



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 17, 2024 – 10:18 PM EDT

PDB ID : 3CVG  
Title : Crystal structure of a periplasmic putative metal binding protein  
Authors : Agarwal, R.; Burley, S.K.; Swaminathan, S.; New York SGX Research Center  
for Structural Genomics (NYSGXRC)  
Deposited on : 2008-04-18  
Resolution : 1.97 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 : 4.02b-467  
Mogul : 2022.3.0, CSD as543be (2022)  
Xtriage (Phenix) : 1.20.1  
EDS : 2.37.1  
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) : 2.37.1

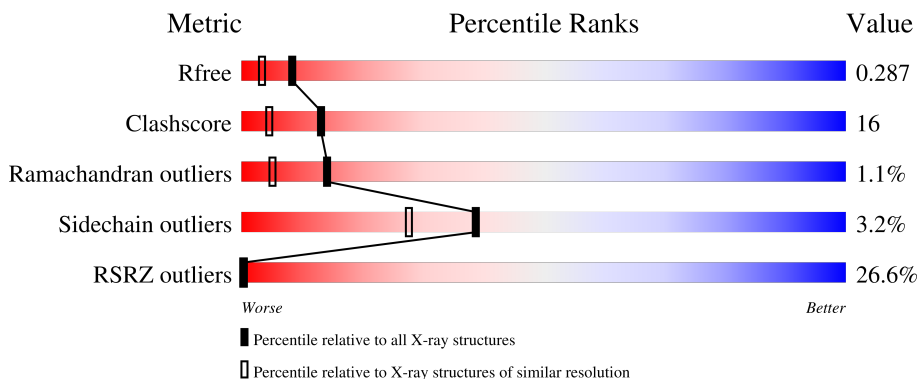
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.97 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	11647 (2.00-1.96)
Clashscore	141614	1014 (1.98-1.98)
Ramachandran outliers	138981	1006 (1.98-1.98)
Sidechain outliers	138945	1006 (1.98-1.98)
RSRZ outliers	127900	11410 (2.00-1.96)

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	294	
1	B	294	
1	C	294	
1	D	294	

## 2 Entry composition i

There are 3 unique types of molecules in this entry. The entry contains 8486 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 Putative metal binding protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	Se			
1	A	270	2113	1356	353	399	5	0	0	0
1	B	270	2113	1356	353	399	5	0	0	0
1	C	207	1640	1055	276	304	5	0	0	0
1	D	268	2096	1347	351	393	5	0	0	0

There are 44 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	19	MSE	-	expression tag	UNP Q1DXA6
A	20	SER	-	expression tag	UNP Q1DXA6
A	21	LEU	-	expression tag	UNP Q1DXA6
A	305	GLU	-	expression tag	UNP Q1DXA6
A	306	GLY	-	expression tag	UNP Q1DXA6
A	307	HIS	-	expression tag	UNP Q1DXA6
A	308	HIS	-	expression tag	UNP Q1DXA6
A	309	HIS	-	expression tag	UNP Q1DXA6
A	310	HIS	-	expression tag	UNP Q1DXA6
A	311	HIS	-	expression tag	UNP Q1DXA6
A	312	HIS	-	expression tag	UNP Q1DXA6
B	19	MSE	-	expression tag	UNP Q1DXA6
B	20	SER	-	expression tag	UNP Q1DXA6
B	21	LEU	-	expression tag	UNP Q1DXA6
B	305	GLU	-	expression tag	UNP Q1DXA6
B	306	GLY	-	expression tag	UNP Q1DXA6
B	307	HIS	-	expression tag	UNP Q1DXA6
B	308	HIS	-	expression tag	UNP Q1DXA6
B	309	HIS	-	expression tag	UNP Q1DXA6
B	310	HIS	-	expression tag	UNP Q1DXA6
B	311	HIS	-	expression tag	UNP Q1DXA6

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Chain	Residue	Modelled	Actual	Comment	Reference
B	312	HIS	-	expression tag	UNP Q1DXA6
C	19	MSE	-	expression tag	UNP Q1DXA6
C	20	SER	-	expression tag	UNP Q1DXA6
C	21	LEU	-	expression tag	UNP Q1DXA6
C	305	GLU	-	expression tag	UNP Q1DXA6
C	306	GLY	-	expression tag	UNP Q1DXA6
C	307	HIS	-	expression tag	UNP Q1DXA6
C	308	HIS	-	expression tag	UNP Q1DXA6
C	309	HIS	-	expression tag	UNP Q1DXA6
C	310	HIS	-	expression tag	UNP Q1DXA6
C	311	HIS	-	expression tag	UNP Q1DXA6
C	312	HIS	-	expression tag	UNP Q1DXA6
D	19	MSE	-	expression tag	UNP Q1DXA6
D	20	SER	-	expression tag	UNP Q1DXA6
D	21	LEU	-	expression tag	UNP Q1DXA6
D	305	GLU	-	expression tag	UNP Q1DXA6
D	306	GLY	-	expression tag	UNP Q1DXA6
D	307	HIS	-	expression tag	UNP Q1DXA6
D	308	HIS	-	expression tag	UNP Q1DXA6
D	309	HIS	-	expression tag	UNP Q1DXA6
D	310	HIS	-	expression tag	UNP Q1DXA6
D	311	HIS	-	expression tag	UNP Q1DXA6
D	312	HIS	-	expression tag	UNP Q1DXA6

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

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

- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	159	Total O 159 159	0	0

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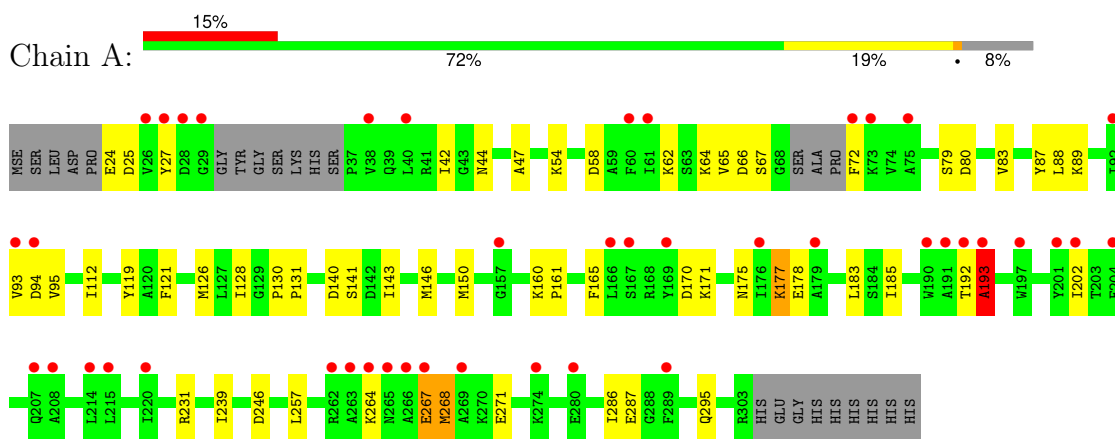
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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>		<b>ZeroOcc</b>	<b>AltConf</b>
3	B	113	Total 113	O 113	0	0
3	C	135	Total 135	O 135	0	0
3	D	113	Total 113	O 113	0	0

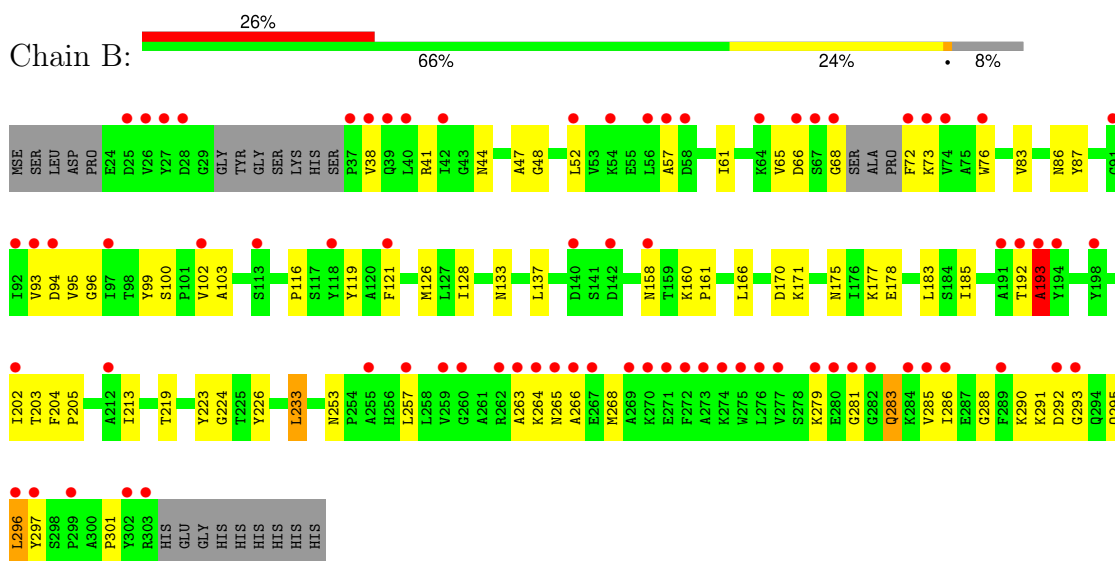
### 3 Residue-property plots i

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.

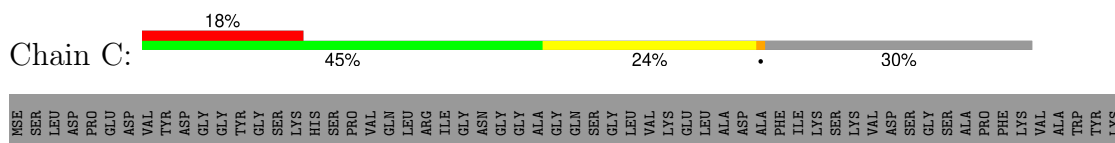
- Molecule 1: Putative metal binding protein

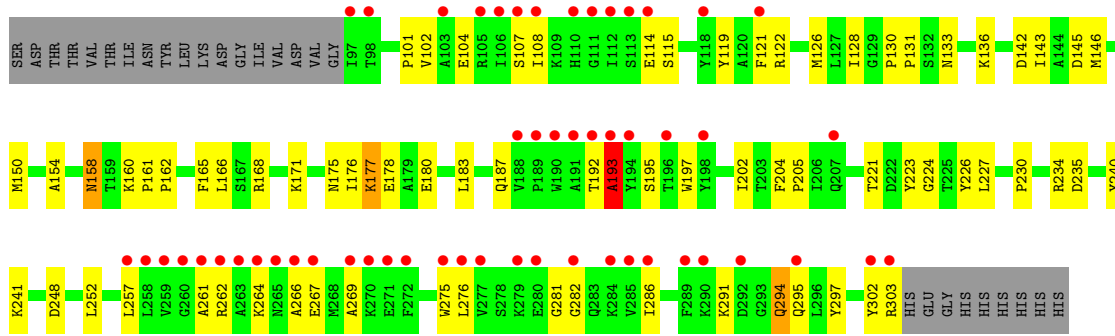


- Molecule 1: Putative metal binding protein

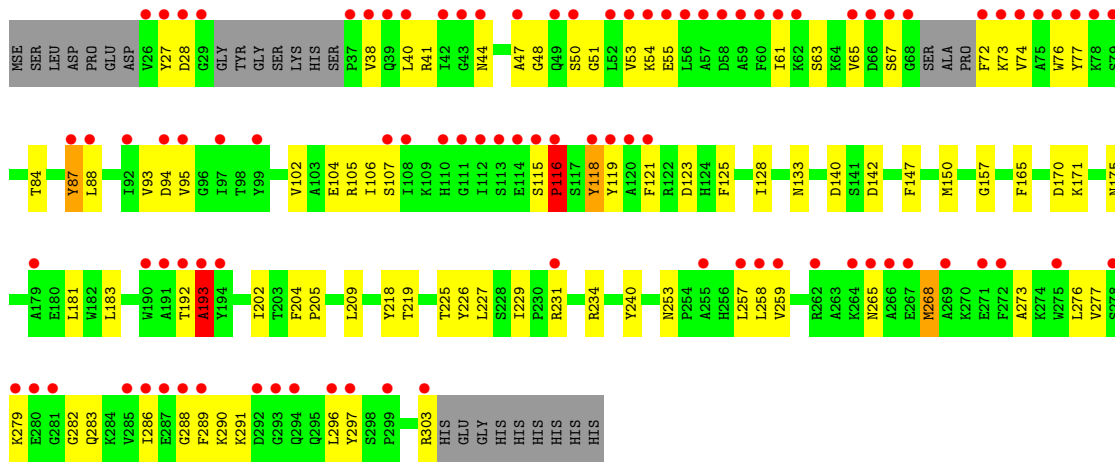


- Molecule 1: Putative metal binding protein





● Molecule 1: Putative metal binding protein



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 42 21 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	150.78Å 150.78Å 116.69Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	44.14 – 1.97 48.49 – 1.90	Depositor EDS
% Data completeness (in resolution range)	94.4 (44.14-1.97) 91.4 (48.49-1.90)	Depositor EDS
$R_{merge}$	0.06	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.34 (at 1.90Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.259 , 0.289 0.258 , 0.287	Depositor DCC
$R_{free}$ test set	2721 reflections (2.62%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	28.2	Xtrriage
Anisotropy	0.176	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33 , 45.7	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	8486	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	36.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.67% 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 [i](#)

### 5.1 Standard geometry [i](#)

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	0.36	0/2160	0.61	1/2918 (0.0%)
1	B	0.33	0/2160	0.60	1/2918 (0.0%)
1	C	0.35	0/1681	0.62	1/2274 (0.0%)
1	D	0.33	0/2143	0.61	1/2895 (0.0%)
All	All	0.34	0/8144	0.61	4/11005 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	193	ALA	N-CA-C	-10.64	82.28	111.00
1	A	193	ALA	N-CA-C	-10.26	83.31	111.00
1	B	193	ALA	N-CA-C	-10.07	83.80	111.00
1	C	193	ALA	N-CA-C	-9.87	84.35	111.00

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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	2113	0	2087	59	0
1	B	2113	0	2087	72	0
1	C	1640	0	1619	68	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	2096	0	2077	77	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	159	0	0	4	0
3	B	113	0	0	6	0
3	C	135	0	0	6	0
3	D	113	0	0	6	0
All	All	8486	0	7870	258	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 16.

All (258) 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:183:LEU:HD12	1:C:183:LEU:HD12	1.52	0.92
1:A:143:ILE:HA	1:A:146:MSE:HE3	1.55	0.88
1:C:136:LYS:HE3	3:C:470:HOH:O	1.76	0.85
1:D:277:VAL:HA	1:D:283:GLN:HE21	1.45	0.82
1:D:44:ASN:HD21	1:D:47:ALA:HB3	1.44	0.81
1:C:291:LYS:HD2	3:C:497:HOH:O	1.81	0.80
1:C:221:THR:HB	3:C:491:HOH:O	1.82	0.78
1:B:126:MSE:HE2	1:B:223:TYR:HA	1.65	0.78
1:A:202:ILE:HD13	1:C:192:THR:HG21	1.64	0.77
1:B:202:ILE:HD13	1:D:192:THR:HG21	1.67	0.76
1:D:118:TYR:HB2	1:D:257:LEU:HB3	1.65	0.76
1:B:160:LYS:HD2	1:B:161:PRO:HA	1.68	0.75
1:B:102:VAL:HG23	3:B:440:HOH:O	1.88	0.73
1:A:72:PHE:CE2	1:A:268:MSE:HE1	2.24	0.72
1:A:171:LYS:H	1:A:175:ASN:HD22	1.38	0.72
1:C:126:MSE:HE1	1:C:226:TYR:HB2	1.70	0.72
1:A:192:THR:HG21	1:C:202:ILE:HD13	1.70	0.71
1:C:158:ASN:HD22	1:C:158:ASN:H	1.38	0.71
1:A:171:LYS:HD2	1:C:193:ALA:HB3	1.73	0.70
1:A:231:ARG:HH11	1:A:231:ARG:HG2	1.55	0.70
1:B:171:LYS:H	1:B:175:ASN:HD22	1.39	0.70
1:D:44:ASN:ND2	1:D:47:ALA:HB3	2.06	0.70
1:A:185:ILE:HA	1:C:102:VAL:HG11	1.73	0.70
1:B:192:THR:HG21	1:D:202:ILE:HD13	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:283:GLN:HE21	1:B:283:GLN:HA	1.54	0.70
1:C:143:ILE:HD12	1:C:146:MSE:HE3	1.72	0.69
1:B:121:PHE:HB3	1:B:286:ILE:HD13	1.73	0.69
1:D:38:VAL:HG22	1:D:73:LYS:HB2	1.72	0.69
1:D:77:TYR:CD2	1:D:93:VAL:HG12	2.28	0.69
1:D:171:LYS:H	1:D:175:ASN:HD22	1.38	0.69
1:C:143:ILE:HA	1:C:146:MSE:HE3	1.73	0.68
1:C:150:MSE:HE1	1:C:165:PHE:HD1	1.58	0.68
1:C:266:ALA:HA	1:C:269:ALA:HB3	1.75	0.68
1:B:183:LEU:HD12	1:D:183:LEU:HD12	1.76	0.68
1:C:121:PHE:HB3	1:C:286:ILE:HD13	1.77	0.67
1:A:150:MSE:HE1	1:A:165:PHE:HD1	1.59	0.66
1:D:227:LEU:HD12	1:D:296:LEU:HD13	1.78	0.66
1:D:258:LEU:HG	3:D:446:HOH:O	1.96	0.65
1:A:89:LYS:HD2	1:A:112:ILE:HD11	1.77	0.65
1:D:72:PHE:CE2	1:D:268:MSE:HE1	2.33	0.64
1:B:295:GLN:HG3	3:B:481:HOH:O	1.98	0.63
1:C:171:LYS:H	1:C:175:ASN:HD22	1.46	0.63
1:B:263:ALA:HA	3:B:487:HOH:O	1.97	0.63
1:B:296:LEU:HG	1:B:297:TYR:CE1	2.34	0.62
1:A:80:ASP:OD1	1:A:83:VAL:HG23	1.99	0.62
1:D:288:GLY:O	1:D:290:LYS:HG3	1.99	0.62
1:A:177:LYS:HE3	1:A:177:LYS:HA	1.82	0.61
1:C:146:MSE:HE1	1:C:241:LYS:CG	2.30	0.61
1:D:28:ASP:O	1:D:61:ILE:HG21	2.00	0.61
1:D:303:ARG:HD3	3:D:461:HOH:O	1.99	0.61
1:C:158:ASN:H	1:C:158:ASN:ND2	1.99	0.61
1:C:224:GLY:HA2	3:C:497:HOH:O	2.01	0.60
1:B:95:VAL:HB	1:B:257:LEU:HD11	1.83	0.60
1:A:121:PHE:HB3	1:A:286:ILE:HD13	1.83	0.60
1:B:296:LEU:HD12	1:B:297:TYR:N	2.16	0.60
1:D:28:ASP:OD1	1:D:73:LYS:HG2	2.00	0.60
1:C:294:GLN:HG2	3:C:446:HOH:O	2.01	0.60
1:C:276:LEU:HD12	1:C:282:GLY:HA3	1.83	0.59
1:A:79:SER:HB2	1:A:83:VAL:HB	1.83	0.59
1:B:183:LEU:HD12	1:D:183:LEU:CD1	2.32	0.59
1:A:72:PHE:CZ	1:A:268:MSE:HE1	2.38	0.59
1:A:140:ASP:HB2	3:A:532:HOH:O	2.02	0.59
1:B:44:ASN:ND2	1:B:47:ALA:HB3	2.18	0.58
1:C:146:MSE:HE1	1:C:241:LYS:HG2	1.84	0.58
1:D:282:GLY:O	1:D:286:ILE:HG13	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:95:VAL:HB	1:A:257:LEU:HD11	1.86	0.58
1:D:48:GLY:HA3	1:D:76:TRP:CZ2	2.37	0.58
1:A:44:ASN:ND2	1:A:47:ALA:HB3	2.19	0.58
1:D:63:SER:O	1:D:67:SER:HB3	2.04	0.58
1:B:171:LYS:HD2	1:D:193:ALA:HB3	1.86	0.57
1:C:235:ASP:HB3	3:C:496:HOH:O	2.04	0.57
1:D:128:ILE:C	1:D:128:ILE:HD12	2.24	0.57
1:C:158:ASN:ND2	1:C:158:ASN:N	2.52	0.57
1:D:150:MSE:HE1	1:D:165:PHE:HD1	1.68	0.57
1:A:231:ARG:HG2	1:A:231:ARG:NH1	2.20	0.57
1:A:246:ASP:HB3	3:A:444:HOH:O	2.05	0.56
1:B:290:LYS:HG2	1:B:295:GLN:HA	1.87	0.56
1:D:55:GLU:HG2	3:D:431:HOH:O	2.06	0.56
1:B:183:LEU:CD1	1:D:183:LEU:HD12	2.35	0.56
1:B:213:ILE:HG21	1:B:233:LEU:HD22	1.87	0.56
1:B:192:THR:O	1:B:193:ALA:CB	2.54	0.56
1:A:72:PHE:CD2	1:A:268:MSE:HE1	2.41	0.56
1:C:158:ASN:HD22	1:C:158:ASN:N	2.00	0.56
1:B:38:VAL:HG22	1:B:73:LYS:HB2	1.87	0.56
1:C:143:ILE:HA	1:C:146:MSE:CE	2.35	0.55
1:B:52:LEU:HD22	1:B:297:TYR:CD1	2.41	0.55
1:D:88:LEU:HD23	1:D:93:VAL:HG23	1.88	0.55
1:B:263:ALA:O	1:B:266:ALA:HB2	2.07	0.54
1:B:203:THR:HB	3:B:502:HOH:O	2.07	0.54
1:B:292:ASP:OD2	1:B:293:GLY:N	2.41	0.53
1:C:223:TYR:CE2	1:C:227:LEU:HD11	2.43	0.53
1:D:227:LEU:HB3	1:D:291:LYS:HG2	1.89	0.53
1:A:65:VAL:C	1:A:67:SER:N	2.62	0.53
1:D:257:LEU:CD2	1:D:273:ALA:HA	2.38	0.53
1:D:27:TYR:HE1	1:D:53:VAL:HG12	1.74	0.53
1:C:176:ILE:O	1:C:180:GLU:HG3	2.09	0.53
1:D:289:PHE:HB3	3:D:458:HOH:O	2.08	0.53
1:D:171:LYS:H	1:D:175:ASN:ND2	2.07	0.52
1:D:72:PHE:CD2	1:D:268:MSE:HE1	2.45	0.52
1:A:58:ASP:O	1:A:62:LYS:HB2	2.09	0.52
1:C:108:ILE:HG23	1:C:115:SER:HB2	1.92	0.52
1:C:101:PRO:O	1:C:104:GLU:HB2	2.10	0.52
1:D:40:LEU:HD11	1:D:95:VAL:HG22	1.92	0.52
1:A:44:ASN:HD21	1:A:47:ALA:HB3	1.75	0.52
1:C:108:ILE:CG2	1:C:115:SER:HB2	2.41	0.51
1:D:303:ARG:HG2	1:D:303:ARG:HH11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:185:ILE:HA	1:D:102:VAL:HG21	1.93	0.51
1:D:95:VAL:HG12	1:D:259:VAL:HG22	1.93	0.51
1:D:121:PHE:HB3	1:D:286:ILE:HD13	1.93	0.51
1:B:292:ASP:CG	1:B:293:GLY:H	2.13	0.51
1:D:61:ILE:HD11	1:D:74:VAL:HG23	1.91	0.51
1:A:27:TYR:CD2	1:A:54:LYS:HG3	2.46	0.51
1:A:64:LYS:HE2	1:A:64:LYS:HA	1.93	0.51
1:C:142:ASP:OD2	1:C:145:ASP:HB2	2.11	0.51
1:D:54:LYS:HB3	3:D:431:HOH:O	2.11	0.51
1:D:171:LYS:N	1:D:175:ASN:HD22	2.06	0.51
1:C:126:MSE:CE	1:C:226:TYR:HB2	2.39	0.50
1:B:192:THR:O	1:B:193:ALA:HB3	2.11	0.50
1:D:226:TYR:O	1:D:229:ILE:HG12	2.11	0.50
1:A:89:LYS:HD2	1:A:112:ILE:CD1	2.40	0.50
1:B:279:LYS:H	1:B:279:LYS:HD2	1.77	0.50
1:A:267:GLU:O	1:A:271:GLU:HG2	2.11	0.50
1:B:48:GLY:HA3	1:B:76:TRP:CZ2	2.46	0.50
1:D:88:LEU:CD2	1:D:93:VAL:HG23	2.40	0.50
1:A:192:THR:O	1:A:193:ALA:CB	2.59	0.50
1:A:171:LYS:H	1:A:175:ASN:ND2	2.06	0.50
1:B:291:LYS:O	1:B:292:ASP:HB3	2.10	0.50
1:C:262:ARG:HA	1:C:262:ARG:HH11	1.76	0.50
1:C:262:ARG:HA	1:C:262:ARG:NH1	2.27	0.50
1:B:126:MSE:CE	1:B:223:TYR:HA	2.41	0.50
1:C:150:MSE:HE1	1:C:165:PHE:CD1	2.42	0.50
1:A:193:ALA:HB3	1:C:171:LYS:HD2	1.93	0.49
1:B:116:PRO:HG2	3:B:486:HOH:O	2.12	0.49
1:D:125:PHE:CE2	1:D:253:ASN:HB2	2.47	0.49
1:A:183:LEU:CD1	1:C:183:LEU:HD12	2.33	0.49
1:D:231:ARG:HG2	1:D:234:ARG:CZ	2.43	0.49
1:B:65:VAL:HA	1:B:68:GLY:O	2.13	0.49
1:D:61:ILE:O	1:D:65:VAL:HG23	2.13	0.49
1:A:171:LYS:N	1:A:175:ASN:HD22	2.08	0.49
1:B:87:TYR:HB3	1:B:93:VAL:HG22	1.95	0.49
1:B:296:LEU:HG	1:B:297:TYR:CD1	2.47	0.49
1:D:105:ARG:HH11	1:D:105:ARG:HG2	1.78	0.49
1:B:41:ARG:NH2	3:B:487:HOH:O	2.46	0.48
1:D:192:THR:O	1:D:193:ALA:CB	2.61	0.48
1:D:209:LEU:HD23	1:D:225:THR:HG22	1.95	0.48
1:A:88:LEU:HD23	1:A:93:VAL:HG23	1.96	0.48
1:B:83:VAL:HA	1:B:86:ASN:HD22	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:204:PHE:HB3	1:B:205:PRO:HD2	1.94	0.48
1:D:41:ARG:HB3	1:D:77:TYR:HE2	1.78	0.48
1:B:126:MSE:HE2	1:B:223:TYR:CA	2.41	0.48
1:D:296:LEU:HG	1:D:297:TYR:CE1	2.48	0.48
1:A:150:MSE:HE1	1:A:165:PHE:CD1	2.46	0.47
1:D:257:LEU:HD22	1:D:276:LEU:HD23	1.96	0.47
1:B:52:LEU:HD22	1:B:297:TYR:CE1	2.49	0.47
1:B:193:ALA:HB3	1:D:171:LYS:HD2	1.95	0.47
1:A:94:ASP:OD1	1:A:264:LYS:O	2.33	0.47
1:C:128:ILE:HD12	1:C:128:ILE:C	2.35	0.47
1:C:160:LYS:HD2	1:C:161:PRO:HA	1.96	0.47
1:C:161:PRO:HB2	1:C:162:PRO:HD2	1.97	0.47
1:C:183:LEU:HD23	1:C:187:GLN:O	2.14	0.47
1:C:204:PHE:HB3	1:C:205:PRO:HD2	1.96	0.47
1:D:257:LEU:HD21	1:D:273:ALA:HA	1.97	0.47
1:C:166:LEU:HD23	1:C:166:LEU:C	2.36	0.47
1:D:204:PHE:HB3	1:D:205:PRO:HD2	1.96	0.47
1:C:133:ASN:HB2	1:C:240:TYR:OH	2.15	0.46
1:C:192:THR:O	1:C:193:ALA:CB	2.63	0.46
1:D:150:MSE:CE	1:D:218:TYR:HB2	2.45	0.46
1:B:283:GLN:HA	1:B:283:GLN:NE2	2.27	0.46
1:B:170:ASP:O	1:B:171:LYS:HB2	2.16	0.46
1:B:44:ASN:HD21	1:B:47:ALA:H	1.64	0.46
1:A:170:ASP:O	1:A:171:LYS:HB2	2.15	0.46
1:D:48:GLY:HA2	1:D:53:VAL:HB	1.98	0.46
1:A:89:LYS:HD3	3:A:505:HOH:O	2.15	0.46
1:B:57:ALA:O	1:B:61:ILE:HG13	2.16	0.45
1:B:94:ASP:OD1	1:B:264:LYS:O	2.34	0.45
1:C:171:LYS:N	1:C:175:ASN:HD22	2.13	0.45
1:D:102:VAL:O	1:D:106:ILE:HG13	2.16	0.45
1:B:72:PHE:CE1	1:B:268:MSE:HE3	2.51	0.45
1:B:100:SER:HB3	1:B:103:ALA:HB3	1.98	0.45
1:A:44:ASN:HD21	1:A:47:ALA:H	1.64	0.45
1:A:65:VAL:C	1:A:67:SER:H	2.20	0.45
1:A:62:LYS:O	1:A:66:ASP:HB2	2.17	0.45
1:B:44:ASN:HD21	1:B:47:ALA:HB3	1.81	0.45
1:C:295:GLN:HG2	1:C:297:TYR:O	2.16	0.45
1:A:24:GLU:O	1:A:25:ASP:HB2	2.16	0.45
1:A:177:LYS:HE3	1:A:177:LYS:CA	2.46	0.45
1:B:96:GLY:O	1:B:257:LEU:HA	2.17	0.45
1:C:122:ARG:HB3	1:C:252:LEU:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:166:LEU:C	1:B:166:LEU:HD23	2.38	0.44
1:C:130:PRO:HA	1:C:131:PRO:HD3	1.94	0.44
1:D:104:GLU:O	1:D:107:SER:HB3	2.17	0.44
1:B:204:PHE:HB3	1:B:205:PRO:CD	2.48	0.44
1:B:281:GLY:O	1:B:285:VAL:HG23	2.17	0.44
1:C:204:PHE:HB3	1:C:205:PRO:CD	2.48	0.44
1:A:160:LYS:HA	1:A:161:PRO:HA	1.86	0.44
1:C:275:TRP:O	1:C:281:GLY:HA3	2.18	0.44
1:C:264:LYS:C	1:C:266:ALA:N	2.70	0.44
1:D:147:PHE:CE1	1:D:181:LEU:HD13	2.53	0.43
1:D:204:PHE:HB3	1:D:205:PRO:CD	2.48	0.43
1:C:160:LYS:HD2	1:C:160:LYS:HA	1.74	0.43
1:C:257:LEU:C	1:C:257:LEU:HD23	2.38	0.43
1:B:126:MSE:HE1	1:B:226:TYR:CB	2.48	0.43
1:B:224:GLY:CA	1:B:296:LEU:HD11	2.47	0.43
1:B:279:LYS:HD2	1:B:279:LYS:N	2.33	0.43
1:B:44:ASN:HD22	1:B:48:GLY:H	1.65	0.43
1:A:64:LYS:HE2	3:A:530:HOH:O	2.19	0.43
1:B:133:ASN:HD21	1:B:137:LEU:N	2.17	0.43
1:A:62:LYS:O	1:A:66:ASP:CB	2.67	0.43
1:C:177:LYS:HE3	1:C:177:LYS:HA	2.00	0.43
1:D:94:ASP:CG	1:D:265:ASN:HD22	2.22	0.43
1:D:227:LEU:HD13	1:D:291:LYS:HB3	2.01	0.43
1:B:213:ILE:HG21	1:B:233:LEU:CD2	2.49	0.43
1:D:44:ASN:HD21	1:D:47:ALA:CB	2.25	0.43
1:A:42:ILE:HG12	1:A:95:VAL:CG2	2.49	0.42
1:A:130:PRO:HA	1:A:131:PRO:HD3	1.93	0.42
1:A:192:THR:O	1:A:193:ALA:HB3	2.18	0.42
1:B:44:ASN:HD21	1:B:47:ALA:N	2.16	0.42
1:D:133:ASN:HB2	1:D:240:TYR:OH	2.20	0.42
1:D:157:GLY:HA2	3:D:428:HOH:O	2.19	0.42
1:B:288:GLY:O	1:B:290:LYS:HG3	2.20	0.42
1:C:168:ARG:NH1	1:C:205:PRO:HG3	2.34	0.42
1:C:230:PRO:O	1:C:234:ARG:HG3	2.19	0.42
1:B:192:THR:CG2	1:D:202:ILE:HD13	2.43	0.42
1:A:126:MSE:HE3	1:A:239:ILE:HG12	2.01	0.42
1:B:224:GLY:HA2	1:B:296:LEU:HD11	2.01	0.42
1:B:160:LYS:HA	1:B:161:PRO:HA	1.92	0.42
1:B:44:ASN:ND2	1:B:48:GLY:H	2.18	0.42
1:B:99:TYR:HB3	1:B:253:ASN:OD1	2.20	0.42
1:C:104:GLU:O	1:C:107:SER:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:154:ALA:HB1	1:C:197:TRP:CG	2.55	0.41
1:D:118:TYR:CE1	1:D:273:ALA:HB1	2.55	0.41
1:A:160:LYS:HA	1:A:160:LYS:HD2	1.74	0.41
1:B:41:ARG:HE	1:B:41:ARG:HB2	1.73	0.41
1:D:128:ILE:HD11	1:D:219:THR:HG22	2.02	0.41
1:D:150:MSE:HE1	1:D:218:TYR:HB2	2.01	0.41
1:A:192:THR:HG21	1:C:202:ILE:CD1	2.46	0.41
1:B:48:GLY:HA3	1:B:76:TRP:CE2	2.56	0.41
1:D:125:PHE:CD2	1:D:253:ASN:HB2	2.56	0.41
1:D:257:LEU:HD22	1:D:276:LEU:CD2	2.50	0.41
1:A:87:TYR:HB3	1:A:93:VAL:HG22	2.02	0.41
1:C:223:TYR:CZ	1:C:227:LEU:HD11	2.56	0.41
1:D:118:TYR:N	1:D:118:TYR:CD2	2.88	0.41
1:A:128:ILE:C	1:A:128:ILE:HD12	2.41	0.41
1:C:195:SER:HB3	1:C:197:TRP:CE2	2.56	0.41
1:C:171:LYS:H	1:C:175:ASN:ND2	2.15	0.41
1:C:257:LEU:HD23	1:C:257:LEU:O	2.21	0.41
1:C:303:ARG:HG3	1:C:303:ARG:HH11	1.84	0.41
1:D:84:THR:O	1:D:87:TYR:HB2	2.21	0.41
1:A:287:GLU:HA	1:A:295:GLN:NE2	2.35	0.41
1:C:114:GLU:HG3	1:C:261:ALA:HA	2.03	0.41
1:A:44:ASN:HD21	1:A:47:ALA:N	2.19	0.41
1:A:141:SER:O	1:A:146:MSE:HE2	2.21	0.41
1:D:170:ASP:O	1:D:171:LYS:HB2	2.22	0.40
1:A:202:ILE:CD1	1:C:192:THR:HG21	2.44	0.40
1:D:115:SER:HA	1:D:116:PRO:HA	1.76	0.40
1:B:128:ILE:C	1:B:128:ILE:HD12	2.42	0.40
1:B:128:ILE:HD11	1:B:219:THR:HG22	2.04	0.40
1:D:123:ASP:HB3	1:D:253:ASN:O	2.21	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	264/294 (90%)	256 (97%)	7 (3%)	1 (0%)	34	22
1	B	264/294 (90%)	244 (92%)	17 (6%)	3 (1%)	14	5
1	C	205/294 (70%)	191 (93%)	12 (6%)	2 (1%)	15	6
1	D	262/294 (89%)	240 (92%)	17 (6%)	5 (2%)	8	1
All	All	995/1176 (85%)	931 (94%)	53 (5%)	11 (1%)	14	5

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	193	ALA
1	B	193	ALA
1	C	193	ALA
1	D	193	ALA
1	B	158	ASN
1	D	279	LYS
1	C	302	TYR
1	D	50	SER
1	B	301	PRO
1	D	51	GLY
1	D	116	PRO

### 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	222/236 (94%)	217 (98%)	5 (2%)	50	44
1	B	222/236 (94%)	214 (96%)	8 (4%)	35	23
1	C	172/236 (73%)	165 (96%)	7 (4%)	30	18
1	D	220/236 (93%)	213 (97%)	7 (3%)	39	28
All	All	836/944 (89%)	809 (97%)	27 (3%)	39	28

All (27) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	119	TYR
1	A	177	LYS
1	A	178	GLU
1	A	267	GLU
1	A	268	MSE
1	B	66	ASP
1	B	119	TYR
1	B	177	LYS
1	B	178	GLU
1	B	233	LEU
1	B	265	ASN
1	B	283	GLN
1	B	296	LEU
1	C	119	TYR
1	C	158	ASN
1	C	177	LYS
1	C	178	GLU
1	C	248	ASP
1	C	267	GLU
1	C	294	GLN
1	D	87	TYR
1	D	116	PRO
1	D	118	TYR
1	D	119	TYR
1	D	140	ASP
1	D	142	ASP
1	D	268	MSE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	44	ASN
1	A	49	GLN
1	A	86	ASN
1	A	110	HIS
1	A	175	ASN
1	A	295	GLN
1	B	44	ASN
1	B	86	ASN
1	B	175	ASN
1	B	295	GLN
1	C	158	ASN
1	C	175	ASN

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Mol	Chain	Res	Type
1	C	236	GLN
1	C	265	ASN
1	D	44	ASN
1	D	49	GLN
1	D	124	HIS
1	D	175	ASN
1	D	256	HIS
1	D	265	ASN
1	D	283	GLN
1	D	295	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are 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 [i](#)

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	265/294 (90%)	1.04	43 (16%) <b>1</b> <b>1</b>	15, 30, 50, 58	0
1	B	265/294 (90%)	1.57	75 (28%) <b>0</b> <b>0</b>	17, 39, 55, 59	0
1	C	202/294 (68%)	1.61	54 (26%) <b>0</b> <b>0</b>	16, 34, 57, 63	0
1	D	263/294 (89%)	1.80	93 (35%) <b>0</b> <b>0</b>	17, 44, 55, 60	0
All	All	995/1176 (84%)	1.50	265 (26%) <b>0</b> <b>0</b>	15, 36, 55, 63	0

All (265) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	302	TYR	11.1
1	C	269	ALA	9.5
1	C	266	ALA	9.4
1	B	72	PHE	9.0
1	C	272	PHE	8.5
1	B	38	VAL	8.2
1	B	26	VAL	7.3
1	D	65	VAL	7.1
1	D	257	LEU	7.0
1	A	262	ARG	6.9
1	C	262	ARG	6.7
1	D	53	VAL	6.6
1	D	72	PHE	6.6
1	B	276	LEU	6.5
1	B	302	TYR	6.4
1	B	303	ARG	6.3
1	D	76	TRP	6.2
1	D	108	ILE	6.1
1	C	261	ALA	6.0
1	D	37	PRO	6.0
1	D	61	ILE	6.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	D	38	VAL	6.0
1	B	118	TYR	6.0
1	D	296	LEU	5.9
1	D	66	ASP	5.7
1	B	37	PRO	5.7
1	B	67	SER	5.6
1	C	112	ILE	5.5
1	D	264	LYS	5.5
1	D	56	LEU	5.3
1	C	303	ARG	5.2
1	B	266	ALA	5.2
1	D	280	GLU	5.2
1	D	57	ALA	5.2
1	D	259	VAL	5.2
1	C	289	PHE	5.1
1	B	40	LEU	5.1
1	D	62	LYS	5.1
1	D	39	GLN	5.1
1	D	118	TYR	5.1
1	C	111	GLY	5.0
1	B	66	ASP	4.9
1	B	92	ILE	4.8
1	D	42	ILE	4.8
1	C	280	GLU	4.8
1	C	267	GLU	4.8
1	D	271	GLU	4.7
1	C	265	ASN	4.7
1	C	271	GLU	4.7
1	A	61	ILE	4.7
1	C	257	LEU	4.6
1	C	259	VAL	4.6
1	D	27	TYR	4.6
1	B	281	GLY	4.6
1	C	276	LEU	4.6
1	B	272	PHE	4.6
1	D	29	GLY	4.6
1	D	78	LYS	4.5
1	C	264	LYS	4.5
1	C	286	ILE	4.5
1	D	68	GLY	4.5
1	B	257	LEU	4.4
1	D	275	TRP	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	C	114	GLU	4.4
1	D	28	ASP	4.4
1	C	263	ALA	4.3
1	C	97	ILE	4.3
1	D	67	SER	4.3
1	D	74	VAL	4.2
1	D	113	SER	4.2
1	A	267	GLU	4.2
1	B	74	VAL	4.2
1	B	285	VAL	4.1
1	C	113	SER	4.1
1	B	262	ARG	4.1
1	D	75	ALA	4.1
1	A	280	GLU	4.1
1	C	285	VAL	4.1
1	B	140	ASP	4.1
1	D	52	LEU	4.0
1	D	95	VAL	4.0
1	C	108	ILE	4.0
1	B	296	LEU	4.0
1	B	273	ALA	4.0
1	D	267	GLU	3.9
1	D	97	ILE	3.9
1	A	26	VAL	3.9
1	A	27	TYR	3.9
1	B	263	ALA	3.8
1	B	76	TRP	3.8
1	D	59	ALA	3.8
1	D	77	TYR	3.8
1	D	266	ALA	3.8
1	D	281	GLY	3.8
1	D	87	TYR	3.8
1	B	52	LEU	3.7
1	D	116	PRO	3.7
1	B	280	GLU	3.7
1	B	93	VAL	3.6
1	B	289	PHE	3.6
1	A	269	ALA	3.6
1	D	262	ARG	3.6
1	A	202	ILE	3.6
1	A	93	VAL	3.6
1	A	28	ASP	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	73	LYS	3.5
1	A	40	LEU	3.5
1	C	282	GLY	3.4
1	A	263	ALA	3.4
1	D	193	ALA	3.4
1	D	285	VAL	3.4
1	D	286	ILE	3.4
1	B	292	ASP	3.4
1	D	303	ARG	3.4
1	C	260	GLY	3.4
1	C	258	LEU	3.4
1	B	265	ASN	3.3
1	C	275	TRP	3.3
1	D	60	PHE	3.3
1	C	103	ALA	3.3
1	C	279	LYS	3.3
1	B	64	LYS	3.2
1	C	284	LYS	3.2
1	B	27	TYR	3.2
1	C	277	VAL	3.2
1	D	58	ASP	3.2
1	D	115	SER	3.2
1	A	264	LYS	3.2
1	B	275	TRP	3.2
1	D	292	ASP	3.2
1	D	50	SER	3.2
1	D	121	PHE	3.1
1	B	267	GLU	3.1
1	C	193	ALA	3.1
1	A	72	PHE	3.1
1	C	192	THR	3.1
1	C	98	THR	3.1
1	D	92	ILE	3.1
1	D	40	LEU	3.0
1	D	120	ALA	3.0
1	B	68	GLY	3.0
1	B	91	GLY	3.0
1	D	190	TRP	3.0
1	B	192	THR	2.9
1	B	282	GLY	2.9
1	B	193	ALA	2.9
1	D	278	SER	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	D	294	GLN	2.9
1	B	25	ASP	2.9
1	D	114	GLU	2.9
1	B	269	ALA	2.9
1	C	191	ALA	2.9
1	D	231	ARG	2.9
1	C	110	HIS	2.9
1	B	57	ALA	2.9
1	C	290	LYS	2.9
1	D	73	LYS	2.9
1	C	190	TRP	2.8
1	D	293	GLY	2.8
1	D	112	ILE	2.8
1	D	191	ALA	2.8
1	B	121	PHE	2.8
1	A	73	LYS	2.7
1	D	287	GLU	2.8
1	D	55	GLU	2.7
1	C	194	TYR	2.7
1	C	198	TYR	2.7
1	C	292	ASP	2.7
1	D	179	ALA	2.7
1	A	190	TRP	2.7
1	A	193	ALA	2.7
1	A	207	GLN	2.7
1	A	215	LEU	2.7
1	A	289	PHE	2.7
1	D	297	TYR	2.7
1	B	39	GLN	2.6
1	D	194	TYR	2.6
1	A	166	LEU	2.6
1	D	54	LYS	2.6
1	D	26	VAL	2.6
1	B	28	ASP	2.6
1	D	192	THR	2.6
1	D	88	LEU	2.5
1	A	92	ILE	2.5
1	C	189	PRO	2.5
1	B	113	SER	2.5
1	A	179	ALA	2.5
1	A	169	TYR	2.5
1	B	293	GLY	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	C	107	SER	2.5
1	A	38	VAL	2.5
1	B	102	VAL	2.5
1	D	43	GLY	2.5
1	D	107	SER	2.5
1	B	279	LYS	2.5
1	B	284	LYS	2.5
1	A	60	PHE	2.5
1	D	299	PRO	2.4
1	B	54	LYS	2.4
1	D	49	GLN	2.4
1	A	266	ALA	2.4
1	D	288	GLY	2.4
1	D	279	LYS	2.4
1	B	158	ASN	2.4
1	D	269	ALA	2.4
1	C	105	ARG	2.4
1	B	270	LYS	2.4
1	A	167	SER	2.3
1	A	75	ALA	2.3
1	A	274	LYS	2.3
1	B	194	TYR	2.3
1	B	202	ILE	2.3
1	C	106	ILE	2.3
1	B	274	LYS	2.3
1	D	44	ASN	2.3
1	A	208	ALA	2.3
1	B	212	ALA	2.3
1	B	264	LYS	2.3
1	B	259	VAL	2.3
1	D	111	GLY	2.3
1	A	214	LEU	2.3
1	C	118	TYR	2.3
1	C	121	PHE	2.3
1	A	157	GLY	2.3
1	B	260	GLY	2.3
1	C	270	LYS	2.3
1	D	110	HIS	2.3
1	A	204	PHE	2.2
1	A	265	ASN	2.2
1	D	47	ALA	2.2
1	A	220	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	286	ILE	2.2
1	D	258	LEU	2.2
1	C	196	THR	2.2
1	B	58	ASP	2.2
1	C	295	GLN	2.2
1	B	297	TYR	2.2
1	D	119	TYR	2.2
1	C	188	VAL	2.2
1	A	197	TRP	2.2
1	D	79	SER	2.2
1	B	198	TYR	2.2
1	B	94	ASP	2.2
1	D	255	ALA	2.1
1	C	207	GLN	2.1
1	B	255	ALA	2.1
1	A	191	ALA	2.1
1	D	265	ASN	2.1
1	A	201	TYR	2.1
1	D	99	TYR	2.1
1	B	271	GLU	2.1
1	A	192	THR	2.1
1	D	94	ASP	2.1
1	A	94	ASP	2.1
1	B	142	ASP	2.1
1	A	176	ILE	2.1
1	D	272	PHE	2.0
1	D	289	PHE	2.0
1	B	191	ALA	2.0
1	B	299	PRO	2.0
1	A	29	GLY	2.0
1	B	42	ILE	2.0
1	B	277	VAL	2.0
1	B	56	LEU	2.0
1	B	97	ILE	2.0

## 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 [i](#)

There are no monosaccharides 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	CA	B	401	1/1	0.91	0.11	49,49,49,49	0
2	CA	D	401	1/1	0.97	0.09	39,39,39,39	0
2	CA	A	401	1/1	0.98	0.05	32,32,32,32	0
2	CA	C	401	1/1	0.99	0.06	35,35,35,35	0

### 6.5 Other polymers [i](#)

There are no such residues in this entry.