wwPDB X-ray Structure Validation Summary Report (i)

Dec 18, 2023 – 12:20 am GMT

PDB ID	:	4D1J
Title	:	The structure of the GH35 beta-galactosidase Bgl35A from Cellvibrio japonicas in complex with 1-Deoxygalactonojirimycin
Authors	:	Larsbrink, J.; Thompson, A.J.; Lundqvist, M.; Gardner, J.G.; Davies, G.J.; Brumer, H.
Deposited on	:	2014-05-02
Resolution	:	1.80 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
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

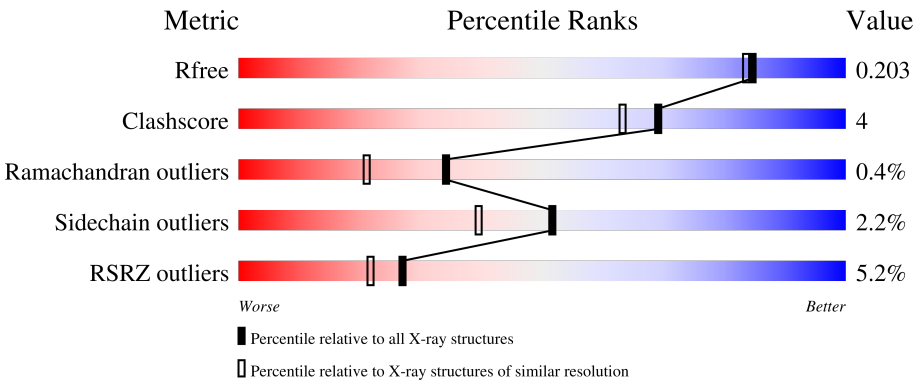
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 1.80 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}	130704	5950 (1.80-1.80)
Clashscore	141614	6793 (1.80-1.80)
Ramachandran outliers	138981	6697 (1.80-1.80)
Sidechain outliers	138945	6696 (1.80-1.80)
RSRZ outliers	127900	5850 (1.80-1.80)

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 of 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	540	5% 92% 6% •
1	B	540	5% 91% 8% •
1	C	540	6% 92% 7% •
1	D	540	5% 92% 7% •
1	E	540	4% 91% 7% •

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Mol	Chain	Length	Quality of chain
1	F	540	5% 91% 7%
1	G	540	4% 92% 6%
1	H	540	8% 92% 6%

2 Entry composition (i)

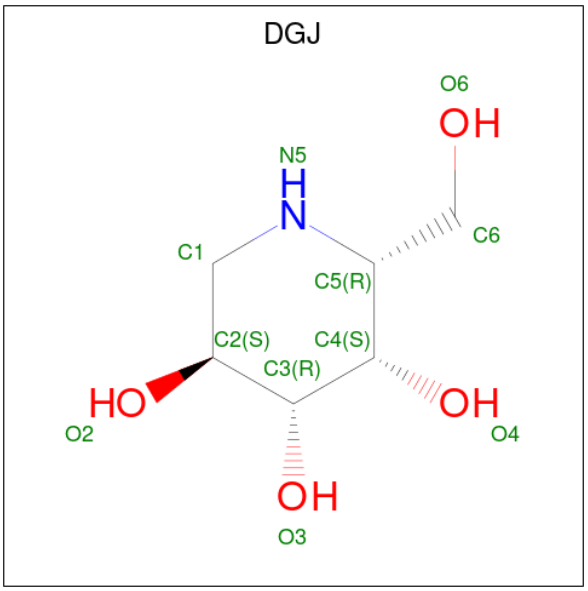
There are 5 unique types of molecules in this entry. The entry contains 37796 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 BETA-GALACTOSIDASE, PUTATIVE, BGL35A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	539	4185	2681	711	777	16	0	3	0
1	B	539	4167	2671	703	777	16	0	3	0
1	C	539	4190	2689	710	775	16	0	6	0
1	D	540	4222	2712	715	779	16	0	7	0
1	E	539	4234	2713	718	787	16	0	5	0
1	F	539	4244	2725	712	790	17	0	12	0
1	G	540	4224	2712	712	783	17	0	7	0
1	H	539	4181	2677	714	775	15	0	4	0

- Molecule 2 is (2R,3S,4R,5S)-2-(hydroxymethyl)piperidine-3,4,5-triol (three-letter code: DGJ) (formula: $C_6H_{13}NO_4$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	11	6	1	4	0	0
2	B	1	11	6	1	4	0	0
2	C	1	11	6	1	4	0	0
2	D	1	11	6	1	4	0	0
2	E	1	11	6	1	4	0	0
2	F	1	11	6	1	4	0	0
2	G	1	11	6	1	4	0	0
2	H	1	11	6	1	4	0	0

- Molecule 3 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Na		
3	A	4	4	4	0	0
3	B	2	2	2	0	0
3	D	4	4	4	0	0
3	E	4	4	4	0	0

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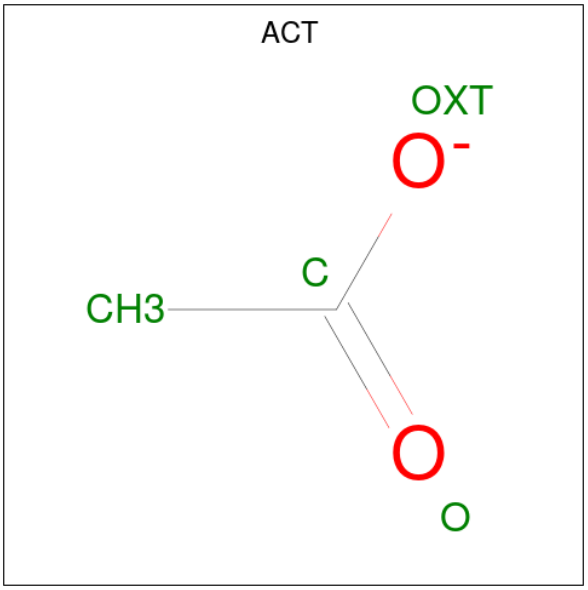
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	F	4	Total Na 4 4	0	0
3	G	4	Total Na 4 4	0	0
3	H	1	Total Na 1 1	0	0

- Molecule 4 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C O 4 2 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	F	1	Total C O 4 2 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	493	Total O 493 493	0	0

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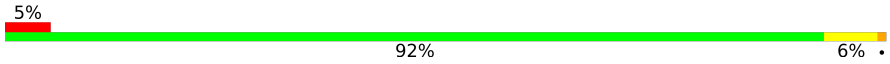
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
5	B	491	491	491	0	0
			Total	O		
5	C	409	409	409	0	0
			Total	O		
5	D	535	535	535	0	0
			Total	O		
5	E	567	571	571	0	4
			Total	O		
5	F	564	564	564	0	0
			Total	O		
5	G	556	559	559	0	3
			Total	O		
5	H	396	396	396	0	0

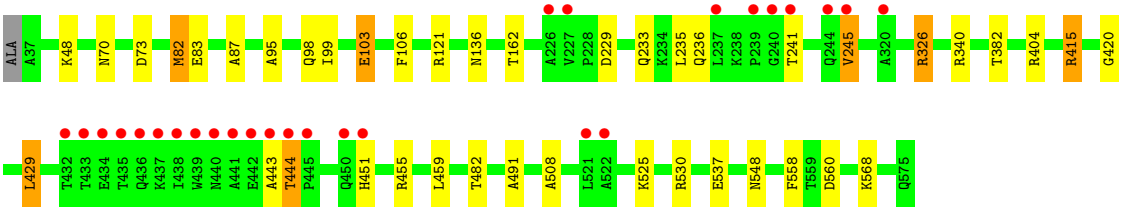
3 Residue-property plots (i)

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: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

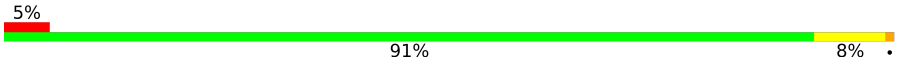
Chain A:

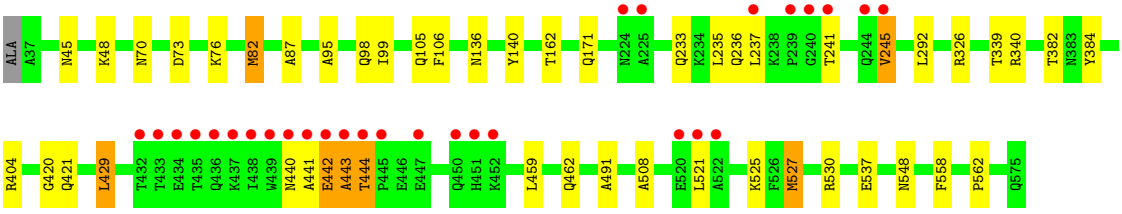




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

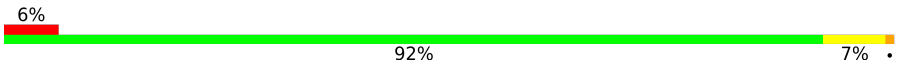
Chain B:

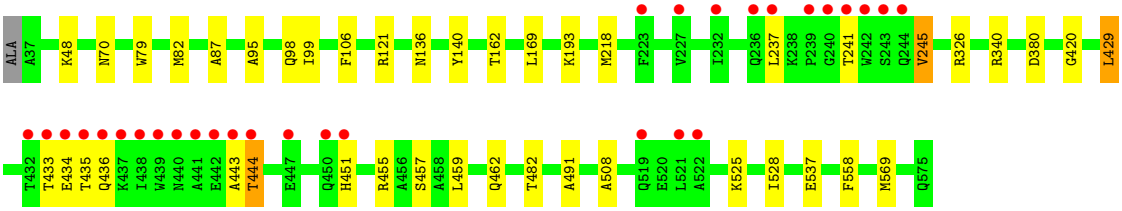




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

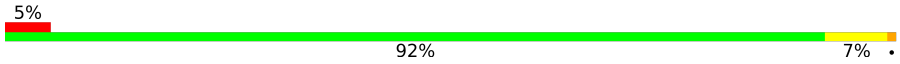
Chain C:

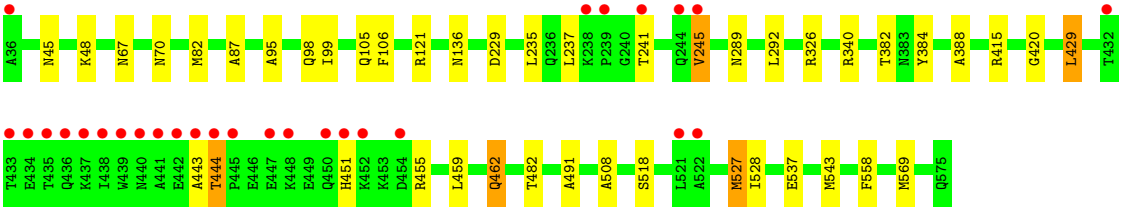




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

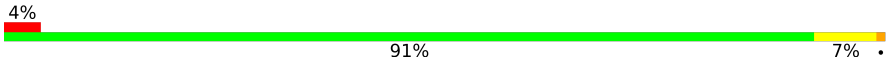
Chain D:

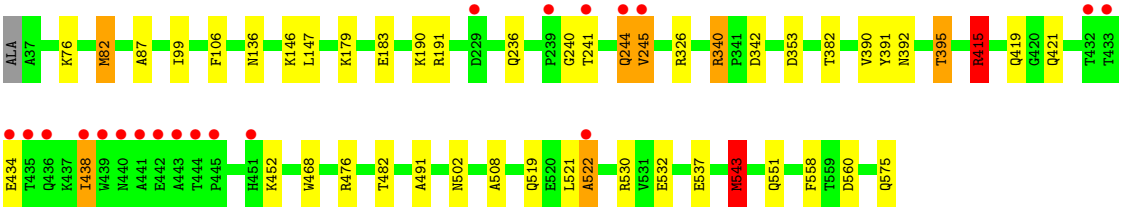




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

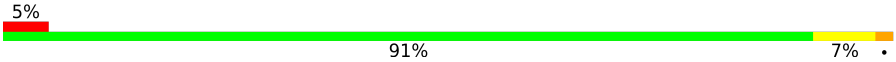
Chain E:

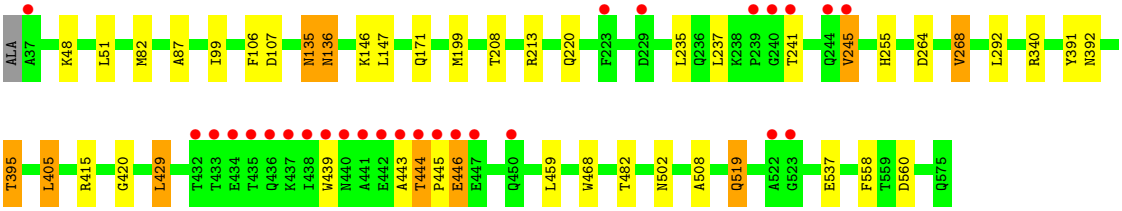




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

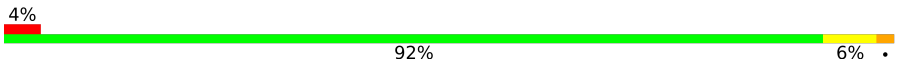
Chain F:

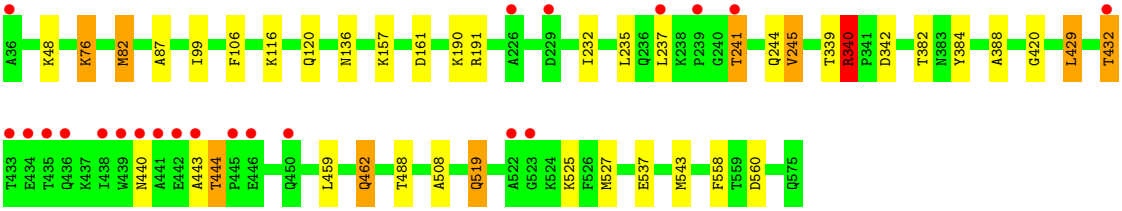




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

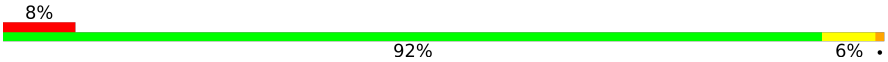
Chain G:

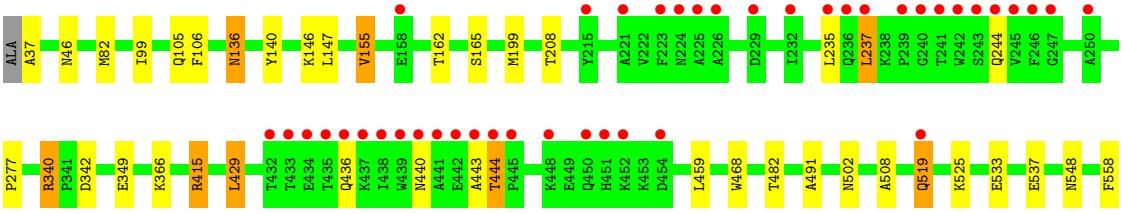




• Molecule 1: BETA-GALACTOSIDASE, PUTATIVE, BGL35A

Chain H:





H563
Q575

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	99.26Å 116.09Å 116.11Å 90.00° 90.05° 90.04°	Depositor
Resolution (Å)	116.11 – 1.80 46.03 – 1.80	Depositor EDS
% Data completeness (in resolution range)	97.1 (116.11-1.80) 97.1 (46.03-1.80)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.64 (at 1.79Å)	Xtriage
Refinement program	REFMAC 5.8.0049	Depositor
R, R_{free}	0.172 , 0.195 0.181 , 0.203	Depositor DCC
R_{free} test set	23426 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	25.0	Xtriage
Anisotropy	0.007	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 51.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	0.077 for h,l,-k 0.077 for h,-l,k 0.057 for h,-k,-l 0.027 for -h,k,-l 0.028 for -h,-k,l 0.028 for -h,l,k 0.035 for -h,-l,-k	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	37796	wwPDB-VP
Average B, all atoms (Å^2)	29.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.60% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: DGJ, NA, ACT

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	0.58	0/4305	0.77	8/5873 (0.1%)
1	B	0.54	0/4287	0.77	7/5854 (0.1%)
1	C	0.56	0/4321	0.76	4/5899 (0.1%)
1	D	0.59	0/4356	0.76	8/5944 (0.1%)
1	E	0.61	1/4361 (0.0%)	0.97	14/5945 (0.2%)
1	F	0.61	0/4393	0.77	7/5997 (0.1%)
1	G	0.61	0/4358	0.94	7/5945 (0.1%)
1	H	0.54	0/4304	0.91	6/5875 (0.1%)
All	All	0.58	1/34685 (0.0%)	0.84	61/47332 (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
1	B	0	1
All	All	0	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	183	GLU	CD-OE2	-5.55	1.19	1.25

The worst 5 of 61 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	340	ARG	NE-CZ-NH1	30.58	135.59	120.30
1	E	340	ARG	NE-CZ-NH2	-30.37	105.12	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	340	ARG	NE-CZ-NH1	30.31	135.45	120.30
1	G	340	ARG	NE-CZ-NH2	-29.62	105.49	120.30
1	H	340	ARG	NE-CZ-NH1	28.64	134.62	120.30

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	103	GLU	Peptide
1	B	442	GLU	Peptide

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	4185	0	3989	30	0
1	B	4167	0	3951	34	0
1	C	4190	0	3985	29	0
1	D	4222	0	4051	35	0
1	E	4234	0	4084	40	0
1	F	4244	0	4071	35	0
1	G	4224	0	4050	34	0
1	H	4181	0	3974	33	0
2	A	11	0	13	0	0
2	B	11	0	13	0	0
2	C	11	0	13	0	0
2	D	11	0	13	0	0
2	E	11	0	13	0	0
2	F	11	0	13	1	0
2	G	11	0	13	0	0
2	H	11	0	13	1	0
3	A	4	0	0	0	0
3	B	2	0	0	0	0
3	D	4	0	0	0	0
3	E	4	0	0	0	0
3	F	4	0	0	0	0
3	G	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	H	1	0	0	0	0
4	C	8	0	6	0	0
4	D	8	0	6	0	0
4	F	4	0	3	0	0
5	A	493	0	0	12	0
5	B	491	0	0	10	0
5	C	409	0	0	5	0
5	D	535	0	0	10	0
5	E	571	0	0	12	0
5	F	564	0	0	4	0
5	G	559	0	0	9	0
5	H	396	0	0	10	0
All	All	37796	0	32274	242	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 4.

The worst 5 of 242 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:E:146:LYS:HE3	1:G:527[A]:MET:HE3	1.37	1.06
1:D:527[A]:MET:HE3	1:F:146:LYS:HE3	1.38	1.03
1:F:468:TRP:HE1	1:F:502:ASN:HD22	1.09	1.00
1:B:527[A]:MET:HE3	1:H:146:LYS:HE3	1.44	0.96
1:H:468:TRP:HE1	1:H:502:ASN:HD22	1.12	0.93

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	540/540 (100%)	519 (96%)	19 (4%)	2 (0%)	34	21
1	B	540/540 (100%)	519 (96%)	18 (3%)	3 (1%)	25	12
1	C	543/540 (101%)	524 (96%)	16 (3%)	3 (1%)	25	12
1	D	545/540 (101%)	525 (96%)	18 (3%)	2 (0%)	34	21
1	E	542/540 (100%)	524 (97%)	16 (3%)	2 (0%)	34	21
1	F	549/540 (102%)	528 (96%)	19 (4%)	2 (0%)	34	21
1	G	545/540 (101%)	525 (96%)	19 (4%)	1 (0%)	47	33
1	H	541/540 (100%)	522 (96%)	17 (3%)	2 (0%)	34	21
All	All	4345/4320 (101%)	4186 (96%)	142 (3%)	17 (0%)	34	21

5 of 17 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	434	GLU
1	F	446	GLU
1	B	441	ALA
1	B	444	THR
1	E	522	ALA

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	423/452 (94%)	416 (98%)	7 (2%)	60	51
1	B	419/452 (93%)	408 (97%)	11 (3%)	46	32
1	C	421/452 (93%)	415 (99%)	6 (1%)	67	59
1	D	429/452 (95%)	421 (98%)	8 (2%)	57	46
1	E	436/452 (96%)	425 (98%)	11 (2%)	47	34
1	F	436/452 (96%)	424 (97%)	12 (3%)	43	30
1	G	430/452 (95%)	415 (96%)	15 (4%)	36	21
1	H	420/452 (93%)	413 (98%)	7 (2%)	60	51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	3414/3616 (94%)	3337 (98%)	77 (2%)	52 37

5 of 77 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	235	LEU
1	H	136	ASN
1	G	245	VAL
1	G	525[A]	LYS
1	H	519	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 43 such sidechains are listed below:

Mol	Chain	Res	Type
1	F	220	GLN
1	G	244	GLN
1	F	224	ASN
1	F	502	ASN
1	G	519	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 36 ligands modelled in this entry, 23 are monoatomic - leaving 13 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	DGJ	G	600	-	11,11,11	0.95	0	13,15,15	1.12	0
2	DGJ	F	600	-	11,11,11	0.97	1 (9%)	13,15,15	1.12	0
2	DGJ	A	600	-	11,11,11	0.88	1 (9%)	13,15,15	1.07	0
2	DGJ	E	600	-	11,11,11	1.16	1 (9%)	13,15,15	0.72	0
2	DGJ	D	600	-	11,11,11	1.09	1 (9%)	13,15,15	1.33	2 (15%)
2	DGJ	H	600	-	11,11,11	0.54	0	13,15,15	0.87	0
4	ACT	C	601	-	3,3,3	0.71	0	3,3,3	0.63	0
4	ACT	D	605	-	3,3,3	0.87	0	3,3,3	0.18	0
4	ACT	D	606	-	3,3,3	1.03	0	3,3,3	0.48	0
4	ACT	F	605	-	3,3,3	0.76	0	3,3,3	1.07	0
4	ACT	C	602	-	3,3,3	0.92	0	3,3,3	0.61	0
2	DGJ	B	600	-	11,11,11	0.70	0	13,15,15	0.86	1 (7%)
2	DGJ	C	600	-	11,11,11	0.82	0	13,15,15	0.97	1 (7%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	DGJ	G	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	F	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	A	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	E	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	D	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	H	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	B	600	-	-	0/2/19/19	0/1/1/1
2	DGJ	C	600	-	-	0/2/19/19	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	600	DGJ	C1-C2	3.19	1.55	1.52
2	D	600	DGJ	C1-N5	2.84	1.51	1.47
2	A	600	DGJ	O2-C2	2.07	1.47	1.43
2	F	600	DGJ	C1-C2	-2.02	1.50	1.52

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	600	DGJ	C1-C2-C3	2.57	113.34	110.33
2	D	600	DGJ	O2-C2-C1	2.26	114.04	109.61
2	C	600	DGJ	C2-C3-C4	-2.06	107.33	110.89
2	B	600	DGJ	O4-C4-C3	-2.01	105.70	110.35

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	600	DGJ	1	0
2	H	600	DGJ	1	0

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	539/540 (99%)	0.02	27 (5%)	28	23	17, 26, 49, 93	0
1	B	539/540 (99%)	0.08	29 (5%)	25	20	19, 28, 51, 101	0
1	C	539/540 (99%)	0.14	30 (5%)	24	19	18, 29, 56, 108	0
1	D	540/540 (100%)	0.02	28 (5%)	27	22	15, 25, 52, 107	0
1	E	539/540 (99%)	-0.04	20 (3%)	41	36	16, 24, 47, 87	0
1	F	539/540 (99%)	0.03	27 (5%)	28	23	15, 23, 47, 97	0
1	G	540/540 (100%)	-0.00	22 (4%)	37	31	16, 24, 48, 82	0
1	H	539/540 (99%)	0.17	42 (7%)	13	10	20, 29, 62, 102	0
All	All	4314/4320 (99%)	0.05	225 (5%)	27	22	15, 26, 53, 108	0

The worst 5 of 225 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	441	ALA	10.1
1	B	438	ILE	9.7
1	B	439	TRP	9.7
1	F	441	ALA	9.0
1	D	439	TRP	8.9

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 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, 95th 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(Å^2)	Q<0.9
4	ACT	C	601	4/4	0.84	0.22	36,44,45,45	0
4	ACT	D	605	4/4	0.87	0.22	37,37,41,44	0
3	NA	B	601	1/1	0.91	0.19	47,47,47,47	0
4	ACT	D	606	4/4	0.92	0.13	33,34,34,34	0
3	NA	F	603	1/1	0.93	0.08	30,30,30,30	0
4	ACT	C	602	4/4	0.93	0.19	36,36,36,38	0
4	ACT	F	605	4/4	0.93	0.15	37,40,44,45	0
3	NA	H	601	1/1	0.95	0.19	41,41,41,41	0
3	NA	B	602	1/1	0.95	0.23	42,42,42,42	0
3	NA	A	604	1/1	0.96	0.20	44,44,44,44	0
3	NA	D	602	1/1	0.96	0.24	41,41,41,41	0
3	NA	A	603	1/1	0.96	0.18	36,36,36,36	0
3	NA	G	602	1/1	0.97	0.11	31,31,31,31	0
2	DGJ	B	600	11/11	0.97	0.14	20,21,24,25	0
2	DGJ	D	600	11/11	0.97	0.17	17,18,20,20	0
3	NA	E	603	1/1	0.97	0.08	28,28,28,28	0
3	NA	E	604	1/1	0.97	0.04	31,31,31,31	0
3	NA	F	602	1/1	0.97	0.07	35,35,35,35	0
2	DGJ	E	600	11/11	0.97	0.17	17,18,20,21	0
2	DGJ	H	600	11/11	0.98	0.15	21,22,23,23	0
3	NA	G	603	1/1	0.98	0.22	38,38,38,38	0
3	NA	D	604	1/1	0.98	0.11	30,30,30,30	0
2	DGJ	A	600	11/11	0.98	0.17	17,19,21,21	0
2	DGJ	C	600	11/11	0.98	0.15	21,22,22,23	0
3	NA	F	601	1/1	0.98	0.08	26,26,26,26	0
2	DGJ	F	600	11/11	0.98	0.15	15,18,19,19	0
2	DGJ	G	600	11/11	0.98	0.16	18,18,19,20	0
3	NA	D	603	1/1	0.99	0.07	40,40,40,40	0
3	NA	G	604	1/1	0.99	0.14	39,39,39,39	0
3	NA	D	601	1/1	0.99	0.13	33,33,33,33	0
3	NA	E	601	1/1	0.99	0.05	24,24,24,24	0
3	NA	E	602	1/1	0.99	0.16	27,27,27,27	0
3	NA	F	604	1/1	0.99	0.05	24,24,24,24	0
3	NA	G	601	1/1	0.99	0.07	35,35,35,35	0
3	NA	A	602	1/1	0.99	0.23	35,35,35,35	0
3	NA	A	601	1/1	1.00	0.06	29,29,29,29	0

6.5 Other polymers (i)

There are no such residues in this entry.