wwPDB X-ray Structure Validation Summary Report (i)

Jan 3, 2024 – 03:46 am GMT

PDB ID	:	4XC5
Title	:	CRYSTAL STRUCTURE OF THE T1L REOVIRUS ATTACHMENT PROTEIN SIGMA1
Authors	:	Reiss, K.; Stehle, T.
Deposited on	:	2014-12-17
Resolution	:	2.20 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 (i) symbol.

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

The following versions of software and data (see references (1)) were used in the production of this report:

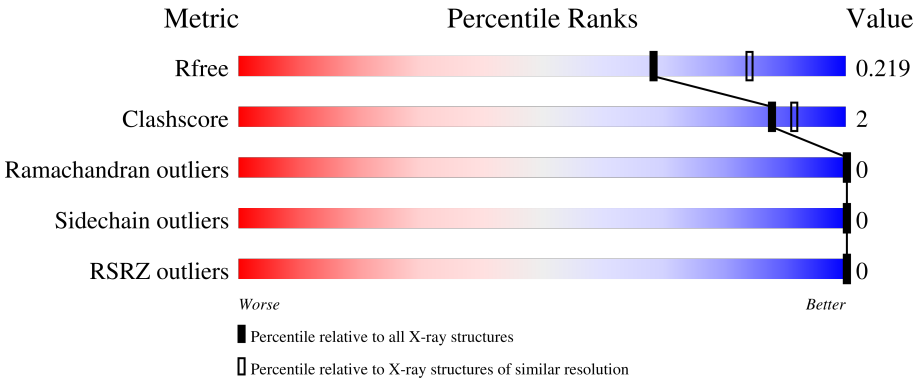
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.20 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	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

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	218	69% 5% 26%
1	B	218	71% · 26%
1	C	218	71% · 26%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 3951 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 Outer capsid protein sigma-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	162	Total	C	N	O	S	0	0	0
			1274	811	213	243	7			
1	B	161	Total	C	N	O	S	0	0	0
			1260	801	211	241	7			
1	C	162	Total	C	N	O	S	0	0	0
			1263	802	212	242	7			

There are 165 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	253	HIS	-	expression tag	UNP P04506
A	254	HIS	-	expression tag	UNP P04506
A	255	HIS	-	expression tag	UNP P04506
A	256	HIS	-	expression tag	UNP P04506
A	257	HIS	-	expression tag	UNP P04506
A	258	HIS	-	expression tag	UNP P04506
A	259	GLY	-	expression tag	UNP P04506
A	260	SER	-	expression tag	UNP P04506
A	261	SER	-	expression tag	UNP P04506
A	262	ASN	-	expression tag	UNP P04506
A	263	SER	-	expression tag	UNP P04506
A	264	GLY	-	expression tag	UNP P04506
A	265	LYS	-	expression tag	UNP P04506
A	266	GLN	-	expression tag	UNP P04506
A	267	ILE	-	expression tag	UNP P04506
A	268	GLU	-	expression tag	UNP P04506
A	269	ASP	-	expression tag	UNP P04506
A	270	LYS	-	expression tag	UNP P04506
A	271	ILE	-	expression tag	UNP P04506
A	272	GLU	-	expression tag	UNP P04506
A	273	GLU	-	expression tag	UNP P04506
A	274	ILE	-	expression tag	UNP P04506
A	275	LEU	-	expression tag	UNP P04506

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Chain	Residue	Modelled	Actual	Comment	Reference
A	276	SER	-	expression tag	UNP P04506
A	277	LYS	-	expression tag	UNP P04506
A	278	ILE	-	expression tag	UNP P04506
A	279	TYR	-	expression tag	UNP P04506
A	280	HIS	-	expression tag	UNP P04506
A	281	ILE	-	expression tag	UNP P04506
A	282	GLU	-	expression tag	UNP P04506
A	283	ASN	-	expression tag	UNP P04506
A	284	GLU	-	expression tag	UNP P04506
A	285	ILE	-	expression tag	UNP P04506
A	286	ALA	-	expression tag	UNP P04506
A	287	ARG	-	expression tag	UNP P04506
A	288	ILE	-	expression tag	UNP P04506
A	289	LYS	-	expression tag	UNP P04506
A	290	LYS	-	expression tag	UNP P04506
A	291	LEU	-	expression tag	UNP P04506
A	292	ILE	-	expression tag	UNP P04506
A	293	GLY	-	expression tag	UNP P04506
A	294	GLU	-	expression tag	UNP P04506
A	295	GLY	-	expression tag	UNP P04506
A	296	SER	-	expression tag	UNP P04506
A	297	GLY	-	expression tag	UNP P04506
A	298	ARG	-	expression tag	UNP P04506
A	299	GLY	-	expression tag	UNP P04506
A	300	VAL	-	expression tag	UNP P04506
A	301	LEU	-	expression tag	UNP P04506
A	302	ASN	-	expression tag	UNP P04506
A	303	GLN	-	expression tag	UNP P04506
A	304	GLY	-	expression tag	UNP P04506
A	305	VAL	-	expression tag	UNP P04506
A	306	THR	-	expression tag	UNP P04506
A	307	SER	-	expression tag	UNP P04506
B	253	HIS	-	expression tag	UNP P04506
B	254	HIS	-	expression tag	UNP P04506
B	255	HIS	-	expression tag	UNP P04506
B	256	HIS	-	expression tag	UNP P04506
B	257	HIS	-	expression tag	UNP P04506
B	258	HIS	-	expression tag	UNP P04506
B	259	GLY	-	expression tag	UNP P04506
B	260	SER	-	expression tag	UNP P04506
B	261	SER	-	expression tag	UNP P04506
B	262	ASN	-	expression tag	UNP P04506

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Chain	Residue	Modelled	Actual	Comment	Reference
B	263	SER	-	expression tag	UNP P04506
B	264	GLY	-	expression tag	UNP P04506
B	265	LYS	-	expression tag	UNP P04506
B	266	GLN	-	expression tag	UNP P04506
B	267	ILE	-	expression tag	UNP P04506
B	268	GLU	-	expression tag	UNP P04506
B	269	ASP	-	expression tag	UNP P04506
B	270	LYS	-	expression tag	UNP P04506
B	271	ILE	-	expression tag	UNP P04506
B	272	GLU	-	expression tag	UNP P04506
B	273	GLU	-	expression tag	UNP P04506
B	274	ILE	-	expression tag	UNP P04506
B	275	LEU	-	expression tag	UNP P04506
B	276	SER	-	expression tag	UNP P04506
B	277	LYS	-	expression tag	UNP P04506
B	278	ILE	-	expression tag	UNP P04506
B	279	TYR	-	expression tag	UNP P04506
B	280	HIS	-	expression tag	UNP P04506
B	281	ILE	-	expression tag	UNP P04506
B	282	GLU	-	expression tag	UNP P04506
B	283	ASN	-	expression tag	UNP P04506
B	284	GLU	-	expression tag	UNP P04506
B	285	ILE	-	expression tag	UNP P04506
B	286	ALA	-	expression tag	UNP P04506
B	287	ARG	-	expression tag	UNP P04506
B	288	ILE	-	expression tag	UNP P04506
B	289	LYS	-	expression tag	UNP P04506
B	290	LYS	-	expression tag	UNP P04506
B	291	LEU	-	expression tag	UNP P04506
B	292	ILE	-	expression tag	UNP P04506
B	293	GLY	-	expression tag	UNP P04506
B	294	GLU	-	expression tag	UNP P04506
B	295	GLY	-	expression tag	UNP P04506
B	296	SER	-	expression tag	UNP P04506
B	297	GLY	-	expression tag	UNP P04506
B	298	ARG	-	expression tag	UNP P04506
B	299	GLY	-	expression tag	UNP P04506
B	300	VAL	-	expression tag	UNP P04506
B	301	LEU	-	expression tag	UNP P04506
B	302	ASN	-	expression tag	UNP P04506
B	303	GLN	-	expression tag	UNP P04506
B	304	GLY	-	expression tag	UNP P04506

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Chain	Residue	Modelled	Actual	Comment	Reference
B	305	VAL	-	expression tag	UNP P04506
B	306	THR	-	expression tag	UNP P04506
B	307	SER	-	expression tag	UNP P04506
C	253	HIS	-	expression tag	UNP P04506
C	254	HIS	-	expression tag	UNP P04506
C	255	HIS	-	expression tag	UNP P04506
C	256	HIS	-	expression tag	UNP P04506
C	257	HIS	-	expression tag	UNP P04506
C	258	HIS	-	expression tag	UNP P04506
C	259	GLY	-	expression tag	UNP P04506
C	260	SER	-	expression tag	UNP P04506
C	261	SER	-	expression tag	UNP P04506
C	262	ASN	-	expression tag	UNP P04506
C	263	SER	-	expression tag	UNP P04506
C	264	GLY	-	expression tag	UNP P04506
C	265	LYS	-	expression tag	UNP P04506
C	266	GLN	-	expression tag	UNP P04506
C	267	ILE	-	expression tag	UNP P04506
C	268	GLU	-	expression tag	UNP P04506
C	269	ASP	-	expression tag	UNP P04506
C	270	LYS	-	expression tag	UNP P04506
C	271	ILE	-	expression tag	UNP P04506
C	272	GLU	-	expression tag	UNP P04506
C	273	GLU	-	expression tag	UNP P04506
C	274	ILE	-	expression tag	UNP P04506
C	275	LEU	-	expression tag	UNP P04506
C	276	SER	-	expression tag	UNP P04506
C	277	LYS	-	expression tag	UNP P04506
C	278	ILE	-	expression tag	UNP P04506
C	279	TYR	-	expression tag	UNP P04506
C	280	HIS	-	expression tag	UNP P04506
C	281	ILE	-	expression tag	UNP P04506
C	282	GLU	-	expression tag	UNP P04506
C	283	ASN	-	expression tag	UNP P04506
C	284	GLU	-	expression tag	UNP P04506
C	285	ILE	-	expression tag	UNP P04506
C	286	ALA	-	expression tag	UNP P04506
C	287	ARG	-	expression tag	UNP P04506
C	288	ILE	-	expression tag	UNP P04506
C	289	LYS	-	expression tag	UNP P04506
C	290	LYS	-	expression tag	UNP P04506
C	291	LEU	-	expression tag	UNP P04506

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Chain	Residue	Modelled	Actual	Comment	Reference
C	292	ILE	-	expression tag	UNP P04506
C	293	GLY	-	expression tag	UNP P04506
C	294	GLU	-	expression tag	UNP P04506
C	295	GLY	-	expression tag	UNP P04506
C	296	SER	-	expression tag	UNP P04506
C	297	GLY	-	expression tag	UNP P04506
C	298	ARG	-	expression tag	UNP P04506
C	299	GLY	-	expression tag	UNP P04506
C	300	VAL	-	expression tag	UNP P04506
C	301	LEU	-	expression tag	UNP P04506
C	302	ASN	-	expression tag	UNP P04506
C	303	GLN	-	expression tag	UNP P04506
C	304	GLY	-	expression tag	UNP P04506
C	305	VAL	-	expression tag	UNP P04506
C	306	THR	-	expression tag	UNP P04506
C	307	SER	-	expression tag	UNP P04506

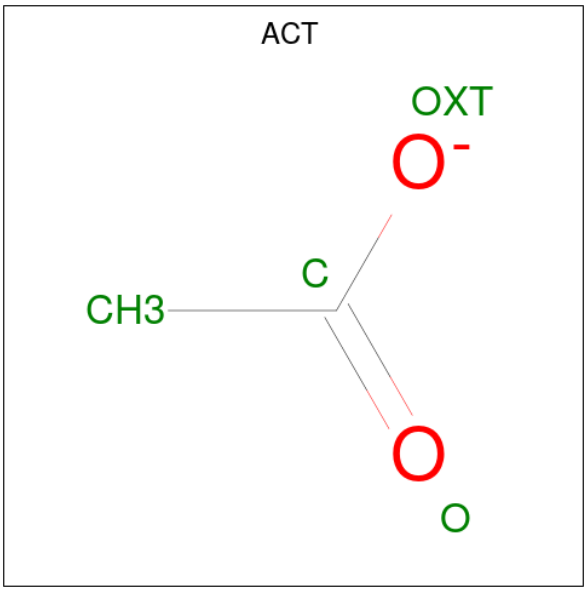
- Molecule 2 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Cl 1 1	0	0
2	B	1	Total Cl 1 1	0	0
2	C	1	Total Cl 1 1	0	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

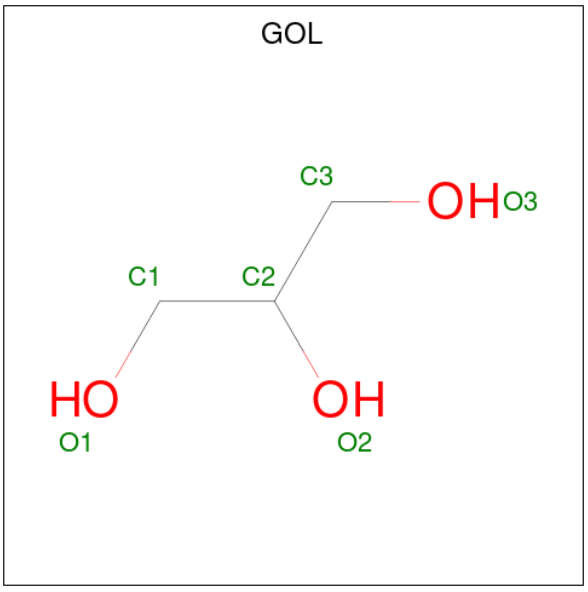
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total Mg 1 1	0	0
3	B	1	Total Mg 1 1	0	0
3	C	1	Total Mg 1 1	0	0

- Molecule 4 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).



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

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



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

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

- Molecule 6 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	29	Total O 29 29	0	0
6	B	32	Total O 32 32	0	0
6	C	33	Total O 33 33	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: Outer capsid protein sigma-1

Chain A:

• Molecule 1: Outer capsid protein sigma-1

Chain B:

• Molecule 1: Outer capsid protein sigma-1

Chain C:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	112.93Å 112.96Å 113.22Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	42.32 – 2.20 46.18 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.7 (42.32-2.20) 98.5 (46.18-2.00)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.38 (at 2.00Å)	Xtriage
Refinement program	BUSTER 2.10.0	Depositor
R, R_{free}	0.190 , 0.223 0.189 , 0.219	Depositor DCC
R_{free} test set	4835 reflections (9.97%)	wwPDB-VP
Wilson B-factor (Å^2)	30.1	Xtriage
Anisotropy	0.081	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.39 , 38.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.048 for -h,-l,-k 0.045 for l,-k,h 0.045 for -k,-h,-l 0.447 for k,-l,-h 0.447 for -l,h,-k	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	3951	wwPDB-VP
Average B, all atoms (Å^2)	38.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.29% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CL, ACT, GOL, MG

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	0.52	0/1309	0.68	0/1789
1	B	0.51	0/1295	0.68	0/1770
1	C	0.51	0/1298	0.69	0/1776
All	All	0.51	0/3902	0.68	0/5335

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

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	1274	0	1204	6	0
1	B	1260	0	1180	5	0
1	C	1263	0	1172	4	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
4	A	4	0	3	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	4	0	3	0	0
4	C	4	0	3	0	0
5	A	12	0	16	1	0
5	B	18	0	24	3	0
5	C	12	0	16	0	0
6	A	29	0	0	0	0
6	B	32	0	0	0	0
6	C	33	0	0	0	0
All	All	3951	0	3621	15	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 2.

The worst 5 of 15 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:B:355:THR:H	5:B:504:GOL:H32	1.54	0.70
1:A:419:LEU:HD22	1:A:424:ARG:HG2	1.87	0.57
1:A:420:ASN:O	1:A:423:GLN:HG2	2.09	0.53
1:A:333:ARG:NH2	1:A:394:GLY:O	2.44	0.51
1:C:412:THR:HG22	1:C:463:ILE:HD12	1.94	0.49

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	160/218 (73%)	157 (98%)	3 (2%)	0	100	100
1	B	159/218 (73%)	155 (98%)	4 (2%)	0	100	100
1	C	160/218 (73%)	156 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	479/654 (73%)	468 (98%)	11 (2%)	0	100 100

There are no Ramachandran outliers to report.

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	137/189 (72%)	137 (100%)	0	100 100
1	B	134/189 (71%)	134 (100%)	0	100 100
1	C	133/189 (70%)	133 (100%)	0	100 100
All	All	404/567 (71%)	404 (100%)	0	100 100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	357	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 16 ligands modelled in this entry, 6 are monoatomic - leaving 10 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	$\#\|Z\| > 2$
5	GOL	B	505	-	5,5,5	0.05	0	5,5,5	0.09	0
5	GOL	A	505	-	5,5,5	0.11	0	5,5,5	0.16	0
5	GOL	C	505	-	5,5,5	0.19	0	5,5,5	0.35	0
4	ACT	A	503	-	3,3,3	1.29	0	3,3,3	0.70	0
5	GOL	B	504	-	5,5,5	0.16	0	5,5,5	0.56	0
5	GOL	B	506	-	5,5,5	0.11	0	5,5,5	0.17	0
4	ACT	B	503	-	3,3,3	1.17	0	3,3,3	0.84	0
5	GOL	A	504	-	5,5,5	0.22	0	5,5,5	0.45	0
4	ACT	C	503	-	3,3,3	1.22	0	3,3,3	0.76	0
5	GOL	C	504	-	5,5,5	0.04	0	5,5,5	0.35	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
5	GOL	B	505	-	-	0/4/4/4	-
5	GOL	A	505	-	-	2/4/4/4	-
5	GOL	C	505	-	-	0/4/4/4	-
5	GOL	B	504	-	-	2/4/4/4	-
5	GOL	B	506	-	-	0/4/4/4	-
5	GOL	A	504	-	-	0/4/4/4	-
5	GOL	C	504	-	-	0/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	504	GOL	C1-C2-C3-O3
5	A	505	GOL	C1-C2-C3-O3
5	A	505	GOL	O2-C2-C3-O3
5	B	504	GOL	O2-C2-C3-O3

There are no ring outliers.

3 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	505	GOL	1	0
5	A	505	GOL	1	0
5	B	504	GOL	2	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

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	162/218 (74%)	0.13	0	100	100	26, 36, 55, 69	0
1	B	161/218 (73%)	0.12	0	100	100	23, 35, 53, 69	0
1	C	162/218 (74%)	0.10	0	100	100	25, 36, 55, 70	0
All	All	485/654 (74%)	0.12	0	100	100	23, 36, 55, 70	0

There are no RSRZ outliers to report.

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

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

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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	ACT	C	503	4/4	0.78	0.20	63,65,66,73	0
5	GOL	A	505	6/6	0.83	0.26	46,51,58,61	0
5	GOL	B	506	6/6	0.83	0.23	49,52,61,65	0
5	GOL	B	505	6/6	0.85	0.17	52,57,61,64	0
5	GOL	C	505	6/6	0.86	0.21	44,49,52,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	ACT	B	503	4/4	0.87	0.13	59,63,65,66	0
5	GOL	A	504	6/6	0.90	0.16	45,51,53,53	0
3	MG	C	502	1/1	0.94	0.07	52,52,52,52	1
4	ACT	A	503	4/4	0.94	0.16	54,58,59,64	0
3	MG	B	502	1/1	0.94	0.11	53,53,53,53	1
5	GOL	B	504	6/6	0.95	0.15	50,51,56,57	0
3	MG	A	502	1/1	0.96	0.07	47,47,47,47	1
5	GOL	C	504	6/6	0.97	0.17	44,51,57,62	0
2	CL	A	501	1/1	0.97	0.09	50,50,50,50	0
2	CL	C	501	1/1	0.98	0.09	49,49,49,49	0
2	CL	B	501	1/1	0.99	0.08	49,49,49,49	0

6.5 Other polymers (i)

There are no such residues in this entry.