wwPDB X-ray Structure Validation Summary Report (i)

Feb 1, 2016 – 02:11 AM GMT

PDB ID	:	2G0J
Title	:	Crystal structure of SMU.848 from Streptococcus mutans
Authors	:	Hou, H.-F.; Gao, Z.-Q.; Li, L.-F.; Liang, Y.-H.; Su, X.-D.; Dong, Y.-H.
Deposited on	:	2006-02-13
Resolution	:	2.80 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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:

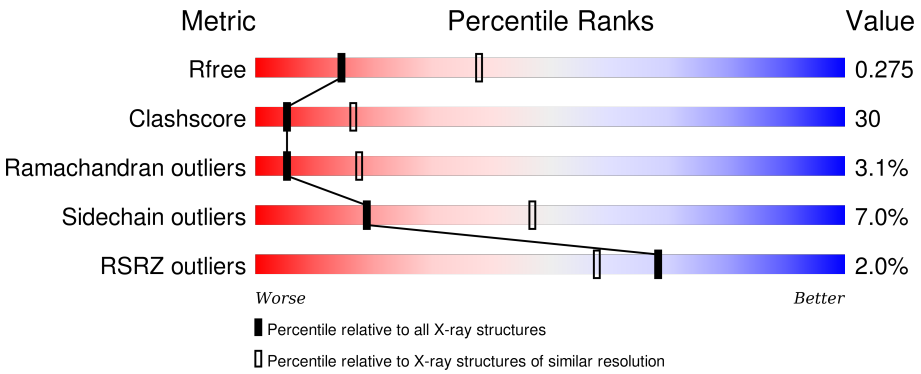
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026688
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	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 2.80 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	2393 (2.80-2.80)
Clashscore	102246	2827 (2.80-2.80)
Ramachandran outliers	100387	2782 (2.80-2.80)
Sidechain outliers	100360	2784 (2.80-2.80)
RSRZ outliers	91569	2404 (2.80-2.80)

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	145	3%; 38%; 37%; • •; 21%
1	B	145	%; 42%; 32%; •; 23%
1	C	145	2%; 51%; 26%; •; 20%
1	D	145	38%; 35%; • •; 22%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 3540 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 SMU.848.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	114	870	550	139	174	7	0	0	0
1	B	112	855	542	134	172	7	0	0	0
1	C	116	882	557	141	176	8	0	0	0
1	D	113	859	544	135	173	7	0	0	0

There are 136 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-33	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-32	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-31	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-30	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-29	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-28	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-27	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-26	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-25	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-24	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-23	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-22	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-21	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-20	LEU	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-19	VAL	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-18	PRO	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-17	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-16	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-15	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-14	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-13	MET	-	CLONING ARTIFACT	UNP Q8DUQ5

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-12	ALA	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-11	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-10	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-9	THR	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-8	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-7	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-6	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-5	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-4	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-3	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-2	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
A	-1	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
A	0	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-33	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-32	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-31	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-30	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-29	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-28	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-27	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-26	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-25	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-24	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-23	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-22	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-21	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-20	LEU	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-19	VAL	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-18	PRO	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-17	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-16	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-15	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-14	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-13	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-12	ALA	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-11	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-10	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-9	THR	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-8	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-7	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-6	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-5	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-4	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-3	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-2	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
B	-1	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
B	0	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-33	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-32	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-31	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-30	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-29	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-28	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-27	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-26	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-25	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-24	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-23	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-22	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-21	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-20	LEU	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-19	VAL	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-18	PRO	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-17	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-16	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-15	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-14	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-13	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-12	ALA	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-11	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-10	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-9	THR	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-8	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-7	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-6	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-5	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-4	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-3	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-2	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
C	-1	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
C	0	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-33	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-32	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-31	SER	-	CLONING ARTIFACT	UNP Q8DUQ5

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-30	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-29	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-28	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-27	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-26	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-25	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-24	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-23	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-22	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-21	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-20	LEU	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-19	VAL	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-18	PRO	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-17	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-16	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-15	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-14	HIS	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-13	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-12	ALA	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-11	SER	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-10	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-9	THR	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-8	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-7	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-6	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-5	GLN	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-4	MET	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-3	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-2	ARG	-	CLONING ARTIFACT	UNP Q8DUQ5
D	-1	GLY	-	CLONING ARTIFACT	UNP Q8DUQ5
D	0	SER	-	CLONING ARTIFACT	UNP Q8DUQ5

- Molecule 2 is water.

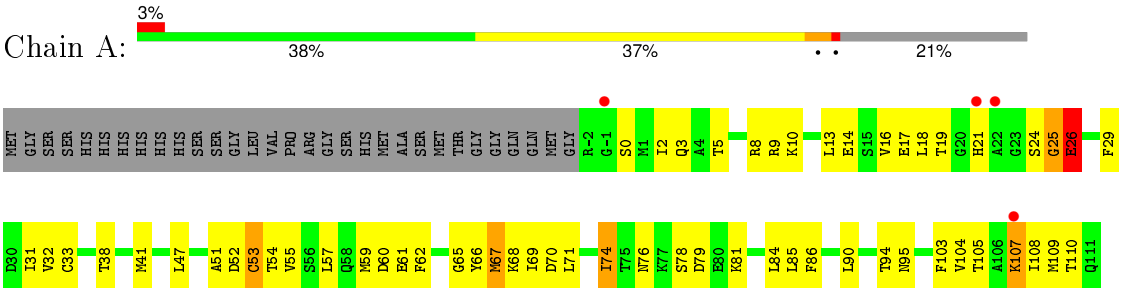
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
2	A	23	23	23	0	0
2	B	17	Total 17	O 17	0	0
2	C	16	Total 16	O 16	0	0
2	D	18	Total 18	O 18	0	0

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.

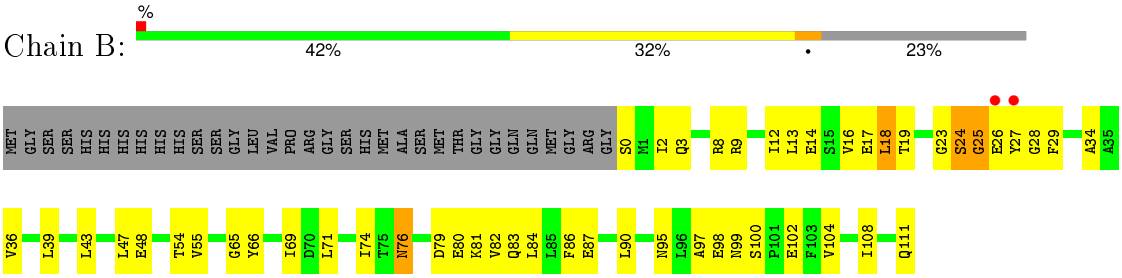
- Molecule 1: hypothetical protein SMU.848

Chain A:



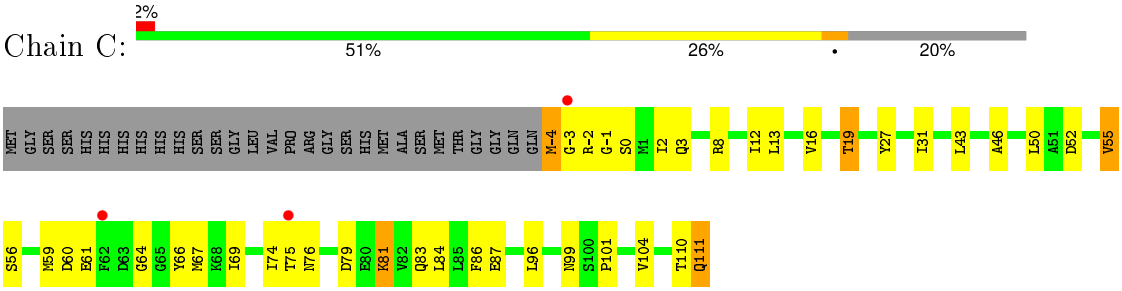
- Molecule 1: hypothetical protein SMU.848

Chain B:



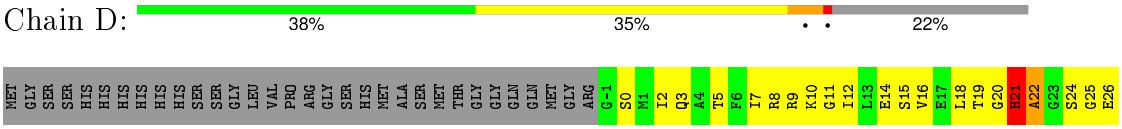
- Molecule 1: hypothetical protein SMU.848

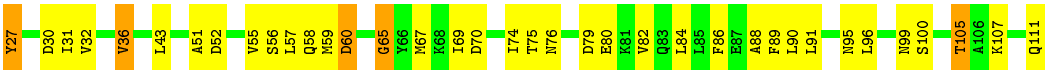
Chain C:



- Molecule 1: hypothetical protein SMU.848

Chain D:




Y27
D30
I31
V32
V36
L43
A51
D52
V55
S56
L57
Q58
M59
D60
G65
Y66
M67
K68
I69
D70
I74
T75
N76
D79
E80
K81
V82
Q83
L84
L85
F86
E87
A88
F89
L90
L91
N95
L96
N99
S100
T105
A106
K107
Q111

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α, β, γ	78.16Å 78.16Å 130.16Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	50.00 – 2.80 46.91 – 2.80	Depositor EDS
% Data completeness (in resolution range)	94.8 (50.00-2.80) 94.8 (46.91-2.80)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.23 (at 2.81Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.226 , 0.259 0.226 , 0.275	Depositor DCC
R_{free} test set	575 reflections (5.14%)	DCC
Wilson B-factor (Å^2)	42.4	Xtriage
Anisotropy	0.483	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 63.9	EDS
Estimated twinning fraction	0.043 for -h,-k,l	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Outliers	0 of 11790 reflections	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	3540	wwPDB-VP
Average B, all atoms (Å^2)	38.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.80% 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 (i)

5.1 Standard geometry (i)

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	0/880	0.69	0/1185
1	B	0.46	0/865	0.70	0/1166
1	C	0.43	0/892	0.67	0/1200
1	D	0.47	0/869	0.73	0/1171
All	All	0.46	0/3506	0.70	0/4722

There are no bond length outliers.

There are no bond angle outliers.

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	870	0	872	71	0
1	B	855	0	856	56	0
1	C	882	0	884	59	0
1	D	859	0	859	43	0
2	A	23	0	0	5	1
2	B	17	0	0	2	1
2	C	16	0	0	2	0
2	D	18	0	0	0	0
All	All	3540	0	3471	209	2

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 30.

The worst 5 of 209 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:B:80:GLU:HG3	1:C:-3:GLY:H	1.09	1.15
1:C:81:LYS:HD3	1:D:84:LEU:HD22	1.33	1.09
1:B:80:GLU:HG3	1:C:-3:GLY:N	1.71	1.04
1:C:84:LEU:HD23	1:D:84:LEU:HD23	1.44	0.96
1:A:107:LYS:HZ1	1:A:109:MET:HG2	1.34	0.89

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:128:HOH:O	2:A:128:HOH:O[5_554]	0.31	1.89
2:B:127:HOH:O	2:B:127:HOH:O[5_554]	1.00	1.20

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	112/145 (77%)	99 (88%)	10 (9%)	3 (3%)	6 21
1	B	110/145 (76%)	95 (86%)	10 (9%)	5 (4%)	3 10
1	C	114/145 (79%)	104 (91%)	8 (7%)	2 (2%)	11 34
1	D	111/145 (77%)	97 (87%)	10 (9%)	4 (4%)	4 14
All	All	447/580 (77%)	395 (88%)	38 (8%)	14 (3%)	5 17

5 of 14 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	26	GLU
1	B	25	GLY
1	B	27	TYR

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Mol	Chain	Res	Type
1	B	65	GLY
1	B	23	GLY

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	96/120 (80%)	88 (92%)	8 (8%)	14	38
1	B	95/120 (79%)	91 (96%)	4 (4%)	36	71
1	C	97/120 (81%)	90 (93%)	7 (7%)	18	45
1	D	95/120 (79%)	87 (92%)	8 (8%)	14	37
All	All	383/480 (80%)	356 (93%)	27 (7%)	19	47

5 of 27 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	-4	MET
1	C	81	LYS
1	D	90	LEU
1	C	19	THR
1	A	74	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 12 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	95	ASN
1	B	99	ASN
1	C	83	GLN
1	B	76	ASN
1	C	45	ASN

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 carbohydrates in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

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 (i)

6.1 Protein, DNA and RNA chains (i)

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, 95th 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	114/145 (78%)	0.11	4 (3%)	48	35	29, 41, 62, 66	0
1	B	112/145 (77%)	-0.21	2 (1%)	71	61	22, 36, 53, 73	0
1	C	116/145 (80%)	-0.03	3 (2%)	59	47	19, 36, 58, 69	0
1	D	113/145 (77%)	-0.22	0	100	100	20, 32, 48, 58	0
All	All	455/580 (78%)	-0.09	9 (1%)	68	58	19, 36, 58, 73	0

The worst 5 of 9 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	62	PHE	3.5
1	B	26	GLU	3.1
1	C	75	THR	2.8
1	B	27	TYR	2.6
1	A	21	HIS	2.3

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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.