



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 10, 2024 – 02:58 pm BST

PDB ID : 8RZ0
Title : Synthetic immunogen RH5-34EM bound to monoclonal antibody R5.016
Authors : Farrell, B.; Harrison, T.; Higgins, M.K.
Deposited on : 2024-02-11
Resolution : 1.63 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 : 2.37.1
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) : 2.37.1

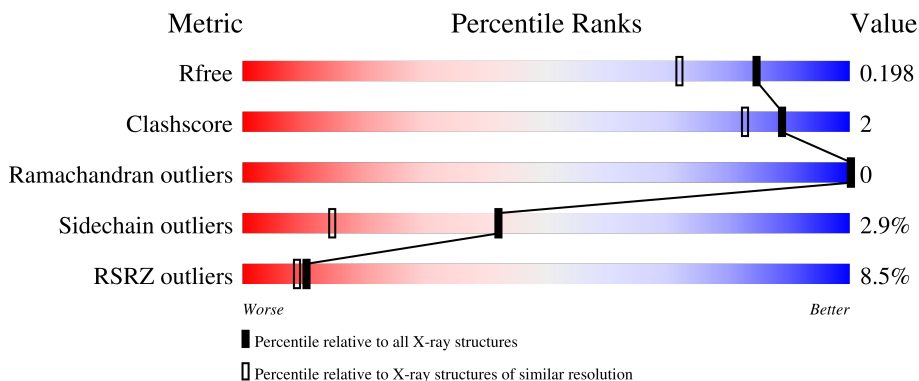
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.63 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.



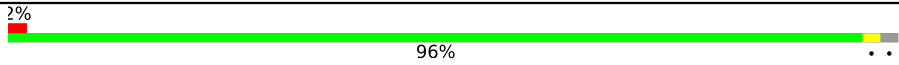
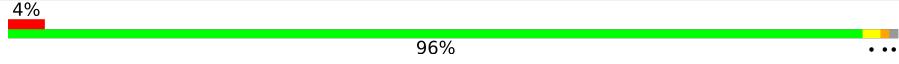
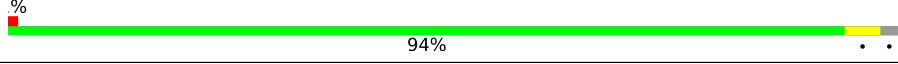
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3122 (1.66-1.62)
Clashscore	141614	3268 (1.66-1.62)
Ramachandran outliers	138981	3215 (1.66-1.62)
Sidechain outliers	138945	3215 (1.66-1.62)
RSRZ outliers	127900	3079 (1.66-1.62)

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 $\leq 5\%$. 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	119	18% (Poor fit) 81% (0 outliers), 8% (1 outlier), 11% (2+ outliers)
1	C	119	15% (Poor fit) 84% (0 outliers), 12% (2+ outliers)
1	E	119	19% (Poor fit) 82% (0 outliers), 12% (1 outlier), 5% (2+ outliers)
1	G	119	24% (Poor fit) 71% (0 outliers), 7% (1 outlier), 23% (2+ outliers)
2	B	247	4% (Poor fit) 95% (0 outliers), 2% (1 outlier), 3% (2+ outliers)

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Mol	Chain	Length	Quality of chain
2	D	247	 2% 96% ..
2	F	247	 4% 96% ...
2	H	247	 % 94% ..

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 12379 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 RH5-34EM.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	106	Total 904	C 558	N 168	O 174	S 4	0	1	0
1	C	105	Total 914	C 570	N 171	O 170	S 3	0	2	0
1	E	113	Total 959	C 591	N 179	O 186	S 3	0	0	0
1	G	92	Total 789	C 492	N 150	O 144	S 3	0	0	0

- Molecule 2 is a protein called R5.016 scFv.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	247	Total 1936	C 1216	N 326	O 385	S 9	0	12	0
2	D	242	Total 1871	C 1173	N 316	O 373	S 9	0	4	0
2	F	244	Total 1876	C 1176	N 316	O 375	S 9	0	3	0
2	H	243	Total 1874	C 1175	N 314	O 376	S 9	0	6	0

- Molecule 3 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	1	Total C O 6 3 3	0	0
3	D	1	Total C O 6 3 3	0	0
3	F	1	Total C O 6 3 3	0	0
3	H	1	Total C O 6 3 3	0	0

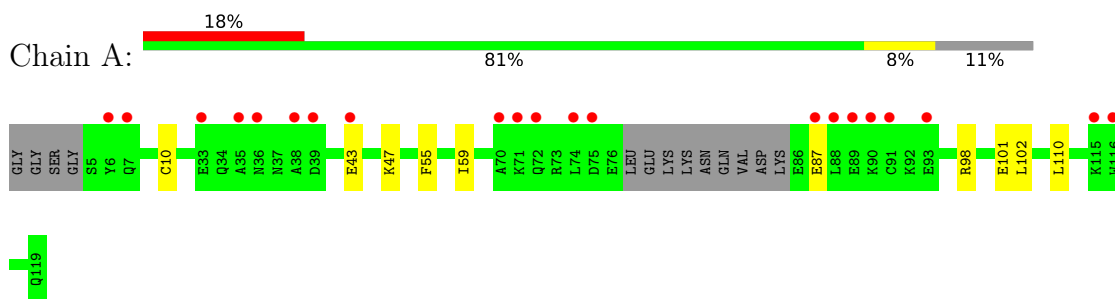
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	45	Total O 45 45	0	0
4	B	277	Total O 277 277	0	0
4	C	64	Total O 64 64	0	0
4	D	265	Total O 265 265	0	0
4	E	78	Total O 78 78	0	0
4	F	257	Total O 257 257	0	0
4	G	26	Total O 26 26	0	0
4	H	220	Total O 220 220	0	0

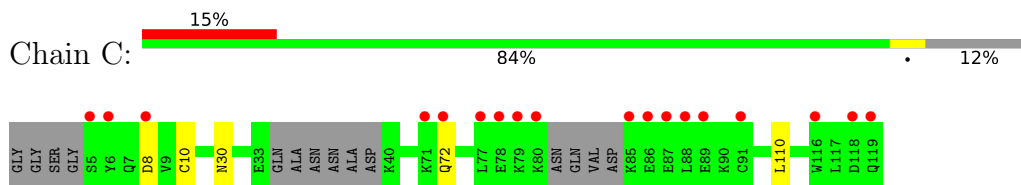
3 Residue-property plots [i](#)

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.

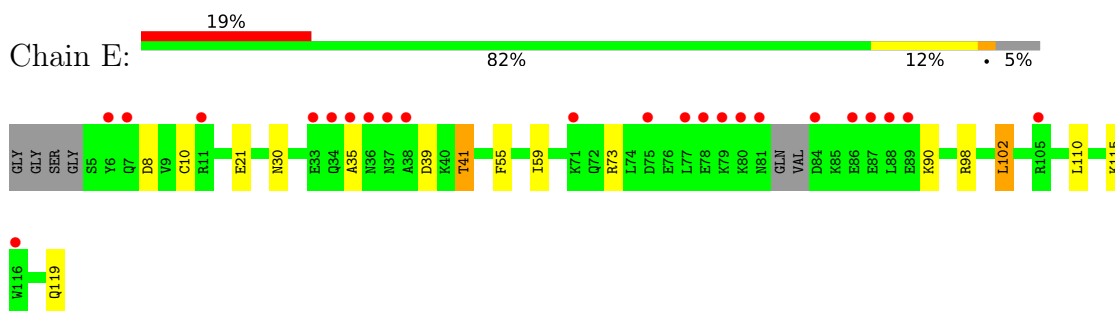
- Molecule 1: RH5-34EM



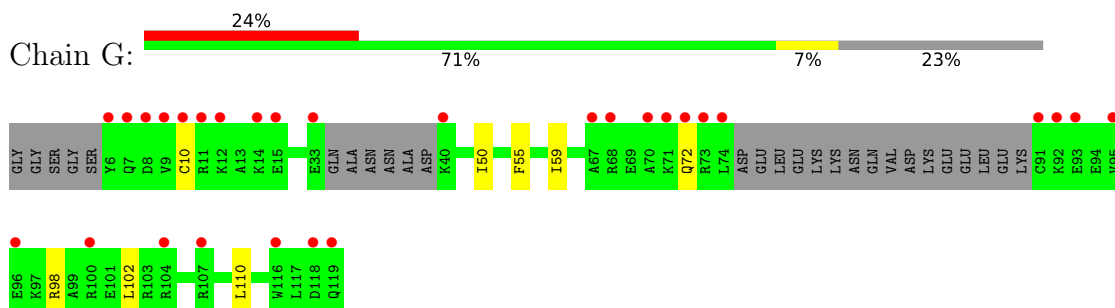
- Molecule 1: RH5-34EM



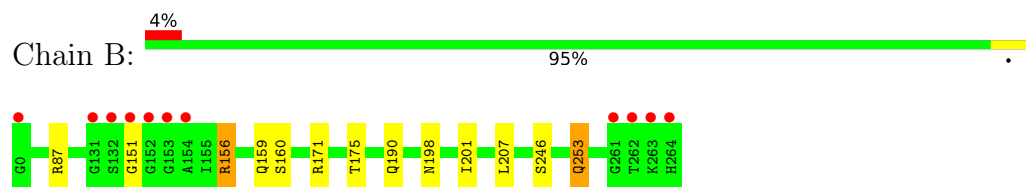
- Molecule 1: RH5-34EM



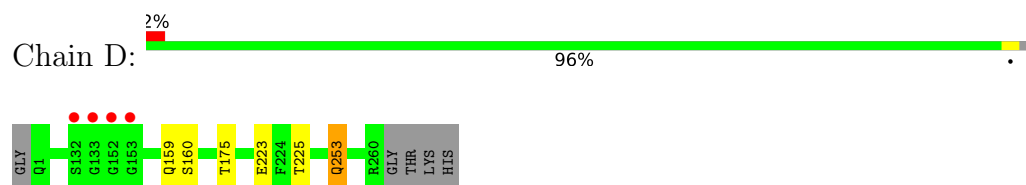
- Molecule 1: RH5-34EM



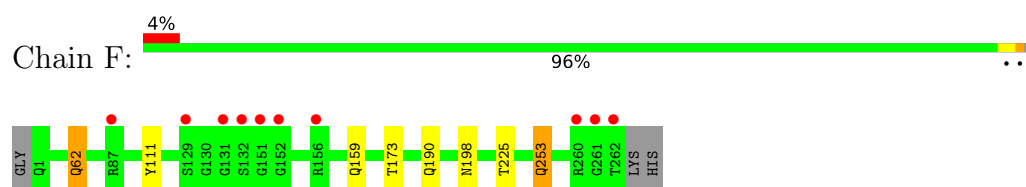
- Molecule 2: R5.016 scFv



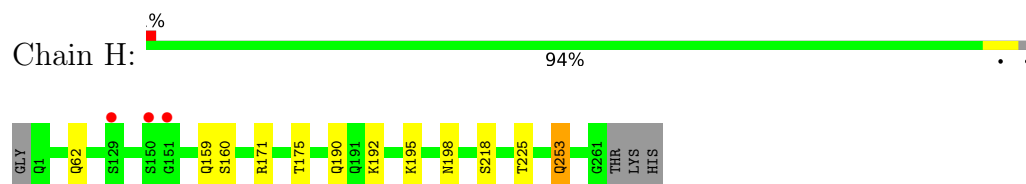
- Molecule 2: R5.016 scFv



- Molecule 2: R5.016 scFv



- Molecule 2: R5.016 scFv



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	64.28Å 114.01Å 217.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	108.54 – 1.63 108.54 – 1.63	Depositor EDS
% Data completeness (in resolution range)	100.0 (108.54-1.63) 100.0 (108.54-1.63)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.53 (at 1.63Å)	Xtriage
Refinement program	BUSTER 2.10.4 (20-OCT-2021)	Depositor
R, R_{free}	0.191 , 0.206 0.184 , 0.198	Depositor DCC
R_{free} test set	9860 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å ²)	25.0	Xtriage
Anisotropy	0.257	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 54.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	12379	wwPDB-VP
Average B, all atoms (Å ²)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 10.44% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: GOL

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	0.36	0/911	0.45	0/1202
1	C	0.35	0/923	0.41	0/1211
1	E	0.39	0/963	0.48	0/1270
1	G	0.29	0/792	0.42	0/1041
2	B	0.48	0/2016	0.63	0/2736
2	D	0.45	0/1926	0.61	0/2615
2	F	0.46	0/1928	0.62	0/2619
2	H	0.41	0/1935	0.60	0/2627
All	All	0.42	0/11394	0.57	0/15321

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 [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	904	0	937	3	0
1	C	914	0	975	0	0
1	E	959	0	994	6	0
1	G	789	0	836	1	0
2	B	1936	0	1882	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	1871	0	1794	6	0
2	F	1876	0	1794	10	0
2	H	1874	0	1795	8	0
3	B	6	0	8	0	0
3	D	6	0	8	0	0
3	F	6	0	8	0	0
3	H	6	0	8	0	0
4	A	45	0	0	0	0
4	B	277	0	0	0	0
4	C	64	0	0	0	0
4	D	265	0	0	0	0
4	E	78	0	0	0	0
4	F	257	0	0	0	0
4	G	26	0	0	0	0
4	H	220	0	0	0	0
All	All	12379	0	11039	41	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 2.

All (41) 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:151:GLY:HA2	2:B:246:SER:HA	1.39	1.04
2:H:159:GLN:H	2:H:253:GLN:HE22	1.18	0.91
2:D:159:GLN:H	2:D:253:GLN:HE22	1.18	0.89
2:F:159:GLN:H	2:F:253:GLN:HE22	1.16	0.89
2:B:159:GLN:H	2:B:253:GLN:HE22	1.16	0.87
2:B:156:ARG:HH12	2:F:62:GLN:HG3	1.40	0.84
2:B:253:GLN:HE21	2:B:253:GLN:H	1.29	0.81
2:F:253:GLN:HE21	2:F:253:GLN:H	1.29	0.78
2:D:253:GLN:HE21	2:D:253:GLN:H	1.33	0.77
2:H:253:GLN:HE21	2:H:253:GLN:H	1.32	0.75
1:E:39:ASP:OD1	1:E:41:THR:HG23	1.89	0.73
2:H:192:LYS:HB2	2:H:195:LYS:HD2	1.71	0.71
2:F:173:THR:HG23	2:F:225[A]:THR:CG2	2.21	0.71
2:B:160[B]:SER:OG	2:B:175[B]:THR:OG1	2.20	0.58
2:F:159:GLN:H	2:F:253:GLN:NE2	1.96	0.58
2:H:159:GLN:H	2:H:253:GLN:NE2	1.96	0.55
2:H:190:GLN:HE21	2:H:198:ASN:HD21	1.55	0.54
2:B:156:ARG:NH1	2:F:62:GLN:HG3	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:253:GLN:H	2:B:253:GLN:NE2	2.02	0.52
2:F:190:GLN:HE21	2:F:198[B]:ASN:HD21	1.58	0.51
1:E:98:ARG:HH21	1:E:102:LEU:HG	1.76	0.51
2:B:159:GLN:H	2:B:253:GLN:NE2	1.96	0.51
2:F:253:GLN:H	2:F:253:GLN:NE2	2.04	0.51
2:D:159:GLN:H	2:D:253:GLN:NE2	1.98	0.49
2:B:201:ILE:HG12	2:B:207[A]:LEU:HD22	1.94	0.49
2:D:253:GLN:H	2:D:253:GLN:NE2	2.07	0.49
2:D:160:SER:OG	2:D:175[A]:THR:OG1	2.28	0.48
1:A:43:GLU:HG2	1:A:47:LYS:HD2	1.95	0.47
1:E:55:PHE:HE1	1:E:59:ILE:HD11	1.82	0.45
1:G:55:PHE:HE1	1:G:59:ILE:HD11	1.82	0.44
2:B:190:GLN:HE21	2:B:198[B]:ASN:HD21	1.66	0.44
1:A:55:PHE:HE1	1:A:59:ILE:HD11	1.83	0.43
2:D:175[A]:THR:HG22	2:D:225:THR:HG22	2.01	0.43
1:E:21:GLU:OE2	1:E:98:ARG:NH2	2.52	0.43
2:H:253:GLN:H	2:H:253:GLN:NE2	2.09	0.42
1:E:35:ALA:HB1	2:F:111:TYR:OH	2.19	0.42
2:H:160:SER:OG	2:H:175[B]:THR:OG1	2.34	0.42
1:A:98:ARG:HA	1:A:101:GLU:HG2	2.03	0.41
1:E:115:LYS:O	1:E:119:GLN:HG3	2.20	0.41
2:F:173:THR:CG2	2:F:225[A]:THR:CG2	2.95	0.41
2:H:218:SER:OG	2:H:225[B]:THR:HG23	2.21	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	A	103/119 (87%)	102 (99%)	1 (1%)	0	100 100
1	C	101/119 (85%)	101 (100%)	0	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	109/119 (92%)	109 (100%)	0	0	100	100
1	G	86/119 (72%)	86 (100%)	0	0	100	100
2	B	255/247 (103%)	251 (98%)	4 (2%)	0	100	100
2	D	242/247 (98%)	239 (99%)	3 (1%)	0	100	100
2	F	243/247 (98%)	238 (98%)	5 (2%)	0	100	100
2	H	245/247 (99%)	242 (99%)	3 (1%)	0	100	100
All	All	1384/1464 (94%)	1368 (99%)	16 (1%)	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	95/104 (91%)	91 (96%)	4 (4%)	30	7
1	C	97/104 (93%)	92 (95%)	5 (5%)	23	4
1	E	101/104 (97%)	93 (92%)	8 (8%)	12	1
1	G	82/104 (79%)	76 (93%)	6 (7%)	14	1
2	B	214/202 (106%)	210 (98%)	4 (2%)	57	32
2	D	203/202 (100%)	201 (99%)	2 (1%)	76	59
2	F	203/202 (100%)	201 (99%)	2 (1%)	76	59
2	H	204/202 (101%)	201 (98%)	3 (2%)	65	42
All	All	1199/1224 (98%)	1165 (97%)	34 (3%)	42	16

All (34) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	CYS
1	A	87	GLU
1	A	102	LEU
1	A	110	LEU

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Mol	Chain	Res	Type
2	B	87	ARG
2	B	156	ARG
2	B	171	ARG
2	B	253	GLN
1	C	8	ASP
1	C	10	CYS
1	C	30	ASN
1	C	72	GLN
1	C	110	LEU
2	D	223	GLU
2	D	253	GLN
1	E	8	ASP
1	E	10	CYS
1	E	30	ASN
1	E	41	THR
1	E	73	ARG
1	E	90	LYS
1	E	102	LEU
1	E	110	LEU
2	F	62	GLN
2	F	253	GLN
1	G	10	CYS
1	G	50	ILE
1	G	72	GLN
1	G	98	ARG
1	G	102	LEU
1	G	110	LEU
2	H	62	GLN
2	H	171	ARG
2	H	253	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	36	ASN
2	B	62	GLN
2	B	102	GLN
2	B	183	ASN
2	B	190	GLN
2	B	253	GLN
2	D	62	GLN
2	D	65	GLN

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Mol	Chain	Res	Type
2	D	183	ASN
2	D	253	GLN
2	F	59	ASN
2	F	183	ASN
2	F	190	GLN
2	F	253	GLN
1	G	72	GLN
2	H	65	GLN
2	H	183	ASN
2	H	190	GLN
2	H	198	ASN
2	H	253	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 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	$\# Z > 2$
3	GOL	H	301	-	5,5,5	0.05	0	5,5,5	0.11	0
3	GOL	F	301	-	5,5,5	0.15	0	5,5,5	0.42	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	GOL	B	301	-	5,5,5	0.15	0	5,5,5	0.13	0
3	GOL	D	301	-	5,5,5	0.16	0	5,5,5	0.06	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	GOL	H	301	-	-	0/4/4/4	-
3	GOL	F	301	-	-	2/4/4/4	-
3	GOL	B	301	-	-	0/4/4/4	-
3	GOL	D	301	-	-	0/4/4/4	-

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	F	301	GOL	O1-C1-C2-C3
3	F	301	GOL	O1-C1-C2-O2

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	D	1
2	H	1
2	F	1
2	B	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	133:GLY	C	152:GLY	N	42.51
1	H	131:GLY	C	150:SER	N	42.46
1	F	132:SER	C	151:GLY	N	42.18
1	B	132:SER	C	151:GLY	N	41.06

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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	106/119 (89%)	0.91	21 (19%) 1 1	22, 47, 78, 90	0
1	C	105/119 (88%)	0.74	18 (17%) 1 1	24, 40, 76, 87	0
1	E	113/119 (94%)	0.89	23 (20%) 1 0	21, 39, 83, 90	0
1	G	92/119 (77%)	1.51	29 (31%) 0 0	33, 59, 93, 103	0
2	B	247/247 (100%)	0.10	11 (4%) 33 30	18, 24, 42, 66	0
2	D	242/247 (97%)	-0.11	4 (1%) 70 71	20, 26, 39, 54	0
2	F	244/247 (98%)	0.03	10 (4%) 37 35	19, 27, 42, 61	0
2	H	243/247 (98%)	-0.04	3 (1%) 79 79	21, 30, 47, 57	0
All	All	1392/1464 (95%)	0.29	119 (8%) 10 9	18, 30, 68, 103	0

All (119) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	91	CYS	10.4
2	B	151	GLY	8.5
1	E	38	ALA	8.2
1	G	74	LEU	8.2
2	B	262	THR	7.7
2	F	132	SER	7.1
1	G	119	GLN	6.8
1	G	10	CYS	5.6
2	B	132	SER	5.4
1	E	88	LEU	5.4
1	C	6	TYR	5.3
1	E	6	TYR	5.2
1	G	116	TRP	5.2
1	G	9	VAL	5.1
1	C	86	GLU	5.0
1	A	74	LEU	4.9

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Mol	Chain	Res	Type	RSRZ
1	C	77	LEU	4.9
1	G	73	ARG	4.9
1	G	12	LYS	4.8
1	C	78	GLU	4.8
1	G	8	ASP	4.7
1	A	89	GLU	4.6
1	E	37	ASN	4.4
1	A	71	LYS	4.4
2	F	262	THR	4.4
2	F	151	GLY	4.2
1	A	72	GLN	4.2
1	A	91	CYS	4.2
1	G	92	LYS	4.2
1	C	79	LYS	4.2
2	F	261	GLY	4.1
2	H	150	SER	4.1
2	B	264	HIS	4.1
1	E	77	LEU	4.0
1	G	93	GLU	4.0
1	G	67	ALA	4.0
2	B	153	GLY	3.9
1	E	36	ASN	3.7
1	A	88	LEU	3.7
1	C	5	SER	3.7
1	A	75	ASP	3.7
1	G	95	VAL	3.7
2	H	129	SER	3.7
1	G	7	GLN	3.7
1	E	79	LYS	3.6
2	B	263	LYS	3.6
1	E	86	GLU	3.6
1	C	116	TRP	3.5
1	G	6	TYR	3.5
1	G	70	ALA	3.4
1	E	35	ALA	3.4
1	C	85	LYS	3.3
1	A	93	GLU	3.2
1	G	11	ARG	3.2
1	A	115	LYS	3.2
1	A	38	ALA	3.1
2	B	0	GLY	3.1
2	D	152	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
1	E	81	ASN	3.0
1	E	33	GLU	3.0
2	F	131	GLY	3.0
2	F	152	GLY	3.0
2	F	129	SER	3.0
1	A	6	TYR	3.0
1	A	87	GLU	3.0
1	G	15	GLU	2.9
1	G	72	GLN	2.9
1	E	116	TRP	2.9
2	F	260	ARG	2.9
1	A	35	ALA	2.9
1	G	96	GLU	2.9
2	D	133	GLY	2.9
2	D	132	SER	2.9
1	C	91	CYS	2.8
2	B	131	GLY	2.8
1	C	80	LYS	2.8
2	F	87	ARG	2.8
1	A	36	ASN	2.8
2	D	153	GLY	2.8
1	C	8	ASP	2.7
1	C	118	ASP	2.7
2	B	154	ALA	2.7
1	A	116	TRP	2.7
1	A	90	LYS	2.7
1	C	87	GLU	2.6
1	G	100	ARG	2.6
1	E	87	GLU	2.6
1	C	89	GLU	2.6
1	E	84	ASP	2.6
1	G	118	ASP	2.6
1	C	72	GLN	2.6
1	E	34	GLN	2.5
1	C	88	LEU	2.5
1	G	104	ARG	2.4
2	H	151	GLY	2.4
2	F	156	ARG	2.4
1	E	80	LYS	2.4
1	E	78	GLU	2.3
1	C	119	GLN	2.3
2	B	152	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	7	GLN	2.3
1	C	71	LYS	2.3
1	E	75	ASP	2.3
1	G	71	LYS	2.3
1	A	7	GLN	2.3
1	G	33	GLU	2.3
1	G	107	ARG	2.2
1	A	70	ALA	2.2
1	G	40	LYS	2.2
1	G	68	ARG	2.2
1	E	11	ARG	2.2
1	E	89	GLU	2.2
1	A	43	GLU	2.1
1	E	105	ARG	2.1
1	A	39	ASP	2.1
1	G	14	LYS	2.1
1	E	71	LYS	2.0
2	B	261	GLY	2.0
1	A	33	GLU	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, 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	GOL	F	301	6/6	0.66	0.21	48,49,49,49	0
3	GOL	H	301	6/6	0.81	0.16	43,44,44,45	0
3	GOL	B	301	6/6	0.87	0.11	30,30,31,31	0
3	GOL	D	301	6/6	0.94	0.09	31,32,33,33	0

6.5 Other polymers [i](#)

There are no such residues in this entry.