50S ribosomal protein L2

Chain AC:



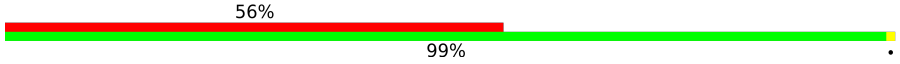


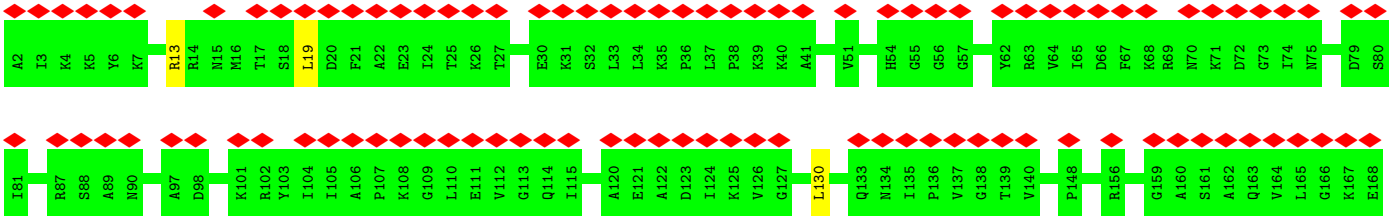




• Molecule 25: 50S ribosomal protein L2

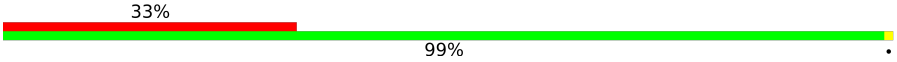
Chain BC:

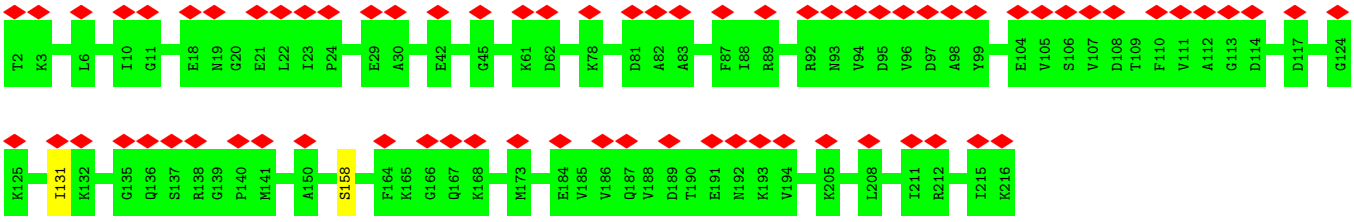




• Molecule 26: 50S ribosomal protein L3

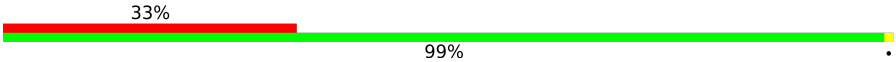
Chain AD:

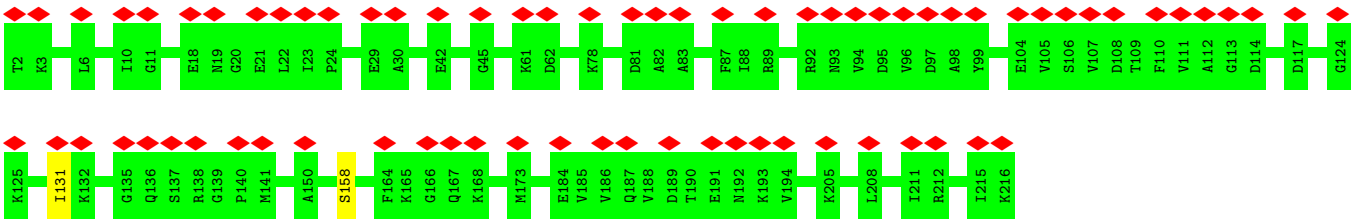




• Molecule 26: 50S ribosomal protein L3

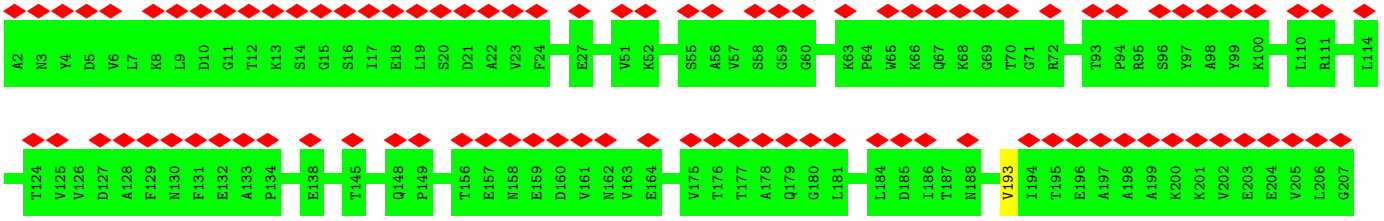
Chain BD:





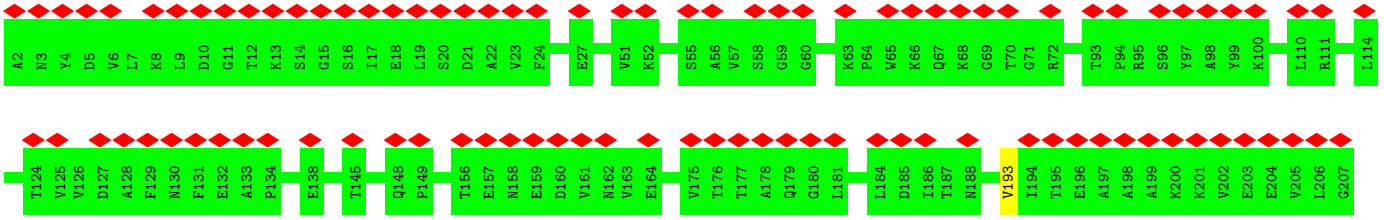
• Molecule 27: 50S ribosomal protein L4

Chain AE:



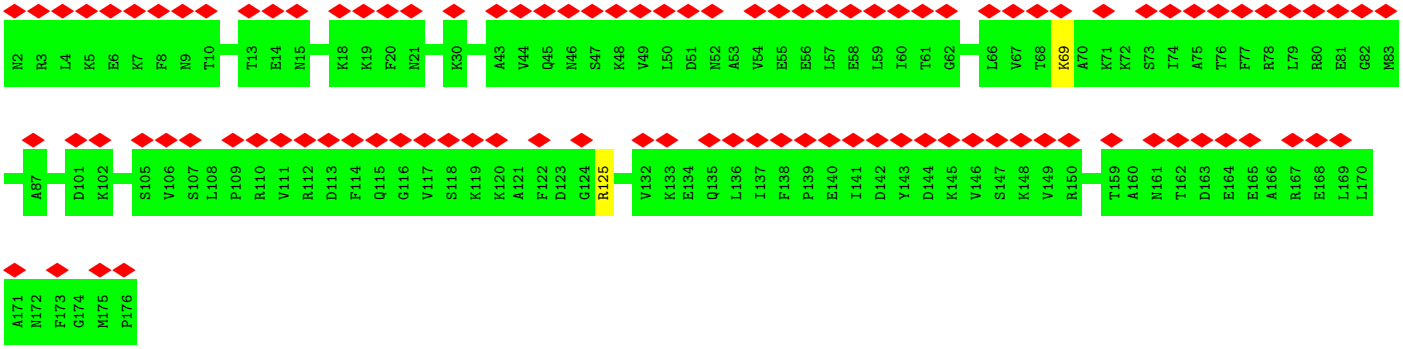
• Molecule 27: 50S ribosomal protein L4

Chain BE:



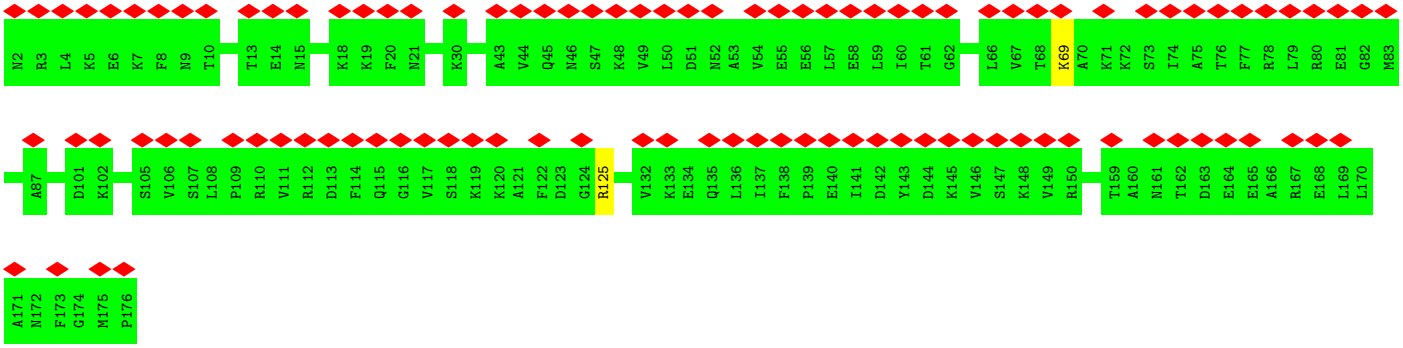
• Molecule 28: 50S ribosomal protein L5

Chain AF:



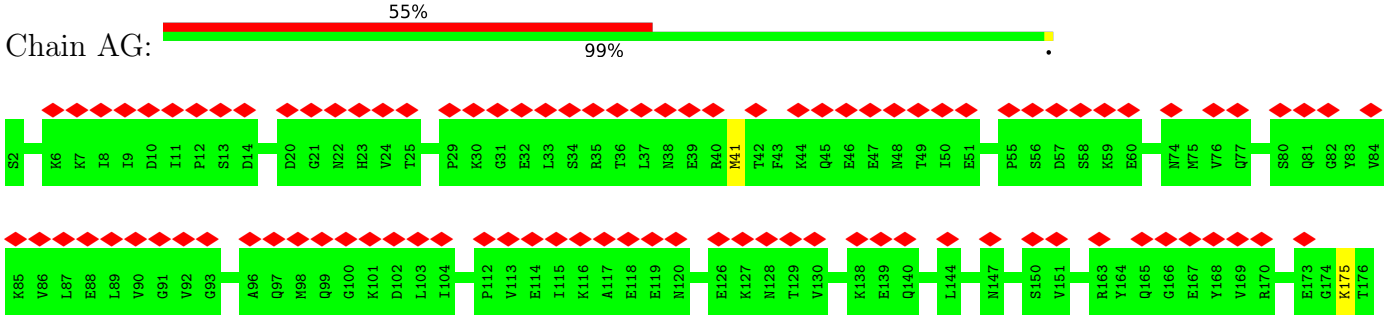
• Molecule 28: 50S ribosomal protein L5

Chain BF:



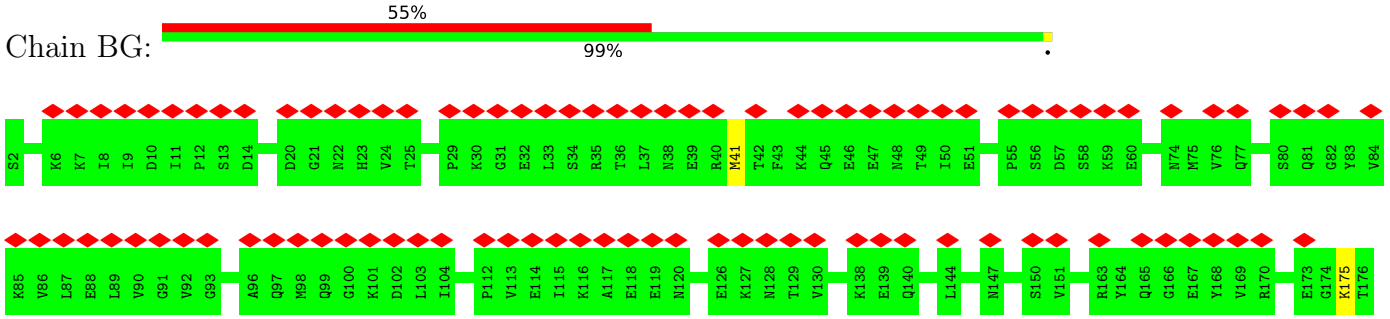
• Molecule 29: 50S ribosomal protein L6

Chain AG:



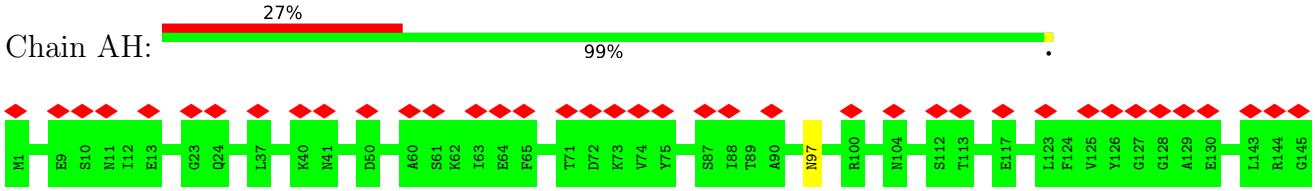
• Molecule 29: 50S ribosomal protein L6

Chain BG:



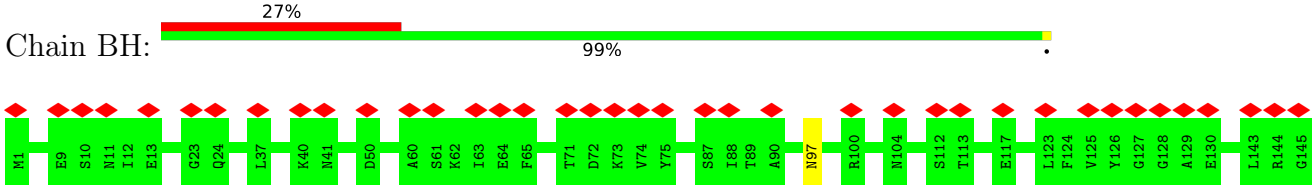
• Molecule 30: 50S ribosomal protein L13

Chain AH:



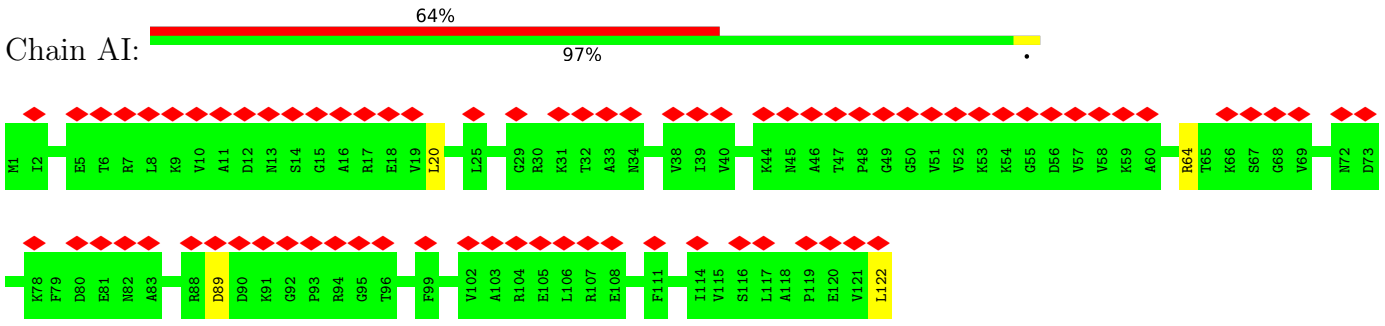
• Molecule 30: 50S ribosomal protein L13

Chain BH:



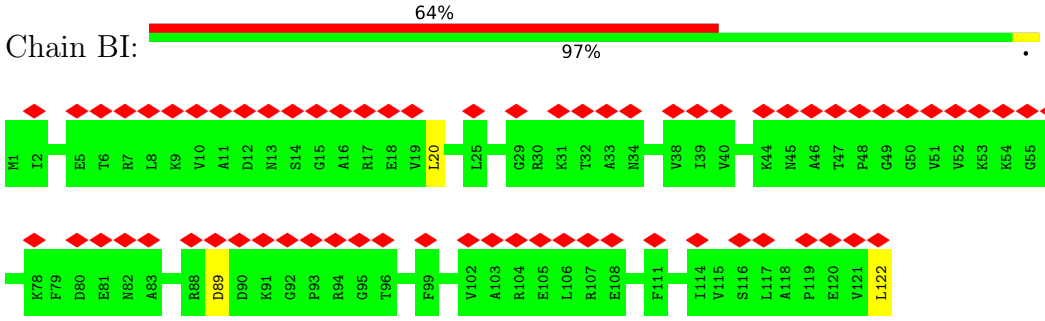
• Molecule 31: 50S ribosomal protein L14

Chain AI:



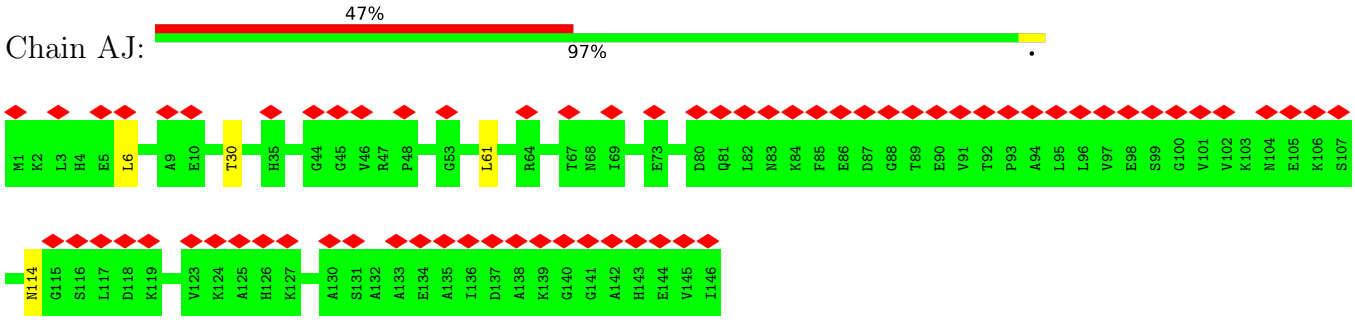
• Molecule 31: 50S ribosomal protein L14

Chain BI:



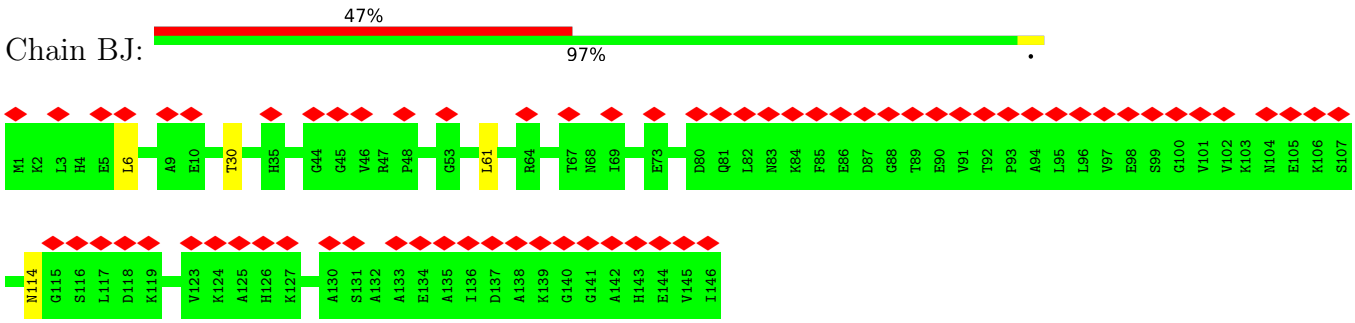
• Molecule 32: 50S ribosomal protein L15

Chain AJ:



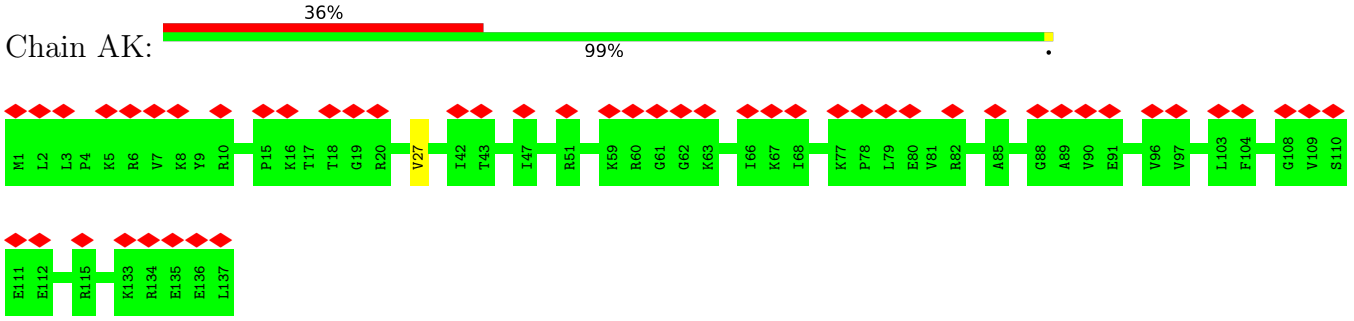
• Molecule 32: 50S ribosomal protein L15

Chain BJ:



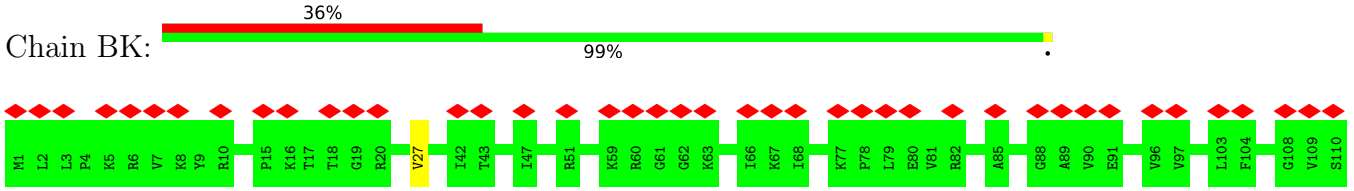
• Molecule 33: 50S ribosomal protein L16

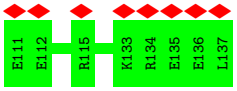
Chain AK:



• Molecule 33: 50S ribosomal protein L16

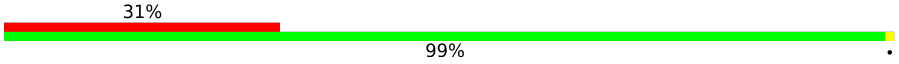
Chain BK:

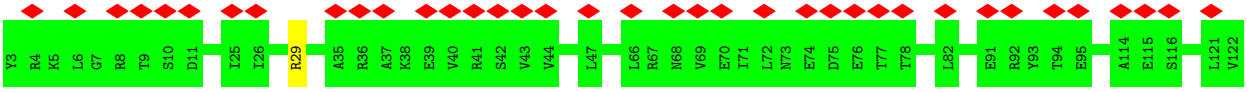




• Molecule 34: 50S ribosomal protein L17

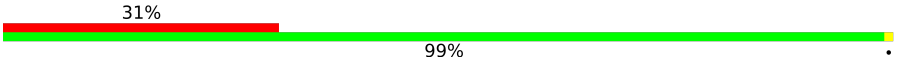
Chain AL:

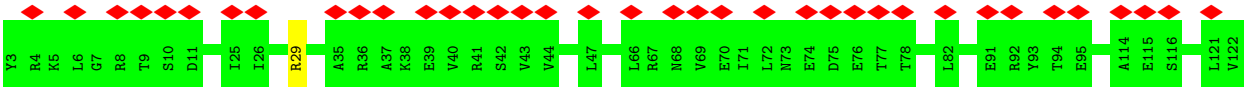




• Molecule 34: 50S ribosomal protein L17

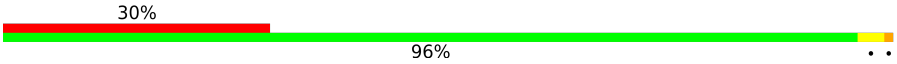
Chain BL:

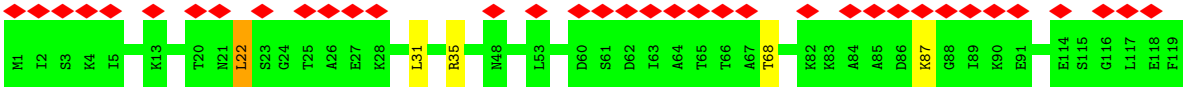




• Molecule 35: 50S ribosomal protein L18

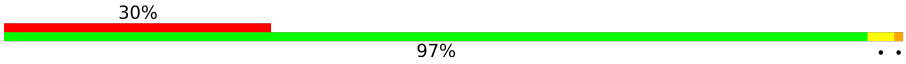
Chain AM:

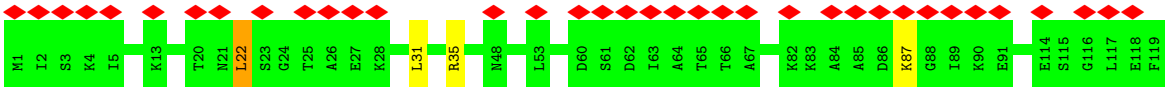




• Molecule 35: 50S ribosomal protein L18

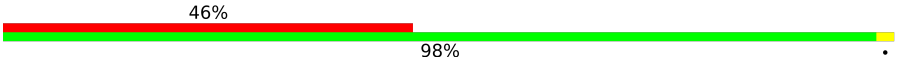
Chain BM:

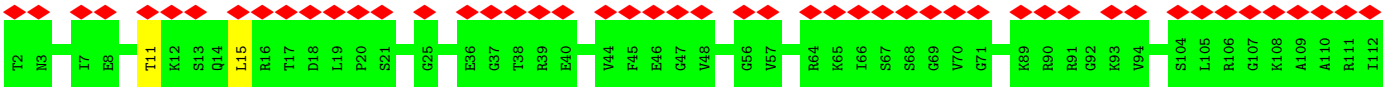




• Molecule 36: 50S ribosomal protein L19

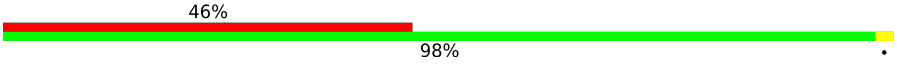
Chain AN:

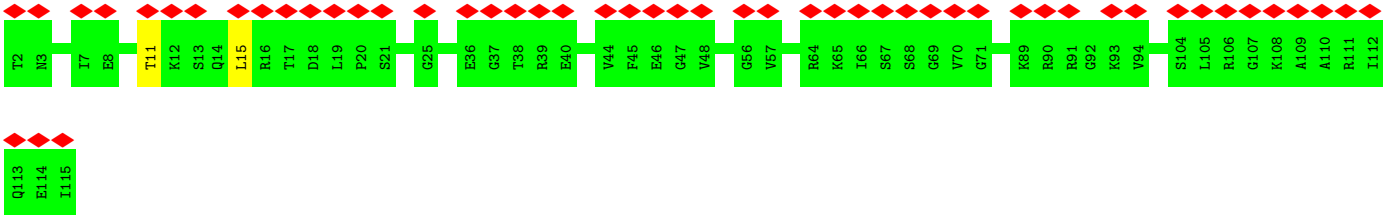




• Molecule 36: 50S ribosomal protein L19

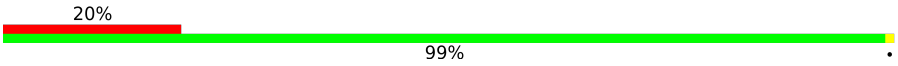
Chain BN:

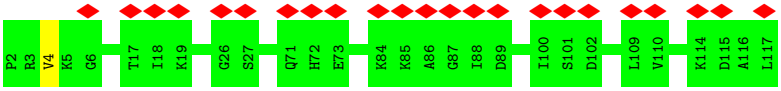




• Molecule 37: 50S ribosomal protein L20

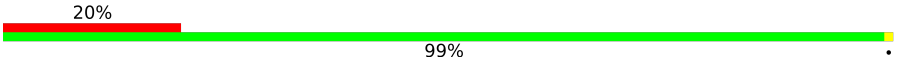
Chain AO:

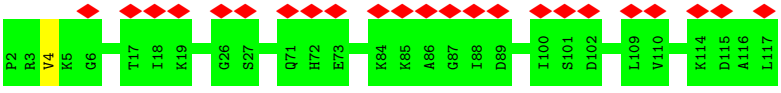




• Molecule 37: 50S ribosomal protein L20

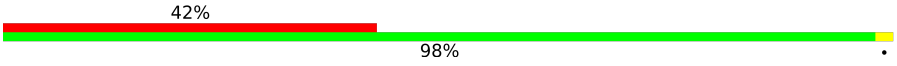
Chain BO:

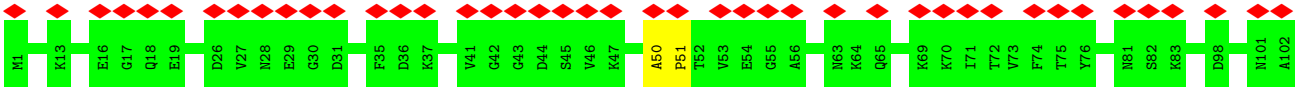




• Molecule 38: 50S ribosomal protein L21

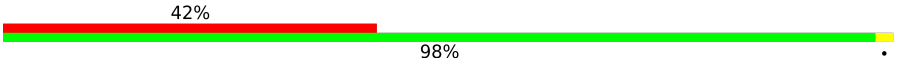
Chain AP:

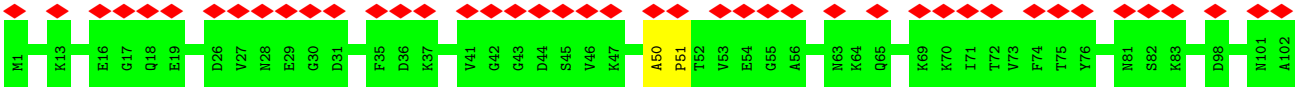




• Molecule 38: 50S ribosomal protein L21

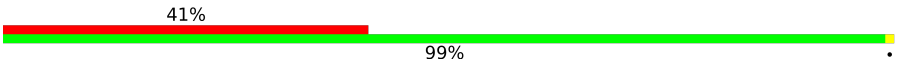
Chain BP:

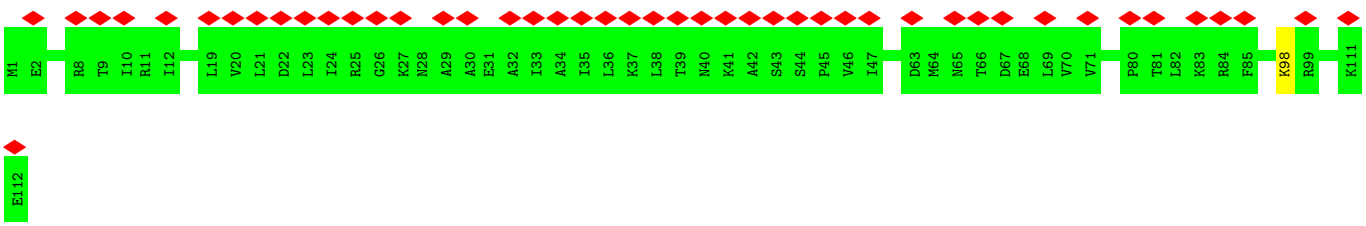




• Molecule 39: 50S ribosomal protein L22

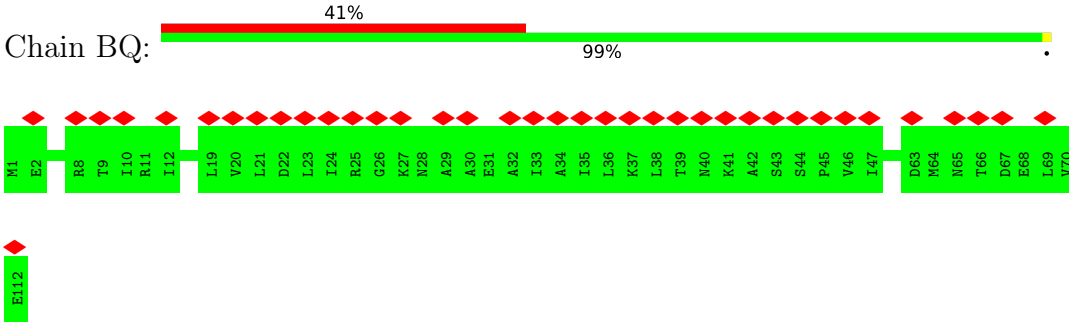
Chain AQ:





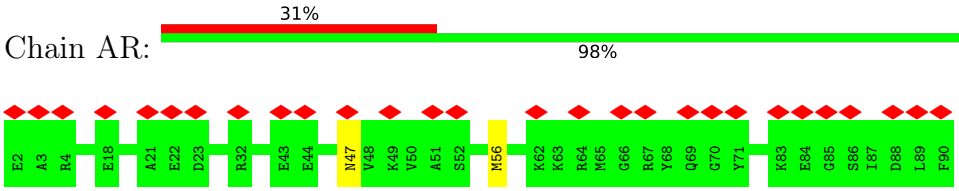
• Molecule 39: 50S ribosomal protein L22

Chain BQ:



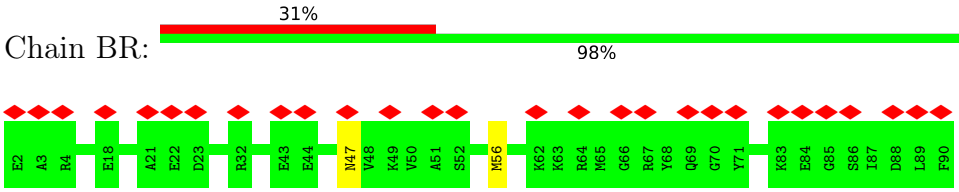
• Molecule 40: 50S ribosomal protein L23

Chain AR:



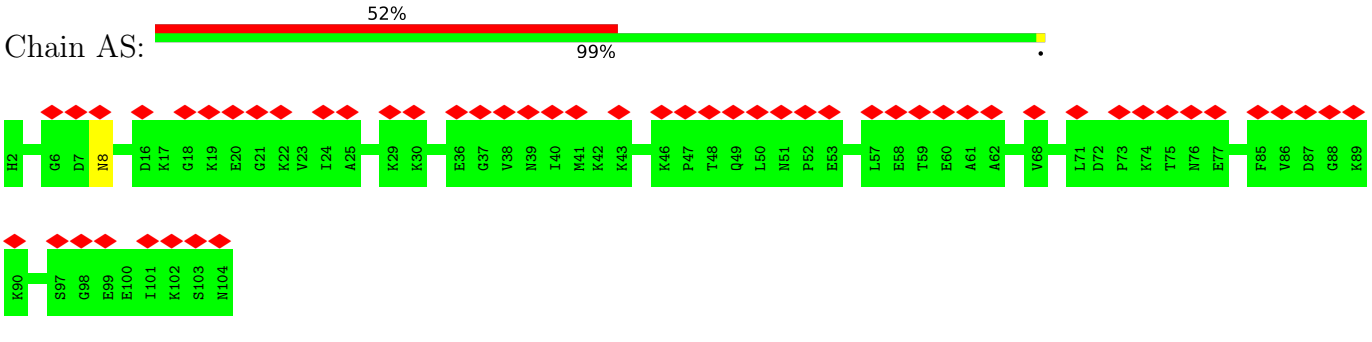
• Molecule 40: 50S ribosomal protein L23

Chain BR:



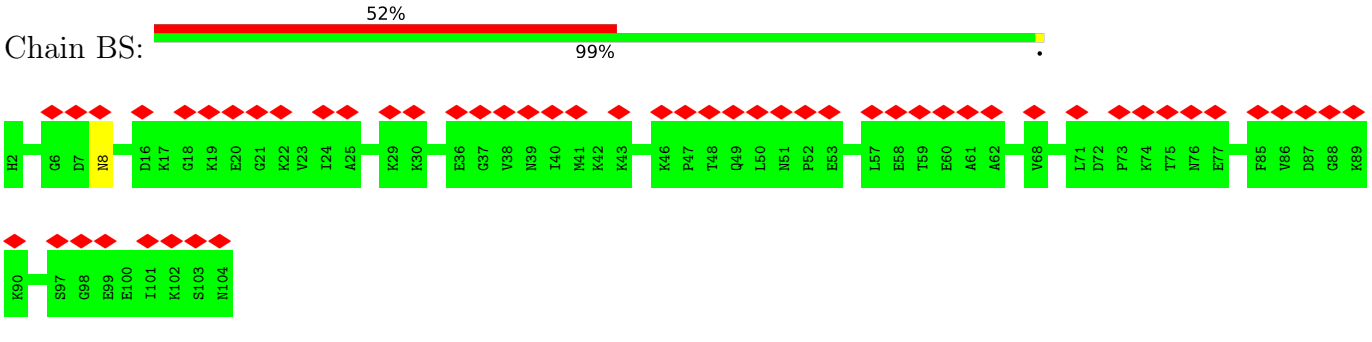
• Molecule 41: 50S ribosomal protein L24

Chain AS:



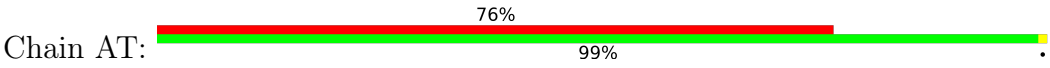
• Molecule 41: 50S ribosomal protein L24

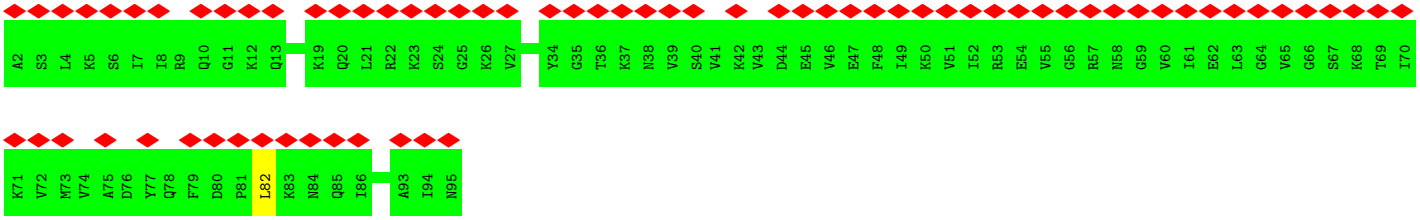
Chain BS:



• Molecule 42: 50S ribosomal protein L25

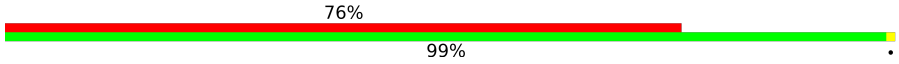
Chain AT:





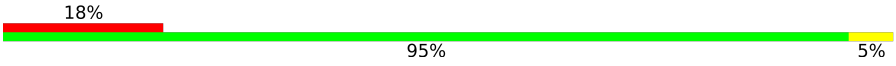
• Molecule 42: 50S ribosomal protein L25

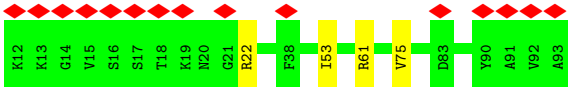
Chain BT:



• Molecule 43: 50S ribosomal protein L27

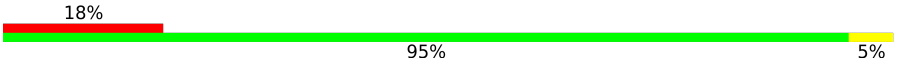
Chain AU:

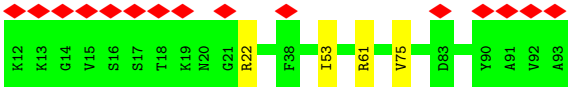




• Molecule 43: 50S ribosomal protein L27

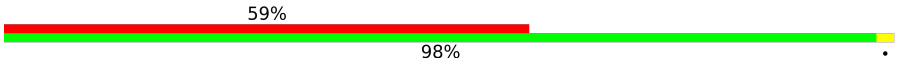
Chain BU:

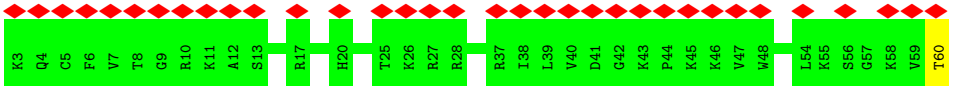




• Molecule 44: 50S ribosomal protein L28

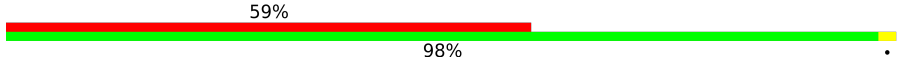
Chain AV:

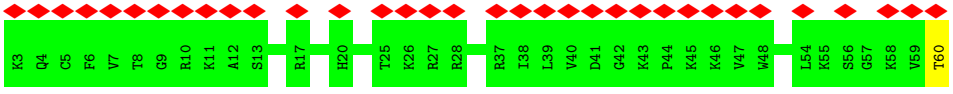




• Molecule 44: 50S ribosomal protein L28

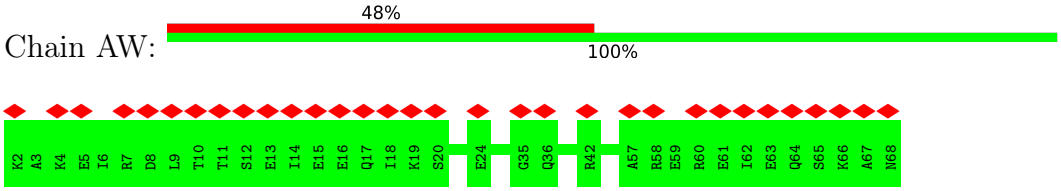
Chain BV:





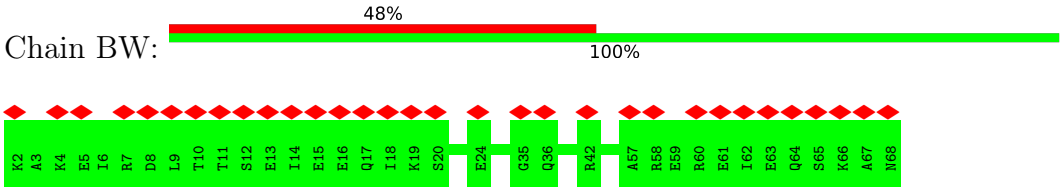
• Molecule 45: 50S ribosomal protein L29

Chain AW:



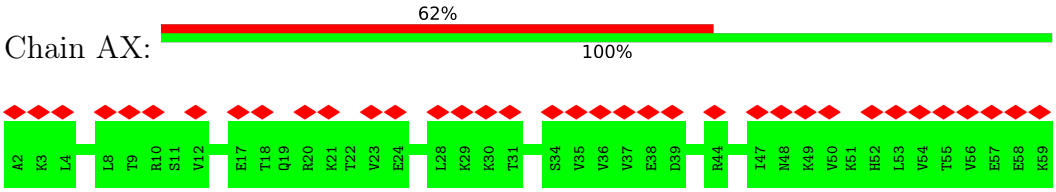
• Molecule 45: 50S ribosomal protein L29

Chain BW:



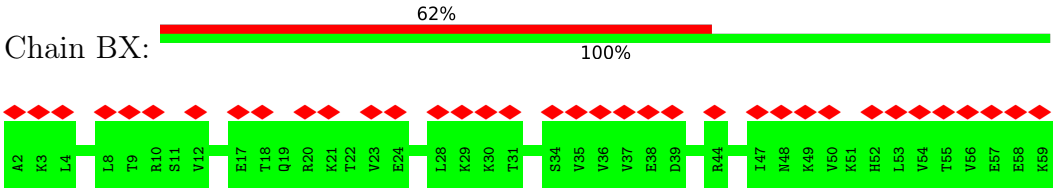
• Molecule 46: 50S ribosomal protein L30

Chain AX:



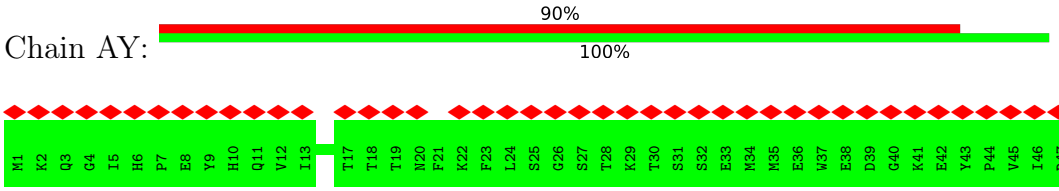
• Molecule 46: 50S ribosomal protein L30

Chain BX:



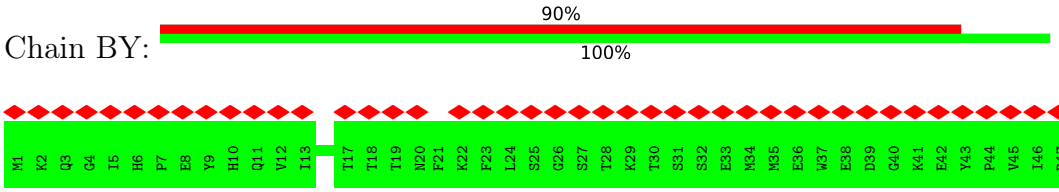
• Molecule 47: 50S ribosomal protein L31 type B

Chain AY:



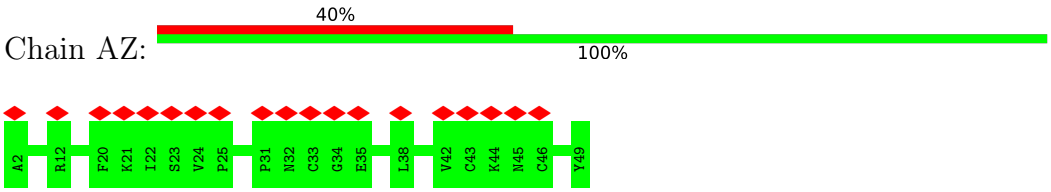
• Molecule 47: 50S ribosomal protein L31 type B

Chain BY:



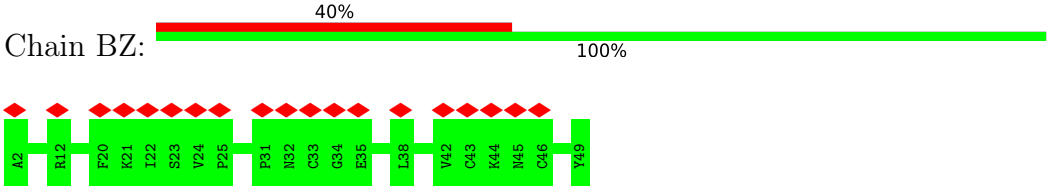
• Molecule 48: 50S ribosomal protein L32

Chain AZ:



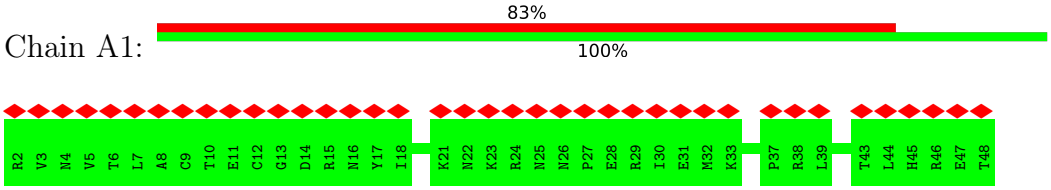
• Molecule 48: 50S ribosomal protein L32

Chain BZ:



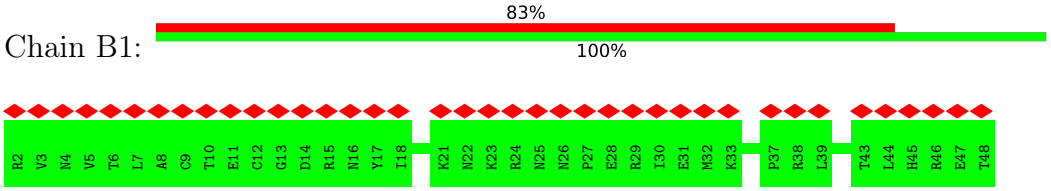
• Molecule 49: 50S ribosomal protein L33

Chain A1:



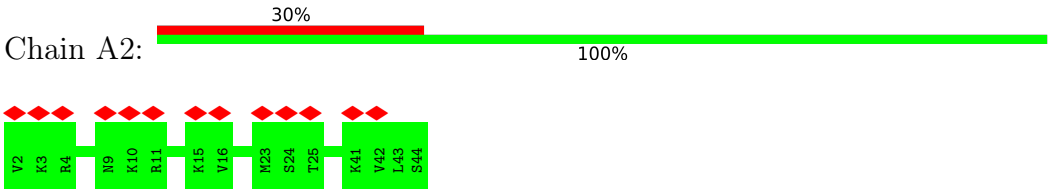
• Molecule 49: 50S ribosomal protein L33

Chain B1:



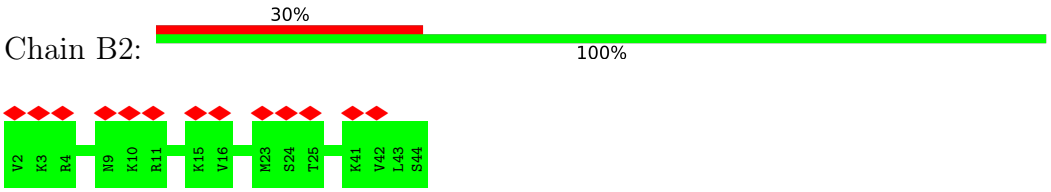
• Molecule 50: 50S ribosomal protein L34

Chain A2:



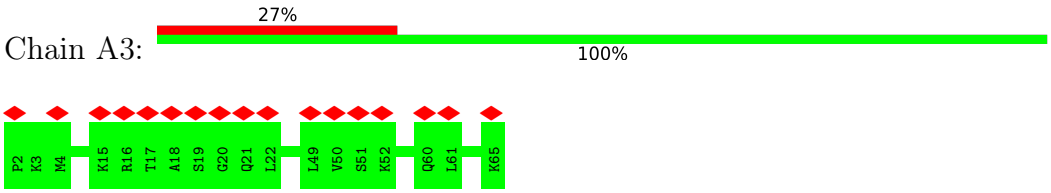
• Molecule 50: 50S ribosomal protein L34

Chain B2:



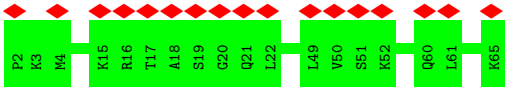
• Molecule 51: 50S ribosomal protein L35

Chain A3:



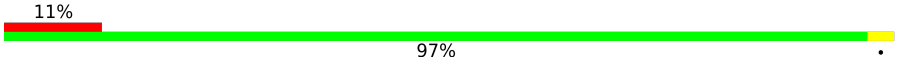
• Molecule 51: 50S ribosomal protein L35

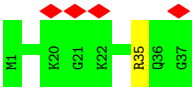
Chain B3:



• Molecule 52: 50S ribosomal protein L36

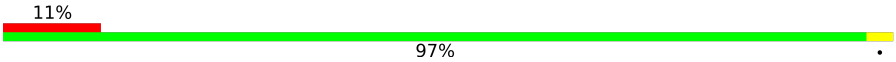
Chain A4:

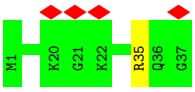




• Molecule 52: 50S ribosomal protein L36

Chain B4:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	12570	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	2.3	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.059	Depositor
Minimum map value	-0.021	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.000	Depositor
Recommended contour level	0.023	Depositor
Map size (Å)	642.0, 642.0, 642.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.605, 1.605, 1.605	Depositor

5 Model quality

5.1 Standard geometry

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	Aa	0.38	0/36913	0.95	101/57564 (0.2%)
1	Ba	0.38	0/36913	0.95	102/57564 (0.2%)
2	Ab	0.26	0/1840	0.53	1/2470 (0.0%)
2	Bb	0.26	0/1840	0.53	1/2470 (0.0%)
3	Ac	0.27	0/1523	0.59	0/2062
3	Bc	0.27	0/1523	0.59	0/2062
4	Ad	0.28	0/1526	0.62	1/2063 (0.0%)
4	Bd	0.28	0/1526	0.62	1/2063 (0.0%)
5	Ae	0.28	0/1159	0.59	0/1566
5	Be	0.28	0/1159	0.59	0/1566
6	Af	0.30	0/789	0.60	1/1060 (0.1%)
6	Bf	0.30	0/789	0.60	1/1060 (0.1%)
7	Ag	0.26	0/1176	0.54	0/1588
7	Bg	0.26	0/1176	0.54	0/1588
8	Ah	0.31	0/1038	0.63	0/1395
8	Bh	0.31	0/1038	0.63	0/1395
9	Ai	0.27	0/937	0.67	1/1269 (0.1%)
9	Bi	0.27	0/937	0.67	1/1269 (0.1%)
10	Aj	0.27	0/764	0.56	0/1034
10	Bj	0.27	0/764	0.56	0/1034
11	Ak	0.29	0/824	0.59	0/1119
11	Bk	0.29	0/824	0.59	0/1119
12	Al	0.30	0/1054	0.63	1/1415 (0.1%)
12	Bl	0.30	0/1054	0.63	1/1415 (0.1%)
13	Am	0.26	0/732	0.56	0/991
13	Bm	0.26	0/732	0.56	0/991
14	An	0.32	0/497	0.63	0/662
14	Bn	0.32	0/497	0.63	0/662
15	Ao	0.26	0/732	0.53	0/979
15	Bo	0.26	0/732	0.53	0/979
16	Ap	0.33	0/705	0.57	0/952
16	Bp	0.33	0/705	0.57	0/952
17	Aq	0.32	0/629	0.58	0/849
17	Bq	0.32	0/629	0.58	0/849

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
18	Ar	0.28	0/453	0.65	1/604 (0.2%)
18	Br	0.28	0/453	0.65	1/604 (0.2%)
19	As	0.31	0/654	0.58	0/879
19	Bs	0.31	0/654	0.58	0/879
20	At	0.23	0/591	0.50	0/793
20	Bt	0.23	0/591	0.50	0/793
21	Au	0.27	0/403	0.51	0/535
21	Bu	0.27	0/403	0.51	0/535
22	Av	0.49	0/1350	0.81	2/1812 (0.1%)
22	Bv	0.49	0/1350	0.81	2/1812 (0.1%)
23	AA	0.74	3/69738 (0.0%)	1.02	207/108747 (0.2%)
23	BA	0.74	3/69738 (0.0%)	1.02	208/108747 (0.2%)
24	AB	0.61	0/2732	1.16	21/4253 (0.5%)
24	BB	0.61	0/2732	1.16	21/4253 (0.5%)
25	AC	0.48	0/2129	0.67	3/2858 (0.1%)
25	BC	0.48	0/2129	0.67	3/2858 (0.1%)
26	AD	0.49	0/1651	0.66	0/2215
26	BD	0.49	0/1651	0.66	0/2215
27	AE	0.47	0/1595	0.66	0/2154
27	BE	0.47	0/1595	0.66	0/2154
28	AF	0.31	0/1339	0.63	0/1805
28	BF	0.32	0/1339	0.63	0/1805
29	AG	0.35	0/1281	0.58	0/1736
29	BG	0.35	0/1281	0.58	0/1736
30	AH	0.48	0/1165	0.65	0/1570
30	BH	0.48	0/1165	0.65	0/1570
31	AI	0.47	0/925	0.73	3/1242 (0.2%)
31	BI	0.47	0/925	0.73	3/1242 (0.2%)
32	AJ	0.46	0/1100	0.71	2/1467 (0.1%)
32	BJ	0.45	0/1100	0.71	2/1467 (0.1%)
33	AK	0.46	0/1095	0.61	0/1472
33	BK	0.46	0/1095	0.61	0/1472
34	AL	0.43	0/936	0.71	0/1253
34	BL	0.43	0/936	0.71	0/1253
35	AM	0.43	0/900	0.69	3/1205 (0.2%)
35	BM	0.43	0/900	0.69	2/1205 (0.2%)
36	AN	0.44	0/901	0.65	1/1209 (0.1%)
36	BN	0.44	0/901	0.65	1/1209 (0.1%)
37	AO	0.52	0/954	0.64	0/1264
37	BO	0.52	0/954	0.64	0/1264
38	AP	0.47	0/800	0.67	0/1070
38	BP	0.47	0/800	0.67	0/1070
39	AQ	0.45	0/862	0.70	0/1161

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	BQ	0.45	0/862	0.70	0/1161
40	AR	0.43	0/723	0.63	0/966
40	BR	0.43	0/723	0.63	0/966
41	AS	0.39	0/779	0.67	0/1043
41	BS	0.39	0/779	0.67	0/1043
42	AT	0.37	0/730	0.66	1/981 (0.1%)
42	BT	0.37	0/730	0.66	1/981 (0.1%)
43	AU	0.55	0/628	0.68	1/833 (0.1%)
43	BU	0.55	0/628	0.68	1/833 (0.1%)
44	AV	0.38	0/451	0.66	0/603
44	BV	0.38	0/451	0.66	0/603
45	AW	0.39	0/542	0.69	0/722
45	BW	0.39	0/542	0.69	0/722
46	AX	0.40	0/451	0.61	0/606
46	BX	0.40	0/451	0.61	0/606
47	AY	0.25	0/378	0.53	0/521
47	BY	0.25	0/378	0.53	0/521
48	AZ	0.43	0/366	0.65	0/489
48	BZ	0.43	0/366	0.65	0/489
49	A1	0.34	0/395	0.60	0/530
49	B1	0.34	0/395	0.60	0/530
50	A2	0.48	0/371	0.67	0/484
50	B2	0.47	0/371	0.67	0/484
51	A3	0.40	0/526	0.62	0/690
51	B3	0.40	0/526	0.61	0/690
52	A4	0.53	0/298	0.63	0/392
52	B4	0.52	0/298	0.63	0/392
All	All	0.58	6/306060 (0.0%)	0.92	703/458404 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
5	Ae	0	1
5	Be	0	1
9	Ai	0	1
9	Bi	0	1
12	Al	0	1
12	Bl	0	1
19	As	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
19	Bs	0	1
20	At	0	1
20	Bt	0	1
26	AD	0	1
26	BD	0	1
38	AP	0	1
38	BP	0	1
All	All	0	14

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1065	A	N9-C4	-5.38	1.34	1.37
23	AA	1584	U	C1'-N1	5.31	1.56	1.48
23	BA	1584	U	C1'-N1	5.31	1.56	1.48
23	AA	1065	A	N9-C4	-5.26	1.34	1.37
23	BA	1186	A	N9-C4	-5.21	1.34	1.37
23	AA	1186	A	N9-C4	-5.02	1.34	1.37

All (703) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	BB	87	C	N1-C2-O2	12.71	126.53	118.90
24	AB	87	C	N1-C2-O2	12.65	126.49	118.90
24	AB	87	C	C2-N1-C1'	12.14	132.15	118.80
24	BB	87	C	C2-N1-C1'	12.08	132.08	118.80
23	AA	576	U	C2-N1-C1'	12.02	132.13	117.70
23	BA	576	U	C2-N1-C1'	11.98	132.07	117.70
1	Aa	745	U	OP1-P-O3'	-11.41	80.09	105.20
1	Ba	745	U	OP1-P-O3'	-11.40	80.12	105.20
23	AA	2150	A	N7-C8-N9	10.86	119.23	113.80
23	BA	2150	A	N7-C8-N9	10.83	119.22	113.80
23	BA	576	U	N1-C2-O2	10.59	130.21	122.80
24	AB	111	C	N1-C2-O2	10.59	125.25	118.90
24	BB	111	C	N1-C2-O2	10.59	125.25	118.90
24	AB	87	C	N3-C2-O2	-10.55	114.52	121.90
23	AA	576	U	N1-C2-O2	10.55	130.18	122.80
23	BA	1179	C	N1-C2-O2	10.49	125.19	118.90
24	BB	87	C	N3-C2-O2	-10.47	114.57	121.90
23	AA	1179	C	N1-C2-O2	10.42	125.15	118.90
23	BA	576	U	N3-C2-O2	-9.97	115.22	122.20
23	AA	576	U	N3-C2-O2	-9.96	115.23	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	2150	A	C5-N7-C8	9.83	108.81	103.90
23	AA	2150	A	C5-N7-C8	9.79	108.80	103.90
23	AA	1994	C	N1-C2-O2	9.75	124.75	118.90
23	BA	1994	C	N1-C2-O2	9.72	124.73	118.90
23	BA	1994	C	C2-N1-C1'	9.61	129.37	118.80
23	AA	1994	C	C2-N1-C1'	9.60	129.37	118.80
23	AA	1932	C	N1-C2-O2	9.50	124.60	118.90
23	BA	1932	C	N1-C2-O2	9.41	124.55	118.90
23	BA	1932	C	C2-N1-C1'	9.39	129.13	118.80
23	AA	1932	C	C2-N1-C1'	9.36	129.10	118.80
24	BB	87	C	C6-N1-C1'	-9.05	109.94	120.80
24	AB	87	C	C6-N1-C1'	-9.04	109.95	120.80
23	AA	1179	C	N3-C2-O2	-8.82	115.72	121.90
23	BA	1179	C	N3-C2-O2	-8.78	115.75	121.90
23	AA	1179	C	C2-N1-C1'	8.75	128.42	118.80
24	AB	111	C	N3-C2-O2	-8.74	115.78	121.90
23	BA	1179	C	C2-N1-C1'	8.71	128.38	118.80
24	BB	111	C	N3-C2-O2	-8.69	115.82	121.90
24	BB	111	C	C2-N1-C1'	8.63	128.29	118.80
23	AA	593	U	C2-N1-C1'	8.61	128.03	117.70
24	AB	111	C	C2-N1-C1'	8.60	128.26	118.80
23	BA	593	U	C2-N1-C1'	8.56	127.97	117.70
24	BB	108	U	N3-C2-O2	-8.44	116.29	122.20
24	AB	108	U	N3-C2-O2	-8.42	116.31	122.20
23	AA	439	U	C2-N1-C1'	8.37	127.74	117.70
23	AA	576	U	C6-N1-C1'	-8.35	109.50	121.20
23	BA	576	U	C6-N1-C1'	-8.33	109.53	121.20
23	AA	1894	G	C4-N9-C1'	8.33	137.33	126.50
23	BA	1894	G	C4-N9-C1'	8.33	137.33	126.50
23	BA	439	U	C2-N1-C1'	8.32	127.69	117.70
23	AA	1378	U	N3-C2-O2	-8.30	116.39	122.20
9	Bi	66	LEU	CA-CB-CG	8.29	134.38	115.30
9	Ai	66	LEU	CA-CB-CG	8.29	134.37	115.30
23	BA	1378	U	N3-C2-O2	-8.22	116.45	122.20
23	BA	1804	U	C2-N1-C1'	8.19	127.53	117.70
1	Aa	55	C	N1-C2-O2	8.13	123.78	118.90
23	AA	1804	U	C2-N1-C1'	8.12	127.44	117.70
1	Ba	55	C	N1-C2-O2	8.10	123.76	118.90
23	AA	1378	U	N1-C2-O2	8.08	128.46	122.80
23	BA	1378	U	N1-C2-O2	8.07	128.45	122.80
1	Aa	99	U	C2-N1-C1'	8.07	127.38	117.70
24	BB	108	U	C2-N1-C1'	8.06	127.37	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Ba	99	U	C2-N1-C1'	8.05	127.37	117.70
24	BB	100	U	C2-N1-C1'	8.05	127.36	117.70
24	AB	108	U	C2-N1-C1'	8.04	127.35	117.70
1	Aa	599	U	C2-N1-C1'	8.03	127.34	117.70
1	Ba	599	U	C2-N1-C1'	8.03	127.34	117.70
1	Ba	55	C	C2-N1-C1'	8.02	127.62	118.80
23	AA	759	U	C2-N1-C1'	8.02	127.32	117.70
23	BA	759	U	N1-C2-O2	8.02	128.41	122.80
23	BA	1994	C	N3-C2-O2	-8.00	116.30	121.90
24	AB	100	U	C2-N1-C1'	8.00	127.29	117.70
23	BA	759	U	C2-N1-C1'	8.00	127.29	117.70
23	AA	759	U	N1-C2-O2	7.98	128.38	122.80
1	Aa	55	C	C2-N1-C1'	7.97	127.57	118.80
23	AA	1994	C	N3-C2-O2	-7.97	116.32	121.90
1	Ba	1187	G	C4-N9-C1'	7.94	136.82	126.50
1	Aa	1187	G	C4-N9-C1'	7.92	136.80	126.50
23	BA	439	U	N3-C2-O2	-7.88	116.68	122.20
23	AA	439	U	N3-C2-O2	-7.87	116.69	122.20
23	AA	1227	U	N3-C2-O2	-7.84	116.71	122.20
23	AA	439	U	N1-C2-O2	7.84	128.29	122.80
23	BA	439	U	N1-C2-O2	7.84	128.29	122.80
1	Ba	745	U	OP2-P-O3'	-7.79	88.07	105.20
1	Aa	745	U	OP2-P-O3'	-7.78	88.09	105.20
23	BA	1227	U	N3-C2-O2	-7.75	116.78	122.20
23	BA	2370	U	N3-C2-O2	-7.73	116.79	122.20
23	BA	882	C	C2-N1-C1'	7.70	127.27	118.80
23	AA	2370	U	N3-C2-O2	-7.69	116.82	122.20
23	AA	882	C	C2-N1-C1'	7.68	127.25	118.80
23	AA	1378	U	C2-N1-C1'	7.63	126.86	117.70
23	AA	1932	C	N3-C2-O2	-7.63	116.56	121.90
23	BA	1378	U	C2-N1-C1'	7.62	126.84	117.70
24	AB	108	U	N1-C2-O2	7.59	128.12	122.80
24	BB	108	U	N1-C2-O2	7.59	128.11	122.80
31	AI	20	LEU	CA-CB-CG	7.56	132.69	115.30
31	BI	20	LEU	CA-CB-CG	7.55	132.66	115.30
23	AA	1894	G	C8-N9-C1'	-7.53	117.20	127.00
23	BA	1894	G	C8-N9-C1'	-7.53	117.20	127.00
23	BA	1932	C	N3-C2-O2	-7.50	116.65	121.90
1	Ba	1136	U	C2-N1-C1'	7.48	126.67	117.70
35	BM	31	LEU	CA-CB-CG	7.44	132.41	115.30
35	AM	31	LEU	CA-CB-CG	7.42	132.37	115.30
1	Aa	1136	U	C2-N1-C1'	7.41	126.59	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	1599	G	N3-C2-N2	-7.41	114.72	119.90
1	Ba	415	A	P-O3'-C3'	7.35	128.52	119.70
23	BA	1599	G	N3-C2-N2	-7.29	114.79	119.90
1	Aa	415	A	P-O3'-C3'	7.29	128.45	119.70
23	AA	1692	C	C2-N1-C1'	7.28	126.81	118.80
23	BA	1692	C	C2-N1-C1'	7.26	126.78	118.80
23	BA	1579	C	N1-C2-O2	7.22	123.23	118.90
1	Ba	902	C	C2-N1-C1'	7.17	126.69	118.80
23	AA	1579	C	N1-C2-O2	7.17	123.20	118.90
23	BA	1994	C	C6-N1-C1'	-7.16	112.21	120.80
23	AA	1597	U	N3-C2-O2	-7.14	117.20	122.20
1	Aa	835	U	C2-N1-C1'	7.13	126.26	117.70
23	AA	2223	C	N1-C2-O2	7.13	123.18	118.90
1	Aa	746	U	OP1-P-OP2	7.11	130.27	119.60
1	Aa	902	C	C2-N1-C1'	7.11	126.62	118.80
1	Ba	835	U	C2-N1-C1'	7.11	126.23	117.70
23	AA	1994	C	C6-N1-C1'	-7.10	112.28	120.80
23	BA	1932	C	C6-N1-C1'	-7.09	112.29	120.80
1	Ba	746	U	OP1-P-OP2	7.08	130.22	119.60
1	Ba	99	U	N1-C2-O2	7.08	127.75	122.80
1	Aa	99	U	N1-C2-O2	7.06	127.75	122.80
23	BA	1597	U	N3-C2-O2	-7.06	117.26	122.20
1	Ba	99	U	N3-C2-O2	-7.04	117.27	122.20
23	BA	2223	C	N1-C2-O2	7.04	123.12	118.90
23	AA	1932	C	C6-N1-C1'	-7.03	112.36	120.80
1	Aa	1187	G	N3-C4-N9	7.02	130.21	126.00
1	Aa	99	U	N3-C2-O2	-7.01	117.29	122.20
23	BA	759	U	N3-C2-O2	-7.00	117.30	122.20
1	Aa	460	A	P-O3'-C3'	6.99	128.09	119.70
23	BA	2261	G	P-O3'-C3'	-6.99	111.31	119.70
23	AA	1894	G	N3-C4-N9	6.97	130.18	126.00
23	BA	1894	G	N3-C4-N9	6.97	130.18	126.00
23	BA	2819	C	N1-C2-O2	6.97	123.08	118.90
1	Ba	1187	G	N3-C4-N9	6.94	130.16	126.00
23	AA	759	U	N3-C2-O2	-6.94	117.34	122.20
23	AA	2261	G	P-O3'-C3'	-6.94	111.38	119.70
1	Ba	460	A	P-O3'-C3'	6.93	128.01	119.70
23	AA	1214	C	N1-C2-O2	6.91	123.05	118.90
23	AA	1914	C	N1-C2-O2	6.89	123.03	118.90
23	BA	575	G	C4-N9-C1'	6.88	135.44	126.50
23	AA	575	G	C4-N9-C1'	6.85	135.41	126.50
23	BA	1914	C	N1-C2-O2	6.85	123.01	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	2361	U	C2-N1-C1'	6.84	125.91	117.70
1	Aa	431	G	C4-N9-C1'	6.84	135.39	126.50
23	AA	1160	C	N1-C2-O2	6.84	123.00	118.90
1	Ba	431	G	C4-N9-C1'	6.84	135.39	126.50
1	Aa	424	G	C4-N9-C1'	6.84	135.39	126.50
1	Ba	424	G	C4-N9-C1'	6.84	135.39	126.50
22	Av	176	ARG	NE-CZ-NH1	6.83	123.72	120.30
22	Bv	176	ARG	NE-CZ-NH1	6.83	123.72	120.30
23	AA	2819	C	N1-C2-O2	6.82	122.99	118.90
23	BA	1160	C	N1-C2-O2	6.81	122.99	118.90
23	AA	2361	U	C2-N1-C1'	6.79	125.85	117.70
1	Aa	1187	G	N3-C4-C5	-6.76	125.22	128.60
1	Ba	1187	G	N3-C4-C5	-6.76	125.22	128.60
1	Aa	55	C	N3-C2-O2	-6.74	117.18	121.90
23	BA	1214	C	N1-C2-O2	6.74	122.94	118.90
1	Ba	55	C	N3-C2-O2	-6.71	117.20	121.90
1	Ba	431	G	N3-C4-N9	6.69	130.01	126.00
1	Aa	424	G	N3-C4-C5	-6.68	125.26	128.60
23	BA	1227	U	N1-C2-O2	6.65	127.45	122.80
23	AA	1227	U	N1-C2-O2	6.63	127.44	122.80
1	Ba	424	G	N3-C4-C5	-6.63	125.29	128.60
1	Aa	711	G	P-O3'-C3'	6.62	127.65	119.70
1	Aa	431	G	N3-C4-N9	6.60	129.96	126.00
1	Ba	711	G	P-O3'-C3'	6.60	127.62	119.70
1	Ba	451	U	P-O3'-C3'	6.59	127.61	119.70
1	Aa	1041	C	P-O3'-C3'	6.58	127.59	119.70
1	Aa	65	G	P-O3'-C3'	6.57	127.58	119.70
1	Aa	451	U	P-O3'-C3'	6.56	127.57	119.70
1	Ba	1041	C	P-O3'-C3'	6.55	127.56	119.70
1	Ba	65	G	P-O3'-C3'	6.54	127.55	119.70
23	BA	1597	U	N1-C2-O2	6.54	127.38	122.80
23	AA	1597	U	N1-C2-O2	6.53	127.37	122.80
1	Ba	1075	G	P-O3'-C3'	6.52	127.52	119.70
1	Ba	1187	G	C8-N9-C1'	-6.51	118.53	127.00
4	Ad	101	LEU	CA-CB-CG	6.51	130.28	115.30
1	Aa	1187	G	C8-N9-C1'	-6.51	118.54	127.00
4	Bd	101	LEU	CA-CB-CG	6.51	130.26	115.30
1	Aa	1075	G	P-O3'-C3'	6.50	127.50	119.70
1	Ba	1136	U	N3-C2-O2	-6.49	117.66	122.20
1	Aa	1136	U	N3-C2-O2	-6.49	117.66	122.20
23	BA	2049	U	C2-N1-C1'	6.48	125.47	117.70
1	Aa	835	U	N3-C2-O2	-6.47	117.67	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	2049	U	C2-N1-C1'	6.46	125.46	117.70
1	Aa	336	C	C2-N1-C1'	6.46	125.91	118.80
1	Aa	315	U	C2-N1-C1'	6.45	125.44	117.70
1	Ba	336	C	C2-N1-C1'	6.45	125.89	118.80
23	BA	2699	U	N1-C2-O2	6.45	127.31	122.80
23	AA	2223	C	N3-C2-O2	-6.44	117.39	121.90
1	Ba	315	U	C2-N1-C1'	6.44	125.42	117.70
23	AA	575	G	N3-C4-N9	6.43	129.86	126.00
23	AA	1731	G	P-O3'-C3'	6.43	127.42	119.70
23	AA	268	A	P-O3'-C3'	6.43	127.42	119.70
23	BA	74	U	N1-C2-O2	6.42	127.30	122.80
23	BA	1213	C	N1-C2-O2	6.42	122.75	118.90
23	AA	2699	U	N1-C2-O2	6.41	127.29	122.80
1	Ba	431	G	N3-C4-C5	-6.41	125.39	128.60
23	BA	268	A	P-O3'-C3'	6.41	127.39	119.70
23	AA	1651	C	N1-C2-O2	6.40	122.74	118.90
23	BA	1651	C	N1-C2-O2	6.40	122.74	118.90
23	AA	74	U	N1-C2-O2	6.40	127.28	122.80
23	BA	1731	G	P-O3'-C3'	6.40	127.38	119.70
1	Ba	835	U	N3-C2-O2	-6.40	117.72	122.20
23	AA	1213	C	N1-C2-O2	6.39	122.73	118.90
23	AA	2450	U	P-O3'-C3'	6.39	127.36	119.70
23	BA	2450	U	P-O3'-C3'	6.39	127.36	119.70
24	BB	111	C	C6-N1-C1'	-6.38	113.14	120.80
23	BA	2223	C	N3-C2-O2	-6.38	117.43	121.90
1	Aa	1136	U	N1-C2-O2	6.38	127.27	122.80
23	BA	975	U	N1-C2-O2	6.37	127.26	122.80
23	AA	1992	C	C2-N1-C1'	6.36	125.80	118.80
23	BA	1552	U	N3-C2-O2	-6.36	117.75	122.20
24	AB	111	C	C6-N1-C1'	-6.35	113.18	120.80
23	BA	1992	C	C2-N1-C1'	6.35	125.78	118.80
23	AA	975	U	N1-C2-O2	6.34	127.24	122.80
23	AA	1804	U	C6-N1-C1'	-6.34	112.32	121.20
1	Ba	424	G	N3-C4-N9	6.34	129.80	126.00
23	BA	2262	G	O5'-P-OP1	-6.34	99.99	105.70
23	AA	1804	U	N3-C2-O2	-6.33	117.77	122.20
1	Ba	1136	U	N1-C2-O2	6.33	127.23	122.80
23	BA	1804	U	C6-N1-C1'	-6.33	112.33	121.20
1	Aa	424	G	N3-C4-N9	6.33	129.80	126.00
23	AA	1804	U	N1-C2-O2	6.32	127.23	122.80
23	BA	1804	U	N3-C2-O2	-6.32	117.77	122.20
23	AA	2747	U	C2-N1-C1'	6.32	125.28	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Ba	902	C	N3-C2-O2	-6.32	117.48	121.90
1	Aa	431	G	N3-C4-C5	-6.31	125.45	128.60
23	AA	2262	G	O5'-P-OP1	-6.29	100.03	105.70
23	BA	1692	C	N1-C2-O2	6.28	122.67	118.90
1	Aa	762	C	C2-N1-C1'	6.28	125.70	118.80
1	Ba	762	C	C2-N1-C1'	6.28	125.70	118.80
23	BA	2747	U	C2-N1-C1'	6.26	125.21	117.70
23	AA	988	C	N1-C2-O2	6.25	122.65	118.90
1	Aa	902	C	N3-C2-O2	-6.25	117.53	121.90
23	BA	575	G	N3-C4-N9	6.25	129.75	126.00
23	AA	1552	U	N3-C2-O2	-6.25	117.83	122.20
1	Ba	797	U	C2-N1-C1'	6.24	125.19	117.70
23	BA	862	C	N1-C2-O2	6.24	122.65	118.90
24	BB	94	C	N1-C2-O2	6.24	122.64	118.90
23	AA	1692	C	N1-C2-O2	6.24	122.64	118.90
23	BA	988	C	N1-C2-O2	6.23	122.64	118.90
1	Aa	902	C	N1-C2-O2	6.23	122.64	118.90
1	Aa	797	U	C2-N1-C1'	6.22	125.17	117.70
1	Aa	387	C	C2-N1-C1'	6.21	125.64	118.80
23	BA	1579	C	N3-C2-O2	-6.21	117.55	121.90
23	BA	184	C	C2-N1-C1'	6.21	125.63	118.80
23	AA	1227	U	C2-N1-C1'	6.20	125.14	117.70
1	Aa	1168	C	N1-C2-O2	6.20	122.62	118.90
23	AA	1579	C	N3-C2-O2	-6.19	117.56	121.90
23	AA	184	C	C2-N1-C1'	6.19	125.61	118.80
23	AA	862	C	N1-C2-O2	6.19	122.61	118.90
1	Ba	599	U	N1-C2-O2	6.19	127.13	122.80
1	Aa	599	U	N1-C2-O2	6.18	127.12	122.80
23	BA	1804	U	N1-C2-O2	6.17	127.12	122.80
23	BA	1953	U	C2-N1-C1'	6.17	125.11	117.70
23	AA	1953	U	C2-N1-C1'	6.17	125.11	117.70
24	AB	94	C	N1-C2-O2	6.17	122.60	118.90
23	BA	1227	U	C2-N1-C1'	6.17	125.11	117.70
23	AA	2845	G	N3-C2-N2	-6.17	115.58	119.90
1	Aa	835	U	N1-C2-O2	6.17	127.12	122.80
1	Ba	902	C	N1-C2-O2	6.17	122.60	118.90
23	AA	1914	C	N3-C2-O2	-6.16	117.59	121.90
1	Ba	387	C	C2-N1-C1'	6.16	125.58	118.80
1	Aa	1001	U	P-O3'-C3'	6.15	127.08	119.70
18	Ar	60	LEU	CA-CB-CG	6.15	129.45	115.30
1	Ba	835	U	N1-C2-O2	6.15	127.11	122.80
18	Br	60	LEU	CA-CB-CG	6.15	129.44	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Ba	502	C	C2-N1-C1'	6.15	125.56	118.80
23	AA	2845	G	N3-C4-N9	-6.15	122.31	126.00
1	Aa	524	U	C2-N1-C1'	6.14	125.07	117.70
1	Ba	1168	C	N1-C2-O2	6.13	122.58	118.90
1	Ba	524	U	C2-N1-C1'	6.13	125.05	117.70
1	Ba	1001	U	P-O3'-C3'	6.12	127.05	119.70
23	BA	1914	C	N3-C2-O2	-6.12	117.62	121.90
23	AA	882	C	C6-N1-C1'	-6.10	113.48	120.80
23	BA	2347	A	C2-N3-C4	6.10	113.65	110.60
23	BA	882	C	C6-N1-C1'	-6.10	113.48	120.80
1	Aa	502	C	C2-N1-C1'	6.10	125.51	118.80
1	Aa	460	A	C2-N3-C4	6.09	113.65	110.60
23	AA	575	G	C8-N9-C1'	-6.09	119.08	127.00
1	Aa	762	C	N1-C2-O2	6.09	122.56	118.90
1	Ba	762	C	N1-C2-O2	6.09	122.56	118.90
23	BA	575	G	C8-N9-C1'	-6.09	119.09	127.00
23	AA	593	U	C6-N1-C1'	-6.08	112.68	121.20
23	BA	2845	G	N3-C2-N2	-6.08	115.64	119.90
23	BA	593	U	C6-N1-C1'	-6.08	112.69	121.20
1	Ba	460	A	C2-N3-C4	6.07	113.64	110.60
1	Aa	162	A	C2-N3-C4	6.07	113.64	110.60
1	Aa	1140	C	N1-C2-O2	6.06	122.53	118.90
36	BN	15	LEU	CA-CB-CG	6.05	129.22	115.30
1	Ba	1140	C	N1-C2-O2	6.05	122.53	118.90
23	BA	2845	G	N3-C4-N9	-6.04	122.38	126.00
36	AN	15	LEU	CA-CB-CG	6.04	129.18	115.30
23	BA	2112	C	N1-C2-O2	6.03	122.52	118.90
24	AB	87	C	C6-N1-C2	-6.02	117.89	120.30
1	Aa	969	U	P-O3'-C3'	6.02	126.92	119.70
1	Aa	1314	G	P-O3'-C3'	6.02	126.92	119.70
23	AA	1179	C	C6-N1-C2	-6.02	117.89	120.30
23	AA	2347	A	C2-N3-C4	6.02	113.61	110.60
1	Ba	1314	G	P-O3'-C3'	6.02	126.92	119.70
23	BA	576	U	P-O3'-C3'	6.01	126.91	119.70
1	Ba	1096	U	C2-N1-C1'	6.01	124.91	117.70
23	BA	882	C	N1-C2-O2	6.00	122.50	118.90
1	Aa	1096	U	C2-N1-C1'	6.00	124.89	117.70
23	BA	882	C	N3-C2-O2	-6.00	117.70	121.90
23	BA	463	C	N1-C2-O2	6.00	122.50	118.90
23	AA	2112	C	N1-C2-O2	5.99	122.50	118.90
1	Ba	969	U	P-O3'-C3'	5.99	126.89	119.70
23	AA	576	U	P-O3'-C3'	5.96	126.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Ba	162	A	C2-N3-C4	5.96	113.58	110.60
23	BA	2223	C	C2-N1-C1'	5.96	125.35	118.80
1	Aa	1096	U	N1-C2-O2	5.95	126.97	122.80
23	AA	2223	C	C2-N1-C1'	5.95	125.34	118.80
23	BA	1179	C	C6-N1-C1'	-5.95	113.66	120.80
23	AA	1179	C	C6-N1-C1'	-5.94	113.67	120.80
23	AA	987	U	P-O3'-C3'	5.94	126.83	119.70
23	BA	987	U	P-O3'-C3'	5.94	126.83	119.70
31	AI	89	ASP	CB-CG-OD1	5.94	123.64	118.30
23	BA	1731	G	OP1-P-O3'	5.94	118.27	105.20
1	Ba	1096	U	N1-C2-O2	5.94	126.96	122.80
1	Ba	1267	A	P-O3'-C3'	5.94	126.82	119.70
23	AA	882	C	N3-C2-O2	-5.94	117.75	121.90
1	Aa	1267	A	P-O3'-C3'	5.93	126.82	119.70
23	AA	439	U	C6-N1-C1'	-5.93	112.89	121.20
23	AA	463	C	N1-C2-O2	5.93	122.46	118.90
23	BA	402	C	N1-C2-O2	5.93	122.46	118.90
23	AA	882	C	N1-C2-O2	5.93	122.46	118.90
1	Aa	1325	U	C2-N1-C1'	5.92	124.81	117.70
23	AA	1731	G	OP1-P-O3'	5.92	118.23	105.20
24	BB	100	U	C6-N1-C1'	-5.92	112.91	121.20
23	AA	577	A	P-O3'-C3'	5.91	126.80	119.70
1	Ba	1325	U	C2-N1-C1'	5.91	124.80	117.70
23	BA	439	U	C6-N1-C1'	-5.91	112.92	121.20
1	Aa	415	A	C2-N3-C4	5.91	113.55	110.60
23	BA	1179	C	C6-N1-C2	-5.90	117.94	120.30
23	AA	2049	U	N1-C2-O2	5.89	126.92	122.80
1	Aa	431	G	C8-N9-C1'	-5.89	119.34	127.00
24	AB	100	U	C6-N1-C1'	-5.89	112.95	121.20
1	Ba	431	G	C8-N9-C1'	-5.89	119.34	127.00
1	Ba	315	U	N1-C2-O2	5.89	126.92	122.80
23	BA	577	A	P-O3'-C3'	5.89	126.77	119.70
23	BA	2049	U	N1-C2-O2	5.89	126.92	122.80
1	Aa	315	U	N1-C2-O2	5.88	126.92	122.80
1	Aa	415	A	OP1-P-O3'	5.88	118.14	105.20
43	BU	53	ILE	C-N-CA	5.87	136.38	121.70
23	BA	897	A	C5-C6-N6	-5.87	119.01	123.70
31	BI	89	ASP	CB-CG-OD1	5.86	123.58	118.30
1	Ba	599	U	N3-C2-O2	-5.86	118.10	122.20
1	Ba	387	C	N1-C2-O2	5.86	122.42	118.90
23	AA	402	C	N1-C2-O2	5.85	122.41	118.90
1	Ba	415	A	OP1-P-O3'	5.85	118.07	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	2369	C	N1-C2-O2	5.85	122.41	118.90
23	BA	2370	U	N1-C2-O2	5.85	126.90	122.80
43	AU	53	ILE	C-N-CA	5.85	136.32	121.70
23	AA	897	A	C5-C6-N6	-5.84	119.03	123.70
23	BA	688	A	P-O3'-C3'	5.84	126.71	119.70
1	Aa	315	U	N3-C2-O2	-5.82	118.12	122.20
23	AA	2370	U	N1-C2-O2	5.82	126.88	122.80
1	Ba	315	U	N3-C2-O2	-5.82	118.12	122.20
1	Ba	415	A	C2-N3-C4	5.82	113.51	110.60
23	AA	1768	C	N1-C2-O2	5.82	122.39	118.90
23	BA	1768	C	N1-C2-O2	5.82	122.39	118.90
23	BA	2796	C	N1-C2-O2	5.82	122.39	118.90
24	BB	87	C	C6-N1-C2	-5.82	117.97	120.30
1	Aa	437	U	P-O3'-C3'	5.81	126.67	119.70
23	BA	828	A	C4-N9-C1'	5.81	136.76	126.30
1	Ba	437	U	P-O3'-C3'	5.80	126.67	119.70
23	AA	755	C	N1-C2-O2	5.80	122.38	118.90
23	AA	828	A	C4-N9-C1'	5.80	136.74	126.30
23	BA	268	A	O4'-C1'-N9	5.80	112.84	108.20
1	Aa	599	U	N3-C2-O2	-5.80	118.14	122.20
23	AA	688	A	P-O3'-C3'	5.80	126.66	119.70
23	AA	268	A	O4'-C1'-N9	5.79	112.83	108.20
1	Ba	1156	A	P-O3'-C3'	5.79	126.64	119.70
23	AA	2796	C	N1-C2-O2	5.78	122.37	118.90
23	AA	74	U	N3-C2-O2	-5.77	118.16	122.20
23	BA	74	U	N3-C2-O2	-5.77	118.16	122.20
23	AA	2742	C	N1-C2-O2	5.77	122.36	118.90
1	Aa	1156	A	P-O3'-C3'	5.77	126.62	119.70
23	BA	1287	U	N1-C2-O2	5.77	126.84	122.80
1	Aa	387	C	N1-C2-O2	5.76	122.36	118.90
1	Ba	336	C	N1-C2-O2	5.75	122.35	118.90
23	BA	2742	C	N1-C2-O2	5.75	122.35	118.90
1	Aa	336	C	N1-C2-O2	5.74	122.34	118.90
23	BA	755	C	N1-C2-O2	5.74	122.34	118.90
23	AA	1287	U	N1-C2-O2	5.73	126.81	122.80
23	AA	1588	U	O4'-C1'-N1	5.73	112.78	108.20
23	AA	2369	C	N1-C2-O2	5.73	122.34	118.90
23	BA	1588	U	O4'-C1'-N1	5.72	112.78	108.20
23	AA	759	U	C6-N1-C1'	-5.71	113.21	121.20
23	AA	943	C	N1-C2-O2	5.71	122.33	118.90
1	Ba	486	C	N1-C2-O2	5.71	122.32	118.90
23	BA	759	U	C6-N1-C1'	-5.69	113.23	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	1213	C	N3-C2-O2	-5.69	117.92	121.90
23	AA	2361	U	N1-C2-O2	5.69	126.78	122.80
23	AA	1287	U	C2-N1-C1'	5.68	124.52	117.70
23	BA	862	C	C6-N1-C2	-5.68	118.03	120.30
1	Aa	486	C	N1-C2-O2	5.68	122.31	118.90
23	BA	943	C	N1-C2-O2	5.68	122.31	118.90
23	AA	2749	G	P-O3'-C3'	5.67	126.51	119.70
23	BA	1213	C	N3-C2-O2	-5.67	117.93	121.90
23	AA	975	U	N3-C2-O2	-5.67	118.23	122.20
23	BA	975	U	N3-C2-O2	-5.67	118.23	122.20
1	Ba	65	G	C4-N9-C1'	5.66	133.86	126.50
23	BA	2749	G	P-O3'-C3'	5.66	126.50	119.70
23	BA	1287	U	N3-C2-O2	-5.65	118.24	122.20
23	AA	1287	U	N3-C2-O2	-5.65	118.25	122.20
23	BA	1552	U	N1-C2-O2	5.64	126.75	122.80
23	AA	1803	G	C4-N9-C1'	5.64	133.83	126.50
23	BA	1803	G	C4-N9-C1'	5.64	133.83	126.50
1	Aa	1370	A	P-O3'-C3'	5.64	126.46	119.70
23	BA	1228	A	N7-C8-N9	5.63	116.62	113.80
23	BA	2370	U	C2-N1-C1'	5.63	124.46	117.70
23	AA	2370	U	C2-N1-C1'	5.63	124.45	117.70
1	Aa	599	U	C6-N1-C1'	-5.62	113.33	121.20
23	BA	1287	U	C2-N1-C1'	5.62	124.44	117.70
1	Aa	1136	U	P-O3'-C3'	5.62	126.44	119.70
23	AA	872	U	N1-C2-O2	5.62	126.73	122.80
1	Ba	1136	U	P-O3'-C3'	5.62	126.44	119.70
1	Ba	1370	A	P-O3'-C3'	5.62	126.44	119.70
1	Aa	65	G	C4-N9-C1'	5.62	133.80	126.50
23	AA	862	C	C6-N1-C2	-5.62	118.05	120.30
23	BA	1845	U	P-O3'-C3'	5.61	126.44	119.70
23	BA	593	U	C5-C6-N1	5.61	125.51	122.70
1	Ba	599	U	C6-N1-C1'	-5.60	113.36	121.20
23	BA	862	C	N3-C2-O2	-5.60	117.98	121.90
23	BA	1579	C	C6-N1-C2	-5.60	118.06	120.30
1	Ba	1048	C	N1-C2-O2	5.60	122.26	118.90
1	Ba	424	G	C8-N9-C1'	-5.59	119.73	127.00
23	AA	1214	C	N3-C2-O2	-5.59	117.99	121.90
23	AA	1845	U	P-O3'-C3'	5.59	126.41	119.70
23	BA	1451	U	N1-C2-O2	5.59	126.71	122.80
23	AA	1552	U	N1-C2-O2	5.58	126.71	122.80
23	AA	593	U	C5-C6-N1	5.58	125.49	122.70
23	BA	872	U	N1-C2-O2	5.58	126.71	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	1579	C	C6-N1-C2	-5.58	118.07	120.30
23	AA	1228	A	N7-C8-N9	5.58	116.59	113.80
23	AA	1633	A	C2-N3-C4	5.57	113.39	110.60
22	Av	153	MET	CG-SD-CE	-5.57	91.29	100.20
22	Bv	153	MET	CG-SD-CE	-5.57	91.29	100.20
1	Aa	424	G	C8-N9-C1'	-5.56	119.77	127.00
23	BA	2361	U	N1-C2-O2	5.56	126.69	122.80
23	AA	256	C	N1-C2-O2	5.56	122.24	118.90
23	AA	754	U	N1-C2-O2	5.56	126.69	122.80
23	BA	754	U	N1-C2-O2	5.56	126.69	122.80
23	AA	1343	U	C2-N1-C1'	5.56	124.37	117.70
23	AA	577	A	C2-N3-C4	5.56	113.38	110.60
23	BA	1214	C	N3-C2-O2	-5.56	118.01	121.90
23	AA	862	C	N3-C2-O2	-5.55	118.01	121.90
1	Aa	553	C	O4'-C1'-N1	5.55	112.64	108.20
23	AA	1692	C	C6-N1-C1'	-5.55	114.14	120.80
23	BA	1692	C	C6-N1-C1'	-5.55	114.14	120.80
1	Aa	1122	A	P-O3'-C3'	5.55	126.36	119.70
24	BB	69	C	N1-C2-O2	5.55	122.23	118.90
23	BA	2761	C	N1-C2-O2	5.54	122.23	118.90
1	Ba	1122	A	P-O3'-C3'	5.54	126.35	119.70
23	AA	1451	U	N1-C2-O2	5.54	126.68	122.80
23	BA	398	C	N1-C2-O2	5.54	122.22	118.90
35	BM	22	LEU	CA-CB-CG	5.54	128.04	115.30
35	AM	22	LEU	CA-CB-CG	5.54	128.03	115.30
1	Ba	387	C	N3-C2-O2	-5.54	118.03	121.90
23	BA	1343	U	C2-N1-C1'	5.54	124.34	117.70
23	AA	1992	C	N1-C2-O2	5.53	122.22	118.90
23	BA	1992	C	N1-C2-O2	5.53	122.22	118.90
23	BA	2699	U	N3-C2-O2	-5.52	118.33	122.20
23	BA	256	C	N1-C2-O2	5.52	122.21	118.90
23	AA	2761	C	N1-C2-O2	5.51	122.21	118.90
1	Ba	553	C	O4'-C1'-N1	5.51	112.61	108.20
23	AA	1894	G	C6-C5-N7	-5.50	127.10	130.40
1	Ba	55	C	C6-N1-C1'	-5.49	114.21	120.80
24	AB	69	C	N1-C2-O2	5.49	122.19	118.90
23	BA	1894	G	C6-C5-N7	-5.49	127.11	130.40
1	Aa	387	C	N3-C2-O2	-5.47	118.07	121.90
1	Ba	486	C	N3-C2-O2	-5.47	118.07	121.90
23	BA	2408	C	N1-C2-O2	5.47	122.18	118.90
23	AA	1049	C	N1-C2-O2	5.46	122.18	118.90
23	BA	2747	U	N3-C2-O2	-5.46	118.38	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	1216	U	C2-N1-C1'	5.46	124.25	117.70
1	Aa	55	C	C6-N1-C1'	-5.46	114.25	120.80
23	AA	398	C	N1-C2-O2	5.46	122.17	118.90
23	BA	577	A	C2-N3-C4	5.45	113.33	110.60
23	BA	1049	C	N1-C2-O2	5.45	122.17	118.90
1	Aa	486	C	N3-C2-O2	-5.45	118.08	121.90
23	AA	2408	C	N1-C2-O2	5.45	122.17	118.90
23	AA	975	U	C2-N1-C1'	5.44	124.23	117.70
23	AA	872	U	N3-C2-O2	-5.43	118.40	122.20
23	AA	2699	U	N3-C2-O2	-5.43	118.39	122.20
23	BA	1633	A	C2-N3-C4	5.43	113.32	110.60
24	AB	115	C	N1-C2-O2	5.43	122.16	118.90
1	Ba	422	A	C2-N3-C4	5.43	113.31	110.60
1	Aa	1048	C	N1-C2-O2	5.42	122.16	118.90
23	BA	2321	C	N1-C2-O2	5.42	122.15	118.90
23	AA	1815	C	N1-C2-O2	5.42	122.15	118.90
1	Ba	1168	C	C2-N1-C1'	5.42	124.76	118.80
23	AA	327	G	O4'-C1'-N9	5.42	112.53	108.20
23	BA	327	G	O4'-C1'-N9	5.42	112.53	108.20
23	BA	1216	U	C2-N1-C1'	5.41	124.20	117.70
23	AA	575	G	N3-C4-C5	-5.41	125.90	128.60
23	BA	1815	C	N1-C2-O2	5.40	122.14	118.90
23	BA	975	U	C2-N1-C1'	5.40	124.17	117.70
24	BB	115	C	N1-C2-O2	5.39	122.14	118.90
1	Ba	411	C	C6-N1-C2	-5.38	118.15	120.30
23	AA	1101	A	C2-N3-C4	5.38	113.29	110.60
23	BA	1514	A	N1-C6-N6	5.38	121.83	118.60
1	Aa	1168	C	C2-N1-C1'	5.38	124.72	118.80
1	Ba	1157	C	N1-C2-O2	5.38	122.13	118.90
23	BA	1692	C	N3-C2-O2	-5.38	118.14	121.90
24	AB	100	U	N1-C2-O2	5.37	126.56	122.80
23	AA	1894	G	N3-C4-C5	-5.36	125.92	128.60
23	BA	1894	G	N3-C4-C5	-5.36	125.92	128.60
23	BA	1732	U	O5'-P-OP2	-5.36	100.88	105.70
23	AA	1514	A	N1-C6-N6	5.36	121.81	118.60
23	BA	460	C	N1-C2-O2	5.35	122.11	118.90
23	AA	2321	C	N1-C2-O2	5.35	122.11	118.90
23	AA	2361	U	N3-C2-O2	-5.35	118.46	122.20
1	Ba	55	C	C6-N1-C2	-5.35	118.16	120.30
23	AA	2747	U	N3-C2-O2	-5.34	118.46	122.20
23	BA	2731	C	N1-C2-O2	5.34	122.11	118.90
24	BB	94	C	N3-C2-O2	-5.34	118.16	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	2249	G	O4'-C1'-N9	5.34	112.47	108.20
24	AB	94	C	N3-C2-O2	-5.33	118.17	121.90
25	AC	130	LEU	CA-CB-CG	5.33	127.56	115.30
25	BC	130	LEU	CA-CB-CG	5.33	127.56	115.30
23	AA	2049	U	N3-C2-O2	-5.33	118.47	122.20
1	Aa	1157	C	N1-C2-O2	5.33	122.10	118.90
23	AA	2731	C	N1-C2-O2	5.33	122.10	118.90
1	Aa	55	C	C6-N1-C2	-5.33	118.17	120.30
23	AA	971	U	N1-C2-O2	5.33	126.53	122.80
23	AA	1732	U	O5'-P-OP2	-5.33	100.91	105.70
23	BA	872	U	N3-C2-O2	-5.32	118.47	122.20
24	BB	100	U	N1-C2-O2	5.32	126.53	122.80
23	AA	2636	U	C2-N1-C1'	5.32	124.08	117.70
25	BC	19	LEU	CA-CB-CG	5.32	127.53	115.30
31	BI	64	ARG	CA-CB-CG	5.32	125.11	113.40
23	AA	988	C	N3-C2-O2	-5.32	118.18	121.90
23	AA	1692	C	N3-C2-O2	-5.32	118.18	121.90
1	Aa	411	C	C6-N1-C2	-5.31	118.17	120.30
31	AI	64	ARG	CA-CB-CG	5.31	125.09	113.40
25	AC	19	LEU	CA-CB-CG	5.31	127.52	115.30
23	BA	2112	C	N3-C2-O2	-5.31	118.18	121.90
23	AA	2112	C	N3-C2-O2	-5.30	118.19	121.90
23	AA	1551	U	O5'-P-OP1	-5.30	100.93	105.70
23	BA	1551	U	O5'-P-OP1	-5.30	100.93	105.70
23	BA	2636	U	C2-N1-C1'	5.30	124.06	117.70
23	AA	2249	G	O4'-C1'-N9	5.30	112.44	108.20
1	Aa	1012	G	C4-N9-C1'	5.29	133.37	126.50
23	BA	1101	A	C2-N3-C4	5.29	113.24	110.60
1	Ba	1012	G	C4-N9-C1'	5.29	133.37	126.50
23	BA	971	U	N1-C2-O2	5.29	126.50	122.80
23	AA	714	G	C4-N9-C1'	5.28	133.37	126.50
23	BA	714	G	C4-N9-C1'	5.28	133.37	126.50
23	BA	988	C	N3-C2-O2	-5.28	118.21	121.90
23	AA	394	U	N1-C2-O2	5.27	126.49	122.80
1	Aa	422	A	C2-N3-C4	5.27	113.23	110.60
23	BA	394	U	N1-C2-O2	5.27	126.49	122.80
23	AA	2263	C	N1-C2-O2	5.27	122.06	118.90
23	BA	575	G	N3-C4-C5	-5.26	125.97	128.60
23	BA	2361	U	N3-C2-O2	-5.26	118.52	122.20
23	BA	2049	U	N3-C2-O2	-5.26	118.52	122.20
23	BA	340	C	N1-C2-O2	5.25	122.05	118.90
23	AA	1758	A	C2-N3-C4	5.25	113.23	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	1758	A	C2-N3-C4	5.25	113.23	110.60
23	AA	2796	C	N3-C2-O2	-5.25	118.22	121.90
23	BA	1451	U	N3-C2-O2	-5.25	118.52	122.20
23	BA	2263	C	N1-C2-O2	5.25	122.05	118.90
23	BA	2796	C	N3-C2-O2	-5.25	118.22	121.90
23	AA	460	C	N1-C2-O2	5.24	122.05	118.90
1	Ba	324	C	C6-N1-C2	-5.24	118.20	120.30
1	Ba	797	U	N1-C2-O2	5.24	126.47	122.80
1	Aa	502	C	N1-C2-O2	5.23	122.04	118.90
23	AA	340	C	N1-C2-O2	5.23	122.04	118.90
23	AA	1451	U	N3-C2-O2	-5.23	118.54	122.20
23	AA	1557	C	N1-C2-O2	5.22	122.03	118.90
23	BA	1557	C	N1-C2-O2	5.22	122.03	118.90
23	BA	1214	C	C2-N1-C1'	5.22	124.54	118.80
12	Al	62	LEU	CA-CB-CG	5.21	127.29	115.30
1	Ba	1186	A	C2-N3-C4	5.21	113.21	110.60
23	BA	1101	A	C4-N9-C1'	5.21	135.67	126.30
25	BC	13	ARG	CA-CB-CG	5.21	124.85	113.40
12	Bl	62	LEU	CA-CB-CG	5.20	127.27	115.30
1	Aa	1063	U	C2-N1-C1'	5.20	123.94	117.70
23	BA	1950	U	N1-C2-O2	5.20	126.44	122.80
1	Aa	1188	G	C4-N9-C1'	5.20	133.26	126.50
23	AA	1101	A	C4-N9-C1'	5.20	135.66	126.30
1	Ba	1063	U	C2-N1-C1'	5.20	123.94	117.70
23	AA	1101	A	N7-C8-N9	5.20	116.40	113.80
23	BA	1101	A	N7-C8-N9	5.20	116.40	113.80
1	Aa	1096	U	N3-C2-O2	-5.19	118.56	122.20
1	Ba	1096	U	N3-C2-O2	-5.19	118.56	122.20
25	AC	13	ARG	CA-CB-CG	5.19	124.82	113.40
23	AA	1950	U	N1-C2-O2	5.19	126.43	122.80
1	Aa	797	U	N1-C2-O2	5.18	126.43	122.80
23	BA	1953	U	N3-C2-O2	-5.18	118.57	122.20
32	BJ	61	LEU	CB-CG-CD2	-5.18	102.19	111.00
23	AA	1228	A	O4'-C1'-N9	5.18	112.34	108.20
32	AJ	6	LEU	CA-CB-CG	5.18	127.21	115.30
32	AJ	61	LEU	CB-CG-CD2	-5.18	102.19	111.00
23	AA	754	U	N3-C2-O2	-5.18	118.58	122.20
23	BA	1228	A	O4'-C1'-N9	5.18	112.34	108.20
1	Ba	1188	G	C4-N9-C1'	5.18	133.23	126.50
32	BJ	6	LEU	CA-CB-CG	5.17	127.20	115.30
23	AA	1625	U	N3-C2-O2	-5.17	118.58	122.20
23	AA	1587	C	N1-C2-O2	5.16	122.00	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	Bf	54	ASP	CB-CG-OD1	5.16	122.94	118.30
1	Aa	1186	A	C2-N3-C4	5.16	113.18	110.60
23	AA	1385	G	P-O3'-C3'	5.15	125.88	119.70
23	AA	1953	U	N3-C2-O2	-5.15	118.59	122.20
23	AA	1214	C	C2-N1-C1'	5.15	124.46	118.80
23	AA	2263	C	C6-N1-C2	-5.15	118.24	120.30
23	BA	57	C	N1-C2-O2	5.15	121.99	118.90
1	Ba	542	U	C2-N1-C1'	5.14	123.87	117.70
23	AA	1160	C	N3-C2-O2	-5.14	118.30	121.90
1	Aa	1114	C	C6-N1-C2	-5.14	118.25	120.30
23	AA	57	C	N1-C2-O2	5.13	121.98	118.90
1	Aa	542	U	C2-N1-C1'	5.13	123.86	117.70
23	AA	256	C	N3-C2-O2	-5.13	118.31	121.90
23	AA	1651	C	N3-C2-O2	-5.13	118.31	121.90
23	BA	1160	C	N3-C2-O2	-5.13	118.31	121.90
23	AA	1761	G	N3-C4-C5	5.12	131.16	128.60
23	BA	1761	G	N3-C4-C5	5.12	131.16	128.60
23	BA	1651	C	N3-C2-O2	-5.12	118.31	121.90
1	Ba	797	U	N3-C2-O2	-5.12	118.62	122.20
23	BA	1385	G	P-O3'-C3'	5.12	125.84	119.70
23	BA	556	U	N1-C2-O2	5.12	126.38	122.80
23	BA	256	C	N3-C2-O2	-5.12	118.32	121.90
6	Af	54	ASP	CB-CG-OD1	5.11	122.90	118.30
24	AB	108	U	C6-N1-C1'	-5.11	114.04	121.20
1	Aa	99	U	C5-C6-N1	5.11	125.25	122.70
23	AA	1758	A	C4-N9-C1'	5.11	135.50	126.30
1	Aa	1373	A	C2-N3-C4	5.11	113.15	110.60
23	AA	576	U	C5-C6-N1	5.11	125.25	122.70
23	AA	1803	G	C8-N9-C1'	-5.11	120.36	127.00
1	Ba	1373	A	C2-N3-C4	5.11	113.15	110.60
23	BA	1803	G	C8-N9-C1'	-5.11	120.36	127.00
23	BA	2369	C	N3-C2-O2	-5.11	118.33	121.90
23	BA	1216	U	N1-C2-O2	5.10	126.37	122.80
23	BA	530	C	N1-C2-O2	5.10	121.96	118.90
23	BA	1587	C	N1-C2-O2	5.10	121.96	118.90
23	BA	2095	U	N1-C2-O2	5.10	126.37	122.80
23	AA	2819	C	C2-N1-C1'	5.09	124.41	118.80
23	BA	1758	A	C4-N9-C1'	5.09	135.47	126.30
24	BB	83	C	C6-N1-C2	-5.09	118.26	120.30
24	BB	108	U	C6-N1-C1'	-5.09	114.08	121.20
1	Aa	324	C	C6-N1-C2	-5.09	118.27	120.30
23	AA	1380	G	C4-N9-C1'	5.09	133.11	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BA	1828	U	N1-C2-O2	5.08	126.36	122.80
23	AA	2369	C	N3-C2-O2	-5.08	118.35	121.90
42	AT	82	LEU	C-N-CA	5.07	134.38	121.70
1	Aa	488	U	C2-N1-C1'	5.07	123.78	117.70
1	Ba	488	U	C2-N1-C1'	5.07	123.78	117.70
42	BT	82	LEU	C-N-CA	5.07	134.38	121.70
23	AA	556	U	N1-C2-O2	5.07	126.35	122.80
1	Ba	99	U	C5-C6-N1	5.07	125.23	122.70
1	Ba	502	C	N1-C2-O2	5.07	121.94	118.90
1	Aa	460	A	N3-C4-N9	5.06	131.44	127.40
23	AA	1552	U	C6-N1-C2	-5.06	117.97	121.00
23	BA	1552	U	C6-N1-C2	-5.06	117.97	121.00
23	AA	1828	U	N1-C2-O2	5.05	126.33	122.80
23	BA	576	U	C5-C6-N1	5.05	125.22	122.70
23	BA	593	U	N1-C2-O2	5.05	126.33	122.80
23	BA	402	C	N3-C2-O2	-5.05	118.37	121.90
23	BA	60	U	N1-C2-O2	5.04	126.33	122.80
1	Aa	99	U	P-O3'-C3'	5.04	125.75	119.70
23	BA	1380	G	C4-N9-C1'	5.04	133.06	126.50
23	BA	1625	U	N3-C2-O2	-5.04	118.67	122.20
23	AA	1992	C	N3-C2-O2	-5.04	118.37	121.90
1	Ba	460	A	N3-C4-N9	5.04	131.43	127.40
23	BA	1992	C	N3-C2-O2	-5.04	118.37	121.90
2	Ab	20	THR	C-N-CA	5.04	134.30	121.70
23	BA	2347	A	N3-C4-N9	5.04	131.43	127.40
23	BA	2223	C	C6-N1-C2	-5.04	118.28	120.30
23	BA	2819	C	C2-N1-C1'	5.04	124.34	118.80
23	AA	2095	U	N1-C2-O2	5.04	126.33	122.80
23	BA	754	U	N3-C2-O2	-5.04	118.67	122.20
23	AA	1132	A	O4'-C1'-N9	5.03	112.22	108.20
1	Ba	902	C	C6-N1-C1'	-5.03	114.76	120.80
24	AB	100	U	O4'-C1'-N1	5.03	112.22	108.20
1	Ba	99	U	P-O3'-C3'	5.03	125.73	119.70
23	BA	2263	C	C6-N1-C2	-5.03	118.29	120.30
1	Aa	797	U	N3-C2-O2	-5.03	118.68	122.20
23	AA	2224	U	N3-C2-O2	-5.03	118.68	122.20
23	AA	1559	G	N3-C2-N2	-5.02	116.38	119.90
23	BA	1559	G	N3-C2-N2	-5.02	116.38	119.90
23	AA	2223	C	C6-N1-C2	-5.02	118.29	120.30
23	AA	943	C	C6-N1-C2	-5.01	118.30	120.30
23	BA	1214	C	C6-N1-C2	-5.01	118.30	120.30
1	Aa	524	U	N3-C2-O2	-5.01	118.69	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AA	60	U	N1-C2-O2	5.01	126.31	122.80
23	AA	184	C	C5-C6-N1	5.01	123.50	121.00
1	Ba	1114	C	C6-N1-C2	-5.01	118.30	120.30
2	Bb	20	THR	C-N-CA	5.01	134.23	121.70
1	Aa	599	U	O4'-C1'-N1	5.01	112.20	108.20
23	AA	2347	A	N3-C4-N9	5.01	131.41	127.40
1	Ba	599	U	O4'-C1'-N1	5.01	112.20	108.20
35	AM	68	THR	C-N-CA	5.00	134.21	121.70
23	AA	460	C	C6-N1-C2	-5.00	118.30	120.30
1	Ba	65	G	OP2-P-O3'	5.00	116.20	105.20
23	BA	2224	U	N3-C2-O2	-5.00	118.70	122.20

There are no chirality outliers.

All (14) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
26	AD	158	SER	Peptide
38	AP	50	ALA	Peptide
5	Ae	76	ARG	Peptide
9	Ai	108	ARG	Peptide
12	Al	126	GLY	Peptide
19	As	80	PHE	Peptide
20	At	58	ASP	Peptide
26	BD	158	SER	Peptide
38	BP	50	ALA	Peptide
5	Be	76	ARG	Peptide
9	Bi	108	ARG	Peptide
12	Bl	126	GLY	Peptide
19	Bs	80	PHE	Peptide
20	Bt	58	ASP	Peptide

5.2 Too-close contacts (i)

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

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	Ab	224/226 (99%)	209 (93%)	14 (6%)	1 (0%)	34	72
2	Bb	224/226 (99%)	208 (93%)	14 (6%)	2 (1%)	17	57
3	Ac	200/202 (99%)	177 (88%)	23 (12%)	0	100	100
3	Bc	200/202 (99%)	177 (88%)	23 (12%)	0	100	100
4	Ad	196/198 (99%)	170 (87%)	26 (13%)	0	100	100
4	Bd	196/198 (99%)	170 (87%)	26 (13%)	0	100	100
5	Ae	154/156 (99%)	147 (96%)	7 (4%)	0	100	100
5	Be	154/156 (99%)	147 (96%)	7 (4%)	0	100	100
6	Af	93/95 (98%)	85 (91%)	8 (9%)	0	100	100
6	Bf	93/95 (98%)	85 (91%)	8 (9%)	0	100	100
7	Ag	150/152 (99%)	144 (96%)	6 (4%)	0	100	100
7	Bg	150/152 (99%)	144 (96%)	6 (4%)	0	100	100
8	Ah	129/131 (98%)	122 (95%)	7 (5%)	0	100	100
8	Bh	129/131 (98%)	121 (94%)	8 (6%)	0	100	100
9	Ai	125/127 (98%)	112 (90%)	13 (10%)	0	100	100
9	Bi	125/127 (98%)	112 (90%)	13 (10%)	0	100	100
10	Aj	95/97 (98%)	88 (93%)	7 (7%)	0	100	100
10	Bj	95/97 (98%)	88 (93%)	7 (7%)	0	100	100
11	Ak	112/114 (98%)	93 (83%)	19 (17%)	0	100	100
11	Bk	112/114 (98%)	93 (83%)	19 (17%)	0	100	100
12	Al	133/135 (98%)	118 (89%)	15 (11%)	0	100	100
12	Bl	133/135 (98%)	118 (89%)	15 (11%)	0	100	100
13	Am	100/121 (83%)	90 (90%)	10 (10%)	0	100	100
13	Bm	100/121 (83%)	90 (90%)	10 (10%)	0	100	100
14	An	58/60 (97%)	49 (84%)	9 (16%)	0	100	100
14	Bn	58/60 (97%)	49 (84%)	9 (16%)	0	100	100
15	Ao	86/88 (98%)	85 (99%)	1 (1%)	0	100	100
15	Bo	86/88 (98%)	85 (99%)	1 (1%)	0	100	100
16	Ap	87/89 (98%)	78 (90%)	9 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	Bp	87/89 (98%)	78 (90%)	9 (10%)	0	100	100
17	Aq	78/80 (98%)	72 (92%)	6 (8%)	0	100	100
17	Bq	78/80 (98%)	72 (92%)	6 (8%)	0	100	100
18	Ar	52/54 (96%)	51 (98%)	1 (2%)	0	100	100
18	Br	52/54 (96%)	51 (98%)	1 (2%)	0	100	100
19	As	78/80 (98%)	68 (87%)	10 (13%)	0	100	100
19	Bs	78/80 (98%)	69 (88%)	9 (12%)	0	100	100
20	At	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
20	Bt	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
21	Au	50/52 (96%)	48 (96%)	2 (4%)	0	100	100
21	Bu	50/52 (96%)	48 (96%)	2 (4%)	0	100	100
22	Av	158/190 (83%)	149 (94%)	9 (6%)	0	100	100
22	Bv	158/190 (83%)	149 (94%)	9 (6%)	0	100	100
25	AC	272/274 (99%)	257 (94%)	15 (6%)	0	100	100
25	BC	272/274 (99%)	257 (94%)	15 (6%)	0	100	100
26	AD	213/215 (99%)	194 (91%)	19 (9%)	0	100	100
26	BD	213/215 (99%)	194 (91%)	19 (9%)	0	100	100
27	AE	204/206 (99%)	192 (94%)	12 (6%)	0	100	100
27	BE	204/206 (99%)	192 (94%)	12 (6%)	0	100	100
28	AF	173/175 (99%)	142 (82%)	31 (18%)	0	100	100
28	BF	173/175 (99%)	142 (82%)	31 (18%)	0	100	100
29	AG	173/175 (99%)	155 (90%)	18 (10%)	0	100	100
29	BG	173/175 (99%)	155 (90%)	18 (10%)	0	100	100
30	AH	143/145 (99%)	131 (92%)	12 (8%)	0	100	100
30	BH	143/145 (99%)	131 (92%)	12 (8%)	0	100	100
31	AI	120/122 (98%)	106 (88%)	14 (12%)	0	100	100
31	BI	120/122 (98%)	106 (88%)	14 (12%)	0	100	100
32	AJ	144/146 (99%)	135 (94%)	9 (6%)	0	100	100
32	BJ	144/146 (99%)	135 (94%)	9 (6%)	0	100	100
33	AK	135/137 (98%)	127 (94%)	8 (6%)	0	100	100
33	BK	135/137 (98%)	127 (94%)	8 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	AL	118/120 (98%)	114 (97%)	4 (3%)	0	100	100
34	BL	118/120 (98%)	115 (98%)	3 (2%)	0	100	100
35	AM	117/119 (98%)	103 (88%)	14 (12%)	0	100	100
35	BM	117/119 (98%)	103 (88%)	14 (12%)	0	100	100
36	AN	112/114 (98%)	99 (88%)	13 (12%)	0	100	100
36	BN	112/114 (98%)	99 (88%)	13 (12%)	0	100	100
37	AO	114/116 (98%)	109 (96%)	5 (4%)	0	100	100
37	BO	114/116 (98%)	109 (96%)	5 (4%)	0	100	100
38	AP	100/102 (98%)	93 (93%)	6 (6%)	1 (1%)	15	54
38	BP	100/102 (98%)	93 (93%)	6 (6%)	1 (1%)	15	54
39	AQ	110/112 (98%)	106 (96%)	4 (4%)	0	100	100
39	BQ	110/112 (98%)	106 (96%)	4 (4%)	0	100	100
40	AR	87/89 (98%)	81 (93%)	6 (7%)	0	100	100
40	BR	87/89 (98%)	81 (93%)	6 (7%)	0	100	100
41	AS	101/103 (98%)	89 (88%)	12 (12%)	0	100	100
41	BS	101/103 (98%)	89 (88%)	12 (12%)	0	100	100
42	AT	92/94 (98%)	87 (95%)	5 (5%)	0	100	100
42	BT	92/94 (98%)	87 (95%)	5 (5%)	0	100	100
43	AU	80/82 (98%)	72 (90%)	8 (10%)	0	100	100
43	BU	80/82 (98%)	72 (90%)	8 (10%)	0	100	100
44	AV	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
44	BV	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
45	AW	65/67 (97%)	58 (89%)	7 (11%)	0	100	100
45	BW	65/67 (97%)	58 (89%)	7 (11%)	0	100	100
46	AX	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
46	BX	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
47	AY	57/59 (97%)	45 (79%)	12 (21%)	0	100	100
47	BY	57/59 (97%)	45 (79%)	12 (21%)	0	100	100
48	AZ	46/48 (96%)	40 (87%)	6 (13%)	0	100	100
48	BZ	46/48 (96%)	40 (87%)	6 (13%)	0	100	100
49	A1	45/47 (96%)	44 (98%)	1 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	B1	45/47 (96%)	44 (98%)	1 (2%)	0	100	100
50	A2	41/43 (95%)	39 (95%)	2 (5%)	0	100	100
50	B2	41/43 (95%)	39 (95%)	2 (5%)	0	100	100
51	A3	62/64 (97%)	58 (94%)	4 (6%)	0	100	100
51	B3	62/64 (97%)	57 (92%)	5 (8%)	0	100	100
52	A4	35/37 (95%)	35 (100%)	0	0	100	100
52	B4	35/37 (95%)	35 (100%)	0	0	100	100
All	All	11016/11310 (97%)	10097 (92%)	914 (8%)	5 (0%)	100	100

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	Ab	33	THR
38	AP	51	PRO
2	Bb	33	THR
38	BP	51	PRO
2	Bb	36	ASN

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	Ab	195/196 (100%)	194 (100%)	1 (0%)	88	93
2	Bb	195/196 (100%)	195 (100%)	0	100	100
3	Ac	138/164 (84%)	138 (100%)	0	100	100
3	Bc	138/164 (84%)	138 (100%)	0	100	100
4	Ad	147/174 (84%)	146 (99%)	1 (1%)	84	90
4	Bd	147/174 (84%)	146 (99%)	1 (1%)	84	90
5	Ae	118/122 (97%)	118 (100%)	0	100	100
5	Be	118/122 (97%)	118 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	Af	80/83 (96%)	80 (100%)	0	100	100
6	Bf	80/83 (96%)	80 (100%)	0	100	100
7	Ag	118/128 (92%)	118 (100%)	0	100	100
7	Bg	118/128 (92%)	118 (100%)	0	100	100
8	Ah	111/112 (99%)	109 (98%)	2 (2%)	59	77
8	Bh	111/112 (99%)	109 (98%)	2 (2%)	59	77
9	Ai	86/105 (82%)	84 (98%)	2 (2%)	50	70
9	Bi	86/105 (82%)	84 (98%)	2 (2%)	50	70
10	Aj	81/87 (93%)	80 (99%)	1 (1%)	71	83
10	Bj	81/87 (93%)	80 (99%)	1 (1%)	71	83
11	Ak	82/90 (91%)	82 (100%)	0	100	100
11	Bk	82/90 (91%)	82 (100%)	0	100	100
12	Al	111/117 (95%)	110 (99%)	1 (1%)	78	87
12	Bl	111/117 (95%)	110 (99%)	1 (1%)	78	87
13	Am	62/104 (60%)	61 (98%)	1 (2%)	62	79
13	Bm	62/104 (60%)	61 (98%)	1 (2%)	62	79
14	An	48/52 (92%)	46 (96%)	2 (4%)	30	54
14	Bn	48/52 (92%)	46 (96%)	2 (4%)	30	54
15	Ao	77/80 (96%)	76 (99%)	1 (1%)	69	82
15	Bo	77/80 (96%)	76 (99%)	1 (1%)	69	82
16	Ap	73/75 (97%)	71 (97%)	2 (3%)	44	65
16	Bp	73/75 (97%)	71 (97%)	2 (3%)	44	65
17	Aq	65/75 (87%)	65 (100%)	0	100	100
17	Bq	65/75 (87%)	65 (100%)	0	100	100
18	Ar	48/49 (98%)	48 (100%)	0	100	100
18	Br	48/49 (98%)	48 (100%)	0	100	100
19	As	67/70 (96%)	67 (100%)	0	100	100
19	Bs	67/70 (96%)	67 (100%)	0	100	100
20	At	61/67 (91%)	61 (100%)	0	100	100
20	Bt	61/67 (91%)	61 (100%)	0	100	100
21	Au	40/48 (83%)	40 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	Bu	40/48 (83%)	40 (100%)	0	100	100
22	Av	147/173 (85%)	143 (97%)	4 (3%)	44	65
22	Bv	147/173 (85%)	143 (97%)	4 (3%)	44	65
25	AC	221/221 (100%)	221 (100%)	0	100	100
25	BC	221/221 (100%)	221 (100%)	0	100	100
26	AD	173/173 (100%)	172 (99%)	1 (1%)	86	92
26	BD	173/173 (100%)	172 (99%)	1 (1%)	86	92
27	AE	168/168 (100%)	167 (99%)	1 (1%)	86	92
27	BE	168/168 (100%)	167 (99%)	1 (1%)	86	92
28	AF	141/154 (92%)	139 (99%)	2 (1%)	67	80
28	BF	141/154 (92%)	139 (99%)	2 (1%)	67	80
29	AG	124/153 (81%)	122 (98%)	2 (2%)	62	79
29	BG	124/153 (81%)	122 (98%)	2 (2%)	62	79
30	AH	122/123 (99%)	121 (99%)	1 (1%)	81	89
30	BH	122/123 (99%)	121 (99%)	1 (1%)	81	89
31	AI	100/100 (100%)	99 (99%)	1 (1%)	76	86
31	BI	100/100 (100%)	99 (99%)	1 (1%)	76	86
32	AJ	109/112 (97%)	107 (98%)	2 (2%)	59	77
32	BJ	109/112 (97%)	107 (98%)	2 (2%)	59	77
33	AK	108/114 (95%)	107 (99%)	1 (1%)	78	87
33	BK	108/114 (95%)	107 (99%)	1 (1%)	78	87
34	AL	96/101 (95%)	95 (99%)	1 (1%)	76	86
34	BL	96/101 (95%)	95 (99%)	1 (1%)	76	86
35	AM	86/95 (90%)	83 (96%)	3 (4%)	36	59
35	BM	86/95 (90%)	83 (96%)	3 (4%)	36	59
36	AN	93/100 (93%)	92 (99%)	1 (1%)	73	84
36	BN	93/100 (93%)	92 (99%)	1 (1%)	73	84
37	AO	96/96 (100%)	95 (99%)	1 (1%)	76	86
37	BO	96/96 (100%)	95 (99%)	1 (1%)	76	86
38	AP	84/86 (98%)	84 (100%)	0	100	100
38	BP	84/86 (98%)	84 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	AQ	89/91 (98%)	88 (99%)	1 (1%)	73	84
39	BQ	89/91 (98%)	88 (99%)	1 (1%)	73	84
40	AR	78/80 (98%)	76 (97%)	2 (3%)	46	66
40	BR	78/80 (98%)	76 (97%)	2 (3%)	46	66
41	AS	81/88 (92%)	80 (99%)	1 (1%)	71	83
41	BS	81/88 (92%)	80 (99%)	1 (1%)	71	83
42	AT	78/82 (95%)	78 (100%)	0	100	100
42	BT	78/82 (95%)	78 (100%)	0	100	100
43	AU	63/64 (98%)	60 (95%)	3 (5%)	25	51
43	BU	63/64 (98%)	60 (95%)	3 (5%)	25	51
44	AV	44/49 (90%)	43 (98%)	1 (2%)	50	70
44	BV	44/49 (90%)	43 (98%)	1 (2%)	50	70
45	AW	58/60 (97%)	58 (100%)	0	100	100
45	BW	58/60 (97%)	58 (100%)	0	100	100
46	AX	52/52 (100%)	52 (100%)	0	100	100
46	BX	52/52 (100%)	52 (100%)	0	100	100
47	AY	23/56 (41%)	23 (100%)	0	100	100
47	BY	23/56 (41%)	23 (100%)	0	100	100
48	AZ	35/44 (80%)	35 (100%)	0	100	100
48	BZ	35/44 (80%)	35 (100%)	0	100	100
49	A1	44/45 (98%)	44 (100%)	0	100	100
49	B1	44/45 (98%)	44 (100%)	0	100	100
50	A2	39/39 (100%)	39 (100%)	0	100	100
50	B2	39/39 (100%)	39 (100%)	0	100	100
51	A3	55/55 (100%)	55 (100%)	0	100	100
51	B3	55/55 (100%)	55 (100%)	0	100	100
52	A4	35/35 (100%)	34 (97%)	1 (3%)	42	64
52	B4	35/35 (100%)	34 (97%)	1 (3%)	42	64
All	All	8900/9614 (93%)	8813 (99%)	87 (1%)	77	86

All (87) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	Ab	36	ASN
4	Ad	115	ASN
8	Ah	56	LYS
8	Ah	105	LEU
9	Ai	20	ARG
9	Ai	115	ARG
10	Aj	102	LEU
12	Al	44	ARG
13	Am	57	ARG
14	An	26	ARG
14	An	45	ARG
15	Ao	54	ARG
16	Ap	9	ARG
16	Ap	32	ARG
22	Av	103	ARG
22	Av	151	LEU
22	Av	164	THR
22	Av	179	ASP
26	AD	131	ILE
27	AE	193	VAL
28	AF	69	LYS
28	AF	125	ARG
29	AG	41	MET
29	AG	175	LYS
30	AH	97	ASN
31	AI	122	LEU
32	AJ	30	THR
32	AJ	114	ASN
33	AK	27	VAL
34	AL	29	ARG
35	AM	22	LEU
35	AM	35	ARG
35	AM	87	LYS
36	AN	11	THR
37	AO	4	VAL
39	AQ	98	LYS
40	AR	47	ASN
40	AR	56	MET
41	AS	8	ASN
43	AU	22	ARG
43	AU	61	ARG
43	AU	75	VAL
44	AV	60	THR

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Mol	Chain	Res	Type
52	A4	35	ARG
4	Bd	115	ASN
8	Bh	56	LYS
8	Bh	105	LEU
9	Bi	20	ARG
9	Bi	115	ARG
10	Bj	102	LEU
12	Bl	44	ARG
13	Bm	57	ARG
14	Bn	26	ARG
14	Bn	45	ARG
15	Bo	54	ARG
16	Bp	9	ARG
16	Bp	32	ARG
22	Bv	103	ARG
22	Bv	151	LEU
22	Bv	164	THR
22	Bv	179	ASP
26	BD	131	ILE
27	BE	193	VAL
28	BF	69	LYS
28	BF	125	ARG
29	BG	41	MET
29	BG	175	LYS
30	BH	97	ASN
31	BI	122	LEU
32	BJ	30	THR
32	BJ	114	ASN
33	BK	27	VAL
34	BL	29	ARG
35	BM	22	LEU
35	BM	35	ARG
35	BM	87	LYS
36	BN	11	THR
37	BO	4	VAL
39	BQ	98	LYS
40	BR	47	ASN
40	BR	56	MET
41	BS	8	ASN
43	BU	22	ARG
43	BU	61	ARG
43	BU	75	VAL

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Mol	Chain	Res	Type
44	BV	60	THR
52	B4	35	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) such sidechains are listed below:

Mol	Chain	Res	Type
2	Ab	190	ASN
3	Ac	53	HIS
3	Ac	64	ASN
4	Ad	115	ASN
4	Ad	146	GLN
5	Ae	83	HIS
6	Af	70	ASN
7	Ag	67	ASN
9	Ai	33	ASN
9	Ai	77	GLN
11	Ak	22	HIS
11	Ak	40	ASN
11	Ak	101	GLN
12	Al	42	GLN
12	Al	85	HIS
14	An	52	GLN
17	Aq	33	HIS
18	Ar	57	GLN
19	As	22	GLN
20	At	21	ASN
22	Av	82	ASN
22	Av	152	GLN
25	AC	86	ASN
25	AC	133	GLN
25	AC	230	HIS
26	AD	128	GLN
26	AD	148	HIS
26	AD	167	GLN
27	AE	75	GLN
28	AF	127	ASN
29	AG	77	GLN
30	AH	48	HIS
30	AH	97	ASN
31	AI	4	GLN
32	AJ	4	HIS
32	AJ	114	ASN

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Mol	Chain	Res	Type
35	AM	43	GLN
36	AN	4	HIS
36	AN	79	HIS
37	AO	37	GLN
37	AO	91	ASN
38	AP	81	ASN
39	AQ	77	ASN
40	AR	47	ASN
41	AS	8	ASN
41	AS	39	ASN
41	AS	44	HIS
43	AU	20	ASN
44	AV	16	ASN
48	AZ	19	HIS
48	AZ	40	HIS
49	A1	26	ASN
49	A1	45	HIS
50	A2	17	HIS
2	Bb	190	ASN
3	Bc	53	HIS
3	Bc	64	ASN
4	Bd	115	ASN
4	Bd	146	GLN
5	Be	83	HIS
6	Bf	70	ASN
7	Bg	67	ASN
9	Bi	33	ASN
9	Bi	77	GLN
11	Bk	22	HIS
11	Bk	40	ASN
11	Bk	101	GLN
12	Bl	42	GLN
12	Bl	85	HIS
14	Bn	52	GLN
17	Bq	33	HIS
18	Br	57	GLN
19	Bs	22	GLN
20	Bt	21	ASN
22	Bv	152	GLN
25	BC	86	ASN
25	BC	133	GLN
25	BC	230	HIS

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Mol	Chain	Res	Type
26	BD	128	GLN
26	BD	148	HIS
26	BD	167	GLN
27	BE	75	GLN
28	BF	127	ASN
29	BG	77	GLN
30	BH	48	HIS
30	BH	97	ASN
31	BI	4	GLN
32	BJ	4	HIS
32	BJ	114	ASN
35	BM	43	GLN
36	BN	4	HIS
36	BN	79	HIS
37	BO	37	GLN
37	BO	91	ASN
39	BQ	77	ASN
40	BR	47	ASN
41	BS	8	ASN
41	BS	39	ASN
41	BS	44	HIS
43	BU	20	ASN
44	BV	16	ASN
48	BZ	19	HIS
48	BZ	40	HIS
49	B1	26	ASN
49	B1	45	HIS
50	B2	17	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	Aa	1537/1539 (99%)	470 (30%)	0
1	Ba	1537/1539 (99%)	468 (30%)	0
23	AA	2895/2923 (99%)	795 (27%)	27 (0%)
23	BA	2895/2923 (99%)	795 (27%)	28 (0%)
24	AB	113/115 (98%)	16 (14%)	0
24	BB	113/115 (98%)	16 (14%)	0
All	All	9090/9154 (99%)	2560 (28%)	55 (0%)

All (2560) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	Aa	6	U
1	Aa	8	G
1	Aa	9	A
1	Aa	10	G
1	Aa	23	G
1	Aa	30	A
1	Aa	33	A
1	Aa	40	G
1	Aa	41	C
1	Aa	45	G
1	Aa	48	C
1	Aa	49	C
1	Aa	50	U
1	Aa	51	A
1	Aa	52	A
1	Aa	59	C
1	Aa	60	A
1	Aa	61	A
1	Aa	62	G
1	Aa	66	A
1	Aa	68	C
1	Aa	69	G
1	Aa	70	A
1	Aa	71	A
1	Aa	75	A
1	Aa	76	C
1	Aa	78	A
1	Aa	82	G
1	Aa	83	C
1	Aa	84	U
1	Aa	85	U
1	Aa	88	U
1	Aa	89	U
1	Aa	92	C
1	Aa	94	G
1	Aa	99	U
1	Aa	100	A
1	Aa	107	G
1	Aa	120	C
1	Aa	129	A
1	Aa	140	A
1	Aa	150	U
1	Aa	162	A

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Mol	Chain	Res	Type
1	Aa	163	C
1	Aa	165	G
1	Aa	183	U
1	Aa	184	A
1	Aa	185	U
1	Aa	186	U
1	Aa	187	U
1	Aa	188	U
1	Aa	191	A
1	Aa	193	C
1	Aa	194	G
1	Aa	197	U
1	Aa	199	G
1	Aa	200	U
1	Aa	201	U
1	Aa	203	A
1	Aa	204	A
1	Aa	206	A
1	Aa	208	U
1	Aa	209	G
1	Aa	210	A
1	Aa	211	A
1	Aa	213	G
1	Aa	219	C
1	Aa	220	U
1	Aa	221	U
1	Aa	222	G
1	Aa	224	U
1	Aa	228	A
1	Aa	230	U
1	Aa	231	U
1	Aa	234	A
1	Aa	252	U
1	Aa	253	U
1	Aa	255	G
1	Aa	256	C
1	Aa	257	U
1	Aa	258	A
1	Aa	259	G
1	Aa	264	U
1	Aa	267	G
1	Aa	269	U

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Mol	Chain	Res	Type
1	Aa	274	G
1	Aa	275	C
1	Aa	279	C
1	Aa	289	G
1	Aa	291	U
1	Aa	297	G
1	Aa	301	A
1	Aa	309	G
1	Aa	335	A
1	Aa	336	C
1	Aa	337	A
1	Aa	339	G
1	Aa	352	A
1	Aa	354	G
1	Aa	355	G
1	Aa	356	G
1	Aa	358	G
1	Aa	359	G
1	Aa	360	C
1	Aa	362	G
1	Aa	364	A
1	Aa	375	U
1	Aa	376	U
1	Aa	380	C
1	Aa	381	A
1	Aa	389	A
1	Aa	392	G
1	Aa	395	U
1	Aa	406	C
1	Aa	411	C
1	Aa	412	G
1	Aa	413	U
1	Aa	414	G
1	Aa	415	A
1	Aa	416	G
1	Aa	417	U
1	Aa	418	G
1	Aa	419	A
1	Aa	420	U
1	Aa	421	G
1	Aa	422	A
1	Aa	423	A

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Mol	Chain	Res	Type
1	Aa	424	G
1	Aa	425	G
1	Aa	426	U
1	Aa	430	C
1	Aa	431	G
1	Aa	432	G
1	Aa	434	U
1	Aa	437	U
1	Aa	438	A
1	Aa	440	A
1	Aa	441	A
1	Aa	442	C
1	Aa	449	A
1	Aa	450	U
1	Aa	451	U
1	Aa	452	A
1	Aa	456	A
1	Aa	458	G
1	Aa	460	A
1	Aa	461	C
1	Aa	464	A
1	Aa	465	U
1	Aa	484	A
1	Aa	485	U
1	Aa	486	C
1	Aa	487	U
1	Aa	488	U
1	Aa	492	G
1	Aa	499	A
1	Aa	503	A
1	Aa	504	G
1	Aa	505	A
1	Aa	506	A
1	Aa	507	A
1	Aa	513	G
1	Aa	514	G
1	Aa	516	U
1	Aa	517	A
1	Aa	519	C
1	Aa	522	C
1	Aa	526	C
1	Aa	529	G

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Mol	Chain	Res	Type
1	Aa	532	G
1	Aa	535	G
1	Aa	539	U
1	Aa	541	A
1	Aa	542	U
1	Aa	543	A
1	Aa	548	G
1	Aa	554	A
1	Aa	555	A
1	Aa	567	A
1	Aa	570	U
1	Aa	571	A
1	Aa	580	A
1	Aa	581	A
1	Aa	584	C
1	Aa	585	G
1	Aa	596	G
1	Aa	603	A
1	Aa	610	A
1	Aa	619	C
1	Aa	628	C
1	Aa	638	G
1	Aa	639	G
1	Aa	640	G
1	Aa	641	U
1	Aa	642	C
1	Aa	647	G
1	Aa	649	A
1	Aa	650	A
1	Aa	657	A
1	Aa	661	U
1	Aa	666	G
1	Aa	670	A
1	Aa	673	A
1	Aa	674	G
1	Aa	695	A
1	Aa	696	G
1	Aa	702	A
1	Aa	703	A
1	Aa	711	G
1	Aa	712	A
1	Aa	724	A

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Mol	Chain	Res	Type
1	Aa	729	A
1	Aa	731	U
1	Aa	739	G
1	Aa	756	A
1	Aa	763	G
1	Aa	772	C
1	Aa	781	G
1	Aa	798	A
1	Aa	801	U
1	Aa	813	C
1	Aa	818	C
1	Aa	823	A
1	Aa	825	C
1	Aa	826	G
1	Aa	827	A
1	Aa	829	G
1	Aa	835	U
1	Aa	836	A
1	Aa	840	G
1	Aa	843	A
1	Aa	844	G
1	Aa	845	G
1	Aa	846	G
1	Aa	847	G
1	Aa	848	G
1	Aa	849	U
1	Aa	850	U
1	Aa	852	C
1	Aa	853	C
1	Aa	854	G
1	Aa	855	C
1	Aa	858	C
1	Aa	860	U
1	Aa	881	A
1	Aa	894	G
1	Aa	898	A
1	Aa	910	A
1	Aa	911	G
1	Aa	923	A
1	Aa	924	A
1	Aa	935	G
1	Aa	943	C

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Mol	Chain	Res	Type
1	Aa	944	A
1	Aa	949	C
1	Aa	950	G
1	Aa	953	G
1	Aa	954	G
1	Aa	955	A
1	Aa	956	G
1	Aa	958	A
1	Aa	959	U
1	Aa	961	U
1	Aa	969	U
1	Aa	970	U
1	Aa	972	G
1	Aa	973	A
1	Aa	974	A
1	Aa	975	G
1	Aa	977	A
1	Aa	978	A
1	Aa	980	G
1	Aa	983	A
1	Aa	984	A
1	Aa	985	G
1	Aa	986	A
1	Aa	991	U
1	Aa	1001	U
1	Aa	1002	G
1	Aa	1003	A
1	Aa	1007	C
1	Aa	1008	C
1	Aa	1011	U
1	Aa	1012	G
1	Aa	1013	A
1	Aa	1015	A
1	Aa	1016	A
1	Aa	1017	C
1	Aa	1022	G
1	Aa	1023	A
1	Aa	1026	U
1	Aa	1032	C
1	Aa	1033	U
1	Aa	1035	C
1	Aa	1036	C

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Mol	Chain	Res	Type
1	Aa	1038	C
1	Aa	1039	U
1	Aa	1041	C
1	Aa	1042	G
1	Aa	1043	G
1	Aa	1047	A
1	Aa	1048	C
1	Aa	1052	G
1	Aa	1055	A
1	Aa	1056	C
1	Aa	1057	A
1	Aa	1064	G
1	Aa	1065	C
1	Aa	1066	A
1	Aa	1076	U
1	Aa	1077	C
1	Aa	1091	A
1	Aa	1092	G
1	Aa	1094	U
1	Aa	1096	U
1	Aa	1101	U
1	Aa	1105	G
1	Aa	1106	U
1	Aa	1109	C
1	Aa	1112	A
1	Aa	1113	A
1	Aa	1115	G
1	Aa	1119	G
1	Aa	1123	C
1	Aa	1130	G
1	Aa	1135	G
1	Aa	1136	U
1	Aa	1137	U
1	Aa	1138	G
1	Aa	1141	A
1	Aa	1142	U
1	Aa	1143	C
1	Aa	1146	U
1	Aa	1148	A
1	Aa	1149	G
1	Aa	1150	U
1	Aa	1151	U

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Mol	Chain	Res	Type
1	Aa	1154	G
1	Aa	1156	A
1	Aa	1157	C
1	Aa	1165	U
1	Aa	1167	A
1	Aa	1168	C
1	Aa	1169	U
1	Aa	1172	C
1	Aa	1173	G
1	Aa	1174	G
1	Aa	1175	U
1	Aa	1177	A
1	Aa	1178	C
1	Aa	1179	A
1	Aa	1181	A
1	Aa	1187	G
1	Aa	1188	G
1	Aa	1189	A
1	Aa	1190	A
1	Aa	1191	G
1	Aa	1194	G
1	Aa	1202	C
1	Aa	1203	G
1	Aa	1206	A
1	Aa	1207	A
1	Aa	1208	A
1	Aa	1209	U
1	Aa	1210	C
1	Aa	1211	A
1	Aa	1216	G
1	Aa	1222	U
1	Aa	1224	U
1	Aa	1225	G
1	Aa	1226	A
1	Aa	1228	U
1	Aa	1230	G
1	Aa	1234	U
1	Aa	1235	A
1	Aa	1236	C
1	Aa	1238	C
1	Aa	1243	G
1	Aa	1246	A

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Mol	Chain	Res	Type
1	Aa	1248	A
1	Aa	1250	U
1	Aa	1251	G
1	Aa	1256	A
1	Aa	1260	A
1	Aa	1266	C
1	Aa	1267	A
1	Aa	1268	G
1	Aa	1270	G
1	Aa	1274	C
1	Aa	1275	C
1	Aa	1280	G
1	Aa	1281	G
1	Aa	1282	U
1	Aa	1283	C
1	Aa	1286	G
1	Aa	1287	C
1	Aa	1288	A
1	Aa	1289	A
1	Aa	1290	A
1	Aa	1291	U
1	Aa	1292	C
1	Aa	1296	U
1	Aa	1297	A
1	Aa	1300	G
1	Aa	1305	U
1	Aa	1307	U
1	Aa	1308	C
1	Aa	1309	A
1	Aa	1310	G
1	Aa	1311	U
1	Aa	1312	U
1	Aa	1313	C
1	Aa	1314	G
1	Aa	1315	G
1	Aa	1319	G
1	Aa	1320	U
1	Aa	1322	G
1	Aa	1327	C
1	Aa	1329	A
1	Aa	1332	C
1	Aa	1333	G

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Mol	Chain	Res	Type
1	Aa	1335	C
1	Aa	1336	U
1	Aa	1337	A
1	Aa	1338	C
1	Aa	1339	A
1	Aa	1341	G
1	Aa	1345	C
1	Aa	1347	G
1	Aa	1348	G
1	Aa	1356	A
1	Aa	1357	G
1	Aa	1361	U
1	Aa	1363	G
1	Aa	1368	U
1	Aa	1371	G
1	Aa	1373	A
1	Aa	1378	A
1	Aa	1380	G
1	Aa	1387	A
1	Aa	1391	U
1	Aa	1392	C
1	Aa	1393	C
1	Aa	1404	A
1	Aa	1408	A
1	Aa	1419	C
1	Aa	1421	C
1	Aa	1428	A
1	Aa	1429	G
1	Aa	1438	A
1	Aa	1448	G
1	Aa	1451	G
1	Aa	1456	A
1	Aa	1461	U
1	Aa	1462	U
1	Aa	1463	U
1	Aa	1464	A
1	Aa	1466	G
1	Aa	1468	G
1	Aa	1476	U
1	Aa	1483	U
1	Aa	1495	U
1	Aa	1505	G

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Mol	Chain	Res	Type
1	Aa	1508	G
1	Aa	1510	A
1	Aa	1514	A
1	Aa	1515	G
1	Aa	1540	G
1	Aa	1541	G
1	Aa	1543	U
23	AA	11	U
23	AA	15	G
23	AA	27	G
23	AA	28	A
23	AA	34	U
23	AA	36	G
23	AA	43	A
23	AA	51	G
23	AA	52	A
23	AA	53	A
23	AA	55	G
23	AA	63	U
23	AA	70	G
23	AA	71	A
23	AA	74	U
23	AA	75	G
23	AA	83	G
23	AA	84	A
23	AA	90	A
23	AA	92	G
23	AA	93	U
23	AA	96	G
23	AA	101	G
23	AA	102	A
23	AA	104	C
23	AA	117	A
23	AA	119	U
23	AA	124	A
23	AA	141	U
23	AA	148	U
23	AA	149	U
23	AA	152	C
23	AA	156	A
23	AA	157	U
23	AA	158	G

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Mol	Chain	Res	Type
23	AA	161	A
23	AA	164	A
23	AA	167	U
23	AA	168	A
23	AA	170	C
23	AA	172	U
23	AA	173	A
23	AA	177	G
23	AA	178	A
23	AA	180	G
23	AA	184	C
23	AA	185	A
23	AA	199	A
23	AA	202	A
23	AA	213	C
23	AA	215	G
23	AA	216	A
23	AA	218	G
23	AA	219	A
23	AA	224	A
23	AA	225	A
23	AA	233	U
23	AA	246	U
23	AA	251	G
23	AA	255	G
23	AA	268	A
23	AA	269	G
23	AA	270	C
23	AA	279	A
23	AA	280	C
23	AA	285	U
23	AA	286	U
23	AA	287	G
23	AA	292	U
23	AA	293	U
23	AA	298	U
23	AA	299	U
23	AA	300	G
23	AA	301	U
23	AA	302	A
23	AA	307	A
23	AA	309	U

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Mol	Chain	Res	Type
23	AA	310	C
23	AA	311	U
23	AA	312	A
23	AA	316	G
23	AA	320	U
23	AA	321	U
23	AA	327	G
23	AA	328	G
23	AA	333	C
23	AA	335	U
23	AA	345	C
23	AA	353	A
23	AA	365	A
23	AA	366	G
23	AA	373	A
23	AA	388	A
23	AA	389	A
23	AA	392	U
23	AA	394	U
23	AA	397	U
23	AA	402	C
23	AA	404	U
23	AA	406	A
23	AA	410	G
23	AA	411	A
23	AA	417	A
23	AA	432	G
23	AA	435	A
23	AA	444	C
23	AA	447	A
23	AA	449	U
23	AA	451	U
23	AA	452	G
23	AA	458	A
23	AA	460	C
23	AA	481	C
23	AA	482	U
23	AA	486	G
23	AA	490	C
23	AA	492	G
23	AA	493	A
23	AA	501	C

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Mol	Chain	Res	Type
23	AA	502	C
23	AA	503	A
23	AA	504	G
23	AA	506	A
23	AA	512	A
23	AA	513	G
23	AA	518	A
23	AA	523	A
23	AA	527	G
23	AA	535	G
23	AA	538	G
23	AA	539	G
23	AA	550	A
23	AA	553	A
23	AA	554	C
23	AA	557	G
23	AA	558	A
23	AA	559	A
23	AA	563	G
23	AA	566	U
23	AA	572	C
23	AA	574	A
23	AA	576	U
23	AA	577	A
23	AA	578	G
23	AA	580	C
23	AA	591	A
23	AA	592	A
23	AA	594	G
23	AA	606	G
23	AA	611	U
23	AA	616	G
23	AA	617	A
23	AA	618	A
23	AA	639	U
23	AA	644	C
23	AA	645	A
23	AA	646	A
23	AA	647	G
23	AA	659	A
23	AA	672	A
23	AA	679	G

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Mol	Chain	Res	Type
23	AA	682	A
23	AA	689	A
23	AA	690	U
23	AA	698	U
23	AA	699	U
23	AA	702	U
23	AA	713	A
23	AA	715	A
23	AA	720	A
23	AA	722	A
23	AA	730	A
23	AA	731	U
23	AA	735	C
23	AA	750	A
23	AA	754	U
23	AA	755	C
23	AA	759	U
23	AA	760	A
23	AA	761	A
23	AA	762	C
23	AA	763	A
23	AA	765	U
23	AA	766	G
23	AA	768	A
23	AA	771	G
23	AA	775	A
23	AA	792	U
23	AA	793	G
23	AA	797	A
23	AA	802	G
23	AA	809	A
23	AA	810	A
23	AA	816	G
23	AA	820	G
23	AA	822	G
23	AA	827	A
23	AA	829	U
23	AA	830	U
23	AA	834	A
23	AA	835	U
23	AA	836	C
23	AA	837	G

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Mol	Chain	Res	Type
23	AA	840	C
23	AA	841	C
23	AA	842	U
23	AA	850	G
23	AA	856	U
23	AA	857	C
23	AA	868	A
23	AA	870	C
23	AA	872	U
23	AA	891	A
23	AA	892	U
23	AA	904	G
23	AA	911	A
23	AA	914	G
23	AA	918	G
23	AA	920	A
23	AA	926	G
23	AA	928	C
23	AA	940	U
23	AA	943	C
23	AA	949	C
23	AA	952	A
23	AA	955	A
23	AA	957	C
23	AA	960	C
23	AA	964	U
23	AA	968	A
23	AA	969	A
23	AA	970	U
23	AA	971	U
23	AA	972	A
23	AA	973	A
23	AA	975	U
23	AA	977	A
23	AA	985	A
23	AA	986	G
23	AA	988	C
23	AA	989	A
23	AA	990	G
23	AA	992	A
23	AA	997	G
23	AA	1003	A

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Mol	Chain	Res	Type
23	AA	1005	G
23	AA	1012	G
23	AA	1018	A
23	AA	1019	A
23	AA	1024	A
23	AA	1025	A
23	AA	1027	A
23	AA	1034	A
23	AA	1040	A
23	AA	1043	U
23	AA	1047	G
23	AA	1049	C
23	AA	1056	U
23	AA	1057	A
23	AA	1066	G
23	AA	1067	U
23	AA	1069	G
23	AA	1070	A
23	AA	1076	A
23	AA	1077	U
23	AA	1078	G
23	AA	1086	G
23	AA	1087	C
23	AA	1088	C
23	AA	1089	C
23	AA	1091	G
23	AA	1092	A
23	AA	1093	C
23	AA	1094	A
23	AA	1095	A
23	AA	1100	G
23	AA	1102	U
23	AA	1105	U
23	AA	1106	G
23	AA	1109	U
23	AA	1111	A
23	AA	1113	A
23	AA	1114	A
23	AA	1115	G
23	AA	1116	C
23	AA	1117	A
23	AA	1118	G

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Mol	Chain	Res	Type
23	AA	1119	C
23	AA	1120	C
23	AA	1122	U
23	AA	1126	U
23	AA	1127	U
23	AA	1128	A
23	AA	1132	A
23	AA	1133	G
23	AA	1137	G
23	AA	1138	U
23	AA	1139	A
23	AA	1140	A
23	AA	1143	G
23	AA	1145	U
23	AA	1148	C
23	AA	1150	A
23	AA	1151	G
23	AA	1155	A
23	AA	1156	G
23	AA	1158	G
23	AA	1160	C
23	AA	1161	A
23	AA	1162	C
23	AA	1163	U
23	AA	1174	U
23	AA	1176	U
23	AA	1178	C
23	AA	1179	C
23	AA	1186	A
23	AA	1200	A
23	AA	1201	G
23	AA	1208	A
23	AA	1214	C
23	AA	1215	U
23	AA	1216	U
23	AA	1217	U
23	AA	1218	G
23	AA	1225	G
23	AA	1245	G
23	AA	1250	G
23	AA	1258	A
23	AA	1265	G

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Mol	Chain	Res	Type
23	AA	1267	A
23	AA	1274	G
23	AA	1275	A
23	AA	1276	G
23	AA	1284	A
23	AA	1285	A
23	AA	1286	G
23	AA	1290	G
23	AA	1291	A
23	AA	1294	G
23	AA	1298	G
23	AA	1300	G
23	AA	1304	G
23	AA	1309	G
23	AA	1310	A
23	AA	1320	G
23	AA	1326	C
23	AA	1337	A
23	AA	1338	U
23	AA	1339	U
23	AA	1340	G
23	AA	1342	C
23	AA	1344	A
23	AA	1348	U
23	AA	1349	U
23	AA	1351	C
23	AA	1354	G
23	AA	1358	A
23	AA	1367	C
23	AA	1370	C
23	AA	1386	U
23	AA	1387	C
23	AA	1389	U
23	AA	1392	G
23	AA	1394	U
23	AA	1402	A
23	AA	1405	G
23	AA	1415	A
23	AA	1416	U
23	AA	1417	G
23	AA	1420	U
23	AA	1422	A

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Mol	Chain	Res	Type
23	AA	1423	C
23	AA	1432	A
23	AA	1440	A
23	AA	1443	A
23	AA	1445	C
23	AA	1447	A
23	AA	1450	A
23	AA	1451	U
23	AA	1453	G
23	AA	1454	U
23	AA	1455	U
23	AA	1457	U
23	AA	1459	A
23	AA	1463	A
23	AA	1464	U
23	AA	1471	A
23	AA	1472	C
23	AA	1481	A
23	AA	1489	A
23	AA	1490	G
23	AA	1491	C
23	AA	1494	G
23	AA	1495	C
23	AA	1496	G
23	AA	1497	A
23	AA	1498	U
23	AA	1499	U
23	AA	1503	U
23	AA	1504	U
23	AA	1510	U
23	AA	1516	C
23	AA	1518	G
23	AA	1519	U
23	AA	1520	A
23	AA	1521	A
23	AA	1525	U
23	AA	1526	G
23	AA	1527	A
23	AA	1532	U
23	AA	1533	A
23	AA	1534	G
23	AA	1536	C

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Mol	Chain	Res	Type
23	AA	1537	A
23	AA	1540	U
23	AA	1550	G
23	AA	1551	U
23	AA	1552	U
23	AA	1553	A
23	AA	1554	A
23	AA	1555	G
23	AA	1556	G
23	AA	1559	G
23	AA	1561	G
23	AA	1569	G
23	AA	1570	G
23	AA	1575	A
23	AA	1576	A
23	AA	1578	A
23	AA	1579	C
23	AA	1580	A
23	AA	1581	U
23	AA	1582	U
23	AA	1583	G
23	AA	1584	U
23	AA	1586	U
23	AA	1587	C
23	AA	1591	G
23	AA	1594	U
23	AA	1605	A
23	AA	1606	C
23	AA	1613	G
23	AA	1616	A
23	AA	1625	U
23	AA	1627	G
23	AA	1629	U
23	AA	1630	A
23	AA	1631	G
23	AA	1632	A
23	AA	1633	A
23	AA	1634	A
23	AA	1635	A
23	AA	1636	U
23	AA	1639	G
23	AA	1652	A

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Mol	Chain	Res	Type
23	AA	1653	A
23	AA	1654	A
23	AA	1661	C
23	AA	1666	A
23	AA	1675	G
23	AA	1679	A
23	AA	1683	U
23	AA	1684	A
23	AA	1690	A
23	AA	1691	G
23	AA	1692	C
23	AA	1693	G
23	AA	1718	G
23	AA	1719	C
23	AA	1732	U
23	AA	1737	U
23	AA	1738	C
23	AA	1740	G
23	AA	1745	A
23	AA	1747	G
23	AA	1757	U
23	AA	1758	A
23	AA	1759	G
23	AA	1760	G
23	AA	1761	G
23	AA	1762	U
23	AA	1765	A
23	AA	1768	C
23	AA	1771	A
23	AA	1772	G
23	AA	1790	G
23	AA	1791	G
23	AA	1797	G
23	AA	1800	A
23	AA	1806	U
23	AA	1808	U
23	AA	1809	C
23	AA	1811	A
23	AA	1813	A
23	AA	1814	A
23	AA	1818	A
23	AA	1826	G

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Mol	Chain	Res	Type
23	AA	1827	C
23	AA	1828	U
23	AA	1829	A
23	AA	1830	A
23	AA	1835	U
23	AA	1843	U
23	AA	1846	A
23	AA	1856	A
23	AA	1860	C
23	AA	1878	U
23	AA	1879	U
23	AA	1880	A
23	AA	1885	G
23	AA	1889	G
23	AA	1895	C
23	AA	1897	U
23	AA	1898	C
23	AA	1899	U
23	AA	1900	G
23	AA	1901	C
23	AA	1902	G
23	AA	1903	A
23	AA	1904	A
23	AA	1907	U
23	AA	1909	C
23	AA	1911	A
23	AA	1912	A
23	AA	1914	C
23	AA	1918	G
23	AA	1933	G
23	AA	1935	C
23	AA	1937	G
23	AA	1938	U
23	AA	1945	A
23	AA	1950	U
23	AA	1956	G
23	AA	1958	U
23	AA	1963	A
23	AA	1964	A
23	AA	1965	A
23	AA	1966	U
23	AA	1971	U

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Mol	Chain	Res	Type
23	AA	1982	U
23	AA	1989	C
23	AA	1990	C
23	AA	1992	C
23	AA	1994	C
23	AA	1996	A
23	AA	1997	A
23	AA	1998	A
23	AA	1999	G
23	AA	2009	U
23	AA	2018	U
23	AA	2019	G
23	AA	2020	U
23	AA	2023	C
23	AA	2024	A
23	AA	2029	G
23	AA	2030	A
23	AA	2047	A
23	AA	2057	A
23	AA	2058	A
23	AA	2059	G
23	AA	2060	A
23	AA	2062	G
23	AA	2070	C
23	AA	2073	G
23	AA	2075	G
23	AA	2076	A
23	AA	2082	C
23	AA	2083	G
23	AA	2085	A
23	AA	2087	A
23	AA	2088	G
23	AA	2089	A
23	AA	2096	G
23	AA	2097	G
23	AA	2103	U
23	AA	2107	G
23	AA	2109	A
23	AA	2110	G
23	AA	2111	C
23	AA	2115	A
23	AA	2117	A

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Mol	Chain	Res	Type
23	AA	2118	U
23	AA	2119	U
23	AA	2120	G
23	AA	2126	C
23	AA	2129	C
23	AA	2139	A
23	AA	2140	C
23	AA	2143	G
23	AA	2145	U
23	AA	2147	G
23	AA	2153	A
23	AA	2155	C
23	AA	2157	U
23	AA	2158	U
23	AA	2160	G
23	AA	2161	A
23	AA	2164	C
23	AA	2172	C
23	AA	2173	U
23	AA	2174	A
23	AA	2175	G
23	AA	2176	C
23	AA	2183	G
23	AA	2185	A
23	AA	2186	G
23	AA	2188	C
23	AA	2190	C
23	AA	2193	G
23	AA	2194	U
23	AA	2195	G
23	AA	2198	A
23	AA	2204	C
23	AA	2215	U
23	AA	2224	U
23	AA	2225	A
23	AA	2229	C
23	AA	2230	G
23	AA	2231	C
23	AA	2232	A
23	AA	2238	U
23	AA	2240	U
23	AA	2241	C

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Mol	Chain	Res	Type
23	AA	2243	U
23	AA	2252	A
23	AA	2261	G
23	AA	2262	G
23	AA	2263	C
23	AA	2265	G
23	AA	2266	G
23	AA	2290	C
23	AA	2295	A
23	AA	2305	A
23	AA	2306	G
23	AA	2310	C
23	AA	2314	A
23	AA	2316	G
23	AA	2321	C
23	AA	2328	A
23	AA	2329	U
23	AA	2330	G
23	AA	2331	G
23	AA	2332	U
23	AA	2333	U
23	AA	2334	G
23	AA	2335	G
23	AA	2336	A
23	AA	2337	A
23	AA	2345	A
23	AA	2346	U
23	AA	2347	A
23	AA	2352	G
23	AA	2353	U
23	AA	2358	G
23	AA	2361	U
23	AA	2362	A
23	AA	2370	U
23	AA	2374	C
23	AA	2377	C
23	AA	2385	A
23	AA	2388	A
23	AA	2396	A
23	AA	2409	G
23	AA	2410	G
23	AA	2411	A

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Mol	Chain	Res	Type
23	AA	2412	C
23	AA	2429	U
23	AA	2433	C
23	AA	2434	A
23	AA	2441	G
23	AA	2449	C
23	AA	2450	U
23	AA	2451	C
23	AA	2455	G
23	AA	2456	G
23	AA	2457	A
23	AA	2458	U
23	AA	2459	A
23	AA	2460	A
23	AA	2461	A
23	AA	2462	A
23	AA	2463	G
23	AA	2468	C
23	AA	2472	G
23	AA	2474	G
23	AA	2475	A
23	AA	2485	U
23	AA	2486	A
23	AA	2503	A
23	AA	2511	G
23	AA	2521	G
23	AA	2525	C
23	AA	2529	G
23	AA	2530	A
23	AA	2531	U
23	AA	2532	G
23	AA	2540	A
23	AA	2544	C
23	AA	2545	A
23	AA	2547	C
23	AA	2556	G
23	AA	2561	C
23	AA	2562	G
23	AA	2568	A
23	AA	2569	A
23	AA	2570	G
23	AA	2581	U

Continued on next page...

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Mol	Chain	Res	Type
23	AA	2589	U
23	AA	2592	A
23	AA	2593	A
23	AA	2594	G
23	AA	2599	A
23	AA	2600	C
23	AA	2604	A
23	AA	2605	G
23	AA	2613	C
23	AA	2626	G
23	AA	2629	A
23	AA	2630	G
23	AA	2636	U
23	AA	2640	U
23	AA	2642	U
23	AA	2646	U
23	AA	2648	G
23	AA	2650	G
23	AA	2656	A
23	AA	2657	G
23	AA	2666	A
23	AA	2672	G
23	AA	2679	U
23	AA	2681	A
23	AA	2687	A
23	AA	2692	A
23	AA	2695	G
23	AA	2696	G
23	AA	2697	G
23	AA	2699	U
23	AA	2700	G
23	AA	2712	G
23	AA	2716	U
23	AA	2741	G
23	AA	2745	G
23	AA	2750	C
23	AA	2753	U
23	AA	2756	G
23	AA	2757	U
23	AA	2759	G
23	AA	2760	A
23	AA	2761	C

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Mol	Chain	Res	Type
23	AA	2764	G
23	AA	2769	G
23	AA	2771	G
23	AA	2775	A
23	AA	2778	G
23	AA	2784	A
23	AA	2788	A
23	AA	2793	G
23	AA	2794	C
23	AA	2796	C
23	AA	2798	C
23	AA	2800	U
23	AA	2801	C
23	AA	2803	A
23	AA	2804	G
23	AA	2805	A
23	AA	2806	U
23	AA	2808	A
23	AA	2817	A
23	AA	2820	U
23	AA	2821	U
23	AA	2822	C
23	AA	2823	G
23	AA	2824	G
23	AA	2827	A
23	AA	2828	U
23	AA	2829	A
23	AA	2831	G
23	AA	2832	A
23	AA	2838	C
23	AA	2840	A
23	AA	2843	A
23	AA	2850	G
23	AA	2853	U
23	AA	2854	A
23	AA	2855	A
23	AA	2879	G
23	AA	2887	G
23	AA	2888	A
23	AA	2892	G
23	AA	2899	A
23	AA	2900	C

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Mol	Chain	Res	Type
23	AA	2903	A
23	AA	2913	G
23	AA	2914	A
23	AA	2919	A
24	AB	10	U
24	AB	22	G
24	AB	23	U
24	AB	24	C
24	AB	33	U
24	AB	39	G
24	AB	40	C
24	AB	43	A
24	AB	51	A
24	AB	55	A
24	AB	64	A
24	AB	87	C
24	AB	88	G
24	AB	106	G
24	AB	111	C
24	AB	113	G
1	Ba	6	U
1	Ba	8	G
1	Ba	9	A
1	Ba	10	G
1	Ba	23	G
1	Ba	30	A
1	Ba	33	A
1	Ba	40	G
1	Ba	41	C
1	Ba	45	G
1	Ba	48	C
1	Ba	49	C
1	Ba	50	U
1	Ba	51	A
1	Ba	52	A
1	Ba	59	C
1	Ba	60	A
1	Ba	61	A
1	Ba	62	G
1	Ba	66	A
1	Ba	68	C
1	Ba	69	G

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Mol	Chain	Res	Type
1	Ba	70	A
1	Ba	71	A
1	Ba	75	A
1	Ba	76	C
1	Ba	78	A
1	Ba	82	G
1	Ba	83	C
1	Ba	84	U
1	Ba	85	U
1	Ba	88	U
1	Ba	89	U
1	Ba	92	C
1	Ba	94	G
1	Ba	99	U
1	Ba	100	A
1	Ba	107	G
1	Ba	120	C
1	Ba	129	A
1	Ba	140	A
1	Ba	150	U
1	Ba	162	A
1	Ba	163	C
1	Ba	165	G
1	Ba	183	U
1	Ba	184	A
1	Ba	185	U
1	Ba	186	U
1	Ba	187	U
1	Ba	188	U
1	Ba	191	A
1	Ba	193	C
1	Ba	194	G
1	Ba	197	U
1	Ba	199	G
1	Ba	200	U
1	Ba	201	U
1	Ba	203	A
1	Ba	204	A
1	Ba	206	A
1	Ba	208	U
1	Ba	209	G
1	Ba	210	A

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Mol	Chain	Res	Type
1	Ba	211	A
1	Ba	213	G
1	Ba	219	C
1	Ba	220	U
1	Ba	221	U
1	Ba	222	G
1	Ba	224	U
1	Ba	228	A
1	Ba	230	U
1	Ba	231	U
1	Ba	234	A
1	Ba	252	U
1	Ba	253	U
1	Ba	255	G
1	Ba	256	C
1	Ba	257	U
1	Ba	258	A
1	Ba	259	G
1	Ba	264	U
1	Ba	267	G
1	Ba	269	U
1	Ba	274	G
1	Ba	275	C
1	Ba	279	C
1	Ba	289	G
1	Ba	291	U
1	Ba	297	G
1	Ba	301	A
1	Ba	309	G
1	Ba	335	A
1	Ba	336	C
1	Ba	337	A
1	Ba	339	G
1	Ba	352	A
1	Ba	354	G
1	Ba	355	G
1	Ba	356	G
1	Ba	358	G
1	Ba	359	G
1	Ba	360	C
1	Ba	362	G
1	Ba	364	A

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Mol	Chain	Res	Type
1	Ba	375	U
1	Ba	376	U
1	Ba	380	C
1	Ba	381	A
1	Ba	389	A
1	Ba	392	G
1	Ba	395	U
1	Ba	406	C
1	Ba	411	C
1	Ba	412	G
1	Ba	413	U
1	Ba	414	G
1	Ba	415	A
1	Ba	416	G
1	Ba	417	U
1	Ba	418	G
1	Ba	419	A
1	Ba	420	U
1	Ba	421	G
1	Ba	422	A
1	Ba	423	A
1	Ba	424	G
1	Ba	425	G
1	Ba	426	U
1	Ba	430	C
1	Ba	431	G
1	Ba	432	G
1	Ba	434	U
1	Ba	437	U
1	Ba	438	A
1	Ba	440	A
1	Ba	441	A
1	Ba	442	C
1	Ba	449	A
1	Ba	450	U
1	Ba	451	U
1	Ba	452	A
1	Ba	456	A
1	Ba	458	G
1	Ba	460	A
1	Ba	461	C
1	Ba	464	A

Continued on next page...

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Mol	Chain	Res	Type
1	Ba	465	U
1	Ba	484	A
1	Ba	485	U
1	Ba	486	C
1	Ba	487	U
1	Ba	488	U
1	Ba	492	G
1	Ba	499	A
1	Ba	503	A
1	Ba	504	G
1	Ba	505	A
1	Ba	506	A
1	Ba	507	A
1	Ba	513	G
1	Ba	514	G
1	Ba	516	U
1	Ba	517	A
1	Ba	519	C
1	Ba	522	C
1	Ba	526	C
1	Ba	529	G
1	Ba	532	G
1	Ba	535	G
1	Ba	539	U
1	Ba	541	A
1	Ba	542	U
1	Ba	543	A
1	Ba	548	G
1	Ba	554	A
1	Ba	555	A
1	Ba	567	A
1	Ba	570	U
1	Ba	571	A
1	Ba	580	A
1	Ba	581	A
1	Ba	584	C
1	Ba	585	G
1	Ba	596	G
1	Ba	603	A
1	Ba	610	A
1	Ba	619	C
1	Ba	628	C

Continued on next page...

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Mol	Chain	Res	Type
1	Ba	638	G
1	Ba	639	G
1	Ba	640	G
1	Ba	641	U
1	Ba	642	C
1	Ba	647	G
1	Ba	649	A
1	Ba	650	A
1	Ba	657	A
1	Ba	661	U
1	Ba	666	G
1	Ba	670	A
1	Ba	673	A
1	Ba	674	G
1	Ba	695	A
1	Ba	696	G
1	Ba	702	A
1	Ba	703	A
1	Ba	711	G
1	Ba	712	A
1	Ba	724	A
1	Ba	729	A
1	Ba	731	U
1	Ba	739	G
1	Ba	756	A
1	Ba	763	G
1	Ba	772	C
1	Ba	781	G
1	Ba	798	A
1	Ba	801	U
1	Ba	813	C
1	Ba	818	C
1	Ba	823	A
1	Ba	825	C
1	Ba	826	G
1	Ba	827	A
1	Ba	829	G
1	Ba	835	U
1	Ba	836	A
1	Ba	840	G
1	Ba	845	G
1	Ba	847	G

Continued on next page...

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Mol	Chain	Res	Type
1	Ba	848	G
1	Ba	849	U
1	Ba	850	U
1	Ba	852	C
1	Ba	853	C
1	Ba	854	G
1	Ba	855	C
1	Ba	856	C
1	Ba	857	C
1	Ba	858	C
1	Ba	881	A
1	Ba	894	G
1	Ba	898	A
1	Ba	910	A
1	Ba	911	G
1	Ba	923	A
1	Ba	924	A
1	Ba	935	G
1	Ba	943	C
1	Ba	944	A
1	Ba	949	C
1	Ba	950	G
1	Ba	953	G
1	Ba	954	G
1	Ba	955	A
1	Ba	956	G
1	Ba	958	A
1	Ba	959	U
1	Ba	961	U
1	Ba	969	U
1	Ba	970	U
1	Ba	972	G
1	Ba	973	A
1	Ba	974	A
1	Ba	975	G
1	Ba	977	A
1	Ba	978	A
1	Ba	980	G
1	Ba	983	A
1	Ba	984	A
1	Ba	985	G
1	Ba	986	A

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Mol	Chain	Res	Type
1	Ba	991	U
1	Ba	1001	U
1	Ba	1002	G
1	Ba	1003	A
1	Ba	1007	C
1	Ba	1008	C
1	Ba	1011	U
1	Ba	1012	G
1	Ba	1013	A
1	Ba	1015	A
1	Ba	1016	A
1	Ba	1017	C
1	Ba	1022	G
1	Ba	1023	A
1	Ba	1026	U
1	Ba	1032	C
1	Ba	1033	U
1	Ba	1035	C
1	Ba	1036	C
1	Ba	1038	C
1	Ba	1039	U
1	Ba	1041	C
1	Ba	1042	G
1	Ba	1043	G
1	Ba	1047	A
1	Ba	1048	C
1	Ba	1052	G
1	Ba	1055	A
1	Ba	1056	C
1	Ba	1057	A
1	Ba	1064	G
1	Ba	1065	C
1	Ba	1066	A
1	Ba	1076	U
1	Ba	1077	C
1	Ba	1091	A
1	Ba	1092	G
1	Ba	1094	U
1	Ba	1096	U
1	Ba	1101	U
1	Ba	1105	G
1	Ba	1106	U

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Mol	Chain	Res	Type
1	Ba	1109	C
1	Ba	1112	A
1	Ba	1113	A
1	Ba	1115	G
1	Ba	1119	G
1	Ba	1123	C
1	Ba	1130	G
1	Ba	1135	G
1	Ba	1136	U
1	Ba	1137	U
1	Ba	1138	G
1	Ba	1141	A
1	Ba	1142	U
1	Ba	1143	C
1	Ba	1146	U
1	Ba	1148	A
1	Ba	1149	G
1	Ba	1150	U
1	Ba	1151	U
1	Ba	1154	G
1	Ba	1156	A
1	Ba	1157	C
1	Ba	1165	U
1	Ba	1167	A
1	Ba	1168	C
1	Ba	1169	U
1	Ba	1172	C
1	Ba	1173	G
1	Ba	1174	G
1	Ba	1175	U
1	Ba	1177	A
1	Ba	1178	C
1	Ba	1179	A
1	Ba	1181	A
1	Ba	1187	G
1	Ba	1188	G
1	Ba	1189	A
1	Ba	1190	A
1	Ba	1191	G
1	Ba	1194	G
1	Ba	1202	C
1	Ba	1203	G

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Mol	Chain	Res	Type
1	Ba	1206	A
1	Ba	1207	A
1	Ba	1208	A
1	Ba	1209	U
1	Ba	1210	C
1	Ba	1211	A
1	Ba	1216	G
1	Ba	1222	U
1	Ba	1224	U
1	Ba	1225	G
1	Ba	1226	A
1	Ba	1228	U
1	Ba	1230	G
1	Ba	1234	U
1	Ba	1235	A
1	Ba	1236	C
1	Ba	1238	C
1	Ba	1243	G
1	Ba	1246	A
1	Ba	1248	A
1	Ba	1250	U
1	Ba	1251	G
1	Ba	1256	A
1	Ba	1260	A
1	Ba	1266	C
1	Ba	1267	A
1	Ba	1268	G
1	Ba	1270	G
1	Ba	1274	C
1	Ba	1275	C
1	Ba	1280	G
1	Ba	1281	G
1	Ba	1282	U
1	Ba	1283	C
1	Ba	1286	G
1	Ba	1287	C
1	Ba	1288	A
1	Ba	1289	A
1	Ba	1290	A
1	Ba	1291	U
1	Ba	1292	C
1	Ba	1296	U

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Mol	Chain	Res	Type
1	Ba	1297	A
1	Ba	1300	G
1	Ba	1305	U
1	Ba	1307	U
1	Ba	1308	C
1	Ba	1309	A
1	Ba	1310	G
1	Ba	1311	U
1	Ba	1312	U
1	Ba	1313	C
1	Ba	1314	G
1	Ba	1315	G
1	Ba	1319	G
1	Ba	1320	U
1	Ba	1322	G
1	Ba	1327	C
1	Ba	1329	A
1	Ba	1332	C
1	Ba	1333	G
1	Ba	1335	C
1	Ba	1336	U
1	Ba	1337	A
1	Ba	1338	C
1	Ba	1339	A
1	Ba	1341	G
1	Ba	1345	C
1	Ba	1347	G
1	Ba	1348	G
1	Ba	1356	A
1	Ba	1357	G
1	Ba	1361	U
1	Ba	1363	G
1	Ba	1368	U
1	Ba	1371	G
1	Ba	1373	A
1	Ba	1378	A
1	Ba	1380	G
1	Ba	1387	A
1	Ba	1391	U
1	Ba	1392	C
1	Ba	1393	C
1	Ba	1404	A

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Mol	Chain	Res	Type
1	Ba	1408	A
1	Ba	1419	C
1	Ba	1421	C
1	Ba	1428	A
1	Ba	1429	G
1	Ba	1438	A
1	Ba	1448	G
1	Ba	1451	G
1	Ba	1456	A
1	Ba	1461	U
1	Ba	1462	U
1	Ba	1463	U
1	Ba	1464	A
1	Ba	1466	G
1	Ba	1468	G
1	Ba	1476	U
1	Ba	1483	U
1	Ba	1495	U
1	Ba	1505	G
1	Ba	1508	G
1	Ba	1510	A
1	Ba	1514	A
1	Ba	1515	G
1	Ba	1540	G
1	Ba	1541	G
1	Ba	1543	U
23	BA	11	U
23	BA	15	G
23	BA	27	G
23	BA	28	A
23	BA	34	U
23	BA	36	G
23	BA	43	A
23	BA	51	G
23	BA	52	A
23	BA	53	A
23	BA	55	G
23	BA	63	U
23	BA	70	G
23	BA	71	A
23	BA	74	U
23	BA	75	G

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Mol	Chain	Res	Type
23	BA	83	G
23	BA	84	A
23	BA	90	A
23	BA	92	G
23	BA	93	U
23	BA	96	G
23	BA	101	G
23	BA	102	A
23	BA	104	C
23	BA	117	A
23	BA	119	U
23	BA	124	A
23	BA	141	U
23	BA	148	U
23	BA	149	U
23	BA	152	C
23	BA	156	A
23	BA	157	U
23	BA	158	G
23	BA	161	A
23	BA	164	A
23	BA	167	U
23	BA	168	A
23	BA	170	C
23	BA	172	U
23	BA	173	A
23	BA	177	G
23	BA	178	A
23	BA	180	G
23	BA	184	C
23	BA	185	A
23	BA	199	A
23	BA	202	A
23	BA	213	C
23	BA	215	G
23	BA	216	A
23	BA	218	G
23	BA	219	A
23	BA	224	A
23	BA	225	A
23	BA	233	U
23	BA	246	U

Continued on next page...

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Mol	Chain	Res	Type
23	BA	251	G
23	BA	255	G
23	BA	268	A
23	BA	269	G
23	BA	270	C
23	BA	279	A
23	BA	280	C
23	BA	285	U
23	BA	286	U
23	BA	287	G
23	BA	292	U
23	BA	293	U
23	BA	298	U
23	BA	299	U
23	BA	300	G
23	BA	301	U
23	BA	302	A
23	BA	307	A
23	BA	309	U
23	BA	310	C
23	BA	311	U
23	BA	312	A
23	BA	316	G
23	BA	320	U
23	BA	321	U
23	BA	327	G
23	BA	328	G
23	BA	333	C
23	BA	335	U
23	BA	345	C
23	BA	353	A
23	BA	365	A
23	BA	366	G
23	BA	373	A
23	BA	388	A
23	BA	389	A
23	BA	392	U
23	BA	394	U
23	BA	397	U
23	BA	402	C
23	BA	404	U
23	BA	406	A

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Mol	Chain	Res	Type
23	BA	410	G
23	BA	411	A
23	BA	417	A
23	BA	432	G
23	BA	435	A
23	BA	444	C
23	BA	447	A
23	BA	449	U
23	BA	451	U
23	BA	452	G
23	BA	458	A
23	BA	460	C
23	BA	481	C
23	BA	482	U
23	BA	486	G
23	BA	490	C
23	BA	492	G
23	BA	493	A
23	BA	501	C
23	BA	502	C
23	BA	503	A
23	BA	504	G
23	BA	506	A
23	BA	512	A
23	BA	513	G
23	BA	518	A
23	BA	523	A
23	BA	527	G
23	BA	535	G
23	BA	538	G
23	BA	539	G
23	BA	550	A
23	BA	553	A
23	BA	554	C
23	BA	557	G
23	BA	558	A
23	BA	559	A
23	BA	563	G
23	BA	566	U
23	BA	572	C
23	BA	574	A
23	BA	576	U

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Mol	Chain	Res	Type
23	BA	577	A
23	BA	578	G
23	BA	580	C
23	BA	591	A
23	BA	592	A
23	BA	594	G
23	BA	606	G
23	BA	611	U
23	BA	616	G
23	BA	617	A
23	BA	618	A
23	BA	639	U
23	BA	644	C
23	BA	645	A
23	BA	646	A
23	BA	647	G
23	BA	659	A
23	BA	672	A
23	BA	679	G
23	BA	682	A
23	BA	689	A
23	BA	690	U
23	BA	698	U
23	BA	699	U
23	BA	702	U
23	BA	713	A
23	BA	715	A
23	BA	720	A
23	BA	722	A
23	BA	730	A
23	BA	731	U
23	BA	735	C
23	BA	750	A
23	BA	754	U
23	BA	755	C
23	BA	759	U
23	BA	760	A
23	BA	761	A
23	BA	762	C
23	BA	763	A
23	BA	765	U
23	BA	766	G

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Mol	Chain	Res	Type
23	BA	768	A
23	BA	771	G
23	BA	775	A
23	BA	792	U
23	BA	793	G
23	BA	797	A
23	BA	802	G
23	BA	809	A
23	BA	810	A
23	BA	816	G
23	BA	820	G
23	BA	822	G
23	BA	827	A
23	BA	829	U
23	BA	830	U
23	BA	834	A
23	BA	835	U
23	BA	836	C
23	BA	837	G
23	BA	840	C
23	BA	841	C
23	BA	842	U
23	BA	850	G
23	BA	856	U
23	BA	857	C
23	BA	868	A
23	BA	870	C
23	BA	872	U
23	BA	891	A
23	BA	892	U
23	BA	904	G
23	BA	911	A
23	BA	914	G
23	BA	918	G
23	BA	920	A
23	BA	926	G
23	BA	928	C
23	BA	940	U
23	BA	943	C
23	BA	949	C
23	BA	952	A
23	BA	955	A

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Mol	Chain	Res	Type
23	BA	957	C
23	BA	960	C
23	BA	964	U
23	BA	968	A
23	BA	969	A
23	BA	970	U
23	BA	971	U
23	BA	972	A
23	BA	973	A
23	BA	975	U
23	BA	977	A
23	BA	985	A
23	BA	986	G
23	BA	988	C
23	BA	989	A
23	BA	990	G
23	BA	992	A
23	BA	997	G
23	BA	1003	A
23	BA	1005	G
23	BA	1012	G
23	BA	1018	A
23	BA	1019	A
23	BA	1024	A
23	BA	1025	A
23	BA	1027	A
23	BA	1034	A
23	BA	1040	A
23	BA	1043	U
23	BA	1047	G
23	BA	1049	C
23	BA	1056	U
23	BA	1057	A
23	BA	1066	G
23	BA	1067	U
23	BA	1069	G
23	BA	1070	A
23	BA	1076	A
23	BA	1077	U
23	BA	1078	G
23	BA	1086	G
23	BA	1087	C

Continued on next page...

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Mol	Chain	Res	Type
23	BA	1088	C
23	BA	1089	C
23	BA	1091	G
23	BA	1092	A
23	BA	1093	C
23	BA	1094	A
23	BA	1095	A
23	BA	1100	G
23	BA	1102	U
23	BA	1105	U
23	BA	1106	G
23	BA	1109	U
23	BA	1111	A
23	BA	1113	A
23	BA	1114	A
23	BA	1115	G
23	BA	1116	C
23	BA	1117	A
23	BA	1118	G
23	BA	1119	C
23	BA	1120	C
23	BA	1122	U
23	BA	1126	U
23	BA	1127	U
23	BA	1128	A
23	BA	1132	A
23	BA	1133	G
23	BA	1137	G
23	BA	1138	U
23	BA	1139	A
23	BA	1140	A
23	BA	1143	G
23	BA	1145	U
23	BA	1148	C
23	BA	1150	A
23	BA	1151	G
23	BA	1155	A
23	BA	1156	G
23	BA	1158	G
23	BA	1160	C
23	BA	1161	A
23	BA	1162	C

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Mol	Chain	Res	Type
23	BA	1163	U
23	BA	1174	U
23	BA	1176	U
23	BA	1178	C
23	BA	1179	C
23	BA	1186	A
23	BA	1200	A
23	BA	1201	G
23	BA	1208	A
23	BA	1214	C
23	BA	1215	U
23	BA	1216	U
23	BA	1217	U
23	BA	1218	G
23	BA	1225	G
23	BA	1245	G
23	BA	1250	G
23	BA	1258	A
23	BA	1265	G
23	BA	1267	A
23	BA	1274	G
23	BA	1275	A
23	BA	1276	G
23	BA	1284	A
23	BA	1285	A
23	BA	1286	G
23	BA	1290	G
23	BA	1291	A
23	BA	1294	G
23	BA	1298	G
23	BA	1300	G
23	BA	1304	G
23	BA	1309	G
23	BA	1310	A
23	BA	1320	G
23	BA	1326	C
23	BA	1337	A
23	BA	1338	U
23	BA	1339	U
23	BA	1340	G
23	BA	1342	C
23	BA	1344	A

Continued on next page...

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Mol	Chain	Res	Type
23	BA	1348	U
23	BA	1349	U
23	BA	1351	C
23	BA	1354	G
23	BA	1358	A
23	BA	1367	C
23	BA	1370	C
23	BA	1386	U
23	BA	1387	C
23	BA	1389	U
23	BA	1392	G
23	BA	1394	U
23	BA	1402	A
23	BA	1405	G
23	BA	1415	A
23	BA	1416	U
23	BA	1417	G
23	BA	1420	U
23	BA	1422	A
23	BA	1423	C
23	BA	1432	A
23	BA	1440	A
23	BA	1443	A
23	BA	1445	C
23	BA	1447	A
23	BA	1450	A
23	BA	1451	U
23	BA	1453	G
23	BA	1454	U
23	BA	1455	U
23	BA	1457	U
23	BA	1459	A
23	BA	1463	A
23	BA	1464	U
23	BA	1471	A
23	BA	1472	C
23	BA	1481	A
23	BA	1489	A
23	BA	1490	G
23	BA	1491	C
23	BA	1494	G
23	BA	1495	C

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Mol	Chain	Res	Type
23	BA	1496	G
23	BA	1497	A
23	BA	1498	U
23	BA	1499	U
23	BA	1503	U
23	BA	1504	U
23	BA	1510	U
23	BA	1516	C
23	BA	1518	G
23	BA	1519	U
23	BA	1520	A
23	BA	1521	A
23	BA	1525	U
23	BA	1526	G
23	BA	1527	A
23	BA	1532	U
23	BA	1533	A
23	BA	1534	G
23	BA	1536	C
23	BA	1537	A
23	BA	1540	U
23	BA	1550	G
23	BA	1551	U
23	BA	1552	U
23	BA	1553	A
23	BA	1554	A
23	BA	1555	G
23	BA	1556	G
23	BA	1559	G
23	BA	1561	G
23	BA	1569	G
23	BA	1570	G
23	BA	1575	A
23	BA	1576	A
23	BA	1578	A
23	BA	1579	C
23	BA	1580	A
23	BA	1581	U
23	BA	1582	U
23	BA	1583	G
23	BA	1584	U
23	BA	1586	U

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Mol	Chain	Res	Type
23	BA	1587	C
23	BA	1591	G
23	BA	1594	U
23	BA	1605	A
23	BA	1606	C
23	BA	1613	G
23	BA	1616	A
23	BA	1625	U
23	BA	1627	G
23	BA	1629	U
23	BA	1630	A
23	BA	1631	G
23	BA	1632	A
23	BA	1633	A
23	BA	1634	A
23	BA	1635	A
23	BA	1636	U
23	BA	1639	G
23	BA	1652	A
23	BA	1653	A
23	BA	1654	A
23	BA	1661	C
23	BA	1666	A
23	BA	1675	G
23	BA	1679	A
23	BA	1683	U
23	BA	1684	A
23	BA	1690	A
23	BA	1691	G
23	BA	1692	C
23	BA	1693	G
23	BA	1718	G
23	BA	1719	C
23	BA	1732	U
23	BA	1737	U
23	BA	1738	C
23	BA	1740	G
23	BA	1745	A
23	BA	1747	G
23	BA	1757	U
23	BA	1758	A
23	BA	1759	G

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Mol	Chain	Res	Type
23	BA	1760	G
23	BA	1761	G
23	BA	1762	U
23	BA	1765	A
23	BA	1768	C
23	BA	1771	A
23	BA	1772	G
23	BA	1790	G
23	BA	1791	G
23	BA	1797	G
23	BA	1800	A
23	BA	1806	U
23	BA	1808	U
23	BA	1809	C
23	BA	1811	A
23	BA	1813	A
23	BA	1814	A
23	BA	1818	A
23	BA	1826	G
23	BA	1827	C
23	BA	1828	U
23	BA	1829	A
23	BA	1830	A
23	BA	1835	U
23	BA	1843	U
23	BA	1846	A
23	BA	1856	A
23	BA	1860	C
23	BA	1878	U
23	BA	1879	U
23	BA	1880	A
23	BA	1885	G
23	BA	1889	G
23	BA	1895	C
23	BA	1897	U
23	BA	1898	C
23	BA	1899	U
23	BA	1900	G
23	BA	1901	C
23	BA	1902	G
23	BA	1903	A
23	BA	1904	A

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Mol	Chain	Res	Type
23	BA	1907	U
23	BA	1909	C
23	BA	1911	A
23	BA	1912	A
23	BA	1914	C
23	BA	1918	G
23	BA	1933	G
23	BA	1935	C
23	BA	1937	G
23	BA	1938	U
23	BA	1945	A
23	BA	1950	U
23	BA	1956	G
23	BA	1958	U
23	BA	1963	A
23	BA	1964	A
23	BA	1965	A
23	BA	1966	U
23	BA	1971	U
23	BA	1982	U
23	BA	1989	C
23	BA	1990	C
23	BA	1992	C
23	BA	1994	C
23	BA	1996	A
23	BA	1997	A
23	BA	1998	A
23	BA	1999	G
23	BA	2009	U
23	BA	2018	U
23	BA	2019	G
23	BA	2020	U
23	BA	2023	C
23	BA	2024	A
23	BA	2029	G
23	BA	2030	A
23	BA	2047	A
23	BA	2057	A
23	BA	2058	A
23	BA	2059	G
23	BA	2060	A
23	BA	2062	G

Continued on next page...

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Mol	Chain	Res	Type
23	BA	2070	C
23	BA	2073	G
23	BA	2075	G
23	BA	2076	A
23	BA	2082	C
23	BA	2083	G
23	BA	2085	A
23	BA	2087	A
23	BA	2088	G
23	BA	2089	A
23	BA	2096	G
23	BA	2097	G
23	BA	2103	U
23	BA	2107	G
23	BA	2109	A
23	BA	2110	G
23	BA	2111	C
23	BA	2115	A
23	BA	2117	A
23	BA	2118	U
23	BA	2119	U
23	BA	2120	G
23	BA	2126	C
23	BA	2129	C
23	BA	2139	A
23	BA	2140	C
23	BA	2143	G
23	BA	2145	U
23	BA	2147	G
23	BA	2153	A
23	BA	2155	C
23	BA	2157	U
23	BA	2158	U
23	BA	2160	G
23	BA	2161	A
23	BA	2164	C
23	BA	2172	C
23	BA	2173	U
23	BA	2174	A
23	BA	2175	G
23	BA	2176	C
23	BA	2183	G

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Mol	Chain	Res	Type
23	BA	2185	A
23	BA	2186	G
23	BA	2188	C
23	BA	2190	C
23	BA	2193	G
23	BA	2194	U
23	BA	2195	G
23	BA	2198	A
23	BA	2204	C
23	BA	2215	U
23	BA	2224	U
23	BA	2225	A
23	BA	2229	C
23	BA	2230	G
23	BA	2231	C
23	BA	2232	A
23	BA	2238	U
23	BA	2240	U
23	BA	2241	C
23	BA	2243	U
23	BA	2252	A
23	BA	2261	G
23	BA	2262	G
23	BA	2263	C
23	BA	2265	G
23	BA	2266	G
23	BA	2290	C
23	BA	2295	A
23	BA	2305	A
23	BA	2306	G
23	BA	2310	C
23	BA	2314	A
23	BA	2316	G
23	BA	2321	C
23	BA	2328	A
23	BA	2329	U
23	BA	2330	G
23	BA	2331	G
23	BA	2332	U
23	BA	2333	U
23	BA	2334	G
23	BA	2335	G

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Mol	Chain	Res	Type
23	BA	2336	A
23	BA	2337	A
23	BA	2345	A
23	BA	2346	U
23	BA	2347	A
23	BA	2352	G
23	BA	2353	U
23	BA	2358	G
23	BA	2361	U
23	BA	2362	A
23	BA	2370	U
23	BA	2374	C
23	BA	2377	C
23	BA	2385	A
23	BA	2388	A
23	BA	2396	A
23	BA	2409	G
23	BA	2410	G
23	BA	2411	A
23	BA	2412	C
23	BA	2429	U
23	BA	2433	C
23	BA	2434	A
23	BA	2441	G
23	BA	2449	C
23	BA	2450	U
23	BA	2451	C
23	BA	2455	G
23	BA	2456	G
23	BA	2457	A
23	BA	2458	U
23	BA	2459	A
23	BA	2460	A
23	BA	2461	A
23	BA	2462	A
23	BA	2463	G
23	BA	2468	C
23	BA	2472	G
23	BA	2474	G
23	BA	2475	A
23	BA	2485	U
23	BA	2486	A

Continued on next page...

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Mol	Chain	Res	Type
23	BA	2503	A
23	BA	2511	G
23	BA	2521	G
23	BA	2525	C
23	BA	2529	G
23	BA	2530	A
23	BA	2531	U
23	BA	2532	G
23	BA	2540	A
23	BA	2544	C
23	BA	2545	A
23	BA	2547	C
23	BA	2556	G
23	BA	2561	C
23	BA	2562	G
23	BA	2568	A
23	BA	2569	A
23	BA	2570	G
23	BA	2581	U
23	BA	2589	U
23	BA	2592	A
23	BA	2593	A
23	BA	2594	G
23	BA	2599	A
23	BA	2600	C
23	BA	2604	A
23	BA	2605	G
23	BA	2613	C
23	BA	2626	G
23	BA	2629	A
23	BA	2630	G
23	BA	2636	U
23	BA	2640	U
23	BA	2642	U
23	BA	2646	U
23	BA	2648	G
23	BA	2650	G
23	BA	2656	A
23	BA	2657	G
23	BA	2666	A
23	BA	2672	G
23	BA	2679	U

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Mol	Chain	Res	Type
23	BA	2681	A
23	BA	2687	A
23	BA	2692	A
23	BA	2695	G
23	BA	2696	G
23	BA	2697	G
23	BA	2699	U
23	BA	2700	G
23	BA	2712	G
23	BA	2716	U
23	BA	2741	G
23	BA	2745	G
23	BA	2750	C
23	BA	2753	U
23	BA	2756	G
23	BA	2757	U
23	BA	2759	G
23	BA	2760	A
23	BA	2761	C
23	BA	2764	G
23	BA	2769	G
23	BA	2771	G
23	BA	2775	A
23	BA	2778	G
23	BA	2784	A
23	BA	2788	A
23	BA	2793	G
23	BA	2794	C
23	BA	2796	C
23	BA	2798	C
23	BA	2800	U
23	BA	2801	C
23	BA	2803	A
23	BA	2804	G
23	BA	2805	A
23	BA	2806	U
23	BA	2808	A
23	BA	2817	A
23	BA	2820	U
23	BA	2821	U
23	BA	2822	C
23	BA	2823	G

Continued on next page...

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Mol	Chain	Res	Type
23	BA	2824	G
23	BA	2827	A
23	BA	2828	U
23	BA	2829	A
23	BA	2831	G
23	BA	2832	A
23	BA	2838	C
23	BA	2840	A
23	BA	2843	A
23	BA	2850	G
23	BA	2853	U
23	BA	2854	A
23	BA	2855	A
23	BA	2879	G
23	BA	2887	G
23	BA	2888	A
23	BA	2892	G
23	BA	2899	A
23	BA	2900	C
23	BA	2903	A
23	BA	2913	G
23	BA	2914	A
23	BA	2919	A
24	BB	10	U
24	BB	22	G
24	BB	23	U
24	BB	24	C
24	BB	33	U
24	BB	39	G
24	BB	40	C
24	BB	43	A
24	BB	51	A
24	BB	55	A
24	BB	64	A
24	BB	87	C
24	BB	88	G
24	BB	106	G
24	BB	111	C
24	BB	113	G

All (55) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
23	AA	99	U
23	AA	160	G
23	AA	267	G
23	AA	268	A
23	AA	291	G
23	AA	451	U
23	AA	487	U
23	AA	513	G
23	AA	576	U
23	AA	577	A
23	AA	688	A
23	AA	697	U
23	AA	711	G
23	AA	840	C
23	AA	987	U
23	AA	1024	A
23	AA	1075	G
23	AA	1190	A
23	AA	1267	A
23	AA	1372	C
23	AA	1385	G
23	AA	1845	U
23	AA	2117	A
23	AA	2450	U
23	AA	2568	A
23	AA	2749	G
23	AA	2783	U
23	BA	99	U
23	BA	160	G
23	BA	267	G
23	BA	268	A
23	BA	291	G
23	BA	451	U
23	BA	487	U
23	BA	513	G
23	BA	576	U
23	BA	577	A
23	BA	688	A
23	BA	697	U
23	BA	711	G
23	BA	840	C
23	BA	987	U
23	BA	1024	A

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Mol	Chain	Res	Type
23	BA	1075	G
23	BA	1190	A
23	BA	1267	A
23	BA	1372	C
23	BA	1385	G
23	BA	1731	G
23	BA	1845	U
23	BA	2117	A
23	BA	2450	U
23	BA	2568	A
23	BA	2749	G
23	BA	2783	U

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
23	AA	6
23	BA	6
1	Aa	1
1	Ba	1

Continued on next page...

Continued from previous page...

Mol	Chain	Number of breaks
24	BB	1
24	AB	1
13	Am	1
13	Bm	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	2207:U	O3'	2208:A	P	9.06
1	BA	2207:U	O3'	2208:A	P	9.06
1	AA	2132:A	O3'	2133:G	P	8.44
1	BA	2132:A	O3'	2133:G	P	8.44
1	AA	1096:C	O3'	1097:U	P	6.77
1	BA	1096:C	O3'	1097:U	P	6.77
1	Aa	465:U	O3'	466:G	P	3.97
1	Ba	465:U	O3'	466:G	P	3.97
1	AA	1153:C	O3'	1154:G	P	3.61
1	BA	1153:C	O3'	1154:G	P	3.61
1	AA	1448:U	O3'	1449:A	P	3.51
1	BA	1448:U	O3'	1449:A	P	3.51
1	BB	114:G	O3'	115:C	P	3.40
1	AA	2217:G	O3'	2218:G	P	3.39
1	AB	114:G	O3'	115:C	P	3.39
1	BA	2217:G	O3'	2218:G	P	3.39
1	Am	93:ARG	C	94:GLY	N	3.26
1	Bm	93:ARG	C	94:GLY	N	3.26

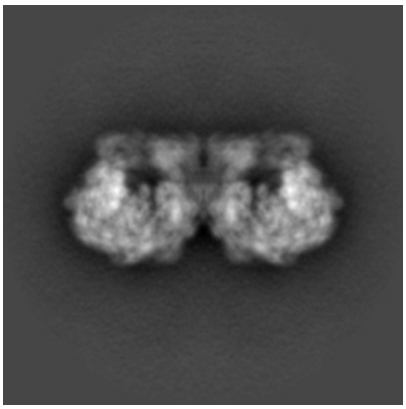
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-3637. These allow visual inspection of the internal detail of the map and identification of artifacts.

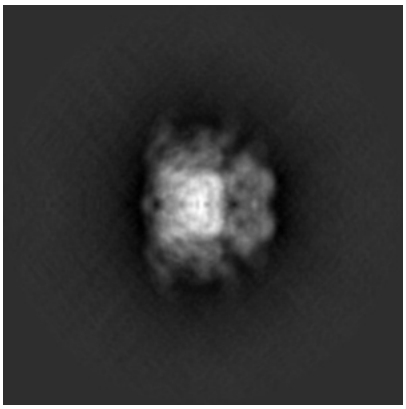
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

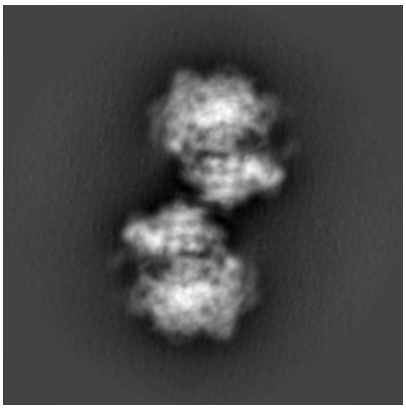
6.1.1 Primary map



X

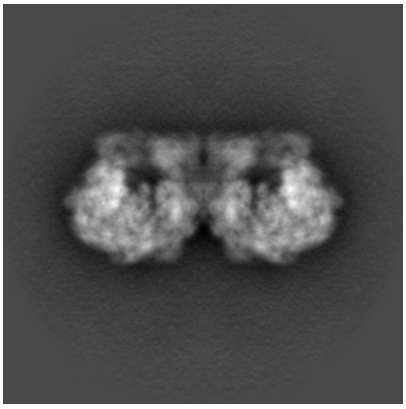


Y

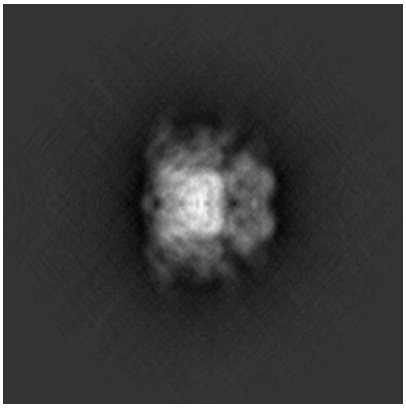


Z

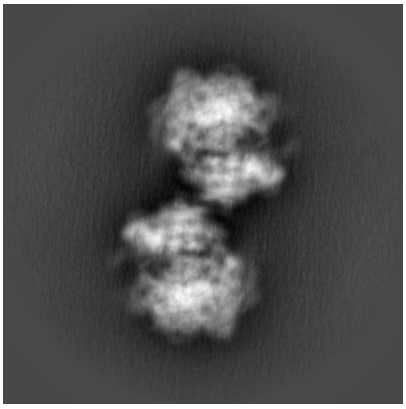
6.1.2 Raw map



X



Y

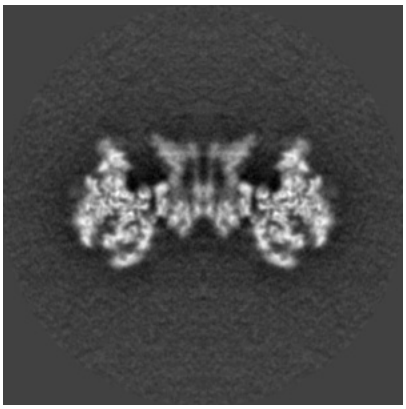


Z

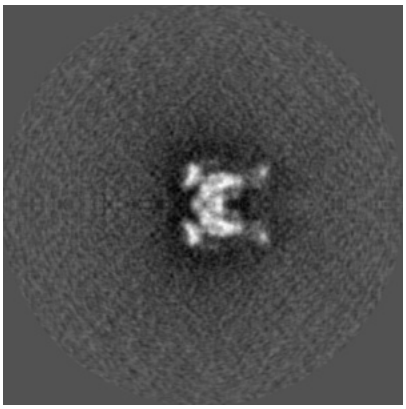
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

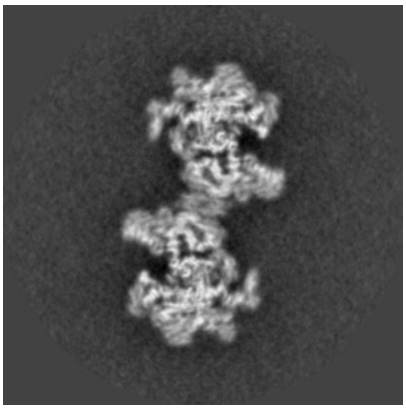
6.2.1 Primary map



X Index: 200

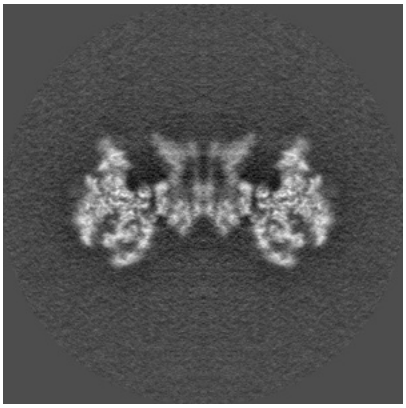


Y Index: 200

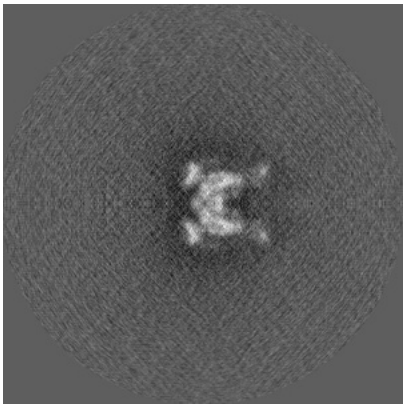


Z Index: 200

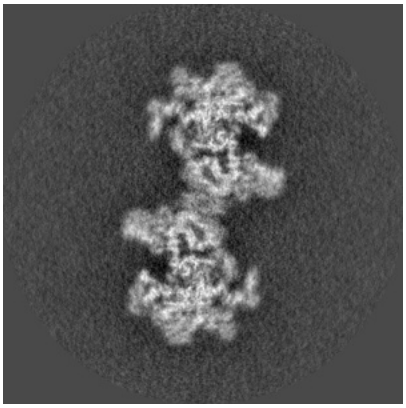
6.2.2 Raw map



X Index: 200



Y Index: 200

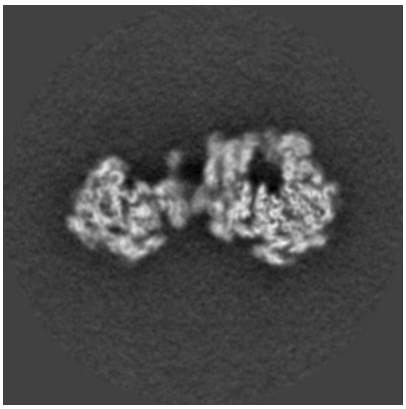


Z Index: 200

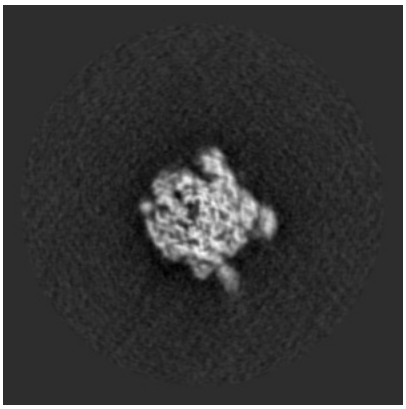
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

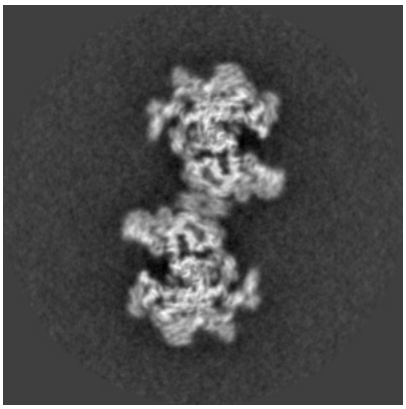
6.3.1 Primary map



X Index: 210

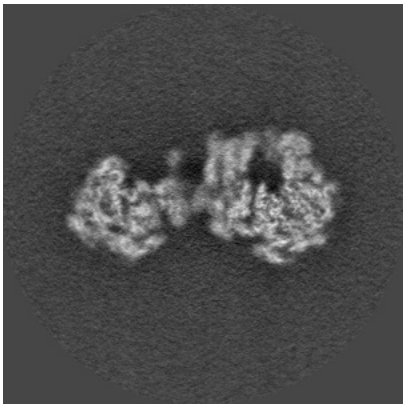


Y Index: 113

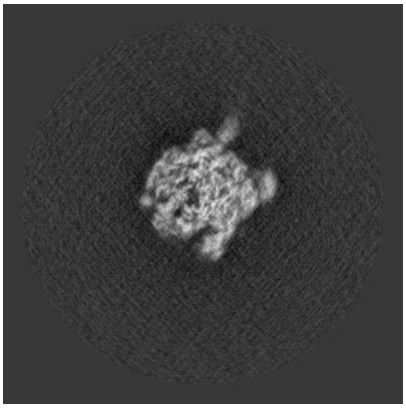


Z Index: 201

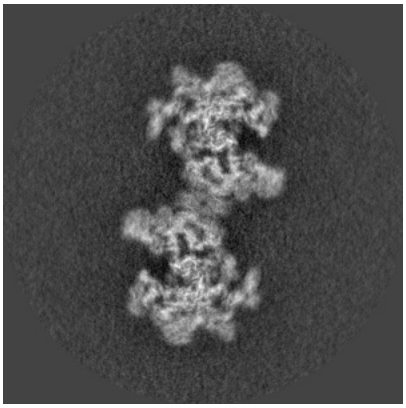
6.3.2 Raw map



X Index: 210



Y Index: 287

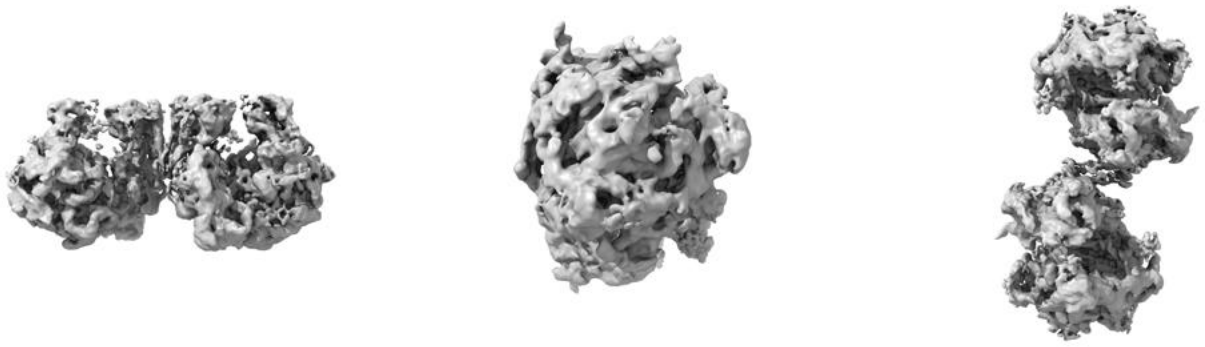


Z Index: 201

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

6.4 Orthogonal surface views (i)

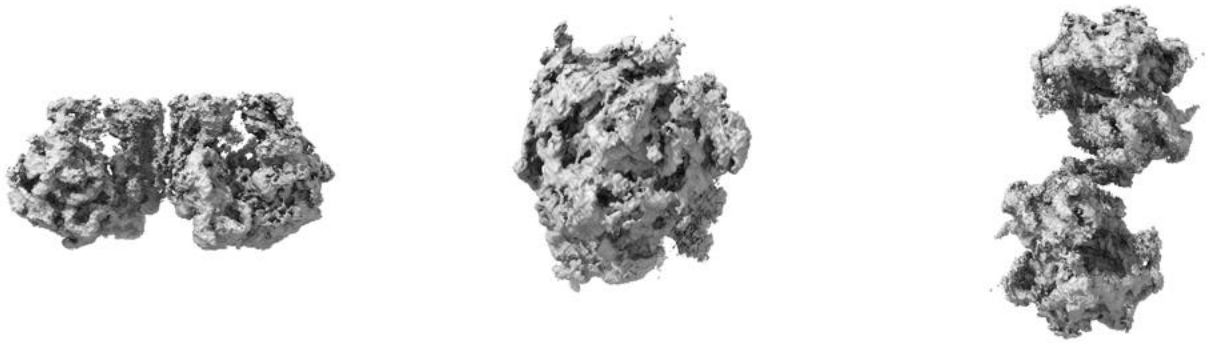
6.4.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.023. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

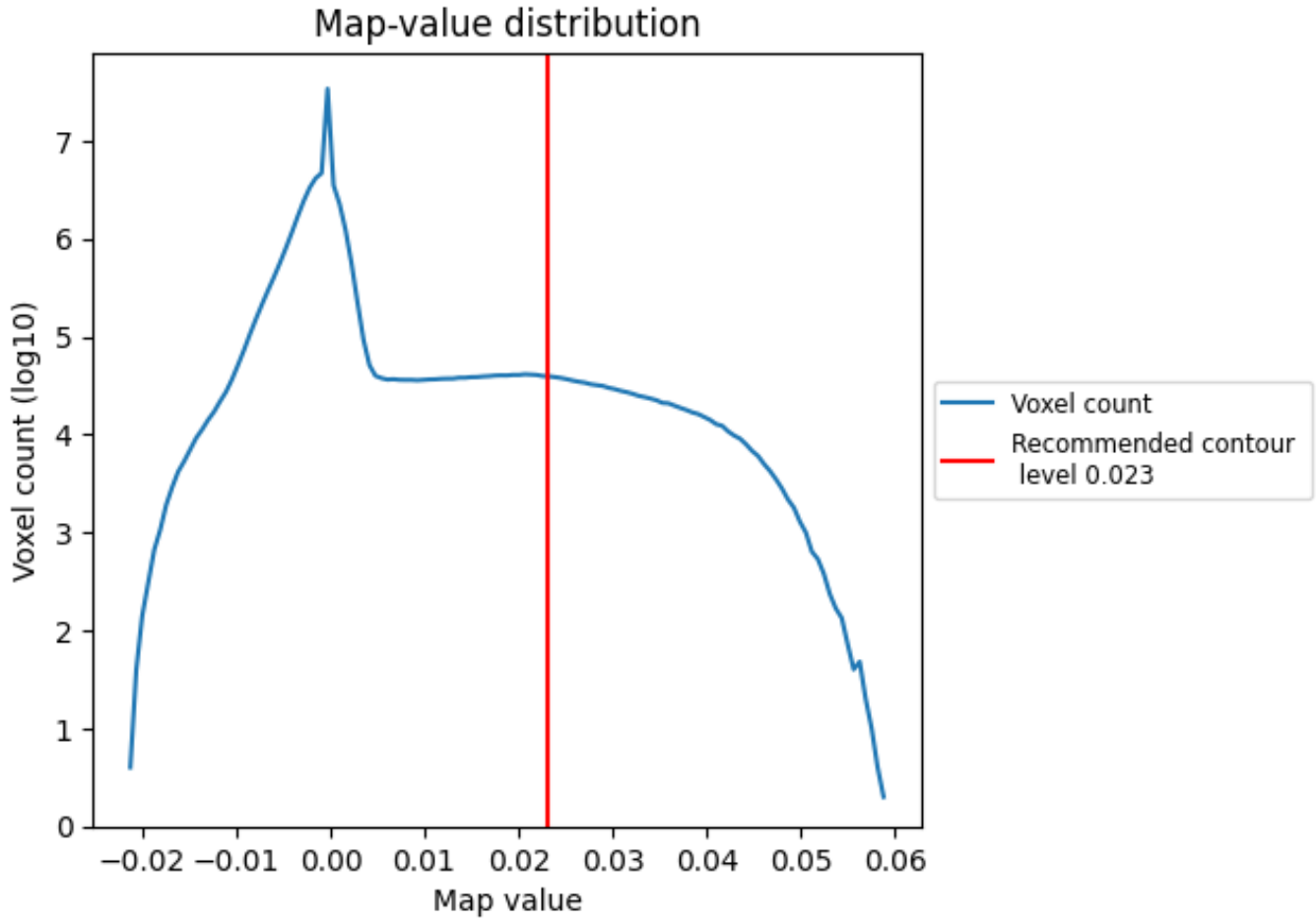
6.5 Mask visualisation (i)

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

7 Map analysis

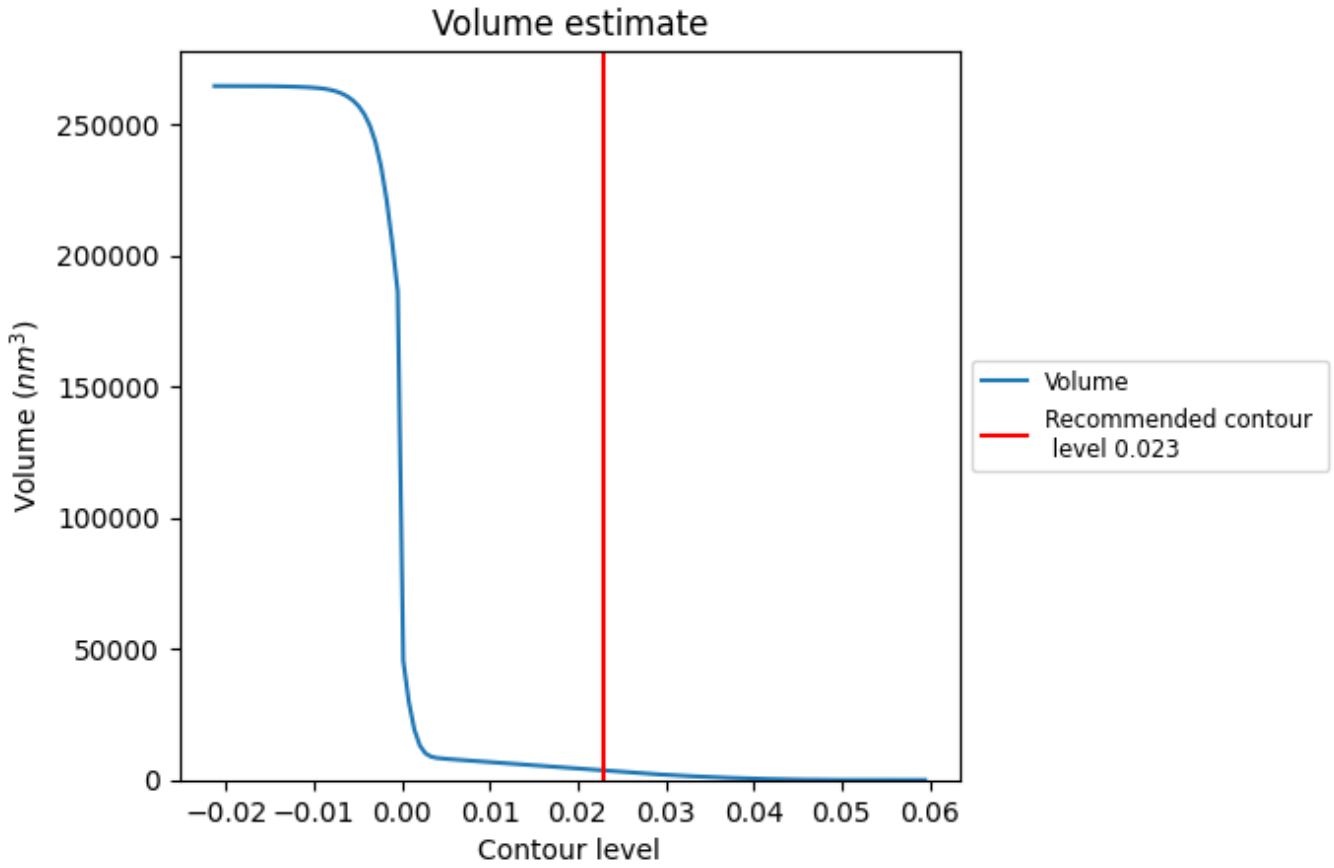
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

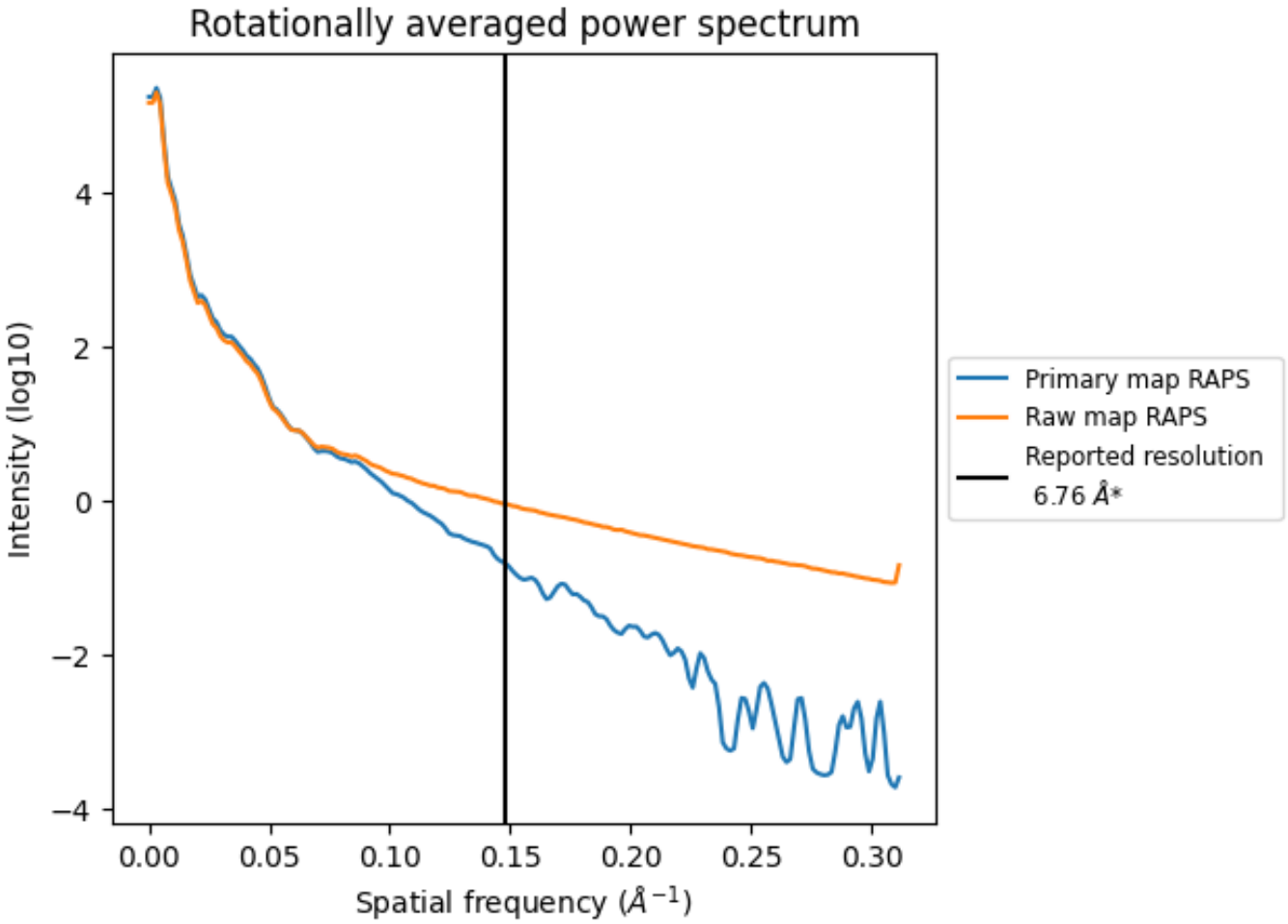
7.2 Volume estimate



The volume at the recommended contour level is 3567 nm^3; this corresponds to an approximate mass of 3222 kDa.

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

7.3 Rotationally averaged power spectrum (i)

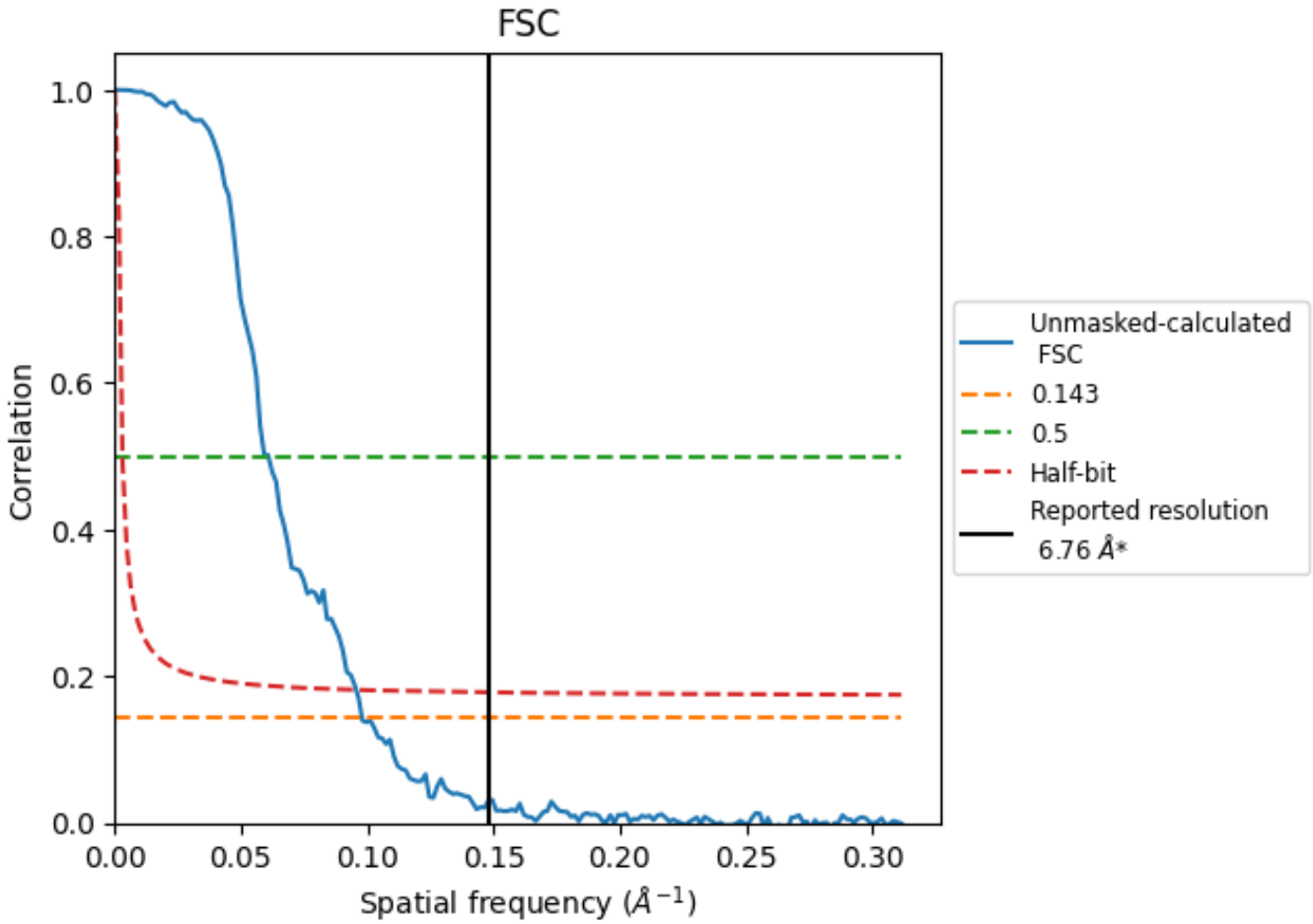


*Reported resolution corresponds to spatial frequency of 0.148 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.148 Å^{-1}

8.2 Resolution estimates (i)

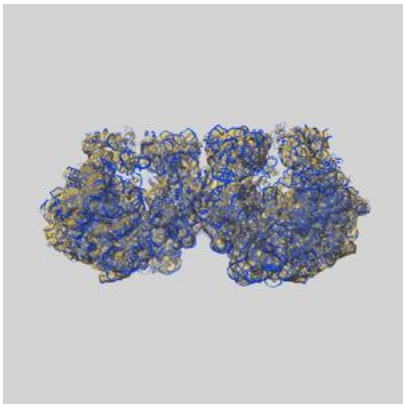
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.76	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	10.21	16.42	10.46

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 10.21 differs from the reported value 6.76 by more than 10 %

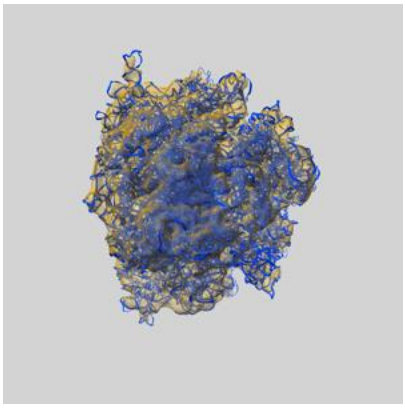
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-3637 and PDB model 6FXC. Per-residue inclusion information can be found in section 3 on page 17.

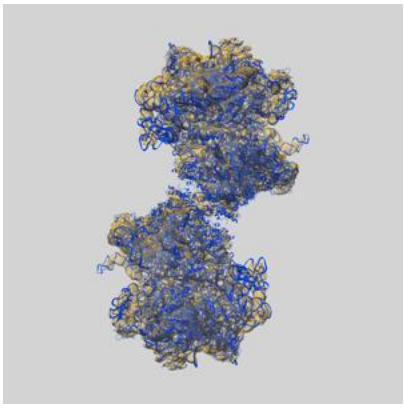
9.1 Map-model overlay



X



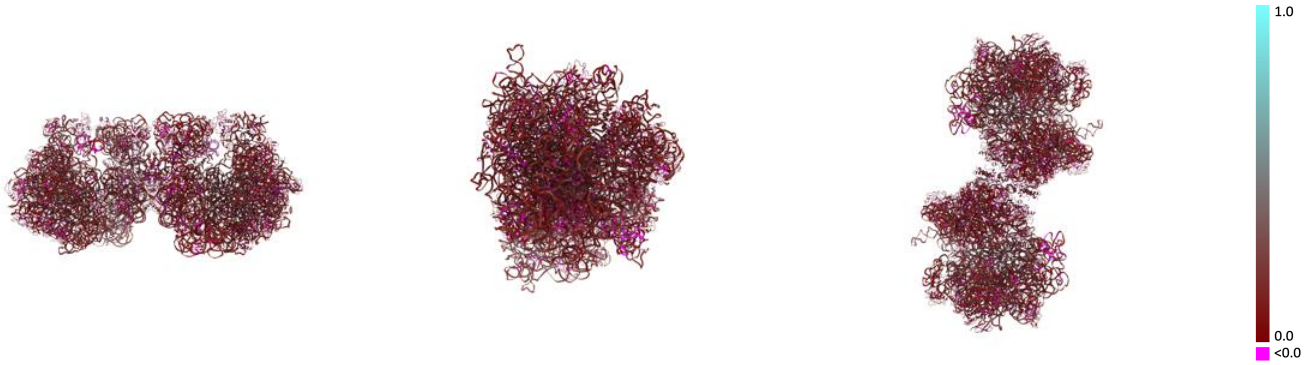
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.023 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

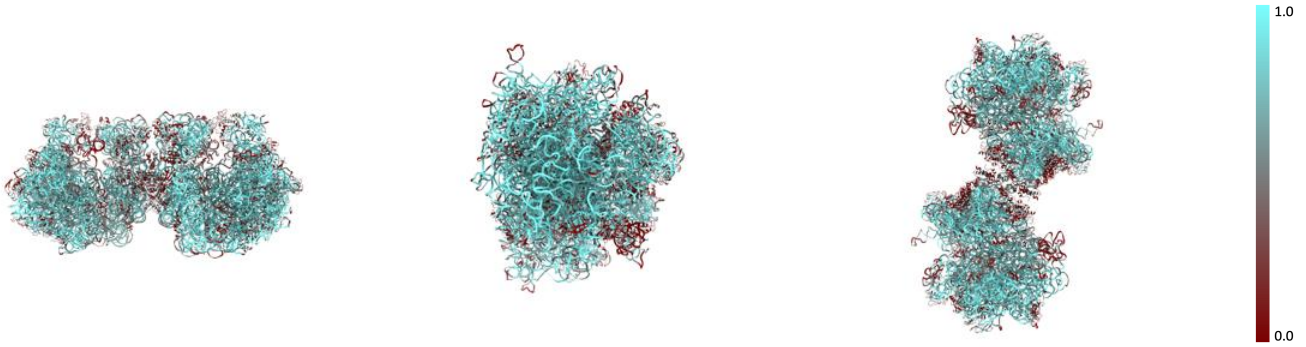
9.2 Q-score mapped to coordinate model



X Y Z

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

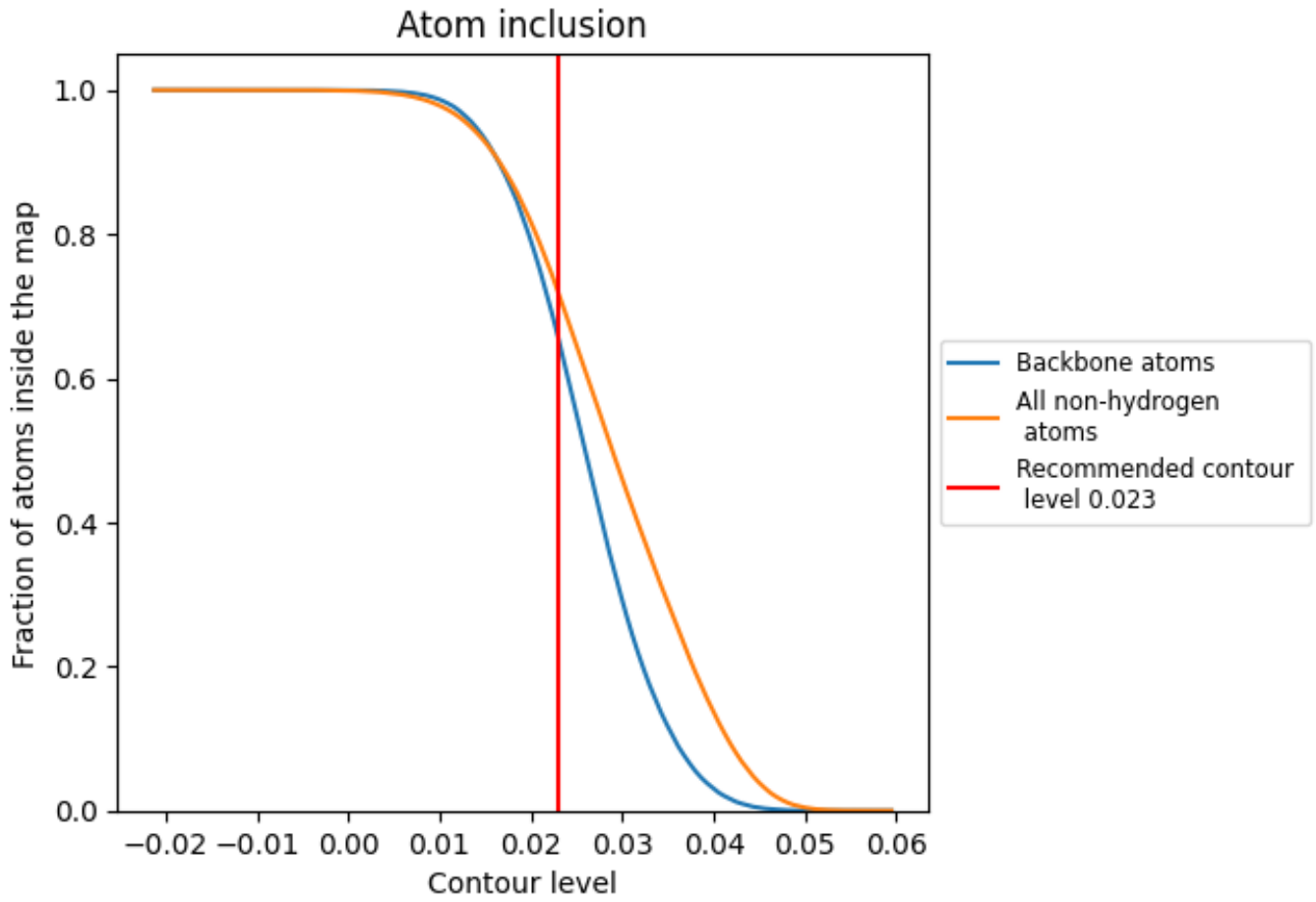
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.023).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 72% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.023) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7187	0.1410
A1	0.1947	0.0740
A2	0.6358	0.0860
A3	0.6434	0.0790
A4	0.7820	0.0730
AA	0.8405	0.1650
AB	0.8151	0.1500
AC	0.3935	0.0970
AD	0.5876	0.1020
AE	0.4633	0.1010
AF	0.3548	0.1100
AG	0.3846	0.1160
AH	0.6240	0.0920
AI	0.2983	0.1400
AJ	0.4468	0.0740
AK	0.5645	0.1370
AL	0.5918	0.0940
AM	0.6571	0.1060
AN	0.4773	0.1290
AO	0.7151	0.0990
AP	0.5129	0.1050
AQ	0.4952	0.0790
AR	0.6223	0.0850
AS	0.4404	0.0870
AT	0.2370	0.0990
AU	0.7098	0.1040
AV	0.3380	0.0690
AW	0.4419	0.1080
AX	0.3447	0.1120
AY	0.1168	0.1090
AZ	0.5591	0.0690
Aa	0.8309	0.1470
Ab	0.3011	0.1100
Ac	0.2628	0.1170
Ad	0.5459	0.1000

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Chain	Atom inclusion	Q-score
Ae	0.2435	0.1020
Af	0.3780	0.1040
Ag	0.2827	0.1110
Ah	0.4307	0.1020
Ai	0.4225	0.0680
Aj	0.4243	0.0600
Ak	0.4078	0.1020
Al	0.3383	0.1140
Am	0.4158	0.0890
An	0.7468	0.0700
Ao	0.5747	0.0960
Ap	0.5258	0.0830
Aq	0.4373	0.0900
Ar	0.3613	0.1070
As	0.6061	0.0900
At	0.5575	0.0980
Au	0.0646	0.0350
Av	0.2785	0.1120
B1	0.1973	0.0840
B2	0.6358	0.0930
B3	0.6434	0.0810
B4	0.7820	0.0720
BA	0.8405	0.1670
BB	0.8151	0.1460
BC	0.3930	0.0990
BD	0.5876	0.0970
BE	0.4633	0.1040
BF	0.3548	0.1090
BG	0.3846	0.1140
BH	0.6231	0.0910
BI	0.2983	0.1420
BJ	0.4468	0.0790
BK	0.5645	0.1350
BL	0.5929	0.0930
BM	0.6559	0.1100
BN	0.4761	0.1250
BO	0.7151	0.0970
BP	0.5129	0.1060
BQ	0.4952	0.0760
BR	0.6209	0.0870
BS	0.4404	0.0890
BT	0.2370	0.0930

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Chain	Atom inclusion	Q-score
BU	0.7098	0.0990
BV	0.3380	0.0710
BW	0.4400	0.1140
BX	0.3447	0.1090
BY	0.1168	0.1110
BZ	0.5591	0.0670
Ba	0.8308	0.1470
Bb	0.3011	0.1110
Bc	0.2628	0.1140
Bd	0.5466	0.1000
Be	0.2435	0.0970
Bf	0.3780	0.1110
Bg	0.2836	0.1120
Bh	0.4307	0.0990
Bi	0.4236	0.0750
Bj	0.4229	0.0550
Bk	0.4078	0.1060
Bl	0.3383	0.1140
Bm	0.4158	0.0920
Bn	0.7468	0.0610
Bo	0.5747	0.0980
Bp	0.5258	0.0890
Bq	0.4356	0.0940
Br	0.3613	0.1120
Bs	0.6061	0.0860
Bt	0.5575	0.0990
Bu	0.0646	0.0430
Bv	0.2785	0.1120