



wwPDB X-ray Structure Validation Summary Report ⓘ

Feb 1, 2016 – 01:05 PM GMT

PDB ID : 3SWR
Title : Structure of human DNMT1 (601-1600) in complex with Sinefungin
Authors : Hashimoto, H.; Cheng, X.
Deposited on : 2011-07-14
Resolution : 2.49 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

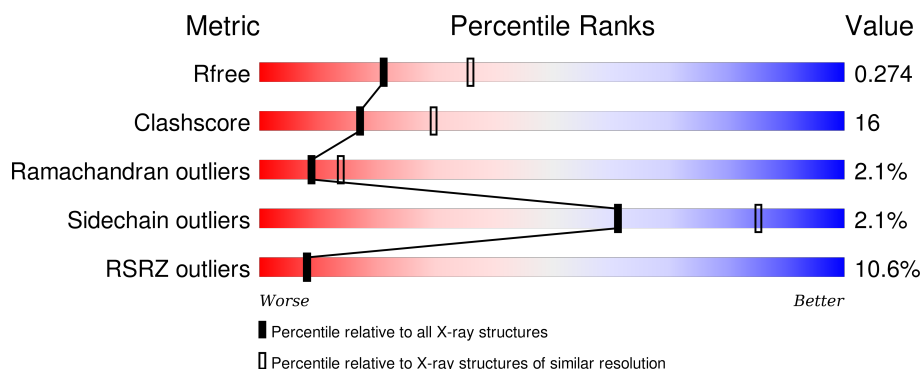
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION


The reported resolution of this entry is 2.49 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	3553 (2.50-2.50)
Clashscore	102246	4242 (2.50-2.50)
Ramachandran outliers	100387	4156 (2.50-2.50)
Sidechain outliers	100360	4158 (2.50-2.50)
RSRZ outliers	91569	3562 (2.50-2.50)

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 ≥ 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	1002	

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
4	MES	A	4	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	EDO	A	101	-	-	-	X
5	EDO	A	102	-	-	-	X
5	EDO	A	103	-	-	-	X
5	EDO	A	106	-	-	-	X
5	EDO	A	109	-	-	-	X
5	EDO	A	110	-	-	-	X
5	EDO	A	113	-	-	-	X
5	EDO	A	116	-	-	X	-
5	EDO	A	117	-	-	-	X
5	EDO	A	119	-	-	-	X
5	EDO	A	122	-	-	-	X

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 7924 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.

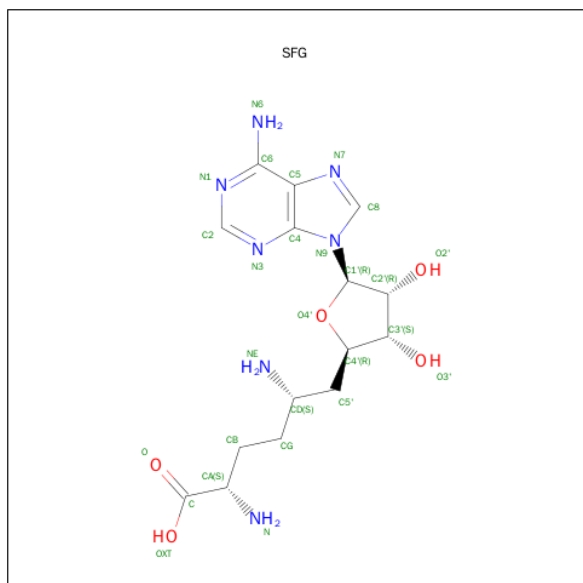
- Molecule 1 is a protein called DNA (cytosine-5)-methyltransferase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	965	Total	C	N	O	S	0	2	0
			7478	4706	1322	1396	54			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	599	HIS	-	EXPRESSION TAG	UNP P26358
A	600	MET	-	EXPRESSION TAG	UNP P26358

- Molecule 2 is SINEFUNGIN (three-letter code: SFG) (formula: C₁₅H₂₃N₇O₅).



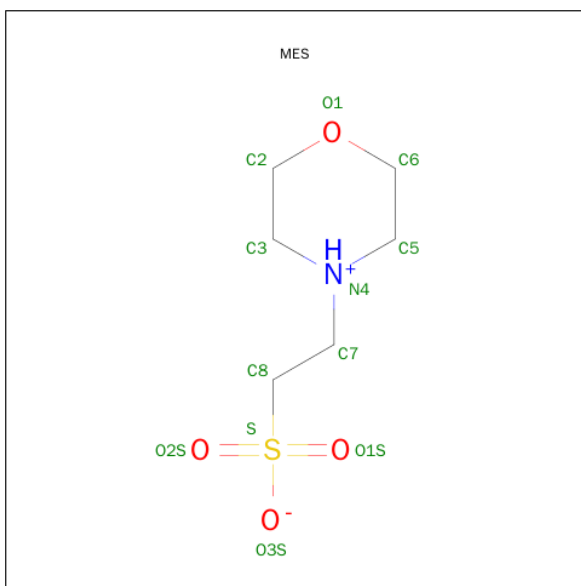
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			27	15	7	5		

- Molecule 3 is SULFATE ION (three-letter code: SO₄) (formula: O₄S).



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

- Molecule 4 is 2-(N-MORPHOLINO)-ETHANESULFONIC ACID (three-letter code: MES) (formula: C₆H₁₃NO₄S).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	S	0	0
			12	6	1	4	1		
4	A	1	Total	C	N	O	S	0	0
			12	6	1	4	1		

- Molecule 5 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C₂H₆O₂).



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

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

- Molecule 6 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	4	Total Zn 4 4	0	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	286	Total O 286 286	0	0

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	60.00Å 110.77Å 201.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 2.49 30.01 – 2.50	Depositor EDS
% Data completeness (in resolution range)	91.9 (30.00-2.49) 92.0 (30.01-2.50)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.85 (at 2.51Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.220 , 0.272 0.221 , 0.274	Depositor DCC
R_{free} test set	2177 reflections (5.00%)	DCC
Wilson B-factor (Å ²)	44.3	Xtriage
Anisotropy	0.591	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 39.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	1 of 46552 reflections (0.002%)	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	7924	wwPDB-VP
Average B, all atoms (Å ²)	56.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.74% 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, 0.375 respectively for untwinned datasets, and 0.333, 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: SFG, ZN, EDO, MES, SO4

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	0.36	0/7656	0.63	6/10378 (0.1%)

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1537	GLY	N-CA-C	6.26	128.74	113.10
1	A	1538	ARG	N-CA-C	-6.00	94.79	111.00
1	A	959	PRO	N-CA-CB	5.73	110.18	103.30
1	A	1130	PRO	N-CA-CB	5.57	109.98	103.30
1	A	955	PRO	N-CA-CB	5.49	109.89	103.30

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	7478	0	7108	242	0
2	A	27	0	22	0	0
3	A	5	0	0	0	0
4	A	24	0	26	1	0
5	A	100	0	150	19	0
6	A	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	A	286	0	0	8	0
All	All	7924	0	7306	242	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 16.

The worst 5 of 242 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:A:1010:ASN:HD21	1:A:1012:THR:HG22	1.12	1.09
1:A:700:ASP:HA	1:A:1268:VAL:HG11	1.45	0.99
1:A:1010:ASN:ND2	1:A:1012:THR:HG22	1.83	0.94
1:A:1261:ARG:HD2	1:A:1322:GLU:OE1	1.72	0.89
1:A:649:LYS:H	1:A:649:LYS:HD3	1.39	0.86

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	959/1002 (96%)	862 (90%)	77 (8%)	20 (2%)	9 14

5 of 20 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	717	LYS
1	A	718	MET
1	A	961	LYS
1	A	1002	PRO
1	A	1483	LYS

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	780/867 (90%)	764 (98%)	16 (2%)	61 85

5 of 16 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	986	ASP
1	A	995	ARG
1	A	1198	VAL
1	A	980	ILE
1	A	1269	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 16 such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1389	ASN
1	A	1393	GLN
1	A	1505	ASN
1	A	1379	ASN
1	A	1507	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

Of 33 ligands modelled in this entry, 4 are monoatomic - leaving 29 for Mogul analysis.

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	$\# Z > 2$
3	SO4	A	1	-	4,4,4	0.24	0	6,6,6	0.09	0
5	EDO	A	101	-	3,3,3	0.56	0	2,2,2	0.36	0
5	EDO	A	102	-	3,3,3	0.63	0	2,2,2	0.32	0
5	EDO	A	103	-	3,3,3	0.43	0	2,2,2	0.48	0
5	EDO	A	104	-	3,3,3	0.58	0	2,2,2	0.34	0
5	EDO	A	105	-	3,3,3	0.48	0	2,2,2	0.42	0
5	EDO	A	106	-	3,3,3	0.59	0	2,2,2	0.31	0
5	EDO	A	107	-	3,3,3	0.52	0	2,2,2	0.38	0
5	EDO	A	108	-	3,3,3	0.53	0	2,2,2	0.40	0
5	EDO	A	109	-	3,3,3	0.50	0	2,2,2	0.40	0
5	EDO	A	110	-	3,3,3	0.53	0	2,2,2	0.36	0
5	EDO	A	111	-	3,3,3	0.41	0	2,2,2	0.48	0
5	EDO	A	112	-	3,3,3	0.53	0	2,2,2	0.39	0
5	EDO	A	113	-	3,3,3	0.48	0	2,2,2	0.39	0
5	EDO	A	114	-	3,3,3	0.57	0	2,2,2	0.33	0
5	EDO	A	115	-	3,3,3	0.51	0	2,2,2	0.35	0
5	EDO	A	116	-	3,3,3	0.55	0	2,2,2	0.34	0
5	EDO	A	117	-	3,3,3	0.39	0	2,2,2	0.47	0
5	EDO	A	118	-	3,3,3	0.49	0	2,2,2	0.39	0
5	EDO	A	119	-	3,3,3	0.50	0	2,2,2	0.38	0
5	EDO	A	120	-	3,3,3	0.57	0	2,2,2	0.34	0
5	EDO	A	121	-	3,3,3	0.48	0	2,2,2	0.41	0
5	EDO	A	122	-	3,3,3	0.54	0	2,2,2	0.34	0
5	EDO	A	123	-	3,3,3	0.51	0	2,2,2	0.39	0
5	EDO	A	124	-	3,3,3	0.50	0	2,2,2	0.38	0
5	EDO	A	125	-	3,3,3	0.48	0	2,2,2	0.43	0
4	MES	A	2	-	11,12,12	0.82	0	14,16,16	1.35	2 (14%)
2	SFG	A	300	-	21,29,29	1.88	3 (14%)	19,42,42	2.67	6 (31%)
4	MES	A	4	-	11,12,12	0.73	0	14,16,16	1.31	2 (14%)

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	SO4	A	1	-	-	0/0/0/0	0/0/0/0
5	EDO	A	101	-	-	0/1/1/1	0/0/0/0
5	EDO	A	102	-	-	0/1/1/1	0/0/0/0
5	EDO	A	103	-	-	0/1/1/1	0/0/0/0
5	EDO	A	104	-	-	0/1/1/1	0/0/0/0
5	EDO	A	105	-	-	0/1/1/1	0/0/0/0
5	EDO	A	106	-	-	0/1/1/1	0/0/0/0
5	EDO	A	107	-	-	0/1/1/1	0/0/0/0
5	EDO	A	108	-	-	0/1/1/1	0/0/0/0
5	EDO	A	109	-	-	0/1/1/1	0/0/0/0
5	EDO	A	110	-	-	0/1/1/1	0/0/0/0
5	EDO	A	111	-	-	0/1/1/1	0/0/0/0
5	EDO	A	112	-	-	0/1/1/1	0/0/0/0
5	EDO	A	113	-	-	0/1/1/1	0/0/0/0
5	EDO	A	114	-	-	0/1/1/1	0/0/0/0
5	EDO	A	115	-	-	0/1/1/1	0/0/0/0
5	EDO	A	116	-	-	0/1/1/1	0/0/0/0
5	EDO	A	117	-	-	0/1/1/1	0/0/0/0
5	EDO	A	118	-	-	0/1/1/1	0/0/0/0
5	EDO	A	119	-	-	0/1/1/1	0/0/0/0
5	EDO	A	120	-	-	0/1/1/1	0/0/0/0
5	EDO	A	121	-	-	0/1/1/1	0/0/0/0
5	EDO	A	122	-	-	0/1/1/1	0/0/0/0
5	EDO	A	123	-	-	0/1/1/1	0/0/0/0
5	EDO	A	124	-	-	0/1/1/1	0/0/0/0
5	EDO	A	125	-	-	0/1/1/1	0/0/0/0
4	MES	A	2	-	-	0/6/14/14	0/1/1/1
2	SFG	A	300	-	-	0/9/33/33	0/3/3/3
4	MES	A	4	-	-	0/6/14/14	0/1/1/1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	300	SFG	C2-N3	3.40	1.38	1.32
2	A	300	SFG	C5'-C4'	4.11	1.59	1.52
2	A	300	SFG	O4'-C1'	5.17	1.47	1.41

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

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
2	A	300	SFG	N3-C2-N1	-8.49	122.39	128.89
2	A	300	SFG	C1'-N9-C4	-3.83	121.17	126.94
2	A	300	SFG	CG-CD-NE	2.01	115.01	109.13
4	A	4	MES	O2S-S-C8	2.39	108.94	106.91
2	A	300	SFG	C2-N1-C6	2.62	123.44	118.77

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

11 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	102	EDO	1	0
5	A	104	EDO	1	0
5	A	106	EDO	3	0
5	A	113	EDO	3	0
5	A	115	EDO	1	0
5	A	116	EDO	4	0
5	A	119	EDO	1	0
5	A	120	EDO	1	0
5	A	123	EDO	3	0
5	A	124	EDO	1	0
4	A	4	MES	1	0

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	965/1002 (96%)	0.37	102 (10%) 8 8	26, 50, 108, 137	0

The worst 5 of 102 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	855	LEU	8.9
1	A	980	ILE	7.9
1	A	682	SER	7.5
1	A	956	VAL	6.6
1	A	1130	PRO	6.4

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates 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. 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, 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	LLDF	B-factors(Å ²)	Q<0.9
5	EDO	A	106	4/4	0.83	0.47	12.86	60,62,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
5	EDO	A	101	4/4	0.84	0.37	8.28	53,53,55,55	0
5	EDO	A	109	4/4	0.78	0.32	6.19	90,91,91,92	0
5	EDO	A	122	4/4	0.82	0.30	6.02	76,77,78,78	0
5	EDO	A	113	4/4	0.92	0.29	6.00	57,59,61,64	0
5	EDO	A	102	4/4	0.91	0.23	5.99	42,46,47,48	0
5	EDO	A	119	4/4	0.86	0.64	3.80	87,88,89,89	0
4	MES	A	4	12/12	0.88	0.25	3.25	115,117,119,119	0
5	EDO	A	110	4/4	0.86	0.36	3.19	75,76,76,76	0
5	EDO	A	117	4/4	0.97	0.21	2.16	53,55,56,56	0
5	EDO	A	103	4/4	0.95	0.17	2.12	55,56,56,56	0
5	EDO	A	105	4/4	0.90	0.16	1.89	62,63,65,65	0
5	EDO	A	108	4/4	0.89	0.17	1.50	70,71,71,72	0
5	EDO	A	118	4/4	0.97	0.17	1.49	40,43,43,44	0
5	EDO	A	121	4/4	0.89	0.20	1.43	76,77,77,79	0
5	EDO	A	115	4/4	0.82	0.29	1.18	68,72,73,74	0
5	EDO	A	114	4/4	0.91	0.19	0.76	52,53,54,54	0
5	EDO	A	112	4/4	0.87	0.15	0.62	71,72,72,73	0
5	EDO	A	120	4/4	0.85	0.20	0.42	81,83,83,84	0
3	SO4	A	1	5/5	0.84	0.20	0.42	111,112,112,112	0
2	SFG	A	300	27/27	0.92	0.18	0.39	49,55,58,59	0
4	MES	A	2	12/12	0.95	0.12	0.30	67,69,76,77	0
6	ZN	A	1601	1/1	0.98	0.10	-1.11	70,70,70,70	0
6	ZN	A	1602	1/1	0.92	0.04	-3.37	103,103,103,103	0
6	ZN	A	3	1/1	0.98	0.12	-	50,50,50,50	0
6	ZN	A	1603	1/1	0.99	0.07	-	62,62,62,62	0
5	EDO	A	104	4/4	0.92	0.15	-	51,51,51,52	0
5	EDO	A	125	4/4	0.84	0.31	-	75,78,79,81	0
5	EDO	A	116	4/4	0.27	0.55	-	85,85,86,86	0
5	EDO	A	124	4/4	0.84	0.26	-	68,69,69,69	0
5	EDO	A	107	4/4	0.91	0.17	-	63,64,64,65	0
5	EDO	A	111	4/4	0.96	0.13	-	49,51,53,56	0
5	EDO	A	123	4/4	0.82	0.29	-	69,69,69,69	0

6.5 Other polymers ⓘ

There are no such residues in this entry.