Full wwPDB X-ray Structure Validation Report (i)

Oct 30, 2024 – 06:25 AM EDT

PDB ID	:	4V7K
Title	:	Structure of RelE nuclease bound to the 70S ribosome (postcleavage state)
Authors	:	Neubauer, C.; Gao, Y.-G.; Andersen, K.R.; Dunham, C.M.; Kelley, A.C.; Hentschel, J.; Gerdes, K.; Ramakrishnan, V.; Brodersen, D.E.
Deposited on	:	2009-11-02
Resolution	:	3.60 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

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

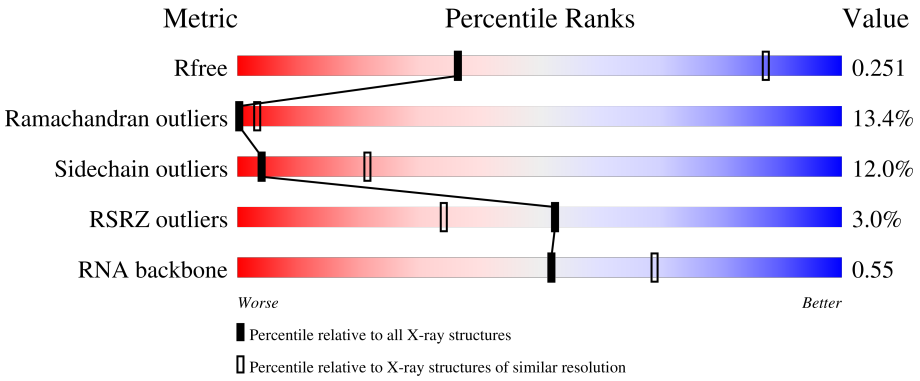
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.60 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	1563 (3.70-3.50)
Ramachandran outliers	177936	1641 (3.70-3.50)
Sidechain outliers	177891	1640 (3.70-3.50)
RSRZ outliers	164620	1562 (3.70-3.50)
RNA backbone	3690	1108 (4.20-3.00)

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

Mol	Chain	Length	Quality of chain
1	Ab	256	2% 70% 20% • 9%
1	Bb	256	2% 71% 19% • 9%
2	Ac	239	69% 16% 14%
2	Bc	239	2% 69% 16% 14%
3	Ad	209	2% 78% 20% •

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Mol	Chain	Length	Quality of chain
3	Bd	209	2% 78% 21%
4	Ae	162	73% 19% 7%
4	Be	162	72% 20% 7%
5	Af	101	2% 85% 15%
5	Bf	101	4% 85% 14%
6	Ag	156	5% 87% 13%
6	Bg	156	4% 87% 12%
7	Ah	138	4% 89% 11%
7	Bh	138	3% 89% 11%
8	Ai	128	9% 77% 20%
8	Bi	128	5% 77% 20%
9	Aj	105	3% 79% 14% 7%
9	Bj	105	2% 79% 14% 7%
10	Ak	129	2% 83% 9% 8%
10	Bk	129	3% 83% 9% 8%
11	Al	132	3% 77% 15% 6%
11	Bl	132	5% 76% 15% 6%
12	Am	126	10% 64% 25% 6%
12	Bm	126	5% 67% 24% 6%
13	An	61	21% 77% 21%
13	Bn	61	5% 77% 20%
14	Ao	89	% 83% 13%
14	Bo	89	% 84% 12%
15	Ap	88	2% 83% 11% 6%
15	Bp	88	% 86% 8% 6%

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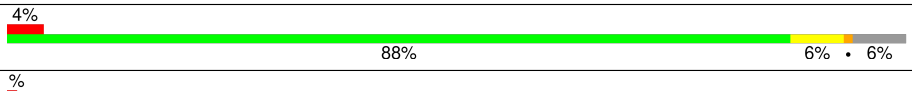
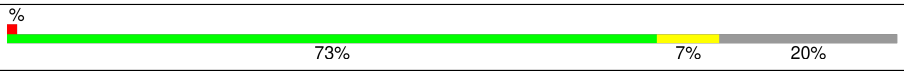
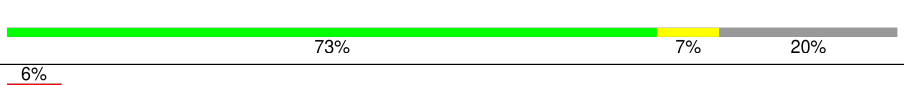
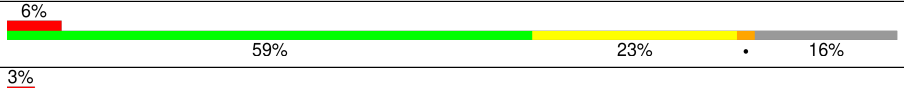
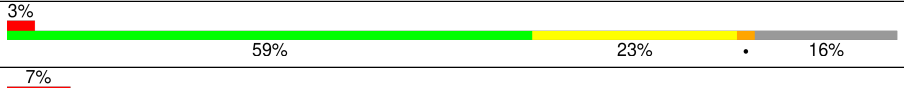
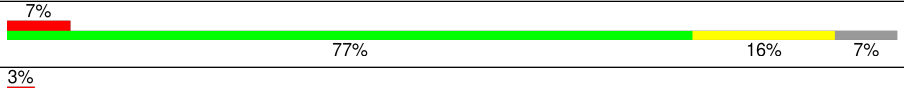
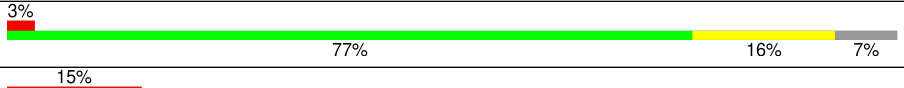
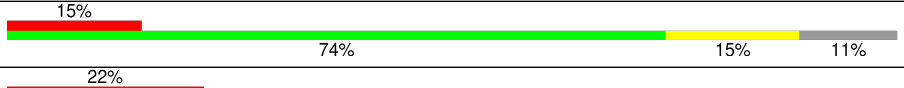
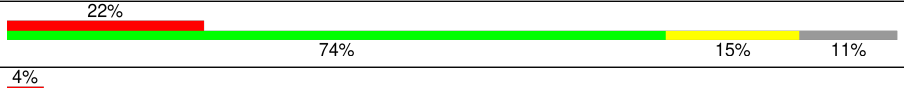
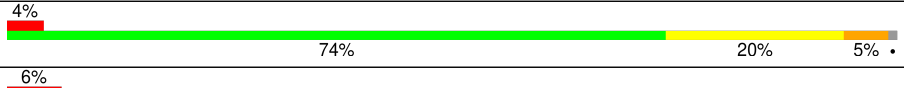
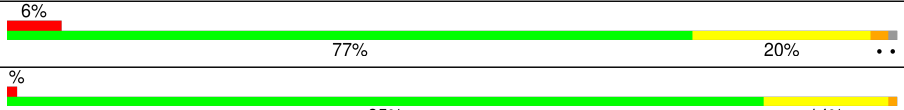
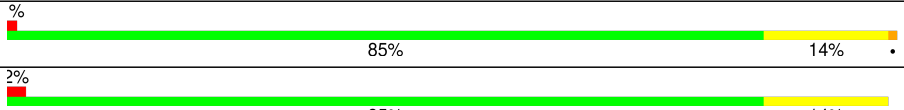
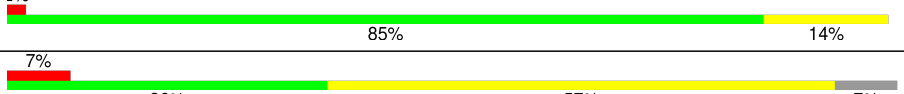
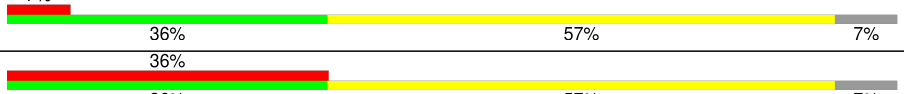
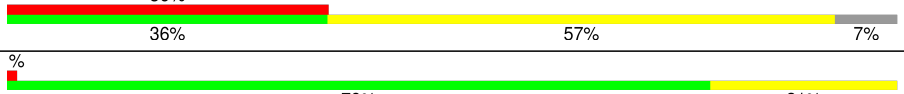
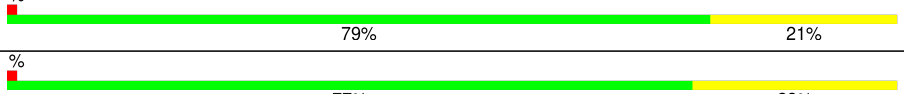
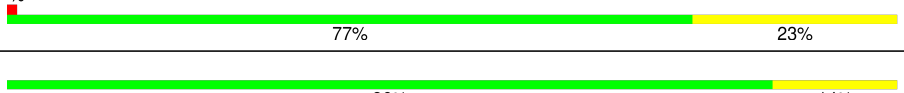
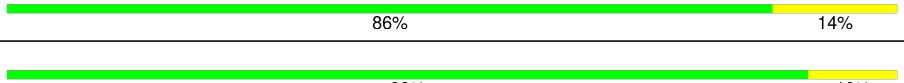
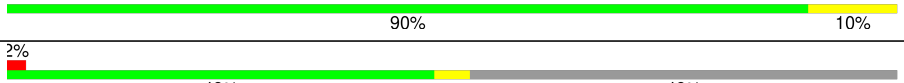
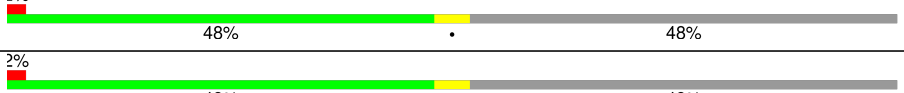
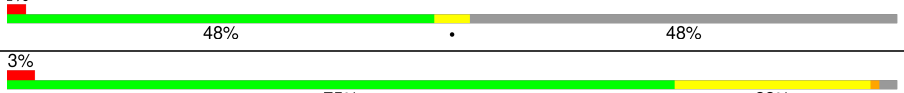
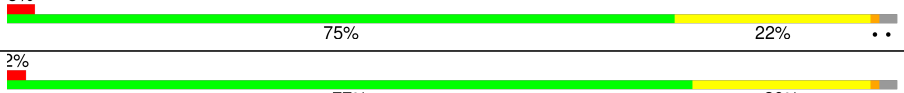
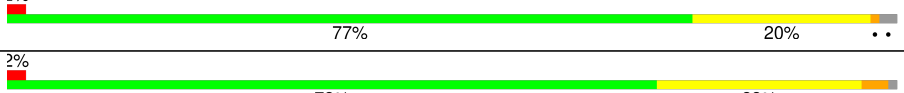
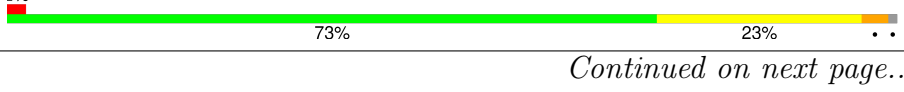
Mol	Chain	Length	Quality of chain
16	Aq	105	
16	Bq	105	
17	Ar	88	
17	Br	88	
18	As	93	
18	Bs	93	
19	At	106	
19	Bt	106	
20	Au	27	
20	Bu	27	
21	Ay	95	
21	By	95	
22	Aa	1504	
22	Ba	1504	
23	Ax	14	
23	Bx	14	
24	Av	77	
24	Bv	77	
25	Aw	77	
25	Bw	77	
26	AC	229	
26	BC	229	
27	AD	276	
27	BD	276	
28	AE	206	

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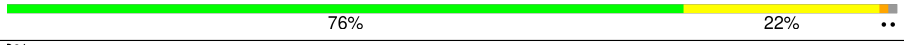
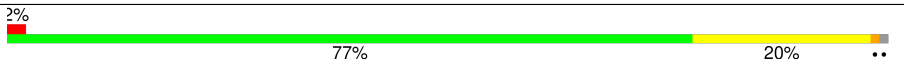
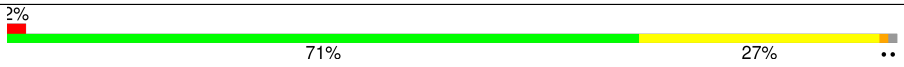
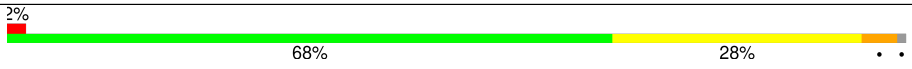
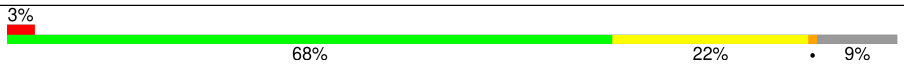
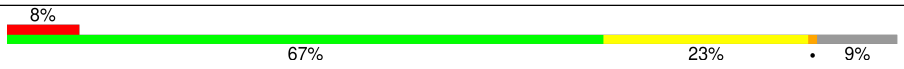
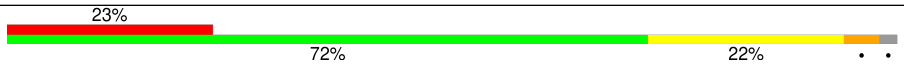
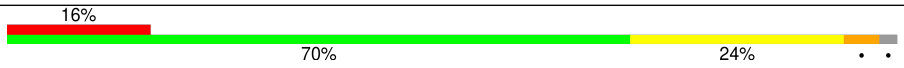
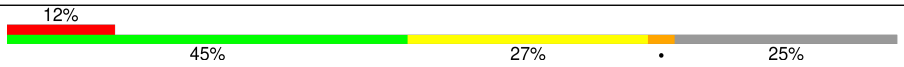
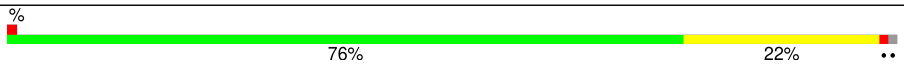
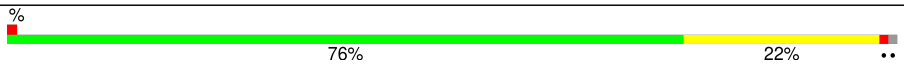
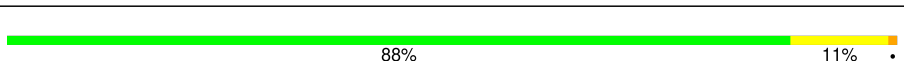
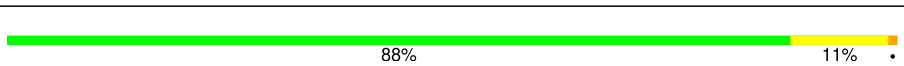
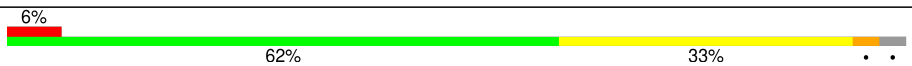
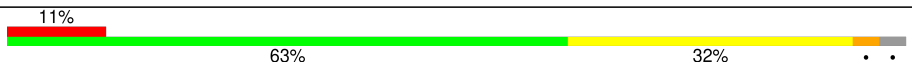
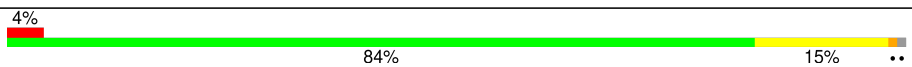
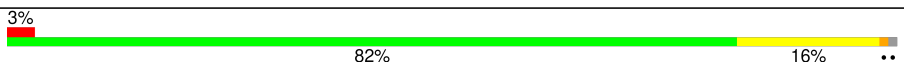
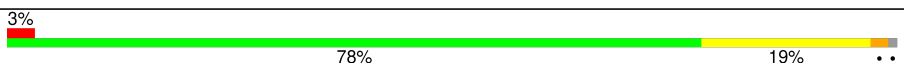
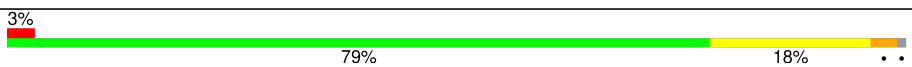
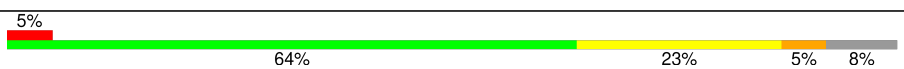
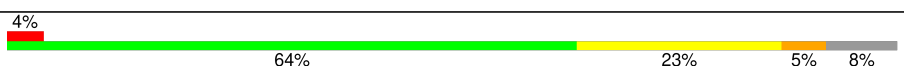
Mol	Chain	Length	Quality of chain
28	BE	206	
29	AF	210	
29	BF	210	
30	AG	182	
30	BG	182	
31	AH	180	
31	BH	180	
32	AI	148	
32	BI	148	
33	AJ	173	
33	BJ	173	
34	AN	140	
34	BN	140	
35	AO	122	
35	BO	122	
36	AP	150	
36	BP	150	
37	AQ	141	
37	BQ	141	
38	AR	118	
38	BR	118	
39	AS	112	
39	BS	112	
40	AT	146	
40	BT	146	

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Mol	Chain	Length	Quality of chain
41	AU	118	2% 82% 17%
41	BU	118	3% 82% 17%
42	AV	101	2% 76% 21%
42	BV	101	% 75% 21%
43	AW	113	82% 15%
43	BW	113	82% 15%
44	AX	96	2% 82% 14%
44	BX	96	82% 14%
45	AY	110	5% 56% 27% 6% 9%
45	BY	110	12% 55% 28% 6% 9%
46	AZ	206	66% 22% 11%
46	BZ	206	% 63% 25% 11%
47	A0	85	6% 85% 14%
47	B0	85	8% 85% 14%
48	A1	98	72% 21% 5%
48	B1	98	% 71% 20% 5%
49	A2	72	81% 18%
49	B2	72	76% 22%
50	A3	60	2% 87% 12%
50	B3	60	87% 12%
51	A4	71	% 52% 23% 6% 20%
51	B4	71	% 52% 23% 6% 20%
52	A5	60	3% 72% 17% 8%
52	B5	60	3% 72% 17% 8%
53	A6	54	17% 57% 30% 6% 7%

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Mol	Chain	Length	Quality of chain
53	B6	54	7% 57% 30% 6% 7%
54	A7	49	2% 88% 8%
54	B7	49	2% 88% 8%
55	A8	65	5% 68% 25% 5%
55	B8	65	2% 68% 25% 5%
56	A9	37	27% 97%
56	B9	37	19% 97%
57	AA	2848	% 79% 19%
57	BA	2848	% 79% 19%
58	AB	119	3% 82% 18%
58	BB	119	5% 82% 18%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	2928	-	-	-	X
60	MG	AA	2978	-	-	-	X
60	MG	AA	3075	-	-	-	X
60	MG	AA	3117	-	-	-	X
60	MG	AA	3201	-	-	-	X
60	MG	AA	3214	-	-	-	X
60	MG	AA	3218	-	-	-	X
60	MG	AA	3248	-	-	-	X
60	MG	AA	3264	-	-	-	X
60	MG	AQ	201	-	-	-	X
60	MG	Aa	1602	-	-	-	X
60	MG	Aa	1615	-	-	-	X
60	MG	Aa	1636	-	-	-	X
60	MG	Aa	1669	-	-	-	X
60	MG	Aa	1700	-	-	-	X
60	MG	Aa	1713	-	-	-	X
60	MG	Aa	1718	-	-	-	X
60	MG	Aa	1727	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	Ae	201	-	-	-	X
60	MG	BA	2938	-	-	-	X
60	MG	BA	2958	-	-	-	X
60	MG	BA	3099	-	-	-	X
60	MG	BA	3160	-	-	-	X
60	MG	BA	3198	-	-	-	X
60	MG	BA	3233	-	-	-	X
60	MG	BA	3243	-	-	-	X
60	MG	BA	3254	-	-	-	X
60	MG	BA	3264	-	-	-	X
60	MG	Ba	1665	-	-	-	X
60	MG	Ba	1676	-	-	-	X
60	MG	Ba	1681	-	-	-	X
60	MG	Ba	1702	-	-	-	X
60	MG	Ba	1706	-	-	-	X

2 Entry composition (i)

There are 60 unique types of molecules in this entry. The entry contains 297230 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ab	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			
1	Bb	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Ac	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
2	Bc	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	Ad	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
3	Bd	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	Ae	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			
4	Be	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	Af	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
5	Bf	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	Ag	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
6	Bg	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	Ah	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
7	Bh	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	Ai	127	Total	C	N	O	0	0	0
			1010	639	197	174			
8	Bi	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	Aj	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			
9	Bj	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	Ak	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	Bk	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	Al	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			
11	Bl	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Am	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			
12	Bm	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			

- Molecule 13 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	An	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
13	Bn	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	Ao	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
14	Bo	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	Ap	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
15	Bp	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	Aq	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
16	Bq	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	Ar	70	Total	C	N	O	0	0	0
			574	367	112	95			
17	Br	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	As	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			
18	Bs	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	At	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
19	Bt	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	Au	24	Total	C	N	O	0	0	0
			208	128	50	30			
20	Bu	24	Total	C	N	O	0	0	0
			208	128	50	30			

- Molecule 21 is a protein called Toxin relE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	Ay	94	Total	C	N	O	S	0	0	0
			782	502	139	139	2			
21	By	94	Total	C	N	O	S	0	0	0
			782	502	139	139	2			

- Molecule 22 is a RNA chain called RNA (1504-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	Aa	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
22	Ba	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 23 is a RNA chain called RNA (5'-R(*A*AP*GP*UP*AP*AP*AP*AP*AP*UP* GP*UP*A*(CCC))-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	Ax	13	Total	C	N	O	P	0	0	0
			260	117	51	80	12			
23	Bx	13	Total	C	N	O	P	0	0	0
			260	117	51	80	12			

- Molecule 24 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	Av	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			
24	Bv	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			

- Molecule 25 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Aw	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
25	Bw	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 26 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	AC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			
26	BC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	AD	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			
27	BD	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
28	BE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			
29	BF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	AH	164	Total	C	N	O	S	0	0	0
			1259	800	233	225	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BH	164	Total	C	N	O	S	0	0	0
			1259	800	233	225	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AI	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			
32	BI	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			

- Molecule 33 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
33	AJ	130	Total	C	N	O	0	0	0
			641	381	130	130			
33	BJ	130	Total	C	N	O	0	0	0
			641	381	130	130			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	AN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
34	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	AO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
35	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	AP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
36	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	AQ	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			
37	BQ	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	AR	117	Total	C	N	O	0	0	0
			960	599	202	159			
38	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
39	AS	98	Total	C	N	O	0	0	0
			770	486	154	130			
39	BS	98	Total	C	N	O	0	0	0
			770	486	154	130			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	AT	135	Total	C	N	O	S	0	0	0
			1123	699	230	193	1			
40	BT	135	Total	C	N	O	S	0	0	0
			1123	699	230	193	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	AU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
41	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	AV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
42	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	AW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
43	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	AX	92	Total	C	N	O	0	0	0
			725	471	131	123			
44	BX	92	Total	C	N	O	0	0	0
			725	471	131	123			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	AY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
45	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	AZ	184	Total	C	N	O	S	0	0	0
			1467	936	261	268	2			
46	BZ	184	Total	C	N	O	S	0	0	0
			1467	936	261	268	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	A0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	A1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			
48	B1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	A2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
49	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	A3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			
50	B3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	A4	57	Total	C	N	O	S	0	0	0
			450	285	77	83	5			
51	B4	57	Total	C	N	O	S	0	0	0
			450	285	77	83	5			

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	A5	55	Total	C	N	O	S	0	0	0
			427	267	86	69	5			
52	B5	55	Total	C	N	O	S	0	0	0
			427	267	86	69	5			

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	A6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
53	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	A7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
54	B7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	A8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
55	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 56 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
56	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 57 is a RNA chain called RNA (2848-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	AA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			
57	BA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			

- Molecule 58 is a RNA chain called RNA (119-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	AB	119	Total 2551	C 1136	N 471	O 826	P 118	0	0	0
58	BB	119	Total 2551	C 1136	N 471	O 826	P 118	0	0	0

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	Ad	1	Total 1	Zn 1	0	0
59	An	1	Total 1	Zn 1	0	0
59	A4	1	Total 1	Zn 1	0	0
59	A9	1	Total 1	Zn 1	0	0
59	Bd	1	Total 1	Zn 1	0	0
59	Bn	1	Total 1	Zn 1	0	0
59	B4	1	Total 1	Zn 1	0	0
59	B9	1	Total 1	Zn 1	0	0

- Molecule 60 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	Ae	2	Total 2	Mg 2	0	0
60	Aa	145	Total 145	Mg 145	0	0
60	Av	5	Total 5	Mg 5	0	0
60	Aw	1	Total 1	Mg 1	0	0
60	AD	2	Total 2	Mg 2	0	0
60	AF	1	Total 1	Mg 1	0	0
60	AQ	1	Total 1	Mg 1	0	0
60	AX	1	Total 1	Mg 1	0	0

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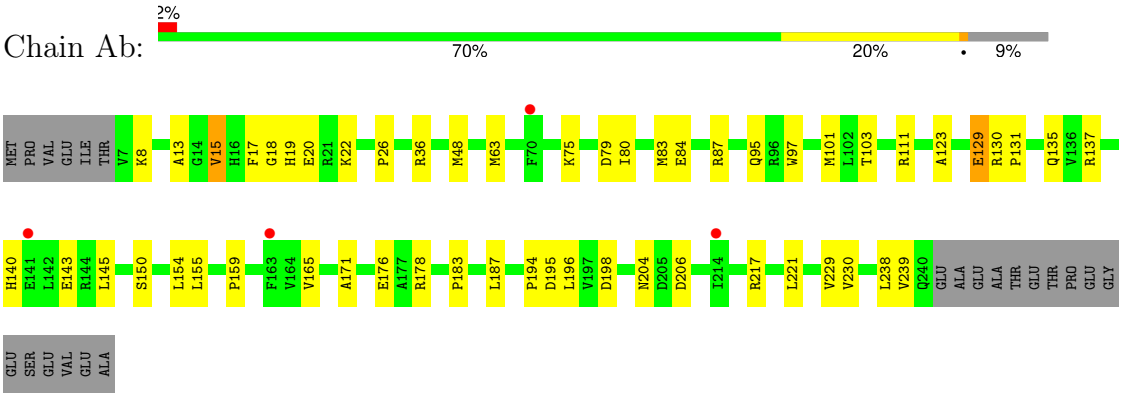
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	A1	2	Total Mg 2 2	0	0
60	A5	1	Total Mg 1 1	0	0
60	A7	1	Total Mg 1 1	0	0
60	AA	367	Total Mg 367 367	0	0
60	AB	3	Total Mg 3 3	0	0
60	Bd	1	Total Mg 1 1	0	0
60	Bl	1	Total Mg 1 1	0	0
60	Bm	1	Total Mg 1 1	0	0
60	Ba	143	Total Mg 143 143	0	0
60	Bx	1	Total Mg 1 1	0	0
60	Bv	5	Total Mg 5 5	0	0
60	Bw	1	Total Mg 1 1	0	0
60	BD	2	Total Mg 2 2	0	0
60	BF	1	Total Mg 1 1	0	0
60	BO	1	Total Mg 1 1	0	0
60	BX	1	Total Mg 1 1	0	0
60	B0	2	Total Mg 2 2	0	0
60	B5	2	Total Mg 2 2	0	0
60	B7	2	Total Mg 2 2	0	0
60	BA	365	Total Mg 365 365	0	0
60	BB	3	Total Mg 3 3	0	0

3 Residue-property plots (i)

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

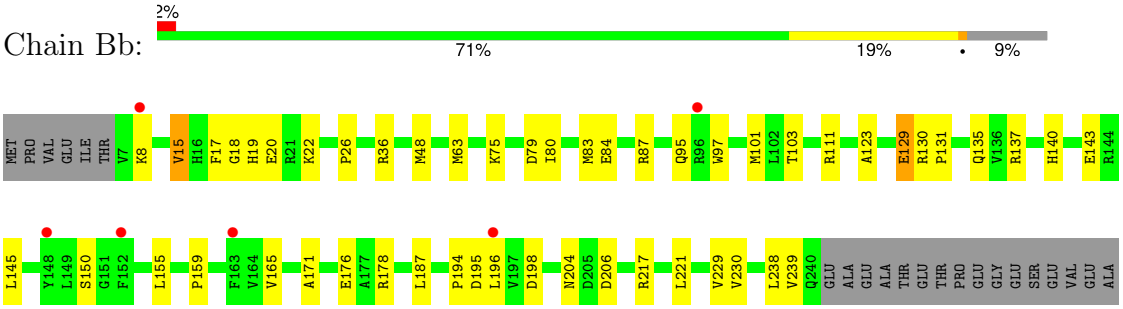
• Molecule 1: 30S ribosomal protein S2

Chain Ab:



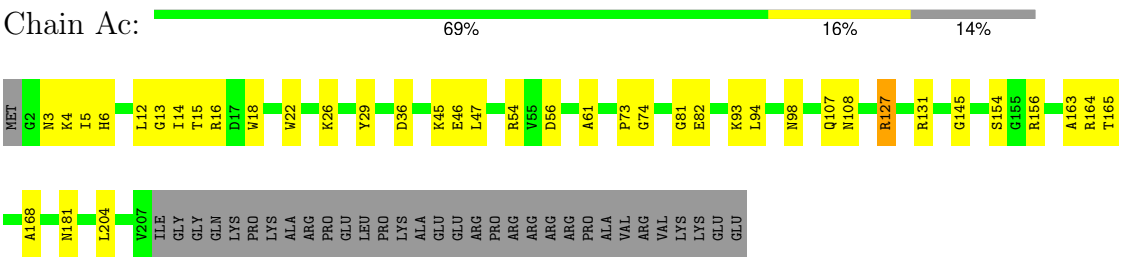
• Molecule 1: 30S ribosomal protein S2

Chain Bb:



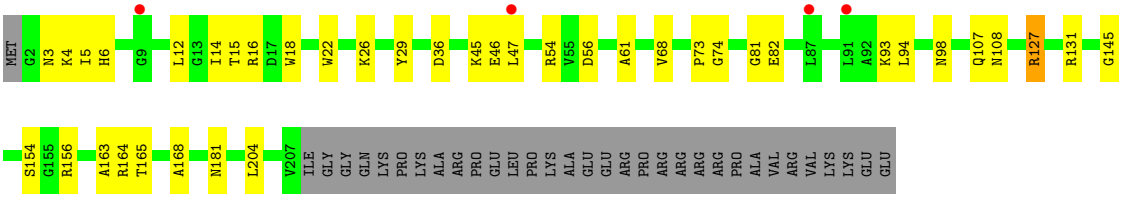
• Molecule 2: 30S ribosomal protein S3

Chain Ac:



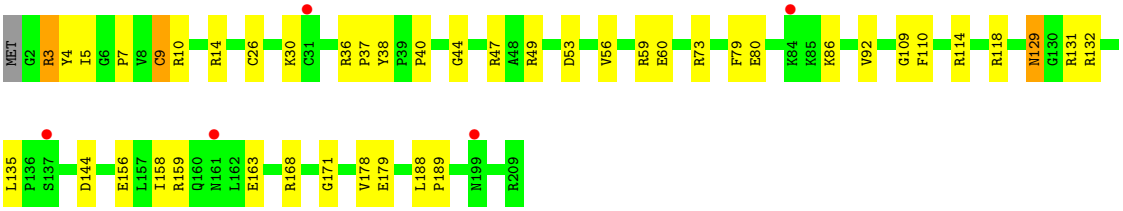
• Molecule 2: 30S ribosomal protein S3

Chain Bc:



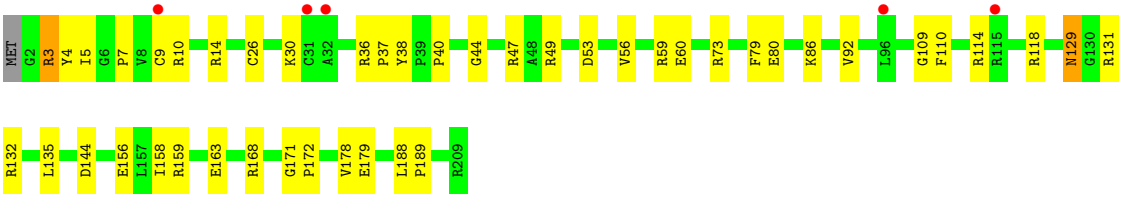
• Molecule 3: 30S ribosomal protein S4

Chain Ad:



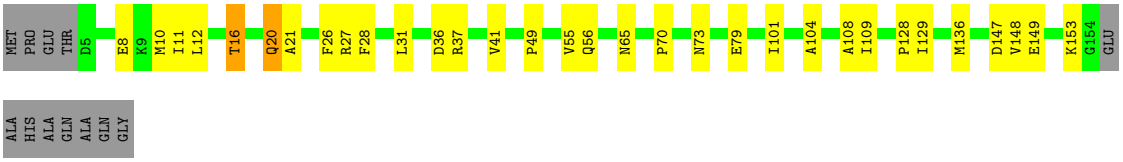
• Molecule 3: 30S ribosomal protein S4

Chain Bd:



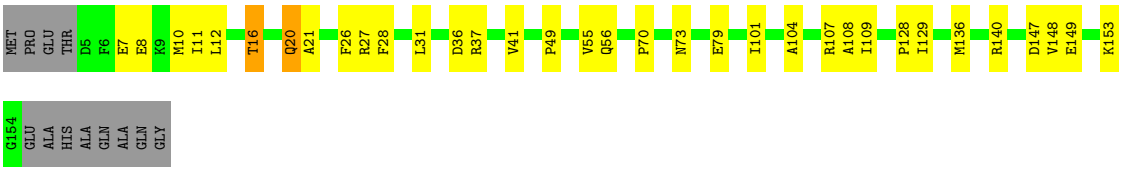
• Molecule 4: 30S ribosomal protein S5

Chain Ae:



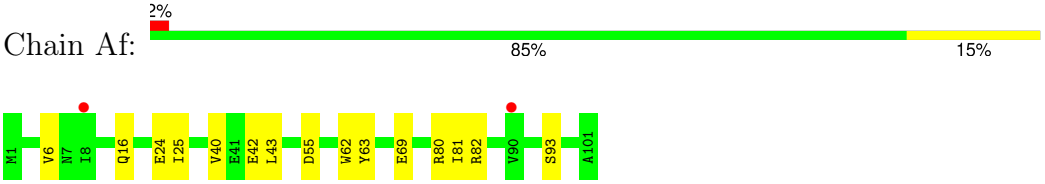
• Molecule 4: 30S ribosomal protein S5

Chain Be:



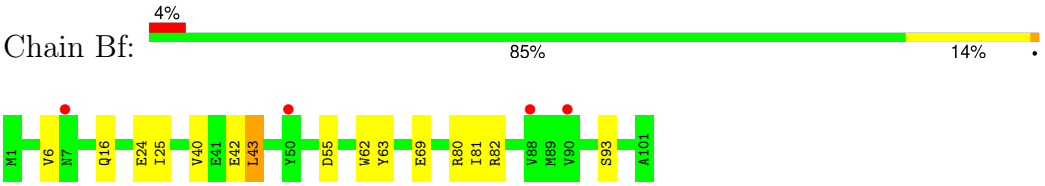
• Molecule 5: 30S ribosomal protein S6

Chain Af:



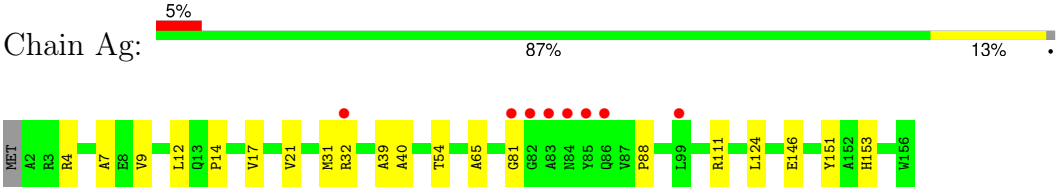
• Molecule 5: 30S ribosomal protein S6

Chain Bf:



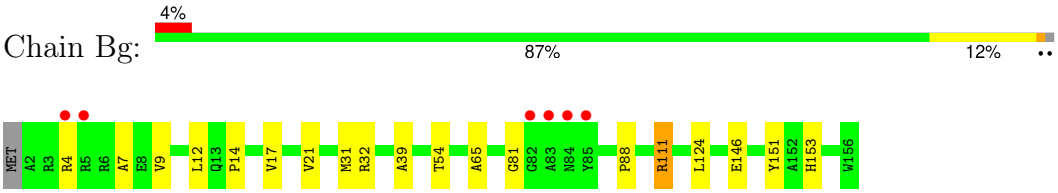
• Molecule 6: 30S ribosomal protein S7

Chain Ag:



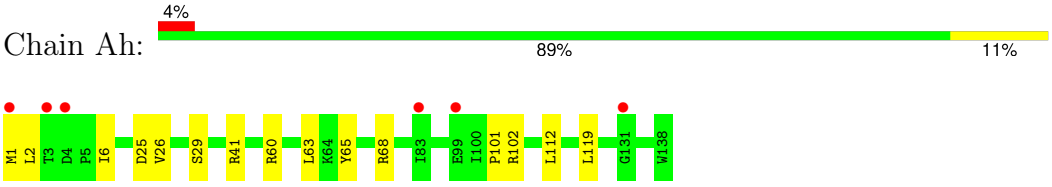
• Molecule 6: 30S ribosomal protein S7

Chain Bg:



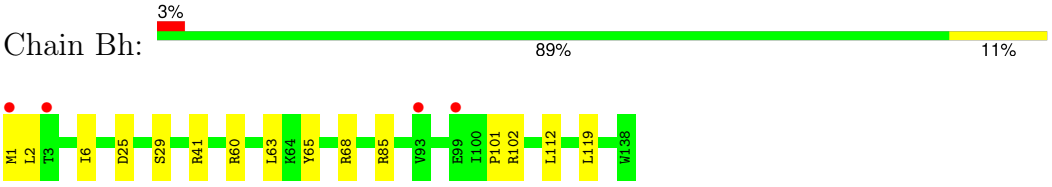
• Molecule 7: 30S ribosomal protein S8

Chain Ah:



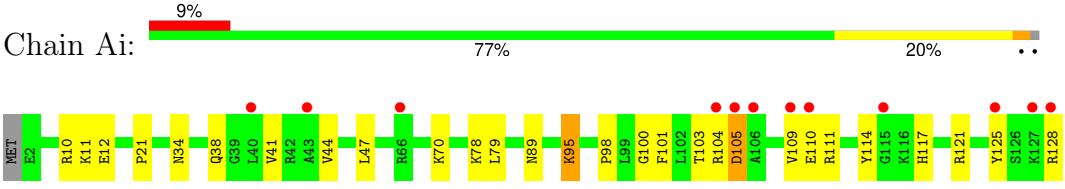
• Molecule 7: 30S ribosomal protein S8

Chain Bh:



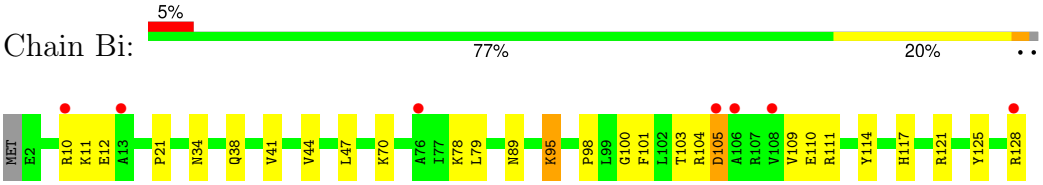
• Molecule 8: 30S ribosomal protein S9

Chain Ai:



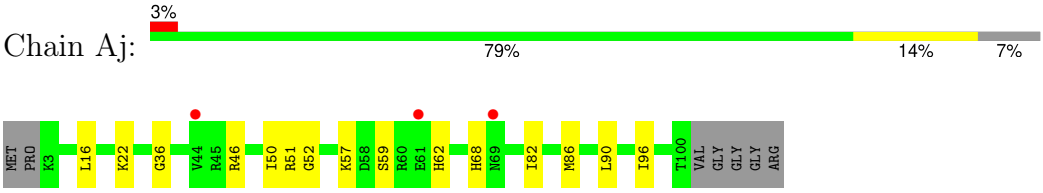
• Molecule 8: 30S ribosomal protein S9

Chain Bi:



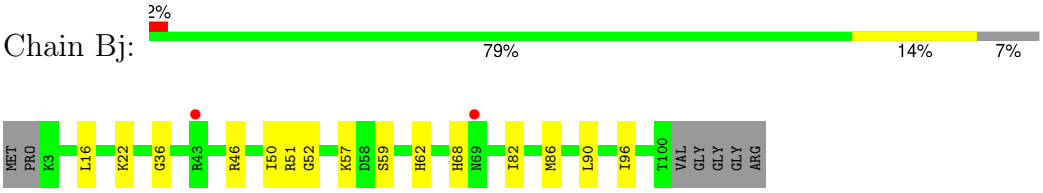
• Molecule 9: 30S ribosomal protein S10

Chain Aj:



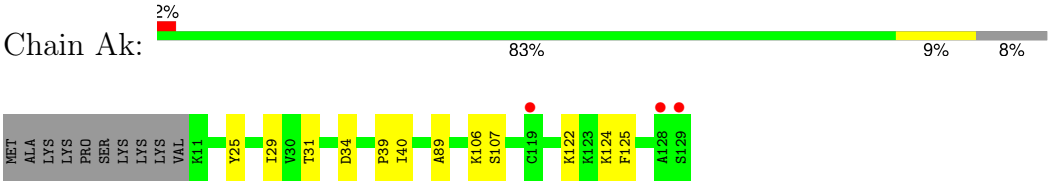
• Molecule 9: 30S ribosomal protein S10

Chain Bj:



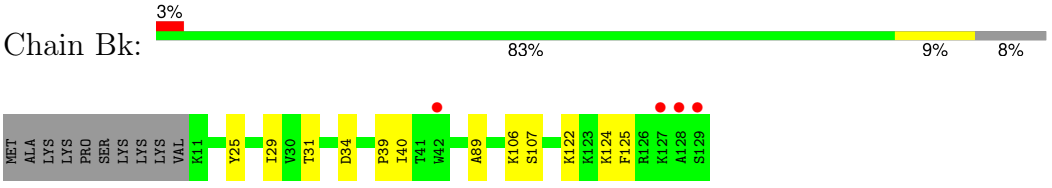
• Molecule 10: 30S ribosomal protein S11

Chain Ak:



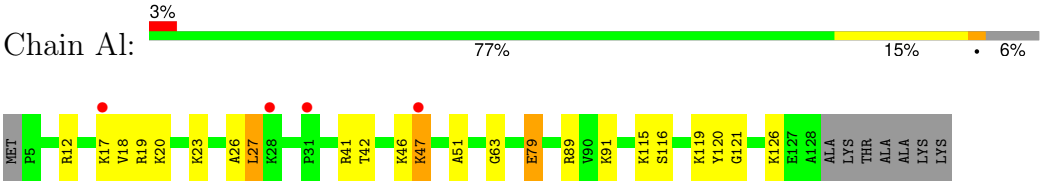
• Molecule 10: 30S ribosomal protein S11

Chain Bk:



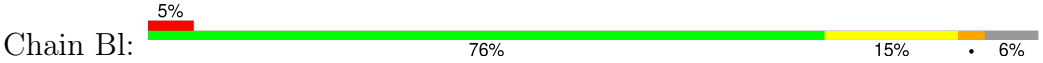
• Molecule 11: 30S ribosomal protein S12

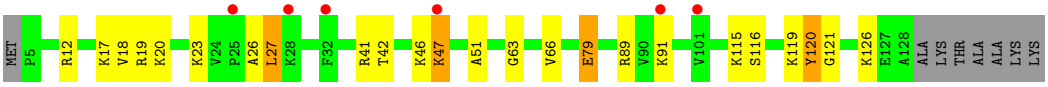
Chain Al:



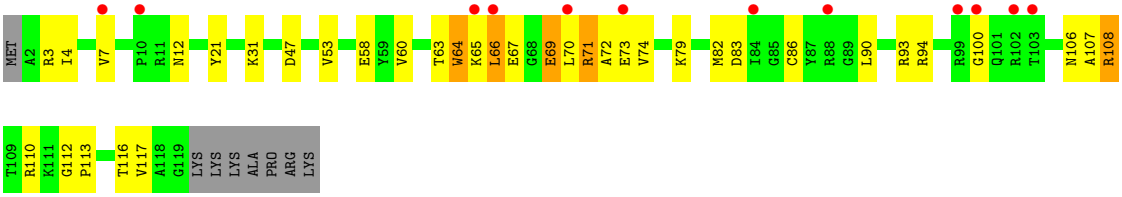
• Molecule 11: 30S ribosomal protein S12

Chain Bl:

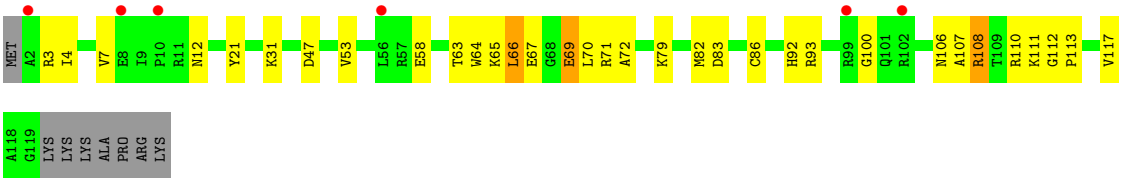




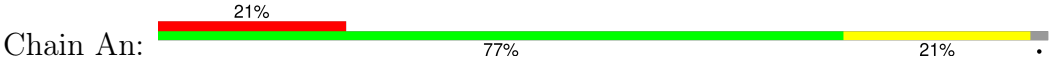
• Molecule 12: 30S ribosomal protein S13

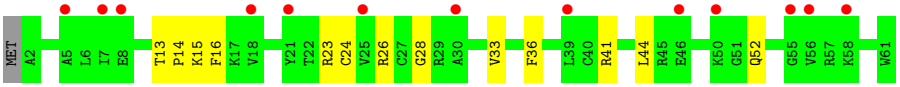


• Molecule 12: 30S ribosomal protein S13

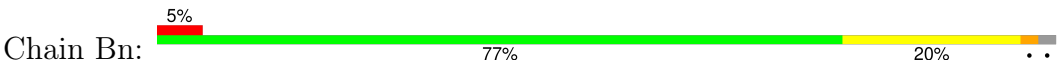


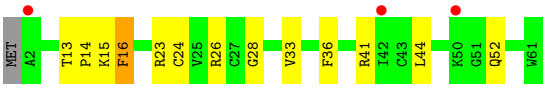
• Molecule 13: 30S ribosomal protein S14 type Z



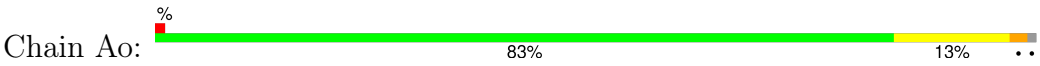


• Molecule 13: 30S ribosomal protein S14 type Z

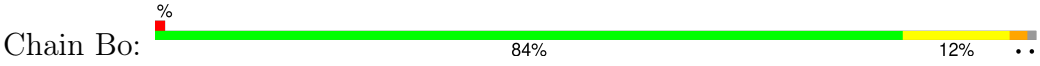


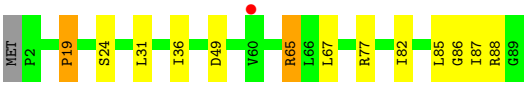


• Molecule 14: 30S ribosomal protein S15



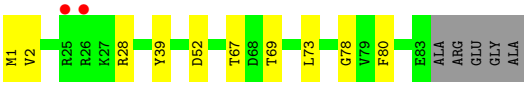
• Molecule 14: 30S ribosomal protein S15





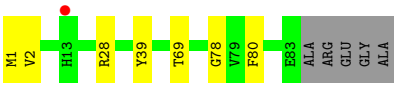
• Molecule 15: 30S ribosomal protein S16

Chain Ap:



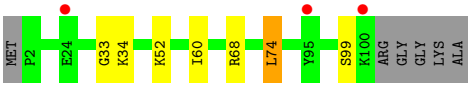
• Molecule 15: 30S ribosomal protein S16

Chain Bp:



• Molecule 16: 30S ribosomal protein S17

Chain Aq:

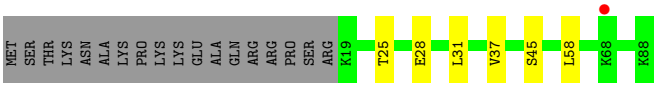


• Molecule 16: 30S ribosomal protein S17

Chain Bq:

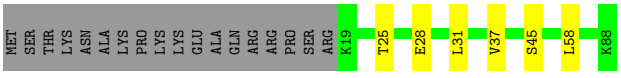
• Molecule 17: 30S ribosomal protein S18

Chain Ar:



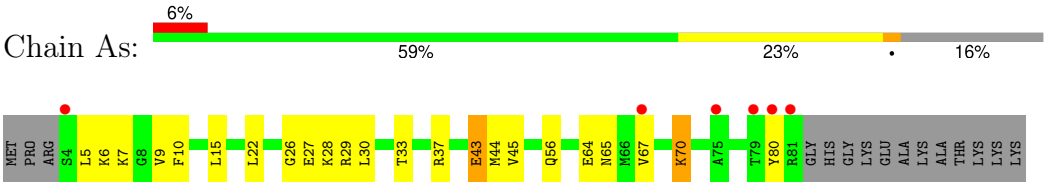
• Molecule 17: 30S ribosomal protein S18

Chain Br:



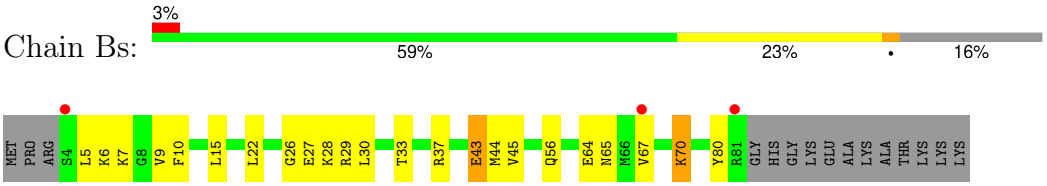
• Molecule 18: 30S ribosomal protein S19

Chain As:



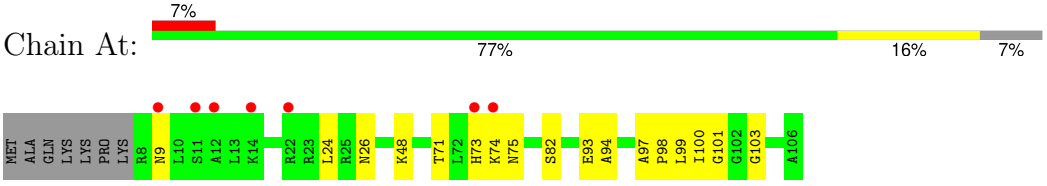
• Molecule 18: 30S ribosomal protein S19

Chain Bs:



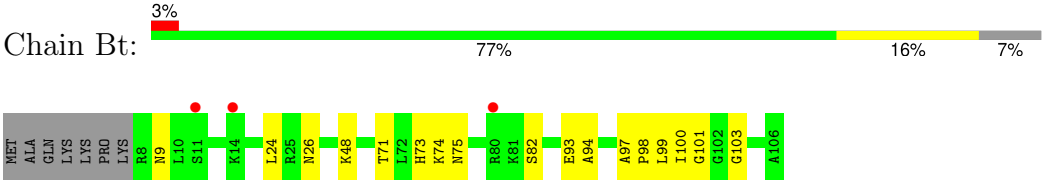
• Molecule 19: 30S ribosomal protein S20

Chain At:



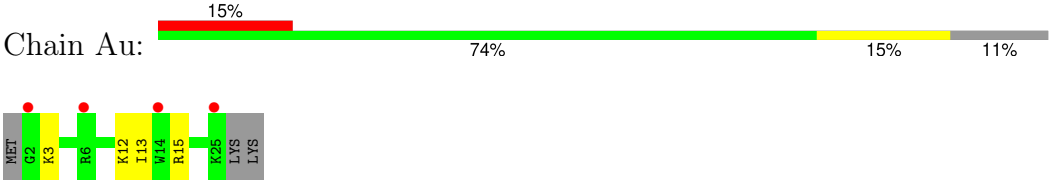
• Molecule 19: 30S ribosomal protein S20

Chain Bt:



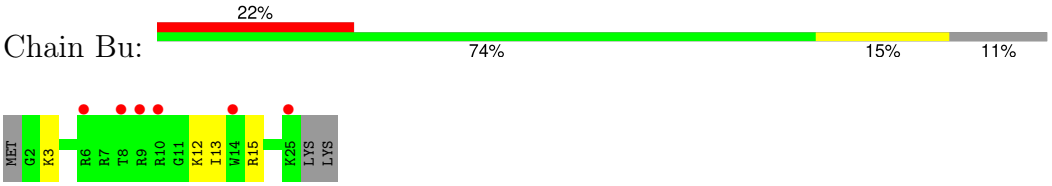
• Molecule 20: 30S ribosomal protein Thx

Chain Au:



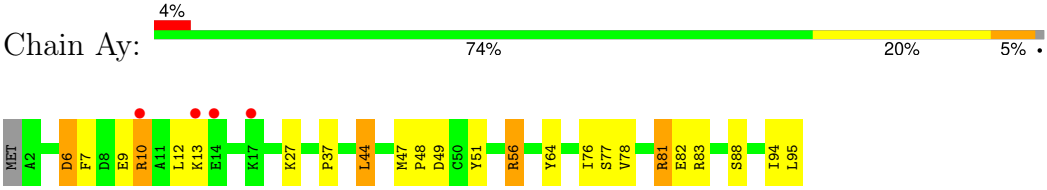
• Molecule 20: 30S ribosomal protein Thx

Chain Bu:



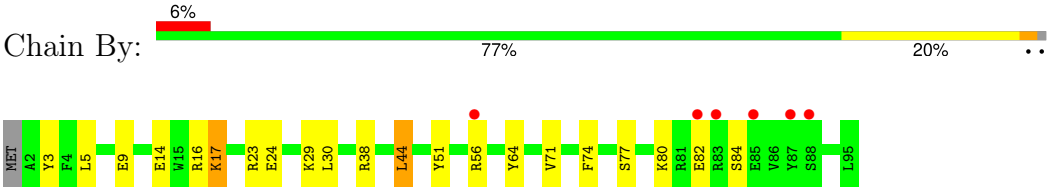
• Molecule 21: Toxin relE

Chain Ay:



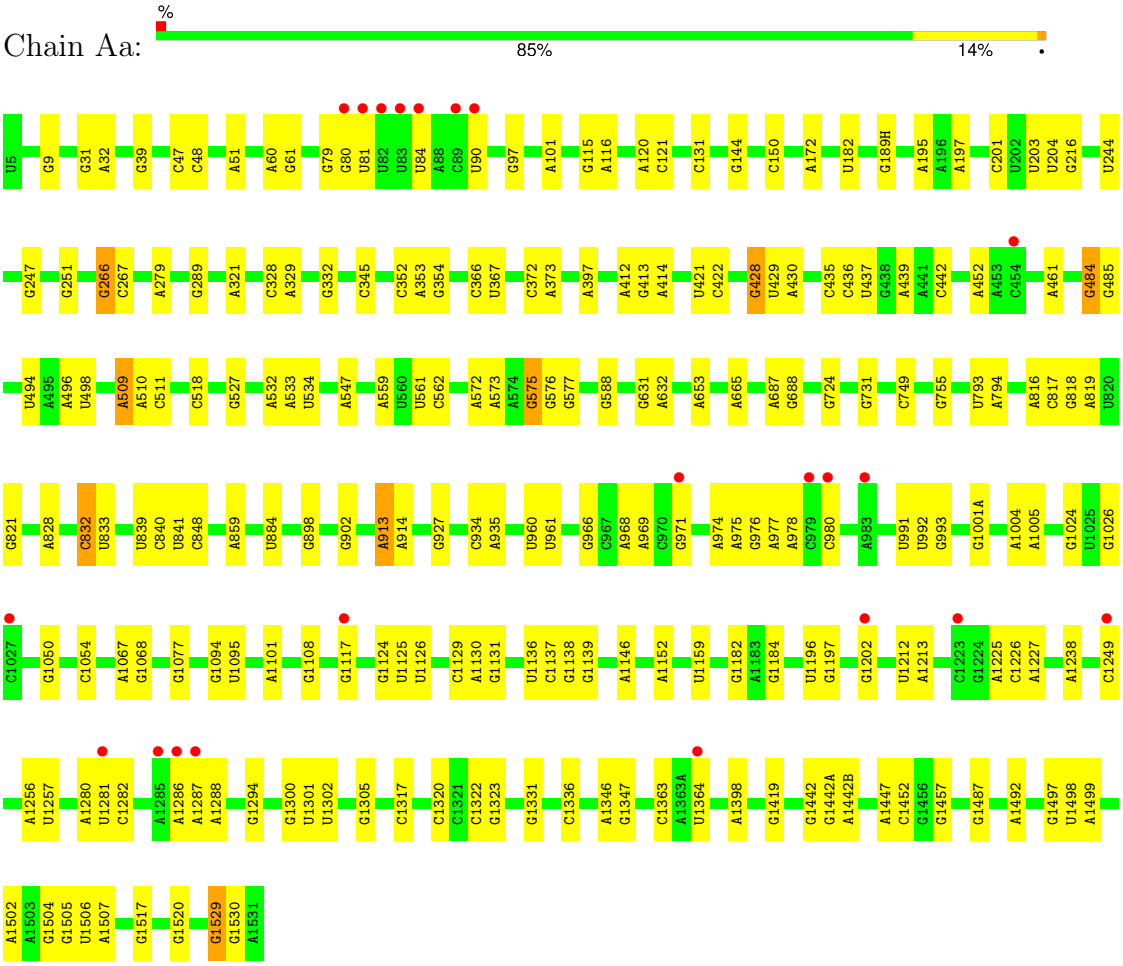
• Molecule 21: Toxin relE

Chain By:



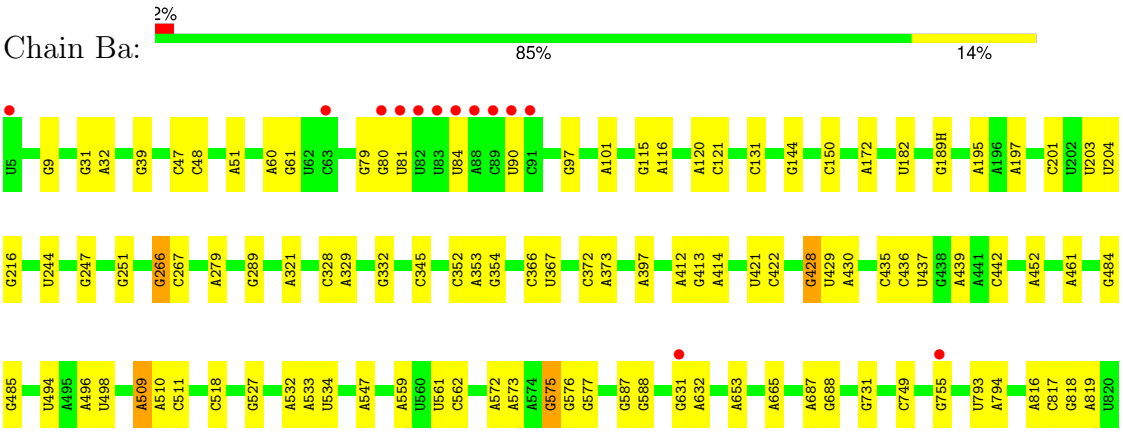
• Molecule 22: RNA (1504-MER)

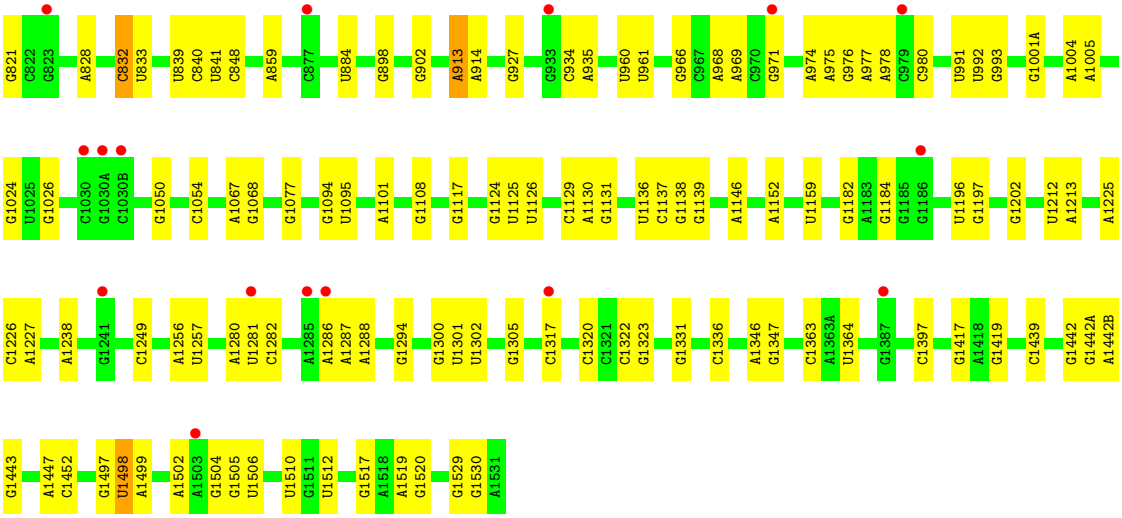
Chain Aa:



• Molecule 22: RNA (1504-MER)

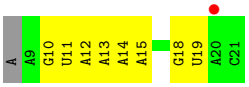
Chain Ba:





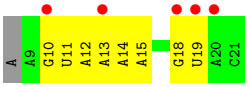
• Molecule 23: RNA (5'-R(*A*AP*GP*UP*AP*AP*AP*AP*AP*UP*GP*UP*A*(CCC))-3')

Chain Ax:



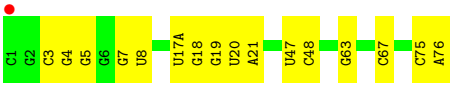
• Molecule 23: RNA (5'-R(*A*AP*GP*UP*AP*AP*AP*AP*AP*UP*GP*UP*A*(CCC))-3')

Chain Bx:



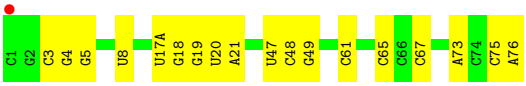
• Molecule 24: RNA (77-MER)

Chain Av:



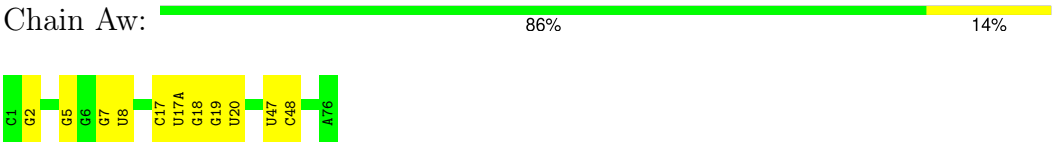
• Molecule 24: RNA (77-MER)

Chain Bv:



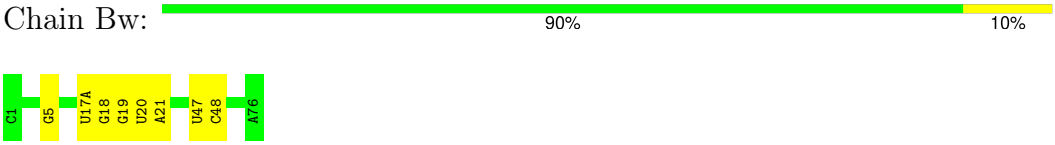
• Molecule 25: RNA (77-MER)

Chain Aw:



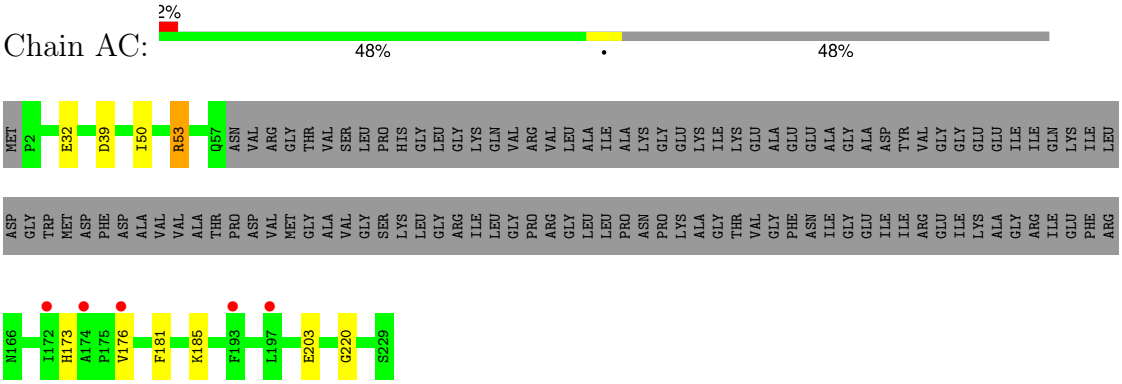
• Molecule 25: RNA (77-MER)

Chain Bw:



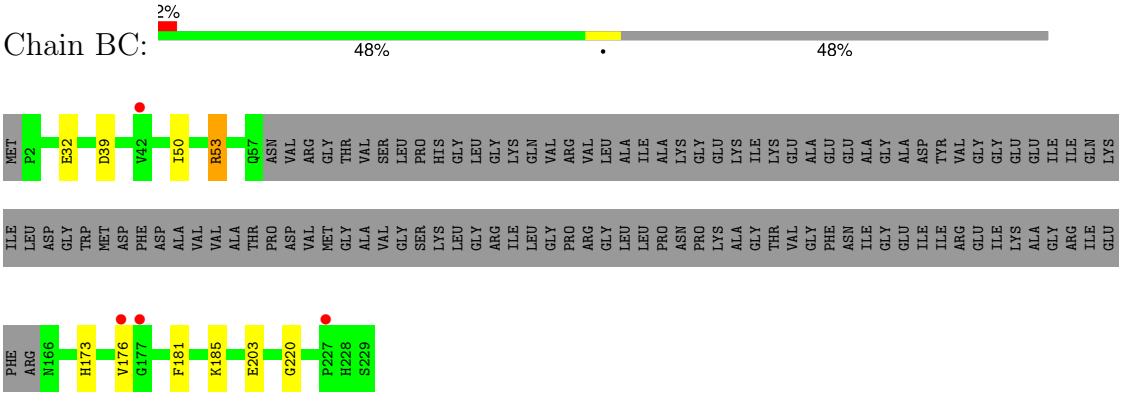
• Molecule 26: 50S ribosomal protein L1

Chain AC:



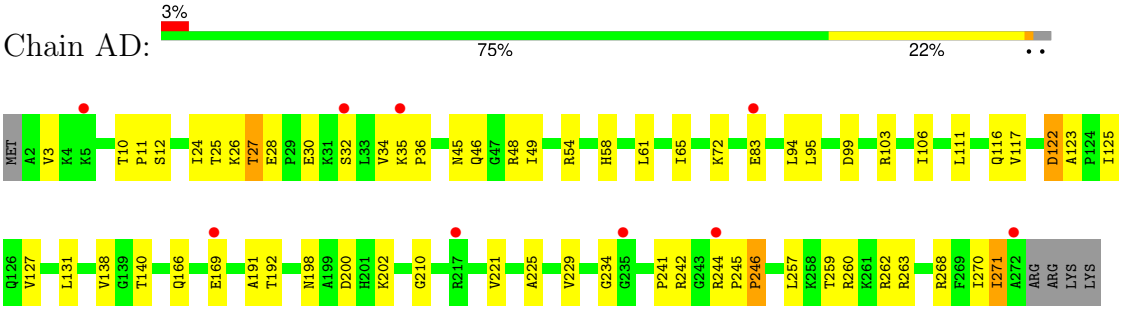
• Molecule 26: 50S ribosomal protein L1

Chain BC:



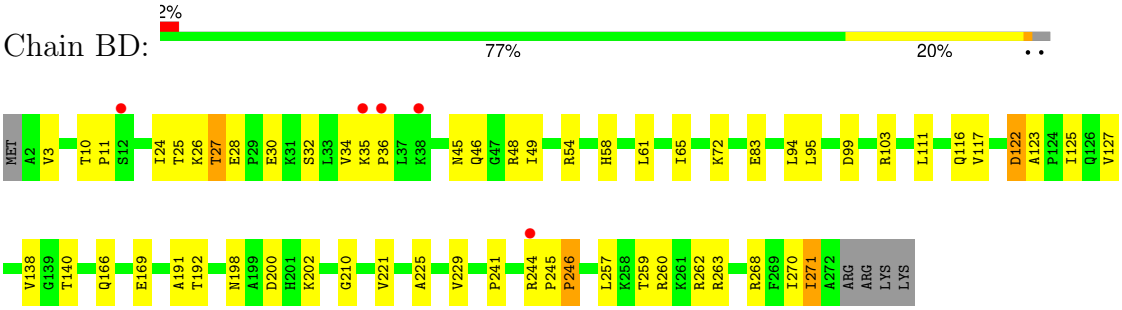
• Molecule 27: 50S ribosomal protein L2

Chain AD:



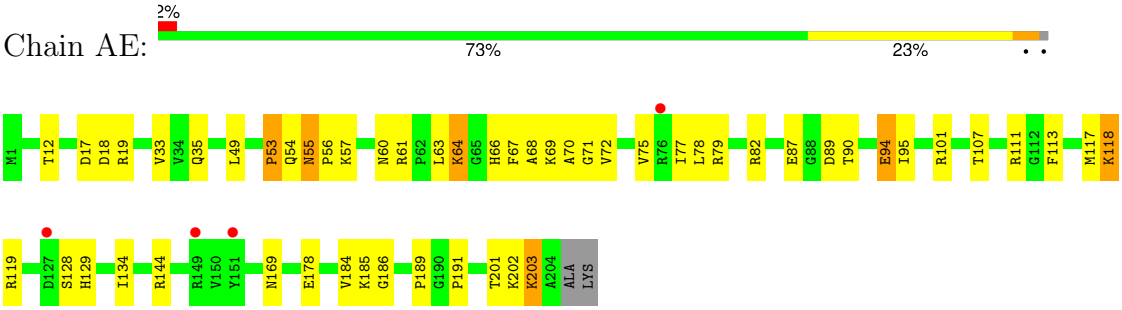
• Molecule 27: 50S ribosomal protein L2

Chain BD:



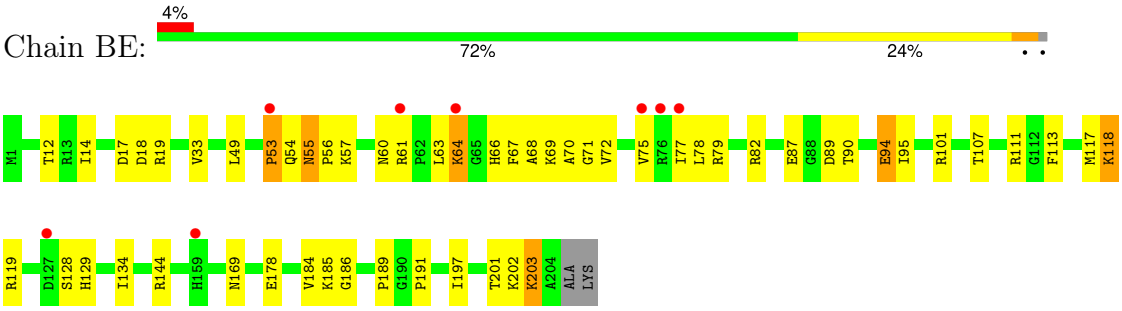
• Molecule 28: 50S ribosomal protein L3

Chain AE:



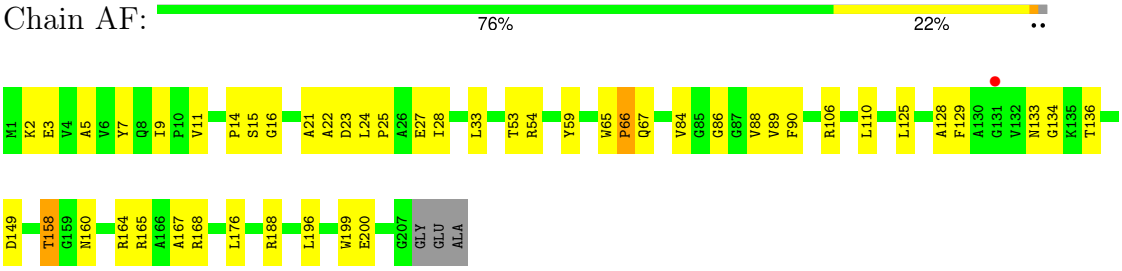
• Molecule 28: 50S ribosomal protein L3

Chain BE:



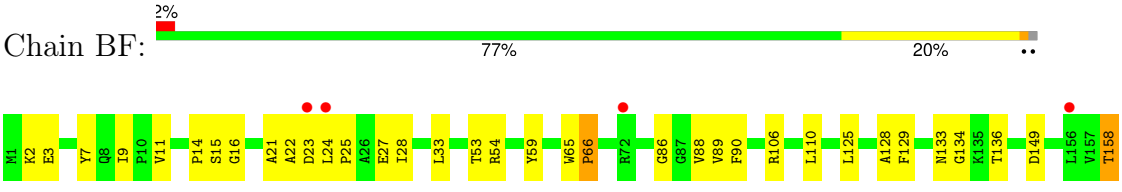
• Molecule 29: 50S ribosomal protein L4

Chain AF:



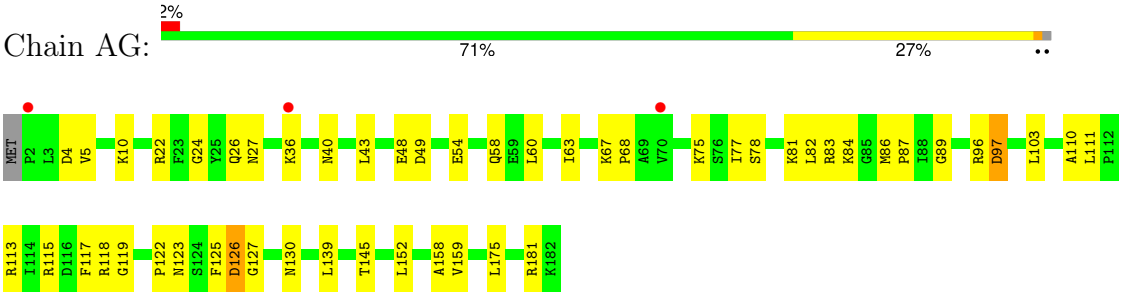
• Molecule 29: 50S ribosomal protein L4

Chain BF:



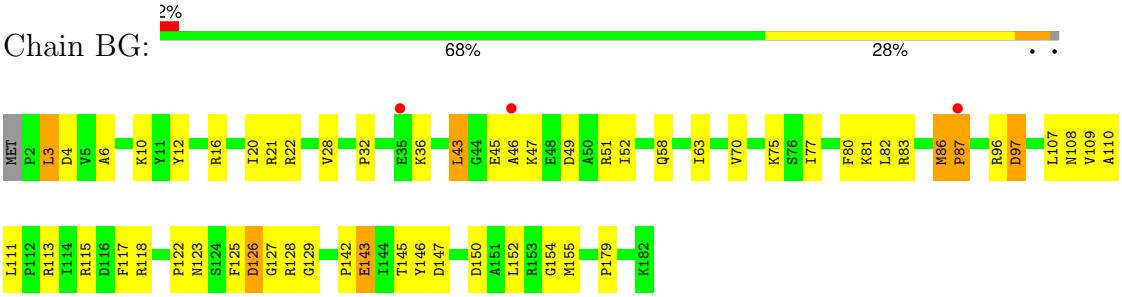
• Molecule 30: 50S ribosomal protein L5

Chain AG:



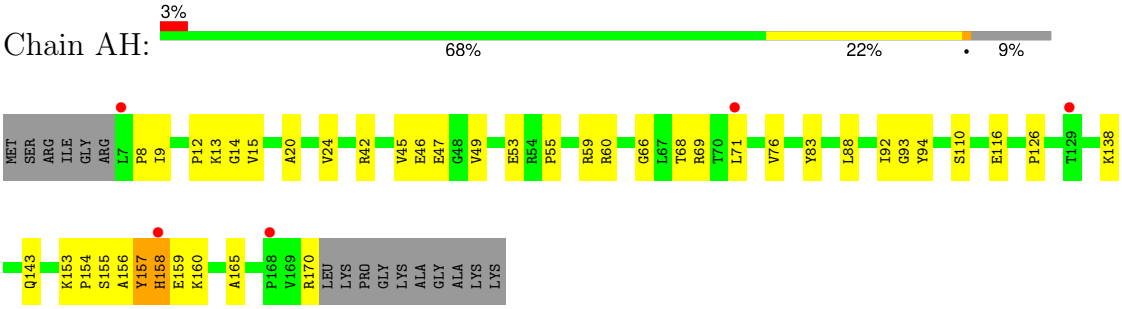
• Molecule 30: 50S ribosomal protein L5

Chain BG:



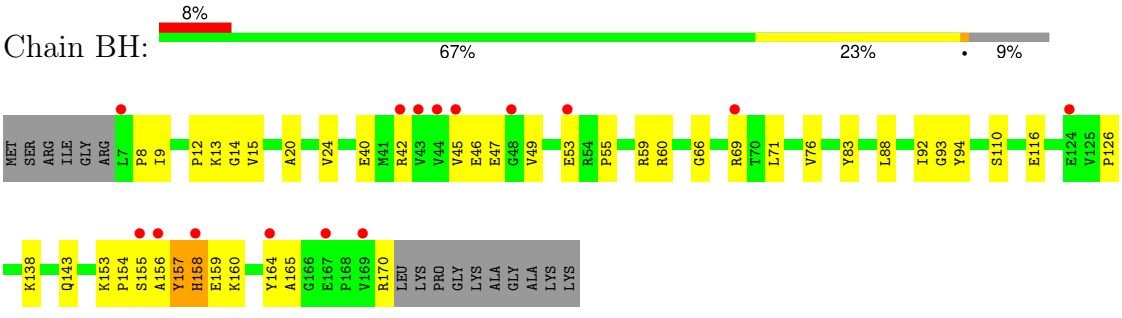
• Molecule 31: 50S ribosomal protein L6

Chain AH:



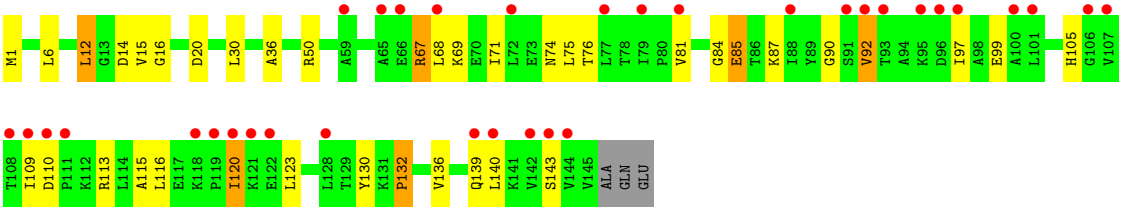
• Molecule 31: 50S ribosomal protein L6

Chain BH:

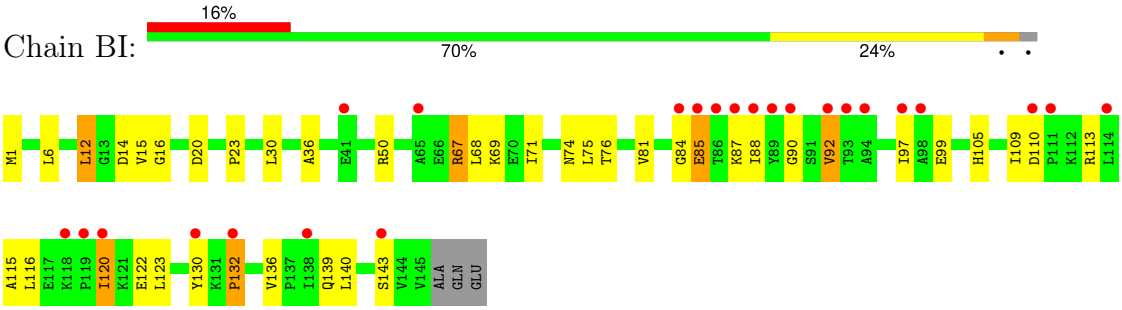


• Molecule 32: 50S ribosomal protein L9

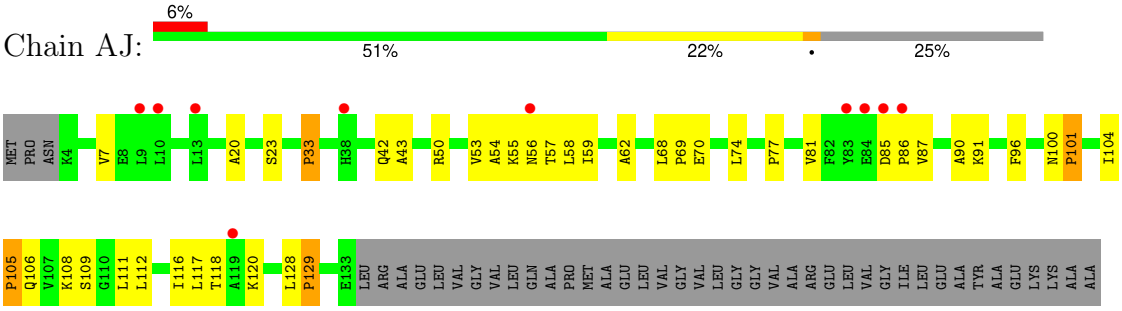
Chain AI:



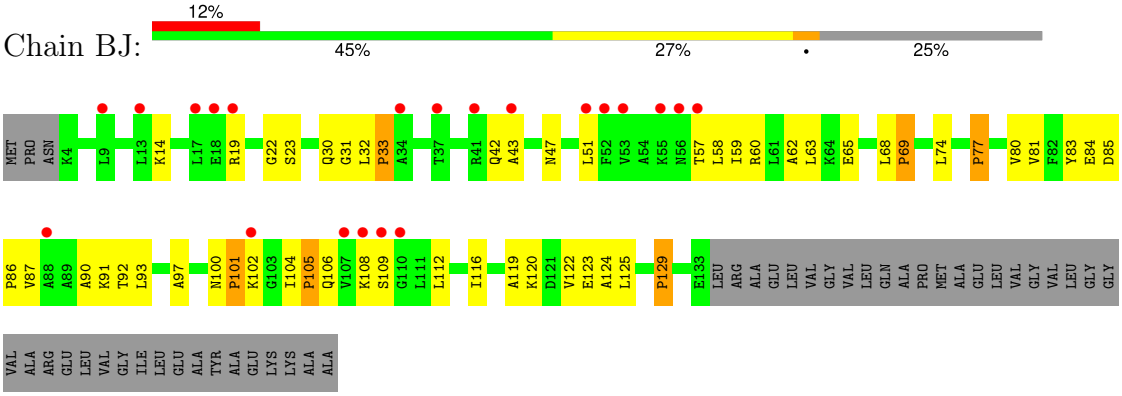
• Molecule 32: 50S ribosomal protein L9



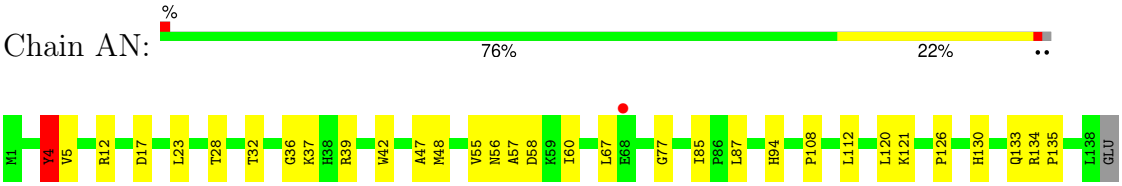
• Molecule 33: 50S ribosomal protein L10



• Molecule 33: 50S ribosomal protein L10

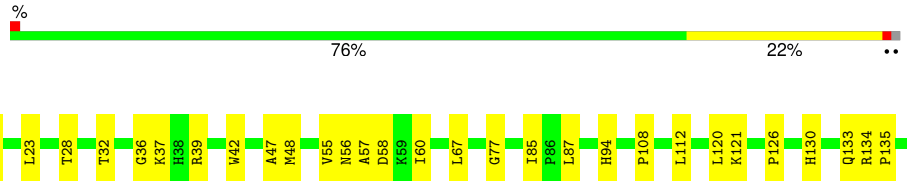


• Molecule 34: 50S ribosomal protein L13



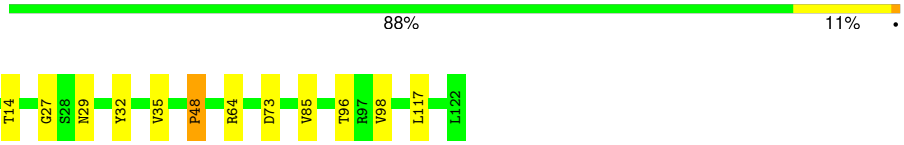
• Molecule 34: 50S ribosomal protein L13

Chain BN:



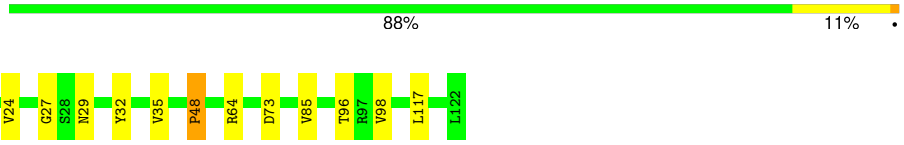
• Molecule 35: 50S ribosomal protein L14

Chain AO:



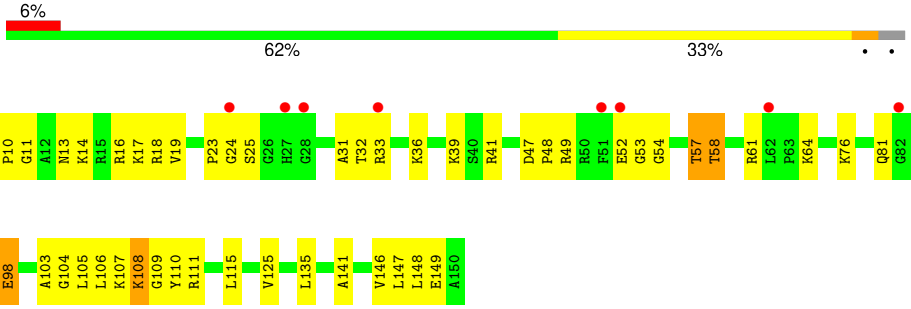
• Molecule 35: 50S ribosomal protein L14

Chain BO:



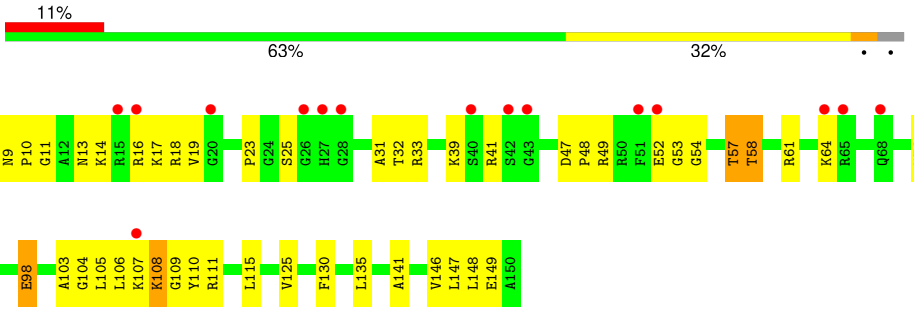
• Molecule 36: 50S ribosomal protein L15

Chain AP:



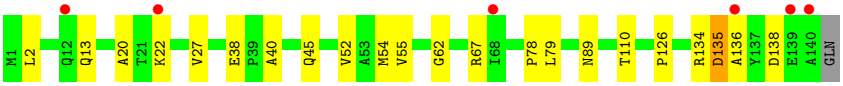
• Molecule 36: 50S ribosomal protein L15

Chain BP:

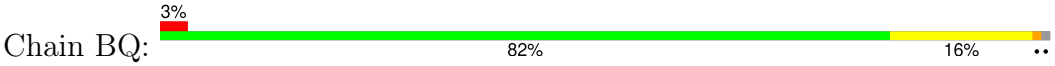


• Molecule 37: 50S ribosomal protein L16

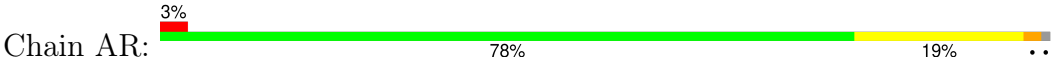
Chain AQ:

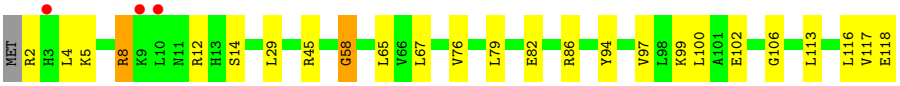


• Molecule 37: 50S ribosomal protein L16

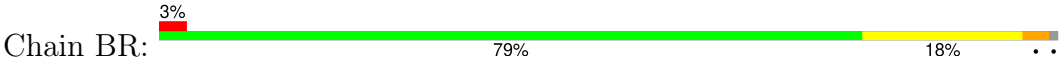


• Molecule 38: 50S ribosomal protein L17

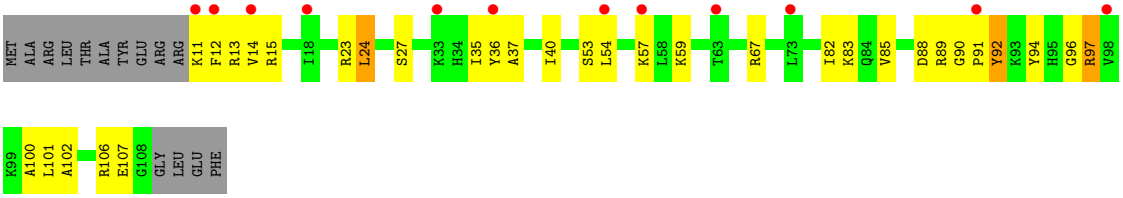




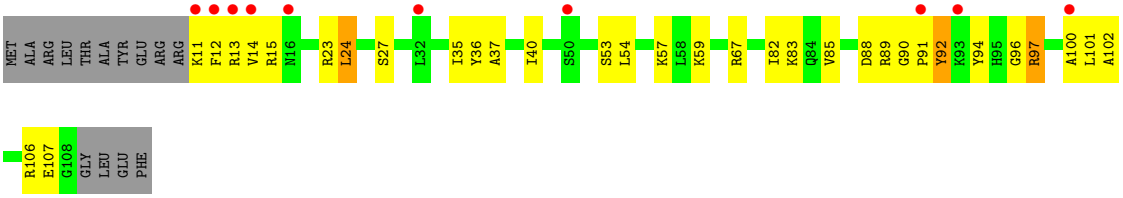
• Molecule 38: 50S ribosomal protein L17



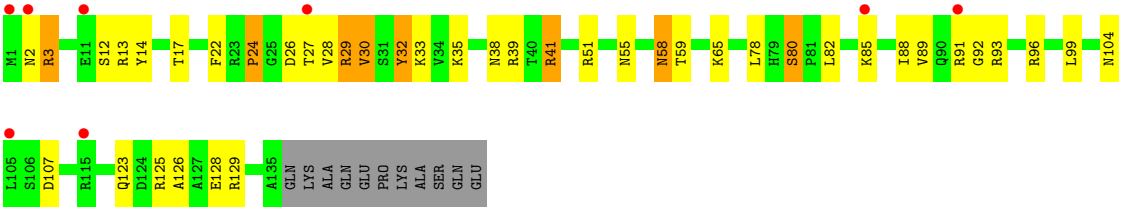
• Molecule 39: 50S ribosomal protein L18



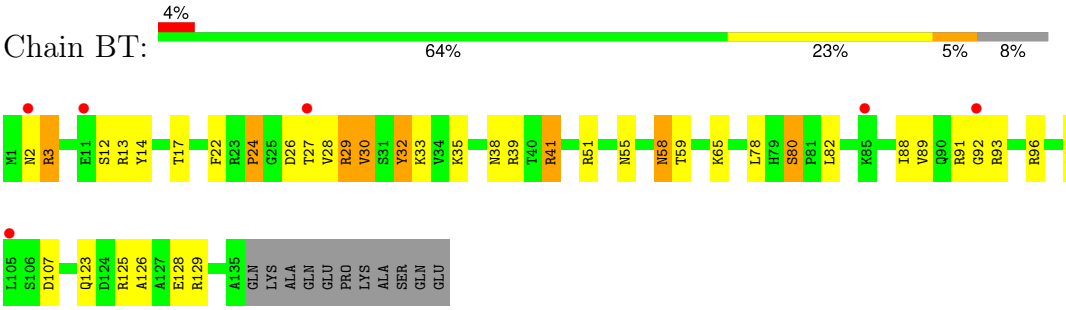
• Molecule 39: 50S ribosomal protein L18



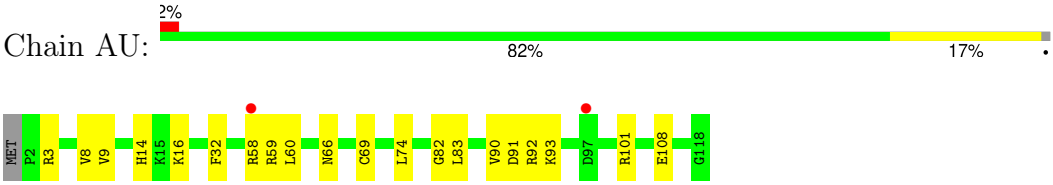
• Molecule 40: 50S ribosomal protein L19



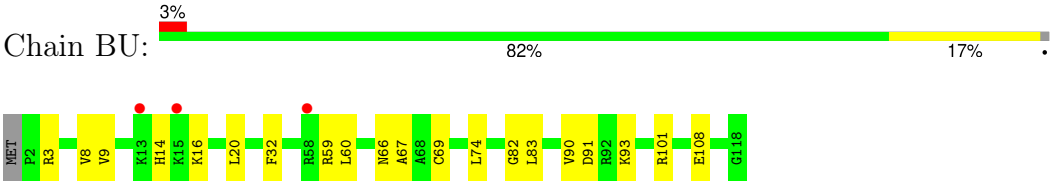
• Molecule 40: 50S ribosomal protein L19



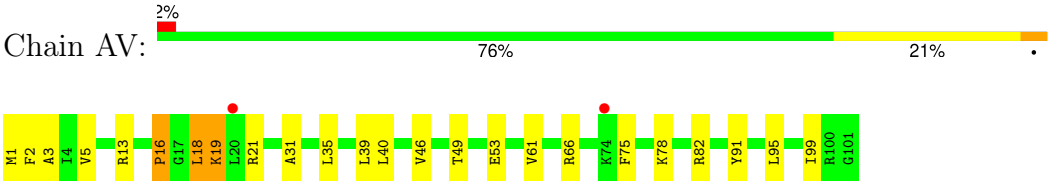
• Molecule 41: 50S ribosomal protein L20



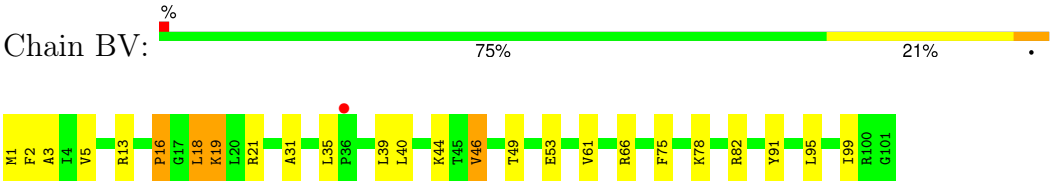
• Molecule 41: 50S ribosomal protein L20



• Molecule 42: 50S ribosomal protein L21

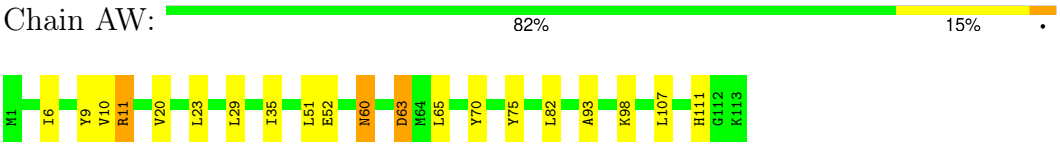


• Molecule 42: 50S ribosomal protein L21



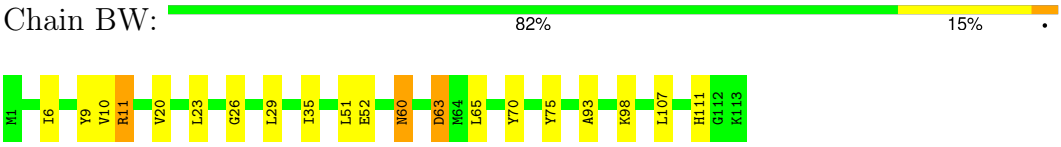
• Molecule 43: 50S ribosomal protein L22

Chain AW:



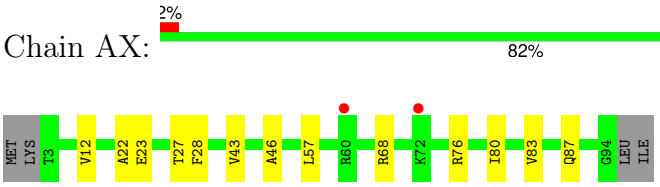
• Molecule 43: 50S ribosomal protein L22

Chain BW:



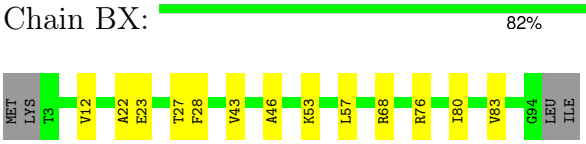
• Molecule 44: 50S ribosomal protein L23

Chain AX:



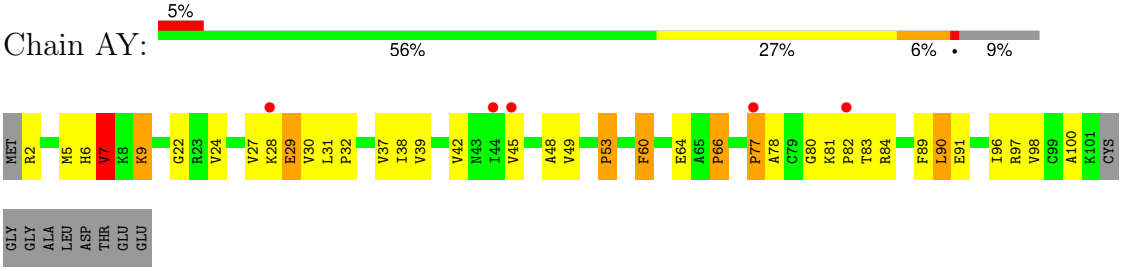
• Molecule 44: 50S ribosomal protein L23

Chain BX:



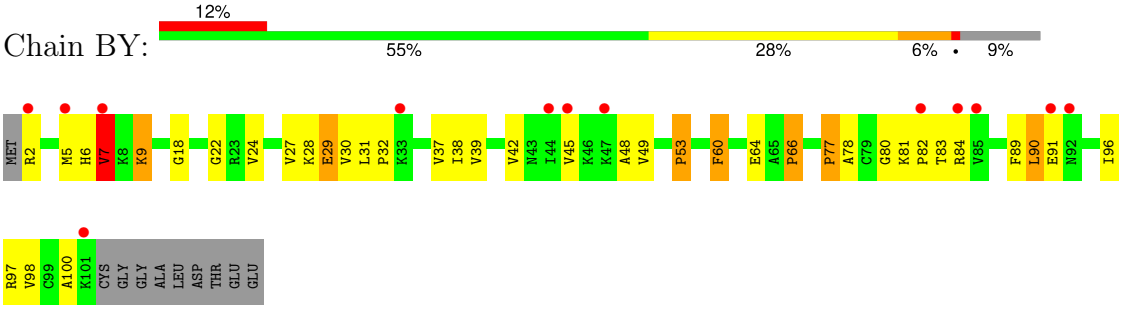
• Molecule 45: 50S ribosomal protein L24

Chain AY:



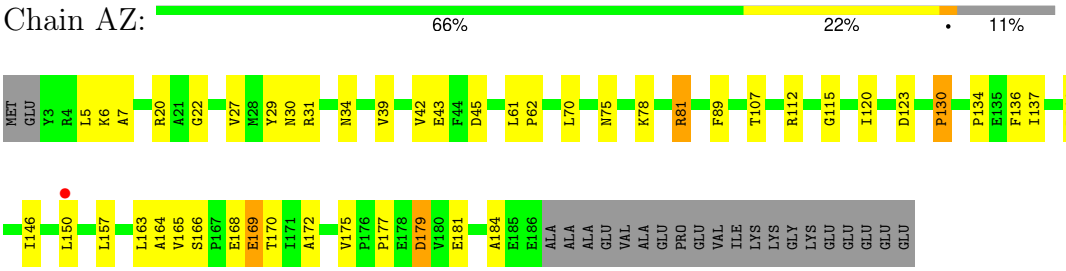
• Molecule 45: 50S ribosomal protein L24

Chain BY:



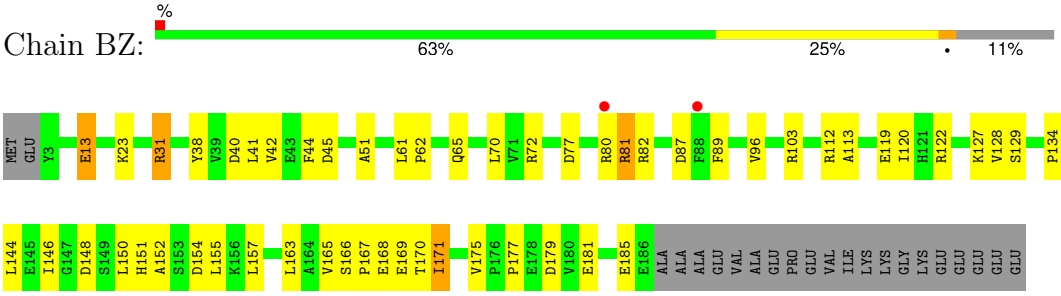
• Molecule 46: 50S ribosomal protein L25

Chain AZ:



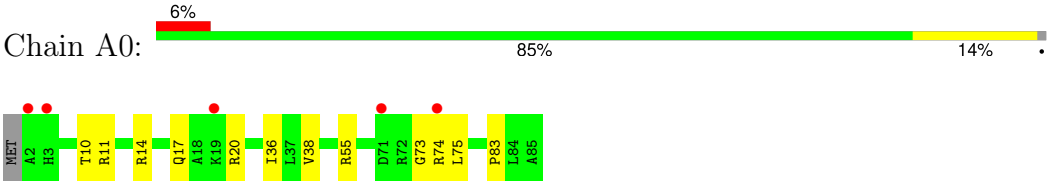
• Molecule 46: 50S ribosomal protein L25

Chain BZ:



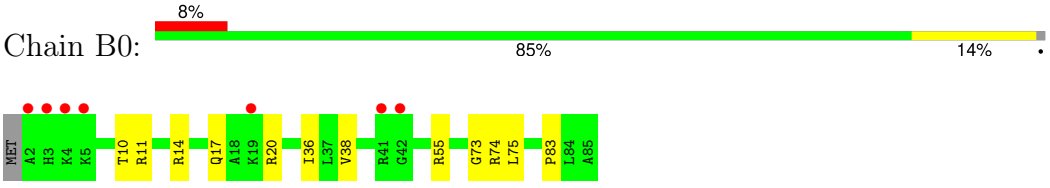
• Molecule 47: 50S ribosomal protein L27

Chain A0:



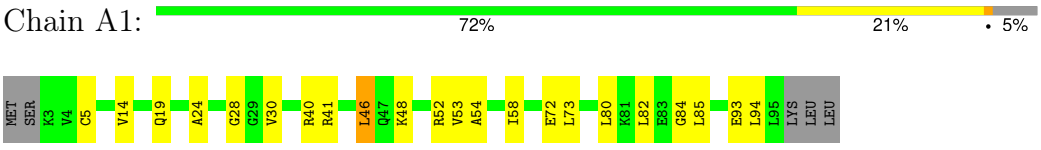
• Molecule 47: 50S ribosomal protein L27

Chain B0:



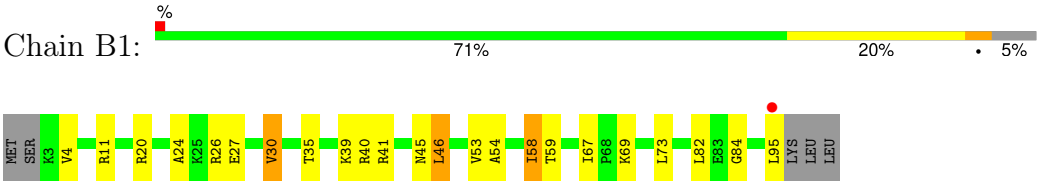
• Molecule 48: 50S ribosomal protein L28

Chain A1:



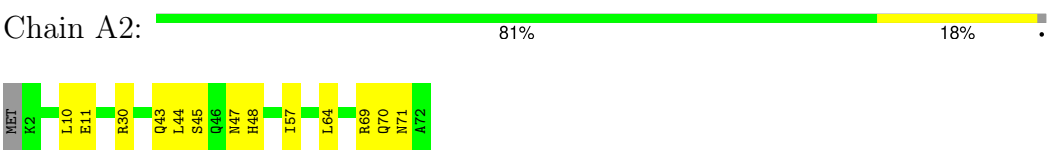
• Molecule 48: 50S ribosomal protein L28

Chain B1:



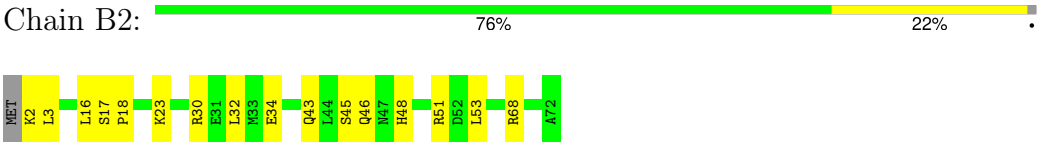
• Molecule 49: 50S ribosomal protein L29

Chain A2:



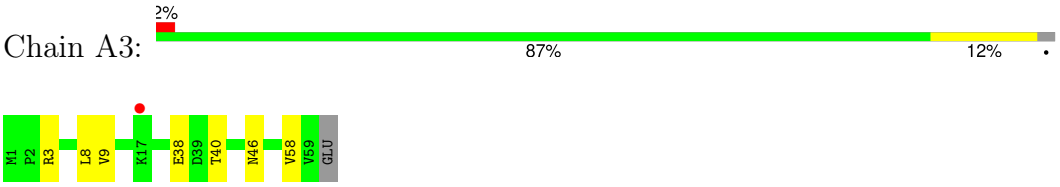
• Molecule 49: 50S ribosomal protein L29

Chain B2:



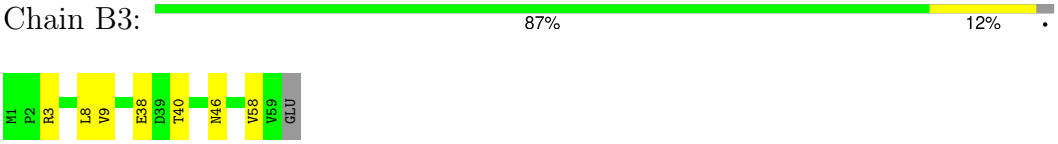
• Molecule 50: 50S ribosomal protein L30

Chain A3:



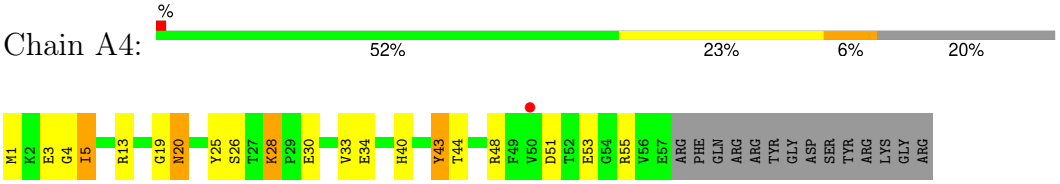
• Molecule 50: 50S ribosomal protein L30

Chain B3:



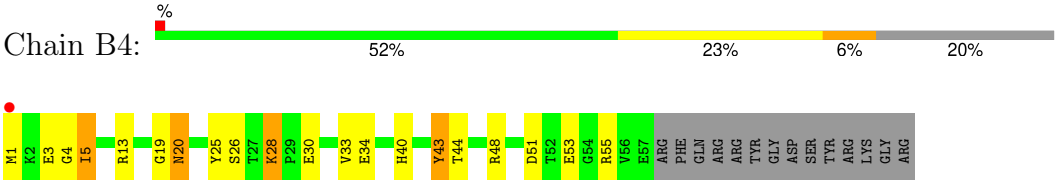
• Molecule 51: 50S ribosomal protein L31

Chain A4:



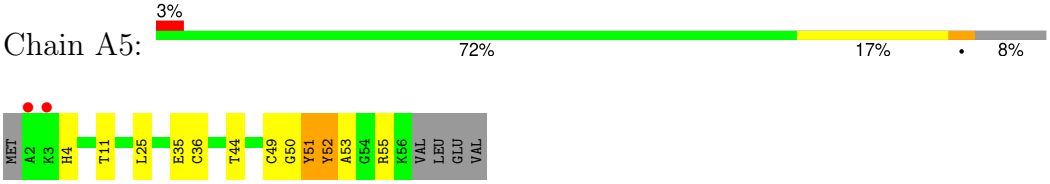
• Molecule 51: 50S ribosomal protein L31

Chain B4:



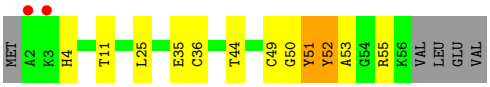
• Molecule 52: 50S ribosomal protein L32

Chain A5:



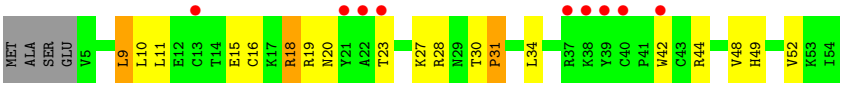
• Molecule 52: 50S ribosomal protein L32

Chain B5:



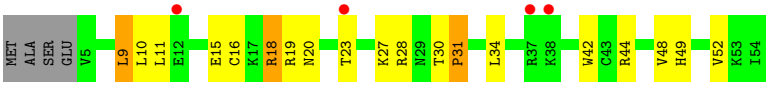
• Molecule 53: 50S ribosomal protein L33

Chain A6:



• Molecule 53: 50S ribosomal protein L33

Chain B6:



• Molecule 54: 50S ribosomal protein L34

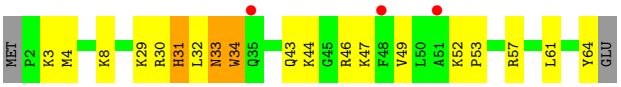
Chain A7:

• Molecule 54: 50S ribosomal protein L34

Chain B7:

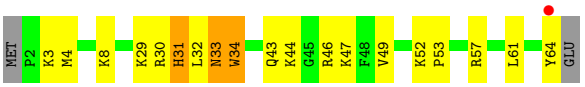
• Molecule 55: 50S ribosomal protein L35

Chain A8:



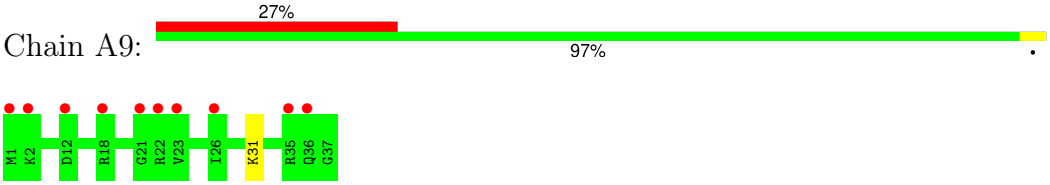
• Molecule 55: 50S ribosomal protein L35

Chain B8:



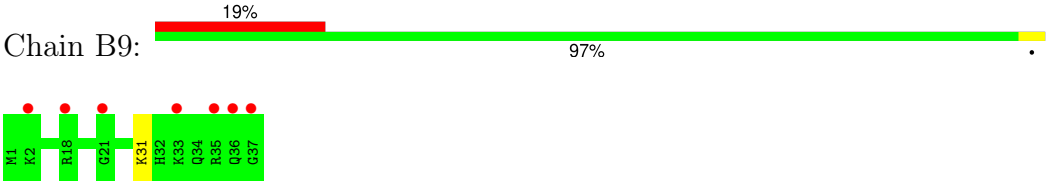
• Molecule 56: 50S ribosomal protein L36

Chain A9:



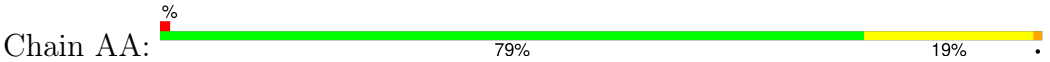
• Molecule 56: 50S ribosomal protein L36

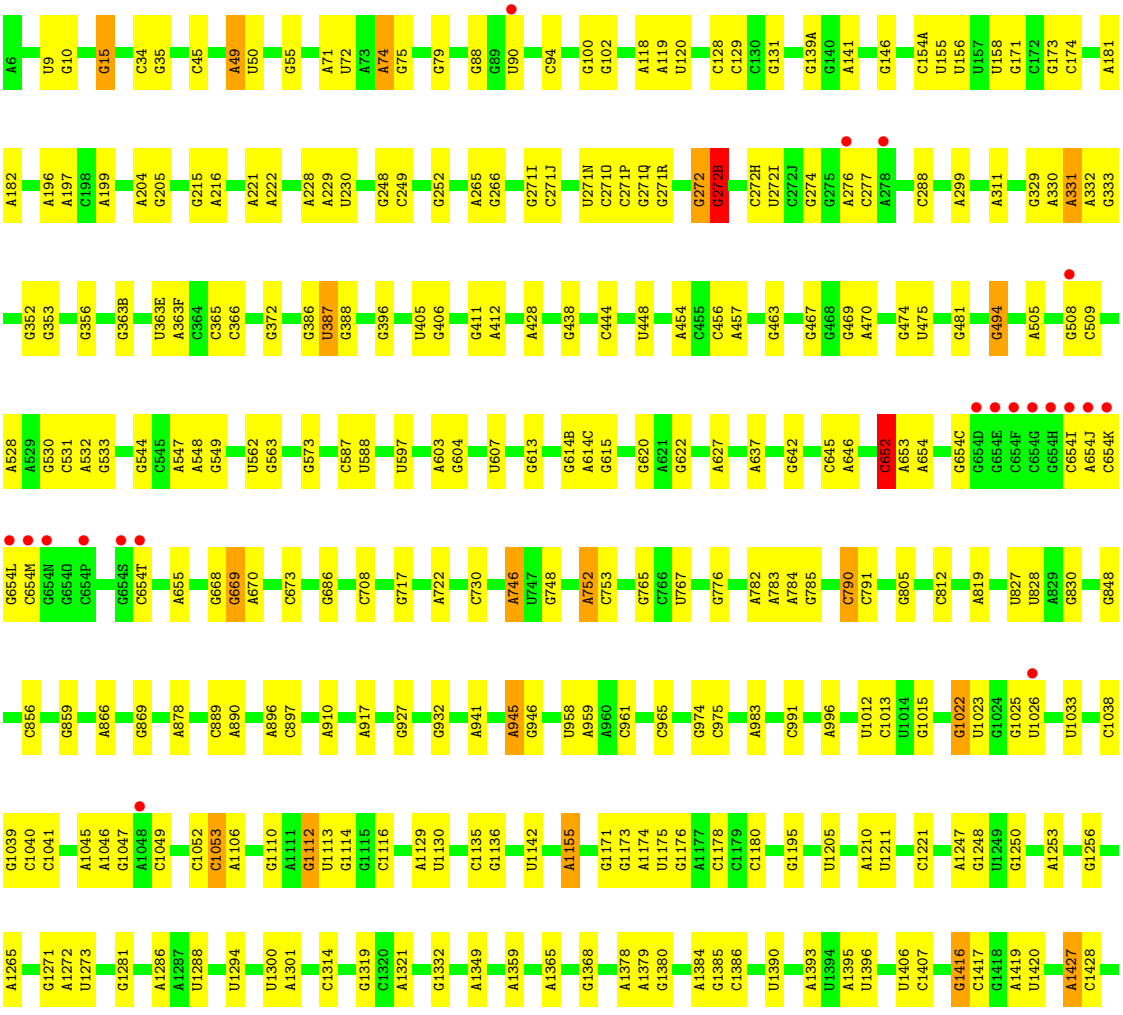
Chain B9:

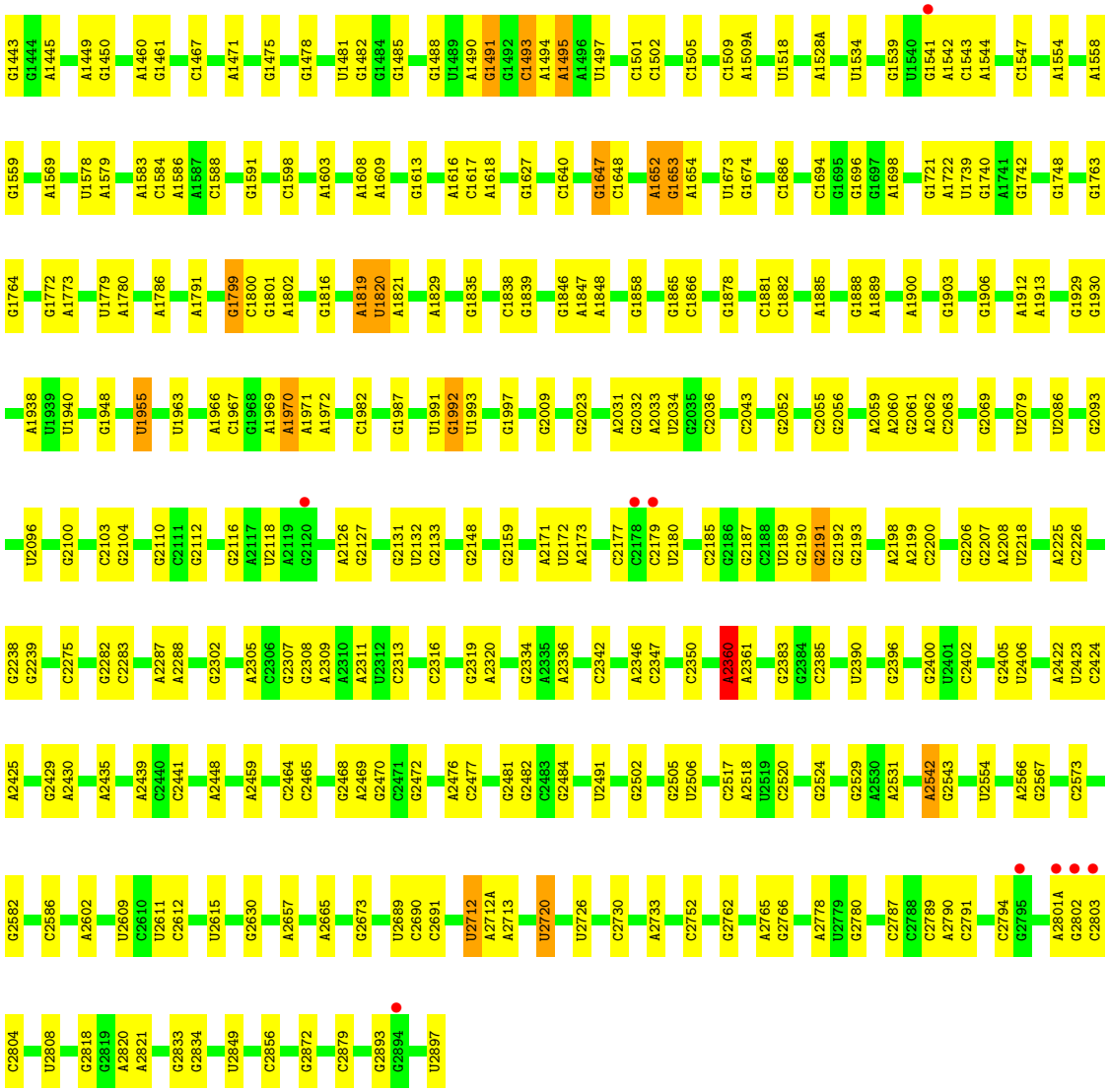


• Molecule 57: RNA (2848-MER)

Chain AA:

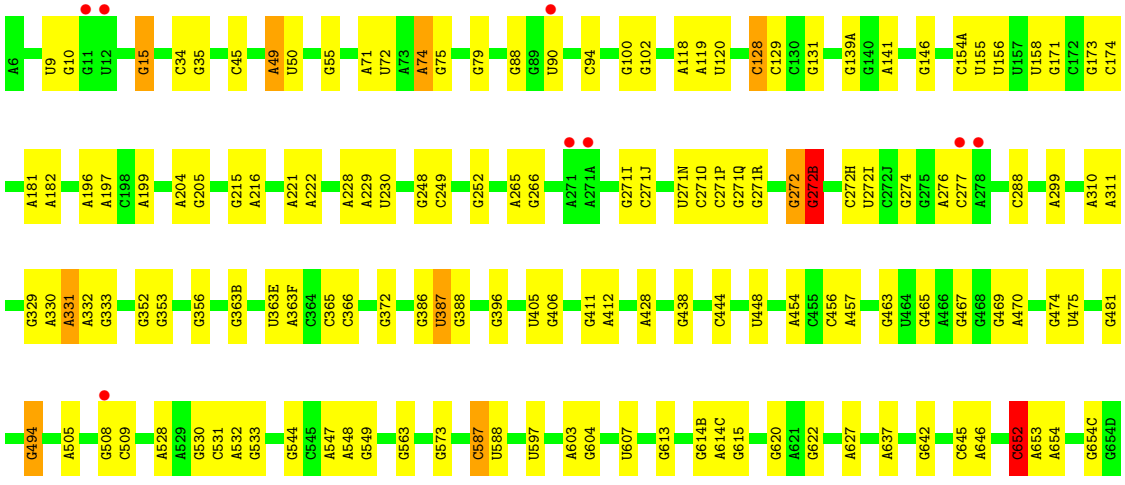


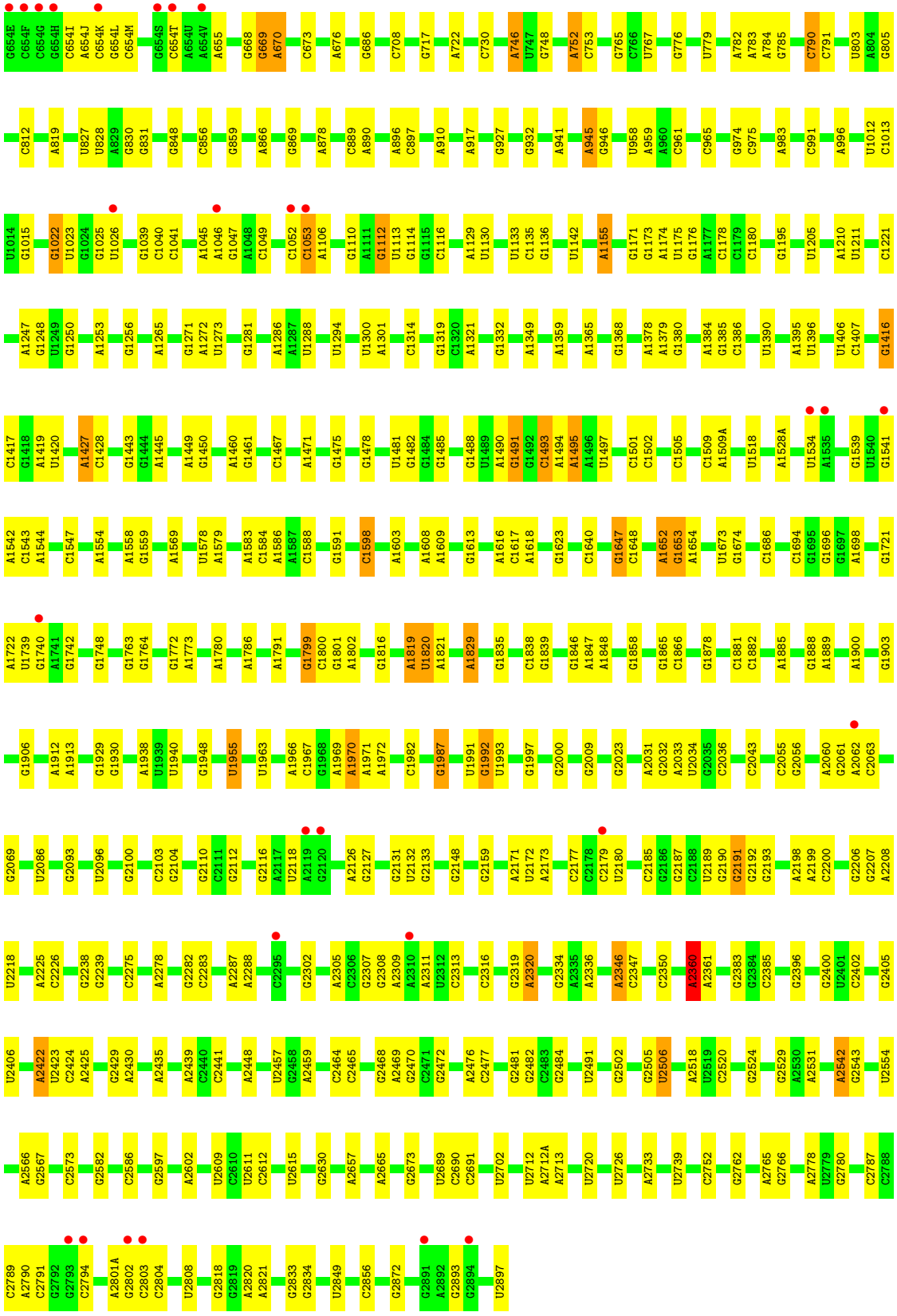




• Molecule 57: RNA (2848-MER)

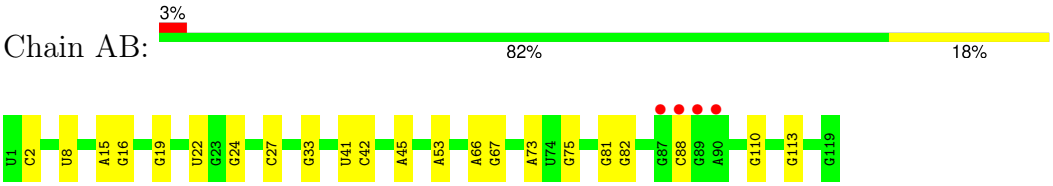
Chain BA:





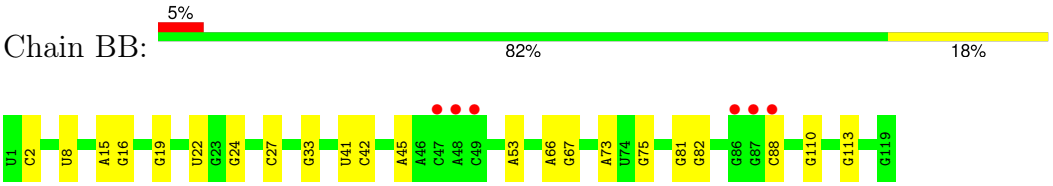
- Molecule 58: RNA (119-MER)

Chain AB:



• Molecule 58: RNA (119-MER)

Chain BB:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.23Å 451.43Å 623.34Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.63 – 3.60 49.63 – 3.60	Depositor EDS
% Data completeness (in resolution range)	100.0 (49.63-3.60) 99.8 (49.63-3.60)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.23	Depositor
$< I/\sigma(I) >$ [1]	2.28 (at 3.57Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.215 , 0.245 0.219 , 0.251	Depositor DCC
R_{free} test set	30861 reflections (4.53%)	wwPDB-VP
Wilson B-factor (Å^2)	103.4	Xtriage
Anisotropy	0.072	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 99.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.43$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	297230	wwPDB-VP
Average B, all atoms (Å^2)	109.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.48% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CCC, ZN, MG, 5MU

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	Ab	0.33	0/1935	0.61	0/2609
1	Bb	0.33	0/1935	0.62	0/2609
2	Ac	0.31	0/1636	0.58	0/2205
2	Bc	0.32	0/1636	0.58	0/2205
3	Ad	0.37	0/1733	0.65	1/2318 (0.0%)
3	Bd	0.36	0/1733	0.64	1/2318 (0.0%)
4	Ae	0.35	0/1162	0.64	0/1564
4	Be	0.37	0/1162	0.65	0/1564
5	Af	0.34	0/856	0.64	0/1154
5	Bf	0.37	0/856	0.65	0/1154
6	Ag	0.32	0/1276	0.57	0/1709
6	Bg	0.32	0/1276	0.57	0/1709
7	Ah	0.35	0/1136	0.64	0/1527
7	Bh	0.35	0/1136	0.64	0/1527
8	Ai	0.33	0/1029	0.57	0/1379
8	Bi	0.33	0/1029	0.57	0/1379
9	Aj	0.33	0/807	0.62	0/1085
9	Bj	0.33	0/807	0.62	0/1085
10	Ak	0.36	0/900	0.64	0/1213
10	Bk	0.36	0/900	0.64	0/1213
11	Al	0.40	0/986	0.72	1/1320 (0.1%)
11	Bl	0.41	0/986	0.72	1/1320 (0.1%)
12	Am	0.30	0/947	0.56	0/1270
12	Bm	0.30	0/947	0.61	0/1270
13	An	0.35	0/501	0.56	0/664
13	Bn	0.36	0/501	0.57	0/664
14	Ao	0.33	0/745	0.59	0/992
14	Bo	0.35	0/745	0.60	0/992
15	Ap	0.34	0/716	0.62	0/963
15	Bp	0.32	0/716	0.62	0/963
16	Aq	0.38	0/836	0.67	0/1117
16	Bq	0.36	0/836	0.66	0/1117

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	Ar	0.36	0/579	0.66	0/768
17	Br	0.36	0/579	0.67	0/768
18	As	0.36	0/642	0.63	0/865
18	Bs	0.35	0/642	0.64	0/865
19	At	0.34	0/765	0.63	0/1007
19	Bt	0.34	0/765	0.63	0/1007
20	Au	0.42	0/212	0.59	0/277
20	Bu	0.40	0/212	0.59	0/277
21	Ay	0.35	0/793	0.59	0/1059
21	By	0.35	0/793	0.68	0/1059
22	Aa	0.41	0/36190	0.69	13/56486 (0.0%)
22	Ba	0.42	0/36190	0.70	11/56486 (0.0%)
23	Ax	0.43	0/289	0.73	0/449
23	Bx	0.43	0/289	0.73	0/449
24	Av	0.43	0/1810	0.70	0/2821
24	Bv	0.46	0/1810	0.72	0/2821
25	Aw	0.36	0/1832	0.70	0/2855
25	Bw	0.36	0/1832	0.71	0/2855
26	AC	0.32	0/956	0.56	0/1288
26	BC	0.30	0/956	0.56	0/1288
27	AD	0.46	0/2154	0.81	1/2905 (0.0%)
27	BD	0.48	0/2154	0.82	1/2905 (0.0%)
28	AE	0.45	0/1596	0.80	1/2153 (0.0%)
28	BE	0.47	0/1596	0.79	1/2153 (0.0%)
29	AF	0.41	0/1658	0.72	0/2244
29	BF	0.43	0/1658	0.73	0/2244
30	AG	0.37	0/1499	0.73	1/2016 (0.0%)
30	BG	0.39	0/1499	0.73	0/2016
31	AH	0.39	0/1284	0.75	1/1739 (0.1%)
31	BH	0.44	0/1284	0.78	1/1739 (0.1%)
32	AI	0.40	0/1146	0.92	4/1551 (0.3%)
32	BI	0.39	0/1146	0.91	4/1551 (0.3%)
33	AJ	0.36	0/640	0.77	7/889 (0.8%)
33	BJ	0.39	0/640	0.88	6/889 (0.7%)
34	AN	0.39	0/1131	0.74	1/1525 (0.1%)
34	BN	0.43	0/1131	0.75	1/1525 (0.1%)
35	AO	0.45	0/943	0.71	0/1269
35	BO	0.45	0/943	0.71	0/1269
36	AP	0.46	0/1131	1.00	6/1504 (0.4%)
36	BP	0.52	0/1131	1.03	6/1504 (0.4%)
37	AQ	0.40	0/1133	0.65	0/1515
37	BQ	0.40	0/1133	0.66	0/1515
38	AR	0.43	0/974	0.79	1/1302 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	BR	0.46	0/974	0.79	1/1302 (0.1%)
39	AS	0.37	0/778	0.71	0/1036
39	BS	0.39	0/778	0.72	0/1036
40	AT	0.47	0/1137	0.89	4/1519 (0.3%)
40	BT	0.47	0/1137	0.89	4/1519 (0.3%)
41	AU	0.45	1/975 (0.1%)	0.71	0/1297
41	BU	0.49	0/975	0.73	0/1297
42	AV	0.40	0/790	0.77	0/1057
42	BV	0.42	0/790	0.78	0/1057
43	AW	0.45	0/907	0.75	1/1216 (0.1%)
43	BW	0.47	0/907	0.76	1/1216 (0.1%)
44	AX	0.43	0/739	0.69	0/993
44	BX	0.47	0/739	0.72	0/993
45	AY	0.43	0/788	0.76	1/1051 (0.1%)
45	BY	0.48	0/788	0.78	1/1051 (0.1%)
46	AZ	0.36	0/1499	0.68	0/2035
46	BZ	0.37	0/1499	0.72	0/2035
47	A0	0.39	0/671	0.65	0/892
47	B0	0.42	0/671	0.67	0/892
48	A1	0.39	0/738	0.76	1/981 (0.1%)
48	B1	0.46	0/738	0.80	1/981 (0.1%)
49	A2	0.34	0/600	0.63	0/793
49	B2	0.44	0/600	0.75	0/793
50	A3	0.36	0/472	0.66	0/634
50	B3	0.41	0/472	0.67	0/634
51	A4	0.36	0/460	0.70	1/621 (0.2%)
51	B4	0.40	0/460	0.70	1/621 (0.2%)
52	A5	0.48	0/441	0.81	0/596
52	B5	0.50	0/441	0.83	0/596
53	A6	0.43	0/440	0.81	0/586
53	B6	0.46	0/440	0.81	0/586
54	A7	0.41	0/417	0.65	0/550
54	B7	0.46	0/417	0.68	0/550
55	A8	0.52	0/515	0.90	0/679
55	B8	0.53	0/515	0.92	0/679
56	A9	0.34	0/310	0.60	0/407
56	B9	0.38	0/310	0.62	0/407
57	AA	0.50	1/68704 (0.0%)	0.74	40/107260 (0.0%)
57	BA	0.55	2/68704 (0.0%)	0.74	48/107260 (0.0%)
58	AB	0.41	0/2853	0.70	0/4451
58	BB	0.44	0/2853	0.71	0/4451
All	All	0.46	4/321584 (0.0%)	0.72	176/480460 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
21	Ay	0	1
22	Aa	0	8
22	Ba	1	11
24	Av	0	1
24	Bv	0	1
34	AN	0	1
34	BN	0	1
43	AW	0	1
43	BW	0	1
52	A5	0	1
52	B5	0	1
57	AA	3	48
57	BA	3	49
All	All	7	125

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BA	2506	U	N1-C2	5.94	1.43	1.38
57	BA	783	A	C5-C6	-5.52	1.36	1.41
41	AU	58	ARG	CG-CD	5.12	1.64	1.51
57	AA	783	A	C5-C6	-5.07	1.36	1.41

All (176) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	AI	50	ARG	NE-CZ-NH1	-13.91	113.34	120.30
32	BI	50	ARG	NE-CZ-NH1	13.44	127.02	120.30
32	BI	50	ARG	NE-CZ-NH2	-13.41	113.60	120.30
32	AI	50	ARG	NE-CZ-NH2	13.03	126.81	120.30
57	BA	790	C	C2'-C3'-O3'	10.57	132.76	109.50
22	Ba	1498	U	C2'-C3'-O3'	10.51	132.61	109.50
57	AA	790	C	C2'-C3'-O3'	9.99	131.47	109.50
57	AA	1992	G	C2'-C3'-O3'	9.95	131.40	109.50
57	BA	1992	G	C2'-C3'-O3'	9.88	131.24	109.50
57	AA	2360	A	N9-C1'-C2'	-9.75	101.27	112.00
36	AP	52	GLU	N-CA-C	9.61	136.94	111.00
36	BP	52	GLU	N-CA-C	9.55	136.80	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BA	1799	G	C2'-C3'-O3'	9.26	129.87	109.50
57	BA	2360	A	N9-C1'-C2'	-9.26	101.82	112.00
57	BA	1820	U	C2'-C3'-O3'	8.97	129.24	109.50
57	AA	1799	G	C2'-C3'-O3'	8.95	129.20	109.50
57	BA	1819	A	C2'-C3'-O3'	8.94	129.16	109.50
57	BA	1653	G	C2'-C3'-O3'	8.78	128.81	109.50
57	AA	1820	U	C2'-C3'-O3'	8.77	128.79	109.50
57	BA	331	A	C2'-C3'-O3'	8.76	128.76	109.50
57	BA	1022	G	C2'-C3'-O3'	8.64	128.52	109.50
57	AA	331	A	C2'-C3'-O3'	8.60	128.42	109.50
57	AA	1819	A	C2'-C3'-O3'	8.53	128.25	109.50
22	Aa	575	G	C2'-C3'-O3'	8.47	128.13	109.50
57	AA	1653	G	C2'-C3'-O3'	8.46	128.11	109.50
22	Ba	575	G	C2'-C3'-O3'	8.41	128.01	109.50
22	Aa	115	G	C2'-C3'-O3'	8.40	127.98	109.50
57	AA	49	A	C2'-C3'-O3'	8.31	127.79	109.50
57	AA	1022	G	C2'-C3'-O3'	8.24	127.64	109.50
57	BA	49	A	C2'-C3'-O3'	8.20	127.55	109.50
57	BA	752	A	C2'-C3'-O3'	8.19	127.51	109.50
57	BA	1786	A	N9-C1'-C2'	8.19	124.64	114.00
22	Ba	115	G	C2'-C3'-O3'	8.15	127.42	109.50
57	AA	752	A	C2'-C3'-O3'	8.07	127.25	109.50
22	Aa	366	C	C2'-C3'-O3'	8.03	127.17	109.50
22	Ba	366	C	C2'-C3'-O3'	7.96	127.00	109.50
57	AA	1652	A	C2'-C3'-O3'	7.86	126.79	109.50
57	AA	1786	A	N9-C1'-C2'	7.84	124.20	114.00
57	BA	1652	A	C2'-C3'-O3'	7.78	126.60	109.50
27	AD	210	GLY	N-CA-C	-7.50	94.34	113.10
27	BD	210	GLY	N-CA-C	-7.40	94.61	113.10
36	BP	58	THR	N-CA-C	-7.24	91.45	111.00
32	AI	50	ARG	CD-NE-CZ	7.17	133.64	123.60
36	AP	58	THR	N-CA-C	-7.17	91.64	111.00
57	BA	945	A	N9-C1'-C2'	7.10	123.22	114.00
57	AA	74	A	C2'-C3'-O3'	7.04	124.98	109.50
32	BI	50	ARG	CD-NE-CZ	7.03	133.44	123.60
22	Ba	60	A	C2'-C3'-O3'	7.01	124.93	109.50
22	Aa	60	A	C2'-C3'-O3'	7.00	124.91	109.50
31	AH	158	HIS	N-CA-C	6.90	129.64	111.00
57	AA	945	A	N9-C1'-C2'	6.89	122.96	114.00
36	BP	41	ARG	N-CA-C	-6.89	92.39	111.00
31	BH	158	HIS	N-CA-C	6.86	129.53	111.00
36	AP	41	ARG	N-CA-C	-6.69	92.94	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	AA	652	C	N1-C1'-C2'	-6.68	104.65	112.00
33	BJ	33	PRO	N-CA-CB	6.62	111.25	103.30
22	Aa	1498	U	N1-C1'-C2'	6.54	122.50	114.00
57	AA	1970	A	C5'-C4'-O4'	6.52	116.92	109.10
57	BA	1495	A	N9-C1'-C2'	6.48	122.43	114.00
57	BA	74	A	C2'-C3'-O3'	6.47	124.05	113.70
30	AG	54	GLU	N-CA-C	-6.45	93.58	111.00
57	BA	1493	C	N1-C1'-C2'	6.44	122.37	114.00
40	AT	59	THR	N-CA-C	-6.39	93.74	111.00
57	BA	652	C	N1-C1'-C2'	-6.39	104.97	112.00
38	BR	58	GLY	N-CA-C	6.34	128.95	113.10
36	BP	53	GLY	N-CA-C	-6.26	97.45	113.10
40	BT	59	THR	N-CA-C	-6.22	94.20	111.00
57	AA	1495	A	N9-C1'-C2'	6.19	122.05	114.00
38	AR	58	GLY	N-CA-C	6.18	128.55	113.10
36	AP	53	GLY	N-CA-C	-6.17	97.67	113.10
57	BA	1970	A	C5'-C4'-O4'	6.15	116.48	109.10
36	BP	54	GLY	N-CA-C	-6.13	97.78	113.10
22	Aa	913	A	C2'-C3'-O3'	6.09	123.44	113.70
36	AP	54	GLY	N-CA-C	-6.07	97.92	113.10
22	Ba	913	A	C2'-C3'-O3'	6.07	123.42	113.70
57	AA	1493	C	N1-C1'-C2'	6.07	121.89	114.00
22	Aa	1529	G	N9-C1'-C2'	6.07	121.89	114.00
57	AA	1970	A	C5'-C4'-C3'	5.99	125.59	116.00
57	BA	1970	A	C5'-C4'-C3'	5.96	125.54	116.00
48	A1	46	LEU	CA-CB-CG	5.89	128.85	115.30
40	BT	80	SER	N-CA-C	5.89	126.90	111.00
22	Ba	832	C	N1-C1'-C2'	-5.84	105.58	112.00
22	Aa	832	C	N1-C1'-C2'	-5.83	105.58	112.00
33	BJ	105	PRO	N-CA-CB	5.83	110.29	103.30
57	AA	1053	C	N1-C1'-C2'	5.81	121.56	114.00
57	BA	272(B)	G	C5'-C4'-C3'	5.79	125.26	116.00
40	AT	80	SER	N-CA-C	5.77	126.58	111.00
22	Aa	266	G	C2'-C3'-O3'	5.71	122.83	113.70
57	AA	272(B)	G	C5'-C4'-C3'	5.71	125.14	116.00
57	AA	272	G	C2'-C3'-O3'	5.71	122.83	113.70
48	B1	46	LEU	CA-CB-CG	5.69	128.39	115.30
57	BA	1053	C	N1-C1'-C2'	5.69	121.40	114.00
33	AJ	77	PRO	N-CA-CB	5.69	110.12	103.30
22	Ba	266	G	C2'-C3'-O3'	5.61	122.68	113.70
57	AA	15	G	N9-C1'-C2'	-5.61	105.83	112.00
22	Aa	1067	A	C2'-C3'-O3'	5.61	122.67	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BA	2346	A	O4'-C1'-N9	5.58	112.66	108.20
57	AA	2191	G	C2'-C3'-O3'	5.57	122.61	113.70
22	Aa	428	G	C2'-C3'-O3'	5.56	122.60	113.70
40	AT	30	VAL	N-CA-C	5.55	125.98	111.00
57	BA	272	G	C2'-C3'-O3'	5.54	122.57	113.70
33	BJ	77	PRO	N-CA-CB	5.54	109.94	103.30
57	BA	803	U	OP1-P-O3'	5.52	117.35	105.20
22	Ba	1067	A	C2'-C3'-O3'	5.51	122.52	113.70
22	Ba	428	G	C2'-C3'-O3'	5.50	122.50	113.70
33	AJ	105	PRO	N-CA-CB	5.50	109.90	103.30
33	AJ	69	PRO	N-CA-CB	5.48	109.88	103.30
33	AJ	86	PRO	N-CA-CB	5.47	109.87	103.30
57	AA	669	G	N9-C1'-C2'	5.46	121.10	114.00
57	AA	494	G	C5'-C4'-C3'	-5.46	107.27	116.00
33	AJ	129	PRO	N-CA-CB	5.44	109.83	103.30
57	AA	1653	G	C5'-C4'-O4'	5.44	115.63	109.10
22	Ba	509	A	C2'-C3'-O3'	5.44	122.41	113.70
57	BA	272(B)	G	N9-C1'-C2'	-5.42	106.03	112.00
57	BA	2191	G	C2'-C3'-O3'	5.42	122.37	113.70
40	BT	30	VAL	N-CA-C	5.42	125.62	111.00
32	BI	67	ARG	N-CA-C	-5.41	96.40	111.00
43	AW	98	LYS	N-CA-C	-5.39	96.45	111.00
32	AI	67	ARG	N-CA-C	-5.38	96.47	111.00
57	AA	1819	A	C4'-C3'-O3'	5.37	123.75	113.00
57	BA	265	A	N9-C1'-C2'	5.37	120.98	114.00
57	BA	1294	U	C5'-C4'-C3'	-5.37	107.41	116.00
57	AA	1365	A	C5'-C4'-C3'	5.37	124.59	116.00
57	BA	587	C	OP2-P-O3'	5.37	117.01	105.20
57	AA	2346	A	O4'-C1'-N9	5.35	112.48	108.20
57	BA	1987	G	C5'-C4'-C3'	-5.33	107.48	116.00
33	AJ	101	PRO	N-CA-CB	5.32	109.69	103.30
57	BA	310	A	C5'-C4'-C3'	-5.32	107.49	116.00
57	BA	1427	A	C2'-C3'-O3'	5.32	122.21	113.70
40	BT	29	ARG	N-CA-C	5.31	125.34	111.00
11	Al	119	LYS	N-CA-C	-5.31	96.67	111.00
57	AA	265	A	N9-C1'-C2'	5.29	120.88	114.00
3	Bd	109	GLY	N-CA-C	5.29	126.32	113.10
33	BJ	69	PRO	N-CA-CB	5.29	109.64	103.30
57	BA	676	A	O4'-C1'-N9	5.29	112.43	108.20
33	BJ	101	PRO	N-CA-CB	5.28	109.64	103.30
57	BA	783	A	N9-C1'-C2'	-5.28	106.19	112.00
57	BA	1365	A	C5'-C4'-C3'	5.27	124.44	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	AA	1294	U	C5'-C4'-C3'	-5.26	107.58	116.00
57	BA	494	G	C5'-C4'-C3'	-5.25	107.60	116.00
22	Aa	115	G	C4'-C3'-C2'	5.25	107.85	102.60
57	AA	1443	G	C5'-C4'-C3'	-5.25	107.61	116.00
43	BW	98	LYS	N-CA-C	-5.24	96.86	111.00
40	AT	29	ARG	N-CA-C	5.20	125.04	111.00
57	AA	272(B)	G	N9-C1'-C2'	-5.20	106.28	112.00
51	A4	43	TYR	N-CA-C	5.18	125.00	111.00
57	BA	748	G	N9-C1'-C2'	5.18	120.74	114.00
45	BY	7	VAL	N-CA-C	5.17	124.96	111.00
28	AE	118	LYS	N-CA-C	-5.17	97.05	111.00
57	BA	1819	A	C4'-C3'-O3'	5.16	123.32	113.00
33	AJ	33	PRO	N-CA-CB	5.15	109.48	103.30
3	Ad	109	GLY	N-CA-C	5.14	125.94	113.10
34	AN	67	LEU	N-CA-C	-5.13	97.14	111.00
57	AA	1155	A	C5'-C4'-O4'	-5.13	102.95	109.10
11	Bl	119	LYS	N-CA-C	-5.12	97.18	111.00
33	BJ	129	PRO	N-CA-CB	5.11	109.43	103.30
57	AA	2346	A	N9-C1'-C2'	5.10	120.63	114.00
57	BA	15	G	N9-C1'-C2'	-5.09	106.40	112.00
22	Aa	509	A	C2'-C3'-O3'	5.08	121.83	113.70
36	AP	24	GLY	N-CA-C	-5.08	100.41	113.10
57	AA	1698	A	N9-C1'-C2'	5.08	120.60	114.00
57	BA	2278	A	C5'-C4'-C3'	5.08	124.12	116.00
57	BA	1698	A	N9-C1'-C2'	5.08	120.60	114.00
51	B4	43	TYR	N-CA-C	5.07	124.70	111.00
57	AA	1427	A	C2'-C3'-O3'	5.07	121.81	113.70
34	BN	67	LEU	N-CA-C	-5.07	97.31	111.00
36	BP	52	GLU	CA-C-N	-5.07	106.06	116.20
57	BA	669	G	N9-C1'-C2'	5.05	120.57	114.00
57	AA	748	G	N9-C1'-C2'	5.04	120.55	114.00
57	BA	128	C	C2'-C3'-O3'	5.04	121.77	113.70
57	BA	1155	A	C5'-C4'-O4'	-5.03	103.06	109.10
57	BA	1443	G	C5'-C4'-C3'	-5.03	107.95	116.00
28	BE	118	LYS	N-CA-C	-5.02	97.45	111.00
57	BA	2422	A	C2'-C3'-O3'	5.01	121.71	113.70
45	AY	7	VAL	N-CA-C	5.00	124.51	111.00
57	BA	1598	C	C5'-C4'-C3'	-5.00	108.00	116.00

All (7) chirality outliers are listed below:

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Mol	Chain	Res	Type	Atom
57	AA	1799	G	C3'
57	AA	1819	A	C3'
57	AA	1820	U	C3'
22	Ba	1498	U	C3'
57	BA	1799	G	C3'
57	BA	1819	A	C3'
57	BA	1820	U	C3'

All (125) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	A5	51	TYR	Sidechain
57	AA	1040	C	Sidechain
57	AA	1112	G	Sidechain
57	AA	1288	U	Sidechain
57	AA	1332	G	Sidechain
57	AA	1378	A	Sidechain
57	AA	1393	A	Sidechain
57	AA	1396	U	Sidechain
57	AA	1416	G	Sidechain
57	AA	1491	G	Sidechain
57	AA	15	G	Sidechain
57	AA	1518	U	Sidechain
57	AA	1613	G	Sidechain
57	AA	1627	G	Sidechain
57	AA	1647	G	Sidechain
57	AA	1673	U	Sidechain
57	AA	1772	G	Sidechain
57	AA	1779	U	Sidechain
57	AA	1802	A	Sidechain
57	AA	1940	U	Sidechain
57	AA	1955	U	Sidechain
57	AA	2009	G	Sidechain
57	AA	2059	A	Sidechain
57	AA	2079	U	Sidechain
57	AA	2086	U	Sidechain
57	AA	2360	A	Sidechain
57	AA	2390	U	Sidechain
57	AA	2464	C	Sidechain
57	AA	249	C	Sidechain
57	AA	2506	U	Sidechain

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Mol	Chain	Res	Type	Group
57	AA	2517	C	Sidechain
57	AA	2542	A	Sidechain
57	AA	2665	A	Sidechain
57	AA	271(Q)	G	Sidechain
57	AA	2712	U	Sidechain
57	AA	272(B)	G	Sidechain
57	AA	2720	U	Sidechain
57	AA	2730	C	Sidechain
57	AA	2856	C	Sidechain
57	AA	387	U	Sidechain
57	AA	463	G	Sidechain
57	AA	467	G	Sidechain
57	AA	469	G	Sidechain
57	AA	562	U	Sidechain
57	AA	597	U	Sidechain
57	AA	642	G	Sidechain
57	AA	652	C	Sidechain
57	AA	746	A	Sidechain
57	AA	767	U	Sidechain
34	AN	4	TYR	Sidechain
43	AW	9	TYR	Sidechain
22	Aa	1077	G	Sidechain
22	Aa	1502	A	Sidechain
22	Aa	436	C	Sidechain
22	Aa	484	G	Sidechain
22	Aa	494	U	Sidechain
22	Aa	832	C	Sidechain
22	Aa	884	U	Sidechain
22	Aa	898	G	Sidechain
24	Av	4	G	Sidechain
21	Ay	56	ARG	Sidechain
52	B5	51	TYR	Sidechain
57	BA	1040	C	Sidechain
57	BA	1112	G	Sidechain
57	BA	1133	U	Sidechain
57	BA	1288	U	Sidechain
57	BA	1332	G	Sidechain
57	BA	1378	A	Sidechain
57	BA	1396	U	Sidechain
57	BA	1416	G	Sidechain
57	BA	1491	G	Sidechain
57	BA	15	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BA	1518	U	Sidechain
57	BA	1613	G	Sidechain
57	BA	1623	G	Sidechain
57	BA	1647	G	Sidechain
57	BA	1673	U	Sidechain
57	BA	1772	G	Sidechain
57	BA	1802	A	Sidechain
57	BA	1829	A	Sidechain
57	BA	1940	U	Sidechain
57	BA	1955	U	Sidechain
57	BA	2000	G	Sidechain
57	BA	2009	G	Sidechain
57	BA	2086	U	Sidechain
57	BA	2320	A	Sidechain
57	BA	2360	A	Sidechain
57	BA	2457	U	Sidechain
57	BA	2464	C	Sidechain
57	BA	249	C	Sidechain
57	BA	2506	U	Sidechain
57	BA	2542	A	Sidechain
57	BA	2597	G	Sidechain
57	BA	2665	A	Sidechain
57	BA	271(Q)	G	Sidechain
57	BA	272(B)	G	Sidechain
57	BA	2739	U	Sidechain
57	BA	2856	C	Sidechain
57	BA	387	U	Sidechain
57	BA	463	G	Sidechain
57	BA	465	G	Sidechain
57	BA	467	G	Sidechain
57	BA	469	G	Sidechain
57	BA	597	U	Sidechain
57	BA	642	G	Sidechain
57	BA	652	C	Sidechain
57	BA	670	A	Sidechain
57	BA	746	A	Sidechain
57	BA	767	U	Sidechain
57	BA	779	U	Sidechain
57	BA	831	G	Sidechain
34	BN	4	TYR	Sidechain
43	BW	9	TYR	Sidechain
22	Ba	1077	G	Sidechain

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Mol	Chain	Res	Type	Group
22	Ba	1417	G	Sidechain
22	Ba	1498	U	Sidechain
22	Ba	1510	U	Sidechain
22	Ba	1512	U	Sidechain
22	Ba	436	C	Sidechain
22	Ba	494	U	Sidechain
22	Ba	587	G	Sidechain
22	Ba	832	C	Sidechain
22	Ba	884	U	Sidechain
22	Ba	898	G	Sidechain
24	Bv	4	G	Sidechain

5.2 Too-close contacts (i)

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

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	Ab	232/256 (91%)	149 (64%)	48 (21%)	35 (15%)	0 2
1	Bb	232/256 (91%)	148 (64%)	52 (22%)	32 (14%)	0 3
2	Ac	204/239 (85%)	132 (65%)	43 (21%)	29 (14%)	0 3
2	Bc	204/239 (85%)	134 (66%)	41 (20%)	29 (14%)	0 3
3	Ad	206/209 (99%)	131 (64%)	52 (25%)	23 (11%)	0 5
3	Bd	206/209 (99%)	132 (64%)	51 (25%)	23 (11%)	0 5
4	Ae	148/162 (91%)	105 (71%)	24 (16%)	19 (13%)	0 4
4	Be	148/162 (91%)	104 (70%)	23 (16%)	21 (14%)	0 3
5	Af	99/101 (98%)	67 (68%)	25 (25%)	7 (7%)	1 11
5	Bf	99/101 (98%)	66 (67%)	26 (26%)	7 (7%)	1 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	Ag	153/156 (98%)	108 (71%)	31 (20%)	14 (9%)	0 7
6	Bg	153/156 (98%)	106 (69%)	33 (22%)	14 (9%)	0 7
7	Ah	136/138 (99%)	97 (71%)	32 (24%)	7 (5%)	1 16
7	Bh	136/138 (99%)	97 (71%)	33 (24%)	6 (4%)	2 19
8	Ai	125/128 (98%)	83 (66%)	24 (19%)	18 (14%)	0 3
8	Bi	125/128 (98%)	82 (66%)	25 (20%)	18 (14%)	0 3
9	Aj	96/105 (91%)	76 (79%)	13 (14%)	7 (7%)	1 10
9	Bj	96/105 (91%)	76 (79%)	13 (14%)	7 (7%)	1 10
10	Ak	117/129 (91%)	88 (75%)	22 (19%)	7 (6%)	1 13
10	Bk	117/129 (91%)	87 (74%)	23 (20%)	7 (6%)	1 13
11	Al	122/132 (92%)	82 (67%)	25 (20%)	15 (12%)	0 4
11	Bl	122/132 (92%)	82 (67%)	24 (20%)	16 (13%)	0 3
12	Am	116/126 (92%)	58 (50%)	28 (24%)	30 (26%)	0 0
12	Bm	116/126 (92%)	66 (57%)	25 (22%)	25 (22%)	0 1
13	An	58/61 (95%)	38 (66%)	10 (17%)	10 (17%)	0 2
13	Bn	58/61 (95%)	37 (64%)	11 (19%)	10 (17%)	0 2
14	Ao	86/89 (97%)	52 (60%)	24 (28%)	10 (12%)	0 4
14	Bo	86/89 (97%)	52 (60%)	25 (29%)	9 (10%)	0 5
15	Ap	81/88 (92%)	55 (68%)	20 (25%)	6 (7%)	1 10
15	Bp	81/88 (92%)	55 (68%)	23 (28%)	3 (4%)	2 22
16	Aq	97/105 (92%)	74 (76%)	18 (19%)	5 (5%)	1 16
16	Bq	97/105 (92%)	73 (75%)	19 (20%)	5 (5%)	1 16
17	Ar	68/88 (77%)	43 (63%)	20 (29%)	5 (7%)	1 10
17	Br	68/88 (77%)	42 (62%)	21 (31%)	5 (7%)	1 10
18	As	76/93 (82%)	43 (57%)	20 (26%)	13 (17%)	0 2
18	Bs	76/93 (82%)	43 (57%)	20 (26%)	13 (17%)	0 2
19	At	97/106 (92%)	60 (62%)	25 (26%)	12 (12%)	0 4
19	Bt	97/106 (92%)	60 (62%)	25 (26%)	12 (12%)	0 4
20	Au	22/27 (82%)	13 (59%)	6 (27%)	3 (14%)	0 3
20	Bu	22/27 (82%)	12 (54%)	7 (32%)	3 (14%)	0 3
21	Ay	92/95 (97%)	51 (55%)	24 (26%)	17 (18%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
21	By	92/95 (97%)	58 (63%)	20 (22%)	14 (15%)	0 2
26	AC	116/229 (51%)	87 (75%)	25 (22%)	4 (3%)	3 25
26	BC	116/229 (51%)	86 (74%)	26 (22%)	4 (3%)	3 25
27	AD	269/276 (98%)	187 (70%)	50 (19%)	32 (12%)	0 4
27	BD	269/276 (98%)	190 (71%)	50 (19%)	29 (11%)	0 5
28	AE	202/206 (98%)	138 (68%)	35 (17%)	29 (14%)	0 3
28	BE	202/206 (98%)	140 (69%)	34 (17%)	28 (14%)	0 3
29	AF	205/210 (98%)	148 (72%)	29 (14%)	28 (14%)	0 3
29	BF	205/210 (98%)	148 (72%)	30 (15%)	27 (13%)	0 3
30	AG	179/182 (98%)	98 (55%)	47 (26%)	34 (19%)	0 1
30	BG	179/182 (98%)	99 (55%)	42 (24%)	38 (21%)	0 1
31	AH	162/180 (90%)	97 (60%)	36 (22%)	29 (18%)	0 1
31	BH	162/180 (90%)	97 (60%)	36 (22%)	29 (18%)	0 1
32	AI	143/148 (97%)	75 (52%)	44 (31%)	24 (17%)	0 2
32	BI	143/148 (97%)	76 (53%)	40 (28%)	27 (19%)	0 1
33	AJ	128/173 (74%)	46 (36%)	43 (34%)	39 (30%)	0 0
33	BJ	128/173 (74%)	40 (31%)	36 (28%)	52 (41%)	0 0
34	AN	136/140 (97%)	96 (71%)	23 (17%)	17 (12%)	0 4
34	BN	136/140 (97%)	98 (72%)	21 (15%)	17 (12%)	0 4
35	AO	120/122 (98%)	103 (86%)	11 (9%)	6 (5%)	1 17
35	BO	120/122 (98%)	103 (86%)	12 (10%)	5 (4%)	2 20
36	AP	144/150 (96%)	75 (52%)	37 (26%)	32 (22%)	0 0
36	BP	144/150 (96%)	75 (52%)	38 (26%)	31 (22%)	0 1
37	AQ	138/141 (98%)	105 (76%)	20 (14%)	13 (9%)	0 6
37	BQ	138/141 (98%)	105 (76%)	18 (13%)	15 (11%)	0 5
38	AR	115/118 (98%)	82 (71%)	21 (18%)	12 (10%)	0 5
38	BR	115/118 (98%)	83 (72%)	20 (17%)	12 (10%)	0 5
39	AS	96/112 (86%)	45 (47%)	29 (30%)	22 (23%)	0 0
39	BS	96/112 (86%)	45 (47%)	29 (30%)	22 (23%)	0 0
40	AT	133/146 (91%)	87 (65%)	19 (14%)	27 (20%)	0 1
40	BT	133/146 (91%)	87 (65%)	20 (15%)	26 (20%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	AU	115/118 (98%)	86 (75%)	23 (20%)	6 (5%)	1 16
41	BU	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	1 13
42	AV	99/101 (98%)	66 (67%)	22 (22%)	11 (11%)	0 5
42	BV	99/101 (98%)	67 (68%)	20 (20%)	12 (12%)	0 4
43	AW	111/113 (98%)	85 (77%)	16 (14%)	10 (9%)	0 7
43	BW	111/113 (98%)	86 (78%)	14 (13%)	11 (10%)	0 6
44	AX	90/96 (94%)	65 (72%)	22 (24%)	3 (3%)	3 25
44	BX	90/96 (94%)	64 (71%)	24 (27%)	2 (2%)	5 32
45	AY	98/110 (89%)	45 (46%)	23 (24%)	30 (31%)	0 0
45	BY	98/110 (89%)	46 (47%)	21 (21%)	31 (32%)	0 0
46	AZ	182/206 (88%)	104 (57%)	46 (25%)	32 (18%)	0 1
46	BZ	182/206 (88%)	105 (58%)	46 (25%)	31 (17%)	0 2
47	A0	82/85 (96%)	62 (76%)	15 (18%)	5 (6%)	1 13
47	B0	82/85 (96%)	61 (74%)	16 (20%)	5 (6%)	1 13
48	A1	91/98 (93%)	66 (72%)	15 (16%)	10 (11%)	0 5
48	B1	91/98 (93%)	71 (78%)	11 (12%)	9 (10%)	0 6
49	A2	69/72 (96%)	41 (59%)	18 (26%)	10 (14%)	0 3
49	B2	69/72 (96%)	47 (68%)	16 (23%)	6 (9%)	0 7
50	A3	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	3 24
50	B3	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	3 24
51	A4	55/71 (78%)	22 (40%)	20 (36%)	13 (24%)	0 0
51	B4	55/71 (78%)	23 (42%)	19 (34%)	13 (24%)	0 0
52	A5	53/60 (88%)	37 (70%)	8 (15%)	8 (15%)	0 2
52	B5	53/60 (88%)	37 (70%)	8 (15%)	8 (15%)	0 2
53	A6	48/54 (89%)	22 (46%)	13 (27%)	13 (27%)	0 0
53	B6	48/54 (89%)	22 (46%)	13 (27%)	13 (27%)	0 0
54	A7	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	5 32
54	B7	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	5 32
55	A8	61/65 (94%)	35 (57%)	15 (25%)	11 (18%)	0 1
55	B8	61/65 (94%)	35 (57%)	15 (25%)	11 (18%)	0 1
56	A9	35/37 (95%)	25 (71%)	9 (26%)	1 (3%)	3 27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
56	B9	35/37 (95%)	25 (71%)	9 (26%)	1 (3%)	3 27
All	All	12016/13122 (92%)	7873 (66%)	2533 (21%)	1610 (13%)	0 3

All (1610) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	18	GLY
1	Ab	75	LYS
1	Ab	123	ALA
1	Ab	143	GLU
1	Ab	165	VAL
1	Ab	195	ASP
1	Ab	229	VAL
1	Ab	230	VAL
1	Ab	238	LEU
1	Ab	239	VAL
2	Ac	15	THR
2	Ac	47	LEU
2	Ac	73	PRO
2	Ac	108	ASN
2	Ac	154	SER
2	Ac	156	ARG
3	Ad	30	LYS
3	Ad	40	PRO
3	Ad	47	ARG
3	Ad	129	ASN
3	Ad	179	GLU
4	Ae	21	ALA
4	Ae	37	ARG
4	Ae	70	PRO
5	Af	40	VAL
5	Af	43	LEU
5	Af	62	TRP
5	Af	81	ILE
5	Af	82	ARG
6	Ag	4	ARG
6	Ag	39	ALA
8	Ai	41	VAL
8	Ai	44	VAL
8	Ai	89	ASN
8	Ai	103	THR

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Mol	Chain	Res	Type
8	Ai	105	ASP
8	Ai	117	HIS
9	Aj	51	ARG
9	Aj	57	LYS
10	Ak	25	TYR
10	Ak	107	SER
11	Al	17	LYS
11	Al	23	LYS
11	Al	46	LYS
11	Al	47	LYS
11	Al	79	GLU
11	Al	91	LYS
11	Al	115	LYS
12	Am	4	ILE
12	Am	21	TYR
12	Am	64	TRP
12	Am	66	LEU
12	Am	69	GLU
12	Am	71	ARG
12	Am	72	ALA
12	Am	73	GLU
12	Am	83	ASP
12	Am	86	CYS
12	Am	106	ASN
12	Am	107	ALA
12	Am	108	ARG
12	Am	113	PRO
12	Am	117	VAL
13	An	15	LYS
13	An	16	PHE
13	An	26	ARG
13	An	52	GLN
16	Aq	68	ARG
16	Aq	99	SER
17	Ar	37	VAL
18	As	10	PHE
18	As	26	GLY
18	As	28	LYS
18	As	64	GLU
18	As	67	VAL
19	At	9	ASN
19	At	48	LYS

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Mol	Chain	Res	Type
19	At	101	GLY
19	At	103	GLY
20	Au	3	LYS
21	Ay	6	ASP
21	Ay	51	TYR
21	Ay	56	ARG
21	Ay	78	VAL
21	Ay	83	ARG
26	AC	220	GLY
27	AD	25	THR
27	AD	27	THR
27	AD	36	PRO
27	AD	123	ALA
27	AD	125	ILE
27	AD	127	VAL
27	AD	169	GLU
27	AD	225	ALA
27	AD	241	PRO
27	AD	245	PRO
27	AD	246	PRO
27	AD	271	ILE
28	AE	53	PRO
28	AE	54	GLN
28	AE	55	ASN
28	AE	61	ARG
28	AE	64	LYS
28	AE	68	ALA
28	AE	69	LYS
28	AE	77	ILE
28	AE	90	THR
28	AE	118	LYS
28	AE	189	PRO
28	AE	203	LYS
29	AF	21	ALA
29	AF	27	GLU
29	AF	59	TYR
29	AF	89	VAL
29	AF	133	ASN
29	AF	136	THR
30	AG	4	ASP
30	AG	48	GLU
30	AG	49	ASP

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Mol	Chain	Res	Type
30	AG	63	ILE
30	AG	78	SER
30	AG	82	LEU
30	AG	97	ASP
30	AG	110	ALA
30	AG	115	ARG
30	AG	117	PHE
30	AG	118	ARG
30	AG	122	PRO
30	AG	126	ASP
30	AG	159	VAL
31	AH	8	PRO
31	AH	12	PRO
31	AH	24	VAL
31	AH	83	TYR
31	AH	92	ILE
31	AH	138	LYS
31	AH	154	PRO
31	AH	155	SER
31	AH	156	ALA
31	AH	159	GLU
31	AH	160	LYS
31	AH	165	ALA
32	AI	12	LEU
32	AI	15	VAL
32	AI	71	ILE
32	AI	76	THR
32	AI	87	LYS
32	AI	92	VAL
32	AI	99	GLU
32	AI	105	HIS
32	AI	120	ILE
32	AI	132	PRO
33	AJ	33	PRO
33	AJ	43	ALA
33	AJ	54	ALA
33	AJ	56	ASN
33	AJ	58	LEU
33	AJ	68	LEU
33	AJ	70	GLU
33	AJ	85	ASP
33	AJ	87	VAL

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Mol	Chain	Res	Type
33	AJ	100	ASN
33	AJ	101	PRO
33	AJ	105	PRO
33	AJ	108	LYS
33	AJ	109	SER
33	AJ	112	LEU
33	AJ	117	LEU
33	AJ	120	LYS
34	AN	4	TYR
34	AN	42	TRP
34	AN	58	ASP
34	AN	60	ILE
34	AN	126	PRO
34	AN	134	ARG
35	AO	27	GLY
35	AO	29	ASN
35	AO	48	PRO
36	AP	14	LYS
36	AP	17	LYS
36	AP	19	VAL
36	AP	31	ALA
36	AP	58	THR
36	AP	89	ALA
36	AP	103	ALA
36	AP	111	ARG
37	AQ	2	LEU
37	AQ	27	VAL
37	AQ	135	ASP
38	AR	8	ARG
38	AR	12	ARG
38	AR	58	GLY
39	AS	13	ARG
39	AS	23	ARG
39	AS	24	LEU
39	AS	35	ILE
39	AS	59	LYS
39	AS	82	ILE
39	AS	90	GLY
39	AS	92	TYR
39	AS	97	ARG
39	AS	100	ALA
39	AS	107	GLU

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Mol	Chain	Res	Type
40	AT	2	ASN
40	AT	3	ARG
40	AT	24	PRO
40	AT	26	ASP
40	AT	28	VAL
40	AT	30	VAL
40	AT	35	LYS
40	AT	55	ASN
40	AT	58	ASN
40	AT	80	SER
40	AT	91	ARG
40	AT	107	ASP
41	AU	91	ASP
41	AU	93	LYS
42	AV	18	LEU
42	AV	46	VAL
42	AV	53	GLU
43	AW	10	VAL
43	AW	11	ARG
43	AW	60	ASN
43	AW	111	HIS
45	AY	5	MET
45	AY	7	VAL
45	AY	24	VAL
45	AY	27	VAL
45	AY	38	ILE
45	AY	45	VAL
45	AY	60	PHE
45	AY	66	PRO
45	AY	77	PRO
45	AY	78	ALA
45	AY	90	LEU
45	AY	91	GLU
45	AY	96	ILE
45	AY	97	ARG
46	AZ	5	LEU
46	AZ	31	ARG
46	AZ	42	VAL
46	AZ	134	PRO
46	AZ	136	PHE
46	AZ	140	ASP
46	AZ	146	ILE

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Mol	Chain	Res	Type
46	AZ	163	LEU
46	AZ	169	GLU
46	AZ	177	PRO
46	AZ	179	ASP
47	A0	17	GLN
47	A0	74	ARG
48	A1	53	VAL
48	A1	54	ALA
48	A1	58	ILE
48	A1	93	GLU
49	A2	43	GLN
49	A2	45	SER
49	A2	48	HIS
49	A2	70	GLN
51	A4	26	SER
51	A4	40	HIS
51	A4	43	TYR
51	A4	44	THR
52	A5	35	GLU
52	A5	36	CYS
52	A5	49	CYS
52	A5	51	TYR
52	A5	52	TYR
53	A6	9	LEU
53	A6	18	ARG
53	A6	27	LYS
53	A6	28	ARG
53	A6	31	PRO
53	A6	44	ARG
53	A6	48	VAL
55	A8	33	ASN
55	A8	34	TRP
55	A8	43	GLN
1	Bb	15	VAL
1	Bb	18	GLY
1	Bb	75	LYS
1	Bb	123	ALA
1	Bb	143	GLU
1	Bb	165	VAL
1	Bb	195	ASP
1	Bb	229	VAL
1	Bb	230	VAL

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Mol	Chain	Res	Type
1	Bb	238	LEU
1	Bb	239	VAL
2	Bc	15	THR
2	Bc	47	LEU
2	Bc	61	ALA
2	Bc	73	PRO
2	Bc	108	ASN
2	Bc	154	SER
2	Bc	156	ARG
3	Bd	30	LYS
3	Bd	40	PRO
3	Bd	47	ARG
3	Bd	129	ASN
4	Be	21	ALA
4	Be	37	ARG
4	Be	70	PRO
5	Bf	40	VAL
5	Bf	43	LEU
5	Bf	62	TRP
5	Bf	81	ILE
6	Bg	4	ARG
6	Bg	39	ALA
8	Bi	41	VAL
8	Bi	44	VAL
8	Bi	89	ASN
8	Bi	103	THR
8	Bi	105	ASP
8	Bi	117	HIS
9	Bj	51	ARG
9	Bj	57	LYS
10	Bk	25	TYR
10	Bk	107	SER
11	Bl	17	LYS
11	Bl	23	LYS
11	Bl	46	LYS
11	Bl	47	LYS
11	Bl	79	GLU
11	Bl	115	LYS
12	Bm	4	ILE
12	Bm	21	TYR
12	Bm	63	THR
12	Bm	64	TRP

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Mol	Chain	Res	Type
12	Bm	66	LEU
12	Bm	67	GLU
12	Bm	69	GLU
12	Bm	71	ARG
12	Bm	72	ALA
12	Bm	83	ASP
12	Bm	86	CYS
12	Bm	106	ASN
12	Bm	107	ALA
12	Bm	108	ARG
12	Bm	113	PRO
13	Bn	15	LYS
13	Bn	16	PHE
13	Bn	26	ARG
13	Bn	52	GLN
16	Bq	68	ARG
16	Bq	99	SER
17	Br	37	VAL
18	Bs	10	PHE
18	Bs	26	GLY
18	Bs	28	LYS
18	Bs	64	GLU
18	Bs	67	VAL
19	Bt	9	ASN
19	Bt	48	LYS
19	Bt	71	THR
19	Bt	101	GLY
19	Bt	103	GLY
20	Bu	3	LYS
21	By	9	GLU
21	By	84	SER
26	BC	220	GLY
27	BD	25	THR
27	BD	27	THR
27	BD	36	PRO
27	BD	123	ALA
27	BD	127	VAL
27	BD	169	GLU
27	BD	225	ALA
27	BD	241	PRO
27	BD	245	PRO
27	BD	246	PRO

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Mol	Chain	Res	Type
27	BD	271	ILE
28	BE	53	PRO
28	BE	54	GLN
28	BE	55	ASN
28	BE	61	ARG
28	BE	64	LYS
28	BE	68	ALA
28	BE	69	LYS
28	BE	77	ILE
28	BE	90	THR
28	BE	118	LYS
28	BE	189	PRO
28	BE	203	LYS
29	BF	21	ALA
29	BF	27	GLU
29	BF	59	TYR
29	BF	89	VAL
29	BF	133	ASN
29	BF	136	THR
30	BG	6	ALA
30	BG	43	LEU
30	BG	47	LYS
30	BG	49	ASP
30	BG	75	LYS
30	BG	81	LYS
30	BG	82	LEU
30	BG	86	MET
30	BG	87	PRO
30	BG	96	ARG
30	BG	109	VAL
30	BG	110	ALA
30	BG	115	ARG
30	BG	123	ASN
30	BG	126	ASP
30	BG	142	PRO
30	BG	143	GLU
30	BG	145	THR
31	BH	8	PRO
31	BH	12	PRO
31	BH	24	VAL
31	BH	71	LEU
31	BH	83	TYR

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Mol	Chain	Res	Type
31	BH	92	ILE
31	BH	154	PRO
31	BH	155	SER
31	BH	156	ALA
31	BH	159	GLU
31	BH	160	LYS
31	BH	165	ALA
32	BI	12	LEU
32	BI	15	VAL
32	BI	71	ILE
32	BI	76	THR
32	BI	87	LYS
32	BI	92	VAL
32	BI	99	GLU
32	BI	105	HIS
32	BI	120	ILE
32	BI	132	PRO
33	BJ	14	LYS
33	BJ	19	ARG
33	BJ	23	SER
33	BJ	30	GLN
33	BJ	32	LEU
33	BJ	33	PRO
33	BJ	43	ALA
33	BJ	47	ASN
33	BJ	51	LEU
33	BJ	57	THR
33	BJ	58	LEU
33	BJ	59	ILE
33	BJ	62	ALA
33	BJ	63	LEU
33	BJ	68	LEU
33	BJ	69	PRO
33	BJ	77	PRO
33	BJ	80	VAL
33	BJ	84	GLU
33	BJ	85	ASP
33	BJ	86	PRO
33	BJ	87	VAL
33	BJ	90	ALA
33	BJ	92	THR
33	BJ	93	LEU

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Mol	Chain	Res	Type
33	BJ	100	ASN
33	BJ	101	PRO
33	BJ	105	PRO
33	BJ	108	LYS
33	BJ	109	SER
33	BJ	112	LEU
33	BJ	120	LYS
33	BJ	122	VAL
33	BJ	123	GLU
33	BJ	124	ALA
33	BJ	125	LEU
34	BN	4	TYR
34	BN	42	TRP
34	BN	58	ASP
34	BN	60	ILE
34	BN	126	PRO
34	BN	134	ARG
35	BO	27	GLY
35	BO	29	ASN
35	BO	48	PRO
36	BP	14	LYS
36	BP	17	LYS
36	BP	19	VAL
36	BP	31	ALA
36	BP	58	THR
36	BP	89	ALA
36	BP	103	ALA
36	BP	111	ARG
37	BQ	2	LEU
37	BQ	27	VAL
37	BQ	135	ASP
38	BR	8	ARG
38	BR	12	ARG
38	BR	58	GLY
39	BS	13	ARG
39	BS	23	ARG
39	BS	24	LEU
39	BS	35	ILE
39	BS	59	LYS
39	BS	82	ILE
39	BS	90	GLY
39	BS	92	TYR

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Mol	Chain	Res	Type
39	BS	107	GLU
40	BT	2	ASN
40	BT	3	ARG
40	BT	24	PRO
40	BT	26	ASP
40	BT	28	VAL
40	BT	30	VAL
40	BT	35	LYS
40	BT	55	ASN
40	BT	58	ASN
40	BT	80	SER
40	BT	91	ARG
40	BT	107	ASP
41	BU	91	ASP
41	BU	93	LYS
42	BV	18	LEU
42	BV	46	VAL
42	BV	53	GLU
43	BW	10	VAL
43	BW	11	ARG
43	BW	93	ALA
43	BW	111	HIS
45	BY	5	MET
45	BY	7	VAL
45	BY	24	VAL
45	BY	27	VAL
45	BY	38	ILE
45	BY	45	VAL
45	BY	60	PHE
45	BY	66	PRO
45	BY	77	PRO
45	BY	78	ALA
45	BY	90	LEU
45	BY	91	GLU
45	BY	96	ILE
45	BY	97	ARG
46	BZ	65	GLN
46	BZ	120	ILE
46	BZ	136	PHE
46	BZ	146	ILE
46	BZ	152	ALA
46	BZ	168	GLU

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Mol	Chain	Res	Type
46	BZ	170	THR
46	BZ	171	ILE
47	B0	17	GLN
47	B0	74	ARG
48	B1	27	GLU
48	B1	30	VAL
48	B1	53	VAL
48	B1	84	GLY
49	B2	45	SER
49	B2	48	HIS
51	B4	26	SER
51	B4	40	HIS
51	B4	43	TYR
51	B4	44	THR
52	B5	35	GLU
52	B5	36	CYS
52	B5	49	CYS
52	B5	51	TYR
52	B5	52	TYR
53	B6	9	LEU
53	B6	18	ARG
53	B6	27	LYS
53	B6	28	ARG
53	B6	31	PRO
53	B6	44	ARG
53	B6	48	VAL
55	B8	33	ASN
55	B8	34	TRP
55	B8	43	GLN
55	B8	49	VAL
1	Ab	20	GLU
1	Ab	26	PRO
1	Ab	80	ILE
1	Ab	101	MET
1	Ab	103	THR
1	Ab	150	SER
1	Ab	171	ALA
2	Ac	26	LYS
2	Ac	45	LYS
2	Ac	61	ALA
2	Ac	145	GLY
2	Ac	163	ALA

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Mol	Chain	Res	Type
2	Ac	165	THR
3	Ad	3	ARG
3	Ad	4	TYR
3	Ad	5	ILE
3	Ad	73	ARG
3	Ad	92	VAL
3	Ad	171	GLY
3	Ad	189	PRO
4	Ae	20	GLN
4	Ae	27	ARG
4	Ae	104	ALA
4	Ae	128	PRO
4	Ae	129	ILE
4	Ae	148	VAL
4	Ae	153	LYS
5	Af	6	VAL
6	Ag	21	VAL
6	Ag	54	THR
7	Ah	2	LEU
7	Ah	41	ARG
8	Ai	12	GLU
8	Ai	100	GLY
8	Ai	101	PHE
8	Ai	111	ARG
9	Aj	36	GLY
9	Aj	52	GLY
9	Aj	59	SER
10	Ak	89	ALA
10	Ak	122	LYS
11	Al	19	ARG
11	Al	51	ALA
11	Al	121	GLY
12	Am	3	ARG
12	Am	7	VAL
12	Am	12	ASN
12	Am	58	GLU
12	Am	63	THR
12	Am	74	VAL
12	Am	90	LEU
12	Am	100	GLY
12	Am	112	GLY
12	Am	116	THR

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Mol	Chain	Res	Type
13	An	24	CYS
13	An	36	PHE
14	Ao	49	ASP
14	Ao	85	LEU
14	Ao	86	GLY
14	Ao	87	ILE
15	Ap	39	TYR
15	Ap	78	GLY
16	Aq	33	GLY
16	Aq	34	LYS
17	Ar	58	LEU
18	As	65	ASN
18	As	80	TYR
19	At	71	THR
19	At	100	ILE
21	Ay	10	ARG
21	Ay	48	PRO
21	Ay	76	ILE
21	Ay	88	SER
21	Ay	94	ILE
27	AD	30	GLU
27	AD	32	SER
27	AD	58	HIS
27	AD	122	ASP
27	AD	138	VAL
27	AD	262	ARG
28	AE	33	VAL
28	AE	57	LYS
28	AE	66	HIS
28	AE	70	ALA
28	AE	71	GLY
28	AE	72	VAL
28	AE	82	ARG
28	AE	186	GLY
28	AE	201	THR
29	AF	3	GLU
29	AF	16	GLY
29	AF	54	ARG
29	AF	86	GLY
29	AF	90	PHE
29	AF	128	ALA
29	AF	134	GLY

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Mol	Chain	Res	Type
29	AF	158	THR
29	AF	167	ALA
30	AG	10	LYS
30	AG	27	ASN
30	AG	43	LEU
30	AG	75	LYS
30	AG	96	ARG
30	AG	103	LEU
31	AH	14	GLY
31	AH	45	VAL
31	AH	59	ARG
31	AH	69	ARG
31	AH	71	LEU
31	AH	126	PRO
31	AH	157	TYR
32	AI	14	ASP
32	AI	30	LEU
32	AI	85	GLU
32	AI	116	LEU
33	AJ	7	VAL
33	AJ	20	ALA
33	AJ	57	THR
33	AJ	59	ILE
33	AJ	62	ALA
33	AJ	74	LEU
33	AJ	90	ALA
33	AJ	91	LYS
33	AJ	96	PHE
33	AJ	106	GLN
33	AJ	116	ILE
34	AN	47	ALA
34	AN	57	ALA
34	AN	77	GLY
34	AN	133	GLN
35	AO	5	GLN
36	AP	10	PRO
36	AP	11	GLY
36	AP	47	ASP
36	AP	49	ARG
36	AP	98	GLU
36	AP	104	GLY
36	AP	106	LEU

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Mol	Chain	Res	Type
36	AP	107	LYS
36	AP	108	LYS
37	AQ	20	ALA
37	AQ	62	GLY
37	AQ	136	ALA
38	AR	117	VAL
39	AS	53	SER
39	AS	94	TYR
39	AS	96	GLY
39	AS	102	ALA
40	AT	12	SER
40	AT	17	THR
40	AT	32	TYR
40	AT	39	ARG
40	AT	88	ILE
40	AT	92	GLY
40	AT	129	ARG
41	AU	9	VAL
41	AU	32	PHE
41	AU	90	VAL
42	AV	19	LYS
42	AV	31	ALA
43	AW	29	LEU
43	AW	63	ASP
43	AW	93	ALA
45	AY	22	GLY
45	AY	29	GLU
45	AY	42	VAL
45	AY	48	ALA
45	AY	80	GLY
46	AZ	30	ASN
46	AZ	81	ARG
46	AZ	120	ILE
46	AZ	141	VAL
46	AZ	168	GLU
46	AZ	181	GLU
48	A1	24	ALA
48	A1	85	LEU
48	A1	94	LEU
49	A2	10	LEU
49	A2	11	GLU
49	A2	44	LEU

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Mol	Chain	Res	Type
50	A3	3	ARG
50	A3	38	GLU
51	A4	20	ASN
51	A4	48	ARG
52	A5	50	GLY
52	A5	53	ALA
53	A6	49	HIS
53	A6	52	VAL
54	A7	46	VAL
55	A8	31	HIS
55	A8	46	ARG
55	A8	49	VAL
55	A8	57	ARG
1	Bb	20	GLU
1	Bb	26	PRO
1	Bb	80	ILE
1	Bb	101	MET
1	Bb	103	THR
1	Bb	150	SER
1	Bb	171	ALA
2	Bc	26	LYS
2	Bc	45	LYS
2	Bc	145	GLY
2	Bc	163	ALA
2	Bc	165	THR
3	Bd	3	ARG
3	Bd	4	TYR
3	Bd	5	ILE
3	Bd	44	GLY
3	Bd	73	ARG
3	Bd	92	VAL
3	Bd	179	GLU
4	Be	20	GLN
4	Be	27	ARG
4	Be	128	PRO
4	Be	129	ILE
4	Be	148	VAL
4	Be	153	LYS
5	Bf	82	ARG
6	Bg	21	VAL
7	Bh	2	LEU
7	Bh	41	ARG

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Mol	Chain	Res	Type
8	Bi	12	GLU
8	Bi	101	PHE
8	Bi	109	VAL
8	Bi	111	ARG
9	Bj	36	GLY
9	Bj	52	GLY
9	Bj	59	SER
10	Bk	89	ALA
10	Bk	122	LYS
11	Bl	19	ARG
11	Bl	51	ALA
11	Bl	91	LYS
11	Bl	121	GLY
12	Bm	3	ARG
12	Bm	7	VAL
12	Bm	12	ASN
12	Bm	58	GLU
12	Bm	100	GLY
13	Bn	24	CYS
13	Bn	36	PHE
14	Bo	49	ASP
14	Bo	77	ARG
14	Bo	85	LEU
14	Bo	86	GLY
14	Bo	87	ILE
15	Bp	28	ARG
15	Bp	39	TYR
15	Bp	78	GLY
16	Bq	33	GLY
16	Bq	34	LYS
17	Br	45	SER
17	Br	58	LEU
18	Bs	65	ASN
18	Bs	80	TYR
19	Bt	100	ILE
21	By	17	LYS
21	By	44	LEU
21	By	56	ARG
21	By	80	LYS
27	BD	30	GLU
27	BD	32	SER
27	BD	58	HIS

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Mol	Chain	Res	Type
27	BD	122	ASP
27	BD	125	ILE
27	BD	138	VAL
27	BD	262	ARG
28	BE	33	VAL
28	BE	57	LYS
28	BE	66	HIS
28	BE	70	ALA
28	BE	71	GLY
28	BE	72	VAL
28	BE	82	ARG
28	BE	186	GLY
28	BE	201	THR
29	BF	3	GLU
29	BF	16	GLY
29	BF	86	GLY
29	BF	90	PHE
29	BF	134	GLY
29	BF	158	THR
29	BF	167	ALA
30	BG	10	LYS
30	BG	46	ALA
30	BG	70	VAL
30	BG	122	PRO
30	BG	127	GLY
30	BG	128	ARG
30	BG	129	GLY
30	BG	146	TYR
30	BG	147	ASP
30	BG	154	GLY
31	BH	14	GLY
31	BH	45	VAL
31	BH	59	ARG
31	BH	69	ARG
31	BH	126	PRO
31	BH	138	LYS
31	BH	157	TYR
31	BH	158	HIS
32	BI	14	ASP
32	BI	30	LEU
32	BI	85	GLU
32	BI	97	ILE

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Mol	Chain	Res	Type
32	BI	116	LEU
33	BJ	42	GLN
33	BJ	81	VAL
33	BJ	106	GLN
33	BJ	129	PRO
34	BN	47	ALA
34	BN	57	ALA
34	BN	77	GLY
34	BN	133	GLN
35	BO	5	GLN
36	BP	10	PRO
36	BP	11	GLY
36	BP	47	ASP
36	BP	49	ARG
36	BP	98	GLU
36	BP	104	GLY
36	BP	106	LEU
36	BP	107	LYS
36	BP	108	LYS
37	BQ	20	ALA
37	BQ	62	GLY
37	BQ	136	ALA
38	BR	117	VAL
39	BS	53	SER
39	BS	94	TYR
39	BS	96	GLY
39	BS	97	ARG
39	BS	100	ALA
39	BS	102	ALA
40	BT	12	SER
40	BT	17	THR
40	BT	32	TYR
40	BT	39	ARG
40	BT	88	ILE
40	BT	92	GLY
40	BT	129	ARG
41	BU	9	VAL
41	BU	32	PHE
41	BU	90	VAL
42	BV	19	LYS
42	BV	31	ALA
42	BV	78	LYS

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Mol	Chain	Res	Type
43	BW	60	ASN
43	BW	63	ASP
44	BX	22	ALA
45	BY	22	GLY
45	BY	29	GLU
45	BY	31	LEU
45	BY	42	VAL
45	BY	48	ALA
45	BY	80	GLY
46	BZ	77	ASP
46	BZ	113	ALA
46	BZ	128	VAL
46	BZ	134	PRO
46	BZ	165	VAL
46	BZ	169	GLU
46	BZ	181	GLU
48	B1	26	ARG
48	B1	58	ILE
49	B2	43	GLN
50	B3	3	ARG
50	B3	38	GLU
51	B4	20	ASN
51	B4	48	ARG
52	B5	50	GLY
52	B5	53	ALA
53	B6	49	HIS
53	B6	52	VAL
54	B7	46	VAL
55	B8	31	HIS
55	B8	46	ARG
55	B8	57	ARG
1	Ab	19	HIS
1	Ab	95	GLN
1	Ab	130	ARG
1	Ab	131	PRO
2	Ac	4	LYS
2	Ac	12	LEU
2	Ac	46	GLU
2	Ac	54	ARG
2	Ac	74	GLY
2	Ac	127	ARG
2	Ac	181	ASN

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Mol	Chain	Res	Type
3	Ad	14	ARG
3	Ad	37	PRO
3	Ad	44	GLY
3	Ad	60	GLU
3	Ad	159	ARG
4	Ae	108	ALA
4	Ae	149	GLU
5	Af	42	GLU
6	Ag	7	ALA
6	Ag	153	HIS
7	Ah	68	ARG
8	Ai	10	ARG
8	Ai	95	LYS
10	Ak	106	LYS
11	Al	26	ALA
11	Al	27	LEU
12	Am	31	LYS
12	Am	67	GLU
12	Am	70	LEU
14	Ao	24	SER
14	Ao	77	ARG
15	Ap	28	ARG
15	Ap	67	THR
16	Aq	74	LEU
17	Ar	28	GLU
17	Ar	45	SER
18	As	27	GLU
19	At	74	LYS
19	At	82	SER
19	At	94	ALA
19	At	98	PRO
19	At	99	LEU
20	Au	15	ARG
21	Ay	37	PRO
21	Ay	44	LEU
21	Ay	77	SER
26	AC	203	GLU
27	AD	202	LYS
28	AE	94	GLU
29	AF	22	ALA
29	AF	25	PRO
30	AG	68	PRO

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Mol	Chain	Res	Type
30	AG	81	LYS
30	AG	127	GLY
30	AG	130	ASN
30	AG	158	ALA
31	AH	13	LYS
31	AH	47	GLU
31	AH	49	VAL
31	AH	110	SER
31	AH	158	HIS
32	AI	36	ALA
32	AI	75	LEU
32	AI	97	ILE
32	AI	115	ALA
32	AI	143	SER
33	AJ	23	SER
33	AJ	50	ARG
33	AJ	55	LYS
33	AJ	111	LEU
33	AJ	118	THR
33	AJ	129	PRO
34	AN	56	ASN
36	AP	9	ASN
36	AP	33	ARG
36	AP	39	LYS
36	AP	147	LEU
37	AQ	22	LYS
37	AQ	134	ARG
38	AR	14	SER
39	AS	27	SER
39	AS	37	ALA
39	AS	88	ASP
40	AT	27	THR
40	AT	33	LYS
40	AT	38	ASN
40	AT	104	ASN
42	AV	2	PHE
42	AV	3	ALA
42	AV	16	PRO
42	AV	78	LYS
43	AW	6	ILE
44	AX	22	ALA
45	AY	31	LEU

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Mol	Chain	Res	Type
45	AY	37	VAL
45	AY	100	ALA
46	AZ	7	ALA
46	AZ	78	LYS
46	AZ	170	THR
46	AZ	172	ALA
46	AZ	184	ALA
49	A2	47	ASN
49	A2	69	ARG
51	A4	3	GLU
51	A4	51	ASP
53	A6	16	CYS
53	A6	19	ARG
53	A6	20	ASN
53	A6	23	THR
55	A8	29	LYS
55	A8	53	PRO
1	Bb	95	GLN
1	Bb	130	ARG
1	Bb	131	PRO
1	Bb	217	ARG
2	Bc	4	LYS
2	Bc	12	LEU
2	Bc	46	GLU
2	Bc	54	ARG
2	Bc	74	GLY
2	Bc	127	ARG
2	Bc	181	ASN
3	Bd	14	ARG
3	Bd	60	GLU
3	Bd	159	ARG
3	Bd	171	GLY
3	Bd	189	PRO
4	Be	104	ALA
4	Be	108	ALA
4	Be	149	GLU
5	Bf	6	VAL
5	Bf	42	GLU
6	Bg	7	ALA
6	Bg	14	PRO
6	Bg	54	THR
6	Bg	153	HIS

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Mol	Chain	Res	Type
7	Bh	68	ARG
8	Bi	95	LYS
10	Bk	106	LYS
11	Bl	26	ALA
11	Bl	27	LEU
12	Bm	70	LEU
12	Bm	112	GLY
14	Bo	24	SER
16	Bq	74	LEU
17	Br	28	GLU
18	Bs	27	GLU
19	Bt	74	LYS
19	Bt	82	SER
19	Bt	98	PRO
19	Bt	99	LEU
21	By	3	TYR
27	BD	202	LYS
28	BE	94	GLU
29	BF	15	SER
29	BF	22	ALA
29	BF	25	PRO
29	BF	54	ARG
29	BF	128	ALA
30	BG	97	ASP
30	BG	117	PHE
30	BG	179	PRO
31	BH	13	LYS
31	BH	47	GLU
31	BH	110	SER
32	BI	36	ALA
32	BI	69	LYS
32	BI	143	SER
33	BJ	65	GLU
33	BJ	74	LEU
33	BJ	97	ALA
33	BJ	102	LYS
34	BN	37	LYS
34	BN	56	ASN
36	BP	9	ASN
36	BP	147	LEU
37	BQ	22	LYS
38	BR	4	LEU

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Mol	Chain	Res	Type
38	BR	14	SER
39	BS	27	SER
39	BS	37	ALA
39	BS	88	ASP
40	BT	27	THR
40	BT	33	LYS
40	BT	38	ASN
40	BT	104	ASN
42	BV	2	PHE
42	BV	3	ALA
42	BV	16	PRO
43	BW	6	ILE
43	BW	29	LEU
45	BY	37	VAL
45	BY	53	PRO
45	BY	100	ALA
46	BZ	13	GLU
46	BZ	31	ARG
46	BZ	42	VAL
46	BZ	51	ALA
46	BZ	62	PRO
46	BZ	81	ARG
46	BZ	122	ARG
46	BZ	166	SER
46	BZ	185	GLU
47	B0	73	GLY
48	B1	24	ALA
48	B1	54	ALA
48	B1	69	LYS
49	B2	17	SER
51	B4	3	GLU
51	B4	51	ASP
53	B6	19	ARG
53	B6	20	ASN
53	B6	23	THR
55	B8	29	LYS
55	B8	53	PRO
1	Ab	8	LYS
1	Ab	83	MET
1	Ab	84	GLU
1	Ab	129	GLU
1	Ab	135	GLN

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Mol	Chain	Res	Type
1	Ab	194	PRO
1	Ab	217	ARG
2	Ac	14	ILE
2	Ac	36	ASP
2	Ac	56	ASP
2	Ac	98	ASN
2	Ac	164	ARG
4	Ae	16	THR
4	Ae	136	MET
6	Ag	9	VAL
6	Ag	14	PRO
6	Ag	31	MET
6	Ag	65	ALA
6	Ag	81	GLY
7	Ah	29	SER
8	Ai	11	LYS
8	Ai	34	ASN
8	Ai	70	LYS
11	Al	12	ARG
14	Ao	65	ARG
17	Ar	25	THR
18	As	30	LEU
18	As	43	GLU
18	As	70	LYS
21	Ay	9	GLU
26	AC	53	ARG
27	AD	191	ALA
28	AE	17	ASP
28	AE	56	PRO
29	AF	7	TYR
29	AF	9	ILE
29	AF	11	VAL
29	AF	15	SER
29	AF	168	ARG
30	AG	84	LYS
30	AG	87	PRO
30	AG	145	THR
30	AG	175	LEU
31	AH	20	ALA
32	AI	6	LEU
32	AI	69	LYS
34	AN	17	ASP

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Mol	Chain	Res	Type
34	AN	37	LYS
34	AN	94	HIS
36	AP	25	SER
36	AP	48	PRO
36	AP	57	THR
36	AP	76	LYS
36	AP	141	ALA
36	AP	149	GLU
37	AQ	13	GLN
37	AQ	40	ALA
38	AR	4	LEU
38	AR	5	LYS
38	AR	86	ARG
38	AR	106	GLY
40	AT	29	ARG
40	AT	126	ALA
45	AY	39	VAL
45	AY	49	VAL
45	AY	53	PRO
45	AY	81	LYS
46	AZ	45	ASP
46	AZ	130	PRO
51	A4	28	LYS
52	A5	4	HIS
55	A8	3	LYS
1	Bb	8	LYS
1	Bb	19	HIS
1	Bb	83	MET
1	Bb	84	GLU
1	Bb	129	GLU
1	Bb	135	GLN
1	Bb	194	PRO
2	Bc	56	ASP
2	Bc	164	ARG
2	Bc	204	LEU
3	Bd	37	PRO
4	Be	16	THR
4	Be	109	ILE
4	Be	136	MET
6	Bg	9	VAL
6	Bg	81	GLY
7	Bh	29	SER

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Mol	Chain	Res	Type
8	Bi	10	ARG
8	Bi	11	LYS
8	Bi	34	ASN
8	Bi	70	LYS
12	Bm	31	LYS
14	Bo	65	ARG
18	Bs	9	VAL
18	Bs	30	LEU
18	Bs	43	GLU
18	Bs	70	LYS
19	Bt	94	ALA
20	Bu	15	ARG
21	By	38	ARG
21	By	82	GLU
26	BC	53	ARG
26	BC	203	GLU
27	BD	45	ASN
27	BD	191	ALA
28	BE	17	ASP
28	BE	56	PRO
28	BE	117	MET
29	BF	9	ILE
29	BF	11	VAL
29	BF	168	ARG
30	BG	118	ARG
31	BH	20	ALA
31	BH	49	VAL
32	BI	6	LEU
32	BI	75	LEU
32	BI	115	ALA
33	BJ	31	GLY
33	BJ	60	ARG
33	BJ	83	TYR
33	BJ	91	LYS
34	BN	17	ASP
34	BN	94	HIS
36	BP	25	SER
36	BP	33	ARG
36	BP	39	LYS
36	BP	48	PRO
36	BP	76	LYS
36	BP	141	ALA

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Mol	Chain	Res	Type
36	BP	149	GLU
37	BQ	40	ALA
37	BQ	134	ARG
38	BR	5	LYS
38	BR	86	ARG
38	BR	106	GLY
40	BT	29	ARG
41	BU	67	ALA
45	BY	30	VAL
45	BY	39	VAL
45	BY	81	LYS
46	BZ	154	ASP
51	B4	28	LYS
52	B5	4	HIS
53	B6	16	CYS
55	B8	3	LYS
1	Ab	22	LYS
1	Ab	155	LEU
2	Ac	168	ALA
2	Ac	204	LEU
3	Ad	56	VAL
3	Ad	118	ARG
3	Ad	156	GLU
3	Ad	178	VAL
4	Ae	8	GLU
4	Ae	109	ILE
6	Ag	40	ALA
10	Ak	34	ASP
13	An	14	PRO
13	An	23	ARG
14	Ao	36	ILE
15	Ap	52	ASP
18	As	9	VAL
19	At	97	ALA
21	Ay	81	ARG
27	AD	3	VAL
27	AD	10	THR
27	AD	12	SER
27	AD	28	GLU
27	AD	45	ASN
27	AD	140	THR
27	AD	263	ARG

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Mol	Chain	Res	Type
28	AE	19	ARG
28	AE	117	MET
28	AE	185	LYS
29	AF	2	LYS
29	AF	14	PRO
29	AF	176	LEU
30	AG	24	GLY
30	AG	86	MET
30	AG	181	ARG
32	AI	16	GLY
33	AJ	42	GLN
33	AJ	53	VAL
33	AJ	104	ILE
35	AO	14	THR
35	AO	64	ARG
36	AP	36	LYS
36	AP	109	GLY
36	AP	148	LEU
38	AR	45	ARG
38	AR	82	GLU
38	AR	102	GLU
39	AS	91	PRO
40	AT	41	ARG
42	AV	35	LEU
43	AW	35	ILE
44	AX	87	GLN
45	AY	9	LYS
46	AZ	142	SER
46	AZ	164	ALA
46	AZ	165	VAL
47	A0	55	ARG
48	A1	30	VAL
56	A9	31	LYS
1	Bb	22	LYS
1	Bb	155	LEU
1	Bb	198	ASP
2	Bc	14	ILE
2	Bc	36	ASP
2	Bc	98	ASN
2	Bc	168	ALA
4	Be	7	GLU
4	Be	8	GLU

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Mol	Chain	Res	Type
4	Be	49	PRO
6	Bg	31	MET
6	Bg	65	ALA
10	Bk	34	ASP
11	Bl	12	ARG
12	Bm	117	VAL
13	Bn	14	PRO
17	Br	25	THR
19	Bt	97	ALA
21	By	23	ARG
21	By	51	TYR
21	By	77	SER
27	BD	3	VAL
27	BD	10	THR
27	BD	28	GLU
27	BD	140	THR
27	BD	263	ARG
28	BE	19	ARG
29	BF	2	LYS
29	BF	7	TYR
29	BF	14	PRO
29	BF	176	LEU
30	BG	32	PRO
30	BG	52	ILE
30	BG	155	MET
32	BI	16	GLY
32	BI	122	GLU
34	BN	36	GLY
35	BO	64	ARG
36	BP	57	THR
36	BP	109	GLY
36	BP	148	LEU
37	BQ	13	GLN
37	BQ	53	ALA
37	BQ	78	PRO
38	BR	82	GLU
38	BR	102	GLU
39	BS	85	VAL
39	BS	91	PRO
40	BT	41	ARG
40	BT	126	ALA
42	BV	35	LEU

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Mol	Chain	Res	Type
42	BV	44	LYS
43	BW	65	LEU
44	BX	46	ALA
45	BY	49	VAL
46	BZ	45	ASP
46	BZ	80	ARG
46	BZ	82	ARG
46	BZ	119	GLU
47	B0	55	ARG
49	B2	18	PRO
49	B2	23	LYS
56	B9	31	LYS
1	Ab	13	ALA
1	Ab	154	LEU
1	Ab	198	ASP
2	Ac	6	HIS
2	Ac	81	GLY
3	Ad	9	CYS
4	Ae	49	PRO
4	Ae	65	ASN
7	Ah	6	ILE
8	Ai	21	PRO
8	Ai	98	PRO
10	Ak	39	PRO
11	Al	63	GLY
12	Am	60	VAL
14	Ao	10	LYS
15	Ap	73	LEU
21	Ay	82	GLU
27	AD	244	ARG
28	AE	35	GLN
28	AE	75	VAL
29	AF	5	ALA
29	AF	24	LEU
34	AN	5	VAL
34	AN	135	PRO
36	AP	146	VAL
37	AQ	78	PRO
39	AS	57	LYS
39	AS	85	VAL
40	AT	85	LYS
42	AV	49	THR

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Mol	Chain	Res	Type
43	AW	65	LEU
44	AX	46	ALA
46	AZ	39	VAL
46	AZ	107	THR
46	AZ	115	GLY
47	A0	73	GLY
51	A4	5	ILE
2	Bc	6	HIS
2	Bc	81	GLY
3	Bd	56	VAL
3	Bd	118	ARG
3	Bd	156	GLU
3	Bd	178	VAL
4	Be	107	ARG
4	Be	140	ARG
8	Bi	21	PRO
11	Bl	120	TYR
13	Bn	23	ARG
21	By	29	LYS
27	BD	244	ARG
28	BE	185	LYS
29	BF	24	LEU
30	BG	3	LEU
30	BG	107	LEU
33	BJ	119	ALA
34	BN	5	VAL
34	BN	135	PRO
36	BP	146	VAL
37	BQ	29	PHE
38	BR	29	LEU
39	BS	57	LYS
42	BV	49	THR
45	BY	9	LYS
47	B0	83	PRO
51	B4	4	GLY
51	B4	5	ILE
13	An	28	GLY
14	Ao	19	PRO
29	AF	66	PRO
31	AH	66	GLY
32	AI	90	GLY
34	AN	36	GLY

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Mol	Chain	Res	Type
45	AY	30	VAL
47	A0	83	PRO
48	A1	28	GLY
51	A4	4	GLY
51	A4	33	VAL
7	Bh	6	ILE
8	Bi	98	PRO
8	Bi	100	GLY
10	Bk	39	PRO
11	Bl	63	GLY
13	Bn	28	GLY
14	Bo	19	PRO
14	Bo	36	ILE
21	By	71	VAL
28	BE	75	VAL
30	BG	28	VAL
32	BI	90	GLY
33	BJ	22	GLY
33	BJ	104	ILE
37	BQ	52	VAL
43	BW	35	ILE
46	BZ	96	VAL
51	B4	33	VAL
3	Ad	7	PRO
6	Ag	17	VAL
9	Aj	82	ILE
27	AD	11	PRO
27	AD	234	GLY
31	AH	76	VAL
31	AH	93	GLY
33	AJ	128	LEU
45	AY	98	VAL
46	AZ	22	GLY
48	A1	84	GLY
6	Bg	17	VAL
9	Bj	82	ILE
12	Bm	53	VAL
18	Bs	45	VAL
20	Bu	13	ILE
31	BH	66	GLY
45	BY	98	VAL
46	BZ	129	SER

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Mol	Chain	Res	Type
51	B4	19	GLY
55	B8	52	LYS
2	Ac	13	GLY
8	Ai	109	VAL
12	Am	53	VAL
18	As	45	VAL
30	AG	119	GLY
36	AP	23	PRO
37	AQ	52	VAL
37	AQ	126	PRO
45	AY	82	PRO
46	AZ	137	ILE
51	A4	19	GLY
3	Bd	7	PRO
3	Bd	172	PRO
7	Bh	101	PRO
9	Bj	90	LEU
26	BC	176	VAL
31	BH	76	VAL
32	BI	88	ILE
36	BP	23	PRO
41	BU	82	GLY
45	BY	82	PRO
4	Ae	11	ILE
6	Ag	88	PRO
7	Ah	101	PRO
9	Aj	90	LEU
13	An	13	THR
20	Au	13	ILE
21	Ay	47	MET
26	AC	176	VAL
27	AD	106	ILE
30	AG	89	GLY
33	AJ	81	VAL
41	AU	82	GLY
49	A2	57	ILE
2	Bc	68	VAL
6	Bg	88	PRO
6	Bg	111	ARG
11	Bl	18	VAL
13	Bn	13	THR
27	BD	11	PRO

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Mol	Chain	Res	Type
27	BD	34	VAL
29	BF	66	PRO
31	BH	55	PRO
31	BH	93	GLY
32	BI	23	PRO
37	BQ	126	PRO
39	BS	14	VAL
1	Ab	183	PRO
7	Ah	26	VAL
11	Al	18	VAL
27	AD	34	VAL
31	AH	55	PRO
32	AI	84	GLY
39	AS	14	VAL
55	A8	52	LYS
4	Be	11	ILE
32	BI	84	GLY
33	BJ	116	ILE
43	BW	26	GLY
45	BY	18	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	Ab	202/220 (92%)	181 (90%)	21 (10%)	5 26
1	Bb	202/220 (92%)	181 (90%)	21 (10%)	5 26
2	Ac	160/188 (85%)	148 (92%)	12 (8%)	11 37
2	Bc	160/188 (85%)	148 (92%)	12 (8%)	11 37
3	Ad	180/181 (99%)	157 (87%)	23 (13%)	3 19
3	Bd	180/181 (99%)	157 (87%)	23 (13%)	3 19
4	Ae	115/123 (94%)	100 (87%)	15 (13%)	3 19
4	Be	115/123 (94%)	100 (87%)	15 (13%)	3 19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	Af	90/90 (100%)	82 (91%)	8 (9%)	8 32
5	Bf	90/90 (100%)	81 (90%)	9 (10%)	6 28
6	Ag	126/127 (99%)	120 (95%)	6 (5%)	21 51
6	Bg	126/127 (99%)	120 (95%)	6 (5%)	21 51
7	Ah	119/119 (100%)	111 (93%)	8 (7%)	13 41
7	Bh	119/119 (100%)	110 (92%)	9 (8%)	11 37
8	Ai	98/99 (99%)	86 (88%)	12 (12%)	4 21
8	Bi	98/99 (99%)	86 (88%)	12 (12%)	4 21
9	Aj	88/92 (96%)	80 (91%)	8 (9%)	7 31
9	Bj	88/92 (96%)	80 (91%)	8 (9%)	7 31
10	Ak	90/99 (91%)	85 (94%)	5 (6%)	17 47
10	Bk	90/99 (91%)	85 (94%)	5 (6%)	17 47
11	Al	104/109 (95%)	94 (90%)	10 (10%)	7 29
11	Bl	104/109 (95%)	93 (89%)	11 (11%)	5 26
12	Am	94/101 (93%)	82 (87%)	12 (13%)	3 19
12	Bm	94/101 (93%)	83 (88%)	11 (12%)	4 23
13	An	49/50 (98%)	46 (94%)	3 (6%)	15 44
13	Bn	49/50 (98%)	45 (92%)	4 (8%)	9 34
14	Ao	79/80 (99%)	73 (92%)	6 (8%)	11 37
14	Bo	79/80 (99%)	73 (92%)	6 (8%)	11 37
15	Ap	72/74 (97%)	68 (94%)	4 (6%)	17 47
15	Bp	72/74 (97%)	68 (94%)	4 (6%)	17 47
16	Aq	94/97 (97%)	91 (97%)	3 (3%)	34 61
16	Bq	94/97 (97%)	91 (97%)	3 (3%)	34 61
17	Ar	61/77 (79%)	60 (98%)	1 (2%)	58 76
17	Br	61/77 (79%)	60 (98%)	1 (2%)	58 76
18	As	69/80 (86%)	57 (83%)	12 (17%)	1 10
18	Bs	69/80 (86%)	57 (83%)	12 (17%)	1 10
19	At	76/82 (93%)	71 (93%)	5 (7%)	14 42
19	Bt	76/82 (93%)	71 (93%)	5 (7%)	14 42
20	Au	19/22 (86%)	18 (95%)	1 (5%)	19 48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	Bu	19/22 (86%)	18 (95%)	1 (5%)	19 48
21	Ay	86/87 (99%)	75 (87%)	11 (13%)	3 19
21	By	86/87 (99%)	77 (90%)	9 (10%)	5 26
26	AC	99/181 (55%)	92 (93%)	7 (7%)	12 39
26	BC	99/181 (55%)	92 (93%)	7 (7%)	12 39
27	AD	213/218 (98%)	178 (84%)	35 (16%)	2 12
27	BD	213/218 (98%)	180 (84%)	33 (16%)	2 14
28	AE	165/166 (99%)	135 (82%)	30 (18%)	1 8
28	BE	165/166 (99%)	133 (81%)	32 (19%)	1 7
29	AF	165/166 (99%)	143 (87%)	22 (13%)	3 18
29	BF	165/166 (99%)	145 (88%)	20 (12%)	4 21
30	AG	155/156 (99%)	137 (88%)	18 (12%)	4 23
30	BG	155/156 (99%)	128 (83%)	27 (17%)	1 10
31	AH	137/148 (93%)	123 (90%)	14 (10%)	6 27
31	BH	137/148 (93%)	122 (89%)	15 (11%)	5 25
32	AI	122/124 (98%)	103 (84%)	19 (16%)	2 14
32	BI	122/124 (98%)	103 (84%)	19 (16%)	2 14
34	AN	117/119 (98%)	102 (87%)	15 (13%)	3 19
34	BN	117/119 (98%)	102 (87%)	15 (13%)	3 19
35	AO	100/100 (100%)	90 (90%)	10 (10%)	6 28
35	BO	100/100 (100%)	89 (89%)	11 (11%)	5 25
36	AP	112/116 (97%)	93 (83%)	19 (17%)	1 11
36	BP	112/116 (97%)	92 (82%)	20 (18%)	1 9
37	AQ	110/111 (99%)	100 (91%)	10 (9%)	7 31
37	BQ	110/111 (99%)	100 (91%)	10 (9%)	7 31
38	AR	100/101 (99%)	86 (86%)	14 (14%)	3 17
38	BR	100/101 (99%)	86 (86%)	14 (14%)	3 17
39	AS	77/88 (88%)	63 (82%)	14 (18%)	1 8
39	BS	77/88 (88%)	63 (82%)	14 (18%)	1 8
40	AT	118/127 (93%)	99 (84%)	19 (16%)	2 13
40	BT	118/127 (93%)	99 (84%)	19 (16%)	2 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	AU	92/94 (98%)	79 (86%)	13 (14%)	3 17
41	BU	92/94 (98%)	79 (86%)	13 (14%)	3 17
42	AV	82/82 (100%)	66 (80%)	16 (20%)	1 7
42	BV	82/82 (100%)	65 (79%)	17 (21%)	1 6
43	AW	91/92 (99%)	80 (88%)	11 (12%)	4 21
43	BW	91/92 (99%)	81 (89%)	10 (11%)	5 25
44	AX	74/78 (95%)	64 (86%)	10 (14%)	3 18
44	BX	74/78 (95%)	63 (85%)	11 (15%)	2 15
45	AY	84/91 (92%)	68 (81%)	16 (19%)	1 7
45	BY	84/91 (92%)	68 (81%)	16 (19%)	1 7
46	AZ	162/179 (90%)	141 (87%)	21 (13%)	3 19
46	BZ	162/179 (90%)	134 (83%)	28 (17%)	1 10
47	A0	66/67 (98%)	59 (89%)	7 (11%)	5 26
47	B0	66/67 (98%)	59 (89%)	7 (11%)	5 26
48	A1	78/83 (94%)	66 (85%)	12 (15%)	2 14
48	B1	78/83 (94%)	62 (80%)	16 (20%)	1 6
49	A2	66/67 (98%)	63 (96%)	3 (4%)	23 53
49	B2	66/67 (98%)	56 (85%)	10 (15%)	2 15
50	A3	51/52 (98%)	46 (90%)	5 (10%)	6 29
50	B3	51/52 (98%)	46 (90%)	5 (10%)	6 29
51	A4	51/63 (81%)	41 (80%)	10 (20%)	1 7
51	B4	51/63 (81%)	41 (80%)	10 (20%)	1 7
52	A5	47/52 (90%)	42 (89%)	5 (11%)	5 26
52	B5	47/52 (90%)	42 (89%)	5 (11%)	5 26
53	A6	49/52 (94%)	40 (82%)	9 (18%)	1 8
53	B6	49/52 (94%)	40 (82%)	9 (18%)	1 8
54	A7	40/42 (95%)	37 (92%)	3 (8%)	11 37
54	B7	40/42 (95%)	37 (92%)	3 (8%)	11 37
55	A8	53/55 (96%)	42 (79%)	11 (21%)	1 6
55	B8	53/55 (96%)	42 (79%)	11 (21%)	1 6
56	A9	34/34 (100%)	34 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
56	B9	34/34 (100%)	34 (100%)	0	100 100
All	All	9962/10602 (94%)	8764 (88%)	1198 (12%)	4 21

All (1198) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	17	PHE
1	Ab	36	ARG
1	Ab	48	MET
1	Ab	63	MET
1	Ab	79	ASP
1	Ab	87	ARG
1	Ab	97	TRP
1	Ab	111	ARG
1	Ab	129	GLU
1	Ab	137	ARG
1	Ab	140	HIS
1	Ab	145	LEU
1	Ab	159	PRO
1	Ab	176	GLU
1	Ab	178	ARG
1	Ab	187	LEU
1	Ab	196	LEU
1	Ab	204	ASN
1	Ab	206	ASP
1	Ab	221	LEU
2	Ac	3	ASN
2	Ac	5	ILE
2	Ac	16	ARG
2	Ac	18	TRP
2	Ac	22	TRP
2	Ac	29	TYR
2	Ac	82	GLU
2	Ac	93	LYS
2	Ac	94	LEU
2	Ac	107	GLN
2	Ac	127	ARG
2	Ac	131	ARG
3	Ad	3	ARG
3	Ad	9	CYS
3	Ad	10	ARG

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Mol	Chain	Res	Type
3	Ad	26	CYS
3	Ad	36	ARG
3	Ad	38	TYR
3	Ad	49	ARG
3	Ad	53	ASP
3	Ad	59	ARG
3	Ad	79	PHE
3	Ad	80	GLU
3	Ad	86	LYS
3	Ad	110	PHE
3	Ad	114	ARG
3	Ad	129	ASN
3	Ad	131	ARG
3	Ad	132	ARG
3	Ad	135	LEU
3	Ad	144	ASP
3	Ad	158	ILE
3	Ad	163	GLU
3	Ad	168	ARG
3	Ad	188	LEU
4	Ae	10	MET
4	Ae	12	LEU
4	Ae	16	THR
4	Ae	20	GLN
4	Ae	26	PHE
4	Ae	28	PHE
4	Ae	31	LEU
4	Ae	36	ASP
4	Ae	41	VAL
4	Ae	55	VAL
4	Ae	56	GLN
4	Ae	73	ASN
4	Ae	79	GLU
4	Ae	101	ILE
4	Ae	147	ASP
5	Af	16	GLN
5	Af	24	GLU
5	Af	25	ILE
5	Af	55	ASP
5	Af	63	TYR
5	Af	69	GLU
5	Af	80	ARG

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Mol	Chain	Res	Type
5	Af	93	SER
6	Ag	12	LEU
6	Ag	32	ARG
6	Ag	111	ARG
6	Ag	124	LEU
6	Ag	146	GLU
6	Ag	151	TYR
7	Ah	1	MET
7	Ah	25	ASP
7	Ah	60	ARG
7	Ah	63	LEU
7	Ah	65	TYR
7	Ah	102	ARG
7	Ah	112	LEU
7	Ah	119	LEU
8	Ai	38	GLN
8	Ai	47	LEU
8	Ai	78	LYS
8	Ai	79	LEU
8	Ai	95	LYS
8	Ai	104	ARG
8	Ai	105	ASP
8	Ai	110	GLU
8	Ai	114	TYR
8	Ai	121	ARG
8	Ai	125	TYR
8	Ai	128	ARG
9	Aj	16	LEU
9	Aj	22	LYS
9	Aj	46	ARG
9	Aj	50	ILE
9	Aj	62	HIS
9	Aj	68	HIS
9	Aj	86	MET
9	Aj	96	ILE
10	Ak	29	ILE
10	Ak	31	THR
10	Ak	40	ILE
10	Ak	124	LYS
10	Ak	125	PHE
11	Al	20	LYS
11	Al	27	LEU

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Mol	Chain	Res	Type
11	Al	41	ARG
11	Al	42	THR
11	Al	47	LYS
11	Al	79	GLU
11	Al	89	ARG
11	Al	116	SER
11	Al	120	TYR
11	Al	126	LYS
12	Am	47	ASP
12	Am	64	TRP
12	Am	65	LYS
12	Am	66	LEU
12	Am	69	GLU
12	Am	71	ARG
12	Am	79	LYS
12	Am	82	MET
12	Am	93	ARG
12	Am	94	ARG
12	Am	108	ARG
12	Am	110	ARG
13	An	33	VAL
13	An	41	ARG
13	An	44	LEU
14	Ao	19	PRO
14	Ao	31	LEU
14	Ao	65	ARG
14	Ao	67	LEU
14	Ao	82	ILE
14	Ao	88	ARG
15	Ap	1	MET
15	Ap	2	VAL
15	Ap	69	THR
15	Ap	80	PHE
16	Aq	52	LYS
16	Aq	60	ILE
16	Aq	74	LEU
17	Ar	31	LEU
18	As	5	LEU
18	As	6	LYS
18	As	7	LYS
18	As	15	LEU
18	As	22	LEU

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Mol	Chain	Res	Type
18	As	29	ARG
18	As	33	THR
18	As	37	ARG
18	As	43	GLU
18	As	44	MET
18	As	56	GLN
18	As	70	LYS
19	At	24	LEU
19	At	26	ASN
19	At	73	HIS
19	At	75	ASN
19	At	93	GLU
20	Au	12	LYS
21	Ay	6	ASP
21	Ay	7	PHE
21	Ay	10	ARG
21	Ay	12	LEU
21	Ay	13	LYS
21	Ay	27	LYS
21	Ay	44	LEU
21	Ay	49	ASP
21	Ay	64	TYR
21	Ay	81	ARG
21	Ay	95	LEU
26	AC	32	GLU
26	AC	39	ASP
26	AC	50	ILE
26	AC	53	ARG
26	AC	173	HIS
26	AC	181	PHE
26	AC	185	LYS
27	AD	24	ILE
27	AD	26	LYS
27	AD	27	THR
27	AD	35	LYS
27	AD	46	GLN
27	AD	48	ARG
27	AD	49	ILE
27	AD	54	ARG
27	AD	61	LEU
27	AD	65	ILE
27	AD	72	LYS

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Mol	Chain	Res	Type
27	AD	83	GLU
27	AD	94	LEU
27	AD	95	LEU
27	AD	99	ASP
27	AD	103	ARG
27	AD	111	LEU
27	AD	116	GLN
27	AD	117	VAL
27	AD	122	ASP
27	AD	131	LEU
27	AD	166	GLN
27	AD	192	THR
27	AD	198	ASN
27	AD	200	ASP
27	AD	221	VAL
27	AD	229	VAL
27	AD	242	ARG
27	AD	246	PRO
27	AD	257	LEU
27	AD	259	THR
27	AD	260	ARG
27	AD	268	ARG
27	AD	270	ILE
27	AD	271	ILE
28	AE	12	THR
28	AE	18	ASP
28	AE	49	LEU
28	AE	53	PRO
28	AE	55	ASN
28	AE	60	ASN
28	AE	63	LEU
28	AE	64	LYS
28	AE	67	PHE
28	AE	78	LEU
28	AE	79	ARG
28	AE	87	GLU
28	AE	89	ASP
28	AE	94	GLU
28	AE	95	ILE
28	AE	101	ARG
28	AE	107	THR
28	AE	111	ARG

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Mol	Chain	Res	Type
28	AE	113	PHE
28	AE	119	ARG
28	AE	128	SER
28	AE	129	HIS
28	AE	134	ILE
28	AE	144	ARG
28	AE	169	ASN
28	AE	178	GLU
28	AE	184	VAL
28	AE	191	PRO
28	AE	202	LYS
28	AE	203	LYS
29	AF	23	ASP
29	AF	28	ILE
29	AF	33	LEU
29	AF	53	THR
29	AF	65	TRP
29	AF	66	PRO
29	AF	67	GLN
29	AF	84	VAL
29	AF	88	VAL
29	AF	106	ARG
29	AF	110	LEU
29	AF	125	LEU
29	AF	129	PHE
29	AF	149	ASP
29	AF	158	THR
29	AF	160	ASN
29	AF	164	ARG
29	AF	165	ARG
29	AF	188	ARG
29	AF	196	LEU
29	AF	199	TRP
29	AF	200	GLU
30	AG	5	VAL
30	AG	22	ARG
30	AG	26	GLN
30	AG	36	LYS
30	AG	40	ASN
30	AG	58	GLN
30	AG	60	LEU
30	AG	67	LYS

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Mol	Chain	Res	Type
30	AG	77	ILE
30	AG	83	ARG
30	AG	97	ASP
30	AG	111	LEU
30	AG	113	ARG
30	AG	123	ASN
30	AG	125	PHE
30	AG	126	ASP
30	AG	139	LEU
30	AG	152	LEU
31	AH	9	ILE
31	AH	15	VAL
31	AH	42	ARG
31	AH	46	GLU
31	AH	53	GLU
31	AH	60	ARG
31	AH	68	THR
31	AH	88	LEU
31	AH	94	TYR
31	AH	116	GLU
31	AH	143	GLN
31	AH	153	LYS
31	AH	157	TYR
31	AH	170	ARG
32	AI	1	MET
32	AI	12	LEU
32	AI	20	ASP
32	AI	67	ARG
32	AI	68	LEU
32	AI	74	ASN
32	AI	81	VAL
32	AI	85	GLU
32	AI	92	VAL
32	AI	109	ILE
32	AI	110	ASP
32	AI	113	ARG
32	AI	120	ILE
32	AI	123	LEU
32	AI	130	TYR
32	AI	132	PRO
32	AI	136	VAL
32	AI	139	GLN

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Mol	Chain	Res	Type
32	AI	140	LEU
34	AN	4	TYR
34	AN	12	ARG
34	AN	23	LEU
34	AN	28	THR
34	AN	32	THR
34	AN	39	ARG
34	AN	48	MET
34	AN	55	VAL
34	AN	85	ILE
34	AN	87	LEU
34	AN	108	PRO
34	AN	112	LEU
34	AN	120	LEU
34	AN	121	LYS
34	AN	130	HIS
35	AO	3	GLN
35	AO	10	VAL
35	AO	32	TYR
35	AO	35	VAL
35	AO	48	PRO
35	AO	73	ASP
35	AO	85	VAL
35	AO	96	THR
35	AO	98	VAL
35	AO	117	LEU
36	AP	6	LEU
36	AP	13	ASN
36	AP	16	ARG
36	AP	18	ARG
36	AP	32	THR
36	AP	57	THR
36	AP	61	ARG
36	AP	64	LYS
36	AP	81	GLN
36	AP	85	LEU
36	AP	91	PHE
36	AP	95	VAL
36	AP	98	GLU
36	AP	105	LEU
36	AP	108	LYS
36	AP	110	TYR

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Mol	Chain	Res	Type
36	AP	115	LEU
36	AP	125	VAL
36	AP	135	LEU
37	AQ	38	GLU
37	AQ	45	GLN
37	AQ	54	MET
37	AQ	55	VAL
37	AQ	67	ARG
37	AQ	79	LEU
37	AQ	89	ASN
37	AQ	110	THR
37	AQ	135	ASP
37	AQ	138	ASP
38	AR	2	ARG
38	AR	8	ARG
38	AR	29	LEU
38	AR	65	LEU
38	AR	67	LEU
38	AR	76	VAL
38	AR	79	LEU
38	AR	94	TYR
38	AR	97	VAL
38	AR	99	LYS
38	AR	100	LEU
38	AR	113	LEU
38	AR	116	LEU
38	AR	118	GLU
39	AS	11	LYS
39	AS	12	PHE
39	AS	15	ARG
39	AS	24	LEU
39	AS	36	TYR
39	AS	40	ILE
39	AS	54	LEU
39	AS	67	ARG
39	AS	83	LYS
39	AS	89	ARG
39	AS	92	TYR
39	AS	97	ARG
39	AS	101	LEU
39	AS	106	ARG
40	AT	3	ARG

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Mol	Chain	Res	Type
40	AT	13	ARG
40	AT	14	TYR
40	AT	22	PHE
40	AT	24	PRO
40	AT	32	TYR
40	AT	41	ARG
40	AT	51	ARG
40	AT	58	ASN
40	AT	65	LYS
40	AT	78	LEU
40	AT	82	LEU
40	AT	89	VAL
40	AT	93	ARG
40	AT	96	ARG
40	AT	99	LEU
40	AT	123	GLN
40	AT	125	ARG
40	AT	128	GLU
41	AU	3	ARG
41	AU	8	VAL
41	AU	14	HIS
41	AU	16	LYS
41	AU	59	ARG
41	AU	60	LEU
41	AU	66	ASN
41	AU	69	CYS
41	AU	74	LEU
41	AU	83	LEU
41	AU	92	ARG
41	AU	101	ARG
41	AU	108	GLU
42	AV	1	MET
42	AV	5	VAL
42	AV	13	ARG
42	AV	16	PRO
42	AV	18	LEU
42	AV	19	LYS
42	AV	21	ARG
42	AV	39	LEU
42	AV	40	LEU
42	AV	61	VAL
42	AV	66	ARG

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Mol	Chain	Res	Type
42	AV	75	PHE
42	AV	82	ARG
42	AV	91	TYR
42	AV	95	LEU
42	AV	99	ILE
43	AW	11	ARG
43	AW	20	VAL
43	AW	23	LEU
43	AW	51	LEU
43	AW	52	GLU
43	AW	60	ASN
43	AW	63	ASP
43	AW	70	TYR
43	AW	75	TYR
43	AW	82	LEU
43	AW	107	LEU
44	AX	12	VAL
44	AX	23	GLU
44	AX	27	THR
44	AX	28	PHE
44	AX	43	VAL
44	AX	57	LEU
44	AX	68	ARG
44	AX	76	ARG
44	AX	80	ILE
44	AX	83	VAL
45	AY	2	ARG
45	AY	6	HIS
45	AY	7	VAL
45	AY	9	LYS
45	AY	28	LYS
45	AY	29	GLU
45	AY	32	PRO
45	AY	53	PRO
45	AY	60	PHE
45	AY	64	GLU
45	AY	66	PRO
45	AY	77	PRO
45	AY	83	THR
45	AY	84	ARG
45	AY	89	PHE
45	AY	90	LEU

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Mol	Chain	Res	Type
46	AZ	6	LYS
46	AZ	20	ARG
46	AZ	27	VAL
46	AZ	29	TYR
46	AZ	34	ASN
46	AZ	43	GLU
46	AZ	61	LEU
46	AZ	62	PRO
46	AZ	70	LEU
46	AZ	75	ASN
46	AZ	81	ARG
46	AZ	89	PHE
46	AZ	112	ARG
46	AZ	123	ASP
46	AZ	130	PRO
46	AZ	150	LEU
46	AZ	157	LEU
46	AZ	166	SER
46	AZ	169	GLU
46	AZ	175	VAL
46	AZ	179	ASP
47	A0	10	THR
47	A0	11	ARG
47	A0	14	ARG
47	A0	20	ARG
47	A0	36	ILE
47	A0	38	VAL
47	A0	75	LEU
48	A1	5	CYS
48	A1	14	VAL
48	A1	19	GLN
48	A1	40	ARG
48	A1	41	ARG
48	A1	46	LEU
48	A1	48	LYS
48	A1	52	ARG
48	A1	72	GLU
48	A1	73	LEU
48	A1	80	LEU
48	A1	82	LEU
49	A2	30	ARG
49	A2	64	LEU

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Mol	Chain	Res	Type
49	A2	71	ASN
50	A3	8	LEU
50	A3	9	VAL
50	A3	40	THR
50	A3	46	ASN
50	A3	58	VAL
51	A4	1	MET
51	A4	5	ILE
51	A4	13	ARG
51	A4	20	ASN
51	A4	25	TYR
51	A4	28	LYS
51	A4	30	GLU
51	A4	34	GLU
51	A4	53	GLU
51	A4	55	ARG
52	A5	11	THR
52	A5	25	LEU
52	A5	44	THR
52	A5	52	TYR
52	A5	55	ARG
53	A6	9	LEU
53	A6	10	LEU
53	A6	11	LEU
53	A6	15	GLU
53	A6	18	ARG
53	A6	30	THR
53	A6	31	PRO
53	A6	34	LEU
53	A6	42	TRP
54	A7	4	THR
54	A7	8	ASN
54	A7	41	ARG
55	A8	4	MET
55	A8	8	LYS
55	A8	30	ARG
55	A8	31	HIS
55	A8	32	LEU
55	A8	33	ASN
55	A8	34	TRP
55	A8	44	LYS
55	A8	47	LYS

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Mol	Chain	Res	Type
55	A8	61	LEU
55	A8	64	TYR
1	Bb	15	VAL
1	Bb	17	PHE
1	Bb	36	ARG
1	Bb	48	MET
1	Bb	63	MET
1	Bb	79	ASP
1	Bb	87	ARG
1	Bb	97	TRP
1	Bb	111	ARG
1	Bb	129	GLU
1	Bb	137	ARG
1	Bb	140	HIS
1	Bb	145	LEU
1	Bb	159	PRO
1	Bb	176	GLU
1	Bb	178	ARG
1	Bb	187	LEU
1	Bb	196	LEU
1	Bb	204	ASN
1	Bb	206	ASP
1	Bb	221	LEU
2	Bc	3	ASN
2	Bc	5	ILE
2	Bc	16	ARG
2	Bc	18	TRP
2	Bc	22	TRP
2	Bc	29	TYR
2	Bc	82	GLU
2	Bc	93	LYS
2	Bc	94	LEU
2	Bc	107	GLN
2	Bc	127	ARG
2	Bc	131	ARG
3	Bd	3	ARG
3	Bd	9	CYS
3	Bd	10	ARG
3	Bd	26	CYS
3	Bd	36	ARG
3	Bd	38	TYR
3	Bd	49	ARG

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Mol	Chain	Res	Type
3	Bd	53	ASP
3	Bd	59	ARG
3	Bd	79	PHE
3	Bd	80	GLU
3	Bd	86	LYS
3	Bd	110	PHE
3	Bd	114	ARG
3	Bd	129	ASN
3	Bd	131	ARG
3	Bd	132	ARG
3	Bd	135	LEU
3	Bd	144	ASP
3	Bd	158	ILE
3	Bd	163	GLU
3	Bd	168	ARG
3	Bd	188	LEU
4	Be	10	MET
4	Be	12	LEU
4	Be	16	THR
4	Be	20	GLN
4	Be	26	PHE
4	Be	28	PHE
4	Be	31	LEU
4	Be	36	ASP
4	Be	41	VAL
4	Be	55	VAL
4	Be	56	GLN
4	Be	73	ASN
4	Be	79	GLU
4	Be	101	ILE
4	Be	147	ASP
5	Bf	16	GLN
5	Bf	24	GLU
5	Bf	25	ILE
5	Bf	43	LEU
5	Bf	55	ASP
5	Bf	63	TYR
5	Bf	69	GLU
5	Bf	80	ARG
5	Bf	93	SER
6	Bg	12	LEU
6	Bg	32	ARG

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Mol	Chain	Res	Type
6	Bg	111	ARG
6	Bg	124	LEU
6	Bg	146	GLU
6	Bg	151	TYR
7	Bh	1	MET
7	Bh	25	ASP
7	Bh	60	ARG
7	Bh	63	LEU
7	Bh	65	TYR
7	Bh	85	ARG
7	Bh	102	ARG
7	Bh	112	LEU
7	Bh	119	LEU
8	Bi	38	GLN
8	Bi	47	LEU
8	Bi	78	LYS
8	Bi	79	LEU
8	Bi	95	LYS
8	Bi	104	ARG
8	Bi	105	ASP
8	Bi	110	GLU
8	Bi	114	TYR
8	Bi	121	ARG
8	Bi	125	TYR
8	Bi	128	ARG
9	Bj	16	LEU
9	Bj	22	LYS
9	Bj	46	ARG
9	Bj	50	ILE
9	Bj	62	HIS
9	Bj	68	HIS
9	Bj	86	MET
9	Bj	96	ILE
10	Bk	29	ILE
10	Bk	31	THR
10	Bk	40	ILE
10	Bk	124	LYS
10	Bk	125	PHE
11	Bl	20	LYS
11	Bl	27	LEU
11	Bl	41	ARG
11	Bl	42	THR

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Mol	Chain	Res	Type
11	Bl	47	LYS
11	Bl	66	VAL
11	Bl	79	GLU
11	Bl	89	ARG
11	Bl	116	SER
11	Bl	120	TYR
11	Bl	126	LYS
12	Bm	47	ASP
12	Bm	65	LYS
12	Bm	66	LEU
12	Bm	69	GLU
12	Bm	79	LYS
12	Bm	82	MET
12	Bm	92	HIS
12	Bm	93	ARG
12	Bm	108	ARG
12	Bm	110	ARG
12	Bm	111	LYS
13	Bn	16	PHE
13	Bn	33	VAL
13	Bn	41	ARG
13	Bn	44	LEU
14	Bo	19	PRO
14	Bo	31	LEU
14	Bo	65	ARG
14	Bo	67	LEU
14	Bo	82	ILE
14	Bo	88	ARG
15	Bp	1	MET
15	Bp	2	VAL
15	Bp	69	THR
15	Bp	80	PHE
16	Bq	52	LYS
16	Bq	60	ILE
16	Bq	74	LEU
17	Br	31	LEU
18	Bs	5	LEU
18	Bs	6	LYS
18	Bs	7	LYS
18	Bs	15	LEU
18	Bs	22	LEU
18	Bs	29	ARG

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Mol	Chain	Res	Type
18	Bs	33	THR
18	Bs	37	ARG
18	Bs	43	GLU
18	Bs	44	MET
18	Bs	56	GLN
18	Bs	70	LYS
19	Bt	24	LEU
19	Bt	26	ASN
19	Bt	73	HIS
19	Bt	75	ASN
19	Bt	93	GLU
20	Bu	12	LYS
21	By	5	LEU
21	By	14	GLU
21	By	16	ARG
21	By	17	LYS
21	By	24	GLU
21	By	30	LEU
21	By	44	LEU
21	By	64	TYR
21	By	74	PHE
26	BC	32	GLU
26	BC	39	ASP
26	BC	50	ILE
26	BC	53	ARG
26	BC	173	HIS
26	BC	181	PHE
26	BC	185	LYS
27	BD	24	ILE
27	BD	26	LYS
27	BD	27	THR
27	BD	35	LYS
27	BD	46	GLN
27	BD	48	ARG
27	BD	49	ILE
27	BD	54	ARG
27	BD	61	LEU
27	BD	65	ILE
27	BD	72	LYS
27	BD	83	GLU
27	BD	94	LEU
27	BD	95	LEU

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Mol	Chain	Res	Type
27	BD	99	ASP
27	BD	103	ARG
27	BD	111	LEU
27	BD	116	GLN
27	BD	117	VAL
27	BD	122	ASP
27	BD	166	GLN
27	BD	192	THR
27	BD	198	ASN
27	BD	200	ASP
27	BD	221	VAL
27	BD	229	VAL
27	BD	246	PRO
27	BD	257	LEU
27	BD	259	THR
27	BD	260	ARG
27	BD	268	ARG
27	BD	270	ILE
27	BD	271	ILE
28	BE	12	THR
28	BE	14	ILE
28	BE	18	ASP
28	BE	49	LEU
28	BE	53	PRO
28	BE	55	ASN
28	BE	60	ASN
28	BE	63	LEU
28	BE	64	LYS
28	BE	67	PHE
28	BE	78	LEU
28	BE	79	ARG
28	BE	87	GLU
28	BE	89	ASP
28	BE	94	GLU
28	BE	95	ILE
28	BE	101	ARG
28	BE	107	THR
28	BE	111	ARG
28	BE	113	PHE
28	BE	119	ARG
28	BE	128	SER
28	BE	129	HIS

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Mol	Chain	Res	Type
28	BE	134	ILE
28	BE	144	ARG
28	BE	169	ASN
28	BE	178	GLU
28	BE	184	VAL
28	BE	191	PRO
28	BE	197	ILE
28	BE	202	LYS
28	BE	203	LYS
29	BF	23	ASP
29	BF	28	ILE
29	BF	33	LEU
29	BF	53	THR
29	BF	65	TRP
29	BF	66	PRO
29	BF	88	VAL
29	BF	106	ARG
29	BF	110	LEU
29	BF	125	LEU
29	BF	129	PHE
29	BF	149	ASP
29	BF	158	THR
29	BF	160	ASN
29	BF	164	ARG
29	BF	165	ARG
29	BF	188	ARG
29	BF	196	LEU
29	BF	199	TRP
29	BF	200	GLU
30	BG	3	LEU
30	BG	4	ASP
30	BG	12	TYR
30	BG	16	ARG
30	BG	20	ILE
30	BG	21	ARG
30	BG	22	ARG
30	BG	36	LYS
30	BG	43	LEU
30	BG	45	GLU
30	BG	51	ARG
30	BG	58	GLN
30	BG	63	ILE

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Mol	Chain	Res	Type
30	BG	77	ILE
30	BG	80	PHE
30	BG	83	ARG
30	BG	86	MET
30	BG	87	PRO
30	BG	97	ASP
30	BG	108	ASN
30	BG	111	LEU
30	BG	113	ARG
30	BG	125	PHE
30	BG	126	ASP
30	BG	143	GLU
30	BG	150	ASP
30	BG	152	LEU
31	BH	9	ILE
31	BH	15	VAL
31	BH	40	GLU
31	BH	42	ARG
31	BH	46	GLU
31	BH	53	GLU
31	BH	60	ARG
31	BH	88	LEU
31	BH	94	TYR
31	BH	116	GLU
31	BH	143	GLN
31	BH	153	LYS
31	BH	157	TYR
31	BH	164	TYR
31	BH	170	ARG
32	BI	1	MET
32	BI	12	LEU
32	BI	20	ASP
32	BI	67	ARG
32	BI	68	LEU
32	BI	74	ASN
32	BI	81	VAL
32	BI	85	GLU
32	BI	92	VAL
32	BI	109	ILE
32	BI	110	ASP
32	BI	113	ARG
32	BI	120	ILE

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Mol	Chain	Res	Type
32	BI	123	LEU
32	BI	130	TYR
32	BI	132	PRO
32	BI	136	VAL
32	BI	139	GLN
32	BI	140	LEU
34	BN	4	TYR
34	BN	12	ARG
34	BN	23	LEU
34	BN	28	THR
34	BN	32	THR
34	BN	39	ARG
34	BN	48	MET
34	BN	55	VAL
34	BN	85	ILE
34	BN	87	LEU
34	BN	108	PRO
34	BN	112	LEU
34	BN	120	LEU
34	BN	121	LYS
34	BN	130	HIS
35	BO	3	GLN
35	BO	10	VAL
35	BO	24	VAL
35	BO	32	TYR
35	BO	35	VAL
35	BO	48	PRO
35	BO	73	ASP
35	BO	85	VAL
35	BO	96	THR
35	BO	98	VAL
35	BO	117	LEU
36	BP	6	LEU
36	BP	13	ASN
36	BP	16	ARG
36	BP	18	ARG
36	BP	32	THR
36	BP	57	THR
36	BP	61	ARG
36	BP	64	LYS
36	BP	81	GLN
36	BP	85	LEU

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Mol	Chain	Res	Type
36	BP	91	PHE
36	BP	95	VAL
36	BP	98	GLU
36	BP	105	LEU
36	BP	108	LYS
36	BP	110	TYR
36	BP	115	LEU
36	BP	125	VAL
36	BP	130	PHE
36	BP	135	LEU
37	BQ	38	GLU
37	BQ	45	GLN
37	BQ	54	MET
37	BQ	55	VAL
37	BQ	67	ARG
37	BQ	79	LEU
37	BQ	89	ASN
37	BQ	110	THR
37	BQ	135	ASP
37	BQ	138	ASP
38	BR	2	ARG
38	BR	8	ARG
38	BR	29	LEU
38	BR	65	LEU
38	BR	67	LEU
38	BR	76	VAL
38	BR	79	LEU
38	BR	94	TYR
38	BR	97	VAL
38	BR	99	LYS
38	BR	100	LEU
38	BR	113	LEU
38	BR	116	LEU
38	BR	118	GLU
39	BS	11	LYS
39	BS	12	PHE
39	BS	15	ARG
39	BS	24	LEU
39	BS	36	TYR
39	BS	40	ILE
39	BS	54	LEU
39	BS	67	ARG

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Mol	Chain	Res	Type
39	BS	83	LYS
39	BS	89	ARG
39	BS	92	TYR
39	BS	97	ARG
39	BS	101	LEU
39	BS	106	ARG
40	BT	3	ARG
40	BT	13	ARG
40	BT	14	TYR
40	BT	22	PHE
40	BT	24	PRO
40	BT	32	TYR
40	BT	41	ARG
40	BT	51	ARG
40	BT	58	ASN
40	BT	65	LYS
40	BT	78	LEU
40	BT	82	LEU
40	BT	89	VAL
40	BT	93	ARG
40	BT	96	ARG
40	BT	99	LEU
40	BT	123	GLN
40	BT	125	ARG
40	BT	128	GLU
41	BU	3	ARG
41	BU	8	VAL
41	BU	14	HIS
41	BU	16	LYS
41	BU	20	LEU
41	BU	59	ARG
41	BU	60	LEU
41	BU	66	ASN
41	BU	69	CYS
41	BU	74	LEU
41	BU	83	LEU
41	BU	101	ARG
41	BU	108	GLU
42	BV	1	MET
42	BV	5	VAL
42	BV	13	ARG
42	BV	16	PRO

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Mol	Chain	Res	Type
42	BV	18	LEU
42	BV	19	LYS
42	BV	21	ARG
42	BV	39	LEU
42	BV	40	LEU
42	BV	46	VAL
42	BV	61	VAL
42	BV	66	ARG
42	BV	75	PHE
42	BV	82	ARG
42	BV	91	TYR
42	BV	95	LEU
42	BV	99	ILE
43	BW	11	ARG
43	BW	20	VAL
43	BW	23	LEU
43	BW	51	LEU
43	BW	52	GLU
43	BW	60	ASN
43	BW	63	ASP
43	BW	70	TYR
43	BW	75	TYR
43	BW	107	LEU
44	BX	12	VAL
44	BX	23	GLU
44	BX	27	THR
44	BX	28	PHE
44	BX	43	VAL
44	BX	53	LYS
44	BX	57	LEU
44	BX	68	ARG
44	BX	76	ARG
44	BX	80	ILE
44	BX	83	VAL
45	BY	2	ARG
45	BY	6	HIS
45	BY	7	VAL
45	BY	9	LYS
45	BY	28	LYS
45	BY	29	GLU
45	BY	32	PRO
45	BY	53	PRO

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Mol	Chain	Res	Type
45	BY	60	PHE
45	BY	64	GLU
45	BY	66	PRO
45	BY	77	PRO
45	BY	83	THR
45	BY	84	ARG
45	BY	89	PHE
45	BY	90	LEU
46	BZ	13	GLU
46	BZ	23	LYS
46	BZ	31	ARG
46	BZ	38	TYR
46	BZ	40	ASP
46	BZ	41	LEU
46	BZ	44	PHE
46	BZ	61	LEU
46	BZ	70	LEU
46	BZ	72	ARG
46	BZ	81	ARG
46	BZ	87	ASP
46	BZ	89	PHE
46	BZ	103	ARG
46	BZ	112	ARG
46	BZ	127	LYS
46	BZ	144	LEU
46	BZ	148	ASP
46	BZ	150	LEU
46	BZ	151	HIS
46	BZ	155	LEU
46	BZ	157	LEU
46	BZ	163	LEU
46	BZ	167	PRO
46	BZ	171	ILE
46	BZ	175	VAL
46	BZ	177	PRO
46	BZ	179	ASP
47	B0	10	THR
47	B0	11	ARG
47	B0	14	ARG
47	B0	20	ARG
47	B0	36	ILE
47	B0	38	VAL

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Mol	Chain	Res	Type
47	B0	75	LEU
48	B1	4	VAL
48	B1	11	ARG
48	B1	20	ARG
48	B1	30	VAL
48	B1	35	THR
48	B1	39	LYS
48	B1	40	ARG
48	B1	41	ARG
48	B1	45	ASN
48	B1	46	LEU
48	B1	58	ILE
48	B1	59	THR
48	B1	67	ILE
48	B1	73	LEU
48	B1	82	LEU
48	B1	95	LEU
49	B2	2	LYS
49	B2	3	LEU
49	B2	16	LEU
49	B2	30	ARG
49	B2	32	LEU
49	B2	34	GLU
49	B2	46	GLN
49	B2	51	ARG
49	B2	53	LEU
49	B2	68	ARG
50	B3	8	LEU
50	B3	9	VAL
50	B3	40	THR
50	B3	46	ASN
50	B3	58	VAL
51	B4	1	MET
51	B4	5	ILE
51	B4	13	ARG
51	B4	20	ASN
51	B4	25	TYR
51	B4	28	LYS
51	B4	30	GLU
51	B4	34	GLU
51	B4	53	GLU
51	B4	55	ARG

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Mol	Chain	Res	Type
52	B5	11	THR
52	B5	25	LEU
52	B5	44	THR
52	B5	52	TYR
52	B5	55	ARG
53	B6	9	LEU
53	B6	10	LEU
53	B6	11	LEU
53	B6	15	GLU
53	B6	18	ARG
53	B6	30	THR
53	B6	31	PRO
53	B6	34	LEU
53	B6	42	TRP
54	B7	4	THR
54	B7	8	ASN
54	B7	41	ARG
55	B8	4	MET
55	B8	8	LYS
55	B8	30	ARG
55	B8	31	HIS
55	B8	32	LEU
55	B8	33	ASN
55	B8	34	TRP
55	B8	44	LYS
55	B8	47	LYS
55	B8	61	LEU
55	B8	64	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (327) such sidechains are listed below:

Mol	Chain	Res	Type
1	Ab	37	ASN
1	Ab	40	HIS
1	Ab	78	GLN
1	Ab	110	GLN
1	Ab	135	GLN
1	Ab	146	GLN
1	Ab	204	ASN
2	Ac	6	HIS
2	Ac	69	HIS
2	Ac	107	GLN

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Mol	Chain	Res	Type
2	Ac	123	GLN
2	Ac	136	GLN
2	Ac	170	GLN
2	Ac	181	ASN
3	Ad	42	GLN
3	Ad	62	GLN
3	Ad	77	ASN
3	Ad	129	ASN
3	Ad	161	ASN
4	Ae	72	GLN
4	Ae	73	ASN
4	Ae	78	HIS
4	Ae	141	GLN
5	Af	7	ASN
5	Af	18	GLN
5	Af	27	GLN
5	Af	32	ASN
5	Af	73	ASN
5	Af	100	ASN
6	Ag	13	GLN
6	Ag	28	ASN
6	Ag	64	GLN
6	Ag	68	ASN
6	Ag	86	GLN
6	Ag	97	GLN
6	Ag	106	GLN
6	Ag	122	HIS
6	Ag	148	ASN
8	Ai	31	GLN
8	Ai	58	HIS
8	Ai	124	GLN
9	Aj	56	HIS
9	Aj	78	ASN
10	Ak	13	GLN
10	Ak	78	GLN
10	Ak	117	ASN
11	Al	8	ASN
11	Al	9	GLN
11	Al	49	ASN
11	Al	75	HIS
12	Am	40	ASN
12	Am	77	ASN

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Mol	Chain	Res	Type
12	Am	92	HIS
12	Am	101	GLN
14	Ao	9	GLN
14	Ao	13	GLN
14	Ao	37	ASN
14	Ao	46	HIS
15	Ap	76	GLN
16	Aq	16	GLN
16	Aq	26	GLN
16	Aq	94	ASN
17	Ar	36	ASN
18	As	14	HIS
18	As	23	ASN
19	At	16	HIS
19	At	26	ASN
19	At	42	GLN
19	At	75	ASN
21	Ay	25	GLN
21	Ay	42	ASN
21	Ay	65	GLN
26	AC	57	GLN
26	AC	166	ASN
27	AD	58	HIS
27	AD	96	HIS
27	AD	126	GLN
27	AD	166	GLN
27	AD	186	HIS
27	AD	198	ASN
28	AE	48	GLN
28	AE	54	GLN
28	AE	55	ASN
28	AE	129	HIS
28	AE	143	ASN
28	AE	169	ASN
28	AE	192	ASN
29	AF	8	GLN
29	AF	40	GLN
29	AF	69	HIS
29	AF	75	HIS
29	AF	133	ASN
29	AF	160	ASN
29	AF	169	ASN

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Mol	Chain	Res	Type
30	AG	27	ASN
30	AG	40	ASN
30	AG	79	ASN
31	AH	65	HIS
31	AH	74	ASN
31	AH	139	GLN
31	AH	147	ASN
32	AI	74	ASN
32	AI	104	GLN
32	AI	139	GLN
34	AN	56	ASN
34	AN	69	GLN
34	AN	128	HIS
35	AO	5	GLN
35	AO	82	ASN
36	AP	13	ASN
36	AP	68	GLN
36	AP	84	ASN
36	AP	128	HIS
37	AQ	45	GLN
37	AQ	123	HIS
38	AR	23	ASN
38	AR	24	GLN
38	AR	53	HIS
38	AR	71	GLN
39	AS	34	HIS
40	AT	38	ASN
40	AT	43	GLN
40	AT	55	ASN
40	AT	90	GLN
40	AT	123	GLN
41	AU	44	ASN
41	AU	49	HIS
41	AU	66	ASN
41	AU	81	HIS
41	AU	117	GLN
42	AV	11	GLN
43	AW	34	ASN
43	AW	57	ASN
43	AW	61	ASN
43	AW	102	HIS
44	AX	31	HIS

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Mol	Chain	Res	Type
44	AX	41	ASN
44	AX	55	ASN
46	AZ	34	ASN
46	AZ	118	GLN
46	AZ	132	ASN
47	A0	12	ASN
47	A0	29	GLN
47	A0	35	ASN
47	A0	70	GLN
48	A1	19	GLN
48	A1	45	ASN
48	A1	47	GLN
49	A2	47	ASN
49	A2	56	GLN
49	A2	70	GLN
50	A3	19	GLN
50	A3	46	ASN
50	A3	52	HIS
51	A4	6	HIS
51	A4	20	ASN
51	A4	40	HIS
51	A4	46	GLN
52	A5	4	HIS
52	A5	43	HIS
53	A6	32	ASN
54	A7	8	ASN
55	A8	33	ASN
55	A8	43	GLN
56	A9	34	GLN
1	Bb	37	ASN
1	Bb	40	HIS
1	Bb	78	GLN
1	Bb	110	GLN
1	Bb	135	GLN
1	Bb	146	GLN
1	Bb	204	ASN
2	Bc	6	HIS
2	Bc	69	HIS
2	Bc	107	GLN
2	Bc	136	GLN
2	Bc	170	GLN
2	Bc	181	ASN

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Mol	Chain	Res	Type
3	Bd	42	GLN
3	Bd	62	GLN
3	Bd	77	ASN
3	Bd	129	ASN
3	Bd	161	ASN
4	Be	72	GLN
4	Be	73	ASN
4	Be	78	HIS
4	Be	141	GLN
5	Bf	7	ASN
5	Bf	18	GLN
5	Bf	27	GLN
5	Bf	32	ASN
5	Bf	73	ASN
5	Bf	100	ASN
6	Bg	13	GLN
6	Bg	28	ASN
6	Bg	64	GLN
6	Bg	68	ASN
6	Bg	86	GLN
6	Bg	97	GLN
6	Bg	106	GLN
6	Bg	122	HIS
6	Bg	148	ASN
7	Bh	15	ASN
8	Bi	31	GLN
8	Bi	58	HIS
8	Bi	124	GLN
9	Bj	56	HIS
9	Bj	78	ASN
10	Bk	13	GLN
10	Bk	78	GLN
10	Bk	117	ASN
11	Bl	8	ASN
11	Bl	9	GLN
11	Bl	49	ASN
11	Bl	75	HIS
12	Bm	40	ASN
12	Bm	77	ASN
12	Bm	101	GLN
14	Bo	9	GLN
14	Bo	13	GLN

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Mol	Chain	Res	Type
14	Bo	37	ASN
14	Bo	46	HIS
15	Bp	76	GLN
16	Bq	16	GLN
16	Bq	26	GLN
16	Bq	94	ASN
17	Br	36	ASN
18	Bs	14	HIS
18	Bs	23	ASN
19	Bt	16	HIS
19	Bt	26	ASN
19	Bt	42	GLN
19	Bt	75	ASN
21	By	25	GLN
21	By	65	GLN
26	BC	57	GLN
26	BC	166	ASN
27	BD	58	HIS
27	BD	96	HIS
27	BD	126	GLN
27	BD	166	GLN
27	BD	186	HIS
27	BD	198	ASN
28	BE	48	GLN
28	BE	54	GLN
28	BE	55	ASN
28	BE	129	HIS
28	BE	143	ASN
28	BE	169	ASN
28	BE	192	ASN
29	BF	8	GLN
29	BF	40	GLN
29	BF	69	HIS
29	BF	75	HIS
29	BF	133	ASN
29	BF	160	ASN
29	BF	169	ASN
29	BF	203	GLN
30	BG	40	ASN
30	BG	58	GLN
30	BG	130	ASN
31	BH	65	HIS

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Mol	Chain	Res	Type
31	BH	74	ASN
31	BH	139	GLN
31	BH	147	ASN
32	BI	74	ASN
32	BI	139	GLN
34	BN	45	ASN
34	BN	56	ASN
34	BN	69	GLN
34	BN	128	HIS
35	BO	5	GLN
35	BO	82	ASN
36	BP	13	ASN
36	BP	68	GLN
36	BP	84	ASN
36	BP	128	HIS
37	BQ	45	GLN
37	BQ	123	HIS
38	BR	13	HIS
38	BR	23	ASN
38	BR	24	GLN
38	BR	53	HIS
38	BR	71	GLN
39	BS	34	HIS
39	BS	95	HIS
40	BT	38	ASN
40	BT	43	GLN
40	BT	55	ASN
40	BT	90	GLN
40	BT	123	GLN
41	BU	44	ASN
41	BU	49	HIS
41	BU	66	ASN
41	BU	81	HIS
41	BU	117	GLN
42	BV	11	GLN
43	BW	34	ASN
43	BW	57	ASN
43	BW	61	ASN
43	BW	102	HIS
44	BX	31	HIS
44	BX	41	ASN
44	BX	55	ASN

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Mol	Chain	Res	Type
46	BZ	34	ASN
46	BZ	118	GLN
46	BZ	151	HIS
47	B0	12	ASN
47	B0	29	GLN
47	B0	35	ASN
47	B0	70	GLN
48	B1	45	ASN
48	B1	56	GLN
49	B2	47	ASN
50	B3	19	GLN
50	B3	46	ASN
50	B3	52	HIS
51	B4	20	ASN
51	B4	40	HIS
51	B4	46	GLN
52	B5	4	HIS
52	B5	43	HIS
53	B6	32	ASN
54	B7	8	ASN
55	B8	33	ASN
55	B8	43	GLN
56	B9	34	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	Aa	1503/1504 (99%)	211 (14%)	0
22	Ba	1503/1504 (99%)	210 (13%)	0
23	Ax	11/14 (78%)	8 (72%)	0
23	Bx	11/14 (78%)	8 (72%)	0
24	Av	76/77 (98%)	15 (19%)	0
24	Bv	76/77 (98%)	17 (22%)	0
25	Aw	76/77 (98%)	11 (14%)	0
25	Bw	76/77 (98%)	8 (10%)	0
57	AA	2847/2848 (99%)	521 (18%)	55 (1%)
57	BA	2847/2848 (99%)	517 (18%)	56 (1%)
58	AB	118/119 (99%)	21 (17%)	1 (0%)
58	BB	118/119 (99%)	21 (17%)	1 (0%)
All	All	9262/9278 (99%)	1568 (16%)	113 (1%)

All (1568) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
22	Aa	9	G
22	Aa	31	G
22	Aa	32	A
22	Aa	39	G
22	Aa	47	C
22	Aa	48	C
22	Aa	51	A
22	Aa	61	G
22	Aa	79	G
22	Aa	80	G
22	Aa	81	U
22	Aa	84	U
22	Aa	90	U
22	Aa	97	G
22	Aa	101	A
22	Aa	116	A
22	Aa	120	A
22	Aa	121	C
22	Aa	131	C
22	Aa	144	G
22	Aa	150	C
22	Aa	172	A
22	Aa	182	U
22	Aa	189(H)	G
22	Aa	195	A
22	Aa	197	A
22	Aa	201	C
22	Aa	203	U
22	Aa	204	U
22	Aa	216	G
22	Aa	244	U
22	Aa	247	G
22	Aa	251	G
22	Aa	266	G
22	Aa	267	C
22	Aa	279	A
22	Aa	289	G
22	Aa	321	A
22	Aa	328	C
22	Aa	329	A
22	Aa	332	G
22	Aa	345	C
22	Aa	352	C

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Mol	Chain	Res	Type
22	Aa	353	A
22	Aa	354	G
22	Aa	367	U
22	Aa	372	C
22	Aa	373	A
22	Aa	397	A
22	Aa	412	A
22	Aa	413	G
22	Aa	414	A
22	Aa	421	U
22	Aa	422	C
22	Aa	428	G
22	Aa	429	U
22	Aa	430	A
22	Aa	435	C
22	Aa	437	U
22	Aa	439	A
22	Aa	442	C
22	Aa	452	A
22	Aa	461	A
22	Aa	484	G
22	Aa	485	G
22	Aa	496	A
22	Aa	498	U
22	Aa	509	A
22	Aa	510	A
22	Aa	511	C
22	Aa	518	C
22	Aa	527	G
22	Aa	532	A
22	Aa	533	A
22	Aa	534	U
22	Aa	547	A
22	Aa	559	A
22	Aa	561	U
22	Aa	562	C
22	Aa	572	A
22	Aa	573	A
22	Aa	575	G
22	Aa	576	G
22	Aa	577	G
22	Aa	588	G

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Mol	Chain	Res	Type
22	Aa	631	G
22	Aa	632	A
22	Aa	653	A
22	Aa	665	A
22	Aa	687	A
22	Aa	688	G
22	Aa	724	G
22	Aa	731	G
22	Aa	749	C
22	Aa	755	G
22	Aa	793	U
22	Aa	794	A
22	Aa	816	A
22	Aa	817	C
22	Aa	818	G
22	Aa	819	A
22	Aa	821	G
22	Aa	828	A
22	Aa	833	U
22	Aa	839	U
22	Aa	840	C
22	Aa	841	U
22	Aa	848	C
22	Aa	859	A
22	Aa	902	G
22	Aa	913	A
22	Aa	914	A
22	Aa	927	G
22	Aa	934	C
22	Aa	935	A
22	Aa	960	U
22	Aa	961	U
22	Aa	966	G
22	Aa	968	A
22	Aa	969	A
22	Aa	971	G
22	Aa	974	A
22	Aa	975	A
22	Aa	976	G
22	Aa	977	A
22	Aa	978	A
22	Aa	980	C

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Mol	Chain	Res	Type
22	Aa	991	U
22	Aa	992	U
22	Aa	993	G
22	Aa	1001(A)	G
22	Aa	1004	A
22	Aa	1005	A
22	Aa	1024	G
22	Aa	1026	G
22	Aa	1050	G
22	Aa	1054	C
22	Aa	1068	G
22	Aa	1094	G
22	Aa	1095	U
22	Aa	1101	A
22	Aa	1108	G
22	Aa	1117	G
22	Aa	1124	G
22	Aa	1125	U
22	Aa	1126	U
22	Aa	1129	C
22	Aa	1130	A
22	Aa	1131	G
22	Aa	1136	U
22	Aa	1137	C
22	Aa	1138	G
22	Aa	1139	G
22	Aa	1146	A
22	Aa	1152	A
22	Aa	1159	U
22	Aa	1182	G
22	Aa	1184	G
22	Aa	1196	U
22	Aa	1197	G
22	Aa	1202	G
22	Aa	1212	U
22	Aa	1213	A
22	Aa	1225	A
22	Aa	1226	C
22	Aa	1227	A
22	Aa	1238	A
22	Aa	1249	C
22	Aa	1256	A

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Mol	Chain	Res	Type
22	Aa	1257	U
22	Aa	1280	A
22	Aa	1281	U
22	Aa	1282	C
22	Aa	1286	A
22	Aa	1287	A
22	Aa	1288	A
22	Aa	1294	G
22	Aa	1300	G
22	Aa	1301	U
22	Aa	1302	U
22	Aa	1305	G
22	Aa	1317	C
22	Aa	1320	C
22	Aa	1322	C
22	Aa	1323	G
22	Aa	1331	G
22	Aa	1336	C
22	Aa	1346	A
22	Aa	1347	G
22	Aa	1363	C
22	Aa	1364	U
22	Aa	1398	A
22	Aa	1419	G
22	Aa	1442	G
22	Aa	1442(A)	G
22	Aa	1442(B)	A
22	Aa	1447	A
22	Aa	1452	C
22	Aa	1457	G
22	Aa	1487	G
22	Aa	1492	A
22	Aa	1497	G
22	Aa	1499	A
22	Aa	1504	G
22	Aa	1505	G
22	Aa	1506	U
22	Aa	1507	A
22	Aa	1517	G
22	Aa	1520	G
22	Aa	1529	G
22	Aa	1530	G

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Mol	Chain	Res	Type
23	Ax	10	G
23	Ax	11	U
23	Ax	12	A
23	Ax	13	A
23	Ax	14	A
23	Ax	15	A
23	Ax	18	G
23	Ax	19	U
24	Av	3	C
24	Av	5	G
24	Av	7	G
24	Av	8	U
24	Av	17(A)	U
24	Av	18	G
24	Av	19	G
24	Av	20	U
24	Av	21	A
24	Av	47	U
24	Av	48	C
24	Av	63	G
24	Av	67	C
24	Av	75	C
24	Av	76	A
25	Aw	2	G
25	Aw	5	G
25	Aw	7	G
25	Aw	8	U
25	Aw	17	C
25	Aw	17(A)	U
25	Aw	18	G
25	Aw	19	G
25	Aw	20	U
25	Aw	47	U
25	Aw	48	C
57	AA	9	U
57	AA	10	G
57	AA	34	C
57	AA	35	G
57	AA	45	C
57	AA	49	A
57	AA	50	U
57	AA	55	G

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Mol	Chain	Res	Type
57	AA	71	A
57	AA	72	U
57	AA	75	G
57	AA	88	G
57	AA	90	U
57	AA	94	C
57	AA	100	G
57	AA	102	G
57	AA	118	A
57	AA	120	U
57	AA	129	C
57	AA	131	G
57	AA	139(A)	G
57	AA	141	A
57	AA	146	G
57	AA	154(A)	C
57	AA	155	U
57	AA	156	U
57	AA	158	U
57	AA	171	G
57	AA	173	G
57	AA	174	C
57	AA	181	A
57	AA	182	A
57	AA	196	A
57	AA	197	A
57	AA	199	A
57	AA	204	A
57	AA	205	G
57	AA	215	G
57	AA	216	A
57	AA	221	A
57	AA	222	A
57	AA	228	A
57	AA	229	A
57	AA	230	U
57	AA	248	G
57	AA	252	G
57	AA	271(I)	G
57	AA	271(J)	C
57	AA	271(N)	U
57	AA	271(O)	C

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Mol	Chain	Res	Type
57	AA	271(P)	C
57	AA	271(R)	G
57	AA	272	G
57	AA	272(B)	G
57	AA	272(H)	C
57	AA	272(I)	U
57	AA	274	G
57	AA	276	A
57	AA	277	C
57	AA	288	C
57	AA	299	A
57	AA	311	A
57	AA	329	G
57	AA	330	A
57	AA	332	A
57	AA	333	G
57	AA	352	G
57	AA	353	G
57	AA	356	G
57	AA	363(B)	G
57	AA	363(E)	U
57	AA	363(F)	A
57	AA	365	C
57	AA	372	G
57	AA	386	G
57	AA	388	G
57	AA	396	G
57	AA	405	U
57	AA	406	G
57	AA	411	G
57	AA	412	A
57	AA	428	A
57	AA	444	C
57	AA	448	U
57	AA	454	A
57	AA	456	C
57	AA	457	A
57	AA	470	A
57	AA	475	U
57	AA	481	G
57	AA	494	G
57	AA	505	A

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Mol	Chain	Res	Type
57	AA	508	G
57	AA	509	C
57	AA	528	A
57	AA	530	G
57	AA	531	C
57	AA	532	A
57	AA	533	G
57	AA	544	G
57	AA	547	A
57	AA	548	A
57	AA	549	G
57	AA	563	G
57	AA	573	G
57	AA	588	U
57	AA	603	A
57	AA	604	G
57	AA	607	U
57	AA	613	G
57	AA	614(B)	G
57	AA	615	G
57	AA	620	G
57	AA	622	G
57	AA	627	A
57	AA	637	A
57	AA	645	C
57	AA	646	A
57	AA	653	A
57	AA	654	A
57	AA	654(C)	G
57	AA	654(I)	C
57	AA	654(J)	A
57	AA	654(K)	C
57	AA	654(L)	G
57	AA	654(M)	C
57	AA	654(T)	C
57	AA	655	A
57	AA	668	G
57	AA	669	G
57	AA	670	A
57	AA	673	C
57	AA	686	G
57	AA	708	C

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Mol	Chain	Res	Type
57	AA	717	G
57	AA	722	A
57	AA	730	C
57	AA	753	C
57	AA	765	G
57	AA	776	G
57	AA	782	A
57	AA	784	A
57	AA	785	G
57	AA	790	C
57	AA	791	C
57	AA	805	G
57	AA	812	C
57	AA	819	A
57	AA	827	U
57	AA	828	U
57	AA	830	G
57	AA	848	G
57	AA	856	C
57	AA	859	G
57	AA	866	A
57	AA	869	G
57	AA	878	A
57	AA	890	A
57	AA	896	A
57	AA	897	C
57	AA	910	A
57	AA	917	A
57	AA	927	G
57	AA	932	G
57	AA	941	A
57	AA	945	A
57	AA	946	G
57	AA	958	U
57	AA	959	A
57	AA	961	C
57	AA	965	C
57	AA	974	G
57	AA	975	C
57	AA	983	A
57	AA	991	C
57	AA	996	A

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Mol	Chain	Res	Type
57	AA	1012	U
57	AA	1013	C
57	AA	1015	G
57	AA	1022	G
57	AA	1023	U
57	AA	1025	G
57	AA	1026	U
57	AA	1033	U
57	AA	1038	C
57	AA	1039	G
57	AA	1041	C
57	AA	1045	A
57	AA	1046	A
57	AA	1047	G
57	AA	1049	C
57	AA	1052	C
57	AA	1053	C
57	AA	1106	A
57	AA	1110	G
57	AA	1112	G
57	AA	1113	U
57	AA	1114	G
57	AA	1116	C
57	AA	1129	A
57	AA	1130	U
57	AA	1135	C
57	AA	1136	G
57	AA	1142	U
57	AA	1155	A
57	AA	1171	G
57	AA	1173	G
57	AA	1174	A
57	AA	1175	U
57	AA	1176	G
57	AA	1178	C
57	AA	1180	C
57	AA	1195	G
57	AA	1205	U
57	AA	1210	A
57	AA	1211	U
57	AA	1221	C
57	AA	1247	A

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Mol	Chain	Res	Type
57	AA	1248	G
57	AA	1250	G
57	AA	1253	A
57	AA	1256	G
57	AA	1265	A
57	AA	1271	G
57	AA	1272	A
57	AA	1273	U
57	AA	1281	G
57	AA	1300	U
57	AA	1301	A
57	AA	1314	C
57	AA	1319	G
57	AA	1321	A
57	AA	1349	A
57	AA	1359	A
57	AA	1368	G
57	AA	1379	A
57	AA	1380	G
57	AA	1384	A
57	AA	1385	G
57	AA	1386	C
57	AA	1390	U
57	AA	1395	A
57	AA	1406	U
57	AA	1407	C
57	AA	1416	G
57	AA	1417	C
57	AA	1419	A
57	AA	1420	U
57	AA	1427	A
57	AA	1428	C
57	AA	1445	A
57	AA	1449	A
57	AA	1450	G
57	AA	1460	A
57	AA	1461	G
57	AA	1467	C
57	AA	1471	A
57	AA	1475	G
57	AA	1478	G
57	AA	1481	U

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Mol	Chain	Res	Type
57	AA	1482	G
57	AA	1485	G
57	AA	1488	G
57	AA	1490	A
57	AA	1491	G
57	AA	1493	C
57	AA	1494	A
57	AA	1495	A
57	AA	1497	U
57	AA	1501	C
57	AA	1502	C
57	AA	1505	C
57	AA	1509	C
57	AA	1509(A)	A
57	AA	1528(A)	A
57	AA	1534	U
57	AA	1539	G
57	AA	1541	G
57	AA	1542	A
57	AA	1543	C
57	AA	1544	A
57	AA	1547	C
57	AA	1554	A
57	AA	1558	A
57	AA	1559	G
57	AA	1569	A
57	AA	1578	U
57	AA	1579	A
57	AA	1583	A
57	AA	1584	C
57	AA	1586	A
57	AA	1588	C
57	AA	1591	G
57	AA	1598	C
57	AA	1603	A
57	AA	1608	A
57	AA	1609	A
57	AA	1616	A
57	AA	1617	C
57	AA	1618	A
57	AA	1640	C
57	AA	1647	G

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Mol	Chain	Res	Type
57	AA	1648	C
57	AA	1653	G
57	AA	1654	A
57	AA	1674	G
57	AA	1686	C
57	AA	1694	C
57	AA	1696	G
57	AA	1721	G
57	AA	1722	A
57	AA	1739	U
57	AA	1740	G
57	AA	1742	G
57	AA	1748	G
57	AA	1763	G
57	AA	1764	G
57	AA	1773	A
57	AA	1780	A
57	AA	1791	A
57	AA	1799	G
57	AA	1800	C
57	AA	1801	G
57	AA	1816	G
57	AA	1820	U
57	AA	1821	A
57	AA	1829	A
57	AA	1835	G
57	AA	1838	C
57	AA	1839	G
57	AA	1846	G
57	AA	1847	A
57	AA	1848	A
57	AA	1858	G
57	AA	1865	G
57	AA	1866	C
57	AA	1878	G
57	AA	1881	C
57	AA	1882	C
57	AA	1885	A
57	AA	1888	G
57	AA	1889	A
57	AA	1900	A
57	AA	1903	G

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Mol	Chain	Res	Type
57	AA	1906	G
57	AA	1912	A
57	AA	1913	A
57	AA	1929	G
57	AA	1930	G
57	AA	1938	A
57	AA	1948	G
57	AA	1955	U
57	AA	1963	U
57	AA	1966	A
57	AA	1967	C
57	AA	1969	A
57	AA	1970	A
57	AA	1971	A
57	AA	1972	A
57	AA	1982	C
57	AA	1987	G
57	AA	1991	U
57	AA	1992	G
57	AA	1993	U
57	AA	1997	G
57	AA	2023	G
57	AA	2031	A
57	AA	2032	G
57	AA	2033	A
57	AA	2034	U
57	AA	2036	C
57	AA	2043	C
57	AA	2052	G
57	AA	2055	C
57	AA	2056	G
57	AA	2060	A
57	AA	2061	G
57	AA	2062	A
57	AA	2063	C
57	AA	2069	G
57	AA	2093	G
57	AA	2096	U
57	AA	2100	G
57	AA	2103	C
57	AA	2104	G
57	AA	2110	G

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Mol	Chain	Res	Type
57	AA	2112	G
57	AA	2116	G
57	AA	2118	U
57	AA	2127	G
57	AA	2131	G
57	AA	2132	U
57	AA	2133	G
57	AA	2148	G
57	AA	2159	G
57	AA	2172	U
57	AA	2173	A
57	AA	2177	C
57	AA	2179	C
57	AA	2180	U
57	AA	2185	C
57	AA	2187	G
57	AA	2189	U
57	AA	2190	G
57	AA	2192	G
57	AA	2193	G
57	AA	2198	A
57	AA	2199	A
57	AA	2200	C
57	AA	2206	G
57	AA	2207	G
57	AA	2208	A
57	AA	2218	U
57	AA	2225	A
57	AA	2226	C
57	AA	2238	G
57	AA	2239	G
57	AA	2275	C
57	AA	2283	C
57	AA	2287	A
57	AA	2288	A
57	AA	2302	G
57	AA	2305	A
57	AA	2307	G
57	AA	2308	G
57	AA	2309	A
57	AA	2311	A
57	AA	2313	C

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Mol	Chain	Res	Type
57	AA	2316	C
57	AA	2319	G
57	AA	2320	A
57	AA	2334	G
57	AA	2336	A
57	AA	2342	C
57	AA	2347	C
57	AA	2350	C
57	AA	2360	A
57	AA	2361	A
57	AA	2383	G
57	AA	2385	C
57	AA	2396	G
57	AA	2400	G
57	AA	2402	C
57	AA	2406	U
57	AA	2423	U
57	AA	2424	C
57	AA	2425	A
57	AA	2429	G
57	AA	2430	A
57	AA	2435	A
57	AA	2439	A
57	AA	2441	C
57	AA	2448	A
57	AA	2459	A
57	AA	2465	C
57	AA	2468	G
57	AA	2469	A
57	AA	2470	G
57	AA	2472	G
57	AA	2476	A
57	AA	2477	C
57	AA	2482	G
57	AA	2484	G
57	AA	2491	U
57	AA	2502	G
57	AA	2505	G
57	AA	2518	A
57	AA	2520	C
57	AA	2524	G
57	AA	2529	G

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Mol	Chain	Res	Type
57	AA	2531	A
57	AA	2542	A
57	AA	2543	G
57	AA	2554	U
57	AA	2566	A
57	AA	2567	G
57	AA	2573	C
57	AA	2582	G
57	AA	2586	C
57	AA	2602	A
57	AA	2609	U
57	AA	2611	U
57	AA	2612	C
57	AA	2615	U
57	AA	2630	G
57	AA	2657	A
57	AA	2673	G
57	AA	2690	C
57	AA	2691	C
57	AA	2712	U
57	AA	2712(A)	A
57	AA	2713	A
57	AA	2720	U
57	AA	2726	U
57	AA	2733	A
57	AA	2752	C
57	AA	2762	G
57	AA	2765	A
57	AA	2766	G
57	AA	2778	A
57	AA	2780	G
57	AA	2787	C
57	AA	2789	C
57	AA	2790	A
57	AA	2791	C
57	AA	2794	C
57	AA	2801(A)	A
57	AA	2802	G
57	AA	2803	C
57	AA	2804	C
57	AA	2808	U
57	AA	2818	G

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Mol	Chain	Res	Type
57	AA	2820	A
57	AA	2821	A
57	AA	2833	G
57	AA	2834	G
57	AA	2849	U
57	AA	2872	G
57	AA	2879	C
57	AA	2893	G
57	AA	2897	U
58	AB	2	C
58	AB	8	U
58	AB	15	A
58	AB	16	G
58	AB	19	G
58	AB	22	U
58	AB	24	G
58	AB	27	C
58	AB	33	G
58	AB	41	U
58	AB	42	C
58	AB	45	A
58	AB	53	A
58	AB	67	G
58	AB	73	A
58	AB	75	G
58	AB	81	G
58	AB	82	G
58	AB	88	C
58	AB	110	G
58	AB	113	G
22	Ba	9	G
22	Ba	31	G
22	Ba	32	A
22	Ba	39	G
22	Ba	47	C
22	Ba	48	C
22	Ba	51	A
22	Ba	61	G
22	Ba	79	G
22	Ba	80	G
22	Ba	81	U
22	Ba	84	U

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Mol	Chain	Res	Type
22	Ba	90	U
22	Ba	97	G
22	Ba	101	A
22	Ba	116	A
22	Ba	120	A
22	Ba	121	C
22	Ba	131	C
22	Ba	144	G
22	Ba	150	C
22	Ba	172	A
22	Ba	182	U
22	Ba	189(H)	G
22	Ba	195	A
22	Ba	197	A
22	Ba	201	C
22	Ba	203	U
22	Ba	204	U
22	Ba	216	G
22	Ba	244	U
22	Ba	247	G
22	Ba	251	G
22	Ba	266	G
22	Ba	267	C
22	Ba	279	A
22	Ba	289	G
22	Ba	321	A
22	Ba	328	C
22	Ba	329	A
22	Ba	332	G
22	Ba	345	C
22	Ba	352	C
22	Ba	353	A
22	Ba	354	G
22	Ba	367	U
22	Ba	372	C
22	Ba	373	A
22	Ba	397	A
22	Ba	412	A
22	Ba	413	G
22	Ba	414	A
22	Ba	421	U
22	Ba	422	C

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Mol	Chain	Res	Type
22	Ba	428	G
22	Ba	429	U
22	Ba	430	A
22	Ba	435	C
22	Ba	437	U
22	Ba	439	A
22	Ba	442	C
22	Ba	452	A
22	Ba	461	A
22	Ba	484	G
22	Ba	485	G
22	Ba	496	A
22	Ba	498	U
22	Ba	509	A
22	Ba	510	A
22	Ba	511	C
22	Ba	518	C
22	Ba	527	G
22	Ba	532	A
22	Ba	533	A
22	Ba	534	U
22	Ba	547	A
22	Ba	559	A
22	Ba	561	U
22	Ba	562	C
22	Ba	572	A
22	Ba	573	A
22	Ba	575	G
22	Ba	576	G
22	Ba	577	G
22	Ba	588	G
22	Ba	631	G
22	Ba	632	A
22	Ba	653	A
22	Ba	665	A
22	Ba	687	A
22	Ba	688	G
22	Ba	731	G
22	Ba	749	C
22	Ba	755	G
22	Ba	793	U
22	Ba	794	A

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Mol	Chain	Res	Type
22	Ba	816	A
22	Ba	817	C
22	Ba	818	G
22	Ba	819	A
22	Ba	821	G
22	Ba	828	A
22	Ba	833	U
22	Ba	839	U
22	Ba	840	C
22	Ba	841	U
22	Ba	848	C
22	Ba	859	A
22	Ba	902	G
22	Ba	913	A
22	Ba	914	A
22	Ba	927	G
22	Ba	934	C
22	Ba	935	A
22	Ba	960	U
22	Ba	961	U
22	Ba	966	G
22	Ba	968	A
22	Ba	969	A
22	Ba	971	G
22	Ba	974	A
22	Ba	975	A
22	Ba	976	G
22	Ba	977	A
22	Ba	978	A
22	Ba	980	C
22	Ba	991	U
22	Ba	992	U
22	Ba	993	G
22	Ba	1001(A)	G
22	Ba	1004	A
22	Ba	1005	A
22	Ba	1024	G
22	Ba	1026	G
22	Ba	1050	G
22	Ba	1054	C
22	Ba	1068	G
22	Ba	1094	G

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Mol	Chain	Res	Type
22	Ba	1095	U
22	Ba	1101	A
22	Ba	1108	G
22	Ba	1117	G
22	Ba	1124	G
22	Ba	1125	U
22	Ba	1126	U
22	Ba	1129	C
22	Ba	1130	A
22	Ba	1131	G
22	Ba	1136	U
22	Ba	1137	C
22	Ba	1138	G
22	Ba	1139	G
22	Ba	1146	A
22	Ba	1152	A
22	Ba	1159	U
22	Ba	1182	G
22	Ba	1184	G
22	Ba	1196	U
22	Ba	1197	G
22	Ba	1202	G
22	Ba	1212	U
22	Ba	1213	A
22	Ba	1225	A
22	Ba	1226	C
22	Ba	1227	A
22	Ba	1238	A
22	Ba	1249	C
22	Ba	1256	A
22	Ba	1257	U
22	Ba	1280	A
22	Ba	1281	U
22	Ba	1282	C
22	Ba	1286	A
22	Ba	1287	A
22	Ba	1288	A
22	Ba	1294	G
22	Ba	1300	G
22	Ba	1301	U
22	Ba	1302	U
22	Ba	1305	G

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Mol	Chain	Res	Type
22	Ba	1317	C
22	Ba	1320	C
22	Ba	1322	C
22	Ba	1323	G
22	Ba	1331	G
22	Ba	1336	C
22	Ba	1346	A
22	Ba	1347	G
22	Ba	1363	C
22	Ba	1364	U
22	Ba	1397	C
22	Ba	1419	G
22	Ba	1439	C
22	Ba	1442	G
22	Ba	1442(A)	G
22	Ba	1442(B)	A
22	Ba	1443	G
22	Ba	1447	A
22	Ba	1452	C
22	Ba	1497	G
22	Ba	1499	A
22	Ba	1502	A
22	Ba	1504	G
22	Ba	1505	G
22	Ba	1506	U
22	Ba	1517	G
22	Ba	1519	A
22	Ba	1520	G
22	Ba	1529	G
22	Ba	1530	G
23	Bx	10	G
23	Bx	11	U
23	Bx	12	A
23	Bx	13	A
23	Bx	14	A
23	Bx	15	A
23	Bx	18	G
23	Bx	19	U
24	Bv	3	C
24	Bv	5	G
24	Bv	8	U
24	Bv	17(A)	U

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Mol	Chain	Res	Type
24	Bv	18	G
24	Bv	19	G
24	Bv	20	U
24	Bv	21	A
24	Bv	47	U
24	Bv	48	C
24	Bv	49	G
24	Bv	61	C
24	Bv	65	C
24	Bv	67	C
24	Bv	73	A
24	Bv	75	C
24	Bv	76	A
25	Bw	5	G
25	Bw	17(A)	U
25	Bw	18	G
25	Bw	19	G
25	Bw	20	U
25	Bw	21	A
25	Bw	47	U
25	Bw	48	C
57	BA	9	U
57	BA	10	G
57	BA	34	C
57	BA	35	G
57	BA	45	C
57	BA	49	A
57	BA	50	U
57	BA	55	G
57	BA	71	A
57	BA	72	U
57	BA	75	G
57	BA	88	G
57	BA	90	U
57	BA	94	C
57	BA	100	G
57	BA	102	G
57	BA	118	A
57	BA	120	U
57	BA	129	C
57	BA	131	G
57	BA	139(A)	G

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Mol	Chain	Res	Type
57	BA	141	A
57	BA	146	G
57	BA	154(A)	C
57	BA	155	U
57	BA	156	U
57	BA	158	U
57	BA	171	G
57	BA	173	G
57	BA	174	C
57	BA	181	A
57	BA	182	A
57	BA	196	A
57	BA	197	A
57	BA	199	A
57	BA	204	A
57	BA	205	G
57	BA	215	G
57	BA	216	A
57	BA	221	A
57	BA	222	A
57	BA	228	A
57	BA	229	A
57	BA	230	U
57	BA	248	G
57	BA	252	G
57	BA	271(I)	G
57	BA	271(J)	C
57	BA	271(N)	U
57	BA	271(O)	C
57	BA	271(P)	C
57	BA	271(R)	G
57	BA	272	G
57	BA	272(B)	G
57	BA	272(H)	C
57	BA	272(I)	U
57	BA	274	G
57	BA	276	A
57	BA	277	C
57	BA	288	C
57	BA	299	A
57	BA	311	A
57	BA	329	G

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Mol	Chain	Res	Type
57	BA	330	A
57	BA	332	A
57	BA	333	G
57	BA	352	G
57	BA	353	G
57	BA	356	G
57	BA	363(B)	G
57	BA	363(E)	U
57	BA	363(F)	A
57	BA	365	C
57	BA	372	G
57	BA	386	G
57	BA	388	G
57	BA	396	G
57	BA	405	U
57	BA	406	G
57	BA	411	G
57	BA	412	A
57	BA	428	A
57	BA	444	C
57	BA	448	U
57	BA	454	A
57	BA	456	C
57	BA	457	A
57	BA	470	A
57	BA	475	U
57	BA	481	G
57	BA	494	G
57	BA	505	A
57	BA	508	G
57	BA	509	C
57	BA	528	A
57	BA	530	G
57	BA	531	C
57	BA	532	A
57	BA	533	G
57	BA	544	G
57	BA	547	A
57	BA	548	A
57	BA	549	G
57	BA	563	G
57	BA	573	G

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Mol	Chain	Res	Type
57	BA	588	U
57	BA	603	A
57	BA	604	G
57	BA	607	U
57	BA	613	G
57	BA	614(B)	G
57	BA	615	G
57	BA	620	G
57	BA	622	G
57	BA	627	A
57	BA	637	A
57	BA	645	C
57	BA	646	A
57	BA	653	A
57	BA	654	A
57	BA	654(C)	G
57	BA	654(I)	C
57	BA	654(J)	A
57	BA	654(K)	C
57	BA	654(L)	G
57	BA	654(M)	C
57	BA	654(T)	C
57	BA	655	A
57	BA	668	G
57	BA	669	G
57	BA	670	A
57	BA	673	C
57	BA	686	G
57	BA	708	C
57	BA	717	G
57	BA	722	A
57	BA	730	C
57	BA	753	C
57	BA	765	G
57	BA	776	G
57	BA	782	A
57	BA	784	A
57	BA	785	G
57	BA	790	C
57	BA	791	C
57	BA	805	G
57	BA	812	C

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Mol	Chain	Res	Type
57	BA	819	A
57	BA	827	U
57	BA	828	U
57	BA	830	G
57	BA	848	G
57	BA	856	C
57	BA	859	G
57	BA	866	A
57	BA	869	G
57	BA	878	A
57	BA	890	A
57	BA	896	A
57	BA	897	C
57	BA	910	A
57	BA	917	A
57	BA	927	G
57	BA	932	G
57	BA	941	A
57	BA	945	A
57	BA	946	G
57	BA	958	U
57	BA	959	A
57	BA	961	C
57	BA	965	C
57	BA	974	G
57	BA	975	C
57	BA	983	A
57	BA	991	C
57	BA	996	A
57	BA	1012	U
57	BA	1013	C
57	BA	1015	G
57	BA	1022	G
57	BA	1023	U
57	BA	1025	G
57	BA	1026	U
57	BA	1039	G
57	BA	1041	C
57	BA	1045	A
57	BA	1046	A
57	BA	1047	G
57	BA	1049	C

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Mol	Chain	Res	Type
57	BA	1052	C
57	BA	1053	C
57	BA	1106	A
57	BA	1110	G
57	BA	1112	G
57	BA	1113	U
57	BA	1114	G
57	BA	1116	C
57	BA	1129	A
57	BA	1130	U
57	BA	1135	C
57	BA	1136	G
57	BA	1142	U
57	BA	1155	A
57	BA	1171	G
57	BA	1173	G
57	BA	1174	A
57	BA	1175	U
57	BA	1176	G
57	BA	1178	C
57	BA	1180	C
57	BA	1195	G
57	BA	1205	U
57	BA	1210	A
57	BA	1211	U
57	BA	1221	C
57	BA	1247	A
57	BA	1248	G
57	BA	1250	G
57	BA	1253	A
57	BA	1256	G
57	BA	1265	A
57	BA	1271	G
57	BA	1272	A
57	BA	1273	U
57	BA	1281	G
57	BA	1300	U
57	BA	1301	A
57	BA	1314	C
57	BA	1319	G
57	BA	1321	A
57	BA	1349	A

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Mol	Chain	Res	Type
57	BA	1359	A
57	BA	1368	G
57	BA	1379	A
57	BA	1380	G
57	BA	1384	A
57	BA	1385	G
57	BA	1386	C
57	BA	1390	U
57	BA	1395	A
57	BA	1406	U
57	BA	1407	C
57	BA	1416	G
57	BA	1417	C
57	BA	1419	A
57	BA	1420	U
57	BA	1427	A
57	BA	1428	C
57	BA	1445	A
57	BA	1449	A
57	BA	1450	G
57	BA	1460	A
57	BA	1461	G
57	BA	1467	C
57	BA	1471	A
57	BA	1475	G
57	BA	1478	G
57	BA	1481	U
57	BA	1482	G
57	BA	1485	G
57	BA	1488	G
57	BA	1490	A
57	BA	1491	G
57	BA	1493	C
57	BA	1494	A
57	BA	1495	A
57	BA	1497	U
57	BA	1501	C
57	BA	1502	C
57	BA	1505	C
57	BA	1509	C
57	BA	1509(A)	A
57	BA	1528(A)	A

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Mol	Chain	Res	Type
57	BA	1534	U
57	BA	1539	G
57	BA	1541	G
57	BA	1542	A
57	BA	1543	C
57	BA	1544	A
57	BA	1547	C
57	BA	1554	A
57	BA	1558	A
57	BA	1559	G
57	BA	1569	A
57	BA	1578	U
57	BA	1579	A
57	BA	1583	A
57	BA	1584	C
57	BA	1586	A
57	BA	1588	C
57	BA	1591	G
57	BA	1598	C
57	BA	1603	A
57	BA	1608	A
57	BA	1609	A
57	BA	1616	A
57	BA	1617	C
57	BA	1618	A
57	BA	1640	C
57	BA	1647	G
57	BA	1648	C
57	BA	1653	G
57	BA	1654	A
57	BA	1674	G
57	BA	1686	C
57	BA	1694	C
57	BA	1696	G
57	BA	1721	G
57	BA	1722	A
57	BA	1739	U
57	BA	1740	G
57	BA	1742	G
57	BA	1748	G
57	BA	1763	G
57	BA	1764	G

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Mol	Chain	Res	Type
57	BA	1773	A
57	BA	1780	A
57	BA	1791	A
57	BA	1799	G
57	BA	1800	C
57	BA	1801	G
57	BA	1816	G
57	BA	1820	U
57	BA	1821	A
57	BA	1829	A
57	BA	1835	G
57	BA	1838	C
57	BA	1839	G
57	BA	1846	G
57	BA	1847	A
57	BA	1848	A
57	BA	1858	G
57	BA	1865	G
57	BA	1866	C
57	BA	1878	G
57	BA	1881	C
57	BA	1882	C
57	BA	1885	A
57	BA	1888	G
57	BA	1889	A
57	BA	1900	A
57	BA	1903	G
57	BA	1906	G
57	BA	1912	A
57	BA	1913	A
57	BA	1929	G
57	BA	1930	G
57	BA	1938	A
57	BA	1948	G
57	BA	1955	U
57	BA	1963	U
57	BA	1966	A
57	BA	1967	C
57	BA	1969	A
57	BA	1970	A
57	BA	1971	A
57	BA	1972	A

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Mol	Chain	Res	Type
57	BA	1982	C
57	BA	1987	G
57	BA	1991	U
57	BA	1992	G
57	BA	1993	U
57	BA	1997	G
57	BA	2023	G
57	BA	2031	A
57	BA	2032	G
57	BA	2033	A
57	BA	2034	U
57	BA	2036	C
57	BA	2043	C
57	BA	2055	C
57	BA	2056	G
57	BA	2060	A
57	BA	2061	G
57	BA	2062	A
57	BA	2063	C
57	BA	2069	G
57	BA	2093	G
57	BA	2096	U
57	BA	2100	G
57	BA	2103	C
57	BA	2104	G
57	BA	2110	G
57	BA	2112	G
57	BA	2116	G
57	BA	2118	U
57	BA	2127	G
57	BA	2131	G
57	BA	2132	U
57	BA	2133	G
57	BA	2148	G
57	BA	2159	G
57	BA	2172	U
57	BA	2173	A
57	BA	2177	C
57	BA	2179	C
57	BA	2180	U
57	BA	2185	C
57	BA	2187	G

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Mol	Chain	Res	Type
57	BA	2189	U
57	BA	2190	G
57	BA	2192	G
57	BA	2193	G
57	BA	2198	A
57	BA	2199	A
57	BA	2200	C
57	BA	2206	G
57	BA	2207	G
57	BA	2208	A
57	BA	2218	U
57	BA	2225	A
57	BA	2226	C
57	BA	2238	G
57	BA	2239	G
57	BA	2275	C
57	BA	2283	C
57	BA	2287	A
57	BA	2288	A
57	BA	2302	G
57	BA	2305	A
57	BA	2307	G
57	BA	2308	G
57	BA	2309	A
57	BA	2311	A
57	BA	2313	C
57	BA	2316	C
57	BA	2319	G
57	BA	2320	A
57	BA	2334	G
57	BA	2336	A
57	BA	2347	C
57	BA	2350	C
57	BA	2360	A
57	BA	2361	A
57	BA	2383	G
57	BA	2385	C
57	BA	2396	G
57	BA	2400	G
57	BA	2402	C
57	BA	2406	U
57	BA	2423	U

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Mol	Chain	Res	Type
57	BA	2424	C
57	BA	2425	A
57	BA	2429	G
57	BA	2430	A
57	BA	2435	A
57	BA	2439	A
57	BA	2441	C
57	BA	2448	A
57	BA	2459	A
57	BA	2465	C
57	BA	2468	G
57	BA	2469	A
57	BA	2470	G
57	BA	2472	G
57	BA	2476	A
57	BA	2477	C
57	BA	2482	G
57	BA	2484	G
57	BA	2491	U
57	BA	2502	G
57	BA	2505	G
57	BA	2518	A
57	BA	2520	C
57	BA	2524	G
57	BA	2529	G
57	BA	2531	A
57	BA	2542	A
57	BA	2543	G
57	BA	2554	U
57	BA	2566	A
57	BA	2567	G
57	BA	2573	C
57	BA	2582	G
57	BA	2586	C
57	BA	2602	A
57	BA	2609	U
57	BA	2611	U
57	BA	2612	C
57	BA	2615	U
57	BA	2630	G
57	BA	2657	A
57	BA	2673	G

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Mol	Chain	Res	Type
57	BA	2690	C
57	BA	2691	C
57	BA	2702	U
57	BA	2712	U
57	BA	2712(A)	A
57	BA	2713	A
57	BA	2720	U
57	BA	2726	U
57	BA	2733	A
57	BA	2752	C
57	BA	2762	G
57	BA	2765	A
57	BA	2766	G
57	BA	2778	A
57	BA	2780	G
57	BA	2787	C
57	BA	2789	C
57	BA	2790	A
57	BA	2791	C
57	BA	2794	C
57	BA	2801(A)	A
57	BA	2802	G
57	BA	2803	C
57	BA	2804	C
57	BA	2808	U
57	BA	2818	G
57	BA	2820	A
57	BA	2821	A
57	BA	2833	G
57	BA	2834	G
57	BA	2849	U
57	BA	2872	G
57	BA	2893	G
57	BA	2897	U
58	BB	2	C
58	BB	8	U
58	BB	15	A
58	BB	16	G
58	BB	19	G
58	BB	22	U
58	BB	24	G
58	BB	27	C

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Mol	Chain	Res	Type
58	BB	33	G
58	BB	41	U
58	BB	42	C
58	BB	45	A
58	BB	53	A
58	BB	67	G
58	BB	73	A
58	BB	75	G
58	BB	81	G
58	BB	82	G
58	BB	88	C
58	BB	110	G
58	BB	113	G

All (113) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
57	AA	49	A
57	AA	71	A
57	AA	74	A
57	AA	79	G
57	AA	119	A
57	AA	128	C
57	AA	221	A
57	AA	266	G
57	AA	272	G
57	AA	331	A
57	AA	332	A
57	AA	366	C
57	AA	387	U
57	AA	438	G
57	AA	474	G
57	AA	587	C
57	AA	603	A
57	AA	614(C)	A
57	AA	652	C
57	AA	746	A
57	AA	752	A
57	AA	790	C
57	AA	889	C
57	AA	1022	G
57	AA	1210	A

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Mol	Chain	Res	Type
57	AA	1286	A
57	AA	1427	A
57	AA	1490	A
57	AA	1558	A
57	AA	1608	A
57	AA	1652	A
57	AA	1653	G
57	AA	1799	G
57	AA	1819	A
57	AA	1820	U
57	AA	1846	G
57	AA	1885	A
57	AA	1948	G
57	AA	1970	A
57	AA	1992	G
57	AA	2033	A
57	AA	2036	C
57	AA	2062	A
57	AA	2126	A
57	AA	2171	A
57	AA	2191	G
57	AA	2225	A
57	AA	2282	G
57	AA	2311	A
57	AA	2405	G
57	AA	2422	A
57	AA	2439	A
57	AA	2481	G
57	AA	2611	U
57	AA	2689	U
58	AB	66	A
57	BA	49	A
57	BA	71	A
57	BA	74	A
57	BA	79	G
57	BA	119	A
57	BA	128	C
57	BA	221	A
57	BA	266	G
57	BA	272	G
57	BA	331	A
57	BA	332	A

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Mol	Chain	Res	Type
57	BA	366	C
57	BA	387	U
57	BA	438	G
57	BA	474	G
57	BA	587	C
57	BA	603	A
57	BA	614(C)	A
57	BA	652	C
57	BA	746	A
57	BA	752	A
57	BA	790	C
57	BA	889	C
57	BA	1022	G
57	BA	1210	A
57	BA	1286	A
57	BA	1427	A
57	BA	1490	A
57	BA	1558	A
57	BA	1608	A
57	BA	1652	A
57	BA	1653	G
57	BA	1799	G
57	BA	1819	A
57	BA	1820	U
57	BA	1846	G
57	BA	1885	A
57	BA	1948	G
57	BA	1970	A
57	BA	1992	G
57	BA	2033	A
57	BA	2036	C
57	BA	2062	A
57	BA	2126	A
57	BA	2171	A
57	BA	2191	G
57	BA	2225	A
57	BA	2282	G
57	BA	2311	A
57	BA	2346	A
57	BA	2405	G
57	BA	2422	A
57	BA	2439	A

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Mol	Chain	Res	Type
57	BA	2481	G
57	BA	2611	U
57	BA	2689	U
58	BB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
23	CCC	Bx	21	-	0,2,26	-	-	0,1,41	-	-
24	5MU	Av	54	24	19,22,23	0.27	0	27,32,35	0.39	0
24	5MU	Bv	54	24	19,22,23	0.33	0	27,32,35	0.49	0
23	CCC	Ax	21	-	0,2,26	-	-	0,1,41	-	-

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	5MU	Bv	54	24	-	0/7/25/26	0/2/2/2
24	5MU	Av	54	24	-	0/7/25/26	0/2/2/2

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1072 ligands modelled in this entry, 1072 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	Ab	234/256 (91%)	0.12	4 (1%) 69 48	114, 153, 181, 193	0
1	Bb	234/256 (91%)	0.14	6 (2%) 57 37	113, 152, 181, 193	0
2	Ac	206/239 (86%)	0.14	0 100 100	123, 150, 166, 178	0
2	Bc	206/239 (86%)	0.09	4 (1%) 66 45	124, 149, 166, 179	0
3	Ad	208/209 (99%)	0.26	5 (2%) 59 39	96, 119, 144, 155	0
3	Bd	208/209 (99%)	0.24	5 (2%) 59 39	97, 119, 145, 154	0
4	Ae	150/162 (92%)	-0.03	0 100 100	88, 114, 138, 159	0
4	Be	150/162 (92%)	-0.01	0 100 100	84, 112, 138, 160	0
5	Af	101/101 (100%)	-0.13	2 (1%) 64 44	91, 121, 138, 155	0
5	Bf	101/101 (100%)	0.08	4 (3%) 43 28	91, 120, 137, 155	0
6	Ag	155/156 (99%)	0.16	8 (5%) 34 23	118, 137, 171, 188	0
6	Bg	155/156 (99%)	0.16	6 (3%) 44 28	118, 138, 171, 188	0
7	Ah	138/138 (100%)	0.11	6 (4%) 40 26	96, 117, 132, 157	0
7	Bh	138/138 (100%)	0.03	4 (2%) 54 35	95, 116, 131, 158	0
8	Ai	127/128 (99%)	0.71	12 (9%) 15 12	120, 160, 178, 186	0
8	Bi	127/128 (99%)	0.57	7 (5%) 32 21	119, 160, 178, 186	0
9	Aj	98/105 (93%)	0.54	3 (3%) 51 33	126, 164, 184, 190	0
9	Bj	98/105 (93%)	0.43	2 (2%) 64 44	124, 164, 184, 190	0
10	Ak	119/129 (92%)	-0.00	3 (2%) 58 38	89, 117, 145, 171	0
10	Bk	119/129 (92%)	0.05	4 (3%) 48 31	89, 117, 144, 171	0
11	Al	124/132 (93%)	0.14	4 (3%) 50 33	75, 97, 123, 161	0
11	Bl	124/132 (93%)	0.17	6 (4%) 36 25	77, 97, 125, 162	0
12	Am	118/126 (93%)	0.63	12 (10%) 13 11	115, 143, 157, 166	0
12	Bm	118/126 (93%)	0.43	6 (5%) 34 23	115, 142, 157, 166	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	An	60/61 (98%)	1.25	13 (21%) 3 3	126, 139, 159, 162	0
13	Bn	60/61 (98%)	0.52	3 (5%) 35 24	127, 138, 159, 162	0
14	Ao	88/89 (98%)	-0.11	1 (1%) 77 57	81, 110, 131, 138	0
14	Bo	88/89 (98%)	-0.02	1 (1%) 77 57	81, 110, 132, 137	0
15	Ap	83/88 (94%)	0.43	2 (2%) 59 39	93, 110, 128, 148	0
15	Bp	83/88 (94%)	0.22	1 (1%) 76 55	94, 111, 130, 147	0
16	Aq	99/105 (94%)	0.08	3 (3%) 52 34	80, 107, 124, 132	0
16	Bq	99/105 (94%)	0.03	4 (4%) 43 28	80, 107, 123, 132	0
17	Ar	70/88 (79%)	0.11	1 (1%) 73 52	96, 122, 142, 158	0
17	Br	70/88 (79%)	0.04	0 100 100	95, 122, 141, 157	0
18	As	78/93 (83%)	0.46	6 (7%) 21 15	131, 153, 173, 181	0
18	Bs	78/93 (83%)	0.42	3 (3%) 44 29	130, 153, 172, 181	0
19	At	99/106 (93%)	0.33	7 (7%) 23 17	86, 114, 145, 149	0
19	Bt	99/106 (93%)	0.14	3 (3%) 52 34	86, 114, 145, 149	0
20	Au	24/27 (88%)	1.19	4 (16%) 5 6	108, 138, 162, 168	0
20	Bu	24/27 (88%)	1.50	6 (25%) 2 2	106, 137, 162, 168	0
21	Ay	94/95 (98%)	0.34	4 (4%) 40 26	118, 154, 186, 189	0
21	By	94/95 (98%)	0.28	6 (6%) 27 19	110, 146, 182, 188	0
22	Aa	1504/1504 (100%)	0.11	22 (1%) 71 51	65, 119, 193, 208	0
22	Ba	1504/1504 (100%)	0.09	29 (1%) 66 45	63, 119, 193, 208	0
23	Ax	12/14 (85%)	1.05	1 (8%) 19 14	108, 191, 198, 199	0
23	Bx	12/14 (85%)	2.24	5 (41%) 1 1	108, 191, 198, 199	0
24	Av	76/77 (98%)	-0.03	1 (1%) 74 53	96, 119, 160, 163	0
24	Bv	76/77 (98%)	-0.24	1 (1%) 74 53	69, 107, 141, 167	0
25	Aw	77/77 (100%)	0.12	0 100 100	103, 191, 201, 203	0
25	Bw	77/77 (100%)	-0.06	0 100 100	93, 188, 200, 202	0
26	AC	120/229 (52%)	0.29	5 (4%) 41 27	147, 177, 190, 193	0
26	BC	120/229 (52%)	0.30	4 (3%) 49 32	145, 177, 189, 194	0
27	AD	271/276 (98%)	-0.06	9 (3%) 49 32	48, 76, 98, 121	0
27	BD	271/276 (98%)	-0.09	5 (1%) 67 46	46, 75, 96, 122	0
28	AE	204/206 (99%)	-0.05	4 (1%) 64 44	49, 81, 127, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	BE	204/206 (99%)	-0.01	8 (3%) 44 28	49, 80, 128, 148	0
29	AF	207/210 (98%)	-0.13	1 (0%) 87 72	48, 89, 153, 181	0
29	BF	207/210 (98%)	0.00	4 (1%) 66 45	46, 86, 154, 180	0
30	AG	181/182 (99%)	0.23	3 (1%) 69 48	117, 142, 161, 186	0
30	BG	181/182 (99%)	0.14	3 (1%) 69 48	99, 128, 154, 175	0
31	AH	164/180 (91%)	0.23	5 (3%) 52 34	98, 127, 143, 166	0
31	BH	164/180 (91%)	0.73	15 (9%) 16 12	94, 124, 141, 164	0
32	AI	145/148 (97%)	1.16	34 (23%) 2 3	81, 154, 171, 176	0
32	BI	145/148 (97%)	0.96	24 (16%) 5 6	82, 153, 172, 176	0
33	AJ	130/173 (75%)	0.55	10 (7%) 21 15	170, 195, 202, 203	0
33	BJ	130/173 (75%)	0.99	21 (16%) 5 6	147, 180, 194, 196	0
34	AN	138/140 (98%)	-0.03	1 (0%) 84 67	65, 91, 126, 138	0
34	BN	138/140 (98%)	0.17	2 (1%) 73 52	63, 88, 126, 136	0
35	AO	122/122 (100%)	-0.36	0 100 100	59, 75, 98, 122	0
35	BO	122/122 (100%)	-0.37	0 100 100	56, 74, 99, 120	0
36	AP	146/150 (97%)	0.50	9 (6%) 28 19	51, 106, 133, 169	0
36	BP	146/150 (97%)	0.66	16 (10%) 12 10	50, 104, 133, 169	0
37	AQ	140/141 (99%)	0.16	6 (4%) 40 26	75, 96, 124, 147	0
37	BQ	140/141 (99%)	0.21	4 (2%) 54 35	74, 94, 125, 147	0
38	AR	117/118 (99%)	-0.03	3 (2%) 57 37	48, 80, 108, 128	0
38	BR	117/118 (99%)	0.03	4 (3%) 48 31	47, 79, 107, 127	0
39	AS	98/112 (87%)	0.78	12 (12%) 10 8	111, 137, 154, 161	0
39	BS	98/112 (87%)	0.85	10 (10%) 13 11	110, 136, 153, 162	0
40	AT	135/146 (92%)	0.18	8 (5%) 29 20	66, 92, 150, 183	0
40	BT	135/146 (92%)	0.21	6 (4%) 39 26	66, 92, 150, 183	0
41	AU	117/118 (99%)	-0.07	2 (1%) 69 48	58, 81, 117, 156	0
41	BU	117/118 (99%)	0.13	3 (2%) 57 37	52, 78, 116, 158	0
42	AV	101/101 (100%)	-0.01	2 (1%) 64 44	59, 106, 125, 134	0
42	BV	101/101 (100%)	0.08	1 (0%) 79 59	54, 103, 125, 134	0
43	AW	113/113 (100%)	-0.29	0 100 100	58, 73, 106, 183	0
43	BW	113/113 (100%)	-0.17	0 100 100	55, 71, 105, 183	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	AX	92/96 (95%)	0.01	2 (2%) 62 41	63, 86, 110, 120	0
44	BX	92/96 (95%)	0.20	0 100 100	56, 84, 110, 120	0
45	AY	100/110 (90%)	0.54	5 (5%) 35 24	78, 117, 153, 160	0
45	BY	100/110 (90%)	0.88	13 (13%) 9 8	74, 115, 152, 158	0
46	AZ	184/206 (89%)	0.00	1 (0%) 87 72	117, 141, 158, 188	0
46	BZ	184/206 (89%)	0.07	2 (1%) 77 57	87, 126, 150, 173	0
47	A0	84/85 (98%)	0.29	5 (5%) 29 20	81, 100, 148, 168	0
47	B0	84/85 (98%)	0.48	7 (8%) 19 14	78, 100, 148, 168	0
48	A1	93/98 (94%)	-0.01	0 100 100	64, 87, 127, 137	0
48	B1	93/98 (94%)	0.05	1 (1%) 77 57	55, 82, 119, 133	0
49	A2	71/72 (98%)	-0.03	0 100 100	81, 116, 134, 156	0
49	B2	71/72 (98%)	-0.11	0 100 100	51, 85, 123, 159	0
50	A3	59/60 (98%)	0.07	1 (1%) 69 48	70, 94, 112, 162	0
50	B3	59/60 (98%)	0.13	0 100 100	62, 91, 111, 162	0
51	A4	57/71 (80%)	0.10	1 (1%) 67 46	150, 164, 175, 177	0
51	B4	57/71 (80%)	0.39	1 (1%) 67 46	150, 164, 174, 177	0
52	A5	55/60 (91%)	0.18	2 (3%) 46 30	54, 80, 113, 119	0
52	B5	55/60 (91%)	0.06	2 (3%) 46 30	54, 78, 112, 121	0
53	A6	50/54 (92%)	0.87	9 (18%) 4 5	121, 149, 165, 175	0
53	B6	50/54 (92%)	0.79	4 (8%) 20 14	121, 149, 164, 176	0
54	A7	47/49 (95%)	-0.04	1 (2%) 63 42	50, 64, 86, 133	0
54	B7	47/49 (95%)	-0.12	1 (2%) 63 42	47, 60, 84, 131	0
55	A8	63/65 (96%)	0.53	3 (4%) 36 25	66, 83, 117, 146	0
55	B8	63/65 (96%)	0.59	1 (1%) 70 49	63, 83, 116, 145	0
56	A9	37/37 (100%)	1.41	10 (27%) 2 2	121, 134, 149, 151	0
56	B9	37/37 (100%)	1.13	7 (18%) 4 5	121, 132, 148, 152	0
57	AA	2848/2848 (100%)	-0.23	29 (1%) 79 59	47, 83, 185, 208	0
57	BA	2848/2848 (100%)	-0.13	36 (1%) 74 53	44, 80, 185, 208	0
58	AB	119/119 (100%)	0.29	4 (3%) 48 31	90, 143, 176, 196	0
58	BB	119/119 (100%)	0.56	6 (5%) 35 24	86, 142, 175, 197	0
All	All	21500/22400 (95%)	0.10	638 (2%) 52 34	44, 108, 181, 208	0

All (638) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
32	BI	88	ILE	10.7
10	Bk	129	SER	9.7
8	Ai	106	ALA	8.9
32	AI	72	LEU	8.9
32	BI	92	VAL	8.0
52	A5	2	ALA	7.3
57	BA	277	C	7.0
57	AA	654(H)	G	7.0
47	B0	3	HIS	6.5
32	AI	119	PRO	6.4
52	B5	2	ALA	6.4
22	Ba	89	C	5.9
57	AA	654(I)	C	5.8
20	Bu	10	ARG	5.8
22	Aa	83	U	5.6
32	AI	144	VAL	5.6
32	AI	65	ALA	5.6
21	Ay	14	GLU	5.6
57	BA	654(E)	G	5.5
57	AA	654(L)	G	5.4
47	B0	2	ALA	5.3
32	AI	97	ILE	5.2
32	BI	120	ILE	5.1
18	As	81	ARG	5.1
32	BI	130	TYR	5.1
57	AA	654(G)	C	5.0
33	BJ	56	ASN	5.0
22	Aa	82	U	5.0
57	BA	508	G	4.9
28	BE	75	VAL	4.9
23	Bx	19	U	4.8
36	BP	51	PHE	4.8
10	Ak	128	ALA	4.7
57	BA	654(K)	C	4.7
31	BH	155	SER	4.6
41	BU	15	LYS	4.6
22	Ba	80	G	4.5
54	A7	47	ARG	4.5
45	BY	92	ASN	4.5
32	AI	143	SER	4.4
31	BH	167	GLU	4.4
31	BH	169	VAL	4.4

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Mol	Chain	Res	Type	RSRZ
32	AI	100	ALA	4.3
57	AA	654(J)	A	4.3
37	BQ	140	ALA	4.3
8	Ai	66	ARG	4.3
1	Ab	214	ILE	4.2
55	A8	48	PHE	4.2
6	Bg	4	ARG	4.2
57	AA	654(E)	G	4.2
20	Bu	25	LYS	4.2
13	Bn	2	ALA	4.2
57	BA	654(H)	G	4.2
58	AB	89	G	4.2
40	BT	105	LEU	4.2
57	AA	654(F)	C	4.1
47	A0	2	ALA	4.1
12	Bm	102	ARG	4.0
56	B9	21	GLY	4.0
56	A9	12	ASP	4.0
13	An	30	ALA	4.0
18	As	67	VAL	4.0
32	BI	119	PRO	4.0
22	Aa	1286	A	4.0
6	Ag	85	TYR	3.9
23	Bx	20	A	3.9
10	Bk	128	ALA	3.9
39	AS	12	PHE	3.9
21	By	85	GLU	3.9
21	By	83	ARG	3.8
26	AC	172	ILE	3.8
6	Bg	83	ALA	3.8
33	BJ	43	ALA	3.8
36	BP	64	LYS	3.8
32	AI	93	THR	3.8
22	Ba	88	A	3.8
18	Bs	81	ARG	3.7
32	BI	97	ILE	3.7
36	BP	28	GLY	3.7
51	B4	1	MET	3.7
37	AQ	22	LYS	3.7
8	Ai	109	VAL	3.7
45	BY	45	VAL	3.7
57	BA	1534	U	3.7

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Mol	Chain	Res	Type	RSRZ
27	BD	35	LYS	3.7
6	Ag	83	ALA	3.7
45	BY	84	ARG	3.7
13	An	7	ILE	3.7
58	BB	88	C	3.6
40	BT	85	LYS	3.6
8	Ai	115	GLY	3.6
57	BA	2802	G	3.6
58	BB	49	C	3.6
22	Ba	84	U	3.6
47	B0	41	ARG	3.6
26	BC	176	VAL	3.6
31	BH	44	VAL	3.6
57	AA	654(N)	G	3.6
27	BD	36	PRO	3.6
36	AP	27	HIS	3.6
40	AT	11	GLU	3.6
30	BG	35	GLU	3.5
46	BZ	88	PHE	3.5
32	BI	143	SER	3.5
32	BI	114	LEU	3.5
36	BP	68	GLN	3.5
13	An	25	VAL	3.5
55	A8	35	GLN	3.5
33	BJ	109	SER	3.5
56	B9	2	LYS	3.5
39	BS	12	PHE	3.5
58	AB	88	C	3.5
39	AS	11	LYS	3.5
22	Aa	1202	G	3.4
58	AB	87	G	3.4
3	Bd	31	CYS	3.4
58	BB	48	A	3.4
32	AI	109	ILE	3.4
57	AA	654(K)	C	3.4
2	Bc	87	LEU	3.4
33	AJ	13	LEU	3.4
36	BP	43	GLY	3.4
56	A9	21	GLY	3.4
22	Ba	1286	A	3.4
10	Ak	129	SER	3.4
3	Ad	161	ASN	3.4

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Mol	Chain	Res	Type	RSRZ
28	BE	76	ARG	3.4
57	AA	2803	C	3.4
45	BY	47	LYS	3.4
12	Am	88	ARG	3.4
15	Ap	26	ARG	3.4
32	BI	94	ALA	3.4
42	BV	36	PRO	3.4
32	AI	118	LYS	3.4
46	BZ	80	ARG	3.3
32	AI	68	LEU	3.3
21	Ay	10	ARG	3.3
33	BJ	34	ALA	3.3
41	AU	97	ASP	3.3
31	BH	53	GLU	3.3
57	BA	654(F)	C	3.3
19	Bt	80	ARG	3.3
6	Ag	99	LEU	3.3
3	Ad	31	CYS	3.3
12	Am	100	GLY	3.3
39	BS	14	VAL	3.3
57	AA	1026	U	3.3
57	BA	654(V)	A	3.3
33	BJ	17	LEU	3.3
6	Bg	84	ASN	3.3
21	By	87	TYR	3.3
32	AI	120	ILE	3.2
39	AS	18	ILE	3.2
47	A0	74	ARG	3.2
33	BJ	37	THR	3.2
53	A6	22	ALA	3.2
26	AC	176	VAL	3.2
11	Al	28	LYS	3.2
56	A9	2	LYS	3.2
37	AQ	140	ALA	3.2
23	Bx	18	G	3.2
22	Aa	454	C	3.2
40	AT	85	LYS	3.2
7	Ah	4	ASP	3.2
12	Am	7	VAL	3.2
19	At	14	LYS	3.2
31	BH	158	HIS	3.2
8	Bi	128	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
32	AI	110	ASP	3.2
57	BA	11	G	3.2
6	Ag	82	GLY	3.2
32	BI	84	GLY	3.2
40	AT	2	ASN	3.2
15	Bp	13	HIS	3.2
30	AG	2	PRO	3.2
32	BI	118	LYS	3.1
8	Bi	13	ALA	3.1
57	AA	2802	G	3.1
58	BB	87	G	3.1
57	BA	1026	U	3.1
39	BS	11	LYS	3.1
27	BD	244	ARG	3.1
1	Ab	163	PHE	3.1
23	Bx	13	A	3.1
57	BA	1541	G	3.1
56	B9	18	ARG	3.1
28	BE	53	PRO	3.1
52	A5	3	LYS	3.0
39	BS	91	PRO	3.0
53	A6	37	ARG	3.0
32	BI	87	LYS	3.0
22	Aa	89	C	3.0
57	BA	1053	C	3.0
32	AI	81	VAL	3.0
36	AP	51	PHE	3.0
39	AS	54	LEU	3.0
40	AT	115	ARG	3.0
56	A9	22	ARG	3.0
18	Bs	67	VAL	3.0
45	AY	82	PRO	3.0
38	AR	3	HIS	3.0
57	BA	271	A	3.0
33	AJ	83	TYR	3.0
22	Aa	81	U	3.0
28	AE	149	ARG	3.0
2	Bc	91	LEU	2.9
8	Bi	106	ALA	2.9
30	BG	46	ALA	2.9
57	AA	654(D)	G	2.9
58	BB	86	G	2.9

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Mol	Chain	Res	Type	RSRZ
37	AQ	136	ALA	2.9
22	Aa	84	U	2.9
22	Ba	81	U	2.9
31	BH	164	TYR	2.9
48	B1	95	LEU	2.9
32	BI	132	PRO	2.9
26	BC	177	GLY	2.9
21	Ay	13	LYS	2.9
32	AI	108	THR	2.9
51	A4	50	VAL	2.9
56	A9	23	VAL	2.9
40	BT	11	GLU	2.9
37	BQ	136	ALA	2.9
20	Bu	14	TRP	2.9
12	Am	102	ARG	2.9
56	A9	26	ILE	2.9
22	Aa	971	G	2.9
40	BT	2	ASN	2.9
57	AA	2795	G	2.9
9	Aj	61	GLU	2.9
13	An	58	LYS	2.9
29	BF	23	ASP	2.8
47	A0	19	LYS	2.8
57	BA	654(G)	C	2.8
58	BB	47	C	2.8
19	At	12	ALA	2.8
32	AI	101	LEU	2.8
33	BJ	52	PHE	2.8
36	AP	87	ASP	2.8
36	BP	7	ARG	2.8
18	Bs	4	SER	2.8
33	AJ	86	PRO	2.8
6	Ag	81	GLY	2.8
22	Ba	90	U	2.8
57	BA	1535	A	2.8
32	AI	92	VAL	2.8
3	Bd	96	LEU	2.8
33	AJ	9	LEU	2.8
32	AI	111	PRO	2.8
57	BA	654(S)	G	2.8
31	BH	43	VAL	2.8
47	B0	42	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
18	As	80	TYR	2.8
57	BA	278	A	2.8
57	BA	2062	A	2.8
40	AT	1	MET	2.8
7	Ah	99	GLU	2.8
57	AA	654(T)	C	2.8
57	BA	654(T)	C	2.8
13	Bn	50	LYS	2.8
22	Aa	1117	G	2.8
57	AA	2894	G	2.8
5	Bf	90	VAL	2.8
22	Aa	983	A	2.8
47	B0	19	LYS	2.8
32	BI	89	TYR	2.7
22	Ba	877	C	2.7
38	BR	3	HIS	2.7
13	An	46	GLU	2.7
21	By	82	GLU	2.7
32	AI	59	ALA	2.7
32	AI	142	VAL	2.7
33	BJ	88	ALA	2.7
6	Ag	84	ASN	2.7
32	BI	90	GLY	2.7
32	AI	79	ILE	2.7
58	AB	90	A	2.7
8	Ai	105	ASP	2.7
31	BH	42	ARG	2.7
36	BP	40	SER	2.7
13	An	18	VAL	2.7
57	AA	2801(A)	A	2.7
57	BA	2120	G	2.7
19	Bt	11	SER	2.7
15	Ap	25	ARG	2.7
33	BJ	41	ARG	2.7
12	Bm	8	GLU	2.7
18	As	79	THR	2.7
37	BQ	12	GLN	2.7
39	BS	50	SER	2.7
38	BR	10	LEU	2.7
6	Ag	32	ARG	2.7
36	BP	15	ARG	2.7
57	BA	2310	A	2.7

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Mol	Chain	Res	Type	RSRZ
20	Au	25	LYS	2.7
7	Ah	1	MET	2.7
45	AY	44	ILE	2.7
1	Bb	8	LYS	2.7
39	BS	13	ARG	2.7
45	BY	85	VAL	2.6
3	Bd	32	ALA	2.6
57	BA	1046	A	2.6
32	AI	140	LEU	2.6
45	AY	77	PRO	2.6
45	BY	44	ILE	2.6
32	AI	91	SER	2.6
22	Aa	1249	C	2.6
12	Bm	2	ALA	2.6
12	Bm	10	PRO	2.6
27	AD	235	GLY	2.6
31	BH	48	GLY	2.6
33	BJ	18	GLU	2.6
36	BP	26	GLY	2.6
8	Ai	125	TYR	2.6
32	BI	65	ALA	2.6
2	Bc	47	LEU	2.6
26	AC	197	LEU	2.6
16	Aq	100	LYS	2.6
20	Bu	9	ARG	2.6
32	BI	111	PRO	2.6
57	AA	508	G	2.6
21	By	88	SER	2.6
5	Bf	88	VAL	2.6
39	AS	98	VAL	2.6
12	Am	66	LEU	2.6
40	AT	105	LEU	2.6
12	Am	65	LYS	2.6
36	AP	24	GLY	2.6
8	Bi	108	VAL	2.6
24	Av	1	C	2.6
31	BH	156	ALA	2.6
22	Ba	5	U	2.6
32	AI	88	ILE	2.6
6	Bg	5	ARG	2.6
2	Bc	9	GLY	2.6
6	Bg	82	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
45	BY	7	VAL	2.6
33	AJ	10	LEU	2.6
32	AI	106	GLY	2.6
22	Ba	971	G	2.5
11	Bl	91	LYS	2.5
5	Bf	50	TYR	2.5
30	AG	36	LYS	2.5
28	AE	76	ARG	2.5
33	BJ	110	GLY	2.5
22	Ba	1387	G	2.5
32	AI	122	GLU	2.5
45	BY	82	PRO	2.5
45	AY	45	VAL	2.5
12	Am	99	ARG	2.5
1	Ab	141	GLU	2.5
16	Bq	37	LYS	2.5
31	BH	45	VAL	2.5
20	Au	6	ARG	2.5
33	BJ	57	THR	2.5
39	BS	100	ALA	2.5
22	Aa	80	G	2.5
22	Aa	1285	A	2.5
27	BD	12	SER	2.5
7	Bh	93	VAL	2.5
12	Am	10	PRO	2.5
7	Bh	1	MET	2.5
22	Ba	1281	U	2.5
32	BI	98	ALA	2.5
26	AC	193	PHE	2.5
11	Bl	28	LYS	2.5
11	Bl	47	LYS	2.5
33	BJ	108	LYS	2.5
53	B6	38	LYS	2.5
16	Bq	35	VAL	2.5
20	Bu	6	ARG	2.5
39	AS	73	LEU	2.5
22	Ba	82	U	2.4
56	B9	33	LYS	2.4
12	Bm	99	ARG	2.4
27	AD	217	ARG	2.4
36	BP	20	GLY	2.4
22	Aa	979	C	2.4

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Mol	Chain	Res	Type	RSRZ
6	Ag	86	GLN	2.4
13	An	50	LYS	2.4
32	BI	138	ILE	2.4
32	BI	41	GLU	2.4
53	B6	23	THR	2.4
56	A9	18	ARG	2.4
37	AQ	68	ILE	2.4
14	Ao	52	SER	2.4
19	Bt	14	LYS	2.4
27	AD	35	LYS	2.4
53	A6	38	LYS	2.4
28	BE	61	ARG	2.4
22	Ba	1030(A)	G	2.4
26	BC	42	VAL	2.4
36	AP	82	GLY	2.4
39	AS	36	TYR	2.4
1	Ab	70	PHE	2.4
39	AS	57	LYS	2.4
57	AA	2179	C	2.4
57	BA	1052	C	2.4
8	Ai	43	ALA	2.4
36	BP	27	HIS	2.4
19	At	22	ARG	2.4
33	BJ	19	ARG	2.4
40	AT	91	ARG	2.4
32	BI	93	THR	2.4
40	BT	92	GLY	2.4
47	B0	4	LYS	2.4
8	Ai	104	ARG	2.4
22	Ba	755	G	2.4
46	AZ	150	LEU	2.4
47	A0	3	HIS	2.4
7	Bh	3	THR	2.3
12	Am	84	ILE	2.3
16	Bq	100	LYS	2.3
38	AR	9	LYS	2.3
57	BA	90	U	2.3
32	AI	121	LYS	2.3
13	An	39	LEU	2.3
22	Ba	91	C	2.3
22	Ba	1030(B)	C	2.3
38	AR	10	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
36	BP	107	LYS	2.3
39	BS	16	ASN	2.3
41	BU	13	LYS	2.3
7	Ah	3	THR	2.3
53	A6	23	THR	2.3
8	Bi	10	ARG	2.3
41	BU	58	ARG	2.3
45	BY	2	ARG	2.3
39	AS	91	PRO	2.3
10	Ak	119	CYS	2.3
33	AJ	84	GLU	2.3
14	Bo	60	VAL	2.3
39	AS	33	LYS	2.3
22	Ba	63	C	2.3
22	Ba	979	C	2.3
27	AD	32	SER	2.3
36	AP	28	GLY	2.3
57	AA	2120	G	2.3
57	BA	2894	G	2.3
6	Bg	85	TYR	2.3
56	A9	35	ARG	2.3
57	AA	278	A	2.3
29	BF	156	LEU	2.3
31	BH	7	LEU	2.3
33	AJ	119	ALA	2.3
39	AS	14	VAL	2.3
9	Bj	43	ARG	2.3
29	BF	72	ARG	2.3
53	A6	42	TRP	2.3
30	BG	87	PRO	2.3
45	BY	33	LYS	2.3
23	Ax	20	A	2.3
57	BA	1740	G	2.3
22	Aa	1364	U	2.3
13	An	55	GLY	2.3
32	AI	77	LEU	2.3
9	Aj	69	ASN	2.3
47	A0	71	ASP	2.3
32	AI	95	LYS	2.2
16	Aq	24	GLU	2.2
32	AI	107	VAL	2.2
36	AP	52	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
36	BP	65	ARG	2.2
56	A9	36	GLN	2.2
7	Ah	131	GLY	2.2
8	Ai	40	LEU	2.2
22	Ba	1030	C	2.2
32	AI	128	LEU	2.2
57	AA	276	A	2.2
57	BA	271(A)	A	2.2
57	BA	2119	A	2.2
18	As	4	SER	2.2
22	Aa	90	U	2.2
7	Ah	83	ILE	2.2
8	Ai	128	ARG	2.2
12	Am	73	GLU	2.2
13	An	8	GLU	2.2
32	AI	66	GLU	2.2
36	BP	16	ARG	2.2
42	AV	20	LEU	2.2
53	A6	40	CYS	2.2
33	BJ	102	LYS	2.2
5	Bf	7	ASN	2.2
8	Bi	105	ASP	2.2
20	Au	14	TRP	2.2
1	Bb	96	ARG	2.2
1	Bb	163	PHE	2.2
36	AP	33	ARG	2.2
38	BR	105	ARG	2.2
54	B7	47	ARG	2.2
31	AH	7	LEU	2.2
37	AQ	12	GLN	2.2
10	Bk	127	LYS	2.2
33	BJ	55	LYS	2.2
47	B0	5	LYS	2.2
10	Bk	42	TRP	2.2
40	BT	27	THR	2.2
33	BJ	53	VAL	2.2
52	B5	3	LYS	2.2
56	A9	1	MET	2.2
32	AI	96	ASP	2.2
57	AA	654(S)	G	2.2
34	AN	68	GLU	2.2
11	Al	47	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
42	AV	74	LYS	2.2
28	BE	159	HIS	2.2
53	A6	21	TYR	2.2
27	AD	244	ARG	2.2
41	AU	58	ARG	2.2
12	Am	70	LEU	2.2
33	BJ	13	LEU	2.2
34	BN	138	LEU	2.2
8	Ai	127	LYS	2.1
28	BE	127	ASP	2.2
50	A3	17	LYS	2.1
36	BP	52	GLU	2.1
29	AF	131	GLY	2.1
1	Bb	148	TYR	2.1
18	As	75	ALA	2.1
26	AC	174	ALA	2.1
32	AI	139	GLN	2.1
55	A8	51	ALA	2.1
21	By	56	ARG	2.1
5	Af	90	VAL	2.1
22	Ba	631	G	2.1
57	AA	1541	G	2.1
39	AS	63	THR	2.1
40	AT	27	THR	2.1
53	A6	13	CYS	2.1
19	At	74	LYS	2.1
45	AY	28	LYS	2.1
19	At	11	SER	2.1
33	AJ	56	ASN	2.1
45	BY	91	GLU	2.1
5	Af	8	ILE	2.1
55	B8	64	TYR	2.1
37	BQ	10	ARG	2.1
57	AA	654(P)	C	2.1
11	Bl	32	PHE	2.1
31	AH	71	LEU	2.1
11	Bl	25	PRO	2.1
31	AH	129	THR	2.1
32	BI	86	THR	2.1
3	Ad	137	SER	2.1
8	Ai	110	GLU	2.1
27	AD	83	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
27	AD	169	GLU	2.1
33	AJ	85	ASP	2.1
13	An	21	TYR	2.1
8	Bi	76	ALA	2.1
13	An	5	ALA	2.1
22	Ba	1241	G	2.1
27	AD	272	ALA	2.1
30	AG	70	VAL	2.1
3	Ad	84	LYS	2.1
17	Ar	68	LYS	2.1
28	BE	64	LYS	2.1
31	AH	168	PRO	2.1
22	Ba	1317	C	2.1
57	BA	2295	C	2.1
57	BA	2803	C	2.1
16	Aq	95	TYR	2.1
28	AE	127	ASP	2.1
53	A6	39	TYR	2.1
56	B9	37	GLY	2.1
21	Ay	17	LYS	2.1
31	AH	158	HIS	2.1
22	Aa	1281	U	2.1
22	Ba	83	U	2.1
22	Ba	823	G	2.1
23	Bx	10	G	2.1
31	BH	69	ARG	2.1
7	Bh	99	GLU	2.1
53	B6	12	GLU	2.1
19	At	9	ASN	2.1
22	Aa	1287	A	2.1
1	Bb	196	LEU	2.1
12	Bm	56	LEU	2.1
16	Bq	43	LEU	2.1
22	Aa	980	C	2.1
22	Aa	1223	C	2.1
24	Bv	1	C	2.1
33	AJ	38	HIS	2.1
56	B9	36	GLN	2.1
26	BC	227	PRO	2.1
34	BN	12	ARG	2.1
12	Am	103	THR	2.1
1	Bb	152	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
20	Au	2	GLY	2.1
37	AQ	139	GLU	2.1
27	BD	38	LYS	2.1
29	BF	24	LEU	2.1
33	BJ	51	LEU	2.1
39	BS	32	LEU	2.1
9	Aj	44	VAL	2.1
9	Bj	69	ASN	2.1
11	Bl	101	VAL	2.1
13	An	56	VAL	2.1
33	BJ	107	VAL	2.1
36	BP	42	SER	2.1
19	At	73	HIS	2.0
22	Ba	1186	G	2.0
22	Ba	1503	A	2.0
57	BA	2793	G	2.0
57	BA	2891	G	2.0
44	AX	60	ARG	2.0
53	B6	37	ARG	2.0
22	Aa	1027	C	2.0
57	AA	654(M)	C	2.0
57	AA	2178	C	2.0
57	BA	2179	C	2.0
57	BA	2794	C	2.0
20	Bu	8	THR	2.0
36	AP	62	LEU	2.0
44	AX	72	LYS	2.0
28	AE	151	TYR	2.0
31	BH	124	GLU	2.0
38	BR	11	ASN	2.0
56	B9	35	ARG	2.0
57	AA	90	U	2.0
57	BA	12	U	2.0
28	BE	77	ILE	2.0
33	BJ	9	LEU	2.0
45	BY	101	LYS	2.0
22	Ba	1285	A	2.0
57	AA	1048	A	2.0
32	BI	85	GLU	2.0
22	Ba	933	G	2.0
3	Ad	199	ASN	2.0
3	Bd	9	CYS	2.0

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Mol	Chain	Res	Type	RSRZ
3	Bd	115	ARG	2.0
32	BI	110	ASP	2.0
45	BY	5	MET	2.0
13	Bn	42	ILE	2.0
11	Al	17	LYS	2.0
11	Al	31	PRO	2.0
27	AD	5	LYS	2.0
39	BS	93	LYS	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
24	5MU	Av	54	21/22	0.83	0.10	130,133,148,148	0
24	5MU	Bv	54	21/22	0.87	0.11	114,116,124,125	0
23	CCC	Bx	21	3/24	0.96	0.46	20,20,20,20	0
23	CCC	Ax	21	3/24	0.96	0.44	20,20,20,20	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3262	1/1	0.04	0.25	81,81,81,81	0
60	MG	Aa	1727	1/1	0.07	0.46	98,98,98,98	1
60	MG	Aa	1601	1/1	0.12	0.35	123,123,123,123	0
60	MG	Aa	1742	1/1	0.18	0.32	106,106,106,106	0
60	MG	Ba	1665	1/1	0.27	0.50	144,144,144,144	0
60	MG	Aa	1648	1/1	0.28	0.22	121,121,121,121	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Aa	1713	1/1	0.34	0.41	98,98,98,98	0
60	MG	Aa	1704	1/1	0.35	0.27	29,29,29,29	1
60	MG	Ba	1715	1/1	0.35	0.17	94,94,94,94	0
60	MG	BA	3258	1/1	0.36	0.31	84,84,84,84	0
60	MG	Aa	1669	1/1	0.38	0.42	122,122,122,122	0
60	MG	Ba	1708	1/1	0.39	0.12	132,132,132,132	0
60	MG	AA	3263	1/1	0.39	0.15	75,75,75,75	0
60	MG	Aa	1700	1/1	0.39	0.46	114,114,114,114	0
60	MG	Aa	1703	1/1	0.40	0.40	94,94,94,94	0
60	MG	AA	3154	1/1	0.40	0.11	142,142,142,142	0
60	MG	Aa	1663	1/1	0.42	0.22	112,112,112,112	0
60	MG	AA	3210	1/1	0.42	0.21	115,115,115,115	0
60	MG	Bw	101	1/1	0.43	0.18	132,132,132,132	1
60	MG	Ba	1681	1/1	0.43	0.47	122,122,122,122	0
60	MG	Ba	1713	1/1	0.46	0.33	83,83,83,83	0
60	MG	AA	3132	1/1	0.46	0.27	78,78,78,78	0
60	MG	Ba	1712	1/1	0.47	0.23	79,79,79,79	0
60	MG	Ba	1729	1/1	0.47	0.37	66,66,66,66	0
60	MG	Ba	1663	1/1	0.49	0.23	85,85,85,85	0
60	MG	Aa	1679	1/1	0.49	0.18	116,116,116,116	0
60	MG	Ba	1733	1/1	0.52	0.20	86,86,86,86	0
60	MG	Ba	1724	1/1	0.52	0.27	68,68,68,68	0
60	MG	BA	3131	1/1	0.52	0.27	96,96,96,96	0
60	MG	Ba	1692	1/1	0.52	0.32	83,83,83,83	0
60	MG	BA	3207	1/1	0.53	0.17	118,118,118,118	0
60	MG	Ba	1737	1/1	0.53	0.36	76,76,76,76	0
60	MG	AA	3117	1/1	0.54	0.51	148,148,148,148	0
60	MG	AA	3088	1/1	0.54	0.27	85,85,85,85	0
60	MG	AA	3240	1/1	0.54	0.33	106,106,106,106	0
60	MG	AA	3192	1/1	0.55	0.30	101,101,101,101	0
60	MG	BA	3126	1/1	0.56	0.22	122,122,122,122	0
60	MG	Ba	1707	1/1	0.56	0.28	76,76,76,76	0
60	MG	Bv	104	1/1	0.56	0.34	75,75,75,75	1
60	MG	BA	3233	1/1	0.56	0.40	97,97,97,97	0
60	MG	Ba	1644	1/1	0.56	0.26	67,67,67,67	0
60	MG	Aa	1675	1/1	0.57	0.32	72,72,72,72	0
60	MG	AA	3260	1/1	0.57	0.37	80,80,80,80	0
60	MG	BA	3154	1/1	0.57	0.13	73,73,73,73	1
60	MG	BA	2945	1/1	0.58	0.21	112,112,112,112	0
60	MG	Ba	1695	1/1	0.58	0.14	86,86,86,86	0
60	MG	BA	3180	1/1	0.58	0.40	105,105,105,105	0
60	MG	Aa	1725	1/1	0.59	0.27	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	2943	1/1	0.59	0.28	70,70,70,70	0
60	MG	AA	3134	1/1	0.59	0.23	98,98,98,98	0
60	MG	AA	3245	1/1	0.59	0.18	97,97,97,97	0
60	MG	AA	3256	1/1	0.59	0.27	71,71,71,71	0
60	MG	BA	3225	1/1	0.59	0.27	38,38,38,38	0
60	MG	Ba	1677	1/1	0.59	0.12	138,138,138,138	0
60	MG	Aa	1602	1/1	0.59	0.43	126,126,126,126	0
60	MG	BA	3261	1/1	0.59	0.25	68,68,68,68	0
60	MG	BA	3151	1/1	0.60	0.30	119,119,119,119	0
60	MG	Aa	1698	1/1	0.60	0.35	98,98,98,98	1
60	MG	Ba	1669	1/1	0.61	0.18	94,94,94,94	0
60	MG	AA	3155	1/1	0.61	0.17	92,92,92,92	1
60	MG	Aa	1646	1/1	0.61	0.27	102,102,102,102	0
60	MG	Ba	1721	1/1	0.62	0.22	92,92,92,92	0
60	MG	BA	3257	1/1	0.62	0.19	72,72,72,72	0
60	MG	AA	3162	1/1	0.62	0.36	94,94,94,94	0
60	MG	Ba	1653	1/1	0.62	0.19	74,74,74,74	0
60	MG	BA	2958	1/1	0.63	0.40	88,88,88,88	0
60	MG	AA	3238	1/1	0.64	0.23	75,75,75,75	0
60	MG	AA	2954	1/1	0.64	0.28	112,112,112,112	0
60	MG	Aa	1676	1/1	0.64	0.34	90,90,90,90	1
60	MG	AA	3220	1/1	0.64	0.10	54,54,54,54	0
60	MG	Ba	1706	1/1	0.64	0.44	104,104,104,104	0
60	MG	AA	3073	1/1	0.65	0.35	78,78,78,78	0
60	MG	BA	3209	1/1	0.65	0.25	74,74,74,74	0
60	MG	Ae	201	1/1	0.65	0.42	108,108,108,108	0
60	MG	AA	3100	1/1	0.65	0.39	97,97,97,97	0
60	MG	Ba	1699	1/1	0.65	0.31	88,88,88,88	0
60	MG	Bm	201	1/1	0.65	0.21	118,118,118,118	0
60	MG	Aa	1647	1/1	0.65	0.18	138,138,138,138	0
60	MG	AA	3191	1/1	0.66	0.31	74,74,74,74	0
60	MG	AQ	201	1/1	0.66	0.41	94,94,94,94	0
60	MG	AB	201	1/1	0.66	0.22	63,63,63,63	0
60	MG	AA	3206	1/1	0.66	0.23	115,115,115,115	0
60	MG	Ba	1643	1/1	0.66	0.21	108,108,108,108	0
60	MG	Ae	202	1/1	0.66	0.38	89,89,89,89	0
60	MG	Aa	1688	1/1	0.66	0.14	63,63,63,63	1
60	MG	Aa	1718	1/1	0.67	0.41	84,84,84,84	0
60	MG	Ba	1630	1/1	0.67	0.35	76,76,76,76	0
60	MG	AA	3109	1/1	0.67	0.30	78,78,78,78	0
60	MG	Ba	1676	1/1	0.67	0.72	137,137,137,137	1
60	MG	AA	3168	1/1	0.67	0.12	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3061	1/1	0.67	0.34	42,42,42,42	0
60	MG	Aa	1665	1/1	0.68	0.39	120,120,120,120	0
60	MG	AA	3153	1/1	0.68	0.27	71,71,71,71	0
60	MG	AA	3130	1/1	0.68	0.28	76,76,76,76	0
60	MG	Ba	1711	1/1	0.68	0.14	123,123,123,123	0
60	MG	BA	3240	1/1	0.68	0.27	84,84,84,84	0
60	MG	BA	3247	1/1	0.68	0.16	54,54,54,54	0
60	MG	AA	3072	1/1	0.68	0.33	122,122,122,122	0
60	MG	Ba	1604	1/1	0.68	0.26	75,75,75,75	0
60	MG	AA	3261	1/1	0.68	0.31	76,76,76,76	0
60	MG	BB	201	1/1	0.68	0.28	54,54,54,54	0
60	MG	Aa	1614	1/1	0.69	0.14	69,69,69,69	0
60	MG	Bl	201	1/1	0.69	0.16	5,5,5,5	1
60	MG	BA	3074	1/1	0.69	0.35	75,75,75,75	0
60	MG	BA	3099	1/1	0.69	0.42	90,90,90,90	0
60	MG	Ba	1696	1/1	0.69	0.23	83,83,83,83	0
60	MG	Ba	1735	1/1	0.69	0.08	122,122,122,122	0
60	MG	Aa	1712	1/1	0.69	0.10	117,117,117,117	0
60	MG	AA	2928	1/1	0.69	0.49	110,110,110,110	0
60	MG	Ba	1615	1/1	0.69	0.15	81,81,81,81	0
60	MG	BA	3205	1/1	0.69	0.24	92,92,92,92	0
60	MG	Ba	1697	1/1	0.70	0.31	93,93,93,93	1
60	MG	Aa	1622	1/1	0.70	0.32	79,79,79,79	0
60	MG	AA	2917	1/1	0.70	0.18	112,112,112,112	0
60	MG	Ba	1624	1/1	0.70	0.33	76,76,76,76	0
60	MG	Aa	1631	1/1	0.70	0.30	72,72,72,72	0
60	MG	AA	3264	1/1	0.70	0.40	78,78,78,78	0
60	MG	Aa	1632	1/1	0.70	0.29	72,72,72,72	0
60	MG	Aa	1643	1/1	0.70	0.32	90,90,90,90	0
60	MG	BA	3198	1/1	0.70	0.47	91,91,91,91	0
60	MG	Aw	101	1/1	0.70	0.09	83,83,83,83	1
60	MG	BA	3111	1/1	0.71	0.33	74,74,74,74	0
60	MG	AA	3204	1/1	0.71	0.17	51,51,51,51	0
60	MG	AX	101	1/1	0.71	0.20	55,55,55,55	1
60	MG	Aa	1610	1/1	0.71	0.17	115,115,115,115	0
60	MG	BA	3244	1/1	0.71	0.22	91,91,91,91	0
60	MG	BA	2947	1/1	0.71	0.22	44,44,44,44	0
60	MG	BA	3254	1/1	0.71	0.49	66,66,66,66	0
60	MG	AA	3196	1/1	0.71	0.32	70,70,70,70	0
60	MG	BA	3012	1/1	0.71	0.27	61,61,61,61	0
60	MG	AA	3259	1/1	0.71	0.30	78,78,78,78	0
60	MG	BA	3264	1/1	0.71	0.45	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Ba	1656	1/1	0.71	0.16	73,73,73,73	0
60	MG	Ba	1738	1/1	0.72	0.24	106,106,106,106	0
60	MG	BA	3119	1/1	0.72	0.17	67,67,67,67	0
60	MG	AA	3083	1/1	0.72	0.30	76,76,76,76	0
60	MG	Aa	1674	1/1	0.72	0.12	90,90,90,90	0
60	MG	AA	3236	1/1	0.72	0.25	90,90,90,90	0
60	MG	AA	3141	1/1	0.72	0.28	86,86,86,86	0
60	MG	BA	2952	1/1	0.72	0.21	102,102,102,102	0
60	MG	AA	3148	1/1	0.72	0.08	77,77,77,77	0
60	MG	Ba	1688	1/1	0.72	0.21	120,120,120,120	1
60	MG	AA	3149	1/1	0.72	0.35	100,100,100,100	0
60	MG	Ba	1621	1/1	0.72	0.29	82,82,82,82	0
60	MG	AA	3265	1/1	0.73	0.26	70,70,70,70	0
60	MG	Aa	1621	1/1	0.73	0.09	89,89,89,89	0
60	MG	Ba	1720	1/1	0.73	0.23	91,91,91,91	0
60	MG	Ba	1646	1/1	0.73	0.19	128,128,128,128	0
60	MG	Aa	1686	1/1	0.73	0.09	37,37,37,37	1
60	MG	AA	3214	1/1	0.73	0.42	88,88,88,88	0
60	MG	AA	3081	1/1	0.73	0.23	99,99,99,99	0
60	MG	Ba	1702	1/1	0.73	0.49	97,97,97,97	0
60	MG	AA	3231	1/1	0.73	0.29	51,51,51,51	0
60	MG	AA	3114	1/1	0.73	0.22	18,18,18,18	1
60	MG	AA	3203	1/1	0.73	0.16	66,66,66,66	0
60	MG	Aa	1736	1/1	0.73	0.15	117,117,117,117	0
60	MG	BO	201	1/1	0.73	0.38	122,122,122,122	0
60	MG	Ba	1635	1/1	0.73	0.27	57,57,57,57	0
60	MG	AA	3205	1/1	0.74	0.19	51,51,51,51	0
60	MG	Aa	1741	1/1	0.74	0.37	79,79,79,79	0
60	MG	Aa	1662	1/1	0.74	0.28	73,73,73,73	0
60	MG	BA	3236	1/1	0.74	0.31	116,116,116,116	0
60	MG	BA	3132	1/1	0.74	0.17	43,43,43,43	0
60	MG	BA	3138	1/1	0.74	0.17	54,54,54,54	0
60	MG	Ba	1601	1/1	0.74	0.34	90,90,90,90	0
60	MG	BA	3252	1/1	0.74	0.13	40,40,40,40	0
60	MG	Aa	1719	1/1	0.74	0.37	101,101,101,101	0
60	MG	Aa	1734	1/1	0.74	0.28	84,84,84,84	0
60	MG	BA	3189	1/1	0.74	0.25	75,75,75,75	0
60	MG	Ba	1739	1/1	0.74	0.27	53,53,53,53	0
60	MG	Aa	1723	1/1	0.74	0.22	83,83,83,83	0
60	MG	Ba	1687	1/1	0.74	0.14	50,50,50,50	1
60	MG	Aa	1655	1/1	0.75	0.18	87,87,87,87	0
60	MG	Bv	103	1/1	0.75	0.32	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3088	1/1	0.75	0.24	107,107,107,107	0
60	MG	AA	3209	1/1	0.75	0.27	84,84,84,84	0
60	MG	Aa	1692	1/1	0.75	0.33	46,46,46,46	0
60	MG	BA	3202	1/1	0.75	0.11	76,76,76,76	0
60	MG	AA	3248	1/1	0.75	0.46	106,106,106,106	0
60	MG	AA	2957	1/1	0.75	0.16	72,72,72,72	0
60	MG	AA	2909	1/1	0.75	0.28	41,41,41,41	0
60	MG	Aa	1743	1/1	0.75	0.30	67,67,67,67	0
60	MG	Aa	1615	1/1	0.75	0.42	53,53,53,53	0
60	MG	BA	3172	1/1	0.76	0.37	50,50,50,50	0
60	MG	Ba	1718	1/1	0.76	0.18	107,107,107,107	0
60	MG	BA	3186	1/1	0.76	0.29	70,70,70,70	0
60	MG	Ba	1641	1/1	0.76	0.36	94,94,94,94	0
60	MG	AA	2941	1/1	0.76	0.37	92,92,92,92	0
60	MG	BA	2960	1/1	0.76	0.09	101,101,101,101	0
60	MG	BA	3204	1/1	0.76	0.34	64,64,64,64	0
60	MG	BA	2966	1/1	0.76	0.17	67,67,67,67	0
60	MG	AA	3201	1/1	0.76	0.51	88,88,88,88	0
60	MG	AA	2968	1/1	0.76	0.38	76,76,76,76	0
60	MG	BA	3216	1/1	0.76	0.34	117,117,117,117	0
60	MG	Ba	1647	1/1	0.76	0.31	117,117,117,117	0
60	MG	AA	3120	1/1	0.76	0.15	76,76,76,76	0
60	MG	AA	3247	1/1	0.76	0.15	103,103,103,103	0
60	MG	BA	3238	1/1	0.76	0.39	113,113,113,113	0
60	MG	BA	3116	1/1	0.76	0.31	91,91,91,91	0
60	MG	BA	3243	1/1	0.76	0.43	111,111,111,111	0
60	MG	AA	3005	1/1	0.76	0.17	57,57,57,57	0
60	MG	AA	3036	1/1	0.76	0.34	100,100,100,100	0
60	MG	AA	3167	1/1	0.76	0.14	73,73,73,73	0
60	MG	Aa	1667	1/1	0.76	0.24	78,78,78,78	0
60	MG	AA	3189	1/1	0.76	0.27	107,107,107,107	0
60	MG	Aa	1706	1/1	0.76	0.31	54,54,54,54	0
60	MG	AA	3111	1/1	0.76	0.39	54,54,54,54	0
60	MG	BA	3158	1/1	0.76	0.15	88,88,88,88	0
60	MG	BA	3160	1/1	0.76	0.43	74,74,74,74	0
60	MG	Aa	1744	1/1	0.77	0.29	87,87,87,87	0
60	MG	BA	3222	1/1	0.77	0.25	61,61,61,61	0
60	MG	Aa	1730	1/1	0.77	0.25	77,77,77,77	0
60	MG	Aa	1606	1/1	0.77	0.23	66,66,66,66	0
60	MG	AA	3077	1/1	0.77	0.16	99,99,99,99	0
60	MG	Ba	1671	1/1	0.77	0.29	87,87,87,87	0
60	MG	Aa	1722	1/1	0.77	0.22	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3241	1/1	0.77	0.30	49,49,49,49	0
60	MG	Aa	1645	1/1	0.77	0.35	79,79,79,79	0
60	MG	BA	3098	1/1	0.77	0.28	52,52,52,52	0
60	MG	BA	3188	1/1	0.77	0.21	64,64,64,64	0
60	MG	Ba	1679	1/1	0.77	0.25	92,92,92,92	0
60	MG	AA	2978	1/1	0.77	0.42	124,124,124,124	0
60	MG	Ba	1683	1/1	0.77	0.12	65,65,65,65	0
60	MG	Ba	1684	1/1	0.77	0.26	75,75,75,75	0
60	MG	Aa	1690	1/1	0.77	0.18	49,49,49,49	0
60	MG	Aa	1611	1/1	0.77	0.31	60,60,60,60	0
60	MG	AA	3110	1/1	0.77	0.34	91,91,91,91	0
60	MG	BA	3149	1/1	0.78	0.16	76,76,76,76	0
60	MG	AA	2959	1/1	0.78	0.19	73,73,73,73	0
60	MG	BA	3035	1/1	0.78	0.30	52,52,52,52	0
60	MG	BA	3067	1/1	0.78	0.24	28,28,28,28	0
60	MG	AA	3221	1/1	0.78	0.20	47,47,47,47	0
60	MG	BA	3165	1/1	0.78	0.24	67,67,67,67	0
60	MG	Aa	1691	1/1	0.78	0.20	53,53,53,53	0
60	MG	AA	3075	1/1	0.78	0.42	84,84,84,84	0
60	MG	BA	3182	1/1	0.78	0.20	63,63,63,63	0
60	MG	AA	3094	1/1	0.78	0.35	67,67,67,67	0
60	MG	BA	2938	1/1	0.78	0.51	84,84,84,84	0
60	MG	Ba	1605	1/1	0.78	0.34	73,73,73,73	0
60	MG	BA	3118	1/1	0.78	0.15	70,70,70,70	0
60	MG	Aa	1636	1/1	0.78	0.43	88,88,88,88	0
60	MG	AA	3145	1/1	0.78	0.34	78,78,78,78	0
60	MG	AA	3246	1/1	0.78	0.11	70,70,70,70	0
60	MG	AA	3165	1/1	0.78	0.17	97,97,97,97	0
60	MG	Ba	1690	1/1	0.78	0.21	56,56,56,56	0
60	MG	AA	2961	1/1	0.79	0.28	76,76,76,76	0
60	MG	AA	3127	1/1	0.79	0.18	89,89,89,89	0
60	MG	AA	3034	1/1	0.79	0.25	55,55,55,55	0
60	MG	BA	2948	1/1	0.79	0.40	73,73,73,73	0
60	MG	AA	2952	1/1	0.79	0.21	88,88,88,88	0
60	MG	Ba	1659	1/1	0.79	0.20	79,79,79,79	0
60	MG	Aa	1652	1/1	0.79	0.21	58,58,58,58	0
60	MG	AA	3098	1/1	0.79	0.11	75,75,75,75	0
60	MG	BA	2968	1/1	0.79	0.26	69,69,69,69	0
60	MG	AA	3099	1/1	0.79	0.29	57,57,57,57	0
60	MG	BA	3181	1/1	0.79	0.12	61,61,61,61	0
60	MG	BA	3129	1/1	0.79	0.24	53,53,53,53	0
60	MG	AA	3218	1/1	0.79	0.41	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Aa	1680	1/1	0.80	0.36	107,107,107,107	0
60	MG	BA	3162	1/1	0.80	0.17	57,57,57,57	0
60	MG	AA	3028	1/1	0.80	0.28	60,60,60,60	0
60	MG	Aa	1677	1/1	0.80	0.08	69,69,69,69	0
60	MG	Ba	1730	1/1	0.80	0.22	62,62,62,62	0
60	MG	Ba	1654	1/1	0.80	0.23	50,50,50,50	0
60	MG	Av	105	1/1	0.80	0.19	92,92,92,92	1
60	MG	Ba	1736	1/1	0.80	0.13	59,59,59,59	0
60	MG	Aa	1678	1/1	0.80	0.18	93,93,93,93	0
60	MG	AA	3092	1/1	0.80	0.17	51,51,51,51	0
60	MG	AB	203	1/1	0.80	0.33	56,56,56,56	0
60	MG	AA	3224	1/1	0.80	0.17	73,73,73,73	0
60	MG	BA	3147	1/1	0.80	0.21	56,56,56,56	0
60	MG	Ba	1694	1/1	0.80	0.19	83,83,83,83	0
60	MG	BA	3072	1/1	0.80	0.26	55,55,55,55	0
60	MG	Aa	1689	1/1	0.80	0.15	65,65,65,65	1
60	MG	Aa	1656	1/1	0.80	0.15	88,88,88,88	0
60	MG	AB	202	1/1	0.81	0.24	62,62,62,62	0
60	MG	BA	3163	1/1	0.81	0.23	71,71,71,71	0
60	MG	Ba	1689	1/1	0.81	0.31	57,57,57,57	0
60	MG	BA	3228	1/1	0.81	0.25	94,94,94,94	0
60	MG	AA	2944	1/1	0.81	0.18	56,56,56,56	0
60	MG	BA	3178	1/1	0.81	0.11	55,55,55,55	0
60	MG	BA	2963	1/1	0.81	0.16	55,55,55,55	0
60	MG	Aa	1641	1/1	0.81	0.17	74,74,74,74	0
60	MG	AA	3118	1/1	0.81	0.26	74,74,74,74	0
60	MG	AA	3059	1/1	0.81	0.38	68,68,68,68	0
60	MG	Aa	1661	1/1	0.81	0.27	64,64,64,64	0
60	MG	AA	3087	1/1	0.81	0.24	60,60,60,60	0
60	MG	BA	3250	1/1	0.81	0.34	88,88,88,88	0
60	MG	Ba	1612	1/1	0.81	0.10	82,82,82,82	0
60	MG	Ba	1726	1/1	0.81	0.23	34,34,34,34	1
60	MG	BA	3203	1/1	0.81	0.14	95,95,95,95	0
60	MG	BA	3076	1/1	0.81	0.15	83,83,83,83	0
60	MG	Aa	1705	1/1	0.81	0.10	71,71,71,71	0
60	MG	Aa	1728	1/1	0.81	0.20	83,83,83,83	0
60	MG	AA	3163	1/1	0.81	0.22	54,54,54,54	0
60	MG	Ba	1645	1/1	0.82	0.36	101,101,101,101	0
60	MG	Ba	1703	1/1	0.82	0.35	25,25,25,25	1
60	MG	BA	3234	1/1	0.82	0.29	74,74,74,74	0
60	MG	Ba	1705	1/1	0.82	0.32	76,76,76,76	0
60	MG	BA	2922	1/1	0.82	0.15	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3135	1/1	0.82	0.30	96,96,96,96	0
60	MG	AA	3226	1/1	0.82	0.30	95,95,95,95	0
60	MG	AA	3229	1/1	0.82	0.20	73,73,73,73	0
60	MG	Ba	1675	1/1	0.82	0.30	58,58,58,58	0
60	MG	AA	3164	1/1	0.82	0.33	69,69,69,69	0
60	MG	AA	3000	1/1	0.82	0.30	63,63,63,63	0
60	MG	Aa	1735	1/1	0.82	0.20	68,68,68,68	1
60	MG	Ba	1658	1/1	0.82	0.18	50,50,50,50	0
60	MG	AA	2971	1/1	0.82	0.11	52,52,52,52	0
60	MG	BA	2965	1/1	0.82	0.14	58,58,58,58	0
60	MG	AA	2963	1/1	0.82	0.31	46,46,46,46	0
60	MG	BA	3121	1/1	0.82	0.39	70,70,70,70	0
60	MG	BA	3175	1/1	0.82	0.33	57,57,57,57	0
60	MG	BA	3027	1/1	0.83	0.20	43,43,43,43	0
60	MG	Aa	1701	1/1	0.83	0.19	71,71,71,71	0
60	MG	Aa	1617	1/1	0.83	0.09	49,49,49,49	1
60	MG	BA	3212	1/1	0.83	0.33	68,68,68,68	0
60	MG	BA	3153	1/1	0.83	0.26	46,46,46,46	0
60	MG	BA	3220	1/1	0.83	0.23	50,50,50,50	0
60	MG	BA	3221	1/1	0.83	0.40	106,106,106,106	0
60	MG	Ba	1650	1/1	0.83	0.28	49,49,49,49	0
60	MG	AA	3252	1/1	0.83	0.31	80,80,80,80	0
60	MG	Av	104	1/1	0.83	0.23	50,50,50,50	1
60	MG	BA	3232	1/1	0.83	0.20	77,77,77,77	0
60	MG	BA	3081	1/1	0.83	0.27	83,83,83,83	0
60	MG	AA	3257	1/1	0.83	0.20	78,78,78,78	0
60	MG	Ba	1608	1/1	0.83	0.18	79,79,79,79	0
60	MG	AA	2965	1/1	0.83	0.20	69,69,69,69	0
60	MG	AA	3056	1/1	0.83	0.29	19,19,19,19	0
60	MG	BA	3176	1/1	0.83	0.17	48,48,48,48	0
60	MG	Ba	1725	1/1	0.83	0.29	45,45,45,45	0
60	MG	AA	2967	1/1	0.83	0.34	69,69,69,69	0
60	MG	AA	2945	1/1	0.83	0.10	74,74,74,74	0
60	MG	Aa	1628	1/1	0.83	0.13	92,92,92,92	0
60	MG	AA	2925	1/1	0.83	0.28	79,79,79,79	0
60	MG	AA	2999	1/1	0.83	0.17	46,46,46,46	0
60	MG	AA	3241	1/1	0.83	0.31	64,64,64,64	0
60	MG	Aa	1659	1/1	0.83	0.19	88,88,88,88	0
60	MG	BA	2981	1/1	0.83	0.18	46,46,46,46	0
60	MG	AA	3179	1/1	0.83	0.12	56,56,56,56	0
60	MG	BA	3146	1/1	0.83	0.29	84,84,84,84	0
60	MG	BB	203	1/1	0.83	0.32	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	2947	1/1	0.84	0.20	72,72,72,72	0
60	MG	Ba	1651	1/1	0.84	0.35	62,62,62,62	0
60	MG	BA	3086	1/1	0.84	0.16	48,48,48,48	0
60	MG	BA	3087	1/1	0.84	0.34	51,51,51,51	0
60	MG	AA	3146	1/1	0.84	0.52	90,90,90,90	0
60	MG	Ba	1742	1/1	0.84	0.25	92,92,92,92	0
60	MG	AA	3147	1/1	0.84	0.25	79,79,79,79	0
60	MG	BA	3107	1/1	0.84	0.22	45,45,45,45	0
60	MG	Aa	1637	1/1	0.84	0.16	75,75,75,75	0
60	MG	Aa	1717	1/1	0.84	0.21	66,66,66,66	0
60	MG	BA	3206	1/1	0.84	0.25	71,71,71,71	0
60	MG	AA	3152	1/1	0.84	0.28	62,62,62,62	0
60	MG	BA	3208	1/1	0.84	0.26	52,52,52,52	0
60	MG	BA	2901	1/1	0.84	0.33	138,138,138,138	0
60	MG	Ba	1662	1/1	0.84	0.16	67,67,67,67	0
60	MG	AA	3116	1/1	0.84	0.22	35,35,35,35	0
60	MG	Aa	1639	1/1	0.84	0.26	65,65,65,65	0
60	MG	AA	3089	1/1	0.84	0.23	75,75,75,75	0
60	MG	AA	3158	1/1	0.84	0.21	46,46,46,46	0
60	MG	AA	3208	1/1	0.84	0.30	86,86,86,86	0
60	MG	BA	3136	1/1	0.84	0.25	106,106,106,106	0
60	MG	AA	3253	1/1	0.84	0.18	71,71,71,71	0
60	MG	AA	3160	1/1	0.84	0.29	99,99,99,99	0
60	MG	Aa	1739	1/1	0.84	0.16	78,78,78,78	0
60	MG	Ba	1631	1/1	0.84	0.18	73,73,73,73	0
60	MG	AA	3065	1/1	0.84	0.31	73,73,73,73	0
60	MG	Aa	1702	1/1	0.84	0.34	91,91,91,91	0
60	MG	BA	2977	1/1	0.84	0.19	46,46,46,46	0
60	MG	Ba	1686	1/1	0.84	0.13	84,84,84,84	0
60	MG	BA	3007	1/1	0.84	0.24	90,90,90,90	0
60	MG	Aa	1699	1/1	0.84	0.11	84,84,84,84	1
60	MG	BA	3020	1/1	0.84	0.18	84,84,84,84	0
60	MG	AA	3013	1/1	0.84	0.32	78,78,78,78	0
60	MG	BA	3167	1/1	0.84	0.29	59,59,59,59	0
60	MG	BA	3168	1/1	0.84	0.11	53,53,53,53	0
60	MG	AA	3223	1/1	0.84	0.61	78,78,78,78	0
60	MG	BA	3058	1/1	0.84	0.29	34,34,34,34	0
60	MG	Aa	1732	1/1	0.84	0.16	49,49,49,49	0
60	MG	Ba	1691	1/1	0.84	0.30	58,58,58,58	0
60	MG	AA	3175	1/1	0.84	0.31	40,40,40,40	0
60	MG	BA	3101	1/1	0.85	0.28	52,52,52,52	0
60	MG	Aa	1684	1/1	0.85	0.24	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3109	1/1	0.85	0.44	90,90,90,90	0
60	MG	AA	3051	1/1	0.85	0.13	81,81,81,81	0
60	MG	AA	2901	1/1	0.85	0.14	84,84,84,84	0
60	MG	Ba	1609	1/1	0.85	0.26	74,74,74,74	0
60	MG	Aa	1625	1/1	0.85	0.27	76,76,76,76	0
60	MG	AA	3151	1/1	0.85	0.16	85,85,85,85	0
60	MG	AA	2973	1/1	0.85	0.13	79,79,79,79	0
60	MG	AA	2975	1/1	0.85	0.29	90,90,90,90	0
60	MG	Ba	1719	1/1	0.85	0.28	57,57,57,57	0
60	MG	AA	2953	1/1	0.85	0.13	96,96,96,96	0
60	MG	AA	3207	1/1	0.85	0.30	59,59,59,59	0
60	MG	Ba	1634	1/1	0.85	0.22	37,37,37,37	0
60	MG	AA	2980	1/1	0.85	0.41	69,69,69,69	0
60	MG	BA	3141	1/1	0.85	0.24	57,57,57,57	0
60	MG	AA	2985	1/1	0.85	0.30	31,31,31,31	0
60	MG	AA	2992	1/1	0.85	0.22	45,45,45,45	0
60	MG	Aa	1720	1/1	0.85	0.32	75,75,75,75	0
60	MG	BA	3150	1/1	0.85	0.16	76,76,76,76	0
60	MG	BA	3019	1/1	0.85	0.17	30,30,30,30	0
60	MG	AA	3216	1/1	0.85	0.33	49,49,49,49	0
60	MG	AA	3126	1/1	0.85	0.12	47,47,47,47	0
60	MG	Aa	1687	1/1	0.85	0.19	64,64,64,64	0
60	MG	BA	3239	1/1	0.85	0.13	64,64,64,64	0
60	MG	Aa	1672	1/1	0.85	0.06	87,87,87,87	0
60	MG	Aa	1714	1/1	0.85	0.08	47,47,47,47	0
60	MG	AA	3133	1/1	0.85	0.28	48,48,48,48	0
60	MG	AA	3021	1/1	0.85	0.24	96,96,96,96	0
60	MG	Bx	101	1/1	0.85	0.16	83,83,83,83	0
60	MG	BA	3249	1/1	0.85	0.44	67,67,67,67	0
60	MG	BA	3080	1/1	0.85	0.20	58,58,58,58	0
60	MG	Ba	1698	1/1	0.85	0.23	89,89,89,89	1
60	MG	Aa	1738	1/1	0.85	0.18	55,55,55,55	0
60	MG	AA	3230	1/1	0.85	0.16	78,78,78,78	0
60	MG	AA	3185	1/1	0.85	0.39	83,83,83,83	0
60	MG	BA	3179	1/1	0.85	0.10	24,24,24,24	0
60	MG	BA	3097	1/1	0.85	0.14	54,54,54,54	0
60	MG	Aa	1619	1/1	0.85	0.28	65,65,65,65	0
60	MG	BA	2908	1/1	0.85	0.21	20,20,20,20	0
60	MG	Aa	1658	1/1	0.86	0.32	75,75,75,75	0
60	MG	AA	3097	1/1	0.86	0.11	43,43,43,43	0
60	MG	Aa	1682	1/1	0.86	0.17	59,59,59,59	0
60	MG	AA	2923	1/1	0.86	0.18	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Ba	1616	1/1	0.86	0.06	29,29,29,29	1
60	MG	Ba	1722	1/1	0.86	0.14	63,63,63,63	0
60	MG	AA	3183	1/1	0.86	0.11	69,69,69,69	0
60	MG	Aa	1695	1/1	0.86	0.16	78,78,78,78	0
60	MG	Ba	1664	1/1	0.86	0.28	46,46,46,46	0
60	MG	BA	3230	1/1	0.86	0.11	45,45,45,45	0
60	MG	BA	2959	1/1	0.86	0.16	37,37,37,37	0
60	MG	AA	3243	1/1	0.86	0.75	79,79,79,79	0
60	MG	AA	3266	1/1	0.86	0.33	87,87,87,87	0
60	MG	AA	3267	1/1	0.86	0.47	74,74,74,74	0
60	MG	Ba	1734	1/1	0.86	0.12	84,84,84,84	1
60	MG	Ba	1700	1/1	0.86	0.16	58,58,58,58	0
60	MG	Ba	1701	1/1	0.86	0.22	60,60,60,60	0
60	MG	Aa	1697	1/1	0.86	0.26	65,65,65,65	0
60	MG	BA	3000	1/1	0.86	0.20	16,16,16,16	0
60	MG	AA	2932	1/1	0.86	0.23	57,57,57,57	0
60	MG	BA	3245	1/1	0.86	0.13	90,90,90,90	0
60	MG	AA	3159	1/1	0.86	0.22	114,114,114,114	0
60	MG	Ba	1740	1/1	0.86	0.30	78,78,78,78	0
60	MG	Bd	301	1/1	0.86	0.20	55,55,55,55	0
60	MG	BA	3196	1/1	0.86	0.09	68,68,68,68	0
60	MG	BA	3024	1/1	0.86	0.26	24,24,24,24	0
60	MG	AA	3050	1/1	0.86	0.16	96,96,96,96	0
60	MG	BA	3029	1/1	0.86	0.17	27,27,27,27	0
60	MG	Aa	1627	1/1	0.86	0.08	53,53,53,53	0
60	MG	A7	101	1/1	0.86	0.41	80,80,80,80	0
60	MG	Aa	1654	1/1	0.86	0.12	56,56,56,56	0
60	MG	BB	202	1/1	0.86	0.15	46,46,46,46	0
60	MG	AA	2904	1/1	0.86	0.14	131,131,131,131	0
60	MG	AA	3128	1/1	0.87	0.29	23,23,23,23	0
60	MG	Aa	1607	1/1	0.87	0.24	69,69,69,69	0
60	MG	Ba	1611	1/1	0.87	0.14	97,97,97,97	0
60	MG	AA	2993	1/1	0.87	0.14	56,56,56,56	0
60	MG	AA	3157	1/1	0.87	0.21	66,66,66,66	0
60	MG	AA	3067	1/1	0.87	0.22	34,34,34,34	0
60	MG	Ba	1667	1/1	0.87	0.16	50,50,50,50	0
60	MG	BA	3137	1/1	0.87	0.27	80,80,80,80	0
60	MG	AA	3112	1/1	0.87	0.28	60,60,60,60	0
60	MG	AA	3139	1/1	0.87	0.10	44,44,44,44	0
60	MG	BA	3143	1/1	0.87	0.34	95,95,95,95	0
60	MG	BA	3145	1/1	0.87	0.38	63,63,63,63	0
60	MG	Ba	1674	1/1	0.87	0.10	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Ba	1628	1/1	0.87	0.19	46,46,46,46	0
60	MG	AA	2997	1/1	0.87	0.13	43,43,43,43	0
60	MG	Aa	1651	1/1	0.87	0.32	58,58,58,58	0
60	MG	BA	2903	1/1	0.87	0.07	99,99,99,99	0
60	MG	BA	3229	1/1	0.87	0.17	32,32,32,32	0
60	MG	Aa	1666	1/1	0.87	0.23	61,61,61,61	0
60	MG	Aa	1715	1/1	0.87	0.07	57,57,57,57	0
60	MG	BA	3156	1/1	0.87	0.21	29,29,29,29	0
60	MG	Ba	1637	1/1	0.87	0.26	80,80,80,80	0
60	MG	BA	3084	1/1	0.87	0.23	34,34,34,34	0
60	MG	AA	3239	1/1	0.87	0.28	77,77,77,77	0
60	MG	AA	3166	1/1	0.87	0.20	48,48,48,48	0
60	MG	AA	3008	1/1	0.87	0.13	75,75,75,75	0
60	MG	BA	3093	1/1	0.87	0.23	61,61,61,61	0
60	MG	BA	3094	1/1	0.87	0.26	11,11,11,11	0
60	MG	AA	3242	1/1	0.87	0.33	85,85,85,85	0
60	MG	AA	3125	1/1	0.87	0.21	42,42,42,42	0
60	MG	Av	101	1/1	0.87	0.39	90,90,90,90	1
60	MG	AA	3177	1/1	0.87	0.15	57,57,57,57	0
60	MG	BA	3106	1/1	0.87	0.23	41,41,41,41	0
60	MG	BA	3251	1/1	0.87	0.17	65,65,65,65	0
60	MG	Ba	1728	1/1	0.87	0.23	30,30,30,30	0
60	MG	AA	3107	1/1	0.87	0.22	47,47,47,47	0
60	MG	AA	3217	1/1	0.87	0.27	85,85,85,85	0
60	MG	BA	3183	1/1	0.87	0.17	44,44,44,44	0
60	MG	AA	3250	1/1	0.87	0.22	40,40,40,40	0
60	MG	BA	3187	1/1	0.87	0.26	36,36,36,36	0
60	MG	BA	2971	1/1	0.87	0.35	66,66,66,66	0
60	MG	AA	3251	1/1	0.87	0.35	84,84,84,84	0
60	MG	BA	3193	1/1	0.87	0.16	44,44,44,44	0
60	MG	AA	3074	1/1	0.88	0.26	33,33,33,33	0
60	MG	BA	3215	1/1	0.88	0.29	65,65,65,65	0
60	MG	BA	3103	1/1	0.88	0.28	50,50,50,50	0
60	MG	BA	3161	1/1	0.88	0.30	71,71,71,71	0
60	MG	AA	3035	1/1	0.88	0.15	21,21,21,21	0
60	MG	AA	3200	1/1	0.88	0.38	72,72,72,72	1
60	MG	AA	2964	1/1	0.88	0.20	65,65,65,65	0
60	MG	Ba	1666	1/1	0.88	0.23	73,73,73,73	0
60	MG	AA	3046	1/1	0.88	0.15	47,47,47,47	0
60	MG	BA	3170	1/1	0.88	0.12	13,13,13,13	0
60	MG	Ba	1638	1/1	0.88	0.18	40,40,40,40	0
60	MG	AA	3048	1/1	0.88	0.17	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	2931	1/1	0.88	0.18	62,62,62,62	0
60	MG	AA	3002	1/1	0.88	0.14	58,58,58,58	0
60	MG	BA	3237	1/1	0.88	0.09	55,55,55,55	0
60	MG	BA	3128	1/1	0.88	0.17	26,26,26,26	0
60	MG	BA	3036	1/1	0.88	0.18	34,34,34,34	0
60	MG	BA	3130	1/1	0.88	0.20	45,45,45,45	0
60	MG	BA	2942	1/1	0.88	0.13	42,42,42,42	0
60	MG	BA	3242	1/1	0.88	0.35	52,52,52,52	0
60	MG	BA	3059	1/1	0.88	0.17	52,52,52,52	0
60	MG	Aa	1694	1/1	0.88	0.12	89,89,89,89	0
60	MG	AA	2955	1/1	0.88	0.14	48,48,48,48	0
60	MG	AA	3009	1/1	0.88	0.17	31,31,31,31	0
60	MG	AF	301	1/1	0.88	0.14	74,74,74,74	0
60	MG	BA	2955	1/1	0.88	0.11	49,49,49,49	0
60	MG	Ba	1704	1/1	0.88	0.23	62,62,62,62	0
60	MG	AA	3020	1/1	0.88	0.12	39,39,39,39	0
60	MG	AA	2948	1/1	0.88	0.16	67,67,67,67	0
60	MG	Aa	1650	1/1	0.88	0.41	64,64,64,64	0
60	MG	Ba	1620	1/1	0.88	0.10	55,55,55,55	0
60	MG	Aa	1629	1/1	0.88	0.22	59,59,59,59	0
60	MG	AA	3102	1/1	0.88	0.36	68,68,68,68	0
60	MG	AA	3104	1/1	0.88	0.31	56,56,56,56	0
60	MG	BA	2976	1/1	0.88	0.37	104,104,104,104	0
60	MG	Ba	1714	1/1	0.88	0.10	62,62,62,62	0
60	MG	AA	3228	1/1	0.89	0.16	51,51,51,51	0
60	MG	BA	3133	1/1	0.89	0.09	54,54,54,54	0
60	MG	Ba	1627	1/1	0.89	0.19	74,74,74,74	0
60	MG	Ba	1668	1/1	0.89	0.20	49,49,49,49	0
60	MG	AA	3066	1/1	0.89	0.21	27,27,27,27	0
60	MG	BA	3034	1/1	0.89	0.16	11,11,11,11	0
60	MG	AA	3096	1/1	0.89	0.60	73,73,73,73	0
60	MG	B5	102	1/1	0.89	0.32	76,76,76,76	0
60	MG	BA	3046	1/1	0.89	0.14	28,28,28,28	0
60	MG	AA	3198	1/1	0.89	0.24	52,52,52,52	0
60	MG	Ba	1632	1/1	0.89	0.18	41,41,41,41	0
60	MG	BA	2905	1/1	0.89	0.19	29,29,29,29	0
60	MG	BA	2907	1/1	0.89	0.22	49,49,49,49	0
60	MG	AA	3031	1/1	0.89	0.19	45,45,45,45	0
60	MG	AA	2949	1/1	0.89	0.24	41,41,41,41	0
60	MG	BA	2924	1/1	0.89	0.17	93,93,93,93	0
60	MG	AA	3001	1/1	0.89	0.23	26,26,26,26	0
60	MG	Ba	1716	1/1	0.89	0.23	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	2939	1/1	0.89	0.20	71,71,71,71	0
60	MG	Aa	1620	1/1	0.89	0.11	73,73,73,73	0
60	MG	Ba	1640	1/1	0.89	0.33	80,80,80,80	0
60	MG	Aa	1623	1/1	0.89	0.08	74,74,74,74	0
60	MG	AA	3103	1/1	0.89	0.08	35,35,35,35	0
60	MG	Aa	1683	1/1	0.89	0.10	66,66,66,66	0
60	MG	AA	3138	1/1	0.89	0.12	56,56,56,56	0
60	MG	AA	3079	1/1	0.89	0.30	55,55,55,55	0
60	MG	AA	3080	1/1	0.89	0.34	67,67,67,67	0
60	MG	Ba	1727	1/1	0.89	0.14	46,46,46,46	0
60	MG	Ba	1602	1/1	0.89	0.24	93,93,93,93	0
60	MG	AA	2990	1/1	0.89	0.24	34,34,34,34	0
60	MG	AA	3172	1/1	0.89	0.18	38,38,38,38	0
60	MG	BA	3110	1/1	0.89	0.21	23,23,23,23	0
60	MG	Aa	1740	1/1	0.89	0.16	42,42,42,42	0
60	MG	AA	3085	1/1	0.89	0.12	47,47,47,47	0
60	MG	BA	3117	1/1	0.89	0.25	63,63,63,63	0
60	MG	Ba	1657	1/1	0.89	0.14	52,52,52,52	0
60	MG	AA	3113	1/1	0.89	0.20	76,76,76,76	0
60	MG	AA	3254	1/1	0.89	0.23	53,53,53,53	0
60	MG	BA	3260	1/1	0.89	0.29	80,80,80,80	0
60	MG	BA	2996	1/1	0.89	0.19	18,18,18,18	0
60	MG	Aa	1633	1/1	0.89	0.27	62,62,62,62	0
60	MG	BA	3265	1/1	0.89	0.20	74,74,74,74	0
60	MG	AA	2958	1/1	0.89	0.20	47,47,47,47	0
60	MG	AA	3023	1/1	0.89	0.23	13,13,13,13	0
60	MG	Aa	1640	1/1	0.89	0.12	60,60,60,60	0
60	MG	BA	3060	1/1	0.90	0.28	16,16,16,16	0
60	MG	AA	3190	1/1	0.90	0.18	43,43,43,43	0
60	MG	AA	3058	1/1	0.90	0.30	44,44,44,44	0
60	MG	Ba	1617	1/1	0.90	0.20	36,36,36,36	0
60	MG	BA	2951	1/1	0.90	0.29	72,72,72,72	0
60	MG	BA	3077	1/1	0.90	0.07	46,46,46,46	0
60	MG	AA	3024	1/1	0.90	0.18	25,25,25,25	0
60	MG	AA	2951	1/1	0.90	0.09	53,53,53,53	0
60	MG	Ba	1622	1/1	0.90	0.10	57,57,57,57	0
60	MG	AA	3064	1/1	0.90	0.09	29,29,29,29	0
60	MG	AA	2977	1/1	0.90	0.31	54,54,54,54	0
60	MG	BA	2962	1/1	0.90	0.15	54,54,54,54	0
60	MG	BA	3091	1/1	0.90	0.22	32,32,32,32	0
60	MG	Aa	1670	1/1	0.90	0.12	43,43,43,43	0
60	MG	AA	3235	1/1	0.90	0.33	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3090	1/1	0.90	0.24	59,59,59,59	0
60	MG	AA	3144	1/1	0.90	0.36	50,50,50,50	0
60	MG	Ba	1672	1/1	0.90	0.08	95,95,95,95	0
60	MG	BA	3235	1/1	0.90	0.10	51,51,51,51	0
60	MG	AA	2915	1/1	0.90	0.16	21,21,21,21	0
60	MG	Aa	1609	1/1	0.90	0.11	64,64,64,64	0
60	MG	AA	3037	1/1	0.90	0.16	27,27,27,27	0
60	MG	Aa	1616	1/1	0.90	0.06	64,64,64,64	0
60	MG	B0	101	1/1	0.90	0.15	71,71,71,71	0
60	MG	BA	3173	1/1	0.90	0.22	72,72,72,72	0
60	MG	BA	3174	1/1	0.90	0.10	63,63,63,63	0
60	MG	B0	102	1/1	0.90	0.16	47,47,47,47	0
60	MG	BA	3010	1/1	0.90	0.18	13,13,13,13	0
60	MG	AA	3119	1/1	0.90	0.31	68,68,68,68	0
60	MG	AA	3244	1/1	0.90	0.43	67,67,67,67	0
60	MG	Aa	1716	1/1	0.90	0.12	70,70,70,70	0
60	MG	AA	3178	1/1	0.90	0.13	35,35,35,35	0
60	MG	AA	3076	1/1	0.90	0.09	78,78,78,78	0
60	MG	BA	3124	1/1	0.90	0.10	40,40,40,40	0
60	MG	BA	3125	1/1	0.90	0.16	40,40,40,40	0
60	MG	AA	3180	1/1	0.90	0.11	73,73,73,73	0
60	MG	AA	2970	1/1	0.90	0.11	53,53,53,53	0
60	MG	AA	3219	1/1	0.90	0.23	30,30,30,30	0
60	MG	Aa	1685	1/1	0.90	0.10	53,53,53,53	0
60	MG	BA	3263	1/1	0.90	0.11	68,68,68,68	0
60	MG	BA	3044	1/1	0.90	0.16	21,21,21,21	0
60	MG	Ba	1610	1/1	0.90	0.09	50,50,50,50	0
60	MG	BA	3048	1/1	0.90	0.13	31,31,31,31	0
60	MG	AA	2907	1/1	0.90	0.13	48,48,48,48	0
60	MG	AA	3222	1/1	0.90	0.21	45,45,45,45	0
60	MG	BA	2913	1/1	0.91	0.19	11,11,11,11	0
60	MG	BA	3032	1/1	0.91	0.19	32,32,32,32	0
60	MG	BA	2918	1/1	0.91	0.07	29,29,29,29	0
60	MG	AA	3060	1/1	0.91	0.10	46,46,46,46	0
60	MG	AA	2933	1/1	0.91	0.32	67,67,67,67	0
60	MG	BA	2927	1/1	0.91	0.35	83,83,83,83	0
60	MG	AA	3122	1/1	0.91	0.23	39,39,39,39	0
60	MG	AA	3063	1/1	0.91	0.09	53,53,53,53	0
60	MG	Ba	1642	1/1	0.91	0.22	78,78,78,78	0
60	MG	BA	2940	1/1	0.91	0.20	82,82,82,82	0
60	MG	Aa	1693	1/1	0.91	0.25	75,75,75,75	0
60	MG	AA	3202	1/1	0.91	0.22	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3025	1/1	0.91	0.18	26,26,26,26	0
60	MG	BA	3073	1/1	0.91	0.23	30,30,30,30	0
60	MG	Aa	1613	1/1	0.91	0.17	100,100,100,100	0
60	MG	BA	3224	1/1	0.91	0.23	62,62,62,62	0
60	MG	Aa	1653	1/1	0.91	0.08	59,59,59,59	0
60	MG	AA	3068	1/1	0.91	0.15	19,19,19,19	0
60	MG	BA	2953	1/1	0.91	0.14	25,25,25,25	0
60	MG	AA	3033	1/1	0.91	0.15	57,57,57,57	0
60	MG	BA	3231	1/1	0.91	0.10	64,64,64,64	0
60	MG	BA	3082	1/1	0.91	0.16	34,34,34,34	0
60	MG	AA	2972	1/1	0.91	0.17	43,43,43,43	0
60	MG	AA	3135	1/1	0.91	0.19	71,71,71,71	0
60	MG	AA	2922	1/1	0.91	0.12	48,48,48,48	0
60	MG	AA	3211	1/1	0.91	0.18	60,60,60,60	0
60	MG	AA	3249	1/1	0.91	0.21	55,55,55,55	0
60	MG	BA	3092	1/1	0.91	0.14	79,79,79,79	0
60	MG	AA	3212	1/1	0.91	0.22	68,68,68,68	0
60	MG	AA	3171	1/1	0.91	0.11	57,57,57,57	0
60	MG	Aa	1696	1/1	0.91	0.14	67,67,67,67	0
60	MG	BA	2969	1/1	0.91	0.09	35,35,35,35	0
60	MG	AA	3003	1/1	0.91	0.15	43,43,43,43	0
60	MG	AA	3038	1/1	0.91	0.20	64,64,64,64	0
60	MG	BA	3102	1/1	0.91	0.12	47,47,47,47	0
60	MG	AA	3255	1/1	0.91	0.18	50,50,50,50	0
60	MG	AA	2960	1/1	0.91	0.23	17,17,17,17	0
60	MG	BA	2986	1/1	0.91	0.12	63,63,63,63	0
60	MG	BA	3177	1/1	0.91	0.15	70,70,70,70	0
60	MG	Aa	1657	1/1	0.91	0.09	71,71,71,71	0
60	MG	AA	2926	1/1	0.91	0.16	26,26,26,26	0
60	MG	BA	3255	1/1	0.91	0.18	81,81,81,81	0
60	MG	AA	3181	1/1	0.91	0.09	61,61,61,61	0
60	MG	BA	3112	1/1	0.91	0.08	69,69,69,69	0
60	MG	BA	3115	1/1	0.91	0.20	21,21,21,21	0
60	MG	AA	2983	1/1	0.91	0.19	27,27,27,27	0
60	MG	AA	3018	1/1	0.91	0.17	48,48,48,48	0
60	MG	BA	3013	1/1	0.91	0.54	50,50,50,50	0
60	MG	AA	3086	1/1	0.91	0.16	74,74,74,74	0
60	MG	Aa	1635	1/1	0.91	0.22	39,39,39,39	0
60	MG	Aa	1733	1/1	0.91	0.09	60,60,60,60	0
60	MG	Ba	1678	1/1	0.91	0.18	51,51,51,51	0
60	MG	Aa	1642	1/1	0.92	0.16	95,95,95,95	0
60	MG	AA	2991	1/1	0.92	0.20	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3121	1/1	0.92	0.35	31,31,31,31	0
59	ZN	A4	101	1/1	0.92	0.06	186,186,186,186	0
60	MG	Ba	1731	1/1	0.92	0.16	20,20,20,20	0
60	MG	AA	3124	1/1	0.92	0.21	15,15,15,15	0
60	MG	AA	3258	1/1	0.92	0.34	38,38,38,38	0
60	MG	Aa	1668	1/1	0.92	0.13	40,40,40,40	0
60	MG	AA	2929	1/1	0.92	0.14	29,29,29,29	0
60	MG	AA	3170	1/1	0.92	0.21	47,47,47,47	0
60	MG	AA	2931	1/1	0.92	0.25	35,35,35,35	0
60	MG	BA	3201	1/1	0.92	0.20	43,43,43,43	0
60	MG	AA	3047	1/1	0.92	0.14	40,40,40,40	0
60	MG	BA	2979	1/1	0.92	0.20	55,55,55,55	0
60	MG	AA	3173	1/1	0.92	0.14	14,14,14,14	0
60	MG	Aa	1644	1/1	0.92	0.18	56,56,56,56	0
60	MG	Ba	1743	1/1	0.92	0.32	57,57,57,57	0
60	MG	AA	3049	1/1	0.92	0.15	54,54,54,54	0
60	MG	Aa	1612	1/1	0.92	0.09	32,32,32,32	0
60	MG	BA	3123	1/1	0.92	0.24	2,2,2,2	0
60	MG	BA	3211	1/1	0.92	0.14	24,24,24,24	0
60	MG	AA	3227	1/1	0.92	0.15	39,39,39,39	0
60	MG	Bv	105	1/1	0.92	0.11	81,81,81,81	1
59	ZN	B4	101	1/1	0.92	0.07	201,201,201,201	0
60	MG	BA	3218	1/1	0.92	0.45	80,80,80,80	0
60	MG	BA	3219	1/1	0.92	0.24	40,40,40,40	0
60	MG	Ba	1648	1/1	0.92	0.17	32,32,32,32	0
60	MG	Aa	1673	1/1	0.92	0.13	60,60,60,60	0
60	MG	BA	3021	1/1	0.92	0.15	31,31,31,31	0
60	MG	AA	2903	1/1	0.92	0.27	65,65,65,65	0
60	MG	Aa	1604	1/1	0.92	0.07	76,76,76,76	0
60	MG	BA	3226	1/1	0.92	0.28	75,75,75,75	0
60	MG	B7	101	1/1	0.92	0.11	36,36,36,36	0
60	MG	BA	3134	1/1	0.92	0.11	52,52,52,52	0
60	MG	AA	2905	1/1	0.92	0.15	15,15,15,15	0
60	MG	BA	3033	1/1	0.92	0.30	61,61,61,61	0
60	MG	AA	3142	1/1	0.92	0.18	53,53,53,53	0
60	MG	Aa	1664	1/1	0.92	0.25	44,44,44,44	0
60	MG	Aa	1707	1/1	0.92	0.17	79,79,79,79	0
60	MG	Aa	1708	1/1	0.92	0.12	81,81,81,81	0
60	MG	BA	2912	1/1	0.92	0.28	37,37,37,37	0
60	MG	Ba	1660	1/1	0.92	0.20	60,60,60,60	0
60	MG	BA	3057	1/1	0.92	0.19	45,45,45,45	0
60	MG	Ba	1709	1/1	0.92	0.13	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Ba	1710	1/1	0.92	0.09	65,65,65,65	0
60	MG	Ba	1606	1/1	0.92	0.14	50,50,50,50	0
60	MG	BA	3152	1/1	0.92	0.19	71,71,71,71	0
60	MG	BA	2925	1/1	0.92	0.24	31,31,31,31	0
60	MG	BA	2926	1/1	0.92	0.21	24,24,24,24	0
60	MG	Aa	1709	1/1	0.92	0.06	148,148,148,148	0
60	MG	AA	2921	1/1	0.92	0.21	50,50,50,50	0
60	MG	BA	3075	1/1	0.92	0.13	44,44,44,44	0
60	MG	BA	2932	1/1	0.92	0.16	67,67,67,67	0
60	MG	Aa	1711	1/1	0.92	0.12	70,70,70,70	0
60	MG	BA	3078	1/1	0.92	0.23	32,32,32,32	0
60	MG	BA	3253	1/1	0.92	0.21	43,43,43,43	0
60	MG	AA	2982	1/1	0.92	0.28	56,56,56,56	0
60	MG	AA	3069	1/1	0.92	0.27	68,68,68,68	0
60	MG	Ba	1613	1/1	0.92	0.34	38,38,38,38	0
60	MG	BA	3083	1/1	0.92	0.30	52,52,52,52	0
60	MG	BA	3259	1/1	0.92	0.15	86,86,86,86	0
60	MG	AA	3027	1/1	0.92	0.11	54,54,54,54	0
60	MG	Aa	1605	1/1	0.92	0.07	43,43,43,43	0
60	MG	AA	3029	1/1	0.92	0.16	37,37,37,37	0
60	MG	AA	3030	1/1	0.92	0.10	28,28,28,28	0
60	MG	AA	2956	1/1	0.92	0.11	61,61,61,61	0
60	MG	AA	2986	1/1	0.92	0.24	46,46,46,46	0
60	MG	AA	3078	1/1	0.92	0.10	83,83,83,83	0
60	MG	BA	2956	1/1	0.92	0.13	50,50,50,50	0
60	MG	BA	3049	1/1	0.93	0.20	62,62,62,62	0
60	MG	BA	3052	1/1	0.93	0.12	10,10,10,10	0
60	MG	BA	3055	1/1	0.93	0.21	7,7,7,7	0
60	MG	AA	3232	1/1	0.93	0.07	64,64,64,64	0
60	MG	AA	3006	1/1	0.93	0.11	32,32,32,32	0
60	MG	AD	302	1/1	0.93	0.12	21,21,21,21	0
60	MG	AA	2987	1/1	0.93	0.17	53,53,53,53	0
60	MG	BA	3066	1/1	0.93	0.30	32,32,32,32	0
60	MG	AA	2920	1/1	0.93	0.21	22,22,22,22	0
60	MG	BD	301	1/1	0.93	0.18	14,14,14,14	0
60	MG	AA	3014	1/1	0.93	0.37	50,50,50,50	0
60	MG	AA	3015	1/1	0.93	0.19	14,14,14,14	0
60	MG	Aa	1737	1/1	0.93	0.13	119,119,119,119	0
60	MG	BA	3144	1/1	0.93	0.27	59,59,59,59	0
60	MG	Ba	1639	1/1	0.93	0.16	58,58,58,58	0
60	MG	Av	102	1/1	0.93	0.18	77,77,77,77	0
60	MG	Aa	1724	1/1	0.93	0.06	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	2970	1/1	0.93	0.27	53,53,53,53	0
60	MG	AA	2950	1/1	0.93	0.14	51,51,51,51	0
60	MG	BA	2972	1/1	0.93	0.24	30,30,30,30	0
60	MG	BA	3227	1/1	0.93	0.49	82,82,82,82	0
60	MG	BA	2973	1/1	0.93	0.16	52,52,52,52	0
60	MG	AA	3150	1/1	0.93	0.20	62,62,62,62	0
60	MG	AA	2935	1/1	0.93	0.28	69,69,69,69	0
60	MG	AA	2939	1/1	0.93	0.38	68,68,68,68	0
60	MG	AA	3026	1/1	0.93	0.18	35,35,35,35	0
60	MG	BA	3089	1/1	0.93	0.14	56,56,56,56	0
60	MG	AA	3053	1/1	0.93	0.17	42,42,42,42	0
60	MG	BA	2987	1/1	0.93	0.20	9,9,9,9	0
60	MG	BA	2917	1/1	0.93	0.33	23,23,23,23	0
60	MG	BA	3164	1/1	0.93	0.14	31,31,31,31	0
60	MG	AA	3054	1/1	0.93	0.11	24,24,24,24	0
60	MG	AA	3186	1/1	0.93	0.13	77,77,77,77	0
60	MG	BA	3008	1/1	0.93	0.16	32,32,32,32	0
60	MG	AA	3187	1/1	0.93	0.24	49,49,49,49	0
60	MG	AA	3188	1/1	0.93	0.20	36,36,36,36	0
60	MG	AA	3156	1/1	0.93	0.10	73,73,73,73	0
60	MG	BA	3015	1/1	0.93	0.14	18,18,18,18	0
60	MG	BA	3016	1/1	0.93	0.17	11,11,11,11	0
60	MG	AA	2940	1/1	0.93	0.12	34,34,34,34	0
60	MG	AA	3225	1/1	0.93	0.16	57,57,57,57	0
60	MG	Aa	1721	1/1	0.93	0.08	68,68,68,68	0
60	MG	Ba	1618	1/1	0.93	0.18	57,57,57,57	0
60	MG	Ba	1619	1/1	0.93	0.05	44,44,44,44	0
60	MG	BA	3114	1/1	0.93	0.15	8,8,8,8	0
60	MG	BA	3028	1/1	0.93	0.16	24,24,24,24	0
60	MG	AA	2984	1/1	0.93	0.10	45,45,45,45	0
60	MG	BA	2941	1/1	0.93	0.15	62,62,62,62	0
60	MG	Aa	1729	1/1	0.93	0.23	30,30,30,30	0
60	MG	BA	2944	1/1	0.93	0.09	62,62,62,62	0
60	MG	AA	3084	1/1	0.93	0.22	54,54,54,54	0
60	MG	BA	3191	1/1	0.93	0.12	23,23,23,23	0
60	MG	AA	3136	1/1	0.93	0.21	84,84,84,84	0
60	MG	Ba	1741	1/1	0.93	0.17	73,73,73,73	0
60	MG	BA	3197	1/1	0.93	0.18	103,103,103,103	1
60	MG	Ba	1626	1/1	0.93	0.18	56,56,56,56	0
60	MG	BA	3199	1/1	0.93	0.13	34,34,34,34	0
60	MG	AA	3137	1/1	0.93	0.23	90,90,90,90	0
60	MG	BA	2933	1/1	0.94	0.19	18,18,18,18	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	2984	1/1	0.94	0.19	22,22,22,22	0
60	MG	BA	2936	1/1	0.94	0.06	35,35,35,35	0
60	MG	Bv	101	1/1	0.94	0.21	52,52,52,52	1
60	MG	Ba	1717	1/1	0.94	0.43	71,71,71,71	0
60	MG	AA	3082	1/1	0.94	0.09	72,72,72,72	0
60	MG	BA	3004	1/1	0.94	0.07	46,46,46,46	0
60	MG	AA	2911	1/1	0.94	0.28	20,20,20,20	0
60	MG	AA	3194	1/1	0.94	0.11	26,26,26,26	0
60	MG	BA	2943	1/1	0.94	0.17	35,35,35,35	0
60	MG	BA	3214	1/1	0.94	0.25	34,34,34,34	0
60	MG	BA	3011	1/1	0.94	0.16	11,11,11,11	0
60	MG	Aa	1660	1/1	0.94	0.14	49,49,49,49	0
60	MG	AA	2927	1/1	0.94	0.24	32,32,32,32	0
60	MG	BA	3148	1/1	0.94	0.12	74,74,74,74	0
60	MG	BA	3014	1/1	0.94	0.17	1,1,1,1	0
60	MG	AD	301	1/1	0.94	0.16	21,21,21,21	0
60	MG	AA	2976	1/1	0.94	0.23	46,46,46,46	0
60	MG	BA	3090	1/1	0.94	0.12	32,32,32,32	0
60	MG	Ba	1670	1/1	0.94	0.12	58,58,58,58	0
60	MG	AA	3071	1/1	0.94	0.23	74,74,74,74	0
60	MG	AA	2919	1/1	0.94	0.13	36,36,36,36	0
60	MG	BA	2902	1/1	0.94	0.20	60,60,60,60	0
60	MG	BA	3159	1/1	0.94	0.19	52,52,52,52	0
60	MG	BA	3096	1/1	0.94	0.06	49,49,49,49	0
60	MG	Aa	1626	1/1	0.94	0.06	63,63,63,63	0
60	MG	AA	3115	1/1	0.94	0.18	19,19,19,19	0
60	MG	Ba	1649	1/1	0.94	0.24	49,49,49,49	0
60	MG	BA	3030	1/1	0.94	0.17	26,26,26,26	0
60	MG	AA	3010	1/1	0.94	0.17	10,10,10,10	0
60	MG	AA	2906	1/1	0.94	0.18	25,25,25,25	0
60	MG	AA	2996	1/1	0.94	0.29	40,40,40,40	0
60	MG	BA	3169	1/1	0.94	0.07	25,25,25,25	0
60	MG	BA	2964	1/1	0.94	0.22	49,49,49,49	0
60	MG	BA	3108	1/1	0.94	0.14	50,50,50,50	0
60	MG	AA	3140	1/1	0.94	0.24	45,45,45,45	0
60	MG	BA	3038	1/1	0.94	0.13	26,26,26,26	0
60	MG	Ba	1655	1/1	0.94	0.13	43,43,43,43	0
60	MG	BA	2967	1/1	0.94	0.22	20,20,20,20	0
60	MG	BA	3113	1/1	0.94	0.16	24,24,24,24	1
60	MG	BA	3047	1/1	0.94	0.16	36,36,36,36	0
60	MG	AA	2981	1/1	0.94	0.24	13,13,13,13	0
60	MG	BA	2923	1/1	0.94	0.12	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3051	1/1	0.94	0.15	16,16,16,16	0
60	MG	Ba	1685	1/1	0.94	0.12	25,25,25,25	1
60	MG	BA	3054	1/1	0.94	0.20	36,36,36,36	0
60	MG	BA	3184	1/1	0.94	0.11	57,57,57,57	0
60	MG	AA	3233	1/1	0.94	0.09	44,44,44,44	0
60	MG	BA	3122	1/1	0.94	0.13	24,24,24,24	0
60	MG	AA	2998	1/1	0.94	0.07	36,36,36,36	0
60	MG	Aa	1608	1/1	0.94	0.13	39,39,39,39	0
60	MG	BA	2974	1/1	0.94	0.21	31,31,31,31	0
60	MG	BA	2930	1/1	0.94	0.21	28,28,28,28	0
60	MG	BA	3262	1/1	0.94	0.15	39,39,39,39	0
60	MG	BA	3127	1/1	0.94	0.26	20,20,20,20	0
60	MG	BA	3064	1/1	0.94	0.09	44,44,44,44	0
60	MG	AA	2902	1/1	0.94	0.24	167,167,167,167	0
60	MG	AA	3022	1/1	0.94	0.14	22,22,22,22	0
60	MG	BA	3200	1/1	0.94	0.09	33,33,33,33	0
60	MG	BA	3071	1/1	0.94	0.19	39,39,39,39	0
60	MG	BA	3195	1/1	0.95	0.09	37,37,37,37	0
60	MG	AA	3093	1/1	0.95	0.11	56,56,56,56	0
60	MG	AA	2937	1/1	0.95	0.10	67,67,67,67	0
60	MG	Av	103	1/1	0.95	0.06	84,84,84,84	0
60	MG	AA	2910	1/1	0.95	0.33	49,49,49,49	0
60	MG	AA	3234	1/1	0.95	0.17	79,79,79,79	0
60	MG	Aa	1649	1/1	0.95	0.11	32,32,32,32	0
60	MG	BA	2982	1/1	0.95	0.21	4,4,4,4	0
60	MG	BA	3061	1/1	0.95	0.09	35,35,35,35	0
60	MG	AA	3123	1/1	0.95	0.18	18,18,18,18	0
60	MG	BA	2934	1/1	0.95	0.35	72,72,72,72	0
60	MG	AA	3237	1/1	0.95	0.17	37,37,37,37	0
60	MG	BA	3068	1/1	0.95	0.27	64,64,64,64	0
60	MG	BA	3070	1/1	0.95	0.09	83,83,83,83	0
60	MG	BA	2991	1/1	0.95	0.25	32,32,32,32	0
60	MG	AA	3174	1/1	0.95	0.10	72,72,72,72	0
60	MG	BA	2999	1/1	0.95	0.21	26,26,26,26	0
60	MG	BA	3213	1/1	0.95	0.12	36,36,36,36	0
60	MG	AA	3055	1/1	0.95	0.34	67,67,67,67	0
60	MG	BA	3142	1/1	0.95	0.28	53,53,53,53	0
60	MG	BA	3001	1/1	0.95	0.06	37,37,37,37	0
60	MG	BA	3217	1/1	0.95	0.18	26,26,26,26	0
60	MG	BA	3002	1/1	0.95	0.15	41,41,41,41	0
60	MG	AA	3176	1/1	0.95	0.31	74,74,74,74	0
60	MG	BA	3005	1/1	0.95	0.17	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3079	1/1	0.95	0.15	82,82,82,82	0
60	MG	AA	2913	1/1	0.95	0.18	22,22,22,22	0
60	MG	BA	3223	1/1	0.95	0.10	43,43,43,43	0
60	MG	AA	3011	1/1	0.95	0.17	14,14,14,14	0
60	MG	AA	2914	1/1	0.95	0.14	15,15,15,15	0
60	MG	AA	2994	1/1	0.95	0.28	30,30,30,30	0
60	MG	Ba	1603	1/1	0.95	0.06	64,64,64,64	0
60	MG	BA	3085	1/1	0.95	0.08	60,60,60,60	0
60	MG	BA	2946	1/1	0.95	0.06	75,75,75,75	0
60	MG	AA	3106	1/1	0.95	0.19	65,65,65,65	0
60	MG	BX	101	1/1	0.95	0.14	31,31,31,31	1
60	MG	BA	2950	1/1	0.95	0.07	37,37,37,37	0
60	MG	BA	3017	1/1	0.95	0.11	38,38,38,38	0
60	MG	AA	3215	1/1	0.95	0.10	56,56,56,56	0
60	MG	Ba	1682	1/1	0.95	0.05	66,66,66,66	0
60	MG	AA	3182	1/1	0.95	0.15	40,40,40,40	0
60	MG	BA	3022	1/1	0.95	0.13	16,16,16,16	0
60	MG	BA	3023	1/1	0.95	0.23	21,21,21,21	0
60	MG	BA	3166	1/1	0.95	0.08	50,50,50,50	0
60	MG	BA	2954	1/1	0.95	0.10	57,57,57,57	0
60	MG	AA	3131	1/1	0.95	0.26	46,46,46,46	0
60	MG	Aa	1745	1/1	0.95	0.19	48,48,48,48	0
60	MG	AA	2946	1/1	0.95	0.06	101,101,101,101	0
60	MG	BA	3171	1/1	0.95	0.24	69,69,69,69	0
60	MG	AA	2916	1/1	0.95	0.18	25,25,25,25	0
60	MG	Aa	1618	1/1	0.95	0.12	28,28,28,28	0
60	MG	BA	3105	1/1	0.95	0.13	40,40,40,40	0
60	MG	BA	2906	1/1	0.95	0.14	26,26,26,26	0
60	MG	AA	3043	1/1	0.95	0.10	37,37,37,37	0
60	MG	Ba	1614	1/1	0.95	0.29	68,68,68,68	0
60	MG	AA	3161	1/1	0.95	0.27	61,61,61,61	0
60	MG	BA	3037	1/1	0.95	0.11	35,35,35,35	0
60	MG	AA	3045	1/1	0.95	0.12	22,22,22,22	0
60	MG	BA	3040	1/1	0.95	0.10	17,17,17,17	0
60	MG	BA	3041	1/1	0.95	0.20	15,15,15,15	0
60	MG	BA	2916	1/1	0.95	0.18	62,62,62,62	0
60	MG	BA	3045	1/1	0.95	0.11	16,16,16,16	0
60	MG	A1	101	1/1	0.95	0.21	53,53,53,53	0
60	MG	AA	3193	1/1	0.95	0.11	20,20,20,20	0
60	MG	A5	101	1/1	0.95	0.21	34,34,34,34	0
60	MG	AA	2934	1/1	0.95	0.19	32,32,32,32	1
60	MG	BA	3190	1/1	0.95	0.12	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	BA	3050	1/1	0.95	0.05	29,29,29,29	0
60	MG	Aa	1731	1/1	0.95	0.44	64,64,64,64	0
60	MG	BA	3194	1/1	0.95	0.13	12,12,12,12	0
60	MG	AA	2930	1/1	0.96	0.05	15,15,15,15	0
60	MG	BA	2904	1/1	0.96	0.15	1,1,1,1	0
60	MG	AA	2966	1/1	0.96	0.24	57,57,57,57	0
60	MG	Aa	1638	1/1	0.96	0.19	62,62,62,62	0
60	MG	AA	2979	1/1	0.96	0.10	51,51,51,51	0
60	MG	AA	3108	1/1	0.96	0.04	38,38,38,38	0
60	MG	Ba	1723	1/1	0.96	0.05	103,103,103,103	0
60	MG	AA	2942	1/1	0.96	0.20	40,40,40,40	0
60	MG	Ba	1625	1/1	0.96	0.10	72,72,72,72	0
60	MG	AA	2969	1/1	0.96	0.08	22,22,22,22	0
60	MG	AA	3004	1/1	0.96	0.10	39,39,39,39	0
60	MG	AA	3213	1/1	0.96	0.18	33,33,33,33	0
60	MG	AA	3052	1/1	0.96	0.13	18,18,18,18	0
60	MG	AA	2988	1/1	0.96	0.17	33,33,33,33	0
60	MG	BA	3063	1/1	0.96	0.11	26,26,26,26	0
60	MG	BA	3246	1/1	0.96	0.10	89,89,89,89	0
60	MG	AA	3129	1/1	0.96	0.10	29,29,29,29	0
60	MG	Ba	1693	1/1	0.96	0.07	78,78,78,78	0
60	MG	BA	3026	1/1	0.96	0.07	40,40,40,40	0
60	MG	BA	3139	1/1	0.96	0.04	15,15,15,15	0
60	MG	BA	3140	1/1	0.96	0.17	25,25,25,25	0
60	MG	BA	2985	1/1	0.96	0.09	26,26,26,26	0
60	MG	AA	3016	1/1	0.96	0.10	31,31,31,31	0
60	MG	BA	2928	1/1	0.96	0.08	17,17,17,17	0
60	MG	BA	2988	1/1	0.96	0.11	34,34,34,34	0
60	MG	BA	2989	1/1	0.96	0.28	31,31,31,31	0
60	MG	BA	2957	1/1	0.96	0.25	13,13,13,13	0
60	MG	BA	2995	1/1	0.96	0.17	14,14,14,14	0
60	MG	B5	101	1/1	0.96	0.15	27,27,27,27	0
60	MG	BA	2998	1/1	0.96	0.11	14,14,14,14	0
60	MG	AA	3039	1/1	0.96	0.13	19,19,19,19	0
60	MG	AA	3017	1/1	0.96	0.15	18,18,18,18	0
60	MG	BA	2961	1/1	0.96	0.08	28,28,28,28	0
60	MG	B7	102	1/1	0.96	0.26	57,57,57,57	0
60	MG	AA	3101	1/1	0.96	0.16	46,46,46,46	0
60	MG	AA	3044	1/1	0.96	0.36	17,17,17,17	0
60	MG	BA	3039	1/1	0.97	0.11	15,15,15,15	0
60	MG	BD	302	1/1	0.97	0.10	18,18,18,18	0
60	MG	BF	301	1/1	0.97	0.04	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3040	1/1	0.97	0.06	21,21,21,21	0
60	MG	AA	3042	1/1	0.97	0.20	27,27,27,27	0
60	MG	Ba	1636	1/1	0.97	0.15	60,60,60,60	0
60	MG	AA	2918	1/1	0.97	0.34	25,25,25,25	0
60	MG	AA	3070	1/1	0.97	0.10	54,54,54,54	0
60	MG	BA	3006	1/1	0.97	0.14	21,21,21,21	0
60	MG	Ba	1661	1/1	0.97	0.12	41,41,41,41	0
60	MG	Aa	1726	1/1	0.97	0.22	36,36,36,36	0
60	MG	AA	3199	1/1	0.97	0.12	53,53,53,53	0
60	MG	BA	3095	1/1	0.97	0.11	33,33,33,33	0
60	MG	BA	2935	1/1	0.97	0.26	25,25,25,25	0
60	MG	AA	3032	1/1	0.97	0.07	33,33,33,33	0
60	MG	BA	3056	1/1	0.97	0.16	92,92,92,92	0
60	MG	BA	2937	1/1	0.97	0.21	67,67,67,67	0
60	MG	BA	3100	1/1	0.97	0.11	62,62,62,62	0
60	MG	AA	2936	1/1	0.97	0.24	5,5,5,5	0
60	MG	AA	2974	1/1	0.97	0.32	43,43,43,43	0
60	MG	Aa	1710	1/1	0.97	0.09	29,29,29,29	0
60	MG	BA	3104	1/1	0.97	0.06	31,31,31,31	0
60	MG	AA	3184	1/1	0.97	0.07	44,44,44,44	0
60	MG	BA	3062	1/1	0.97	0.08	36,36,36,36	0
60	MG	Ba	1623	1/1	0.97	0.05	34,34,34,34	0
60	MG	AA	3062	1/1	0.97	0.09	26,26,26,26	0
60	MG	BA	3248	1/1	0.97	0.29	47,47,47,47	0
60	MG	BA	3065	1/1	0.97	0.12	13,13,13,13	0
60	MG	BA	3155	1/1	0.97	0.07	59,59,59,59	0
60	MG	AA	3169	1/1	0.97	0.07	44,44,44,44	0
60	MG	BA	2909	1/1	0.97	0.23	45,45,45,45	0
60	MG	BA	2980	1/1	0.97	0.22	9,9,9,9	0
60	MG	BA	3069	1/1	0.97	0.09	35,35,35,35	0
60	MG	BA	2910	1/1	0.97	0.20	2,2,2,2	0
60	MG	BA	3256	1/1	0.97	0.26	39,39,39,39	0
60	MG	AA	2938	1/1	0.97	0.11	84,84,84,84	0
60	MG	Ba	1607	1/1	0.97	0.06	75,75,75,75	0
60	MG	BA	2949	1/1	0.97	0.08	42,42,42,42	0
60	MG	BA	2915	1/1	0.97	0.22	20,20,20,20	0
60	MG	A1	102	1/1	0.97	0.15	116,116,116,116	0
60	MG	Ba	1652	1/1	0.97	0.04	69,69,69,69	0
60	MG	Aa	1624	1/1	0.97	0.09	37,37,37,37	0
60	MG	BA	2990	1/1	0.97	0.09	10,10,10,10	0
60	MG	BA	2920	1/1	0.97	0.11	24,24,24,24	0
60	MG	BA	2994	1/1	0.97	0.21	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	AA	3095	1/1	0.97	0.27	26,26,26,26	0
60	MG	AA	2962	1/1	0.97	0.06	19,19,19,19	0
60	MG	AA	3195	1/1	0.98	0.06	30,30,30,30	0
60	MG	Ba	1673	1/1	0.98	0.07	39,39,39,39	0
60	MG	BA	2921	1/1	0.98	0.06	31,31,31,31	0
60	MG	BA	3003	1/1	0.98	0.07	22,22,22,22	0
60	MG	Aa	1634	1/1	0.98	0.05	47,47,47,47	0
60	MG	BA	3192	1/1	0.98	0.04	34,34,34,34	0
60	MG	AA	3197	1/1	0.98	0.25	22,22,22,22	0
60	MG	Aa	1603	1/1	0.98	0.06	68,68,68,68	1
60	MG	BA	3042	1/1	0.98	0.09	30,30,30,30	0
60	MG	BA	3043	1/1	0.98	0.29	17,17,17,17	0
60	MG	BA	2975	1/1	0.98	0.20	105,105,105,105	0
60	MG	BA	3157	1/1	0.98	0.08	85,85,85,85	0
59	ZN	Bn	101	1/1	0.98	0.04	137,137,137,137	0
60	MG	BA	3120	1/1	0.98	0.24	16,16,16,16	0
60	MG	BA	3009	1/1	0.98	0.11	3,3,3,3	0
60	MG	AA	3091	1/1	0.98	0.13	27,27,27,27	0
60	MG	BA	2978	1/1	0.98	0.06	56,56,56,56	0
60	MG	AA	3143	1/1	0.98	0.05	29,29,29,29	0
60	MG	Ba	1680	1/1	0.98	0.03	63,63,63,63	0
60	MG	BA	2929	1/1	0.98	0.04	10,10,10,10	0
60	MG	AA	3012	1/1	0.98	0.08	22,22,22,22	0
60	MG	BA	3053	1/1	0.98	0.09	12,12,12,12	0
60	MG	AA	3105	1/1	0.98	0.08	47,47,47,47	0
60	MG	BA	3210	1/1	0.98	0.11	22,22,22,22	0
60	MG	AA	2995	1/1	0.98	0.21	18,18,18,18	0
60	MG	BA	3018	1/1	0.98	0.09	2,2,2,2	0
60	MG	AA	2924	1/1	0.98	0.04	32,32,32,32	0
60	MG	Bv	102	1/1	0.98	0.09	37,37,37,37	0
60	MG	Ba	1629	1/1	0.98	0.06	36,36,36,36	0
60	MG	AA	2912	1/1	0.98	0.07	26,26,26,26	0
59	ZN	An	101	1/1	0.98	0.03	153,153,153,153	0
60	MG	AA	3007	1/1	0.98	0.06	43,43,43,43	0
60	MG	BA	3025	1/1	0.98	0.09	12,12,12,12	0
60	MG	BA	2992	1/1	0.98	0.12	33,33,33,33	0
60	MG	BA	2993	1/1	0.98	0.20	12,12,12,12	0
60	MG	Ba	1633	1/1	0.98	0.08	39,39,39,39	0
60	MG	BA	2914	1/1	0.98	0.09	11,11,11,11	0
60	MG	AA	2908	1/1	0.98	0.11	25,25,25,25	0
60	MG	BA	2997	1/1	0.98	0.07	22,22,22,22	0
60	MG	AA	3019	1/1	0.98	0.10	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	MG	Ba	1732	1/1	0.98	0.08	70,70,70,70	0
60	MG	BA	3185	1/1	0.99	0.28	40,40,40,40	0
59	ZN	A9	101	1/1	0.99	0.04	138,138,138,138	0
60	MG	Aa	1630	1/1	0.99	0.03	36,36,36,36	0
60	MG	BA	3031	1/1	0.99	0.06	14,14,14,14	0
60	MG	BA	2983	1/1	0.99	0.03	21,21,21,21	0
60	MG	AA	2989	1/1	0.99	0.04	33,33,33,33	0
60	MG	Aa	1681	1/1	0.99	0.02	76,76,76,76	0
60	MG	BA	2919	1/1	0.99	0.06	13,13,13,13	0
60	MG	Aa	1671	1/1	0.99	0.05	49,49,49,49	0
60	MG	AA	3057	1/1	0.99	0.06	92,92,92,92	0
60	MG	BA	2911	1/1	0.99	0.06	21,21,21,21	0
60	MG	AA	3041	1/1	0.99	0.06	21,21,21,21	0
59	ZN	Bd	302	1/1	0.99	0.17	80,80,80,80	0
59	ZN	B9	101	1/1	0.99	0.04	116,116,116,116	0
59	ZN	Ad	301	1/1	1.00	0.18	76,76,76,76	0

6.5 Other polymers (i)

There are no such residues in this entry.