Full wwPDB X-ray Structure Validation Report (i)

Feb 27, 2021 – 08:35 AM GMT

PDB ID	:	6TBJ
Title	:	Structure of a beta galactosidase with inhibitor
Authors	:	Offen, W.; Davies, G.
Deposited on	:	2019-11-01
Resolution	:	1.50 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 following versions of software and data (see references (i)) were used in the production of this report:

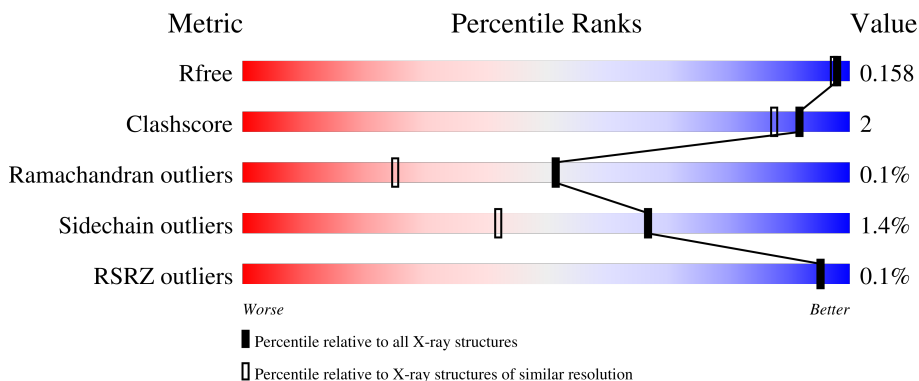|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.17.1.dev1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.17.1.dev1

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 1.50 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.
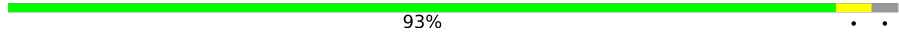
Metric	Percentile Ranks	Value
Rfree		0.158
Clashscore		2
Ramachandran outliers		0.1%
Sidechain outliers		1.4%
RSRZ outliers		0.1%

Worse　　　　　　　　　　　　　　　　　　　*Better*

■ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2936 (1.50-1.50)
Clashscore	141614	3144 (1.50-1.50)
Ramachandran outliers	138981	3066 (1.50-1.50)
Sidechain outliers	138945	3064 (1.50-1.50)
RSRZ outliers	127900	2884 (1.50-1.50)

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

Mol	Chain	Length	Quality of chain
1	A	550	92%　　　　　　　　　　　　　　　• 5%
1	B	550	90%　　　　　　　　　　　　　5% 5%
1	C	550	91%　　　　　　　　　　　　　5% •
1	D	550	91%　　　　　　　　　　　　　5% •
1	E	550	93%　　　　　　　　　　　　　• •

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Mol	Chain	Length	Quality of chain
1	F	550	93%
1	G	550	91% 6%
1	H	550	90% 5% 5%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 35492 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, putative, bgl35A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	525	Total 4131	C 2650	N 697	O 767	S 17	0	3	0
1	B	524	Total 4135	C 2652	N 699	O 769	S 15	0	2	0
1	C	526	Total 4123	C 2641	N 698	O 769	S 15	0	1	1
1	D	531	Total 4194	C 2691	N 709	O 779	S 15	0	4	0
1	E	532	Total 4156	C 2662	N 702	O 777	S 15	0	0	0
1	F	531	Total 4186	C 2678	N 709	O 784	S 15	0	3	0
1	G	532	Total 4206	C 2695	N 715	O 780	S 16	0	5	0
1	H	523	Total 4106	C 2629	N 691	O 771	S 15	0	5	0

There are 80 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	26	MET	-	initiating methionine	UNP B3PBE0
A	27	GLY	-	expression tag	UNP B3PBE0
A	28	SER	-	expression tag	UNP B3PBE0
A	29	SER	-	expression tag	UNP B3PBE0
A	30	HIS	-	expression tag	UNP B3PBE0
A	31	HIS	-	expression tag	UNP B3PBE0
A	32	HIS	-	expression tag	UNP B3PBE0
A	33	HIS	-	expression tag	UNP B3PBE0
A	34	HIS	-	expression tag	UNP B3PBE0
A	35	HIS	-	expression tag	UNP B3PBE0
B	26	MET	-	initiating methionine	UNP B3PBE0
B	27	GLY	-	expression tag	UNP B3PBE0
B	28	SER	-	expression tag	UNP B3PBE0

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Chain	Residue	Modelled	Actual	Comment	Reference
B	29	SER	-	expression tag	UNP B3PBE0
B	30	HIS	-	expression tag	UNP B3PBE0
B	31	HIS	-	expression tag	UNP B3PBE0
B	32	HIS	-	expression tag	UNP B3PBE0
B	33	HIS	-	expression tag	UNP B3PBE0
B	34	HIS	-	expression tag	UNP B3PBE0
B	35	HIS	-	expression tag	UNP B3PBE0
C	26	MET	-	initiating methionine	UNP B3PBE0
C	27	GLY	-	expression tag	UNP B3PBE0
C	28	SER	-	expression tag	UNP B3PBE0
C	29	SER	-	expression tag	UNP B3PBE0
C	30	HIS	-	expression tag	UNP B3PBE0
C	31	HIS	-	expression tag	UNP B3PBE0
C	32	HIS	-	expression tag	UNP B3PBE0
C	33	HIS	-	expression tag	UNP B3PBE0
C	34	HIS	-	expression tag	UNP B3PBE0
C	35	HIS	-	expression tag	UNP B3PBE0
D	26	MET	-	initiating methionine	UNP B3PBE0
D	27	GLY	-	expression tag	UNP B3PBE0
D	28	SER	-	expression tag	UNP B3PBE0
D	29	SER	-	expression tag	UNP B3PBE0
D	30	HIS	-	expression tag	UNP B3PBE0
D	31	HIS	-	expression tag	UNP B3PBE0
D	32	HIS	-	expression tag	UNP B3PBE0
D	33	HIS	-	expression tag	UNP B3PBE0
D	34	HIS	-	expression tag	UNP B3PBE0
D	35	HIS	-	expression tag	UNP B3PBE0
E	26	MET	-	initiating methionine	UNP B3PBE0
E	27	GLY	-	expression tag	UNP B3PBE0
E	28	SER	-	expression tag	UNP B3PBE0
E	29	SER	-	expression tag	UNP B3PBE0
E	30	HIS	-	expression tag	UNP B3PBE0
E	31	HIS	-	expression tag	UNP B3PBE0
E	32	HIS	-	expression tag	UNP B3PBE0
E	33	HIS	-	expression tag	UNP B3PBE0
E	34	HIS	-	expression tag	UNP B3PBE0
E	35	HIS	-	expression tag	UNP B3PBE0
F	26	MET	-	initiating methionine	UNP B3PBE0
F	27	GLY	-	expression tag	UNP B3PBE0
F	28	SER	-	expression tag	UNP B3PBE0
F	29	SER	-	expression tag	UNP B3PBE0
F	30	HIS	-	expression tag	UNP B3PBE0

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Chain	Residue	Modelled	Actual	Comment	Reference
F	31	HIS	-	expression tag	UNP B3PBE0
F	32	HIS	-	expression tag	UNP B3PBE0
F	33	HIS	-	expression tag	UNP B3PBE0
F	34	HIS	-	expression tag	UNP B3PBE0
F	35	HIS	-	expression tag	UNP B3PBE0
G	26	MET	-	initiating methionine	UNP B3PBE0
G	27	GLY	-	expression tag	UNP B3PBE0
G	28	SER	-	expression tag	UNP B3PBE0
G	29	SER	-	expression tag	UNP B3PBE0
G	30	HIS	-	expression tag	UNP B3PBE0
G	31	HIS	-	expression tag	UNP B3PBE0
G	32	HIS	-	expression tag	UNP B3PBE0
G	33	HIS	-	expression tag	UNP B3PBE0
G	34	HIS	-	expression tag	UNP B3PBE0
G	35	HIS	-	expression tag	UNP B3PBE0
H	26	MET	-	initiating methionine	UNP B3PBE0
H	27	GLY	-	expression tag	UNP B3PBE0
H	28	SER	-	expression tag	UNP B3PBE0
H	29	SER	-	expression tag	UNP B3PBE0
H	30	HIS	-	expression tag	UNP B3PBE0
H	31	HIS	-	expression tag	UNP B3PBE0
H	32	HIS	-	expression tag	UNP B3PBE0
H	33	HIS	-	expression tag	UNP B3PBE0
H	34	HIS	-	expression tag	UNP B3PBE0
H	35	HIS	-	expression tag	UNP B3PBE0

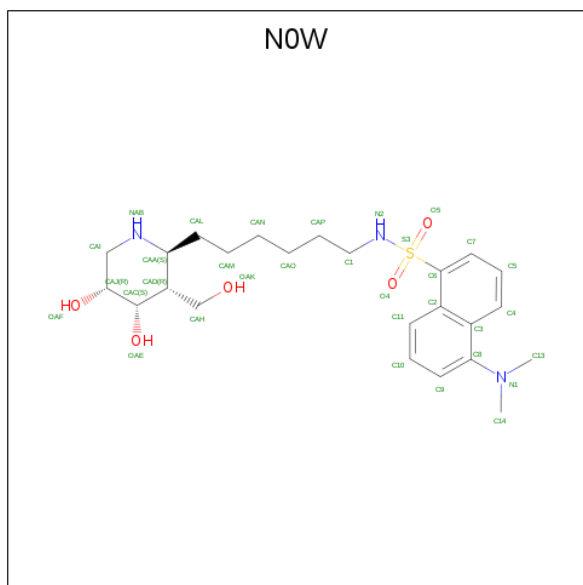- Molecule 2 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	3	Total 3	Na 3	0	0
2	B	1	Total 1	Na 1	0	0
2	C	3	Total 3	Na 3	0	0
2	D	5	Total 5	Na 5	0	0
2	E	4	Total 4	Na 4	0	0
2	F	4	Total 4	Na 4	0	0
2	G	3	Total 3	Na 3	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	H	4	Total 4	Na 4	0	0

- Molecule 3 is 5-(dimethylamino)- {N}-[6-[(2 {S},3 {R},4 {S},5 {R})-3-(hydroxymethyl)-4,5-bis(oxidanyl)piperidin-2-yl]hexyl]naphthalene-1-sulfonamide (three-letter code: N0W) (formula: $C_{24}H_{37}N_3O_5S$) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total 21	C 13	N 2	O 5	S 1	0	0
3	B	1	Total 13	C 9	N 1	O 3		0	0
3	C	1	Total 12	C 8	N 1	O 3		0	0
3	D	1	Total 21	C 13	N 2	O 5	S 1	0	0
3	E	1	Total 15	C 11	N 1	O 3		0	0
3	F	1	Total 21	C 13	N 2	O 5	S 1	0	0
3	G	1	Total 15	C 11	N 1	O 3		0	0
3	H	1	Total 15	C 11	N 1	O 3		0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	220	Total 220	O 220	0	0
4	B	254	Total 254	O 254	0	0
4	C	238	Total 238	O 238	0	0
4	D	307	Total 307	O 307	0	0
4	E	301	Total 301	O 301	0	0
4	F	274	Total 274	O 274	0	0
4	G	291	Total 291	O 291	0	0
4	H	210	Total 210	O 210	0	0

3 Residue-property plots ⓘ

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.
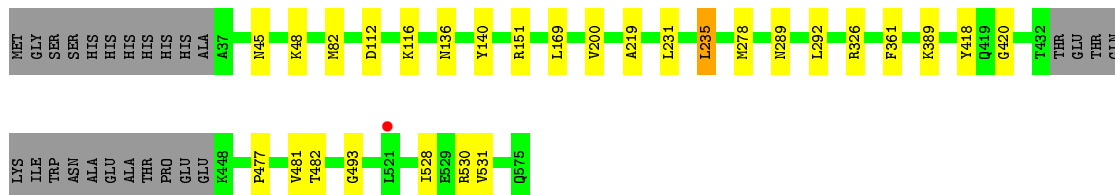
- Molecule 1: Beta-galactosidase, putative, bgl35A

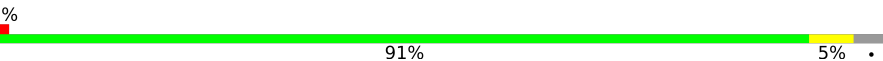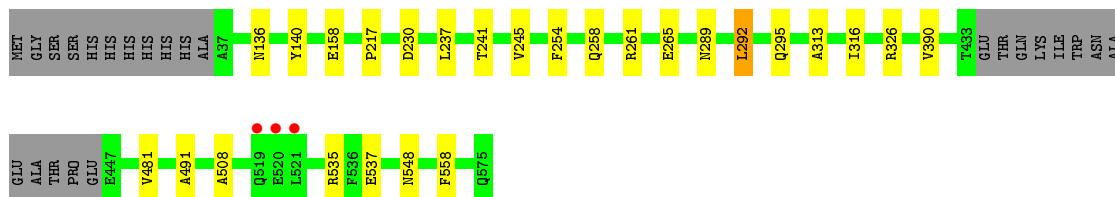- Molecule 1: Beta-galactosidase, putative, bgl35A

- Molecule 1: Beta-galactosidase, putative, bgl35A

- Molecule 1: Beta-galactosidase, putative, bgl35A

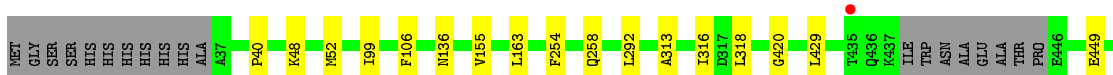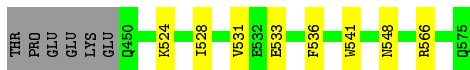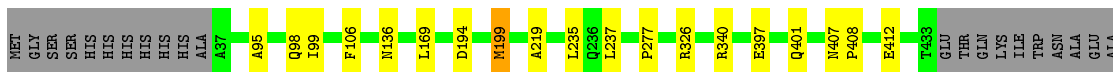ASN ALA GLU ALA THR PRO GLU GLU K448 A491 I528 E533 E537 W541 R566 M569 Q575

● Molecule 1: Beta-galactosidase, putative, bgl35A

Chain E:

93%

MET GLY SER HIS HIS HIS HIS HIS ALA A37 M82 E83 N136 R154 K179 E183 K190 R191 F254 Q258 N289 L318 R326 F356 K437 ILE TRP ASN ALA GLU ALA THR P445 T482 A508 R530 E537 R545 N548

F558 R561 Q575

● Molecule 1: Beta-galactosidase, putative, bgl35A

Chain F:

93%

MET GLY SER HIS HIS HIS HIS HIS ALA A37 P40 K48 M52 I99 F106 N136 V155 L163 F254 Q258 L292 A313 I316 D317 L318 G420 L429 T435 Q436 K437 ILE TRP ASN ALA GLU ALA THR PRO E446 E449

T482 E537 W541 R566 S573 V574 Q575

● Molecule 1: Beta-galactosidase, putative, bgl35A

Chain G:

91%

6%

MET GLY SER HIS HIS HIS HIS HIS HIS A36 K48 M82 A95 Q98 N136 K157 D161 L169 M199 E205 A219 V227 P228 D229 I232 Q233 P277 Y384 P385 E397 Q401 N407 P408 Y418 Q419 G420 W439 ASN ALA

GLU ALA THR PRO GLU GLU K448 P477 V481 T482 A491 A508 E537 F558 Q575

● Molecule 1: Beta-galactosidase, putative, bgl35A

Chain H:

90%

5% 5%

MET GLY SER HIS HIS HIS HIS HIS ALA A37 A95 Q98 I99 F106 N136 L169 D194 M199 A219 L235 Q236 L237 P277 R326 R340 E397 Q401 N407 P408 E412 T433 GLU THR GLN LYS ILE TRP ASN ALA GLU ALA

THR PRO GLU GLU LYS GLU Q450 K524 I528 V531 E532 E533 F536 W541 N548 R566 Q575

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	99.42Å　　115.79Å　　116.19Å 89.93°　　90.08°　　　89.99°	Depositor
Resolution (Å)	63.21　–　1.50	Depositor
	63.21　–　1.50	EDS
% Data completeness	94.5 (63.21-1.50)	Depositor
(in resolution range)	94.5 (63.21-1.50)	EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.78 (at 1.50Å)	Xtriage
Refinement program	REFMAC 5.8.0253	Depositor
R, R_{free}	0.145　,　0.164	Depositor
	0.147　,　0.158	DCC
R_{free} test set	39812 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	19.7	Xtriage
Anisotropy	0.090	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 27.5	EDS
L-test for twinning[2]	$< |L| > = 0.35, < L^2 > = 0.18$	Xtriage
Estimated twinning fraction	0.249 for h,-l,k 0.249 for h,l,-k 0.186 for h,-k,-l 0.130 for -h,k,-l 0.129 for -h,-k,l 0.136 for -h,-l,-k 0.129 for -h,l,k	Xtriage
Reported twinning fraction	0.582 for H, K, L 0.048 for h,-k,-l 0.089 for H, -L, K 0.281 for H, L, -K	Depositor
Outliers	0 of 793059 reflections	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	35492	wwPDB-VP
Average B, all atoms (Å^2)	22.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.06% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: NA, N0W

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	0.81	0/4247	0.94	2/5787 (0.0%)
1	B	0.79	0/4248	0.95	2/5786 (0.0%)
1	C	0.81	0/4233	0.96	1/5771 (0.0%)
1	D	0.85	2/4312 (0.0%)	0.98	0/5877
1	E	0.81	0/4266	0.95	3/5817 (0.1%)
1	F	0.84	0/4299	0.98	0/5859
1	G	0.84	1/4325 (0.0%)	0.99	0/5891
1	H	0.82	1/4225 (0.0%)	0.94	2/5768 (0.0%)
All	All	0.82	4/34155 (0.0%)	0.96	10/46556 (0.0%)

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	533	GLU	CD-OE1	-6.49	1.18	1.25
1	H	533	GLU	CD-OE1	-5.58	1.19	1.25
1	G	205	GLU	CD-OE1	-5.45	1.19	1.25
1	D	97	GLU	CD-OE1	-5.21	1.20	1.25

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	530	ARG	NE-CZ-NH2	-6.66	116.97	120.30
1	C	535	ARG	NE-CZ-NH2	-6.57	117.02	120.30
1	H	340	ARG	NE-CZ-NH1	-5.75	117.43	120.30
1	E	561	ARG	NE-CZ-NH2	-5.62	117.49	120.30
1	B	151	ARG	NE-CZ-NH2	-5.60	117.50	120.30
1	H	340	ARG	NE-CZ-NH2	5.55	123.08	120.30
1	A	415	ARG	NE-CZ-NH1	5.38	122.99	120.30
1	E	545	ARG	NE-CZ-NH2	-5.36	117.62	120.30
1	E	154	ARG	NE-CZ-NH2	-5.24	117.68	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	358	ARG	NE-CZ-NH2	-5.05	117.77	120.30

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	4131	0	3985	8	0
1	B	4135	0	3999	12	0
1	C	4123	0	3960	11	0
1	D	4194	0	4036	19	0
1	E	4156	0	3981	12	0
1	F	4186	0	4014	12	0
1	G	4206	0	4070	18	0
1	H	4106	0	3914	14	0
2	A	3	0	0	0	0
2	B	1	0	0	0	0
2	C	3	0	0	0	0
2	D	5	0	0	0	0
2	E	4	0	0	0	0
2	F	4	0	0	0	0
2	G	3	0	0	0	0
2	H	4	0	0	0	0
3	A	21	0	0	0	0
3	B	13	0	0	0	0
3	C	12	0	0	0	0
3	D	21	0	0	0	0
3	E	15	0	0	0	0
3	F	21	0	0	0	0
3	G	15	0	0	0	0
3	H	15	0	0	0	0
4	A	220	0	0	2	0
4	B	254	0	0	1	0
4	C	238	0	0	1	0
4	D	307	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	E	301	0	0	4	0
4	F	274	0	0	1	0
4	G	291	0	0	3	0
4	H	210	0	0	0	0
All	All	35492	0	31959	102	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 (102) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:528:ILE:HD13	1:D:569:MET:SD	2.02	0.99
1:D:326:ARG:HG3	1:D:326:ARG:HH21	1.24	0.98
1:A:482:THR:HG22	4:A:724:HOH:O	1.68	0.94
1:H:199:MET:HG2	1:H:277:PRO:HB2	1.52	0.92
1:E:482:THR:HG22	4:E:756:HOH:O	1.89	0.72
1:E:179:LYS:HE3	4:E:953:HOH:O	1.90	0.71
1:G:48:LYS:NZ	1:G:420:GLY:O	2.24	0.70
1:B:326:ARG:NH1	4:B:701:HOH:O	2.26	0.69
1:F:482:THR:HG22	4:F:792:HOH:O	1.94	0.67
1:B:112:ASP:OD1	1:B:116:LYS:HE2	1.94	0.66
1:B:169:LEU:HD12	1:B:219:ALA:HA	1.76	0.66
1:D:326:ARG:NH2	4:D:701:HOH:O	2.28	0.66
1:F:48:LYS:NZ	1:F:420:GLY:O	2.30	0.64
1:A:232:ILE:O	1:A:235:LEU:O	2.15	0.63
1:G:481:VAL:CG2	4:G:969:HOH:O	2.47	0.62
1:G:481:VAL:HG23	4:G:969:HOH:O	2.00	0.62
1:D:326:ARG:HG3	1:D:326:ARG:NH2	2.03	0.60
1:A:179:LYS:NZ	4:A:701:HOH:O	2.31	0.59
1:E:179:LYS:HD2	4:E:784:HOH:O	2.03	0.58
1:H:169:LEU:CD1	1:H:219:ALA:HA	2.33	0.58
1:C:481:VAL:O	1:C:481:VAL:HG22	2.03	0.58
1:E:326:ARG:HG3	1:E:356:PHE:CZ	2.39	0.58
1:B:481:VAL:HG22	1:B:481:VAL:O	2.04	0.57
1:F:541:TRP:CD2	1:F:566:ARG:HD2	2.40	0.57
1:H:541:TRP:CD2	1:H:566:ARG:HD2	2.39	0.57
1:D:326:ARG:HH21	1:D:326:ARG:CG	2.03	0.56
1:D:326:ARG:NH2	1:D:326:ARG:CG	2.67	0.56
1:B:361:PHE:CD2	1:B:493:GLY:HA3	2.41	0.56
1:H:235:LEU:HB3	1:H:237:LEU:HD13	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:48:LYS:NZ	1:B:420:GLY:O	2.39	0.54
1:B:477:PRO:HD2	1:B:482:THR:HG22	1.88	0.54
1:D:528:ILE:CD1	1:D:569:MET:SD	2.88	0.54
1:D:45:ASN:ND2	4:D:705:HOH:O	2.41	0.54
1:F:318:LEU:C	1:F:318:LEU:HD12	2.28	0.53
1:E:530:ARG:NH1	4:E:701:HOH:O	2.33	0.53
1:E:190:LYS:HG3	1:E:191:ARG:HG2	1.90	0.53
1:F:155:VAL:HG23	1:F:163:LEU:HB2	1.91	0.52
1:C:241:THR:O	1:C:245:VAL:HG13	2.09	0.52
1:G:482[A]:THR:HG23	4:G:785:HOH:O	2.10	0.52
1:E:508:ALA:HB3	1:E:558:PHE:CD1	2.45	0.52
1:G:397:GLU:O	1:G:401:GLN:HG3	2.09	0.51
1:G:157:LYS:HE3	1:G:161:ASP:HB2	1.93	0.51
1:A:140:TYR:CZ	1:C:548:ASN:HB3	2.46	0.51
1:F:155:VAL:CG2	1:F:163:LEU:HB2	2.41	0.51
1:A:254:PHE:O	1:A:258:GLN:HG2	2.11	0.50
1:A:99:ILE:O	1:A:106:PHE:HA	2.11	0.50
1:E:318:LEU:C	1:E:318:LEU:HD12	2.32	0.49
1:D:169:LEU:CD1	1:D:219:ALA:HA	2.42	0.49
1:G:384:TYR:CD1	1:G:385:PRO:HA	2.48	0.49
1:D:390:VAL:HG22	4:D:957:HOH:O	2.13	0.48
1:B:528:ILE:HG21	1:B:531:VAL:HG23	1.95	0.48
1:G:169:LEU:HD13	1:G:219:ALA:HA	1.95	0.48
1:D:318:LEU:HD12	1:D:318:LEU:C	2.32	0.48
1:H:397:GLU:O	1:H:401:GLN:HG3	2.13	0.48
1:C:390:VAL:HG22	4:C:904:HOH:O	2.14	0.47
1:B:231:LEU:HG	1:B:235:LEU:HD22	1.96	0.47
1:H:199:MET:CG	1:H:277:PRO:HB2	2.36	0.47
1:F:254:PHE:O	1:F:258:GLN:HG2	2.13	0.47
1:G:169:LEU:CD1	1:G:219:ALA:HA	2.44	0.47
1:C:508:ALA:HB3	1:C:558:PHE:CD1	2.51	0.46
1:D:83:GLU:HA	1:D:83:GLU:OE1	2.16	0.46
1:D:541:TRP:CE2	1:D:566:ARG:HD3	2.51	0.46
1:G:227:VAL:HB	1:G:232:ILE:HD11	1.99	0.45
1:H:412:GLU:HG2	1:H:536:PHE:CG	2.52	0.45
1:H:528:ILE:HG21	1:H:531:VAL:HG23	1.98	0.45
1:A:178:LYS:HG3	1:A:269:ALA:CB	2.47	0.45
1:D:235:LEU:HB3	1:D:237:LEU:HG	1.98	0.45
1:D:99:ILE:O	1:D:106:PHE:HA	2.17	0.44
1:E:254:PHE:O	1:E:258:GLN:HG2	2.18	0.44
1:G:229:ASP:O	1:G:233:GLN:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:95:ALA:O	1:H:98:GLN:HG2	2.18	0.44
1:G:407:ASN:N	1:G:408:PRO:HD2	2.33	0.44
1:D:230:ASP:OD2	1:D:234:LYS:HE3	2.17	0.43
1:G:199:MET:HG2	1:G:277:PRO:HB2	1.99	0.43
1:C:261:ARG:O	1:C:265:GLU:HG3	2.18	0.43
1:D:48:LYS:NZ	1:D:420:GLY:O	2.37	0.43
1:C:254:PHE:O	1:C:258:GLN:HG2	2.19	0.43
1:A:548:ASN:HB3	1:B:140:TYR:CZ	2.53	0.43
1:H:169:LEU:HD13	1:H:219:ALA:HA	1.99	0.43
1:F:313:ALA:HB1	1:F:316:ILE:HD12	2.00	0.42
1:F:541:TRP:CE2	1:F:566:ARG:CD	3.02	0.42
1:G:508:ALA:HB3	1:G:558:PHE:CD1	2.55	0.42
1:D:292:LEU:O	1:D:295:GLN:HB2	2.19	0.42
1:H:99:ILE:O	1:H:106:PHE:HA	2.20	0.42
1:D:140:TYR:CZ	1:E:548:ASN:HB3	2.54	0.42
1:G:477:PRO:HD2	1:G:482[B]:THR:HG22	2.01	0.42
1:B:200:VAL:O	1:B:278:MET:HA	2.20	0.42
1:C:140:TYR:CZ	1:H:548:ASN:HB3	2.55	0.42
1:G:481:VAL:HG22	1:G:481:VAL:O	2.20	0.42
1:C:292:LEU:O	1:C:295:GLN:HB2	2.19	0.42
1:E:179:LYS:HB2	1:E:179:LYS:HE2	1.28	0.42
1:C:292:LEU:HB2	1:C:295:GLN:NE2	2.36	0.41
1:B:45:ASN:OD1	1:B:418:TYR:OH	2.39	0.41
1:E:191:ARG:HD3	1:E:191:ARG:HA	1.89	0.41
1:C:313:ALA:HB1	1:C:316:ILE:HD12	2.01	0.41
1:H:541:TRP:CE2	1:H:566:ARG:CD	3.04	0.41
1:F:40:PRO:HA	1:F:52:MET:O	2.21	0.41
1:F:99:ILE:O	1:F:106:PHE:HA	2.21	0.41
1:F:541:TRP:CE2	1:F:566:ARG:HD3	2.56	0.41
1:G:95:ALA:O	1:G:98:GLN:HG2	2.21	0.41
1:H:407:ASN:N	1:H:408:PRO:HD2	2.36	0.40
1:G:418:TYR:HD2	1:G:419:GLN:HE21	1.70	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	524/550 (95%)	501 (96%)	22 (4%)	1 (0%)	47	23
1	B	522/550 (95%)	499 (96%)	23 (4%)	0	100	100
1	C	523/550 (95%)	501 (96%)	21 (4%)	1 (0%)	47	23
1	D	531/550 (96%)	511 (96%)	19 (4%)	1 (0%)	47	23
1	E	528/550 (96%)	504 (96%)	24 (4%)	0	100	100
1	F	530/550 (96%)	509 (96%)	21 (4%)	0	100	100
1	G	533/550 (97%)	513 (96%)	19 (4%)	1 (0%)	47	23
1	H	524/550 (95%)	504 (96%)	20 (4%)	0	100	100
All	All	4215/4400 (96%)	4042 (96%)	169 (4%)	4 (0%)	51	25

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	491	ALA
1	A	491	ALA
1	G	491	ALA
1	D	491	ALA

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	427/461 (93%)	422 (99%)	5 (1%)	71	48
1	B	429/461 (93%)	423 (99%)	6 (1%)	67	42
1	C	425/461 (92%)	416 (98%)	9 (2%)	53	23
1	D	432/461 (94%)	425 (98%)	7 (2%)	62	36
1	E	427/461 (93%)	420 (98%)	7 (2%)	62	36
1	F	432/461 (94%)	426 (99%)	6 (1%)	67	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	G	434/461 (94%)	431 (99%)	3 (1%)	84	69
1	H	422/461 (92%)	416 (99%)	6 (1%)	67	42
All	All	3428/3688 (93%)	3379 (99%)	49 (1%)	67	42

All (49) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	136	ASN
1	A	220	GLN
1	A	235	LEU
1	A	389	LYS
1	A	537	GLU
1	B	82	MET
1	B	136	ASN
1	B	235	LEU
1	B	289	ASN
1	B	292	LEU
1	B	389	LYS
1	C	136	ASN
1	C	158	GLU
1	C	217	PRO
1	C	230	ASP
1	C	237	LEU
1	C	289	ASN
1	C	292	LEU
1	C	326	ARG
1	C	537	GLU
1	D	41	GLU
1	D	76	LYS
1	D	136	ASN
1	D	326	ARG
1	D	419	GLN
1	D	429	LEU
1	D	537	GLU
1	E	82	MET
1	E	83	GLU
1	E	136	ASN
1	E	179	LYS
1	E	183	GLU
1	E	289	ASN
1	E	537	GLU

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Mol	Chain	Res	Type
1	F	136	ASN
1	F	292	LEU
1	F	429	LEU
1	F	449	GLU
1	F	537	GLU
1	F	573	SER
1	G	82	MET
1	G	136	ASN
1	G	537	GLU
1	H	136	ASN
1	H	194[A]	ASP
1	H	194[B]	ASP
1	H	199	MET
1	H	326	ARG
1	H	524	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	289	ASN
1	C	64	GLN
1	C	289	ASN
1	C	451	HIS
1	D	45	ASN
1	F	289	ASN
1	G	289	ASN
1	G	419	GLN
1	H	64	GLN
1	H	289	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 35 ligands modelled in this entry, 27 are monoatomic - leaving 8 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	#$\|Z\| > 2$
3	N0W	B	602	-	13,13,35	1.26	1 (7%)	11,17,49	1.19	2 (18%)
3	N0W	D	606	-	21,21,35	1.94	4 (19%)	21,28,49	1.51	4 (19%)
3	N0W	G	604	-	15,15,35	1.20	2 (13%)	13,19,49	1.26	1 (7%)
3	N0W	A	604	-	21,21,35	1.69	2 (9%)	21,28,49	3.00	3 (14%)
3	N0W	C	604	-	12,12,35	1.63	1 (8%)	11,16,49	1.69	2 (18%)
3	N0W	F	605	-	21,21,35	1.69	3 (14%)	21,28,49	1.73	4 (19%)
3	N0W	H	605	-	15,15,35	1.04	1 (6%)	13,19,49	1.12	1 (7%)
3	N0W	E	605	-	15,15,35	1.77	5 (33%)	13,19,49	1.03	1 (7%)

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	N0W	B	602	-	-	2/5/22/40	0/1/1/3
3	N0W	D	606	-	-	3/13/30/40	0/1/1/3
3	N0W	G	604	-	-	4/7/24/40	0/1/1/3
3	N0W	A	604	-	-	4/13/30/40	0/1/1/3
3	N0W	C	604	-	-	2/4/21/40	0/1/1/3
3	N0W	F	605	-	-	3/13/30/40	0/1/1/3
3	N0W	H	605	-	-	3/7/24/40	0/1/1/3
3	N0W	E	605	-	-	2/7/24/40	0/1/1/3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	604	N0W	C6-S3	-6.61	1.59	1.75
3	F	605	N0W	C6-S3	-5.92	1.61	1.75
3	D	606	N0W	C6-S3	-5.54	1.62	1.75
3	E	605	N0W	CAD-CAC	-4.19	1.48	1.53
3	C	604	N0W	CAI-CAJ	3.95	1.56	1.52
3	D	606	N0W	CAI-CAJ	3.90	1.56	1.52
3	D	606	N0W	CAD-CAC	-3.50	1.49	1.53
3	G	604	N0W	CAI-CAJ	3.11	1.55	1.52
3	F	605	N0W	CAI-CAJ	3.04	1.55	1.52
3	E	605	N0W	CAJ-CAC	3.04	1.57	1.52
3	D	606	N0W	CAI-NAB	2.90	1.51	1.47
3	G	604	N0W	CAA-NAB	2.52	1.51	1.47
3	E	605	N0W	CAL-CAA	2.50	1.58	1.52
3	F	605	N0W	CAD-CAC	2.48	1.55	1.53
3	B	602	N0W	CAA-NAB	2.41	1.51	1.47
3	E	605	N0W	CAI-NAB	2.20	1.50	1.47
3	E	605	N0W	CAI-CAJ	2.19	1.54	1.52
3	H	605	N0W	CAI-NAB	2.06	1.50	1.47
3	A	604	N0W	CAI-CAJ	2.04	1.54	1.52

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	604	N0W	C6-S3-N2	9.53	113.59	107.76
3	A	604	N0W	O5-S3-O4	-8.97	105.96	118.85
3	F	605	N0W	CAI-CAJ-CAC	5.40	116.66	110.33
3	C	604	N0W	CAL-CAA-NAB	-4.98	105.02	110.60
3	D	606	N0W	O5-S3-N2	-3.93	101.71	107.31
3	D	606	N0W	O5-S3-O4	-3.34	114.05	118.85
3	F	605	N0W	O5-S3-O4	-3.10	114.39	118.85
3	H	605	N0W	OAE-CAC-CAD	2.86	115.97	110.05
3	D	606	N0W	O5-S3-C6	2.86	112.87	108.28
3	G	604	N0W	OAF-CAJ-CAI	2.58	114.66	109.61
3	A	604	N0W	O4-S3-N2	2.51	110.90	107.31
3	D	606	N0W	OAF-CAJ-CAI	-2.41	104.91	109.61
3	E	605	N0W	OAE-CAC-CAD	2.40	115.02	110.05
3	F	605	N0W	O5-S3-C6	2.25	111.88	108.28
3	F	605	N0W	C6-S3-N2	2.22	109.12	107.76
3	C	604	N0W	OAK-CAH-CAD	2.10	116.14	111.29
3	B	602	N0W	OAF-CAJ-CAC	2.08	114.31	110.14
3	B	602	N0W	OAE-CAC-CAJ	-2.05	106.07	109.99

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	604	N0W	C1-N2-S3-O5
3	A	604	N0W	N2-C1-CAP-CAO
3	A	604	N0W	NAB-CAA-CAL-CAM
3	A	604	N0W	CAD-CAA-CAL-CAM
3	B	602	N0W	NAB-CAA-CAL-CAM
3	B	602	N0W	CAD-CAA-CAL-CAM
3	C	604	N0W	CAD-CAA-CAL-CAM
3	D	606	N0W	C1-N2-S3-C6
3	D	606	N0W	NAB-CAA-CAL-CAM
3	D	606	N0W	CAD-CAA-CAL-CAM
3	E	605	N0W	NAB-CAA-CAL-CAM
3	E	605	N0W	CAD-CAA-CAL-CAM
3	F	605	N0W	NAB-CAA-CAL-CAM
3	F	605	N0W	CAD-CAA-CAL-CAM
3	G	604	N0W	NAB-CAA-CAL-CAM
3	H	605	N0W	NAB-CAA-CAL-CAM
3	H	605	N0W	CAD-CAA-CAL-CAM
3	G	604	N0W	CAA-CAL-CAM-CAN
3	G	604	N0W	CAM-CAN-CAO-CAP
3	G	604	N0W	CAD-CAA-CAL-CAM
3	F	605	N0W	CAN-CAO-CAP-C1
3	C	604	N0W	NAB-CAA-CAL-CAM
3	H	605	N0W	CAM-CAN-CAO-CAP

There are no ring outliers.

No monomer is involved in short contacts.

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 then 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.

Ligand N0W B 602

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W D 606

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W G 604

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W A 604

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W C 604

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W F 605

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W H 605

Bond lengths

Bond angles

Torsions

Rings

Ligand N0W E 605

Bond lengths

Bond angles

Torsions

Rings

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 (i)

6.1 Protein, DNA and RNA chains (i)

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	525/550 (95%)	-0.49	0	100 100	15, 22, 37, 53	3 (0%)
1	B	524/550 (95%)	-0.57	1 (0%)	95 95	15, 21, 31, 45	6 (1%)
1	C	526/550 (95%)	-0.52	3 (0%)	89 91	14, 21, 33, 46	7 (1%)
1	D	531/550 (96%)	-0.55	0	100 100	13, 19, 33, 52	2 (0%)
1	E	532/550 (96%)	-0.56	0	100 100	14, 20, 33, 46	4 (0%)
1	F	531/550 (96%)	-0.51	1 (0%)	95 95	13, 20, 35, 43	2 (0%)
1	G	532/550 (96%)	-0.51	1 (0%)	95 95	13, 19, 34, 47	4 (0%)
1	H	523/550 (95%)	-0.51	0	100 100	15, 22, 34, 49	4 (0%)
All	All	4224/4400 (96%)	-0.53	6 (0%)	95 95	13, 20, 34, 53	32 (0%)

All (6) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	521	LEU	5.0
1	G	36	ALA	4.1
1	B	521	LEU	3.3
1	C	519	GLN	2.2
1	C	520	GLU	2.2
1	F	435	THR	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
2	NA	A	602	1/1	0.97	0.07	27,27,27,27	0
2	NA	A	603	1/1	0.97	0.06	28,28,28,28	0
3	N0W	A	604	21/33	0.97	0.08	18,20,30,33	7
3	N0W	B	602	13/33	0.97	0.06	17,18,20,25	0
3	N0W	D	606	21/33	0.97	0.07	16,19,32,45	5
3	N0W	F	605	21/33	0.97	0.09	17,19,29,34	7
3	N0W	H	605	15/33	0.97	0.07	16,18,20,24	3
2	NA	F	603	1/1	0.98	0.08	27,27,27,27	0
2	NA	F	604	1/1	0.98	0.05	28,28,28,28	0
2	NA	G	603	1/1	0.98	0.04	27,27,27,27	0
2	NA	C	601	1/1	0.98	0.06	26,26,26,26	0
2	NA	C	602	1/1	0.98	0.06	29,29,29,29	0
3	N0W	C	604	12/33	0.98	0.07	17,18,21,22	0
2	NA	D	605	1/1	0.98	0.08	28,28,28,28	0
3	N0W	E	605	15/33	0.98	0.07	15,16,21,23	3
2	NA	E	603	1/1	0.98	0.04	28,28,28,28	0
3	N0W	G	604	15/33	0.98	0.07	14,17,20,25	3
2	NA	F	602	1/1	0.98	0.03	26,26,26,26	0
2	NA	A	601	1/1	0.99	0.03	30,30,30,30	0
2	NA	H	601	1/1	0.99	0.07	25,25,25,25	0
2	NA	H	603	1/1	0.99	0.03	32,32,32,32	0
2	NA	H	604	1/1	0.99	0.06	29,29,29,29	0
2	NA	B	601	1/1	0.99	0.03	28,28,28,28	0
2	NA	E	604	1/1	0.99	0.06	25,25,25,25	0
2	NA	F	601	1/1	0.99	0.09	21,21,21,21	0
2	NA	C	603	1/1	0.99	0.06	31,31,31,31	0
2	NA	D	601	1/1	0.99	0.04	22,22,22,22	0
2	NA	D	604	1/1	0.99	0.06	26,26,26,26	0
2	NA	G	601	1/1	0.99	0.04	20,20,20,20	0
2	NA	G	602	1/1	0.99	0.05	28,28,28,28	0
2	NA	E	601	1/1	1.00	0.05	21,21,21,21	0
2	NA	E	602	1/1	1.00	0.05	23,23,23,23	0
2	NA	D	602	1/1	1.00	0.05	20,20,20,20	0
2	NA	D	603	1/1	1.00	0.06	24,24,24,24	0
2	NA	H	602	1/1	1.00	0.03	29,29,29,29	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.
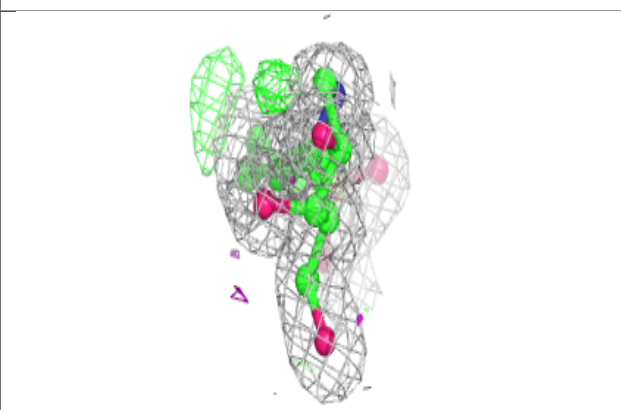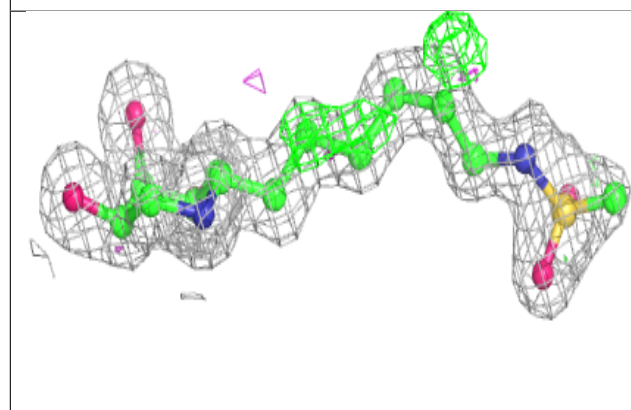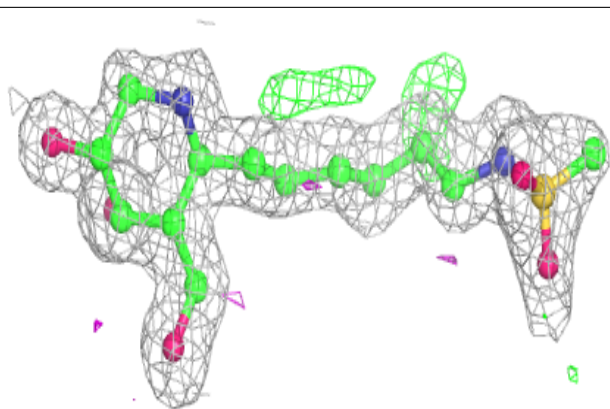
Electron density around N0W A 604:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
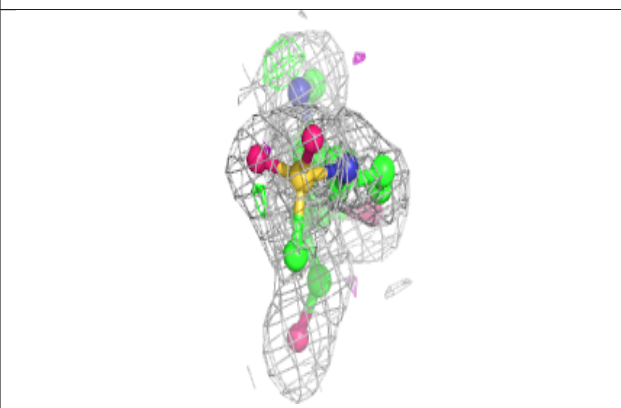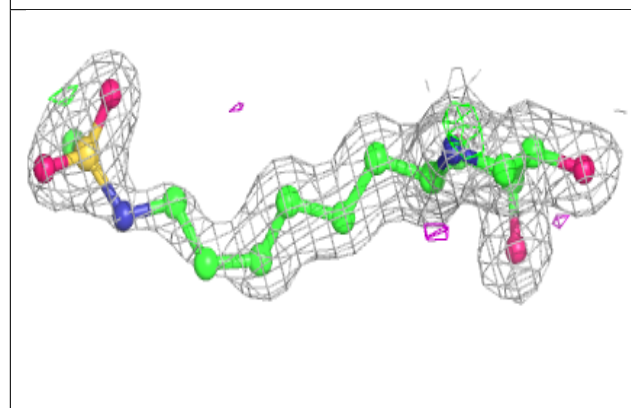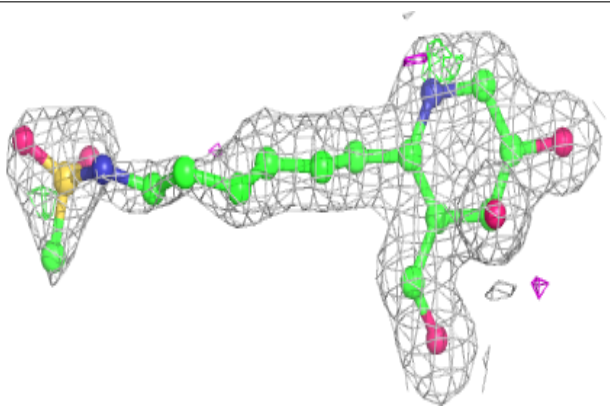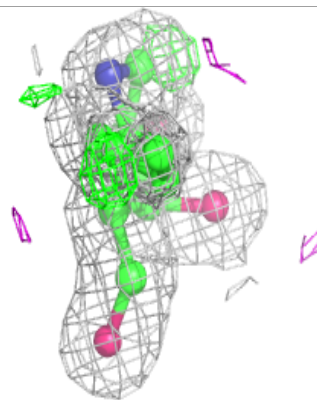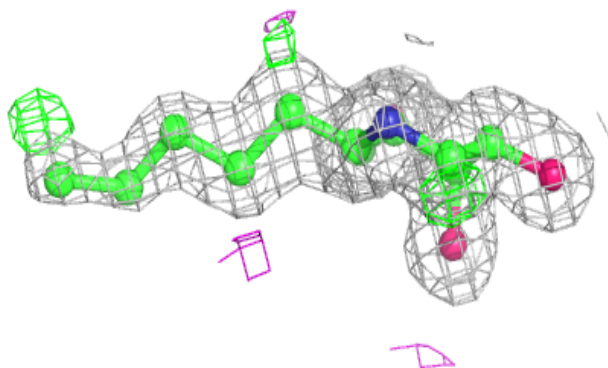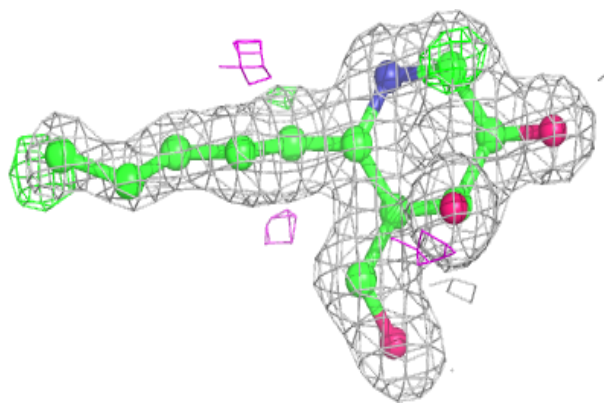and green (positive)
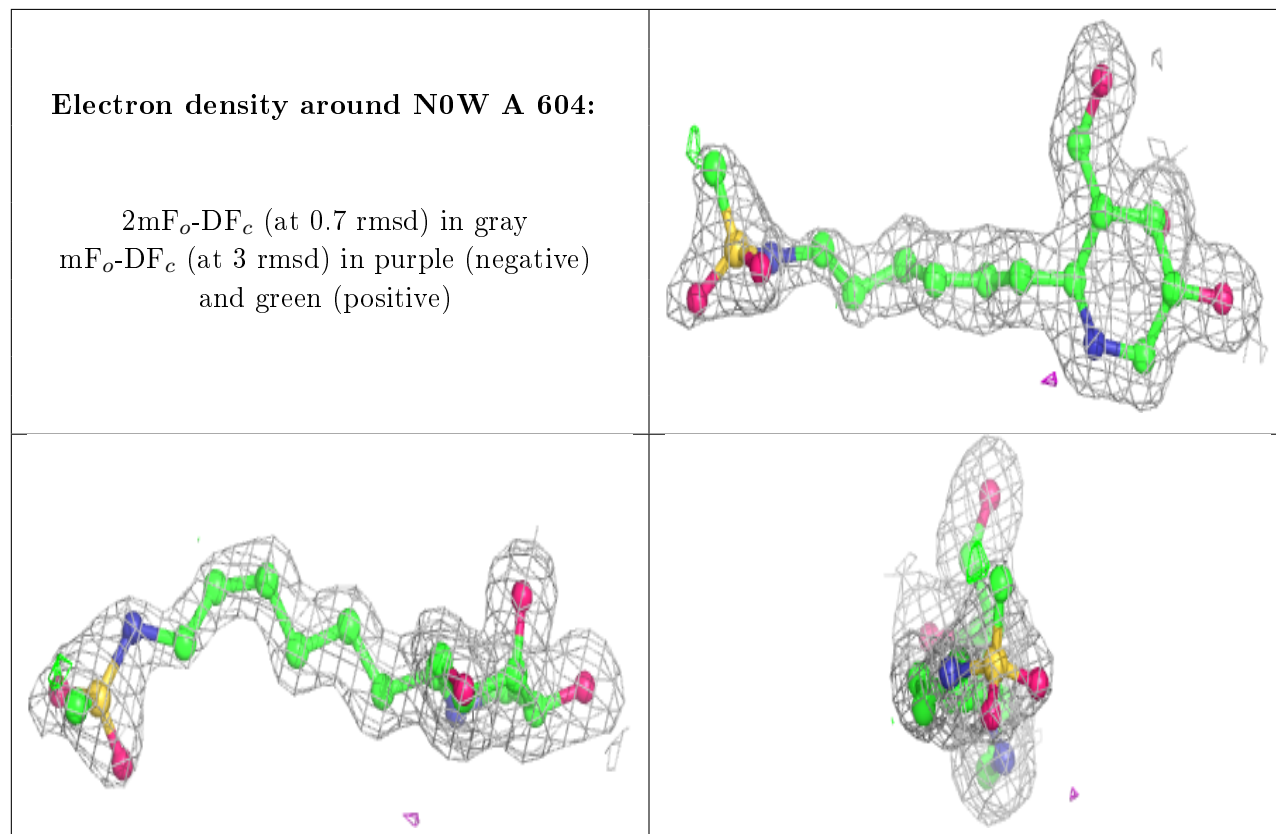
Electron density around N0W B 602:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
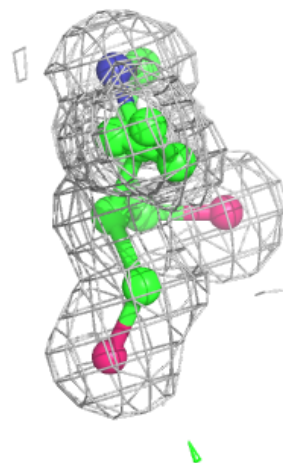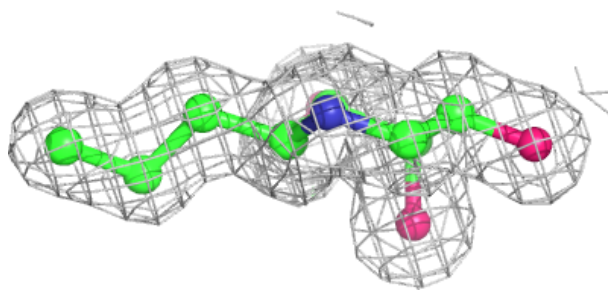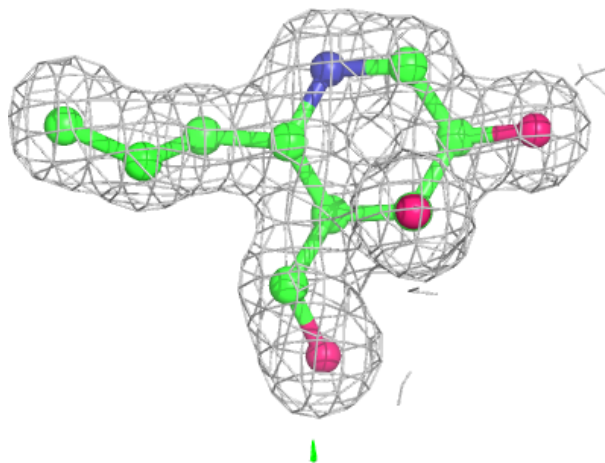
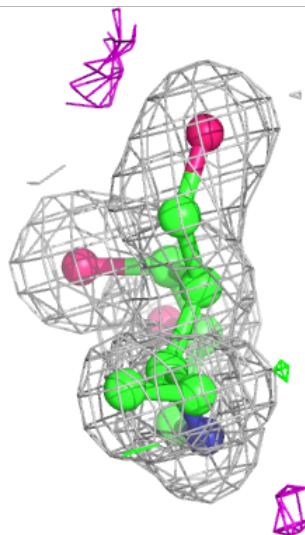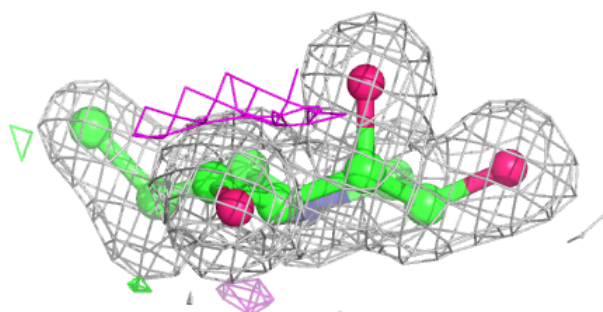**Electron density around N0W D 606:**

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

Electron density around N0W F 605:

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

Electron density around N0W H 605:

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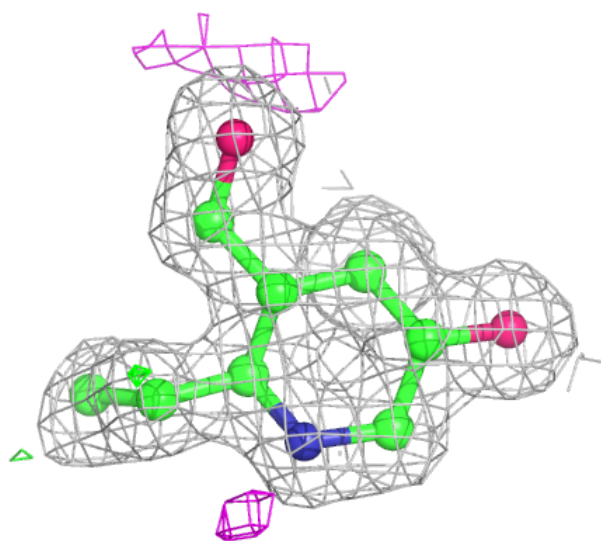and green (positive)

Electron density around N0W C 604:
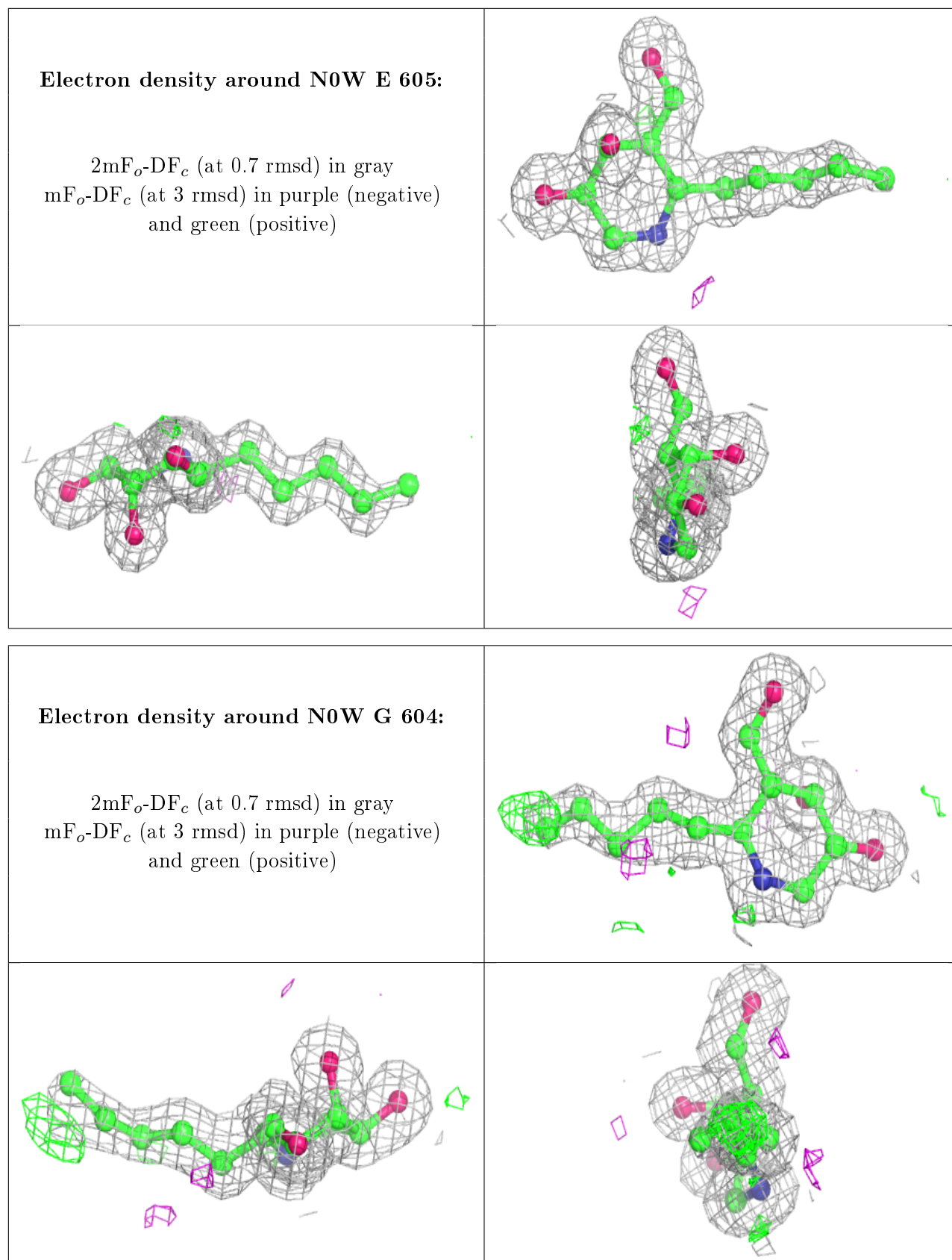
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around N0W E 605:

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

Electron density around N0W G 604:

$2mF_o$-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.