Full wwPDB X-ray Structure Validation Report ⓘ

May 15, 2020 – 03:44 pm BST

PDB ID	:	3O0Z
Title	:	Crystal structure of a coiled-coil domain from human ROCK I
Authors	:	Tu, D.; Eck, M.J.
Deposited on	:	2010-07-20
Resolution	:	2.33 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 following versions of software and data (see references ⓘ) were used in the production of this report:

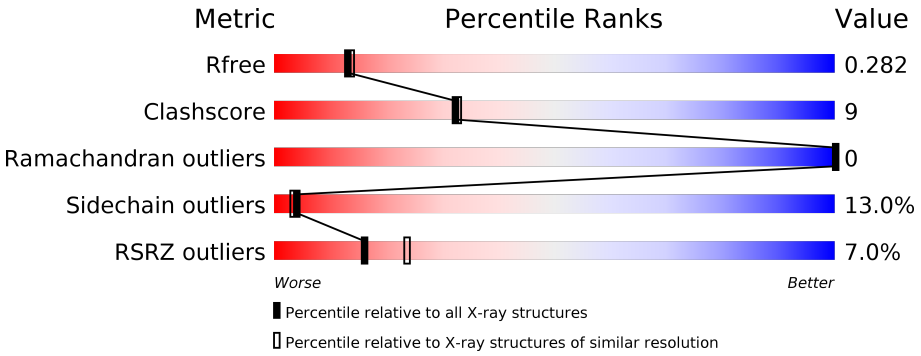
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

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 2.33 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}	130704	2096 (2.36-2.32)
Clashscore	141614	2193 (2.36-2.32)
Ramachandran outliers	138981	2159 (2.36-2.32)
Sidechain outliers	138945	2160 (2.36-2.32)
RSRZ outliers	127900	2067 (2.36-2.32)

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 >=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 <=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	168	5% 70% 17% • 10%
1	B	168	4% 69% 15% 7% 10%
1	C	168	4% 63% 26% 5% 5%
1	D	168	13% 71% 21% • 5%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 5275 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 Rho-associated protein kinase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	152	Total	C	N	O	Se	0	3	0
			1282	778	238	261	5			
1	B	152	Total	C	N	O	Se	0	4	0
			1286	777	242	262	5			
1	C	159	Total	C	N	O	Se	0	3	0
			1335	809	247	272	7			
1	D	160	Total	C	N	O	Se	0	4	0
			1345	815	251	273	6			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	533	GLY	-	EXPRESSION TAG	UNP Q13464
A	534	SER	-	EXPRESSION TAG	UNP Q13464
B	533	GLY	-	EXPRESSION TAG	UNP Q13464
B	534	SER	-	EXPRESSION TAG	UNP Q13464
C	533	GLY	-	EXPRESSION TAG	UNP Q13464
C	534	SER	-	EXPRESSION TAG	UNP Q13464
D	533	GLY	-	EXPRESSION TAG	UNP Q13464
D	534	SER	-	EXPRESSION TAG	UNP Q13464

- Molecule 2 is water.

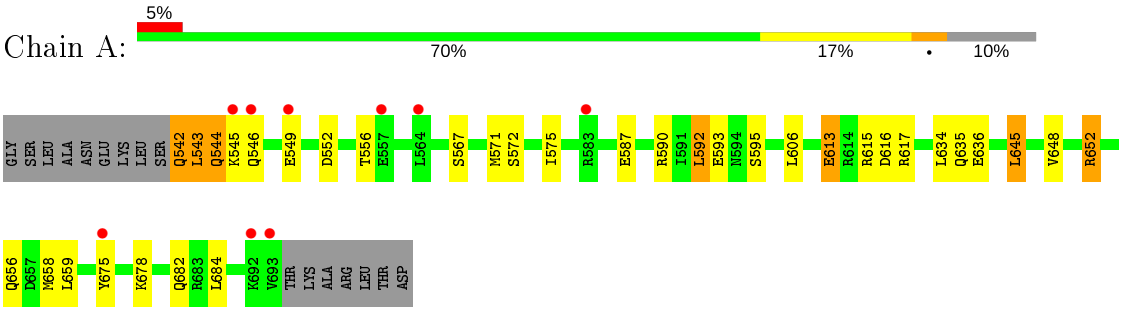
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	7	Total	O	0	0
			7	7		
2	B	7	Total	O	0	0
			7	7		
2	C	9	Total	O	0	0
			9	9		
2	D	4	Total	O	0	0
			4	4		

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA 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.

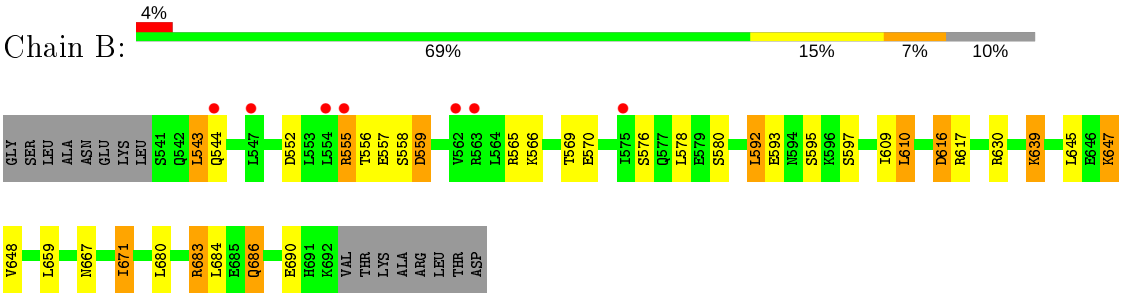
- Molecule 1: Rho-associated protein kinase 1

Chain A:



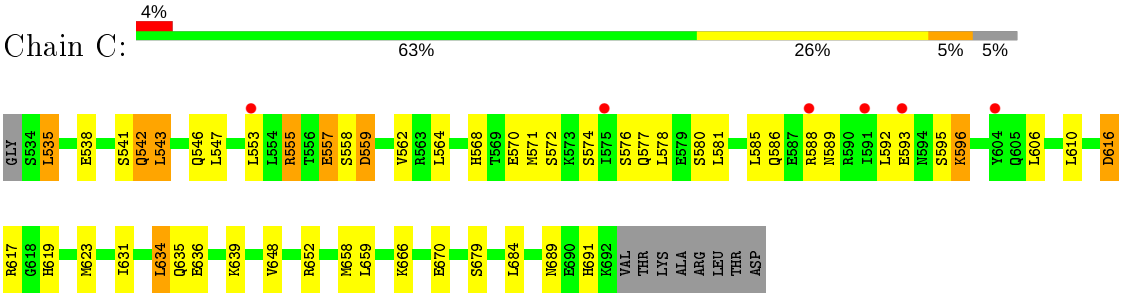
- Molecule 1: Rho-associated protein kinase 1

Chain B:



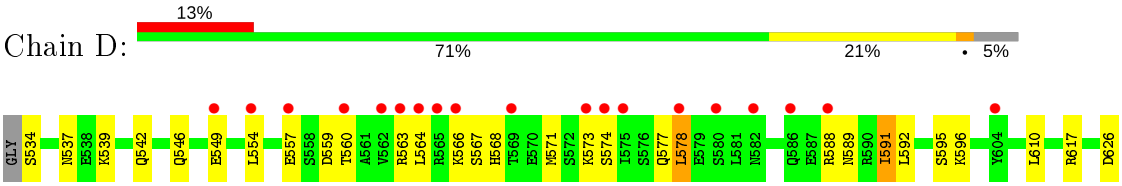
- Molecule 1: Rho-associated protein kinase 1

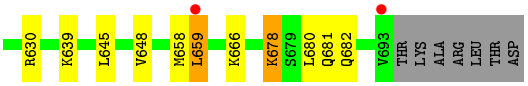
Chain C:



- Molecule 1: Rho-associated protein kinase 1

Chain D:




R630
K639
L645
V648
M658
L659
K666
K678
S679
L680
Q681
Q682
V693
THR
LYS
ALA
ARG
LEU
THR
ASP

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α, β, γ	84.59Å 84.59Å 340.13Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	42.13 – 2.33 48.92 – 2.33	Depositor EDS
% Data completeness (in resolution range)	67.9 (42.13-2.33) 69.1 (48.92-2.33)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.31 (at 2.32Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.6_289)	Depositor
R, R_{free}	0.239 , 0.286 0.229 , 0.282	Depositor DCC
R_{free} test set	1999 reflections (5.32%)	wwPDB-VP
Wilson B-factor (Å^2)	30.2	Xtriage
Anisotropy	0.981	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 65.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	5275	wwPDB-VP
Average B, all atoms (Å^2)	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 13.39% 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.

5 Model quality

5.1 Standard geometry

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	0.46	0/1297	0.63	2/1725 (0.1%)
1	B	0.43	0/1303	0.55	0/1731
1	C	0.43	0/1352	0.59	0/1796
1	D	0.41	0/1362	0.52	0/1810
All	All	0.43	0/5314	0.57	2/7062 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	617	ARG	NE-CZ-NH1	8.56	124.58	120.30
1	A	684	LEU	CA-CB-CG	5.08	126.99	115.30

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	1282	0	1282	29	0
1	B	1286	0	1290	26	0
1	C	1335	0	1344	34	0
1	D	1345	0	1357	28	0
2	A	7	0	0	0	0
2	B	7	0	0	0	0
2	C	9	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	4	0	0	0	0
All	All	5275	0	5273	93	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 (93) 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:C:617:ARG:HD2	1:D:617:ARG:HG3	1.54	0.87
1:D:678:LYS:HA	1:D:678:LYS:HE2	1.67	0.76
1:A:652:ARG:CG	1:A:652:ARG:HH11	2.00	0.75
1:A:652:ARG:HG2	1:A:652:ARG:HH11	1.55	0.72
1:A:552:ASP:O	1:A:556:THR:HG23	1.93	0.69
1:B:565:ARG:O	1:B:569:THR:HG23	1.93	0.69
1:C:666:LYS:HG3	1:D:666:LYS:HB2	1.77	0.66
1:C:658[A]:MSE:HE2	1:D:659:LEU:HD11	1.78	0.65
1:C:593:GLU:OE2	1:D:592:LEU:HD11	1.98	0.63
1:C:535:LEU:HD22	1:C:538:GLU:OE1	2.00	0.62
1:C:559:ASP:O	1:C:562:VAL:HG12	2.00	0.62
1:C:619:HIS:O	1:C:623[A]:MSE:HG3	2.00	0.62
1:A:652:ARG:CB	1:A:652:ARG:HH11	2.13	0.61
1:C:581:LEU:O	1:C:585:LEU:HG	2.01	0.61
1:C:631:ILE:O	1:C:635:GLN:HG3	2.03	0.58
1:A:635:GLN:HE21	1:B:630[B]:ARG:HH21	1.51	0.57
1:A:635:GLN:HE21	1:B:630[B]:ARG:NH2	2.03	0.57
1:C:617:ARG:HD2	1:D:617:ARG:CG	2.33	0.55
1:A:592:LEU:HD13	1:B:592:LEU:HB3	1.88	0.55
1:C:648:VAL:HG12	1:D:648:VAL:HG12	1.89	0.55
1:A:616:ASP:HB3	1:B:617:ARG:HH12	1.71	0.55
1:A:652:ARG:HG2	1:A:652:ARG:NH1	2.19	0.54
1:B:683:ARG:HD2	1:B:683:ARG:C	2.28	0.54
1:B:647:LYS:HB2	1:B:647:LYS:NZ	2.22	0.54
1:A:545:LYS:O	1:A:549:GLU:HG3	2.08	0.53
1:A:571:MSE:O	1:A:575:ILE:HD12	2.08	0.53
1:B:555:ARG:HB2	1:B:555:ARG:HH11	1.74	0.53
1:A:648:VAL:HG12	1:B:648:VAL:HG12	1.90	0.52
1:D:559:ASP:O	1:D:563:ARG:HG2	2.09	0.52
1:B:686:GLN:O	1:B:690:GLU:HG3	2.09	0.52
1:C:542:GLN:O	1:C:546:GLN:HG3	2.09	0.51
1:D:534:SER:HA	1:D:537:ASN:HB2	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:595:SER:OG	1:D:596:LYS:HD3	2.11	0.51
1:A:543:LEU:N	1:A:543:LEU:HD23	2.26	0.51
1:C:571[B]:MSE:SE	1:D:571[B]:MSE:SE	3.30	0.50
1:A:542:GLN:CD	1:A:544:GLN:HG3	2.31	0.50
1:C:568:HIS:O	1:C:572:SER:HB2	2.11	0.50
1:B:667:ASN:O	1:B:671:ILE:HD12	2.12	0.49
1:C:652:ARG:NH1	1:C:652:ARG:HG2	2.27	0.49
1:D:626:ASP:O	1:D:630[A]:ARG:HG3	2.12	0.48
1:A:592:LEU:O	1:A:595:SER:HB3	2.13	0.48
1:A:616:ASP:HB3	1:B:617:ARG:NH1	2.28	0.48
1:A:645:LEU:HA	1:A:645:LEU:HD23	1.59	0.48
1:C:588:ARG:O	1:C:592:LEU:HG	2.14	0.48
1:B:543:LEU:HD23	1:B:543:LEU:C	2.34	0.47
1:C:617:ARG:HB3	1:D:617:ARG:NH1	2.30	0.47
1:A:542:GLN:NE2	1:A:544:GLN:CG	2.77	0.47
1:A:587:GLU:OE1	1:A:590:ARG:NH1	2.48	0.47
1:A:656:GLN:HE22	1:A:659:LEU:HD23	1.79	0.47
1:D:539:LYS:HA	1:D:539:LYS:HD2	1.70	0.46
1:A:606:LEU:HD11	1:B:610:LEU:HD13	1.97	0.46
1:C:570:GLU:O	1:C:574:SER:HB2	2.16	0.46
1:A:658[B]:MSE:HE2	1:B:659:LEU:HD21	1.97	0.46
1:C:596:LYS:HE3	1:D:595:SER:OG	2.16	0.46
1:D:542:GLN:O	1:D:546:GLN:HG3	2.16	0.45
1:D:681:GLN:HE21	1:D:682:GLN:HG3	1.80	0.45
1:A:635:GLN:NE2	1:B:630[B]:ARG:HH21	2.14	0.45
1:B:647:LYS:HG2	1:B:648:VAL:N	2.30	0.45
1:C:666:LYS:O	1:C:670:GLU:HG3	2.17	0.45
1:A:592:LEU:HD11	1:B:593:GLU:HG3	1.98	0.45
1:C:553:LEU:O	1:C:557:GLU:HB3	2.16	0.45
1:D:557:GLU:HA	1:D:560:THR:OG1	2.16	0.45
1:C:666:LYS:HE2	1:C:666:LYS:HB3	1.80	0.45
1:A:613:GLU:OE1	1:B:610:LEU:HD23	2.18	0.44
1:B:555:ARG:O	1:B:559:ASP:HB2	2.17	0.44
1:C:578:LEU:HD21	1:D:578:LEU:HB3	1.99	0.44
1:B:617:ARG:HG3	1:B:617:ARG:O	2.18	0.43
1:A:544:GLN:H	1:A:544:GLN:HG3	1.58	0.43
1:B:566:LYS:O	1:B:570:GLU:HG3	2.19	0.43
1:D:568:HIS:HA	1:D:571[B]:MSE:HE2	2.00	0.43
1:C:577:GLN:O	1:C:580:SER:HB2	2.19	0.43
1:B:592:LEU:HA	1:B:592:LEU:HD12	1.70	0.43
1:D:554:LEU:HA	1:D:554:LEU:HD23	1.89	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:543:LEU:HA	1:C:543:LEU:HD23	1.84	0.42
1:D:573:LYS:C	1:D:573:LYS:HD2	2.39	0.42
1:C:555:ARG:HD3	1:C:555:ARG:HA	1.65	0.41
1:D:568:HIS:C	1:D:568:HIS:ND1	2.73	0.41
1:C:691:HIS:CG	1:C:691:HIS:O	2.73	0.41
1:C:589:ASN:CB	1:D:589:ASN:HD21	2.33	0.41
1:C:652:ARG:HG2	1:C:652:ARG:HH11	1.86	0.41
1:D:573:LYS:O	1:D:577:GLN:HG3	2.20	0.41
1:C:589:ASN:HB2	1:D:589:ASN:HD21	1.86	0.41
1:C:616:ASP:O	1:C:617:ARG:C	2.57	0.41
1:A:652:ARG:HH11	1:A:652:ARG:HB3	1.84	0.41
1:C:639:LYS:HB3	1:C:639:LYS:HE2	1.72	0.41
1:A:544:GLN:NE2	1:A:545:LYS:HG3	2.36	0.41
1:D:591:ILE:HG22	1:D:592:LEU:N	2.36	0.41
1:C:634:LEU:HA	1:C:634:LEU:HD12	1.96	0.40
1:B:639:LYS:HD2	1:B:639:LYS:HA	1.59	0.40
1:B:684:LEU:HA	1:B:684:LEU:HD23	1.87	0.40
1:B:616:ASP:N	1:B:616:ASP:OD1	2.53	0.40
1:A:678:LYS:HE3	1:A:678:LYS:HB2	1.96	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	153/168 (91%)	151 (99%)	2 (1%)	0	100	100
1	B	154/168 (92%)	151 (98%)	3 (2%)	0	100	100
1	C	161/168 (96%)	156 (97%)	5 (3%)	0	100	100
1	D	162/168 (96%)	160 (99%)	2 (1%)	0	100	100
All	All	630/672 (94%)	618 (98%)	12 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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	146/153 (95%)	129 (88%)	17 (12%)	5 4
1	B	147/153 (96%)	123 (84%)	24 (16%)	2 1
1	C	153/153 (100%)	131 (86%)	22 (14%)	3 2
1	D	154/153 (101%)	140 (91%)	14 (9%)	9 8
All	All	600/612 (98%)	523 (87%)	77 (13%)	4 3

All (77) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	542	GLN
1	A	543	LEU
1	A	544	GLN
1	A	546	GLN
1	A	567	SER
1	A	572	SER
1	A	592	LEU
1	A	593	GLU
1	A	613	GLU
1	A	615	ARG
1	A	634	LEU
1	A	636	GLU
1	A	645	LEU
1	A	652	ARG
1	A	675[A]	TYR
1	A	675[B]	TYR
1	A	682	GLN
1	B	543	LEU
1	B	544	GLN
1	B	552	ASP
1	B	555	ARG
1	B	556	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	557	GLU
1	B	558	SER
1	B	559	ASP
1	B	576	SER
1	B	578	LEU
1	B	580	SER
1	B	592	LEU
1	B	595	SER
1	B	597	SER
1	B	609	ILE
1	B	610	LEU
1	B	616	ASP
1	B	639	LYS
1	B	645	LEU
1	B	647	LYS
1	B	671	ILE
1	B	680	LEU
1	B	683	ARG
1	B	686	GLN
1	C	535	LEU
1	C	541	SER
1	C	542	GLN
1	C	543	LEU
1	C	547	LEU
1	C	555	ARG
1	C	557	GLU
1	C	558	SER
1	C	559	ASP
1	C	564	LEU
1	C	576	SER
1	C	586	GLN
1	C	596	LYS
1	C	606	LEU
1	C	610	LEU
1	C	616	ASP
1	C	634	LEU
1	C	636	GLU
1	C	659	LEU
1	C	679	SER
1	C	684	LEU
1	C	689	ASN
1	D	549	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	564	LEU
1	D	566	LYS
1	D	567	SER
1	D	574	SER
1	D	578	LEU
1	D	588	ARG
1	D	591	ILE
1	D	610	LEU
1	D	639	LYS
1	D	645	LEU
1	D	659	LEU
1	D	678	LYS
1	D	680	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	582	ASN
1	A	589	ASN
1	A	628	GLN
1	A	635	GLN
1	A	644	ASN
1	A	656	GLN
1	A	681	GLN
1	B	577	GLN
1	B	582	ASN
1	B	586	GLN
1	B	589	ASN
1	B	605	GLN
1	C	582	ASN
1	C	589	ASN
1	C	598	GLN
1	D	542	GLN
1	D	551	ASN
1	D	577	GLN
1	D	589	ASN
1	D	635	GLN
1	D	644	ASN
1	D	656	GLN
1	D	661	HIS
1	D	681	GLN
1	D	686	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 carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

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^{th} 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^2)	Q<0.9
1	A	149/168 (88%)	0.60	9 (6%) 21 30	38, 63, 113, 140	0
1	B	149/168 (88%)	0.52	7 (4%) 31 42	45, 77, 139, 165	0
1	C	156/168 (92%)	0.63	6 (3%) 40 51	40, 76, 127, 147	0
1	D	157/168 (93%)	0.88	21 (13%) 3 5	41, 82, 119, 145	0
All	All	611/672 (90%)	0.66	43 (7%) 16 24	38, 75, 125, 165	0

All (43) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	575	ILE	6.0
1	D	562	VAL	5.2
1	B	544	GLN	5.1
1	D	575	ILE	4.7
1	D	564	LEU	4.0
1	D	693	VAL	3.9
1	D	578	LEU	3.9
1	A	549	GLU	3.7
1	D	569	THR	3.7
1	A	693	VAL	3.6
1	B	547	LEU	3.4
1	C	588	ARG	3.4
1	A	675[A]	TYR	3.4
1	C	591	ILE	3.4
1	D	604	TYR	3.3
1	A	692	LYS	2.9
1	C	593	GLU	2.9
1	B	575	ILE	2.9
1	B	562	VAL	2.9
1	A	557	GLU	2.8
1	D	573	LYS	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	582	ASN	2.6
1	D	566	LYS	2.6
1	D	588	ARG	2.6
1	D	574	SER	2.5
1	B	555	ARG	2.5
1	D	580	SER	2.4
1	D	563	ARG	2.4
1	C	604	TYR	2.4
1	B	563	ARG	2.4
1	A	583	ARG	2.4
1	D	554	LEU	2.4
1	B	554	LEU	2.3
1	D	565	ARG	2.3
1	D	659	LEU	2.2
1	D	557	GLU	2.2
1	A	546	GLN	2.2
1	A	564	LEU	2.2
1	A	545	LYS	2.2
1	D	549	GLU	2.2
1	D	586	GLN	2.1
1	C	553	LEU	2.1
1	D	560	THR	2.1

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

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

6.3 Carbohydrates

There are no carbohydrates in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.