



wwPDB X-ray Structure Validation Summary Report ⓘ

Jun 21, 2017 – 02:58 PM EDT

PDB ID : 5JJQ
Title : Crystal structure of IdnL1
Authors : Cieslak, J.; Miyanaga, A.; Kudo, F.; Eguchi, T.
Deposited on : 2016-04-25
Resolution : 2.60 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 ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20029077
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
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) : rb-20029077

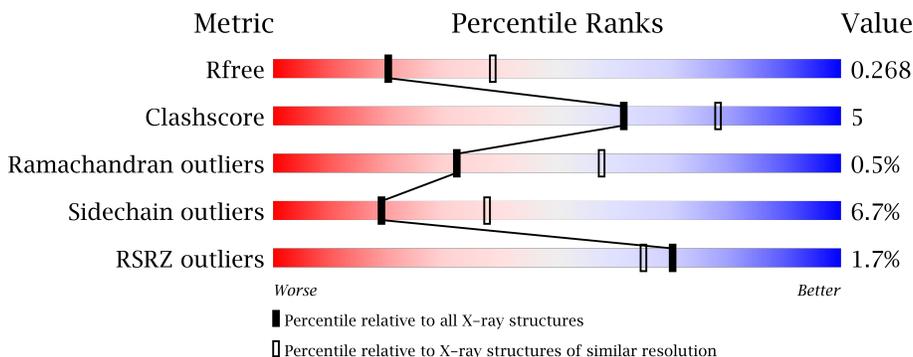
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

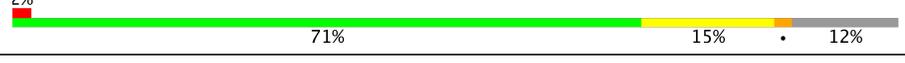
The reported resolution of this entry is 2.60 Å.

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}	100719	2542 (2.60-2.60)
Clashscore	112137	2895 (2.60-2.60)
Ramachandran outliers	110173	2848 (2.60-2.60)
Sidechain outliers	110143	2848 (2.60-2.60)
RSRZ outliers	101464	2550 (2.60-2.60)

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 $\leq 5\%$. 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	552	
1	B	552	
1	C	552	
1	D	552	

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 15125 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 AMP-dependent synthetase and ligase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	488	3685	2335	655	684	11	0	1	0
1	B	487	3685	2339	654	681	11	0	1	0
1	C	489	3697	2341	659	686	11	0	1	0
1	D	487	3691	2340	657	683	11	0	1	0

There are 80 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-19	MET	-	initiating methionine	UNP A0A077KT11
A	-18	GLY	-	expression tag	UNP A0A077KT11
A	-17	SER	-	expression tag	UNP A0A077KT11
A	-16	SER	-	expression tag	UNP A0A077KT11
A	-15	HIS	-	expression tag	UNP A0A077KT11
A	-14	HIS	-	expression tag	UNP A0A077KT11
A	-13	HIS	-	expression tag	UNP A0A077KT11
A	-12	HIS	-	expression tag	UNP A0A077KT11
A	-11	HIS	-	expression tag	UNP A0A077KT11
A	-10	HIS	-	expression tag	UNP A0A077KT11
A	-9	SER	-	expression tag	UNP A0A077KT11
A	-8	SER	-	expression tag	UNP A0A077KT11
A	-7	GLY	-	expression tag	UNP A0A077KT11
A	-6	LEU	-	expression tag	UNP A0A077KT11
A	-5	VAL	-	expression tag	UNP A0A077KT11
A	-4	PRO	-	expression tag	UNP A0A077KT11
A	-3	ARG	-	expression tag	UNP A0A077KT11
A	-2	GLY	-	expression tag	UNP A0A077KT11
A	-1	SER	-	expression tag	UNP A0A077KT11
A	0	HIS	-	expression tag	UNP A0A077KT11
B	-19	MET	-	initiating methionine	UNP A0A077KT11

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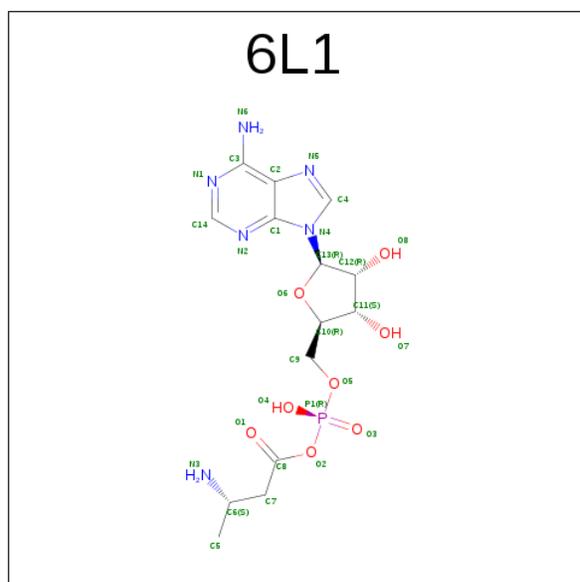
Chain	Residue	Modelled	Actual	Comment	Reference
B	-18	GLY	-	expression tag	UNP A0A077KT11
B	-17	SER	-	expression tag	UNP A0A077KT11
B	-16	SER	-	expression tag	UNP A0A077KT11
B	-15	HIS	-	expression tag	UNP A0A077KT11
B	-14	HIS	-	expression tag	UNP A0A077KT11
B	-13	HIS	-	expression tag	UNP A0A077KT11
B	-12	HIS	-	expression tag	UNP A0A077KT11
B	-11	HIS	-	expression tag	UNP A0A077KT11
B	-10	HIS	-	expression tag	UNP A0A077KT11
B	-9	SER	-	expression tag	UNP A0A077KT11
B	-8	SER	-	expression tag	UNP A0A077KT11
B	-7	GLY	-	expression tag	UNP A0A077KT11
B	-6	LEU	-	expression tag	UNP A0A077KT11
B	-5	VAL	-	expression tag	UNP A0A077KT11
B	-4	PRO	-	expression tag	UNP A0A077KT11
B	-3	ARG	-	expression tag	UNP A0A077KT11
B	-2	GLY	-	expression tag	UNP A0A077KT11
B	-1	SER	-	expression tag	UNP A0A077KT11
B	0	HIS	-	expression tag	UNP A0A077KT11
C	-19	MET	-	initiating methionine	UNP A0A077KT11
C	-18	GLY	-	expression tag	UNP A0A077KT11
C	-17	SER	-	expression tag	UNP A0A077KT11
C	-16	SER	-	expression tag	UNP A0A077KT11
C	-15	HIS	-	expression tag	UNP A0A077KT11
C	-14	HIS	-	expression tag	UNP A0A077KT11
C	-13	HIS	-	expression tag	UNP A0A077KT11
C	-12	HIS	-	expression tag	UNP A0A077KT11
C	-11	HIS	-	expression tag	UNP A0A077KT11
C	-10	HIS	-	expression tag	UNP A0A077KT11
C	-9	SER	-	expression tag	UNP A0A077KT11
C	-8	SER	-	expression tag	UNP A0A077KT11
C	-7	GLY	-	expression tag	UNP A0A077KT11
C	-6	LEU	-	expression tag	UNP A0A077KT11
C	-5	VAL	-	expression tag	UNP A0A077KT11
C	-4	PRO	-	expression tag	UNP A0A077KT11
C	-3	ARG	-	expression tag	UNP A0A077KT11
C	-2	GLY	-	expression tag	UNP A0A077KT11
C	-1	SER	-	expression tag	UNP A0A077KT11
C	0	HIS	-	expression tag	UNP A0A077KT11
D	-19	MET	-	initiating methionine	UNP A0A077KT11
D	-18	GLY	-	expression tag	UNP A0A077KT11
D	-17	SER	-	expression tag	UNP A0A077KT11

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-16	SER	-	expression tag	UNP A0A077KT11
D	-15	HIS	-	expression tag	UNP A0A077KT11
D	-14	HIS	-	expression tag	UNP A0A077KT11
D	-13	HIS	-	expression tag	UNP A0A077KT11
D	-12	HIS	-	expression tag	UNP A0A077KT11
D	-11	HIS	-	expression tag	UNP A0A077KT11
D	-10	HIS	-	expression tag	UNP A0A077KT11
D	-9	SER	-	expression tag	UNP A0A077KT11
D	-8	SER	-	expression tag	UNP A0A077KT11
D	-7	GLY	-	expression tag	UNP A0A077KT11
D	-6	LEU	-	expression tag	UNP A0A077KT11
D	-5	VAL	-	expression tag	UNP A0A077KT11
D	-4	PRO	-	expression tag	UNP A0A077KT11
D	-3	ARG	-	expression tag	UNP A0A077KT11
D	-2	GLY	-	expression tag	UNP A0A077KT11
D	-1	SER	-	expression tag	UNP A0A077KT11
D	0	HIS	-	expression tag	UNP A0A077KT11

- Molecule 2 is 5'-O-[(R)-{(3S)-3-aminobutanoyl}oxy](hydroxy)phosphoryl]adenosine (three-letter code: 6L1) (formula: C₁₄H₂₁N₆O₈P).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	A	1	Total	C	N	O	P	0	0
			29	14	6	8	1		
2	B	1	Total	C	N	O	P	0	0
			29	14	6	8	1		

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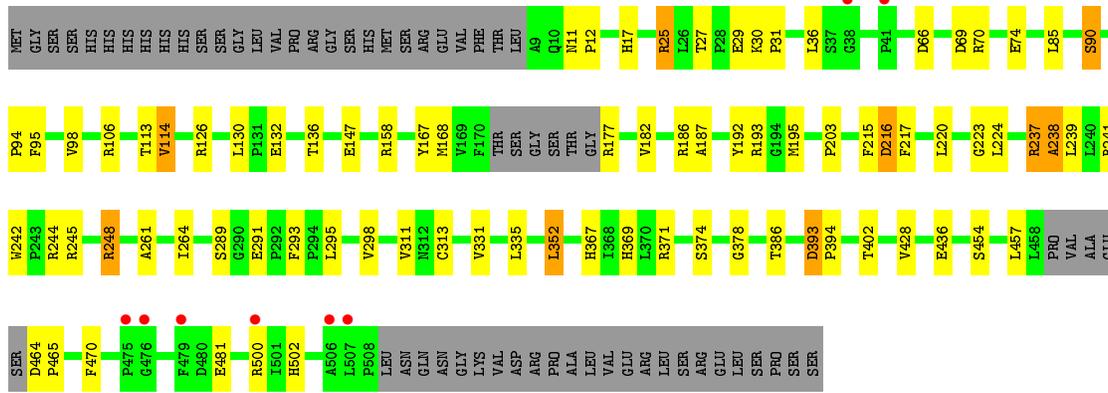
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	C	1	Total	C	N	O	P	0	0
			29	14	6	8	1		
2	D	1	Total	C	N	O	P	0	0
			29	14	6	8	1		

- Molecule 3 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

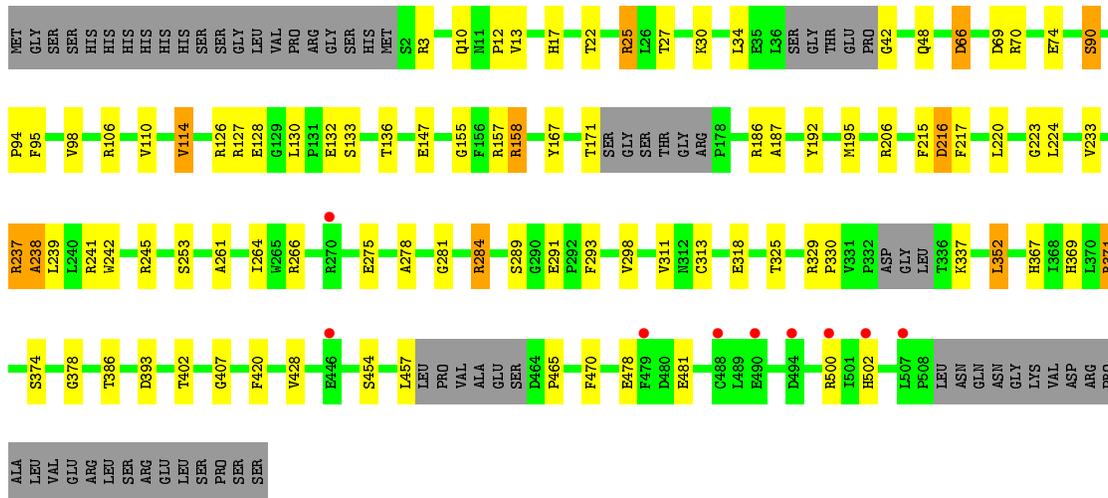
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	B	1	Total	Cl	0	0
			1	1		
3	A	1	Total	Cl	0	0
			1	1		
3	D	1	Total	Cl	0	0
			1	1		
3	C	1	Total	Cl	0	0
			1	1		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	60	Total	O	0	0
			60	60		
4	B	58	Total	O	0	0
			58	58		
4	C	69	Total	O	0	0
			69	69		
4	D	60	Total	O	0	0
			60	60		



• Molecule 1: AMP-dependent synthetase and ligase



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	65.75Å 104.45Å 120.00Å 81.78° 83.01° 81.98°	Depositor
Resolution (Å)	59.51 – 2.60 59.44 – 2.60	Depositor EDS
% Data completeness (in resolution range)	94.1 (59.51-2.60) 90.0 (59.44-2.60)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.30 (at 2.61Å)	Xtrriage
Refinement program	REFMAC 5.7.0029	Depositor
R, R_{free}	0.234 , 0.265 0.237 , 0.268	Depositor DCC
R_{free} test set	4516 reflections (5.28%)	DCC
Wilson B-factor (Å ²)	38.3	Xtrriage
Anisotropy	0.256	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 44.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	15125	wwPDB-VP
Average B, all atoms (Å ²)	43.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 17.69% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical 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: 6L1, CL

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	0.76	0/3770	0.87	7/5134 (0.1%)
1	B	0.68	0/3770	0.86	4/5134 (0.1%)
1	C	0.72	0/3782	0.87	4/5151 (0.1%)
1	D	0.70	0/3774	0.90	6/5136 (0.1%)
All	All	0.71	0/15096	0.87	21/20555 (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
1	C	0	1
1	D	0	1
All	All	0	4

There are no bond length outliers.

The worst 5 of 21 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	371	ARG	NE-CZ-NH1	10.95	125.78	120.30
1	A	405	ARG	NE-CZ-NH1	8.70	124.65	120.30
1	D	371	ARG	NE-CZ-NH2	-7.92	116.34	120.30
1	A	405	ARG	NE-CZ-NH2	-6.88	116.86	120.30
1	B	393	ASP	CB-CG-OD1	5.73	123.45	118.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	215	PHE	Peptide
1	B	215	PHE	Peptide
1	C	215	PHE	Peptide
1	D	215	PHE	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	3685	0	3677	36	0
1	B	3685	0	3676	42	0
1	C	3697	0	3685	39	0
1	D	3691	0	3681	46	0
2	A	29	0	0	2	0
2	B	29	0	0	3	0
2	C	29	0	0	1	0
2	D	29	0	0	1	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	60	0	0	1	0
4	B	58	0	0	1	0
4	C	69	0	0	1	0
4	D	60	0	0	1	0
All	All	15125	0	14719	152	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 5.

The worst 5 of 152 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:D:281:GLY:O	1:D:284:ARG:NH1	2.04	0.91
1:A:206:ARG:NH2	1:C:25:ARG:O	2.21	0.72
1:D:127:ARG:O	1:D:128:GLU:HG3	1.99	0.63
1:C:30:LYS:NZ	1:C:203:PRO:O	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:69:ASP:O	1:C:94:PRO:HD2	2.00	0.61

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	483/552 (88%)	457 (95%)	24 (5%)	2 (0%)	38 63
1	B	480/552 (87%)	452 (94%)	25 (5%)	3 (1%)	28 53
1	C	484/552 (88%)	456 (94%)	26 (5%)	2 (0%)	38 63
1	D	478/552 (87%)	451 (94%)	24 (5%)	3 (1%)	28 53
All	All	1925/2208 (87%)	1816 (94%)	99 (5%)	10 (0%)	32 58

5 of 10 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	216	ASP
1	B	216	ASP
1	C	216	ASP
1	D	216	ASP
1	A	238	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	384/439 (88%)	361 (94%)	23 (6%)	22	44
1	B	384/439 (88%)	359 (94%)	25 (6%)	20	39
1	C	385/439 (88%)	359 (93%)	26 (7%)	18	37
1	D	385/439 (88%)	356 (92%)	29 (8%)	16	31
All	All	1538/1756 (88%)	1435 (93%)	103 (7%)	19	38

5 of 103 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	481	GLU
1	C	158	ARG
1	D	311	VAL
1	B	500	ARG
1	C	106	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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](#)

Of 8 ligands modelled in this entry, 4 are monoatomic - leaving 4 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	6L1	A	601	-	27,31,31	2.35	7 (25%)	27,46,46	2.76	6 (22%)
2	6L1	B	601	-	27,31,31	2.48	7 (25%)	27,46,46	2.41	8 (29%)
2	6L1	C	601	-	27,31,31	2.21	6 (22%)	27,46,46	2.43	6 (22%)
2	6L1	D	601	-	27,31,31	2.42	8 (29%)	27,46,46	3.19	11 (40%)

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	6L1	A	601	-	-	0/13/35/35	0/3/3/3
2	6L1	B	601	-	-	0/13/35/35	0/3/3/3
2	6L1	C	601	-	-	0/13/35/35	0/3/3/3
2	6L1	D	601	-	-	0/13/35/35	0/3/3/3

The worst 5 of 28 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	601	6L1	C12-C13	-7.25	1.42	1.53
2	A	601	6L1	C12-C13	-5.38	1.45	1.53
2	D	601	6L1	O8-C12	-3.58	1.34	1.43
2	B	601	6L1	C12-C13	-3.31	1.48	1.53
2	B	601	6L1	C2-C1	-2.66	1.34	1.40

The worst 5 of 31 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	601	6L1	N2-C14-N1	-12.70	117.80	128.86
2	A	601	6L1	N2-C14-N1	-12.19	118.24	128.86
2	C	601	6L1	N2-C14-N1	-10.48	119.73	128.86
2	B	601	6L1	N2-C14-N1	-8.82	121.18	128.86
2	D	601	6L1	C13-N4-C1	-4.52	118.82	126.64

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	601	6L1	2	0
2	B	601	6L1	3	0
2	C	601	6L1	1	0
2	D	601	6L1	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	488/552 (88%)	-0.13	8 (1%) 72 67	15, 36, 71, 100	0
1	B	487/552 (88%)	-0.10	8 (1%) 72 67	16, 41, 83, 102	0
1	C	489/552 (88%)	-0.13	8 (1%) 72 67	17, 37, 78, 94	0
1	D	487/552 (88%)	-0.07	9 (1%) 69 63	16, 40, 80, 112	0
All	All	1951/2208 (88%)	-0.11	33 (1%) 70 65	15, 39, 79, 112	0

The worst 5 of 33 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	476	GLY	4.3
1	D	488	CYS	3.8
1	D	490	GLU	3.7
1	B	279	LEU	3.1
1	A	507	LEU	3.1

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](#)

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(\AA^2)	Q<0.9
2	6L1	B	601	29/29	0.97	0.13	-0.35	22,29,35,42	0
2	6L1	A	601	29/29	0.97	0.13	-0.54	20,31,39,48	0
2	6L1	D	601	29/29	0.97	0.13	-0.98	23,34,42,44	0
2	6L1	C	601	29/29	0.97	0.12	-1.37	21,28,37,47	0
3	CL	D	602	1/1	0.99	0.10	-1.51	33,33,33,33	0
3	CL	B	602	1/1	0.98	0.07	-3.70	30,30,30,30	0
3	CL	A	602	1/1	0.99	0.09	-3.86	34,34,34,34	0
3	CL	C	602	1/1	0.98	0.05	-8.03	24,24,24,24	0

6.5 Other polymers

There are no such residues in this entry.