



# Full wwPDB X-ray Structure Validation Report ⓘ

Nov 19, 2023 – 07:19 PM JST

PDB ID : 7BRS  
Title : E.coli beta-galactosidase (E537Q) in complex with fluorescent probe KSA02  
Authors : Chen, X.; Hu, Y.L.; Gao, Y.; Yuan, R.; Guo, Y.  
Deposited on : 2020-03-30  
Resolution : 2.67 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
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) : 2.36

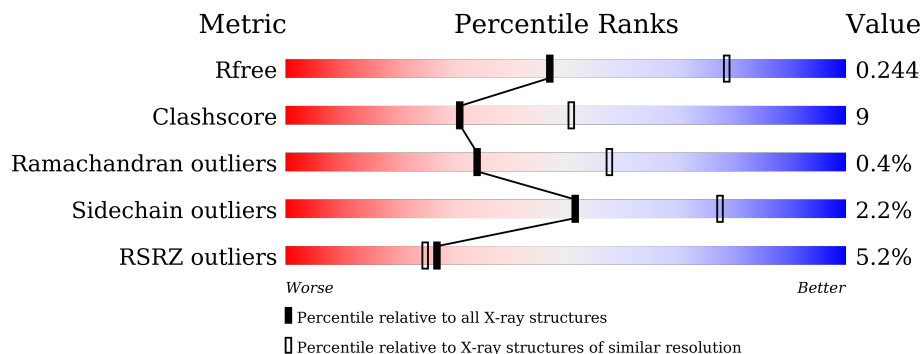
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.67 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	3863 (2.70-2.66)
Clashscore	141614	4210 (2.70-2.66)
Ramachandran outliers	138981	4141 (2.70-2.66)
Sidechain outliers	138945	4141 (2.70-2.66)
RSRZ outliers	127900	3780 (2.70-2.66)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1025	
1	B	1025	
1	C	1025	
1	D	1025	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	F4X	D	1101	-	-	-	X

## 2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 32496 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.

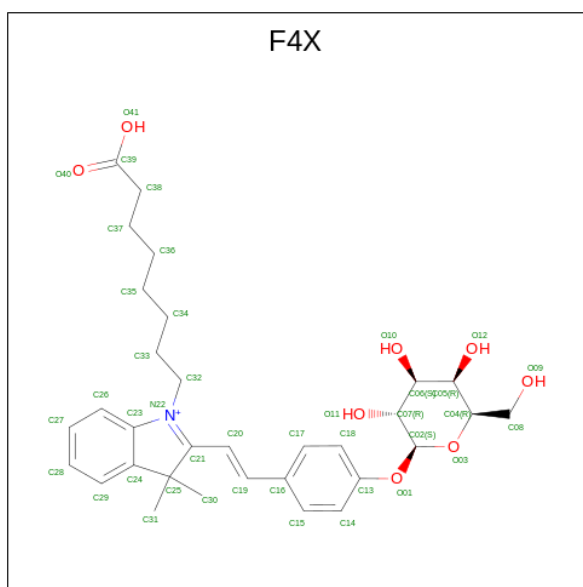
- Molecule 1 is a protein called Beta-galactosidase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1021	7932	5026	1408	1462	36	0	2	0
1	B	1012	7907	5001	1400	1471	35	0	0	0
1	C	1015	7960	5039	1416	1469	36	0	0	0
1	D	1015	7946	5023	1413	1475	35	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	SER	-	expression tag	UNP P00722
A	537	GLN	GLU	engineered mutation	UNP P00722
B	-1	SER	-	expression tag	UNP P00722
B	537	GLN	GLU	engineered mutation	UNP P00722
C	-1	SER	-	expression tag	UNP P00722
C	537	GLN	GLU	engineered mutation	UNP P00722
D	-1	SER	-	expression tag	UNP P00722
D	537	GLN	GLU	engineered mutation	UNP P00722

- Molecule 2 is 8-[2-[(E)-2-[4-[(2S,3R,4S,5R,6R)-6-(hydroxymethyl)-3,4,5-tris(oxidanyl)oxan-2-yl]oxyphenyl]ethenyl]-3,3-dimethyl-indol-1-ium-1-yl]octanoic acid (three-letter code: F4X) (formula: C<sub>32</sub>H<sub>42</sub>NO<sub>8</sub>) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			41	32	1	8		
2	B	1	Total	C	N	O	0	0
			41	32	1	8		
2	C	1	Total	C	N	O	0	0
			41	32	1	8		
2	D	1	Total	C	N	O	0	0
			41	32	1	8		

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	2	Total	Mg	0	0
			2	2		
3	B	2	Total	Mg	0	0
			2	2		
3	C	2	Total	Mg	0	0
			2	2		
3	D	2	Total	Mg	0	0
			2	2		

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

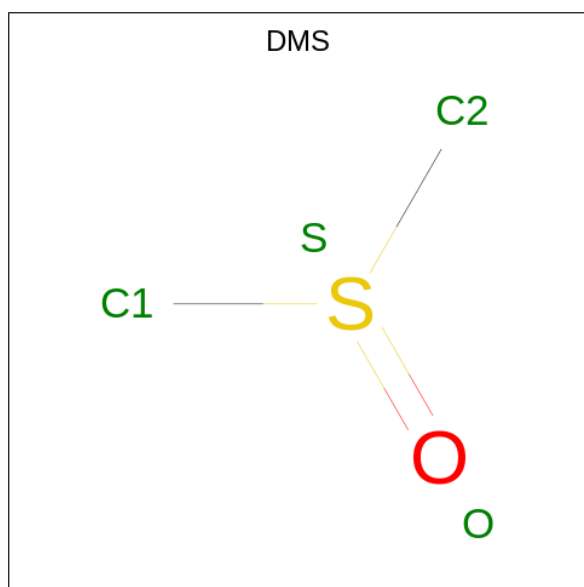
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total	Na	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	2	Total Na 2 2	0	0
4	C	2	Total Na 2 2	0	0
4	D	2	Total Na 2 2	0	0

- Molecule 5 is DIMETHYL SULFOXIDE (three-letter code: DMS) (formula: C<sub>2</sub>H<sub>6</sub>OS).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0
5	A	1	Total C O S 4 2 1 1	0	0

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

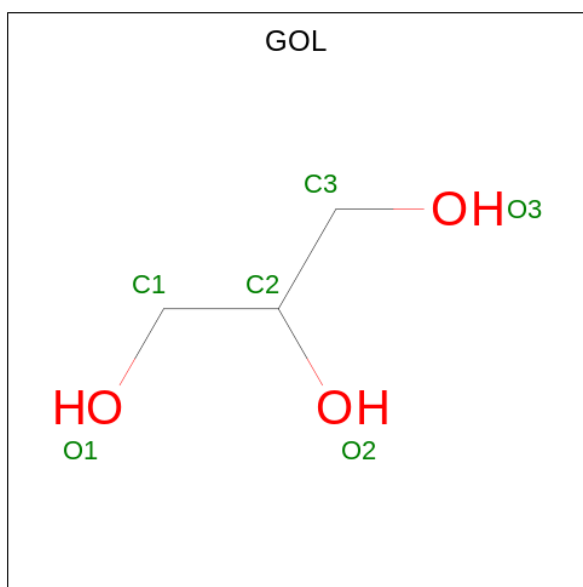
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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	C	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		
5	D	1	Total	C	O	S	0	0
			4	2	1	1		

- Molecule 6 is GLYCEROL (three-letter code: GOL) (formula: C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>).





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

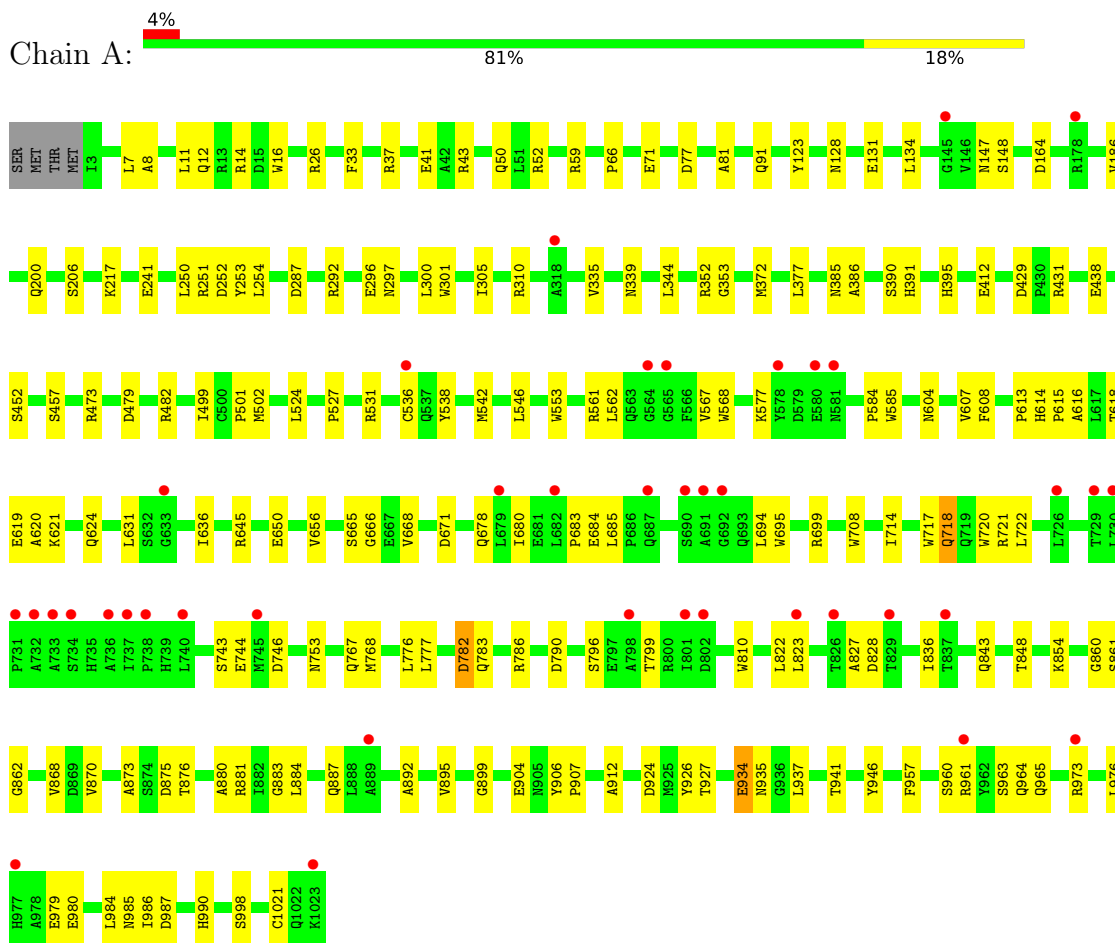
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	108	Total O 108 108	0	0
7	B	100	Total O 100 100	0	0
7	C	77	Total O 77 77	0	0
7	D	97	Total O 97 97	0	0

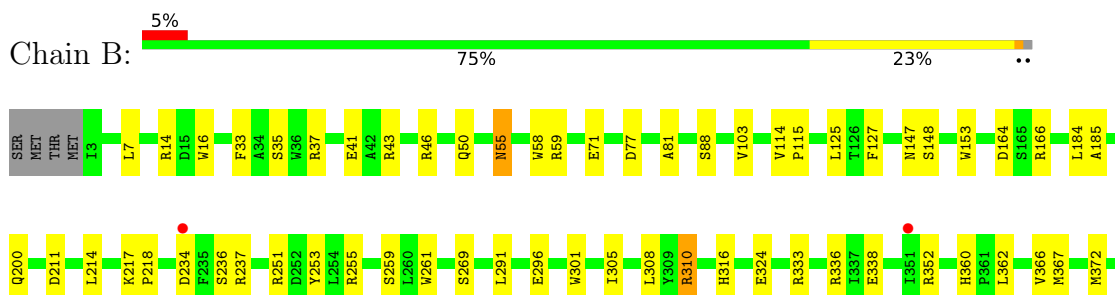
### 3 Residue-property plots [i](#)

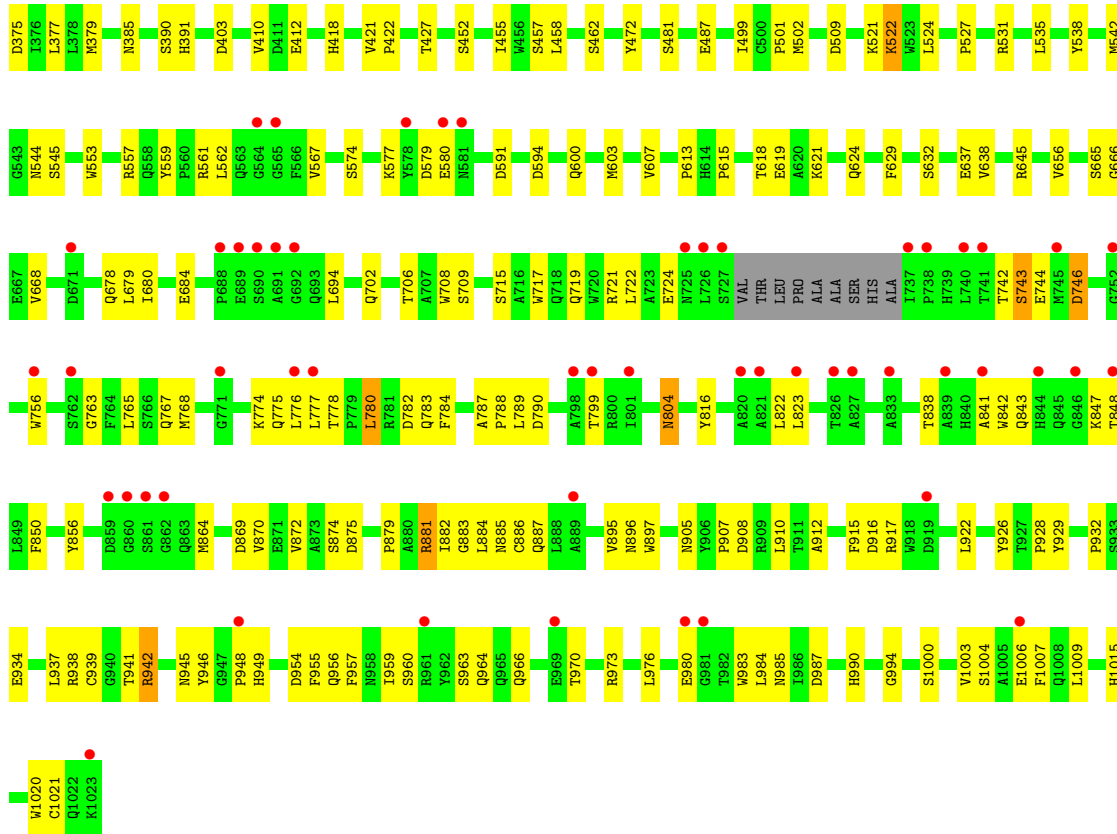
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Beta-galactosidase

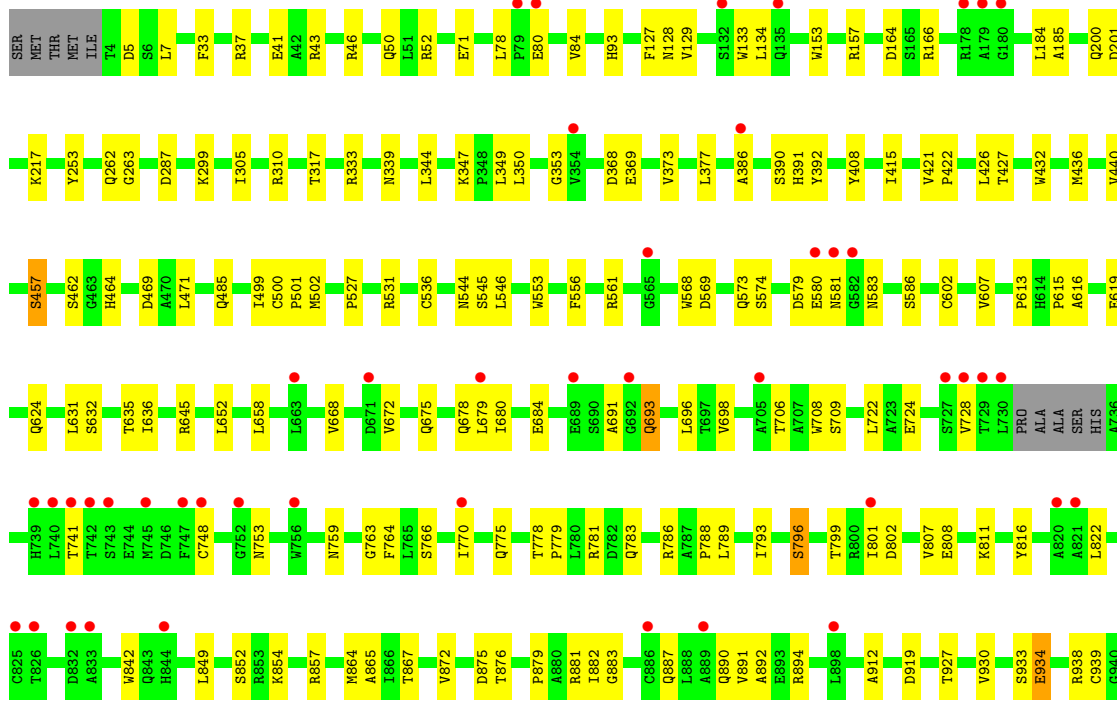
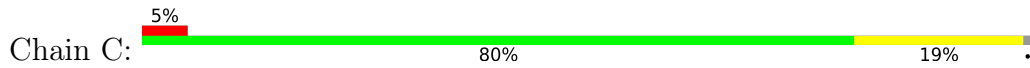


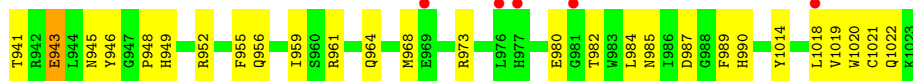
- Molecule 1: Beta-galactosidase



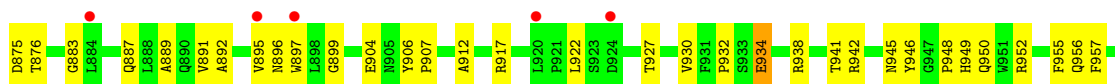
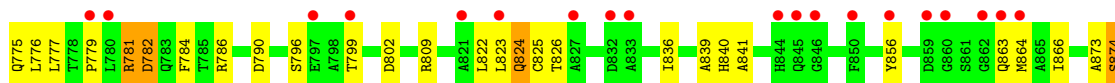
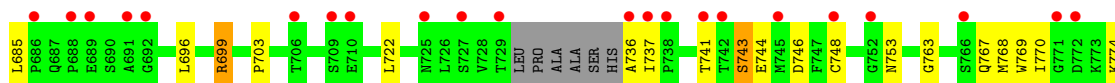
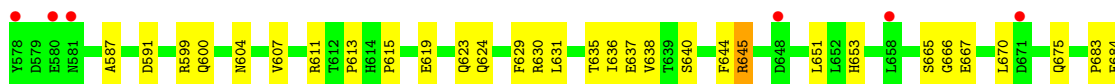
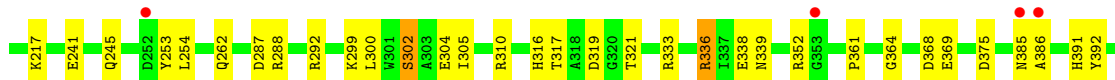
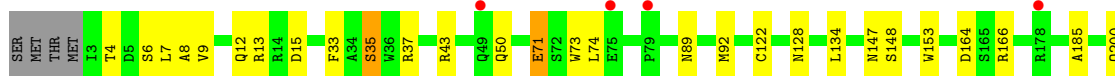
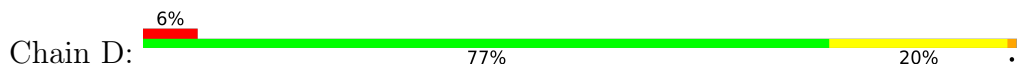


● Molecule 1: Beta-galactosidase





• Molecule 1: Beta-galactosidase



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	246.65Å 84.42Å 240.65Å 90.00° 94.43° 90.00°	Depositor
Resolution (Å)	30.04 – 2.67 30.04 – 2.67	Depositor EDS
% Data completeness (in resolution range)	99.6 (30.04-2.67) 99.6 (30.04-2.67)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.87 (at 2.68Å)	Xtrriage
Refinement program	PHENIX 1.16_3549	Depositor
R, $R_{free}$	0.200 , 0.244 0.200 , 0.244	Depositor DCC
$R_{free}$ test set	6843 reflections (4.89%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	44.5	Xtrriage
Anisotropy	0.676	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.32 , 54.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	32496	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	69.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.02% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: NA, MG, GOL, F4X, DMS

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	0.29	0/8170	0.49	0/11179
1	B	0.29	0/8144	0.49	0/11140
1	C	0.29	0/8199	0.49	0/11211
1	D	0.29	0/8181	0.49	0/11183
All	All	0.29	0/32694	0.49	0/44713

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	7932	0	7349	118	0
1	B	7907	0	7306	161	0
1	C	7960	0	7411	134	0
1	D	7946	0	7385	155	0
2	A	41	0	0	0	0
2	B	41	0	0	0	0
2	C	41	0	0	0	0
2	D	41	0	0	1	0
3	A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	2	0	0	0	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
4	A	1	0	0	0	0
4	B	2	0	0	0	0
4	C	2	0	0	0	0
4	D	2	0	0	0	0
5	A	60	0	90	0	0
5	B	40	0	60	2	0
5	C	48	0	72	0	0
5	D	36	0	54	0	0
6	A	6	0	8	0	0
7	A	108	0	0	2	0
7	B	100	0	0	3	0
7	C	77	0	0	2	0
7	D	97	0	0	1	0
All	All	32496	0	29735	563	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 9.

All (563) 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:C:849:LEU:HD23	1:C:876:THR:HG21	1.47	0.95
1:D:777:LEU:HB2	1:D:887:GLN:HG2	1.49	0.93
1:A:767:GLN:HG3	1:A:776:LEU:HB2	1.53	0.90
1:B:939:CYS:HA	1:B:956:GLN:OE1	1.75	0.86
1:C:440:VAL:HG21	1:C:471:LEU:HD13	1.55	0.86
1:A:305:ILE:HD11	1:A:645:ARG:HB3	1.59	0.85
1:C:305:ILE:HD11	1:C:645:ARG:HB3	1.56	0.85
1:C:934:GLU:HG2	1:C:964:GLN:NE2	1.92	0.84
1:C:857:ARG:HB3	1:C:865:ALA:HB3	1.60	0.83
1:C:652:LEU:HD21	1:C:698:VAL:HB	1.63	0.81
1:A:699:ARG:HE	1:A:714:ILE:HD13	1.44	0.81
1:A:671:ASP:H	1:A:678:GLN:HE22	1.27	0.80
1:B:305:ILE:HD11	1:B:645:ARG:HB3	1.63	0.79
1:B:959:ILE:HG22	1:B:984:LEU:HA	1.63	0.78
1:A:656:VAL:HG12	1:A:694:LEU:HD11	1.66	0.77
1:B:843:GLN:HB3	1:B:848:THR:HA	1.67	0.77
1:C:440:VAL:CG2	1:C:471:LEU:HD13	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:896:ASN:HB3	1:B:945:ASN:HB2	1.69	0.74
1:D:6:SER:HB3	1:D:9:VAL:HG23	1.68	0.74
1:A:767:GLN:HA	1:A:776:LEU:HD22	1.70	0.74
1:A:59:ARG:HD3	1:A:77:ASP:OD2	1.88	0.73
1:C:741:THR:HB	1:C:748:CYS:HB3	1.72	0.72
1:B:410:VAL:HG22	1:B:455:ILE:HB	1.72	0.71
1:C:427:THR:HA	1:C:436:MET:HE1	1.73	0.71
1:C:887:GLN:NE2	1:C:980:GLU:O	2.23	0.71
1:C:891:VAL:HG12	1:C:982:THR:HG23	1.72	0.70
1:D:948:PRO:HG2	1:D:949:HIS:CD2	2.26	0.70
1:A:7:LEU:N	1:A:71:GLU:OE2	2.23	0.70
1:C:786:ARG:HB2	1:C:934:GLU:HG3	1.73	0.70
1:D:464:HIS:NE2	1:D:469:ASP:OD2	2.25	0.69
1:D:949:HIS:HB3	1:D:1020:TRP:HE1	1.56	0.69
1:D:653:HIS:HD2	1:D:699:ARG:HD3	1.58	0.69
1:C:934:GLU:OE2	1:C:990:HIS:NE2	2.27	0.68
1:C:696:LEU:HB2	1:C:722:LEU:HD11	1.75	0.67
1:B:882:ILE:HG12	1:B:1009:LEU:HD13	1.77	0.67
1:C:668:VAL:HG11	1:C:680:ILE:HD12	1.76	0.67
1:A:91:GLN:HE22	1:A:206:SER:H	1.43	0.66
1:B:774:LYS:HZ2	1:B:775:GLN:H	1.42	0.66
1:C:934:GLU:HG2	1:C:964:GLN:HE21	1.60	0.66
1:C:796:SER:HB2	1:C:802:ASP:H	1.61	0.66
1:B:939:CYS:CA	1:B:956:GLN:OE1	2.43	0.66
1:D:599:ARG:NH1	1:D:600:GLN:OE1	2.29	0.66
1:C:636:ILE:HD11	1:C:696:LEU:HD21	1.77	0.65
1:D:822:LEU:HD21	1:D:825:CYS:HB2	1.76	0.65
1:C:882:ILE:HB	1:C:989:PHE:HD2	1.61	0.65
1:B:637:GLU:HG2	1:B:679:LEU:HD21	1.78	0.65
1:B:780:LEU:HD21	1:B:884:LEU:HD13	1.78	0.64
1:C:262:GLN:HE22	1:C:299:LYS:HD2	1.62	0.64
1:C:153:TRP:HB2	1:C:185:ALA:HB3	1.80	0.64
1:D:13:ARG:HD3	1:D:15:ASP:OD2	1.98	0.64
1:B:7:LEU:N	1:B:71:GLU:OE2	2.31	0.63
1:D:653:HIS:CD2	1:D:699:ARG:HD3	2.33	0.63
1:D:743:SER:OG	1:D:744:GLU:N	2.28	0.63
1:A:251:ARG:H	1:A:254:LEU:HD12	1.64	0.63
1:D:542:MET:HE2	1:D:790:ASP:HB3	1.81	0.63
1:D:957:PHE:HB2	1:D:986:ILE:HG22	1.79	0.63
1:D:352:ARG:H	1:D:385:ASN:HB2	1.64	0.63
1:A:887:GLN:NE2	1:A:980:GLU:O	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:822:LEU:HD13	1:D:840:HIS:CE1	2.34	0.63
1:B:922:LEU:HD21	1:B:960:SER:HA	1.81	0.62
1:A:123:TYR:HB2	1:A:186:VAL:HG23	1.80	0.62
1:B:544:ASN:HB3	1:B:789:LEU:HD22	1.81	0.62
1:B:637:GLU:HG2	1:B:679:LEU:CD2	2.29	0.61
1:C:43:ARG:NH1	1:C:263:GLY:O	2.32	0.61
1:B:743:SER:OG	1:B:744:GLU:N	2.33	0.61
1:B:656:VAL:HG12	1:B:694:LEU:HD22	1.83	0.60
1:D:863:GLN:HG2	1:D:1021:CYS:HB2	1.82	0.60
1:B:843:GLN:CB	1:B:848:THR:HA	2.32	0.60
1:A:934:GLU:HG2	1:A:964:GLN:OE1	2.01	0.60
1:B:1004:SER:HB2	1:B:1006:GLU:OE2	2.02	0.60
1:B:600:GLN:HB2	1:B:603:MET:HE2	1.83	0.60
1:B:883:GLY:HA3	1:B:987:ASP:HA	1.83	0.60
1:D:775:GLN:O	1:D:776:LEU:HD23	2.01	0.60
1:D:961:ARG:HD2	1:D:982:THR:HG22	1.84	0.60
1:D:241:GLU:HG2	1:D:292:ARG:HG3	1.82	0.60
1:B:153:TRP:HB2	1:B:185:ALA:HB3	1.82	0.59
1:B:963:SER:HB2	1:B:983:TRP:CE2	2.37	0.59
1:D:767:GLN:OE1	1:D:769:TRP:CZ2	2.55	0.59
1:B:624:GLN:NE2	7:B:1206:HOH:O	2.34	0.59
1:D:153:TRP:HB2	1:D:185:ALA:HB3	1.84	0.59
1:A:960:SER:OG	1:A:961:ARG:N	2.35	0.59
1:C:344:LEU:HB2	1:C:349:LEU:HD11	1.84	0.59
1:B:887:GLN:NE2	1:B:980:GLU:O	2.35	0.59
1:D:651:LEU:HD23	1:D:703:PRO:HG3	1.84	0.59
1:B:907:PRO:HA	1:B:910:LEU:HD23	1.85	0.58
1:D:950:GLN:HB3	1:D:1021:CYS:SG	2.42	0.58
1:A:743:SER:OG	1:A:744:GLU:N	2.37	0.58
1:D:950:GLN:N	1:D:1021:CYS:O	2.35	0.58
1:D:957:PHE:CB	1:D:986:ILE:HG22	2.33	0.58
1:B:43:ARG:O	1:B:310:ARG:HD2	2.04	0.58
1:C:80:GLU:H	1:C:80:GLU:CD	2.07	0.58
1:D:479:ASP:OD1	1:D:481:SER:HB3	2.04	0.57
1:D:948:PRO:HG2	1:D:949:HIS:HD2	1.67	0.57
1:B:668:VAL:HG11	1:B:680:ILE:HG21	1.87	0.57
1:B:774:LYS:HZ2	1:B:776:LEU:H	1.51	0.57
1:C:706:THR:OG1	1:C:709:SER:N	2.37	0.57
1:C:989:PHE:CE2	1:C:1014:TYR:HB3	2.40	0.57
1:D:615:PRO:HG2	1:D:904:GLU:OE2	2.04	0.57
1:A:783:GLN:NE2	1:A:985:ASN:OD1	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:984:LEU:HD22	1:A:986:ILE:HG23	1.85	0.57
1:B:869:ASP:OD1	1:B:1015:HIS:HB2	2.05	0.57
1:D:665:SER:OG	1:D:666:GLY:N	2.37	0.57
1:A:899:GLY:HA3	1:A:941:THR:HG22	1.87	0.57
1:C:883:GLY:HA3	1:C:987:ASP:HB3	1.86	0.57
1:C:943:GLU:HB3	1:C:952:ARG:HG2	1.86	0.57
1:B:553:TRP:CZ2	1:B:624:GLN:HG2	2.40	0.57
1:B:879:PRO:HG2	1:B:882:ILE:HD11	1.87	0.57
1:A:927:THR:N	1:A:935:ASN:OD1	2.31	0.56
1:C:464:HIS:HE2	1:C:469:ASP:CG	2.09	0.56
1:D:4:THR:C	1:D:6:SER:H	2.08	0.56
1:D:883:GLY:HA3	1:D:987:ASP:HA	1.87	0.56
1:D:352:ARG:HB2	1:D:385:ASN:H	1.69	0.56
1:A:883:GLY:HA3	1:A:987:ASP:HA	1.88	0.56
1:D:604:ASN:OD1	2:D:1101:F4X:O09	2.23	0.56
1:D:895:VAL:HG22	1:D:946:TYR:CD1	2.40	0.56
1:D:499:ILE:HG22	1:D:501:PRO:HD3	1.87	0.56
1:D:891:VAL:HG22	1:D:982:THR:HG23	1.88	0.56
1:D:304:GLU:OE2	1:D:644:PHE:HD2	1.89	0.55
1:A:767:GLN:HG2	1:A:768:MET:H	1.71	0.55
1:C:464:HIS:NE2	1:C:469:ASP:OD1	2.39	0.55
1:D:553:TRP:CZ2	1:D:624:GLN:HG2	2.41	0.55
1:D:875:ASP:OD1	1:D:875:ASP:N	2.39	0.55
1:C:553:TRP:CZ2	1:C:624:GLN:HG2	2.41	0.55
1:A:131:GLU:HA	1:A:134:LEU:HD12	1.89	0.55
1:A:8:ALA:O	1:A:12:GLN:HB2	2.07	0.55
1:B:377:LEU:HD22	1:B:708:TRP:HA	1.89	0.55
1:D:245:GLN:HG2	1:D:288:ARG:HG2	1.89	0.55
1:A:372:MET:HE1	1:A:395:HIS:HB3	1.89	0.55
1:B:619:GLU:HA	1:B:912:ALA:HB2	1.89	0.55
1:C:693:GLN:HG2	1:C:724:GLU:HB2	1.89	0.55
1:A:904:GLU:OE2	1:A:906:TYR:HE1	1.89	0.55
1:C:52:ARG:HG3	1:C:133:TRP:CH2	2.42	0.54
1:D:922:LEU:HD11	1:D:960:SER:HA	1.88	0.54
1:C:684:GLU:O	1:C:684:GLU:HG3	2.07	0.54
1:D:779:PRO:HB2	1:D:781:ARG:HD2	1.89	0.54
1:C:961:ARG:HD2	1:C:982:THR:HG22	1.88	0.54
1:D:823:LEU:HD11	1:D:841:ALA:HB2	1.89	0.54
1:A:619:GLU:HA	1:A:912:ALA:HB2	1.88	0.54
1:B:838:THR:HG23	1:B:856:TYR:HE1	1.72	0.54
1:C:631:LEU:HD12	1:C:635:THR:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:352:ARG:H	1:B:385:ASN:HB2	1.73	0.54
1:B:780:LEU:HD13	1:B:1020:TRP:HZ3	1.73	0.54
1:C:347:LYS:NZ	1:C:675:GLN:HG3	2.23	0.54
1:C:764:PHE:CD2	1:C:781:ARG:HG2	2.42	0.54
1:B:895:VAL:HG22	1:B:946:TYR:CD1	2.43	0.54
1:D:7:LEU:N	1:D:71:GLU:OE2	2.41	0.53
1:A:768:MET:H	1:A:776:LEU:HD13	1.74	0.53
1:B:768:MET:H	1:B:774:LYS:NZ	2.05	0.53
1:B:879:PRO:CG	1:B:882:ILE:HD11	2.38	0.53
1:B:783:GLN:NE2	1:B:985:ASN:OD1	2.29	0.53
1:B:607:VAL:HG12	1:B:613:PRO:HA	1.90	0.53
1:D:892:ALA:HB3	1:D:946:TYR:CE1	2.44	0.53
1:C:440:VAL:HG21	1:C:471:LEU:CD1	2.33	0.53
1:A:665:SER:OG	1:A:666:GLY:N	2.42	0.53
1:A:860:GLY:O	1:A:862:GLY:N	2.42	0.53
1:B:37:ARG:NH1	1:B:50:GLN:HG2	2.23	0.53
1:C:262:GLN:NE2	1:C:299:LYS:HD2	2.24	0.53
1:C:943:GLU:OE1	1:C:945:ASN:ND2	2.41	0.53
1:C:619:GLU:HA	1:C:912:ALA:HB2	1.89	0.53
1:C:43:ARG:O	1:C:310:ARG:HD2	2.09	0.52
1:B:412:GLU:HA	1:B:457:SER:HB3	1.91	0.52
1:B:907:PRO:HG2	1:B:990:HIS:O	2.10	0.52
1:D:960:SER:OG	1:D:961:ARG:N	2.38	0.52
1:A:668:VAL:HG11	1:A:680:ILE:HG21	1.89	0.52
1:B:166:ARG:NH2	7:B:1204:HOH:O	2.33	0.52
1:B:542:MET:HE2	1:B:790:ASP:HB3	1.91	0.52
1:D:262:GLN:HE22	1:D:299:LYS:HD2	1.74	0.52
1:A:767:GLN:HG2	1:A:776:LEU:HD13	1.90	0.52
1:D:653:HIS:CD2	1:D:699:ARG:HH11	2.28	0.52
1:D:930:VAL:HA	1:D:973:ARG:HD3	1.92	0.52
1:D:946:TYR:OH	1:D:982:THR:HG21	2.09	0.52
1:C:415:ILE:HD13	1:C:436:MET:HG2	1.92	0.52
1:D:43:ARG:O	1:D:310:ARG:HD2	2.09	0.52
1:B:959:ILE:HG21	1:B:984:LEU:HD12	1.92	0.51
1:D:619:GLU:HA	1:D:912:ALA:HB2	1.93	0.51
1:B:55:ASN:HD21	1:B:211:ASP:HA	1.75	0.51
1:B:881:ARG:O	1:B:882:ILE:HD13	2.11	0.51
1:A:786:ARG:HG2	1:A:880:ALA:HB1	1.93	0.51
1:B:255:ARG:HB2	1:B:316:HIS:CE1	2.45	0.51
1:B:778:THR:HG22	1:B:887:GLN:N	2.26	0.51
1:C:842:TRP:HZ3	1:C:852:SER:HB3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:784:PHE:HA	1:B:881:ARG:O	2.10	0.51
1:B:850:PHE:HE1	1:B:872:VAL:HG13	1.76	0.51
1:D:989:PHE:CE2	1:D:1014:TYR:HB3	2.45	0.51
1:C:949:HIS:CD2	1:C:1020:TRP:HE1	2.29	0.51
1:D:375:ASP:OD1	1:D:611:ARG:HD2	2.10	0.51
1:D:607:VAL:HG12	1:D:613:PRO:HA	1.92	0.51
1:B:778:THR:HG22	1:B:887:GLN:H	1.76	0.51
1:B:881:ARG:NH1	1:B:987:ASP:OD2	2.44	0.51
1:B:678:GLN:NE2	1:B:680:ILE:HD11	2.26	0.51
1:B:784:PHE:HE2	1:B:870:VAL:HG21	1.75	0.51
1:A:577:LYS:HB3	1:A:585:TRP:CE2	2.46	0.50
1:B:615:PRO:O	1:B:618:THR:HG22	2.10	0.50
1:C:788:PRO:HD3	1:C:968:MET:HG3	1.93	0.50
1:C:894:ARG:HD3	1:C:919:ASP:OD1	2.10	0.50
1:D:763:GLY:HA3	1:D:822:LEU:HD22	1.93	0.50
1:A:352:ARG:N	1:A:385:ASN:OD1	2.42	0.50
1:D:767:GLN:OE1	1:D:769:TRP:CE2	2.65	0.50
1:B:724:GLU:CB	1:D:874:SER:HB3	2.42	0.50
1:B:838:THR:CG2	1:B:856:TYR:HE1	2.25	0.50
1:C:930:VAL:HA	1:C:973:ARG:HD3	1.94	0.50
1:A:568:TRP:HE1	1:A:604:ASN:ND2	2.10	0.50
1:B:743:SER:HB3	1:B:746:ASP:O	2.12	0.50
1:C:41:GLU:OE2	1:C:46:ARG:HB2	2.11	0.50
1:C:52:ARG:NH1	1:C:128:ASN:O	2.44	0.50
1:C:624:GLN:NE2	7:C:1204:HOH:O	2.43	0.50
1:A:241:GLU:OE2	1:A:292:ARG:NH2	2.45	0.50
1:C:949:HIS:HD2	1:C:1020:TRP:HE1	1.58	0.50
1:D:822:LEU:HD12	1:D:839:ALA:O	2.12	0.50
1:A:895:VAL:HG22	1:A:946:TYR:CD1	2.47	0.50
1:B:777:LEU:HB2	1:B:887:GLN:HB3	1.94	0.50
1:C:499:ILE:HG22	1:C:501:PRO:HD3	1.93	0.50
1:C:783:GLN:NE2	1:C:985:ASN:OD1	2.33	0.50
1:A:621:LYS:HE2	1:A:717:TRP:HZ3	1.77	0.49
1:C:882:ILE:HB	1:C:989:PHE:CD2	2.46	0.49
1:A:645:ARG:HH22	1:A:650:GLU:CD	2.16	0.49
1:B:665:SER:OG	1:B:666:GLY:N	2.45	0.49
1:C:615:PRO:HG3	1:C:927:THR:HG21	1.93	0.49
1:D:767:GLN:HE21	1:D:775:GLN:H	1.60	0.49
1:B:875:ASP:OD1	1:B:875:ASP:N	2.45	0.49
1:C:934:GLU:HG2	1:C:964:GLN:HE22	1.73	0.49
1:D:896:ASN:OD1	1:D:917:ARG:NH1	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:759:ASN:HB2	1:C:766:SER:OG	2.12	0.49
1:D:553:TRP:HB2	1:D:623:GLN:HG3	1.95	0.49
1:A:41:GLU:N	7:A:1204:HOH:O	2.37	0.49
1:A:43:ARG:O	1:A:310:ARG:HD2	2.13	0.49
1:A:822:LEU:HD23	1:A:823:LEU:N	2.27	0.49
1:B:881:ARG:HH21	1:B:964:GLN:NE2	2.11	0.49
1:C:502:MET:HB3	1:C:536:CYS:SG	2.53	0.49
1:B:706:THR:OG1	1:B:709:SER:N	2.46	0.49
1:D:319:ASP:OD1	1:D:321:THR:HG23	2.13	0.49
1:A:777:LEU:HD12	1:A:887:GLN:HG2	1.95	0.48
1:D:770:ILE:HG12	1:D:775:GLN:HE22	1.77	0.48
1:A:767:GLN:HG2	1:A:768:MET:N	2.28	0.48
1:A:843:GLN:HG2	1:A:848:THR:HA	1.94	0.48
1:B:499:ILE:HG22	1:B:501:PRO:HD3	1.94	0.48
1:C:377:LEU:HD22	1:C:708:TRP:HA	1.95	0.48
1:C:779:PRO:O	1:C:781:ARG:HG3	2.13	0.48
1:D:767:GLN:HG2	1:D:768:MET:H	1.79	0.48
1:D:864:MET:O	1:D:1019:VAL:HA	2.13	0.48
1:C:78:LEU:HB3	1:C:80:GLU:OE1	2.13	0.48
1:A:631:LEU:HD13	1:A:636:ILE:HG13	1.96	0.48
1:A:782:ASP:OD2	1:A:854:LYS:NZ	2.46	0.48
1:C:946:TYR:OH	1:C:982:THR:HG21	2.13	0.48
1:A:810:TRP:CZ2	1:A:880:ALA:HB2	2.48	0.48
1:A:875:ASP:N	1:A:875:ASP:OD1	2.45	0.48
1:C:875:ASP:OD1	1:C:875:ASP:N	2.46	0.48
1:A:531:ARG:O	1:A:561:ARG:NH1	2.45	0.48
1:C:531:ARG:O	1:C:561:ARG:NH1	2.46	0.48
1:D:426:LEU:HD22	1:D:432:TRP:CE2	2.48	0.48
1:A:91:GLN:NE2	1:A:206:SER:H	2.10	0.48
1:B:778:THR:HG22	1:B:887:GLN:HB2	1.95	0.48
1:C:5:ASP:OD2	1:C:157:ARG:HA	2.13	0.48
1:D:33:PHE:CD2	1:D:217:LYS:HE3	2.48	0.48
1:D:963:SER:OG	1:D:965:GLN:N	2.46	0.48
1:B:531:ARG:O	1:B:561:ARG:NH1	2.45	0.48
1:D:777:LEU:CB	1:D:887:GLN:HG2	2.33	0.48
1:B:719:GLN:HE22	1:B:915:PHE:H	1.62	0.48
1:D:336:ARG:HH21	1:D:338:GLU:CD	2.16	0.48
1:D:770:ILE:O	1:D:770:ILE:HG13	2.13	0.48
1:B:621:LYS:HE2	1:B:717:TRP:HZ3	1.79	0.48
1:C:574:SER:OG	1:C:586:SER:HB3	2.14	0.48
1:A:884:LEU:HD12	1:A:986:ILE:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:573:GLN:HB2	1:C:602:CYS:HB2	1.95	0.47
1:B:37:ARG:CZ	1:B:218:PRO:HD3	2.44	0.47
1:B:50:GLN:NE2	5:B:1112:DMS:O	2.46	0.47
1:B:678:GLN:HE21	1:B:680:ILE:HD11	1.79	0.47
1:D:767:GLN:CG	1:D:776:LEU:HB2	2.44	0.47
1:A:296:GLU:HG3	1:A:297:ASN:OD1	2.13	0.47
1:C:811:LYS:HG2	1:C:816:TYR:CD2	2.48	0.47
1:D:767:GLN:HG2	1:D:768:MET:N	2.29	0.47
1:A:52:ARG:NH1	1:A:128[A]:ASN:O	2.39	0.47
1:A:823:LEU:HD13	1:C:728:VAL:O	2.13	0.47
1:B:237:ARG:NH1	1:B:296:GLU:HG3	2.30	0.47
1:B:937:LEU:HD12	1:B:957:PHE:C	2.33	0.47
1:D:37:ARG:NH1	1:D:50:GLN:HG2	2.29	0.47
1:D:932:PRO:HB3	1:D:976:LEU:HD11	1.96	0.47
1:D:952:ARG:HA	1:D:955:PHE:HE2	1.79	0.47
1:C:607:VAL:HG12	1:C:613:PRO:HA	1.95	0.47
1:D:986:ILE:HD12	1:D:986:ILE:O	2.14	0.47
1:B:527:PRO:HB3	1:D:339:ASN:O	2.14	0.47
1:D:300:LEU:O	7:D:1201:HOH:O	2.20	0.47
1:D:615:PRO:HG3	1:D:927:THR:HG21	1.96	0.47
1:D:631:LEU:HB2	1:D:636:ILE:HG22	1.95	0.47
1:A:241:GLU:CG	1:A:292:ARG:HG2	2.44	0.47
1:A:502:MET:HB3	1:A:536:CYS:SG	2.55	0.47
1:A:546:LEU:HD22	1:A:616:ALA:HB1	1.96	0.47
1:B:352:ARG:HG2	1:B:624:GLN:HB3	1.96	0.47
1:C:864:MET:C	1:C:1019:VAL:HG23	2.35	0.47
1:C:890:GLN:OE1	1:C:948:PRO:HD3	2.15	0.47
1:D:651:LEU:HD13	1:D:667:GLU:HB3	1.97	0.47
1:D:836:ILE:H	1:D:836:ILE:HD12	1.80	0.47
1:A:553:TRP:CZ2	1:A:624:GLN:HG2	2.50	0.47
1:C:368:ASP:OD1	1:C:368:ASP:N	2.48	0.47
1:D:474:TRP:CZ2	1:D:478:VAL:HG21	2.50	0.47
1:B:869:ASP:CG	1:B:1015:HIS:HD1	2.17	0.47
1:D:200:GLN:HG2	1:D:391:HIS:HB2	1.97	0.47
1:D:531:ARG:O	1:D:561:ARG:NH1	2.48	0.47
1:D:899:GLY:HA3	1:D:941:THR:HG22	1.97	0.47
1:D:777:LEU:HB2	1:D:887:GLN:CG	2.33	0.47
1:C:959:ILE:HD12	1:C:984:LEU:HD13	1.97	0.46
1:D:369:GLU:HG3	1:D:397:LEU:HD21	1.97	0.46
1:D:949:HIS:HB3	1:D:1020:TRP:NE1	2.28	0.46
1:A:499:ILE:HG22	1:A:501:PRO:HD3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:948:PRO:HG2	1:B:949:HIS:CE1	2.50	0.46
1:B:352:ARG:O	1:B:385:ASN:N	2.47	0.46
1:C:33:PHE:CD2	1:C:217:LYS:HE3	2.50	0.46
1:C:941:THR:OG1	1:C:955:PHE:O	2.33	0.46
1:D:906:TYR:HE2	1:D:934:GLU:OE2	1.99	0.46
1:A:607:VAL:HG12	1:A:613:PRO:HA	1.97	0.46
1:B:756:TRP:CD1	1:B:768:MET:SD	3.09	0.46
1:C:892:ALA:HB3	1:C:946:TYR:CE1	2.50	0.46
1:B:390:SER:HB2	1:B:391:HIS:CE1	2.51	0.46
1:B:487:GLU:OE2	1:B:502:MET:HG2	2.16	0.46
1:D:8:ALA:O	1:D:12:GLN:HB2	2.16	0.46
1:D:386:ALA:HB2	1:D:408:TYR:HB2	1.97	0.46
1:A:14:ARG:HA	1:A:16:TRP:CZ3	2.51	0.46
1:B:850:PHE:CE1	1:B:872:VAL:HG13	2.50	0.46
1:B:966:GLN:HG2	1:B:976:LEU:HD23	1.97	0.46
1:B:973:ARG:HA	1:B:976:LEU:HD12	1.96	0.46
1:A:527:PRO:HB3	1:C:339:ASN:O	2.16	0.46
1:D:92:MET:HE1	1:D:364:GLY:HA3	1.98	0.46
1:D:166:ARG:HG3	1:D:392:TYR:HB2	1.97	0.46
1:D:361:PRO:HB2	1:D:576:ILE:HG13	1.97	0.46
1:A:694:LEU:HD12	1:A:695:TRP:H	1.81	0.46
1:B:147:ASN:HA	1:B:148:SER:HA	1.60	0.46
1:A:390:SER:HB2	1:A:391:HIS:CE1	2.51	0.46
1:D:824:GLN:OE1	1:D:826:THR:HG23	2.16	0.46
1:A:542:MET:HE1	1:A:998:SER:HB3	1.98	0.45
1:C:679:LEU:O	1:C:680:ILE:HD13	2.16	0.45
1:D:640:SER:O	1:D:675:GLN:HA	2.16	0.45
1:D:629:PHE:CD1	1:D:638:VAL:HG22	2.52	0.45
1:D:743:SER:HB3	1:D:746:ASP:HB3	1.97	0.45
1:B:774:LYS:NZ	1:B:775:GLN:H	2.10	0.45
1:C:778:THR:HG22	1:C:779:PRO:O	2.16	0.45
1:A:147:ASN:HB3	1:A:206:SER:HA	1.97	0.45
1:A:335:VAL:HG22	1:A:344:LEU:HD12	1.99	0.45
1:C:253:TYR:HD1	1:C:317:THR:HG22	1.82	0.45
1:C:678:GLN:NE2	1:C:680:ILE:HD11	2.31	0.45
1:A:631:LEU:HD13	1:A:636:ILE:CG1	2.46	0.45
1:B:59:ARG:NH1	1:B:77:ASP:OD2	2.40	0.45
1:B:217:LYS:NZ	1:B:324:GLU:OE1	2.31	0.45
1:A:892:ALA:HB3	1:A:946:TYR:CE1	2.51	0.45
1:B:33:PHE:CD2	1:B:217:LYS:HE3	2.51	0.45
1:B:58:TRP:CE2	1:B:125:LEU:HD22	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:629:PHE:CD1	1:B:638:VAL:HG22	2.51	0.45
1:B:843:GLN:HB2	1:B:847:LYS:O	2.17	0.45
1:C:763:GLY:HA3	1:C:822:LEU:HD12	1.97	0.45
1:D:254:LEU:HD23	1:D:316:HIS:O	2.17	0.45
1:B:251:ARG:HH11	1:B:253:TYR:HE2	1.64	0.45
1:B:763:GLY:HA3	1:B:822:LEU:HD11	1.98	0.45
1:B:251:ARG:NH1	1:B:253:TYR:HE2	2.15	0.45
1:B:897:TRP:CZ2	1:B:938:ARG:HG2	2.52	0.45
1:D:134:LEU:N	1:D:134:LEU:HD12	2.31	0.45
1:D:907:PRO:HG2	1:D:990:HIS:O	2.16	0.45
1:A:868:VAL:HG12	1:A:870:VAL:HG23	1.99	0.45
1:C:41:GLU:OE2	1:C:46:ARG:NH1	2.49	0.45
1:C:883:GLY:HA3	1:C:987:ASP:CB	2.47	0.45
1:A:963:SER:HB3	1:A:979:GLU:OE2	2.17	0.45
1:D:630:ARG:HD3	1:D:637:GLU:OE2	2.17	0.45
1:D:767:GLN:HE22	1:D:774:LYS:CB	2.30	0.45
1:D:856:TYR:HD2	1:D:866:ILE:HG12	1.82	0.45
1:A:568:TRP:HE1	1:A:604:ASN:HD22	1.65	0.44
1:A:620:ALA:O	1:A:624:GLN:HG3	2.17	0.44
1:D:410:VAL:HG22	1:D:455:ILE:HB	1.99	0.44
1:D:777:LEU:HD21	1:D:889:ALA:HA	2.00	0.44
1:A:924:ASP:OD1	1:A:924:ASP:N	2.49	0.44
1:D:887:GLN:NE2	1:D:980:GLU:O	2.49	0.44
1:B:594:ASP:OD1	1:B:594:ASP:N	2.49	0.44
1:B:702:GLN:OE1	1:B:715:SER:OG	2.35	0.44
1:C:546:LEU:HD22	1:C:616:ALA:HB1	1.99	0.44
1:C:7:LEU:CD1	1:C:71:GLU:HA	2.47	0.44
1:A:59:ARG:NH2	1:A:81:ALA:O	2.50	0.44
1:A:352:ARG:HG2	1:A:624:GLN:HB3	1.99	0.44
1:A:538:TYR:O	1:A:567:VAL:HA	2.17	0.44
1:B:524:LEU:HD11	1:B:562:LEU:HG	1.99	0.44
1:B:742:THR:HG22	1:B:743:SER:O	2.17	0.44
1:A:52:ARG:NH1	1:A:128[B]:ASN:O	2.38	0.44
1:A:300:LEU:O	7:A:1201:HOH:O	2.21	0.44
1:B:127:PHE:CE1	1:B:184:LEU:HG	2.52	0.44
1:C:421:VAL:HA	1:C:422:PRO:HA	1.84	0.44
1:A:553:TRP:CE2	1:A:624:GLN:HG2	2.53	0.44
1:B:928:PRO:HB2	1:B:973:ARG:HD2	1.99	0.44
1:A:37:ARG:NH1	1:A:50:GLN:HG2	2.32	0.44
1:B:103:VAL:HG22	1:B:418:HIS:CE1	2.53	0.44
1:B:557:ARG:NH1	7:B:1208:HOH:O	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:774:LYS:HZ1	1:B:776:LEU:HG	1.82	0.44
1:B:822:LEU:HD23	1:B:823:LEU:N	2.33	0.43
1:D:949:HIS:CD2	1:D:949:HIS:N	2.86	0.43
1:D:89:ASN:HB2	1:D:92:MET:CE	2.48	0.43
1:D:683:PRO:O	1:D:685:LEU:N	2.51	0.43
1:D:741:THR:HB	1:D:748:CYS:HB3	1.99	0.43
1:B:994:GLY:N	1:B:1003:VAL:HG22	2.33	0.43
1:C:166:ARG:HG3	1:C:392:TYR:HB2	2.00	0.43
1:C:580:GLU:HG3	1:C:581:ASN:CG	2.39	0.43
1:D:302:SER:OG	1:D:304:GLU:N	2.49	0.43
1:A:339:ASN:O	1:C:527:PRO:HB3	2.19	0.43
1:A:618:THR:HA	1:A:621:LYS:HB3	2.00	0.43
1:C:390:SER:HA	1:C:391:HIS:HA	1.61	0.43
1:C:672:VAL:HB	1:C:678:GLN:HB2	2.00	0.43
1:D:722:LEU:N	1:D:722:LEU:HD12	2.33	0.43
1:D:826:THR:O	1:D:836:ILE:HG23	2.19	0.43
1:A:683:PRO:O	1:A:685:LEU:N	2.52	0.43
1:A:810:TRP:CH2	1:A:880:ALA:HB2	2.53	0.43
1:A:973:ARG:HA	1:A:976:LEU:HD12	1.99	0.43
1:B:767:GLN:CB	1:B:774:LYS:HE2	2.48	0.43
1:B:887:GLN:HG3	1:B:983:TRP:CE2	2.53	0.43
1:C:427:THR:HG21	1:C:462:SER:HB3	2.00	0.43
1:D:786:ARG:HB2	1:D:934:GLU:HG3	2.00	0.43
1:C:778:THR:HB	1:C:887:GLN:H	1.83	0.43
1:B:804:ASN:O	1:B:804:ASN:ND2	2.51	0.43
1:C:811:LYS:HB2	1:C:811:LYS:HE3	1.62	0.43
1:D:305:ILE:HD11	1:D:645:ARG:HB3	2.01	0.43
1:A:26:ARG:NH2	1:A:438:GLU:OE2	2.52	0.43
1:D:73:TRP:CE2	1:D:122:CYS:HB3	2.54	0.43
1:A:608:PHE:CE2	1:A:614:HIS:HD2	2.37	0.43
1:B:234:ASP:OD1	1:B:236:SER:HB3	2.18	0.43
1:B:787:ALA:H	1:B:964:GLN:NE2	2.17	0.43
1:B:856:TYR:HB3	1:B:864:MET:HE2	2.01	0.43
1:C:544:ASN:HB3	1:C:789:LEU:HD22	2.01	0.43
1:C:881:ARG:NH2	1:C:934:GLU:CG	2.82	0.43
1:D:599:ARG:HB2	1:D:600:GLN:H	1.65	0.43
1:B:458:LEU:HD11	1:B:472:TYR:HB2	1.99	0.42
1:B:719:GLN:NE2	1:B:915:PHE:H	2.17	0.42
1:B:905:ASN:OD1	1:B:939:CYS:HB2	2.19	0.42
1:B:942:ARG:HA	1:B:955:PHE:CE1	2.54	0.42
1:D:287:ASP:OD1	1:D:287:ASP:N	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:457:SER:HA	1:D:485:GLN:O	2.19	0.42
1:D:779:PRO:O	1:D:781:ARG:HD3	2.19	0.42
1:D:922:LEU:HD12	1:D:922:LEU:O	2.18	0.42
1:A:937:LEU:HD12	1:A:957:PHE:C	2.39	0.42
1:B:774:LYS:HZ2	1:B:776:LEU:N	2.17	0.42
1:C:939:CYS:HA	1:C:956:GLN:HG3	2.01	0.42
1:D:476:LYS:NZ	1:D:497:ASP:OD2	2.37	0.42
1:D:587:ALA:HB1	1:D:591:ASP:HB2	2.01	0.42
1:A:429:ASP:OD1	1:A:431:ARG:HG3	2.19	0.42
1:A:786:ARG:HG2	1:A:880:ALA:CB	2.49	0.42
1:C:386:ALA:HA	1:C:408:TYR:O	2.20	0.42
1:C:658:LEU:HD11	1:C:691:ALA:O	2.19	0.42
1:A:11:LEU:HD13	1:A:66:PRO:HB2	2.00	0.42
1:A:479:ASP:OD2	1:A:482:ARG:NH1	2.52	0.42
1:A:694:LEU:HD12	1:A:695:TRP:N	2.33	0.42
1:B:301:TRP:CH2	1:B:452:SER:HA	2.54	0.42
1:C:350:LEU:HD11	1:C:556:PHE:HB3	2.01	0.42
1:C:369:GLU:O	1:C:373:VAL:HG23	2.19	0.42
1:D:767:GLN:HG3	1:D:776:LEU:HB2	2.00	0.42
1:B:375:ASP:O	1:B:379:MET:HG3	2.19	0.42
1:B:427:THR:HG21	1:B:462:SER:HB3	2.00	0.42
1:C:770:ILE:HD12	1:C:775:GLN:OE1	2.18	0.42
1:D:502:MET:HA	1:D:537:GLN:O	2.20	0.42
1:A:542:MET:HE3	1:A:790:ASP:HB3	2.01	0.42
1:B:59:ARG:HD3	1:B:77:ASP:OD2	2.19	0.42
1:B:367:MET:HE2	1:B:372:MET:HG3	2.00	0.42
1:C:579:ASP:OD1	1:C:583:ASN:N	2.50	0.42
1:C:854:LYS:HA	1:C:867:THR:O	2.19	0.42
1:B:542:MET:CE	1:B:790:ASP:HB3	2.49	0.42
1:B:881:ARG:NH2	1:B:934:GLU:OE1	2.50	0.42
1:D:956:GLN:O	1:D:986:ILE:HA	2.19	0.42
1:A:147:ASN:HA	1:A:148:SER:HA	1.60	0.42
1:A:390:SER:HA	1:A:391:HIS:HA	1.69	0.42
1:A:615:PRO:HG2	1:A:904:GLU:OE1	2.20	0.42
1:A:827:ALA:HB2	1:A:836:ILE:HG22	2.01	0.42
1:B:308:LEU:HD11	1:B:403:ASP:O	2.20	0.42
1:C:427:THR:HA	1:C:436:MET:CE	2.47	0.42
1:C:457:SER:HA	1:C:485:GLN:O	2.20	0.42
1:D:653:HIS:HB3	1:D:699:ARG:HG2	2.01	0.42
1:A:301:TRP:CH2	1:A:452:SER:HA	2.55	0.42
1:B:14:ARG:HA	1:B:16:TRP:CZ3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:114:VAL:HG13	1:B:115:PRO:HD2	2.01	0.42
1:B:200:GLN:HG2	1:B:391:HIS:HB2	2.01	0.42
1:D:352:ARG:O	1:D:385:ASN:N	2.52	0.42
1:D:542:MET:CE	1:D:790:ASP:HB3	2.49	0.42
1:D:941:THR:OG1	1:D:955:PHE:O	2.34	0.42
1:A:577:LYS:O	1:A:584:PRO:HA	2.20	0.42
1:A:786:ARG:HA	1:A:881:ARG:NH2	2.35	0.42
1:A:963:SER:OG	1:A:965:GLN:HG3	2.20	0.42
1:B:553:TRP:CE2	1:B:624:GLN:HG2	2.54	0.42
1:B:768:MET:H	1:B:774:LYS:HZ1	1.67	0.42
1:C:287:ASP:N	1:C:287:ASP:OD1	2.44	0.42
1:A:907:PRO:HG2	1:A:990:HIS:O	2.19	0.41
1:B:291:LEU:HD23	5:B:1110:DMS:H23	2.00	0.41
1:C:37:ARG:NH1	1:C:50:GLN:HG2	2.35	0.41
1:C:883:GLY:HA3	1:C:987:ASP:HA	2.02	0.41
1:C:987:ASP:OD1	1:C:987:ASP:N	2.53	0.41
1:D:147:ASN:HA	1:D:148:SER:HA	1.63	0.41
1:D:696:LEU:HB3	1:D:722:LEU:HD11	2.01	0.41
1:B:577:LYS:HE2	1:B:591:ASP:O	2.21	0.41
1:D:782:ASP:HB3	1:D:784:PHE:HE1	1.85	0.41
1:A:782:ASP:OD1	1:A:782:ASP:N	2.54	0.41
1:B:259:SER:HB2	1:B:261:TRP:HE1	1.85	0.41
1:B:941:THR:OG1	1:B:955:PHE:O	2.30	0.41
1:C:200:GLN:HG2	1:C:391:HIS:HB2	2.02	0.41
1:D:873:ALA:O	1:D:876:THR:HG22	2.20	0.41
1:A:200:GLN:HG2	1:A:391:HIS:HB2	2.02	0.41
1:A:412:GLU:HA	1:A:457:SER:HB3	2.03	0.41
1:C:52:ARG:HE	1:C:52:ARG:HB3	1.59	0.41
1:C:680:ILE:HD13	1:C:680:ILE:HA	1.85	0.41
1:D:782:ASP:OD1	1:D:782:ASP:N	2.52	0.41
1:D:822:LEU:HD11	1:D:824:GLN:O	2.20	0.41
1:A:287:ASP:OD1	1:A:287:ASP:N	2.44	0.41
1:B:823:LEU:HD11	1:B:841:ALA:CB	2.51	0.41
1:B:970:THR:HG21	1:B:976:LEU:HG	2.02	0.41
1:C:84:VAL:HG13	1:C:93:HIS:CD2	2.56	0.41
1:D:35:SER:O	1:D:35:SER:OG	2.32	0.41
1:A:524:LEU:HD11	1:A:562:LEU:HG	2.02	0.41
1:B:41:GLU:OE2	1:B:46:ARG:HB2	2.20	0.41
1:B:127:PHE:CE2	1:B:214:LEU:HD11	2.55	0.41
1:B:390:SER:HA	1:B:391:HIS:HA	1.68	0.41
1:B:544:ASN:HB2	1:B:929:TYR:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:50:GLN:OE1	1:C:50:GLN:N	2.54	0.41
1:A:353:GLY:HA2	1:A:386:ALA:O	2.20	0.41
1:C:632:SER:O	1:C:635:THR:HG23	2.21	0.41
1:B:521:LYS:HD3	1:B:559:TYR:CZ	2.56	0.41
1:C:129:VAL:CG2	1:C:134:LEU:HD11	2.50	0.41
1:D:796:SER:HB2	1:D:802:ASP:H	1.85	0.41
1:A:251:ARG:HD3	1:A:253:TYR:CE2	2.56	0.41
1:A:678:GLN:OE1	1:A:680:ILE:HD11	2.20	0.41
1:B:916:ASP:OD1	1:B:917:ARG:N	2.49	0.41
1:B:959:ILE:HG22	1:B:984:LEU:CA	2.43	0.41
1:C:353:GLY:HA2	1:C:386:ALA:O	2.21	0.41
1:C:788:PRO:CD	1:C:968:MET:HG3	2.50	0.41
1:C:801:ILE:HG23	1:C:808:GLU:HG3	2.02	0.41
1:C:1022:GLN:N	1:C:1022:GLN:OE1	2.54	0.41
1:D:253:TYR:HD1	1:D:317:THR:HG22	1.85	0.41
1:D:368:ASP:OD1	1:D:368:ASP:N	2.54	0.41
1:D:462:SER:HB2	1:D:468:HIS:CE1	2.56	0.41
1:D:897:TRP:CZ2	1:D:938:ARG:HG2	2.56	0.41
1:D:964:GLN:O	1:D:968:MET:HB2	2.20	0.41
1:B:579:ASP:HB2	1:B:580:GLU:OE1	2.21	0.41
1:B:932:PRO:HB3	1:B:976:LEU:HD11	2.02	0.41
1:C:485:GLN:NE2	7:C:1206:HOH:O	2.54	0.41
1:D:736:ALA:O	1:D:737:ILE:HD13	2.20	0.41
1:B:59:ARG:NH2	1:B:81:ALA:O	2.54	0.40
1:B:88:SER:HA	1:B:366:VAL:HG21	2.04	0.40
1:B:777:LEU:HD12	1:B:887:GLN:NE2	2.36	0.40
1:A:33:PHE:CD2	1:A:217:LYS:HE3	2.57	0.40
1:B:336:ARG:NH2	1:B:338:GLU:OE1	2.54	0.40
1:B:509:ASP:OD2	1:B:522:LYS:NZ	2.52	0.40
1:B:908:ASP:HB3	1:B:1007:PHE:CD2	2.56	0.40
1:C:789:LEU:HD23	1:C:933:SER:HB2	2.03	0.40
1:C:872:VAL:HG11	1:C:879:PRO:HD3	2.03	0.40
1:D:631:LEU:HD12	1:D:635:THR:O	2.21	0.40
1:D:906:TYR:CE2	1:D:934:GLU:OE2	2.74	0.40
1:B:421:VAL:HA	1:B:422:PRO:HA	1.84	0.40
1:B:788:PRO:HG3	1:B:816:TYR:OH	2.21	0.40
1:C:793:ILE:HA	1:C:807:VAL:CG1	2.51	0.40
1:A:377:LEU:HG	1:A:708:TRP:HA	2.04	0.40
1:B:360:HIS:CE1	1:B:362:LEU:HB2	2.57	0.40
1:B:538:TYR:O	1:B:567:VAL:HA	2.21	0.40
1:C:426:LEU:HD22	1:C:432:TRP:CE2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:568:TRP:HA	1:C:569:ASP:HA	1.86	0.40
1:C:952:ARG:O	1:C:1018:LEU:HA	2.20	0.40
1:D:945:ASN:ND2	1:D:950:GLN:HB2	2.36	0.40
1:A:718:GLN:HG2	1:A:720:TRP:CZ2	2.56	0.40
1:A:827:ALA:O	1:A:828:ASP:OD1	2.40	0.40
1:A:873:ALA:HB3	1:A:876:THR:HG22	2.03	0.40
1:B:782:ASP:HB2	1:B:842:TRP:CZ2	2.57	0.40
1:C:127:PHE:CE1	1:C:184:LEU:HG	2.56	0.40
1:C:959:ILE:HG13	1:C:984:LEU:HB2	2.04	0.40
1:D:74:LEU:HD23	1:D:74:LEU:HA	1.91	0.40
1:D:502:MET:HB3	1:D:536:CYS:SG	2.61	0.40
1:D:670:LEU:HD23	1:D:670:LEU:HA	1.83	0.40
1:D:932:PRO:HG2	1:D:970:THR:HG22	2.02	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	1021/1025 (100%)	958 (94%)	58 (6%)	5 (0%)	29	52
1	B	1008/1025 (98%)	954 (95%)	48 (5%)	6 (1%)	25	47
1	C	1011/1025 (99%)	958 (95%)	50 (5%)	3 (0%)	41	64
1	D	1011/1025 (99%)	955 (94%)	52 (5%)	4 (0%)	34	58
All	All	4051/4100 (99%)	3825 (94%)	208 (5%)	18 (0%)	34	58

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	684	GLU
1	A	861	SER

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Mol	Chain	Res	Type
1	B	799	THR
1	D	684	GLU
1	B	684	GLU
1	C	799	THR
1	D	799	THR
1	A	164	ASP
1	A	799	THR
1	B	743	SER
1	C	164	ASP
1	C	201	ASP
1	D	1009	LEU
1	A	722	LEU
1	B	954	ASP
1	B	164	ASP
1	B	722	LEU
1	D	164	ASP

### 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	804/877 (92%)	792 (98%)	12 (2%)	65	84
1	B	808/877 (92%)	784 (97%)	24 (3%)	41	68
1	C	818/877 (93%)	807 (99%)	11 (1%)	69	86
1	D	815/877 (93%)	790 (97%)	25 (3%)	40	67
All	All	3245/3508 (92%)	3173 (98%)	72 (2%)	52	77

All (72) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	250	LEU
1	A	252	ASP
1	A	473	ARG
1	A	718	GLN
1	A	721	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	746	ASP
1	A	753	ASN
1	A	782	ASP
1	A	796	SER
1	A	926	TYR
1	A	934	GLU
1	A	1021	CYS
1	B	35	SER
1	B	55	ASN
1	B	269	SER
1	B	310	ARG
1	B	333	ARG
1	B	481	SER
1	B	522	LYS
1	B	535	LEU
1	B	545	SER
1	B	574	SER
1	B	632	SER
1	B	721	ARG
1	B	746	ASP
1	B	765	LEU
1	B	780	LEU
1	B	804	ASN
1	B	874	SER
1	B	881	ARG
1	B	885	ASN
1	B	886	CYS
1	B	926	TYR
1	B	942	ARG
1	B	1000	SER
1	B	1021	CYS
1	C	333	ARG
1	C	457	SER
1	C	500	CYS
1	C	545	SER
1	C	693	GLN
1	C	753	ASN
1	C	796	SER
1	C	934	GLU
1	C	938	ARG
1	C	943	GLU
1	C	1021	CYS

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Mol	Chain	Res	Type
1	D	35	SER
1	D	71	GLU
1	D	128	ASN
1	D	302	SER
1	D	333	ARG
1	D	336	ARG
1	D	437	SER
1	D	448	ARG
1	D	481	SER
1	D	535	LEU
1	D	536	CYS
1	D	645	ARG
1	D	699	ARG
1	D	743	SER
1	D	753	ASN
1	D	781	ARG
1	D	782	ASP
1	D	809	ARG
1	D	824	GLN
1	D	874	SER
1	D	934	GLU
1	D	942	ARG
1	D	985	ASN
1	D	1000	SER
1	D	1021	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	91	GLN
1	B	55	ASN
1	B	804	ASN
1	B	964	GLN
1	C	624	GLN
1	C	775	GLN
1	C	949	HIS
1	C	950	GLN
1	C	964	GLN
1	D	653	HIS
1	D	767	GLN
1	D	840	HIS
1	D	863	GLN

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Mol	Chain	Res	Type
1	D	945	ASN
1	D	950	GLN
1	D	985	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

Of 66 ligands modelled in this entry, 15 are monoatomic - leaving 51 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	$\# Z  > 2$
6	GOL	A	1120	-	5,5,5	0.86	0	5,5,5	1.03	0
5	DMS	A	1112	-	3,3,3	0.67	0	3,3,3	0.58	0
2	F4X	A	1101	4	44,44,44	2.43	9 (20%)	62,62,62	1.61	7 (11%)
5	DMS	A	1106	-	3,3,3	0.67	0	3,3,3	0.71	0
5	DMS	D	1113	-	3,3,3	0.67	0	3,3,3	0.55	0
5	DMS	A	1118	-	3,3,3	0.66	0	3,3,3	0.53	0
5	DMS	B	1114	-	3,3,3	0.67	0	3,3,3	0.58	0
5	DMS	C	1111	-	3,3,3	0.66	0	3,3,3	0.52	0
5	DMS	D	1114	-	3,3,3	0.64	0	3,3,3	0.60	0
5	DMS	A	1114	-	3,3,3	0.67	0	3,3,3	0.55	0
5	DMS	B	1110	-	3,3,3	0.66	0	3,3,3	0.45	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
5	DMS	A	1109	-	3,3,3	0.69	0	3,3,3	0.55	0
5	DMS	D	1109	-	3,3,3	0.67	0	3,3,3	0.57	0
5	DMS	B	1111	-	3,3,3	0.69	0	3,3,3	0.70	0
2	F4X	B	1101	4	44,44,44	2.42	9 (20%)	62,62,62	1.28	6 (9%)
5	DMS	A	1111	-	3,3,3	0.68	0	3,3,3	0.62	0
2	F4X	C	1101	4	44,44,44	2.39	9 (20%)	62,62,62	1.38	6 (9%)
5	DMS	A	1108	-	3,3,3	0.67	0	3,3,3	0.65	0
5	DMS	D	1110	-	3,3,3	0.71	0	3,3,3	0.65	0
5	DMS	C	1115	-	3,3,3	0.66	0	3,3,3	0.44	0
5	DMS	D	1112	-	3,3,3	0.68	0	3,3,3	0.60	0
5	DMS	C	1108	-	3,3,3	0.68	0	3,3,3	0.55	0
5	DMS	D	1107	-	3,3,3	0.65	0	3,3,3	0.70	0
5	DMS	C	1106	-	3,3,3	0.66	0	3,3,3	0.40	0
5	DMS	B	1106	-	3,3,3	0.67	0	3,3,3	0.74	0
5	DMS	D	1111	-	3,3,3	0.66	0	3,3,3	0.38	0
5	DMS	A	1117	-	3,3,3	0.67	0	3,3,3	0.55	0
5	DMS	C	1116	-	3,3,3	0.67	0	3,3,3	0.56	0
5	DMS	C	1114	-	3,3,3	0.65	0	3,3,3	0.54	0
5	DMS	C	1110	-	3,3,3	0.68	0	3,3,3	0.60	0
5	DMS	B	1113	-	3,3,3	0.64	0	3,3,3	0.54	0
5	DMS	C	1107	-	3,3,3	0.65	0	3,3,3	0.57	0
5	DMS	D	1108	-	3,3,3	0.65	0	3,3,3	0.61	0
5	DMS	B	1108	-	3,3,3	0.67	0	3,3,3	0.57	0
5	DMS	B	1109	-	3,3,3	0.62	0	3,3,3	0.62	0
5	DMS	C	1112	-	3,3,3	0.67	0	3,3,3	0.62	0
5	DMS	A	1105	-	3,3,3	0.67	0	3,3,3	0.72	0
5	DMS	C	1109	-	3,3,3	0.67	0	3,3,3	0.60	0
5	DMS	A	1110	-	3,3,3	0.70	0	3,3,3	0.52	0
5	DMS	B	1107	-	3,3,3	0.67	0	3,3,3	0.69	0
5	DMS	B	1112	-	3,3,3	0.65	0	3,3,3	0.37	0
5	DMS	A	1107	-	3,3,3	0.68	0	3,3,3	0.58	0
5	DMS	C	1117	-	3,3,3	0.67	0	3,3,3	0.56	0
5	DMS	D	1106	-	3,3,3	0.69	0	3,3,3	0.60	0
5	DMS	A	1119	-	3,3,3	0.65	0	3,3,3	0.49	0
5	DMS	A	1116	-	3,3,3	0.66	0	3,3,3	0.57	0
2	F4X	D	1101	-	44,44,44	2.40	9 (20%)	62,62,62	1.27	6 (9%)
5	DMS	B	1115	-	3,3,3	0.68	0	3,3,3	0.59	0
5	DMS	C	1113	-	3,3,3	0.67	0	3,3,3	0.58	0
5	DMS	A	1115	-	3,3,3	0.67	0	3,3,3	0.51	0
5	DMS	A	1113	-	3,3,3	0.67	0	3,3,3	0.52	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	GOL	A	1120	-	-	1/4/4/4	-
2	F4X	A	1101	4	-	8/21/61/61	0/4/4/4
2	F4X	B	1101	4	-	9/21/61/61	0/4/4/4
2	F4X	D	1101	-	-	9/21/61/61	0/4/4/4
2	F4X	C	1101	4	-	9/21/61/61	0/4/4/4

All (36) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1101	F4X	C18-C17	8.19	1.53	1.38
2	B	1101	F4X	C18-C17	8.18	1.53	1.38
2	D	1101	F4X	C18-C17	8.08	1.53	1.38
2	C	1101	F4X	C18-C17	7.99	1.53	1.38
2	B	1101	F4X	C14-C13	7.87	1.54	1.38
2	A	1101	F4X	C14-C13	7.85	1.54	1.38
2	C	1101	F4X	C14-C13	7.66	1.54	1.38
2	D	1101	F4X	C14-C13	7.57	1.53	1.38
2	A	1101	F4X	C15-C16	7.28	1.53	1.39
2	D	1101	F4X	C15-C16	7.25	1.53	1.39
2	C	1101	F4X	C15-C16	7.20	1.53	1.39
2	B	1101	F4X	C15-C16	7.16	1.53	1.39
2	C	1101	F4X	C17-C16	-3.84	1.32	1.39
2	B	1101	F4X	C17-C16	-3.82	1.32	1.39
2	D	1101	F4X	C17-C16	-3.82	1.32	1.39
2	A	1101	F4X	C17-C16	-3.79	1.32	1.39
2	C	1101	F4X	C18-C13	-3.19	1.32	1.38
2	D	1101	F4X	C18-C13	-3.08	1.32	1.38
2	B	1101	F4X	C18-C13	-3.06	1.32	1.38
2	D	1101	F4X	C15-C14	-3.04	1.33	1.38
2	C	1101	F4X	C15-C14	-3.03	1.33	1.38
2	A	1101	F4X	C18-C13	-3.02	1.32	1.38
2	A	1101	F4X	C15-C14	-2.85	1.33	1.38
2	B	1101	F4X	C15-C14	-2.83	1.33	1.38
2	A	1101	F4X	C21-N22	2.66	1.42	1.35
2	D	1101	F4X	O41-C39	-2.62	1.21	1.30
2	B	1101	F4X	O41-C39	-2.60	1.22	1.30
2	C	1101	F4X	O41-C39	-2.58	1.22	1.30
2	A	1101	F4X	O41-C39	-2.52	1.22	1.30
2	A	1101	F4X	C20-C21	-2.44	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	1101	F4X	C20-C21	-2.44	1.34	1.41
2	D	1101	F4X	C20-C21	-2.34	1.35	1.41
2	B	1101	F4X	C21-N22	2.33	1.41	1.35
2	D	1101	F4X	C21-N22	2.28	1.41	1.35
2	B	1101	F4X	C20-C21	-2.27	1.35	1.41
2	C	1101	F4X	C21-N22	2.26	1.41	1.35

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1101	F4X	C20-C21-N22	6.65	132.46	121.61
2	C	1101	F4X	C20-C21-N22	5.74	130.97	121.61
2	A	1101	F4X	C25-C21-C20	-5.55	118.92	128.94
2	B	1101	F4X	C20-C21-N22	5.06	129.86	121.61
2	D	1101	F4X	C20-C21-N22	4.87	129.56	121.61
2	C	1101	F4X	C25-C21-C20	-3.96	121.80	128.94
2	B	1101	F4X	C25-C21-C20	-3.44	122.73	128.94
2	D	1101	F4X	O01-C02-C07	-3.27	102.39	107.14
2	D	1101	F4X	C25-C21-C20	-3.20	123.16	128.94
2	A	1101	F4X	C26-C23-C24	-3.04	119.49	123.20
2	B	1101	F4X	O01-C02-C07	-2.76	103.13	107.14
2	A	1101	F4X	C29-C24-C23	2.68	122.55	119.55
2	C	1101	F4X	C32-N22-C23	-2.60	117.77	122.53
2	C	1101	F4X	O01-C02-C07	-2.52	103.48	107.14
2	A	1101	F4X	O01-C02-C07	-2.50	103.51	107.14
2	B	1101	F4X	C32-N22-C23	-2.45	118.05	122.53
2	A	1101	F4X	C13-O01-C02	-2.43	114.22	117.79
2	A	1101	F4X	C29-C24-C25	-2.25	127.50	130.65
2	D	1101	F4X	C32-N22-C23	-2.23	118.45	122.53
2	B	1101	F4X	C26-C23-C24	-2.20	120.51	123.20
2	C	1101	F4X	C17-C16-C15	2.17	120.85	117.64
2	B	1101	F4X	C13-O01-C02	-2.15	114.64	117.79
2	D	1101	F4X	C26-C23-C24	-2.09	120.65	123.20
2	C	1101	F4X	C26-C23-C24	-2.09	120.66	123.20
2	D	1101	F4X	C17-C16-C15	2.04	120.67	117.64

There are no chirality outliers.

All (36) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1101	F4X	C19-C20-C21-N22
2	A	1101	F4X	C19-C20-C21-C25

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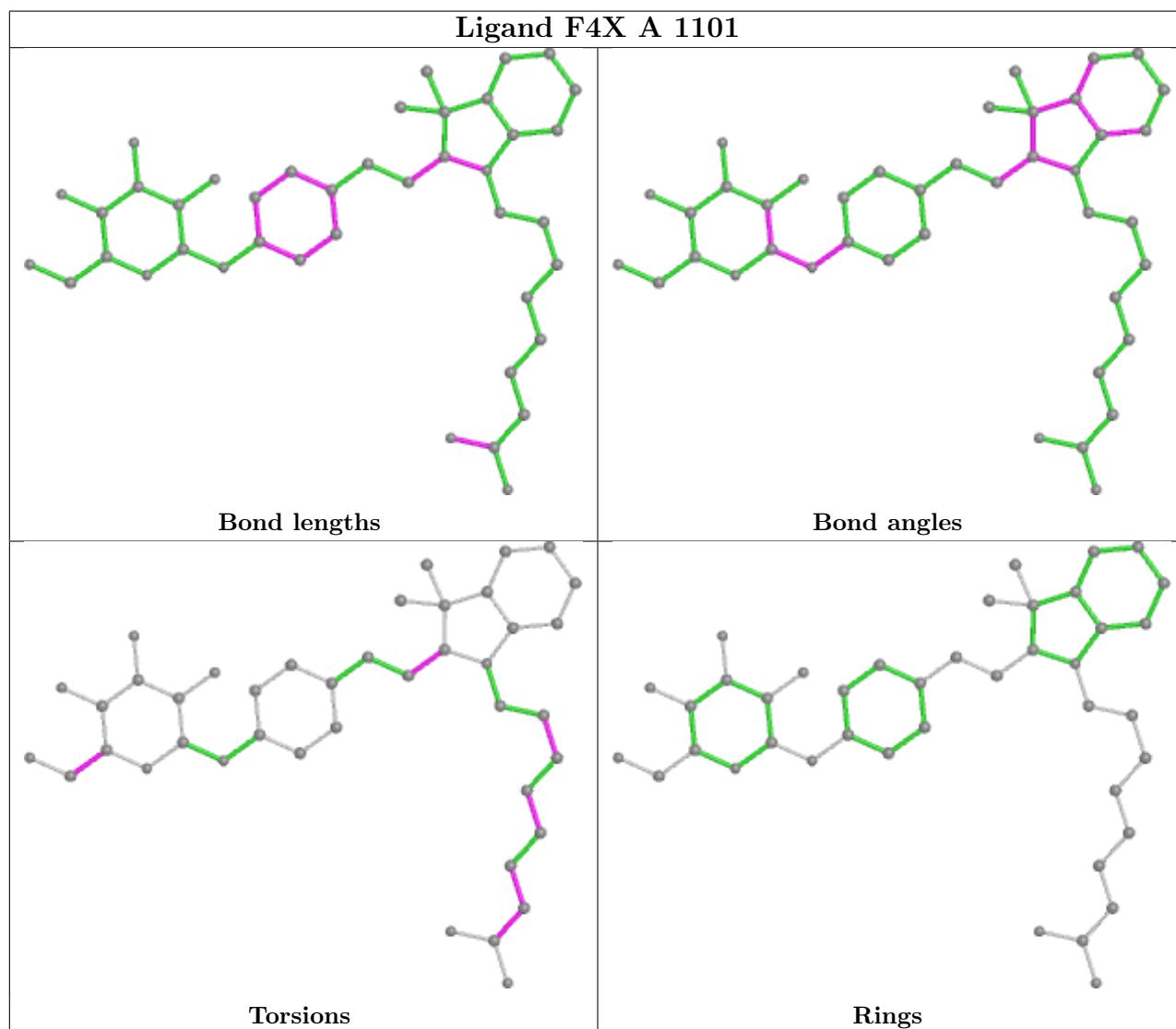
Mol	Chain	Res	Type	Atoms
2	B	1101	F4X	C19-C20-C21-N22
2	B	1101	F4X	C19-C20-C21-C25
2	B	1101	F4X	C33-C32-N22-C21
2	C	1101	F4X	C19-C20-C21-N22
2	C	1101	F4X	C19-C20-C21-C25
2	C	1101	F4X	C33-C32-N22-C21
2	D	1101	F4X	C19-C20-C21-N22
2	D	1101	F4X	C19-C20-C21-C25
2	D	1101	F4X	C33-C32-N22-C21
2	D	1101	F4X	C36-C37-C38-C39
2	A	1101	F4X	C36-C37-C38-C39
2	B	1101	F4X	C36-C37-C38-C39
2	C	1101	F4X	C36-C37-C38-C39
2	A	1101	F4X	C34-C35-C36-C37
2	C	1101	F4X	O03-C04-C08-O09
2	D	1101	F4X	O03-C04-C08-O09
2	B	1101	F4X	O03-C04-C08-O09
2	A	1101	F4X	O03-C04-C08-O09
2	C	1101	F4X	C34-C35-C36-C37
2	D	1101	F4X	C34-C35-C36-C37
2	B	1101	F4X	C34-C35-C36-C37
2	C	1101	F4X	C32-C33-C34-C35
2	D	1101	F4X	C32-C33-C34-C35
2	B	1101	F4X	C32-C33-C34-C35
2	A	1101	F4X	C37-C38-C39-O40
2	D	1101	F4X	C37-C38-C39-O40
2	A	1101	F4X	C37-C38-C39-O41
2	C	1101	F4X	C37-C38-C39-O40
2	B	1101	F4X	C37-C38-C39-O40
2	B	1101	F4X	C37-C38-C39-O41
2	D	1101	F4X	C37-C38-C39-O41
6	A	1120	GOL	C1-C2-C3-O3
2	C	1101	F4X	C37-C38-C39-O41
2	A	1101	F4X	C32-C33-C34-C35

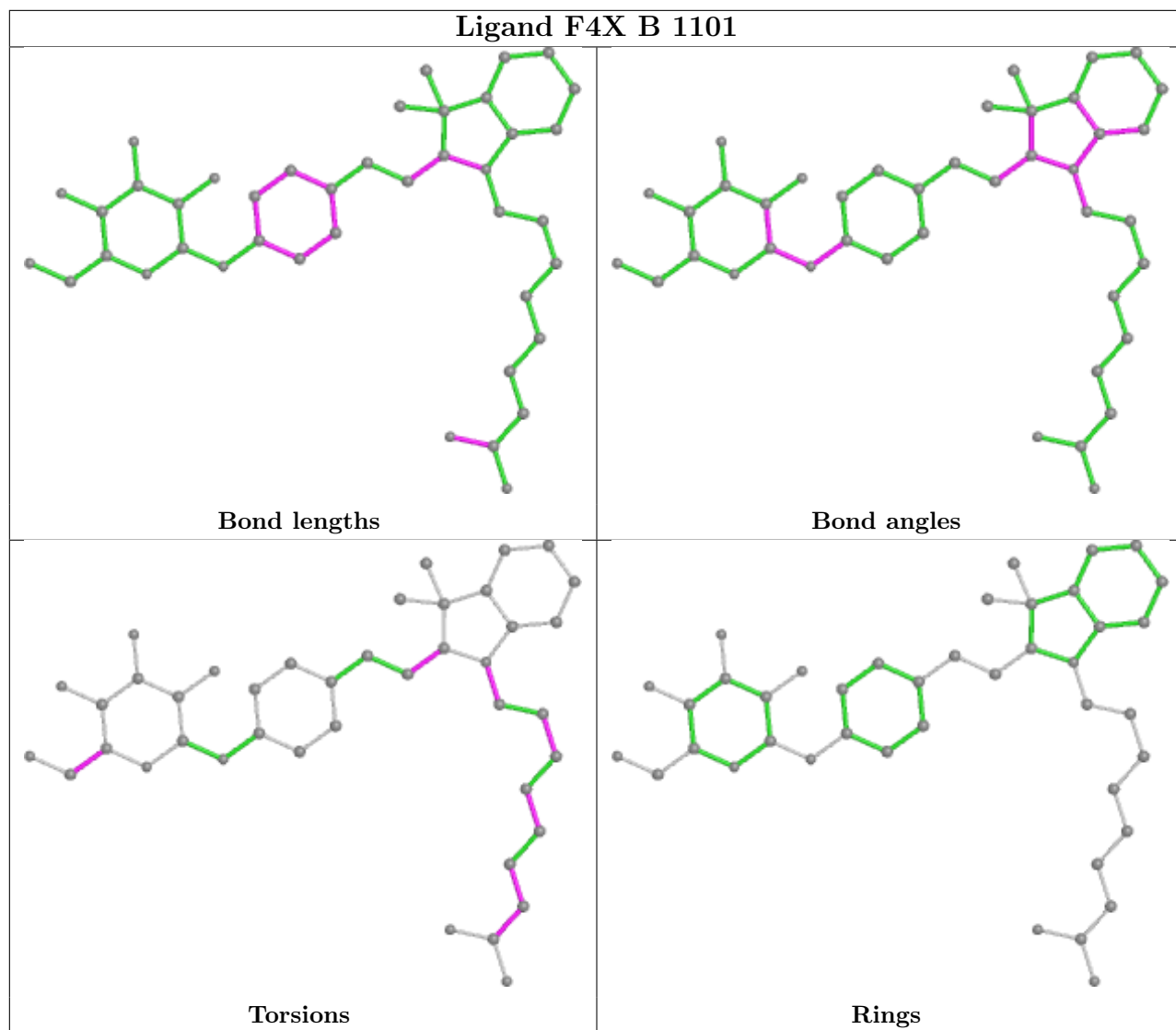
There are no ring outliers.

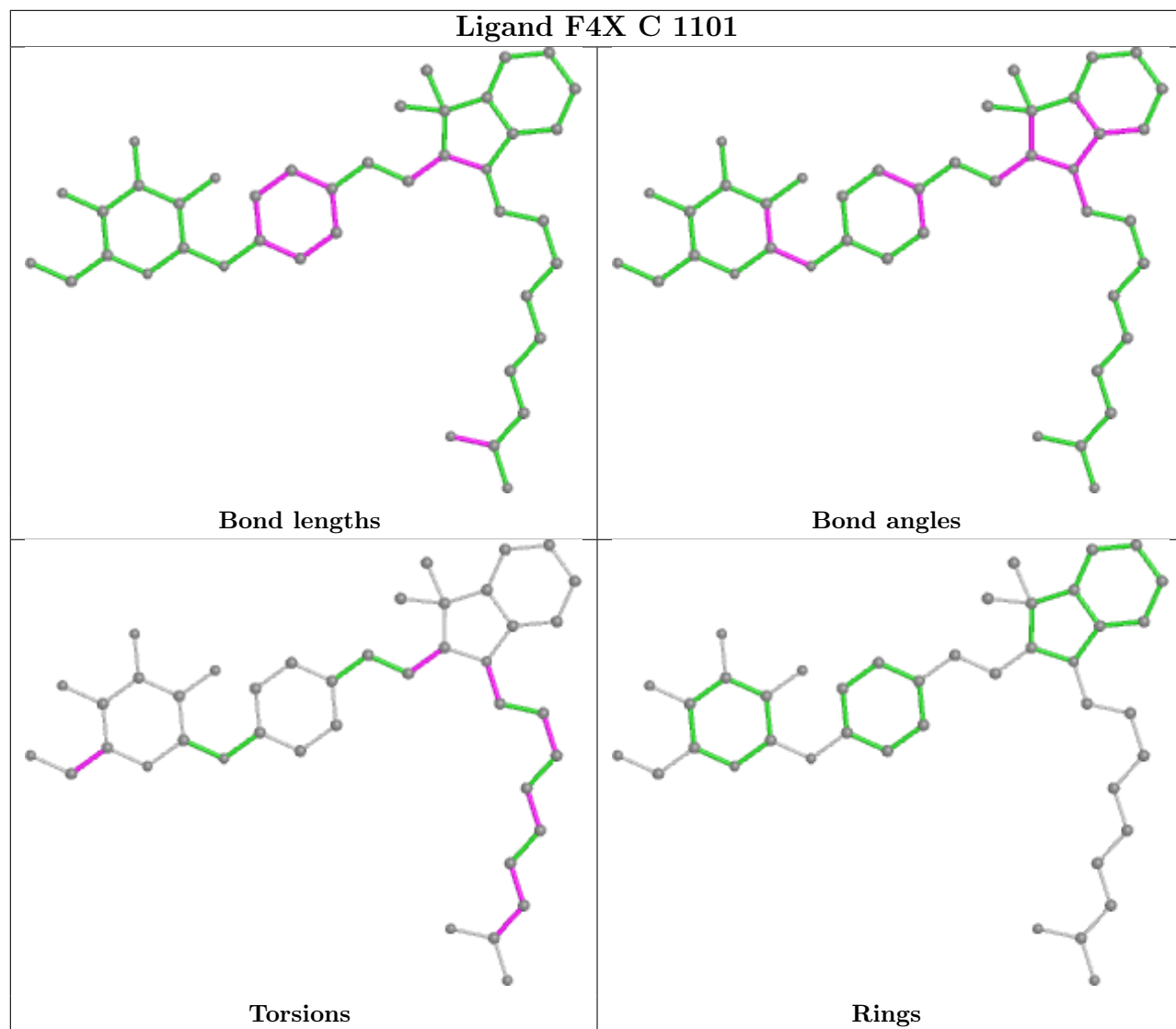
3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	1110	DMS	1	0
5	B	1112	DMS	1	0
2	D	1101	F4X	1	0

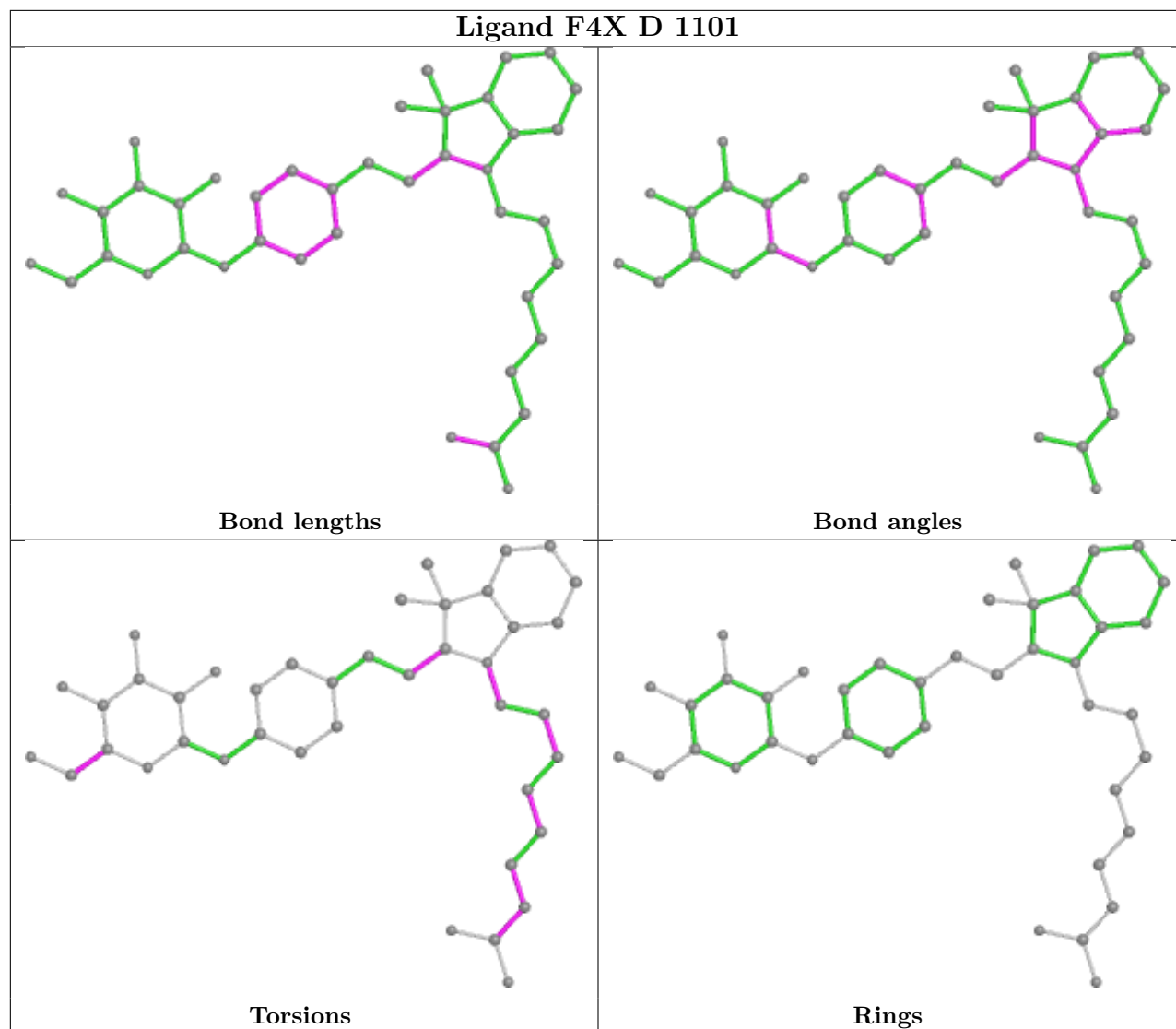
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.











## 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<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	1021/1025 (99%)	0.17	40 (3%) 39 37	36, 62, 131, 166	0
1	B	1012/1025 (98%)	0.18	54 (5%) 26 24	35, 60, 141, 179	0
1	C	1015/1025 (99%)	0.21	50 (4%) 29 27	35, 62, 139, 176	0
1	D	1015/1025 (99%)	0.26	66 (6%) 18 16	30, 63, 149, 190	0
All	All	4063/4100 (99%)	0.20	210 (5%) 27 25	30, 62, 140, 190	0

All (210) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	732	ALA	8.1
1	A	733	ALA	5.9
1	B	738	PRO	5.5
1	A	738	PRO	5.4
1	D	981	GLY	5.4
1	C	729	THR	5.2
1	B	833	ALA	5.1
1	D	821	ALA	4.5
1	A	734	SER	4.2
1	B	726	LEU	4.1
1	D	581	ASN	4.1
1	A	745	MET	4.1
1	D	710	GLU	4.0
1	C	727	SER	3.9
1	A	731	PRO	3.9
1	A	737	ILE	3.9
1	D	864	MET	3.9
1	D	846	GLY	3.9
1	D	748	CYS	3.7
1	B	1023	LYS	3.7
1	C	739	HIS	3.6

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Mol	Chain	Res	Type	RSRZ
1	D	799	THR	3.6
1	A	580	GLU	3.6
1	A	823	LEU	3.6
1	C	745	MET	3.5
1	D	580	GLU	3.5
1	B	692	GLY	3.5
1	C	728	VAL	3.4
1	C	730	LEU	3.4
1	D	827	ALA	3.4
1	C	79	PRO	3.4
1	D	737	ILE	3.3
1	A	679	LEU	3.3
1	B	691	ALA	3.3
1	C	741	THR	3.3
1	D	779	PRO	3.2
1	C	742	THR	3.2
1	C	752	GLY	3.2
1	D	742	THR	3.2
1	A	740	LEU	3.2
1	C	820	ALA	3.2
1	D	850	PHE	3.2
1	A	889	ALA	3.1
1	B	827	ALA	3.1
1	C	580	GLU	3.1
1	A	977	HIS	3.1
1	D	985	ASN	3.1
1	B	737	ILE	3.0
1	A	798	ALA	3.0
1	C	581	ASN	3.0
1	D	729	THR	3.0
1	D	863	GLN	3.0
1	D	844	HIS	2.9
1	D	862	GLY	2.9
1	C	80	GLU	2.9
1	A	633	GLY	2.9
1	C	582	GLY	2.9
1	D	823	LEU	2.9
1	A	318	ALA	2.9
1	D	686	PRO	2.9
1	B	752	GLY	2.9
1	A	690	SER	2.9
1	B	860	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	848	THR	2.9
1	D	745	MET	2.9
1	D	832	ASP	2.9
1	C	770	ILE	2.9
1	A	726	LEU	2.8
1	D	738	PRO	2.8
1	A	691	ALA	2.8
1	D	725	ASN	2.8
1	C	743	SER	2.8
1	B	820	ALA	2.8
1	D	772	ASP	2.8
1	D	385	ASN	2.8
1	D	565	GLY	2.8
1	B	889	ALA	2.8
1	D	736	ALA	2.8
1	B	776	LEU	2.8
1	C	692	GLY	2.8
1	D	178	ARG	2.8
1	C	825	CYS	2.7
1	C	354	VAL	2.7
1	C	821	ALA	2.7
1	D	766	SER	2.7
1	C	844	HIS	2.7
1	D	689	GLU	2.7
1	C	565	GLY	2.7
1	C	898	LEU	2.7
1	B	980	GLU	2.7
1	C	832	ASP	2.7
1	D	386	ALA	2.7
1	C	663	LEU	2.7
1	D	780	LEU	2.7
1	B	690	SER	2.7
1	C	748	CYS	2.6
1	D	79	PRO	2.6
1	A	692	GLY	2.6
1	C	132	SER	2.6
1	D	658	LEU	2.6
1	D	1023	LYS	2.6
1	A	578	TYR	2.6
1	D	833	ALA	2.6
1	B	771	GLY	2.6
1	B	671	ASP	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	862	GLY	2.6
1	B	762	SER	2.6
1	B	725	ASN	2.6
1	C	386	ALA	2.6
1	D	752	GLY	2.5
1	A	826	THR	2.5
1	C	179	ALA	2.5
1	A	730	LEU	2.5
1	A	837	THR	2.5
1	D	671	ASP	2.5
1	D	727	SER	2.5
1	B	581	ASN	2.5
1	B	826	THR	2.5
1	C	801	ILE	2.5
1	D	920	LEU	2.5
1	B	745	MET	2.5
1	D	353	GLY	2.5
1	D	771	GLY	2.5
1	B	846	GLY	2.4
1	C	981	GLY	2.4
1	D	75	GLU	2.4
1	D	692	GLY	2.4
1	B	351	ILE	2.4
1	D	797	GLU	2.4
1	D	924	ASP	2.4
1	A	736	ALA	2.4
1	B	756	TRP	2.4
1	B	981	GLY	2.4
1	C	977	HIS	2.3
1	C	740	LEU	2.3
1	A	178	ARG	2.3
1	C	689	GLU	2.3
1	A	729	THR	2.3
1	A	829	THR	2.3
1	D	691	ALA	2.3
1	D	252	ASP	2.3
1	B	839	ALA	2.3
1	C	135	GLN	2.3
1	D	564	GLY	2.3
1	B	580	GLU	2.3
1	A	145	GLY	2.3
1	C	180	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	740	LEU	2.3
1	C	976	LEU	2.3
1	B	841	ALA	2.3
1	D	578	TYR	2.3
1	C	178	ARG	2.3
1	C	671	ASP	2.3
1	A	565	GLY	2.3
1	D	897	TRP	2.3
1	A	687	GLN	2.3
1	C	833	ALA	2.3
1	A	801	ILE	2.3
1	A	581	ASN	2.2
1	A	961	ARG	2.2
1	D	978	ALA	2.2
1	B	801	ILE	2.2
1	D	709	SER	2.2
1	B	859	ASP	2.2
1	D	860	GLY	2.2
1	A	536	CYS	2.2
1	C	886	CYS	2.2
1	B	844	HIS	2.2
1	D	688	PRO	2.2
1	B	799	THR	2.2
1	C	826	THR	2.2
1	C	969	GLU	2.2
1	D	856	TYR	2.2
1	A	682	LEU	2.2
1	B	777	LEU	2.2
1	C	1018	LEU	2.2
1	D	648	ASP	2.2
1	B	578	TYR	2.2
1	B	565	GLY	2.2
1	C	705	ALA	2.2
1	D	895	VAL	2.1
1	A	1023	LYS	2.1
1	B	727	SER	2.1
1	D	884	LEU	2.1
1	B	741	THR	2.1
1	C	756	TRP	2.1
1	B	821	ALA	2.1
1	B	1006	GLU	2.1
1	B	234	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	679	LEU	2.1
1	B	948	PRO	2.1
1	B	798	ALA	2.1
1	D	706	THR	2.1
1	A	802	ASP	2.1
1	B	919	ASP	2.1
1	B	823	LEU	2.1
1	B	961	ARG	2.1
1	B	564	GLY	2.1
1	C	889	ALA	2.1
1	B	689	GLU	2.1
1	A	564	GLY	2.1
1	B	969	GLU	2.0
1	D	49	GLN	2.0
1	D	845	GLN	2.0
1	B	688	PRO	2.0
1	D	741	THR	2.0
1	B	861	SER	2.0
1	D	859	ASP	2.0
1	C	747	PHE	2.0
1	A	973	ARG	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<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
2	F4X	A	1101	41/41	0.72	0.39	45,64,75,78	0
2	F4X	B	1101	41/41	0.74	0.36	49,65,76,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
2	F4X	D	1101	41/41	0.74	0.40	44,61,76,81	0
2	F4X	C	1101	41/41	0.76	0.36	46,60,75,93	0
5	DMS	A	1113	4/4	0.77	0.26	108,109,110,112	0
5	DMS	D	1110	4/4	0.77	0.28	75,77,81,83	0
5	DMS	C	1110	4/4	0.79	0.37	97,98,98,99	0
5	DMS	A	1117	4/4	0.81	0.27	84,87,88,92	0
5	DMS	A	1109	4/4	0.82	0.23	83,86,88,89	0
4	NA	B	1105	1/1	0.82	0.18	55,55,55,55	0
5	DMS	D	1107	4/4	0.82	0.26	77,88,90,96	0
5	DMS	A	1115	4/4	0.82	0.44	105,108,109,110	0
5	DMS	A	1114	4/4	0.83	0.29	98,102,104,106	0
5	DMS	C	1117	4/4	0.83	0.31	122,123,124,124	0
5	DMS	A	1110	4/4	0.84	0.30	73,77,78,79	0
5	DMS	C	1109	4/4	0.84	0.42	103,108,108,108	0
5	DMS	D	1108	4/4	0.86	0.31	88,89,92,97	0
5	DMS	B	1111	4/4	0.87	0.33	69,75,78,82	0
5	DMS	C	1107	4/4	0.87	0.22	89,95,95,96	0
5	DMS	A	1106	4/4	0.88	0.23	85,86,87,88	0
5	DMS	B	1107	4/4	0.88	0.36	68,77,78,79	0
5	DMS	D	1114	4/4	0.88	0.30	82,84,88,88	0
6	GOL	A	1120	6/6	0.88	0.18	68,71,72,74	0
5	DMS	D	1109	4/4	0.89	0.35	99,102,102,102	0
5	DMS	C	1108	4/4	0.89	0.33	81,83,84,86	0
5	DMS	D	1111	4/4	0.89	0.39	97,97,100,101	0
5	DMS	B	1113	4/4	0.89	0.34	94,95,96,96	0
5	DMS	B	1112	4/4	0.89	0.68	107,107,110,113	0
5	DMS	B	1108	4/4	0.90	0.36	92,95,95,96	0
5	DMS	C	1111	4/4	0.91	0.26	96,96,96,99	0
5	DMS	C	1113	4/4	0.91	0.35	84,84,85,89	0
5	DMS	A	1118	4/4	0.91	0.43	106,106,106,108	0
5	DMS	B	1110	4/4	0.91	0.33	84,84,85,86	0
4	NA	D	1104	1/1	0.91	0.53	67,67,67,67	0
5	DMS	C	1114	4/4	0.92	0.24	89,91,92,93	0
4	NA	B	1104	1/1	0.92	0.14	43,43,43,43	0
5	DMS	A	1105	4/4	0.92	0.26	58,60,62,68	0
5	DMS	A	1107	4/4	0.93	0.19	63,65,69,76	0
3	MG	C	1103	1/1	0.93	0.06	42,42,42,42	0
5	DMS	B	1115	4/4	0.93	0.19	66,73,74,75	0
5	DMS	D	1112	4/4	0.93	0.28	93,94,94,94	0
5	DMS	A	1116	4/4	0.93	0.26	87,90,90,90	0
5	DMS	C	1112	4/4	0.93	0.20	89,90,91,91	0
5	DMS	A	1111	4/4	0.94	0.32	71,72,77,78	0

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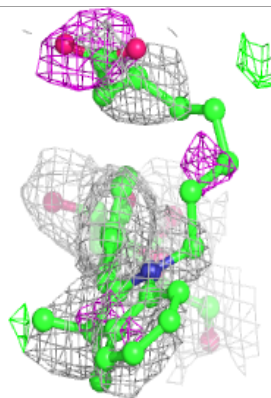
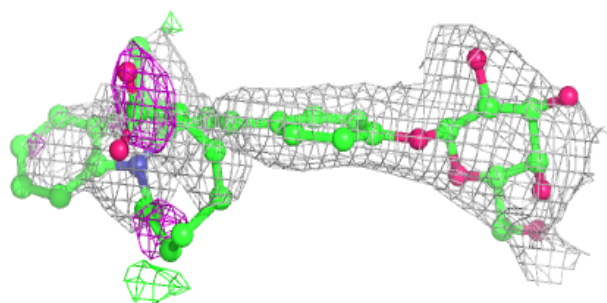
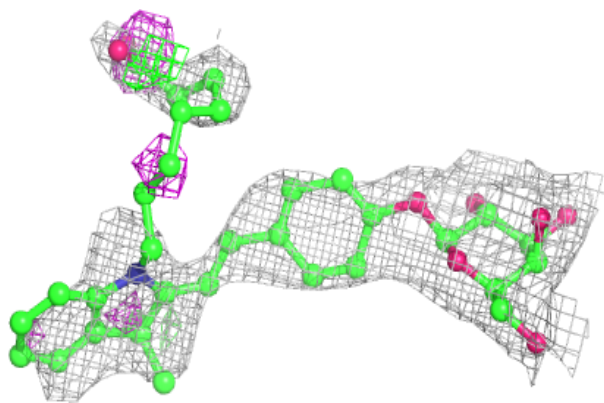
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
5	DMS	A	1112	4/4	0.94	0.31	73,73,75,78	0
5	DMS	D	1113	4/4	0.94	0.23	71,73,74,76	0
5	DMS	C	1115	4/4	0.94	0.20	85,86,87,88	0
4	NA	A	1104	1/1	0.94	0.17	38,38,38,38	0
5	DMS	C	1106	4/4	0.95	0.23	78,79,80,84	0
5	DMS	B	1106	4/4	0.95	0.20	62,63,64,70	0
4	NA	C	1104	1/1	0.95	0.45	67,67,67,67	0
4	NA	D	1105	1/1	0.95	0.21	46,46,46,46	0
4	NA	C	1105	1/1	0.95	0.29	57,57,57,57	0
5	DMS	B	1114	4/4	0.96	0.15	91,94,96,96	0
5	DMS	A	1108	4/4	0.96	0.16	64,65,68,71	0
5	DMS	A	1119	4/4	0.96	0.45	88,88,88,91	0
3	MG	B	1103	1/1	0.96	0.10	33,33,33,33	0
5	DMS	C	1116	4/4	0.96	0.23	71,75,78,79	0
3	MG	C	1102	1/1	0.97	0.09	40,40,40,40	0
5	DMS	B	1109	4/4	0.97	0.16	88,89,89,91	0
5	DMS	D	1106	4/4	0.97	0.13	69,73,74,75	0
3	MG	A	1103	1/1	0.97	0.07	39,39,39,39	0
3	MG	A	1102	1/1	0.98	0.06	27,27,27,27	0
3	MG	D	1102	1/1	0.98	0.08	41,41,41,41	0
3	MG	D	1103	1/1	0.98	0.04	43,43,43,43	0
3	MG	B	1102	1/1	0.99	0.05	23,23,23,23	0

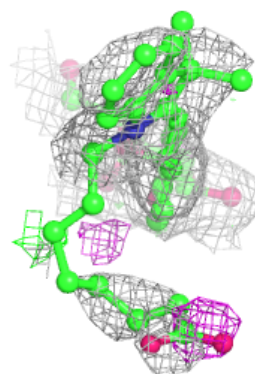
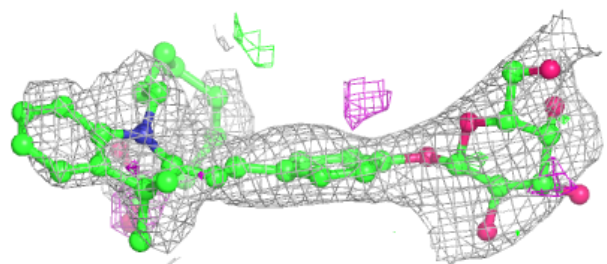
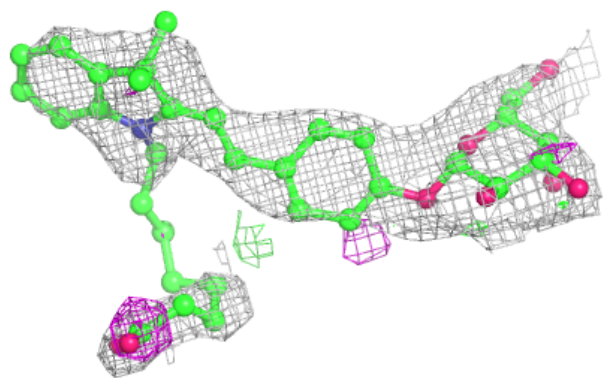
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

**Electron density around F4X A 1101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

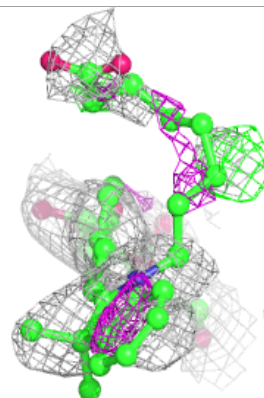
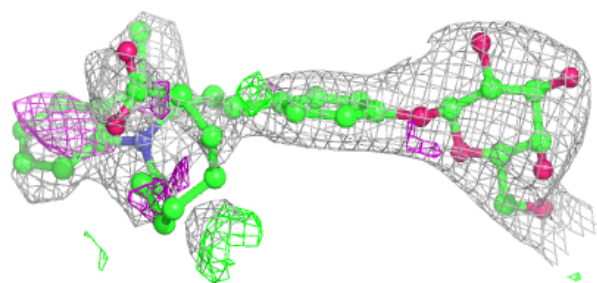
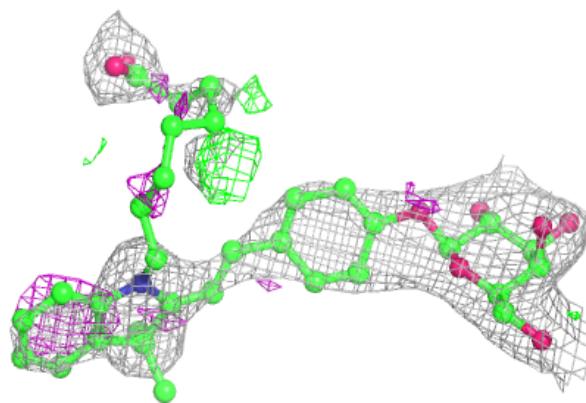
**Electron density around F4X B 1101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

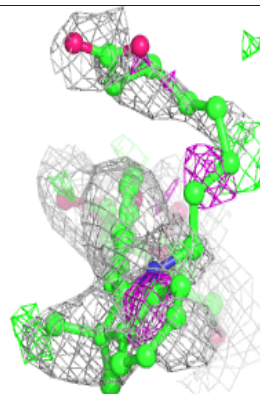
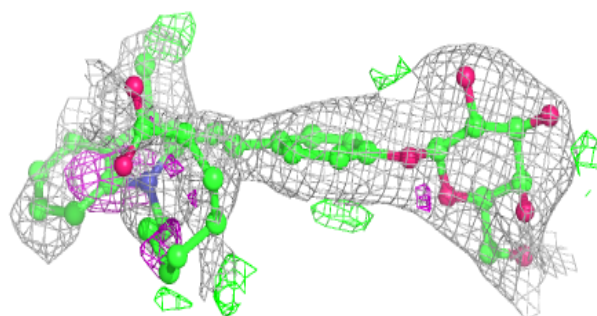
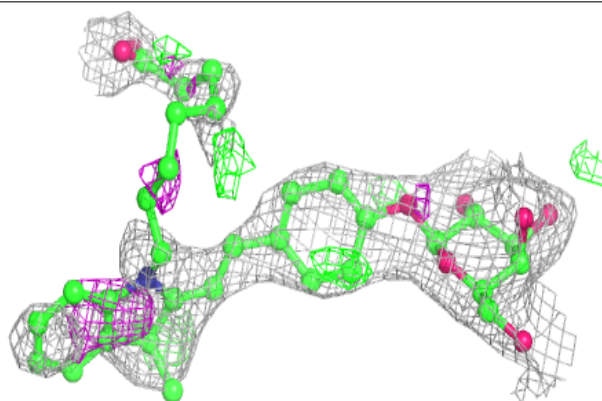


**Electron density around F4X D 1101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around F4X C 1101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



## 6.5 Other polymers [i](#)

There are no such residues in this entry.