Full wwPDB X-ray Structure Validation Report (i)

Jan 9, 2025 – 12:04 PM EST

PDB ID	:	8W3K
Title	:	Crystal structure of prefusion-stabilized RSV F protein UFCR2-iSS-NQ
Authors	:	Lee, Y.Z.; Stanfield, R.L.; Wilson, I.A.; Zhu, J.
Deposited on	:	2024-02-22
Resolution	:	2.30 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 (i) symbol.

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

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

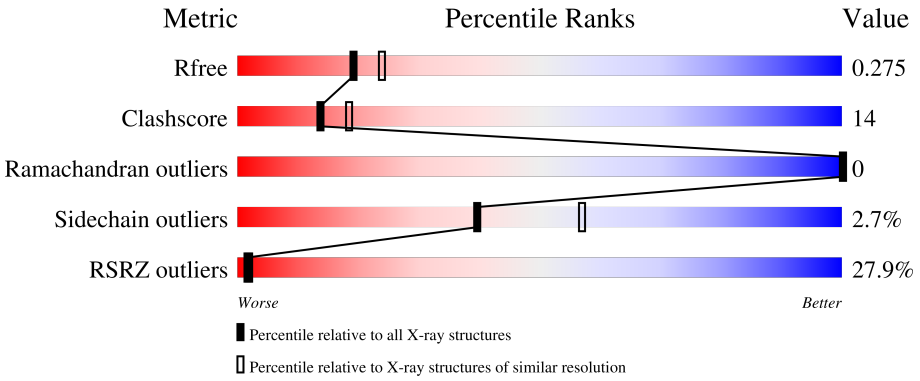
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

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 2.30 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	5963 (2.30-2.30)
Clashscore	180529	6698 (2.30-2.30)
Ramachandran outliers	177936	6640 (2.30-2.30)
Sidechain outliers	177891	6640 (2.30-2.30)
RSRZ outliers	164620	5963 (2.30-2.30)

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	F	507	24% 66% 21% • 12%

2 Entry composition

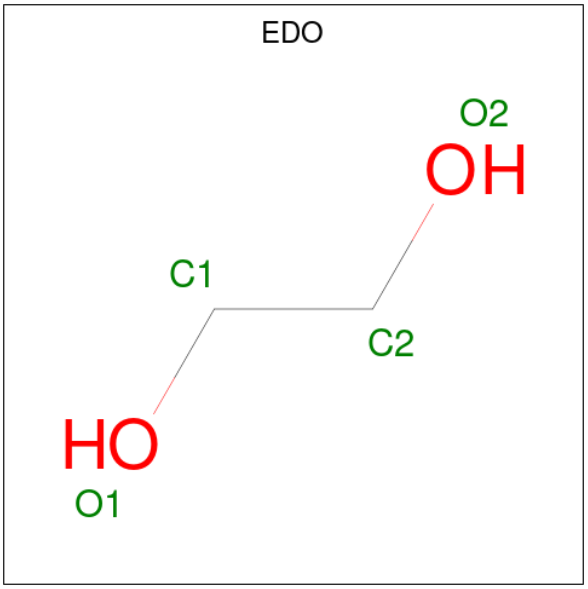
There are 4 unique types of molecules in this entry. The entry contains 3598 atoms, of which 24 are hydrogens and 0 are deuteriums.

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 Prefusion-stabilized RSV F protein UFCR2-iSS-NQ.

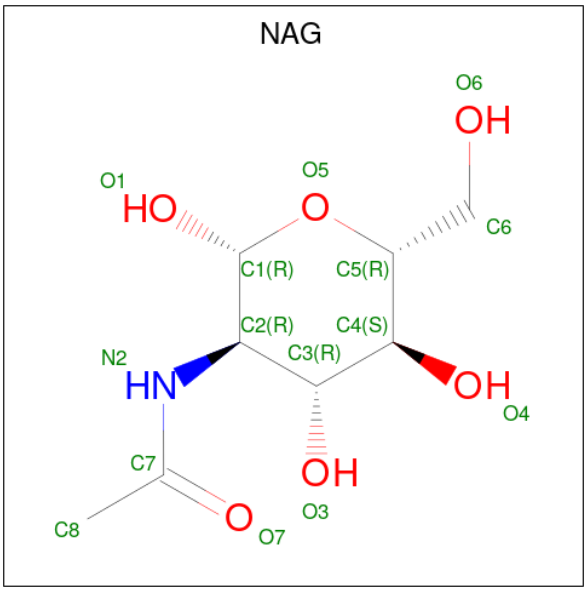
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	F	445	Total	C	N	O	S	0	2	0
			3437	2158	575	679	25			

- Molecule 2 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	F	1	Total	C	H	O	0	0
			10	2	6	2		
2	F	1	Total	C	H	O	0	0
			10	2	6	2		
2	F	1	Total	C	H	O	0	0
			10	2	6	2		
2	F	1	Total	C	H	O	0	0
			10	2	6	2		

- Molecule 3 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	F	1	Total	C	N	O	0	0
			14	8	1	5		

- Molecule 4 is water.

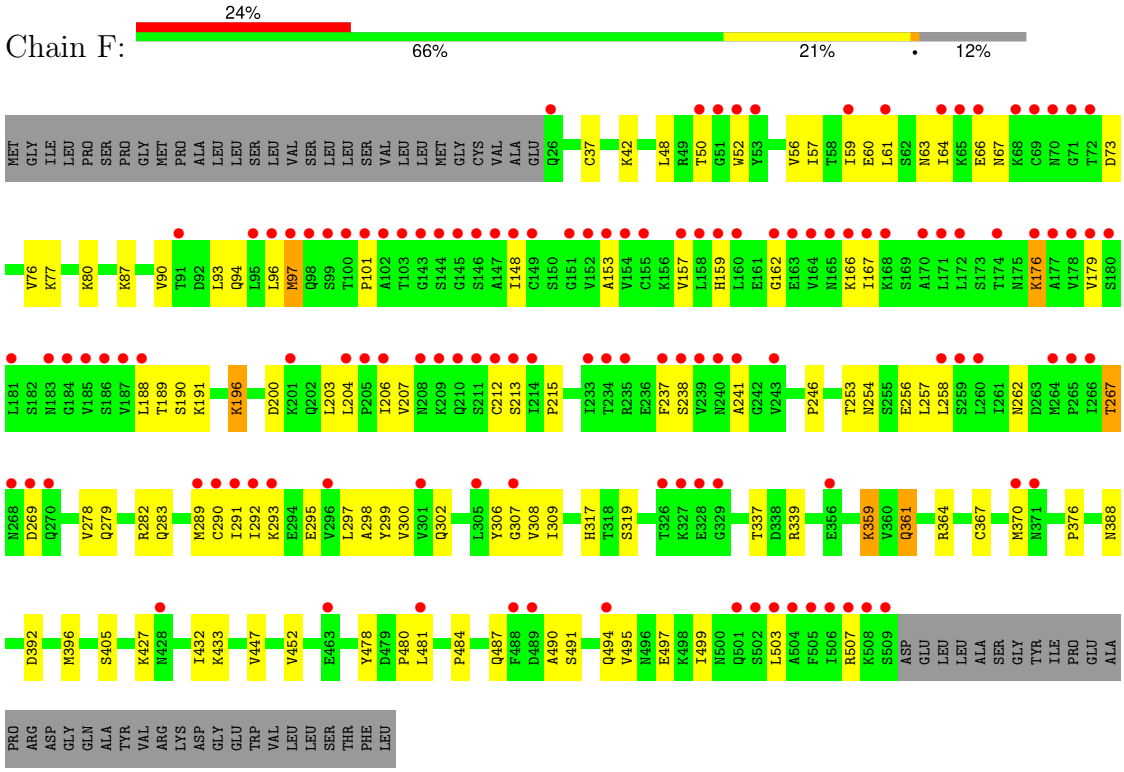
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	F	107	Total	O	0	0
			107	107		

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: Prefusion-stabilized RSV F protein UFCR2-iSS-NQ

Chain F:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 41 3 2	Depositor
Cell constants a, b, c, α, β, γ	168.75Å 168.75Å 168.75Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	46.80 – 2.30 46.80 – 2.30	Depositor EDS
% Data completeness (in resolution range)	99.7 (46.80-2.30) 99.7 (46.80-2.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.86 (at 2.29Å)	Xtriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, R_{free}	0.251 , 0.275 0.251 , 0.275	Depositor DCC
R_{free} test set	1811 reflections (4.91%)	wwPDB-VP
Wilson B-factor (Å^2)	43.6	Xtriage
Anisotropy	0.000	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 37.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	3598	wwPDB-VP
Average B, all atoms (Å^2)	59.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.50% 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: EDO, NAG

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	F	0.54	0/3492	0.83	0/4734

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-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 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	F	3437	0	3480	100	0
2	F	16	24	24	5	0
3	F	14	0	13	1	0
4	F	107	0	0	1	0
All	All	3574	24	3517	100	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 14.

All (100) 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:F:97:MET:SD	1:F:291:ILE:HD12	1.99	1.03
1:F:376:PRO:HA	2:F:601:EDO:H21	1.47	0.96
1:F:60:GLU:HG3	1:F:191:LYS:HD2	1.57	0.86
1:F:337:THR:HG22	1:F:396:MET:HE2	1.57	0.84
1:F:90:VAL:HG13	1:F:292:ILE:HD11	1.58	0.84
1:F:176:LYS:O	1:F:176:LYS:HD2	1.77	0.84
1:F:159:HIS:NE2	1:F:291:ILE:HD13	1.94	0.81
1:F:153:ALA:O	1:F:157:VAL:HG23	1.84	0.78
1:F:206:ILE:HD13	1:F:215:PRO:HB3	1.66	0.77
1:F:237:PHE:CD2	1:F:289:MET:HG2	2.20	0.75
1:F:254:ASN:O	1:F:258:LEU:HD12	1.87	0.74
1:F:491:SER:OG	1:F:494:GLN:N	2.20	0.73
1:F:56:VAL:HB	1:F:189:THR:HG22	1.69	0.73
1:F:176:LYS:HD2	1:F:176:LYS:C	2.11	0.70
1:F:337:THR:HG22	1:F:396:MET:CE	2.22	0.69
1:F:60:GLU:CG	1:F:191:LYS:HD2	2.22	0.69
1:F:308:VAL:O	1:F:309:ILE:HD13	1.91	0.69
1:F:257:LEU:HD23	1:F:278:VAL:CG2	2.24	0.67
1:F:279:GLN:NE2	1:F:282:ARG:HD2	2.11	0.66
1:F:206:ILE:CD1	1:F:215:PRO:HB3	2.25	0.66
1:F:257:LEU:HD23	1:F:278:VAL:HG23	1.79	0.64
1:F:503:LEU:HB3	1:F:507:ARG:NH2	2.13	0.64
1:F:376:PRO:HA	2:F:601:EDO:C2	2.25	0.64
1:F:481:LEU:HD22	1:F:481:LEU:H	1.62	0.64
1:F:339:ARG:HD3	2:F:603:EDO:H11	1.80	0.64
1:F:50:THR:OG1	1:F:307:GLY:HA3	2.00	0.62
1:F:433:LYS:HE3	4:F:734:HOH:O	2.00	0.62
1:F:290:CYS:SG	1:F:300:VAL:HG23	2.40	0.61
1:F:279:GLN:HE22	1:F:282:ARG:HD2	1.64	0.61
1:F:206:ILE:HG23	1:F:213:SER:O	2.01	0.61
1:F:484:PRO:HG2	1:F:495:VAL:HG13	1.84	0.60
1:F:162:GLY:O	1:F:166:LYS:HG3	2.02	0.60
1:F:478:TYR:O	1:F:480:PRO:HD3	2.02	0.60
1:F:257:LEU:CD2	1:F:278:VAL:HG23	2.32	0.59
1:F:495:VAL:O	1:F:499:ILE:HG13	2.02	0.58
1:F:48:LEU:HD22	1:F:367:CYS:HB2	1.85	0.58
1:F:97:MET:SD	1:F:291:ILE:CD1	2.86	0.57
1:F:61:LEU:O	1:F:196:LYS:HB2	2.04	0.57
1:F:503:LEU:O	1:F:507:ARG:HB3	2.05	0.56
1:F:57:ILE:HB	1:F:299:TYR:CE1	2.40	0.56
1:F:76:VAL:HG12	1:F:80:LYS:HE3	1.87	0.56
1:F:364[B]:ARG:HH11	1:F:364[B]:ARG:HB3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:432:ILE:HD11	1:F:447:VAL:HG22	1.88	0.56
1:F:63:ASN:HB2	1:F:295:GLU:HG2	1.88	0.55
1:F:267:THR:HB	1:F:269:ASP:OD1	2.07	0.54
1:F:96:LEU:HD11	1:F:237:PHE:O	2.08	0.53
1:F:237:PHE:CE2	1:F:289:MET:HG2	2.43	0.53
1:F:487:GLN:HB3	1:F:490:ALA:HB2	1.90	0.53
1:F:290:CYS:HB2	1:F:298:ALA:O	2.08	0.53
1:F:96:LEU:C	1:F:96:LEU:HD23	2.29	0.53
1:F:392:ASP:OD2	1:F:491:SER:HB2	2.09	0.52
1:F:167:ILE:HG22	1:F:179:VAL:HG21	1.92	0.52
1:F:97:MET:O	1:F:97:MET:HG2	2.10	0.52
1:F:491:SER:OG	1:F:494:GLN:HB2	2.10	0.52
1:F:317:HIS:ND1	2:F:603:EDO:H21	2.26	0.51
1:F:67:ASN:O	1:F:207:VAL:HG22	2.11	0.50
1:F:66:GLU:HA	1:F:87:LYS:NZ	2.26	0.50
1:F:73:ASP:OD1	1:F:76:VAL:HG23	2.12	0.50
1:F:253:THR:OG1	1:F:256:GLU:HG3	2.12	0.49
1:F:206:ILE:HA	1:F:213:SER:HB3	1.93	0.49
1:F:64:ILE:HG21	1:F:204:LEU:HD21	1.95	0.49
1:F:48:LEU:CD2	1:F:367:CYS:HB2	2.43	0.48
1:F:60:GLU:CG	1:F:191:LYS:CD	2.89	0.48
1:F:370:MET:HE3	1:F:370:MET:HB2	1.65	0.48
1:F:206:ILE:O	1:F:206:ILE:HG22	2.14	0.48
1:F:148:ILE:HA	1:F:302:GLN:HE22	1.78	0.47
1:F:59:ILE:HD12	1:F:297:LEU:HD23	1.95	0.47
1:F:176:LYS:C	1:F:176:LYS:CD	2.81	0.47
1:F:67:ASN:O	1:F:207:VAL:CG2	2.63	0.47
1:F:290:CYS:SG	1:F:300:VAL:CG2	3.02	0.47
1:F:61:LEU:O	1:F:295:GLU:HB3	2.15	0.46
1:F:392:ASP:CG	1:F:491:SER:HB2	2.36	0.46
1:F:203:LEU:O	1:F:206:ILE:HB	2.16	0.46
1:F:52:TRP:CE3	1:F:302:GLN:HG2	2.51	0.45
1:F:503:LEU:CB	1:F:507:ARG:NH2	2.78	0.45
1:F:427:LYS:HD3	1:F:427:LYS:HA	1.82	0.45
1:F:96:LEU:HD23	1:F:96:LEU:O	2.18	0.44
1:F:317:HIS:ND1	2:F:603:EDO:C2	2.81	0.44
1:F:60:GLU:HG3	1:F:191:LYS:CD	2.37	0.44
1:F:200:ASP:OD1	1:F:204:LEU:HD11	2.18	0.44
1:F:77:LYS:HE2	1:F:77:LYS:HB3	1.86	0.43
1:F:96:LEU:HD12	1:F:238:SER:HA	2.00	0.43
1:F:73:ASP:OD1	1:F:76:VAL:CG2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:306:TYR:HB2	1:F:309:ILE:HD11	2.01	0.43
1:F:188:LEU:C	1:F:188:LEU:HD23	2.39	0.43
1:F:291:ILE:HG13	1:F:293:LYS:HB2	2.01	0.43
1:F:405:SER:HB2	1:F:452:VAL:HG21	2.01	0.43
1:F:392:ASP:OD2	1:F:491:SER:CB	2.67	0.42
1:F:37:CYS:SG	1:F:319:SER:HB3	2.59	0.42
1:F:94:GLN:HG3	1:F:292:ILE:HD13	2.02	0.42
1:F:359:LYS:HD3	1:F:359:LYS:HA	1.79	0.42
1:F:361:GLN:HE21	1:F:361:GLN:HB3	1.63	0.42
1:F:246:PRO:HB3	1:F:283:GLN:HA	2.02	0.42
1:F:93:LEU:HD13	1:F:297:LEU:HD13	2.01	0.42
1:F:337:THR:CG2	1:F:396:MET:HE2	2.40	0.41
1:F:206:ILE:O	1:F:206:ILE:CG2	2.68	0.41
1:F:101:PRO:HD2	1:F:241:ALA:HB1	2.03	0.41
1:F:59:ILE:HB	1:F:297:LEU:HD23	2.02	0.41
1:F:497:GLU:HB3	3:F:605:NAG:H82	2.02	0.41
1:F:237:PHE:CG	1:F:289:MET:HG2	2.54	0.40

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	F	445/507 (88%)	429 (96%)	16 (4%)	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	F	408/457 (89%)	397 (97%)	11 (3%)	40 57

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	F	42	LYS
1	F	97	MET
1	F	176	LYS
1	F	190	SER
1	F	196	LYS
1	F	212	CYS
1	F	262	ASN
1	F	267	THR
1	F	359	LYS
1	F	361	GLN
1	F	388	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	F	279	GLN
1	F	361	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

5 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	$\#\|Z\| > 2$
2	EDO	F	601	-	3,3,3	0.55	0	2,2,2	0.57	0
2	EDO	F	604	-	3,3,3	0.93	0	2,2,2	0.62	0
2	EDO	F	602	-	3,3,3	0.77	0	2,2,2	0.47	0
3	NAG	F	605	1	14,14,15	0.98	2 (14%)	17,19,21	0.88	1 (5%)
2	EDO	F	603	-	3,3,3	0.61	0	2,2,2	0.21	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	EDO	F	601	-	-	1/1/1/1	-
2	EDO	F	604	-	-	0/1/1/1	-
2	EDO	F	602	-	-	0/1/1/1	-
3	NAG	F	605	1	-	2/6/23/26	0/1/1/1
2	EDO	F	603	-	-	0/1/1/1	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	F	605	NAG	O5-C1	2.58	1.48	1.43
3	F	605	NAG	C1-C2	2.52	1.55	1.52

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	F	605	NAG	C1-O5-C5	2.84	115.99	112.19

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	F	605	NAG	C4-C5-C6-O6
2	F	601	EDO	O1-C1-C2-O2
3	F	605	NAG	O5-C5-C6-O6

There are no ring outliers.

3 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	601	EDO	2	0
3	F	605	NAG	1	0
2	F	603	EDO	3	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

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	F	445/507 (87%)	1.22	124 (27%)	2	2	27, 56, 100, 132	2 (0%)

All (124) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	101	PRO	8.7
1	F	505	PHE	7.5
1	F	488	PHE	7.1
1	F	143	GLY	6.3
1	F	211	SER	6.1
1	F	506	ILE	6.1
1	F	102	ALA	5.8
1	F	100	THR	5.0
1	F	98	GLN	4.8
1	F	502	SER	4.7
1	F	187	VAL	4.4
1	F	503	LEU	4.4
1	F	178	VAL	4.2
1	F	213	SER	4.2
1	F	184	GLY	4.2
1	F	181	LEU	4.1
1	F	186	SER	4.1
1	F	504	ALA	4.1
1	F	155	CYS	4.0
1	F	329	GLY	3.9
1	F	26	GLN	3.9
1	F	145	GLY	3.9
1	F	509	SER	3.9
1	F	160	LEU	3.9
1	F	53	TYR	3.9
1	F	210	GLN	3.8
1	F	164	VAL	3.8

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Mol	Chain	Res	Type	RSRZ
1	F	71	GLY	3.8
1	F	103	THR	3.7
1	F	158	LEU	3.7
1	F	265	PRO	3.5
1	F	180	SER	3.4
1	F	65	LYS	3.4
1	F	328	GLU	3.4
1	F	174	THR	3.4
1	F	171	LEU	3.4
1	F	185	VAL	3.4
1	F	154	VAL	3.3
1	F	507	ARG	3.3
1	F	97	MET	3.3
1	F	206	ILE	3.3
1	F	266	ILE	3.3
1	F	209	LYS	3.3
1	F	238	SER	3.3
1	F	179	VAL	3.2
1	F	144	SER	3.2
1	F	508	LYS	3.2
1	F	172	LEU	3.2
1	F	326	THR	3.2
1	F	95	LEU	3.2
1	F	68	LYS	3.1
1	F	51	GLY	3.0
1	F	241	ALA	3.0
1	F	204	LEU	3.0
1	F	371	ASN	3.0
1	F	167	ILE	2.9
1	F	243	VAL	2.9
1	F	183	ASN	2.9
1	F	52	TRP	2.9
1	F	291	ILE	2.9
1	F	61	LEU	2.8
1	F	264	MET	2.8
1	F	292	ILE	2.8
1	F	99	SER	2.8
1	F	327	LYS	2.8
1	F	205	PRO	2.8
1	F	269	ASP	2.8
1	F	489	ASP	2.8
1	F	208	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
1	F	463	GLU	2.7
1	F	188	LEU	2.7
1	F	305	LEU	2.7
1	F	50	THR	2.7
1	F	69	CYS	2.7
1	F	260	LEU	2.7
1	F	290	CYS	2.7
1	F	237	PHE	2.7
1	F	239	VAL	2.7
1	F	176	LYS	2.7
1	F	96	LEU	2.6
1	F	151	GLY	2.6
1	F	170	ALA	2.6
1	F	356	GLU	2.6
1	F	233	ILE	2.6
1	F	258	LEU	2.5
1	F	153	ALA	2.5
1	F	501	GLN	2.5
1	F	212	CYS	2.5
1	F	201	LYS	2.5
1	F	481	LEU	2.5
1	F	428	ASN	2.5
1	F	64	ILE	2.5
1	F	296	VAL	2.5
1	F	307	GLY	2.4
1	F	166	LYS	2.4
1	F	162	GLY	2.4
1	F	149	CYS	2.4
1	F	66	GLU	2.3
1	F	235	ARG	2.3
1	F	268	ASN	2.3
1	F	289	MET	2.3
1	F	293	LYS	2.3
1	F	163	GLU	2.3
1	F	152	VAL	2.3
1	F	234	THR	2.3
1	F	91	THR	2.2
1	F	370	MET	2.2
1	F	146	SER	2.2
1	F	240	ASN	2.2
1	F	72	THR	2.2
1	F	159	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
1	F	259	SER	2.2
1	F	177	ALA	2.1
1	F	157	VAL	2.1
1	F	214	ILE	2.1
1	F	168	LYS	2.1
1	F	59	ILE	2.1
1	F	148	ILE	2.1
1	F	301	VAL	2.1
1	F	165	ASN	2.1
1	F	270	GLN	2.1
1	F	147	ALA	2.1
1	F	494	GLN	2.0
1	F	70	ASN	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
3	NAG	F	605	14/15	0.36	0.21	93,112,115,115	0
2	EDO	F	604	4/4	0.79	0.37	33,40,49,58	0
2	EDO	F	601	4/4	0.82	0.32	33,41,52,63	0
2	EDO	F	602	4/4	0.89	0.29	30,50,68,68	0
2	EDO	F	603	4/4	0.90	0.28	31,45,58,64	0

6.5 Other polymers (i)

There are no such residues in this entry.