Full wwPDB X-ray Structure Validation Report ⓘ

Aug 26, 2024 – 07:30 pm BST

PDB ID	:	5L9E
Title	:	CRYSTAL STRUCTURE OF HUMAN CARBONIC ANHYDRASE II IN COMPLEX WITH A QUINOLINE OLIGOAMIDE FOLDAMER
Authors	:	Vallade, M.; Langlois d'Estaintot, B.; Granier, T.; Huc, I.
Deposited on	:	2016-06-10
Resolution	:	2.90 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*
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.

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

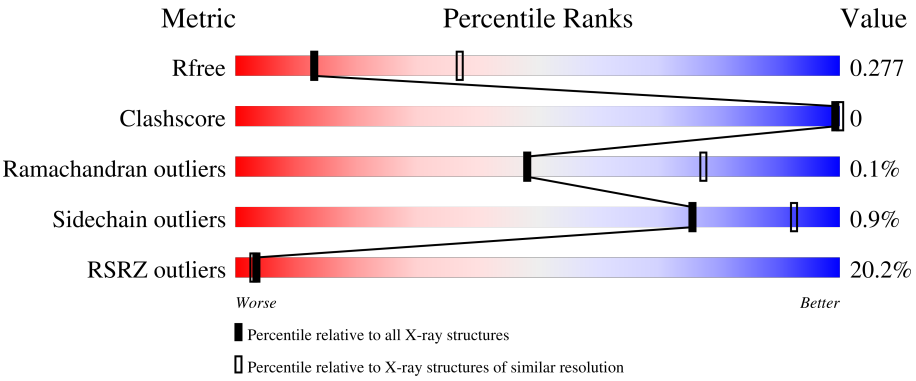
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.002 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.38.2

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 2.90 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}	164625	2335 (2.90-2.90)
Clashscore	180529	2564 (2.90-2.90)
Ramachandran outliers	177936	2514 (2.90-2.90)
Sidechain outliers	177891	2516 (2.90-2.90)
RSRZ outliers	164620	2337 (2.90-2.90)

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	260	19% 98%
1	B	260	13% 98%
1	C	260	18% 98%
1	D	260	30% 97%
2	E	6	17% 67% 17%

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Mol	Chain	Length	Quality of chain
2	F	6	17% 50% 33%
2	G	6	17% 67% 17%
2	H	6	17% 67% 17%

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 8501 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 Carbonic anhydrase 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	259	Total	C	N	O	S	0	0	0
			2003	1287	340	374	2			
1	B	259	Total	C	N	O	S	0	0	0
			2005	1289	340	374	2			
1	C	257	Total	C	N	O	S	0	0	0
			1968	1273	330	363	2			
1	D	256	Total	C	N	O	S	0	0	0
			1933	1248	325	358	2			

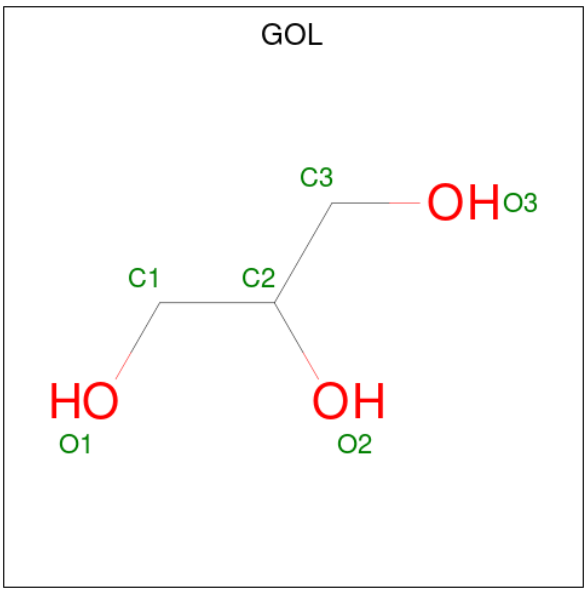
- Molecule 2 is a protein called Aromatic foldamer.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	6	Total	C	N	O	S	0	0	0
			95	65	11	18	1			
2	F	6	Total	C	N	O	S	0	0	0
			95	65	11	18	1			
2	G	6	Total	C	N	O	S	0	0	0
			96	66	11	18	1			
2	H	6	Total	C	N	O	S	0	0	0
			95	65	11	18	1			

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	10	Total	Zn	0	0
			10	10		
3	B	5	Total	Zn	0	0
			5	5		
3	C	6	Total	Zn	0	0
			6	6		
3	D	6	Total	Zn	0	0
			6	6		

- Molecule 4 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 6 3 3	0	0
4	B	1	Total C O 6 3 3	0	0
4	C	1	Total C O 6 3 3	0	0
4	D	1	Total C O 6 3 3	0	0

- Molecule 5 is water.

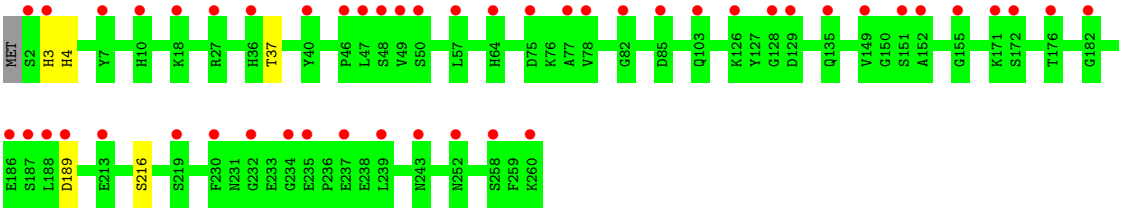
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	45	Total O 45 45	0	0
5	B	31	Total O 31 31	0	0
5	C	43	Total O 43 43	0	0
5	D	36	Total O 36 36	0	0
5	E	2	Total O 2 2	0	0
5	F	2	Total O 2 2	0	0
5	G	1	Total O 1 1	0	0

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.

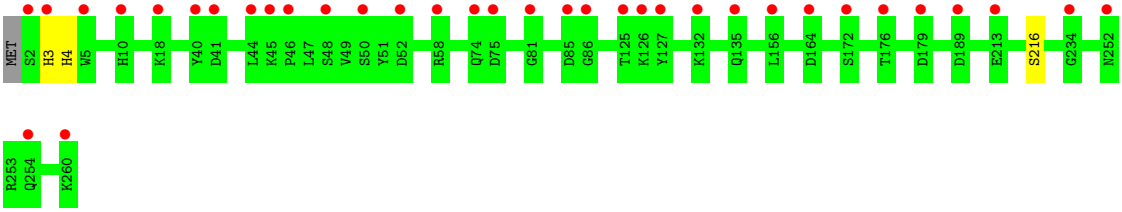
• Molecule 1: Carbonic anhydrase 2

Chain A:



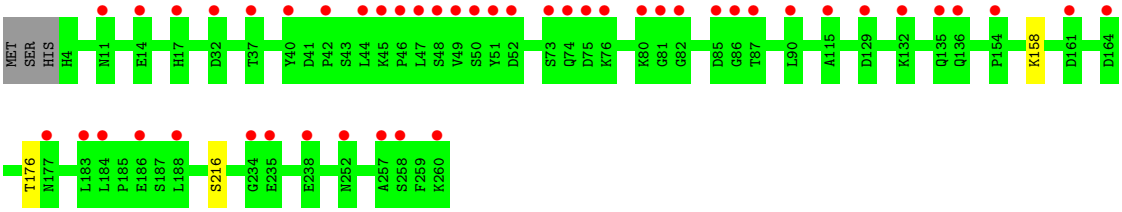
• Molecule 1: Carbonic anhydrase 2

Chain B:



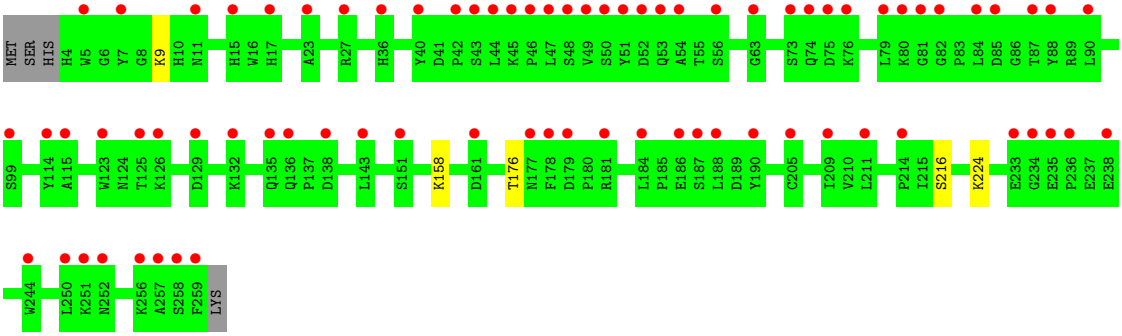
• Molecule 1: Carbonic anhydrase 2

Chain C:



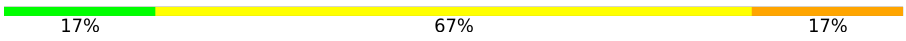
• Molecule 1: Carbonic anhydrase 2

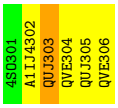
Chain D:



• Molecule 2: Aromatic foldamer

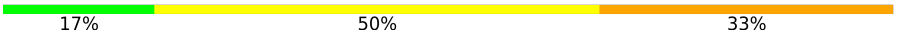
Chain E:

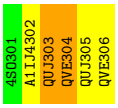




• Molecule 2: Aromatic foldamer

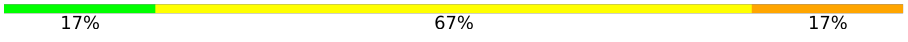
Chain F:

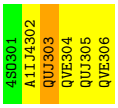




• Molecule 2: Aromatic foldamer

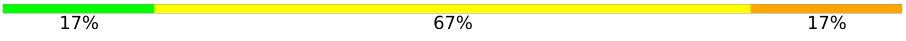
Chain G:

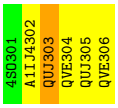




• Molecule 2: Aromatic foldamer

Chain H:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	125.97Å 75.14Å 141.10Å 90.00° 100.08° 90.00°	Depositor
Resolution (Å)	85.39 – 2.90 85.39 – 2.90	Depositor EDS
% Data completeness (in resolution range)	98.1 (85.39-2.90) 98.4 (85.39-2.90)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.42 (at 2.91Å)	Xtriage
Refinement program	REFMAC 5.8.0135	Depositor
R, R_{free}	0.242 , 0.273 0.250 , 0.277	Depositor DCC
R_{free} test set	1394 reflections (4.87%)	wwPDB-VP
Wilson B-factor (Å^2)	42.3	Xtriage
Anisotropy	0.771	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 62.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	8501	wwPDB-VP
Average B, all atoms (Å^2)	66.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 18.71% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, QUJ, 4SO, QVE, GOL, A1IJ4

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	0.44	0/2064	0.68	3/2815 (0.1%)
1	B	0.44	0/2067	0.68	1/2821 (0.0%)
1	C	0.43	0/2028	0.63	0/2767
1	D	0.43	0/1993	0.63	0/2725
All	All	0.44	0/8152	0.65	4/11128 (0.0%)

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
2	E	0	1
2	F	0	2
2	G	0	1
2	H	0	1
All	All	0	5

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	4	HIS	N-CA-CB	8.03	125.05	110.60
1	A	4	HIS	N-CA-CB	5.85	121.13	110.60
1	A	3	HIS	N-CA-C	5.82	126.70	111.00
1	A	189	ASP	CB-CG-OD1	5.13	122.92	118.30

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	E	303	QUJ	Peptide
2	F	303	QUJ	Peptide
2	F	304	QVE	Peptide
2	G	303	QUJ	Peptide
2	H	303	QUJ	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	2003	0	1874	0	0
1	B	2005	0	1864	0	0
1	C	1968	0	1835	1	0
1	D	1933	0	1763	1	0
2	E	95	0	6	0	0
2	F	95	0	6	0	0
2	G	96	0	6	0	0
2	H	95	0	6	0	0
3	A	10	0	0	0	0
3	B	5	0	0	0	0
3	C	6	0	0	0	0
3	D	6	0	0	0	0
4	A	6	0	8	0	0
4	B	6	0	8	0	0
4	C	6	0	8	0	0
4	D	6	0	8	0	0
5	A	45	0	0	0	0
5	B	31	0	0	0	0
5	C	43	0	0	0	0
5	D	36	0	0	0	0
5	E	2	0	0	0	0
5	F	2	0	0	0	0
5	G	1	0	0	0	0
All	All	8501	0	7392	2	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 0.

All (2) 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:158:LYS:NZ	1:D:176:THR:O	2.44	0.51
1:C:158:LYS:NZ	1:C:176:THR:O	2.45	0.50

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	257/260 (99%)	246 (96%)	11 (4%)	0	100 100
1	B	257/260 (99%)	245 (95%)	11 (4%)	1 (0%)	30 60
1	C	255/260 (98%)	245 (96%)	10 (4%)	0	100 100
1	D	254/260 (98%)	243 (96%)	11 (4%)	0	100 100
All	All	1023/1040 (98%)	979 (96%)	43 (4%)	1 (0%)	48 77

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	3	HIS

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	205/225 (91%)	203 (99%)	2 (1%)	73 91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	204/225 (91%)	203 (100%)	1 (0%)	86 96
1	C	196/225 (87%)	195 (100%)	1 (0%)	86 96
1	D	187/225 (83%)	184 (98%)	3 (2%)	58 84
All	All	792/900 (88%)	785 (99%)	7 (1%)	75 92

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

Mol	Chain	Res	Type
1	A	37	THR
1	A	216	SER
1	B	216	SER
1	C	216	SER
1	D	9	LYS
1	D	216	SER
1	D	224	LYS

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

Mol	Chain	Res	Type
1	B	229	ASN
1	B	254	GLN
1	C	229	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)

20 non-standard protein/DNA/RNA residues 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	A1IJ4	H	302	2	16,16,17	1.05	2 (12%)	17,18,20	1.05	1 (5%)
2	QUJ	E	305	2	17,17,20	1.80	2 (11%)	20,23,28	2.79	8 (40%)
2	QUJ	G	305	2	18,18,20	1.97	2 (11%)	21,24,28	2.97	7 (33%)
2	QVE	G	304	2	19,19,20	1.74	2 (10%)	23,26,28	2.99	7 (30%)
2	QVE	G	306	2,3	20,20,20	2.03	2 (10%)	27,28,28	1.66	7 (25%)
2	QVE	F	306	2,3	20,20,20	2.09	2 (10%)	27,28,28	2.57	5 (18%)
2	QUJ	E	303	2	15,15,20	2.20	2 (13%)	19,21,28	2.92	5 (26%)
2	A1IJ4	E	302	2	16,16,17	1.25	2 (12%)	17,18,20	1.20	1 (5%)
2	QUJ	H	305	2	17,17,20	1.95	1 (5%)	20,23,28	3.31	8 (40%)
2	QVE	E	306	2,3	20,20,20	2.01	2 (10%)	27,28,28	1.88	9 (33%)
2	QVE	F	304	2	19,19,20	2.04	2 (10%)	23,26,28	3.65	10 (43%)
2	QUJ	H	303	2	15,15,20	2.14	1 (6%)	19,21,28	2.64	5 (26%)
2	QUJ	F	305	2	17,17,20	1.86	2 (11%)	20,23,28	2.77	8 (40%)
2	A1IJ4	F	302	2	16,16,17	1.17	2 (12%)	17,18,20	1.69	1 (5%)
2	A1IJ4	G	302	2	16,16,17	1.11	1 (6%)	17,18,20	1.27	1 (5%)
2	QUJ	F	303	2	15,15,20	2.08	2 (13%)	19,21,28	3.14	5 (26%)
2	QUJ	G	303	2	15,15,20	2.18	2 (13%)	19,21,28	2.85	5 (26%)
2	QVE	E	304	2	19,19,20	1.93	2 (10%)	23,26,28	3.23	8 (34%)
2	QVE	H	304	2	19,19,20	1.87	2 (10%)	23,26,28	2.86	6 (26%)
2	QVE	H	306	2,3	20,20,20	2.07	2 (10%)	27,28,28	1.88	8 (29%)

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	A1IJ4	H	302	2	-	5/10/10/11	0/1/1/1
2	QUJ	E	305	2	-	2/5/5/9	0/2/2/2
2	QUJ	G	305	2	-	4/6/6/9	0/2/2/2
2	QVE	G	304	2	-	6/7/7/9	0/2/2/2
2	QVE	G	306	2,3	-	8/9/9/9	0/2/2/2
2	QVE	F	306	2,3	-	7/9/9/9	0/2/2/2
2	QUJ	E	303	2	-	2/2/2/9	0/2/2/2
2	A1IJ4	E	302	2	-	0/10/10/11	0/1/1/1
2	QUJ	H	305	2	-	4/5/5/9	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	QVE	E	306	2,3	-	8/9/9/9	0/2/2/2
2	QVE	F	304	2	-	6/7/7/9	0/2/2/2
2	QUJ	H	303	2	-	2/2/2/9	0/2/2/2
2	QUJ	F	305	2	-	3/5/5/9	0/2/2/2
2	A1IJ4	F	302	2	-	3/10/10/11	0/1/1/1
2	A1IJ4	G	302	2	-	4/10/10/11	0/1/1/1
2	QUJ	F	303	2	-	2/2/2/9	0/2/2/2
2	QUJ	G	303	2	-	2/2/2/9	0/2/2/2
2	QVE	E	304	2	-	5/7/7/9	0/2/2/2
2	QVE	H	304	2	-	6/7/7/9	0/2/2/2
2	QVE	H	306	2,3	-	6/9/9/9	0/2/2/2

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	306	QVE	CA-C	-8.43	1.39	1.50
2	H	306	QVE	CA-C	-8.16	1.39	1.50
2	G	306	QVE	CA-C	-8.13	1.39	1.50
2	E	306	QVE	CA-C	-7.90	1.39	1.50
2	F	304	QVE	CA-C	-7.78	1.40	1.48
2	G	303	QUJ	CA-C	-7.59	1.40	1.48
2	E	303	QUJ	CA-C	-7.57	1.40	1.48
2	H	303	QUJ	CA-C	-7.37	1.40	1.48
2	G	305	QUJ	CA-C	-7.30	1.41	1.48
2	H	305	QUJ	CA-C	-7.17	1.41	1.48
2	F	303	QUJ	CA-C	-6.98	1.41	1.48
2	E	304	QVE	CA-C	-6.97	1.41	1.48
2	F	305	QUJ	CA-C	-6.40	1.41	1.48
2	H	304	QVE	CA-C	-6.34	1.42	1.48
2	E	305	QUJ	CA-C	-5.73	1.42	1.48
2	G	304	QVE	CA-C	-5.51	1.42	1.48
2	H	304	QVE	CA-N11	3.95	1.37	1.33
2	G	304	QVE	CA-N11	3.69	1.37	1.33
2	E	305	QUJ	CA-N11	3.48	1.36	1.33
2	G	302	A1IJ4	C128-C127	-3.34	1.39	1.51
2	E	304	QVE	CA-N11	3.31	1.36	1.33
2	F	302	A1IJ4	C128-C127	-3.23	1.40	1.51
2	H	302	A1IJ4	C128-C127	-3.10	1.40	1.51
2	E	302	A1IJ4	C128-C127	-3.03	1.40	1.51
2	H	306	QVE	OXT-C	-2.98	1.21	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	302	A1IJ4	C-N31	2.77	1.38	1.33
2	G	305	QUJ	CA-N11	2.70	1.36	1.33
2	F	305	QUJ	CA-N11	2.57	1.35	1.33
2	F	303	QUJ	CA-N11	2.53	1.35	1.33
2	E	306	QVE	OXT-C	-2.52	1.22	1.30
2	F	304	QVE	CA-N11	2.35	1.35	1.33
2	G	306	QVE	OXT-C	-2.32	1.23	1.30
2	E	303	QUJ	CA-N11	2.28	1.35	1.33
2	F	306	QVE	OXT-C	-2.25	1.23	1.30
2	G	303	QUJ	CA-N11	2.21	1.35	1.33
2	F	302	A1IJ4	C-N31	2.19	1.37	1.33
2	H	302	A1IJ4	C-N31	2.05	1.37	1.33

All (115) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	F	306	QVE	CG-OB-C8	10.78	129.23	116.95
2	F	304	QVE	CG-OB-C8	10.53	128.94	116.95
2	G	305	QUJ	CA-N11-C7	9.93	125.64	118.11
2	H	305	QUJ	CA-N11-C7	9.86	125.59	118.11
2	G	304	QVE	CA-N11-C7	9.38	125.22	118.11
2	H	304	QVE	CA-N11-C7	9.30	125.17	118.11
2	F	304	QVE	CA-N11-C7	9.21	125.10	118.11
2	E	304	QVE	CA-N11-C7	9.13	125.03	118.11
2	F	303	QUJ	CA-N11-C7	9.05	124.97	118.11
2	E	305	QUJ	CA-N11-C7	8.75	124.74	118.11
2	E	303	QUJ	CA-N11-C7	8.61	124.64	118.11
2	F	305	QUJ	CA-N11-C7	7.95	124.14	118.11
2	E	304	QVE	CG-OB-C8	7.64	125.65	116.95
2	G	303	QUJ	CA-N11-C7	7.57	123.85	118.11
2	E	304	QVE	O-C-CA	-7.11	117.48	124.22
2	F	304	QVE	O-C-CA	-7.06	117.53	124.22
2	H	303	QUJ	CA-N11-C7	6.60	123.12	118.11
2	F	303	QUJ	C-CA-N11	6.35	120.88	114.66
2	H	305	QUJ	C9-CA-C	6.24	126.62	121.23
2	F	302	A1IJ4	O-C-N31	-6.16	118.67	124.89
2	G	303	QUJ	C-CA-N11	5.96	120.50	114.66
2	G	303	QUJ	O-C-CA	-5.65	118.87	124.22
2	F	303	QUJ	O-C-CA	-5.64	118.88	124.22
2	G	305	QUJ	C9-CA-C	5.57	126.04	121.23
2	G	304	QVE	O-C-CA	-5.55	118.97	124.22
2	G	304	QVE	CG-OB-C8	5.53	123.25	116.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E	303	QUJ	O-C-CA	-5.43	119.08	124.22
2	H	303	QUJ	O-C-CA	-5.42	119.09	124.22
2	H	303	QUJ	C-CA-N11	5.29	119.84	114.66
2	H	304	QVE	O-C-CA	-5.22	119.28	124.22
2	H	304	QVE	C-CA-N11	5.21	119.77	114.66
2	H	305	QUJ	CG-OB-C8	5.20	123.48	118.01
2	F	305	QUJ	O-C-CA	-5.19	119.31	124.22
2	H	305	QUJ	O-C-CA	-5.04	119.45	124.22
2	G	304	QVE	C-CA-N11	4.94	119.50	114.66
2	E	305	QUJ	O-C-CA	-4.91	119.57	124.22
2	E	306	QVE	C-CA-N11	4.75	123.86	116.28
2	G	305	QUJ	O-C-CA	-4.72	119.75	124.22
2	G	302	A1IJ4	O-C-N31	-4.51	120.34	124.89
2	E	303	QUJ	C-CA-N11	4.33	118.91	114.66
2	H	306	QVE	CG-OB-C8	4.27	121.81	116.95
2	E	305	QUJ	C9-CA-C	4.11	124.78	121.23
2	E	303	QUJ	C3-C2-N	4.09	128.55	120.36
2	F	306	QVE	C-CA-N11	3.99	122.64	116.28
2	H	303	QUJ	C3-C2-N	3.90	128.16	120.36
2	F	303	QUJ	C3-C2-N	3.87	128.11	120.36
2	H	306	QVE	C-CA-N11	3.84	122.40	116.28
2	G	303	QUJ	C3-C2-N	3.77	127.90	120.36
2	F	305	QUJ	CG-OB-C8	3.73	121.94	118.01
2	E	306	QVE	CG-OB-C8	3.68	121.14	116.95
2	H	304	QVE	CG-OB-C8	3.64	121.09	116.95
2	G	306	QVE	CG-OB-C8	3.60	121.05	116.95
2	G	306	QVE	C-CA-N11	3.57	121.97	116.28
2	H	302	A1IJ4	O-C-N31	-3.55	121.31	124.89
2	F	304	QVE	C-CA-N11	3.54	118.13	114.66
2	F	305	QUJ	C-CA-N11	3.47	118.06	114.66
2	E	304	QVE	C-CA-N11	3.42	118.01	114.66
2	F	305	QUJ	C9-CA-C	3.40	124.17	121.23
2	E	303	QUJ	C7-C2-N	-3.34	111.71	118.07
2	E	305	QUJ	C-CA-N11	3.27	117.86	114.66
2	E	302	A1IJ4	O-C-N31	-3.21	121.64	124.89
2	F	304	QVE	OB-C8-C6	3.11	123.72	115.01
2	H	305	QUJ	C3-C2-N	3.07	126.49	120.36
2	H	306	QVE	C2-C7-N11	3.02	121.62	118.64
2	G	305	QUJ	C3-C2-N	2.98	126.32	120.36
2	H	306	QVE	OXT-C-CA	2.93	121.35	114.69
2	F	304	QVE	C3-C2-N	2.92	126.19	120.36
2	F	303	QUJ	C7-C2-N	-2.91	112.53	118.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	F	306	QVE	C2-C7-N11	2.89	121.50	118.64
2	E	306	QVE	OB-C8-C6	2.88	123.06	115.01
2	H	306	QVE	OB-C8-C6	2.84	122.94	115.01
2	E	306	QVE	CA-N11-C7	2.83	123.21	117.24
2	G	304	QVE	C2-C7-N11	2.80	121.41	118.64
2	F	304	QVE	C9-CA-C	2.77	123.62	121.23
2	G	306	QVE	OB-C8-C6	2.74	122.66	115.01
2	E	305	QUJ	C3-C2-N	2.73	125.81	120.36
2	G	306	QVE	CA-N11-C7	2.71	122.95	117.24
2	F	305	QUJ	C3-C2-N	2.71	125.78	120.36
2	E	304	QVE	C9-CA-C	2.70	123.56	121.23
2	H	306	QVE	CA-N11-C7	2.63	122.78	117.24
2	H	304	QVE	C2-C7-N11	2.63	121.24	118.64
2	G	305	QUJ	C6-C7-N11	-2.56	117.50	122.78
2	E	304	QVE	C3-C2-N	2.56	125.47	120.36
2	G	303	QUJ	C7-C2-N	-2.55	113.20	118.07
2	H	304	QVE	C6-C7-N11	-2.54	117.54	122.78
2	G	305	QUJ	C3-C2-C7	-2.51	116.12	120.06
2	F	304	QVE	OB-C8-C9	-2.50	116.52	124.69
2	E	304	QVE	C6-C7-N11	-2.46	117.70	122.78
2	F	304	QVE	C6-C7-N11	-2.44	117.74	122.78
2	F	306	QVE	CA-N11-C7	2.43	122.35	117.24
2	E	306	QVE	C6-C7-N11	-2.39	117.85	122.78
2	H	305	QUJ	OB-C8-C6	2.37	121.65	115.01
2	E	306	QVE	C2-C7-N11	2.37	120.98	118.64
2	H	303	QUJ	C7-C2-N	-2.36	113.56	118.07
2	G	304	QVE	C6-C7-N11	-2.36	117.91	122.78
2	H	306	QVE	C6-C7-N11	-2.36	117.92	122.78
2	F	305	QUJ	OB-C8-C6	2.35	121.58	115.01
2	G	306	QVE	C3-C2-N	2.31	124.98	120.36
2	E	305	QUJ	C3-C2-C7	-2.31	116.44	120.06
2	G	304	QVE	C9-CA-C	2.30	123.21	121.23
2	F	304	QVE	C3-C2-C7	-2.26	116.50	120.06
2	F	306	QVE	C6-C7-N11	-2.26	118.11	122.78
2	E	306	QVE	OXT-C-CA	2.23	119.77	114.69
2	E	306	QVE	C9-CA-N11	-2.17	119.22	124.50
2	G	305	QUJ	OB-C8-C6	2.16	121.04	115.01
2	H	306	QVE	OB-C8-C9	-2.14	117.71	124.69
2	G	306	QVE	C6-C7-N11	-2.13	118.39	122.78
2	H	305	QUJ	C6-C7-N11	-2.12	118.41	122.78
2	G	306	QVE	C9-CA-N11	-2.09	119.41	124.50
2	E	306	QVE	OB-C8-C9	-2.08	117.90	124.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	F	305	QUJ	C3-C2-C7	-2.06	116.82	120.06
2	H	305	QUJ	C3-C2-C7	-2.04	116.86	120.06
2	E	305	QUJ	C6-C7-N11	-2.01	118.64	122.78
2	E	305	QUJ	OB-C8-C6	2.01	120.62	115.01
2	E	304	QVE	C3-C2-C7	-2.00	116.92	120.06

There are no chirality outliers.

All (85) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	303	QUJ	O-C-CA-C9
2	E	303	QUJ	O-C-CA-N11
2	F	303	QUJ	O-C-CA-C9
2	F	303	QUJ	O-C-CA-N11
2	G	303	QUJ	O-C-CA-C9
2	G	303	QUJ	O-C-CA-N11
2	H	303	QUJ	O-C-CA-C9
2	H	303	QUJ	O-C-CA-N11
2	E	304	QVE	O-C-CA-N11
2	F	304	QVE	O-C-CA-N11
2	F	304	QVE	O-C-CA-C9
2	H	304	QVE	O-C-CA-N11
2	H	304	QVE	O-C-CA-C9
2	G	305	QUJ	O-C-CA-C9
2	G	305	QUJ	O-C-CA-N11
2	H	305	QUJ	O-C-CA-C9
2	H	305	QUJ	O-C-CA-N11
2	E	306	QVE	O-C-CA-N11
2	E	306	QVE	O-C-CA-C9
2	E	306	QVE	OXT-C-CA-N11
2	E	306	QVE	OXT-C-CA-C9
2	F	306	QVE	O-C-CA-N11
2	F	306	QVE	O-C-CA-C9
2	F	306	QVE	OXT-C-CA-N11
2	F	306	QVE	OXT-C-CA-C9
2	G	306	QVE	O-C-CA-N11
2	G	306	QVE	OXT-C-CA-N11
2	G	306	QVE	OXT-C-CA-C9
2	H	306	QVE	O-C-CA-N11
2	H	306	QVE	O-C-CA-C9
2	H	306	QVE	OXT-C-CA-N11
2	H	306	QVE	OXT-C-CA-C9

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Mol	Chain	Res	Type	Atoms
2	E	304	QVE	OE2-CD-CG-OB
2	E	304	QVE	OE1-CD-CG-OB
2	G	304	QVE	C9-C8-OB-CG
2	H	306	QVE	C9-C8-OB-CG
2	G	304	QVE	C6-C8-OB-CG
2	H	306	QVE	C6-C8-OB-CG
2	G	305	QUJ	C9-C8-OB-CG
2	G	306	QVE	O-C-CA-C9
2	H	302	A1IJ4	N31-C118-C119-C120
2	H	304	QVE	C9-C8-OB-CG
2	E	305	QUJ	C9-C8-OB-CG
2	F	306	QVE	OE2-CD-CG-OB
2	F	306	QVE	OE1-CD-CG-OB
2	F	304	QVE	C6-C8-OB-CG
2	H	304	QVE	C6-C8-OB-CG
2	E	305	QUJ	C6-C8-OB-CG
2	G	305	QUJ	C6-C8-OB-CG
2	F	305	QUJ	C6-C8-OB-CG
2	F	304	QVE	C9-C8-OB-CG
2	H	305	QUJ	C9-C8-OB-CG
2	H	305	QUJ	C6-C8-OB-CG
2	F	305	QUJ	C9-C8-OB-CG
2	G	306	QVE	OE2-CD-CG-OB
2	G	302	A1IJ4	C119-C120-C121-O71
2	H	302	A1IJ4	C119-C120-C121-O71
2	F	304	QVE	OE2-CD-CG-OB
2	G	306	QVE	OE1-CD-CG-OB
2	H	302	A1IJ4	C123-C122-O71-C121
2	H	302	A1IJ4	C124-C122-O71-C121
2	F	304	QVE	OE1-CD-CG-OB
2	F	302	A1IJ4	C118-C119-C120-C121
2	H	304	QVE	OE2-CD-CG-OB
2	H	302	A1IJ4	C120-C121-O71-C122
2	F	302	A1IJ4	C119-C118-N31-C
2	H	304	QVE	OE1-CD-CG-OB
2	F	305	QUJ	CD-CG-OB-C8
2	E	306	QVE	OE1-CD-CG-OB
2	E	306	QVE	OE2-CD-CG-OB
2	G	304	QVE	OE2-CD-CG-OB
2	G	304	QVE	OE1-CD-CG-OB
2	E	304	QVE	O-C-CA-C9
2	F	302	A1IJ4	C119-C120-C121-O71

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Mol	Chain	Res	Type	Atoms
2	G	302	A1IJ4	C123-C122-O71-C121
2	G	302	A1IJ4	C124-C122-O71-C121
2	G	302	A1IJ4	C119-C118-N31-C
2	G	306	QVE	C6-C8-OB-CG
2	G	306	QVE	C9-C8-OB-CG
2	E	306	QVE	C9-C8-OB-CG
2	E	306	QVE	C6-C8-OB-CG
2	G	304	QVE	CD-CG-OB-C8
2	G	304	QVE	O-C-CA-N11
2	F	306	QVE	CD-CG-OB-C8
2	E	304	QVE	C9-C8-OB-CG

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 31 ligands modelled in this entry, 27 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	$\#\|Z\| > 2$
4	GOL	D	306	-	5,5,5	0.25	0	5,5,5	0.34	0
4	GOL	A	309	-	5,5,5	0.30	0	5,5,5	0.32	0
4	GOL	C	306	-	5,5,5	0.28	0	5,5,5	0.07	0
4	GOL	B	306	-	5,5,5	0.33	0	5,5,5	0.33	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
4	GOL	D	306	-	-	0/4/4/4	-
4	GOL	A	309	-	-	2/4/4/4	-
4	GOL	C	306	-	-	2/4/4/4	-
4	GOL	B	306	-	-	2/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	309	GOL	O1-C1-C2-C3
4	B	306	GOL	O1-C1-C2-C3
4	C	306	GOL	C1-C2-C3-O3
4	A	309	GOL	O1-C1-C2-O2
4	B	306	GOL	O1-C1-C2-O2
4	C	306	GOL	O2-C2-C3-O3

There are no ring outliers.

No monomer is involved in short contacts.

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^{th} 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	259/260 (99%)	1.32	49 (18%) 4 3	46, 61, 75, 124	0
1	B	259/260 (99%)	1.25	35 (13%) 8 7	46, 62, 77, 124	0
1	C	257/260 (98%)	1.20	47 (18%) 4 4	48, 65, 79, 91	0
1	D	256/260 (98%)	1.67	77 (30%) 1 1	52, 71, 90, 107	0
2	E	0/6	-	-	-	-
2	F	0/6	-	-	-	-
2	G	0/6	-	-	-	-
2	H	0/6	-	-	-	-
All	All	1031/1064 (96%)	1.36	208 (20%) 3 3	46, 64, 84, 124	0

All (208) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	2	SER	6.9
1	B	2	SER	6.4
1	D	48	SER	5.5
1	D	52	ASP	5.3
1	B	260	LYS	5.0
1	D	82	GLY	5.0
1	A	3	HIS	4.9
1	A	46	PRO	4.7
1	D	234	GLY	4.2
1	D	99	SER	4.2
1	B	40	TYR	4.1
1	C	234	GLY	4.1
1	C	260	LYS	4.1
1	D	47	LEU	4.1
1	D	188	LEU	4.0
1	C	48	SER	4.0
1	D	252	ASN	4.0

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Mol	Chain	Res	Type	RSRZ
1	B	46	PRO	3.9
1	C	252	ASN	3.9
1	A	152	ALA	3.9
1	B	3	HIS	3.8
1	D	257	ALA	3.7
1	A	189	ASP	3.7
1	C	75	ASP	3.7
1	D	87	THR	3.6
1	D	187	SER	3.6
1	B	10	HIS	3.6
1	C	82	GLY	3.6
1	D	85	ASP	3.6
1	C	46	PRO	3.6
1	D	44	LEU	3.6
1	C	42	PRO	3.5
1	D	49	VAL	3.5
1	D	81	GLY	3.4
1	D	42	PRO	3.4
1	A	85	ASP	3.4
1	D	43	SER	3.4
1	B	45	LYS	3.4
1	B	234	GLY	3.3
1	A	260	LYS	3.3
1	A	151	SER	3.3
1	B	176	THR	3.2
1	D	84	LEU	3.2
1	A	234	GLY	3.2
1	B	85	ASP	3.2
1	B	48	SER	3.1
1	D	129	ASP	3.1
1	D	79	LEU	3.1
1	D	135	GLN	3.1
1	D	177	ASN	3.1
1	C	115	ALA	3.1
1	A	47	LEU	3.1
1	D	88	TYR	3.1
1	D	238	GLU	3.1
1	D	75	ASP	3.0
1	A	36	HIS	3.0
1	D	46	PRO	3.0
1	C	74	GLN	3.0
1	B	252	ASN	3.0

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Mol	Chain	Res	Type	RSRZ
1	D	209	ILE	3.0
1	C	45	LYS	3.0
1	A	235	GLU	3.0
1	D	258	SER	3.0
1	C	184	LEU	2.9
1	C	87	THR	2.9
1	D	184	LEU	2.9
1	A	213	GLU	2.9
1	B	213	GLU	2.9
1	D	50	SER	2.9
1	B	52	ASP	2.9
1	D	143	LEU	2.9
1	B	18	LYS	2.8
1	D	45	LYS	2.8
1	D	63	GLY	2.8
1	A	232	GLY	2.8
1	C	86	GLY	2.8
1	C	129	ASP	2.8
1	D	186	GLU	2.8
1	D	178	PHE	2.8
1	D	136	GLN	2.8
1	D	190	TYR	2.8
1	C	80	LYS	2.8
1	A	103	GLN	2.8
1	D	74	GLN	2.8
1	D	259	PHE	2.8
1	C	177	ASN	2.7
1	B	75	ASP	2.7
1	C	76	LYS	2.7
1	D	126	LYS	2.7
1	C	37	THR	2.7
1	D	11	ASN	2.7
1	A	187	SER	2.7
1	B	189	ASP	2.7
1	D	115	ALA	2.7
1	B	135	GLN	2.7
1	C	238	GLU	2.7
1	D	151	SER	2.7
1	A	18	LYS	2.6
1	B	5	TRP	2.6
1	D	40	TYR	2.6
1	A	172	SER	2.6

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Mol	Chain	Res	Type	RSRZ
1	C	186	GLU	2.6
1	D	235	GLU	2.6
1	B	86	GLY	2.6
1	B	50	SER	2.6
1	B	156	LEU	2.6
1	C	47	LEU	2.6
1	C	51	TYR	2.6
1	D	51	TYR	2.6
1	A	186	GLU	2.5
1	C	40	TYR	2.5
1	D	23	ALA	2.5
1	D	54	ALA	2.5
1	C	85	ASP	2.5
1	C	81	GLY	2.5
1	D	161	ASP	2.5
1	D	205	CYS	2.5
1	C	44	LEU	2.5
1	A	243	ASN	2.5
1	D	7	TYR	2.5
1	D	76	LYS	2.4
1	A	128	GLY	2.4
1	B	58	ARG	2.4
1	B	254	GLN	2.4
1	D	90	LEU	2.4
1	D	233	GLU	2.4
1	C	135	GLN	2.4
1	A	219	SER	2.4
1	A	258	SER	2.4
1	B	44	LEU	2.4
1	A	82	GLY	2.4
1	C	235	GLU	2.4
1	D	181	ARG	2.4
1	A	188	LEU	2.3
1	A	10	HIS	2.3
1	A	129	ASP	2.3
1	D	138	ASP	2.3
1	D	53	GLN	2.3
1	D	80	LYS	2.3
1	A	50	SER	2.3
1	C	73	SER	2.3
1	D	73	SER	2.3
1	A	57	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	D	211	LEU	2.3
1	A	40	TYR	2.3
1	A	182	GLY	2.3
1	D	244	TRP	2.3
1	C	11	ASN	2.3
1	D	132	LYS	2.3
1	C	136	GLN	2.3
1	B	81	GLY	2.3
1	D	15	HIS	2.3
1	D	36	HIS	2.3
1	A	27	ARG	2.3
1	A	48	SER	2.3
1	B	172	SER	2.3
1	C	154	PRO	2.3
1	D	256	LYS	2.3
1	B	127	TYR	2.2
1	C	257	ALA	2.2
1	D	123	TRP	2.2
1	C	161	ASP	2.2
1	D	17	HIS	2.2
1	A	49	VAL	2.2
1	B	74	GLN	2.2
1	A	230	PHE	2.2
1	C	90	LEU	2.2
1	C	188	LEU	2.2
1	C	52	ASP	2.2
1	C	50	SER	2.2
1	D	27	ARG	2.2
1	A	239	LEU	2.2
1	B	41	ASP	2.2
1	C	32	ASP	2.2
1	C	164	ASP	2.2
1	C	49	VAL	2.2
1	D	125	THR	2.1
1	D	114	TYR	2.1
1	D	236	PRO	2.1
1	D	179	ASP	2.1
1	C	17	HIS	2.1
1	A	126	LYS	2.1
1	A	237	GLU	2.1
1	C	14	GLU	2.1
1	A	64	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	251	LYS	2.1
1	A	7	TYR	2.1
1	B	125	THR	2.1
1	C	258	SER	2.1
1	D	250	LEU	2.1
1	D	214	PRO	2.1
1	A	149	VAL	2.1
1	A	155	GLY	2.1
1	C	132	LYS	2.1
1	A	135	GLN	2.0
1	A	176	THR	2.0
1	B	164	ASP	2.0
1	A	252	ASN	2.0
1	A	171	LYS	2.0
1	B	126	LYS	2.0
1	B	132	LYS	2.0
1	C	183	LEU	2.0
1	A	75	ASP	2.0
1	A	77	ALA	2.0
1	B	179	ASP	2.0
1	D	56	SER	2.0
1	A	78	VAL	2.0
1	D	5	TRP	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (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^{th} 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
2	QUJ	H	303	14/19	0.78	0.20	78,83,89,91	0
2	QUJ	G	305	17/19	0.78	0.21	76,82,90,91	0
2	QUJ	H	305	16/19	0.78	0.22	81,89,96,99	0
2	QUJ	G	303	14/19	0.79	0.23	75,78,82,84	0
2	QVE	H	304	18/19	0.80	0.22	72,76,78,79	0
2	QUJ	E	305	16/19	0.80	0.22	70,74,77,79	0
2	QUJ	E	303	14/19	0.81	0.20	67,70,73,75	0
2	QVE	G	304	18/19	0.82	0.24	69,73,75,75	0
2	QVE	E	304	18/19	0.83	0.19	68,69,70,73	0
2	QVE	F	304	18/19	0.84	0.20	64,66,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	QUJ	F	305	16/19	0.84	0.20	68,72,76,77	0
2	QUJ	F	303	14/19	0.85	0.23	66,69,72,74	0
2	A1IJ4	E	302	16/17	0.90	0.17	49,54,66,67	0
2	A1IJ4	F	302	16/17	0.90	0.15	49,55,65,67	0
2	A1IJ4	H	302	16/17	0.90	0.14	56,64,80,82	0
2	QVE	F	306	19/19	0.90	0.20	72,75,77,78	0
2	QVE	G	306	19/19	0.90	0.23	80,84,87,87	0
2	QVE	E	306	19/19	0.91	0.20	75,78,80,83	0
2	A1IJ4	G	302	16/17	0.92	0.13	52,59,74,76	0
2	QVE	H	306	19/19	0.92	0.21	83,88,91,92	0

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
3	ZN	C	307	1/1	0.74	0.33	124,124,124,124	1
3	ZN	A	304	1/1	0.75	0.15	77,77,77,77	1
3	ZN	B	304	1/1	0.78	0.14	77,77,77,77	1
3	ZN	D	304	1/1	0.78	0.18	85,85,85,85	1
3	ZN	C	304	1/1	0.81	0.14	80,80,80,80	1
4	GOL	D	306	6/6	0.85	0.36	124,124,124,124	0
4	GOL	B	306	6/6	0.86	0.34	124,124,124,124	0
3	ZN	A	308	1/1	0.86	0.21	73,73,73,73	1
4	GOL	A	309	6/6	0.90	0.34	124,124,124,124	0
4	GOL	C	306	6/6	0.91	0.25	124,124,124,124	0
3	ZN	B	303	1/1	0.91	0.11	77,77,77,77	0
3	ZN	D	303	1/1	0.92	0.09	89,89,89,89	0
3	ZN	A	303	1/1	0.93	0.10	76,76,76,76	0
3	ZN	A	311	1/1	0.93	0.14	124,124,124,124	1
3	ZN	D	305	1/1	0.93	0.09	99,99,99,99	0
3	ZN	D	307	1/1	0.93	0.14	124,124,124,124	1
3	ZN	A	305	1/1	0.94	0.11	80,80,80,80	0
3	ZN	A	307	1/1	0.94	0.08	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	ZN	C	303	1/1	0.95	0.08	82,82,82,82	0
3	ZN	A	310	1/1	0.96	0.07	77,77,77,77	0
3	ZN	B	302	1/1	0.97	0.07	55,55,55,55	0
3	ZN	A	306	1/1	0.97	0.06	78,78,78,78	0
3	ZN	A	302	1/1	0.98	0.04	57,57,57,57	0
3	ZN	B	305	1/1	0.98	0.07	81,81,81,81	0
3	ZN	C	305	1/1	0.98	0.06	84,84,84,84	0
3	ZN	C	302	1/1	0.98	0.04	58,58,58,58	0
3	ZN	D	302	1/1	0.99	0.03	60,60,60,60	0
3	ZN	A	301	1/1	1.00	0.03	45,45,45,45	0
3	ZN	B	301	1/1	1.00	0.03	45,45,45,45	0
3	ZN	D	301	1/1	1.00	0.02	51,51,51,51	0
3	ZN	C	301	1/1	1.00	0.02	47,47,47,47	0

6.5 Other polymers (i)

There are no such residues in this entry.