Full wwPDB X-ray Structure Validation Report ⓘ

Oct 5, 2023 – 06:01 AM EDT

PDB ID	:	6VYC
Title	:	Crystal structure of WD-repeat domain of human WDR91
Authors	:	Halabelian, L.; Hutchinson, A.; Li, Y.; Seitova, A.; Bountra, C.; Edwards, A.M.; Arrowsmith, C.H.; Structural Genomics Consortium (SGC)
Deposited on	:	2020-02-26
Resolution	:	2.10 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 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	:	FAILED
Xtriage (Phenix)	:	1.13
EDS	:	FAILED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

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 2.10 Å.

There are no overall percentile quality scores available for this entry.

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

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 5037 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 WD repeat-containing protein 91.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	333	Total	C	N	O	S	0	3	0
			2493	1577	418	477	21			
1	B	328	Total	C	N	O	S	0	2	0
			2413	1522	406	465	20			

There are 36 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	374	MET	-	expression tag	UNP A4D1P6
A	375	HIS	-	expression tag	UNP A4D1P6
A	376	HIS	-	expression tag	UNP A4D1P6
A	377	HIS	-	expression tag	UNP A4D1P6
A	378	HIS	-	expression tag	UNP A4D1P6
A	379	HIS	-	expression tag	UNP A4D1P6
A	380	HIS	-	expression tag	UNP A4D1P6
A	381	SER	-	expression tag	UNP A4D1P6
A	382	SER	-	expression tag	UNP A4D1P6
A	383	GLY	-	expression tag	UNP A4D1P6
A	384	ARG	-	expression tag	UNP A4D1P6
A	385	GLU	-	expression tag	UNP A4D1P6
A	386	ASN	-	expression tag	UNP A4D1P6
A	387	LEU	-	expression tag	UNP A4D1P6
A	388	TYR	-	expression tag	UNP A4D1P6
A	389	PHE	-	expression tag	UNP A4D1P6
A	390	GLN	-	expression tag	UNP A4D1P6
A	391	GLY	-	expression tag	UNP A4D1P6
B	374	MET	-	expression tag	UNP A4D1P6
B	375	HIS	-	expression tag	UNP A4D1P6
B	376	HIS	-	expression tag	UNP A4D1P6
B	377	HIS	-	expression tag	UNP A4D1P6
B	378	HIS	-	expression tag	UNP A4D1P6
B	379	HIS	-	expression tag	UNP A4D1P6
B	380	HIS	-	expression tag	UNP A4D1P6

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Chain	Residue	Modelled	Actual	Comment	Reference
B	381	SER	-	expression tag	UNP A4D1P6
B	382	SER	-	expression tag	UNP A4D1P6
B	383	GLY	-	expression tag	UNP A4D1P6
B	384	ARG	-	expression tag	UNP A4D1P6
B	385	GLU	-	expression tag	UNP A4D1P6
B	386	ASN	-	expression tag	UNP A4D1P6
B	387	LEU	-	expression tag	UNP A4D1P6
B	388	TYR	-	expression tag	UNP A4D1P6
B	389	PHE	-	expression tag	UNP A4D1P6
B	390	GLN	-	expression tag	UNP A4D1P6
B	391	GLY	-	expression tag	UNP A4D1P6

- Molecule 2 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	3	Total X 3 3	0	0
2	B	1	Total X 1 1	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	74	Total O 74 74	0	0
3	B	53	Total O 53 53	0	0

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

3 Data and refinement statistics (i)

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 2 21	Depositor
Cell constants a, b, c, α, β, γ	77.00Å 84.05Å 110.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	46.07 – 2.10	Depositor
% Data completeness (in resolution range)	97.3 (46.07-2.10)	Depositor
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.87 (at 2.10Å)	Xtriage
Refinement program	REFMAC 5.8.0258	Depositor
R, R_{free}	0.221 , 0.251	Depositor
Wilson B-factor (Å^2)	34.2	Xtriage
Anisotropy	0.596	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	5037	wwPDB-VP
Average B, all atoms (Å^2)	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.32% 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

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

4.3 Torsion angles

4.3.1 Protein backbone

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

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

Of 4 ligands modelled in this entry, 4 are unknown - 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.

4.7 Other polymers (i)

There are no such residues in this entry.

4.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

5 Fit of model and data

5.1 Protein, DNA and RNA chains

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

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

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

5.3 Carbohydrates

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

5.4 Ligands

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

5.5 Other polymers

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