Full wwPDB X-ray Structure Validation Report (i)

Jan 31, 2016 – 07:29 PM GMT

PDB ID	:	1FVA
Title	:	CRYSTAL STRUCTURE OF BOVINE METHIONINE SULFOXIDE REDUCTASE
Authors	:	Lowther, W.T.; Brot, N.; Weissbach, H.; Matthews, B.W.
Deposited on	:	2000-09-19
Resolution	:	1.70 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
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

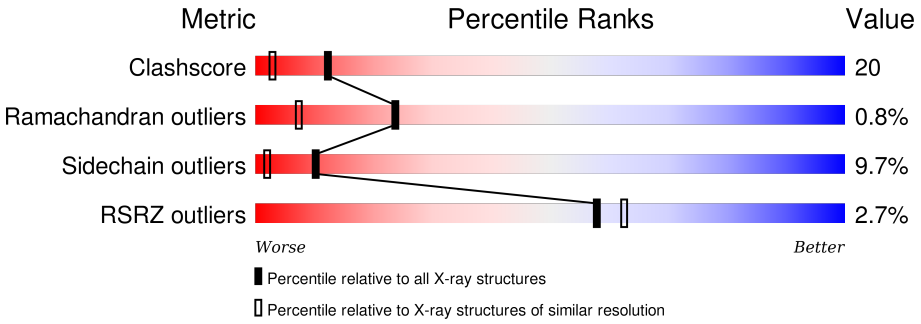
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026688
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 1.70 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))
Clashscore	102246	3585 (1.70-1.70)
Ramachandran outliers	100387	3527 (1.70-1.70)
Sidechain outliers	100360	3527 (1.70-1.70)
RSRZ outliers	91569	3200 (1.70-1.70)

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. 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	217	5% 44% 39% 8% 8%
1	B	217	62% 25% 7%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 3314 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 PEPTIDE METHIONINE SULFOXIDE REDUCTASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	200	Total	C	N	O	S	31	0	0
			1565	992	269	297	7			
1	B	201	Total	C	N	O	S	36	0	0
			1573	998	270	298	7			

- Molecule 2 is water.

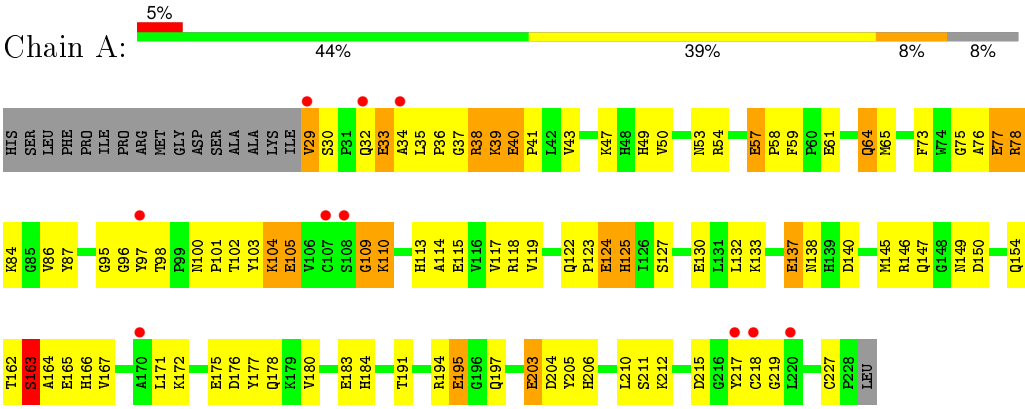
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	61	Total	O	0	0
			61	61		
2	B	115	Total	O	0	0
			115	115		

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 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.

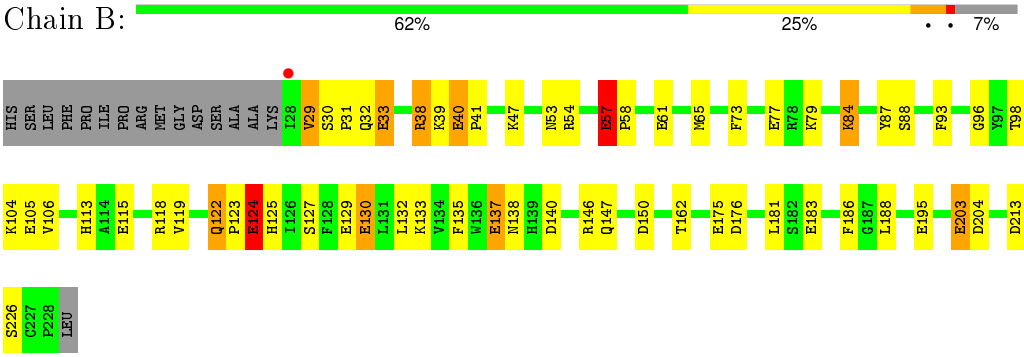
- Molecule 1: PEPTIDE METHIONINE SULFOXIDE REDUCTASE

Chain A:



- Molecule 1: PEPTIDE METHIONINE SULFOXIDE REDUCTASE

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	53.71Å 66.20Å 62.14Å 90.00° 90.99° 90.00°	Depositor
Resolution (Å)	45.20 – 1.70 45.30 – 1.70	Depositor EDS
% Data completeness (in resolution range)	(Not available) (45.20-1.70) 97.6 (45.30-1.70)	Depositor EDS
R_{merge}	0.03	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.53 (at 1.70Å)	Xtriage
Refinement program	TNT V. 5-E	Depositor
R, R_{free}	0.207 , 0.280 0.214 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	DCC
Wilson B-factor (Å^2)	19.5	Xtriage
Anisotropy	0.446	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.39 , 91.8	EDS
Estimated twinning fraction	0.026 for h,-k,-l	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Outliers	0 of 46980 reflections	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	3314	wwPDB-VP
Average B, all atoms (Å^2)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.94% 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, 0.375 respectively for untwinned datasets, and 0.333, 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	0.98	13/1612 (0.8%)	1.28	17/2186 (0.8%)
1	B	1.00	14/1620 (0.9%)	1.22	10/2197 (0.5%)
All	All	0.99	27/3232 (0.8%)	1.25	27/4383 (0.6%)

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	33	GLU	CD-OE2	7.10	1.33	1.25
1	B	203	GLU	CD-OE2	6.73	1.33	1.25
1	A	77	GLU	CD-OE2	6.53	1.32	1.25
1	B	77	GLU	CD-OE2	6.33	1.32	1.25
1	A	105	GLU	CD-OE2	6.19	1.32	1.25
1	B	195	GLU	CD-OE2	6.11	1.32	1.25
1	B	129	GLU	CD-OE2	5.93	1.32	1.25
1	A	137	GLU	CD-OE2	5.86	1.32	1.25
1	B	137	GLU	CD-OE2	5.79	1.32	1.25
1	B	115	GLU	CD-OE2	5.71	1.31	1.25
1	A	124	GLU	CD-OE2	5.64	1.31	1.25
1	A	175	GLU	CD-OE2	5.61	1.31	1.25
1	A	57	GLU	CD-OE2	5.58	1.31	1.25
1	B	61	GLU	CD-OE2	5.32	1.31	1.25
1	B	183	GLU	CD-OE2	5.31	1.31	1.25
1	A	115	GLU	CD-OE2	5.31	1.31	1.25
1	A	165	GLU	CD-OE2	5.29	1.31	1.25
1	A	33	GLU	CD-OE2	5.28	1.31	1.25
1	A	40	GLU	CD-OE2	5.28	1.31	1.25
1	A	61	GLU	CD-OE2	5.26	1.31	1.25
1	B	124	GLU	CD-OE2	5.25	1.31	1.25
1	B	175	GLU	CD-OE2	5.24	1.31	1.25
1	A	195	GLU	CD-OE2	5.23	1.31	1.25
1	B	57	GLU	CD-OE2	5.18	1.31	1.25
1	B	40	GLU	CD-OE2	5.17	1.31	1.25
1	B	130	GLU	CD-OE2	5.12	1.31	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	183	GLU	CD-OE2	5.09	1.31	1.25

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	213	ASP	CB-CG-OD2	-7.49	111.56	118.30
1	A	150	ASP	CB-CG-OD1	7.34	124.91	118.30
1	B	150	ASP	CB-CG-OD2	-7.20	111.83	118.30
1	B	215	ASP	CB-CG-OD2	-7.04	111.97	118.30
1	A	204	ASP	CB-CG-OD1	6.99	124.59	118.30
1	B	150	ASP	CB-CG-OD1	6.75	124.38	118.30
1	A	140	ASP	CB-CG-OD1	6.51	124.16	118.30
1	A	194	ARG	NE-CZ-NH2	-6.49	117.06	120.30
1	A	215	ASP	CB-CG-OD2	-6.39	112.55	118.30
1	A	215	ASP	CB-CG-OD1	6.34	124.00	118.30
1	B	118	ARG	NE-CZ-NH2	-6.24	117.18	120.30
1	B	213	ASP	CB-CG-OD1	6.13	123.82	118.30
1	B	140	ASP	CB-CG-OD2	-5.95	112.95	118.30
1	A	150	ASP	CB-CG-OD2	-5.89	113.00	118.30
1	A	109	GLY	N-CA-C	-5.84	98.50	113.10
1	A	54	ARG	NE-CZ-NH2	-5.81	117.39	120.30
1	A	78	ARG	NE-CZ-NH1	5.81	123.21	120.30
1	A	176	ASP	CB-CG-OD1	5.71	123.44	118.30
1	A	140	ASP	CB-CG-OD2	-5.60	113.26	118.30
1	A	176	ASP	CB-CG-OD2	-5.53	113.33	118.30
1	A	194	ARG	NE-CZ-NH1	5.46	123.03	120.30
1	B	125	HIS	CA-CB-CG	-5.45	104.34	113.60
1	A	204	ASP	CB-CG-OD2	-5.41	113.43	118.30
1	A	54	ARG	NE-CZ-NH1	5.31	122.95	120.30
1	A	125	HIS	CA-CB-CG	-5.31	104.58	113.60
1	B	176	ASP	CB-CG-OD1	5.13	122.92	118.30
1	B	204	ASP	CB-CG-OD1	5.05	122.84	118.30

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	1565	0	1473	87	0
1	B	1573	0	1484	30	0
2	A	61	0	0	4	0
2	B	115	0	0	2	0
All	All	3314	0	2957	117	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 20.

All (117) 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:64:GLN:CG	1:A:123:PRO:HG3	2.03	0.88
1:B:38:ARG:HD2	1:B:100:ASN:O	1.83	0.78
1:A:203:GLU:HG2	1:A:206:HIS:HD2	1.49	0.78
1:A:163:SER:O	1:A:167:VAL:HG23	1.83	0.77
1:A:102:THR:OG1	1:A:105:GLU:HG3	1.84	0.77
1:A:95:GLY:HA2	1:A:197:GLN:OE1	1.90	0.71
1:A:39:LYS:O	1:A:41:PRO:HD3	1.90	0.71
1:A:124:GLU:HG3	1:A:125:HIS:CD2	2.26	0.70
1:A:145:MET:HA	1:A:145:MET:HE2	1.75	0.69
1:A:203:GLU:HG2	1:A:206:HIS:CD2	2.27	0.69
1:A:78:ARG:NH2	1:A:210:LEU:HD13	2.09	0.68
1:B:38:ARG:HG2	1:B:100:ASN:HB2	1.75	0.67
1:A:164:ALA:O	1:A:167:VAL:HB	1.94	0.67
1:A:64:GLN:HG2	1:A:123:PRO:HG3	1.76	0.66
1:A:38:ARG:HG3	1:A:40:GLU:H	1.62	0.64
1:B:30:SER:OG	1:B:33:GLU:HB2	1.98	0.63
1:A:203:GLU:OE1	1:A:203:GLU:N	2.30	0.63
1:A:79:LYS:HD3	1:A:138:ASN:HB3	1.81	0.63
1:A:161:PRO:HB3	1:A:166:HIS:HB3	1.82	0.62
1:A:64:GLN:CD	1:A:123:PRO:HG3	2.20	0.62
1:A:124:GLU:HG2	1:A:125:HIS:H	1.63	0.62
1:A:36:PRO:HD2	2:A:264:HOH:O	2.00	0.61
1:B:127:SER:OG	1:B:130:GLU:HG3	2.00	0.61
1:B:84:LYS:NZ	1:B:84:LYS:HB3	2.15	0.61
1:B:30:SER:O	1:B:31:PRO:C	2.37	0.60
1:A:41:PRO:HA	2:A:248:HOH:O	2.02	0.60
1:A:75:GLY:O	1:A:79:LYS:HE3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:98:THR:O	1:B:101:PRO:HD3	2.02	0.59
1:A:203:GLU:HG3	1:A:205:TYR:CZ	2.37	0.58
1:A:127:SER:N	1:A:130:GLU:OE2	2.28	0.58
1:B:122:GLN:OE1	1:B:124:GLU:HG2	2.03	0.58
1:B:122:GLN:OE1	1:B:123:PRO:HD2	2.04	0.57
1:A:101:PRO:HA	1:A:105:GLU:OE1	2.05	0.56
1:A:53:ASN:HB3	1:A:87:TYR:CZ	2.40	0.56
1:A:57:GLU:OE1	1:A:58:PRO:HA	2.06	0.56
1:A:77:GLU:HG2	1:A:81:TRP:CE3	2.40	0.56
1:A:37:GLY:N	2:A:264:HOH:O	2.29	0.55
1:A:122:GLN:HB3	1:A:124:GLU:CD	2.26	0.55
1:A:161:PRO:HG2	1:A:167:VAL:HG22	1.88	0.55
1:A:146:ARG:HG2	1:A:147:GLN:N	2.20	0.55
1:B:181:LEU:HB3	1:B:186:PHE:HB2	1.87	0.55
1:A:37:GLY:O	1:A:38:ARG:HB3	2.07	0.55
1:A:127:SER:OG	1:A:130:GLU:HG3	2.06	0.54
1:A:34:ALA:HA	1:A:110:LYS:O	2.07	0.54
1:B:93:PHE:CD2	1:B:106:VAL:HG21	2.43	0.54
1:A:79:LYS:CD	1:A:138:ASN:HB3	2.38	0.54
1:A:145:MET:HE2	1:A:156:ARG:CB	2.38	0.54
1:B:54:ARG:NH2	1:B:57:GLU:O	2.33	0.54
1:A:124:GLU:HG3	1:A:125:HIS:NE2	2.23	0.53
1:A:137:GLU:OE1	1:A:227:CYS:N	2.31	0.53
1:A:145:MET:HE2	1:A:156:ARG:HB3	1.91	0.52
1:A:127:SER:HG	1:A:130:GLU:HG3	1.74	0.52
1:B:162:THR:HG23	2:B:232:HOH:O	2.10	0.52
1:A:50:VAL:HG22	1:A:211:SER:OG	2.09	0.52
1:A:127:SER:HG	1:A:130:GLU:CG	2.23	0.51
1:A:98:THR:O	1:A:101:PRO:HD3	2.10	0.51
1:A:180:VAL:O	1:A:184:HIS:HD2	1.94	0.50
1:A:162:THR:O	1:A:163:SER:HB3	2.11	0.50
1:B:79:LYS:HE3	1:B:138:ASN:OD1	2.12	0.50
1:A:96:GLY:HA3	1:A:113:HIS:N	2.28	0.49
1:B:137:GLU:O	1:B:222:GLY:HA3	2.12	0.49
1:B:102:THR:OG1	1:B:105:GLU:HG3	2.12	0.48
1:A:49:HIS:CE1	1:A:212:LYS:HG3	2.47	0.48
1:A:77:GLU:HG2	1:A:81:TRP:HE3	1.78	0.48
1:A:59:PHE:CD1	1:A:65:MET:CE	2.97	0.48
1:A:37:GLY:N	1:A:98:THR:HG23	2.29	0.48
1:A:100:ASN:N	1:A:101:PRO:HD3	2.30	0.47
1:A:146:ARG:CG	1:A:147:GLN:N	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:ASN:N	1:A:101:PRO:CD	2.78	0.47
1:A:177:TYR:O	1:A:178:GLN:C	2.52	0.47
1:A:76:ALA:HA	1:A:79:LYS:HE3	1.97	0.47
1:B:146:ARG:HG2	1:B:147:GLN:N	2.30	0.46
1:A:203:GLU:HG3	1:A:205:TYR:OH	2.15	0.46
1:A:145:MET:HA	1:A:145:MET:CE	2.43	0.46
1:A:133:LYS:HG3	1:A:137:GLU:OE1	2.16	0.46
1:A:117:VAL:CG2	1:A:118:ARG:N	2.79	0.46
1:A:59:PHE:CE1	1:A:65:MET:CE	2.99	0.46
1:A:157:SER:HB3	1:A:191:THR:HA	1.99	0.45
1:B:57:GLU:CG	1:B:58:PRO:HA	2.47	0.45
1:B:103:TYR:HB2	1:B:203:GLU:OE1	2.17	0.45
1:A:59:PHE:CE1	1:A:65:MET:HE1	2.52	0.45
1:B:53:ASN:HB3	1:B:87:TYR:CZ	2.52	0.45
1:B:132:LEU:O	1:B:135:PHE:HB3	2.16	0.45
1:B:30:SER:O	1:B:33:GLU:N	2.49	0.44
1:A:132:LEU:HD23	1:A:132:LEU:HA	1.85	0.44
1:A:38:ARG:HG3	1:A:40:GLU:N	2.31	0.44
1:A:124:GLU:HG2	1:A:125:HIS:N	2.31	0.44
1:B:162:THR:HG22	2:B:289:HOH:O	2.16	0.44
1:B:87:TYR:O	1:B:88:SER:HB3	2.18	0.44
1:B:65:MET:HA	1:B:119:VAL:O	2.17	0.44
1:A:83:LEU:HB2	1:A:86:VAL:CG2	2.48	0.44
1:B:40:GLU:HA	1:B:41:PRO:HD3	1.76	0.44
1:A:124:GLU:CG	1:A:125:HIS:CD2	2.99	0.44
1:A:145:MET:CE	1:A:156:ARG:HB2	2.48	0.44
1:A:35:LEU:HB3	2:A:264:HOH:O	2.18	0.43
1:B:100:ASN:N	1:B:101:PRO:CD	2.81	0.43
1:B:96:GLY:N	1:B:113:HIS:ND1	2.62	0.43
1:A:217:TYR:CE1	1:A:219:GLY:HA2	2.53	0.43
1:A:78:ARG:HH21	1:A:210:LEU:HD13	1.81	0.43
1:A:122:GLN:O	1:A:125:HIS:N	2.52	0.42
1:A:145:MET:CE	1:A:145:MET:CA	2.98	0.42
1:A:39:LYS:H	1:A:39:LYS:HG3	1.68	0.42
1:A:103:TYR:HB2	1:A:203:GLU:CD	2.39	0.42
1:A:29:VAL:O	1:A:97:TYR:HE1	2.02	0.42
1:A:104:LYS:O	1:A:105:GLU:C	2.57	0.42
1:B:133:LYS:NZ	1:B:137:GLU:OE2	2.37	0.42
1:A:122:GLN:OE1	1:A:125:HIS:HD2	2.03	0.41
1:A:59:PHE:CD1	1:A:65:MET:HE1	2.56	0.41
1:A:78:ARG:HH21	1:A:210:LEU:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:171:LEU:HA	1:A:171:LEU:HD23	1.85	0.41
1:A:37:GLY:CA	1:A:98:THR:HG23	2.50	0.41
1:A:145:MET:CE	1:A:156:ARG:CB	2.99	0.41
1:B:93:PHE:CE2	1:B:106:VAL:HG21	2.56	0.41
1:A:114:ALA:HA	1:A:154:GLN:HA	2.03	0.41
1:A:65:MET:HA	1:A:119:VAL:O	2.21	0.41
1:A:83:LEU:HB2	1:A:86:VAL:HG21	2.03	0.40
1:A:137:GLU:CD	1:A:227:CYS:H	2.20	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	198/217 (91%)	180 (91%)	16 (8%)	2 (1%)	19 4
1	B	199/217 (92%)	193 (97%)	5 (2%)	1 (0%)	34 15
All	All	397/434 (92%)	373 (94%)	21 (5%)	3 (1%)	24 7

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	163	SER
1	A	109	GLY
1	B	29	VAL

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	164/178 (92%)	145 (88%)	19 (12%)	7 1
1	B	165/178 (93%)	152 (92%)	13 (8%)	15 3
All	All	329/356 (92%)	297 (90%)	32 (10%)	10 2

All (32) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	29	VAL
1	A	30	SER
1	A	32	GLN
1	A	33	GLU
1	A	38	ARG
1	A	39	LYS
1	A	43	VAL
1	A	47	LYS
1	A	64	GLN
1	A	73	PHE
1	A	84	LYS
1	A	104	LYS
1	A	110	LYS
1	A	149	ASN
1	A	163	SER
1	A	172	LYS
1	A	195	GLU
1	A	203	GLU
1	A	218	CYS
1	B	29	VAL
1	B	32	GLN
1	B	38	ARG
1	B	39	LYS
1	B	47	LYS
1	B	57	GLU
1	B	73	PHE
1	B	84	LYS
1	B	104	LYS
1	B	122	GLN
1	B	124	GLU
1	B	188	LEU
1	B	226	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	32	GLN
1	A	125	HIS
1	A	151	HIS
1	A	184	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

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	200/217 (92%)	0.36	10 (5%) 32 35	23, 37, 68, 96	9 (4%)
1	B	201/217 (92%)	-0.07	1 (0%) 91 93	17, 26, 48, 69	10 (4%)
All	All	401/434 (92%)	0.14	11 (2%) 58 62	17, 31, 60, 96	19 (4%)

All (11) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	218	CYS	4.8
1	A	34	ALA	4.4
1	A	217	TYR	3.8
1	A	97	TYR	3.7
1	A	107	CYS	3.1
1	A	29	VAL	3.0
1	A	108	SER	2.5
1	B	28	ILE	2.4
1	A	32	GLN	2.2
1	A	170	ALA	2.2
1	A	220	LEU	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.