



# Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 11:52 PM GMT

PDB ID : 1YVU  
Title : Crystal structure of A. aeolicus Argonaute  
Authors : Yuan, Y.R.; Pei, Y.; Ma, J.B.; Kuryavyi, V.; Zhadina, M.; Meister, G.; Chen, H.Y.; Dauter, Z.; Tuschl, T.; Patel, D.J.  
Deposited on : 2005-02-16  
Resolution : 2.90 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  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

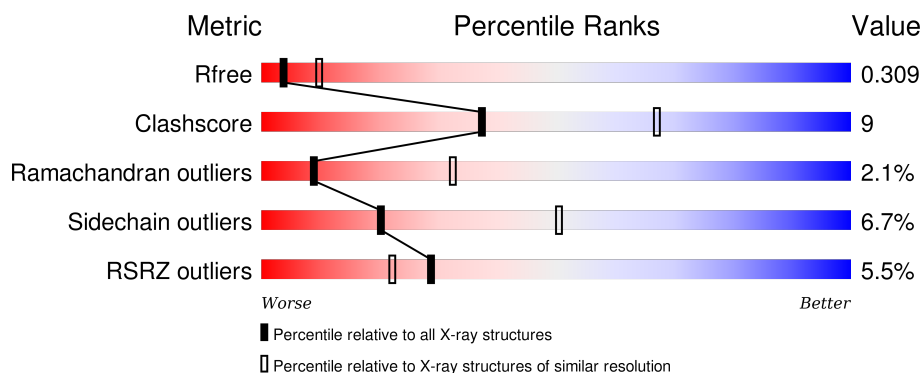
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*


The reported resolution of this entry is 2.90 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))
$R_{free}$	91344	1451 (2.90-2.90)
Clashscore	102246	1668 (2.90-2.90)
Ramachandran outliers	100387	1630 (2.90-2.90)
Sidechain outliers	100360	1632 (2.90-2.90)
RSRZ outliers	91569	1456 (2.90-2.90)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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	706	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	CA	A	901	-	-	-	X

## 2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 5740 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 hypothetical protein aq\_1447.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	682	Total	C	N	O	S	Se	0	0	0
			5670	3694	965	1000	5	6			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	214	MSE	MET	MODIFIED RESIDUE	UNP O67434
A	278	MSE	MET	MODIFIED RESIDUE	UNP O67434
A	450	MSE	MET	MODIFIED RESIDUE	UNP O67434
A	665	MSE	MET	MODIFIED RESIDUE	UNP O67434
A	689	MSE	MET	MODIFIED RESIDUE	UNP O67434
A	703	MSE	MET	MODIFIED RESIDUE	UNP O67434

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	Ca	0	0
			1	1		

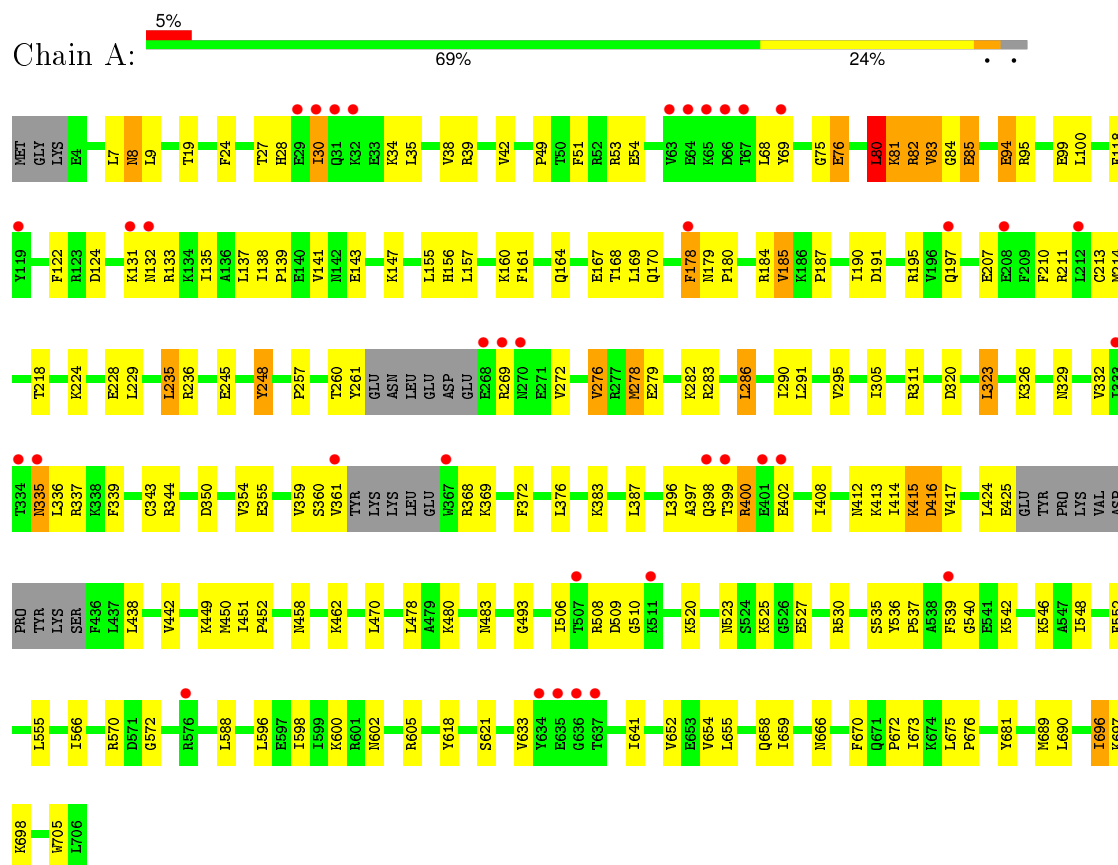
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	69	Total	O	0	0
			69	69		

### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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: hypothetical protein aq\_1447



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	64.15Å 100.68Å 115.22Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	23.90 – 2.90 23.91 – 2.90	Depositor EDS
% Data completeness (in resolution range)	89.3 (23.90-2.90) 97.4 (23.91-2.90)	Depositor EDS
$R_{merge}$	0.11	Depositor
$R_{sym}$	0.11	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.78 (at 2.89Å)	Xtriage
Refinement program	X-PLOR 3.851	Depositor
R, $R_{free}$	0.208 , 0.298 0.225 , 0.309	Depositor DCC
$R_{free}$ test set	806 reflections (5.08%)	DCC
Wilson B-factor (Å <sup>2</sup> )	42.8	Xtriage
Anisotropy	0.010	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 56.5	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	0 of 16701 reflections	Xtriage
$F_o, F_c$ correlation	0.90	EDS
Total number of atoms	5740	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	47.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.26% 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, 0.375 respectively for untwinned datasets, and 0.333, 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: CA

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	0.85	0/5771	0.96	6/7734 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
1	A	493	GLY	N-CA-C	7.86	132.74	113.10
1	A	85	GLU	N-CA-C	6.77	129.28	111.00
1	A	80	LEU	CA-CB-CG	5.45	127.84	115.30
1	A	398	GLN	N-CA-C	-5.37	96.50	111.00
1	A	323	LEU	CA-CB-CG	5.06	126.94	115.30
1	A	697	LYS	N-CA-C	-5.06	97.35	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	618	TYR	Sidechain

## 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	5670	0	5939	108	0
2	A	1	0	0	0	0
3	A	69	0	0	2	0
All	All	5740	0	5939	108	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 9.

All (108) 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:133:ARG:HB3	1:A:269:ARG:HH22	1.31	0.95
1:A:399:THR:HG22	1:A:400:ARG:H	1.40	0.84
1:A:260:THR:HG22	1:A:261:TYR:H	1.50	0.77
1:A:376:LEU:HD12	1:A:470:LEU:HD12	1.68	0.75
1:A:42:VAL:HG22	1:A:81:LYS:HE2	1.74	0.68
1:A:278:MSE:HE3	1:A:283:ARG:HG2	1.76	0.68
1:A:184:ARG:HE	1:A:195:ARG:HE	1.43	0.67
1:A:326:LYS:HG3	1:A:344:ARG:HH11	1.60	0.67
1:A:596:LEU:HD21	1:A:655:LEU:HD13	1.76	0.66
1:A:291:LEU:O	1:A:295:VAL:HG23	1.95	0.66
1:A:8:ASN:ND2	1:A:605:ARG:H	1.95	0.65
1:A:168:THR:HG22	1:A:170:GLN:H	1.60	0.65
1:A:83:VAL:HG12	1:A:84:GLY:H	1.61	0.65
1:A:83:VAL:HG12	1:A:84:GLY:N	2.14	0.62
1:A:94:GLU:HG2	1:A:147:LYS:HB2	1.80	0.62
1:A:245:GLU:HB3	3:A:860:HOH:O	2.00	0.61
1:A:368:ARG:HH12	1:A:462:LYS:HD3	1.66	0.61
1:A:161:PHE:HE1	1:A:278:MSE:HE2	1.65	0.60
1:A:438:LEU:O	1:A:442:VAL:HG23	2.04	0.58
1:A:548:ILE:O	1:A:552:PHE:HD1	1.87	0.56
1:A:184:ARG:HG2	1:A:195:ARG:HG2	1.88	0.56
1:A:24:PHE:HA	1:A:82:ARG:O	2.05	0.56
1:A:478:LEU:HB3	1:A:483:ASN:O	2.07	0.55
1:A:337:ARG:HE	1:A:670:PHE:HE2	1.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:260:THR:HG22	1:A:261:TYR:N	2.20	0.54
1:A:415:LYS:O	1:A:416:ASP:HB2	2.07	0.54
1:A:570:ARG:NH1	1:A:572:GLY:H	2.06	0.54
1:A:248:TYR:H	1:A:248:TYR:HD1	1.56	0.54
1:A:542:LYS:O	1:A:546:LYS:HB2	2.08	0.53
1:A:286:LEU:O	1:A:290:ILE:HG13	2.09	0.53
1:A:34:LYS:O	1:A:38:VAL:HG23	2.10	0.52
1:A:397:ALA:HB2	1:A:402:GLU:OE2	2.09	0.52
1:A:354:VAL:HG21	1:A:387:LEU:HD13	1.92	0.52
1:A:83:VAL:CG1	1:A:84:GLY:H	2.23	0.51
1:A:143:GLU:HB3	1:A:155:LEU:HD11	1.92	0.51
1:A:399:THR:HG22	1:A:400:ARG:N	2.19	0.51
1:A:414:ILE:O	1:A:416:ASP:N	2.44	0.51
1:A:450:MSE:SE	1:A:698:LYS:HD2	2.60	0.51
1:A:207:GLU:HG2	1:A:236:ARG:HH22	1.75	0.50
1:A:38:VAL:O	1:A:42:VAL:HG23	2.12	0.50
1:A:654:VAL:O	1:A:658:GLN:HG3	2.11	0.50
1:A:143:GLU:HG3	1:A:157:LEU:HD13	1.94	0.50
1:A:160:LYS:NZ	1:A:602:ASN:HA	2.26	0.49
1:A:30:ILE:HG22	1:A:35:LEU:HD11	1.94	0.49
1:A:95:ARG:O	1:A:99:GLU:HG3	2.12	0.49
1:A:68:LEU:HD22	1:A:80:LEU:HD12	1.94	0.49
1:A:178:PHE:H	1:A:178:PHE:HD2	1.59	0.49
1:A:133:ARG:HB3	1:A:269:ARG:NH2	2.14	0.49
1:A:570:ARG:HH11	1:A:572:GLY:H	1.60	0.49
1:A:336:LEU:HB2	1:A:339:PHE:H	1.78	0.48
1:A:452:PRO:HB3	1:A:480:LYS:HB3	1.95	0.48
1:A:372:PHE:O	1:A:376:LEU:HD13	2.14	0.48
1:A:51:PHE:HD2	1:A:100:LEU:HD13	1.79	0.48
1:A:169:LEU:HD22	1:A:185:VAL:HG11	1.96	0.48
1:A:414:ILE:HA	1:A:451:ILE:HD11	1.95	0.47
1:A:555:LEU:HD13	1:A:566:ILE:HD13	1.96	0.47
1:A:399:THR:CG2	1:A:400:ARG:H	2.20	0.47
1:A:675:LEU:HD12	3:A:821:HOH:O	2.14	0.47
1:A:184:ARG:NH2	1:A:195:ARG:HH21	2.12	0.47
1:A:197:GLN:NE2	1:A:508:ARG:HA	2.28	0.47
1:A:343:CYS:O	1:A:383:LYS:HE2	2.15	0.47
1:A:332:VAL:HG13	1:A:335:ASN:OD1	2.16	0.46
1:A:282:LYS:O	1:A:286:LEU:HB2	2.16	0.46
1:A:135:ILE:HD11	1:A:269:ARG:HH11	1.81	0.45
1:A:400:ARG:C	1:A:402:GLU:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:424:LEU:C	1:A:458:ASN:HD22	2.19	0.45
1:A:187:PRO:HB2	1:A:190:ILE:HB	1.98	0.45
1:A:197:GLN:HE22	1:A:508:ARG:HA	1.81	0.45
1:A:137:LEU:HD22	1:A:276:VAL:HG21	1.98	0.45
1:A:291:LEU:HD22	1:A:305:ILE:HG21	1.98	0.45
1:A:184:ARG:HH21	1:A:195:ARG:NH2	2.15	0.45
1:A:523:ASN:HD22	1:A:527:GLU:HG2	1.82	0.45
1:A:83:VAL:CG1	1:A:84:GLY:N	2.79	0.45
1:A:168:THR:HG22	1:A:169:LEU:N	2.32	0.44
1:A:224:LYS:O	1:A:228:GLU:HG2	2.16	0.44
1:A:326:LYS:HG3	1:A:344:ARG:NH1	2.29	0.44
1:A:689:MSE:HB3	1:A:696:ILE:HD11	1.99	0.44
1:A:69:TYR:O	1:A:80:LEU:HA	2.18	0.44
1:A:260:THR:CG2	1:A:261:TYR:H	2.24	0.43
1:A:506:ILE:HG13	1:A:690:LEU:HD13	2.00	0.43
1:A:7:LEU:C	1:A:9:LEU:H	2.21	0.43
1:A:184:ARG:HH21	1:A:195:ARG:HH21	1.65	0.43
1:A:229:LEU:HD23	1:A:235:LEU:HD13	1.99	0.43
1:A:179:ASN:HA	1:A:180:PRO:HD2	1.92	0.43
1:A:659:ILE:HG23	1:A:676:PRO:HG3	2.00	0.43
1:A:413:LYS:HE3	1:A:413:LYS:HB2	1.72	0.42
1:A:535:SER:HB2	1:A:696:ILE:HD12	2.00	0.42
1:A:75:GLY:O	1:A:76:GLU:HB2	2.19	0.42
1:A:359:VAL:HG12	1:A:425:GLU:H	1.83	0.42
1:A:633:VAL:HG21	1:A:672:PRO:HG3	2.01	0.42
1:A:525:LYS:HD3	1:A:525:LYS:HA	1.92	0.42
1:A:520:LYS:HD3	1:A:705:TRP:CZ2	2.54	0.42
1:A:131:LYS:HE2	1:A:132:ASN:HD21	1.84	0.41
1:A:369:LYS:HE2	1:A:458:ASN:OD1	2.19	0.41
1:A:138:ILE:HA	1:A:139:PRO:HD3	1.87	0.41
1:A:408:ILE:O	1:A:412:ASN:ND2	2.52	0.41
1:A:260:THR:O	1:A:261:TYR:HB2	2.19	0.41
1:A:666:ASN:HB3	1:A:673:ILE:HD12	2.01	0.41
1:A:210:PHE:O	1:A:214:MSE:HB2	2.20	0.41
1:A:598:ILE:HG23	1:A:641:ILE:HD12	2.03	0.41
1:A:164:GLN:HG2	1:A:257:PRO:O	2.20	0.41
1:A:400:ARG:C	1:A:402:GLU:N	2.73	0.41
1:A:361:VAL:HG23	1:A:425:GLU:HG2	2.01	0.41
1:A:118:PHE:O	1:A:122:PHE:HB2	2.20	0.40
1:A:279:GLU:H	1:A:282:LYS:HD2	1.86	0.40
1:A:536:TYR:HA	1:A:537:PRO:HD3	1.93	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:414:ILE:HD11	1:A:449:LYS:HZ3	1.86	0.40
1:A:376:LEU:CD1	1:A:470:LEU:HD12	2.46	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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	674/706 (96%)	617 (92%)	43 (6%)	14 (2%)	9	32

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	76	GLU
1	A	83	VAL
1	A	85	GLU
1	A	335	ASN
1	A	400	ARG
1	A	415	LYS
1	A	416	ASP
1	A	8	ASN
1	A	540	GLY
1	A	54	GLU
1	A	278	MSE
1	A	509	ASP
1	A	621	SER
1	A	510	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	624/641 (97%)	582 (93%)	42 (7%)	20 50

All (42) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	19	THR
1	A	27	THR
1	A	28	HIS
1	A	30	ILE
1	A	39	ARG
1	A	49	PRO
1	A	53	ARG
1	A	80	LEU
1	A	81	LYS
1	A	82	ARG
1	A	94	GLU
1	A	124	ASP
1	A	141	VAL
1	A	156	HIS
1	A	167	GLU
1	A	178	PHE
1	A	185	VAL
1	A	191	ASP
1	A	211	ARG
1	A	213	CYS
1	A	218	THR
1	A	235	LEU
1	A	248	TYR
1	A	272	VAL
1	A	276	VAL
1	A	286	LEU
1	A	311	ARG
1	A	320	ASP
1	A	323	LEU
1	A	329	ASN

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Mol	Chain	Res	Type
1	A	350	ASP
1	A	355	GLU
1	A	360	SER
1	A	396	LEU
1	A	417	VAL
1	A	530	ARG
1	A	539	PHE
1	A	588	LEU
1	A	600	LYS
1	A	652	VAL
1	A	681	TYR
1	A	696	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	8	ASN
1	A	93	ASN
1	A	132	ASN
1	A	197	GLN
1	A	285	ASN
1	A	378	ASN
1	A	412	ASN
1	A	680	HIS

### 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 carbohydrates in this entry.

## 5.6 Ligand geometry

Of 1 ligands modelled in this entry, 1 is monoatomic - 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.

## 5.7 Other polymers

There are no such residues in this entry.

## 5.8 Polymer linkage issues

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	676/706 (95%)	0.15	37 (5%)	29 22	7, 43, 96, 125	0

All (37) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	634	TYR	6.8
1	A	69	TYR	5.4
1	A	637	THR	5.3
1	A	334	THR	5.3
1	A	64	GLU	4.6
1	A	361	VAL	4.4
1	A	399	THR	4.4
1	A	66	ASP	4.2
1	A	268	GLU	4.1
1	A	30	ILE	4.0
1	A	636	GLY	3.7
1	A	132	ASN	3.5
1	A	63	VAL	3.3
1	A	333	ILE	3.2
1	A	131	LYS	3.1
1	A	398	GLN	2.7
1	A	335	ASN	2.7
1	A	269	ARG	2.7
1	A	65	LYS	2.7
1	A	635	GLU	2.6
1	A	511	LYS	2.5
1	A	178	PHE	2.5
1	A	67	THR	2.5
1	A	576	ARG	2.5
1	A	29	GLU	2.4
1	A	119	TYR	2.4
1	A	507	THR	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	401	GLU	2.3
1	A	402	GLU	2.2
1	A	367	TRP	2.2
1	A	212	LEU	2.1
1	A	32	LYS	2.1
1	A	539	PHE	2.1
1	A	270	ASN	2.0
1	A	208	GLU	2.0
1	A	31	GLN	2.0
1	A	197	GLN	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 carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
2	CA	A	901	1/1	0.35	0.36	3.50	14,14,14,14	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.