



# wwPDB X-ray Structure Validation Summary Report ⓘ

Feb 1, 2016 – 08:01 AM GMT

PDB ID : 3CCJ  
Title : Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation C2534U  
Authors : Blaha, G.; Gurel, G.  
Deposited on : 2008-02-26  
Resolution : 2.70 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

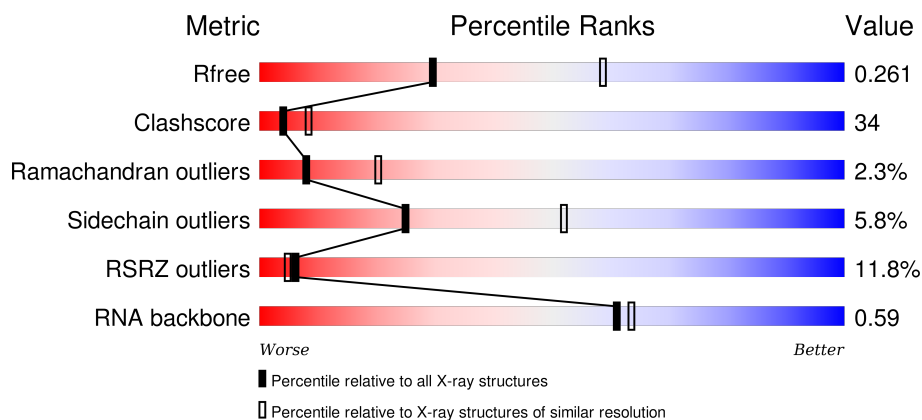
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.70 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))
$R_{free}$	91344	2103 (2.70-2.70)
Clashscore	102246	2422 (2.70-2.70)
Ramachandran outliers	100387	2382 (2.70-2.70)
Sidechain outliers	100360	2382 (2.70-2.70)
RSRZ outliers	91569	2107 (2.70-2.70)
RNA backbone	2183	1069 (3.10-2.30)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	240	<div> <div>14%</div> <div>49%</div> <div>45%</div> <div>• •</div> </div>
2	B	338	<div> <div>9%</div> <div>46%</div> <div>50%</div> <div>•</div> </div>
3	C	246	<div> <div>7%</div> <div>56%</div> <div>39%</div> <div>•</div> </div>
4	D	177	<div> <div>37%</div> <div>39%</div> <div>37%</div> <div>•</div> <div>21%</div> </div>

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Mol	Chain	Length	Quality of chain
5	E	178	
6	F	120	
7	G	348	
8	H	177	
9	I	162	
10	J	145	
11	K	132	
12	L	165	
13	M	196	
14	N	187	
15	O	116	
16	P	149	
17	Q	96	
18	R	155	
19	S	85	
20	T	120	
21	U	67	
22	V	71	
23	W	154	
24	X	92	
25	Y	241	
26	Z	116	
27	1	57	
28	2	50	
29	3	92	

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Mol	Chain	Length	Quality of chain
30	0	2923	
31	9	122	

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
32	MG	0	8003	-	-	-	X
32	MG	0	8008	-	-	-	X
32	MG	0	8009	-	-	-	X
32	MG	0	8011	-	-	-	X
32	MG	0	8043	-	-	-	X
32	MG	0	8079	-	-	-	X
32	MG	0	8083	-	-	-	X
32	MG	Y	8086	-	-	-	X
33	K	0	8401	-	-	-	X
34	NA	0	8504	-	-	-	X
34	NA	0	8517	-	-	-	X
34	NA	0	8521	-	-	-	X
34	NA	0	8522	-	-	-	X
34	NA	0	8523	-	-	-	X
34	NA	0	8528	-	-	-	X
34	NA	0	8535	-	-	-	X
34	NA	0	8542	-	-	-	X
34	NA	0	8546	-	-	-	X
34	NA	0	8547	-	-	-	X
34	NA	0	8555	-	-	-	X
34	NA	0	8556	-	-	-	X
34	NA	0	8559	-	-	-	X
34	NA	0	8560	-	-	-	X
34	NA	0	8562	-	-	-	X
34	NA	0	8563	-	-	-	X
34	NA	0	8564	-	-	-	X
34	NA	0	8565	-	-	-	X
34	NA	0	8567	-	-	-	X
34	NA	B	8552	-	-	-	X
34	NA	L	8568	-	-	-	X
34	NA	R	8575	-	-	-	X
35	CL	0	8805	-	-	-	X
35	CL	0	8812	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
35	CL	0	8813	-	-	X	-
35	CL	3	8804	-	-	X	-
35	CL	B	8819	-	-	-	X
35	CL	J	8801	-	-	X	-
35	CL	J	8821	-	-	-	X
35	CL	M	8818	-	-	X	X
35	CL	N	8807	-	-	X	-
36	SR	0	8903	-	-	-	X
36	SR	0	8957	-	-	-	X
36	SR	0	8969	-	-	-	X
36	SR	0	8970	-	-	-	X
36	SR	0	8982	-	-	-	X
36	SR	0	8992	-	-	-	X
36	SR	0	9007	-	-	-	X
36	SR	B	8987	-	-	-	X
37	CD	3	8704	-	-	-	X
37	CD	Z	8703	-	-	-	X

## 2 Entry composition [i](#)

There are 38 unique types of molecules in this entry. The entry contains 99122 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 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	237	Total	C	N	O	S	0	0	0
			1753	1072	352	324	5			

- Molecule 2 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	337	Total	C	N	O	S	0	0	0
			2625	1616	493	511	5			

- Molecule 3 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	246	Total	C	N	O	S	0	0	0
			1860	1130	345	384	1			

- Molecule 4 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	140	Total	C	N	O	S	0	0	0
			1094	685	195	210	4			

- Molecule 5 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	172	Total	C	N	O	S	0	0	0
			1357	840	224	289	4			

- Molecule 6 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	119	Total	C	N	O	S	0	0	0
			890	551	141	197	1			

- Molecule 7 is a protein called 50S ribosomal protein L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	29	Total	C	N	O	S	0	0	0
			240	149	39	51	1			

- Molecule 8 is a protein called 50S ribosomal protein L10e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	160	Total	C	N	O	S	0	0	0
			1282	798	240	238	6			

- Molecule 9 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	70	Total	C	N	O	S	0	0	0
			519	323	81	114	1			

- Molecule 10 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	142	Total	C	N	O	S	0	0	0
			1120	696	199	222	3			

- Molecule 11 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	132	Total	C	N	O	S	0	0	0
			994	609	189	192	4			

- Molecule 12 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	L	145	Total	C	N	O	0	0	0
			1118	670	222	226			

- Molecule 13 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	194	Total	C	N	O	S	0	0	0
			1558	943	333	281	1			

- Molecule 14 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	186	Total	C	N	O	S	0	0	0
			1445	895	262	286	2			

- Molecule 15 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	115	Total	C	N	O		0	0	0
			865	529	161	175				

- Molecule 16 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	143	Total	C	N	O		0	0	0
			1136	683	229	224				

- Molecule 17 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	95	Total	C	N	O		0	0	0
			735	450	141	144				

- Molecule 18 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	150	Total	C	N	O	S	0	0	0
			1149	713	209	223	4			

- Molecule 19 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	81	Total	C	N	O	S	0	0	0
			641	389	111	138	3			

- Molecule 20 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	119	Total	C	N	O		0	0	0
			950	568	180	202				

- Molecule 21 is a protein called 50S ribosomal protein L24e.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	U	53	Total	C	N	O	S	0	0	0
			410	244	75	86	5			

- Molecule 22 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	65	Total	C	N	O	S	0	0	0
			499	304	94	100	1			

- Molecule 23 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	154	Total	C	N	O	S	0	0	0
			1196	737	209	244	6			

- Molecule 24 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	82	Total	C	N	O	S	0	0	0
			654	402	129	122	1			

- Molecule 25 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y	142	Total	C	N	O		0	0	0
			1130	686	228	216				

- Molecule 26 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	73	Total	C	N	O	S	0	0	0
			573	343	113	112	5			

- Molecule 27 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

- Molecule 28 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 29 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

- Molecule 30 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	10872	19054	2745			

- Molecule 31 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	122	Total	C	N	O	P	0	0	0
			2599	1160	471	847	121			

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	0	85	Total	Mg	0	0
			85	85		
32	Y	2	Total	Mg	0	0
			2	2		
32	K	1	Total	Mg	0	0
			1	1		
32	A	2	Total	Mg	0	0
			2	2		
32	T	1	Total	Mg	0	0
			1	1		
32	9	2	Total	Mg	0	0
			2	2		

- Molecule 33 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	1	Total	K	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	M	1	Total K 1 1	0	0

- Molecule 34 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	0	63	Total Na 63 63	0	0
34	J	1	Total Na 1 1	0	0
34	Q	1	Total Na 1 1	0	0
34	B	1	Total Na 1 1	0	0
34	C	1	Total Na 1 1	0	0
34	R	3	Total Na 3 3	0	0
34	9	2	Total Na 2 2	0	0
34	L	1	Total Na 1 1	0	0
34	S	1	Total Na 1 1	0	0
34	M	1	Total Na 1 1	0	0

- Molecule 35 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	8	Total Cl 8 8	0	0
35	J	4	Total Cl 4 4	0	0
35	Q	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	A	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	O	1	Total 1	Cl 1	0	0
35	R	1	Total 1	Cl 1	0	0
35	Y	1	Total 1	Cl 1	0	0
35	L	1	Total 1	Cl 1	0	0
35	3	1	Total 1	Cl 1	0	0
35	M	1	Total 1	Cl 1	0	0

- Molecule 36 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	0	93	Total 93	Sr 93	0	0
36	J	1	Total 1	Sr 1	0	0
36	1	2	Total 2	Sr 2	0	0
36	B	2	Total 2	Sr 2	0	0
36	3	2	Total 2	Sr 2	0	0
36	A	2	Total 2	Sr 2	0	0
36	2	1	Total 1	Sr 1	0	0
36	R	1	Total 1	Sr 1	0	0
36	9	2	Total 2	Sr 2	0	0
36	S	1	Total 1	Sr 1	0	0
36	F	1	Total 1	Sr 1	0	0

- Molecule 37 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	O	1	Total Cd 1 1	0	0
37	Z	1	Total Cd 1 1	0	0
37	1	1	Total Cd 1 1	0	0
37	3	1	Total Cd 1 1	0	0
37	U	1	Total Cd 1 1	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	0	5813	Total O 5813 5813	0	0
38	9	144	Total O 144 144	0	0
38	A	122	Total O 122 122	0	0
38	B	158	Total O 158 158	0	0
38	C	176	Total O 176 176	0	0
38	D	51	Total O 51 51	0	0
38	E	51	Total O 51 51	0	0
38	F	27	Total O 27 27	0	0
38	G	15	Total O 15 15	0	0
38	H	73	Total O 73 73	0	0
38	I	3	Total O 3 3	0	0
38	J	55	Total O 55 55	0	0
38	K	61	Total O 61 61	0	0
38	L	99	Total O 99 99	0	0
38	M	148	Total O 148 148	0	0

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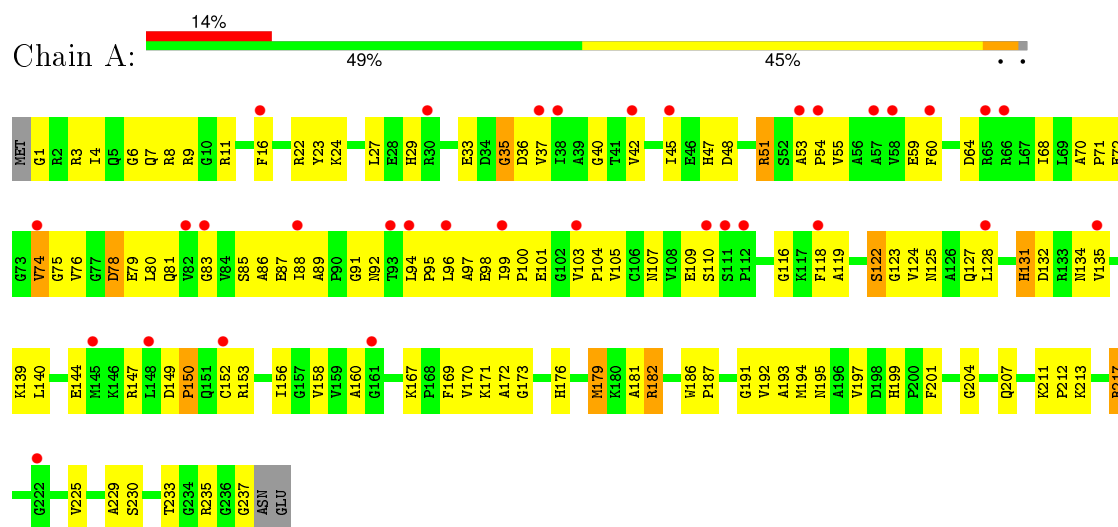
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	N	56	Total 56	O 56	0	0
38	O	42	Total 42	O 42	0	0
38	P	56	Total 56	O 56	0	0
38	Q	58	Total 58	O 58	0	0
38	R	78	Total 78	O 78	0	0
38	S	37	Total 37	O 37	0	0
38	T	41	Total 41	O 41	0	0
38	U	34	Total 34	O 34	0	0
38	V	10	Total 10	O 10	0	0
38	W	71	Total 71	O 71	0	0
38	X	28	Total 28	O 28	0	0
38	Y	102	Total 102	O 102	0	0
38	Z	33	Total 33	O 33	0	0
38	1	53	Total 53	O 53	0	0
38	2	48	Total 48	O 48	0	0
38	3	80	Total 80	O 80	0	0

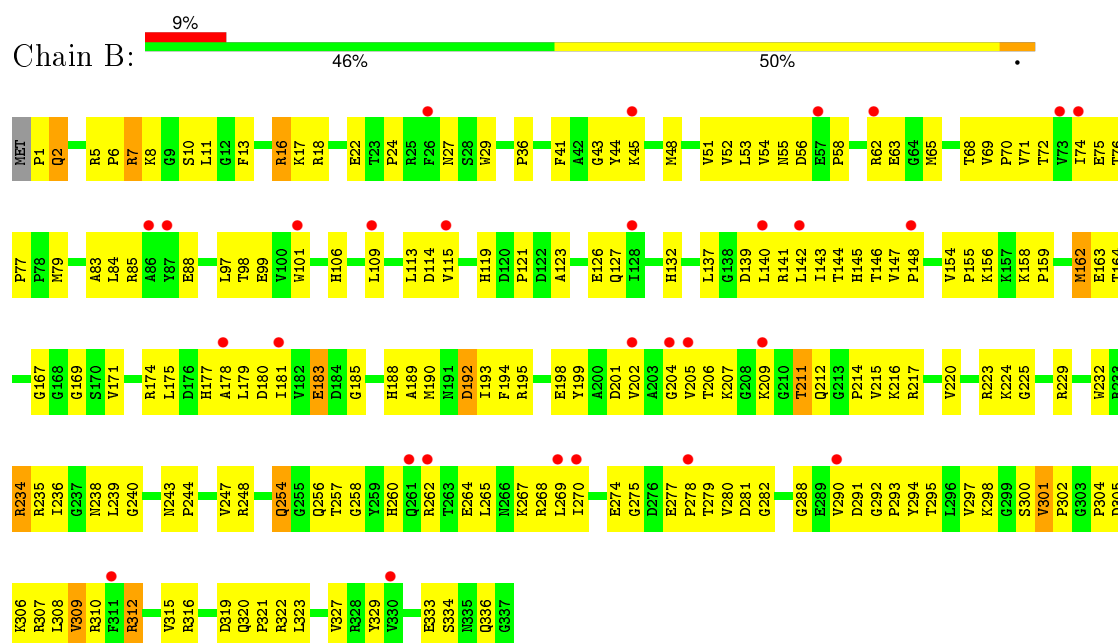
### 3 Residue-property plots

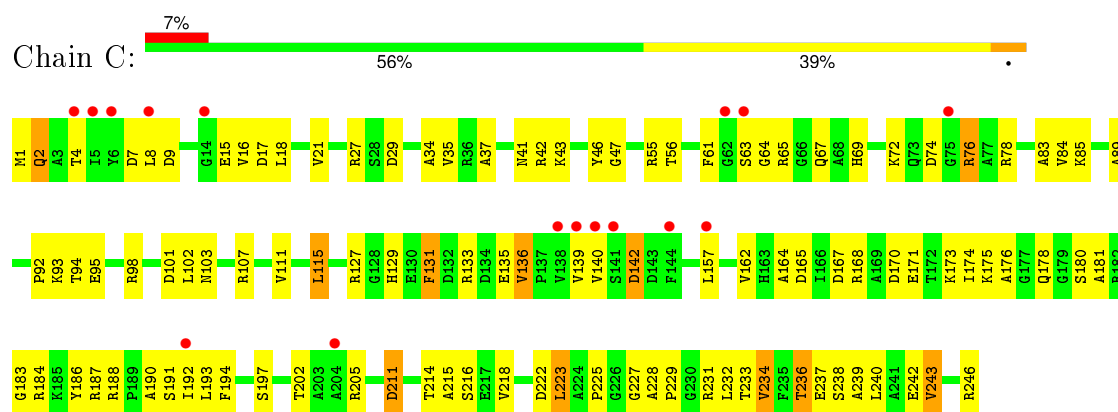
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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: 50S ribosomal protein L2P

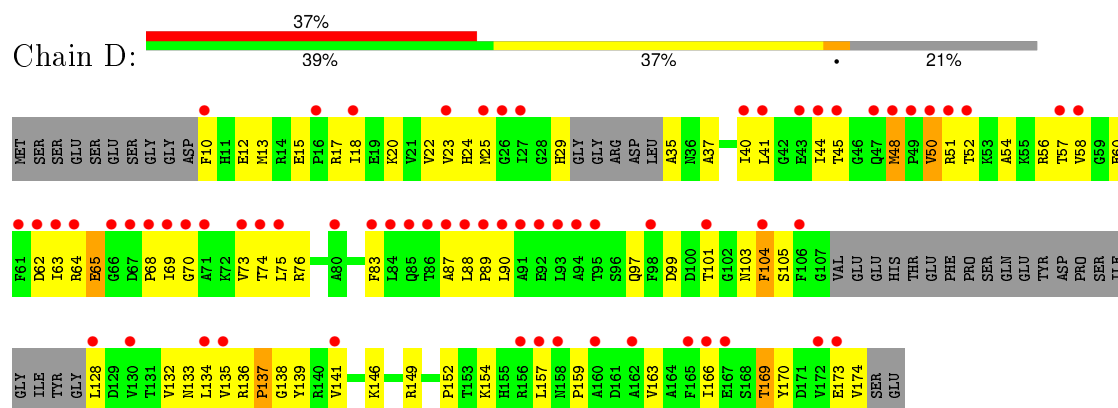


- Molecule 2: 50S ribosomal protein L3P

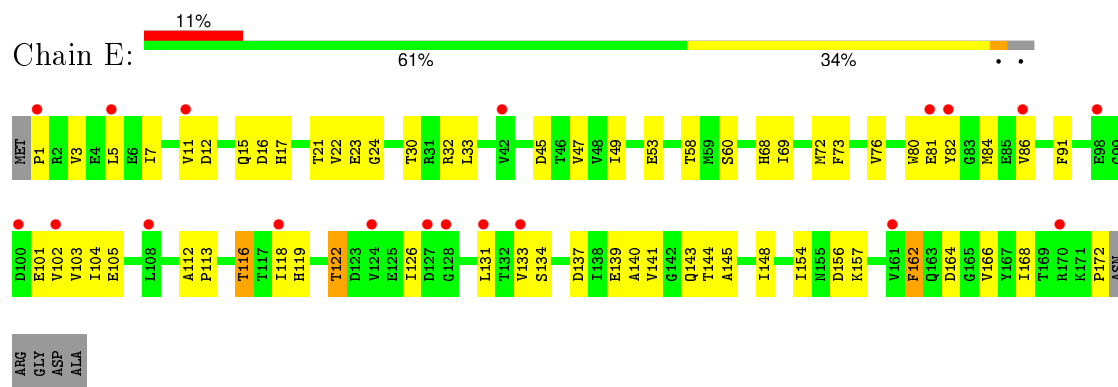




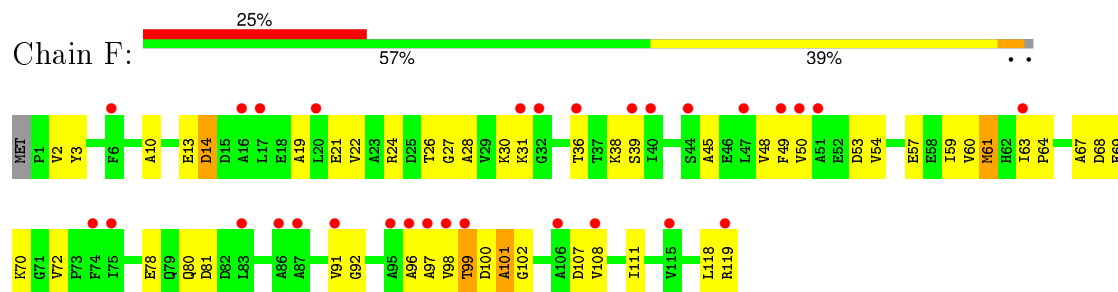
• Molecule 4: 50S ribosomal protein L5P



• Molecule 5: 50S ribosomal protein L6P

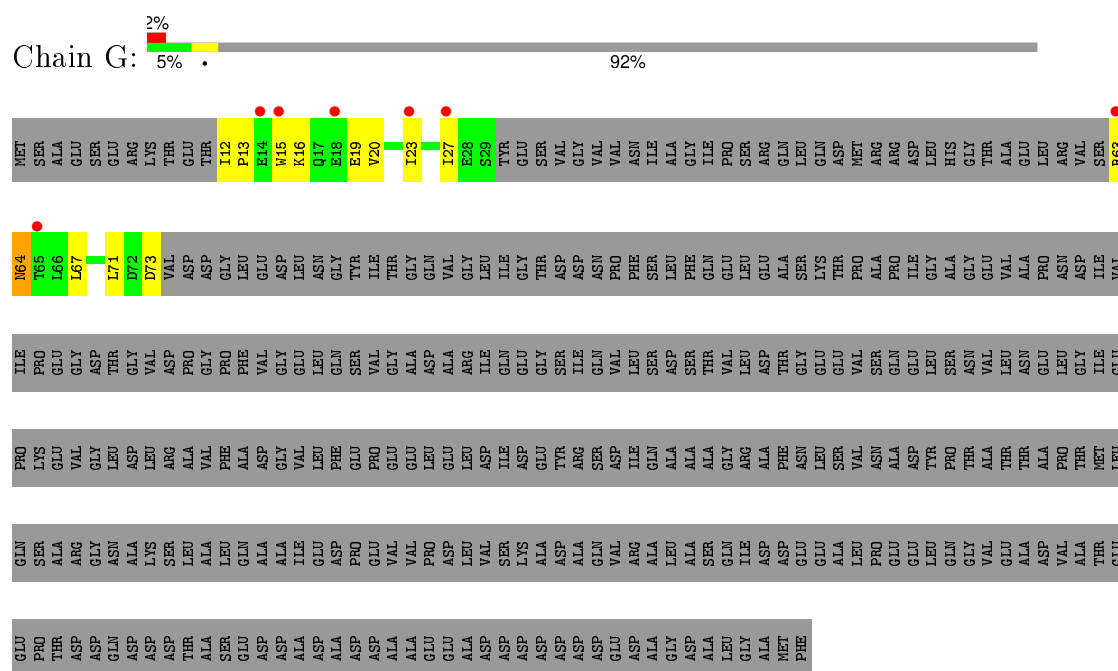


• Molecule 6: 50S ribosomal protein L7Ae

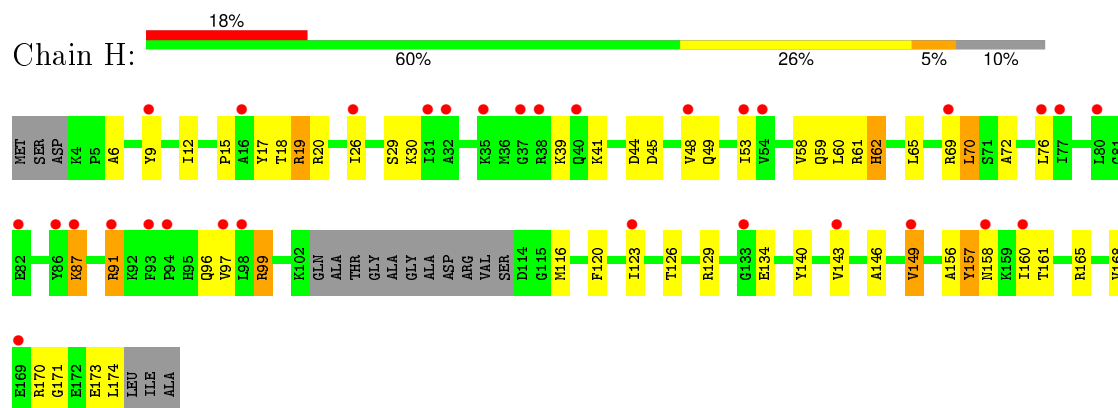


• Molecule 7: 50S ribosomal protein L10E

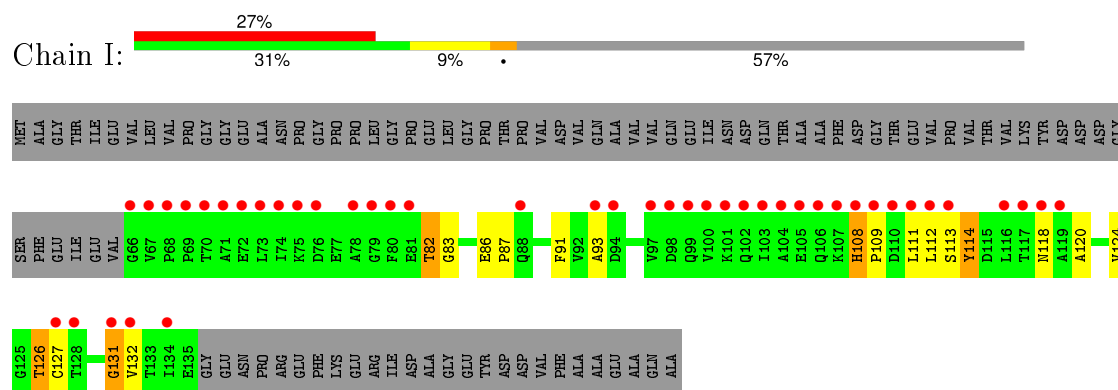




- Molecule 8: 50S ribosomal protein L10e

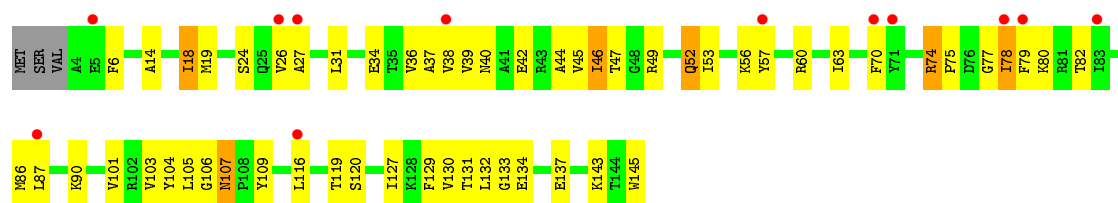


- Molecule 9: 50S ribosomal protein L11P

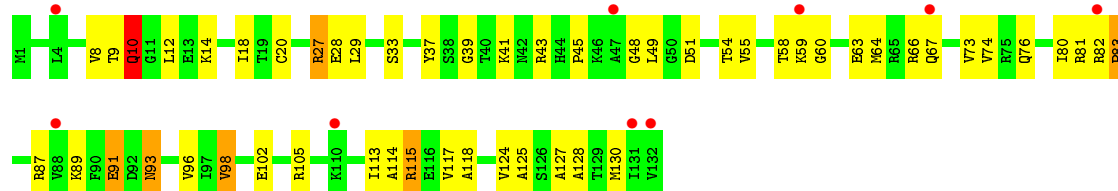


- Molecule 10: 50S ribosomal protein L13P

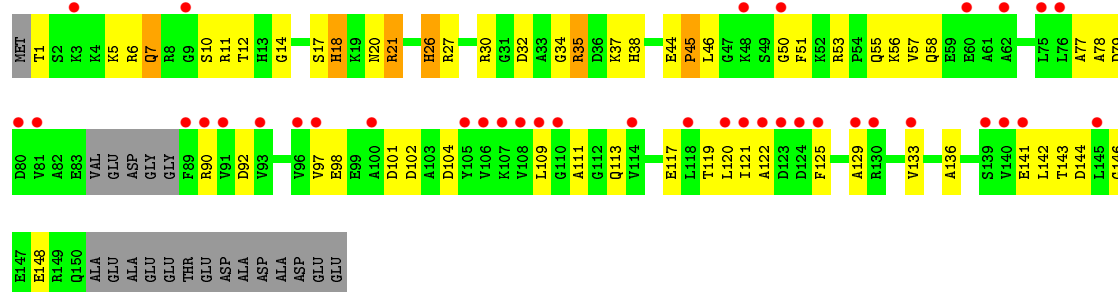




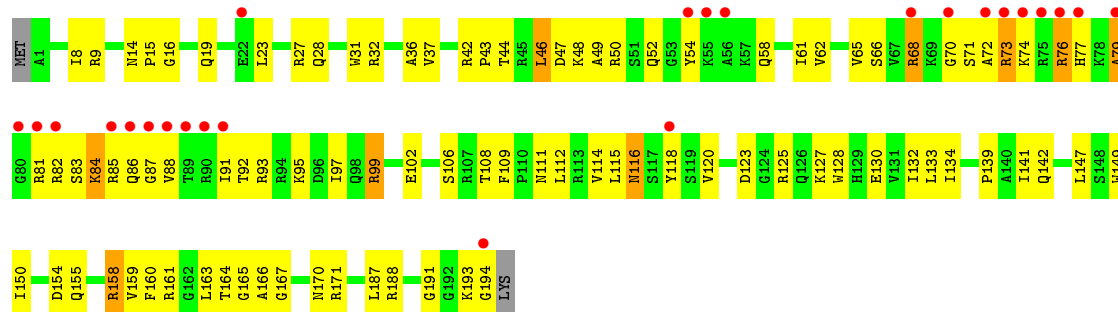
- Molecule 11: 50S ribosomal protein L14P



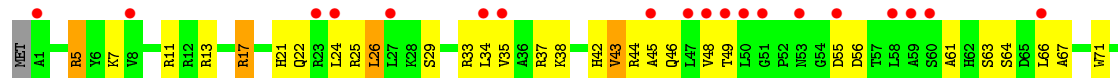
- Molecule 12: 50S ribosomal protein L15P

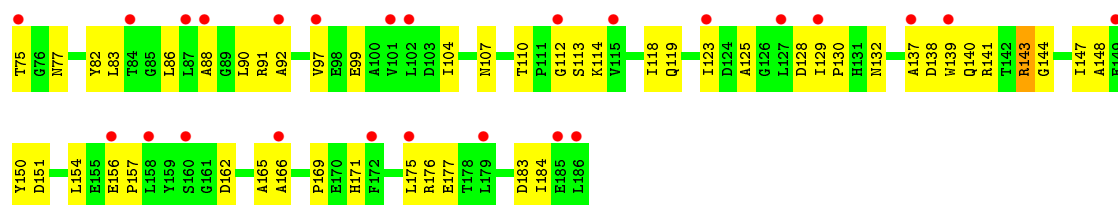


- Molecule 13: 50S ribosomal protein L15e

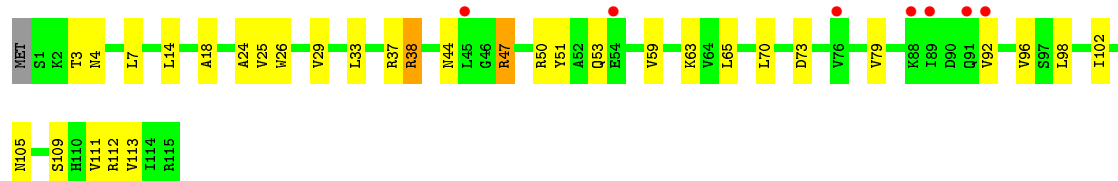


- Molecule 14: 50S ribosomal protein L18P

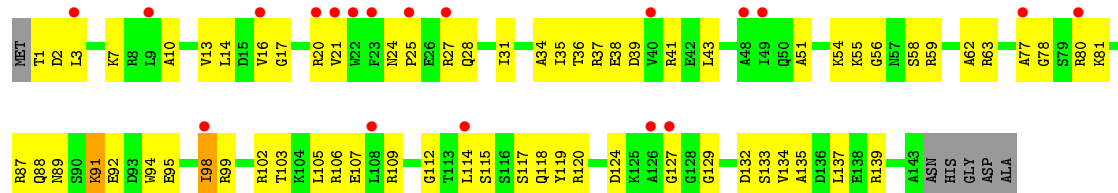




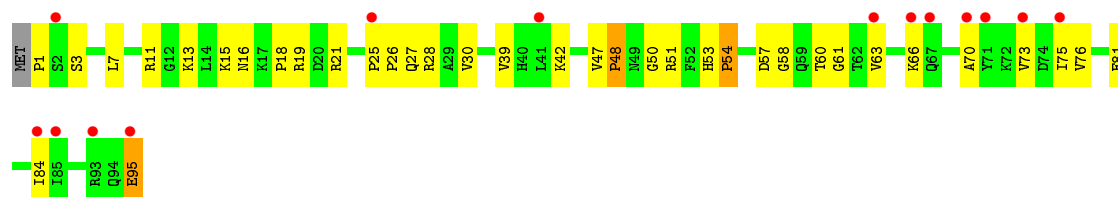
- Molecule 15: 50S ribosomal protein L18e



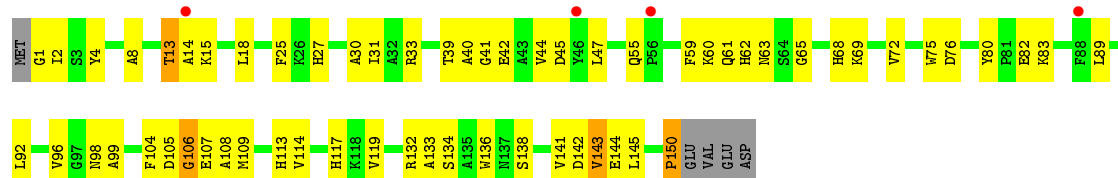
- Molecule 16: 50S ribosomal protein L19e



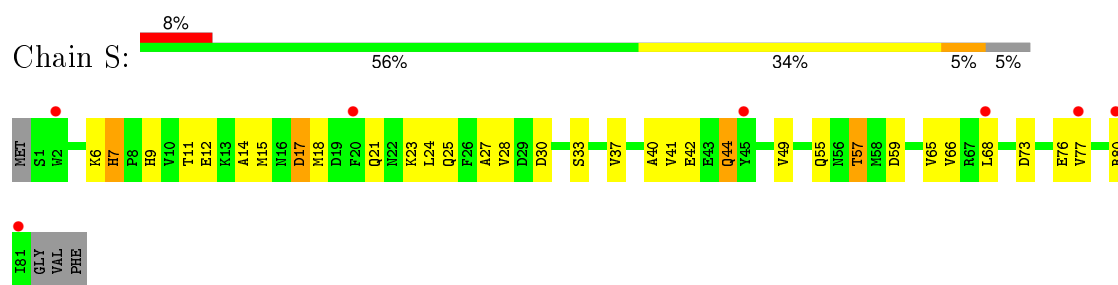
- Molecule 17: 50S ribosomal protein L21e



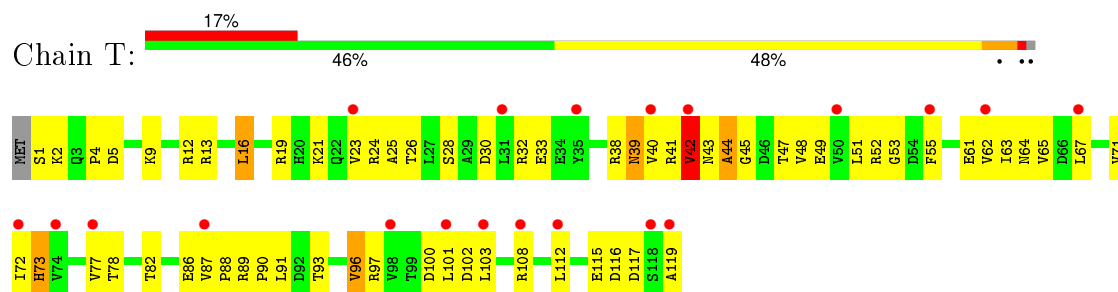
- Molecule 18: 50S ribosomal protein L22P



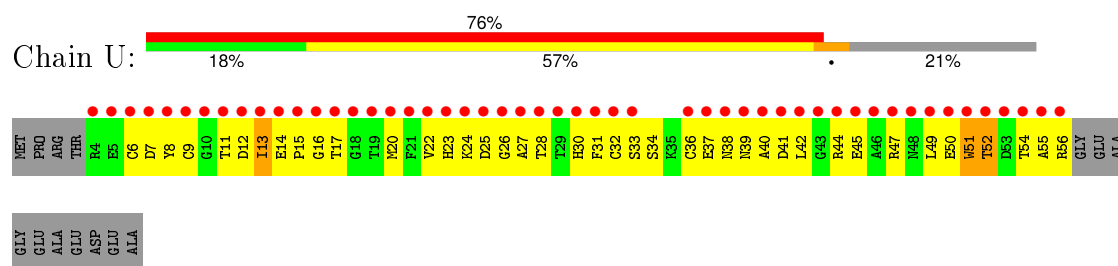
- Molecule 19: 50S ribosomal protein L23P



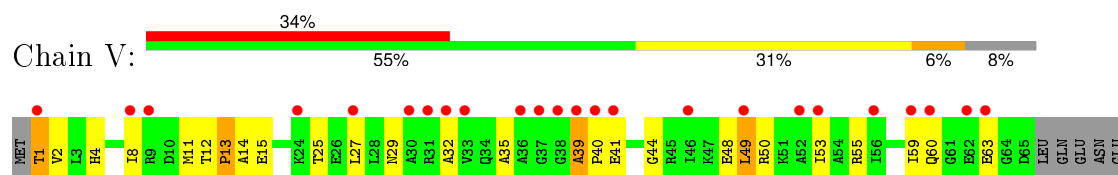
- Molecule 20: 50S ribosomal protein L24P



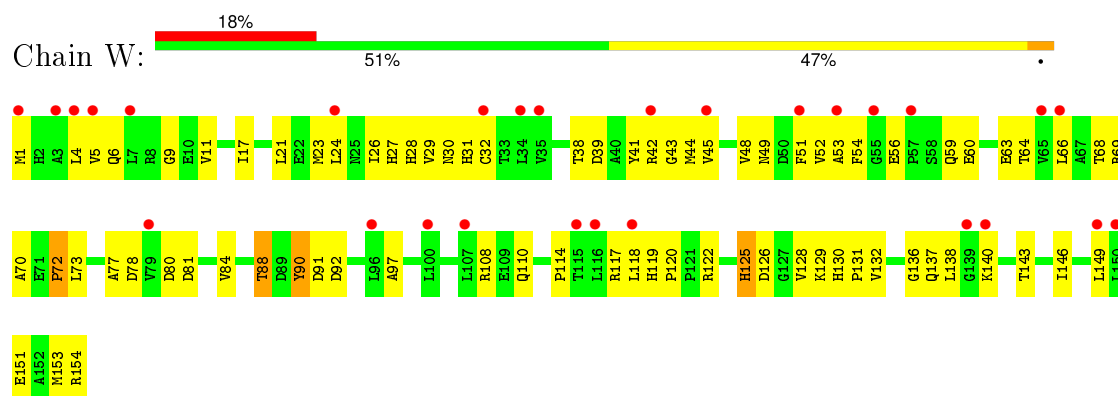
- Molecule 21: 50S ribosomal protein L24e



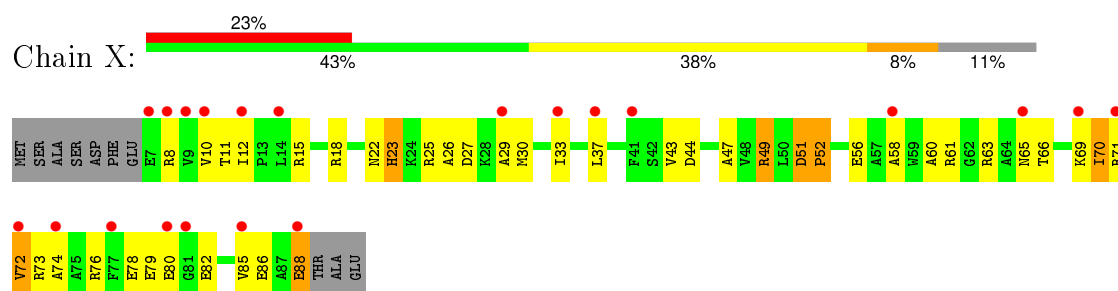
- Molecule 22: 50S ribosomal protein L29P



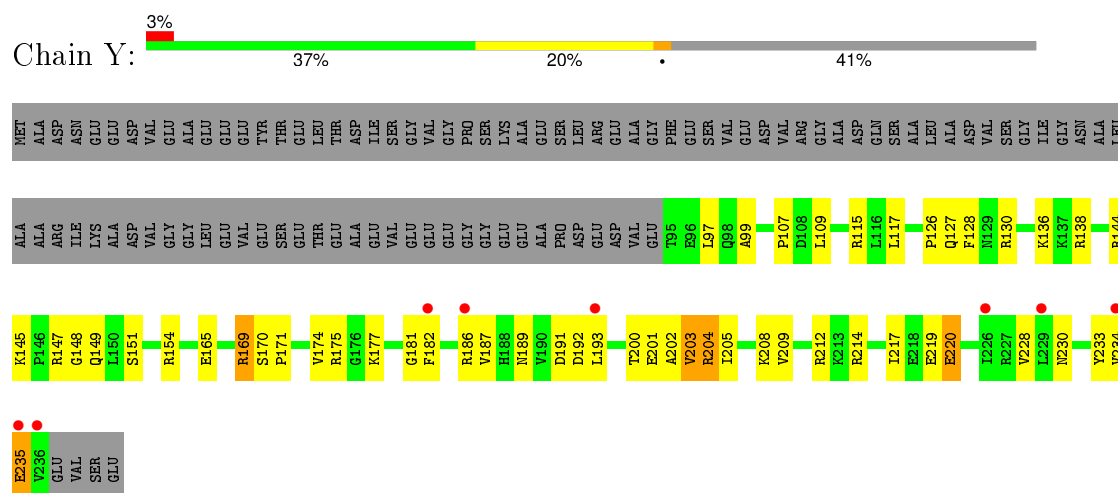
- Molecule 23: 50S ribosomal protein L30P



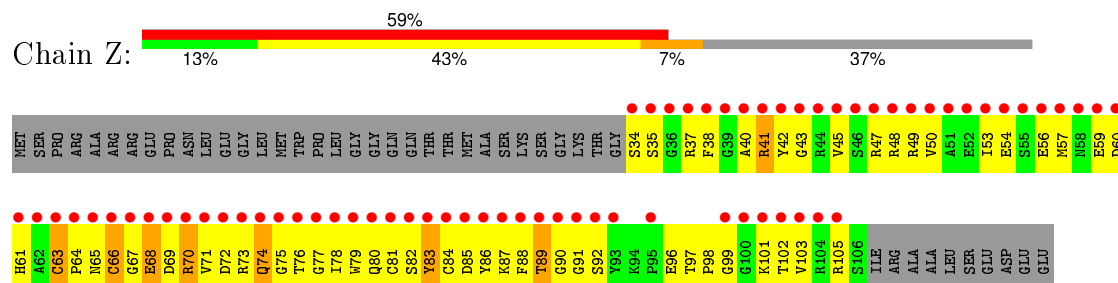
- Molecule 24: 50S ribosomal protein L31e



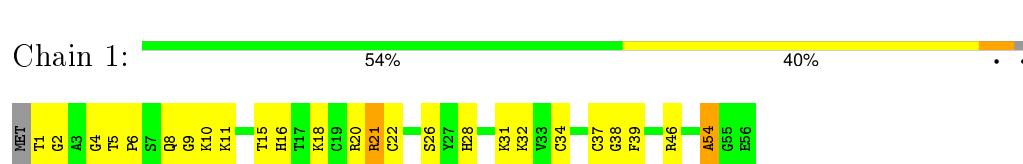
- Molecule 25: 50S ribosomal protein L32e



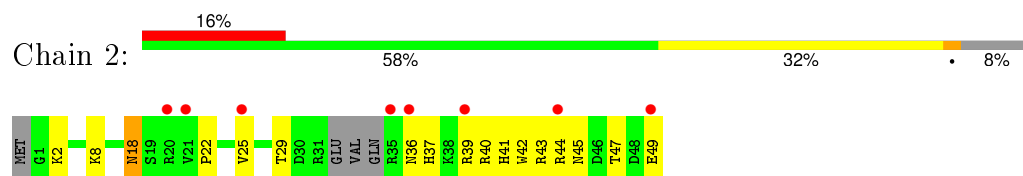
- Molecule 26: 50S ribosomal protein L37Ae



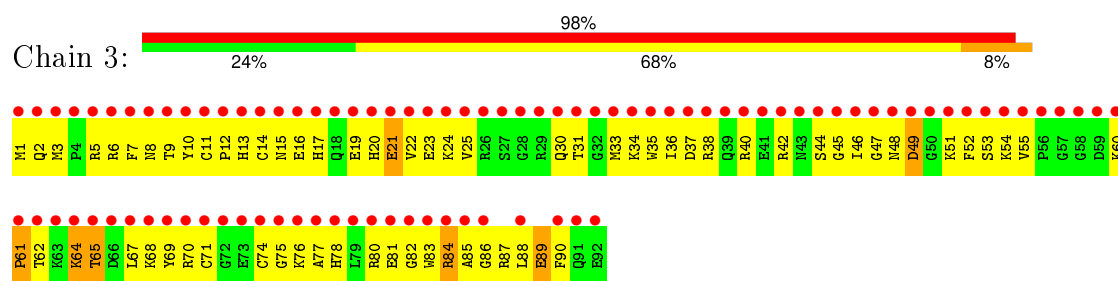
- Molecule 27: 50S ribosomal protein L37e



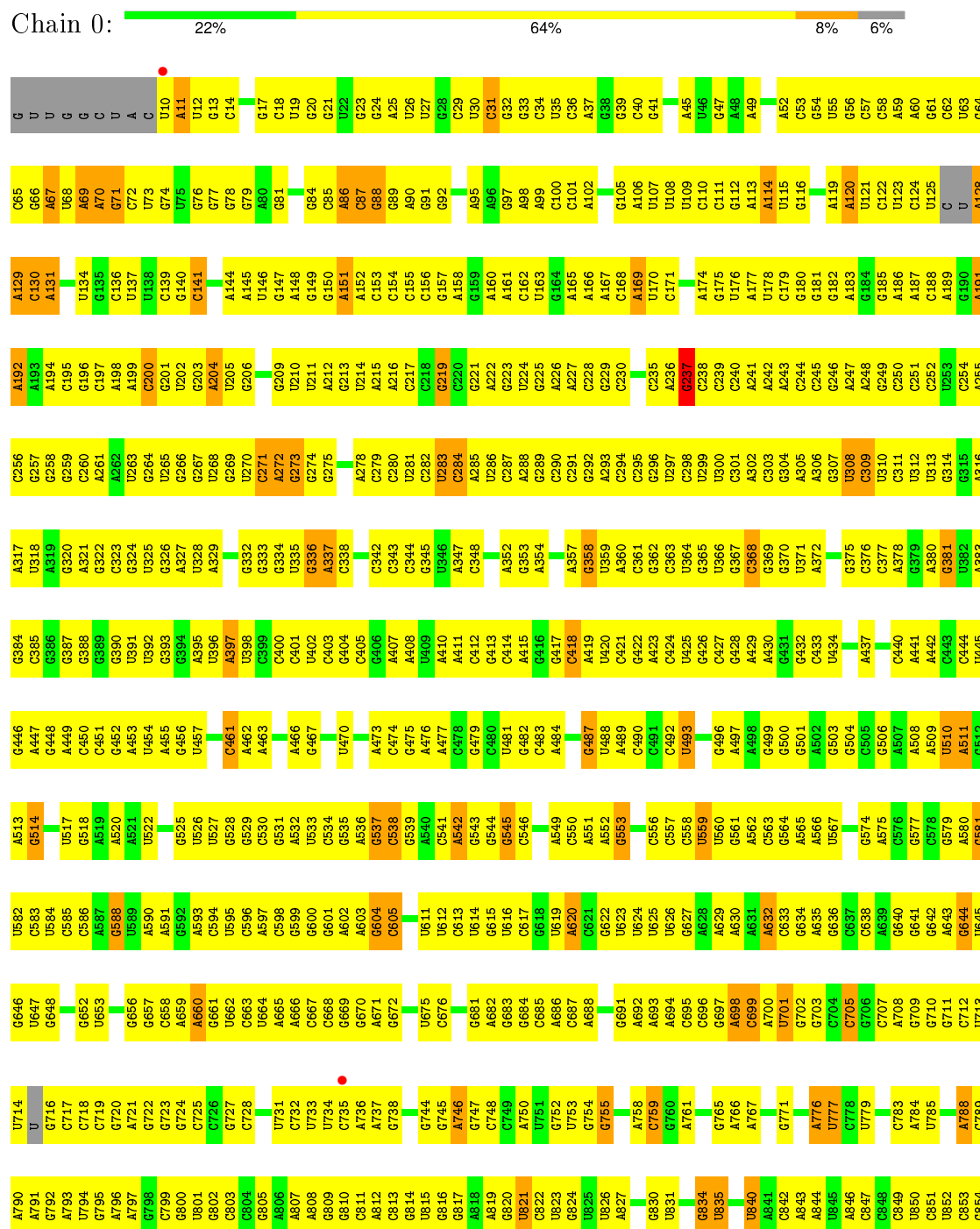
- Molecule 28: 50S ribosomal protein L39e



- Molecule 29: 50S ribosomal protein L44E



• Molecule 30: 23S RIBOSOMAL RNA

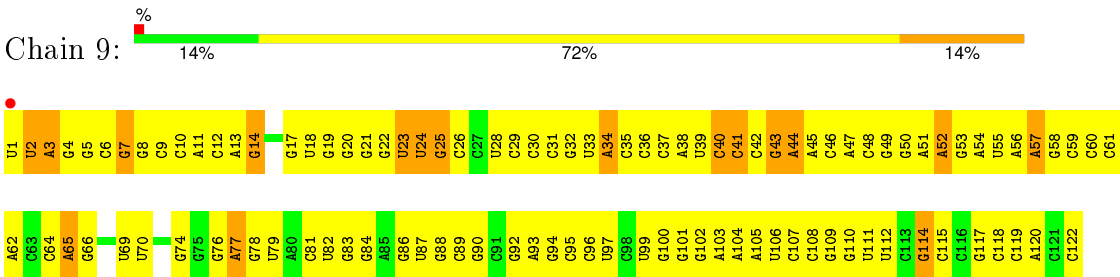


A1865	C1792	G1730	A1661	U1539	U1473	G1398	C1332	G1263	C1196	G1131	G1054	A	G928	U855
A1866	C1793	C1731	C1662	G1540	C1474	A1399	U1333	U1264	G1197	A1132	G1055	G		G856
G1867	G1794	A1732	A1663	G1541	G1475	A1401	C1334	U1265	U1198		A1056	U		A857
	G1795	A1733	G1664	G1542	A1476		C1335	U1266	A1199	G1137	A1057	C	U932	U858
U1871	A1796	A1734	C1665	G1543	C1477		U1336	C1267	A1200	G1138	G1058	G	C933	C859
C1872	A1797	A1735	C1666	U1544	U1478	A1407	G1337	C1268	C1201	U1139	A1059	G	C934	U860
G1873	C1798	C1735	A1667	C1545	A1479	U1408	U1338	U1269	A1202	G1140	C1060	C	G935	A861
U1874	G1800	A1736	U1668	G1546	G1480	G1409	C1342	U1270	G1203	U1141	C1061	A	C936	U862
A1875	G1801	A1737	A1669	A1547	A1481		C1343	C1272	U1205	C1142	G1062	C	C937	G863
	A1802	C1738	G1670	C1548	C1483		G1344	C1273	U1206		G1063	A	G938	U864
G1878	G1803	A1739	G1671	C1549	C1484	U1419	U1345	A1274	A1207	C1146	U1066	C999	A939	A867
U1879	A1804	U1741	U1673	A1550	G1485	C1420	U1346	C1275	C1208	G1147	A1067	U1000	G940	A868
	G1805	A1742	C1674	G1552	A1486	C1421	U1347		C1209	U1149	C1068	G1002	U942	G869
G1806			C1675	G1553	U1487	U1422		U1278	G1210	A1150	C1069	U1003	A943	G870
			C1676	C1554	U1488	C1423	U1350	A1279	G1211	G1151	A1070	U1004	G944	G871
			U1677	A1615	G1489	G1424	G1351	A1280	C1212	A1152	G1071	A1005	U945	U872
			A1678	G1556		A1425	C1352	C1281	C1213	C1153	G1072	A1006	C946	
				G1557		A1426	C1353	U1282	G1214	A1154	A1073	A1007	U947	A875
				G1558		C1427	G1354		A1215	G1155	G1074	C1008	U948	A876
				U1561		A1428		A1287	G1216	C1156	G1075	U1009	U949	A877
				C1562		U1432	U1357	U1288	G1217	G1157	G1076	C1010	A951	G878
				G1563		G1433	A1358	C1289	U1218	G1159	G1077	C1011	A951	G879
				C1564		U1434	U1359		A1222	G1160	A1081	A1012	G952	C880
				C1565		U1435	C1360	U1293	G1223	A1161	A1082	A1013	G953	C881
				C1566		C1436	C1361	U1294	G1224	G1162	C1083	C1015	U954	C882
				G1567		A1437	U1362	G1295	C1225	G1163	C1084	U1016	A955	U883
				G1568		C1438	G1363	A1296		G1164	C1085	U1017	G956	C884
				U1569		U1440	C1364	U1297	C1228	G1165	A1086	A1018	A957	G885
				C1570		G1441	C1365	U1298	C1229	A1166	G1087	C1019	C959	U888
				G1571		U1442	C1366	G1299	A1230	G1167	A1088	A1020	G960	C889
				A1572		G1443	A1369	G1300		C1168		G1021	A961	C890
				C1573		U1444	G1370	C1301	U1234	U1169	G1093	A1022	C962	C891
				C1574		U1445	U1371	G1302	G1235	U1170	C1094	C1023	C963	G892
				C1575		U1446	A1372	C1303	U1237	U1096	A1097	G1024	G964	C893
				G1576		U1447	C1373	U1304	C1238	G1172	C1098	C1025	A965	
				C1577		A1448	C1374	C1305	G1239	A1173	A1098	U1026	U966	C896
				C1578		G1449	A1375		G1239	A1174	G1099	G1027	U967	A897
				U1579		U1450	G1376	A1308	G1240	G1175	G1100	U1028	G968	G898
				A1580		C1451	C1377	U1309	G1241	C1176	U1101	U1029	G969	
				U1581		U1452	G1378	U1310	A1242	A1177	C1102	U1030	U970	G902
				C1582		G1453	U1379	G1311	C1243	G1178	C1103	G1031	U903	U904
				U1583		U1454	U1380	G1312	U1244	C1179		A1032	U904	G905
				C1584		C1455		U1313	C1245	U1180	U1109	C1033	G	C906
				G1585		U1456	U1383	G1314	A1247	C1182	G1110	G1034	U	A907
				G1586		U1457	C1384	G1315	U1248	C1183		G	C	A908
				U1587		G1522	G1385	G1316	U1249	C1184	U1115	G1039	C	
				G1588		U1524	G1386	G1319	C1250	U1185	U1116	A1040	C	A912
				G1589		G1525	U1387		G1251	C1186	U1117	G1039	C	
				A1590		A1526	U1388	G1323	A1252	U1187	A1118	U1042	U	A916
				U1591		U1527	G1389	G1324	C1253	G1119	C1043	U	C	U917
				C1592		A1528	A1390	G1325	C1254	A1188	U1120	C1044	C	
				C1593			G1391	G1326	C1255	A1189	G1121	G1045	G	C920
				C1594		U1531	A1392	C1327	A1255	G1190		G	A	G921
				G1595			A1393	G1328	A1259	A1191		G1050	A	A922
				U1596		G1535	C1394	A1328	G1260	A1192	C1127	C1051	G	A923
				A1597			C1395	G1329	A1193	A1194	U1128	C1052	A	G924
				U1598			C1396	A1470	A1194	G1129	C1129	G1053	G	C925
							C1397	G1331	G1195					

WORLDWIDE  
**PDB**  
PROTEIN DATA BANK



● Molecule 31: 5S RIBOSOMAL RNA



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	212.01Å 299.25Å 573.81Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.83 – 2.70 85.53 – 2.40	Depositor EDS
% Data completeness (in resolution range)	92.7 (49.83-2.70) 89.1 (85.53-2.40)	Depositor EDS
$R_{merge}$	0.18	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, $R_{free}$	0.184 , 0.226 0.185 , 0.261	Depositor DCC
$R_{free}$ test set	4856 reflections (1.97%)	DCC
Wilson B-factor (Å <sup>2</sup> )	79.9	Xtriage
Anisotropy	0.112	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 138.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 667044 reflections	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.71% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, OMG, CL, SR, NA, K, CD, OMU, UR3, 1MA, PSU

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	A	0.37	0/1786	0.66	0/2408
2	B	0.38	0/2690	0.67	0/3652
3	C	0.42	0/1885	0.65	0/2552
4	D	0.35	0/1111	0.58	0/1498
5	E	0.36	0/1382	0.61	0/1880
6	F	0.36	0/901	0.60	0/1224
7	G	0.40	0/241	0.53	0/324
8	H	0.36	0/1302	0.66	0/1743
9	I	0.33	0/526	0.54	0/716
10	J	0.42	0/1136	0.63	0/1530
11	K	0.40	0/1004	0.71	0/1351
12	L	0.35	0/1130	0.64	0/1509
13	M	0.41	0/1582	0.64	0/2116
14	N	0.33	0/1474	0.62	0/1999
15	O	0.37	0/874	0.64	0/1181
16	P	0.39	0/1147	0.56	0/1528
17	Q	0.37	0/749	0.67	0/1005
18	R	1.28	7/1172 (0.6%)	1.10	6/1578 (0.4%)
19	S	0.38	0/648	0.59	0/875
20	T	0.39	0/958	0.67	0/1289
21	U	0.46	0/417	0.64	0/562
22	V	0.35	0/502	0.56	0/675
23	W	0.41	0/1219	0.68	0/1655
24	X	0.39	0/664	0.62	0/895
25	Y	0.39	0/1146	0.64	0/1536
26	Z	0.42	0/584	0.63	0/781
27	1	0.47	0/438	0.63	0/578
28	2	0.38	0/401	0.61	0/529
29	3	0.43	0/771	0.67	0/1024
30	0	0.49	0/65957	0.70	6/102867 (0.0%)
31	9	0.37	0/2904	0.68	0/4526
All	All	0.48	7/98701 (0.0%)	0.69	12/147586 (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
18	R	1	0
23	W	0	1
30	0	0	19
All	All	1	20

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	150	PRO	CB-CG	27.13	2.85	1.50
18	R	150	PRO	CA-C	-18.46	1.16	1.52
18	R	150	PRO	CG-CD	14.04	1.97	1.50
18	R	150	PRO	C-O	11.94	1.47	1.23
18	R	150	PRO	N-CA	11.49	1.66	1.47

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	150	PRO	CB-CA-C	-22.46	55.84	112.00
18	R	150	PRO	N-CA-C	-19.38	61.71	112.10
18	R	150	PRO	CA-N-CD	12.12	128.68	111.70
18	R	150	PRO	N-CA-CB	11.03	116.54	103.30
18	R	150	PRO	CA-C-O	-8.33	100.20	120.20

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

5 of 20 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	493	U	Sidechain
30	0	788	A	Sidechain
30	0	862	U	Sidechain
30	0	882	A	Sidechain
23	W	90	TYR	Sidechain

## 5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1753	0	1766	123	0
2	B	2625	0	2533	168	0
3	C	1860	0	1813	98	0
4	D	1094	0	1085	71	0
5	E	1357	0	1266	49	0
6	F	890	0	843	39	0
7	G	240	0	231	18	0
8	H	1282	0	1292	62	0
9	I	519	0	500	24	0
10	J	1120	0	1098	56	0
11	K	994	0	1027	54	0
12	L	1118	0	1076	54	0
13	M	1558	0	1573	120	0
14	N	1445	0	1401	74	0
15	O	865	0	873	47	0
16	P	1136	0	1123	64	0
17	Q	735	0	729	32	0
18	R	1149	0	1122	58	0
19	S	641	0	605	29	0
20	T	950	0	924	56	0
21	U	410	0	368	58	0
22	V	499	0	511	26	0
23	W	1196	0	1137	79	0
24	X	654	0	653	42	0
25	Y	1130	0	1133	69	0
26	Z	573	0	534	84	0
27	1	431	0	426	27	0
28	2	396	0	413	20	0
29	3	755	0	732	138	0
30	0	59020	0	29802	3476	0
31	9	2599	0	1325	195	0
32	0	85	0	0	0	0
32	9	2	0	0	0	0
32	A	2	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	0	1	0	0	0	0
33	M	1	0	0	0	0
34	0	63	0	0	0	0
34	9	2	0	0	0	0
34	B	1	0	0	0	0
34	C	1	0	0	0	0
34	J	1	0	0	0	0
34	L	1	0	0	0	0
34	M	1	0	0	0	0
34	Q	1	0	0	0	0
34	R	3	0	0	0	0
34	S	1	0	0	0	0
35	0	8	0	0	6	0
35	3	1	0	0	4	0
35	A	1	0	0	0	0
35	B	1	0	0	1	0
35	J	4	0	0	4	0
35	L	1	0	0	0	0
35	M	1	0	0	2	0
35	N	1	0	0	2	0
35	O	1	0	0	1	0
35	Q	1	0	0	1	0
35	R	1	0	0	0	0
35	Y	1	0	0	1	0
36	0	93	0	0	0	0
36	1	2	0	0	0	0
36	2	1	0	0	0	0
36	3	2	0	0	0	0
36	9	2	0	0	0	0
36	A	2	0	0	0	0
36	B	2	0	0	0	0
36	F	1	0	0	0	0
36	J	1	0	0	0	0
36	R	1	0	0	0	0
36	S	1	0	0	0	0
37	1	1	0	0	0	0
37	3	1	0	0	0	0
37	O	1	0	0	0	0
37	U	1	0	0	0	0
37	Z	1	0	0	0	0
38	0	5813	0	0	458	0
38	1	53	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	2	48	0	0	0	0
38	3	80	0	0	12	0
38	9	144	0	0	18	0
38	A	122	0	0	13	0
38	B	158	0	0	21	0
38	C	176	0	0	16	0
38	D	51	0	0	7	0
38	E	51	0	0	3	0
38	F	27	0	0	2	0
38	G	15	0	0	1	0
38	H	73	0	0	2	0
38	I	3	0	0	0	0
38	J	55	0	0	4	0
38	K	61	0	0	5	0
38	L	99	0	0	11	0
38	M	148	0	0	15	0
38	N	56	0	0	7	0
38	O	42	0	0	3	0
38	P	56	0	0	4	0
38	Q	58	0	0	5	0
38	R	78	0	0	1	0
38	S	37	0	0	3	0
38	T	41	0	0	3	0
38	U	34	0	0	4	0
38	V	10	0	0	2	0
38	W	71	0	0	4	0
38	X	28	0	0	1	0
38	Y	102	0	0	8	0
38	Z	33	0	0	7	0
All	All	99122	0	59914	5051	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

The worst 5 of 5051 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:150:PRO:CD	18:R:150:PRO:CG	1.97	1.43
30:0:871:G:C8	30:0:871:G:H5'	1.74	1.22
31:9:29:C:H2'	31:9:30:C:H5'	1.21	1.17
14:N:37:ARG:NH1	31:9:6:C:H5''	1.59	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:56:A:H2'	31:9:57:A:H5''	1.23	1.16

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	235/240 (98%)	198 (84%)	28 (12%)	9 (4%)	4	9
2	B	335/338 (99%)	287 (86%)	42 (12%)	6 (2%)	11	27
3	C	244/246 (99%)	211 (86%)	29 (12%)	4 (2%)	12	30
4	D	134/177 (76%)	109 (81%)	22 (16%)	3 (2%)	8	22
5	E	170/178 (96%)	152 (89%)	16 (9%)	2 (1%)	16	39
6	F	117/120 (98%)	102 (87%)	11 (9%)	4 (3%)	5	10
7	G	25/348 (7%)	23 (92%)	2 (8%)	0	100	100
8	H	156/177 (88%)	139 (89%)	14 (9%)	3 (2%)	10	25
9	I	68/162 (42%)	56 (82%)	10 (15%)	2 (3%)	6	14
10	J	140/145 (97%)	125 (89%)	12 (9%)	3 (2%)	9	23
11	K	130/132 (98%)	107 (82%)	21 (16%)	2 (2%)	13	32
12	L	141/165 (86%)	112 (79%)	25 (18%)	4 (3%)	6	15
13	M	192/196 (98%)	165 (86%)	22 (12%)	5 (3%)	7	16
14	N	184/187 (98%)	156 (85%)	23 (12%)	5 (3%)	6	16
15	O	113/116 (97%)	109 (96%)	4 (4%)	0	100	100
16	P	141/149 (95%)	125 (89%)	13 (9%)	3 (2%)	9	23
17	Q	93/96 (97%)	82 (88%)	7 (8%)	4 (4%)	3	7
18	R	148/155 (96%)	132 (89%)	15 (10%)	1 (1%)	26	55
19	S	79/85 (93%)	67 (85%)	11 (14%)	1 (1%)	15	37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	T	117/120 (98%)	95 (81%)	18 (15%)	4 (3%)	5	10
21	U	51/67 (76%)	46 (90%)	3 (6%)	2 (4%)	4	8
22	V	63/71 (89%)	57 (90%)	5 (8%)	1 (2%)	12	30
23	W	152/154 (99%)	129 (85%)	21 (14%)	2 (1%)	15	37
24	X	80/92 (87%)	68 (85%)	8 (10%)	4 (5%)	3	5
25	Y	140/241 (58%)	131 (94%)	8 (6%)	1 (1%)	26	55
26	Z	71/116 (61%)	52 (73%)	13 (18%)	6 (8%)	1	1
27	1	54/57 (95%)	48 (89%)	5 (9%)	1 (2%)	10	25
28	2	42/50 (84%)	37 (88%)	4 (10%)	1 (2%)	7	19
29	3	90/92 (98%)	73 (81%)	14 (16%)	3 (3%)	5	11
All	All	3705/4472 (83%)	3193 (86%)	426 (12%)	86 (2%)	8	20

5 of 86 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	123	GLY
4	D	65	GLU
4	D	137	PRO
6	F	61	MET
6	F	101	ALA

### 5.3.2 Protein sidechains ⓘ

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	A	179/182 (98%)	172 (96%)	7 (4%)	39	70
2	B	282/283 (100%)	261 (93%)	21 (7%)	17	39
3	C	193/193 (100%)	178 (92%)	15 (8%)	16	35
4	D	117/148 (79%)	109 (93%)	8 (7%)	20	43
5	E	152/156 (97%)	146 (96%)	6 (4%)	39	70
6	F	93/94 (99%)	89 (96%)	4 (4%)	35	66

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	G	27/282 (10%)	25 (93%)	2 (7%)	17	39
8	H	134/145 (92%)	125 (93%)	9 (7%)	20	44
9	I	58/130 (45%)	55 (95%)	3 (5%)	29	58
10	J	118/121 (98%)	112 (95%)	6 (5%)	29	59
11	K	106/106 (100%)	98 (92%)	8 (8%)	17	38
12	L	113/127 (89%)	105 (93%)	8 (7%)	18	41
13	M	158/160 (99%)	148 (94%)	10 (6%)	22	48
14	N	149/150 (99%)	143 (96%)	6 (4%)	38	69
15	O	93/94 (99%)	90 (97%)	3 (3%)	46	77
16	P	113/117 (97%)	111 (98%)	2 (2%)	66	89
17	Q	79/80 (99%)	75 (95%)	4 (5%)	29	59
18	R	117/122 (96%)	110 (94%)	7 (6%)	24	50
19	S	71/74 (96%)	67 (94%)	4 (6%)	26	54
20	T	105/106 (99%)	97 (92%)	8 (8%)	16	37
21	U	44/53 (83%)	42 (96%)	2 (4%)	34	65
22	V	51/57 (90%)	48 (94%)	3 (6%)	24	51
23	W	130/130 (100%)	124 (95%)	6 (5%)	33	64
24	X	66/74 (89%)	57 (86%)	9 (14%)	5	11
25	Y	120/196 (61%)	115 (96%)	5 (4%)	36	68
26	Z	60/94 (64%)	54 (90%)	6 (10%)	9	22
27	1	46/47 (98%)	45 (98%)	1 (2%)	60	86
28	2	42/46 (91%)	41 (98%)	1 (2%)	57	85
29	3	79/79 (100%)	75 (95%)	4 (5%)	29	59
All	All	3095/3646 (85%)	2917 (94%)	178 (6%)	25	52

5 of 178 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
10	J	132	LEU
13	M	76	ARG
25	Y	220	GLU
11	K	12	LEU
12	L	18	HIS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 80 such sidechains are listed below:

Mol	Chain	Res	Type
12	L	58	GLN
14	N	107	ASN
28	2	36	ASN
13	M	24	GLN
13	M	170	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	263 (9%)	14 (0%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	281 (9%)	15 (0%)

5 of 281 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	11	A
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A

5 of 15 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	1237	U
30	0	1352	A
30	0	2526	C
30	0	871	G
30	0	2466	G

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

5 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
30	OMU	0	2587	30	12,22,23	0.94	2 (16%)	19,31,34	3.13	2 (10%)
30	OMG	0	2588	30	17,26,27	1.04	1 (5%)	21,38,41	2.55	3 (14%)
30	UR3	0	2619	30	12,22,23	0.78	1 (8%)	16,32,35	0.71	0
30	PSU	0	2621	30	13,21,22	1.72	2 (15%)	18,30,33	6.15	4 (22%)
30	1MA	0	628	30,34	14,25,26	0.95	1 (7%)	15,37,40	1.16	1 (6%)

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
30	OMU	0	2587	30	-	0/5/27/28	0/2/2/2
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3
30	UR3	0	2619	30	-	0/3/25/26	0/2/2/2
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	1MA	0	628	30,34	-	0/3/25/26	0/3/3/3

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C5-C1'	-5.24	1.47	1.52
30	0	2619	UR3	C6-C5	-2.07	1.33	1.38
30	0	2587	OMU	C6-C5	-2.01	1.33	1.38
30	0	2587	OMU	C4-N3	2.09	1.37	1.33
30	0	628	1MA	C6-N6	2.57	1.33	1.29

The worst 5 of 10 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	N1-C2-N3	-21.60	114.55	128.33
30	0	2588	OMG	C5-C6-N1	-8.87	111.46	123.59
30	0	628	1MA	C2-N3-C4	-3.60	110.82	116.40
30	0	2587	OMU	C5-C4-N3	-3.32	114.59	123.12
30	0	2588	OMG	N3-C2-N1	-2.26	124.00	127.44

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2587	OMU	5	0
30	0	2588	OMG	3	0
30	0	2619	UR3	2	0
30	0	2621	PSU	2	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 305 ligands modelled in this entry, 305 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 [i](#)

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

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	237/240 (98%)	0.39	33 (13%) 4 3	36, 78, 117, 135	0
2	B	337/338 (99%)	0.22	29 (8%) 13 10	36, 72, 106, 116	0
3	C	246/246 (100%)	0.12	16 (6%) 22 20	31, 60, 87, 97	0
4	D	140/177 (79%)	2.14	66 (47%) 0 0	91, 126, 152, 162	0
5	E	172/178 (96%)	0.43	19 (11%) 7 5	62, 89, 116, 123	0
6	F	119/120 (99%)	1.03	30 (25%) 1 1	68, 96, 130, 142	0
7	G	29/348 (8%)	1.14	7 (24%) 1 1	104, 117, 126, 127	0
8	H	160/177 (90%)	0.91	31 (19%) 1 1	57, 81, 125, 130	0
9	I	70/162 (43%)	3.42	44 (62%) 0 0	149, 172, 188, 190	0
10	J	142/145 (97%)	0.43	12 (8%) 13 10	48, 67, 90, 114	0
11	K	132/132 (100%)	0.28	9 (6%) 20 19	38, 69, 98, 107	0
12	L	145/165 (87%)	1.24	38 (26%) 1 1	50, 96, 141, 147	0
13	M	194/196 (98%)	0.81	25 (12%) 5 4	41, 61, 109, 119	0
14	N	186/187 (99%)	1.09	44 (23%) 1 1	72, 94, 145, 152	0
15	O	115/116 (99%)	0.04	7 (6%) 25 23	57, 72, 93, 98	0
16	P	143/149 (95%)	0.43	19 (13%) 4 3	52, 74, 92, 103	0
17	Q	95/96 (98%)	0.68	14 (14%) 3 2	55, 71, 88, 103	0
18	R	150/155 (96%)	0.08	4 (2%) 58 58	45, 61, 87, 109	0
19	S	81/85 (95%)	0.25	7 (8%) 13 10	61, 80, 103, 113	0
20	T	119/120 (99%)	0.87	20 (16%) 2 2	51, 74, 105, 132	0
21	U	53/67 (79%)	6.47	51 (96%) 0 0	119, 128, 137, 138	0
22	V	65/71 (91%)	1.55	24 (36%) 0 0	68, 97, 141, 146	0
23	W	154/154 (100%)	0.65	28 (18%) 2 1	49, 66, 88, 103	0
24	X	82/92 (89%)	1.09	21 (25%) 1 1	57, 81, 104, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	Y	142/241 (58%)	0.07	8 (5%) 28 26	39, 59, 87, 116	0
26	Z	73/116 (62%)	9.05	68 (93%) 0 0	109, 128, 137, 141	0
27	1	56/57 (98%)	0.10	0 100 100	34, 47, 56, 60	0
28	2	46/50 (92%)	0.87	8 (17%) 2 1	43, 84, 116, 122	0
29	3	92/92 (100%)	9.13	90 (97%) 0 0	112, 132, 141, 144	0
30	0	2749/2923 (94%)	-0.64	9 (0%) 94 95	31, 64, 118, 195	0
31	9	122/122 (100%)	-0.85	1 (0%) 87 88	53, 94, 121, 167	0
All	All	6646/7517 (88%)	0.35	782 (11%) 6 5	31, 72, 133, 195	0

The worst 5 of 782 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	41	GLU	30.5
29	3	35	TRP	24.3
29	3	38	ARG	24.1
26	Z	45	VAL	23.9
29	3	45	GLY	23.6

## 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
30	UR3	0	2619	21/22	0.98	0.14	-	56,57,60,60	0
30	OMU	0	2587	21/22	0.98	0.13	-	51,52,54,56	0
30	1MA	0	628	23/24	0.98	0.17	-	37,44,45,46	0
30	PSU	0	2621	20/21	0.96	0.20	-	49,51,60,60	0
30	OMG	0	2588	24/25	0.97	0.13	-	48,51,54,55	0

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
35	CL	B	8819	1/1	0.89	1.19	76.98	83,83,83,83	0
36	SR	0	9007	1/1	0.98	1.35	65.08	200,200,200,200	0
33	K	0	8401	1/1	0.98	0.62	51.87	145,145,145,145	0
36	SR	0	8957	1/1	0.71	1.77	47.66	200,200,200,200	0
36	SR	0	8982	1/1	0.55	0.77	44.48	200,200,200,200	0
34	NA	0	8547	1/1	0.95	0.49	36.94	115,115,115,115	0
34	NA	0	8564	1/1	0.95	0.68	32.23	87,87,87,87	0
34	NA	0	8562	1/1	0.70	1.00	31.44	83,83,83,83	0
34	NA	0	8559	1/1	0.98	0.50	22.25	96,96,96,96	0
34	NA	L	8568	1/1	0.00	0.63	15.97	59,59,59,59	0
34	NA	0	8546	1/1	0.96	1.02	12.01	108,108,108,108	0
36	SR	0	8969	1/1	0.90	1.49	11.87	200,200,200,200	0
34	NA	B	8552	1/1	0.81	0.53	11.05	70,70,70,70	0
35	CL	0	8805	1/1	0.93	0.37	11.00	105,105,105,105	0
34	NA	0	8542	1/1	0.97	0.41	10.82	79,79,79,79	0
34	NA	0	8567	1/1	0.99	0.43	10.35	83,83,83,83	0
34	NA	0	8528	1/1	0.69	0.40	9.22	113,113,113,113	0
32	MG	0	8008	1/1	0.86	0.20	7.40	26,26,26,26	0
34	NA	0	8535	1/1	0.96	0.24	7.14	58,58,58,58	0
36	SR	B	8987	1/1	0.74	0.79	6.87	200,200,200,200	0
32	MG	0	8079	1/1	0.94	0.30	6.61	57,57,57,57	0
32	MG	0	8083	1/1	0.99	0.36	6.10	58,58,58,58	0
34	NA	R	8575	1/1	0.77	0.49	4.99	97,97,97,97	0
34	NA	0	8522	1/1	0.88	0.26	4.48	130,130,130,130	0
34	NA	0	8523	1/1	0.94	0.22	4.44	51,51,51,51	0
34	NA	0	8517	1/1	0.93	0.22	4.42	69,69,69,69	0
32	MG	0	8043	1/1	0.96	0.22	4.37	62,62,62,62	0
36	SR	0	8903	1/1	0.99	0.23	4.35	63,63,63,63	0
34	NA	0	8504	1/1	0.97	0.33	4.24	41,41,41,41	0
34	NA	0	8521	1/1	0.99	0.27	4.10	40,40,40,40	0
32	MG	0	8009	1/1	0.98	0.24	3.89	24,24,24,24	0
34	NA	0	8563	1/1	0.95	0.25	3.48	66,66,66,66	0
32	MG	Y	8086	1/1	0.99	0.26	3.22	52,52,52,52	0
36	SR	0	8970	1/1	0.91	0.15	3.16	158,158,158,158	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	SR	0	8992	1/1	0.97	0.23	2.84	141,141,141,141	0
35	CL	M	8818	1/1	0.94	0.29	2.74	58,58,58,58	0
34	NA	0	8555	1/1	0.93	0.26	2.60	80,80,80,80	0
34	NA	0	8556	1/1	0.89	0.38	2.52	94,94,94,94	0
35	CL	J	8821	1/1	0.74	0.26	2.46	99,99,99,99	0
32	MG	0	8003	1/1	0.94	0.20	2.24	27,27,27,27	0
34	NA	0	8565	1/1	0.99	0.16	2.20	85,85,85,85	0
32	MG	0	8011	1/1	0.93	0.21	2.12	33,33,33,33	0
32	MG	0	8067	1/1	0.92	0.27	1.92	47,47,47,47	0
34	NA	0	8534	1/1	0.97	0.27	1.88	53,53,53,53	0
32	MG	0	8070	1/1	0.99	0.16	1.54	39,39,39,39	0
36	SR	0	8904	1/1	0.99	0.23	1.53	73,73,73,73	0
32	MG	0	8012	1/1	1.00	0.22	1.50	26,26,26,26	0
34	NA	0	8507	1/1	0.81	0.20	1.10	38,38,38,38	0
36	SR	0	8935	1/1	0.97	0.15	0.89	101,101,101,101	0
32	MG	0	8084	1/1	0.99	0.13	0.70	37,37,37,37	0
34	NA	0	8537	1/1	0.94	0.12	0.46	46,46,46,46	0
32	MG	A	8051	1/1	0.95	0.23	0.34	95,95,95,95	0
34	NA	0	8551	1/1	0.99	0.16	0.33	75,75,75,75	0
36	SR	0	9001	1/1	0.73	0.13	0.33	200,200,200,200	0
32	MG	0	8041	1/1	0.98	0.19	0.32	25,25,25,25	0
34	NA	0	8560	1/1	0.56	0.43	-0.03	80,80,80,80	0
34	NA	0	8519	1/1	0.88	0.19	-0.06	51,51,51,51	0
34	NA	0	8513	1/1	0.99	0.18	-0.12	67,67,67,67	0
36	SR	0	8972	1/1	0.92	0.18	-0.18	138,138,138,138	0
33	K	M	8402	1/1	0.97	0.21	-0.24	96,96,96,96	0
34	NA	0	8530	1/1	0.98	0.17	-0.37	53,53,53,53	0
34	NA	Q	8540	1/1	0.59	0.12	-0.44	74,74,74,74	0
32	MG	0	8062	1/1	0.99	0.18	-0.44	66,66,66,66	0
32	MG	0	8052	1/1	0.95	0.13	-0.81	63,63,63,63	0
37	CD	Z	8703	1/1	0.96	0.43	-0.82	188,188,188,188	0
32	MG	A	8050	1/1	0.97	0.12	-0.89	69,69,69,69	0
36	SR	A	8930	1/1	0.91	0.11	-0.96	131,131,131,131	0
34	NA	9	8572	1/1	0.92	0.08	-0.98	71,71,71,71	0
34	NA	M	8539	1/1	0.97	0.12	-1.08	38,38,38,38	0
37	CD	1	8702	1/1	0.98	0.11	-1.10	78,78,78,78	0
32	MG	T	8057	1/1	0.80	0.08	-1.14	80,80,80,80	0
36	SR	0	8910	1/1	0.98	0.13	-1.23	118,118,118,118	0
36	SR	A	8929	1/1	0.96	0.09	-1.27	139,139,139,139	0
32	MG	0	8002	1/1	0.99	0.14	-1.36	31,31,31,31	0
34	NA	J	8538	1/1	0.92	0.12	-1.39	84,84,84,84	0
36	SR	0	8985	1/1	0.97	0.09	-1.43	168,168,168,168	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	SR	3	8932	1/1	0.74	0.11	-1.46	148,148,148,148	0
35	CL	L	8810	1/1	0.85	0.12	-1.47	91,91,91,91	0
36	SR	2	8947	1/1	0.96	0.12	-1.49	195,195,195,195	0
32	MG	0	8058	1/1	0.96	0.07	-1.50	7,7,7,7	0
32	MG	0	8044	1/1	0.98	0.10	-1.57	59,59,59,59	0
37	CD	U	8701	1/1	0.69	0.39	-1.61	180,180,180,180	0
37	CD	3	8704	1/1	0.81	0.58	-1.65	183,183,183,183	0
32	MG	0	8029	1/1	0.97	0.10	-1.78	62,62,62,62	0
34	NA	R	8533	1/1	0.96	0.07	-1.78	94,94,94,94	0
36	SR	0	8943	1/1	0.97	0.10	-1.83	89,89,89,89	0
32	MG	0	8004	1/1	0.99	0.11	-1.90	19,19,19,19	0
32	MG	0	8010	1/1	0.96	0.13	-1.90	46,46,46,46	0
35	CL	0	8812	1/1	0.97	0.08	-1.97	70,70,70,70	0
36	SR	0	8936	1/1	0.94	0.10	-2.01	114,114,114,114	0
32	MG	0	8001	1/1	0.98	0.14	-2.04	42,42,42,42	0
34	NA	0	8515	1/1	0.96	0.09	-2.06	35,35,35,35	0
36	SR	1	8913	1/1	1.00	0.10	-2.12	108,108,108,108	0
32	MG	0	8028	1/1	0.99	0.08	-2.13	13,13,13,13	0
32	MG	0	8016	1/1	0.98	0.15	-2.17	41,41,41,41	0
36	SR	0	8948	1/1	0.99	0.09	-2.18	110,110,110,110	0
32	MG	0	8034	1/1	0.98	0.06	-2.28	50,50,50,50	0
34	NA	0	8557	1/1	0.90	0.06	-2.28	70,70,70,70	0
32	MG	0	8013	1/1	0.99	0.06	-2.40	19,19,19,19	0
32	MG	0	8045	1/1	0.99	0.09	-2.59	28,28,28,28	0
32	MG	0	8014	1/1	0.99	0.08	-3.07	25,25,25,25	0
32	MG	0	8021	1/1	0.97	0.07	-3.09	31,31,31,31	0
32	MG	0	8006	1/1	0.98	0.10	-3.11	44,44,44,44	0
34	NA	0	8520	1/1	0.99	0.06	-3.23	44,44,44,44	0
32	MG	0	8065	1/1	0.86	0.10	-3.51	66,66,66,66	0
36	SR	0	8975	1/1	0.84	0.06	-3.61	189,189,189,189	0
36	SR	0	8945	1/1	0.98	0.07	-3.64	119,119,119,119	0
32	MG	0	8025	1/1	1.00	0.04	-3.66	23,23,23,23	0
32	MG	0	8075	1/1	0.97	0.06	-3.94	50,50,50,50	0
35	CL	3	8804	1/1	0.79	0.11	-4.49	98,98,98,98	0
36	SR	0	8944	1/1	0.99	0.05	-5.00	168,168,168,168	0
36	SR	0	8902	1/1	1.00	0.07	-5.05	72,72,72,72	0
36	SR	0	8949	1/1	0.99	0.07	-6.72	128,128,128,128	0
36	SR	0	8923	1/1	0.97	0.09	-6.87	108,108,108,108	0
32	MG	0	8007	1/1	0.97	0.07	-8.18	21,21,21,21	0
34	NA	0	8550	1/1	0.95	0.12	-8.88	129,129,129,129	0
36	SR	0	8940	1/1	0.99	0.10	-	93,93,93,93	0
32	MG	0	8068	1/1	0.85	0.08	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
35	CL	0	8815	1/1	0.80	0.24	-	130,130,130,130	0
34	NA	S	8510	1/1	0.96	0.06	-	41,41,41,41	0
36	SR	0	8959	1/1	0.87	0.06	-	190,190,190,190	0
36	SR	0	8937	1/1	0.98	0.26	-	126,126,126,126	0
36	SR	0	8942	1/1	0.96	0.05	-	123,123,123,123	0
36	SR	0	8939	1/1	0.97	0.08	-	155,155,155,155	0
32	MG	0	8076	1/1	1.00	0.33	-	76,76,76,76	0
34	NA	0	8544	1/1	0.82	0.44	-	76,76,76,76	0
34	NA	0	8536	1/1	0.88	0.13	-	64,64,64,64	0
36	SR	0	8964	1/1	0.84	0.25	-	176,176,176,176	0
32	MG	0	8078	1/1	0.98	0.35	-	72,72,72,72	0
36	SR	0	8907	1/1	1.00	0.17	-	60,60,60,60	0
36	SR	0	8984	1/1	0.90	0.03	-	124,124,124,124	0
36	SR	0	9008	1/1	0.98	0.10	-	94,94,94,94	0
32	MG	0	8038	1/1	0.92	0.12	-	94,94,94,94	0
35	CL	0	8817	1/1	0.96	0.10	-	84,84,84,84	0
32	MG	0	8056	1/1	0.96	0.14	-	47,47,47,47	0
32	MG	0	8046	1/1	0.91	0.07	-	44,44,44,44	0
36	SR	0	8956	1/1	0.91	0.23	-	200,200,200,200	0
32	MG	0	8042	1/1	0.92	0.05	-	75,75,75,75	0
36	SR	0	8920	1/1	0.97	0.08	-	145,145,145,145	0
32	MG	0	8022	1/1	0.98	0.20	-	25,25,25,25	0
36	SR	0	8918	1/1	0.99	0.10	-	88,88,88,88	0
36	SR	0	8988	1/1	0.89	0.05	-	200,200,200,200	0
35	CL	0	8803	1/1	0.92	0.14	-	82,82,82,82	0
34	NA	0	8512	1/1	0.99	0.24	-	40,40,40,40	0
36	SR	0	8971	1/1	0.73	0.16	-	200,200,200,200	0
32	MG	0	8019	1/1	0.96	0.18	-	19,19,19,19	0
36	SR	0	8979	1/1	0.43	0.70	-	200,200,200,200	0
36	SR	0	8998	1/1	0.95	0.65	-	200,200,200,200	0
34	NA	0	8506	1/1	0.89	0.55	-	91,91,91,91	0
32	MG	0	8018	1/1	0.96	0.08	-	34,34,34,34	0
34	NA	0	8502	1/1	0.90	0.18	-	66,66,66,66	0
34	NA	0	8541	1/1	0.98	0.18	-	60,60,60,60	0
32	MG	0	8088	1/1	0.97	0.17	-	53,53,53,53	0
32	MG	0	8023	1/1	0.92	0.22	-	38,38,38,38	0
36	SR	F	9005	1/1	0.88	0.15	-	170,170,170,170	0
34	NA	0	8548	1/1	0.99	0.05	-	44,44,44,44	0
37	CD	O	8705	1/1	0.99	0.04	-	105,105,105,105	0
32	MG	0	8033	1/1	0.96	0.20	-	69,69,69,69	0
36	SR	1	8952	1/1	0.97	0.12	-	92,92,92,92	0
35	CL	O	8808	1/1	0.89	0.39	-	114,114,114,114	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
32	MG	0	8090	1/1	0.99	0.11	-	57,57,57,57	0
36	SR	0	8991	1/1	0.57	0.09	-	188,188,188,188	0
36	SR	0	8924	1/1	0.97	0.23	-	131,131,131,131	0
36	SR	0	8966	1/1	0.99	0.07	-	101,101,101,101	0
36	SR	0	8990	1/1	0.98	0.14	-	113,113,113,113	0
36	SR	R	8912	1/1	0.99	0.24	-	107,107,107,107	0
32	MG	0	8035	1/1	0.99	0.16	-	76,76,76,76	0
36	SR	0	8914	1/1	0.98	0.22	-	133,133,133,133	0
35	CL	0	8814	1/1	0.97	0.28	-	51,51,51,51	0
34	NA	0	8571	1/1	0.86	0.36	-	99,99,99,99	0
36	SR	0	8981	1/1	0.98	0.13	-	198,198,198,198	0
32	MG	0	8092	1/1	0.90	0.10	-	53,53,53,53	0
32	MG	0	8048	1/1	0.99	0.31	-	26,26,26,26	0
32	MG	K	8054	1/1	0.93	0.15	-	42,42,42,42	0
35	CL	Y	8820	1/1	0.96	0.13	-	58,58,58,58	0
34	NA	0	8558	1/1	0.97	0.24	-	82,82,82,82	0
32	MG	0	8020	1/1	0.94	0.19	-	50,50,50,50	0
32	MG	0	8089	1/1	0.96	0.27	-	56,56,56,56	0
34	NA	0	8526	1/1	0.95	0.12	-	67,67,67,67	0
36	SR	0	8906	1/1	1.00	0.14	-	66,66,66,66	0
36	SR	0	8934	1/1	0.98	0.10	-	138,138,138,138	0
36	SR	9	9003	1/1	0.86	0.04	-	200,200,200,200	0
32	MG	0	8032	1/1	0.87	0.05	-	47,47,47,47	0
34	NA	0	8573	1/1	0.94	0.24	-	89,89,89,89	0
36	SR	0	8983	1/1	0.83	0.30	-	200,200,200,200	0
34	NA	0	8525	1/1	0.90	0.55	-	113,113,113,113	0
32	MG	0	8060	1/1	0.98	0.04	-	58,58,58,58	0
36	SR	0	8954	1/1	0.98	0.15	-	115,115,115,115	0
36	SR	0	8978	1/1	0.96	0.07	-	132,132,132,132	0
32	MG	0	8073	1/1	0.97	0.09	-	89,89,89,89	0
32	MG	0	8087	1/1	0.81	0.06	-	22,22,22,22	0
34	NA	0	8554	1/1	0.95	0.38	-	124,124,124,124	0
36	SR	0	8922	1/1	0.94	0.27	-	181,181,181,181	0
35	CL	R	8806	1/1	0.98	0.15	-	66,66,66,66	0
36	SR	0	8974	1/1	0.85	0.41	-	196,196,196,196	0
36	SR	0	8931	1/1	0.98	0.15	-	120,120,120,120	0
32	MG	0	8031	1/1	0.76	0.12	-	68,68,68,68	0
34	NA	0	8566	1/1	0.95	0.25	-	86,86,86,86	0
36	SR	0	8976	1/1	0.92	0.26	-	195,195,195,195	0
32	MG	0	8085	1/1	0.94	0.11	-	67,67,67,67	0
36	SR	0	8901	1/1	1.00	0.14	-	73,73,73,73	0
36	SR	0	8993	1/1	0.81	0.05	-	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	SR	0	8921	1/1	0.99	0.09	-	88,88,88,88	0
36	SR	0	8953	1/1	0.89	0.33	-	179,179,179,179	0
32	MG	0	8026	1/1	0.94	0.14	-	37,37,37,37	0
36	SR	9	8980	1/1	0.98	0.15	-	191,191,191,191	0
36	SR	0	8926	1/1	0.95	0.23	-	131,131,131,131	0
35	CL	N	8807	1/1	0.82	0.50	-	99,99,99,99	0
34	NA	R	8532	1/1	0.87	0.21	-	68,68,68,68	0
32	MG	0	8080	1/1	0.98	0.27	-	65,65,65,65	0
34	NA	9	8543	1/1	0.97	0.26	-	51,51,51,51	0
36	SR	B	8950	1/1	0.92	0.15	-	123,123,123,123	0
32	MG	Y	8077	1/1	0.85	0.41	-	58,58,58,58	0
34	NA	0	8501	1/1	0.84	0.26	-	53,53,53,53	0
34	NA	0	8570	1/1	0.81	0.18	-	57,57,57,57	0
36	SR	0	8916	1/1	0.99	0.05	-	110,110,110,110	0
32	MG	0	8063	1/1	0.99	0.12	-	60,60,60,60	0
32	MG	0	8064	1/1	0.94	0.23	-	51,51,51,51	0
34	NA	0	8553	1/1	0.56	0.22	-	81,81,81,81	0
32	MG	0	8024	1/1	0.97	0.03	-	39,39,39,39	0
34	NA	0	8545	1/1	0.74	0.42	-	74,74,74,74	0
32	MG	0	8069	1/1	0.99	0.13	-	73,73,73,73	0
34	NA	0	8529	1/1	0.91	0.15	-	61,61,61,61	0
36	SR	0	8977	1/1	0.92	0.05	-	200,200,200,200	0
34	NA	0	8549	1/1	0.82	0.28	-	96,96,96,96	0
32	MG	0	8082	1/1	0.95	0.20	-	62,62,62,62	0
32	MG	0	8036	1/1	0.99	0.10	-	62,62,62,62	0
36	SR	0	8989	1/1	0.88	0.13	-	174,174,174,174	0
36	SR	0	9000	1/1	0.86	0.16	-	200,200,200,200	0
36	SR	0	8960	1/1	0.73	0.06	-	156,156,156,156	0
35	CL	0	8813	1/1	0.97	0.21	-	64,64,64,64	0
35	CL	J	8801	1/1	0.75	0.22	-	85,85,85,85	0
36	SR	0	8911	1/1	0.95	0.14	-	100,100,100,100	0
32	MG	0	8061	1/1	0.96	0.30	-	47,47,47,47	0
34	NA	0	8561	1/1	0.97	0.15	-	53,53,53,53	0
36	SR	0	8917	1/1	0.98	0.10	-	111,111,111,111	0
32	MG	0	8030	1/1	0.95	0.91	-	75,75,75,75	0
35	CL	0	8822	1/1	0.61	0.92	-	140,140,140,140	0
34	NA	0	8531	1/1	0.98	0.18	-	54,54,54,54	0
36	SR	0	8933	1/1	0.99	0.16	-	126,126,126,126	0
34	NA	0	8516	1/1	0.92	0.22	-	27,27,27,27	0
34	NA	0	8569	1/1	0.97	0.12	-	71,71,71,71	0
34	NA	0	8514	1/1	0.96	0.39	-	74,74,74,74	0
32	MG	0	8055	1/1	0.97	0.30	-	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	SR	0	8951	1/1	0.95	0.17	-	183,183,183,183	0
36	SR	0	8915	1/1	0.96	0.12	-	123,123,123,123	0
36	SR	0	8968	1/1	0.84	0.18	-	175,175,175,175	0
32	MG	0	8093	1/1	0.91	0.16	-	48,48,48,48	0
36	SR	J	8986	1/1	0.91	0.33	-	200,200,200,200	0
32	MG	0	8053	1/1	0.92	0.13	-	88,88,88,88	0
36	SR	0	9006	1/1	0.64	0.52	-	200,200,200,200	0
32	MG	0	8039	1/1	0.96	0.20	-	94,94,94,94	0
36	SR	0	8958	1/1	1.00	0.13	-	126,126,126,126	0
34	NA	0	8527	1/1	0.99	0.31	-	92,92,92,92	0
32	MG	0	8066	1/1	0.75	0.45	-	71,71,71,71	0
36	SR	0	8994	1/1	0.98	0.12	-	200,200,200,200	0
36	SR	0	8997	1/1	0.94	0.90	-	200,200,200,200	0
36	SR	0	8928	1/1	0.80	0.12	-	156,156,156,156	0
36	SR	0	8955	1/1	0.82	0.11	-	200,200,200,200	0
34	NA	C	8503	1/1	0.99	0.12	-	36,36,36,36	0
32	MG	0	8049	1/1	0.94	0.26	-	82,82,82,82	0
32	MG	0	8047	1/1	0.99	0.40	-	90,90,90,90	0
36	SR	0	8996	1/1	0.98	0.48	-	200,200,200,200	0
36	SR	0	9004	1/1	0.78	1.33	-	200,200,200,200	0
32	MG	9	8040	1/1	0.96	0.18	-	101,101,101,101	0
36	SR	0	8995	1/1	0.98	0.16	-	123,123,123,123	0
32	MG	0	8027	1/1	1.00	0.10	-	44,44,44,44	0
35	CL	J	8802	1/1	0.86	0.11	-	86,86,86,86	0
32	MG	0	8017	1/1	0.99	0.15	-	28,28,28,28	0
35	CL	Q	8811	1/1	0.96	0.68	-	124,124,124,124	0
34	NA	0	8518	1/1	0.80	0.85	-	91,91,91,91	0
34	NA	0	8508	1/1	0.89	0.35	-	118,118,118,118	0
36	SR	0	8963	1/1	0.94	0.12	-	117,117,117,117	0
32	MG	0	8091	1/1	0.96	0.31	-	67,67,67,67	0
36	SR	0	8962	1/1	0.94	0.06	-	168,168,168,168	0
34	NA	0	8574	1/1	0.94	1.44	-	92,92,92,92	0
32	MG	9	8074	1/1	0.85	0.23	-	97,97,97,97	0
32	MG	0	8037	1/1	0.98	0.31	-	92,92,92,92	0
36	SR	0	8973	1/1	0.99	0.16	-	142,142,142,142	0
36	SR	S	8961	1/1	0.98	0.10	-	130,130,130,130	0
36	SR	0	8965	1/1	0.95	0.22	-	160,160,160,160	0
36	SR	0	8927	1/1	0.94	0.10	-	171,171,171,171	0
32	MG	0	8059	1/1	0.98	0.06	-	55,55,55,55	0
34	NA	0	8505	1/1	0.99	0.23	-	37,37,37,37	0
32	MG	0	8072	1/1	0.99	0.09	-	45,45,45,45	0
32	MG	0	8005	1/1	0.98	0.22	-	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	SR	0	9002	1/1	0.96	0.14	-	200,200,200,200	0
35	CL	J	8816	1/1	0.94	2.10	-	99,99,99,99	0
36	SR	0	8946	1/1	0.97	0.24	-	144,144,144,144	0
32	MG	0	8081	1/1	0.90	0.38	-	116,116,116,116	0
32	MG	0	8071	1/1	0.99	0.13	-	78,78,78,78	0
35	CL	A	8809	1/1	0.97	0.35	-	116,116,116,116	0
36	SR	0	8941	1/1	0.99	0.25	-	141,141,141,141	0
36	SR	0	8908	1/1	0.92	0.10	-	99,99,99,99	0
36	SR	0	8967	1/1	0.99	0.06	-	163,163,163,163	0
32	MG	0	8015	1/1	0.95	0.13	-	30,30,30,30	0
34	NA	0	8511	1/1	0.93	0.09	-	53,53,53,53	0
36	SR	0	8919	1/1	0.89	0.09	-	185,185,185,185	0
36	SR	0	8905	1/1	0.99	0.28	-	68,68,68,68	0
36	SR	0	8925	1/1	0.95	0.14	-	98,98,98,98	0
36	SR	0	8938	1/1	0.92	0.06	-	200,200,200,200	0
34	NA	0	8524	1/1	0.81	0.42	-	53,53,53,53	0
36	SR	3	8999	1/1	0.69	0.42	-	200,200,200,200	0
34	NA	0	8509	1/1	0.66	0.43	-	84,84,84,84	0
36	SR	0	8909	1/1	0.99	0.08	-	100,100,100,100	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.