Full wwPDB X-ray Structure Validation Report ⓘ

Oct 9, 2023 – 07:59 PM EDT

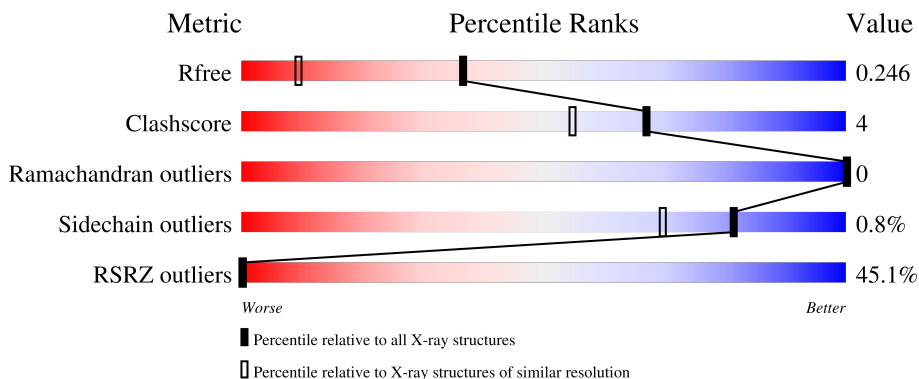|		
PDB ID	:	6WE9
Title	:	YTH domain of human YTHDC1 with 11mer ssDNA Containing N6mA
Authors	:	Horton, J.R.; Cheng, X.
Deposited on	:	2020-04-01
Resolution	:	1.59 Å(reported)

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 1.59 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	Percentile Ranks	Value
Rfree		0.246
Clashscore		4
Ramachandran outliers		0
Sidechain outliers		0.8%
RSRZ outliers		45.1%

Worse — *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3398 (1.60-1.60)
Clashscore	141614	3665 (1.60-1.60)
Ramachandran outliers	138981	3564 (1.60-1.60)
Sidechain outliers	138945	3563 (1.60-1.60)
RSRZ outliers	127900	3321 (1.60-1.60)

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

Mol	Chain	Length	Quality of chain
1	A	166	11% / 94% / 5% ·
1	C	166	80% / 86% / 12% ··
2	B	11	27% / 64% / 36%
2	F	11	27% / 55% / 18% / 9% / 18%

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 3141 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 YTH domain-containing protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	C	164	Total	C	N	O	S	0	2	0
			1226	793	209	218	6			
1	A	164	Total	C	N	O	S	0	2	0
			1297	835	231	225	6			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	344	GLY	-	expression tag	UNP Q96MU7
A	344	GLY	-	expression tag	UNP Q96MU7

- Molecule 2 is a DNA chain called DNA (5'-D(*CP*GP*CP*GP*GP*(6MA)P*CP*TP*CP*TP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	11	Total	C	N	O	P	0	0	0
			223	107	41	65	10			
2	F	9	Total	C	N	O	P	0	0	0
			167	79	31	49	8			

- Molecule 3 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).

EDO

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0
3	A	1	Total 4	C 2	O 2	0	0

- Molecule 4 is SULFATE ION (three-letter code: SO4) (formula: O_4S).

SO4

O1

O3   O⁻ — S — O⁻ O4

S

O2

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 5	O 4	S 1	0	0

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).

GOL

C3

OH O3

C1   C2

HO   OH

O1   O2

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total 6	C 3	O 3	0	0
5	A	1	Total 6	C 3	O 3	0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	C	1	Total 1	O 1	0	0
6	A	151	Total 152	O 152	0	1
6	B	25	Total 25	O 25	0	0
6	F	5	Total 5	O 5	0	0

3 Residue-property plots ⓘ

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.
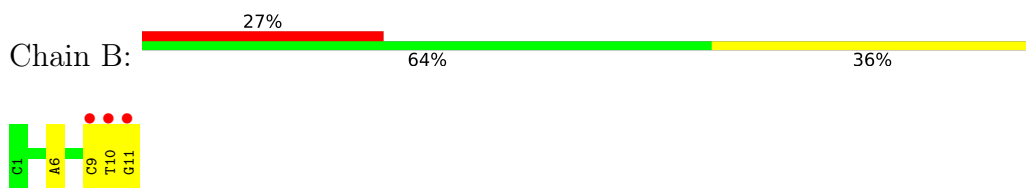
• Molecule 1: YTH domain-containing protein 1
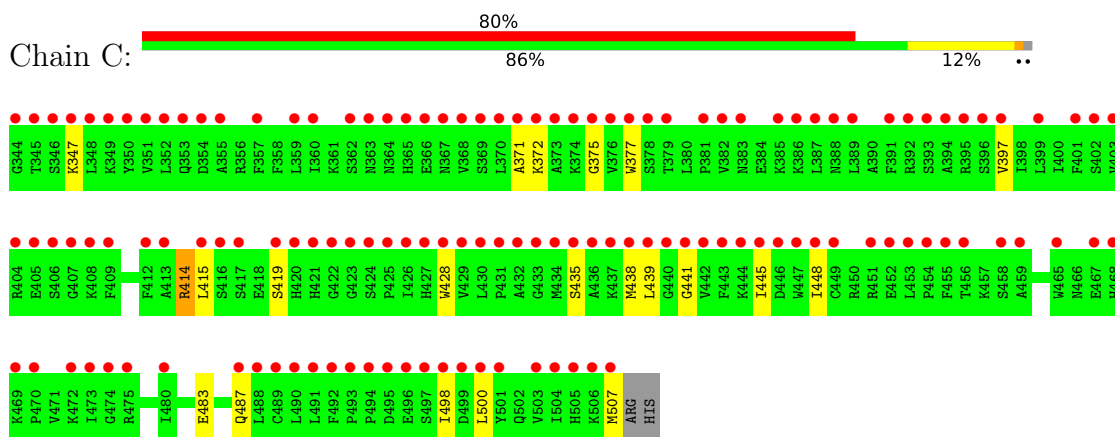
• Molecule 1: YTH domain-containing protein 1
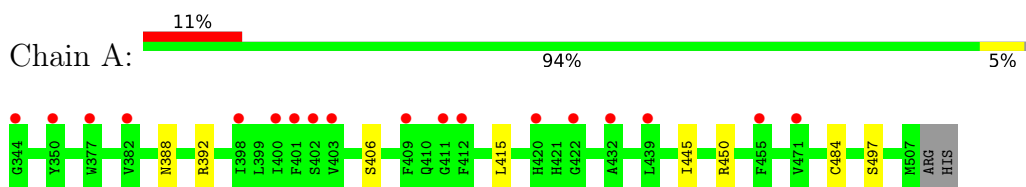
• Molecule 2: DNA (5'-D(*CP*GP*CP*GP*GP*(6MA)P*CP*TP*CP*TP*G)-3')

• Molecule 2: DNA (5'-D(*CP*GP*CP*GP*GP*(6MA)P*CP*TP*CP*TP*G)-3')

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	119.97Å 42.53Å 90.02Å 90.00° 103.46° 90.00°	Depositor
Resolution (Å)	35.31 – 1.59 35.31 – 1.59	Depositor EDS
% Data completeness (in resolution range)	91.3 (35.31-1.59) 91.3 (35.31-1.59)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.57 (at 1.59Å)	Xtriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.222 , 0.246 0.222 , 0.246	Depositor DCC
R_{free} test set	1998 reflections (3.68%)	wwPDB-VP
Wilson B-factor (Å^2)	15.3	Xtriage
Anisotropy	1.177	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 63.9	EDS
L-test for twinning[2]	$< |L| > = 0.48, < L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	3141	wwPDB-VP
Average B, all atoms (Å^2)	64.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.06% of the height of the origin peak. No significant pseudotranslation is detected.*

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: EDO, SO4, GOL, 6MA

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	0.24	0/1335	0.40	0/1802
1	C	0.25	0/1260	0.41	0/1713
2	B	0.59	0/223	0.95	0/340
2	F	0.68	0/160	0.89	0/243
All	All	0.32	0/2978	0.51	0/4098

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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	1297	0	1311	5	0
1	C	1226	0	1174	13	0
2	B	223	0	127	2	0
2	F	167	0	91	5	0
3	A	28	0	42	1	0
4	A	5	0	0	0	0
5	A	12	0	16	1	0
6	A	152	0	0	0	0
6	B	25	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	C	1	0	0	0	0
6	F	5	0	0	0	0
All	All	3141	0	2761	22	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 4.

All (22) 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)
1:C:419:SER:HB2	1:C:441:GLY:HA3	1.77	0.66
1:A:450:ARG:NH2	1:A:497:SER:OG	2.30	0.64
2:B:9:DC:H4'	2:B:10:DT:H5'	1.81	0.61
1:A:406:SER:HB2	3:A:604:EDO:H21	1.86	0.57
1:C:428:TRP:CD1	1:C:439:LEU:HD13	2.44	0.53
1:C:415:LEU:HD23	1:C:445:ILE:HG22	1.91	0.52
1:C:448:ILE:HA	1:C:498:ILE:HG21	1.92	0.52
1:C:371:ALA:O	1:C:375:GLY:N	2.46	0.48
2:F:4:DG:H2''	2:F:5:DG:C4	2.48	0.47
1:C:438:MET:SD	2:F:5:DG:H8	2.38	0.47
1:C:414:ARG:HH22	1:C:507:MET:HG2	1.80	0.46
1:A:415:LEU:HD23	1:A:445:ILE:HG22	1.97	0.46
1:C:347:LYS:HB2	1:C:500:LEU:HD13	1.98	0.46
1:A:388:ASN:O	1:A:392:ARG:HD3	2.16	0.45
2:B:11:DG:H2'	2:B:11:DG:N3	2.31	0.45
2:F:4:DG:H2'	2:F:4:DG:N3	2.32	0.44
1:C:435:SER:OG	1:C:438:MET:HG3	2.18	0.44
1:C:397:VAL:HB	1:C:415:LEU:HB2	2.01	0.42
1:A:484:CYS:HB2	5:A:609:GOL:H32	2.03	0.41
1:C:483:GLU:O	1:C:487:GLN:HG2	2.21	0.41
1:C:377:TRP:CE2	2:F:6:6MA:H13	2.56	0.41
1:C:438:MET:SD	2:F:5:DG:C8	3.13	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	164/166 (99%)	163 (99%)	1 (1%)	0	100	100
1	C	164/166 (99%)	161 (98%)	3 (2%)	0	100	100
All	All	328/332 (99%)	324 (99%)	4 (1%)	0	100	100

There are no Ramachandran outliers to report.

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	140/145 (97%)	140 (100%)	0	100	100
1	C	124/145 (86%)	122 (98%)	2 (2%)	62	41
All	All	264/290 (91%)	262 (99%)	2 (1%)	81	70

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	372	LYS
1	C	414	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

2 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	#$|Z| > 2$
2	6MA	F	6	2	18,24,25	3.57	6 (33%)	15,34,37	2.34	4 (26%)
2	6MA	B	6	2	18,24,25	3.43	5 (27%)	15,34,37	2.11	4 (26%)

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
2	6MA	F	6	2	-	1/5/23/24	0/3/3/3
2	6MA	B	6	2	-	1/5/23/24	0/3/3/3

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	6	6MA	O4'-C1'	7.91	1.60	1.42
2	F	6	6MA	O4'-C1'	7.89	1.60	1.42
2	F	6	6MA	O4'-C4'	-7.23	1.28	1.45
2	B	6	6MA	O4'-C4'	-6.97	1.29	1.45
2	B	6	6MA	C6-N6	6.41	1.45	1.35
2	F	6	6MA	C2'-C1'	-6.26	1.34	1.52
2	F	6	6MA	C6-N6	6.22	1.45	1.35
2	B	6	6MA	C2'-C1'	-5.90	1.35	1.52
2	F	6	6MA	O3'-C3'	-3.16	1.36	1.43
2	F	6	6MA	C1'-N9	-2.88	1.40	1.49
2	B	6	6MA	O3'-C3'	-2.68	1.37	1.43

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	6	6MA	C2-N1-C6	4.96	120.85	116.59
2	F	6	6MA	C2-N1-C6	4.63	120.56	116.59
2	B	6	6MA	N3-C2-N1	-4.52	121.61	128.68
2	F	6	6MA	N3-C2-N1	-4.17	122.16	128.68
2	F	6	6MA	C1-N6-C6	4.12	126.42	122.87
2	F	6	6MA	C2'-C1'-N9	-3.98	105.10	114.27
2	B	6	6MA	C1-N6-C6	-2.87	120.40	122.87
2	B	6	6MA	C4-C5-N7	-2.38	106.92	109.40

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	F	6	6MA	C4'-C5'-O5'-P
2	B	6	6MA	C4'-C5'-O5'-P

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	6	6MA	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

10 ligands 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
4	SO4	A	603	-	4,4,4	0.14	0	6,6,6	0.04	0
3	EDO	A	602	-	3,3,3	0.45	0	2,2,2	0.34	0
3	EDO	A	607	-	3,3,3	0.46	0	2,2,2	0.33	0
3	EDO	A	610	-	3,3,3	0.45	0	2,2,2	0.35	0
3	EDO	A	604	-	3,3,3	0.45	0	2,2,2	0.32	0
5	GOL	A	609	-	5,5,5	0.92	0	5,5,5	0.97	0
3	EDO	A	605	-	3,3,3	0.45	0	2,2,2	0.33	0
3	EDO	A	601	-	3,3,3	0.47	0	2,2,2	0.34	0
3	EDO	A	606	-	3,3,3	0.45	0	2,2,2	0.34	0
5	GOL	A	608	-	5,5,5	0.90	0	5,5,5	1.01	0

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
3	EDO	A	602	-	-	0/1/1/1	-
3	EDO	A	607	-	-	1/1/1/1	-
3	EDO	A	610	-	-	0/1/1/1	-
3	EDO	A	604	-	-	0/1/1/1	-
5	GOL	A	609	-	-	<mark>2/4/4/4</mark>	-
3	EDO	A	605	-	-	0/1/1/1	-
3	EDO	A	601	-	-	0/1/1/1	-
3	EDO	A	606	-	-	0/1/1/1	-
5	GOL	A	608	-	-	0/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	609	GOL	O1-C1-C2-C3
5	A	609	GOL	O1-C1-C2-O2
3	A	607	EDO	O1-C1-C2-O2

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	604	EDO	1	0
5	A	609	GOL	1	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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(Å²)	Q<0.9
1	A	164/166 (98%)	0.97	18 (10%)	5	4	9, 23, 50, 65	0
1	C	164/166 (98%)	4.97	132 (80%)	0	0	66, 110, 151, 161	0
2	B	10/11 (90%)	1.92	3 (30%)	0	0	26, 47, 81, 87	0
2	F	8/11 (72%)	1.71	3 (37%)	0	0	45, 78, 139, 157	0
All	All	346/354 (97%)	2.91	156 (45%)	0	0	9, 62, 141, 161	0

All (156) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	500	LEU	22.4
1	C	416	SER	14.6
1	C	494	PRO	14.4
1	C	344	GLY	13.9
1	C	501	TYR	13.4
1	C	439	LEU	12.7
1	C	371	ALA	11.7
1	C	350	TYR	11.3
1	C	427	HIS	11.3
1	C	503	VAL	11.1
1	C	431	PRO	10.7
1	C	440	GLY	10.6
1	C	445	ILE	10.4
1	C	430	LEU	10.2
1	C	392	ARG	9.9
1	C	376	VAL	9.8
1	C	425	PRO	9.8
1	C	428	TRP	9.6
1	C	491	LEU	9.5
1	C	351	VAL	9.3
1	C	504	ILE	9.2

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Mol	Chain	Res	Type	RSRZ
1	C	368	VAL	9.1
1	C	456	THR	8.9
1	C	393	SER	8.8
1	C	505	HIS	8.8
1	C	447	TRP	8.7
1	C	373	ALA	8.5
1	C	492	PHE	8.5
1	C	394	ALA	8.4
1	C	432	ALA	8.3
1	C	345	THR	8.3
1	C	433	GLY	8.2
1	C	441	GLY	8.0
1	C	370	LEU	7.9
1	C	506	LYS	7.8
1	C	352	LEU	7.8
1	C	395	ARG	7.6
1	C	493	PRO	7.6
1	C	459	ALA	7.6
1	A	344	GLY	7.5
1	C	435	SER	7.5
1	C	434	MET	7.4
1	C	347	LYS	7.2
1	C	507	MET	7.1
1	C	438	MET	7.0
2	B	11	DG	6.8
1	C	443	PHE	6.8
1	C	442	VAL	6.6
1	C	497	SER	6.5
1	C	396	SER	6.5
1	C	419	SER	6.4
1	C	426	ILE	6.3
1	C	391	PHE	6.2
1	C	437	LYS	6.1
2	B	10	DT	6.1
1	C	372	LYS	6.1
1	C	399	LEU	5.8
1	C	446	ASP	5.7
1	C	429	VAL	5.7
1	C	412	PHE	5.5
1	C	423	GLY	5.3
1	C	480	ILE	5.1
1	C	468	HIS	5.1

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Mol	Chain	Res	Type	RSRZ
1	C	413	ALA	5.1
1	C	389	LEU	5.0
1	C	375	GLY	5.0
1	C	458	SER	5.0
1	C	353	GLN	5.0
1	C	408	LYS	4.9
1	C	498	ILE	4.9
1	C	455	PHE	4.8
1	C	381	PRO	4.7
1	C	495	ASP	4.6
1	C	470	PRO	4.5
1	C	449	CYS	4.4
1	C	367	ASN	4.4
1	C	424	SER	4.3
1	C	452	GLU	4.3
1	C	409	PHE	4.2
1	C	421	HIS	4.2
1	C	415	LEU	4.2
1	C	444	LYS	4.2
1	C	379	THR	4.2
1	C	496	GLU	4.2
1	C	388	ASN	4.1
1	C	364	ASN	4.1
1	C	346	SER	4.0
1	C	406	SER	4.0
2	F	5	DG	4.0
1	C	448	ILE	4.0
1	C	355	ALA	4.0
1	C	362	SER	3.9
1	C	488	LEU	3.7
1	C	363	ASN	3.7
1	C	387	LEU	3.7
2	F	4	DG	3.7
1	C	377	TRP	3.7
1	C	369[A]	SER	3.5
1	C	348	LEU	3.5
1	C	472	LYS	3.5
1	C	405	GLU	3.4
1	C	473	ILE	3.4
1	C	382	VAL	3.4
1	C	359	LEU	3.3
1	C	499	ASP	3.3

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Mol	Chain	Res	Type	RSRZ
1	C	465	TRP	3.3
1	C	354	ASP	3.3
1	C	489	CYS	3.3
1	C	404	ARG	3.2
1	C	403	VAL	3.2
1	C	360	ILE	3.1
1	C	490	LEU	3.1
1	C	397	VAL	3.0
1	C	374	LYS	3.0
1	A	401	PHE	2.9
1	A	350	TYR	2.9
2	B	9	DC	2.9
1	C	420	HIS	2.8
1	C	467	GLU	2.8
1	C	422	GLY	2.8
1	C	451	ARG	2.8
1	A	412	PHE	2.7
1	A	403	VAL	2.7
1	C	349	LYS	2.7
1	C	474	GLY	2.7
1	C	454	PRO	2.6
1	C	407	GLY	2.6
1	C	453	LEU	2.6
1	C	366	GLU	2.6
1	C	378[A]	SER	2.6
1	C	365	HIS	2.5
1	A	398	ILE	2.5
1	A	400	ILE	2.5
1	C	436	ALA	2.4
1	C	386	LYS	2.4
1	C	475	ARG	2.4
1	C	401	PHE	2.3
1	C	487	GLN	2.3
1	A	382	VAL	2.3
1	C	383	ASN	2.3
1	C	417	SER	2.3
1	A	411	GLY	2.3
1	A	432	ALA	2.3
1	C	402	SER	2.2
1	C	357	PHE	2.2
1	A	420	HIS	2.2
2	F	8	DT	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	439	LEU	2.2
1	A	471	VAL	2.2
1	A	377	TRP	2.1
1	A	455	PHE	2.1
1	C	385	LYS	2.1
1	C	469	LYS	2.1
1	A	402	SER	2.1
1	A	409	PHE	2.1
1	A	422	GLY	2.0

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

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
2	6MA	F	6	22/23	0.74	0.17	107,122,126,129	0
2	6MA	B	6	22/23	0.92	0.12	13,15,28,35	0

6.3 Carbohydrates ⓘ

There are no monosaccharides 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. 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
5	GOL	A	609	6/6	0.48	0.37	42,46,49,50	0
3	EDO	A	607	4/4	0.53	0.16	62,63,63,63	0
3	EDO	A	605	4/4	0.55	0.17	59,60,62,62	0
5	GOL	A	608	6/6	0.58	0.35	53,58,62,65	0
3	EDO	A	604	4/4	0.65	0.40	43,46,51,56	0
3	EDO	A	610	4/4	0.70	0.33	46,53,58,60	0
3	EDO	A	602	4/4	0.83	0.14	45,47,50,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
3	EDO	A	606	4/4	0.85	0.15	43,43,43,43	4
4	SO4	A	603	5/5	0.91	0.09	65,69,71,74	0
3	EDO	A	601	4/4	0.93	0.15	15,16,17,18	0

6.5 Other polymers ⓘ

There are no such residues in this entry.