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PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report (i)

Oct 2, 2023 – 03:59 PM EDT

PDB ID	:	6N31
Title	:	WD repeats of human WDR12
Authors	:	Halabelian, L.; Zeng, H.; Tempel, W.; Li, Y.; Seitova, A.; Hutchinson, A.; Bountra, C.; Edwards, A.M.; Arrowsmith, C.H.; Structural Genomics Consortium (SGC)
Deposited on	:	2018-11-14
Resolution	:	2.60 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 2.60 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 ⓘ

There are 2 unique types of molecules in this entry. The entry contains 4743 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 Ribosome biogenesis protein WDR12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	308	Total	C	N	O	S	0	3	1
			2339	1485	395	444	15			
1	B	312	Total	C	N	O	S	0	2	0
			2368	1506	400	446	16			

There are 38 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	72	MET	-	initiating methionine	UNP Q9GZL7
A	73	HIS	-	expression tag	UNP Q9GZL7
A	74	HIS	-	expression tag	UNP Q9GZL7
A	75	HIS	-	expression tag	UNP Q9GZL7
A	76	HIS	-	expression tag	UNP Q9GZL7
A	77	HIS	-	expression tag	UNP Q9GZL7
A	78	HIS	-	expression tag	UNP Q9GZL7
A	79	SER	-	expression tag	UNP Q9GZL7
A	80	SER	-	expression tag	UNP Q9GZL7
A	81	GLY	-	expression tag	UNP Q9GZL7
A	82	ARG	-	expression tag	UNP Q9GZL7
A	83	GLU	-	expression tag	UNP Q9GZL7
A	84	ASN	-	expression tag	UNP Q9GZL7
A	85	LEU	-	expression tag	UNP Q9GZL7
A	86	TYR	-	expression tag	UNP Q9GZL7
A	87	PHE	-	expression tag	UNP Q9GZL7
A	88	GLN	-	expression tag	UNP Q9GZL7
A	89	GLY	-	expression tag	UNP Q9GZL7
A	286	GLY	GLU	conflict	UNP Q9GZL7
B	72	MET	-	initiating methionine	UNP Q9GZL7
B	73	HIS	-	expression tag	UNP Q9GZL7
B	74	HIS	-	expression tag	UNP Q9GZL7
B	75	HIS	-	expression tag	UNP Q9GZL7
B	76	HIS	-	expression tag	UNP Q9GZL7
B	77	HIS	-	expression tag	UNP Q9GZL7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	78	HIS	-	expression tag	UNP Q9GZL7
B	79	SER	-	expression tag	UNP Q9GZL7
B	80	SER	-	expression tag	UNP Q9GZL7
B	81	GLY	-	expression tag	UNP Q9GZL7
B	82	ARG	-	expression tag	UNP Q9GZL7
B	83	GLU	-	expression tag	UNP Q9GZL7
B	84	ASN	-	expression tag	UNP Q9GZL7
B	85	LEU	-	expression tag	UNP Q9GZL7
B	86	TYR	-	expression tag	UNP Q9GZL7
B	87	PHE	-	expression tag	UNP Q9GZL7
B	88	GLN	-	expression tag	UNP Q9GZL7
B	89	GLY	-	expression tag	UNP Q9GZL7
B	286	GLY	GLU	conflict	UNP Q9GZL7

- Molecule 2 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	14	Total 14	X 14	0	0
2	B	22	Total 22	X 22	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 21 21	Depositor
Cell constants a, b, c, α, β, γ	52.74Å 87.05Å 155.87Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	76.00 – 2.60	Depositor
% Data completeness (in resolution range)	95.9 (76.00-2.60)	Depositor
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.70 (at 2.61Å)	Xtriage
Refinement program	BUSTER 2.10.2	Depositor
R, R_{free}	0.203 , 0.233	Depositor
Wilson B-factor (Å^2)	47.3	Xtriage
Anisotropy	0.315	Xtriage
L-test for twinning[2]	$< |L| > = 0.51, < L^2 > = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	4743	wwPDB-VP
Average B, all atoms (Å^2)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 21.06 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 7.6059e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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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.

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 36 ligands modelled in this entry, 36 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 ⓘ

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 ⓘ

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.