



wwPDB X-ray Structure Validation Summary Report ⓘ

Feb 11, 2024 – 06:36 AM EST

PDB ID : 3CCS
Title : Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation G2482A
Authors : Blaha, G.; Gurel, G.
Deposited on : 2008-02-26
Resolution : 2.95 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

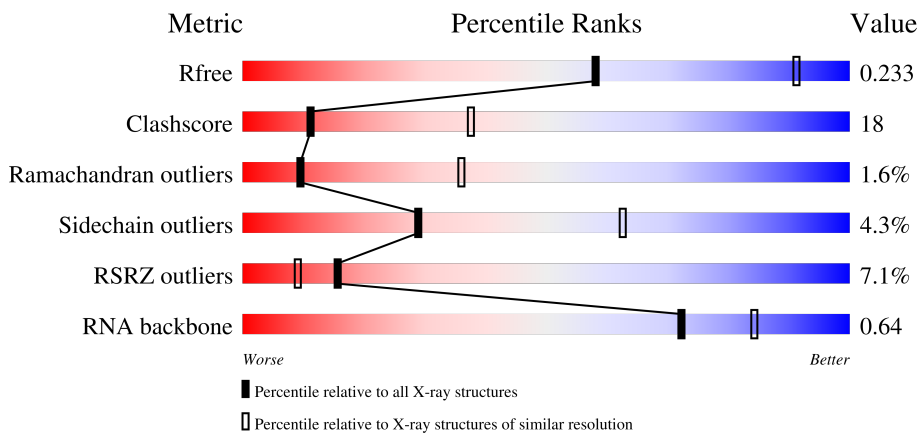
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3104 (3.00-2.92)
Clashscore	141614	3462 (3.00-2.92)
Ramachandran outliers	138981	3340 (3.00-2.92)
Sidechain outliers	138945	3343 (3.00-2.92)
RSRZ outliers	127900	2986 (3.00-2.92)
RNA backbone	3102	1065 (3.22-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	240	 3% 66% 28% . .
2	B	338	 62% 33% .
3	C	246	 73% 24% .
4	D	177	 29% 51% 25% . 21%

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Mol	Chain	Length	Quality of chain
5	E	178	2% 69% 26% ..
6	F	120	12% 74% 24% ..
7	G	348	% 5% 92%
8	H	177	18% 68% 20% 10%
9	I	162	31% 30% 12% 57%
10	J	145	% 65% 31% ..
11	K	132	72% 27% .
12	L	165	13% 60% 28% 12%
13	M	196	10% 58% 37% ..
14	N	187	14% 63% 33% ..
15	O	116	78% 21% ..
16	P	149	70% 23% ..
17	Q	96	% 73% 25% ..
18	R	155	70% 24% ..
19	S	85	2% 72% 24% 5%
20	T	120	4% 68% 29% ..
21	U	67	75% 43% 31% 21%
22	V	71	17% 58% 31% 8%
23	W	154	% 62% 35% .
24	X	92	4% 60% 27% 11%
25	Y	241	42% 16% 41%
26	Z	116	51% 29% 29% 37%
27	1	57	68% 30% .
28	2	50	6% 56% 36% 8%
29	3	92	99% 43% 52% ..

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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
33	CL	0	8812	-	-	X	-
33	CL	Y	8820	-	-	X	-
34	SR	0	8982	-	-	-	X
34	SR	0	9004	-	-	-	X
34	SR	0	9006	-	-	-	X
34	SR	0	9007	-	-	-	X
35	NA	0	8528	-	-	-	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 99121 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
			Total	C	N	O	S			
1	A	237	1753	1072	352	324	5	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			59019	26349	10873	19052	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	A	2	Total	Mg	0	0
			2	2		
32	B	1	Total	Mg	0	0
			1	1		
32	K	1	Total	Mg	0	0
			1	1		
32	T	1	Total	Mg	0	0
			1	1		
32	Y	1	Total	Mg	0	0
			1	1		
32	0	86	Total	Mg	0	0
			86	86		
32	9	1	Total	Mg	0	0
			1	1		

- Molecule 33 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	A	1	Total Cl 1 1	0	0
33	B	1	Total Cl 1 1	0	0
33	J	3	Total Cl 3 3	0	0
33	L	1	Total Cl 1 1	0	0
33	M	1	Total Cl 1 1	0	0
33	N	1	Total Cl 1 1	0	0
33	O	1	Total Cl 1 1	0	0
33	R	1	Total Cl 1 1	0	0
33	Y	1	Total Cl 1 1	0	0
33	3	1	Total Cl 1 1	0	0
33	0	10	Total Cl 10 10	0	0

- Molecule 34 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	A	2	Total Sr 2 2	0	0
34	B	2	Total Sr 2 2	0	0
34	F	1	Total Sr 1 1	0	0
34	H	1	Total Sr 1 1	0	0
34	L	1	Total Sr 1 1	0	0
34	R	1	Total Sr 1 1	0	0
34	S	1	Total Sr 1 1	0	0
34	1	2	Total Sr 2 2	0	0
34	3	2	Total Sr 2 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	0	92	Total 92	Sr 92	0	0
34	9	3	Total 3	Sr 3	0	0

- Molecule 35 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	B	1	Total 1	Na 1	0	0
35	C	1	Total 1	Na 1	0	0
35	H	1	Total 1	Na 1	0	0
35	J	1	Total 1	Na 1	0	0
35	M	1	Total 1	Na 1	0	0
35	Q	1	Total 1	Na 1	0	0
35	R	1	Total 1	Na 1	0	0
35	S	1	Total 1	Na 1	0	0
35	0	65	Total 65	Na 65	0	0
35	9	2	Total 2	Na 2	0	0

- Molecule 36 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	M	1	Total 1	K 1	0	0
36	0	1	Total 1	K 1	0	0

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

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

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

- Molecule 38 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	A	119	Total 119	O 119	0	0
38	B	152	Total 152	O 152	0	0
38	C	185	Total 185	O 185	0	0
38	D	42	Total 42	O 42	0	0
38	E	43	Total 43	O 43	0	0
38	F	26	Total 26	O 26	0	0
38	G	19	Total 19	O 19	0	0
38	H	65	Total 65	O 65	0	0
38	I	8	Total 8	O 8	0	0
38	J	53	Total 53	O 53	0	0
38	K	58	Total 58	O 58	0	0
38	L	85	Total 85	O 85	0	0
38	M	127	Total 127	O 127	0	0
38	N	59	Total 59	O 59	0	0
38	O	39	Total 39	O 39	0	0

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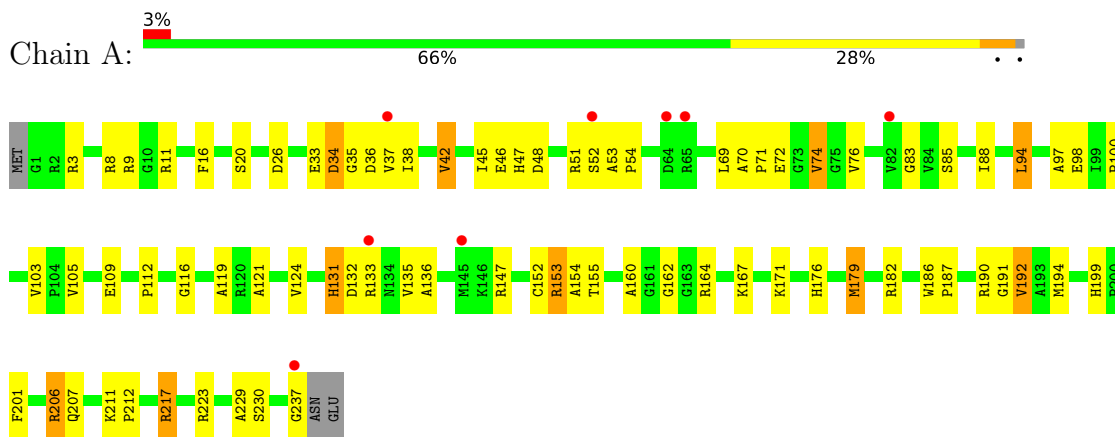
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	P	67	Total O 67 67	0	0
38	Q	48	Total O 48 48	0	0
38	R	77	Total O 77 77	0	0
38	S	30	Total O 30 30	0	0
38	T	36	Total O 36 36	0	0
38	U	28	Total O 28 28	0	0
38	V	13	Total O 13 13	0	0
38	W	67	Total O 67 67	0	0
38	X	21	Total O 21 21	0	0
38	Y	100	Total O 100 100	0	0
38	Z	31	Total O 31 31	0	0
38	1	59	Total O 59 59	0	0
38	2	43	Total O 43 43	0	0
38	3	70	Total O 70 70	0	0
38	0	5904	Total O 5904 5904	0	0
38	9	149	Total O 149 149	0	0

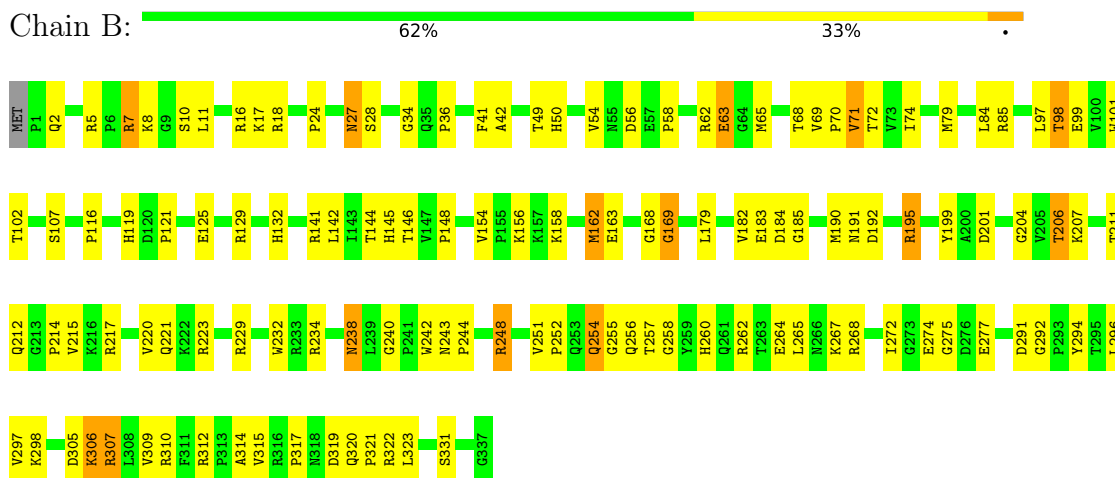
3 Residue-property plots [i](#)

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.

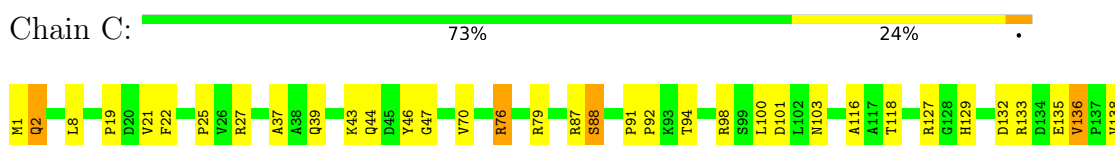
- Molecule 1: 50S ribosomal protein L2P



- Molecule 2: 50S ribosomal protein L3P

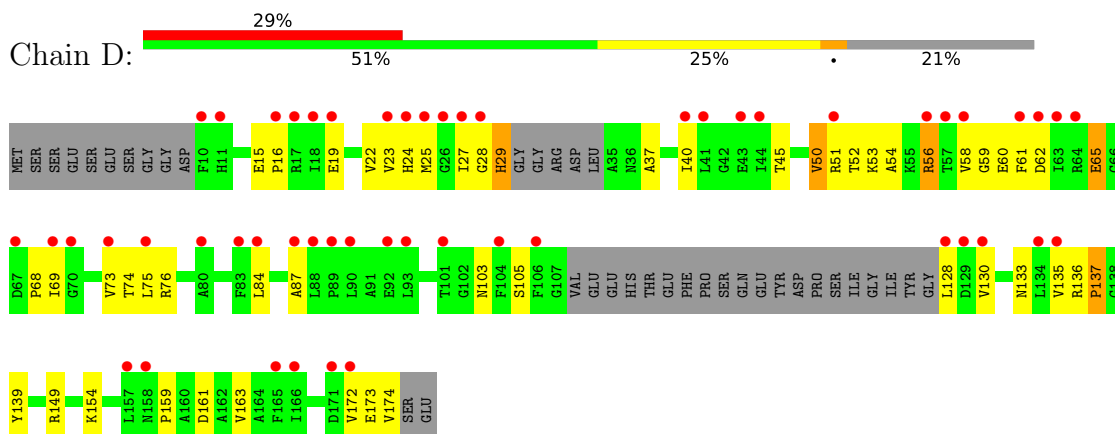


- Molecule 3: 50S ribosomal protein L4P

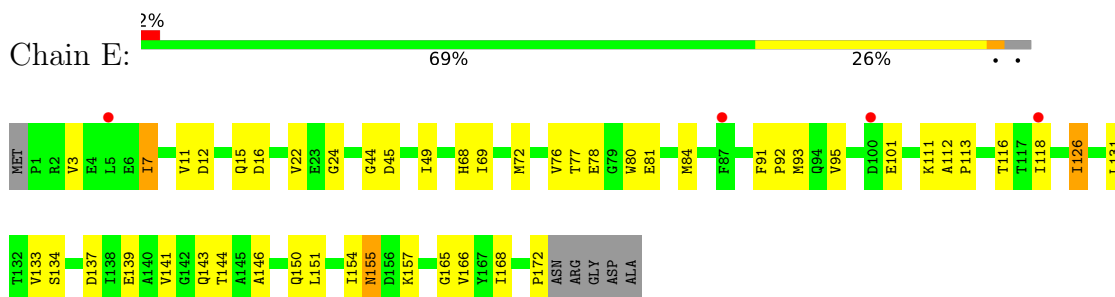




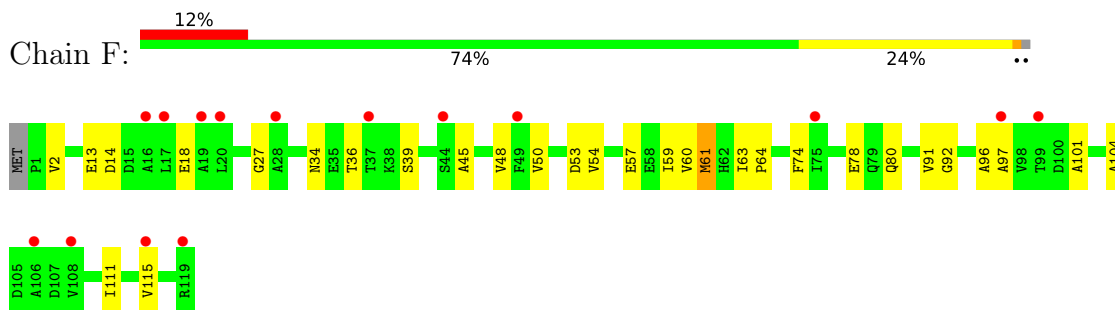
- Molecule 4: 50S ribosomal protein L5P



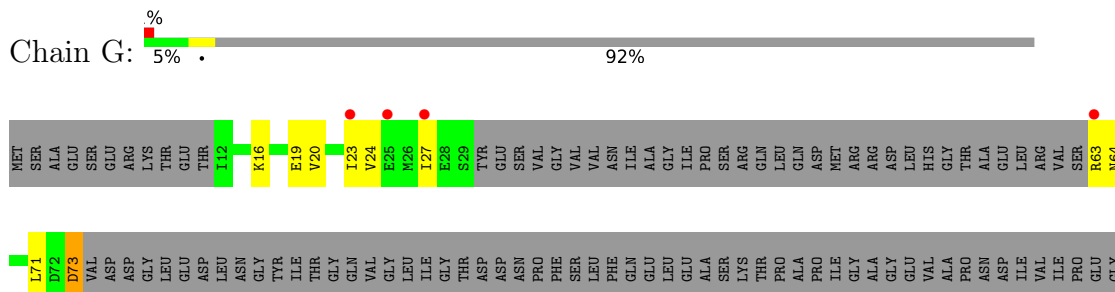
- Molecule 5: 50S ribosomal protein L6P




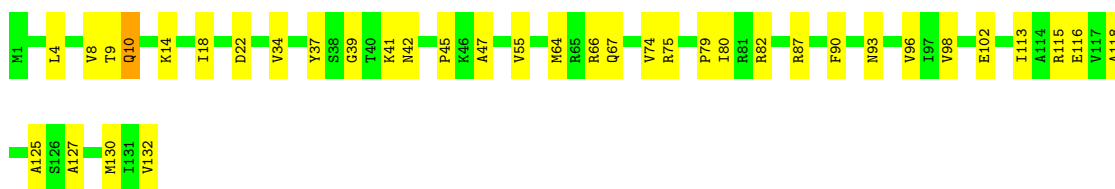
- Molecule 6: 50S ribosomal protein L7Ae



- Molecule 7: 50S ribosomal protein L10E

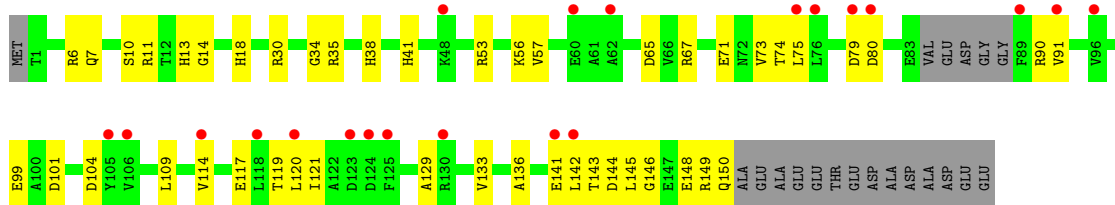


Chain K:  72% 27%



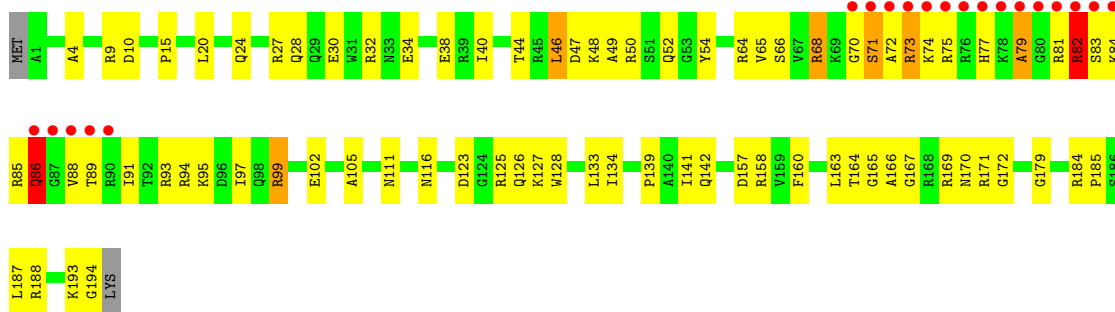
• Molecule 12: 50S ribosomal protein L15P

Chain L:  13% 60% 28% 12%



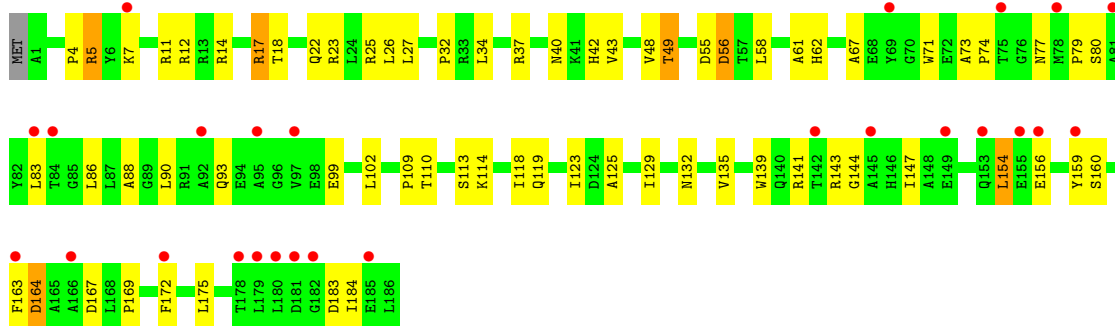
• Molecule 13: 50S ribosomal protein L15e

Chain M:  10% 58% 37%




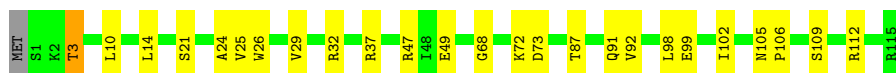
• Molecule 14: 50S ribosomal protein L18P

Chain N:  14% 63% 33%



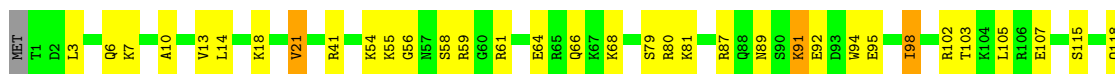
• Molecule 15: 50S ribosomal protein L18e

Chain O:  78% 21% ..



- Molecule 16: 50S ribosomal protein L19e

Chain P:  70% 23% ..



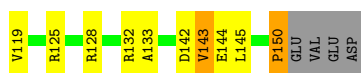
- Molecule 17: 50S ribosomal protein L21e

Chain Q:  73% 25% ..



- Molecule 18: 50S ribosomal protein L22P

Chain R:  70% 24% ..



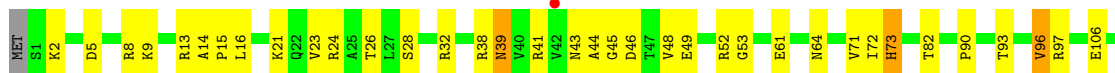
- Molecule 19: 50S ribosomal protein L23P

Chain S:  72% 24% 5% 2% ..



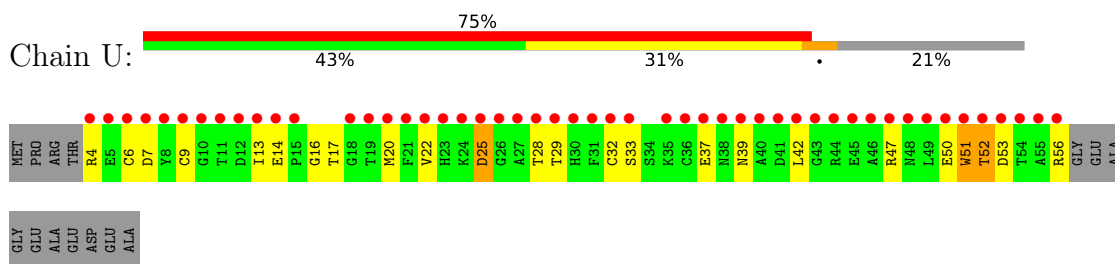
- Molecule 20: 50S ribosomal protein L24P

Chain T:  68% 29% 4% ..

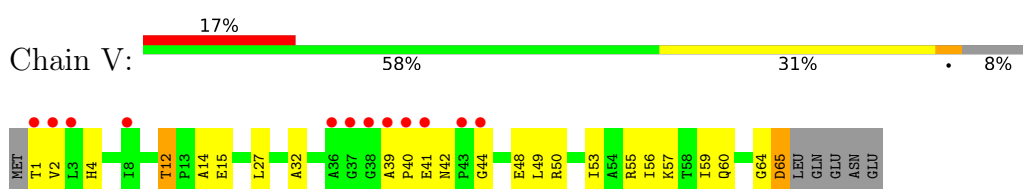




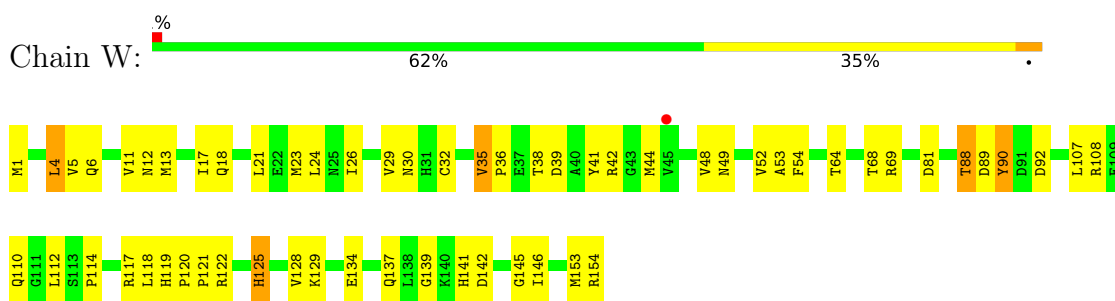
- Molecule 21: 50S ribosomal protein L24e



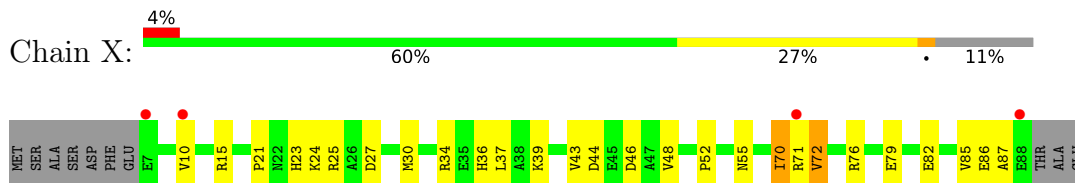
- Molecule 22: 50S ribosomal protein L29P



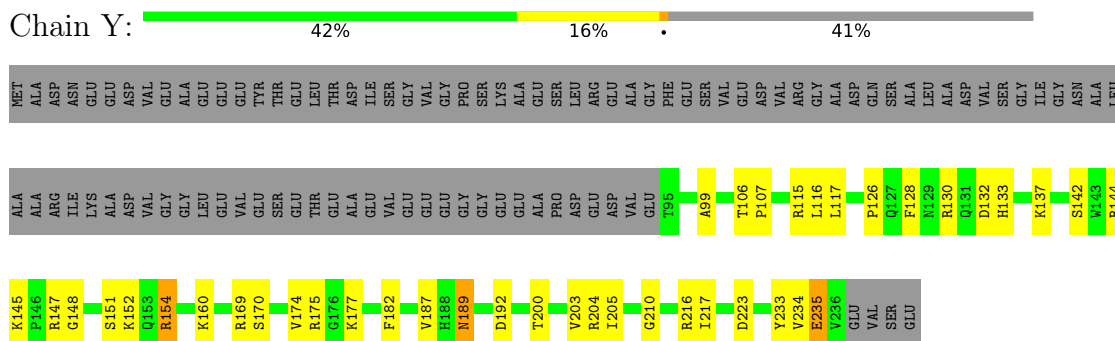
- Molecule 23: 50S ribosomal protein L30P



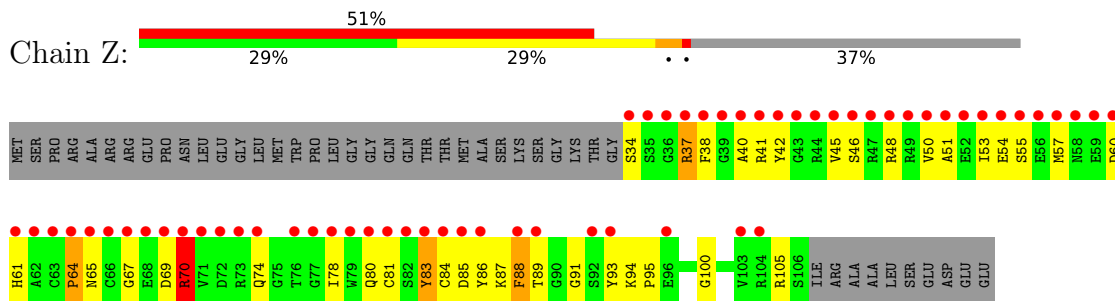
- Molecule 24: 50S ribosomal protein L31e



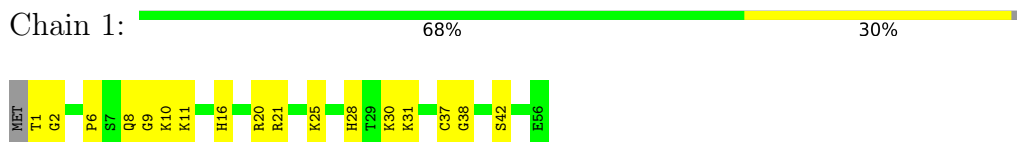
- Molecule 25: 50S ribosomal protein L32e



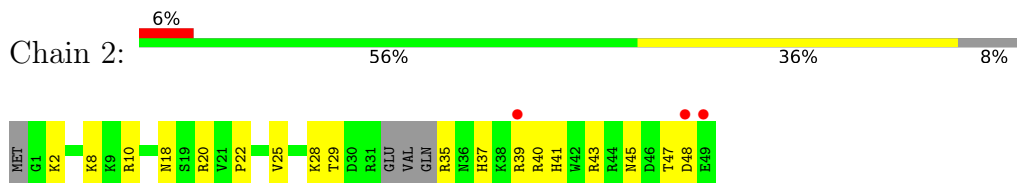
- Molecule 26: 50S ribosomal protein L37Ae



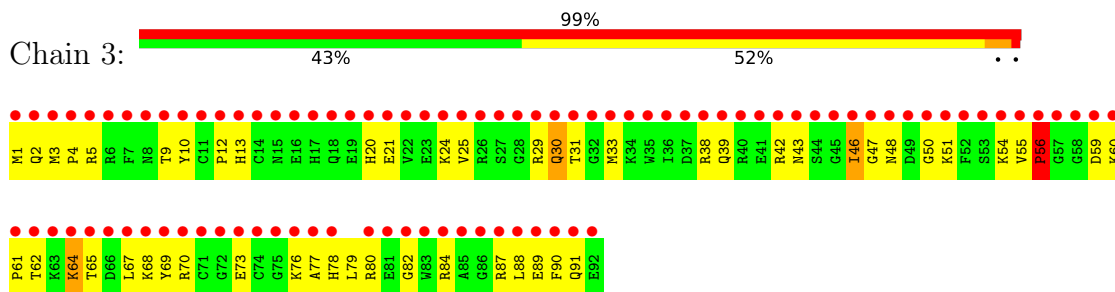
- Molecule 27: 50S ribosomal protein L37e



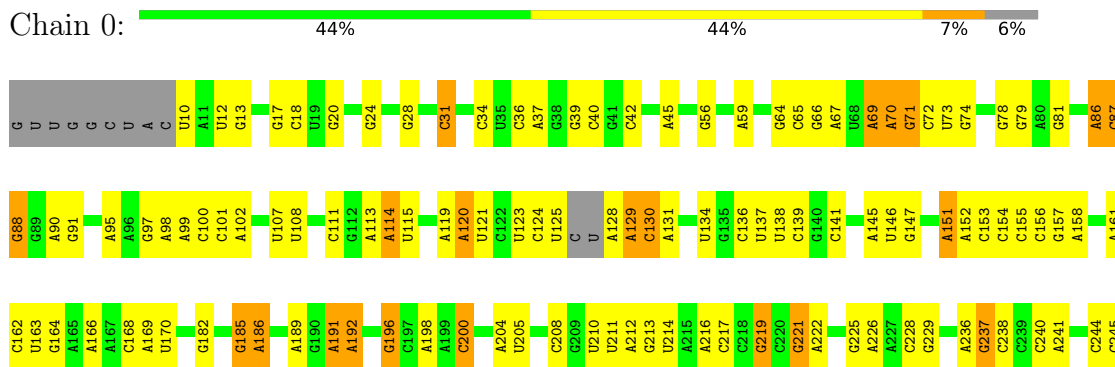
- Molecule 28: 50S ribosomal protein L39e



- Molecule 29: 50S ribosomal protein L44E

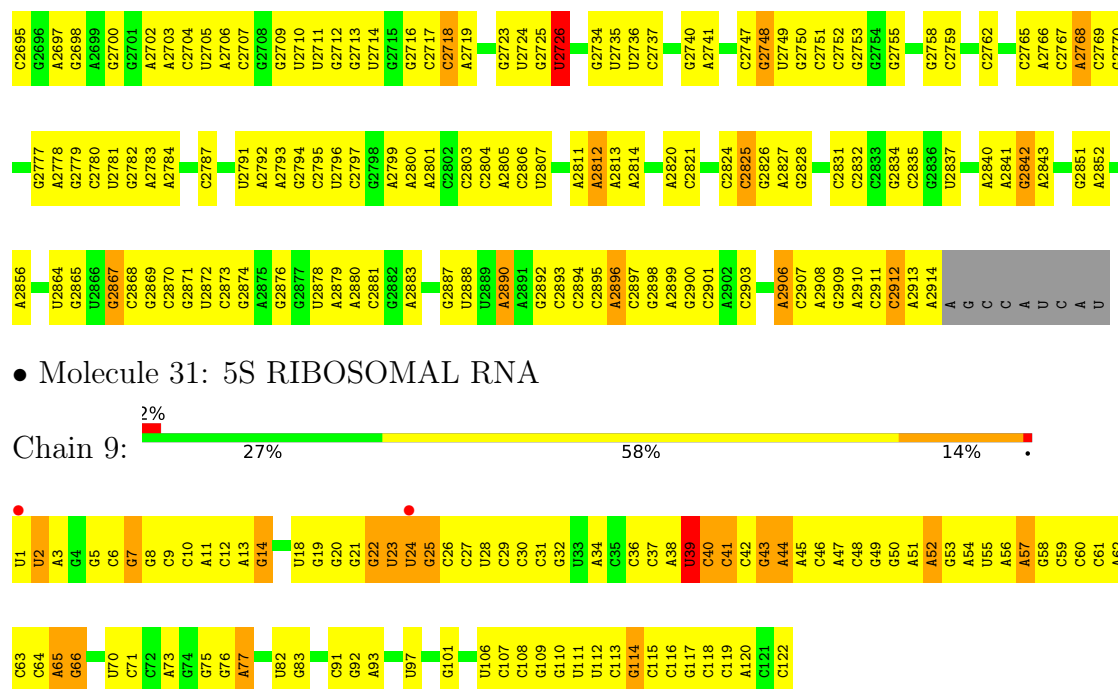


- Molecule 30: 23S RIBOSOMAL RNA



G1398	U1314	G1226	G1162	G1059	A	G902	G814	C717	C568	U481	U392	G315	G246	
A1399	G1315	G1229	G1163	C1060	G	U903	U815	C718	U589	C482	G393	A316	A247	
U1405	A1317	A1230	U1164	C1061	A	U904	G816	C719	U561	C483	U396	A317	A248	
A1407	A1318	A1231	G1165	G1066	G	C905	G817	C720	G561	A484	U397	U318	G249	
U1408	A1321	U1234	A1166	A1067	A	A912	A819	G725	C563	A486	U398	A319	C250	
U1409	G1322	G1235	C1168	U1067	G	G918	G820	C726	G564	C487	C399	G320		
G1410	U1169	A1236	U1170	G1071	C	U919	U821	G727	A566	U488	A407	G324	C254	
A1413	G1325	C1238	A1171	G1072	C	C922	G822	C728	U567	G496	U408	A285	C256	
U1419	A1326	G1239	G1172	G1073	G	G921	G823	G729	U499	A409	U409	G257	G258	
C1420	G1327	G1239	A1173	G1074	G	C922	G823	G730	C571	A410	U410	G259		
C1421	A1328	A1242	A1174	G1075	C	A923	A827	U734	C581	A411	A411	U283	U283	
C1422	G1331	C1243	G1175	G1076	C	G924	G834	A736	U582	G498	C412	G284	G284	
C1423	A1332	U1244	A1177	G1076	A	C925	U835	A737	C583	C499	G413	U265	U265	
C1423	C1332	U1244	A1177	G1076	A	C925	U835	A737	C583	C499	G413	U265	U265	
C1424	C1333	C1245	C1178	C1084	C1000	A932	U836	G744	U584	A507	G416	U335	C271	
C1424	C1334	A1246	U1180	C1085	C1000	U932	U840	G745	U585	A508	G417	U336	A272	
G1425	C1335	A1248	A1181	A1086	U1003	C933	U844	G746	C586	A509	A418	U337	G273	
C1426	C1336	U1249	C1182	A1087	C1004	A939	A844	G747	A587	U510	A419	C338	G274	
C1428	G1337	C1250	C1183	A1088	C1004	U940	U845	G748	U588	A511	U420	A339	G275	
U1429	C1338	C1254	C1184	U1095	A1006	G941	A846	C749	U589	A512	C421	C342	G276	
G1430	G1339	A1255	U1185	A1096	A1007	G942	A847	A750	A590	A513	C422	C343		
	G1340	A1255	C1186	C1008	C1008	U943	U850	U751	A591	C514	C424	C344	C279	
A1434	A1341	G1260	A1187	U1009	C1010	G944	C851	C759	A593	U517	U425	G345	C280	
C1436	C1342	U1266	A1188	G1099	C1011	U945	U852	G760	C594	G518	C440	U346	U281	
U1439	C1343	C1267	A1189	G1100	C1012	C946	U853	A761	U595	U527	A441	A347	C282	
C1439	C1344	G1268	G1190	A1102	A1013	U947	U854	C762	C596	A521	A442	A348	C283	
U1440	A1345	U1269	C1191	C1013	C1013	U948	U855	A682	C597	A522	C443	C349	U284	
A1441	C1346	G1269	A1192	C1014	C1014	U949	U856	G764	C598	C523	C444	A352	A285	
A1442	A1347	U1270	U1193	C1015	C1015	U950	A857	G765	C599	A524	U445	C353	U286	
U1446	U1350	C1273	G1194	U1016	U1016	G951	U858	G766	U600	U526	C446	G358	C287	
U1447	A1351	A1278	U1195	A1017	A1017	G952	U859	G767	A603	U527	A447	U359	A288	
C1451	C1352	U1279	A1196	C1018	C1018	G953	A867	A776	G604	U604	A449	U360	U289	
G1452	A1353	A1280	A1200	C1019	C1019	A957	G868	C778	C530	C530	C450	C361	C290	
U1454	C1354	C1281	C1201	C1020	C1020	C960	G871	U779	U611	G531	C451	G362	C291	
C1455	U1359	A1282	C1202	C1021	C1021	U961	U872	A790	U612	A532	C452	C363	A293	
C1456	C1360	U1288	G1203	C1022	C1022	C962	A875	G792	U614	U533	A453	U364	C294	
U1457	U1361	C1289	C1204	C1023	C1023	C963	A876	G793	U615	C534	U454	G365	C295	
	G1362	U1294	U1205	C1024	C1024	G964	G877	A793	U616	A536	A459	U366	C296	
	C1363	G1296	A1206	C1025	C1025	A965	G878	A797	C699	C537	A460	G367	U287	
	G1364	G1296	U1207	C1026	C1026	G969	G879	U701	C699	C538	C461	C368	U288	
	C1365	A1299	C1208	C1027	C1027	U970	G880	G702	U701	C539	A462	G369	U289	
	A1372	G1299	G1210	C1028	C1028	U971	C881	G703	A620	G539	A463	G370	U300	
	U1375	C1300	C1213	C1029	C1029	G	U882	G704	C621	A540	A464	U371	C301	
	G1376	U1304	G1214	C1030	C1030	U	U883	C705	G622	C541	C465	A372	A302	
	A1471	C1305	A1215	C1031	C1031	C	U884	C706	U624	G543	U465	G373	C303	
	C1469	C1306	G1216	C1032	C1032	C	G885	G707	U625	G544	A467	U374	G304	
	U1472	U1306	C1217	C1033	C1033	C	U886	A806	A628	C546	U468	G375	A305	
	A1473	A1307	U1218	C1034	C1034	G	U887	A807	A629	C546	C469	C377	A306	
	C1474	C1308	C1219	C1035	C1035	C	A894	G808	A629	C547	U470	A378	U308	
	C1477	U1309	U1220	C1036	C1036	C	G898	A809	A629	A549	A471	G379	C309	
	U1478	U1310	G1221	C1037	C1037	U	G899	G810	A630	C550	A472	A380	U310	
	C1394	G1311	C1224	C1038	C1038	C	U900	A812	C633	U653	A473	G381	C311	
	C1395	G1312	A1057	C1039	C1039	C	G901	G811	U634	C557	G479	U312	U312	
	C1396	A1313	A1058	C1040	C1040	G	G902	G812	U635	C557	C480	U313	G314	
	C1397			C1041	C1041									

U2616	A2302	G2462	A2375	A2302	G	A2096	G1986	A1924	C1830	G1751	G1666	A1485
G2616	C2376	G2466	C2376	A2302	U	A2096	U1996	G1925	U1831	G1752	G1567	A1486
G2617	U2377	G2466	U2377	C2309	U	A2099	A1997	G1926	G1832	G1753	G1567	A1487
G2618	U2378	U2467	U2378	C2313	A	A2099	G1998	A1927	U1833	A1755	A1572	U1488
U2619	G2379	C2468	G2379	C2314	C	A2101	U2003	C1928	A1834	G1756	C1574	A1494
U2620	C2382	A2469	G2382	C2315	G	A2102	U2004	G1929	U1835	U1757	C1575	C1495
G2621	G2383	C2472	U2383	G2316	A	A2103	G2005	G1933	A1836	A1758	G1576	C1496
A2624	U2384	U2473	U2384	C2317	G	A2104	G2006	A1934	U1838	A1759	C1577	G1497
C2625	G2387	A2474	U2387	C2318	G	C2103	C2007	C1935	A1839	U1761	C1578	U1500
C2626	U2389	C2475	U2389	C2319	U	C2105	A2006	C1936	A1840	G1762	A1581	U1500
U2627	G2388	C2476	G2388	U2320	A	C2106	U2008	C1937	A1841	G1763	A1582	U1503
U2628	C2389	A2476	C2389	C2321	C	G2110	G2009	G1938	A1842	G1764	U1583	U1503
C2629	U2390	G2480	U2390	C2322	C	G2111	A2010	U1939	U1845	G1765	A1584	A1504
G2630	A2401	G2481	A2401	U2322	C	A2112	A2011	C1940	U1846	U1766	U1585	U1505
G2631	G2402	G2482	G2402	G2323	C	A2112	U2012	C1941	U1850	A1767	U1586	U1506
A2634	A2408	C2483	A2408	G2324	G	C2119	U2013	A1942	G1851	C1768	G1586	A1504
C2635	C2409	U2484	C2409	U2325	G	U2120	G2013	C1943	A1852	U1769	U1587	U1511
G2636	G2410	A2485	G2410	C2326	C	G2121	U2017	G1944	G1853	U1770	G1588	G1512
A2637	C2411	A2486	C2411	C2329	U	A2128	A2018	G1947	C1854	U1771	A1589	G1512
G2638	G2412	C2487	G2412	U2330	A	U2129	A2022	G1948	U1855	C1772	G1592	A1515
A2639	A2413	G2488	A2413	C2331	G	U2134	U2032	G1949	C1856	G1773	C1593	U1516
G2640	G2414	G2489	G2414	A2332	C	G2135	G2033	G1950	C1857	U1774	C1594	G1520
G2641	A2415	A2490	A2415	G2333	G	A2136	U2034	G1951	C1858	C1775	U1596	A1522
G2642	G2416	A2490	G2416	C2334	C	G2136	G2034	U	C1859	G1776	A1597	A1522
C2644	C2417	G2493	C2417	G2336	G	G2136	U2034	A	C1860	A1778	A1598	G1523
A2649	G2418	G2494	G2418	U2337	C	A	C2035	A	G1861	U1779	U1599	G1523
U2650	U2419	G2494	U2419	G2338	C	A	C2035	C	U1868	G1780	A1600	U1524
C2651	C2420	C2498	C2420	A	C	C	U2039	C	U1871	A1701	A1603	G1525
U2652	G2421	U2499	A2264	C	U	C	C2040	U	C1872	U1702	A1526	A1527
G2653	U2422	C2500	U2422	C	C	C	U2043	G	G1873	U1706	G1604	A1527
A2654	A2425	G2501	A2425	A	U	U	G2044	A	G1877	G1707	G1605	A1528
U2655	G2426	C2502	G2426	C	C	A	G2044	A	C1878	U1708	A1606	G1529
G2656	A2434	C2503	A2434	C	C	C	G2050	C	U1791	A1710	U1608	U1530
A2657	U2435	A2504	U2435	C	C	C	A2054	U1964	C1793	C1609	G1609	G1535
U2658	U2436	G2505	U2436	A	A	G	A2055	C1965	G1794	G1610	C1536	C1536
U2659	A2437	U2506	A2437	G	C	C	G2056	U1966	A1796	G1611	C1537	C1537
C2660	G2438	C2507	G2438	U	U	U	U2057	C1967	A1797	A1612	C1538	C1538
U2661	C2440	G2507	C2440	C	C	C	G2058	A1968	C1798	G1613	U1539	U1539
G2662	U2441	A2511	U2441	U	U	U	G2059	A1969	A1799	G1614	U1540	U1540
A2663	G2442	C2512	G2442	G	C	C	A2060	G1970	C1799	A1615	G1541	G1541
U2664	C2443	U2513	C2443	A	A	C	C2061	G1971	A1801	A1616	G1542	G1542
G2665	U2444	U2514	U2444	C	C	C	C2062	U1972	U1804	G1622	U1543	G1543
U2666	G2445	A2521	G2445	A	A	G	U2063	A1973	G1805	C1623	U1544	U1544
A2667	C2446	U2522	C2446	C	C	C	U2064	G1974	G1806	A1624	G1545	G1545
U2668	G2449	U2523	G2449	A	A	U	G2070	C1975	G1809	U1625	G1546	G1546
G2669	U2451	C2524	U2451	C	C	C	C2071	U1976	C1810	A1626	G1546	G1546
C2670	G2451	G2525	G2451	G	G	U	U2072	A1977	A1811	A1627	C1553	C1553
U2671	C2454	U2526	C2454	C	C	C	G2073	G1978	C1913	G1627	C1554	C1554
A2672	U2454	U2527	U2454	C	C	C	A2074	U1980	C1914	A1632	A1559	A1559
G2673	A2457	G2531	A2457	U	U	U	G2075	U1980	U1915	A1633	U	U
U2674	U2458	C2533	U2458	C	C	C	A2081	A1981	C1916	U1741	G1634	G1634
U2675	G2459	U2534	G2459	G	G	C	U2088	C1982	C1916	A1742	G1635	U1561
A2676	A2460	G2537	A2460	C	C	U	C2088	C1983	U1919	U1749	C1642	C1642
G2677	U2461	A2537	U2461	G	G	U	G2092	U1992	A1921	U1748	A1641	A1641
U2678	C2461	C2537	C2461	U	U	C		C1993	A1922	U1749	C1643	C1643



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	212.24Å 299.19Å 575.16Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 2.95 85.59 – 2.40	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-2.95) 91.7 (85.59-2.40)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 2.40Å)	Xtrriage
Refinement program	CNS	Depositor
R, R_{free}	0.179 , 0.238 0.177 , 0.233	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å ²)	62.1	Xtrriage
Anisotropy	0.128	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 79.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	99121	wwPDB-VP
Average B, all atoms (Å ²)	68.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.49% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.34	0/1786	0.64	0/2408
2	B	0.34	0/2690	0.64	0/3652
3	C	0.39	0/1885	0.65	0/2552
4	D	0.33	0/1111	0.57	0/1498
5	E	0.34	0/1382	0.56	0/1880
6	F	0.35	0/901	0.57	0/1224
7	G	0.32	0/241	0.47	0/324
8	H	0.33	0/1302	0.62	0/1743
9	I	0.32	0/526	0.54	0/716
10	J	0.39	0/1136	0.61	0/1530
11	K	0.37	0/1004	0.66	0/1351
12	L	0.34	0/1130	0.61	0/1509
13	M	0.40	0/1582	0.63	0/2116
14	N	0.32	0/1474	0.61	0/1999
15	O	0.37	0/874	0.62	0/1181
16	P	0.34	0/1147	0.53	0/1528
17	Q	0.33	0/749	0.64	0/1005
18	R	1.27	7/1172 (0.6%)	1.10	6/1578 (0.4%)
19	S	0.36	0/648	0.59	0/875
20	T	0.34	0/958	0.66	0/1289
21	U	0.45	0/417	0.60	0/562
22	V	0.34	0/502	0.53	0/675
23	W	0.38	0/1219	0.65	0/1655
24	X	0.36	0/664	0.61	0/895
25	Y	0.38	0/1146	0.62	0/1536
26	Z	0.43	0/584	0.63	0/781
27	1	0.47	0/438	0.64	0/578
28	2	0.36	0/401	0.61	0/529
29	3	0.46	0/771	0.60	0/1024
30	0	0.42	0/65956	0.68	7/102865 (0.0%)
31	9	0.32	0/2904	0.67	1/4526 (0.0%)
All	All	0.42	7/98700 (0.0%)	0.67	14/147584 (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	34
All	All	1	35

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	27.15	2.85	1.50
18	R	150	PRO	CA-C	-18.51	1.15	1.52
18	R	150	PRO	CG-CD	13.84	1.96	1.50
18	R	150	PRO	C-O	11.87	1.47	1.23
18	R	150	PRO	N-CA	11.57	1.67	1.47

The worst 5 of 14 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	150	PRO	CB-CA-C	-22.43	55.92	112.00
18	R	150	PRO	N-CA-C	-19.45	61.53	112.10
18	R	150	PRO	CA-N-CD	12.27	128.88	111.70
18	R	150	PRO	N-CA-CB	10.98	116.47	103.30
18	R	150	PRO	CA-C-O	-8.27	100.34	120.20

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

5 of 35 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	196	G	Sidechain
30	0	221	G	Sidechain
30	0	324	G	Sidechain
30	0	333	G	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	85	0
2	B	2625	0	2533	108	0
3	C	1860	0	1813	63	0
4	D	1094	0	1085	37	0
5	E	1357	0	1266	39	0
6	F	890	0	843	19	0
7	G	240	0	231	8	0
8	H	1282	0	1292	33	0
9	I	519	0	500	14	0
10	J	1120	0	1098	44	0
11	K	994	0	1027	34	0
12	L	1118	0	1076	38	0
13	M	1558	0	1573	95	0
14	N	1445	0	1401	73	0
15	O	865	0	873	22	0
16	P	1136	0	1123	34	0
17	Q	735	0	729	28	0
18	R	1149	0	1122	41	0
19	S	641	0	605	15	0
20	T	950	0	924	36	0
21	U	410	0	368	26	0
22	V	499	0	511	21	0
23	W	1196	0	1137	58	0
24	X	654	0	653	20	0
25	Y	1130	0	1133	39	0
26	Z	573	0	535	50	0
27	1	431	0	426	21	0
28	2	396	0	413	21	0
29	3	755	0	732	57	0
30	0	59019	0	29809	1661	0
31	9	2599	0	1325	127	0
32	0	86	0	0	0	0
32	9	1	0	0	0	0
32	A	2	0	0	0	0
32	B	1	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	Y	1	0	0	0	0
33	0	10	0	0	3	0
33	3	1	0	0	1	0
33	A	1	0	0	0	0
33	B	1	0	0	0	0
33	J	3	0	0	2	0
33	L	1	0	0	0	0
33	M	1	0	0	0	0
33	N	1	0	0	0	0
33	O	1	0	0	0	0
33	R	1	0	0	0	0
33	Y	1	0	0	2	0
34	0	92	0	0	0	0
34	1	2	0	0	0	0
34	3	2	0	0	0	0
34	9	3	0	0	0	0
34	A	2	0	0	0	0
34	B	2	0	0	0	0
34	F	1	0	0	0	0
34	H	1	0	0	0	0
34	L	1	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	65	0	0	0	0
35	9	2	0	0	0	0
35	B	1	0	0	0	0
35	C	1	0	0	0	0
35	H	1	0	0	0	0
35	J	1	0	0	0	0
35	M	1	0	0	0	0
35	Q	1	0	0	0	0
35	R	1	0	0	0	0
35	S	1	0	0	0	0
36	0	1	0	0	0	0
36	M	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	5904	0	0	251	0
38	1	59	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	2	43	0	0	2	0
38	3	70	0	0	3	0
38	9	149	0	0	10	0
38	A	119	0	0	7	0
38	B	152	0	0	16	0
38	C	185	0	0	18	0
38	D	42	0	0	4	0
38	E	43	0	0	1	0
38	F	26	0	0	1	0
38	G	19	0	0	1	0
38	H	65	0	0	4	0
38	I	8	0	0	1	0
38	J	53	0	0	1	0
38	K	58	0	0	3	0
38	L	85	0	0	9	0
38	M	127	0	0	13	0
38	N	59	0	0	2	0
38	O	39	0	0	2	0
38	P	67	0	0	3	0
38	Q	48	0	0	1	0
38	R	77	0	0	2	0
38	S	30	0	0	2	0
38	T	36	0	0	3	0
38	U	28	0	0	4	0
38	V	13	0	0	2	0
38	W	67	0	0	3	0
38	X	21	0	0	2	0
38	Y	100	0	0	5	0
38	Z	31	0	0	7	0
All	All	99121	0	59922	2675	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 18.

The worst 5 of 2675 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:CG	18:R:150:PRO:CD	1.96	1.41
30:0:871:G:C8	30:0:871:G:H5'	1.77	1.19
10:J:82:THR:HG23	30:0:1242:A:H5'	1.23	1.16
30:0:1165:G:H1'	30:0:1174:A:H1'	1.17	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:56:A:H2'	31:9:57:A:H5''	1.19	1.13

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%)	202 (86%)	27 (12%)	6 (3%)	5	24
2	B	335/338 (99%)	309 (92%)	17 (5%)	9 (3%)	5	23
3	C	244/246 (99%)	222 (91%)	20 (8%)	2 (1%)	19	53
4	D	134/177 (76%)	110 (82%)	20 (15%)	4 (3%)	4	20
5	E	170/178 (96%)	157 (92%)	12 (7%)	1 (1%)	25	60
6	F	117/120 (98%)	106 (91%)	7 (6%)	4 (3%)	3	17
7	G	25/348 (7%)	24 (96%)	1 (4%)	0	100	100
8	H	156/177 (88%)	144 (92%)	10 (6%)	2 (1%)	12	41
9	I	68/162 (42%)	52 (76%)	12 (18%)	4 (6%)	1	7
10	J	140/145 (97%)	131 (94%)	8 (6%)	1 (1%)	22	56
11	K	130/132 (98%)	121 (93%)	8 (6%)	1 (1%)	19	53
12	L	141/165 (86%)	120 (85%)	21 (15%)	0	100	100
13	M	192/196 (98%)	179 (93%)	9 (5%)	4 (2%)	7	29
14	N	184/187 (98%)	163 (89%)	17 (9%)	4 (2%)	6	28
15	O	113/116 (97%)	107 (95%)	6 (5%)	0	100	100
16	P	141/149 (95%)	133 (94%)	8 (6%)	0	100	100
17	Q	93/96 (97%)	85 (91%)	7 (8%)	1 (1%)	14	46
18	R	148/155 (96%)	140 (95%)	7 (5%)	1 (1%)	22	56
19	S	79/85 (93%)	74 (94%)	5 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	T	117/120 (98%)	107 (92%)	8 (7%)	2 (2%)	9	34
21	U	51/67 (76%)	42 (82%)	8 (16%)	1 (2%)	7	30
22	V	63/71 (89%)	58 (92%)	5 (8%)	0	100	100
23	W	152/154 (99%)	140 (92%)	10 (7%)	2 (1%)	12	41
24	X	80/92 (87%)	74 (92%)	4 (5%)	2 (2%)	5	25
25	Y	140/241 (58%)	137 (98%)	3 (2%)	0	100	100
26	Z	71/116 (61%)	58 (82%)	8 (11%)	5 (7%)	1	4
27	1	54/57 (95%)	51 (94%)	3 (6%)	0	100	100
28	2	42/50 (84%)	39 (93%)	2 (5%)	1 (2%)	6	26
29	3	90/92 (98%)	74 (82%)	13 (14%)	3 (3%)	4	18
All	All	3705/4472 (83%)	3359 (91%)	286 (8%)	60 (2%)	9	36

5 of 60 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	34	ASP
1	A	37	VAL
1	A	74	VAL
4	D	65	GLU
4	D	137	PRO

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	A	179/182 (98%)	171 (96%)	8 (4%)	27	61
2	B	282/283 (100%)	264 (94%)	18 (6%)	17	47
3	C	193/193 (100%)	182 (94%)	11 (6%)	20	52
4	D	117/148 (79%)	110 (94%)	7 (6%)	19	50
5	E	152/156 (97%)	148 (97%)	4 (3%)	46	75
6	F	93/94 (99%)	93 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	G	27/282 (10%)	26 (96%)	1 (4%)	34	66
8	H	134/145 (92%)	126 (94%)	8 (6%)	19	50
9	I	58/130 (45%)	56 (97%)	2 (3%)	37	69
10	J	118/121 (98%)	113 (96%)	5 (4%)	30	63
11	K	106/106 (100%)	104 (98%)	2 (2%)	57	81
12	L	113/127 (89%)	108 (96%)	5 (4%)	28	62
13	M	158/160 (99%)	148 (94%)	10 (6%)	18	48
14	N	149/150 (99%)	144 (97%)	5 (3%)	37	69
15	O	93/94 (99%)	92 (99%)	1 (1%)	73	89
16	P	113/117 (97%)	107 (95%)	6 (5%)	22	55
17	Q	79/80 (99%)	78 (99%)	1 (1%)	69	87
18	R	117/122 (96%)	114 (97%)	3 (3%)	46	75
19	S	71/74 (96%)	70 (99%)	1 (1%)	67	86
20	T	105/106 (99%)	99 (94%)	6 (6%)	20	52
21	U	44/53 (83%)	41 (93%)	3 (7%)	16	45
22	V	51/57 (90%)	49 (96%)	2 (4%)	32	65
23	W	130/130 (100%)	124 (95%)	6 (5%)	27	60
24	X	66/74 (89%)	61 (92%)	5 (8%)	13	39
25	Y	120/196 (61%)	115 (96%)	5 (4%)	30	63
26	Z	60/94 (64%)	57 (95%)	3 (5%)	24	57
27	1	46/47 (98%)	46 (100%)	0	100	100
28	2	42/46 (91%)	41 (98%)	1 (2%)	49	77
29	3	79/79 (100%)	76 (96%)	3 (4%)	33	66
All	All	3095/3646 (85%)	2963 (96%)	132 (4%)	29	62

5 of 132 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
24	X	27	ASP
24	X	79	GLU
29	3	56	PRO
7	G	73	ASP
5	E	155	ASN

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

Mol	Chain	Res	Type
21	U	39	ASN
27	1	8	GLN
22	V	60	GLN
23	W	141	HIS
28	2	41	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	250 (9%)	21 (0%)
31	9	121/122 (99%)	19 (15%)	2 (1%)
All	All	2866/3045 (94%)	269 (9%)	23 (0%)

5 of 269 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A
30	0	71	G

5 of 23 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	2011	A
30	0	2526	C
30	0	2467	A
30	0	2718	C
30	0	857	A

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

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	1MA	0	628	30,35	16,25,26	1.39	3 (18%)	18,37,40	1.19	2 (11%)
30	PSU	0	2621	30	18,21,22	1.41	2 (11%)	22,30,33	1.30	3 (13%)
30	OMU	0	2587	30	19,22,23	0.38	0	26,31,34	0.41	0
30	UR3	0	2619	30	19,22,23	0.47	0	26,32,35	0.62	1 (3%)
30	OMG	0	2588	30	18,26,27	1.09	3 (16%)	19,38,41	0.74	1 (5%)

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	1MA	0	628	30,35	-	0/3/25/26	0/3/3/3
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	OMU	0	2587	30	-	0/9/27/28	0/2/2/2
30	UR3	0	2619	30	-	0/7/25/26	0/2/2/2
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3

The worst 5 of 8 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C2-N1	4.51	1.42	1.36
30	0	628	1MA	C2-N3	3.73	1.33	1.29
30	0	2588	OMG	C5-C6	-2.91	1.41	1.47
30	0	628	1MA	C6-N6	2.57	1.34	1.27
30	0	2621	PSU	C6-C5	2.56	1.38	1.35

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	C6-C5-C4	3.45	120.61	118.20
30	0	2621	PSU	C6-N1-C2	-2.90	119.72	122.68
30	0	2621	PSU	O2-C2-N1	2.78	125.86	122.79
30	0	628	1MA	N1-C2-N3	2.75	129.23	126.02
30	0	628	1MA	C5-C6-N1	2.58	117.75	113.90

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2621	PSU	1	0
30	0	2587	OMU	1	0
30	0	2588	OMG	1	0

5.5 Carbohydrates [i](#)

There are no monosaccharides 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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	237/240 (98%)	-0.14	8 (3%) 45 29	36, 71, 108, 128	0
2	B	337/338 (99%)	-0.45	0 100 100	38, 67, 98, 112	0
3	C	246/246 (100%)	-0.38	0 100 100	32, 56, 80, 91	0
4	D	140/177 (79%)	1.53	52 (37%) 0 0	89, 121, 144, 151	0
5	E	172/178 (96%)	-0.07	4 (2%) 60 43	57, 83, 104, 113	0
6	F	119/120 (99%)	0.50	15 (12%) 3 2	64, 88, 121, 131	0
7	G	29/348 (8%)	1.11	4 (13%) 2 1	92, 107, 116, 118	0
8	H	160/177 (90%)	0.89	31 (19%) 1 0	65, 89, 118, 127	0
9	I	70/162 (43%)	3.64	50 (71%) 0 0	145, 162, 177, 179	0
10	J	142/145 (97%)	-0.38	1 (0%) 87 76	47, 63, 86, 105	0
11	K	132/132 (100%)	-0.38	0 100 100	45, 63, 91, 100	0
12	L	145/165 (87%)	0.55	21 (14%) 2 1	41, 88, 131, 140	0
13	M	194/196 (98%)	0.25	20 (10%) 6 4	37, 53, 115, 122	0
14	N	186/187 (99%)	0.65	26 (13%) 2 1	70, 90, 134, 139	0
15	O	115/116 (99%)	-0.37	0 100 100	46, 64, 81, 87	0
16	P	143/149 (95%)	-0.30	0 100 100	48, 67, 85, 96	0
17	Q	95/96 (98%)	-0.17	1 (1%) 80 65	57, 69, 89, 97	0
18	R	150/155 (96%)	-0.50	0 100 100	39, 56, 79, 95	0
19	S	81/85 (95%)	-0.28	2 (2%) 57 40	52, 70, 89, 104	0
20	T	119/120 (99%)	-0.03	5 (4%) 36 23	48, 67, 95, 125	0
21	U	53/67 (79%)	4.50	50 (94%) 0 0	112, 125, 131, 134	0
22	V	65/71 (91%)	0.92	12 (18%) 1 0	51, 83, 131, 135	0
23	W	154/154 (100%)	-0.34	1 (0%) 89 78	45, 62, 79, 92	0
24	X	82/92 (89%)	0.03	4 (4%) 29 18	54, 72, 95, 109	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	Y	142/241 (58%)	-0.60	0 100 100	30, 53, 78, 97	0
26	Z	73/116 (62%)	7.40	59 (80%) 0 0	111, 130, 139, 142	0
27	1	56/57 (98%)	-0.51	0 100 100	30, 39, 47, 65	0
28	2	46/50 (92%)	-0.22	3 (6%) 18 11	39, 72, 104, 110	0
29	3	92/92 (100%)	8.50	91 (98%) 0 0	123, 135, 142, 148	0
30	0	2749/2923 (94%)	-0.63	10 (0%) 92 84	25, 58, 106, 183	0
31	9	122/122 (100%)	-0.81	2 (1%) 72 55	51, 90, 111, 159	0
All	All	6646/7517 (88%)	-0.00	472 (7%) 16 9	25, 66, 129, 183	0

The worst 5 of 472 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
26	Z	58	ASN	25.7
29	3	39	GLN	21.9
29	3	41	GLU	19.7
29	3	47	GLY	18.8
29	3	35	TRP	18.8

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
30	1MA	0	628	23/24	0.98	0.14	38,44,47,47	0
30	OMU	0	2587	21/22	0.98	0.11	43,47,50,51	0
30	OMG	0	2588	24/25	0.98	0.12	41,43,46,50	0
30	UR3	0	2619	21/22	0.98	0.13	47,49,51,54	0
30	PSU	0	2621	20/21	0.98	0.18	39,41,53,53	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
33	CL	3	8804	1/1	0.25	0.20	128,128,128,128	0
35	NA	0	8528	1/1	0.51	0.67	76,76,76,76	0
34	SR	0	8979	1/1	0.53	0.19	196,196,196,196	0
34	SR	0	9006	1/1	0.57	0.98	200,200,200,200	0
35	NA	J	8538	1/1	0.58	0.15	78,78,78,78	0
32	MG	0	8040	1/1	0.59	0.39	86,86,86,86	0
35	NA	0	8563	1/1	0.59	0.12	117,117,117,117	0
34	SR	0	8988	1/1	0.61	0.08	173,173,173,173	0
35	NA	0	8570	1/1	0.66	0.09	61,61,61,61	0
35	NA	0	8511	1/1	0.67	0.08	81,81,81,81	0
34	SR	0	8991	1/1	0.67	0.08	180,180,180,180	0
34	SR	0	8982	1/1	0.68	1.93	200,200,200,200	0
34	SR	0	9004	1/1	0.71	0.84	200,200,200,200	0
35	NA	0	8506	1/1	0.72	0.20	83,83,83,83	0
34	SR	0	9001	1/1	0.75	0.13	177,177,177,177	0
32	MG	A	8051	1/1	0.76	0.25	94,94,94,94	0
35	NA	0	8525	1/1	0.77	0.16	75,75,75,75	0
35	NA	B	8552	1/1	0.78	0.28	89,89,89,89	0
37	CD	Z	8703	1/1	0.78	0.46	200,200,200,200	0
37	CD	3	8704	1/1	0.78	0.66	200,200,200,200	0
34	SR	0	8977	1/1	0.80	0.07	200,200,200,200	0
32	MG	0	8089	1/1	0.80	0.25	65,65,65,65	0
34	SR	0	8938	1/1	0.80	0.08	183,183,183,183	0
34	SR	0	8959	1/1	0.80	0.27	200,200,200,200	0
34	SR	0	9007	1/1	0.80	1.77	200,200,200,200	0
34	SR	0	9002	1/1	0.82	0.12	193,193,193,193	0
35	NA	0	8535	1/1	0.83	0.29	67,67,67,67	0
35	NA	0	8562	1/1	0.83	0.97	82,82,82,82	0
32	MG	0	8071	1/1	0.84	0.12	60,60,60,60	0
34	SR	0	8962	1/1	0.84	0.09	172,172,172,172	0
35	NA	0	8509	1/1	0.84	0.13	69,69,69,69	0
34	SR	3	8999	1/1	0.84	0.28	187,187,187,187	0
34	SR	0	8992	1/1	0.84	0.23	159,159,159,159	0
33	CL	J	8801	1/1	0.84	0.12	95,95,95,95	0
35	NA	0	8502	1/1	0.85	0.12	69,69,69,69	0
34	SR	0	8951	1/1	0.85	0.10	155,155,155,155	0
35	NA	H	8518	1/1	0.85	0.42	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8075	1/1	0.85	0.05	55,55,55,55	0
34	SR	0	8985	1/1	0.86	0.06	164,164,164,164	0
35	NA	Q	8540	1/1	0.86	0.11	79,79,79,79	0
34	SR	0	8928	1/1	0.86	0.04	137,137,137,137	0
34	SR	0	8953	1/1	0.86	0.55	200,200,200,200	0
34	SR	0	8957	1/1	0.86	0.34	200,200,200,200	0
34	SR	0	8994	1/1	0.86	0.48	200,200,200,200	0
32	MG	0	8081	1/1	0.86	0.17	88,88,88,88	0
34	SR	0	8919	1/1	0.87	0.09	168,168,168,168	0
35	NA	0	8555	1/1	0.87	0.42	52,52,52,52	0
35	NA	0	8560	1/1	0.87	0.56	118,118,118,118	0
34	SR	9	8980	1/1	0.87	0.15	183,183,183,183	0
35	NA	0	8545	1/1	0.88	0.80	58,58,58,58	0
35	NA	0	8548	1/1	0.88	0.12	56,56,56,56	0
34	SR	0	8989	1/1	0.88	0.20	178,178,178,178	0
32	MG	0	8056	1/1	0.89	0.06	57,57,57,57	0
34	SR	9	9003	1/1	0.89	0.10	187,187,187,187	0
34	SR	0	8993	1/1	0.89	0.08	167,167,167,167	0
35	NA	0	8508	1/1	0.89	0.47	52,52,52,52	0
32	MG	0	8067	1/1	0.89	0.11	35,35,35,35	0
32	MG	9	8074	1/1	0.89	0.07	87,87,87,87	0
34	SR	3	8932	1/1	0.90	0.23	178,178,178,178	0
35	NA	0	8551	1/1	0.90	0.46	63,63,63,63	0
32	MG	0	8080	1/1	0.90	0.75	83,83,83,83	0
34	SR	0	8944	1/1	0.90	0.07	172,172,172,172	0
32	MG	0	8030	1/1	0.90	0.47	90,90,90,90	0
34	SR	0	8975	1/1	0.90	0.14	149,149,149,149	0
35	NA	0	8536	1/1	0.90	0.17	64,64,64,64	0
35	NA	0	8544	1/1	0.90	0.19	79,79,79,79	0
34	SR	0	8976	1/1	0.90	0.29	193,193,193,193	0
35	NA	0	8522	1/1	0.91	0.14	82,82,82,82	0
35	NA	0	8565	1/1	0.91	1.10	78,78,78,78	0
34	SR	0	8983	1/1	0.91	0.33	197,197,197,197	0
35	NA	9	8543	1/1	0.91	0.21	61,61,61,61	0
36	K	0	8401	1/1	0.91	0.63	139,139,139,139	0
34	SR	0	8946	1/1	0.91	0.20	137,137,137,137	0
34	SR	0	8954	1/1	0.91	0.12	108,108,108,108	0
34	SR	L	8969	1/1	0.92	0.29	200,200,200,200	0
33	CL	O	8808	1/1	0.92	0.17	86,86,86,86	0
35	NA	0	8566	1/1	0.92	0.30	63,63,63,63	0
32	MG	0	8031	1/1	0.92	0.39	83,83,83,83	0
33	CL	0	8805	1/1	0.92	0.17	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
36	K	M	8402	1/1	0.92	0.19	87,87,87,87	0
34	SR	0	8971	1/1	0.92	0.06	192,192,192,192	0
34	SR	H	8972	1/1	0.92	0.10	164,164,164,164	0
34	SR	0	8996	1/1	0.92	0.52	200,200,200,200	0
35	NA	0	8542	1/1	0.93	0.53	58,58,58,58	0
33	CL	B	8819	1/1	0.93	0.22	69,69,69,69	0
34	SR	0	8997	1/1	0.93	0.15	189,189,189,189	0
35	NA	0	8547	1/1	0.93	0.99	67,67,67,67	0
35	NA	S	8510	1/1	0.93	0.03	44,44,44,44	0
32	MG	0	8063	1/1	0.93	0.30	116,116,116,116	0
35	NA	0	8553	1/1	0.93	0.28	89,89,89,89	0
33	CL	J	8802	1/1	0.93	0.06	67,67,67,67	0
32	MG	0	8053	1/1	0.93	0.05	63,63,63,63	0
34	SR	0	8915	1/1	0.93	0.08	126,126,126,126	0
32	MG	0	8059	1/1	0.93	0.09	51,51,51,51	0
35	NA	0	8521	1/1	0.93	0.45	64,64,64,64	0
34	SR	9	8978	1/1	0.93	0.06	157,157,157,157	0
35	NA	0	8567	1/1	0.93	0.25	78,78,78,78	0
32	MG	0	8061	1/1	0.93	0.17	36,36,36,36	0
35	NA	0	8526	1/1	0.93	0.15	46,46,46,46	0
33	CL	0	8815	1/1	0.93	0.22	89,89,89,89	0
35	NA	0	8530	1/1	0.93	0.44	74,74,74,74	0
34	SR	A	8930	1/1	0.93	0.15	142,142,142,142	0
34	SR	B	8987	1/1	0.93	0.62	200,200,200,200	0
35	NA	0	8550	1/1	0.94	0.26	71,71,71,71	0
32	MG	0	8006	1/1	0.94	0.12	44,44,44,44	0
32	MG	0	8019	1/1	0.94	0.19	29,29,29,29	0
34	SR	0	8917	1/1	0.94	0.16	114,114,114,114	0
35	NA	0	8557	1/1	0.94	0.06	65,65,65,65	0
35	NA	0	8558	1/1	0.94	0.20	58,58,58,58	0
32	MG	0	8082	1/1	0.94	0.23	76,76,76,76	0
35	NA	0	8527	1/1	0.94	0.28	72,72,72,72	0
34	SR	0	8968	1/1	0.94	0.06	177,177,177,177	0
34	SR	0	8922	1/1	0.94	0.17	168,168,168,168	0
32	MG	0	8044	1/1	0.94	0.05	58,58,58,58	0
32	MG	0	8066	1/1	0.94	0.18	69,69,69,69	0
35	NA	0	8568	1/1	0.94	0.33	54,54,54,54	0
35	NA	0	8569	1/1	0.94	0.18	50,50,50,50	0
34	SR	0	8939	1/1	0.94	0.04	144,144,144,144	0
35	NA	0	8571	1/1	0.94	0.12	79,79,79,79	0
35	NA	0	8573	1/1	0.94	0.13	73,73,73,73	0
32	MG	0	8028	1/1	0.94	0.17	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8055	1/1	0.94	0.06	62,62,62,62	0
35	NA	0	8546	1/1	0.94	0.74	94,94,94,94	0
32	MG	A	8050	1/1	0.94	0.05	64,64,64,64	0
33	CL	N	8807	1/1	0.94	0.22	87,87,87,87	0
32	MG	0	8060	1/1	0.95	0.06	53,53,53,53	0
34	SR	0	8947	1/1	0.95	0.26	200,200,200,200	0
32	MG	Y	8086	1/1	0.95	0.07	50,50,50,50	0
34	SR	S	8961	1/1	0.95	0.09	128,128,128,128	0
32	MG	0	8020	1/1	0.95	0.16	41,41,41,41	0
34	SR	0	8956	1/1	0.95	0.12	169,169,169,169	0
32	MG	0	8021	1/1	0.95	0.09	33,33,33,33	0
32	MG	0	8083	1/1	0.95	0.10	55,55,55,55	0
35	NA	0	8519	1/1	0.95	0.15	52,52,52,52	0
33	CL	Y	8820	1/1	0.95	0.07	52,52,52,52	0
34	SR	0	9000	1/1	0.95	0.07	183,183,183,183	0
35	NA	0	8564	1/1	0.95	0.43	69,69,69,69	0
34	SR	0	8963	1/1	0.95	0.06	133,133,133,133	0
34	SR	0	8965	1/1	0.95	0.06	134,134,134,134	0
32	MG	0	8036	1/1	0.95	0.10	48,48,48,48	0
34	SR	0	8920	1/1	0.95	0.05	127,127,127,127	0
32	MG	0	8090	1/1	0.95	0.17	97,97,97,97	0
35	NA	0	8533	1/1	0.95	0.09	70,70,70,70	0
32	MG	0	8091	1/1	0.95	0.11	56,56,56,56	0
34	SR	A	8929	1/1	0.95	0.11	139,139,139,139	0
35	NA	0	8574	1/1	0.95	0.58	60,60,60,60	0
35	NA	0	8537	1/1	0.95	0.15	50,50,50,50	0
35	NA	9	8572	1/1	0.95	0.27	88,88,88,88	0
32	MG	0	8092	1/1	0.95	0.08	76,76,76,76	0
34	SR	0	8943	1/1	0.95	0.13	84,84,84,84	0
37	CD	U	8701	1/1	0.95	0.45	200,200,200,200	0
35	NA	C	8503	1/1	0.95	0.17	46,46,46,46	0
32	MG	0	8026	1/1	0.95	0.08	50,50,50,50	0
34	SR	B	8950	1/1	0.96	0.16	130,130,130,130	0
34	SR	0	8941	1/1	0.96	0.11	114,114,114,114	0
32	MG	0	8068	1/1	0.96	0.09	56,56,56,56	0
32	MG	0	8085	1/1	0.96	0.17	76,76,76,76	0
33	CL	J	8821	1/1	0.96	0.10	77,77,77,77	0
33	CL	L	8810	1/1	0.96	0.05	64,64,64,64	0
32	MG	0	8087	1/1	0.96	0.09	38,38,38,38	0
32	MG	0	8033	1/1	0.96	0.06	63,63,63,63	0
34	SR	0	8908	1/1	0.96	0.11	85,85,85,85	0
35	NA	0	8513	1/1	0.96	0.41	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
35	NA	0	8561	1/1	0.96	0.31	65,65,65,65	0
35	NA	0	8514	1/1	0.96	0.29	55,55,55,55	0
35	NA	0	8515	1/1	0.96	0.15	32,32,32,32	0
35	NA	0	8517	1/1	0.96	0.09	38,38,38,38	0
34	SR	0	8955	1/1	0.96	0.07	200,200,200,200	0
32	MG	0	8073	1/1	0.96	0.07	72,72,72,72	0
32	MG	0	8010	1/1	0.96	0.13	72,72,72,72	0
32	MG	0	8064	1/1	0.96	0.18	45,45,45,45	0
34	SR	0	8960	1/1	0.96	0.02	151,151,151,151	0
32	MG	0	8093	1/1	0.96	0.06	36,36,36,36	0
33	CL	0	8816	1/1	0.96	0.43	85,85,85,85	0
35	NA	0	8529	1/1	0.96	0.11	48,48,48,48	0
34	SR	0	8927	1/1	0.96	0.06	181,181,181,181	0
34	SR	0	8966	1/1	0.96	0.09	105,105,105,105	0
34	SR	0	8967	1/1	0.96	0.04	131,131,131,131	0
32	MG	0	8052	1/1	0.96	0.09	44,44,44,44	0
34	SR	0	8970	1/1	0.96	0.05	125,125,125,125	0
34	SR	0	8933	1/1	0.96	0.04	135,135,135,135	0
34	SR	0	8937	1/1	0.96	0.15	113,113,113,113	0
32	MG	0	8039	1/1	0.96	0.19	84,84,84,84	0
32	MG	0	8003	1/1	0.97	0.17	38,38,38,38	0
32	MG	0	8062	1/1	0.97	0.17	56,56,56,56	0
32	MG	0	8077	1/1	0.97	0.08	48,48,48,48	0
32	MG	0	8079	1/1	0.97	0.20	66,66,66,66	0
35	NA	M	8539	1/1	0.97	0.14	42,42,42,42	0
34	SR	0	8942	1/1	0.97	0.09	124,124,124,124	0
33	CL	0	8814	1/1	0.97	0.16	79,79,79,79	0
32	MG	B	8042	1/1	0.97	0.07	69,69,69,69	0
32	MG	0	8041	1/1	0.97	0.16	36,36,36,36	0
33	CL	0	8822	1/1	0.97	0.42	88,88,88,88	0
32	MG	0	8065	1/1	0.97	0.06	42,42,42,42	0
34	SR	0	8974	1/1	0.97	0.06	166,166,166,166	0
32	MG	0	8002	1/1	0.97	0.10	40,40,40,40	0
32	MG	0	8058	1/1	0.97	0.06	18,18,18,18	0
32	MG	0	8045	1/1	0.97	0.10	31,31,31,31	0
34	SR	0	8931	1/1	0.97	0.09	111,111,111,111	0
32	MG	0	8047	1/1	0.97	0.31	66,66,66,66	0
35	NA	0	8520	1/1	0.97	0.10	56,56,56,56	0
34	SR	0	8958	1/1	0.97	0.07	116,116,116,116	0
35	NA	0	8554	1/1	0.97	0.86	69,69,69,69	0
34	SR	0	8984	1/1	0.97	0.09	119,119,119,119	0
35	NA	0	8524	1/1	0.97	0.69	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
35	NA	0	8541	1/1	0.98	0.23	64,64,64,64	0
32	MG	T	8057	1/1	0.98	0.07	65,65,65,65	0
34	SR	F	9005	1/1	0.98	0.07	147,147,147,147	0
32	MG	0	8001	1/1	0.98	0.11	36,36,36,36	0
32	MG	0	8032	1/1	0.98	0.04	52,52,52,52	0
34	SR	R	8912	1/1	0.98	0.19	95,95,95,95	0
34	SR	0	8945	1/1	0.98	0.09	105,105,105,105	0
35	NA	0	8549	1/1	0.98	0.85	56,56,56,56	0
32	MG	0	8024	1/1	0.98	0.16	62,62,62,62	0
35	NA	0	8505	1/1	0.98	0.66	53,53,53,53	0
32	MG	0	8035	1/1	0.98	0.10	66,66,66,66	0
34	SR	0	8949	1/1	0.98	0.15	117,117,117,117	0
34	SR	0	8986	1/1	0.98	1.04	200,200,200,200	0
32	MG	0	8025	1/1	0.98	0.10	37,37,37,37	0
35	NA	0	8512	1/1	0.98	0.15	56,56,56,56	0
35	NA	0	8559	1/1	0.98	0.17	77,77,77,77	0
32	MG	0	8038	1/1	0.98	0.08	74,74,74,74	0
34	SR	0	8910	1/1	0.98	0.09	108,108,108,108	0
34	SR	0	8911	1/1	0.98	0.13	88,88,88,88	0
34	SR	0	8914	1/1	0.98	0.27	133,133,133,133	0
33	CL	0	8803	1/1	0.98	0.09	60,60,60,60	0
34	SR	0	8995	1/1	0.98	0.19	150,150,150,150	0
32	MG	0	8069	1/1	0.98	0.10	102,102,102,102	0
33	CL	0	8812	1/1	0.98	0.05	61,61,61,61	0
35	NA	0	8523	1/1	0.98	0.14	54,54,54,54	0
32	MG	0	8012	1/1	0.98	0.16	25,25,25,25	0
32	MG	0	8072	1/1	0.98	0.06	59,59,59,59	0
34	SR	0	8926	1/1	0.98	0.14	122,122,122,122	0
32	MG	0	8027	1/1	0.98	0.12	47,47,47,47	0
33	CL	0	8817	1/1	0.98	0.14	72,72,72,72	0
32	MG	0	8005	1/1	0.98	0.21	42,42,42,42	0
34	SR	0	9008	1/1	0.98	0.14	92,92,92,92	0
32	MG	0	8076	1/1	0.98	0.06	40,40,40,40	0
35	NA	0	8534	1/1	0.98	0.13	50,50,50,50	0
32	MG	0	8043	1/1	0.98	0.13	52,52,52,52	0
32	MG	0	8078	1/1	0.98	0.26	65,65,65,65	0
34	SR	0	8973	1/1	0.98	0.16	146,146,146,146	0
32	MG	0	8017	1/1	0.99	0.17	40,40,40,40	0
34	SR	0	8990	1/1	0.99	0.14	137,137,137,137	0
34	SR	0	8940	1/1	0.99	0.09	93,93,93,93	0
33	CL	A	8809	1/1	0.99	0.15	104,104,104,104	0
32	MG	0	8018	1/1	0.99	0.24	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8007	1/1	0.99	0.18	36,36,36,36	0
35	NA	0	8531	1/1	0.99	0.06	39,39,39,39	0
32	MG	0	8008	1/1	0.99	0.13	31,31,31,31	0
32	MG	0	8009	1/1	0.99	0.24	34,34,34,34	0
32	MG	0	8037	1/1	0.99	0.21	77,77,77,77	0
34	SR	0	8998	1/1	0.99	0.18	178,178,178,178	0
34	SR	1	8913	1/1	0.99	0.06	95,95,95,95	0
34	SR	0	8948	1/1	0.99	0.10	115,115,115,115	0
33	CL	M	8818	1/1	0.99	0.05	49,49,49,49	0
32	MG	0	8022	1/1	0.99	0.20	33,33,33,33	0
34	SR	0	8901	1/1	0.99	0.18	66,66,66,66	0
34	SR	0	8902	1/1	0.99	0.15	68,68,68,68	0
34	SR	0	8905	1/1	0.99	0.25	72,72,72,72	0
34	SR	0	8907	1/1	0.99	0.13	63,63,63,63	0
32	MG	0	8023	1/1	0.99	0.17	28,28,28,28	0
33	CL	R	8806	1/1	0.99	0.14	58,58,58,58	0
32	MG	K	8054	1/1	0.99	0.17	57,57,57,57	0
32	MG	0	8011	1/1	0.99	0.22	25,25,25,25	0
32	MG	0	8004	1/1	0.99	0.12	29,29,29,29	0
34	SR	0	8916	1/1	0.99	0.05	105,105,105,105	0
35	NA	0	8556	1/1	0.99	0.80	71,71,71,71	0
34	SR	0	8964	1/1	0.99	0.12	134,134,134,134	0
32	MG	0	8084	1/1	0.99	0.14	35,35,35,35	0
35	NA	R	8532	1/1	0.99	0.11	50,50,50,50	0
34	SR	0	8918	1/1	0.99	0.12	85,85,85,85	0
35	NA	0	8501	1/1	0.99	0.16	39,39,39,39	0
33	CL	0	8811	1/1	0.99	0.20	81,81,81,81	0
32	MG	0	8013	1/1	0.99	0.06	28,28,28,28	0
34	SR	0	8921	1/1	0.99	0.13	83,83,83,83	0
35	NA	0	8507	1/1	0.99	0.24	43,43,43,43	0
33	CL	0	8813	1/1	0.99	0.07	60,60,60,60	0
34	SR	0	8924	1/1	0.99	0.20	124,124,124,124	0
34	SR	0	8925	1/1	0.99	0.13	98,98,98,98	0
32	MG	0	8014	1/1	0.99	0.17	37,37,37,37	0
32	MG	0	8088	1/1	0.99	0.10	35,35,35,35	0
32	MG	0	8046	1/1	0.99	0.10	45,45,45,45	0
32	MG	0	8016	1/1	0.99	0.17	40,40,40,40	0
35	NA	0	8516	1/1	0.99	0.19	39,39,39,39	0
35	NA	0	8575	1/1	0.99	0.23	103,103,103,103	0
34	SR	0	8981	1/1	0.99	0.13	161,161,161,161	0
32	MG	0	8048	1/1	0.99	0.24	29,29,29,29	0
34	SR	0	8934	1/1	0.99	0.13	133,133,133,133	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
34	SR	0	8935	1/1	0.99	0.11	103,103,103,103	0
37	CD	O	8705	1/1	0.99	0.08	100,100,100,100	0
34	SR	0	8936	1/1	0.99	0.11	95,95,95,95	0
32	MG	0	8070	1/1	0.99	0.17	66,66,66,66	0
32	MG	0	8049	1/1	0.99	0.23	64,64,64,64	0
32	MG	0	8015	1/1	1.00	0.13	45,45,45,45	0
34	SR	0	8909	1/1	1.00	0.14	93,93,93,93	0
34	SR	1	8952	1/1	1.00	0.15	90,90,90,90	0
34	SR	0	8903	1/1	1.00	0.19	57,57,57,57	0
34	SR	0	8904	1/1	1.00	0.20	57,57,57,57	0
34	SR	0	8923	1/1	1.00	0.13	109,109,109,109	0
32	MG	0	8029	1/1	1.00	0.13	59,59,59,59	0
34	SR	0	8906	1/1	1.00	0.21	67,67,67,67	0
32	MG	0	8034	1/1	1.00	0.07	50,50,50,50	0
37	CD	1	8702	1/1	1.00	0.10	61,61,61,61	0
35	NA	0	8504	1/1	1.00	0.12	40,40,40,40	0

6.5 Other polymers [i](#)

There are no such residues in this entry.