Full wwPDB X-ray Structure Validation Report ⓘ

Sep 9, 2021 – 05:01 PM BST

PDB ID	:	6TH1
Title	:	IE1 from rat cytomegalovirus
Authors	:	Schweininger, J.; Muller, Y.A.
Deposited on	:	2019-11-18
Resolution	:	3.40 Å(reported)

This is a Full wwPDB X-ray Structure Validation 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 following versions of software and data (see references ①) were used in the production of this report:

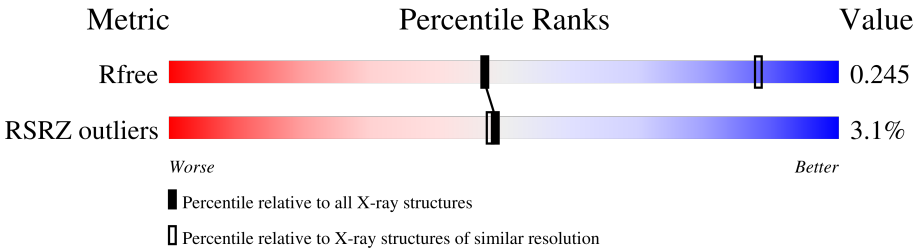
MolProbity	:	FAILED
Xtriage (Phenix)	:	1.13
EDS	:	2.23.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.23.1

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 3.40 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	1026 (3.48-3.32)
RSRZ outliers	127900	2173 (3.50-3.30)

MolProbity failed to run properly - the sequence quality summary graphics cannot be shown.

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 2799 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 Immediate early protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	R	360	Total	C	N	O	S	0	0	0
			2799	1730	508	542	19			

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	25	GLY	-	expression tag	UNP O57046
R	26	PRO	-	expression tag	UNP O57046
R	27	LEU	-	expression tag	UNP O57046
R	28	GLY	-	expression tag	UNP O57046
R	29	SER	-	expression tag	UNP O57046

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3 Data and refinement statistics (i)

Property	Value	Source
Space group	P 65 2 2	Depositor
Cell constants a, b, c, α, β, γ	173.05Å 173.05Å 134.49Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	18.78 – 3.40 18.78 – 3.40	Depositor EDS
% Data completeness (in resolution range)	99.1 (18.78-3.40) 99.1 (18.78-3.40)	Depositor EDS
R_{merge}	0.36	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.20 (at 3.43Å)	Xtriage
Refinement program	PHENIX 1.13_2998	Depositor
R, R_{free}	0.215 , 0.244 0.215 , 0.245	Depositor DCC
R_{free} test set	1626 reflections (9.80%)	wwPDB-VP
Wilson B-factor (Å^2)	132.0	Xtriage
Anisotropy	0.082	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 80.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	2799	wwPDB-VP
Average B, all atoms (Å^2)	130.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.33% 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.

4 Model quality

4.1 Standard geometry

MolProbity failed to run properly - this section is therefore empty.

4.2 Too-close contacts

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4.3 Torsion angles

4.3.1 Protein backbone

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4.3.2 Protein sidechains

MolProbity failed to run properly - this section is therefore empty.

4.3.3 RNA

MolProbity failed to run properly - this section is therefore empty.

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

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

4.5 Carbohydrates

There are no monosaccharides in this entry.

4.6 Ligand geometry

There are no ligands in this entry.

4.7 Other polymers

There are no such residues in this entry.

4.8 Polymer linkage issues

There are no chain breaks in this entry.

5 Fit of model and data

5.1 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	R	360/368 (97%)	-0.06	11 (3%) 49 48	85, 127, 178, 203	0

All (11) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	R	392	SER	6.2
1	R	33	PRO	5.8
1	R	34	GLY	4.8
1	R	255	HIS	3.7
1	R	391	MET	3.7
1	R	87	HIS	2.5
1	R	152	GLN	2.5
1	R	175	ASN	2.4
1	R	40	HIS	2.3
1	R	85	GLU	2.2
1	R	99	ALA	2.1

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

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

5.3 Carbohydrates

There are no monosaccharides in this entry.

5.4 Ligands

There are no ligands in this entry.

5.5 Other polymers (i)

There are no such residues in this entry.