



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2026 – 02:12 PM UTC

PDB ID : 2VTM / pdb\_00002vtm  
Title : Identification of N-(4-piperidiny1)-4-(2,6-dichlorobenzoylamino)-1H- pyrazole  
-3-carboxamide (AT7519), a Novel Cyclin Dependent Kinase Inhibitor Using  
Fragment-Based X-Ray Crystallography and Structure Based Drug Design.  
Authors : Wyatt, P.G.; Woodhead, A.J.; Boulstridge, J.A.; Berdini, V.; Carr, M.G.;  
Cross, D.M.; Danillon, D.; Davis, D.J.; Devine, L.A.; Early, T.R.; Feltell, R.E.;  
Lewis, E.J.; McMenamin, R.L.; Navarro, E.F.; O'Brien, M.A.; O'Reilly, M.;  
Reule, M.; Saxty, G.; Seavers, L.C.A.; Smith, D.; Squires, M.S.; Trewartha,  
G.; Walker, M.T.; Woolford, A.J.  
Deposited on : 2008-05-15  
Resolution : 2.25 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](mailto: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>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12

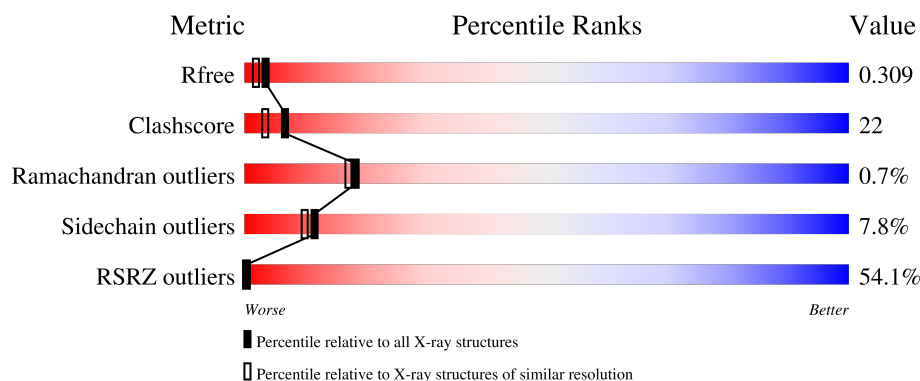
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.25 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))
$R_{free}$	180053	1898 (2.26-2.26)
Clashscore	190562	2005 (2.26-2.26)
Ramachandran outliers	187476	1965 (2.26-2.26)
Sidechain outliers	187428	1966 (2.26-2.26)
RSRZ outliers	180081	1898 (2.26-2.26)

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  $\geq 3$ , 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  $\leq 5\%$ . 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	298	<div> <div>53%</div> <div>64%</div> <div>30%</div> <div>• •</div> </div>

Ideal geometry (proteins) : Engh & Huber (2001)  
 Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
 Validation Pipeline (wwPDB-VP) : 2.49

## 2 Entry composition [i](#)

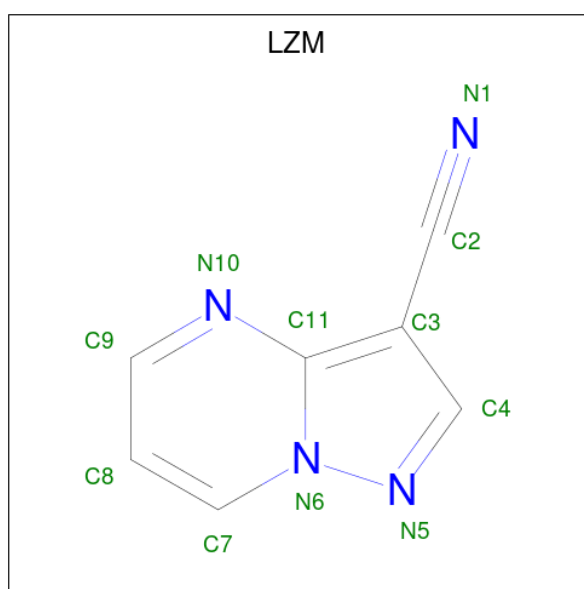
There are 3 unique types of molecules in this entry. The entry contains 2524 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 CELL DIVISION PROTEIN KINASE 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	290	Total	C	N	O	S	0	0	0
			2335	1523	397	407	8			

- Molecule 2 is PYRAZOLO[1,5-A]PYRIMIDINE-3-CARBONITRILE (CCD ID: LZM) (formula: C<sub>7</sub>H<sub>4</sub>N<sub>4</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	N	0	0
			11	7	4		

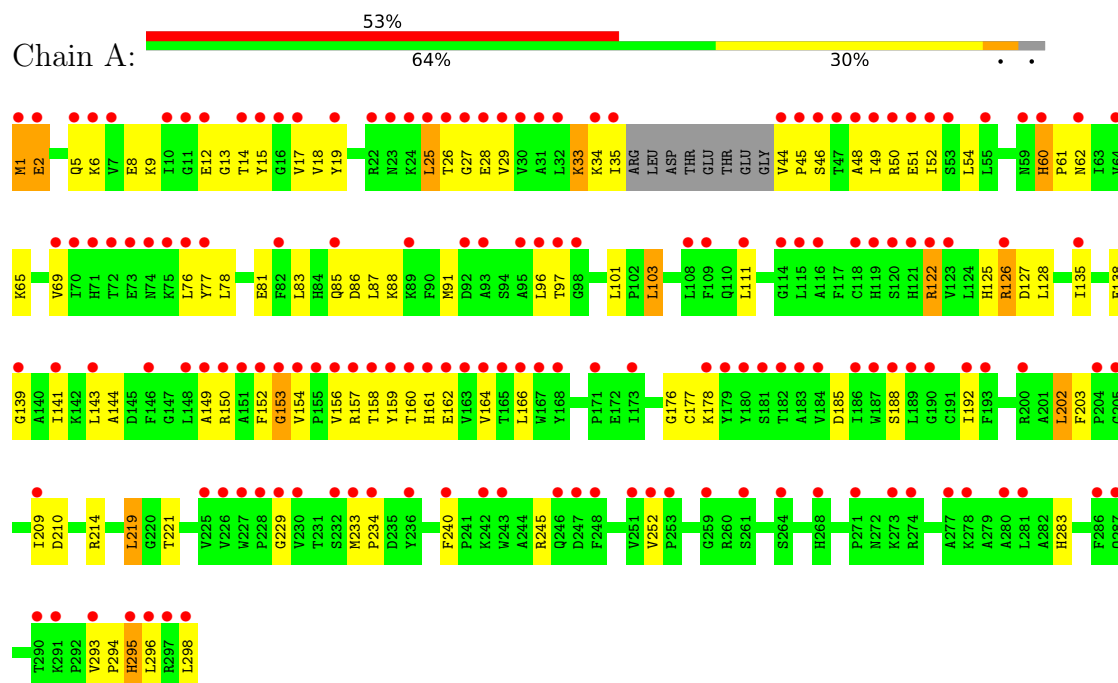
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	178	Total	O	0	0
			178	178		

### 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: CELL DIVISION PROTEIN KINASE 2



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	53.52Å 71.70Å 72.41Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	42.89 – 2.25 42.89 – 2.25	Depositor EDS
% Data completeness (in resolution range)	95.3 (42.89-2.25) 92.2 (42.89-2.25)	Depositor EDS
$R_{merge}$	0.10	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.41 (at 2.24Å)	Xtriage
Refinement program	BUSTER-TNT 2.1.1	Depositor
R, $R_{free}$	0.228 , 0.286 0.239 , 0.309	Depositor DCC
$R_{free}$ test set	651 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	19.1	Xtriage
Anisotropy	0.089	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.37 , 69.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.58$ , $\langle L^2 \rangle = 0.45$	Xtriage
Estimated twinning fraction	0.000 for -h,l,k	Xtriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	2524	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	37.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.92% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  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: LZM

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	0.82	1/2396 (0.0%)	1.11	13/3250 (0.4%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	295	HIS	CA-C	5.68	1.60	1.52

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	240	PHE	CA-C-N	-8.00	111.52	119.76
1	A	240	PHE	C-N-CA	-8.00	111.52	119.76
1	A	221	THR	CA-C-N	-7.74	112.37	120.03
1	A	221	THR	C-N-CA	-7.74	112.37	120.03
1	A	293	VAL	CA-C-N	-7.12	113.33	120.31
1	A	293	VAL	C-N-CA	-7.12	113.33	120.31
1	A	252	VAL	CA-C-N	-6.24	113.96	120.38
1	A	252	VAL	C-N-CA	-6.24	113.96	120.38
1	A	185	ASP	N-CA-C	5.75	117.55	111.28
1	A	283	HIS	CA-C-N	-5.20	114.73	119.82
1	A	283	HIS	C-N-CA	-5.20	114.73	119.82
1	A	60	HIS	CA-C-N	5.14	124.80	119.56
1	A	60	HIS	C-N-CA	5.14	124.80	119.56

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	2335	0	2392	102	0
2	A	11	0	4	3	0
3	A	178	0	0	9	0
All	All	2524	0	2396	102	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 22.

All (102) 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:A:122:ARG:HH11	1:A:122:ARG:HG2	1.27	0.99
1:A:85:GLN:NE2	1:A:135:ILE:HD11	1.76	0.98
1:A:34:LYS:HG2	1:A:77:TYR:CE1	2.06	0.90
1:A:125:HIS:HD2	1:A:127:ASP:H	1.28	0.81
1:A:85:GLN:HE21	1:A:135:ILE:HD11	1.44	0.81
1:A:122:ARG:N	1:A:122:ARG:HD3	1.95	0.80
1:A:60:HIS:HD2	1:A:62:ASN:H	1.30	0.78
1:A:18:VAL:CG2	1:A:33:LYS:HE3	2.14	0.78
1:A:126:ARG:NH1	1:A:154:VAL:HG11	1.98	0.78
1:A:210:ASP:O	1:A:214:ARG:HG3	1.85	0.77
1:A:178:LYS:HG3	3:A:2099:HOH:O	1.87	0.75
1:A:18:VAL:HG22	1:A:33:LYS:HE3	1.70	0.73
1:A:33:LYS:NZ	2:A:1299:LZM:N1	2.34	0.73
1:A:125:HIS:HE1	1:A:144:ALA:O	1.71	0.72
1:A:1:MET:HE2	1:A:2:GLU:H	1.55	0.71
1:A:111:LEU:HD11	1:A:141:ILE:HD13	1.74	0.70
1:A:34:LYS:HE2	1:A:77:TYR:CE1	2.27	0.69
1:A:60:HIS:CD2	1:A:62:ASN:H	2.09	0.69
1:A:34:LYS:HG2	1:A:77:TYR:CD1	2.27	0.69
1:A:15:TYR:CE1	1:A:152:PHE:HB2	2.28	0.68
1:A:34:LYS:HE2	1:A:77:TYR:HE1	1.58	0.67
1:A:188:SER:O	1:A:192:ILE:HG13	1.95	0.66
1:A:25:LEU:HG	1:A:26:THR:HG23	1.78	0.66
1:A:122:ARG:HG2	1:A:122:ARG:NH1	2.05	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:LEU:N	1:A:54:LEU:HD23	2.12	0.64
1:A:60:HIS:CD2	1:A:61:PRO:HD2	2.33	0.64
1:A:294:PRO:HG2	1:A:296:LEU:HD13	1.80	0.64
1:A:25:LEU:HD11	1:A:26:THR:HG22	1.80	0.63
1:A:126:ARG:HD3	3:A:2071:HOH:O	2.00	0.62
1:A:51:GLU:OE1	1:A:150:ARG:NH1	2.30	0.60
1:A:83:LEU:O	2:A:1299:LZM:H7	2.02	0.60
1:A:126:ARG:CZ	1:A:154:VAL:HG11	2.32	0.60
1:A:60:HIS:CG	1:A:61:PRO:HD2	2.37	0.60
1:A:164:VAL:HB	3:A:2085:HOH:O	2.01	0.59
1:A:1:MET:CE	1:A:2:GLU:H	2.16	0.58
1:A:25:LEU:CD1	1:A:26:THR:HG22	2.34	0.58
1:A:128:LEU:HD21	1:A:143:LEU:CD2	2.34	0.58
1:A:34:LYS:HG2	1:A:77:TYR:HE1	1.66	0.56
1:A:101:LEU:O	1:A:101:LEU:HG	2.06	0.55
1:A:97:THR:HG23	3:A:2057:HOH:O	2.06	0.54
1:A:157:ARG:HB3	1:A:161:HIS:HA	1.88	0.54
1:A:65:LYS:NZ	3:A:2036:HOH:O	2.28	0.54
1:A:125:HIS:O	1:A:126:ARG:HB3	2.08	0.53
1:A:9:LYS:HA	1:A:19:TYR:CD1	2.44	0.52
1:A:26:THR:C	1:A:28:GLU:H	2.17	0.52
1:A:13:GLY:HA3	3:A:2004:HOH:O	2.10	0.52
1:A:25:LEU:C	1:A:25:LEU:HD12	2.35	0.51
1:A:126:ARG:CG	1:A:126:ARG:HH11	2.23	0.51
1:A:159:TYR:CZ	1:A:160:THR:HG23	2.45	0.51
1:A:9:LYS:HG3	1:A:17:VAL:CG1	2.41	0.51
1:A:81:GLU:O	2:A:1299:LZM:H4	2.11	0.51
1:A:18:VAL:HG21	1:A:33:LYS:HE3	1.92	0.50
1:A:1:MET:HE2	1:A:1:MET:HA	1.92	0.50
1:A:160:THR:OG1	1:A:162:GLU:HG3	2.11	0.49
1:A:8:GLU:OE2	3:A:2003:HOH:O	2.20	0.49
1:A:154:VAL:HG13	3:A:2073:HOH:O	2.12	0.48
1:A:126:ARG:NH1	1:A:126:ARG:HG3	2.28	0.48
1:A:152:PHE:O	1:A:153:GLY:O	2.31	0.48
1:A:85:GLN:HG2	1:A:86:ASP:N	2.28	0.48
1:A:122:ARG:HH11	1:A:122:ARG:CG	2.12	0.48
1:A:17:VAL:HG22	1:A:159:TYR:OH	2.14	0.47
1:A:177:CYS:HB2	1:A:233:MET:CE	2.44	0.47
1:A:158:THR:HG23	1:A:162:GLU:HB2	1.97	0.47
1:A:149:ALA:O	1:A:153:GLY:N	2.48	0.47
1:A:87:LEU:O	1:A:91:MET:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:26:THR:OG1	1:A:28:GLU:HB2	2.16	0.46
1:A:294:PRO:HG2	1:A:296:LEU:CD1	2.44	0.46
1:A:139:GLY:HA2	1:A:294:PRO:HD3	1.98	0.46
1:A:125:HIS:CD2	1:A:127:ASP:H	2.19	0.46
1:A:154:VAL:HG13	1:A:154:VAL:O	2.16	0.46
1:A:202:LEU:HD13	1:A:203:PHE:CE2	2.51	0.46
1:A:69:VAL:HG13	1:A:69:VAL:O	2.15	0.46
1:A:1:MET:HE2	1:A:2:GLU:N	2.28	0.45
1:A:35:ILE:HD12	1:A:78:LEU:HG	1.98	0.45
1:A:160:THR:C	1:A:161:HIS:CD2	2.95	0.45
1:A:17:VAL:HG11	1:A:19:TYR:CZ	2.52	0.45
1:A:177:CYS:HB2	1:A:233:MET:HE1	1.99	0.44
1:A:209:ILE:HD12	1:A:209:ILE:HA	1.85	0.44
1:A:157:ARG:HA	1:A:162:GLU:O	2.17	0.44
1:A:176:GLY:O	1:A:234:PRO:HG2	2.18	0.44
1:A:6:LYS:HE3	1:A:19:TYR:CD2	2.53	0.44
1:A:44:VAL:HA	1:A:45:PRO:HD3	1.84	0.44
1:A:48:ALA:O	1:A:52:ILE:HG12	2.19	0.43
1:A:1:MET:CE	1:A:2:GLU:N	2.81	0.43
1:A:35:ILE:CD1	1:A:78:LEU:HG	2.48	0.43
1:A:103:LEU:HD11	1:A:294:PRO:HB3	2.01	0.42
1:A:126:ARG:HG3	1:A:126:ARG:O	2.19	0.42
1:A:219:LEU:O	1:A:245:ARG:HD2	2.19	0.42
1:A:156:VAL:O	1:A:164:VAL:HG12	2.19	0.42
1:A:12:GLU:HB3	1:A:159:TYR:CE1	2.55	0.42
1:A:86:ASP:OD1	1:A:88:LYS:HB3	2.19	0.42
1:A:50:ARG:O	1:A:54:LEU:HG	2.19	0.42
1:A:122:ARG:HD3	1:A:122:ARG:H	1.81	0.42
1:A:176:GLY:O	1:A:178:LYS:NZ	2.51	0.41
1:A:158:THR:CG2	1:A:162:GLU:HB2	2.50	0.41
1:A:126:ARG:HH11	1:A:126:ARG:HG3	1.85	0.41
1:A:135:ILE:HG22	1:A:141:ILE:HG13	2.02	0.41
1:A:229:GLY:HA2	3:A:2135:HOH:O	2.20	0.41
1:A:18:VAL:HG22	1:A:33:LYS:CE	2.44	0.41
1:A:158:THR:N	1:A:162:GLU:O	2.53	0.41
1:A:103:LEU:HD22	1:A:103:LEU:O	2.21	0.40
1:A:128:LEU:HD21	1:A:143:LEU:HD22	2.00	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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	286/298 (96%)	274 (96%)	10 (4%)	2 (1%)	18 17

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	153	GLY
1	A	27	GLY

### 5.3.2 Protein sidechains

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	256/263 (97%)	236 (92%)	20 (8%)	11 10

All (20) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	2	GLU
1	A	5	GLN
1	A	14	THR
1	A	25	LEU
1	A	29	VAL
1	A	33	LYS
1	A	46	SER
1	A	49	ILE

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Mol	Chain	Res	Type
1	A	76	LEU
1	A	96	LEU
1	A	103	LEU
1	A	122	ARG
1	A	126	ARG
1	A	138	GLU
1	A	166	LEU
1	A	202	LEU
1	A	219	LEU
1	A	295	HIS
1	A	298	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	3	ASN
1	A	5	GLN
1	A	60	HIS
1	A	85	GLN
1	A	125	HIS
1	A	161	HIS
1	A	246	GLN
1	A	268	HIS
1	A	272	ASN
1	A	287	GLN

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry

1 ligand is modelled in this entry.

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$
2	LZM	A	1299	-	11,12,12	1.35	1 (9%)	15,16,16	1.50	1 (6%)

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
2	LZM	A	1299	-	-	0/0/2/2	0/2/2/2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1299	LZM	C4-C3	-3.76	1.37	1.40

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1299	LZM	C4-C3-C11	3.83	107.11	104.81

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1299	LZM	3	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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	290/298 (97%)	2.36	157 (54%) 0 0	18, 31, 73, 93	0

All (157) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	271	PRO	10.2
1	A	154	VAL	7.8
1	A	298	LEU	6.6
1	A	183	ALA	6.0
1	A	159	TYR	5.9
1	A	45	PRO	5.9
1	A	44	VAL	5.7
1	A	274	ARG	5.4
1	A	96	LEU	4.7
1	A	156	VAL	4.7
1	A	179	TYR	4.7
1	A	25	LEU	4.6
1	A	273	LYS	4.5
1	A	1	MET	4.5
1	A	229	GLY	4.4
1	A	151	ALA	4.3
1	A	150	ARG	4.3
1	A	296	LEU	4.3
1	A	228	PRO	4.2
1	A	49	ILE	4.2
1	A	152	PHE	4.2
1	A	161	HIS	4.1
1	A	164	VAL	4.0
1	A	252	VAL	4.0
1	A	11	GLY	4.0
1	A	297	ARG	4.0
1	A	46	SER	4.0

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Mol	Chain	Res	Type	RSRZ
1	A	14	THR	3.9
1	A	261	SER	3.9
1	A	10	ILE	3.9
1	A	155	PRO	3.8
1	A	22	ARG	3.8
1	A	295	HIS	3.8
1	A	72	THR	3.7
1	A	7	VAL	3.6
1	A	75	LYS	3.6
1	A	48	ALA	3.6
1	A	287	GLN	3.6
1	A	73	GLU	3.6
1	A	246	GLN	3.5
1	A	30	VAL	3.5
1	A	163	VAL	3.4
1	A	293	VAL	3.4
1	A	122	ARG	3.4
1	A	153	GLY	3.4
1	A	52	ILE	3.3
1	A	160	THR	3.3
1	A	118	CYS	3.3
1	A	74	ASN	3.3
1	A	188	SER	3.3
1	A	95	ALA	3.2
1	A	2	GLU	3.2
1	A	19	TYR	3.2
1	A	290	THR	3.2
1	A	109	PHE	3.2
1	A	6	LYS	3.1
1	A	277	ALA	3.1
1	A	180	TYR	3.1
1	A	5	GLN	3.1
1	A	26	THR	3.1
1	A	51	GLU	3.1
1	A	47	THR	3.0
1	A	139	GLY	3.0
1	A	278	LYS	3.0
1	A	93	ALA	3.0
1	A	77	TYR	3.0
1	A	23	ASN	3.0
1	A	82	PHE	2.9
1	A	286	PHE	2.9

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Mol	Chain	Res	Type	RSRZ
1	A	149	ALA	2.9
1	A	143	LEU	2.9
1	A	12	GLU	2.9
1	A	148	LEU	2.9
1	A	15	TYR	2.8
1	A	64	VAL	2.8
1	A	233	MET	2.8
1	A	34	LYS	2.8
1	A	247	ASP	2.8
1	A	120	SER	2.8
1	A	35	ILE	2.8
1	A	60	HIS	2.8
1	A	119	HIS	2.8
1	A	53	SER	2.8
1	A	186	ILE	2.7
1	A	192	ILE	2.7
1	A	71	HIS	2.7
1	A	251	VAL	2.7
1	A	158	THR	2.7
1	A	190	GLY	2.7
1	A	184	VAL	2.7
1	A	167	TRP	2.6
1	A	17	VAL	2.6
1	A	123	VAL	2.6
1	A	27	GLY	2.6
1	A	204	PRO	2.6
1	A	243	TRP	2.6
1	A	16	GLY	2.6
1	A	230	VAL	2.6
1	A	85	GLN	2.5
1	A	166	LEU	2.5
1	A	205	GLY	2.5
1	A	264	SER	2.5
1	A	157	ARG	2.5
1	A	28	GLU	2.5
1	A	50	ARG	2.5
1	A	32	LEU	2.5
1	A	111	LEU	2.5
1	A	24	LYS	2.5
1	A	92	ASP	2.5
1	A	59	ASN	2.5
1	A	280	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	114	GLY	2.5
1	A	232	SER	2.4
1	A	141	ILE	2.4
1	A	178	LYS	2.4
1	A	76	LEU	2.4
1	A	234	PRO	2.4
1	A	97	THR	2.4
1	A	31	ALA	2.4
1	A	29	VAL	2.4
1	A	281	LEU	2.3
1	A	268	HIS	2.3
1	A	146	PHE	2.3
1	A	189	LEU	2.3
1	A	89	LYS	2.3
1	A	98	GLY	2.3
1	A	165	THR	2.3
1	A	182	THR	2.3
1	A	115	LEU	2.2
1	A	225	VAL	2.3
1	A	162	GLU	2.2
1	A	168	TYR	2.2
1	A	226	VAL	2.2
1	A	126	ARG	2.2
1	A	69	VAL	2.2
1	A	70	ILE	2.1
1	A	62	ASN	2.1
1	A	171	PRO	2.1
1	A	253	PRO	2.1
1	A	200	ARG	2.1
1	A	108	LEU	2.1
1	A	227	TRP	2.1
1	A	248	PHE	2.1
1	A	259	GLY	2.1
1	A	242	LYS	2.1
1	A	291	LYS	2.1
1	A	187	TRP	2.1
1	A	193	PHE	2.1
1	A	121	HIS	2.1
1	A	209	ILE	2.1
1	A	236	TYR	2.1
1	A	240	PHE	2.1
1	A	181	SER	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	116	ALA	2.0
1	A	55	LEU	2.0
1	A	135	ILE	2.0
1	A	173	ILE	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

## 6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 6.4 Ligands [i](#)

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<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
2	LZM	A	1299	11/11	0.41	0.21	46,51,56,56	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.