



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 21, 2026 – 02:22 PM JST

PDB ID : 9WDF / pdb_00009wdf
Title : Crystal structure of PAK4-KPT-7523 complex
Authors : Lee, S.J.; Park, J.
Deposited on : 2025-08-19
Resolution : 2.20 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

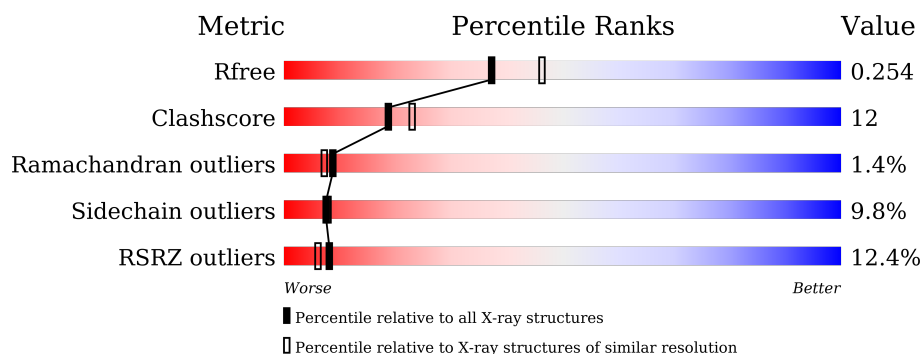
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.20 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}	180053	6164 (2.20-2.20)
Clashscore	190562	6851 (2.20-2.20)
Ramachandran outliers	187476	6768 (2.20-2.20)
Sidechain outliers	187428	6769 (2.20-2.20)
RSRZ outliers	180081	6166 (2.20-2.20)

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

Mol	Chain	Length	Quality of chain
1	A	292	11% 75% 18% 6% .
1	B	292	9% 69% 25% 5% .
1	C	292	8% 79% 15% 5%
1	D	292	16% 76% 20% . ..
1	E	292	8% 74% 21% . .
1	F	292	12% 71% 20% 8% .

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Mol	Chain	Length	Quality of chain
1	G	292	
1	H	292	
1	I	292	
1	J	292	
1	K	292	
1	L	292	

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 criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	SEP	E	474	-	-	X	-

2 Entry composition

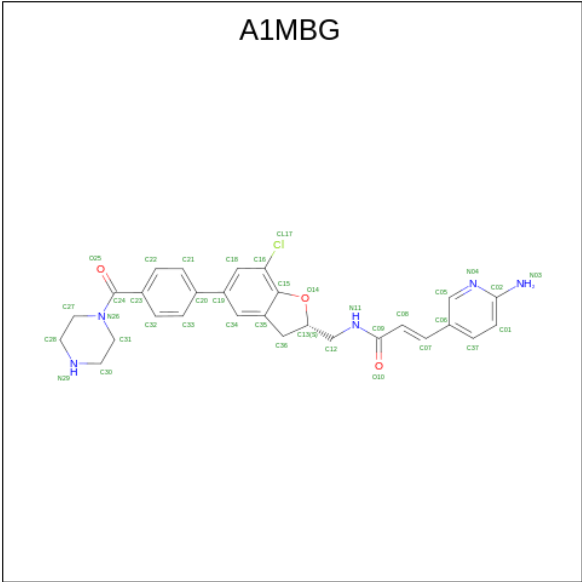
There are 3 unique types of molecules in this entry. The entry contains 28560 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Serine/threonine-protein kinase PAK 4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	B	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	C	291	Total	C	N	O	P	S	0	0	0
			2302	1466	406	415	1	14			
1	D	289	Total	C	N	O	P	S	0	0	0
			2278	1452	399	412	1	14			
1	E	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	F	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	G	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	H	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	I	287	Total	C	N	O	P	S	0	0	0
			2268	1447	399	407	1	14			
1	J	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			
1	K	287	Total	C	N	O	P	S	0	0	0
			2268	1447	399	407	1	14			
1	L	289	Total	C	N	O	P	S	0	0	0
			2286	1457	402	412	1	14			

- Molecule 2 is ({E})-3-(6-azanylpyridin-3-yl)- {N}-[[(2 {S})-7-chloranyl-5-(4-piperazin-1-ylcarbonylphenyl)-2,3-dihydro-1-benzofuran-2-yl]methyl]prop-2-enamide (CCD ID: A1MBG) (formula: C₂₈H₂₈ClN₅O₃) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	A	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	B	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	B	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	C	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	C	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	D	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	D	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	E	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	F	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	F	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	G	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	G	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	H	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	H	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	I	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	I	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	I	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	J	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	K	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	K	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	L	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	L	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		
2	L	1	Total	C	Cl	N	O	0	0
			37	28	1	5	3		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	31	Total	O	0	0
			31	31		
3	B	19	Total	O	0	0
			19	19		
3	C	42	Total	O	0	0
			42	42		
3	D	32	Total	O	0	0
			32	32		
3	E	28	Total	O	0	0
			28	28		
3	F	11	Total	O	0	0
			11	11		
3	G	27	Total	O	0	0
			27	27		
3	H	25	Total	O	0	0
			25	25		
3	I	8	Total	O	0	0
			8	8		

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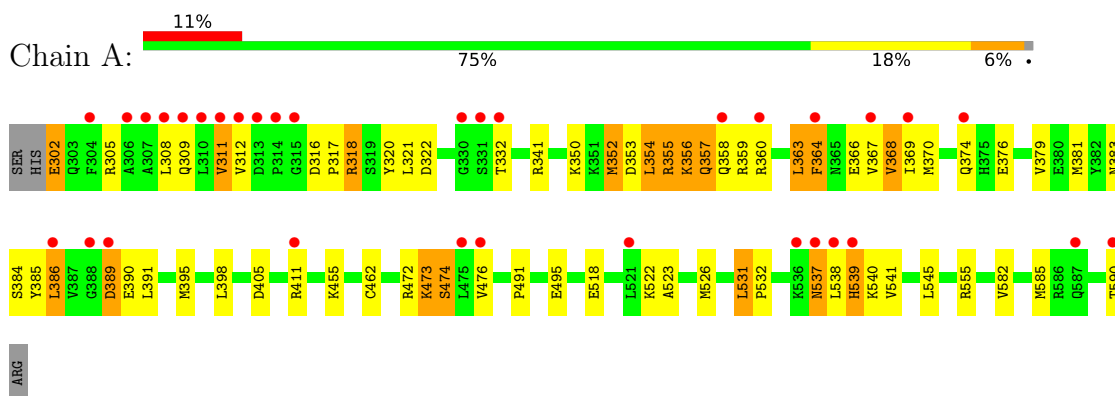
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	J	20	Total	O	0	0
			20	20		
3	K	12	Total	O	0	0
			12	12		
3	L	13	Total	O	0	0
			13	13		

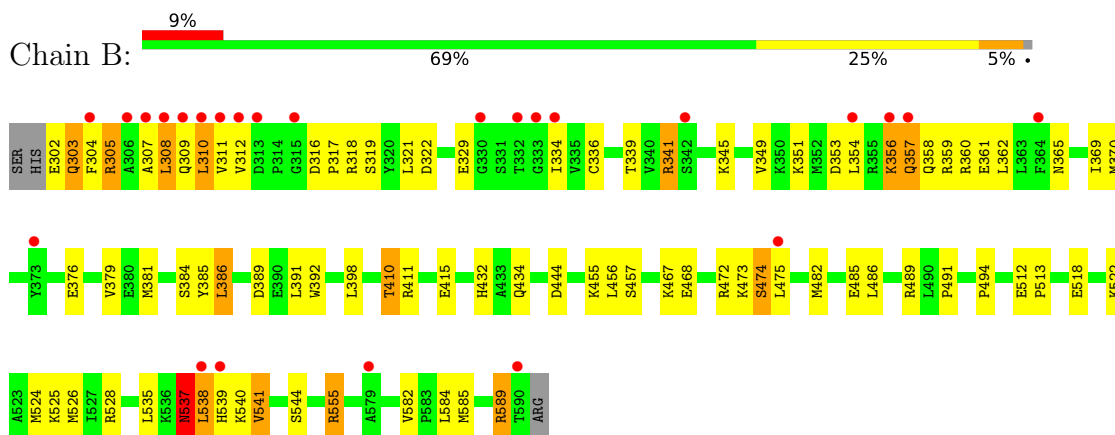
3 Residue-property plots

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.

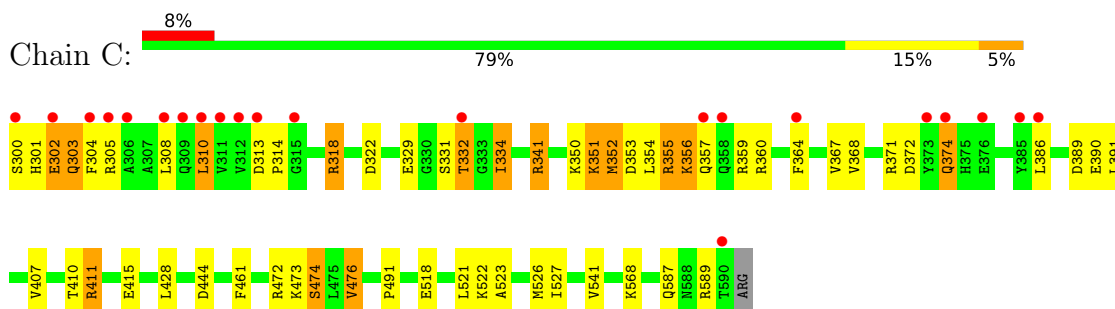
- Molecule 1: Serine/threonine-protein kinase PAK 4



- Molecule 1: Serine/threonine-protein kinase PAK 4



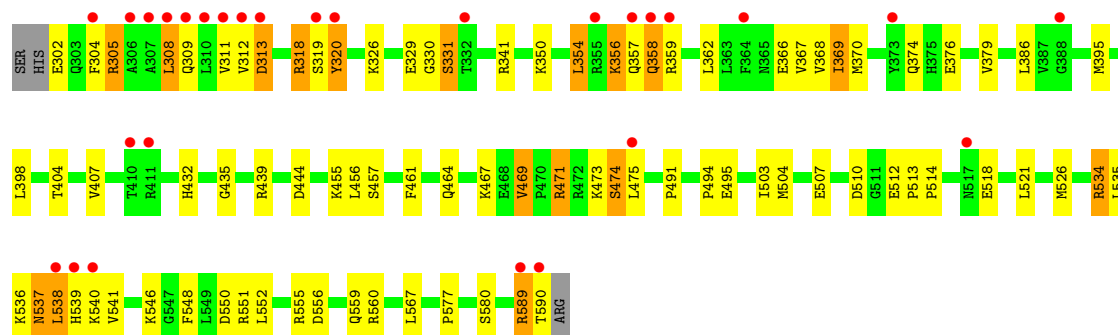
- Molecule 1: Serine/threonine-protein kinase PAK 4



ARG

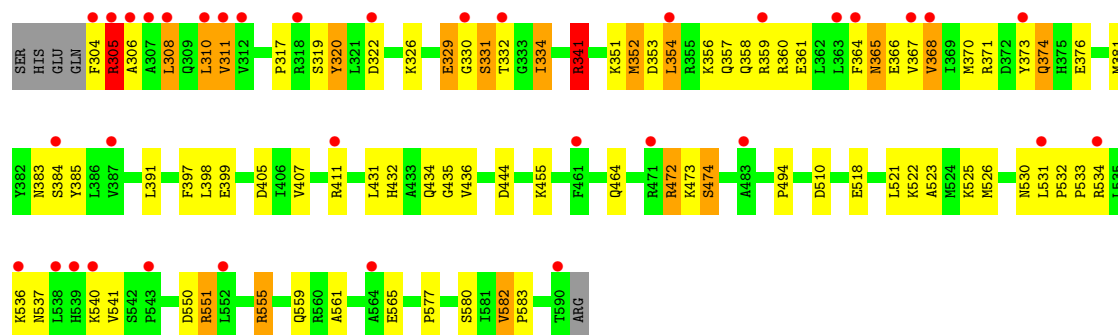
- Molecule 1: Serine/threonine-protein kinase PAK 4

Chain H: 



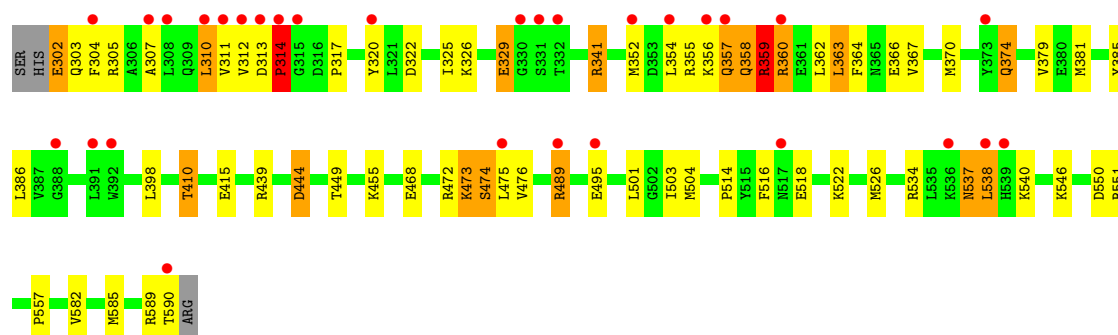
- Molecule 1: Serine/threonine-protein kinase PAK 4

Chain I: 



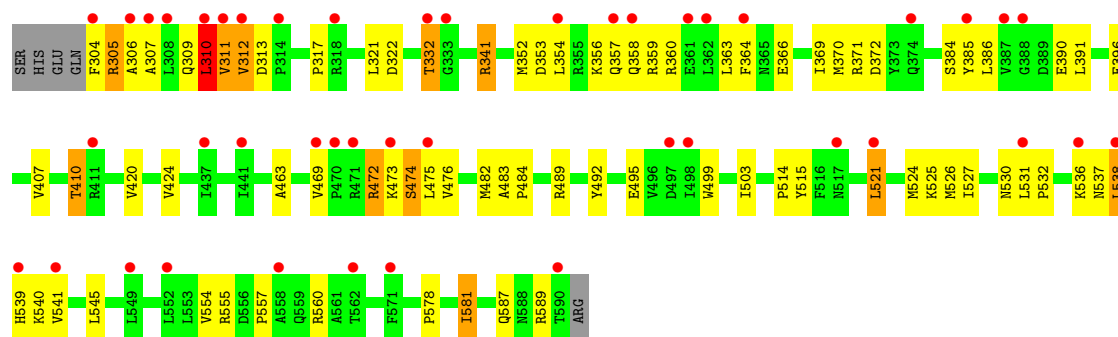
- Molecule 1: Serine/threonine-protein kinase PAK 4

Chain J: 

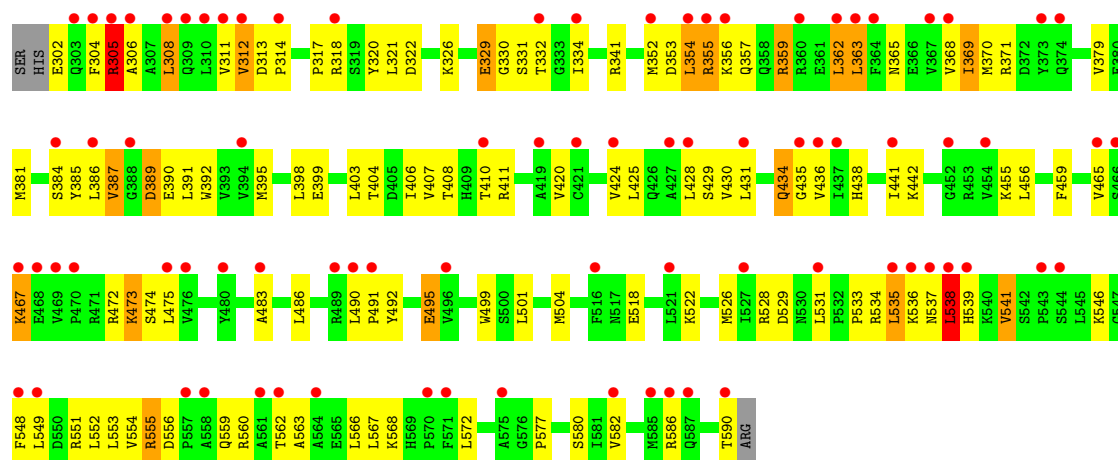


- Molecule 1: Serine/threonine-protein kinase PAK 4

Chain K: 



● Molecule 1: Serine/threonine-protein kinase PAK 4



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	88.51Å 208.67Å 132.49Å 90.00° 103.34° 90.00°	Depositor
Resolution (Å)	44.76 – 2.20 44.76 – 2.20	Depositor EDS
% Data completeness (in resolution range)	96.6 (44.76-2.20) 97.0 (44.76-2.20)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.11 (at 2.20Å)	Xtriage
Refinement program	PHENIX (1.20.1_4487: ???)	Depositor
R, R_{free}	0.221 , 0.255 0.221 , 0.254	Depositor DCC
R_{free} test set	1973 reflections (0.84%)	wwPDB-VP
Wilson B-factor (Å ²)	61.4	Xtriage
Anisotropy	0.182	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 45.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	28560	wwPDB-VP
Average B, all atoms (Å ²)	73.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.50% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: A1MBG, SEP

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	0.50	0/2322	0.68	0/3144
1	B	0.45	0/2322	0.67	0/3144
1	C	0.49	0/2339	0.72	0/3167
1	D	0.44	0/2311	0.71	2/3130 (0.1%)
1	E	0.47	0/2322	0.69	0/3144
1	F	0.38	0/2322	0.68	0/3144
1	G	0.49	0/2322	0.70	0/3144
1	H	0.46	0/2322	0.69	0/3144
1	I	0.43	0/2304	0.72	2/3120 (0.1%)
1	J	0.45	0/2322	0.77	4/3144 (0.1%)
1	K	0.36	0/2304	0.70	2/3120 (0.1%)
1	L	0.38	1/2322 (0.0%)	0.71	2/3144 (0.1%)
All	All	0.45	1/27834 (0.0%)	0.70	12/37689 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	1
1	C	0	3
1	D	0	1
1	E	0	4
1	F	0	4
1	G	0	2
1	H	0	1
1	I	0	3
1	J	0	3
1	K	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	L	0	2
All	All	0	28

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L	305	ARG	CB-CG	5.90	1.70	1.52

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	312	VAL	CA-C-N	7.42	139.91	121.80
1	K	312	VAL	C-N-CA	7.42	139.91	121.80
1	J	516	PHE	CA-C-N	6.86	130.39	120.38
1	J	516	PHE	C-N-CA	6.86	130.39	120.38
1	J	358	GLN	CB-CG-CD	-6.30	101.89	112.60
1	D	357	GLN	CA-C-N	5.92	132.85	121.54
1	D	357	GLN	C-N-CA	5.92	132.85	121.54
1	L	311	VAL	CA-C-N	5.53	131.91	121.97
1	L	311	VAL	C-N-CA	5.53	131.91	121.97
1	I	536	LYS	CA-C-N	5.25	131.56	121.54
1	I	536	LYS	C-N-CA	5.25	131.56	121.54
1	J	358	GLN	CG-CD-NE2	-5.05	108.82	116.40

There are no chirality outliers.

All (28) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	305	ARG	Sidechain
1	A	411	ARG	Sidechain
1	B	341	ARG	Sidechain
1	C	341	ARG	Sidechain
1	C	359	ARG	Sidechain
1	C	411	ARG	Sidechain
1	D	359	ARG	Sidechain
1	E	305	ARG	Sidechain
1	E	313	ASP	Peptide
1	E	341	ARG	Sidechain
1	E	411	ARG	Sidechain
1	F	305	ARG	Sidechain
1	F	341	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	F	359	ARG	Sidechain
1	F	411	ARG	Sidechain
1	G	341	ARG	Sidechain
1	G	359	ARG	Sidechain
1	H	305	ARG	Sidechain
1	I	305	ARG	Sidechain
1	I	341	ARG	Sidechain
1	I	472	ARG	Sidechain
1	J	314	PRO	Peptide
1	J	341	ARG	Sidechain
1	J	359	ARG	Sidechain
1	K	305	ARG	Sidechain
1	K	341	ARG	Sidechain
1	L	305	ARG	Sidechain
1	L	411	ARG	Sidechain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2286	0	2346	53	0
1	B	2286	0	2346	58	0
1	C	2302	0	2358	45	0
1	D	2278	0	2330	47	0
1	E	2286	0	2346	59	0
1	F	2286	0	2346	60	0
1	G	2286	0	2346	62	0
1	H	2286	0	2346	60	0
1	I	2268	0	2332	60	0
1	J	2286	0	2345	48	0
1	K	2268	0	2332	48	0
1	L	2286	0	2346	82	0
2	A	74	0	0	1	0
2	B	74	0	0	0	0
2	C	74	0	0	0	0
2	D	74	0	0	2	0
2	E	37	0	0	1	0
2	F	74	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	G	74	0	0	0	0
2	H	74	0	0	2	0
2	I	111	0	0	1	0
2	J	37	0	0	0	0
2	K	74	0	0	1	0
2	L	111	0	0	2	0
3	A	31	0	0	1	0
3	B	19	0	0	3	0
3	C	42	0	0	1	0
3	D	32	0	0	1	0
3	E	28	0	0	3	0
3	F	11	0	0	1	0
3	G	27	0	0	2	0
3	H	25	0	0	4	0
3	I	8	0	0	1	0
3	J	20	0	0	2	0
3	K	12	0	0	3	0
3	L	13	0	0	3	0
All	All	28560	0	28119	673	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 12.

All (673) 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:A:537:ASN:HD21	1:A:540:LYS:HB2	0.99	1.09
1:K:495:GLU:HG3	1:K:557:PRO:HB3	1.36	1.04
1:A:537:ASN:ND2	1:A:540:LYS:HB2	1.83	0.93
1:F:310:LEU:HG	1:F:311:VAL:HG13	1.50	0.92
1:I:510:ASP:OD1	1:I:537:ASN:ND2	2.03	0.91
1:D:313:ASP:HB2	1:D:314:PRO:HD3	1.50	0.91
1:F:310:LEU:HD23	1:F:311:VAL:H	1.36	0.89
1:C:522:LYS:HG2	1:C:526:MET:HE2	1.59	0.85
1:G:311:VAL:HB	1:G:367:VAL:HG11	1.58	0.85
1:G:379:VAL:HG22	1:G:398:LEU:HD11	1.58	0.85
1:F:473:LYS:HZ1	1:F:491:PRO:HG3	1.40	0.84
1:H:537:ASN:HB3	1:H:540:LYS:HD3	1.59	0.84
1:L:435:GLY:HA2	1:L:465:VAL:HG23	1.59	0.84
1:D:317:PRO:C	1:D:319:SER:H	1.82	0.84
1:H:518:GLU:HG3	1:H:526:MET:HE1	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:356:LYS:HB3	1:K:358:GLN:HE22	1.39	0.84
1:J:473:LYS:C	1:J:489:ARG:HH22	1.86	0.83
1:G:518:GLU:HG3	1:G:526:MET:HE1	1.62	0.82
1:I:522:LYS:HG2	1:I:526:MET:HE2	1.62	0.80
1:H:537:ASN:O	1:H:539:HIS:N	2.14	0.80
1:J:518:GLU:HG3	1:J:526:MET:HE1	1.63	0.79
1:E:472:ARG:HH21	1:E:474:SEP:P	2.05	0.79
1:A:318:ARG:O	1:A:341:ARG:NH1	2.17	0.78
1:E:475:LEU:HD12	1:E:489:ARG:HD3	1.65	0.78
1:K:396:GLU:O	2:K:601:A1MBG:N03	2.15	0.78
1:J:358:GLN:O	1:J:360:ARG:N	2.17	0.78
1:L:467:LYS:HD3	1:L:467:LYS:H	1.49	0.78
1:E:510:ASP:OD1	1:E:537:ASN:ND2	2.16	0.77
1:I:534:ARG:NH1	1:I:550:ASP:OD1	2.17	0.77
1:K:332:THR:HG23	1:K:353:ASP:H	1.50	0.77
1:D:313:ASP:HB2	1:D:314:PRO:CD	2.15	0.77
1:L:555:ARG:HH11	1:L:555:ARG:HB3	1.49	0.77
1:D:399:GLU:O	2:D:601:A1MBG:N11	2.18	0.76
1:D:518:GLU:HG3	1:D:526:MET:HE1	1.66	0.76
1:J:495:GLU:HG3	1:J:557:PRO:HB3	1.69	0.75
1:G:305:ARG:NH1	1:G:389:ASP:OD1	2.19	0.74
1:I:555:ARG:HH21	1:I:555:ARG:HB2	1.52	0.74
1:A:350:LYS:NZ	1:A:366:GLU:OE2	2.19	0.74
1:F:364:PHE:O	1:F:368:VAL:HG12	1.88	0.73
1:I:411:ARG:NH2	1:I:540:LYS:HZ1	1.85	0.73
1:A:537:ASN:HD21	1:A:540:LYS:CB	1.91	0.73
1:L:326:LYS:HE3	1:L:334:ILE:HD13	1.70	0.73
1:G:322:ASP:HB2	1:G:341:ARG:HG2	1.70	0.72
1:K:537:ASN:O	1:K:539:HIS:N	2.20	0.72
1:F:329:GLU:O	1:F:331:SER:N	2.22	0.72
1:E:307:ALA:O	3:E:701:HOH:O	2.07	0.72
1:K:463:ALA:HB1	1:K:472:ARG:HH11	1.53	0.72
1:J:302:GLU:HG3	1:J:305:ARG:HG2	1.70	0.72
1:C:518:GLU:HG3	1:C:526:MET:HE1	1.72	0.71
1:K:309:GLN:O	1:K:311:VAL:N	2.22	0.71
1:L:518:GLU:HG3	1:L:526:MET:HE1	1.71	0.71
1:L:537:ASN:C	1:L:539:HIS:H	1.97	0.71
1:L:534:ARG:HH22	1:L:546:LYS:HZ1	1.39	0.70
1:B:518:GLU:HG3	1:B:526:MET:HE1	1.74	0.70
1:F:358:GLN:OE1	1:F:360:ARG:NE	2.19	0.70
1:E:370:MET:HE3	1:E:379:VAL:HG23	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:354:LEU:HA	1:I:357:GLN:HB2	1.72	0.69
1:I:366:GLU:HG2	1:I:370:MET:HE2	1.74	0.69
1:L:302:GLU:HG2	1:L:305:ARG:H	1.57	0.69
1:D:306:ALA:O	3:D:701:HOH:O	2.11	0.69
1:H:302:GLU:HG3	1:H:304:PHE:H	1.57	0.69
1:L:537:ASN:O	1:L:539:HIS:N	2.23	0.69
1:G:352:MET:HE1	1:G:393:VAL:HG23	1.74	0.69
1:G:535:LEU:O	1:G:538:LEU:HG	1.92	0.69
1:K:554:VAL:O	1:K:560:ARG:NH2	2.26	0.69
1:J:356:LYS:C	1:J:358:GLN:HE22	2.00	0.68
1:J:359:ARG:HH11	1:J:359:ARG:HB3	1.56	0.68
1:F:518:GLU:HG3	1:F:526:MET:HE1	1.75	0.68
1:B:359:ARG:HD3	1:B:362:LEU:HD12	1.76	0.68
1:E:305:ARG:HH11	1:E:355:ARG:HG2	1.59	0.67
1:J:473:LYS:HA	1:J:489:ARG:HH12	1.58	0.67
1:G:308:LEU:HD23	1:G:354:LEU:HD21	1.74	0.67
1:D:308:LEU:HG	1:D:364:PHE:HE1	1.59	0.67
1:I:326:LYS:NZ	1:I:329:GLU:OE2	2.19	0.67
1:L:322:ASP:HB2	1:L:341:ARG:HG2	1.75	0.67
1:E:359:ARG:HD3	1:E:362:LEU:HD12	1.76	0.67
1:H:471:ARG:NH2	1:H:495:GLU:OE1	2.28	0.67
1:B:537:ASN:OD1	1:B:540:LYS:N	2.27	0.66
1:F:537:ASN:O	1:F:539:HIS:N	2.28	0.66
1:H:537:ASN:HB3	1:H:540:LYS:CD	2.26	0.66
1:E:304:PHE:CZ	1:E:364:PHE:CE1	2.84	0.66
1:I:518:GLU:HG3	1:I:526:MET:HE1	1.77	0.66
1:A:398:LEU:H	2:A:601:A1MBG:C01	2.09	0.66
1:D:381:MET:HE2	1:D:393:VAL:HG13	1.78	0.66
1:E:308:LEU:HG	1:E:364:PHE:CZ	2.31	0.66
1:H:350:LYS:NZ	1:H:366:GLU:OE2	2.27	0.66
1:F:365:ASN:O	1:F:369:ILE:HG23	1.97	0.65
1:C:371:ARG:NH1	1:C:372:ASP:OD1	2.29	0.65
1:L:562:THR:HB	3:L:701:HOH:O	1.96	0.65
1:B:312:VAL:HG11	1:B:386:LEU:HD23	1.79	0.65
1:F:475:LEU:HD12	1:F:489:ARG:HD3	1.78	0.65
1:I:319:SER:HA	1:I:341:ARG:HH22	1.61	0.64
1:I:411:ARG:NH2	1:I:540:LYS:NZ	2.45	0.64
1:C:322:ASP:OD2	1:C:341:ARG:NH2	2.29	0.64
1:C:300:SER:HB2	1:C:305:ARG:NH1	2.13	0.63
1:E:472:ARG:NH2	1:E:474:SEP:O3P	2.29	0.63
1:G:312:VAL:HG11	1:G:386:LEU:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:305:ARG:NH1	1:E:355:ARG:HG2	2.13	0.63
1:K:530:ASN:O	1:K:555:ARG:NH2	2.32	0.63
1:E:334:ILE:HG23	1:E:351:LYS:HB2	1.81	0.63
1:F:468:GLU:CD	1:F:468:GLU:H	2.04	0.62
1:L:357:GLN:NE2	3:L:704:HOH:O	2.32	0.62
1:J:475:LEU:HD11	1:J:489:ARG:HE	1.63	0.62
1:F:528:ARG:NH1	1:F:529:ASP:OD1	2.31	0.62
1:L:305:ARG:HA	1:L:308:LEU:HD11	1.81	0.62
1:L:302:GLU:OE2	1:L:305:ARG:HD2	2.00	0.62
1:B:582:VAL:HA	1:B:585:MET:HE3	1.81	0.62
1:K:309:GLN:C	1:K:311:VAL:H	2.08	0.61
1:K:322:ASP:HB2	1:K:341:ARG:HG3	1.81	0.61
1:G:534:ARG:HH21	1:G:538:LEU:HD11	1.64	0.61
1:A:302:GLU:HG3	1:H:357:GLN:OE1	2.00	0.61
1:B:309:GLN:HA	1:B:312:VAL:HG22	1.82	0.61
1:F:571:PHE:O	1:F:574:LYS:HG3	1.99	0.61
1:J:352:MET:HE3	1:J:363:LEU:HD21	1.81	0.61
1:L:398:LEU:H	2:L:602:A1MBG:C01	2.14	0.61
1:A:318:ARG:HH11	1:A:318:ARG:HB2	1.65	0.61
1:C:301:HIS:HB3	1:C:304:PHE:HB3	1.83	0.61
1:E:304:PHE:CZ	1:E:364:PHE:HE1	2.18	0.61
1:G:534:ARG:HH21	1:G:538:LEU:CD1	2.13	0.60
1:F:537:ASN:O	1:F:539:HIS:ND1	2.35	0.60
1:L:556:ASP:OD2	1:L:559:GLN:N	2.35	0.60
1:H:567:LEU:O	3:H:701:HOH:O	2.15	0.60
1:C:350:LYS:HE3	1:C:352:MET:HE3	1.82	0.60
1:F:322:ASP:HB2	1:F:341:ARG:HG2	1.83	0.60
1:I:537:ASN:HB3	1:I:540:LYS:HG3	1.84	0.60
1:B:370:MET:HE2	1:B:381:MET:HB2	1.83	0.60
1:K:310:LEU:HD13	1:K:364:PHE:CE1	2.37	0.59
1:L:387:VAL:HG21	1:L:392:TRP:CE2	2.37	0.59
1:L:556:ASP:OD2	1:L:559:GLN:HG2	2.02	0.59
1:F:473:LYS:HZ1	1:F:491:PRO:CG	2.14	0.59
1:E:304:PHE:CZ	1:E:360:ARG:HB3	2.37	0.59
1:F:398:LEU:H	2:F:601:A1MBG:C01	2.15	0.59
1:J:358:GLN:O	1:J:360:ARG:HG2	2.03	0.59
1:A:518:GLU:CG	1:A:522:LYS:HD2	2.33	0.59
1:B:584:LEU:O	1:B:589:ARG:HD3	2.03	0.59
1:F:485:GLU:OE2	1:F:560:ARG:NH1	2.27	0.59
1:K:420:VAL:O	1:K:424:VAL:HG12	2.02	0.59
1:L:406:ILE:O	1:L:410:THR:HG22	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:334:ILE:HG12	1:I:351:LYS:HB2	1.85	0.58
1:J:537:ASN:HB3	3:J:702:HOH:O	2.01	0.58
1:J:366:GLU:HG2	1:J:370:MET:HE2	1.84	0.58
1:L:430:VAL:O	1:L:434:GLN:NE2	2.36	0.58
1:E:331:SER:HB3	1:G:316:ASP:HB2	1.86	0.58
1:H:308:LEU:HD21	1:H:354:LEU:HD22	1.84	0.58
1:I:397:PHE:CE2	1:I:399:GLU:HG2	2.39	0.58
1:E:364:PHE:O	1:E:368:VAL:HG12	2.03	0.58
1:F:302:GLU:HB2	1:F:305:ARG:NH2	2.18	0.58
1:F:331:SER:OG	1:F:332:THR:N	2.37	0.58
1:F:466:SER:OG	1:F:468:GLU:OE1	2.21	0.58
1:H:398:LEU:H	2:H:601:A1MBG:C01	2.17	0.58
1:L:435:GLY:HA2	1:L:465:VAL:CG2	2.32	0.58
1:D:353:ASP:OD1	1:D:353:ASP:N	2.33	0.57
1:L:354:LEU:HD23	1:L:355:ARG:HG2	1.84	0.57
1:L:420:VAL:O	1:L:424:VAL:HG12	2.04	0.57
1:L:537:ASN:C	1:L:539:HIS:N	2.63	0.57
1:E:518:GLU:HG3	1:E:526:MET:HE1	1.87	0.57
1:F:353:ASP:OD1	1:F:356:LYS:HB2	2.03	0.57
1:C:308:LEU:HD21	1:C:391:LEU:HD22	1.86	0.57
1:G:532:PRO:HG3	1:G:555:ARG:HG3	1.85	0.57
1:H:305:ARG:HH12	1:H:309:GLN:HE21	1.52	0.57
1:J:356:LYS:HG3	1:J:358:GLN:NE2	2.19	0.57
1:L:535:LEU:HG	1:L:538:LEU:HD22	1.87	0.57
1:C:354:LEU:HB2	1:C:389:ASP:O	2.05	0.57
1:C:305:ARG:HH12	1:C:389:ASP:CG	2.13	0.57
1:G:357:GLN:O	1:G:357:GLN:HG2	2.05	0.57
1:K:538:LEU:O	1:K:541:VAL:HG12	2.05	0.56
1:B:398:LEU:HD21	1:B:455:LYS:HD2	1.87	0.56
1:C:473:LYS:HD3	1:C:491:PRO:HG3	1.86	0.56
1:H:379:VAL:HG22	1:H:398:LEU:HD11	1.86	0.56
1:J:312:VAL:C	1:J:314:PRO:HD3	2.30	0.56
1:L:302:GLU:OE2	1:L:305:ARG:NH2	2.38	0.56
1:B:303:GLN:HA	1:B:305:ARG:HD2	1.86	0.56
1:G:356:LYS:HG2	1:G:357:GLN:H	1.71	0.56
1:D:308:LEU:HG	1:D:364:PHE:CE1	2.40	0.56
1:E:532:PRO:HG3	1:E:555:ARG:HG3	1.86	0.56
1:L:326:LYS:HE2	1:L:329:GLU:HG2	1.88	0.56
1:D:361:GLU:HA	1:D:364:PHE:HD2	1.71	0.56
1:F:353:ASP:O	1:F:355:ARG:N	2.29	0.56
1:H:537:ASN:CB	1:H:540:LYS:HD3	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:351:LYS:HG2	1:D:392:TRP:CD1	2.41	0.56
1:I:330:GLY:O	1:I:332:THR:N	2.39	0.56
1:B:455:LYS:NZ	3:B:702:HOH:O	2.20	0.56
1:B:361:GLU:O	1:B:365:ASN:ND2	2.35	0.55
1:B:379:VAL:HG21	1:B:457:SER:HB2	1.87	0.55
1:B:535:LEU:HD13	1:B:541:VAL:HG11	1.88	0.55
1:E:313:ASP:HB3	1:E:314:PRO:HD3	1.88	0.55
1:I:523:ALA:HA	1:I:526:MET:HE3	1.88	0.55
1:A:309:GLN:HA	1:A:312:VAL:HG22	1.87	0.55
1:B:410:THR:CG2	1:B:589:ARG:HD2	2.37	0.55
1:E:472:ARG:NH2	1:E:474:SEP:O2P	2.39	0.55
1:I:304:PHE:C	1:I:306:ALA:H	2.15	0.55
1:G:359:ARG:HD3	1:G:361:GLU:OE2	2.07	0.55
1:C:523:ALA:HA	1:C:526:MET:HE3	1.88	0.55
1:E:472:ARG:NE	1:E:474:SEP:O3P	2.40	0.55
1:F:310:LEU:HD23	1:F:311:VAL:N	2.15	0.55
1:I:365:ASN:OD1	1:I:365:ASN:N	2.38	0.55
1:A:582:VAL:HA	1:A:585:MET:HE3	1.89	0.54
1:A:379:VAL:HG21	1:A:395:MET:HE3	1.89	0.54
1:H:356:LYS:HD2	1:H:358:GLN:H	1.72	0.54
1:E:302:GLU:HG3	1:E:305:ARG:H	1.72	0.54
1:G:331:SER:OG	1:G:332:THR:N	2.40	0.54
1:K:371:ARG:NH1	1:K:372:ASP:OD1	2.41	0.54
1:F:473:LYS:O	1:F:489:ARG:NH1	2.40	0.54
1:J:410:THR:HG22	1:J:589:ARG:HD2	1.89	0.54
1:B:302:GLU:C	1:B:304:PHE:H	2.15	0.54
1:H:539:HIS:CE1	1:H:540:LYS:HD2	2.43	0.54
1:H:318:ARG:O	1:H:341:ARG:NH1	2.31	0.54
1:K:474:SEP:O	1:K:492:TYR:OH	2.26	0.54
1:L:353:ASP:OD1	1:L:353:ASP:N	2.36	0.54
1:C:374:GLN:N	1:C:374:GLN:CD	2.66	0.54
1:G:307:ALA:O	1:G:310:LEU:HD13	2.08	0.54
1:G:331:SER:OG	3:G:701:HOH:O	2.18	0.54
1:L:354:LEU:O	1:L:356:LYS:N	2.41	0.54
1:C:587:GLN:CD	1:C:587:GLN:H	2.16	0.53
1:K:310:LEU:HD13	1:K:364:PHE:HE1	1.72	0.53
1:K:366:GLU:HG2	1:K:370:MET:HE2	1.91	0.53
1:G:397:PHE:CE2	1:G:399:GLU:HG3	2.43	0.53
1:I:305:ARG:HA	1:I:308:LEU:HD11	1.89	0.53
1:L:490:LEU:HB3	1:L:491:PRO:HD2	1.90	0.53
1:L:352:MET:SD	1:L:391:LEU:HD12	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:322:ASP:HB2	1:F:341:ARG:CG	2.39	0.53
1:C:367:VAL:HG21	1:C:391:LEU:HD21	1.89	0.53
1:G:358:GLN:NE2	1:G:363:LEU:HD22	2.23	0.53
1:I:398:LEU:H	2:I:602:A1MBG:C01	2.22	0.53
1:F:537:ASN:HB2	1:F:540:LYS:NZ	2.23	0.53
1:H:439:ARG:NH1	1:H:474:SEP:O1P	2.40	0.53
1:L:549:LEU:HD11	1:L:553:LEU:HD12	1.91	0.53
1:F:304:PHE:HD2	1:F:360:ARG:NH2	2.07	0.53
1:L:551:ARG:NH1	1:L:559:GLN:O	2.39	0.53
1:A:537:ASN:C	1:A:539:HIS:H	2.16	0.53
1:B:316:ASP:OD1	1:B:318:ARG:NE	2.28	0.53
1:J:546:LYS:NZ	1:J:550:ASP:OD2	2.27	0.53
1:B:410:THR:HG22	1:B:589:ARG:HD2	1.90	0.52
1:J:322:ASP:HB2	1:J:341:ARG:HG2	1.91	0.52
1:H:362:LEU:HD13	1:H:461:PHE:HA	1.91	0.52
1:K:560:ARG:O	3:K:701:HOH:O	2.19	0.52
1:F:431:LEU:HD22	1:F:436:VAL:HG21	1.90	0.52
1:G:358:GLN:HE22	1:G:363:LEU:HD22	1.74	0.52
1:G:535:LEU:C	1:G:538:LEU:HG	2.33	0.52
1:I:308:LEU:HA	1:I:311:VAL:HG13	1.92	0.52
1:L:365:ASN:O	1:L:369:ILE:HG22	2.09	0.52
1:L:398:LEU:HD21	1:L:455:LYS:HD2	1.91	0.52
1:B:473:LYS:HD3	1:B:491:PRO:HG3	1.91	0.52
1:B:518:GLU:OE1	1:B:522:LYS:HD3	2.09	0.52
1:D:374:GLN:N	1:D:374:GLN:CD	2.68	0.52
1:E:475:LEU:HD12	1:E:489:ARG:CD	2.37	0.52
1:E:556:ASP:HB3	1:E:559:GLN:HG3	1.91	0.52
1:H:589:ARG:HG3	1:H:590:THR:HG23	1.92	0.52
1:I:330:GLY:O	1:I:332:THR:HG23	2.09	0.52
1:L:354:LEU:HD12	1:L:390:GLU:HB2	1.91	0.52
1:G:537:ASN:O	1:G:540:LYS:NZ	2.43	0.52
1:K:532:PRO:HG3	1:K:555:ARG:HG2	1.92	0.52
1:B:319:SER:O	1:B:321:LEU:N	2.41	0.52
1:K:541:VAL:HG23	1:K:545:LEU:HD13	1.91	0.52
1:L:549:LEU:HA	1:L:552:LEU:HD12	1.91	0.52
1:D:357:GLN:O	1:D:358:GLN:HG2	2.08	0.52
1:H:404:THR:HG23	2:H:602:A1MBG:N03	2.24	0.52
1:F:304:PHE:CD2	1:F:360:ARG:NH2	2.78	0.52
1:D:397:PHE:CE2	1:D:399:GLU:HG2	2.45	0.51
1:F:431:LEU:HB3	1:F:436:VAL:HG22	1.93	0.51
1:I:411:ARG:HH22	1:I:540:LYS:NZ	2.07	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:411:ARG:HH21	1:I:540:LYS:HZ1	1.57	0.51
1:D:331:SER:O	1:D:332:THR:OG1	2.22	0.51
1:E:535:LEU:HD13	1:E:541:VAL:HG11	1.93	0.51
1:E:546:LYS:NZ	3:E:704:HOH:O	2.44	0.51
1:F:523:ALA:HA	1:F:526:MET:HE2	1.93	0.51
1:K:578:PRO:O	1:K:581:ILE:HG12	2.09	0.51
1:D:366:GLU:HG2	1:D:370:MET:HE2	1.93	0.51
1:G:370:MET:HE2	1:G:381:MET:HB2	1.91	0.51
1:H:374:GLN:CD	1:H:374:GLN:N	2.69	0.51
1:H:548:PHE:CE2	1:H:552:LEU:HD11	2.46	0.51
1:L:302:GLU:OE2	1:L:302:GLU:N	2.44	0.51
1:C:301:HIS:O	1:C:301:HIS:ND1	2.44	0.51
1:L:483:ALA:HA	1:L:499:TRP:CD1	2.45	0.51
1:E:475:LEU:HB2	1:E:489:ARG:NH1	2.26	0.51
1:L:567:LEU:HA	1:L:572:LEU:HD12	1.92	0.51
1:B:489:ARG:HH22	1:K:371:ARG:NH2	2.09	0.51
1:L:304:PHE:O	1:L:308:LEU:HG	2.10	0.51
1:G:355:ARG:O	1:G:356:LYS:HB3	2.09	0.51
1:I:565:GLU:OE2	3:I:701:HOH:O	2.20	0.51
1:G:305:ARG:HD2	1:G:354:LEU:HD23	1.93	0.50
1:D:326:LYS:HE3	1:D:334:ILE:HD12	1.93	0.50
1:C:322:ASP:CG	1:C:341:ARG:HH21	2.19	0.50
1:G:356:LYS:HG2	1:G:357:GLN:N	2.25	0.50
1:K:503:ILE:HG23	1:K:514:PRO:HD2	1.92	0.50
1:L:577:PRO:O	1:L:580:SER:OG	2.30	0.50
1:D:317:PRO:C	1:D:319:SER:N	2.55	0.50
1:D:340:VAL:HG22	1:D:345:LYS:O	2.11	0.50
1:F:530:ASN:O	1:F:555:ARG:NH2	2.45	0.50
1:G:466:SER:OG	1:G:468:GLU:HG2	2.11	0.50
1:C:355:ARG:NH1	1:C:389:ASP:OD2	2.45	0.50
1:D:357:GLN:C	1:D:358:GLN:HG2	2.37	0.50
1:D:537:ASN:CG	1:D:540:LYS:HG3	2.36	0.50
1:I:364:PHE:O	1:I:368:VAL:HG13	2.11	0.50
1:H:312:VAL:HG11	1:H:386:LEU:HB2	1.93	0.50
1:E:472:ARG:NH2	1:E:474:SEP:P	2.81	0.50
1:J:475:LEU:HD12	1:J:475:LEU:H	1.76	0.50
1:L:370:MET:HE2	1:L:381:MET:HB2	1.93	0.49
1:A:532:PRO:HG3	1:A:555:ARG:HG3	1.93	0.49
1:I:353:ASP:O	1:I:357:GLN:NE2	2.37	0.49
1:J:582:VAL:HA	1:J:585:MET:HE3	1.94	0.49
1:A:350:LYS:HE2	1:A:352:MET:HE3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:354:LEU:HB2	1:A:389:ASP:O	2.12	0.49
1:C:518:GLU:CG	1:C:526:MET:HE1	2.41	0.49
1:D:332:THR:O	1:D:352:MET:HG3	2.13	0.49
1:E:359:ARG:HD3	1:E:362:LEU:CD1	2.43	0.49
1:E:539:HIS:CD2	1:E:540:LYS:HD3	2.48	0.49
1:G:317:PRO:HB3	1:G:385:TYR:CD1	2.47	0.49
1:B:354:LEU:O	1:B:357:GLN:NE2	2.46	0.49
1:G:317:PRO:HB3	1:G:385:TYR:CE1	2.48	0.49
1:L:535:LEU:HD11	1:L:541:VAL:HG11	1.95	0.49
1:E:476:VAL:HA	1:G:314:PRO:HG2	1.94	0.49
1:G:439:ARG:NH1	1:G:474:SEP:O2P	2.40	0.49
1:H:368:VAL:HG23	1:H:369:ILE:HD13	1.94	0.49
1:J:307:ALA:O	1:J:310:LEU:HD11	2.12	0.49
1:G:352:MET:HE1	1:G:393:VAL:CG2	2.43	0.48
1:I:358:GLN:O	1:I:360:ARG:N	2.45	0.48
1:I:431:LEU:HD22	1:I:436:VAL:HG11	1.94	0.48
1:G:351:LYS:HE2	1:G:392:TRP:CZ2	2.48	0.48
1:D:305:ARG:O	1:D:309:GLN:NE2	2.45	0.48
1:J:475:LEU:HD11	1:J:489:ARG:NE	2.28	0.48
1:E:353:ASP:O	1:E:355:ARG:N	2.38	0.48
1:G:472:ARG:NH2	1:G:474:SEP:O1P	2.39	0.48
1:E:302:GLU:HG2	1:E:305:ARG:HG3	1.96	0.48
1:F:475:LEU:CD1	1:F:489:ARG:HD3	2.41	0.48
1:L:528:ARG:NH2	1:L:529:ASP:OD2	2.45	0.48
1:J:444:ASP:N	1:J:444:ASP:OD1	2.46	0.48
1:C:332:THR:OG1	1:C:356:LYS:O	2.31	0.48
1:E:502:GLY:HA2	1:E:552:LEU:HD13	1.95	0.48
1:E:352:MET:N	1:E:352:MET:SD	2.86	0.48
1:I:305:ARG:NH1	1:I:354:LEU:HB2	2.28	0.48
1:I:320:TYR:H	1:I:341:ARG:NH2	2.11	0.48
1:K:410:THR:HG22	1:K:589:ARG:HD3	1.96	0.48
1:B:482:MET:SD	1:B:524:MET:HE3	2.53	0.48
1:D:354:LEU:C	1:D:356:LYS:H	2.20	0.48
1:D:467:LYS:NZ	1:D:468:GLU:OE2	2.46	0.48
1:J:357:GLN:C	1:J:358:GLN:NE2	2.72	0.48
1:C:353:ASP:OD1	1:C:355:ARG:HG3	2.14	0.48
1:G:535:LEU:HB2	1:G:538:LEU:HA	1.95	0.48
1:H:551:ARG:NH2	1:H:559:GLN:O	2.44	0.48
1:G:308:LEU:HD12	1:G:308:LEU:HA	1.50	0.47
1:I:518:GLU:CG	1:I:526:MET:HE1	2.43	0.47
1:L:363:LEU:HD13	1:L:363:LEU:HA	1.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:537:ASN:ND2	1:A:540:LYS:HE3	2.29	0.47
1:A:320:TYR:O	1:A:341:ARG:HG3	2.15	0.47
1:B:379:VAL:HG23	1:B:456:LEU:O	2.14	0.47
1:F:369:ILE:HG13	1:F:370:MET:N	2.29	0.47
1:F:534:ARG:HH12	1:F:546:LYS:CE	2.27	0.47
1:L:370:MET:HE3	1:L:379:VAL:HG13	1.97	0.47
1:A:316:ASP:HB2	1:H:331:SER:HB2	1.97	0.47
1:F:354:LEU:HB2	1:F:389:ASP:O	2.14	0.47
1:H:546:LYS:NZ	1:H:550:ASP:OD1	2.44	0.47
1:I:322:ASP:CG	1:I:341:ARG:HD2	2.39	0.47
1:K:356:LYS:CB	1:K:358:GLN:HE22	2.19	0.47
1:J:302:GLU:OE2	1:J:304:PHE:HD2	1.97	0.47
1:A:355:ARG:C	1:A:357:GLN:H	2.22	0.47
1:A:523:ALA:HA	1:A:526:MET:HE2	1.96	0.47
1:B:319:SER:C	1:B:321:LEU:H	2.23	0.47
1:F:473:LYS:HZ3	1:F:491:PRO:HA	1.79	0.47
1:J:439:ARG:HH12	1:J:474:SEP:HB3	1.80	0.47
1:I:352:MET:HE3	1:I:352:MET:HB2	1.75	0.47
1:L:456:LEU:HD23	1:L:459:PHE:CZ	2.50	0.47
1:A:366:GLU:HG2	1:A:370:MET:HE2	1.96	0.47
1:B:379:VAL:HG21	1:B:457:SER:CB	2.44	0.47
1:C:300:SER:HB2	1:C:305:ARG:CZ	2.45	0.47
1:J:326:LYS:HE2	1:J:329:GLU:HB2	1.96	0.47
1:K:385:TYR:O	1:K:391:LEU:HD12	2.14	0.47
1:F:411:ARG:HD3	1:F:411:ARG:HA	1.62	0.47
1:K:587:GLN:H	1:K:587:GLN:CD	2.23	0.47
1:C:364:PHE:O	1:C:368:VAL:HG23	2.15	0.46
1:C:301:HIS:O	1:C:303:GLN:N	2.48	0.46
1:C:527:ILE:HD11	3:C:712:HOH:O	2.14	0.46
1:H:313:ASP:OD1	1:H:313:ASP:C	2.58	0.46
1:B:318:ARG:NH2	1:I:331:SER:OG	2.48	0.46
1:H:379:VAL:HG21	1:H:457:SER:CB	2.45	0.46
1:I:373:TYR:HE2	1:I:434:GLN:HG2	1.80	0.46
1:J:313:ASP:N	1:J:314:PRO:HD3	2.29	0.46
1:B:336:CYS:HB2	1:B:349:VAL:HG22	1.98	0.46
1:B:525:LYS:HG3	1:B:528:ARG:NH2	2.31	0.46
1:C:303:GLN:H	1:C:303:GLN:HG3	1.48	0.46
1:I:518:GLU:OE1	1:I:522:LYS:HD3	2.15	0.46
1:K:317:PRO:HB3	1:K:385:TYR:CD2	2.51	0.46
1:C:368:VAL:HG13	1:C:371:ARG:NH2	2.31	0.46
1:D:398:LEU:H	2:D:601:A1MBG:C01	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:439:ARG:NH2	1:H:474:SEP:O1P	2.47	0.46
1:K:521:LEU:HD21	1:L:371:ARG:HG3	1.98	0.46
1:A:317:PRO:HB3	1:A:385:TYR:CD2	2.51	0.46
1:A:398:LEU:HD21	1:A:455:LYS:HD2	1.98	0.46
1:H:560:ARG:O	3:H:702:HOH:O	2.21	0.46
1:K:541:VAL:HG21	1:K:545:LEU:HD22	1.97	0.46
1:A:473:LYS:HD2	1:A:491:PRO:HG3	1.98	0.46
1:E:317:PRO:HB3	1:E:385:TYR:CE1	2.50	0.46
1:B:336:CYS:HB2	1:B:349:VAL:CG2	2.46	0.46
1:C:305:ARG:NH2	1:C:389:ASP:OD1	2.49	0.46
1:G:534:ARG:HA	3:G:714:HOH:O	2.16	0.46
1:H:537:ASN:HB3	1:H:540:LYS:CE	2.46	0.45
1:I:334:ILE:HD11	1:I:351:LYS:HD2	1.97	0.45
1:K:322:ASP:HB2	1:K:341:ARG:CG	2.47	0.45
1:H:546:LYS:NZ	1:H:550:ASP:OD2	2.49	0.45
1:A:518:GLU:HG2	1:A:526:MET:HE1	1.97	0.45
1:I:530:ASN:O	1:I:555:ARG:NH1	2.41	0.45
1:B:310:LEU:H	1:B:310:LEU:HG	1.52	0.45
1:G:327:ILE:HD13	1:G:337:ILE:HG12	1.97	0.45
1:H:305:ARG:HH12	1:H:309:GLN:NE2	2.15	0.45
1:H:473:LYS:HD2	1:H:473:LYS:HA	1.75	0.45
1:H:512:GLU:HB2	1:H:513:PRO:HD2	1.98	0.45
1:L:332:THR:HG23	1:L:332:THR:O	2.17	0.45
1:E:525:LYS:HE3	1:G:374:GLN:HE21	1.81	0.45
1:H:556:ASP:OD2	1:H:559:GLN:HG2	2.17	0.45
1:I:582:VAL:HG22	1:I:583:PRO:HD3	1.97	0.45
1:J:379:VAL:HG23	1:J:398:LEU:HD11	1.98	0.45
1:K:515:TYR:CE2	1:K:527:ILE:HG13	2.52	0.45
1:L:304:PHE:C	1:L:306:ALA:H	2.24	0.45
1:D:306:ALA:HA	1:D:309:GLN:OE1	2.16	0.45
1:H:503:ILE:HG23	1:H:514:PRO:HD2	1.98	0.45
1:C:410:THR:CG2	1:C:589:ARG:HD2	2.47	0.45
1:J:537:ASN:CG	1:J:540:LYS:HE2	2.41	0.45
1:L:495:GLU:OE2	1:L:562:THR:OG1	2.34	0.45
1:A:302:GLU:OE1	1:A:302:GLU:HA	2.16	0.45
1:B:357:GLN:O	1:B:359:ARG:N	2.50	0.45
1:B:541:VAL:O	3:B:701:HOH:O	2.20	0.45
1:D:351:LYS:HG2	1:D:392:TRP:NE1	2.31	0.45
1:E:317:PRO:HB3	1:E:385:TYR:CD1	2.52	0.45
1:F:540:LYS:HZ3	1:F:540:LYS:HB2	1.81	0.45
1:G:325:ILE:HG22	1:G:327:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:310:LEU:HD11	1:J:364:PHE:HE1	1.81	0.45
1:L:353:ASP:O	1:L:357:GLN:NE2	2.46	0.45
1:L:403:LEU:O	1:L:407:VAL:HG12	2.17	0.45
1:A:358:GLN:O	1:A:360:ARG:N	2.50	0.45
1:K:472:ARG:HG3	1:K:473:LYS:N	2.31	0.45
1:K:472:ARG:HG3	1:K:473:LYS:H	1.82	0.45
1:K:489:ARG:HH22	1:L:371:ARG:NH2	2.15	0.45
1:B:353:ASP:O	1:B:389:ASP:O	2.35	0.44
1:B:379:VAL:HG22	1:B:398:LEU:HD11	1.98	0.44
1:C:473:LYS:HE2	1:C:473:LYS:HB3	1.75	0.44
1:D:302:GLU:OE2	1:D:302:GLU:N	2.49	0.44
1:F:308:LEU:HD23	1:F:310:LEU:HD22	1.99	0.44
1:F:311:VAL:HG23	1:F:384:SER:OG	2.17	0.44
1:H:534:ARG:HG2	1:H:535:LEU:O	2.17	0.44
1:I:522:LYS:CG	1:I:526:MET:HE2	2.41	0.44
1:J:317:PRO:HB3	1:J:385:TYR:CD1	2.52	0.44
1:J:501:LEU:HD12	1:J:504:MET:HE2	1.99	0.44
1:L:473:LYS:HE2	1:L:473:LYS:HB3	1.76	0.44
1:B:381:MET:CE	1:B:384:SER:HB3	2.47	0.44
1:C:313:ASP:HA	1:C:314:PRO:HD3	1.88	0.44
1:I:361:GLU:O	1:I:365:ASN:OD1	2.34	0.44
1:I:432:HIS:CG	1:I:494:PRO:HB3	2.52	0.44
1:J:374:GLN:N	1:J:374:GLN:CD	2.75	0.44
1:L:302:GLU:HG3	1:L:304:PHE:HD2	1.82	0.44
1:C:521:LEU:HD23	1:C:521:LEU:HA	1.79	0.44
1:G:379:VAL:HG21	1:G:457:SER:HB2	2.00	0.44
1:H:311:VAL:HB	1:H:367:VAL:HG11	1.99	0.44
1:H:398:LEU:HD21	1:H:455:LYS:HD2	1.99	0.44
1:L:354:LEU:HG	1:L:389:ASP:HB2	1.99	0.44
1:L:404:THR:O	1:L:408:THR:HG22	2.18	0.44
1:B:317:PRO:O	1:B:319:SER:O	2.35	0.44
1:D:398:LEU:HD21	1:D:455:LYS:HD2	1.98	0.44
1:L:385:TYR:O	1:L:391:LEU:HD22	2.17	0.44
1:B:304:PHE:HA	1:B:307:ALA:HB3	1.99	0.44
1:C:318:ARG:HE	1:C:318:ARG:HB2	1.52	0.44
1:I:319:SER:HA	1:I:341:ARG:NH2	2.31	0.44
1:L:534:ARG:NH2	1:L:546:LYS:HZ1	2.11	0.44
1:G:355:ARG:HE	1:G:355:ARG:HB2	1.57	0.44
1:I:322:ASP:OD2	1:I:341:ARG:HD2	2.18	0.44
1:G:587:GLN:H	1:G:587:GLN:HG3	1.47	0.44
1:K:540:LYS:NZ	3:K:702:HOH:O	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:318:ARG:HD2	1:L:392:TRP:CH2	2.53	0.44
1:L:326:LYS:HE2	1:L:329:GLU:CG	2.48	0.44
1:B:555:ARG:HD2	1:B:555:ARG:O	2.17	0.44
1:C:332:THR:HG21	1:C:357:GLN:CD	2.43	0.44
1:H:469:VAL:O	1:H:469:VAL:HG22	2.17	0.44
1:I:308:LEU:HD13	1:I:308:LEU:H	1.83	0.44
1:J:475:LEU:HD12	1:J:475:LEU:N	2.33	0.44
1:K:356:LYS:HB3	1:K:358:GLN:NE2	2.20	0.44
1:K:515:TYR:HE2	1:K:527:ILE:HG13	1.83	0.44
1:L:428:LEU:HD21	1:L:441:ILE:HD11	2.00	0.44
1:A:356:LYS:O	1:A:356:LYS:HG3	2.18	0.44
1:B:302:GLU:HB3	1:B:304:PHE:CD2	2.53	0.44
1:B:305:ARG:HE	1:B:305:ARG:HB3	1.30	0.44
1:C:322:ASP:CG	1:C:341:ARG:NH2	2.75	0.44
1:C:329:GLU:HG3	1:C:334:ILE:HG22	2.00	0.44
1:D:383:ASN:ND2	1:D:385:TYR:OH	2.50	0.44
1:D:523:ALA:HA	1:D:526:MET:HE2	1.99	0.44
1:E:364:PHE:N	1:E:364:PHE:CD1	2.85	0.44
1:H:379:VAL:HG21	1:H:457:SER:HB2	2.00	0.44
1:C:472:ARG:HB3	1:C:474:SEP:O2P	2.18	0.43
1:G:319:SER:C	1:G:341:ARG:HH11	2.26	0.43
1:H:577:PRO:O	1:H:580:SER:OG	2.34	0.43
1:J:495:GLU:HG3	1:J:557:PRO:CB	2.43	0.43
1:L:442:LYS:C	1:L:504:MET:HE2	2.42	0.43
1:L:562:THR:HG22	1:L:563:ALA:N	2.33	0.43
1:B:322:ASP:OD2	1:B:341:ARG:NH2	2.49	0.43
1:E:367:VAL:HG13	1:E:381:MET:HE1	1.99	0.43
1:I:532:PRO:HA	1:I:533:PRO:HD3	1.84	0.43
1:J:359:ARG:HB2	1:J:362:LEU:HB2	1.99	0.43
1:B:432:HIS:CD2	1:B:494:PRO:HB3	2.53	0.43
1:E:352:MET:HG2	1:E:363:LEU:HD11	1.99	0.43
1:H:432:HIS:HD2	3:H:703:HOH:O	2.00	0.43
1:I:398:LEU:HD21	1:I:455:LYS:HD2	1.99	0.43
1:J:310:LEU:H	1:J:310:LEU:HG	1.58	0.43
1:A:537:ASN:HA	1:A:539:HIS:CE1	2.53	0.43
1:B:356:LYS:HA	1:B:356:LYS:HD3	1.64	0.43
1:C:322:ASP:HB2	1:C:341:ARG:HG2	2.00	0.43
1:K:483:ALA:HA	1:K:499:TRP:CD1	2.54	0.43
1:K:540:LYS:HG3	3:K:702:HOH:O	2.19	0.43
1:F:431:LEU:HB3	1:F:436:VAL:CG2	2.49	0.43
1:J:367:VAL:HG13	1:J:381:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:410:THR:CG2	1:K:589:ARG:HD3	2.48	0.43
1:A:531:LEU:HD12	1:A:531:LEU:HA	1.91	0.43
1:E:310:LEU:HB2	3:E:701:HOH:O	2.17	0.43
1:H:555:ARG:HE	1:H:555:ARG:HB3	1.51	0.43
1:I:472:ARG:NH1	1:I:474:SEP:O2P	2.52	0.43
1:L:473:LYS:HA	1:L:492:TYR:CE2	2.53	0.43
1:D:503:ILE:HG23	1:D:514:PRO:HD2	2.00	0.43
1:E:304:PHE:CZ	1:E:360:ARG:HD2	2.54	0.43
1:G:351:LYS:HG2	1:G:392:TRP:CD1	2.53	0.43
1:G:352:MET:HE3	1:G:352:MET:HB2	1.91	0.43
1:D:317:PRO:HG3	1:D:385:TYR:CD2	2.54	0.43
1:D:371:ARG:HE	1:D:371:ARG:HB2	1.66	0.43
1:E:444:ASP:OD1	1:E:444:ASP:N	2.51	0.43
1:I:357:GLN:HG3	1:I:358:GLN:H	1.84	0.43
1:A:518:GLU:HG2	1:A:526:MET:CE	2.49	0.43
1:J:310:LEU:HD11	1:J:364:PHE:CE1	2.54	0.43
1:K:484:PRO:HD3	1:K:499:TRP:CE2	2.53	0.43
1:C:355:ARG:O	1:C:357:GLN:N	2.52	0.43
1:E:309:GLN:HA	1:E:312:VAL:HG22	2.00	0.42
1:G:356:LYS:HB3	1:G:356:LYS:HE3	1.41	0.42
1:B:357:GLN:CD	1:B:357:GLN:H	2.27	0.42
1:D:316:ASP:C	1:D:318:ARG:H	2.27	0.42
1:D:316:ASP:N	1:D:317:PRO:HD3	2.34	0.42
1:G:355:ARG:O	1:G:356:LYS:CB	2.67	0.42
1:I:371:ARG:O	1:I:374:GLN:NE2	2.47	0.42
1:L:355:ARG:C	3:L:703:HOH:O	2.62	0.42
1:L:435:GLY:HA3	1:L:465:VAL:O	2.19	0.42
1:A:537:ASN:O	1:A:539:HIS:N	2.48	0.42
1:F:352:MET:HE2	1:F:363:LEU:HD12	2.01	0.42
1:F:532:PRO:HD3	1:F:555:ARG:HG3	2.00	0.42
1:A:369:ILE:HD12	1:A:462:CYS:SG	2.60	0.42
1:A:386:LEU:HD12	1:A:390:GLU:O	2.20	0.42
1:F:444:ASP:OD1	1:F:444:ASP:N	2.52	0.42
1:F:536:LYS:HA	1:F:536:LYS:HD2	1.78	0.42
1:G:354:LEU:HD12	1:G:354:LEU:HA	1.78	0.42
1:A:353:ASP:OD1	1:A:354:LEU:N	2.53	0.42
1:B:385:TYR:O	1:B:391:LEU:HD12	2.19	0.42
1:B:512:GLU:HB2	1:B:513:PRO:HD2	2.01	0.42
1:F:308:LEU:HD11	1:F:354:LEU:HD11	2.02	0.42
1:G:354:LEU:HB2	1:G:389:ASP:O	2.20	0.42
1:G:539:HIS:CD2	1:G:539:HIS:H	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:541:VAL:HG23	1:G:546:LYS:HG2	2.01	0.42
1:H:366:GLU:HG2	1:H:370:MET:HE2	2.02	0.42
1:J:474:SEP:N	1:J:489:ARG:NH2	2.62	0.42
1:A:363:LEU:HD21	1:A:391:LEU:HD22	2.00	0.42
1:A:386:LEU:HD12	1:A:386:LEU:HA	1.94	0.42
1:A:537:ASN:C	1:A:539:HIS:N	2.77	0.42
1:H:467:LYS:HA	1:H:467:LYS:HD3	1.91	0.42
1:L:331:SER:O	1:L:332:THR:HG22	2.20	0.42
1:L:438:HIS:CD2	1:L:456:LEU:HD21	2.55	0.42
1:B:322:ASP:OD1	1:B:339:THR:HB	2.20	0.42
1:H:435:GLY:O	1:H:464:GLN:HA	2.20	0.42
1:J:472:ARG:HH21	1:J:474:SEP:P	2.43	0.42
1:L:475:LEU:HA	1:L:486:LEU:HD21	2.02	0.42
1:A:472:ARG:NH2	1:A:474:SEP:O3P	2.52	0.42
2:E:601:A1MBG:CL17	1:G:394:VAL:HG11	2.57	0.42
1:E:313:ASP:HB3	1:E:314:PRO:CD	2.49	0.42
1:H:473:LYS:HD3	1:H:491:PRO:HG3	2.02	0.42
1:J:551:ARG:HD2	3:J:710:HOH:O	2.20	0.42
1:L:362:LEU:HD13	1:L:362:LEU:HA	1.63	0.42
1:B:472:ARG:HH21	1:B:474:SEP:P	2.43	0.41
1:K:307:ALA:O	1:K:310:LEU:HD11	2.20	0.41
1:A:353:ASP:HB3	1:A:356:LYS:HB3	2.01	0.41
1:J:503:ILE:HG23	1:J:514:PRO:HD2	2.01	0.41
1:L:399:GLU:O	2:L:602:A1MBG:N11	2.52	0.41
1:A:518:GLU:HG2	1:A:522:LYS:HD2	2.02	0.41
1:D:537:ASN:ND2	1:D:540:LYS:HG3	2.36	0.41
1:F:582:VAL:N	1:F:583:PRO:HD2	2.34	0.41
1:J:357:GLN:N	1:J:357:GLN:OE1	2.53	0.41
1:A:356:LYS:HB2	1:A:356:LYS:HE2	1.59	0.41
1:D:518:GLU:OE1	1:D:522:LYS:HD3	2.20	0.41
1:E:484:PRO:HD3	1:E:499:TRP:CD2	2.56	0.41
1:E:537:ASN:O	1:E:539:HIS:CD2	2.73	0.41
1:I:435:GLY:O	1:I:464:GLN:HA	2.21	0.41
1:J:311:VAL:HB	1:J:367:VAL:HG11	2.02	0.41
1:K:526:MET:O	1:K:530:ASN:HB2	2.20	0.41
1:A:405:ASP:HB3	3:A:712:HOH:O	2.19	0.41
1:B:360:ARG:HD2	1:B:361:GLU:HG3	2.03	0.41
1:F:310:LEU:CD2	1:F:311:VAL:HG22	2.50	0.41
1:F:366:GLU:HG2	1:F:370:MET:HE2	2.02	0.41
1:I:582:VAL:N	1:I:583:PRO:HD2	2.35	0.41
1:J:398:LEU:HD21	1:J:455:LYS:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:317:PRO:HG2	1:L:392:TRP:CE3	2.55	0.41
1:L:562:THR:HG22	1:L:563:ALA:H	1.84	0.41
1:A:308:LEU:HD12	1:A:311:VAL:HG22	2.03	0.41
1:A:383:ASN:HD22	1:A:384:SER:H	1.67	0.41
1:B:475:LEU:HD12	1:B:486:LEU:HD23	2.01	0.41
1:C:351:LYS:O	1:C:391:LEU:O	2.38	0.41
1:C:411:ARG:HD3	1:C:411:ARG:HA	1.78	0.41
1:E:359:ARG:CD	1:E:362:LEU:HD12	2.47	0.41
1:E:472:ARG:HB2	1:E:492:TYR:CE1	2.56	0.41
1:E:539:HIS:HD2	1:E:540:LYS:HD3	1.83	0.41
1:F:537:ASN:O	1:F:540:LYS:NZ	2.53	0.41
1:G:308:LEU:HD23	1:G:354:LEU:CD2	2.46	0.41
1:G:534:ARG:HE	1:G:538:LEU:HD11	1.86	0.41
1:G:535:LEU:O	1:G:538:LEU:CG	2.66	0.41
1:H:432:HIS:ND1	1:H:494:PRO:HB3	2.35	0.41
1:I:521:LEU:O	1:I:525:LYS:HD3	2.20	0.41
1:I:577:PRO:O	1:I:580:SER:OG	2.37	0.41
1:K:521:LEU:O	1:K:525:LYS:HE3	2.20	0.41
1:B:308:LEU:HD12	1:B:311:VAL:CG2	2.51	0.41
1:D:304:PHE:HD2	1:D:360:ARG:HD2	1.86	0.41
1:D:357:GLN:CG	1:D:358:GLN:H	2.34	0.41
1:F:466:SER:HB2	1:F:468:GLU:OE2	2.21	0.41
1:A:358:GLN:CD	1:A:358:GLN:N	2.79	0.41
1:A:364:PHE:O	1:A:368:VAL:HG13	2.21	0.41
1:A:367:VAL:HG21	1:A:391:LEU:HD21	2.03	0.41
1:D:305:ARG:C	1:D:309:GLN:HE22	2.29	0.41
1:E:567:LEU:HD23	1:E:567:LEU:HA	1.97	0.41
1:F:302:GLU:HB3	1:F:305:ARG:HG3	2.02	0.41
1:F:534:ARG:NH1	1:F:546:LYS:HE2	2.36	0.41
1:H:305:ARG:NH1	1:H:309:GLN:HE21	2.18	0.41
1:I:551:ARG:HB3	1:I:561:ALA:HB2	2.03	0.41
1:K:482:MET:SD	1:K:524:MET:HE3	2.61	0.41
1:L:425:LEU:HD22	1:L:563:ALA:HA	2.03	0.41
1:A:367:VAL:HG13	1:A:381:MET:HE1	2.03	0.41
1:B:305:ARG:N	3:B:707:HOH:O	2.54	0.41
1:B:485:GLU:HG2	1:B:486:LEU:N	2.36	0.41
1:C:305:ARG:NH1	1:C:389:ASP:CG	2.77	0.41
1:C:461:PHE:CD1	1:C:476:VAL:HG22	2.55	0.41
1:D:370:MET:HE3	1:D:381:MET:HE3	2.02	0.41
1:E:539:HIS:CD2	1:E:539:HIS:H	2.38	0.41
1:F:302:GLU:HB2	1:F:305:ARG:CZ	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:471:ARG:HD2	1:F:492:TYR:C	2.46	0.41
1:F:538:LEU:C	1:F:540:LYS:H	2.29	0.41
1:G:359:ARG:HH12	1:G:474:SEP:P	2.44	0.41
1:H:320:TYR:HA	3:H:715:HOH:O	2.20	0.41
1:H:537:ASN:C	1:H:539:HIS:N	2.77	0.41
1:L:533:PRO:HG2	1:L:553:LEU:HD13	2.02	0.41
1:L:548:PHE:CE1	1:L:566:LEU:HD22	2.56	0.41
1:A:545:LEU:O	1:A:545:LEU:HD12	2.21	0.41
1:C:332:THR:HG21	1:C:357:GLN:OE1	2.20	0.41
1:F:534:ARG:HH12	1:F:546:LYS:HE2	1.86	0.41
1:I:310:LEU:HA	1:I:310:LEU:HD13	1.24	0.41
1:I:367:VAL:HG13	1:I:381:MET:HE1	2.03	0.41
1:L:554:VAL:O	1:L:560:ARG:NH2	2.50	0.41
1:A:495:GLU:H	1:A:495:GLU:CD	2.29	0.40
1:E:411:ARG:HD3	1:E:411:ARG:HA	1.80	0.40
1:H:546:LYS:NZ	1:H:550:ASP:CG	2.79	0.40
1:I:385:TYR:O	1:I:391:LEU:HD12	2.21	0.40
1:B:537:ASN:OD1	1:B:539:HIS:N	2.43	0.40
1:E:322:ASP:HB2	1:E:341:ARG:CG	2.52	0.40
1:E:509:VAL:HG12	1:E:537:ASN:HD22	1.87	0.40
1:J:398:LEU:HD23	1:J:449:THR:HG22	2.02	0.40
1:D:354:LEU:HD12	1:D:354:LEU:HA	1.83	0.40
1:D:521:LEU:HG	1:D:525:LYS:NZ	2.36	0.40
1:E:303:GLN:C	1:E:306:ALA:H	2.30	0.40
1:E:308:LEU:HD23	1:E:311:VAL:CG2	2.51	0.40
1:G:534:ARG:HE	1:G:534:ARG:HB2	1.56	0.40
1:H:504:MET:O	1:H:507:GLU:HB2	2.21	0.40
1:K:386:LEU:HD12	1:K:390:GLU:O	2.21	0.40
1:L:326:LYS:CE	1:L:334:ILE:HD13	2.47	0.40
1:A:312:VAL:HA	1:A:384:SER:OG	2.22	0.40
1:B:317:PRO:HB3	1:B:385:TYR:CD2	2.56	0.40
1:D:329:GLU:CA	1:D:334:ILE:HA	2.51	0.40
1:E:484:PRO:HD3	1:E:499:TRP:CE2	2.57	0.40
1:F:354:LEU:N	3:F:701:HOH:O	2.50	0.40
1:G:534:ARG:HB3	1:G:538:LEU:HD21	2.03	0.40
1:G:589:ARG:HB2	1:G:590:THR:H	1.66	0.40
1:H:326:LYS:HE2	1:H:329:GLU:HB2	2.02	0.40
1:H:510:ASP:OD1	1:H:537:ASN:OD1	2.38	0.40
1:L:395:MET:HE2	1:L:395:MET:HB3	1.97	0.40
1:B:351:LYS:HG2	1:B:392:TRP:NE1	2.36	0.40
1:C:428:LEU:HD23	1:C:428:LEU:HA	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:379:VAL:HG23	1:H:456:LEU:O	2.21	0.40
1:I:317:PRO:HG3	1:I:385:TYR:CG	2.57	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	286/292 (98%)	277 (97%)	7 (2%)	2 (1%)	18	19
1	B	286/292 (98%)	271 (95%)	12 (4%)	3 (1%)	12	11
1	C	288/292 (99%)	273 (95%)	10 (4%)	5 (2%)	7	5
1	D	286/292 (98%)	266 (93%)	16 (6%)	4 (1%)	9	7
1	E	286/292 (98%)	271 (95%)	12 (4%)	3 (1%)	12	11
1	F	286/292 (98%)	271 (95%)	12 (4%)	3 (1%)	12	11
1	G	286/292 (98%)	272 (95%)	12 (4%)	2 (1%)	18	19
1	H	286/292 (98%)	276 (96%)	6 (2%)	4 (1%)	9	7
1	I	284/292 (97%)	271 (95%)	9 (3%)	4 (1%)	9	7
1	J	286/292 (98%)	274 (96%)	8 (3%)	4 (1%)	9	7
1	K	284/292 (97%)	266 (94%)	12 (4%)	6 (2%)	5	3
1	L	286/292 (98%)	267 (93%)	11 (4%)	8 (3%)	4	2
All	All	3430/3504 (98%)	3255 (95%)	127 (4%)	48 (1%)	9	7

All (48) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	313	ASP
1	E	313	ASP

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Mol	Chain	Res	Type
1	E	314	PRO
1	F	330	GLY
1	F	358	GLN
1	F	538	LEU
1	G	331	SER
1	G	356	LYS
1	H	359	ARG
1	H	538	LEU
1	I	331	SER
1	I	359	ARG
1	K	538	LEU
1	L	312	VAL
1	L	313	ASP
1	C	302	GLU
1	C	310	LEU
1	C	352	MET
1	J	359	ARG
1	K	310	LEU
1	L	355	ARG
1	A	359	ARG
1	C	356	LYS
1	D	318	ARG
1	E	354	LEU
1	J	538	LEU
1	L	320	TYR
1	L	330	GLY
1	L	359	ARG
1	B	537	ASN
1	B	538	LEU
1	C	331	SER
1	D	328	GLY
1	H	320	TYR
1	J	320	TYR
1	K	313	ASP
1	K	357	GLN
1	L	314	PRO
1	A	537	ASN
1	B	358	GLN
1	D	303	GLN
1	I	305	ARG
1	J	314	PRO
1	K	306	ALA

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Mol	Chain	Res	Type
1	L	538	LEU
1	H	330	GLY
1	I	320	TYR
1	K	311	VAL

5.3.2 Protein sidechains ⓘ

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	251/254 (99%)	226 (90%)	25 (10%)	7	7
1	B	251/254 (99%)	226 (90%)	25 (10%)	7	7
1	C	253/254 (100%)	235 (93%)	18 (7%)	13	16
1	D	249/254 (98%)	231 (93%)	18 (7%)	13	15
1	E	251/254 (99%)	231 (92%)	20 (8%)	11	13
1	F	251/254 (99%)	214 (85%)	37 (15%)	3	2
1	G	251/254 (99%)	230 (92%)	21 (8%)	10	11
1	H	251/254 (99%)	228 (91%)	23 (9%)	8	9
1	I	249/254 (98%)	223 (90%)	26 (10%)	7	7
1	J	251/254 (99%)	226 (90%)	25 (10%)	7	7
1	K	249/254 (98%)	226 (91%)	23 (9%)	8	9
1	L	251/254 (99%)	217 (86%)	34 (14%)	4	3
All	All	3008/3048 (99%)	2713 (90%)	295 (10%)	7	8

All (295) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	302	GLU
1	A	311	VAL
1	A	318	ARG
1	A	321	LEU
1	A	322	ASP
1	A	332	THR

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Mol	Chain	Res	Type
1	A	352	MET
1	A	354	LEU
1	A	355	ARG
1	A	356	LYS
1	A	357	GLN
1	A	363	LEU
1	A	364	PHE
1	A	368	VAL
1	A	374	GLN
1	A	376	GLU
1	A	386	LEU
1	A	389	ASP
1	A	473	LYS
1	A	476	VAL
1	A	531	LEU
1	A	538	LEU
1	A	539	HIS
1	A	541	VAL
1	A	590	THR
1	B	303	GLN
1	B	305	ARG
1	B	308	LEU
1	B	310	LEU
1	B	329	GLU
1	B	334	ILE
1	B	345	LYS
1	B	356	LYS
1	B	357	GLN
1	B	369	ILE
1	B	376	GLU
1	B	386	LEU
1	B	410	THR
1	B	411	ARG
1	B	415	GLU
1	B	434	GLN
1	B	444	ASP
1	B	467	LYS
1	B	468	GLU
1	B	537	ASN
1	B	538	LEU
1	B	541	VAL
1	B	544	SER

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Mol	Chain	Res	Type
1	B	555	ARG
1	B	589	ARG
1	C	302	GLU
1	C	303	GLN
1	C	310	LEU
1	C	318	ARG
1	C	332	THR
1	C	334	ILE
1	C	351	LYS
1	C	355	ARG
1	C	360	ARG
1	C	374	GLN
1	C	386	LEU
1	C	390	GLU
1	C	407	VAL
1	C	415	GLU
1	C	444	ASP
1	C	476	VAL
1	C	541	VAL
1	C	568	LYS
1	D	303	GLN
1	D	313	ASP
1	D	318	ARG
1	D	342	SER
1	D	353	ASP
1	D	354	LEU
1	D	356	LYS
1	D	360	ARG
1	D	363	LEU
1	D	374	GLN
1	D	376	GLU
1	D	411	ARG
1	D	444	ASP
1	D	473	LYS
1	D	536	LYS
1	D	540	LYS
1	D	541	VAL
1	D	546	LYS
1	E	308	LEU
1	E	310	LEU
1	E	318	ARG
1	E	329	GLU

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Mol	Chain	Res	Type
1	E	334	ILE
1	E	357	GLN
1	E	358	GLN
1	E	369	ILE
1	E	386	LEU
1	E	410	THR
1	E	444	ASP
1	E	521	LEU
1	E	527	ILE
1	E	534	ARG
1	E	539	HIS
1	E	540	LYS
1	E	541	VAL
1	E	559	GLN
1	E	568	LYS
1	E	590	THR
1	F	302	GLU
1	F	303	GLN
1	F	308	LEU
1	F	309	GLN
1	F	310	LEU
1	F	318	ARG
1	F	321	LEU
1	F	350	LYS
1	F	352	MET
1	F	354	LEU
1	F	356	LYS
1	F	361	GLU
1	F	363	LEU
1	F	368	VAL
1	F	369	ILE
1	F	374	GLN
1	F	389	ASP
1	F	410	THR
1	F	411	ARG
1	F	415	GLU
1	F	422	LEU
1	F	436	VAL
1	F	444	ASP
1	F	467	LYS
1	F	468	GLU
1	F	472	ARG

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Mol	Chain	Res	Type
1	F	473	LYS
1	F	475	LEU
1	F	490	LEU
1	F	525	LYS
1	F	536	LYS
1	F	540	LYS
1	F	549	LEU
1	F	574	LYS
1	F	581	ILE
1	F	587	GLN
1	F	590	THR
1	G	303	GLN
1	G	304	PHE
1	G	305	ARG
1	G	313	ASP
1	G	327	ILE
1	G	354	LEU
1	G	356	LYS
1	G	374	GLN
1	G	376	GLU
1	G	399	GLU
1	G	407	VAL
1	G	415	GLU
1	G	464	GLN
1	G	468	GLU
1	G	475	LEU
1	G	522	LYS
1	G	534	ARG
1	G	538	LEU
1	G	540	LYS
1	G	587	GLN
1	G	590	THR
1	H	308	LEU
1	H	313	ASP
1	H	318	ARG
1	H	319	SER
1	H	331	SER
1	H	354	LEU
1	H	356	LYS
1	H	358	GLN
1	H	369	ILE
1	H	376	GLU

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Mol	Chain	Res	Type
1	H	395	MET
1	H	407	VAL
1	H	444	ASP
1	H	469	VAL
1	H	471	ARG
1	H	475	LEU
1	H	521	LEU
1	H	534	ARG
1	H	536	LYS
1	H	537	ASN
1	H	538	LEU
1	H	541	VAL
1	H	589	ARG
1	I	305	ARG
1	I	308	LEU
1	I	310	LEU
1	I	311	VAL
1	I	329	GLU
1	I	334	ILE
1	I	341	ARG
1	I	352	MET
1	I	354	LEU
1	I	356	LYS
1	I	365	ASN
1	I	368	VAL
1	I	374	GLN
1	I	376	GLU
1	I	383	ASN
1	I	384	SER
1	I	405	ASP
1	I	407	VAL
1	I	444	ASP
1	I	473	LYS
1	I	531	LEU
1	I	541	VAL
1	I	551	ARG
1	I	555	ARG
1	I	559	GLN
1	I	582	VAL
1	J	302	GLU
1	J	303	GLN
1	J	310	LEU

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Mol	Chain	Res	Type
1	J	325	ILE
1	J	329	GLU
1	J	354	LEU
1	J	355	ARG
1	J	357	GLN
1	J	359	ARG
1	J	360	ARG
1	J	363	LEU
1	J	374	GLN
1	J	386	LEU
1	J	410	THR
1	J	415	GLU
1	J	444	ASP
1	J	468	GLU
1	J	473	LYS
1	J	476	VAL
1	J	489	ARG
1	J	522	LYS
1	J	534	ARG
1	J	537	ASN
1	J	538	LEU
1	J	590	THR
1	K	304	PHE
1	K	305	ARG
1	K	310	LEU
1	K	312	VAL
1	K	321	LEU
1	K	332	THR
1	K	352	MET
1	K	354	LEU
1	K	359	ARG
1	K	360	ARG
1	K	363	LEU
1	K	369	ILE
1	K	384	SER
1	K	407	VAL
1	K	410	THR
1	K	469	VAL
1	K	472	ARG
1	K	475	LEU
1	K	476	VAL
1	K	521	LEU

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Mol	Chain	Res	Type
1	K	531	LEU
1	K	536	LYS
1	K	581	ILE
1	L	308	LEU
1	L	312	VAL
1	L	321	LEU
1	L	329	GLU
1	L	354	LEU
1	L	359	ARG
1	L	362	LEU
1	L	363	LEU
1	L	368	VAL
1	L	369	ILE
1	L	384	SER
1	L	386	LEU
1	L	387	VAL
1	L	389	ASP
1	L	429	SER
1	L	431	LEU
1	L	434	GLN
1	L	436	VAL
1	L	467	LYS
1	L	472	ARG
1	L	473	LYS
1	L	495	GLU
1	L	501	LEU
1	L	522	LYS
1	L	531	LEU
1	L	535	LEU
1	L	536	LYS
1	L	538	LEU
1	L	541	VAL
1	L	555	ARG
1	L	568	LYS
1	L	582	VAL
1	L	586	ARG
1	L	590	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (33) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	358	GLN

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Mol	Chain	Res	Type
1	A	365	ASN
1	A	374	GLN
1	A	588	ASN
1	B	539	HIS
1	C	301	HIS
1	C	303	GLN
1	C	517	ASN
1	D	303	GLN
1	D	383	ASN
1	D	409	HIS
1	D	434	GLN
1	D	588	ASN
1	E	409	HIS
1	E	434	GLN
1	E	450	HIS
1	E	537	ASN
1	F	588	ASN
1	G	450	HIS
1	G	464	GLN
1	G	539	HIS
1	H	309	GLN
1	H	432	HIS
1	H	450	HIS
1	I	383	ASN
1	I	464	GLN
1	J	303	GLN
1	J	358	GLN
1	J	450	HIS
1	J	588	ASN
1	K	357	GLN
1	K	358	GLN
1	L	537	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

12 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul

statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
1	SEP	F	474	1	8,9,10	1.69	2 (25%)	8,12,14	0.97	0
1	SEP	B	474	1	8,9,10	1.49	1 (12%)	8,12,14	2.67	3 (37%)
1	SEP	G	474	1	8,9,10	1.42	1 (12%)	8,12,14	1.36	2 (25%)
1	SEP	I	474	1	8,9,10	1.67	1 (12%)	8,12,14	2.74	2 (25%)
1	SEP	E	474	1	8,9,10	1.52	1 (12%)	8,12,14	1.44	1 (12%)
1	SEP	D	474	1	8,9,10	1.54	2 (25%)	8,12,14	1.37	2 (25%)
1	SEP	K	474	1	8,9,10	1.60	1 (12%)	8,12,14	1.39	2 (25%)
1	SEP	L	474	1	8,9,10	1.68	1 (12%)	8,12,14	2.60	3 (37%)
1	SEP	C	474	1	8,9,10	1.41	1 (12%)	8,12,14	1.53	1 (12%)
1	SEP	J	474	1	8,9,10	1.63	1 (12%)	8,12,14	2.48	3 (37%)
1	SEP	H	474	1	8,9,10	1.48	1 (12%)	8,12,14	1.25	1 (12%)
1	SEP	A	474	1	8,9,10	1.15	0	8,12,14	1.85	3 (37%)

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
1	SEP	F	474	1	-	0/5/8/10	-
1	SEP	B	474	1	-	4/5/8/10	-
1	SEP	G	474	1	-	0/5/8/10	-
1	SEP	I	474	1	-	4/5/8/10	-
1	SEP	E	474	1	-	0/5/8/10	-
1	SEP	D	474	1	-	0/5/8/10	-
1	SEP	K	474	1	-	3/5/8/10	-
1	SEP	L	474	1	-	0/5/8/10	-
1	SEP	C	474	1	-	0/5/8/10	-
1	SEP	J	474	1	-	1/5/8/10	-
1	SEP	H	474	1	-	3/5/8/10	-
1	SEP	A	474	1	-	0/5/8/10	-

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	I	474	SEP	P-O1P	3.77	1.62	1.50
1	F	474	SEP	P-O1P	3.68	1.62	1.50
1	J	474	SEP	P-O1P	3.63	1.62	1.50
1	L	474	SEP	P-O1P	3.63	1.62	1.50
1	K	474	SEP	P-O1P	3.44	1.61	1.50
1	D	474	SEP	P-O1P	3.29	1.61	1.50
1	C	474	SEP	P-O1P	3.23	1.60	1.50
1	H	474	SEP	P-O1P	3.19	1.60	1.50
1	E	474	SEP	P-O1P	3.16	1.60	1.50
1	B	474	SEP	P-O1P	3.01	1.60	1.50
1	G	474	SEP	P-O1P	2.99	1.60	1.50
1	F	474	SEP	P-O3P	2.12	1.63	1.54
1	D	474	SEP	P-O3P	2.08	1.62	1.54

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	474	SEP	OG-CB-CA	-5.80	102.50	108.14
1	L	474	SEP	OG-CB-CA	5.33	113.33	108.14
1	I	474	SEP	OG-CB-CA	5.16	113.17	108.14
1	I	474	SEP	P-OG-CB	-5.14	104.13	118.30
1	J	474	SEP	P-OG-CB	-4.79	105.11	118.30
1	L	474	SEP	P-OG-CB	-4.11	106.98	118.30
1	J	474	SEP	OG-CB-CA	3.51	111.56	108.14
1	A	474	SEP	OG-P-O1P	-3.50	96.65	106.47
1	J	474	SEP	O3P-P-OG	3.43	115.86	106.73
1	H	474	SEP	OG-P-O1P	3.23	115.53	106.47
1	B	474	SEP	O2P-P-OG	-3.21	98.18	106.73
1	C	474	SEP	O2P-P-OG	3.04	114.82	106.73
1	E	474	SEP	OG-P-O1P	3.01	114.92	106.47
1	L	474	SEP	O3P-P-OG	2.74	114.03	106.73
1	D	474	SEP	P-OG-CB	-2.58	111.20	118.30
1	G	474	SEP	OG-CB-CA	2.53	110.60	108.14
1	B	474	SEP	OG-P-O1P	2.35	113.07	106.47
1	D	474	SEP	OG-CB-CA	2.30	110.38	108.14
1	G	474	SEP	O3P-P-OG	2.21	112.62	106.73
1	K	474	SEP	O3P-P-O2P	2.18	115.97	107.64
1	A	474	SEP	O3P-P-OG	2.17	112.50	106.73
1	A	474	SEP	O2P-P-OG	2.09	112.30	106.73
1	K	474	SEP	P-OG-CB	-2.06	112.61	118.30

There are no chirality outliers.

All (15) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B	474	SEP	N-CA-CB-OG
1	B	474	SEP	CB-OG-P-O2P
1	B	474	SEP	CB-OG-P-O3P
1	H	474	SEP	CB-OG-P-O2P
1	H	474	SEP	CB-OG-P-O3P
1	I	474	SEP	N-CA-CB-OG
1	I	474	SEP	CB-OG-P-O1P
1	I	474	SEP	CB-OG-P-O2P
1	I	474	SEP	CB-OG-P-O3P
1	J	474	SEP	N-CA-CB-OG
1	K	474	SEP	CB-OG-P-O1P
1	K	474	SEP	CB-OG-P-O2P
1	K	474	SEP	CB-OG-P-O3P
1	B	474	SEP	CB-OG-P-O1P
1	H	474	SEP	CB-OG-P-O1P

There are no ring outliers.

9 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	B	474	SEP	1	0
1	G	474	SEP	3	0
1	I	474	SEP	1	0
1	E	474	SEP	5	0
1	K	474	SEP	1	0
1	C	474	SEP	1	0
1	J	474	SEP	3	0
1	H	474	SEP	2	0
1	A	474	SEP	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

24 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	A1MBG	I	601	-	40,41,41	2.52	9 (22%)	54,57,57	1.61	11 (20%)
2	A1MBG	L	602	-	40,41,41	2.51	8 (20%)	54,57,57	1.71	11 (20%)
2	A1MBG	J	601	-	40,41,41	2.40	10 (25%)	54,57,57	2.28	11 (20%)
2	A1MBG	D	601	-	40,41,41	2.57	12 (30%)	54,57,57	1.60	12 (22%)
2	A1MBG	B	601	-	40,41,41	2.52	11 (27%)	54,57,57	1.83	16 (29%)
2	A1MBG	I	602	-	40,41,41	2.46	10 (25%)	54,57,57	1.75	15 (27%)
2	A1MBG	D	602	-	40,41,41	2.64	13 (32%)	54,57,57	2.48	16 (29%)
2	A1MBG	H	601	-	40,41,41	2.53	10 (25%)	54,57,57	1.97	13 (24%)
2	A1MBG	F	601	-	40,41,41	2.35	10 (25%)	54,57,57	1.84	17 (31%)
2	A1MBG	H	602	-	40,41,41	2.58	14 (35%)	54,57,57	2.25	16 (29%)
2	A1MBG	A	602	-	40,41,41	2.51	11 (27%)	54,57,57	2.20	12 (22%)
2	A1MBG	G	602	-	40,41,41	2.44	12 (30%)	54,57,57	2.63	21 (38%)
2	A1MBG	C	602	-	40,41,41	2.66	11 (27%)	54,57,57	2.03	13 (24%)
2	A1MBG	I	603	-	40,41,41	2.66	11 (27%)	54,57,57	1.97	13 (24%)
2	A1MBG	C	601	-	40,41,41	2.40	9 (22%)	54,57,57	1.92	18 (33%)
2	A1MBG	L	601	-	40,41,41	2.61	11 (27%)	54,57,57	1.72	9 (16%)
2	A1MBG	K	601	-	40,41,41	2.65	10 (25%)	54,57,57	1.69	12 (22%)
2	A1MBG	B	602	-	40,41,41	2.69	13 (32%)	54,57,57	2.13	12 (22%)
2	A1MBG	K	602	-	40,41,41	2.69	11 (27%)	54,57,57	1.91	13 (24%)
2	A1MBG	E	601	-	40,41,41	2.50	13 (32%)	54,57,57	2.31	21 (38%)
2	A1MBG	F	602	-	40,41,41	2.53	11 (27%)	54,57,57	1.99	12 (22%)
2	A1MBG	L	603	-	40,41,41	2.69	13 (32%)	54,57,57	1.79	11 (20%)
2	A1MBG	A	601	-	40,41,41	2.50	14 (35%)	54,57,57	1.84	14 (25%)
2	A1MBG	G	601	-	40,41,41	2.34	10 (25%)	54,57,57	1.79	13 (24%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A1MBG	I	601	-	-	0/22/38/38	1/5/5/5
2	A1MBG	L	602	-	-	0/22/38/38	0/5/5/5
2	A1MBG	J	601	-	-	4/22/38/38	0/5/5/5
2	A1MBG	D	601	-	-	0/22/38/38	0/5/5/5
2	A1MBG	B	601	-	-	0/22/38/38	1/5/5/5
2	A1MBG	I	602	-	-	0/22/38/38	0/5/5/5
2	A1MBG	D	602	-	-	4/22/38/38	0/5/5/5
2	A1MBG	H	601	-	-	0/22/38/38	0/5/5/5
2	A1MBG	F	601	-	-	0/22/38/38	0/5/5/5
2	A1MBG	H	602	-	-	3/22/38/38	0/5/5/5
2	A1MBG	A	602	-	-	4/22/38/38	0/5/5/5
2	A1MBG	G	602	-	-	5/22/38/38	0/5/5/5
2	A1MBG	C	602	-	-	2/22/38/38	0/5/5/5
2	A1MBG	I	603	-	-	2/22/38/38	0/5/5/5
2	A1MBG	C	601	-	-	0/22/38/38	0/5/5/5
2	A1MBG	L	601	-	-	0/22/38/38	1/5/5/5
2	A1MBG	K	601	-	-	0/22/38/38	1/5/5/5
2	A1MBG	B	602	-	-	3/22/38/38	0/5/5/5
2	A1MBG	K	602	-	-	6/22/38/38	0/5/5/5
2	A1MBG	E	601	-	-	4/22/38/38	0/5/5/5
2	A1MBG	F	602	-	-	6/22/38/38	0/5/5/5
2	A1MBG	L	603	-	-	3/22/38/38	0/5/5/5
2	A1MBG	A	601	-	-	0/22/38/38	0/5/5/5
2	A1MBG	G	601	-	-	0/22/38/38	1/5/5/5

All (267) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	602	A1MBG	O14-C15	8.76	1.51	1.38
2	D	601	A1MBG	C09-N11	8.44	1.52	1.34
2	A	602	A1MBG	O14-C15	8.41	1.50	1.38
2	K	601	A1MBG	C09-N11	8.35	1.52	1.34
2	K	602	A1MBG	C09-N11	8.30	1.52	1.34
2	B	602	A1MBG	O14-C15	8.25	1.50	1.38
2	B	601	A1MBG	C09-N11	8.11	1.52	1.34
2	H	601	A1MBG	C09-N11	8.10	1.52	1.34
2	K	602	A1MBG	O14-C15	8.07	1.50	1.38
2	H	602	A1MBG	O14-C15	8.00	1.50	1.38
2	L	601	A1MBG	C09-N11	7.96	1.51	1.34
2	A	601	A1MBG	C09-N11	7.91	1.51	1.34
2	I	601	A1MBG	C09-N11	7.85	1.51	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	603	A1MBG	O14-C15	7.84	1.50	1.38
2	E	601	A1MBG	O14-C15	7.79	1.50	1.38
2	F	601	A1MBG	C09-N11	7.78	1.51	1.34
2	L	603	A1MBG	O14-C15	7.76	1.49	1.38
2	L	603	A1MBG	C09-N11	7.75	1.51	1.34
2	L	602	A1MBG	C09-N11	7.75	1.51	1.34
2	C	601	A1MBG	C09-N11	7.71	1.51	1.34
2	I	603	A1MBG	C09-N11	7.71	1.51	1.34
2	F	602	A1MBG	O14-C15	7.70	1.49	1.38
2	J	601	A1MBG	O14-C15	7.64	1.49	1.38
2	D	602	A1MBG	O14-C15	7.64	1.49	1.38
2	I	602	A1MBG	C09-N11	7.61	1.50	1.34
2	G	601	A1MBG	C09-N11	7.55	1.50	1.34
2	L	602	A1MBG	O14-C15	7.53	1.49	1.38
2	F	602	A1MBG	C09-N11	7.52	1.50	1.34
2	C	602	A1MBG	C09-N11	7.45	1.50	1.34
2	G	602	A1MBG	O14-C15	7.37	1.49	1.38
2	K	601	A1MBG	O14-C15	7.31	1.49	1.38
2	B	602	A1MBG	C09-N11	7.31	1.50	1.34
2	G	602	A1MBG	C09-N11	7.21	1.50	1.34
2	H	601	A1MBG	O14-C15	7.15	1.49	1.38
2	I	602	A1MBG	O14-C15	7.11	1.48	1.38
2	A	602	A1MBG	C09-N11	7.10	1.49	1.34
2	L	601	A1MBG	O14-C15	7.09	1.48	1.38
2	I	601	A1MBG	O14-C15	6.99	1.48	1.38
2	D	602	A1MBG	C09-N11	6.95	1.49	1.34
2	H	602	A1MBG	C09-N11	6.89	1.49	1.34
2	J	601	A1MBG	C09-N11	6.86	1.49	1.34
2	E	601	A1MBG	C09-N11	6.86	1.49	1.34
2	B	602	A1MBG	C23-C24	6.46	1.60	1.50
2	D	601	A1MBG	O14-C15	6.44	1.47	1.38
2	D	602	A1MBG	C23-C24	6.20	1.60	1.50
2	I	603	A1MBG	C23-C24	6.16	1.60	1.50
2	L	601	A1MBG	C23-C24	6.01	1.59	1.50
2	B	601	A1MBG	C23-C24	6.00	1.59	1.50
2	C	601	A1MBG	O14-C15	5.98	1.47	1.38
2	L	603	A1MBG	C24-N26	5.80	1.47	1.34
2	B	601	A1MBG	O14-C15	5.80	1.46	1.38
2	A	601	A1MBG	O14-C15	5.79	1.46	1.38
2	L	602	A1MBG	C23-C24	5.78	1.59	1.50
2	A	601	A1MBG	C23-C24	5.73	1.59	1.50
2	L	603	A1MBG	C23-C24	5.72	1.59	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	K	602	A1MBG	C23-C24	5.72	1.59	1.50
2	F	601	A1MBG	O14-C15	5.68	1.46	1.38
2	G	601	A1MBG	O14-C15	5.68	1.46	1.38
2	K	602	A1MBG	C24-N26	5.58	1.47	1.34
2	L	601	A1MBG	C24-N26	5.54	1.47	1.34
2	C	602	A1MBG	C23-C24	5.51	1.59	1.50
2	K	601	A1MBG	C02-N03	5.43	1.51	1.35
2	I	603	A1MBG	C24-N26	5.40	1.46	1.34
2	C	602	A1MBG	C24-N26	5.38	1.46	1.34
2	K	601	A1MBG	C23-C24	5.31	1.58	1.50
2	E	601	A1MBG	C24-N26	5.30	1.46	1.34
2	H	601	A1MBG	C24-N26	5.27	1.46	1.34
2	B	601	A1MBG	C24-N26	5.17	1.46	1.34
2	D	601	A1MBG	C24-N26	5.17	1.46	1.34
2	D	602	A1MBG	C24-N26	5.14	1.46	1.34
2	K	601	A1MBG	C24-N26	5.14	1.46	1.34
2	I	601	A1MBG	C24-N26	5.12	1.46	1.34
2	I	601	A1MBG	C23-C24	5.10	1.58	1.50
2	D	601	A1MBG	C23-C24	5.09	1.58	1.50
2	H	601	A1MBG	C23-C24	4.97	1.58	1.50
2	E	601	A1MBG	C23-C24	4.96	1.58	1.50
2	I	602	A1MBG	C23-C24	4.96	1.58	1.50
2	H	602	A1MBG	C23-C24	4.96	1.58	1.50
2	B	602	A1MBG	C24-N26	4.94	1.45	1.34
2	C	601	A1MBG	C23-C24	4.93	1.58	1.50
2	A	602	A1MBG	C24-N26	4.93	1.45	1.34
2	H	602	A1MBG	C24-N26	4.86	1.45	1.34
2	F	602	A1MBG	C23-C24	4.83	1.58	1.50
2	I	602	A1MBG	C02-N03	4.83	1.49	1.35
2	G	602	A1MBG	C24-N26	4.83	1.45	1.34
2	B	602	A1MBG	C02-N03	4.79	1.49	1.35
2	G	601	A1MBG	C23-C24	4.79	1.57	1.50
2	F	601	A1MBG	C23-C24	4.76	1.57	1.50
2	L	603	A1MBG	C02-N03	4.75	1.49	1.35
2	A	602	A1MBG	C02-N03	4.73	1.49	1.35
2	D	601	A1MBG	C02-N03	4.70	1.49	1.35
2	L	602	A1MBG	C02-N03	4.70	1.49	1.35
2	E	601	A1MBG	C02-N03	4.67	1.49	1.35
2	B	601	A1MBG	C02-N03	4.64	1.48	1.35
2	K	602	A1MBG	C02-N03	4.64	1.48	1.35
2	D	602	A1MBG	C02-N03	4.63	1.48	1.35
2	L	602	A1MBG	C24-N26	4.58	1.44	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	601	A1MBG	C24-N26	4.57	1.44	1.34
2	A	602	A1MBG	C23-C24	4.55	1.57	1.50
2	J	601	A1MBG	C24-N26	4.54	1.44	1.34
2	H	601	A1MBG	C02-N03	4.53	1.48	1.35
2	A	601	A1MBG	C02-N03	4.52	1.48	1.35
2	C	602	A1MBG	C02-N03	4.50	1.48	1.35
2	H	602	A1MBG	C02-N03	4.49	1.48	1.35
2	G	602	A1MBG	C02-N03	4.47	1.48	1.35
2	F	601	A1MBG	C02-N03	4.44	1.48	1.35
2	F	602	A1MBG	C02-N03	4.39	1.48	1.35
2	I	601	A1MBG	C02-N03	4.38	1.48	1.35
2	F	602	A1MBG	C24-N26	4.37	1.44	1.34
2	J	601	A1MBG	C23-C24	4.36	1.57	1.50
2	F	601	A1MBG	C24-N26	4.35	1.44	1.34
2	I	603	A1MBG	C02-N03	4.35	1.48	1.35
2	L	601	A1MBG	C02-N03	4.29	1.47	1.35
2	G	601	A1MBG	C02-N03	4.22	1.47	1.35
2	A	601	A1MBG	C24-N26	4.18	1.44	1.34
2	C	601	A1MBG	C02-N03	4.11	1.47	1.35
2	I	602	A1MBG	C24-N26	4.05	1.43	1.34
2	J	601	A1MBG	C02-N03	3.90	1.46	1.35
2	A	601	A1MBG	C12-C13	3.90	1.56	1.51
2	G	601	A1MBG	C24-N26	3.79	1.43	1.34
2	L	601	A1MBG	O10-C09	-3.68	1.17	1.24
2	F	602	A1MBG	C12-C13	3.61	1.56	1.51
2	G	602	A1MBG	C34-C35	-3.47	1.33	1.39
2	A	601	A1MBG	O10-C09	-3.45	1.17	1.24
2	I	601	A1MBG	O10-C09	-3.44	1.17	1.24
2	F	601	A1MBG	C34-C19	3.44	1.45	1.39
2	J	601	A1MBG	O10-C09	-3.43	1.17	1.24
2	G	601	A1MBG	O10-C09	-3.39	1.17	1.24
2	D	601	A1MBG	C34-C19	3.39	1.45	1.39
2	L	603	A1MBG	C34-C19	3.35	1.45	1.39
2	F	601	A1MBG	O10-C09	-3.32	1.18	1.24
2	K	601	A1MBG	C37-C01	3.28	1.44	1.38
2	C	601	A1MBG	C34-C19	3.28	1.45	1.39
2	H	602	A1MBG	C12-C13	3.24	1.55	1.51
2	G	602	A1MBG	C23-C24	3.23	1.55	1.50
2	G	601	A1MBG	C12-C13	3.23	1.55	1.51
2	B	601	A1MBG	O10-C09	-3.22	1.18	1.24
2	C	602	A1MBG	C15-C35	3.18	1.42	1.38
2	I	602	A1MBG	C34-C19	3.16	1.45	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	602	A1MBG	O10-C09	-3.16	1.18	1.24
2	G	601	A1MBG	C34-C19	3.12	1.45	1.39
2	D	602	A1MBG	C34-C19	3.11	1.45	1.39
2	L	602	A1MBG	O10-C09	-3.11	1.18	1.24
2	F	602	A1MBG	C15-C35	3.10	1.42	1.38
2	I	602	A1MBG	C15-C35	3.09	1.42	1.38
2	C	601	A1MBG	C12-C13	3.09	1.55	1.51
2	K	601	A1MBG	C34-C19	3.08	1.45	1.39
2	K	601	A1MBG	O10-C09	-3.06	1.18	1.24
2	C	601	A1MBG	O10-C09	-3.04	1.18	1.24
2	K	602	A1MBG	C34-C19	3.04	1.45	1.39
2	D	601	A1MBG	C12-C13	2.99	1.55	1.51
2	I	603	A1MBG	C12-C13	2.99	1.55	1.51
2	H	601	A1MBG	O10-C09	-2.99	1.18	1.24
2	J	601	A1MBG	C15-C35	2.96	1.42	1.38
2	G	602	A1MBG	C12-C13	2.94	1.55	1.51
2	G	602	A1MBG	C34-C19	2.94	1.44	1.39
2	D	601	A1MBG	C15-C35	2.91	1.42	1.38
2	D	602	A1MBG	O10-C09	-2.91	1.18	1.24
2	K	602	A1MBG	C12-C13	2.90	1.55	1.51
2	H	601	A1MBG	C34-C19	2.90	1.44	1.39
2	L	603	A1MBG	C15-C35	2.90	1.42	1.38
2	L	601	A1MBG	C34-C19	2.89	1.44	1.39
2	B	602	A1MBG	C12-C13	2.88	1.55	1.51
2	I	603	A1MBG	C34-C19	2.88	1.44	1.39
2	I	601	A1MBG	C34-C19	2.88	1.44	1.39
2	L	602	A1MBG	C34-C19	2.88	1.44	1.39
2	I	602	A1MBG	O10-C09	-2.84	1.19	1.24
2	C	602	A1MBG	C15-C16	2.82	1.46	1.40
2	F	602	A1MBG	C34-C19	2.82	1.44	1.39
2	L	601	A1MBG	C12-C13	2.81	1.55	1.51
2	E	601	A1MBG	O10-C09	-2.79	1.19	1.24
2	L	603	A1MBG	O10-C09	-2.77	1.19	1.24
2	D	601	A1MBG	O10-C09	-2.75	1.19	1.24
2	A	602	A1MBG	C34-C19	2.73	1.44	1.39
2	A	602	A1MBG	O10-C09	-2.72	1.19	1.24
2	A	601	A1MBG	C34-C19	2.68	1.44	1.39
2	H	602	A1MBG	O10-C09	-2.68	1.19	1.24
2	I	601	A1MBG	C12-C13	2.67	1.55	1.51
2	A	601	A1MBG	C05-N04	2.67	1.40	1.34
2	B	601	A1MBG	C12-C13	2.67	1.55	1.51
2	K	602	A1MBG	O10-C09	-2.67	1.19	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	603	A1MBG	O10-C09	-2.61	1.19	1.24
2	C	602	A1MBG	C34-C19	2.61	1.44	1.39
2	L	603	A1MBG	C15-C16	2.61	1.46	1.40
2	F	602	A1MBG	O10-C09	-2.60	1.19	1.24
2	B	602	A1MBG	C15-C35	2.59	1.42	1.38
2	H	601	A1MBG	C15-C35	2.59	1.42	1.38
2	C	601	A1MBG	C15-C35	2.58	1.42	1.38
2	B	601	A1MBG	C34-C19	2.57	1.44	1.39
2	I	603	A1MBG	C15-C16	2.53	1.45	1.40
2	H	602	A1MBG	C15-C16	2.52	1.45	1.40
2	H	602	A1MBG	C34-C19	2.52	1.44	1.39
2	B	601	A1MBG	C37-C01	2.50	1.43	1.38
2	K	601	A1MBG	C15-C35	2.49	1.42	1.38
2	D	602	A1MBG	C08-C07	2.49	1.39	1.33
2	D	602	A1MBG	C15-C16	2.43	1.45	1.40
2	K	602	A1MBG	C15-C16	2.43	1.45	1.40
2	H	602	A1MBG	C37-C01	2.41	1.43	1.38
2	E	601	A1MBG	C12-C13	2.41	1.54	1.51
2	H	602	A1MBG	C34-C35	-2.41	1.35	1.39
2	C	602	A1MBG	O10-C09	-2.39	1.19	1.24
2	I	602	A1MBG	C05-N04	2.39	1.39	1.34
2	G	601	A1MBG	C15-C35	2.38	1.41	1.38
2	I	603	A1MBG	C34-C35	-2.38	1.35	1.39
2	L	601	A1MBG	C15-C35	2.37	1.41	1.38
2	B	602	A1MBG	C34-C19	2.37	1.43	1.39
2	J	601	A1MBG	C34-C19	2.37	1.43	1.39
2	E	601	A1MBG	C34-C35	-2.36	1.35	1.39
2	I	601	A1MBG	C15-C35	2.34	1.41	1.38
2	L	603	A1MBG	C12-C13	2.33	1.54	1.51
2	K	602	A1MBG	C15-C35	2.31	1.41	1.38
2	J	601	A1MBG	C34-C35	-2.31	1.35	1.39
2	G	602	A1MBG	O10-C09	-2.31	1.20	1.24
2	H	602	A1MBG	C31-N26	2.30	1.51	1.47
2	H	602	A1MBG	C15-C35	2.30	1.41	1.38
2	F	602	A1MBG	C15-C16	2.30	1.45	1.40
2	D	602	A1MBG	C15-C35	2.28	1.41	1.38
2	J	601	A1MBG	C37-C01	2.28	1.42	1.38
2	B	602	A1MBG	C34-C35	-2.25	1.35	1.39
2	B	601	A1MBG	C15-C35	2.24	1.41	1.38
2	A	602	A1MBG	C37-C01	2.24	1.42	1.38
2	B	602	A1MBG	C08-C07	2.23	1.38	1.33
2	A	601	A1MBG	C19-C20	2.22	1.54	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	602	A1MBG	C12-C13	2.21	1.54	1.51
2	F	601	A1MBG	C12-C13	2.20	1.54	1.51
2	E	601	A1MBG	C15-C35	2.20	1.41	1.38
2	H	601	A1MBG	C05-N04	2.20	1.39	1.34
2	E	601	A1MBG	C08-C07	2.19	1.38	1.33
2	E	601	A1MBG	C34-C19	2.19	1.43	1.39
2	A	602	A1MBG	C12-C13	2.18	1.54	1.51
2	L	603	A1MBG	C37-C01	2.18	1.42	1.38
2	G	602	A1MBG	C37-C01	2.18	1.42	1.38
2	I	603	A1MBG	C36-C35	-2.17	1.47	1.50
2	F	602	A1MBG	C37-C01	2.17	1.42	1.38
2	D	602	A1MBG	C34-C35	-2.17	1.35	1.39
2	A	601	A1MBG	C36-C35	-2.15	1.47	1.50
2	F	601	A1MBG	C15-C35	2.15	1.41	1.38
2	C	602	A1MBG	C12-C13	2.15	1.54	1.51
2	L	601	A1MBG	C15-C16	2.14	1.45	1.40
2	B	601	A1MBG	C31-N26	2.14	1.50	1.47
2	B	602	A1MBG	C31-N26	2.13	1.50	1.47
2	L	602	A1MBG	C15-C35	2.12	1.41	1.38
2	A	601	A1MBG	C32-C23	2.11	1.42	1.39
2	G	601	A1MBG	C37-C01	2.10	1.42	1.38
2	K	601	A1MBG	C12-C13	2.10	1.54	1.51
2	D	601	A1MBG	C36-C35	-2.09	1.47	1.50
2	D	602	A1MBG	C37-C01	2.09	1.42	1.38
2	E	601	A1MBG	C36-C35	-2.09	1.47	1.50
2	H	601	A1MBG	C15-C16	2.09	1.45	1.40
2	A	602	A1MBG	C34-C35	-2.08	1.35	1.39
2	E	601	A1MBG	C37-C01	2.08	1.42	1.38
2	G	602	A1MBG	C15-C35	2.08	1.41	1.38
2	A	601	A1MBG	C31-N26	2.07	1.50	1.47
2	C	602	A1MBG	C37-C01	2.07	1.42	1.38
2	D	601	A1MBG	C34-C35	-2.07	1.36	1.39
2	D	602	A1MBG	C31-N26	2.05	1.50	1.47
2	L	603	A1MBG	C08-C07	2.05	1.38	1.33
2	H	602	A1MBG	C18-C19	2.05	1.43	1.39
2	B	602	A1MBG	C15-C16	2.04	1.45	1.40
2	D	601	A1MBG	C37-C01	2.04	1.42	1.38
2	L	601	A1MBG	C37-C01	2.04	1.42	1.38
2	A	602	A1MBG	C15-C35	2.03	1.41	1.38
2	K	602	A1MBG	C08-C07	2.02	1.38	1.33
2	L	603	A1MBG	C31-N26	2.02	1.50	1.47
2	G	602	A1MBG	C08-C07	2.01	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	601	A1MBG	C37-C01	2.01	1.42	1.38
2	F	601	A1MBG	C18-C19	2.01	1.43	1.39

All (332) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	601	A1MBG	O14-C13-C12	-7.97	102.26	109.33
2	A	602	A1MBG	C13-C12-N11	-7.47	95.90	112.16
2	D	602	A1MBG	C23-C24-N26	7.41	128.13	118.72
2	G	602	A1MBG	C13-C12-N11	-7.08	96.76	112.16
2	G	602	A1MBG	O14-C13-C12	7.06	115.60	109.33
2	J	601	A1MBG	C13-C12-N11	-6.47	98.08	112.16
2	I	603	A1MBG	O14-C15-C16	6.35	133.24	123.54
2	H	602	A1MBG	C13-C12-N11	-6.34	98.36	112.16
2	C	602	A1MBG	C13-C12-N11	-6.24	98.58	112.16
2	K	602	A1MBG	O14-C15-C16	6.19	133.01	123.54
2	J	601	A1MBG	C07-C08-C09	-6.12	109.61	121.56
2	D	602	A1MBG	O25-C24-N26	-6.05	112.34	122.34
2	C	602	A1MBG	O14-C15-C16	5.99	132.69	123.54
2	J	601	A1MBG	C08-C09-N11	5.98	126.24	114.97
2	B	602	A1MBG	O14-C15-C16	5.93	132.60	123.54
2	D	602	A1MBG	O14-C15-C16	5.84	132.46	123.54
2	D	602	A1MBG	C13-C12-N11	-5.79	99.56	112.16
2	E	601	A1MBG	O14-C15-C16	5.79	132.39	123.54
2	L	603	A1MBG	O14-C15-C16	5.72	132.28	123.54
2	F	602	A1MBG	C13-C12-N11	-5.61	99.96	112.16
2	J	601	A1MBG	O14-C15-C16	5.58	132.07	123.54
2	A	602	A1MBG	O14-C15-C16	5.56	132.04	123.54
2	H	602	A1MBG	O14-C15-C16	5.56	132.03	123.54
2	B	602	A1MBG	C08-C09-N11	5.54	125.41	114.97
2	D	602	A1MBG	O10-C09-N11	-5.53	113.08	122.23
2	D	602	A1MBG	C08-C09-N11	5.51	125.35	114.97
2	C	602	A1MBG	C07-C08-C09	-5.34	111.13	121.56
2	E	601	A1MBG	C08-C09-N11	5.27	124.91	114.97
2	F	602	A1MBG	O14-C15-C16	5.25	131.56	123.54
2	G	602	A1MBG	C07-C08-C09	-5.18	111.43	121.56
2	B	602	A1MBG	C13-C12-N11	-5.16	100.93	112.16
2	G	602	A1MBG	C19-C18-C16	-5.08	115.30	120.35
2	A	602	A1MBG	C07-C08-C09	-5.08	111.63	121.56
2	L	603	A1MBG	O14-C15-C35	-5.05	107.63	113.42
2	B	602	A1MBG	O14-C13-C12	4.94	113.72	109.33
2	E	601	A1MBG	C13-C12-N11	-4.90	101.50	112.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	602	A1MBG	O14-C13-C12	4.86	113.64	109.33
2	H	602	A1MBG	C08-C09-N11	4.83	124.08	114.97
2	H	602	A1MBG	O10-C09-N11	-4.82	114.26	122.23
2	H	602	A1MBG	O14-C15-C35	-4.79	107.92	113.42
2	A	602	A1MBG	C08-C09-N11	4.69	123.80	114.97
2	A	601	A1MBG	C06-C07-C08	-4.62	116.33	126.91
2	F	602	A1MBG	C08-C09-N11	4.60	123.65	114.97
2	L	601	A1MBG	O14-C15-C16	4.59	130.56	123.54
2	E	601	A1MBG	O10-C09-N11	-4.56	114.69	122.23
2	I	603	A1MBG	O14-C15-C35	-4.54	108.21	113.42
2	K	602	A1MBG	O14-C15-C35	-4.51	108.24	113.42
2	F	602	A1MBG	C07-C08-C09	-4.48	112.80	121.56
2	B	601	A1MBG	O14-C13-C12	-4.44	105.39	109.33
2	K	602	A1MBG	C08-C09-N11	4.44	123.33	114.97
2	F	601	A1MBG	C18-C16-CL17	4.44	125.65	118.49
2	K	601	A1MBG	C06-C07-C08	-4.43	116.77	126.91
2	A	601	A1MBG	C23-C24-N26	4.40	124.30	118.72
2	B	602	A1MBG	O10-C09-N11	-4.39	114.97	122.23
2	A	601	A1MBG	C12-N11-C09	-4.35	117.56	122.47
2	C	601	A1MBG	O14-C13-C12	-4.27	105.54	109.33
2	I	603	A1MBG	O14-C13-C12	4.26	113.11	109.33
2	I	602	A1MBG	C06-C07-C08	-4.23	117.23	126.91
2	G	601	A1MBG	O14-C15-C16	4.19	129.94	123.54
2	G	602	A1MBG	C08-C09-N11	4.18	122.84	114.97
2	I	602	A1MBG	C23-C24-N26	4.16	124.01	118.72
2	L	602	A1MBG	O14-C15-C16	4.16	129.90	123.54
2	I	603	A1MBG	C08-C09-N11	4.16	122.81	114.97
2	I	603	A1MBG	C13-C12-N11	-4.15	103.13	112.16
2	K	602	A1MBG	C13-C12-N11	-4.12	103.19	112.16
2	K	601	A1MBG	C23-C24-N26	4.11	123.93	118.72
2	C	602	A1MBG	O14-C15-C35	-4.09	108.72	113.42
2	E	601	A1MBG	O14-C13-C12	4.09	112.96	109.33
2	E	601	A1MBG	O14-C15-C35	-4.07	108.75	113.42
2	J	601	A1MBG	O14-C15-C35	-4.04	108.78	113.42
2	B	601	A1MBG	C08-C09-N11	4.03	122.57	114.97
2	B	602	A1MBG	O14-C15-C35	-4.02	108.80	113.42
2	G	601	A1MBG	O14-C15-C35	-4.00	108.82	113.42
2	H	601	A1MBG	C23-C24-N26	4.00	123.80	118.72
2	F	601	A1MBG	O14-C13-C12	-4.00	105.78	109.33
2	J	601	A1MBG	C37-C06-C05	3.98	121.49	117.09
2	J	601	A1MBG	O10-C09-N11	-3.97	115.66	122.23
2	H	602	A1MBG	C07-C08-C09	-3.96	113.82	121.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	602	A1MBG	O14-C13-C12	3.95	112.84	109.33
2	F	602	A1MBG	O14-C13-C12	3.95	112.83	109.33
2	L	601	A1MBG	C23-C24-N26	3.94	123.72	118.72
2	G	601	A1MBG	O14-C13-C12	-3.93	105.84	109.33
2	C	601	A1MBG	C06-C07-C08	-3.93	117.92	126.91
2	E	601	A1MBG	C07-C08-C09	-3.93	113.89	121.56
2	B	602	A1MBG	C07-C08-C09	-3.92	113.89	121.56
2	L	601	A1MBG	C06-C07-C08	-3.91	117.96	126.91
2	D	602	A1MBG	O14-C15-C35	-3.91	108.94	113.42
2	G	602	A1MBG	C34-C19-C18	3.89	124.06	118.31
2	I	602	A1MBG	O14-C15-C16	3.87	129.46	123.54
2	F	601	A1MBG	C23-C24-N26	3.87	123.63	118.72
2	L	601	A1MBG	O14-C15-C35	-3.87	108.98	113.42
2	I	601	A1MBG	C23-C24-N26	3.86	123.62	118.72
2	H	601	A1MBG	O14-C15-C16	3.85	129.43	123.54
2	B	601	A1MBG	C18-C16-CL17	3.85	124.71	118.49
2	G	602	A1MBG	C12-N11-C09	3.82	126.77	122.47
2	A	601	A1MBG	O14-C15-C16	3.77	129.30	123.54
2	G	602	A1MBG	O14-C15-C16	3.77	129.29	123.54
2	K	601	A1MBG	O14-C15-C16	3.71	129.22	123.54
2	F	601	A1MBG	C06-C07-C08	-3.71	118.41	126.91
2	E	601	A1MBG	C06-C05-N04	-3.69	120.14	124.21
2	L	602	A1MBG	O14-C13-C12	-3.68	106.06	109.33
2	C	601	A1MBG	O14-C15-C16	3.66	129.13	123.54
2	A	601	A1MBG	O25-C24-N26	-3.66	116.30	122.34
2	J	601	A1MBG	C06-C05-N04	-3.64	120.19	124.21
2	L	602	A1MBG	O25-C24-N26	-3.63	116.34	122.34
2	G	602	A1MBG	O10-C09-N11	-3.62	116.23	122.23
2	D	602	A1MBG	C07-C08-C09	-3.61	114.50	121.56
2	D	601	A1MBG	C12-N11-C09	-3.60	118.40	122.47
2	A	602	A1MBG	O10-C09-N11	-3.58	116.31	122.23
2	A	601	A1MBG	C08-C09-N11	3.55	121.66	114.97
2	C	601	A1MBG	C23-C24-N26	3.53	123.20	118.72
2	A	602	A1MBG	C06-C05-N04	-3.53	120.31	124.21
2	I	601	A1MBG	O14-C13-C12	-3.52	106.21	109.33
2	G	602	A1MBG	O14-C15-C35	-3.50	109.39	113.42
2	F	602	A1MBG	O14-C15-C35	-3.49	109.41	113.42
2	K	602	A1MBG	C12-N11-C09	3.45	126.36	122.47
2	G	602	A1MBG	C36-C35-C15	3.45	110.94	107.93
2	I	601	A1MBG	O14-C15-C16	3.44	128.79	123.54
2	B	601	A1MBG	C06-C05-N04	-3.43	120.42	124.21
2	K	602	A1MBG	O14-C13-C12	3.42	112.37	109.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	601	A1MBG	C23-C24-N26	3.42	123.06	118.72
2	G	602	A1MBG	C34-C19-C20	-3.41	115.22	120.86
2	C	602	A1MBG	C08-C09-N11	3.41	121.40	114.97
2	I	602	A1MBG	O25-C24-N26	-3.40	116.71	122.34
2	C	601	A1MBG	O14-C15-C35	-3.40	109.51	113.42
2	F	602	A1MBG	C37-C06-C05	3.39	120.84	117.09
2	L	601	A1MBG	O14-C13-C12	-3.38	106.33	109.33
2	L	601	A1MBG	C08-C09-N11	3.38	121.34	114.97
2	G	602	A1MBG	C06-C05-N04	-3.32	120.55	124.21
2	H	601	A1MBG	O14-C15-C35	-3.32	109.61	113.42
2	B	602	A1MBG	C06-C05-N04	-3.29	120.58	124.21
2	G	601	A1MBG	C06-C07-C08	-3.28	119.41	126.91
2	B	601	A1MBG	C23-C24-N26	3.27	122.88	118.72
2	K	602	A1MBG	C30-C31-N26	3.27	116.66	109.45
2	A	602	A1MBG	O14-C15-C35	-3.26	109.67	113.42
2	E	601	A1MBG	C12-N11-C09	3.26	126.14	122.47
2	K	601	A1MBG	C06-C05-N04	-3.25	120.62	124.21
2	A	602	A1MBG	C37-C06-C05	3.24	120.68	117.09
2	L	602	A1MBG	C06-C05-N04	-3.24	120.63	124.21
2	B	601	A1MBG	C06-C07-C08	-3.23	119.52	126.91
2	D	601	A1MBG	C18-C16-CL17	3.22	123.69	118.49
2	I	603	A1MBG	C07-C08-C09	-3.21	115.28	121.56
2	F	601	A1MBG	C01-C37-C06	-3.19	117.09	121.25
2	C	601	A1MBG	C12-N11-C09	-3.17	118.89	122.47
2	D	601	A1MBG	O14-C15-C16	3.17	128.38	123.54
2	L	603	A1MBG	C08-C09-N11	3.16	120.93	114.97
2	K	602	A1MBG	C06-C05-N04	-3.16	120.72	124.21
2	H	601	A1MBG	C06-C05-N04	-3.15	120.73	124.21
2	F	602	A1MBG	C06-C05-N04	-3.13	120.75	124.21
2	L	602	A1MBG	C12-N11-C09	-3.11	118.96	122.47
2	L	603	A1MBG	C13-C12-N11	-3.10	105.41	112.16
2	K	601	A1MBG	C18-C16-CL17	3.09	123.48	118.49
2	I	601	A1MBG	C06-C07-C08	-3.06	119.90	126.91
2	A	601	A1MBG	C18-C16-CL17	3.06	123.42	118.49
2	H	602	A1MBG	C28-C27-N26	3.05	116.18	109.45
2	L	603	A1MBG	C23-C24-N26	3.03	122.56	118.72
2	I	602	A1MBG	C18-C16-CL17	3.01	123.35	118.49
2	L	602	A1MBG	C23-C24-N26	3.00	122.53	118.72
2	G	602	A1MBG	C01-C37-C06	-3.00	117.34	121.25
2	C	602	A1MBG	C37-C06-C05	2.96	120.37	117.09
2	E	601	A1MBG	C34-C19-C18	2.96	122.69	118.31
2	G	602	A1MBG	C32-C23-C22	2.94	122.78	118.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	601	A1MBG	C06-C07-C08	-2.94	120.18	126.91
2	J	601	A1MBG	C01-C37-C06	-2.94	117.42	121.25
2	H	601	A1MBG	C30-C31-N26	2.94	115.92	109.45
2	F	601	A1MBG	O25-C24-N26	-2.94	117.48	122.34
2	C	602	A1MBG	C06-C05-N04	-2.94	120.97	124.21
2	F	602	A1MBG	C01-C37-C06	-2.93	117.42	121.25
2	B	602	A1MBG	O25-C24-N26	-2.91	117.53	122.34
2	L	603	A1MBG	C06-C05-N04	-2.90	121.01	124.21
2	G	601	A1MBG	C08-C09-N11	2.89	120.42	114.97
2	A	602	A1MBG	C23-C24-N26	2.84	122.33	118.72
2	G	602	A1MBG	C33-C20-C19	-2.84	116.44	121.36
2	L	603	A1MBG	C06-C07-C08	-2.83	120.42	126.91
2	L	602	A1MBG	C08-C09-N11	2.83	120.31	114.97
2	I	601	A1MBG	C19-C34-C35	-2.82	117.68	121.90
2	I	601	A1MBG	O14-C15-C35	-2.82	110.18	113.42
2	E	601	A1MBG	C19-C34-C35	-2.82	117.69	121.90
2	L	603	A1MBG	O10-C09-N11	-2.81	117.58	122.23
2	K	602	A1MBG	C31-C30-N29	2.80	118.38	111.12
2	D	602	A1MBG	C33-C20-C19	-2.79	116.52	121.36
2	G	602	A1MBG	C33-C20-C21	2.79	123.15	117.59
2	L	602	A1MBG	C06-C07-C08	-2.79	120.53	126.91
2	C	601	A1MBG	C30-N29-C28	2.78	118.32	110.34
2	L	603	A1MBG	C33-C20-C19	-2.77	116.56	121.36
2	A	602	A1MBG	C01-C37-C06	-2.77	117.64	121.25
2	A	601	A1MBG	C06-C05-N04	-2.76	121.17	124.21
2	K	601	A1MBG	O14-C13-C12	-2.75	106.89	109.33
2	I	602	A1MBG	O14-C15-C35	-2.73	110.28	113.42
2	G	602	A1MBG	C37-C06-C05	2.73	120.11	117.09
2	H	602	A1MBG	C06-C05-N04	-2.73	121.20	124.21
2	F	601	A1MBG	C34-C19-C18	2.73	122.34	118.31
2	I	603	A1MBG	O25-C24-N26	-2.70	117.87	122.34
2	G	602	A1MBG	C18-C16-CL17	2.70	122.85	118.49
2	I	603	A1MBG	O10-C09-N11	-2.69	117.78	122.23
2	I	601	A1MBG	C06-C05-N04	-2.68	121.25	124.21
2	D	601	A1MBG	C23-C24-N26	2.68	122.11	118.72
2	I	602	A1MBG	C08-C09-N11	2.67	120.01	114.97
2	H	601	A1MBG	C18-C16-CL17	2.66	122.79	118.49
2	D	601	A1MBG	C08-C09-N11	2.66	119.98	114.97
2	F	601	A1MBG	C15-C16-CL17	-2.65	114.93	118.41
2	D	602	A1MBG	C06-C05-N04	-2.65	121.28	124.21
2	K	601	A1MBG	O14-C15-C35	-2.65	110.38	113.42
2	H	602	A1MBG	C36-C35-C15	2.64	110.23	107.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	601	A1MBG	C18-C16-C15	-2.64	118.46	122.51
2	H	602	A1MBG	C01-C37-C06	-2.63	117.81	121.25
2	C	601	A1MBG	O25-C24-N26	-2.63	117.99	122.34
2	G	601	A1MBG	C01-C37-C06	-2.62	117.83	121.25
2	I	602	A1MBG	C30-C31-N26	2.62	115.23	109.45
2	F	601	A1MBG	O14-C15-C35	-2.62	110.41	113.42
2	E	601	A1MBG	C37-C06-C05	2.61	119.97	117.09
2	H	602	A1MBG	C30-C31-N26	2.60	115.19	109.45
2	I	603	A1MBG	C06-C05-N04	-2.60	121.34	124.21
2	D	602	A1MBG	C12-N11-C09	2.57	125.37	122.47
2	I	602	A1MBG	C30-N29-C28	2.57	117.74	110.34
2	I	601	A1MBG	C08-C09-N11	2.57	119.81	114.97
2	F	601	A1MBG	C19-C34-C35	-2.56	118.06	121.90
2	E	601	A1MBG	C30-N29-C28	2.56	117.70	110.34
2	D	601	A1MBG	C06-C07-C08	-2.55	121.06	126.91
2	E	601	A1MBG	C33-C20-C21	2.54	122.65	117.59
2	L	602	A1MBG	O14-C15-C35	-2.54	110.50	113.42
2	C	602	A1MBG	O14-C13-C12	2.51	111.56	109.33
2	C	601	A1MBG	C06-C05-N04	-2.51	121.44	124.21
2	G	601	A1MBG	C34-C19-C18	2.51	122.02	118.31
2	C	601	A1MBG	C34-C19-C18	2.49	122.00	118.31
2	C	602	A1MBG	C01-C37-C06	-2.49	118.00	121.25
2	I	601	A1MBG	C18-C16-CL17	2.49	122.51	118.49
2	H	602	A1MBG	C12-N11-C09	2.48	125.27	122.47
2	H	601	A1MBG	O25-C24-N26	-2.48	118.23	122.34
2	I	603	A1MBG	C01-C37-C06	-2.47	118.02	121.25
2	L	602	A1MBG	C18-C16-CL17	2.47	122.47	118.49
2	L	601	A1MBG	O10-C09-C08	-2.47	117.41	123.03
2	D	602	A1MBG	C31-N26-C27	-2.45	107.90	112.62
2	C	601	A1MBG	C31-C30-N29	2.45	117.47	111.12
2	E	601	A1MBG	C22-C21-C20	-2.45	117.61	121.13
2	A	601	A1MBG	C28-C27-N26	2.45	114.84	109.45
2	A	601	A1MBG	O14-C15-C35	-2.44	110.62	113.42
2	D	601	A1MBG	C06-C05-N04	-2.43	121.52	124.21
2	C	601	A1MBG	C19-C18-C16	-2.43	117.94	120.35
2	B	602	A1MBG	C28-C27-N26	2.42	114.79	109.45
2	E	601	A1MBG	C19-C18-C16	-2.42	117.94	120.35
2	L	602	A1MBG	C07-C08-C09	-2.42	116.83	121.56
2	D	601	A1MBG	C19-C34-C35	-2.42	118.28	121.90
2	C	601	A1MBG	C18-C19-C20	-2.42	116.87	120.86
2	K	602	A1MBG	C07-C08-C09	-2.41	116.84	121.56
2	B	602	A1MBG	C12-N11-C09	2.41	125.18	122.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	601	A1MBG	C28-C27-N26	2.40	114.74	109.45
2	B	601	A1MBG	O14-C15-C35	-2.40	110.67	113.42
2	E	601	A1MBG	C31-N26-C27	-2.39	108.01	112.62
2	E	601	A1MBG	C31-C30-N29	2.39	117.32	111.12
2	F	601	A1MBG	C06-C05-N04	-2.39	121.58	124.21
2	J	601	A1MBG	C37-C01-C02	-2.38	116.91	119.04
2	C	601	A1MBG	C08-C09-N11	2.38	119.45	114.97
2	G	601	A1MBG	O25-C24-N26	-2.38	118.41	122.34
2	H	602	A1MBG	C37-C06-C05	2.35	119.69	117.09
2	B	601	A1MBG	C34-C19-C18	2.33	121.76	118.31
2	B	601	A1MBG	O14-C15-C16	2.33	127.10	123.54
2	E	601	A1MBG	C33-C20-C19	-2.33	117.33	121.36
2	C	601	A1MBG	C30-C31-N26	2.32	114.57	109.45
2	D	601	A1MBG	O14-C15-C35	-2.32	110.75	113.42
2	F	601	A1MBG	C37-C06-C05	2.30	119.64	117.09
2	F	602	A1MBG	O10-C09-N11	-2.30	118.43	122.23
2	B	601	A1MBG	C30-C31-N26	2.30	114.52	109.45
2	D	602	A1MBG	C27-N26-C24	2.29	130.02	122.78
2	G	601	A1MBG	O10-C09-N11	-2.28	118.45	122.23
2	C	602	A1MBG	O10-C09-N11	-2.28	118.46	122.23
2	I	603	A1MBG	C31-N26-C27	-2.28	108.24	112.62
2	H	601	A1MBG	C34-C19-C18	2.27	121.67	118.31
2	B	601	A1MBG	O25-C24-N26	-2.27	118.58	122.34
2	K	601	A1MBG	C30-C31-N26	2.27	114.45	109.45
2	K	601	A1MBG	C05-N04-C02	2.27	124.13	117.63
2	A	601	A1MBG	O14-C13-C12	-2.26	107.33	109.33
2	L	601	A1MBG	C01-C37-C06	-2.25	118.31	121.25
2	G	602	A1MBG	O25-C24-C23	-2.25	115.86	120.23
2	K	601	A1MBG	C28-C27-N26	2.25	114.40	109.45
2	H	602	A1MBG	C33-C20-C19	-2.24	117.47	121.36
2	F	601	A1MBG	O14-C15-C16	2.24	126.97	123.54
2	F	602	A1MBG	O10-C09-C08	-2.24	117.92	123.03
2	G	601	A1MBG	C18-C19-C20	-2.24	117.16	120.86
2	B	601	A1MBG	C18-C16-C15	-2.24	119.07	122.51
2	I	603	A1MBG	C33-C20-C19	-2.24	117.48	121.36
2	K	602	A1MBG	O10-C09-C08	-2.23	117.94	123.03
2	C	602	A1MBG	C36-C35-C15	2.22	109.87	107.93
2	A	602	A1MBG	C19-C18-C16	-2.22	118.14	120.35
2	D	602	A1MBG	O14-C13-C12	2.22	111.30	109.33
2	G	602	A1MBG	C19-C34-C35	-2.21	118.59	121.90
2	B	601	A1MBG	C37-C06-C05	2.21	119.53	117.09
2	H	602	A1MBG	C34-C19-C18	2.20	121.57	118.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	601	A1MBG	C18-C16-C15	-2.20	119.13	122.51
2	B	602	A1MBG	C30-C31-N26	2.18	114.26	109.45
2	L	603	A1MBG	C31-N26-C27	-2.18	108.43	112.62
2	H	601	A1MBG	C19-C34-C35	-2.16	118.66	121.90
2	J	601	A1MBG	O10-C09-C08	-2.16	118.10	123.03
2	I	602	A1MBG	C01-C37-C06	-2.16	118.43	121.25
2	I	601	A1MBG	C34-C19-C18	2.15	121.50	118.31
2	A	601	A1MBG	C18-C16-C15	-2.15	119.21	122.51
2	B	601	A1MBG	O10-C09-N11	-2.15	118.67	122.23
2	E	601	A1MBG	C34-C35-C15	2.15	121.89	120.14
2	D	602	A1MBG	C36-C35-C15	2.15	109.80	107.93
2	I	602	A1MBG	C31-C30-N29	2.14	116.67	111.12
2	I	603	A1MBG	C37-C06-C05	2.13	119.44	117.09
2	D	601	A1MBG	C01-C37-C06	-2.13	118.48	121.25
2	K	602	A1MBG	O10-C09-N11	-2.12	118.72	122.23
2	F	601	A1MBG	C30-C31-N26	2.12	114.12	109.45
2	C	601	A1MBG	C22-C23-C24	-2.12	114.92	120.29
2	F	602	A1MBG	C12-N11-C09	2.12	124.85	122.47
2	I	602	A1MBG	O14-C13-C12	-2.11	107.46	109.33
2	K	602	A1MBG	C37-C06-C05	2.11	119.42	117.09
2	D	601	A1MBG	C32-C23-C22	2.10	121.58	118.59
2	A	601	A1MBG	C34-C35-C15	2.10	121.85	120.14
2	D	601	A1MBG	C34-C19-C18	2.10	121.42	118.31
2	I	602	A1MBG	C34-C19-C18	2.10	121.41	118.31
2	F	601	A1MBG	C19-C18-C16	-2.09	118.27	120.35
2	I	602	A1MBG	C21-C20-C19	-2.09	117.73	121.36
2	A	601	A1MBG	C19-C34-C35	-2.09	118.78	121.90
2	I	602	A1MBG	C06-C05-N04	-2.08	121.91	124.21
2	L	601	A1MBG	O25-C24-N26	-2.08	118.89	122.34
2	C	601	A1MBG	C18-C16-CL17	2.08	121.85	118.49
2	C	602	A1MBG	C23-C24-N26	2.08	121.35	118.72
2	E	601	A1MBG	C34-C19-C20	-2.07	117.43	120.86
2	K	601	A1MBG	C08-C09-N11	2.07	118.87	114.97
2	B	601	A1MBG	C19-C34-C35	-2.07	118.80	121.90
2	G	601	A1MBG	C36-C35-C15	2.05	109.72	107.93
2	K	601	A1MBG	C15-C16-CL17	-2.05	115.72	118.41
2	L	603	A1MBG	C34-C19-C18	2.04	121.33	118.31
2	C	602	A1MBG	C34-C19-C18	2.04	121.33	118.31
2	B	601	A1MBG	C21-C20-C19	-2.03	117.84	121.36
2	F	601	A1MBG	C33-C20-C21	2.01	121.61	117.59
2	F	601	A1MBG	C18-C16-C15	-2.01	119.42	122.51
2	G	601	A1MBG	C15-O14-C13	2.01	108.63	105.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	601	A1MBG	C01-C37-C06	-2.01	118.63	121.25
2	D	602	A1MBG	C28-C27-N26	2.00	113.87	109.45

There are no chirality outliers.

All (46) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	602	A1MBG	N11-C12-C13-C36
2	A	602	A1MBG	C08-C09-N11-C12
2	A	602	A1MBG	O10-C09-N11-C12
2	B	602	A1MBG	C08-C09-N11-C12
2	B	602	A1MBG	O10-C09-N11-C12
2	C	602	A1MBG	C08-C09-N11-C12
2	C	602	A1MBG	O10-C09-N11-C12
2	D	602	A1MBG	C08-C09-N11-C12
2	D	602	A1MBG	O10-C09-N11-C12
2	E	601	A1MBG	C08-C09-N11-C12
2	E	601	A1MBG	O10-C09-N11-C12
2	F	602	A1MBG	N11-C12-C13-C36
2	F	602	A1MBG	C08-C09-N11-C12
2	F	602	A1MBG	O10-C09-N11-C12
2	G	602	A1MBG	N11-C12-C13-C36
2	G	602	A1MBG	C08-C09-N11-C12
2	G	602	A1MBG	O10-C09-N11-C12
2	H	602	A1MBG	C08-C09-N11-C12
2	H	602	A1MBG	O10-C09-N11-C12
2	I	603	A1MBG	C08-C09-N11-C12
2	I	603	A1MBG	O10-C09-N11-C12
2	J	601	A1MBG	N11-C12-C13-C36
2	J	601	A1MBG	N11-C12-C13-O14
2	J	601	A1MBG	C08-C09-N11-C12
2	J	601	A1MBG	O10-C09-N11-C12
2	K	602	A1MBG	C08-C09-N11-C12
2	K	602	A1MBG	O10-C09-N11-C12
2	L	603	A1MBG	C08-C09-N11-C12
2	L	603	A1MBG	O10-C09-N11-C12
2	F	602	A1MBG	C07-C08-C09-N11
2	F	602	A1MBG	C07-C08-C09-O10
2	K	602	A1MBG	C07-C08-C09-N11
2	K	602	A1MBG	C07-C08-C09-O10
2	A	602	A1MBG	N11-C12-C13-O14
2	D	602	A1MBG	N11-C12-C13-C36

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Mol	Chain	Res	Type	Atoms
2	E	601	A1MBG	N11-C12-C13-C36
2	E	601	A1MBG	N11-C12-C13-O14
2	F	602	A1MBG	N11-C12-C13-O14
2	G	602	A1MBG	N11-C12-C13-O14
2	H	602	A1MBG	N11-C12-C13-C36
2	K	602	A1MBG	N11-C12-C13-C36
2	G	602	A1MBG	C07-C08-C09-N11
2	B	602	A1MBG	N11-C12-C13-C36
2	D	602	A1MBG	N11-C12-C13-O14
2	K	602	A1MBG	N11-C12-C13-O14
2	L	603	A1MBG	C13-C12-N11-C09

All (5) ring outliers are listed below:

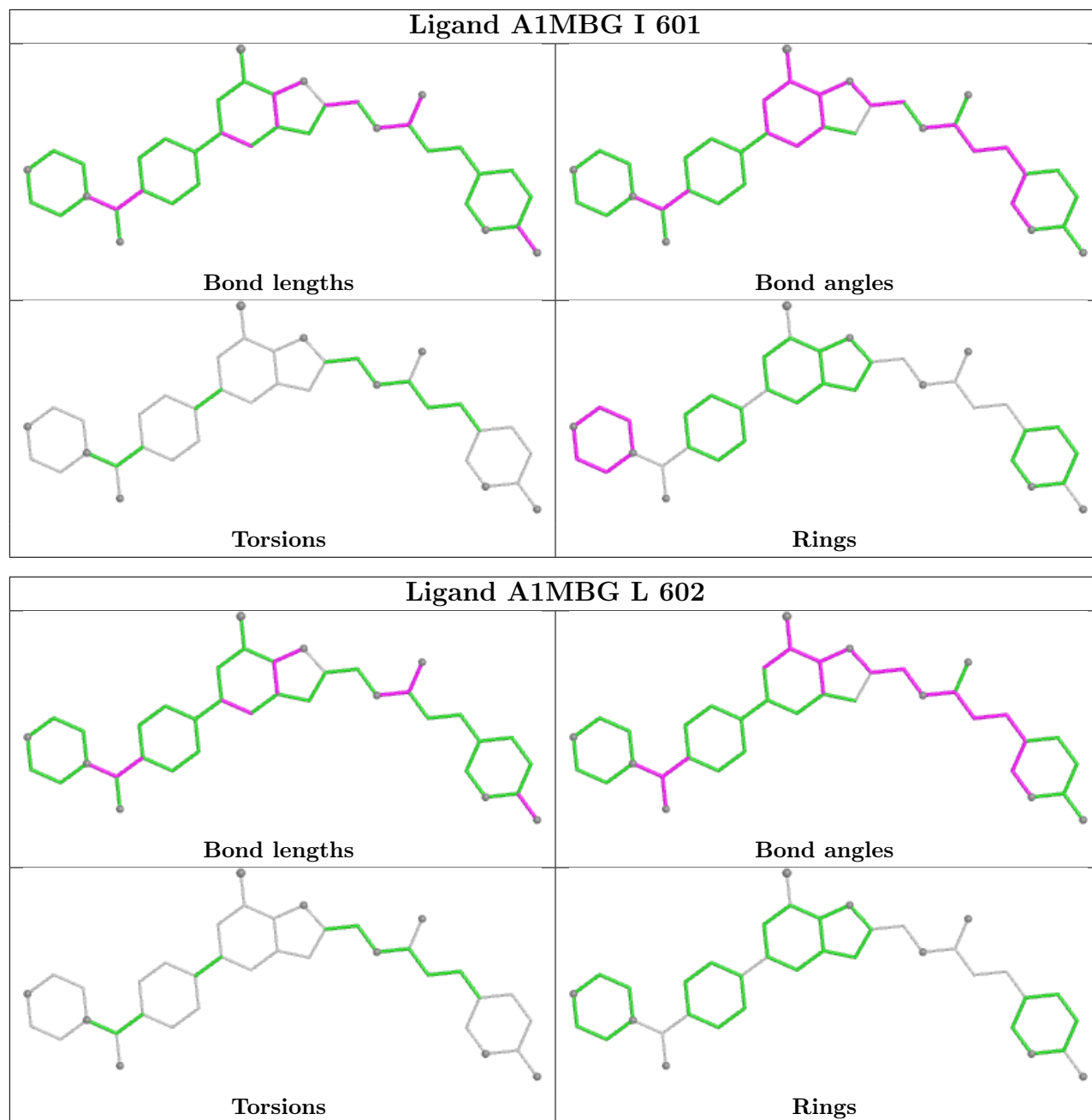
Mol	Chain	Res	Type	Atoms
2	K	601	A1MBG	C27-C28-C30-C31-N26-N29
2	L	601	A1MBG	C27-C28-C30-C31-N26-N29
2	G	601	A1MBG	C27-C28-C30-C31-N26-N29
2	B	601	A1MBG	C27-C28-C30-C31-N26-N29
2	I	601	A1MBG	C27-C28-C30-C31-N26-N29

9 monomers are involved in 11 short contacts:

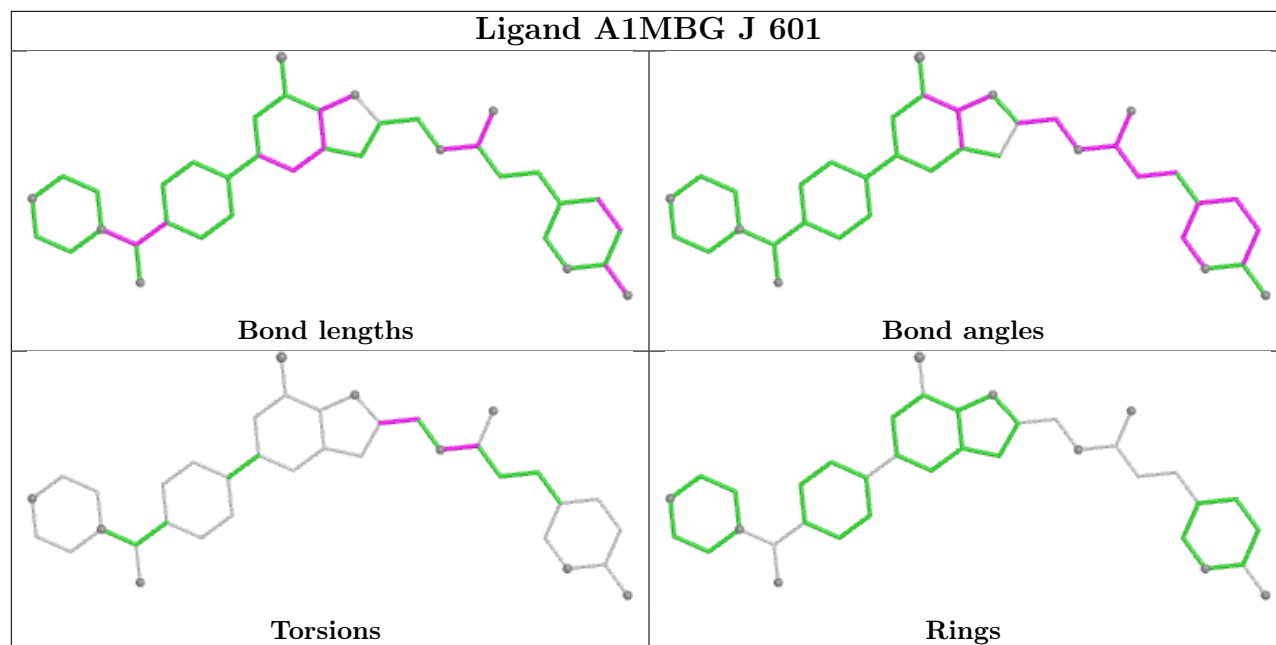
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L	602	A1MBG	2	0
2	D	601	A1MBG	2	0
2	I	602	A1MBG	1	0
2	H	601	A1MBG	1	0
2	F	601	A1MBG	1	0
2	H	602	A1MBG	1	0
2	K	601	A1MBG	1	0
2	E	601	A1MBG	1	0
2	A	601	A1MBG	1	0

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

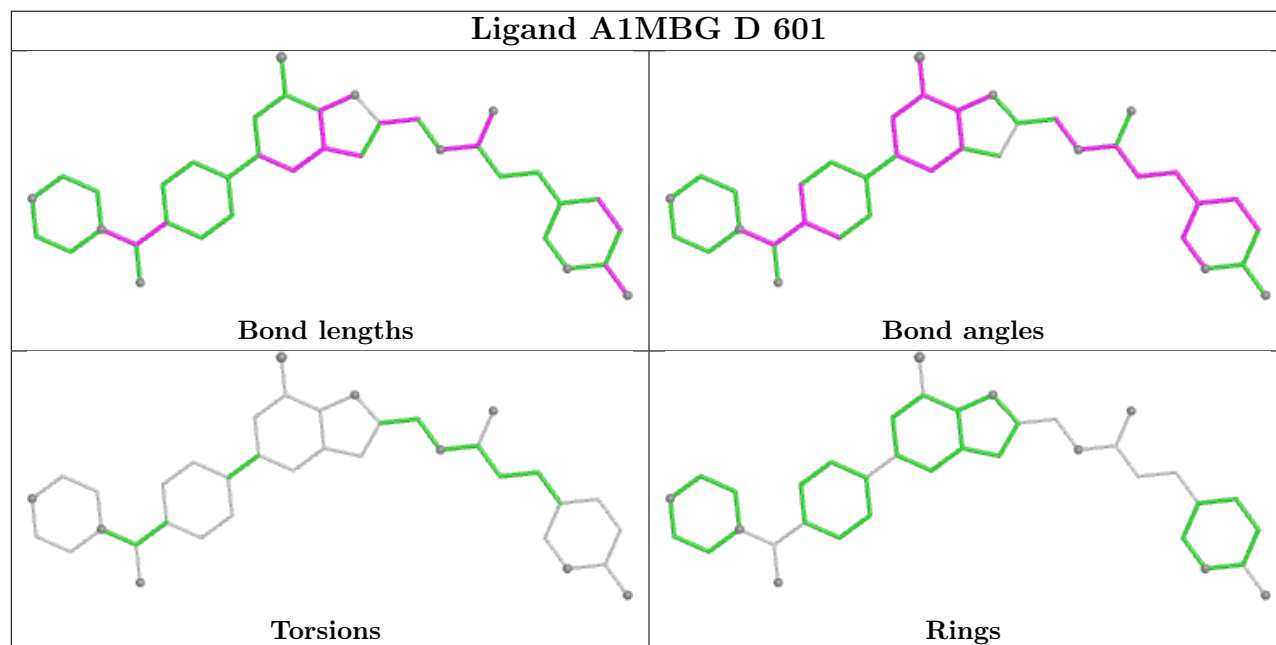
any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



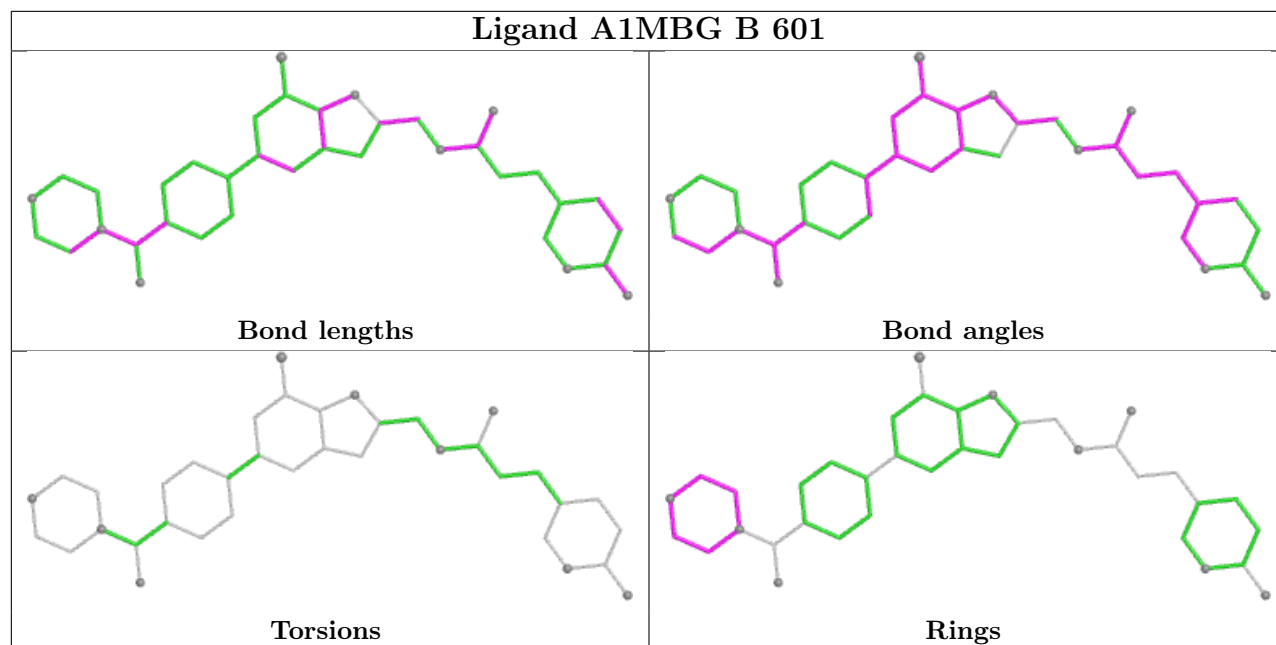
Ligand A1MBG J 601



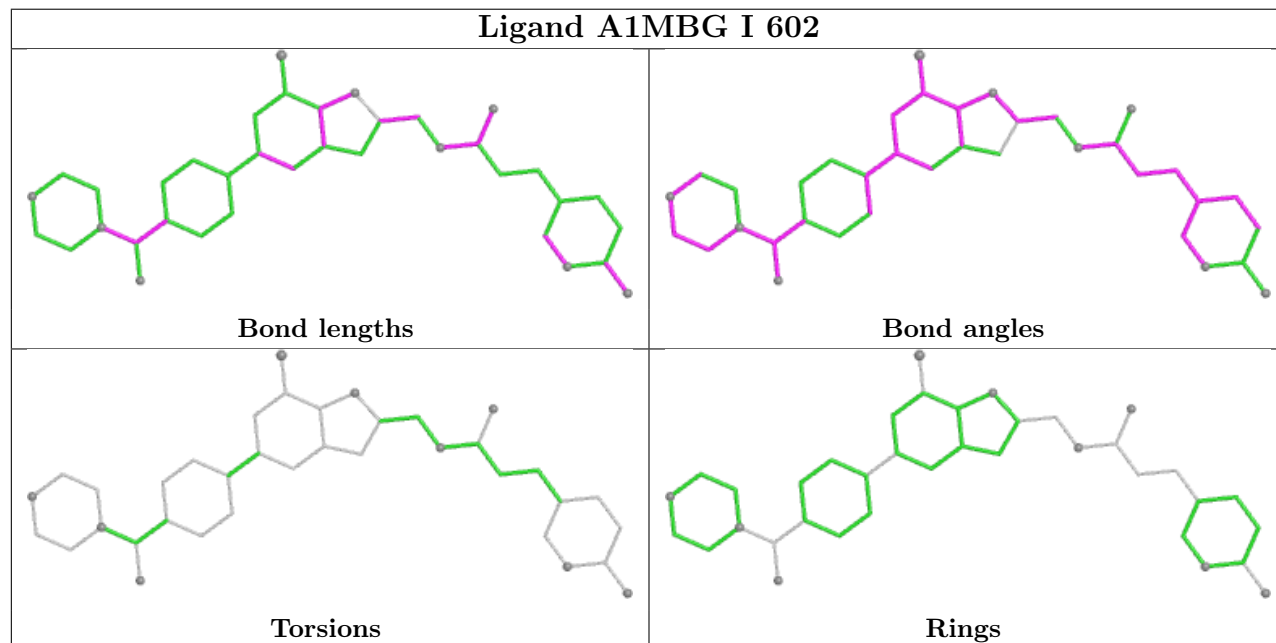
Ligand A1MBG D 601

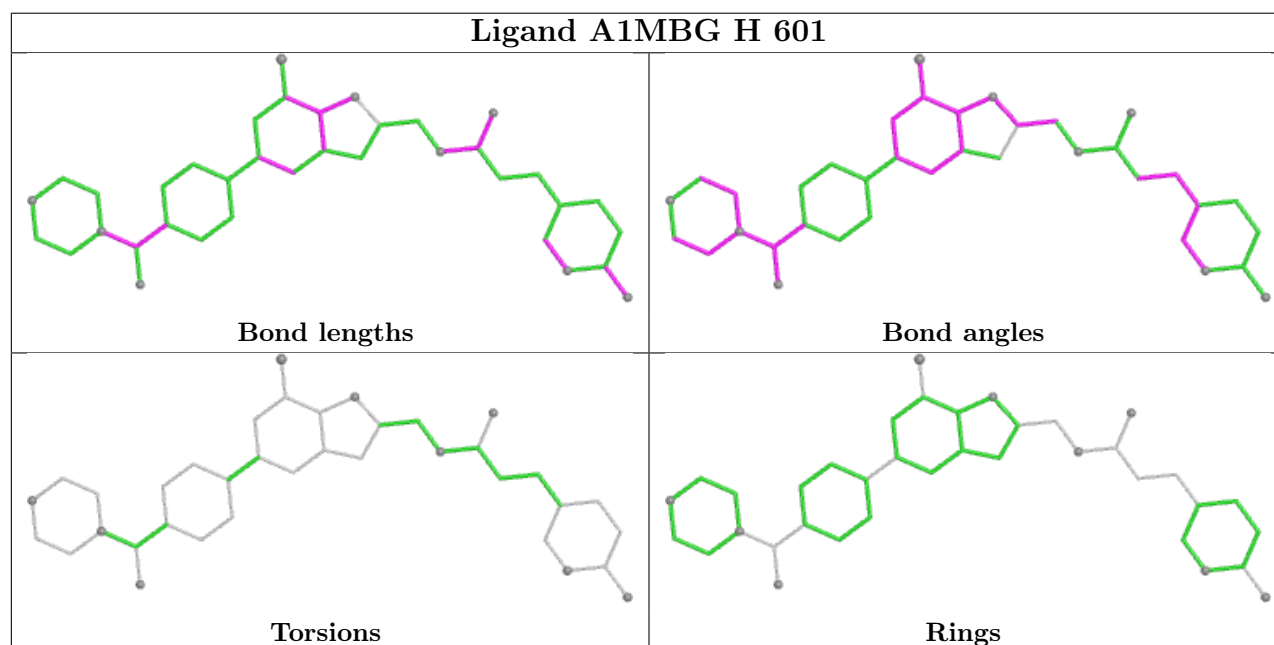
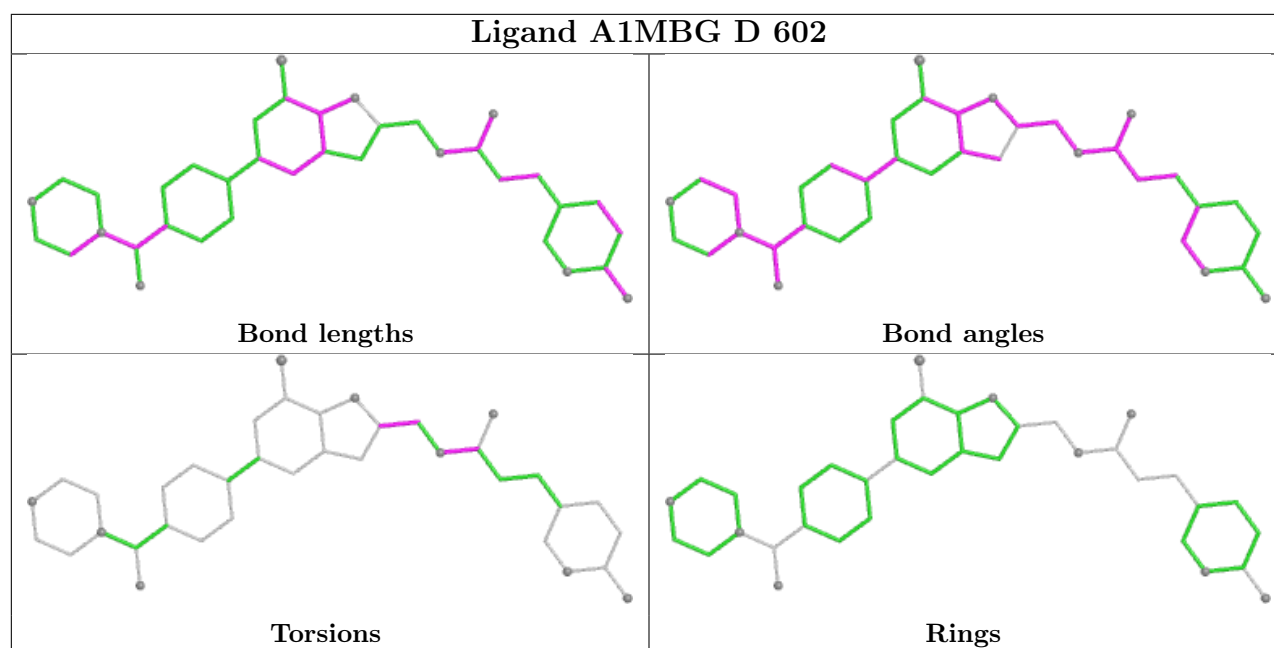


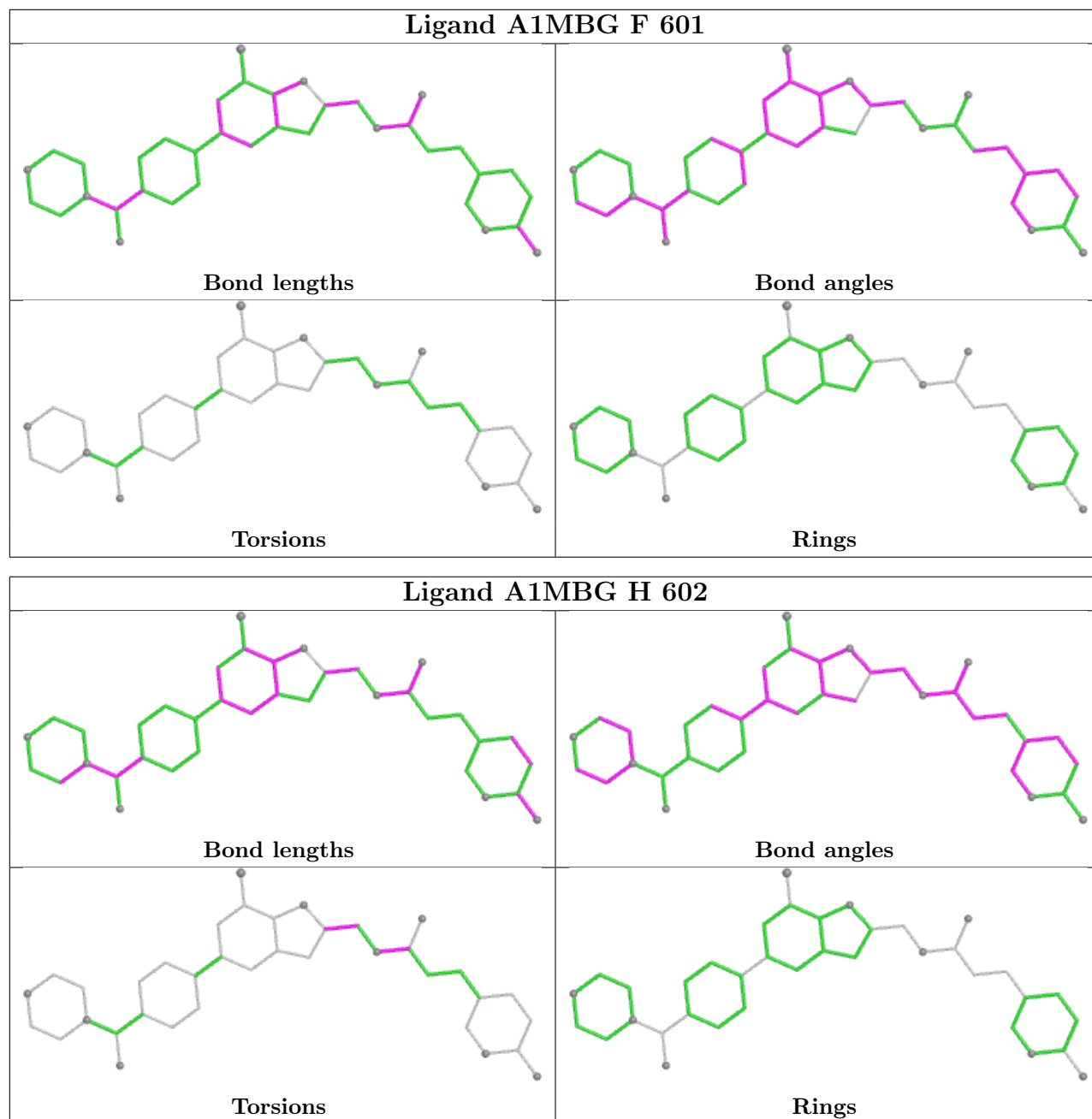
Ligand A1MBG B 601

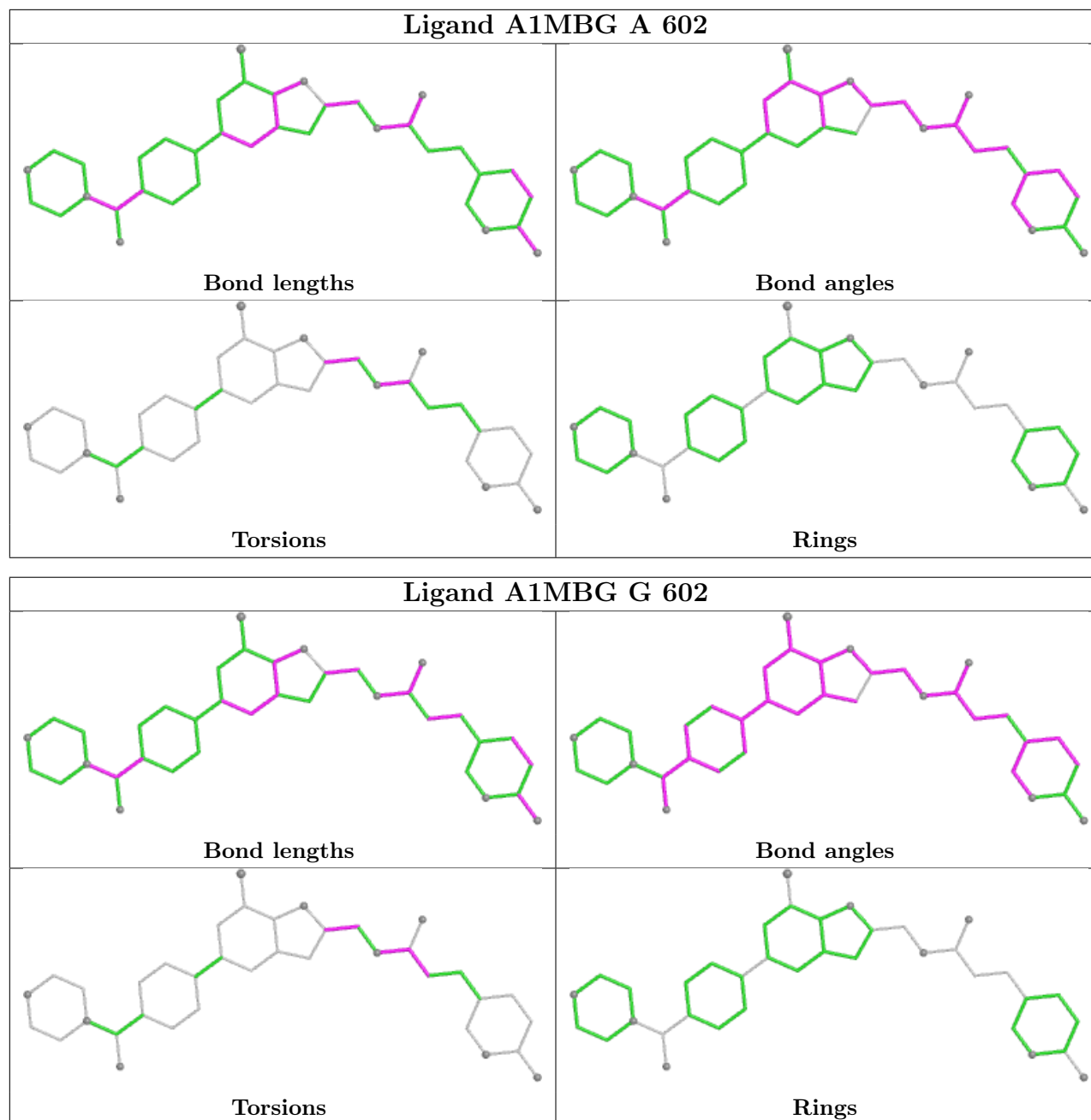


Ligand A1MBG I 602

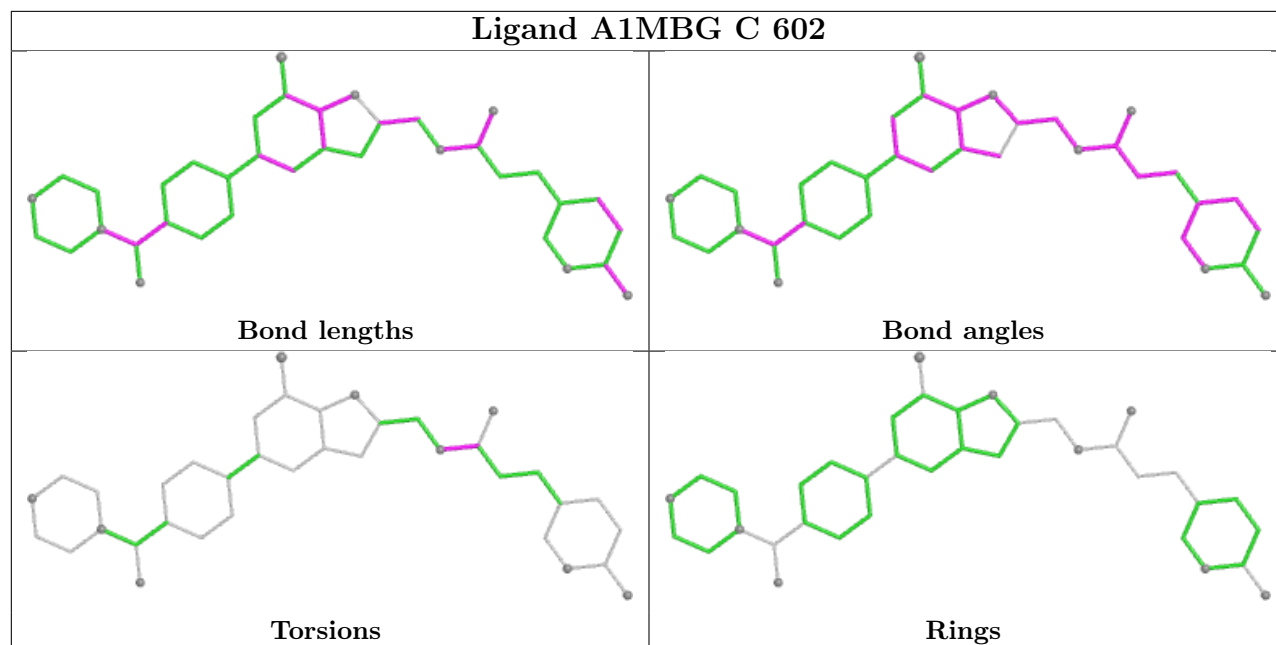




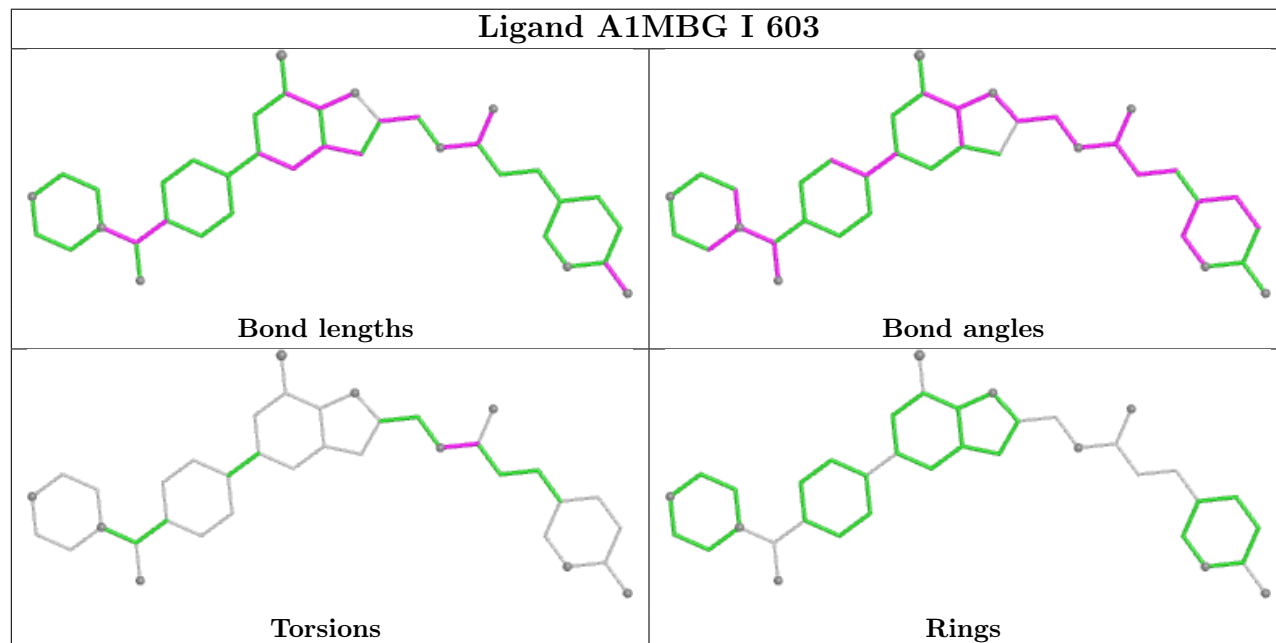


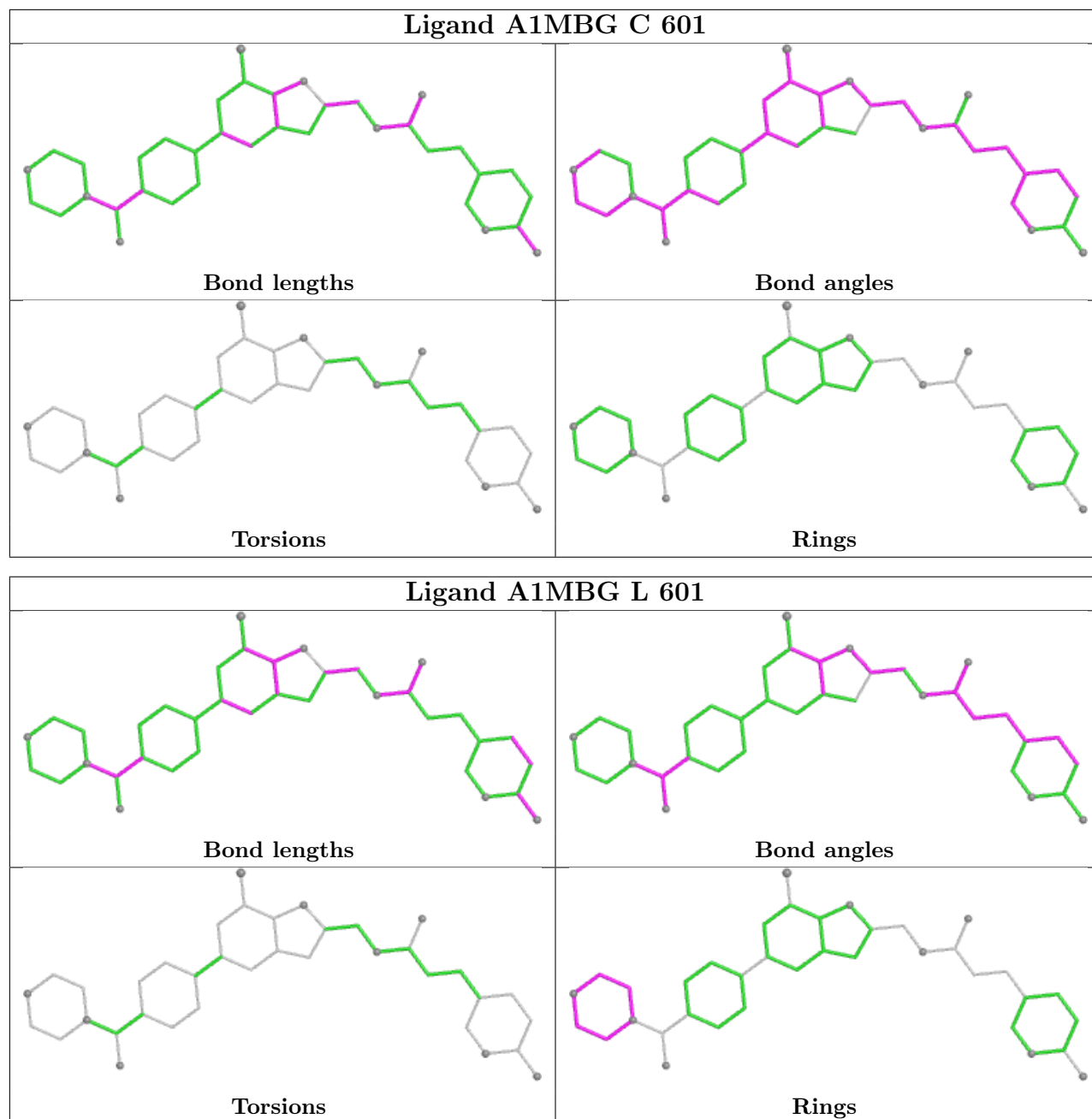


Ligand A1MBG C 602

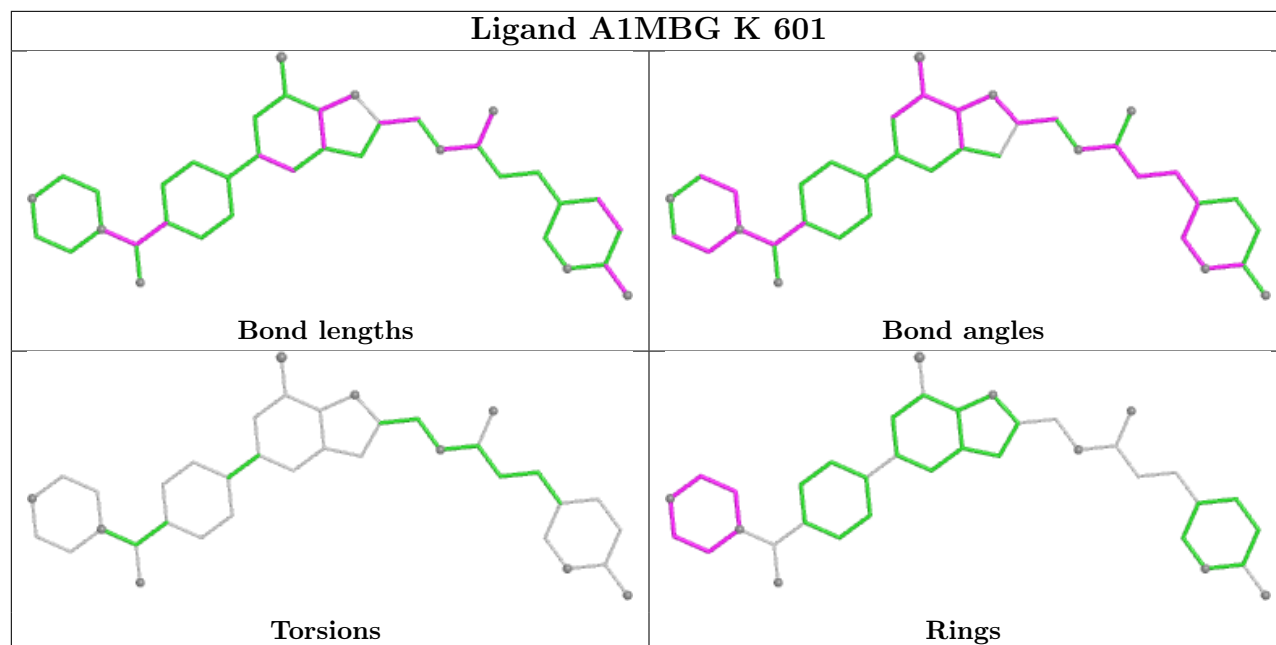


Ligand A1MBG I 603

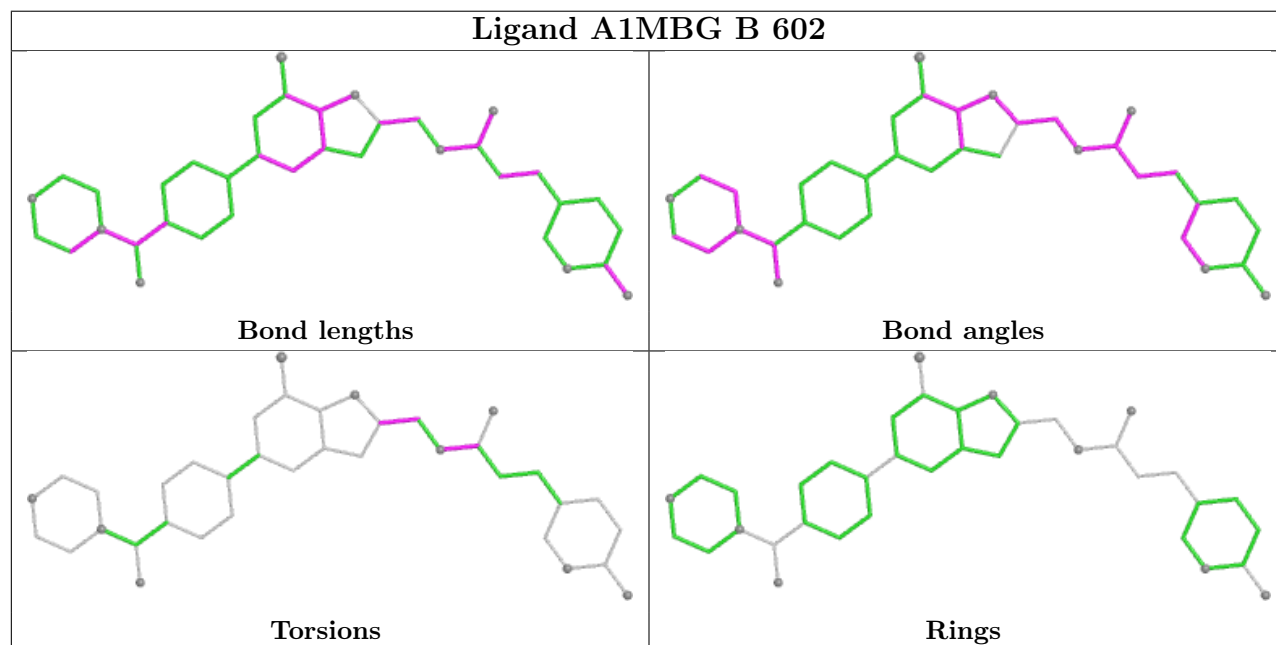


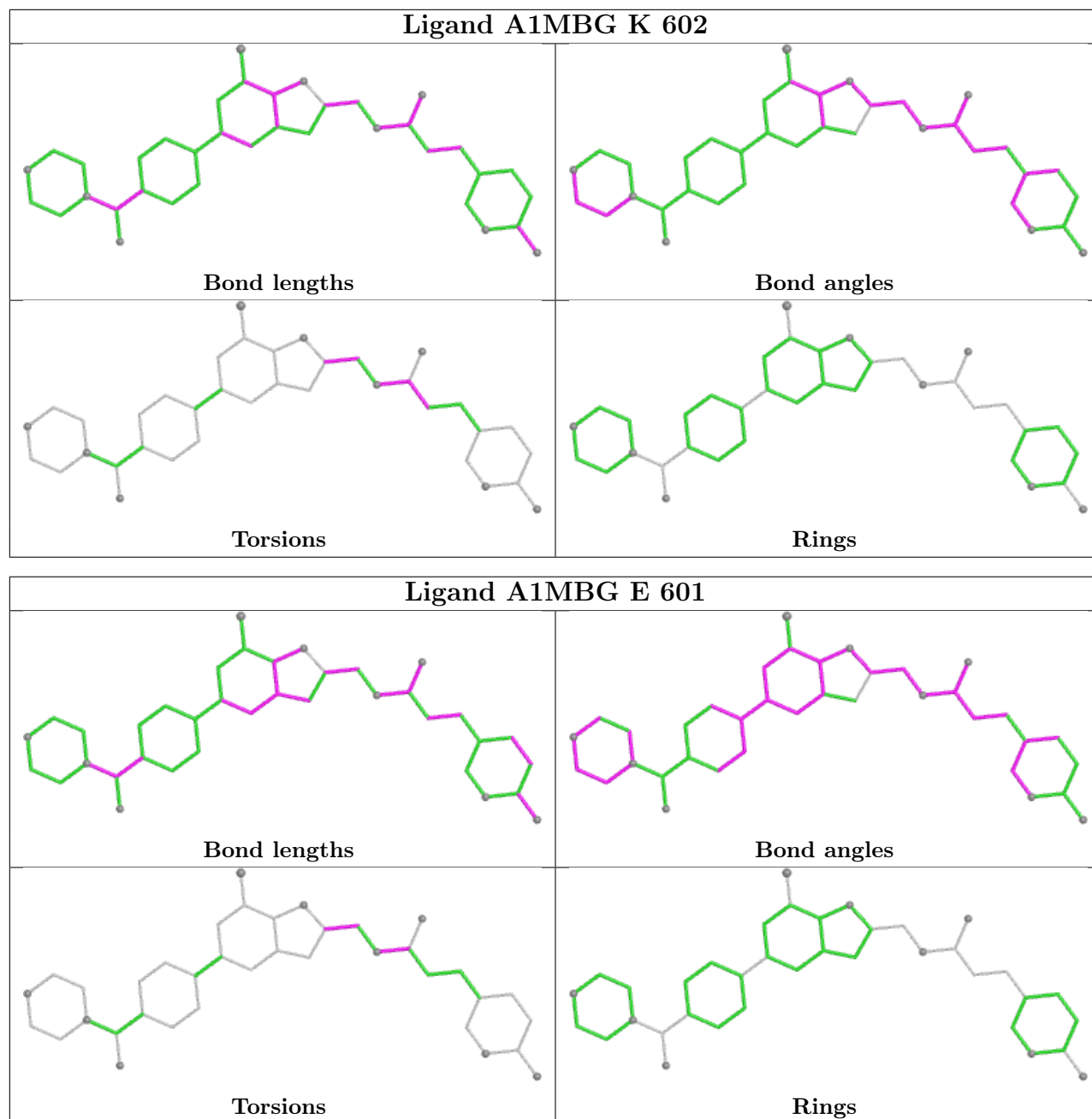


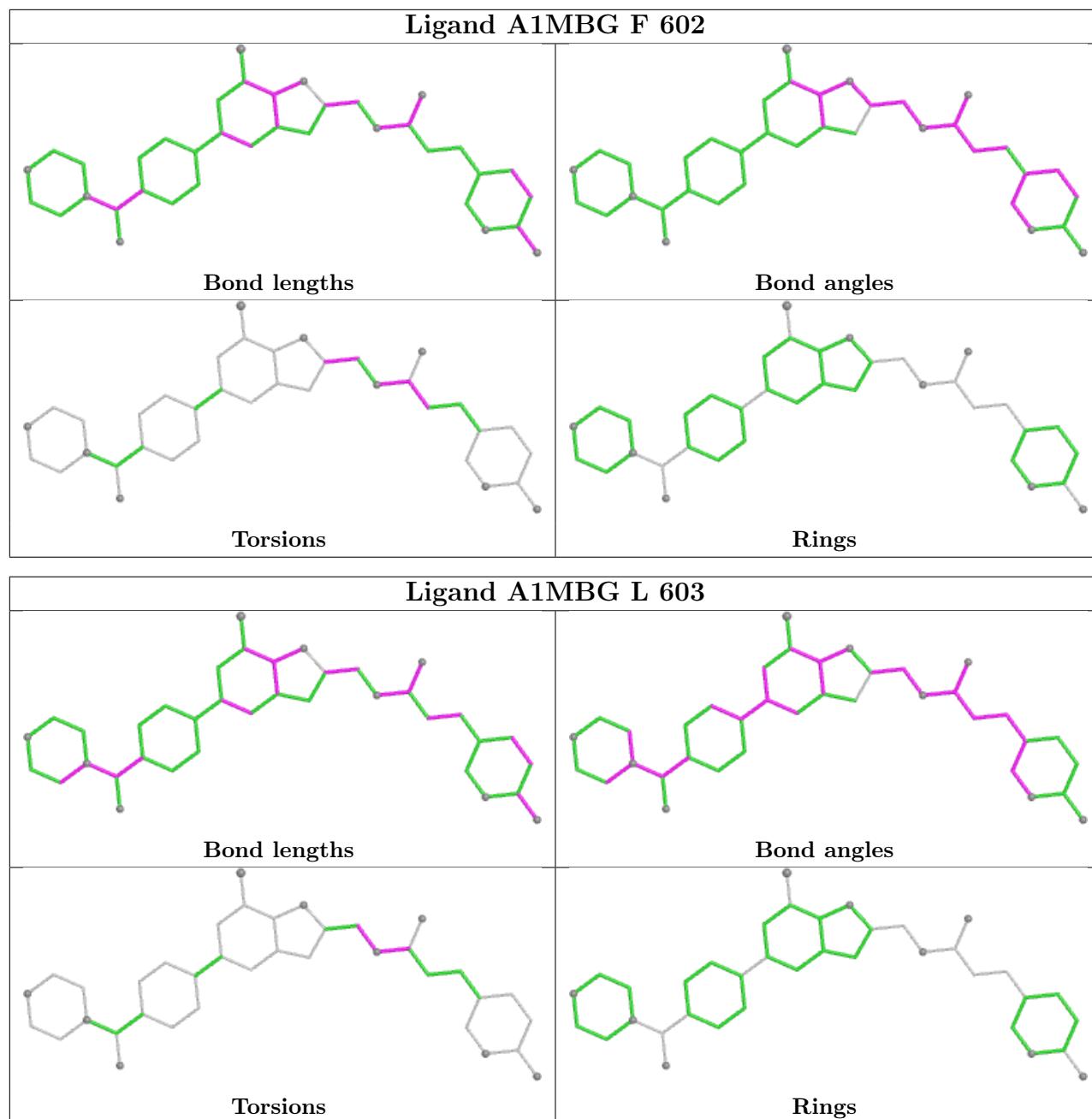
Ligand A1MBG K 601

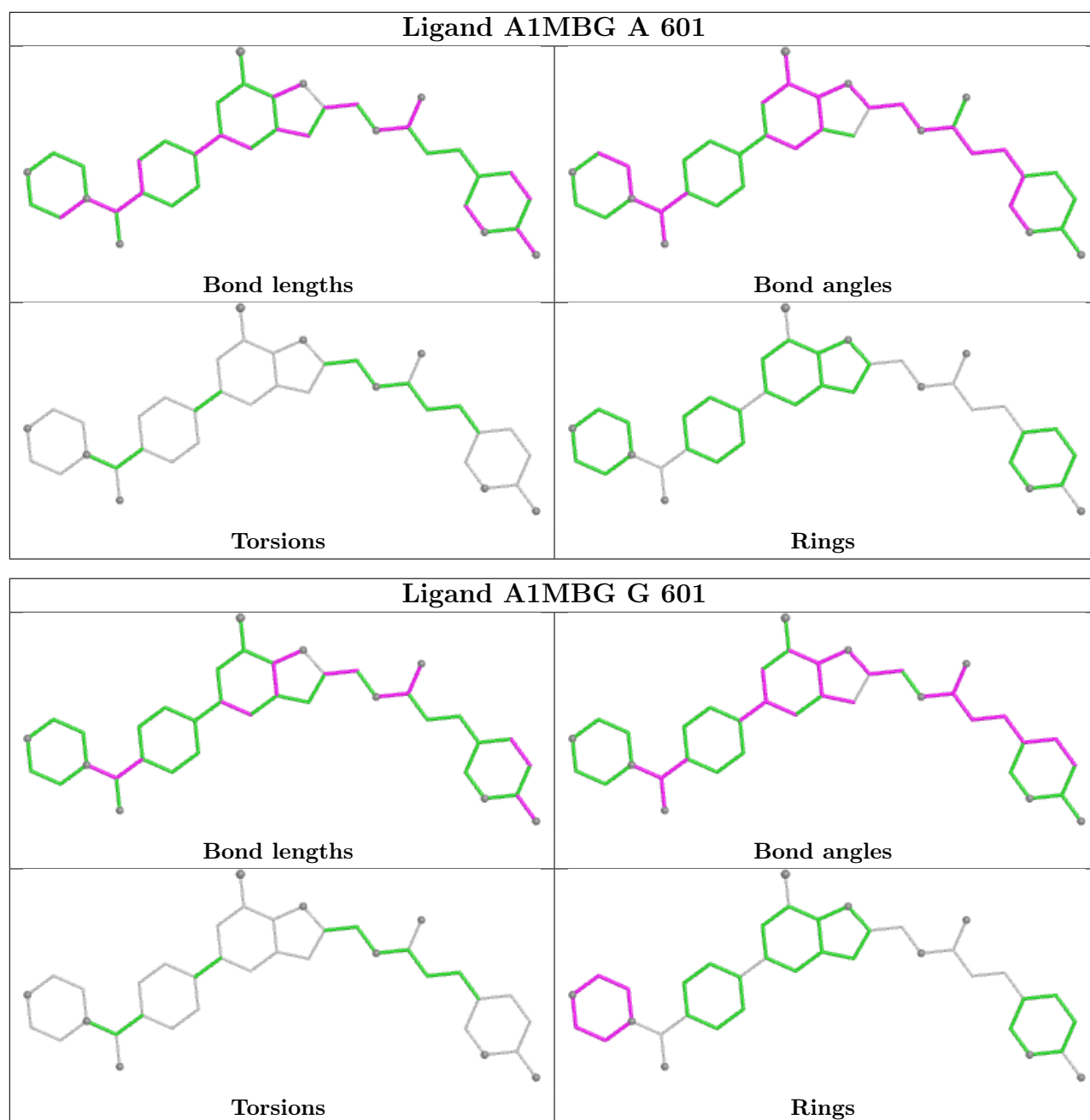


Ligand A1MBG B 602









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, 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	288/292 (98%)	0.58	33 (11%) 9 7	42, 58, 96, 110	0
1	B	288/292 (98%)	0.76	25 (8%) 16 13	48, 65, 101, 123	0
1	C	290/292 (99%)	0.54	22 (7%) 20 17	43, 58, 94, 110	0
1	D	288/292 (98%)	0.90	46 (15%) 5 3	51, 63, 111, 128	0
1	E	288/292 (98%)	0.68	23 (7%) 18 16	47, 62, 98, 113	0
1	F	288/292 (98%)	1.00	36 (12%) 8 6	53, 77, 103, 118	0
1	G	288/292 (98%)	0.58	26 (9%) 15 12	44, 59, 91, 115	0
1	H	288/292 (98%)	0.83	28 (9%) 13 10	52, 66, 95, 108	0
1	I	286/292 (97%)	1.03	35 (12%) 8 6	56, 76, 103, 115	0
1	J	288/292 (98%)	0.72	30 (10%) 11 9	50, 66, 104, 119	0
1	K	286/292 (97%)	1.27	44 (15%) 5 4	60, 85, 111, 124	0
1	L	288/292 (98%)	1.59	82 (28%) 1 1	76, 101, 124, 137	0
All	All	3454/3504 (98%)	0.87	430 (12%) 8 6	42, 69, 108, 137	0

All (430) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	308	LEU	5.8
1	A	304	PHE	5.7
1	H	304	PHE	5.2
1	L	469	VAL	5.0
1	K	304	PHE	5.0
1	G	538	LEU	5.0
1	D	314	PRO	4.9
1	L	308	LEU	4.9
1	I	364	PHE	4.9
1	L	364	PHE	4.8
1	D	364	PHE	4.7

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Mol	Chain	Res	Type	RSRZ
1	C	311	VAL	4.7
1	F	312	VAL	4.6
1	A	310	LEU	4.6
1	I	310	LEU	4.6
1	E	314	PRO	4.5
1	H	308	LEU	4.5
1	A	311	VAL	4.5
1	K	312	VAL	4.4
1	D	353	ASP	4.4
1	H	539	HIS	4.3
1	G	311	VAL	4.3
1	D	317	PRO	4.3
1	D	354	LEU	4.3
1	K	332	THR	4.3
1	E	304	PHE	4.2
1	H	311	VAL	4.2
1	L	352	MET	4.2
1	J	538	LEU	4.2
1	L	354	LEU	4.2
1	I	304	PHE	4.2
1	K	308	LEU	4.2
1	K	310	LEU	4.2
1	K	307	ALA	4.1
1	C	590	THR	4.1
1	G	332	THR	4.0
1	K	314	PRO	4.0
1	E	309	GLN	4.0
1	G	539	HIS	4.0
1	C	309	GLN	4.0
1	L	465	VAL	3.9
1	E	310	LEU	3.9
1	G	590	THR	3.9
1	C	300	SER	3.9
1	D	312	VAL	3.9
1	L	535	LEU	3.9
1	H	332	THR	3.9
1	D	357	GLN	3.9
1	B	308	LEU	3.9
1	K	531	LEU	3.9
1	H	590	THR	3.9
1	C	304	PHE	3.8
1	D	387	VAL	3.8

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Mol	Chain	Res	Type	RSRZ
1	L	332	THR	3.8
1	F	491	PRO	3.7
1	B	304	PHE	3.7
1	F	304	PHE	3.7
1	J	304	PHE	3.7
1	J	308	LEU	3.7
1	D	311	VAL	3.7
1	G	304	PHE	3.7
1	D	329	GLU	3.7
1	L	436	VAL	3.7
1	J	310	LEU	3.7
1	F	332	THR	3.7
1	J	354	LEU	3.6
1	L	431	LEU	3.6
1	H	312	VAL	3.6
1	K	538	LEU	3.6
1	I	564	ALA	3.6
1	E	364	PHE	3.6
1	C	312	VAL	3.6
1	L	367	VAL	3.6
1	A	332	THR	3.5
1	L	490	LEU	3.5
1	E	357	GLN	3.5
1	K	469	VAL	3.5
1	B	333	GLY	3.5
1	F	311	VAL	3.5
1	E	538	LEU	3.5
1	I	308	LEU	3.5
1	L	311	VAL	3.4
1	L	310	LEU	3.4
1	B	332	THR	3.4
1	I	540	LYS	3.4
1	L	306	ALA	3.4
1	E	312	VAL	3.4
1	D	307	ALA	3.4
1	I	330	GLY	3.4
1	D	308	LEU	3.4
1	G	308	LEU	3.4
1	F	330	GLY	3.4
1	B	354	LEU	3.3
1	K	498	ILE	3.3
1	H	307	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
1	J	388	GLY	3.3
1	E	332	THR	3.3
1	D	538	LEU	3.3
1	I	354	LEU	3.3
1	G	357	GLN	3.3
1	A	590	THR	3.3
1	A	364	PHE	3.3
1	F	306	ALA	3.2
1	G	312	VAL	3.3
1	L	475	LEU	3.2
1	A	369	ILE	3.2
1	L	441	ILE	3.2
1	L	304	PHE	3.2
1	C	310	LEU	3.2
1	F	538	LEU	3.2
1	L	362	LEU	3.2
1	I	590	THR	3.2
1	F	475	LEU	3.1
1	D	392	TRP	3.1
1	G	315	GLY	3.1
1	K	306	ALA	3.1
1	B	312	VAL	3.1
1	I	538	LEU	3.1
1	K	590	THR	3.1
1	A	312	VAL	3.1
1	I	312	VAL	3.1
1	E	352	MET	3.1
1	C	313	ASP	3.0
1	I	471	ARG	3.0
1	L	435	GLY	3.0
1	A	538	LEU	3.0
1	E	308	LEU	3.0
1	G	306	ALA	3.0
1	B	310	LEU	3.0
1	I	384	SER	3.0
1	G	313	ASP	3.0
1	D	352	MET	3.0
1	H	306	ALA	2.9
1	H	310	LEU	2.9
1	I	552	LEU	2.9
1	K	362	LEU	2.9
1	B	590	THR	2.9

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Mol	Chain	Res	Type	RSRZ
1	D	313	ASP	2.9
1	J	330	GLY	2.9
1	E	354	LEU	2.9
1	A	309	GLN	2.9
1	D	386	LEU	2.9
1	H	364	PHE	2.9
1	L	496	VAL	2.9
1	A	388	GLY	2.9
1	K	473	LYS	2.9
1	L	539	HIS	2.9
1	B	307	ALA	2.9
1	B	364	PHE	2.9
1	K	541	VAL	2.9
1	E	334	ILE	2.9
1	A	331	SER	2.8
1	L	314	PRO	2.8
1	C	358	GLN	2.8
1	L	309	GLN	2.8
1	B	475	LEU	2.8
1	C	308	LEU	2.8
1	F	310	LEU	2.8
1	J	313	ASP	2.8
1	C	305	ARG	2.8
1	B	306	ALA	2.8
1	F	353	ASP	2.8
1	L	557	PRO	2.8
1	A	308	LEU	2.8
1	I	363	LEU	2.8
1	C	306	ALA	2.8
1	B	311	VAL	2.8
1	H	359	ARG	2.8
1	D	539	HIS	2.8
1	K	470	PRO	2.8
1	D	320	TYR	2.8
1	K	354	LEU	2.8
1	E	306	ALA	2.8
1	H	411	ARG	2.8
1	I	305	ARG	2.8
1	D	590	THR	2.7
1	J	392	TRP	2.7
1	E	356	LYS	2.7
1	K	571	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
1	L	548	PHE	2.7
1	J	312	VAL	2.7
1	L	312	VAL	2.7
1	D	315	GLY	2.7
1	K	388	GLY	2.7
1	L	303	GLN	2.7
1	L	537	ASN	2.7
1	J	536	LYS	2.7
1	D	355	ARG	2.7
1	E	305	ARG	2.7
1	D	310	LEU	2.7
1	L	363	LEU	2.7
1	I	307	ALA	2.7
1	A	358	GLN	2.7
1	H	373	TYR	2.7
1	L	373	TYR	2.7
1	K	536	LYS	2.7
1	L	356	LYS	2.7
1	B	330	GLY	2.7
1	D	369	ILE	2.7
1	G	314	PRO	2.7
1	J	314	PRO	2.7
1	L	570	PRO	2.7
1	F	473	LYS	2.6
1	L	536	LYS	2.6
1	J	517	ASN	2.6
1	K	387	VAL	2.6
1	D	332	THR	2.6
1	L	452	GLY	2.6
1	G	310	LEU	2.6
1	G	475	LEU	2.6
1	D	373	TYR	2.6
1	I	534	ARG	2.6
1	L	318	ARG	2.6
1	J	332	THR	2.6
1	L	437	ILE	2.6
1	L	467	LYS	2.6
1	L	575	ALA	2.6
1	J	489	ARG	2.6
1	C	364	PHE	2.6
1	D	330	GLY	2.6
1	D	393	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
1	I	311	VAL	2.6
1	K	311	VAL	2.6
1	B	357	GLN	2.6
1	H	309	GLN	2.6
1	J	357	GLN	2.6
1	A	386	LEU	2.6
1	E	537	ASN	2.6
1	D	370	MET	2.6
1	D	304	PHE	2.6
1	K	539	HIS	2.6
1	L	374	GLN	2.5
1	A	521	LEU	2.5
1	K	361	GLU	2.5
1	K	475	LEU	2.5
1	F	307	ALA	2.5
1	I	306	ALA	2.5
1	B	313	ASP	2.5
1	F	590	THR	2.5
1	E	331	SER	2.5
1	J	311	VAL	2.5
1	L	368	VAL	2.5
1	J	495	GLU	2.5
1	F	531	LEU	2.5
1	B	309	GLN	2.5
1	E	311	VAL	2.5
1	F	305	ARG	2.5
1	A	475	LEU	2.5
1	D	363	LEU	2.5
1	H	538	LEU	2.5
1	J	391	LEU	2.5
1	L	558	ALA	2.5
1	H	388	GLY	2.5
1	L	388	GLY	2.5
1	I	368	VAL	2.5
1	L	386	LEU	2.5
1	D	356	LYS	2.5
1	A	307	ALA	2.5
1	D	349	VAL	2.4
1	I	531	LEU	2.4
1	L	480	TYR	2.4
1	K	358	GLN	2.4
1	L	564	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
1	E	590	THR	2.4
1	L	454	VAL	2.4
1	L	521	LEU	2.4
1	L	531	LEU	2.4
1	L	355	ARG	2.4
1	A	314	PRO	2.4
1	L	590	THR	2.4
1	G	540	LYS	2.4
1	I	387	VAL	2.4
1	L	394	VAL	2.4
1	K	552	LEU	2.4
1	L	538	LEU	2.4
1	I	539	HIS	2.4
1	K	318	ARG	2.4
1	L	305	ARG	2.4
1	A	313	ASP	2.4
1	I	332	THR	2.4
1	B	334	ILE	2.4
1	G	364	PHE	2.4
1	J	352	MET	2.4
1	L	516	PHE	2.4
1	L	582	VAL	2.4
1	D	321	LEU	2.4
1	D	391	LEU	2.4
1	A	360	ARG	2.4
1	F	534	ARG	2.4
1	H	589	ARG	2.4
1	I	359	ARG	2.4
1	J	539	HIS	2.4
1	I	322	ASP	2.3
1	J	373	TYR	2.3
1	G	536	LYS	2.3
1	J	590	THR	2.3
1	L	527	ILE	2.3
1	I	318	ARG	2.3
1	L	421	CYS	2.3
1	B	538	LEU	2.3
1	H	475	LEU	2.3
1	F	537	ASN	2.3
1	G	467	LYS	2.3
1	I	543	PRO	2.3
1	K	385	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
1	K	562	THR	2.3
1	D	342	SER	2.3
1	J	331	SER	2.3
1	L	585	MET	2.3
1	F	334	ILE	2.3
1	L	428	LEU	2.3
1	G	356	LYS	2.3
1	L	491	PRO	2.3
1	I	373	TYR	2.3
1	K	411	ARG	2.3
1	L	466	SER	2.3
1	A	539	HIS	2.3
1	L	587	GLN	2.3
1	J	356	LYS	2.3
1	J	475	LEU	2.3
1	J	315	GLY	2.3
1	C	385	TYR	2.3
1	H	355	ARG	2.3
1	L	561	ALA	2.3
1	H	410	THR	2.3
1	K	441	ILE	2.3
1	L	334	ILE	2.3
1	K	364	PHE	2.2
1	L	571	PHE	2.2
1	A	306	ALA	2.2
1	D	306	ALA	2.2
1	J	307	ALA	2.2
1	J	320	TYR	2.2
1	L	562	THR	2.2
1	D	319	SER	2.2
1	G	358	GLN	2.2
1	F	540	LYS	2.2
1	F	437	ILE	2.2
1	A	411	ARG	2.2
1	C	315	GLY	2.2
1	C	302	GLU	2.2
1	A	536	LYS	2.2
1	D	309	GLN	2.2
1	G	587	GLN	2.2
1	H	358	GLN	2.2
1	F	331	SER	2.2
1	H	320	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	386	LEU	2.2
1	K	521	LEU	2.2
1	I	411	ARG	2.2
1	K	333	GLY	2.2
1	D	399	GLU	2.2
1	C	357	GLN	2.2
1	D	358	GLN	2.2
1	F	539	HIS	2.2
1	F	433	ALA	2.2
1	I	483	ALA	2.2
1	L	384	SER	2.2
1	L	410	THR	2.2
1	L	427	ALA	2.2
1	D	368	VAL	2.2
1	F	407	VAL	2.2
1	I	367	VAL	2.2
1	F	516	PHE	2.2
1	F	564	ALA	2.2
1	F	490	LEU	2.1
1	K	437	ILE	2.1
1	A	389	ASP	2.1
1	A	537	ASN	2.1
1	B	539	HIS	2.1
1	K	357	GLN	2.1
1	L	419	ALA	2.1
1	G	359	ARG	2.1
1	K	471	ARG	2.1
1	L	489	ARG	2.1
1	B	356	LYS	2.1
1	D	475	LEU	2.1
1	G	334	ILE	2.1
1	G	302	GLU	2.1
1	H	517	ASN	2.1
1	K	497	ASP	2.1
1	K	517	ASN	2.1
1	D	541	VAL	2.1
1	A	587	GLN	2.1
1	A	330	GLY	2.1
1	B	315	GLY	2.1
1	E	359	ARG	2.1
1	L	360	ARG	2.1
1	K	558	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	K	549	LEU	2.1
1	D	316	ASP	2.1
1	C	374	GLN	2.1
1	F	357	GLN	2.1
1	K	374	GLN	2.1
1	A	367	VAL	2.1
1	A	476	VAL	2.1
1	F	364	PHE	2.1
1	H	319	SER	2.1
1	L	468	GLU	2.1
1	A	374	GLN	2.1
1	F	309	GLN	2.1
1	L	543	PRO	2.1
1	L	424	VAL	2.1
1	L	476	VAL	2.1
1	A	315	GLY	2.1
1	D	388	GLY	2.1
1	J	360	ARG	2.1
1	L	586	ARG	2.1
1	C	332	THR	2.0
1	L	483	ALA	2.0
1	C	386	LEU	2.0
1	L	549	LEU	2.0
1	F	532	PRO	2.0
1	L	470	PRO	2.0
1	B	373	TYR	2.0
1	C	373	TYR	2.0
1	F	476	VAL	2.0
1	F	489	ARG	2.0
1	E	333	GLY	2.0
1	I	461	PHE	2.0
1	H	540	LYS	2.0
1	B	342	SER	2.0
1	C	376	GLU	2.0
1	L	544	SER	2.0
1	B	579	ALA	2.0
1	E	358	GLN	2.0
1	H	357	GLN	2.0
1	H	313	ASP	2.0
1	F	543	PRO	2.0
1	I	536	LYS	2.0

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

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
1	SEP	L	474	10/11	0.60	0.17	114,115,116,116	0
1	SEP	K	474	10/11	0.73	0.15	102,103,103,103	0
1	SEP	I	474	10/11	0.84	0.12	84,87,89,90	0
1	SEP	F	474	10/11	0.86	0.12	80,83,84,84	0
1	SEP	A	474	10/11	0.90	0.11	62,65,68,73	0
1	SEP	E	474	10/11	0.91	0.11	66,68,73,74	0
1	SEP	J	474	10/11	0.92	0.10	68,69,70,71	0
1	SEP	B	474	10/11	0.95	0.09	63,65,69,73	0
1	SEP	H	474	10/11	0.95	0.08	67,68,71,74	0
1	SEP	G	474	10/11	0.96	0.08	62,64,67,68	0
1	SEP	D	474	10/11	0.96	0.08	61,61,63,64	0
1	SEP	C	474	10/11	0.97	0.07	54,55,56,57	0

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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	A1MBG	L	603	37/37	0.79	0.17	79,87,96,97	0
2	A1MBG	K	602	37/37	0.88	0.15	77,86,92,96	0
2	A1MBG	C	602	37/37	0.88	0.13	58,65,76,76	0
2	A1MBG	B	602	37/37	0.89	0.14	58,68,79,80	0
2	A1MBG	A	602	37/37	0.90	0.12	54,62,68,75	0
2	A1MBG	I	603	37/37	0.91	0.13	61,68,77,77	0
2	A1MBG	D	602	37/37	0.91	0.11	51,61,74,79	0
2	A1MBG	F	602	37/37	0.91	0.12	60,67,77,80	0
2	A1MBG	H	602	37/37	0.92	0.12	56,63,69,71	0
2	A1MBG	L	602	37/37	0.92	0.12	71,74,77,78	0

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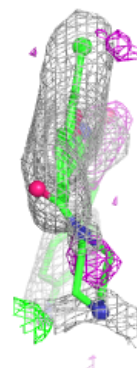
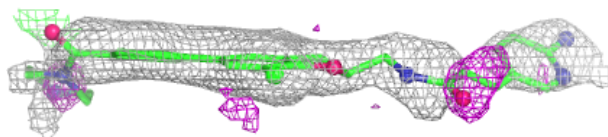
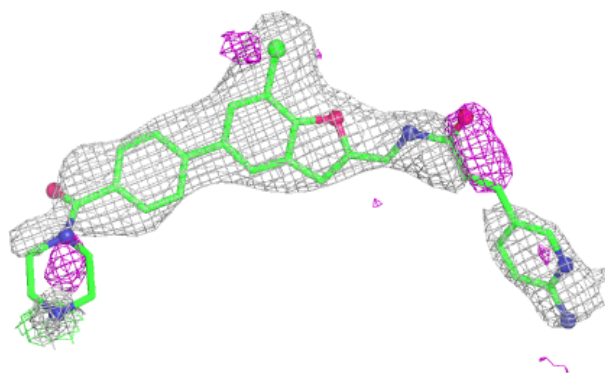
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	A1MBG	E	601	37/37	0.92	0.11	50,56,68,74	0
2	A1MBG	J	601	37/37	0.93	0.11	53,61,69,70	0
2	A1MBG	G	602	37/37	0.93	0.11	46,54,65,67	0
2	A1MBG	D	601	37/37	0.93	0.11	52,57,68,71	0
2	A1MBG	A	601	37/37	0.93	0.10	43,49,60,77	0
2	A1MBG	H	601	37/37	0.94	0.10	49,55,63,81	0
2	A1MBG	I	602	37/37	0.94	0.10	47,55,66,88	0
2	A1MBG	K	601	37/37	0.94	0.10	56,60,64,67	0
2	A1MBG	L	601	37/37	0.95	0.10	56,66,75,78	0
2	A1MBG	I	601	37/37	0.95	0.10	47,54,64,92	0
2	A1MBG	B	601	37/37	0.95	0.09	45,52,62,63	0
2	A1MBG	F	601	37/37	0.96	0.07	51,56,66,69	0
2	A1MBG	C	601	37/37	0.96	0.08	46,51,57,58	0
2	A1MBG	G	601	37/37	0.96	0.08	45,51,57,61	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.

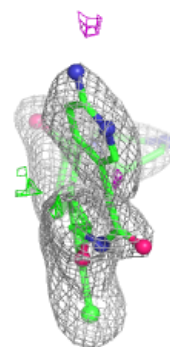
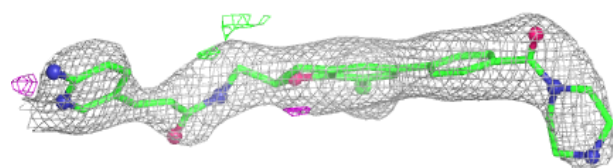
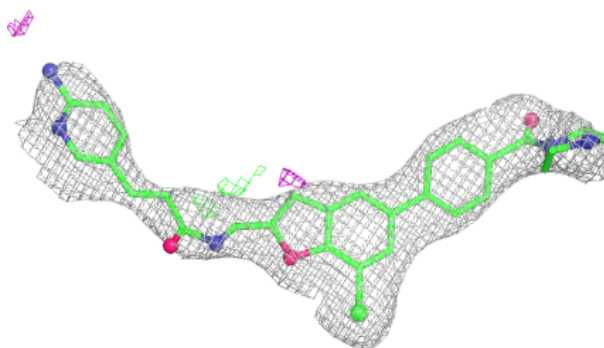
Electron density around A1MBG L 603:

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

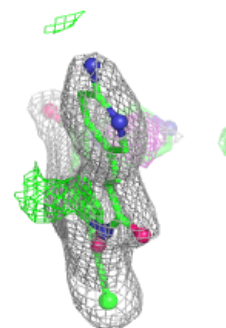
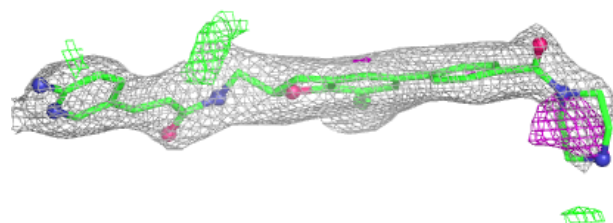
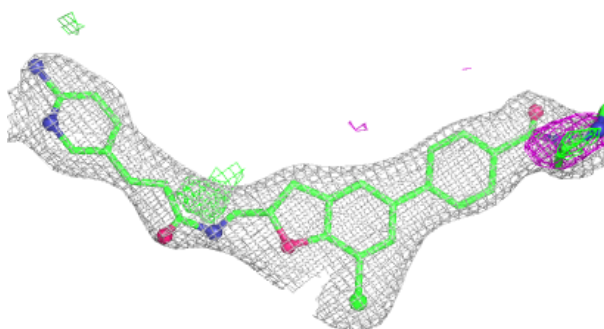


Electron density around A1MBG K 602:

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

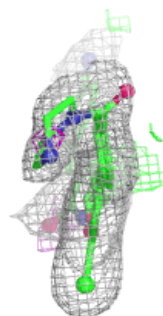
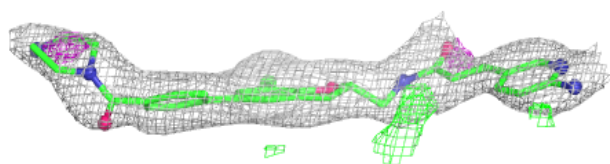
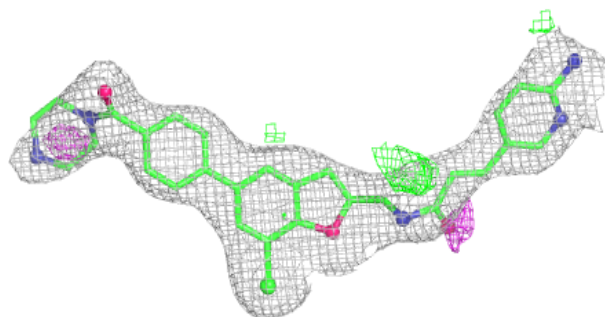
**Electron density around A1MBG C 602:**

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

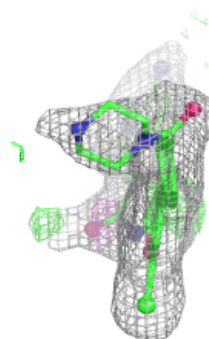
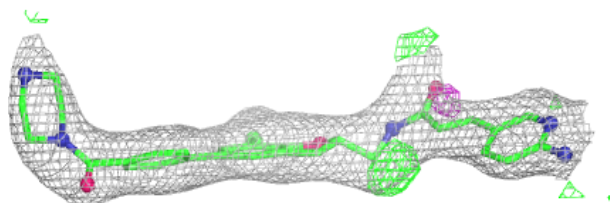
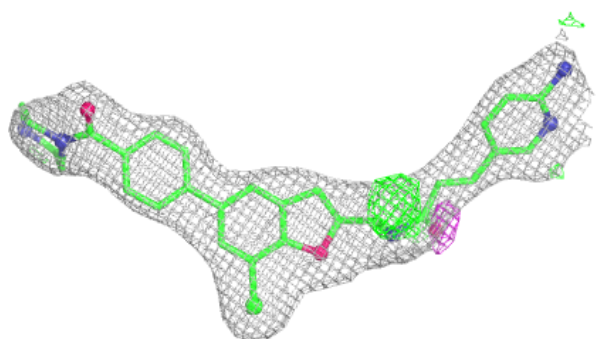


Electron density around A1MBG B 602:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

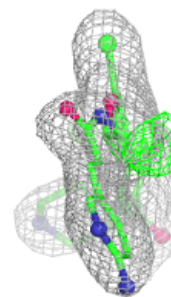
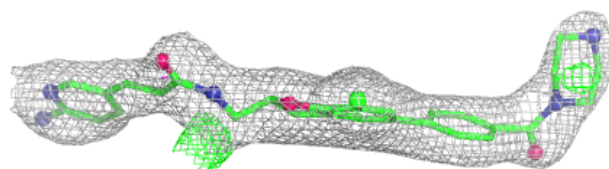
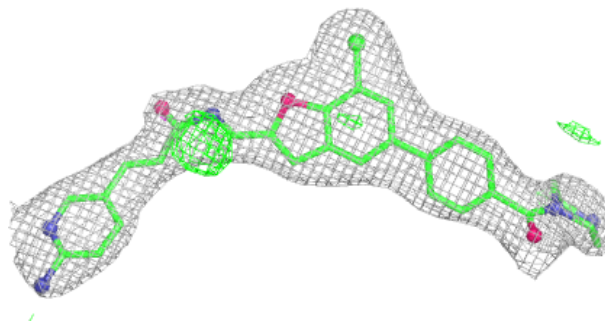
**Electron density around A1MBG A 602:**

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

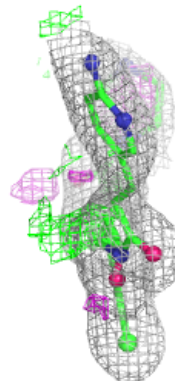
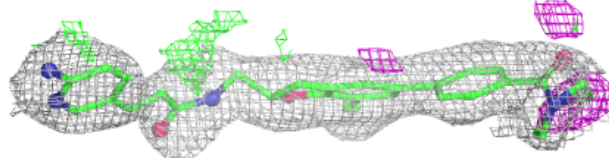
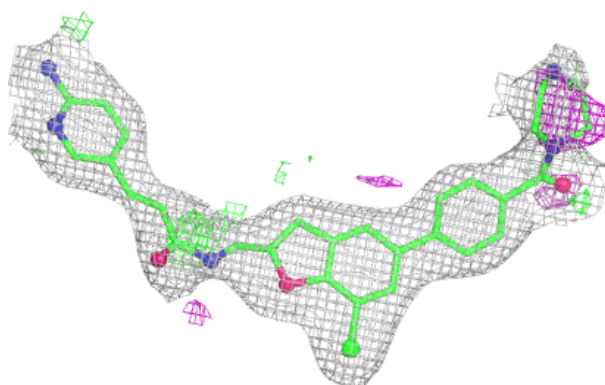


Electron density around A1MBG I 603:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

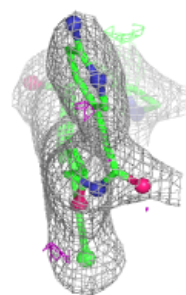
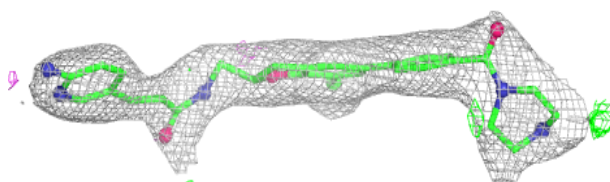
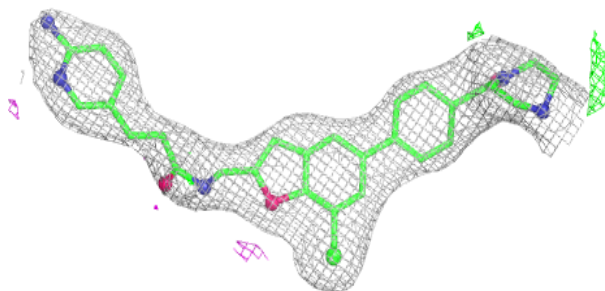
**Electron density around A1MBG D 602:**

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

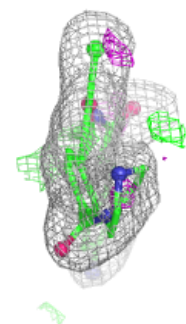
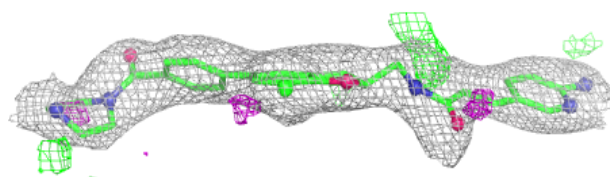
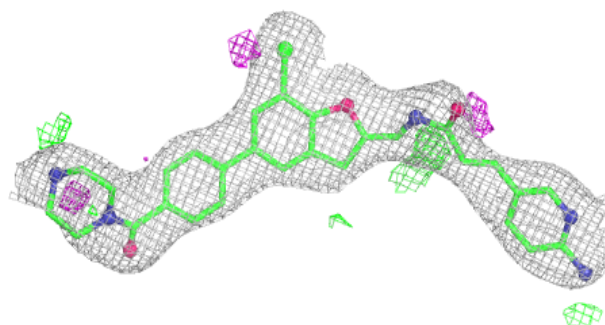


Electron density around A1MBG F 602:

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

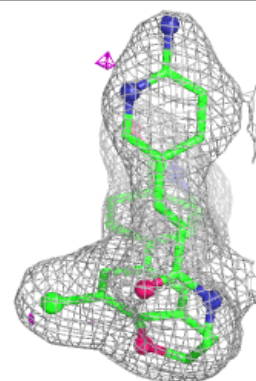
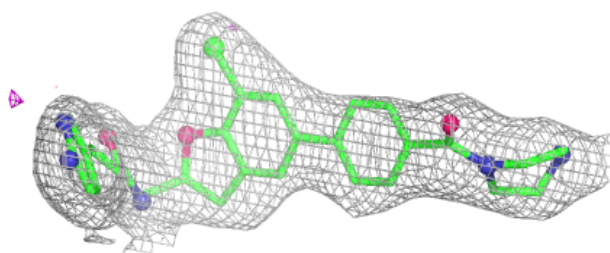
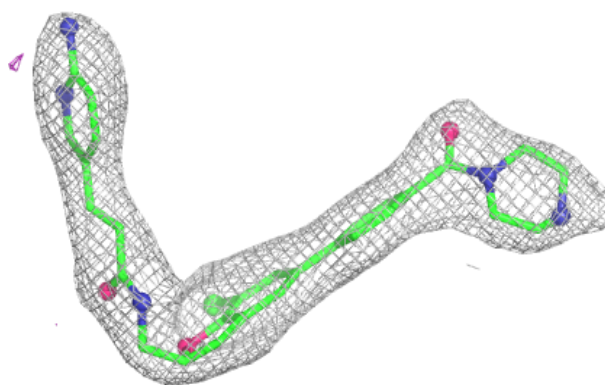
**Electron density around A1MBG H 602:**

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

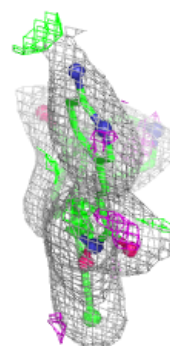
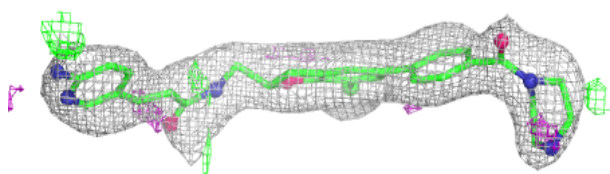
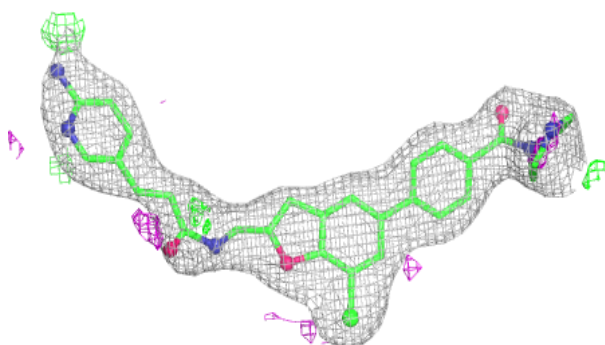


Electron density around A1MBG L 602:

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

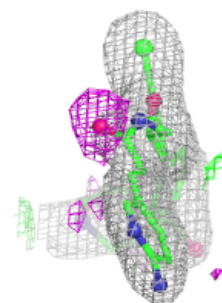
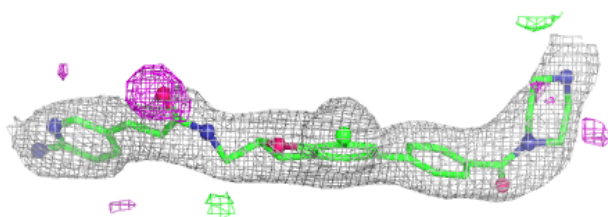
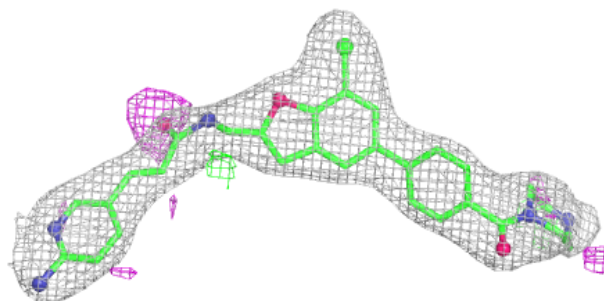
**Electron density around A1MBG E 601:**

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

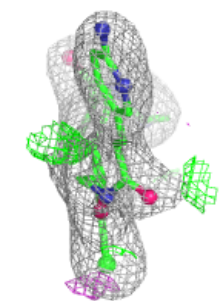
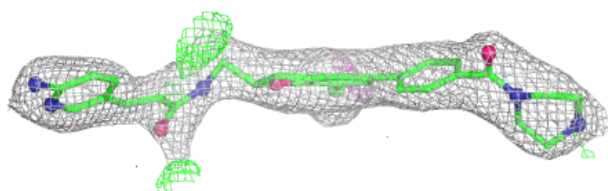
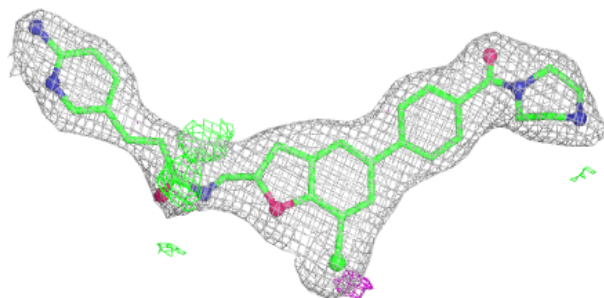


Electron density around A1MBG J 601:

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

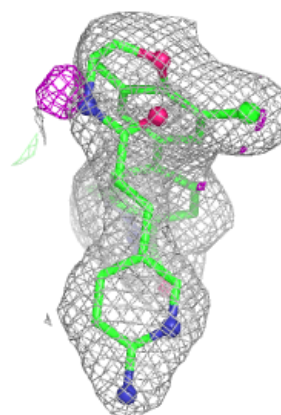
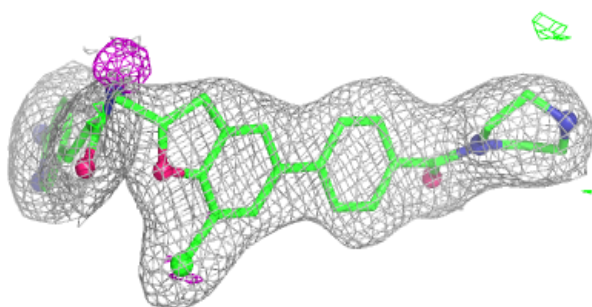
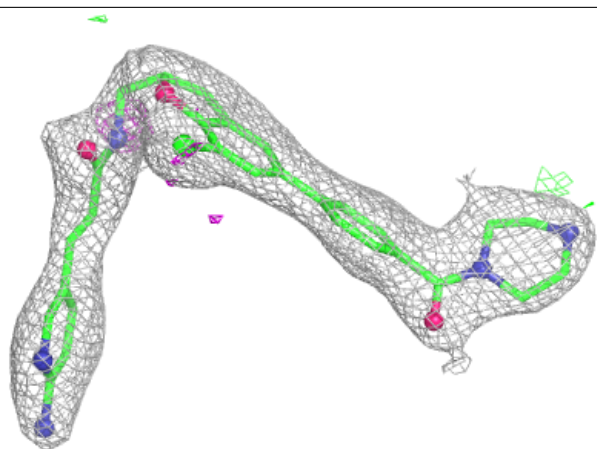
**Electron density around A1MBG G 602:**

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

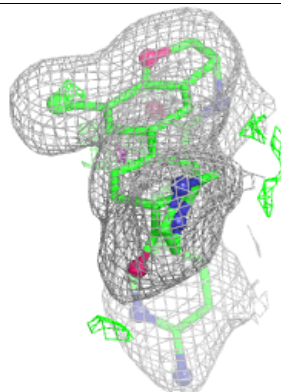
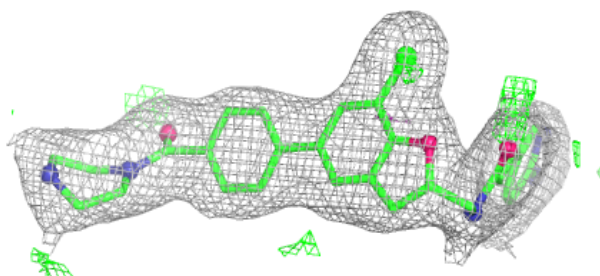
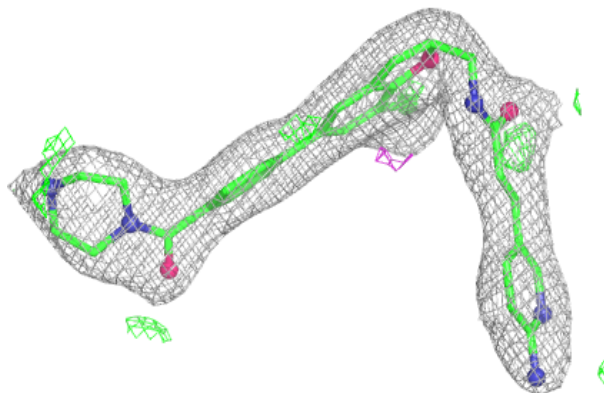


Electron density around A1MBG D 601:

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

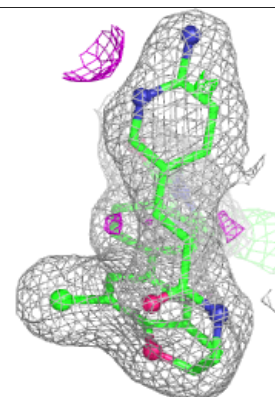
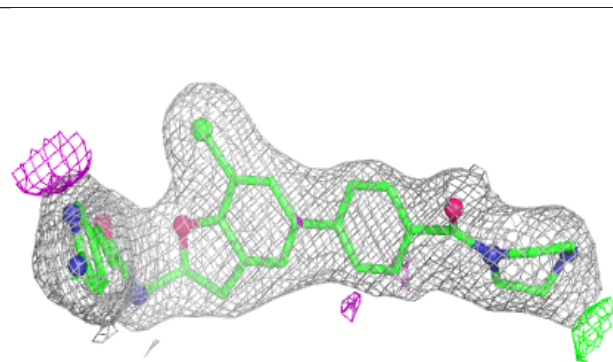
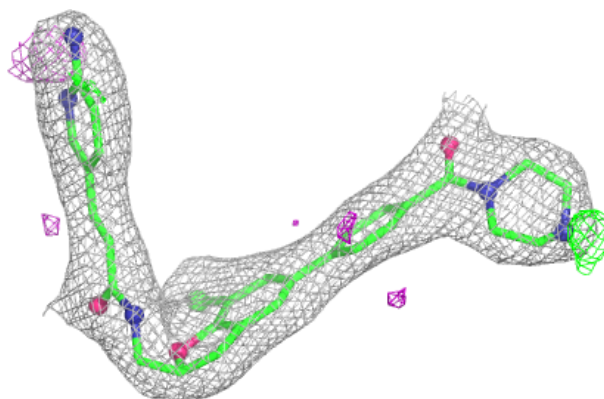
**Electron density around A1MBG A 601:**

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

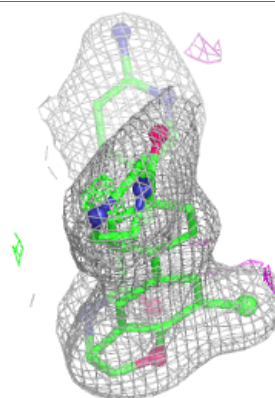
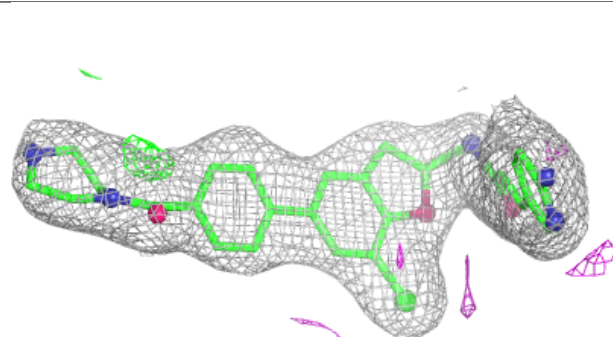
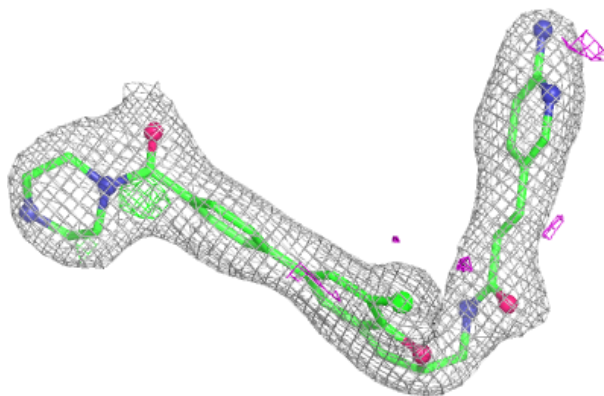


Electron density around A1MBG H 601:

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

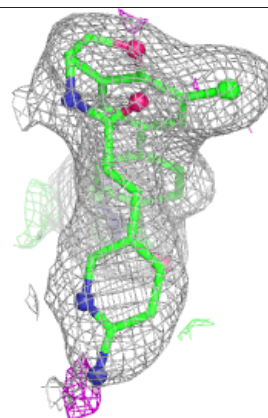
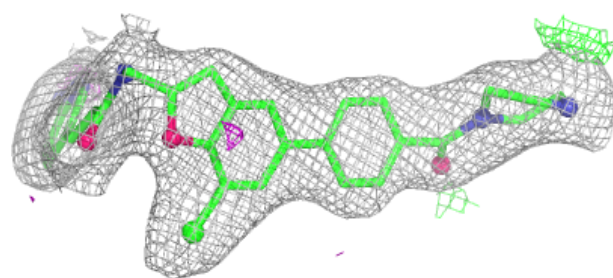
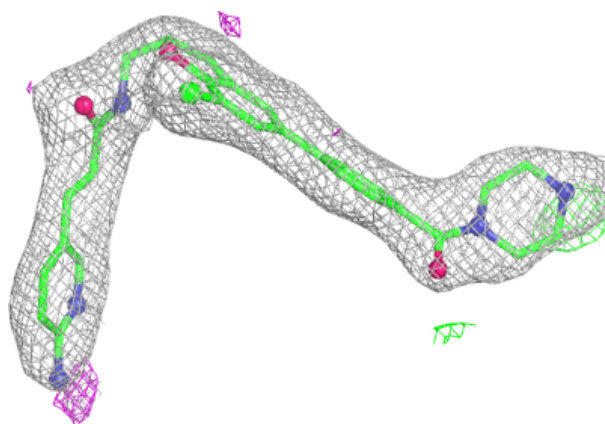
**Electron density around A1MBG I 602:**

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

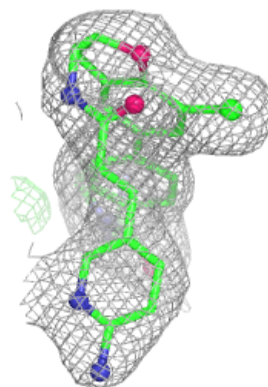
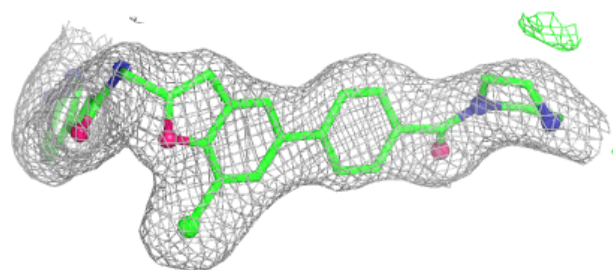
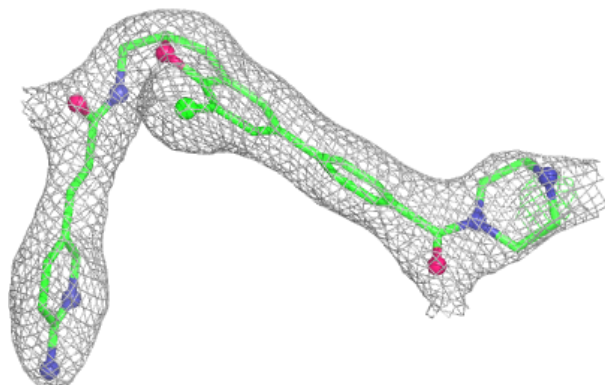


Electron density around A1MBG K 601:

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

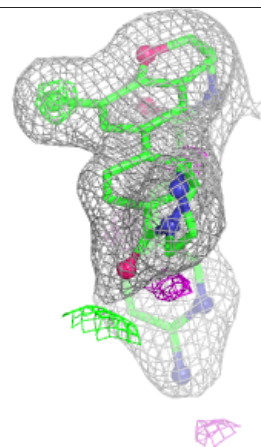
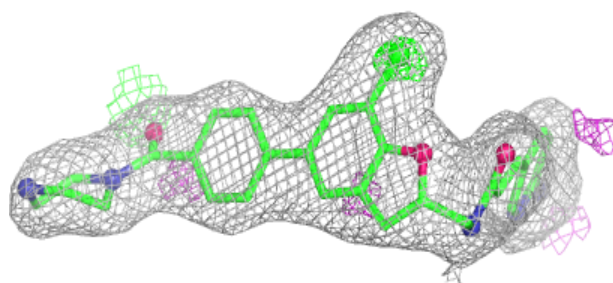
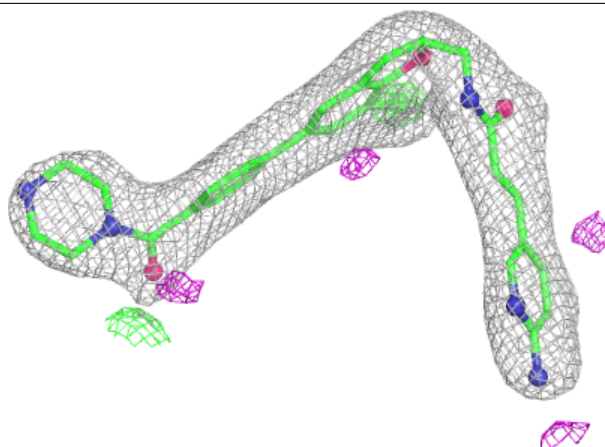
**Electron density around A1MBG L 601:**

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



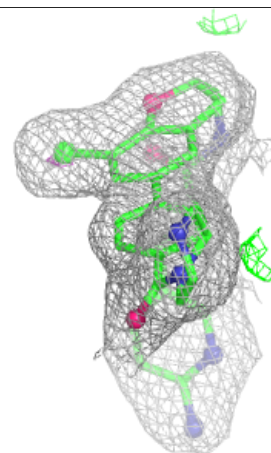
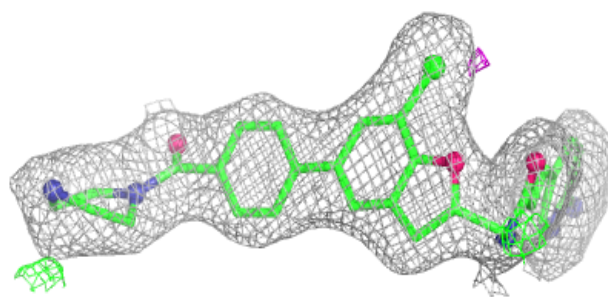
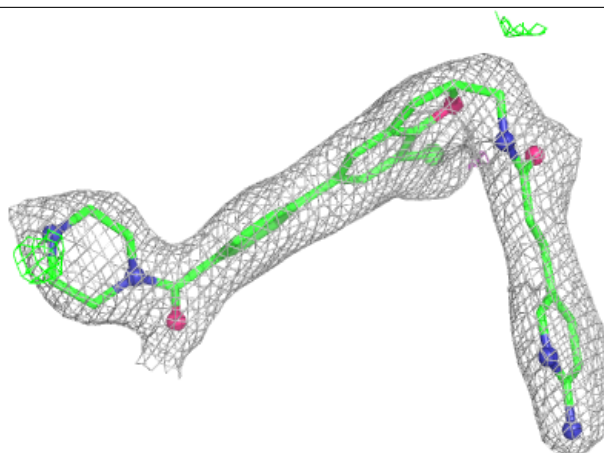
Electron density around A1MBG I 601:

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

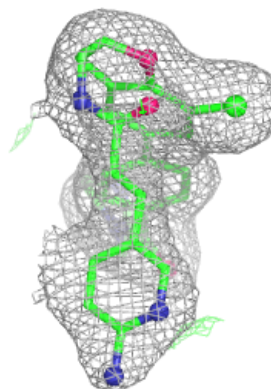
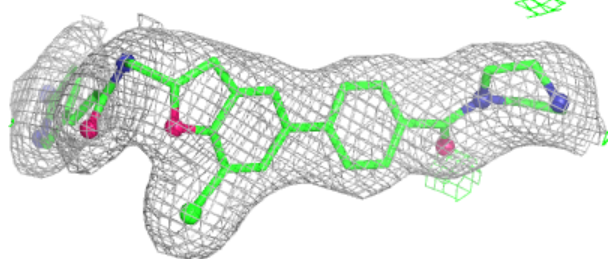
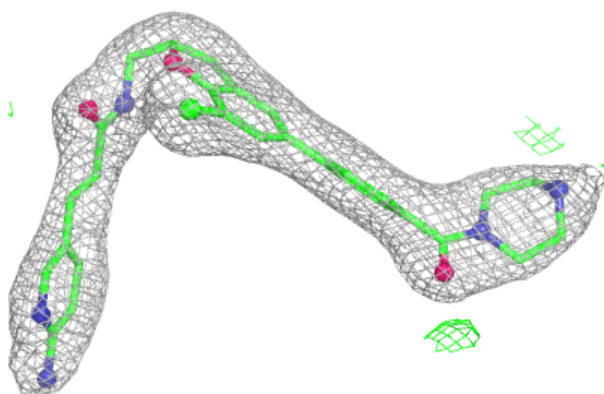


Electron density around A1MBG B 601:

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

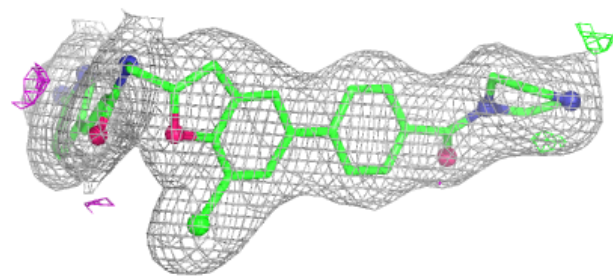
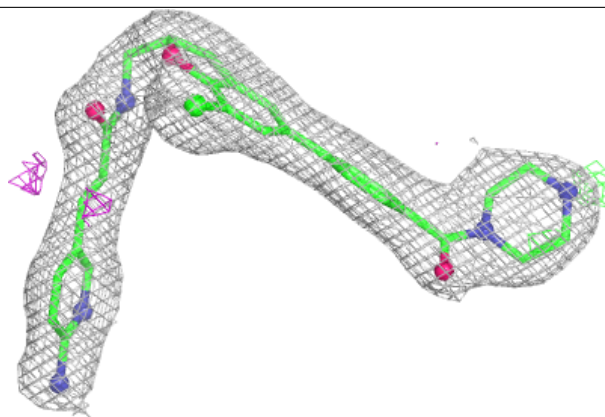
**Electron density around A1MBG F 601:**

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



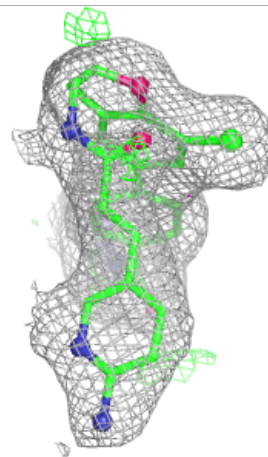
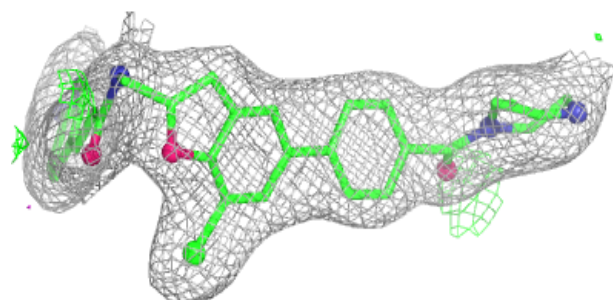
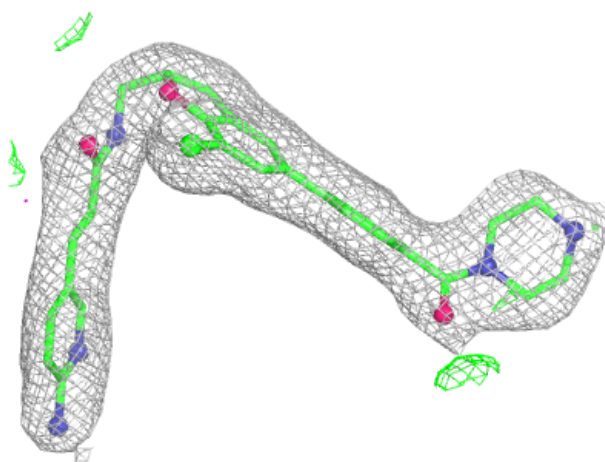
Electron density around A1MBG C 601:

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



Electron density around A1MBG G 601:

$2mF_o-DF_c$ (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.