



# wwPDB X-ray Structure Validation Summary Report i

Feb 27, 2014 – 05:14 AM GMT

PDB ID : 4EXN  
Title : Crystal structure of mouse Interleukin-34  
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Deposited on : 2012-04-30  
Resolution : 2.70 Å(reported)

This is a wwPDB validation summary 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 <http://wwpdb.org/ValidationPDFNotes.html>

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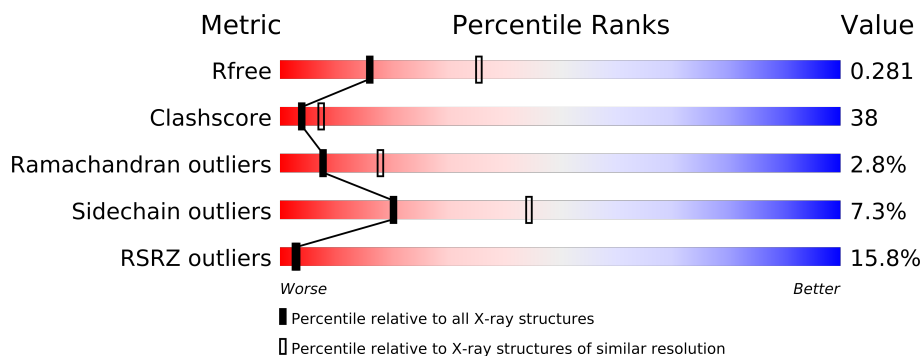
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	stable22639
Percentile statistics	:	21963
Refmac	:	5.8.0049
CCP4	:	6.3.0 (Settle)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 2.70 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))
$R_{free}$	66092	1557 (2.70-2.70)
Clashscore	79885	1939 (2.70-2.70)
Ramachandran outliers	78287	1905 (2.70-2.70)
Sidechain outliers	78261	1905 (2.70-2.70)
RSRZ outliers	66119	1559 (2.70-2.70)

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	175	
1	B	175	
1	E	175	
1	F	175	

## 2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 6461 atoms, of which 0 are hydrogen and 0 are deuterium.

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 Interleukin-34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	172	Total	C	N	O	S	0	0	0
			1408	906	240	252	10			
1	B	162	Total	C	N	O	S	0	0	0
			1322	851	227	234	10			
1	E	171	Total	C	N	O	S	0	0	0
			1397	899	238	250	10			
1	F	172	Total	C	N	O	S	0	0	0
			1408	906	240	252	10			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
B	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
E	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
F	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4

- Molecule 2 is a polymer of unknown type called SUGAR (5-MER).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	5	Total	C	N	O	0	0
			61	34	2	25		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4

- Molecule 3 is a polymer of unknown type called SUGAR (3-MER).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	3	Total	C	N	O	0	0
			39	22	2	15		
3	B	3	Total	C	N	O	0	0
			39	22	2	15		
3	E	3	Total	C	N	O	0	0
			39	22	2	15		
3	F	3	Total	C	N	O	0	0
			39	22	2	15		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
B	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
E	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
F	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4

- Molecule 4 is a polymer of unknown type called SUGAR (5-MER).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	B	5	Total	C	N	O	0	0
			61	34	2	25		
4	E	5	Total	C	N	O	0	0
			61	34	2	25		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4
E	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4

- Molecule 5 is a polymer of unknown type called SUGAR (5-MER).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	F	5	Total	C	N	O	0	0
			61	34	2	25		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	195	ALA	-	EXPRESSION TAG	UNP Q8R1R4

- Molecule 6 is water.

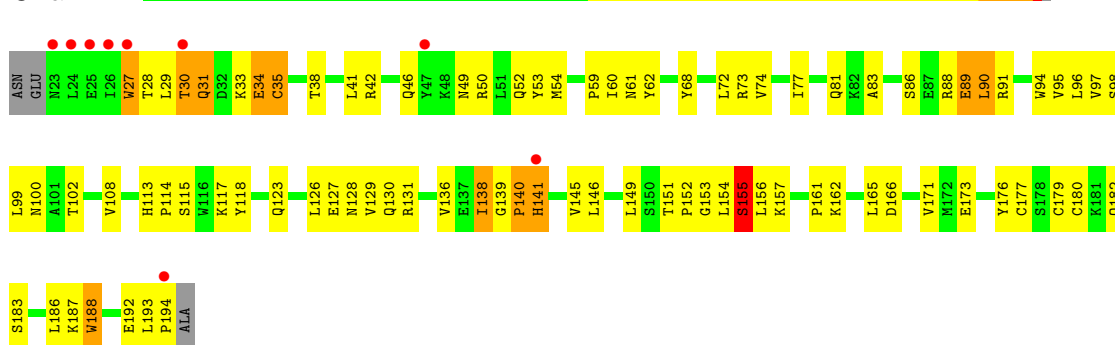
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	148	Total 148	O 148	0	0
6	B	139	Total 139	O 139	0	0
6	E	92	Total 92	O 92	0	0
6	F	147	Total 147	O 147	0	0

### 3 Residue-property plots

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.

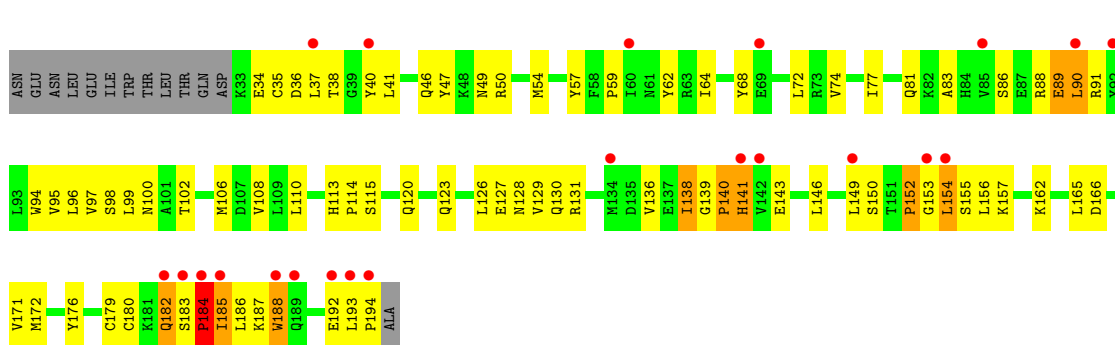
#### • Molecule 1: Interleukin-34

##### Chain A:



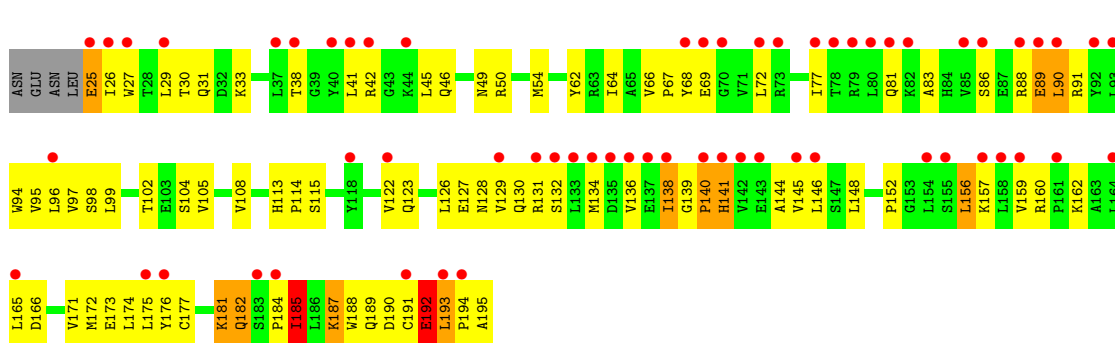
#### • Molecule 1: Interleukin-34

##### Chain B:

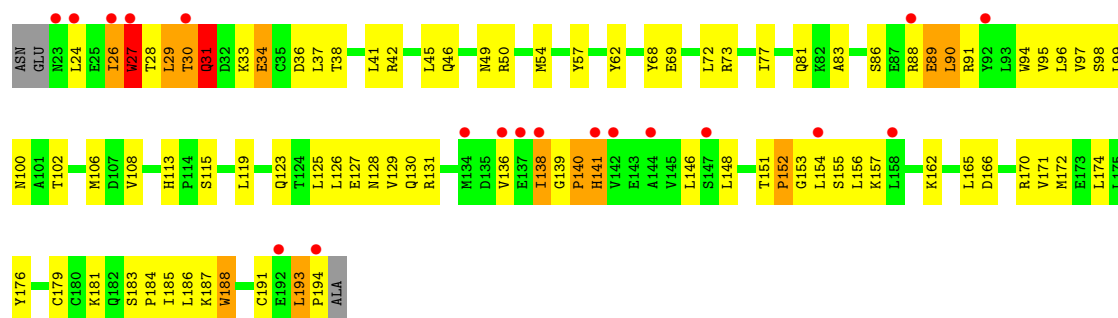


#### • Molecule 1: Interleukin-34

##### Chain E:



## ● Molecule 1: Interleukin-34

Chain F: 

## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	71.30Å 80.04Å 164.18Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 2.70 44.67 – 2.70	Depositor EDS
% Data completeness (in resolution range)	97.4 (50.00-2.70) 97.7 (44.67-2.70)	Depositor EDS
$R_{merge}$	0.06	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	3.33 (at 2.69Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.244 , 0.288 0.241 , 0.281	Depositor DCC
$R_{free}$ test set	1248 reflections (5.07%)	DCC
Wilson B-factor (Å <sup>2</sup> )	62.8	Xtriage
Anisotropy	0.381	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33 , 72.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 25841 reflections	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	6461	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	91.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.52% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.



## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: BMA, NAG, MAN

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	0.57	0/1438	0.82	3/1952 (0.2%)
1	B	0.45	0/1350	0.81	4/1830 (0.2%)
1	E	0.35	0/1427	0.72	2/1937 (0.1%)
1	F	0.44	0/1438	0.72	2/1952 (0.1%)
All	All	0.46	0/5653	0.77	11/7671 (0.1%)

There are no bond length outliers.

The worst 5 of 11 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	154	LEU	N-CA-C	13.31	146.95	111.00
1	E	192	GLU	N-CA-C	9.16	135.75	111.00
1	B	152	PRO	N-CA-C	-8.76	89.34	112.10
1	A	155	SER	N-CA-C	-7.62	90.43	111.00
1	A	83	ALA	N-CA-C	-5.89	95.09	111.00

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Close contacts

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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1408	0	1436	111	0
1	B	1322	0	1355	96	0
1	E	1397	0	1424	101	0
1	F	1408	0	1436	117	0
2	A	61	0	52	3	0
3	A	39	0	34	9	0
3	B	39	0	34	6	0
3	E	39	0	34	5	0
3	F	39	0	34	6	0
4	B	61	0	52	4	0
4	E	61	0	52	7	0
5	F	61	0	52	9	0
6	A	148	0	0	35	0
6	B	139	0	0	24	0
6	E	92	0	0	35	0
6	F	147	0	0	34	0
All	All	6461	0	5995	451	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 38.

The worst 5 of 451 close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:31:GLN:N	1:A:31:GLN:HE21	1.59	1.00
1:A:113:HIS:HD2	1:A:115:SER:H	1.02	1.00
1:F:90:LEU:HG	6:F:417:HOH:O	1.64	0.96
1:A:90:LEU:HG	6:A:415:HOH:O	1.66	0.94
1:A:62:TYR:OH	1:A:108:VAL:HG11	1.68	0.93

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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	170/175 (97%)	153 (90%)	14 (8%)	3 (2%)	13 31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	160/175 (91%)	139 (87%)	18 (11%)	3 (2%)	12	29
1	E	169/175 (97%)	147 (87%)	14 (8%)	8 (5%)	4	7
1	F	170/175 (97%)	149 (88%)	16 (9%)	5 (3%)	7	16
All	All	669/700 (96%)	588 (88%)	62 (9%)	19 (3%)	8	18

5 of 19 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	155	SER
1	B	184	PRO
1	E	184	PRO
1	E	185	ILE
1	E	192	GLU

### 5.3.2 Protein sidechains ⓘ

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	160/162 (99%)	147 (92%)	13 (8%)	17	36
1	B	150/162 (93%)	142 (95%)	8 (5%)	32	62
1	E	158/162 (98%)	145 (92%)	13 (8%)	17	36
1	F	160/162 (99%)	148 (92%)	12 (8%)	19	43
All	All	628/648 (97%)	582 (93%)	46 (7%)	20	44

5 of 46 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	188	TRP
1	E	138	ILE
1	F	138	ILE
1	E	25	GLU
1	E	89	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 22 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	128	ASN
1	E	49	ASN
1	F	113	HIS
1	B	182	GLN
1	E	46	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains 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 ⓘ

32 carbohydrates 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	$\# Z  > 2$
2	NAG	A	201	1,2	12,14,15	0.63	0	15,19,21	0.81	1 (6%)
2	NAG	A	202	2	12,14,15	0.76	0	15,19,21	0.96	2 (13%)
2	BMA	A	203	2	10,11,12	0.85	0	11,15,17	1.39	1 (9%)
2	MAN	A	204	2	10,11,12	0.56	0	11,15,17	0.28	0
2	BMA	A	205	2	10,11,12	0.56	0	11,15,17	0.70	0
3	NAG	A	206	1,3	12,14,15	0.55	0	15,19,21	0.98	1 (6%)
3	NAG	A	207	3	12,14,15	0.64	0	15,19,21	0.72	0
3	BMA	A	208	3	10,11,12	0.44	0	11,15,17	0.29	0
4	NAG	B	201	1,4	12,14,15	0.73	0	15,19,21	0.88	0
4	NAG	B	202	4	12,14,15	0.62	0	15,19,21	0.81	1 (6%)
4	BMA	B	203	4	10,11,12	0.52	0	11,15,17	0.67	0
4	BMA	B	204	4	10,11,12	0.60	0	11,15,17	0.38	0
4	MAN	B	205	4	10,11,12	0.44	0	11,15,17	0.30	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	NAG	B	206	1,3	12,14,15	0.68	0	15,19,21	0.93	0
3	NAG	B	207	3	12,14,15	0.67	0	15,19,21	0.79	0
3	BMA	B	208	3	10,11,12	0.45	0	11,15,17	0.20	0
4	NAG	E	201	1,4	12,14,15	0.51	0	15,19,21	0.70	0
4	NAG	E	202	4	12,14,15	0.64	0	15,19,21	0.83	1 (6%)
4	BMA	E	203	4	10,11,12	0.62	0	11,15,17	0.48	0
4	BMA	E	204	4	10,11,12	0.51	0	11,15,17	0.29	0
4	MAN	E	205	4	10,11,12	0.48	0	11,15,17	0.46	0
3	NAG	E	206	1,3	12,14,15	0.64	0	15,19,21	0.80	0
3	NAG	E	207	3	12,14,15	0.56	0	15,19,21	0.65	0
3	BMA	E	208	3	10,11,12	0.43	0	11,15,17	0.35	0
5	NAG	F	201	1,5	12,14,15	0.58	0	15,19,21	0.67	0
5	NAG	F	202	5	12,14,15	0.56	0	15,19,21	0.77	0
5	BMA	F	203	5	10,11,12	0.67	0	11,15,17	1.11	1 (9%)
5	BMA	F	204	5	10,11,12	0.42	0	11,15,17	0.24	0
5	BMA	F	205	5	10,11,12	0.46	0	11,15,17	0.29	0
3	NAG	F	206	1,3	12,14,15	0.69	0	15,19,21	0.86	0
3	NAG	F	207	3	12,14,15	0.52	0	15,19,21	0.79	0
3	BMA	F	208	3	10,11,12	0.46	0	11,15,17	0.37	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
2	NAG	A	201	1,2	-	0/6/23/26	0/1/1/1
2	NAG	A	202	2	-	0/6/23/26	0/1/1/1
2	BMA	A	203	2	-	0/2/19/22	0/1/1/1
2	MAN	A	204	2	-	0/2/19/22	0/1/1/1
2	BMA	A	205	2	-	0/2/19/22	0/1/1/1
3	NAG	A	206	1,3	-	0/6/23/26	0/1/1/1
3	NAG	A	207	3	-	0/6/23/26	0/1/1/1
3	BMA	A	208	3	-	0/2/19/22	0/1/1/1
4	NAG	B	201	1,4	-	0/6/23/26	0/1/1/1
4	NAG	B	202	4	-	0/6/23/26	0/1/1/1
4	BMA	B	203	4	-	0/2/19/22	0/1/1/1
4	BMA	B	204	4	-	0/2/19/22	0/1/1/1
4	MAN	B	205	4	-	0/2/19/22	0/1/1/1
3	NAG	B	206	1,3	-	0/6/23/26	1/1/1/1
3	NAG	B	207	3	-	0/6/23/26	0/1/1/1
3	BMA	B	208	3	-	0/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	E	201	1,4	-	1/6/23/26	0/1/1/1
4	NAG	E	202	4	-	0/6/23/26	0/1/1/1
4	BMA	E	203	4	-	0/2/19/22	0/1/1/1
4	BMA	E	204	4	-	0/2/19/22	0/1/1/1
4	MAN	E	205	4	-	0/2/19/22	0/1/1/1
3	NAG	E	206	1,3	-	0/6/23/26	0/1/1/1
3	NAG	E	207	3	-	0/6/23/26	0/1/1/1
3	BMA	E	208	3	-	0/2/19/22	0/1/1/1
5	NAG	F	201	1,5	-	2/6/23/26	0/1/1/1
5	NAG	F	202	5	-	0/6/23/26	0/1/1/1
5	BMA	F	203	5	-	0/2/19/22	0/1/1/1
5	BMA	F	204	5	-	0/2/19/22	0/1/1/1
5	BMA	F	205	5	-	0/2/19/22	0/1/1/1
3	NAG	F	206	1,3	-	0/6/23/26	0/1/1/1
3	NAG	F	207	3	-	0/6/23/26	0/1/1/1
3	BMA	F	208	3	-	0/2/19/22	0/1/1/1

There are no bond length outliers.

The worst 5 of 8 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	203	BMA	O3-C3-C2	3.13	115.65	109.94
3	A	206	NAG	C3-C2-N2	-2.63	107.75	111.76
4	E	202	NAG	C2-N2-C7	-2.31	119.22	123.09
5	F	203	BMA	C4-C3-C2	2.22	113.48	110.50
4	B	202	NAG	C2-N2-C7	-2.21	119.38	123.09

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	F	201	NAG	C8-C7-N2-C2
5	F	201	NAG	O7-C7-N2-C2
4	E	201	NAG	O7-C7-N2-C2

All (1) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	206	NAG	C1-C2-C3-C4-C5-O5

## 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<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	172/175 (98%)	0.53	9 (5%) 26 29	26, 61, 129, 150	0
1	B	162/175 (92%)	0.81	22 (13%) 4 4	40, 73, 138, 150	0
1	E	171/175 (97%)	1.99	61 (35%) 1 1	69, 124, 150, 150	0
1	F	172/175 (98%)	0.62	19 (11%) 6 6	44, 78, 137, 150	0
All	All	677/700 (96%)	0.99	111 (16%) 3 3	26, 82, 149, 150	0

The worst 5 of 111 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	193	LEU	10.8
1	E	80	LEU	8.7
1	E	133	LEU	8.7
1	E	146	LEU	8.5
1	E	142	VAL	8.2

### 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 ⓘ

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, 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	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
4	BMA	B	204	11/12	0.37	9.17	150,150,150,150	0
3	BMA	B	208	11/12	0.41	3.37	147,148,148,148	0
3	NAG	F	207	14/15	0.43	3.19	149,149,149,149	0
4	MAN	B	205	11/12	0.38	2.92	150,150,150,150	0
5	NAG	F	201	14/15	0.25	2.00	91,95,98,98	0
3	NAG	A	207	14/15	0.34	1.54	150,150,150,150	0
3	NAG	F	206	14/15	0.27	0.80	129,136,137,138	0
5	BMA	F	205	11/12	0.29	0.74	150,150,150,150	0
3	NAG	B	207	14/15	0.34	0.67	150,150,150,150	0
4	BMA	B	203	11/12	0.23	0.09	147,147,147,147	0
3	NAG	E	206	14/15	0.31	0.08	150,150,150,150	0
3	NAG	A	206	14/15	0.20	-0.04	143,149,149,149	0
3	NAG	B	206	14/15	0.24	-0.13	129,134,134,134	0
3	NAG	E	207	14/15	0.33	-0.14	150,150,150,150	0
4	MAN	E	205	11/12	0.36	-0.19	150,150,150,150	0
2	NAG	A	201	14/15	0.16	-0.72	69,70,72,73	0
4	NAG	B	201	14/15	0.14	-0.83	80,84,87,87	0
4	NAG	B	202	14/15	0.16	-0.86	98,102,105,105	0
5	NAG	F	202	14/15	0.16	-0.98	90,94,98,101	0
5	BMA	F	203	11/12	0.18	-1.26	148,148,148,148	0
4	NAG	E	201	14/15	0.26	-1.28	112,116,119,119	0
2	BMA	A	203	11/12	0.12	-1.49	104,112,119,125	0
4	NAG	E	202	14/15	0.27	-1.99	122,122,122,122	0
4	BMA	E	203	11/12	0.27	-1.99	150,150,150,150	0
2	NAG	A	202	14/15	0.14	-2.10	57,63,70,81	0
2	BMA	A	205	11/12	0.13	-23.00	125,129,131,133	0
5	BMA	F	204	11/12	0.42	-	150,150,150,150	0
4	BMA	E	204	11/12	0.36	-	150,150,150,150	0
2	MAN	A	204	11/12	0.25	-	149,150,150,150	0
3	BMA	F	208	11/12	0.50	-	150,150,150,150	0
3	BMA	E	208	11/12	0.40	-	150,150,150,150	0
3	BMA	A	208	11/12	0.30	-	150,150,150,150	0

## 6.4 Ligands ⓘ

There are no ligands in this entry.

## 6.5 Other polymers ⓘ

There are no such residues in this entry.