



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 25, 2023 – 05:34 PM EDT

PDB ID : 6BLQ  
Title : Crystal Structure of IAg7 in complex with insulin mimotope p8E9E  
Authors : Wang, Y.; Dai, S.  
Deposited on : 2017-11-11  
Resolution : 1.80 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 : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35.1  
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) : 2.35.1

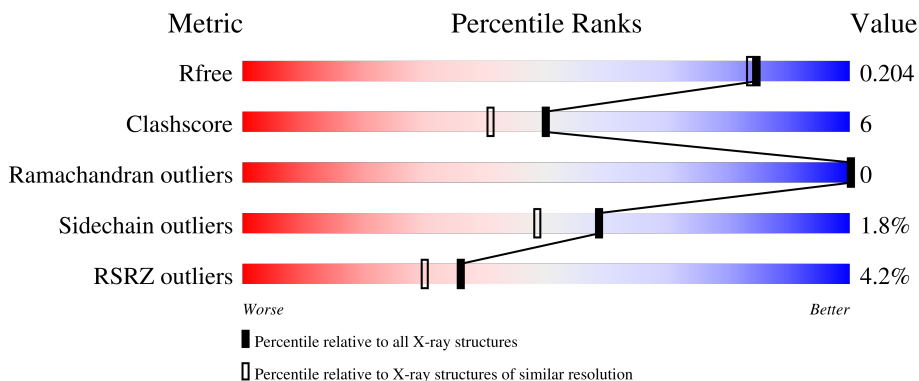
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.80 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  $\geq 3$ , 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	185	 3% 90% 9% ..
2	B	221	 5% 80% 10% • 10%
3	C	2	 100%

## 2 Entry composition i

There are 7 unique types of molecules in this entry. The entry contains 3642 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 H-2 class II histocompatibility antigen, A-D alpha chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	184	1504	970	242	290	2	0	2	0

- Molecule 2 is a protein called H2-Ab1 protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	200	1644	1029	298	310	7	0	1	0

There are 33 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-28	HIS	-	SEE REMARK 999	UNP Q31135
B	-27	LEU	-	SEE REMARK 999	UNP Q31135
B	-26	VAL	-	SEE REMARK 999	UNP Q31135
B	-25	GLU	-	SEE REMARK 999	UNP Q31135
B	-24	ARG	-	SEE REMARK 999	UNP Q31135
B	-23	LEU	-	SEE REMARK 999	UNP Q31135
B	-22	TYR	-	SEE REMARK 999	UNP Q31135
B	-21	LEU	-	SEE REMARK 999	UNP Q31135
B	-20	VAL	-	SEE REMARK 999	UNP Q31135
B	-19	CYS	-	SEE REMARK 999	UNP Q31135
B	-18	GLY	-	SEE REMARK 999	UNP Q31135
B	-17	GLU	-	SEE REMARK 999	UNP Q31135
B	-16	GLU	-	SEE REMARK 999	UNP Q31135
B	-15	GLY	-	linker	UNP Q31135
B	-14	ALA	-	linker	UNP Q31135
B	-13	GLY	-	linker	UNP Q31135
B	-12	GLY	-	linker	UNP Q31135
B	-11	GLY	-	linker	UNP Q31135
B	-4	SER	-	linker	UNP Q31135
B	-3	LEU	-	linker	UNP Q31135

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-2	VAL	-	linker	UNP Q31135
B	-1	GLY	-	linker	UNP Q31135
B	0	GLY	-	linker	UNP Q31135
B	1	SER	-	linker	UNP Q31135
B	2	GLY	-	linker	UNP Q31135
B	3	GLY	-	linker	UNP Q31135
B	4	GLY	-	linker	UNP Q31135
B	193	GLY	-	expression tag	UNP Q31135
B	194	GLY	-	expression tag	UNP Q31135
B	195	LEU	-	expression tag	UNP Q31135
B	196	VAL	-	expression tag	UNP Q31135
B	197	PRO	-	expression tag	UNP Q31135
B	198	ARG	-	expression tag	UNP Q31135

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



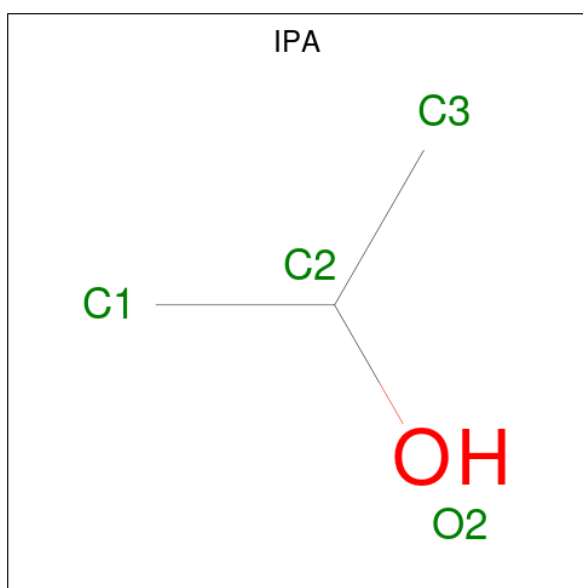
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
3	C	2	28	16	2	10	0	0	0

- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: C<sub>8</sub>H<sub>15</sub>NO<sub>6</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
			Total	C	N			O
4	A	1	14	8	1	5	0	0
4	B	1	14	8	1	5	0	0

- Molecule 5 is ISOPROPYL ALCOHOL (three-letter code: IPA) (formula:  $C_3H_8O$ ).



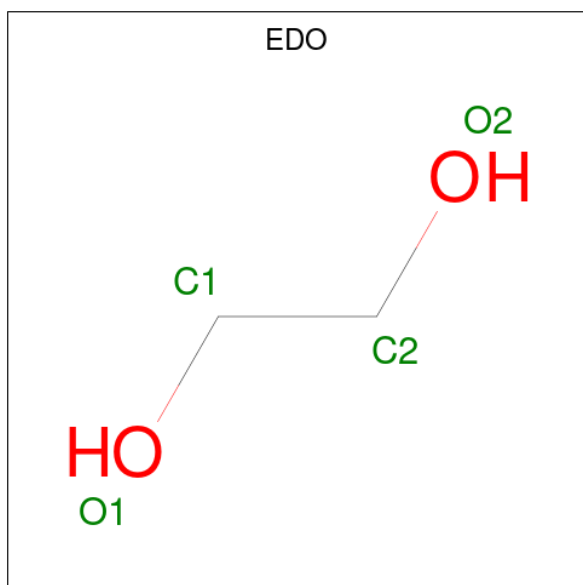
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
5	A	1	4	3	1	0	0
5	A	1	4	3	1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	C	O	0	0
			4	3	1		
5	B	1	Total	C	O	0	0
			4	3	1		

- Molecule 6 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total	C	O	0	0
			4	2	2		
6	A	1	Total	C	O	0	0
			4	2	2		
6	A	1	Total	C	O	0	0
			4	2	2		
6	B	1	Total	C	O	0	0
			4	2	2		
6	B	1	Total	C	O	0	0
			4	2	2		
6	B	1	Total	C	O	0	0
			4	2	2		

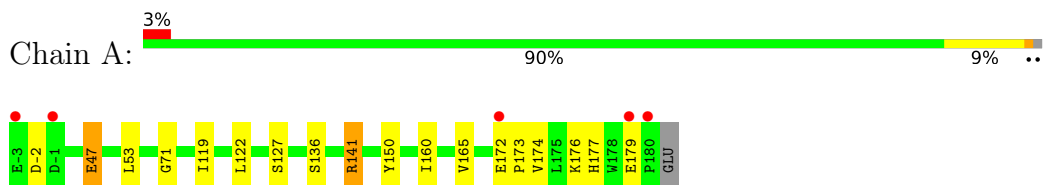
- Molecule 7 is water.

<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>		<b>ZeroOcc</b>	<b>AltConf</b>
7	A	196	Total 196	O 196	0	0
7	B	198	Total 198	O 198	0	0

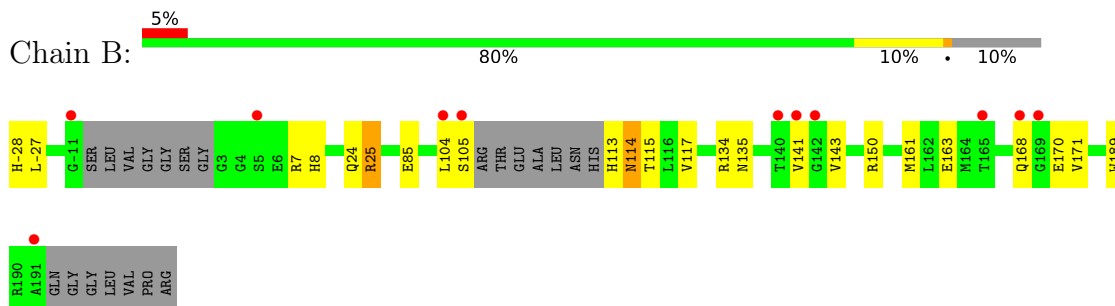
### 3 Residue-property plots [i](#)

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.

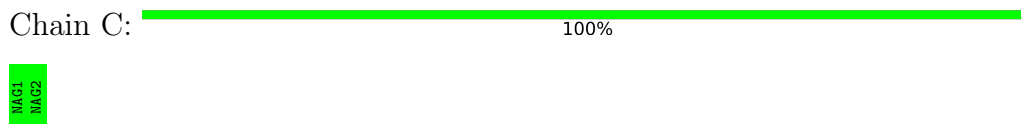
- Molecule 1: H-2 class II histocompatibility antigen, A-D alpha chain



- Molecule 2: H2-Ab1 protein



- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose





## 4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	39.27Å 112.73Å 62.17Å 90.00° 107.32° 90.00°	Depositor
Resolution (Å)	40.87 – 1.80 40.87 – 1.80	Depositor EDS
% Data completeness (in resolution range)	93.8 (40.87-1.80) 93.4 (40.87-1.80)	Depositor EDS
$R_{merge}$	0.07	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.94 (at 1.79Å)	Xtrriage
Refinement program	PHENIX (1.12_2829: ???)	Depositor
R, $R_{free}$	0.168 , 0.203 0.170 , 0.204	Depositor DCC
$R_{free}$ test set	2239 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	19.5	Xtrriage
Anisotropy	0.181	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.35 , 48.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.030 for h,-k,-h-l	Xtrriage
$F_o, F_c$ correlation	0.96	EDS
Total number of atoms	3642	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	25.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.19% 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: EDO, NAG, IPA

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	0.42	0/1550	0.56	0/2116
2	B	0.37	0/1680	0.58	1/2272 (0.0%)
All	All	0.39	0/3230	0.57	1/4388 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	25	ARG	NE-CZ-NH2	-5.26	117.67	120.30

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	1504	0	1425	18	0
2	B	1644	0	1570	18	0
3	C	28	0	25	0	0
4	A	14	0	13	0	0
4	B	14	0	13	1	0
5	A	12	0	24	5	0
5	B	4	0	8	2	0
6	A	12	0	18	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	B	16	0	24	0	0
7	A	196	0	0	2	1
7	B	198	0	0	4	0
All	All	3642	0	3120	37	1

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 6.

All (37) 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)
2:B:150:ARG:H	5:B:202:IPA:H31	1.28	0.98
1:A:141:ARG:H	5:A:204:IPA:H11	1.27	0.96
1:A:160:ILE:HG13	1:A:179:GLU:HG2	1.73	0.69
2:B:117:VAL:HG22	2:B:161:MET:HG3	1.79	0.63
2:B:115:THR:OG1	2:B:163:GLU:OE2	2.22	0.58
2:B:135:ASN:ND2	2:B:171:VAL:H	2.03	0.56
1:A:141:ARG:NH1	5:A:204:IPA:H13	2.20	0.56
2:B:85:GLU:OE1	7:B:301:HOH:O	2.18	0.56
1:A:-2:ASP:N	1:A:-2:ASP:OD1	2.39	0.56
1:A:47[A]:GLU:H	1:A:47[A]:GLU:CD	2.08	0.56
2:B:24:GLN:NE2	4:B:201:NAG:H2	2.22	0.54
2:B:7[B]:ARG:HD3	7:B:309:HOH:O	2.08	0.54
2:B:104:LEU:HD22	2:B:189:TRP:CZ2	2.43	0.52
2:B:8:HIS:HE1	7:B:449:HOH:O	1.93	0.52
5:A:206:IPA:H11	7:B:359:HOH:O	2.09	0.51
6:A:208:EDO:H22	7:A:341:HOH:O	2.11	0.51
1:A:172:GLU:HG3	1:A:173:PRO:HD2	1.91	0.50
1:A:53:LEU:HD21	2:B:-27:LEU:HD13	1.94	0.49
1:A:119:ILE:O	6:A:208:EDO:H12	2.13	0.49
2:B:141:VAL:HA	2:B:143:VAL:H	1.78	0.48
2:B:113:HIS:HA	2:B:114:ASN:HA	1.50	0.48
1:A:150:TYR:CD2	6:A:207:EDO:H22	2.49	0.47
1:A:160:ILE:HG23	1:A:177:HIS:CE1	2.49	0.47
2:B:134:ARG:NH1	2:B:170:GLU:OE2	2.43	0.47
1:A:165:VAL:HB	1:A:174:VAL:HG12	1.99	0.45
1:A:136[B]:SER:HA	6:A:209:EDO:H11	1.99	0.45
2:B:104:LEU:HD22	2:B:189:TRP:HZ2	1.82	0.45
2:B:150:ARG:H	5:B:202:IPA:C3	2.14	0.44
1:A:71:GLY:HA2	5:A:205:IPA:H13	2.00	0.43
1:A:176:LYS:HD2	1:A:176:LYS:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:104:LEU:O	2:B:105:SER:OG	2.33	0.42
1:A:160:ILE:HG23	1:A:177:HIS:HE1	1.84	0.42
1:A:136[A]:SER:HA	6:A:209:EDO:H11	2.02	0.41
2:B:135:ASN:HD21	2:B:171:VAL:H	1.66	0.41
7:A:370:HOH:O	2:B:8:HIS:HD2	2.03	0.41
1:A:122:LEU:HD23	1:A:127:SER:HA	2.03	0.41
1:A:141:ARG:N	5:A:204:IPA:H11	2.12	0.40

All (1) 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)
7:A:421:HOH:O	7:A:461:HOH:O[1_655]	2.17	0.03

## 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	184/185 (100%)	182 (99%)	2 (1%)	0	100	100
2	B	195/221 (88%)	187 (96%)	8 (4%)	0	100	100
All	All	379/406 (93%)	369 (97%)	10 (3%)	0	100	100

There are no Ramachandran outliers to report.

### 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	168/167 (101%)	165 (98%)	3 (2%)	59	48
2	B	177/192 (92%)	173 (98%)	4 (2%)	50	37
All	All	345/359 (96%)	338 (98%)	7 (2%)	59	44

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	47[A]	GLU
1	A	47[B]	GLU
1	A	141	ARG
2	B	-28	HIS
2	B	25	ARG
2	B	114	ASN
2	B	168	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	8	HIS
2	B	24	GLN
2	B	135	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](#)

2 monosaccharides are modelled in this entry.

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
3	NAG	C	1	1,3	14,14,15	0.21	0	17,19,21	0.38	0
3	NAG	C	2	3	14,14,15	0.41	0	17,19,21	0.43	0

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
3	NAG	C	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	C	2	3	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

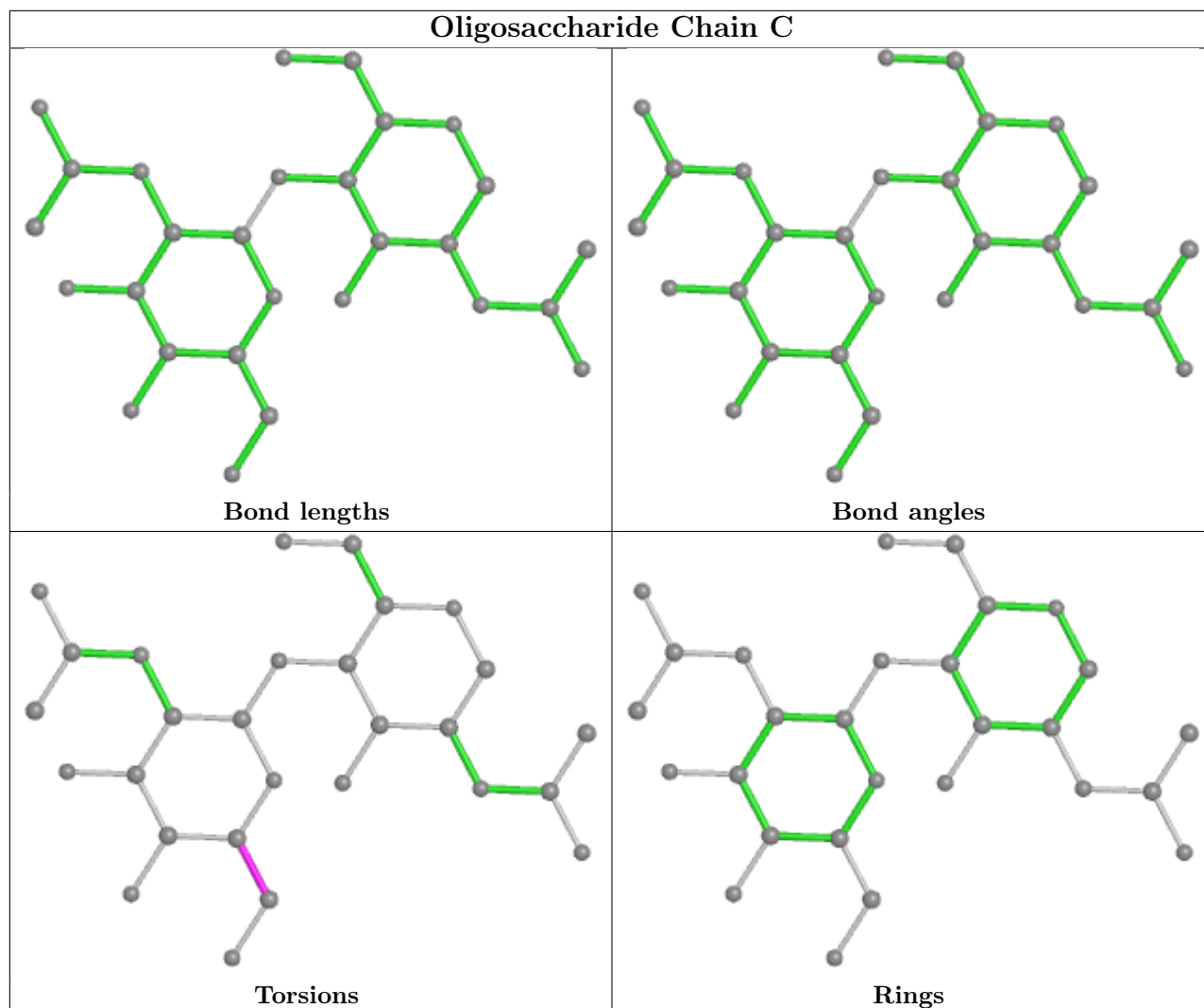
All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	2	NAG	O5-C5-C6-O6
3	C	2	NAG	C4-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.



## 5.6 Ligand geometry [i](#)

13 ligands are modelled in this entry.

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	$\# Z  > 2$
6	EDO	A	208	-	3,3,3	0.42	0	2,2,2	0.21	0
6	EDO	A	207	-	3,3,3	0.36	0	2,2,2	0.30	0
6	EDO	A	209	-	3,3,3	0.48	0	2,2,2	0.36	0
5	IPA	A	204	-	3,3,3	0.42	0	3,3,3	0.37	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
6	EDO	B	204	-	3,3,3	0.44	0	2,2,2	0.30	0
6	EDO	B	206	-	3,3,3	0.41	0	2,2,2	0.13	0
5	IPA	B	202	-	3,3,3	0.54	0	3,3,3	0.38	0
4	NAG	A	201	1	14,14,15	0.23	0	17,19,21	0.59	0
5	IPA	A	205	-	3,3,3	0.48	0	3,3,3	0.54	0
6	EDO	B	203	-	3,3,3	0.46	0	2,2,2	0.36	0
4	NAG	B	201	2	14,14,15	0.56	0	17,19,21	0.55	0
6	EDO	B	205	-	3,3,3	0.32	0	2,2,2	0.66	0
5	IPA	A	206	-	3,3,3	0.41	0	3,3,3	0.50	0

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
6	EDO	A	208	-	-	1/1/1/1	-
6	EDO	A	207	-	-	0/1/1/1	-
6	EDO	A	209	-	-	0/1/1/1	-
6	EDO	B	204	-	-	1/1/1/1	-
6	EDO	B	206	-	-	0/1/1/1	-
4	NAG	A	201	1	-	4/6/23/26	0/1/1/1
6	EDO	B	203	-	-	1/1/1/1	-
4	NAG	B	201	2	-	2/6/23/26	0/1/1/1
6	EDO	B	205	-	-	1/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	B	201	NAG	O5-C5-C6-O6
4	B	201	NAG	C4-C5-C6-O6
4	A	201	NAG	C4-C5-C6-O6
6	B	204	EDO	O1-C1-C2-O2
4	A	201	NAG	O5-C5-C6-O6
6	A	208	EDO	O1-C1-C2-O2
6	B	205	EDO	O1-C1-C2-O2
4	A	201	NAG	C3-C2-N2-C7

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Mol	Chain	Res	Type	Atoms
4	A	201	NAG	C1-C2-N2-C7
6	B	203	EDO	O1-C1-C2-O2

There are no ring outliers.

8 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	A	208	EDO	2	0
6	A	207	EDO	1	0
6	A	209	EDO	2	0
5	A	204	IPA	3	0
5	B	202	IPA	2	0
5	A	205	IPA	1	0
4	B	201	NAG	1	0
5	A	206	IPA	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, 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	184/185 (99%)	-0.17	5 (2%) 54 49	10, 19, 38, 85	0
2	B	200/221 (90%)	-0.14	11 (5%) 25 20	11, 22, 53, 67	0
All	All	384/406 (94%)	-0.15	16 (4%) 36 30	10, 21, 49, 85	0

All (16) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	168	GLN	5.5
2	B	140	THR	4.7
1	A	-3	GLU	4.6
1	A	180	PRO	4.4
2	B	-11	GLY	4.1
2	B	191	ALA	3.6
1	A	179	GLU	3.5
2	B	141	VAL	3.3
1	A	172	GLU	2.8
2	B	104	LEU	2.6
1	A	-1	ASP	2.4
2	B	142	GLY	2.2
2	B	5	SER	2.2
2	B	105	SER	2.2
2	B	169	GLY	2.2
2	B	165	THR	2.1

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

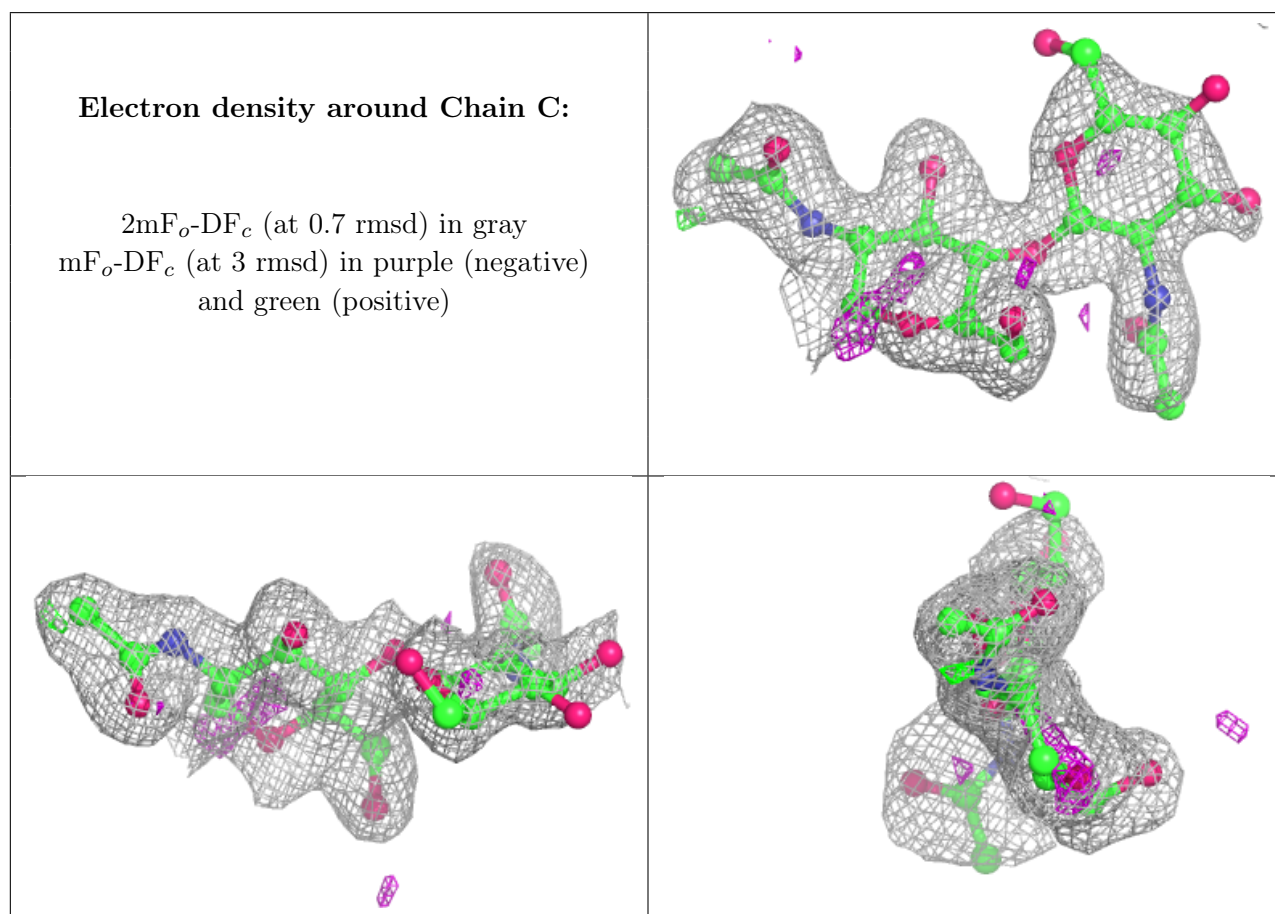
There are no non-standard protein/DNA/RNA residues in this entry.

### 6.3 Carbohydrates [i](#)

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(Å <sup>2</sup> )	Q<0.9
3	NAG	C	2	14/15	0.83	0.39	54,57,72,73	0
3	NAG	C	1	14/15	0.86	0.19	31,36,45,54	0

The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.



### 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
4	NAG	B	201	14/15	0.55	0.40	58,65,68,70	0
5	IPA	A	204	4/4	0.70	0.23	23,36,41,48	0
5	IPA	A	206	4/4	0.75	0.18	28,34,48,50	0
5	IPA	B	202	4/4	0.77	0.16	13,26,30,39	0
4	NAG	A	201	14/15	0.78	0.25	46,57,62,66	0
6	EDO	A	209	4/4	0.80	0.28	24,30,31,43	0
6	EDO	B	205	4/4	0.84	0.25	35,38,39,51	0
5	IPA	A	205	4/4	0.85	0.22	20,26,34,43	0
6	EDO	B	206	4/4	0.88	0.28	37,44,44,47	0
6	EDO	B	203	4/4	0.92	0.20	31,31,34,44	0
6	EDO	A	208	4/4	0.93	0.25	31,31,32,50	0
6	EDO	B	204	4/4	0.94	0.37	32,34,41,45	0
6	EDO	A	207	4/4	0.96	0.21	25,29,35,47	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.