W O R L D W I D E
wwPDB
PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report ⓘ

Oct 5, 2023 – 02:36 AM EDT

PDB ID	:	6UON
Title	:	Molecular basis for tumor infiltrating TCR recognition of hotspot KRAS-G12D mutation
Authors	:	Sun, P.D.; Sim, M.J.W.
Deposited on	:	2019-10-15
Resolution	:	3.50 Å(reported)

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 ⓘ

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

The reported resolution of this entry is 3.50 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 5 unique types of molecules in this entry. The entry contains 13102 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 TCR-V-alpha-12-02*01.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	G	199	Total 1551	C 967	N 256	O 319	S 9	0	0	0
1	I	193	Total 1507	C 943	N 249	O 306	S 9	0	0	0

- Molecule 2 is a protein called TCR-V-beta-10-2*01.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	238	Total 1904	C 1201	N 332	O 364	S 7	0	0	0
2	J	238	Total 1904	C 1201	N 332	O 364	S 7	0	0	0

- Molecule 3 is a protein called HLA class I antigen.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	273	Total 2241	C 1395	N 414	O 426	S 6	0	0	0
3	D	273	Total 2241	C 1395	N 414	O 426	S 6	0	0	0

- Molecule 4 is a protein called Beta-2-microglobulin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	98	Total 820	C 523	N 139	O 156	S 2	0	0	0
4	E	97	Total 812	C 517	N 138	O 155	S 2	0	0	0

- Molecule 5 is a protein called GLY-ALA-ASP-GLY-VAL-GLY-LYS-SER-ALA-LEU.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	C	10	Total 61	C 36	N 11	O 14	0	0	0
5	F	10	Total 61	C 36	N 11	O 14	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	3	ASP	GLY	conflict	UNP P01111
F	3	ASP	GLY	conflict	UNP P01111

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

3 Data and refinement statistics ⓘ

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

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	65.40Å 79.29Å 197.71Å 90.00° 91.11° 90.00°	Depositor
Resolution (Å)	49.42 – 3.50	Depositor
% Data completeness (in resolution range)	99.6 (49.42-3.50)	Depositor
R_{merge}	0.28	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.34 (at 3.48Å)	Xtriage
Refinement program	PHENIX 1.16_3549	Depositor
R, R_{free}	0.252 , 0.294	Depositor
Wilson B-factor (Å^2)	112.7	Xtriage
Anisotropy	0.527	Xtriage
L-test for twinning[2]	$< |L| > = 0.46, < L^2 > = 0.29$	Xtriage
Estimated twinning fraction	0.048 for h,-k,-l	Xtriage
Total number of atoms	13102	wwPDB-VP
Average B, all atoms (Å^2)	129.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.27% of the height of the origin peak. No significant pseudotranslation is detected.*

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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 ⓘ

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 ⓘ

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.