Full wwPDB X-ray Structure Validation Report ⓘ

Aug 26, 2024 – 04:13 PM JST

PDB ID	:	8W7E
Title	:	Design, synthesis and biological evaluations of novel small molecular hyper-activators of human caseinolytic peptidase P (hClpP)
Authors	:	Jiang, J.-X.; Ding, H.; Chen, M.-R.; Lu, M.-L.; Sun, H.-Y.; Xiao, Y.-B.
Deposited on	:	2023-08-30
Resolution	:	2.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

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

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

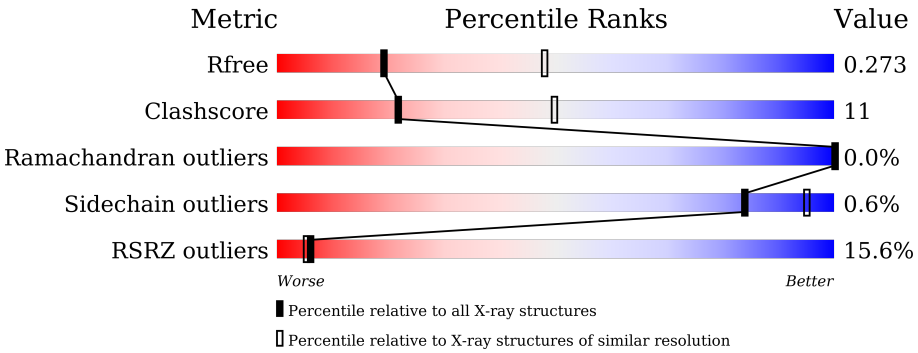
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.002 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.38.2

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	3657 (2.80-2.80)
Clashscore	180529	4123 (2.80-2.80)
Ramachandran outliers	177936	4071 (2.80-2.80)
Sidechain outliers	177891	4073 (2.80-2.80)
RSRZ outliers	164620	3659 (2.80-2.80)

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

Mol	Chain	Length	Quality of chain
1	A	223	4% 61% 18% 22%
1	B	223	5% 64% 15% 21%
1	C	223	7% 65% 14% 22%
1	D	223	9% 65% 14% 21%
1	E	223	8% 62% 16% 22%
1	F	223	11% 51% 28% 21%

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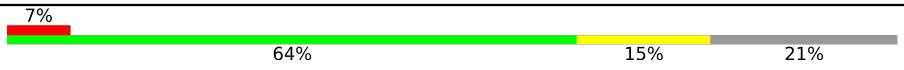
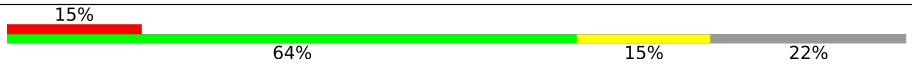
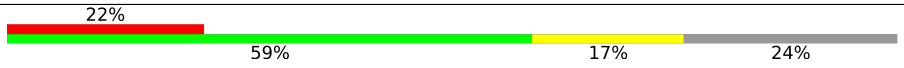
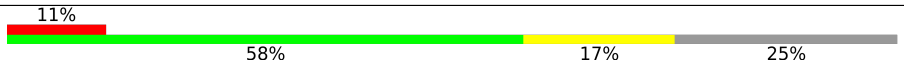
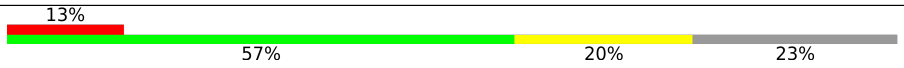
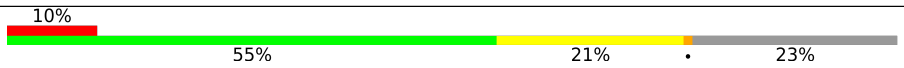
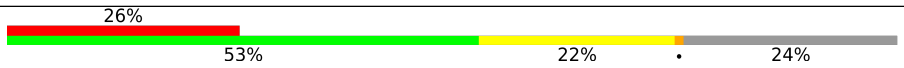
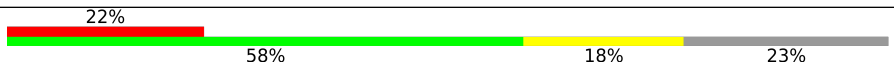
Mol	Chain	Length	Quality of chain
1	G	223	
1	H	223	
1	I	223	
1	J	223	
1	K	223	
1	L	223	
1	M	223	
1	N	223	

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 19090 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 ATP-dependent Clp protease proteolytic subunit, mitochondrial.

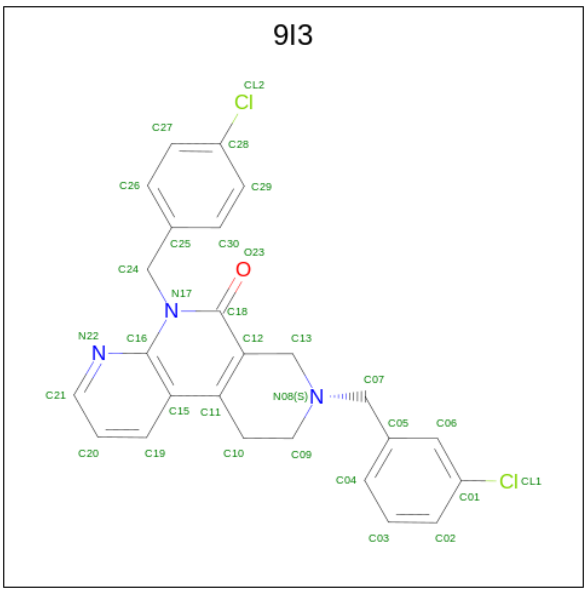
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	175	Total	C	N	O	S	0	1	0
			1359	868	231	247	13			
1	B	176	Total	C	N	O	S	0	0	0
			1352	863	229	247	13			
1	C	175	Total	C	N	O	S	0	2	0
			1365	870	231	250	14			
1	D	176	Total	C	N	O	S	0	1	0
			1370	873	233	251	13			
1	E	174	Total	C	N	O	S	0	1	0
			1339	856	226	243	14			
1	F	177	Total	C	N	O	S	0	1	0
			1374	876	234	252	12			
1	G	176	Total	C	N	O	S	0	0	0
			1347	863	227	244	13			
1	H	175	Total	C	N	O	S	0	0	0
			1336	853	226	244	13			
1	I	169	Total	C	N	O	S	0	0	0
			1296	828	219	236	13			
1	J	168	Total	C	N	O	S	0	0	0
			1276	818	216	229	13			
1	K	172	Total	C	N	O	S	0	0	0
			1314	841	222	238	13			
1	L	172	Total	C	N	O	S	0	0	0
			1330	852	223	242	13			
1	M	170	Total	C	N	O	S	0	1	0
			1283	823	212	236	12			
1	N	171	Total	C	N	O	S	0	0	0
			1315	844	219	239	13			

There are 42 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	55	GLY	-	linker	UNP Q16740
A	56	SER	-	linker	UNP Q16740
A	57	SER	-	linker	UNP Q16740
B	55	GLY	-	linker	UNP Q16740
B	56	SER	-	linker	UNP Q16740
B	57	SER	-	linker	UNP Q16740
C	55	GLY	-	linker	UNP Q16740
C	56	SER	-	linker	UNP Q16740
C	57	SER	-	linker	UNP Q16740
D	55	GLY	-	linker	UNP Q16740
D	56	SER	-	linker	UNP Q16740
D	57	SER	-	linker	UNP Q16740
E	55	GLY	-	linker	UNP Q16740
E	56	SER	-	linker	UNP Q16740
E	57	SER	-	linker	UNP Q16740
F	55	GLY	-	linker	UNP Q16740
F	56	SER	-	linker	UNP Q16740
F	57	SER	-	linker	UNP Q16740
G	55	GLY	-	linker	UNP Q16740
G	56	SER	-	linker	UNP Q16740
G	57	SER	-	linker	UNP Q16740
H	55	GLY	-	linker	UNP Q16740
H	56	SER	-	linker	UNP Q16740
H	57	SER	-	linker	UNP Q16740
I	55	GLY	-	linker	UNP Q16740
I	56	SER	-	linker	UNP Q16740
I	57	SER	-	linker	UNP Q16740
J	55	GLY	-	linker	UNP Q16740
J	56	SER	-	linker	UNP Q16740
J	57	SER	-	linker	UNP Q16740
K	55	GLY	-	linker	UNP Q16740
K	56	SER	-	linker	UNP Q16740
K	57	SER	-	linker	UNP Q16740
L	55	GLY	-	linker	UNP Q16740
L	56	SER	-	linker	UNP Q16740
L	57	SER	-	linker	UNP Q16740
M	55	GLY	-	linker	UNP Q16740
M	56	SER	-	linker	UNP Q16740
M	57	SER	-	linker	UNP Q16740
N	55	GLY	-	linker	UNP Q16740
N	56	SER	-	linker	UNP Q16740
N	57	SER	-	linker	UNP Q16740

- Molecule 2 is 3-[(3-chlorophenyl)methyl]-6-[(4-chlorophenyl)methyl]-2,4-dihydro-1H-pyrido[

2,3-c][2,7]naphthyridin-5-one (three-letter code: 9I3) (formula: $C_{25}H_{21}Cl_2N_3O$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	B	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	C	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	D	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	E	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	E	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	F	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	G	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	H	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	I	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	K	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	L	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		
2	M	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		

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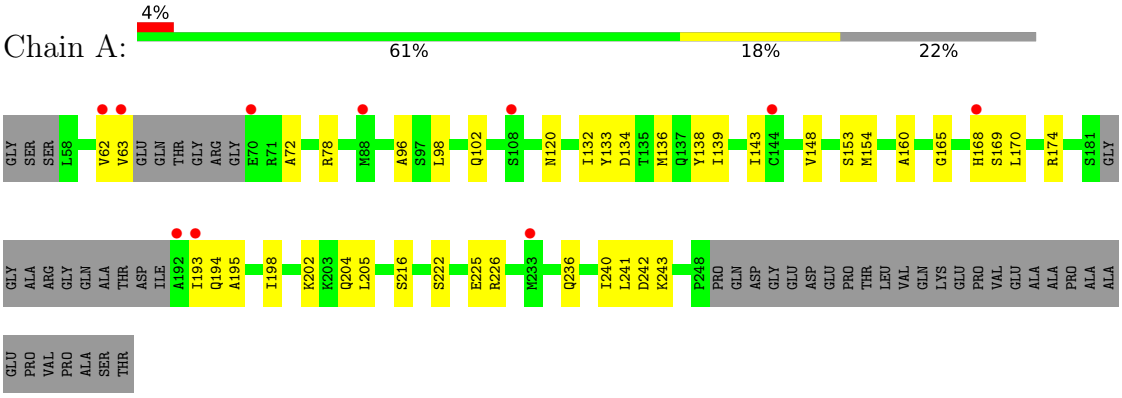
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	N	1	Total	C	Cl	N	O	0	0
			31	25	2	3	1		

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

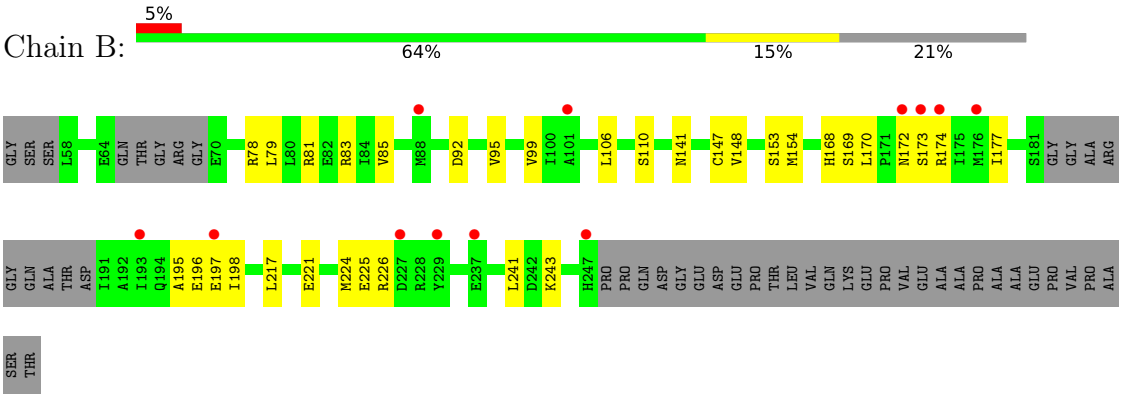
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain A:



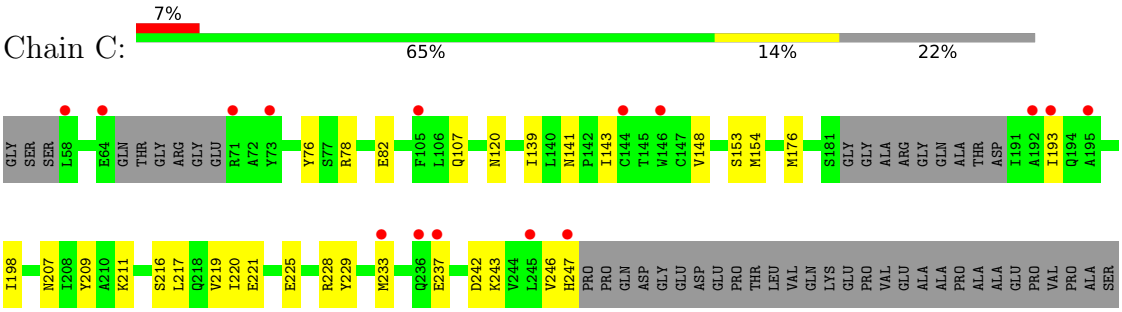
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain B:



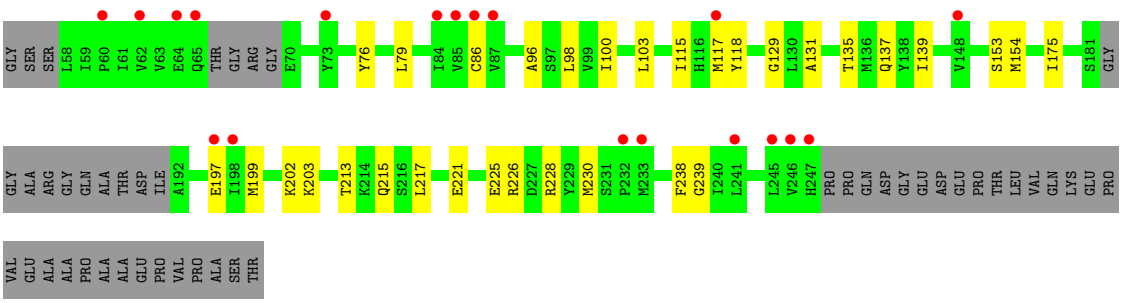
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain C:



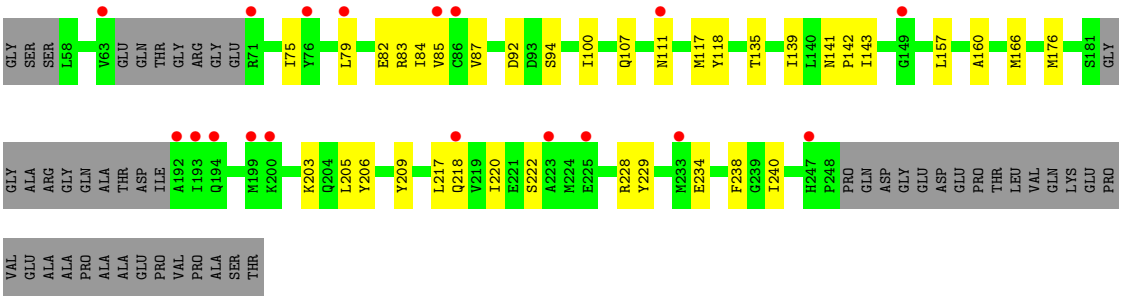
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain D:



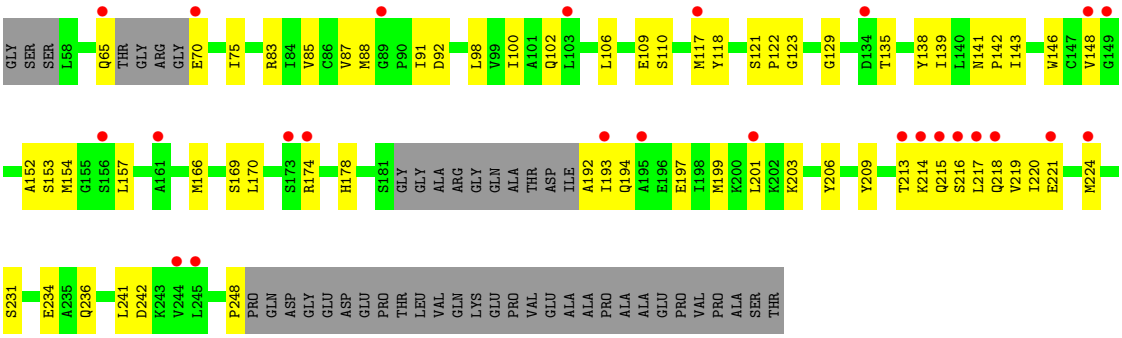
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain E:



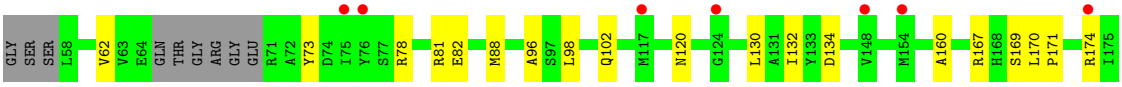
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain F:



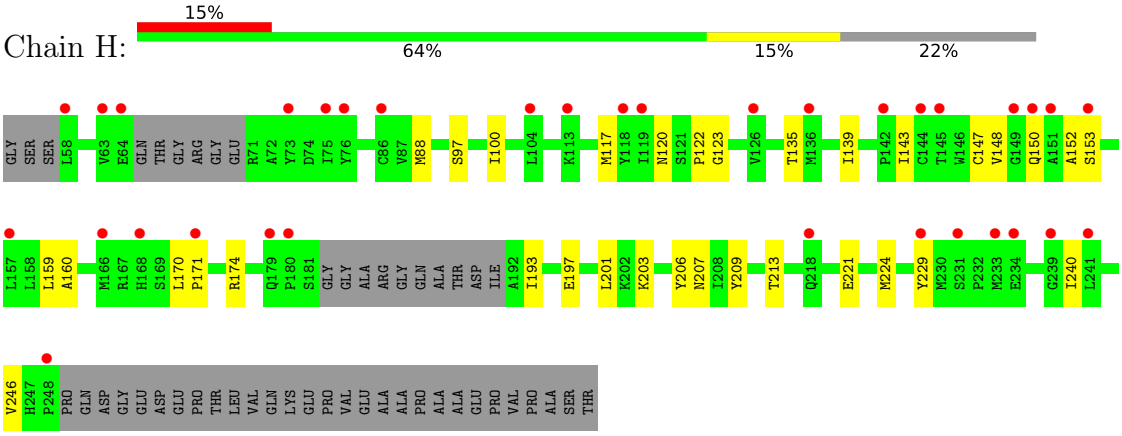
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain G:



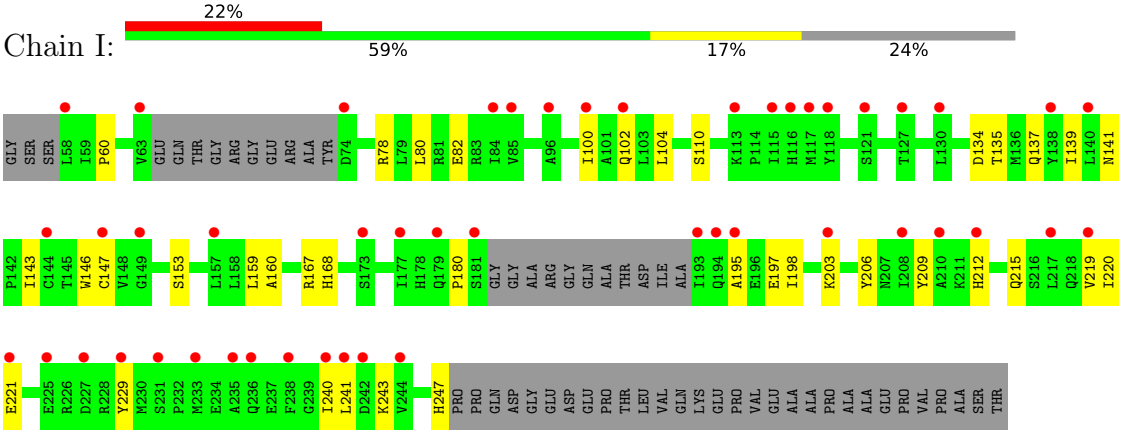
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain H:



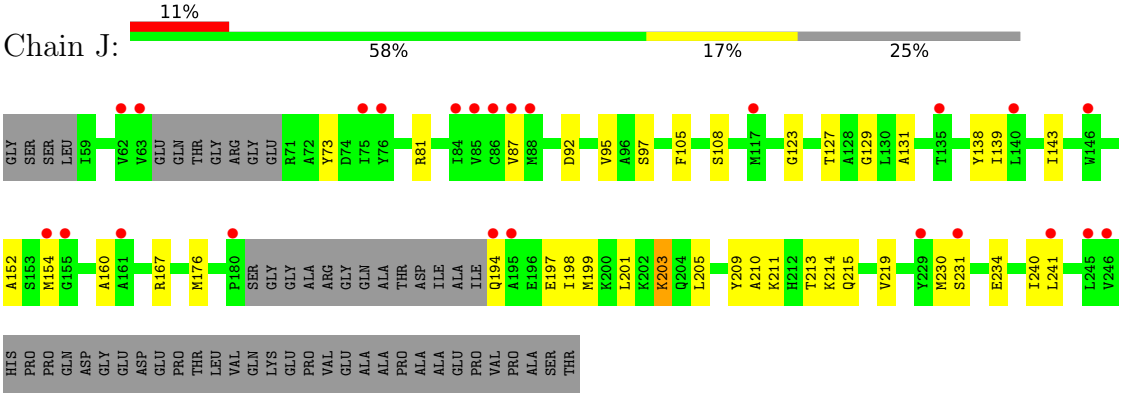
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain I:



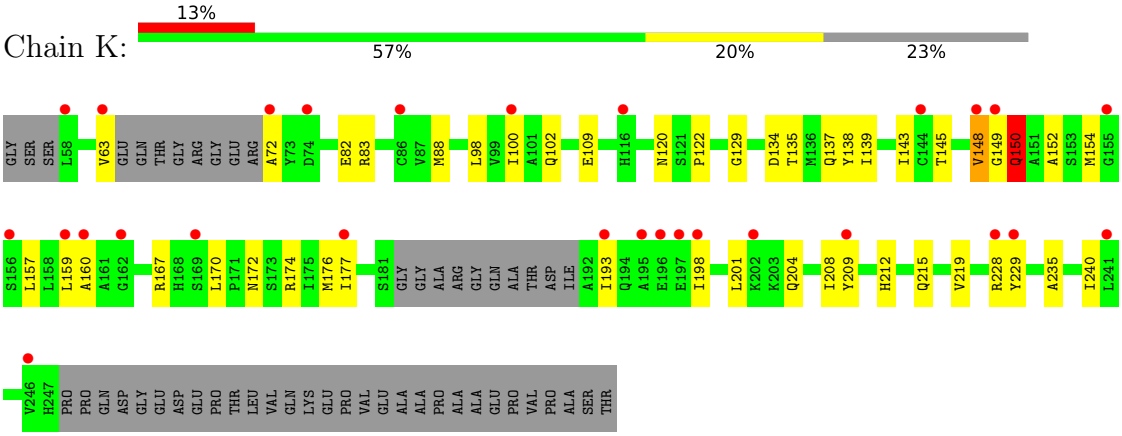
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain J:



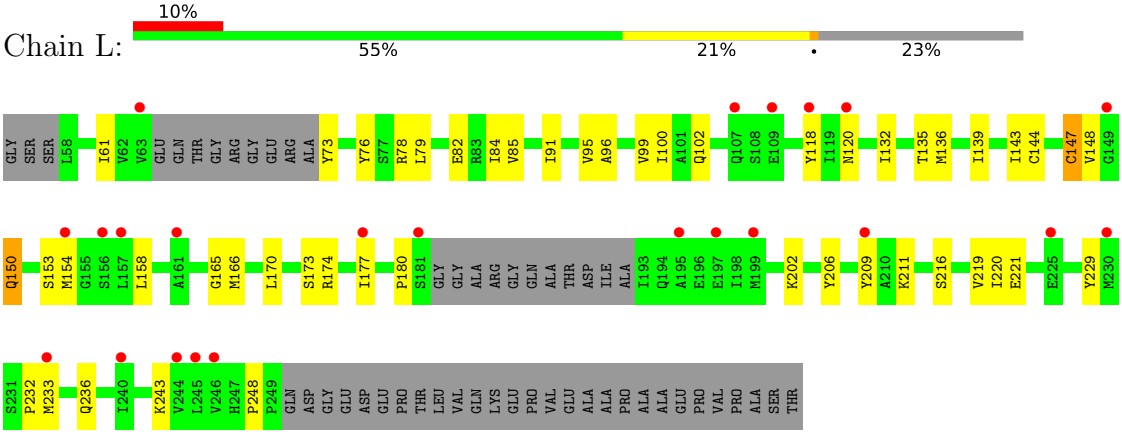
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain K:



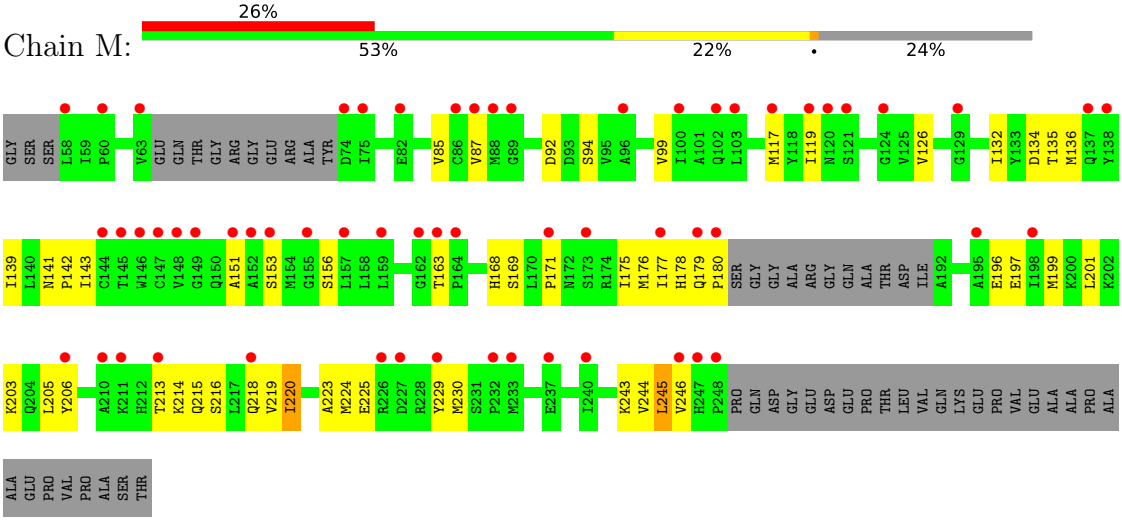
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain L:



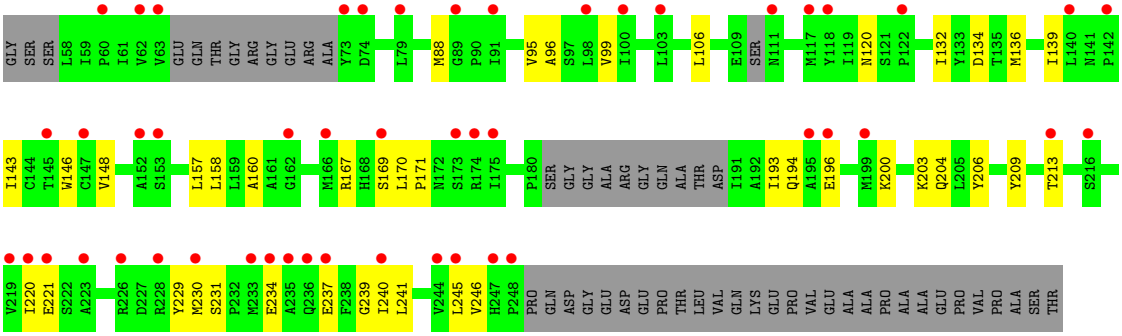
• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain M:



• Molecule 1: ATP-dependent Clp protease proteolytic subunit, mitochondrial

Chain N:


GLY SER SER L58 I59 P60 I61 V62 V63 GLU GLN THR GLY ARG GLY GLU ARG ALA Y73 D74 L79 M88 G89 P90 I91 V95 A96 S97 L98 V99 I100 L103 L106 E109 SER N111 M117 Y118 I119 N120 S121 P122 I132 Y133 D134 T135 M136 I139 L140 N141 P142
I143 C144 T145 W146 C147 V148 A152 S153 L157 L158 L159 A160 A161 G162 M166 R167 H168 S169 L170 P171 N172 S173 R174 I175 P180 SER GLY GLY ALA ARG GLY GLN ALA THR ASP I191 A192 I193 Q194 A195 E196 M199 K200 K203 Q204 L205 Y206 Y209 T213 S216
V219 I220 E221 S222 A223 R226 D227 R228 Y229 M230 S231 P232 M233 E234 A235 Q236 E237 P238 G239 I240 L241 V244 L245 V246 H247 P248 PRO GLN ASP GLY GLU ASP GLU PRO THR LEU VAL GLN LYS GLU PRO VAL GLU ALA ALA PRO ALA ALA GLU PRO VAL PRO ALA SER THR

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	164.77Å 119.22Å 152.81Å 90.00° 100.82° 90.00°	Depositor
Resolution (Å)	46.65 – 2.80 46.65 – 2.80	Depositor EDS
% Data completeness (in resolution range)	99.6 (46.65-2.80) 88.0 (46.65-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.20 (at 2.77Å)	Xtriage
Refinement program	PHENIX (1.18.2_3874: ???)	Depositor
R, R_{free}	0.266 , 0.274 0.265 , 0.273	Depositor DCC
R_{free} test set	69618 reflections (2.76%)	wwPDB-VP
Wilson B-factor (Å^2)	49.8	Xtriage
Anisotropy	0.344	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 25.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	19090	wwPDB-VP
Average B, all atoms (Å^2)	63.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.90% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 9I3

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	0.35	0/1383	0.52	0/1871
1	B	0.27	0/1375	0.44	0/1861
1	C	0.26	0/1388	0.48	0/1877
1	D	0.29	0/1393	0.52	0/1883
1	E	0.32	0/1362	0.54	0/1843
1	F	0.37	0/1398	0.55	0/1892
1	G	0.28	0/1371	0.48	0/1858
1	H	0.25	0/1359	0.49	0/1841
1	I	0.26	0/1318	0.53	0/1785
1	J	0.41	0/1298	0.54	0/1760
1	K	0.41	0/1336	0.56	0/1808
1	L	0.34	0/1355	0.53	0/1836
1	M	0.36	0/1306	0.55	0/1775
1	N	0.31	0/1338	0.55	0/1812
All	All	0.32	0/18980	0.52	0/25702

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1359	0	1389	27	0
1	B	1352	0	1369	25	0
1	C	1365	0	1385	23	0
1	D	1370	0	1396	29	0
1	E	1339	0	1367	27	0
1	F	1374	0	1396	59	0
1	G	1347	0	1370	28	0
1	H	1336	0	1356	21	0
1	I	1296	0	1318	24	0
1	J	1276	0	1292	32	0
1	K	1314	0	1338	43	0
1	L	1330	0	1356	42	0
1	M	1283	0	1285	41	0
1	N	1315	0	1334	32	0
2	A	31	0	0	0	0
2	B	31	0	0	1	0
2	C	31	0	0	0	0
2	D	31	0	0	1	0
2	E	62	0	0	1	0
2	F	31	0	0	0	0
2	G	31	0	0	1	0
2	H	31	0	0	1	0
2	I	31	0	0	0	0
2	K	31	0	0	1	0
2	L	31	0	0	3	0
2	M	31	0	0	0	0
2	N	31	0	0	1	0
All	All	19090	0	18951	402	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 11.

All (402) 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:G:174:ARG:CZ	1:K:201:LEU:HD21	1.79	1.11
1:F:193:ILE:CG2	1:F:197:GLU:HB3	1.94	0.95
1:N:88:MET:HG2	1:N:120:ASN:HB3	1.48	0.94
1:K:129:GLY:HA3	1:K:154:MET:HE2	1.47	0.94
1:J:213:THR:HG23	1:J:215:GLN:H	1.31	0.93
1:L:139:ILE:HD11	1:L:143:ILE:HD11	1.57	0.86
1:F:203:LYS:HA	1:F:206:TYR:CD2	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:129:GLY:HA3	1:K:154:MET:CE	2.06	0.85
1:H:123:GLY:HA3	1:H:153:SER:HB3	1.59	0.85
1:E:142:PRO:HB2	1:E:166:MET:HE1	1.61	0.83
1:G:174:ARG:CZ	1:K:201:LEU:CD2	2.56	0.83
1:F:203:LYS:HA	1:F:206:TYR:HD2	1.42	0.83
1:G:88:MET:HG2	1:G:120:ASN:HB3	1.61	0.82
1:D:213:THR:HG22	1:D:215:GLN:HG2	1.59	0.82
1:I:139:ILE:HD11	1:I:143:ILE:HD11	1.59	0.81
1:F:91:ILE:CD1	1:F:121:SER:OG	2.32	0.78
1:F:193:ILE:HG22	1:F:194:GLN:N	1.97	0.78
1:G:160:ALA:HB2	1:G:240:ILE:HG23	1.66	0.78
1:A:148:VAL:HG12	1:A:170:LEU:HD12	1.66	0.78
1:L:61:ILE:HG23	1:L:73:TYR:HB3	1.66	0.78
1:N:139:ILE:HD11	1:N:143:ILE:HD11	1.65	0.77
1:F:193:ILE:HG21	1:F:197:GLU:HB3	1.67	0.77
1:N:171:PRO:HG3	1:N:246:VAL:HG12	1.67	0.77
1:J:160:ALA:HB2	1:J:240:ILE:HG23	1.69	0.74
1:I:160:ALA:HB2	1:I:240:ILE:HG23	1.69	0.73
1:H:139:ILE:HD11	1:H:143:ILE:HD11	1.69	0.73
1:K:139:ILE:HD11	1:K:143:ILE:HD11	1.71	0.73
1:F:193:ILE:CG2	1:F:194:GLN:N	2.52	0.72
1:D:213:THR:CG2	1:D:238:PHE:O	2.37	0.72
1:C:233[A]:MET:SD	1:E:217:LEU:HB3	2.29	0.72
1:G:174:ARG:NE	1:K:201:LEU:HD21	2.04	0.72
1:I:100:ILE:HG23	1:I:135:THR:HG21	1.71	0.71
1:C:233[B]:MET:HG3	1:E:218:GLN:HA	1.73	0.70
1:L:100:ILE:HG23	1:L:135:THR:HG21	1.72	0.70
1:J:139:ILE:HD11	1:J:143:ILE:HD11	1.73	0.70
1:F:91:ILE:HD12	1:F:121:SER:OG	1.91	0.70
1:I:197:GLU:HG2	1:N:229:TYR:HD1	1.57	0.69
1:H:122:PRO:HA	1:H:152:ALA:HB3	1.75	0.69
1:E:209:TYR:HB3	1:E:220:ILE:HD12	1.74	0.68
1:B:168:HIS:HD2	1:B:243:LYS:HB2	1.58	0.68
1:A:134:ASP:HB3	1:F:170:LEU:HD23	1.74	0.68
1:J:210:ALA:HA	1:J:213:THR:HG22	1.75	0.67
1:F:91:ILE:HD11	1:F:121:SER:OG	1.95	0.67
1:L:96:ALA:O	1:L:100:ILE:HG12	1.95	0.67
1:M:215:GLN:HB3	1:M:219:VAL:HG21	1.77	0.66
1:M:177:ILE:HD12	1:M:224:MET:HE2	1.76	0.66
1:J:131:ALA:HB1	1:L:148:VAL:HG22	1.78	0.66
1:A:236:GLN:NE2	1:A:242:ASP:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:96:ALA:O	1:D:100:ILE:HG12	1.96	0.66
1:L:100:ILE:HD12	1:L:135:THR:HG21	1.78	0.66
1:F:193:ILE:CG2	1:F:194:GLN:H	2.09	0.65
1:N:234:GLU:HA	1:N:237:GLU:HB3	1.78	0.65
1:E:160:ALA:HB2	1:E:240:ILE:HG23	1.78	0.65
1:D:86:CYS:HA	1:D:118:TYR:HB2	1.79	0.65
1:D:213:THR:HG23	1:D:239:GLY:HA3	1.80	0.64
1:E:107:GLN:HG3	1:E:111:ASN:HB3	1.80	0.64
1:G:170:LEU:HD23	1:K:134:ASP:HB3	1.79	0.64
1:F:193:ILE:HG22	1:F:197:GLU:HB3	1.79	0.64
1:A:139:ILE:HD11	1:A:143:ILE:HD11	1.79	0.63
1:E:139:ILE:HD11	1:E:143:ILE:HD11	1.81	0.63
1:M:171:PRO:HG3	1:M:246:VAL:HG22	1.80	0.63
1:M:179:GLN:HE21	1:M:205:LEU:CD1	2.12	0.62
1:D:213:THR:HG22	1:D:215:GLN:CG	2.28	0.61
1:L:78:ARG:NH1	1:L:82:GLU:OE2	2.30	0.61
1:M:179:GLN:HE21	1:M:205:LEU:HD11	1.64	0.61
1:L:209:TYR:HB3	1:L:220:ILE:HD13	1.81	0.61
1:F:123:GLY:HA3	1:F:153[B]:SER:HB2	1.83	0.61
1:K:177:ILE:HB	1:K:209:TYR:HE2	1.66	0.61
1:K:193:ILE:HD12	1:K:198:ILE:HB	1.82	0.61
1:J:231:SER:HB2	1:J:234:GLU:H	1.66	0.61
1:L:100:ILE:HD11	1:L:132:ILE:HA	1.84	0.60
1:F:123:GLY:HA3	1:F:153[A]:SER:HB3	1.82	0.60
1:H:160:ALA:HB2	1:H:240:ILE:HG23	1.83	0.59
1:C:209:TYR:HB3	1:C:220:ILE:HD12	1.84	0.59
1:D:213:THR:HG23	1:D:238:PHE:O	2.03	0.59
1:G:169:SER:HB2	1:G:241:LEU:HD22	1.85	0.59
1:B:110:SER:O	1:B:141:ASN:ND2	2.31	0.59
1:F:218:GLN:CD	1:F:218:GLN:H	2.07	0.59
1:K:100:ILE:HG23	1:K:135:THR:HG21	1.84	0.59
1:K:167:ARG:NH1	1:K:240:ILE:O	2.35	0.58
1:I:80:LEU:HD11	1:I:102:GLN:HG2	1.85	0.58
1:E:157:LEU:HD13	1:E:205:LEU:HD22	1.85	0.58
1:J:97:SER:OG	1:L:76:TYR:OH	2.20	0.58
1:G:73:TYR:OH	1:G:81:ARG:NH1	2.36	0.58
1:I:134:ASP:HB3	1:N:170:LEU:HD13	1.85	0.58
1:C:139:ILE:HD11	1:C:143:ILE:HD11	1.85	0.58
1:H:206:TYR:CZ	1:H:221:GLU:HG3	2.39	0.58
1:J:73:TYR:CE2	1:J:81:ARG:HD2	2.39	0.57
1:M:85:VAL:HG11	1:M:99:VAL:HG13	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:200:LYS:HA	1:N:203:LYS:HE2	1.85	0.57
1:K:148:VAL:HA	1:K:170:LEU:HD23	1.85	0.57
1:L:100:ILE:HD12	1:L:135:THR:CG2	2.34	0.57
1:M:139:ILE:HD12	1:M:141:ASN:HB2	1.86	0.57
1:M:171:PRO:HD3	1:M:245:LEU:O	2.05	0.57
1:F:193:ILE:HG21	1:F:197:GLU:CB	2.35	0.56
1:K:160:ALA:HA	1:K:167:ARG:HH11	1.70	0.56
1:B:147:CYS:SG	1:B:173:SER:HB3	2.45	0.56
1:J:92:ASP:H	1:J:95:VAL:HG12	1.69	0.56
1:N:146:TRP:HZ3	1:N:245:LEU:HD21	1.70	0.56
1:N:193:ILE:HG22	1:N:194:GLN:H	1.71	0.56
1:F:85:VAL:O	1:F:117:MET:HA	2.06	0.55
1:L:91:ILE:HA	1:L:95:VAL:HG11	1.88	0.55
1:N:196:GLU:O	1:N:200:LYS:HG3	2.05	0.55
1:M:216:SER:H	1:M:219:VAL:CG2	2.19	0.55
1:B:177:ILE:HD12	1:B:224:MET:HG3	1.89	0.55
1:J:194:GLN:O	1:J:198:ILE:HG12	2.07	0.55
1:M:215:GLN:HB3	1:M:219:VAL:CG2	2.37	0.55
1:N:167:ARG:NH2	1:N:239:GLY:O	2.40	0.55
1:K:120:ASN:HB2	1:K:149:GLY:HA3	1.89	0.55
1:A:63:VAL:HG12	1:A:72:ALA:HB2	1.89	0.54
1:J:123:GLY:HA2	1:J:154:MET:HB2	1.90	0.54
1:L:165:GLY:O	1:L:243:LYS:NZ	2.36	0.54
1:B:217:LEU:O	1:B:221:GLU:HG3	2.07	0.53
1:L:153:SER:OG	1:L:180:PRO:HD3	2.07	0.53
1:L:154:MET:O	1:L:158:LEU:HD12	2.09	0.53
1:M:142:PRO:HA	1:M:163:THR:HG21	1.90	0.53
1:F:193:ILE:HG21	1:F:197:GLU:CG	2.39	0.53
1:K:215:GLN:HB3	1:K:219:VAL:CG2	2.38	0.53
1:E:111:ASN:HA	1:E:141:ASN:ND2	2.23	0.53
1:F:231:SER:N	1:F:234:GLU:OE1	2.35	0.53
1:I:110:SER:O	1:I:141:ASN:ND2	2.34	0.53
1:K:129:GLY:CA	1:K:154:MET:HE2	2.30	0.53
1:M:216:SER:OG	1:M:219:VAL:HG22	2.09	0.53
1:A:98:LEU:O	1:A:102:GLN:HG3	2.09	0.53
1:I:137:GLN:HE22	1:I:212:HIS:CE1	2.27	0.53
1:N:169:SER:HB2	1:N:241:LEU:HD22	1.90	0.53
1:B:148:VAL:HG23	1:B:170:LEU:HD12	1.90	0.53
1:C:217:LEU:O	1:C:221:GLU:HG3	2.09	0.53
1:I:168:HIS:CD2	1:I:243:LYS:HD2	2.44	0.53
1:A:63:VAL:HA	1:A:72:ALA:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:235:ALA:HB1	1:K:240:ILE:HB	1.91	0.53
1:B:170:LEU:HD13	1:G:134:ASP:HB3	1.91	0.52
1:M:177:ILE:O	1:M:224:MET:HG3	2.09	0.52
1:F:87:VAL:N	1:F:118:TYR:O	2.42	0.52
1:C:78:ARG:NH1	1:C:82:GLU:OE2	2.35	0.52
1:K:145:THR:HB	1:K:159:LEU:HD12	1.90	0.52
1:D:103:LEU:HD11	1:D:117:MET:CE	2.39	0.52
1:M:151:ALA:O	1:M:156:SER:OG	2.26	0.52
1:M:175:ILE:O	1:M:230:MET:N	2.43	0.52
1:M:216:SER:H	1:M:219:VAL:HG22	1.75	0.52
1:C:176:MET:HG3	1:C:228:ARG:O	2.10	0.52
1:G:82:GLU:HG3	2:G:301:9I3:C27	2.40	0.52
1:F:139:ILE:HD11	1:F:143:ILE:HD11	1.92	0.52
1:M:199:MET:O	1:M:203:LYS:HG2	2.10	0.52
1:N:160:ALA:HB2	1:N:240:ILE:HG23	1.91	0.52
1:A:174:ARG:NH2	1:B:197:GLU:OE1	2.41	0.51
1:F:216:SER:O	1:F:219:VAL:HG22	2.11	0.51
1:B:83:ARG:HG2	1:B:106:LEU:HD22	1.92	0.51
1:C:237:GLU:HG3	1:E:203:LYS:HE3	1.91	0.51
1:G:171:PRO:HG3	1:G:246:VAL:HG22	1.92	0.51
1:E:79:LEU:HD12	2:E:301:9I3:CL2	2.47	0.51
1:J:197:GLU:OE2	1:L:229:TYR:HB2	2.11	0.51
1:I:203:LYS:HA	1:I:206:TYR:CD2	2.46	0.51
1:E:82:GLU:O	1:E:84:ILE:HG13	2.10	0.51
1:L:177:ILE:HB	1:L:209:TYR:HE2	1.74	0.51
1:E:85:VAL:O	1:E:117:MET:HA	2.11	0.51
1:M:139:ILE:HD11	1:M:143:ILE:HD11	1.91	0.51
1:F:129:GLY:HA3	1:F:154:MET:HE2	1.93	0.50
1:J:138:TYR:CE2	1:L:248:PRO:HD3	2.46	0.50
1:K:176:MET:HG3	1:K:228:ARG:O	2.11	0.50
1:D:199:MET:HG3	1:D:203:LYS:HZ2	1.76	0.50
1:F:102:GLN:NE2	1:I:60:PRO:HG2	2.26	0.50
1:D:213:THR:HG22	1:D:213:THR:O	2.11	0.50
1:E:157:LEU:CD1	1:E:205:LEU:HD22	2.40	0.50
1:K:157:LEU:HA	1:K:209:TYR:CE1	2.45	0.50
1:N:120:ASN:HB2	1:N:148:VAL:HG13	1.93	0.50
1:B:225:GLU:OE2	1:C:228:ARG:HD2	2.11	0.50
1:D:199:MET:HG3	1:D:203:LYS:NZ	2.27	0.49
1:D:213:THR:HG23	1:D:239:GLY:CA	2.42	0.49
1:A:153[A]:SER:OG	1:A:154:MET:N	2.43	0.49
1:E:100:ILE:HG23	1:E:135:THR:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:88:MET:SD	1:H:120:ASN:HB3	2.52	0.49
1:J:127:THR:HG23	1:L:150:GLN:H	1.76	0.49
1:A:138:TYR:CZ	1:F:248:PRO:HG3	2.47	0.49
1:F:193:ILE:CG2	1:F:197:GLU:CB	2.80	0.49
1:J:152:ALA:HA	1:J:176:MET:HB3	1.94	0.49
1:L:85:VAL:HG11	1:L:99:VAL:HG13	1.93	0.49
1:B:78:ARG:O	1:B:81:ARG:HB2	2.11	0.49
1:K:122:PRO:HA	1:K:152:ALA:HB3	1.94	0.49
1:L:120:ASN:HB2	1:L:148:VAL:HG13	1.94	0.49
1:I:195:ALA:O	1:I:198:ILE:HG22	2.12	0.49
1:L:95:VAL:O	1:L:99:VAL:HG23	2.12	0.49
1:F:169:SER:HB2	1:F:241:LEU:HD22	1.94	0.49
1:I:215:GLN:HB3	1:I:219:VAL:CG2	2.43	0.48
1:L:85:VAL:HG13	1:L:102:GLN:NE2	2.28	0.48
1:M:218:GLN:O	1:M:219:VAL:C	2.49	0.48
1:B:169:SER:OG	1:B:173:SER:HB2	2.13	0.48
1:C:207:ASN:O	1:C:211:LYS:HB2	2.14	0.48
1:N:136:MET:HG2	1:N:143:ILE:HD13	1.95	0.48
1:A:62:VAL:O	1:A:72:ALA:HA	2.13	0.48
1:A:165:GLY:O	1:A:243:LYS:NZ	2.46	0.48
1:H:150:GLN:HB2	1:H:174:ARG:HB3	1.96	0.48
1:J:213:THR:OG1	1:J:215:GLN:HG2	2.13	0.48
1:M:223:ALA:C	1:M:225:GLU:N	2.65	0.48
1:J:131:ALA:HB1	1:L:148:VAL:CG2	2.42	0.48
1:N:136:MET:CE	1:N:158:LEU:HD12	2.43	0.48
1:I:153:SER:OG	1:I:180:PRO:HD3	2.13	0.48
1:J:209:TYR:O	1:J:213:THR:HG22	2.12	0.48
1:N:206:TYR:HA	1:N:220:ILE:HG21	1.95	0.48
1:G:209:TYR:O	1:G:213:THR:OG1	2.26	0.48
1:H:171:PRO:HG3	1:H:246:VAL:HG12	1.94	0.48
1:C:153[A]:SER:OG	1:C:154:MET:N	2.47	0.47
1:G:98:LEU:O	1:G:102:GLN:HG3	2.14	0.47
1:F:110:SER:O	1:F:141:ASN:ND2	2.41	0.47
1:K:174:ARG:HB3	1:K:229:TYR:CD2	2.48	0.47
1:B:226:ARG:NH1	1:C:225:GLU:OE2	2.45	0.47
1:F:214:LYS:O	1:F:214:LYS:HG3	2.15	0.47
1:F:215:GLN:HB3	1:F:219:VAL:CG2	2.45	0.47
1:L:206:TYR:CZ	1:L:221:GLU:HG2	2.50	0.47
1:B:195:ALA:O	1:B:198:ILE:HG22	2.15	0.47
1:K:157:LEU:HD12	1:K:209:TYR:CE1	2.49	0.47
1:L:118:TYR:HE2	2:L:301:9I3:CL1	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:149:GLY:O	1:K:150:GLN:C	2.52	0.47
1:B:196:GLU:OE1	1:D:202:LYS:NZ	2.48	0.47
1:J:213:THR:O	1:J:214:LYS:HB2	2.15	0.47
1:A:120:ASN:HB2	1:A:148:VAL:HG23	1.96	0.47
1:D:76:TYR:OH	1:H:97:SER:OG	2.32	0.47
1:F:217:LEU:HD12	1:F:217:LEU:H	1.79	0.47
1:M:169:SER:O	1:M:245:LEU:HD23	2.15	0.47
1:A:202:LYS:HD2	1:A:205:LEU:HD12	1.97	0.47
1:G:217:LEU:O	1:G:221:GLU:HG3	2.14	0.47
1:M:229:TYR:O	1:M:230:MET:HG3	2.15	0.47
1:I:197:GLU:HG2	1:N:229:TYR:CD1	2.44	0.47
1:J:129:GLY:HA3	1:J:154:MET:SD	2.55	0.47
1:D:115:ILE:HD12	1:D:139:ILE:HD12	1.95	0.46
1:G:167:ARG:NH1	1:G:239:GLY:O	2.42	0.46
1:F:199:MET:HE1	1:M:196:GLU:HA	1.96	0.46
1:N:209:TYR:O	1:N:213:THR:HG22	2.15	0.46
1:B:172:ASN:N	1:G:134:ASP:OD2	2.46	0.46
1:C:148:VAL:HG22	1:D:131:ALA:HB1	1.97	0.46
1:C:193:ILE:HD11	1:C:198:ILE:HG12	1.97	0.46
1:A:168:HIS:CE1	1:A:243:LYS:HD2	2.51	0.46
1:B:170:LEU:CD1	1:G:134:ASP:HB3	2.45	0.46
1:B:85:VAL:HG11	1:B:99:VAL:HG13	1.98	0.46
1:C:246:VAL:HG21	1:E:222:SER:OG	2.15	0.46
1:H:100:ILE:HG23	1:H:135:THR:HG21	1.97	0.46
1:J:215:GLN:HB3	1:J:219:VAL:CG2	2.46	0.46
1:K:120:ASN:CB	1:K:149:GLY:HA3	2.45	0.46
1:K:172:ASN:ND2	1:N:134:ASP:OD1	2.48	0.46
1:A:133:TYR:HA	1:A:136:MET:HE2	1.96	0.46
1:F:92:ASP:C	1:F:92:ASP:OD1	2.53	0.46
1:D:217:LEU:O	1:D:221:GLU:HG3	2.16	0.46
1:H:203:LYS:O	1:H:207:ASN:ND2	2.46	0.46
1:K:159:LEU:O	1:K:160:ALA:C	2.51	0.46
1:N:157:LEU:HA	1:N:209:TYR:HE1	1.80	0.46
1:B:92:ASP:H	1:B:95:VAL:HG22	1.81	0.46
1:E:203:LYS:HA	1:E:206:TYR:CD2	2.50	0.46
1:E:206:TYR:HB3	1:E:217:LEU:CD2	2.46	0.46
1:M:135:THR:O	1:M:139:ILE:HG23	2.16	0.46
1:F:65:GLN:HA	1:F:70:GLU:HB2	1.98	0.45
1:L:206:TYR:CE2	1:L:221:GLU:HG2	2.51	0.45
1:J:194:GLN:OE1	1:J:194:GLN:HA	2.16	0.45
1:M:179:GLN:OE1	1:M:180:PRO:HD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:87:VAL:N	1:E:118:TYR:O	2.47	0.45
1:N:160:ALA:HA	1:N:167:ARG:HD2	1.97	0.45
1:C:229:TYR:HB2	1:D:197:GLU:HG3	1.99	0.45
1:D:129:GLY:HA3	1:D:154:MET:HE2	1.99	0.45
1:I:209:TYR:HB3	1:I:220:ILE:HD13	1.99	0.45
1:J:131:ALA:CB	1:L:148:VAL:HG22	2.44	0.45
1:A:225:GLU:OE2	1:D:228:ARG:HD2	2.17	0.45
1:L:79:LEU:O	1:L:84:ILE:HB	2.17	0.45
1:L:144:CYS:HA	1:L:166:MET:O	2.16	0.45
1:J:215:GLN:HB3	1:J:219:VAL:HG21	1.99	0.45
1:M:117:MET:HE2	1:M:117:MET:HB3	1.86	0.45
1:M:206:TYR:HA	1:M:220:ILE:HG21	1.98	0.45
1:H:147:CYS:HB2	1:H:159:LEU:HD13	1.99	0.45
1:H:224:MET:HB3	1:H:224:MET:HE2	1.89	0.45
1:J:210:ALA:HA	1:J:213:THR:CG2	2.46	0.45
1:E:92:ASP:OD1	1:E:94:SER:N	2.50	0.44
1:G:248:PRO:HG3	1:K:138:TYR:CE1	2.52	0.44
1:L:147:CYS:SG	1:L:173:SER:HB3	2.57	0.44
1:D:153[A]:SER:OG	1:D:154:MET:N	2.51	0.44
1:B:172:ASN:HB3	1:G:130:LEU:HD13	2.00	0.44
1:F:206:TYR:CE1	1:F:221:GLU:HG2	2.52	0.44
1:K:204:GLN:O	1:K:208:ILE:HG13	2.17	0.44
1:L:233:MET:O	1:L:236:GLN:HB3	2.17	0.44
1:M:132:ILE:O	1:M:136:MET:HG3	2.17	0.44
1:F:142:PRO:HB2	1:F:166:MET:HE1	2.00	0.44
1:F:122:PRO:HA	1:F:152:ALA:HB3	2.00	0.44
1:F:192:ALA:C	1:F:193:ILE:HG13	2.37	0.44
1:N:95:VAL:O	1:N:99:VAL:HG23	2.16	0.44
1:A:169:SER:HB2	1:A:241:LEU:HD22	2.00	0.44
1:B:172:ASN:HB3	1:G:130:LEU:HB3	1.99	0.44
1:D:213:THR:CG2	1:D:215:GLN:CG	2.96	0.44
1:E:203:LYS:O	1:E:206:TYR:HB2	2.17	0.44
1:F:215:GLN:HB2	1:F:220:ILE:HD11	1.99	0.44
1:L:173:SER:O	1:L:232:PRO:HD3	2.18	0.44
1:M:176:MET:HE2	1:M:178:HIS:HB3	1.99	0.44
1:L:211:LYS:HB2	1:L:211:LYS:HE2	1.85	0.44
1:F:217:LEU:O	1:F:221:GLU:HG3	2.18	0.44
1:K:193:ILE:CD1	1:K:198:ILE:HB	2.47	0.44
1:C:247:HIS:CE1	1:D:137:GLN:HB2	2.53	0.44
1:E:238:PHE:HD2	1:E:240:ILE:HG13	1.84	0.43
1:G:78:ARG:HD2	1:G:78:ARG:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:79:LEU:HD12	2:D:301:9I3:CL2	2.55	0.43
1:K:137:GLN:HE22	1:K:212:HIS:CE1	2.36	0.43
1:N:230:MET:HB3	1:N:234:GLU:HG2	2.00	0.43
1:A:194:GLN:O	1:A:198:ILE:HD12	2.18	0.43
1:E:176:MET:HB2	1:E:229:TYR:CD2	2.53	0.43
1:F:138:TYR:CD1	1:I:247:HIS:HA	2.54	0.43
1:K:88:MET:HB3	1:K:88:MET:HE2	1.75	0.43
1:K:148:VAL:HG22	1:K:149:GLY:N	2.33	0.43
1:K:215:GLN:HB3	1:K:219:VAL:HG21	2.00	0.43
1:M:153[B]:SER:OG	1:M:180:PRO:HD3	2.19	0.43
1:B:79:LEU:HD12	2:B:301:9I3:CL2	2.55	0.43
1:F:236:GLN:NE2	1:F:242:ASP:O	2.48	0.43
1:I:146:TRP:CE3	1:I:168:HIS:HB2	2.54	0.43
1:C:76:TYR:OH	1:D:98:LEU:HD12	2.19	0.43
1:H:170:LEU:HD13	1:M:134:ASP:HB3	2.00	0.43
1:M:153[A]:SER:OG	1:M:179:GLN:OE1	2.23	0.43
1:F:201:LEU:HD23	1:F:201:LEU:HA	1.90	0.43
1:M:87:VAL:HB	1:M:119:ILE:HD13	2.01	0.43
1:B:174:ARG:HH11	1:G:201:LEU:HD21	1.84	0.43
1:E:228:ARG:HH22	1:E:234:GLU:CD	2.22	0.43
1:F:197:GLU:OE1	1:I:229:TYR:HB2	2.19	0.43
1:G:176:MET:HG3	1:G:228:ARG:O	2.19	0.43
1:H:201:LEU:HD23	1:H:201:LEU:HA	1.91	0.43
1:K:160:ALA:HA	1:K:167:ARG:NH1	2.33	0.43
1:L:202:LYS:HG3	1:L:206:TYR:CE2	2.54	0.43
1:F:100:ILE:HG23	1:F:135:THR:HG21	2.00	0.42
1:F:213:THR:OG1	1:F:220:ILE:HD11	2.19	0.42
1:H:148:VAL:HG11	2:H:301:9I3:CL1	2.55	0.42
1:J:230:MET:SD	1:J:234:GLU:HG2	2.59	0.42
1:K:82:GLU:HG3	2:K:301:9I3:C29	2.48	0.42
1:B:169:SER:HB3	1:B:241:LEU:HD22	2.01	0.42
1:F:98:LEU:O	1:F:102:GLN:HG3	2.18	0.42
1:K:174:ARG:NH2	1:N:204:GLN:OE1	2.35	0.42
1:M:213:THR:O	1:M:214:LYS:HB2	2.17	0.42
1:A:225:GLU:OE1	1:D:226:ARG:NH1	2.52	0.42
1:E:79:LEU:O	1:E:84:ILE:HB	2.20	0.42
1:H:193:ILE:HG21	1:H:197:GLU:HG2	2.01	0.42
1:L:170:LEU:HD11	2:L:301:9I3:C02	2.50	0.42
1:C:216:SER:OG	1:C:219:VAL:HG23	2.20	0.42
1:J:87:VAL:HG12	1:J:87:VAL:O	2.19	0.42
1:M:168:HIS:HA	1:M:243:LYS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:193:ILE:HD11	1:A:198:ILE:HG13	2.02	0.42
1:C:242:ASP:O	1:C:243:LYS:HG3	2.20	0.42
1:D:100:ILE:HD12	1:D:135:THR:OG1	2.19	0.42
1:H:117:MET:HE3	1:H:143:ILE:HG21	2.01	0.42
1:L:136:MET:HG2	1:L:143:ILE:HD13	2.02	0.42
1:N:106:LEU:HD23	1:N:106:LEU:HA	1.91	0.42
1:N:193:ILE:HG22	1:N:194:GLN:N	2.35	0.42
1:B:153:SER:OG	1:B:154:MET:N	2.52	0.42
1:K:98:LEU:O	1:K:102:GLN:HG3	2.19	0.42
1:A:96:ALA:HA	1:A:132:ILE:HD11	2.01	0.42
1:A:160:ALA:HB2	1:A:240:ILE:HG23	2.01	0.42
1:F:83:ARG:HH12	1:F:109:GLU:HB2	1.85	0.42
1:F:153[A]:SER:OG	1:F:154:MET:N	2.53	0.42
1:I:206:TYR:CZ	1:I:221:GLU:HG3	2.53	0.42
1:D:175:ILE:O	1:D:230:MET:N	2.43	0.42
1:J:167:ARG:HB2	1:J:241:LEU:HA	2.01	0.42
1:K:145:THR:OG1	1:K:167:ARG:HG2	2.20	0.42
1:N:148:VAL:HG23	1:N:170:LEU:HD12	2.02	0.42
1:H:206:TYR:CE2	1:H:221:GLU:HG3	2.55	0.41
1:I:78:ARG:HH12	1:I:82:GLU:HG2	1.85	0.41
1:J:203:LYS:HE2	1:J:203:LYS:HB2	1.70	0.41
1:F:199:MET:CE	1:M:196:GLU:HA	2.50	0.41
1:K:129:GLY:CA	1:K:154:MET:CE	2.90	0.41
1:L:132:ILE:O	1:L:135:THR:OG1	2.30	0.41
1:A:195:ALA:HA	1:A:198:ILE:HD13	2.02	0.41
1:I:167:ARG:HE	1:I:241:LEU:HA	1.84	0.41
1:K:63:VAL:HA	1:K:72:ALA:HA	2.02	0.41
1:L:118:TYR:CE2	2:L:301:9I3:CL1	3.10	0.41
1:M:92:ASP:OD1	1:M:94:SER:N	2.53	0.41
1:M:220:ILE:HG23	1:M:224:MET:CE	2.50	0.41
1:E:107:GLN:CG	1:E:111:ASN:HB3	2.49	0.41
1:L:150:GLN:HA	1:L:174:ARG:H	1.85	0.41
1:F:178:HIS:ND1	1:F:224:MET:O	2.39	0.41
1:J:201:LEU:O	1:J:205:LEU:HG	2.20	0.41
1:K:83:ARG:HH12	1:K:109:GLU:HB2	1.86	0.41
1:I:104:LEU:HD22	2:N:301:9I3:O23	2.21	0.41
1:N:96:ALA:HA	1:N:132:ILE:HD11	2.03	0.41
1:C:107:GLN:HG3	1:C:141:ASN:OD1	2.20	0.41
1:F:193:ILE:HG23	1:F:194:GLN:H	1.83	0.41
1:G:176:MET:HB2	1:G:229:TYR:CD2	2.55	0.41
1:H:209:TYR:O	1:H:213:THR:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:216:SER:OG	1:L:219:VAL:HG22	2.20	0.41
1:M:126:VAL:HG11	1:M:201:LEU:HD13	2.03	0.41
1:N:206:TYR:CZ	1:N:221:GLU:HB3	2.55	0.41
1:C:120:ASN:HB2	1:C:148:VAL:HG13	2.02	0.41
1:C:198:ILE:HG22	1:G:195:ALA:HB2	2.03	0.41
1:F:75:ILE:HD12	1:F:75:ILE:HA	1.90	0.41
1:G:174:ARG:NH2	1:K:201:LEU:CD2	2.82	0.41
1:N:230:MET:HB3	1:N:234:GLU:CG	2.51	0.41
1:A:226:ARG:HD2	1:D:225:GLU:CD	2.41	0.40
1:E:75:ILE:O	1:E:79:LEU:HD13	2.20	0.40
1:F:157:LEU:HD12	1:F:209:TYR:CE1	2.56	0.40
1:H:229:TYR:CD1	1:M:197:GLU:HG2	2.56	0.40
1:J:105:PHE:O	1:J:108:SER:HB3	2.21	0.40
1:J:199:MET:HE2	1:J:199:MET:HB3	1.87	0.40
1:L:132:ILE:HB	1:L:158:LEU:HD21	2.04	0.40
1:M:219:VAL:HG23	1:M:220:ILE:N	2.36	0.40
1:F:118:TYR:HD1	1:F:146:TRP:HB2	1.87	0.40
1:F:148:VAL:HG23	1:F:170:LEU:HD22	2.04	0.40
1:G:96:ALA:HA	1:G:132:ILE:HD11	2.02	0.40
1:A:204:GLN:HE22	1:F:174:ARG:HD3	1.86	0.40
1:N:231:SER:HB2	1:N:234:GLU:OE2	2.22	0.40
1:A:78:ARG:O	1:A:78:ARG:HD2	2.21	0.40
1:F:88:MET:CE	1:F:118:TYR:HB3	2.51	0.40
1:G:62:VAL:HG21	1:G:78:ARG:HG2	2.03	0.40
1:I:147:CYS:HB2	1:I:159:LEU:HD22	2.04	0.40
1:F:106:LEU:HD23	1:F:106:LEU:HA	1.86	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	170/223 (76%)	164 (96%)	6 (4%)	0	100	100
1	B	170/223 (76%)	162 (95%)	8 (5%)	0	100	100
1	C	171/223 (77%)	164 (96%)	7 (4%)	0	100	100
1	D	171/223 (77%)	164 (96%)	7 (4%)	0	100	100
1	E	169/223 (76%)	164 (97%)	5 (3%)	0	100	100
1	F	172/223 (77%)	166 (96%)	6 (4%)	0	100	100
1	G	170/223 (76%)	164 (96%)	6 (4%)	0	100	100
1	H	169/223 (76%)	161 (95%)	8 (5%)	0	100	100
1	I	163/223 (73%)	155 (95%)	8 (5%)	0	100	100
1	J	162/223 (73%)	155 (96%)	7 (4%)	0	100	100
1	K	166/223 (74%)	160 (96%)	5 (3%)	1 (1%)	22	51
1	L	166/223 (74%)	161 (97%)	5 (3%)	0	100	100
1	M	165/223 (74%)	154 (93%)	11 (7%)	0	100	100
1	N	163/223 (73%)	152 (93%)	11 (7%)	0	100	100
All	All	2347/3122 (75%)	2246 (96%)	100 (4%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	K	150	GLN

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	150/186 (81%)	148 (99%)	2 (1%)	65	88
1	B	147/186 (79%)	147 (100%)	0	100	100
1	C	150/186 (81%)	150 (100%)	0	100	100
1	D	151/186 (81%)	151 (100%)	0	100	100
1	E	147/186 (79%)	146 (99%)	1 (1%)	81	94

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	F	151/186 (81%)	151 (100%)	0	100 100
1	G	147/186 (79%)	147 (100%)	0	100 100
1	H	146/186 (78%)	146 (100%)	0	100 100
1	I	143/186 (77%)	143 (100%)	0	100 100
1	J	137/186 (74%)	135 (98%)	2 (2%)	60 86
1	K	143/186 (77%)	141 (99%)	2 (1%)	62 87
1	L	148/186 (80%)	146 (99%)	2 (1%)	62 87
1	M	139/186 (75%)	136 (98%)	3 (2%)	47 79
1	N	144/186 (77%)	144 (100%)	0	100 100
All	All	2043/2604 (78%)	2031 (99%)	12 (1%)	84 95

All (12) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	216	SER
1	A	222	SER
1	E	83	ARG
1	J	203	LYS
1	J	211	LYS
1	K	148	VAL
1	K	150	GLN
1	L	147	CYS
1	L	150	GLN
1	M	220	ILE
1	M	244	VAL
1	M	245	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	247	HIS
1	H	179	GLN
1	I	107	GLN
1	J	236	GLN
1	L	141	ASN
1	L	150	GLN
1	L	194	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

14 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	9I3	B	301	-	35,35,35	3.24	9 (25%)	42,50,50	1.32	8 (19%)
2	9I3	N	301	-	35,35,35	3.27	10 (28%)	42,50,50	1.34	9 (21%)
2	9I3	I	301	-	35,35,35	3.24	8 (22%)	42,50,50	1.33	9 (21%)
2	9I3	C	301	-	35,35,35	3.25	9 (25%)	42,50,50	1.30	9 (21%)
2	9I3	E	301	-	35,35,35	3.29	8 (22%)	42,50,50	1.31	7 (16%)
2	9I3	G	301	-	35,35,35	3.27	9 (25%)	42,50,50	1.32	8 (19%)
2	9I3	A	301	-	35,35,35	3.28	9 (25%)	42,50,50	1.29	8 (19%)
2	9I3	L	301	-	35,35,35	3.21	8 (22%)	42,50,50	1.52	10 (23%)
2	9I3	M	301	-	35,35,35	3.29	8 (22%)	42,50,50	1.28	7 (16%)
2	9I3	D	301	-	35,35,35	3.24	8 (22%)	42,50,50	1.37	9 (21%)
2	9I3	K	301	-	35,35,35	3.23	7 (20%)	42,50,50	1.32	8 (19%)
2	9I3	H	301	-	35,35,35	3.24	9 (25%)	42,50,50	1.42	9 (21%)
2	9I3	F	301	-	35,35,35	3.27	9 (25%)	42,50,50	1.31	7 (16%)
2	9I3	E	302	-	35,35,35	3.29	9 (25%)	42,50,50	1.28	7 (16%)

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	9I3	B	301	-	-	0/8/17/17	0/5/5/5
2	9I3	N	301	-	-	2/8/17/17	0/5/5/5
2	9I3	I	301	-	-	0/8/17/17	0/5/5/5
2	9I3	C	301	-	-	0/8/17/17	0/5/5/5
2	9I3	E	301	-	-	0/8/17/17	0/5/5/5
2	9I3	G	301	-	-	1/8/17/17	0/5/5/5
2	9I3	A	301	-	-	0/8/17/17	0/5/5/5
2	9I3	L	301	-	-	0/8/17/17	0/5/5/5
2	9I3	M	301	-	-	2/8/17/17	0/5/5/5
2	9I3	D	301	-	-	0/8/17/17	0/5/5/5
2	9I3	K	301	-	-	0/8/17/17	0/5/5/5
2	9I3	H	301	-	-	2/8/17/17	0/5/5/5
2	9I3	F	301	-	-	0/8/17/17	0/5/5/5
2	9I3	E	302	-	-	0/8/17/17	0/5/5/5

All (120) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	M	301	9I3	C13-N08	-13.86	1.34	1.46
2	E	301	9I3	C13-N08	-13.84	1.34	1.46
2	E	302	9I3	C13-N08	-13.81	1.34	1.46
2	G	301	9I3	C13-N08	-13.67	1.34	1.46
2	N	301	9I3	C13-N08	-13.65	1.34	1.46
2	F	301	9I3	C13-N08	-13.65	1.34	1.46
2	A	301	9I3	C13-N08	-13.62	1.34	1.46
2	I	301	9I3	C13-N08	-13.57	1.34	1.46
2	H	301	9I3	C13-N08	-13.51	1.34	1.46
2	C	301	9I3	C13-N08	-13.48	1.34	1.46
2	K	301	9I3	C13-N08	-13.42	1.34	1.46
2	B	301	9I3	C13-N08	-13.42	1.34	1.46
2	D	301	9I3	C13-N08	-13.38	1.34	1.46
2	L	301	9I3	C13-N08	-13.18	1.34	1.46
2	F	301	9I3	C07-N08	-9.13	1.29	1.47
2	M	301	9I3	C07-N08	-9.12	1.29	1.47
2	A	301	9I3	C07-N08	-9.09	1.30	1.47
2	N	301	9I3	C07-N08	-9.09	1.30	1.47
2	D	301	9I3	C07-N08	-9.05	1.30	1.47
2	E	302	9I3	C07-N08	-9.05	1.30	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	K	301	9I3	C07-N08	-9.04	1.30	1.47
2	G	301	9I3	C07-N08	-9.04	1.30	1.47
2	E	301	9I3	C07-N08	-8.98	1.30	1.47
2	C	301	9I3	C07-N08	-8.98	1.30	1.47
2	H	301	9I3	C07-N08	-8.97	1.30	1.47
2	B	301	9I3	C07-N08	-8.94	1.30	1.47
2	I	301	9I3	C07-N08	-8.90	1.30	1.47
2	L	301	9I3	C07-N08	-8.81	1.30	1.47
2	L	301	9I3	C15-C11	-5.63	1.36	1.46
2	A	301	9I3	C15-C11	-5.52	1.36	1.46
2	C	301	9I3	C15-C11	-5.48	1.36	1.46
2	D	301	9I3	C15-C11	-5.45	1.36	1.46
2	G	301	9I3	C15-C11	-5.43	1.36	1.46
2	I	301	9I3	C15-C11	-5.42	1.36	1.46
2	B	301	9I3	C15-C11	-5.42	1.36	1.46
2	F	301	9I3	C15-C11	-5.41	1.36	1.46
2	E	302	9I3	C15-C11	-5.41	1.36	1.46
2	K	301	9I3	C15-C11	-5.38	1.36	1.46
2	H	301	9I3	C15-C11	-5.38	1.36	1.46
2	M	301	9I3	C15-C11	-5.38	1.36	1.46
2	N	301	9I3	C15-C11	-5.34	1.37	1.46
2	E	301	9I3	C15-C11	-5.34	1.37	1.46
2	A	301	9I3	C09-N08	-4.67	1.34	1.46
2	K	301	9I3	C09-N08	-4.61	1.34	1.46
2	C	301	9I3	C09-N08	-4.60	1.34	1.46
2	I	301	9I3	C09-N08	-4.59	1.34	1.46
2	F	301	9I3	C09-N08	-4.57	1.34	1.46
2	D	301	9I3	C09-N08	-4.57	1.34	1.46
2	E	302	9I3	C09-N08	-4.56	1.34	1.46
2	M	301	9I3	C09-N08	-4.56	1.34	1.46
2	B	301	9I3	C09-N08	-4.54	1.34	1.46
2	E	301	9I3	C09-N08	-4.54	1.34	1.46
2	L	301	9I3	C09-N08	-4.53	1.34	1.46
2	N	301	9I3	C09-N08	-4.53	1.34	1.46
2	G	301	9I3	C09-N08	-4.53	1.34	1.46
2	H	301	9I3	C09-N08	-4.49	1.34	1.46
2	E	301	9I3	C16-N17	-3.74	1.33	1.39
2	D	301	9I3	C16-N17	-3.73	1.33	1.39
2	K	301	9I3	C16-N17	-3.68	1.34	1.39
2	A	301	9I3	C16-N17	-3.65	1.34	1.39
2	N	301	9I3	C16-N17	-3.64	1.34	1.39
2	B	301	9I3	C16-N17	-3.64	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	M	301	9I3	C16-N17	-3.63	1.34	1.39
2	E	302	9I3	C16-N17	-3.60	1.34	1.39
2	H	301	9I3	C16-N17	-3.60	1.34	1.39
2	G	301	9I3	C16-N17	-3.57	1.34	1.39
2	L	301	9I3	C16-N17	-3.55	1.34	1.39
2	C	301	9I3	C16-N17	-3.52	1.34	1.39
2	F	301	9I3	C16-N17	-3.49	1.34	1.39
2	I	301	9I3	C16-N17	-3.41	1.34	1.39
2	I	301	9I3	C12-C11	-2.53	1.32	1.35
2	E	302	9I3	C12-C11	-2.52	1.32	1.35
2	N	301	9I3	C12-C11	-2.52	1.32	1.35
2	B	301	9I3	C12-C11	-2.49	1.33	1.35
2	L	301	9I3	C12-C11	-2.44	1.33	1.35
2	A	301	9I3	C12-C11	-2.44	1.33	1.35
2	G	301	9I3	C19-C15	-2.44	1.36	1.39
2	H	301	9I3	C12-C11	-2.42	1.33	1.35
2	G	301	9I3	C12-C11	-2.42	1.33	1.35
2	A	301	9I3	C19-C15	-2.40	1.36	1.39
2	M	301	9I3	C19-C15	-2.40	1.36	1.39
2	M	301	9I3	C12-C11	-2.40	1.33	1.35
2	C	301	9I3	C12-C11	-2.40	1.33	1.35
2	D	301	9I3	C12-C11	-2.39	1.33	1.35
2	E	301	9I3	C12-C11	-2.39	1.33	1.35
2	F	301	9I3	C12-C11	-2.38	1.33	1.35
2	K	301	9I3	C19-C15	-2.37	1.36	1.39
2	L	301	9I3	C19-C15	-2.37	1.36	1.39
2	C	301	9I3	C19-C15	-2.36	1.36	1.39
2	F	301	9I3	C19-C15	-2.36	1.36	1.39
2	I	301	9I3	C19-C15	-2.35	1.36	1.39
2	N	301	9I3	C19-C15	-2.34	1.36	1.39
2	B	301	9I3	C19-C15	-2.34	1.36	1.39
2	H	301	9I3	C19-C15	-2.34	1.36	1.39
2	K	301	9I3	C12-C11	-2.33	1.33	1.35
2	E	302	9I3	C19-C15	-2.32	1.36	1.39
2	E	301	9I3	C19-C15	-2.28	1.36	1.39
2	D	301	9I3	C19-C15	-2.27	1.36	1.39
2	L	301	9I3	C01-CL1	2.14	1.79	1.74
2	N	301	9I3	O23-C18	-2.12	1.18	1.23
2	C	301	9I3	C01-CL1	2.09	1.79	1.74
2	I	301	9I3	C28-CL2	2.08	1.79	1.74
2	F	301	9I3	C28-CL2	2.06	1.79	1.74
2	A	301	9I3	C01-CL1	2.06	1.79	1.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	301	9I3	C28-CL2	2.05	1.79	1.74
2	F	301	9I3	C01-CL1	2.05	1.79	1.74
2	N	301	9I3	C28-CL2	2.05	1.79	1.74
2	G	301	9I3	C28-CL2	2.05	1.79	1.74
2	E	302	9I3	C28-CL2	2.04	1.78	1.74
2	H	301	9I3	C28-CL2	2.04	1.78	1.74
2	M	301	9I3	C28-CL2	2.03	1.78	1.74
2	B	301	9I3	C01-CL1	2.03	1.78	1.74
2	B	301	9I3	C28-CL2	2.03	1.78	1.74
2	C	301	9I3	C28-CL2	2.03	1.78	1.74
2	E	301	9I3	C01-CL1	2.02	1.78	1.74
2	N	301	9I3	C01-CL1	2.01	1.78	1.74
2	H	301	9I3	C01-CL1	2.01	1.78	1.74
2	D	301	9I3	C01-CL1	2.01	1.78	1.74
2	G	301	9I3	C01-CL1	2.01	1.78	1.74
2	E	302	9I3	C01-CL1	2.01	1.78	1.74

All (115) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	M	301	9I3	C24-N17-C18	3.55	120.42	116.91
2	D	301	9I3	C24-N17-C18	3.49	120.36	116.91
2	A	301	9I3	C24-N17-C18	3.41	120.28	116.91
2	K	301	9I3	C24-N17-C18	3.40	120.26	116.91
2	B	301	9I3	C24-N17-C18	3.39	120.25	116.91
2	L	301	9I3	C07-N08-C09	-3.18	103.98	111.06
2	H	301	9I3	C24-N17-C18	3.15	120.02	116.91
2	N	301	9I3	C12-C18-N17	3.12	120.73	115.23
2	L	301	9I3	C24-N17-C18	3.00	119.87	116.91
2	C	301	9I3	C24-N17-C18	3.00	119.87	116.91
2	C	301	9I3	C12-C18-N17	2.96	120.44	115.23
2	G	301	9I3	C24-N17-C18	2.95	119.82	116.91
2	H	301	9I3	C12-C18-N17	2.95	120.44	115.23
2	I	301	9I3	C12-C18-N17	2.95	120.43	115.23
2	F	301	9I3	C12-C18-N17	2.95	120.43	115.23
2	G	301	9I3	C12-C18-N17	2.93	120.40	115.23
2	B	301	9I3	C12-C18-N17	2.92	120.39	115.23
2	L	301	9I3	C12-C18-N17	2.92	120.38	115.23
2	K	301	9I3	C12-C18-N17	2.92	120.38	115.23
2	E	302	9I3	C24-N17-C18	2.89	119.77	116.91
2	D	301	9I3	C12-C18-N17	2.89	120.33	115.23
2	L	301	9I3	C19-C15-C16	2.85	120.15	117.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	M	301	9I3	C12-C18-N17	2.82	120.20	115.23
2	E	302	9I3	C12-C18-N17	2.79	120.14	115.23
2	E	301	9I3	C10-C11-C15	2.78	120.66	118.03
2	A	301	9I3	C12-C18-N17	2.78	120.13	115.23
2	D	301	9I3	C07-N08-C09	-2.77	104.89	111.06
2	F	301	9I3	O23-C18-C12	-2.77	119.80	125.08
2	F	301	9I3	C24-N17-C18	2.76	119.63	116.91
2	D	301	9I3	O23-C18-C12	-2.74	119.86	125.08
2	I	301	9I3	O23-C18-C12	-2.73	119.87	125.08
2	G	301	9I3	O23-C18-C12	-2.72	119.89	125.08
2	E	301	9I3	C12-C18-N17	2.72	120.03	115.23
2	C	301	9I3	O23-C18-C12	-2.72	119.89	125.08
2	H	301	9I3	O23-C18-C12	-2.71	119.92	125.08
2	M	301	9I3	O23-C18-C12	-2.68	119.97	125.08
2	K	301	9I3	O23-C18-C12	-2.68	119.98	125.08
2	N	301	9I3	C24-N17-C18	2.67	119.54	116.91
2	L	301	9I3	C06-C01-CL1	2.67	122.49	119.15
2	B	301	9I3	O23-C18-C12	-2.66	120.00	125.08
2	F	301	9I3	C10-C11-C15	2.66	120.55	118.03
2	A	301	9I3	O23-C18-C12	-2.64	120.04	125.08
2	E	302	9I3	O23-C18-C12	-2.63	120.06	125.08
2	A	301	9I3	C19-C15-C16	2.63	119.94	117.34
2	N	301	9I3	O23-C18-C12	-2.62	120.08	125.08
2	L	301	9I3	O23-C18-C12	-2.61	120.11	125.08
2	I	301	9I3	C24-N17-C18	2.61	119.48	116.91
2	E	301	9I3	O23-C18-C12	-2.60	120.12	125.08
2	H	301	9I3	C07-N08-C09	-2.59	105.29	111.06
2	M	301	9I3	C10-C11-C15	2.59	120.48	118.03
2	N	301	9I3	C10-C11-C15	2.58	120.47	118.03
2	I	301	9I3	C19-C15-C16	2.56	119.87	117.34
2	H	301	9I3	C10-C09-N08	2.56	113.56	111.23
2	B	301	9I3	C07-N08-C09	-2.52	105.45	111.06
2	L	301	9I3	C25-C24-N17	-2.52	109.15	113.39
2	K	301	9I3	C10-C11-C15	2.45	120.35	118.03
2	G	301	9I3	C10-C11-C15	2.44	120.34	118.03
2	C	301	9I3	C19-C15-C16	2.44	119.75	117.34
2	E	302	9I3	C19-C15-C16	2.42	119.73	117.34
2	I	301	9I3	C10-C11-C15	2.40	120.30	118.03
2	H	301	9I3	C10-C11-C15	2.39	120.29	118.03
2	F	301	9I3	C19-C15-C16	2.39	119.70	117.34
2	I	301	9I3	C07-N08-C09	-2.38	105.76	111.06
2	E	302	9I3	C10-C11-C15	2.36	120.27	118.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	M	301	9I3	C19-C15-C16	2.32	119.63	117.34
2	D	301	9I3	C19-C15-C16	2.32	119.63	117.34
2	C	301	9I3	C07-N08-C09	-2.31	105.92	111.06
2	B	301	9I3	C10-C11-C15	2.29	120.19	118.03
2	H	301	9I3	C19-C15-C16	2.29	119.60	117.34
2	L	301	9I3	C05-C07-N08	2.28	117.56	113.12
2	E	301	9I3	C24-N17-C18	2.28	119.16	116.91
2	B	301	9I3	C19-C15-C16	2.27	119.58	117.34
2	L	301	9I3	C19-C15-C11	-2.25	119.88	123.38
2	G	301	9I3	C20-C21-N22	-2.25	119.75	123.43
2	G	301	9I3	C07-N08-C09	-2.24	106.08	111.06
2	K	301	9I3	C19-C15-C16	2.23	119.55	117.34
2	D	301	9I3	C10-C11-C15	2.23	120.14	118.03
2	K	301	9I3	C20-C21-N22	-2.22	119.80	123.43
2	E	301	9I3	C20-C21-N22	-2.21	119.81	123.43
2	D	301	9I3	C20-C21-N22	-2.21	119.82	123.43
2	C	301	9I3	C21-N22-C16	2.21	120.25	115.14
2	N	301	9I3	C10-C09-N08	2.20	113.23	111.23
2	K	301	9I3	C21-N22-C16	2.20	120.23	115.14
2	I	301	9I3	C21-N22-C16	2.20	120.23	115.14
2	G	301	9I3	C21-N22-C16	2.20	120.23	115.14
2	N	301	9I3	C19-C15-C16	2.19	119.51	117.34
2	E	301	9I3	C19-C15-C16	2.19	119.50	117.34
2	M	301	9I3	C20-C21-N22	-2.19	119.85	123.43
2	F	301	9I3	C21-N22-C16	2.19	120.20	115.14
2	H	301	9I3	C21-N22-C16	2.19	120.20	115.14
2	N	301	9I3	C07-N08-C09	-2.18	106.22	111.06
2	G	301	9I3	C19-C15-C16	2.17	119.48	117.34
2	N	301	9I3	C20-C21-N22	-2.17	119.89	123.43
2	D	301	9I3	C21-N22-C16	2.16	120.15	115.14
2	C	301	9I3	C20-C21-N22	-2.16	119.90	123.43
2	A	301	9I3	C21-N22-C16	2.16	120.14	115.14
2	F	301	9I3	C20-C21-N22	-2.15	119.91	123.43
2	H	301	9I3	C20-C21-N22	-2.15	119.91	123.43
2	D	301	9I3	C10-C09-N08	2.14	113.17	111.23
2	B	301	9I3	C20-C21-N22	-2.14	119.94	123.43
2	C	301	9I3	C10-C11-C15	2.13	120.05	118.03
2	N	301	9I3	C21-N22-C16	2.13	120.08	115.14
2	M	301	9I3	C21-N22-C16	2.13	120.08	115.14
2	E	301	9I3	C21-N22-C16	2.13	120.07	115.14
2	B	301	9I3	C21-N22-C16	2.13	120.06	115.14
2	E	302	9I3	C21-N22-C16	2.12	120.05	115.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	I	301	9I3	C20-C21-N22	-2.12	119.97	123.43
2	A	301	9I3	C20-C21-N22	-2.09	120.01	123.43
2	E	302	9I3	C20-C21-N22	-2.08	120.03	123.43
2	A	301	9I3	C19-C15-C11	-2.07	120.16	123.38
2	L	301	9I3	C21-N22-C16	2.07	119.93	115.14
2	I	301	9I3	C19-C15-C11	-2.05	120.20	123.38
2	A	301	9I3	C07-N08-C09	-2.04	106.51	111.06
2	K	301	9I3	C25-C24-N17	-2.03	109.97	113.39
2	C	301	9I3	C19-C15-C11	-2.03	120.23	123.38

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	M	301	9I3	C05-C07-N08-C09
2	M	301	9I3	C05-C07-N08-C13
2	N	301	9I3	C05-C07-N08-C13
2	H	301	9I3	C05-C07-N08-C13
2	N	301	9I3	C05-C07-N08-C09
2	H	301	9I3	C05-C07-N08-C09
2	G	301	9I3	C05-C07-N08-C13

There are no ring outliers.

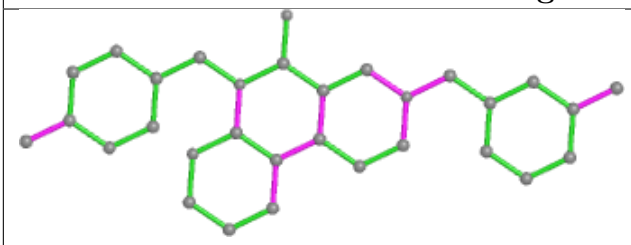
8 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	301	9I3	1	0
2	N	301	9I3	1	0
2	E	301	9I3	1	0
2	G	301	9I3	1	0
2	L	301	9I3	3	0
2	D	301	9I3	1	0
2	K	301	9I3	1	0
2	H	301	9I3	1	0

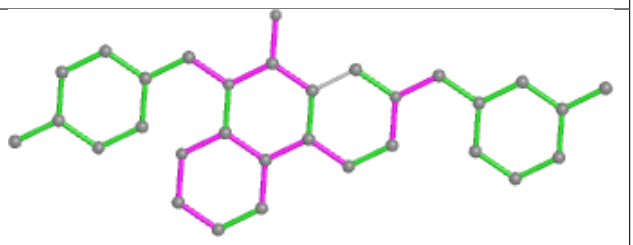
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

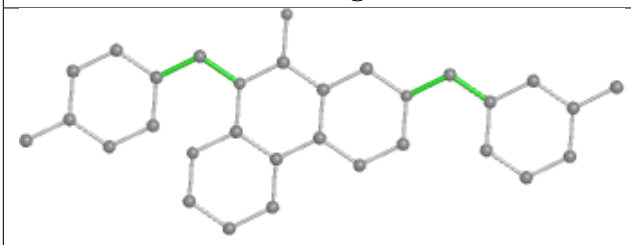
Ligand 9I3 B 301



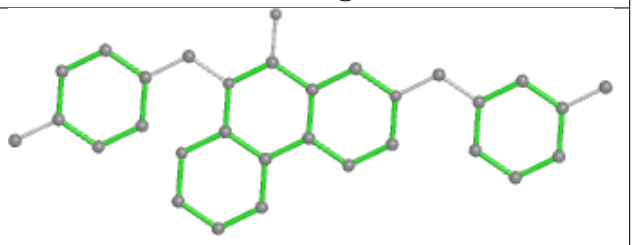
Bond lengths



Bond angles

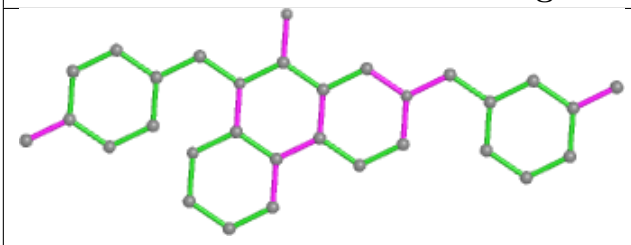


Torsions

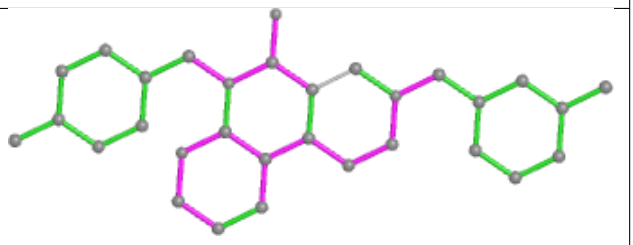


Rings

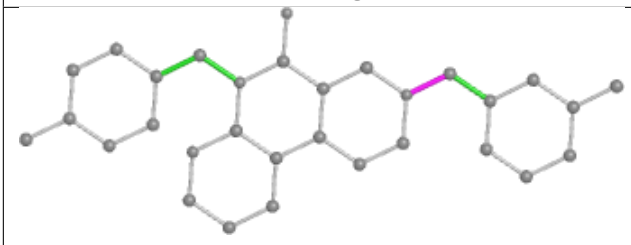
Ligand 9I3 N 301



Bond lengths



Bond angles



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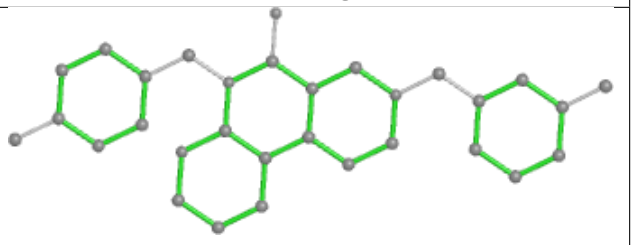
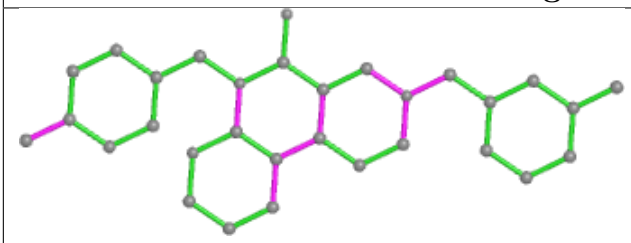
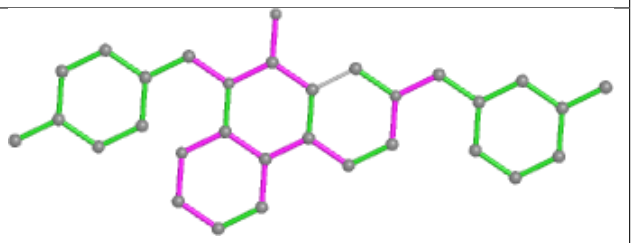


Rings

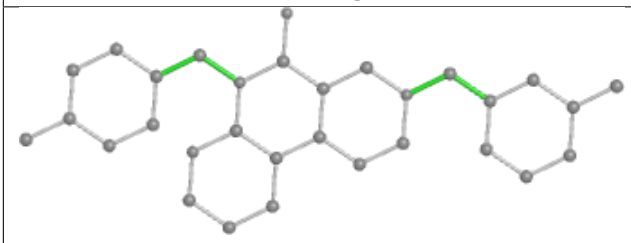
Ligand 9I3 I 301



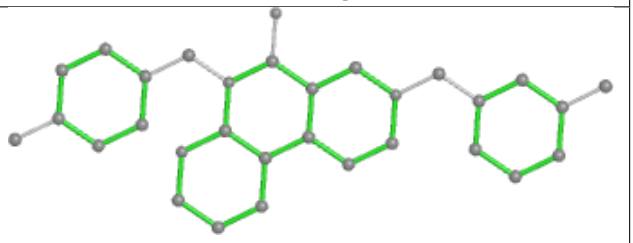
Bond lengths



Bond angles

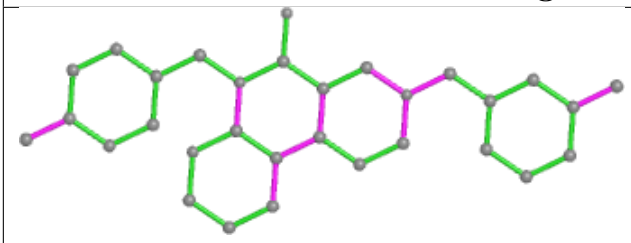


Torsions

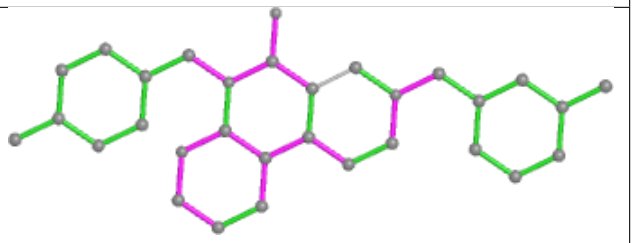


Rings

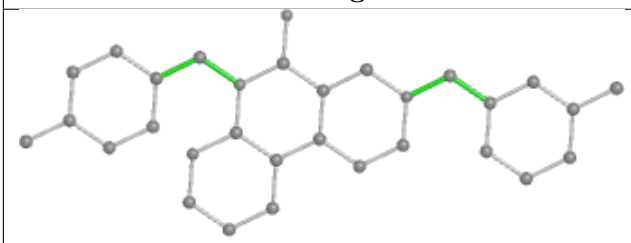
Ligand 9I3 C 301



Bond lengths



Bond angles



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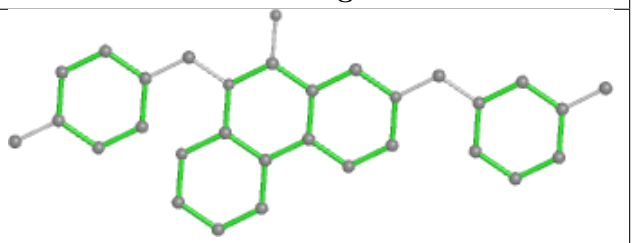
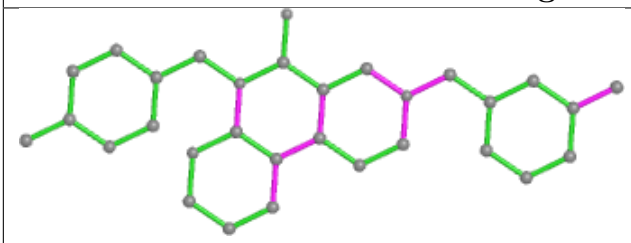
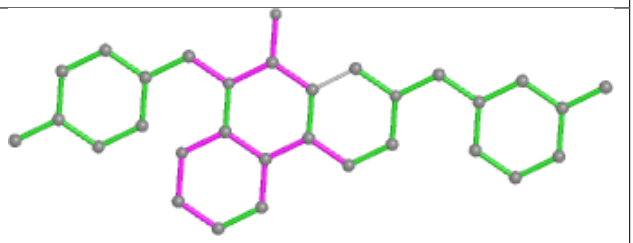


Rings

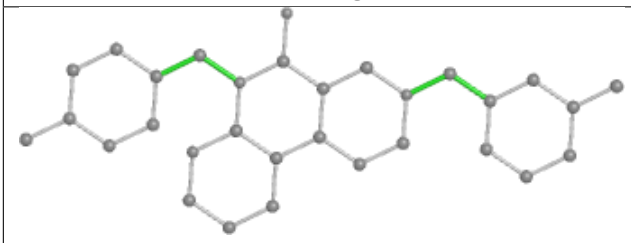
Ligand 9I3 E 301



Bond lengths



Bond angles



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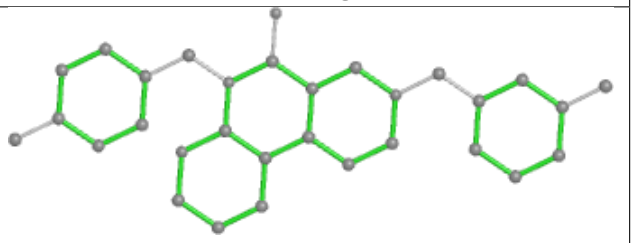
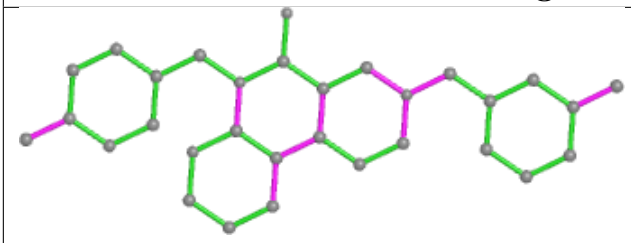


Rings

Ligand 9I3 G 301



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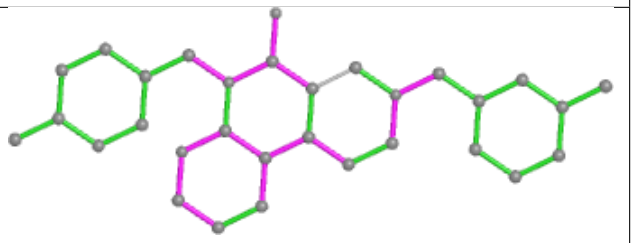

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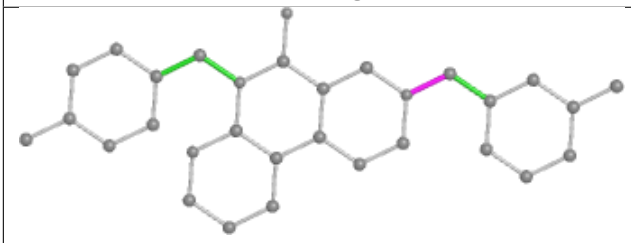

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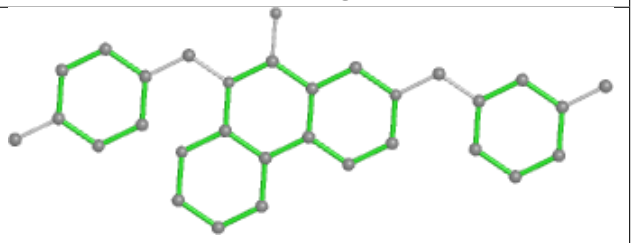
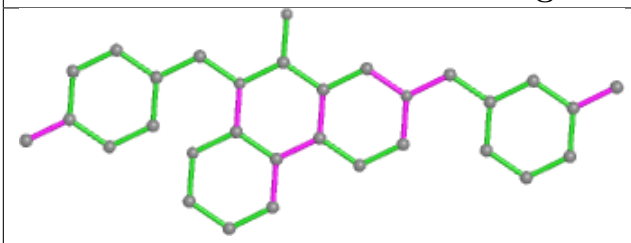


Rings

Ligand 9I3 A 301



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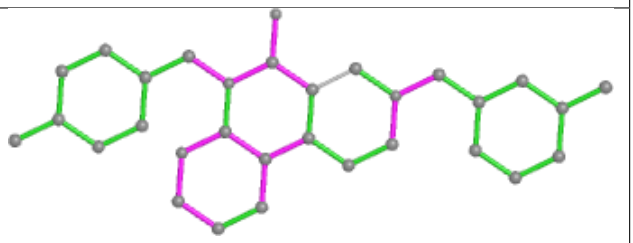
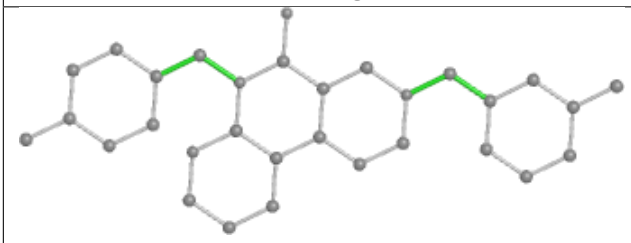


Bond angles



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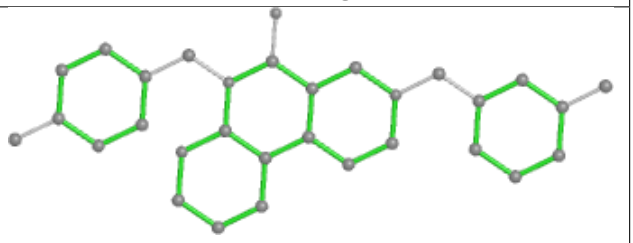
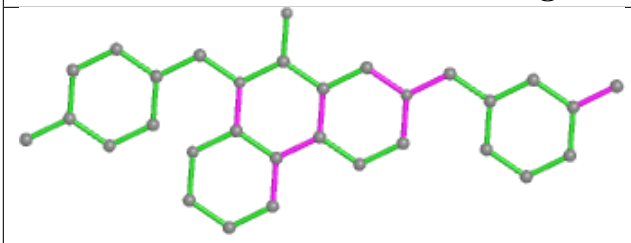


Rings

Ligand 9I3 L 301



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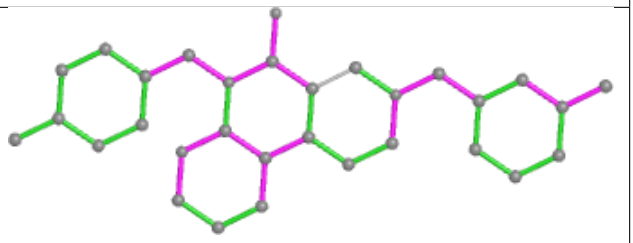
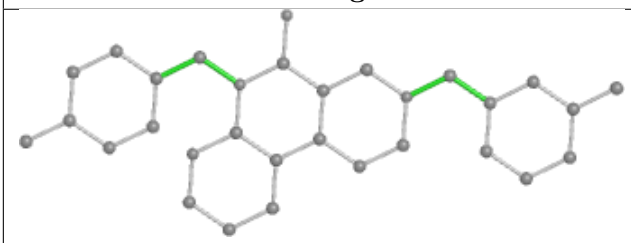


Bond angles



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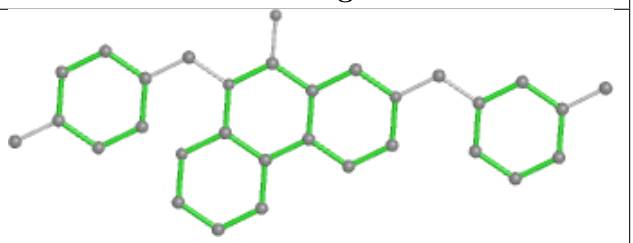
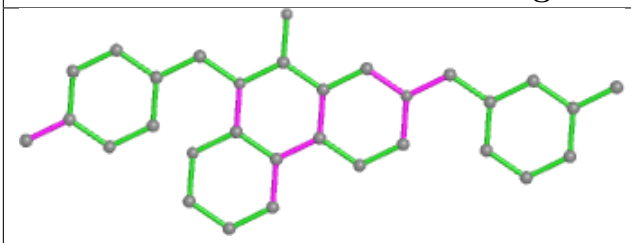
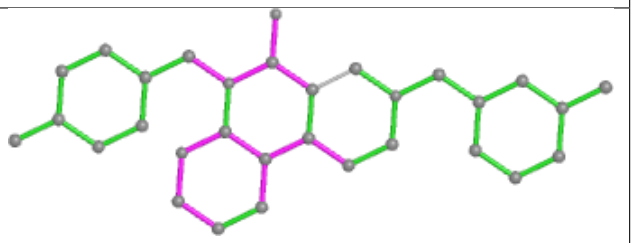


Rings

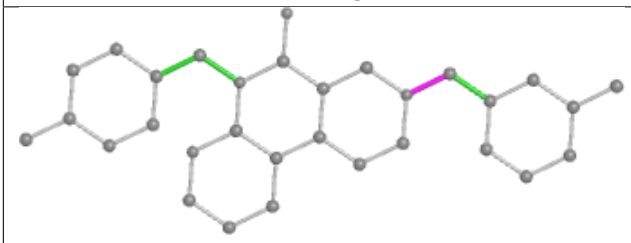
Ligand 9I3 M 301



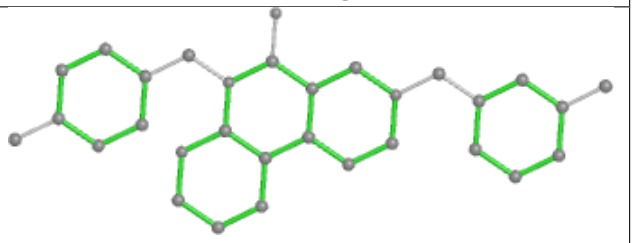
Bond lengths



Bond angles

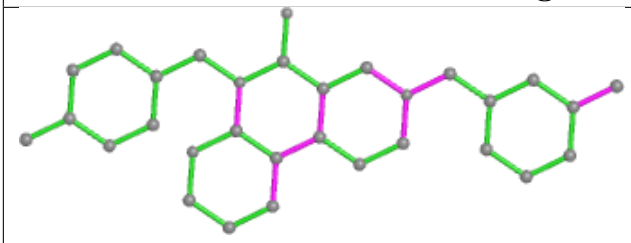


Torsions

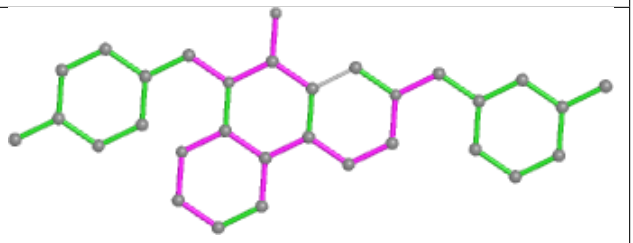


Rings

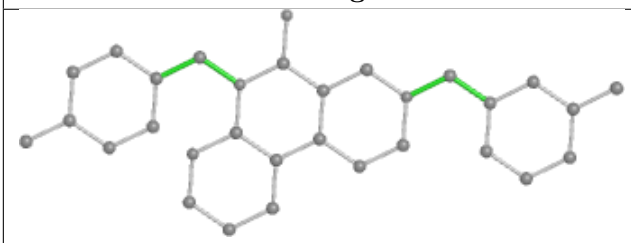
Ligand 9I3 D 301



Bond lengths



Bond angles



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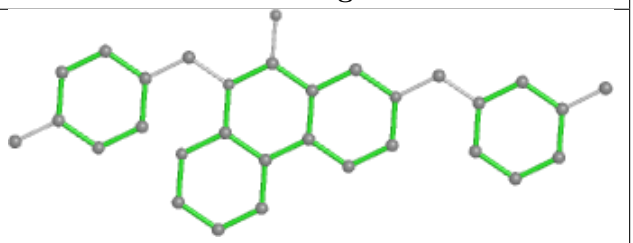
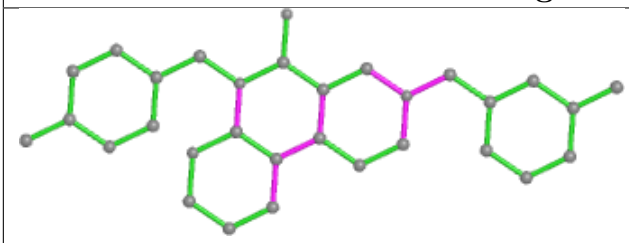


Rings

Ligand 9I3 K 301



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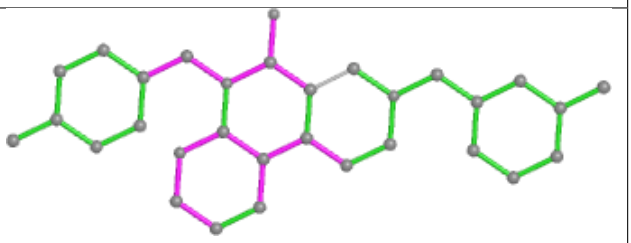
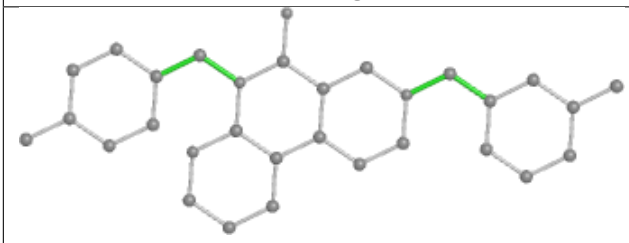


Bond angles



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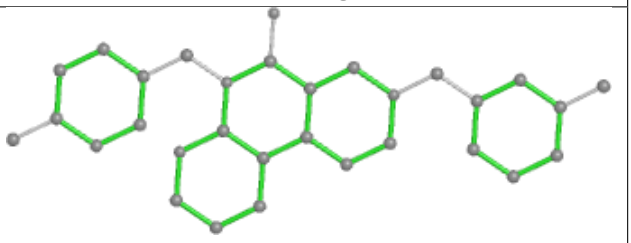
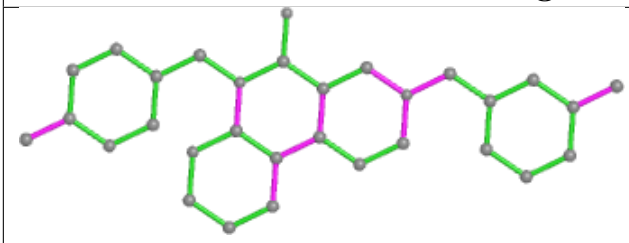
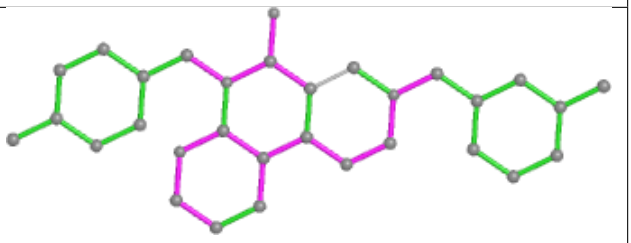


Rings

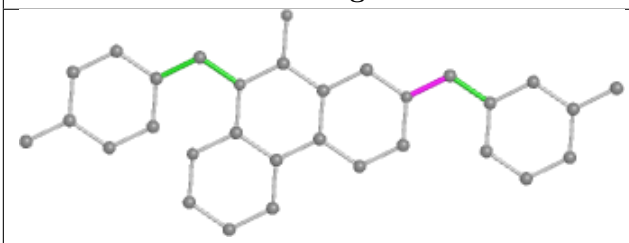
Ligand 9I3 H 301



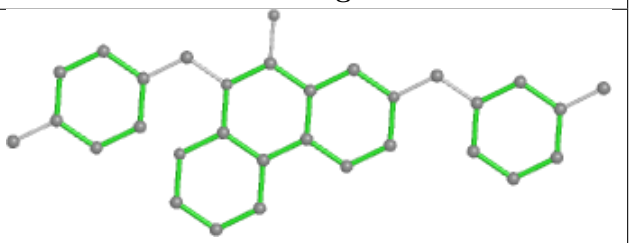
Bond lengths



Bond angles

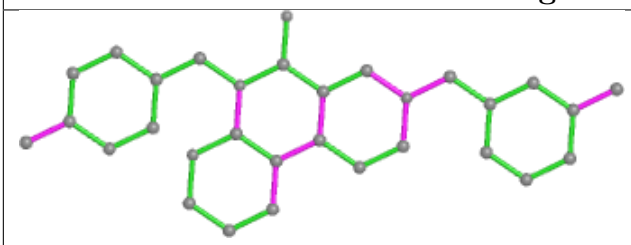


Torsions

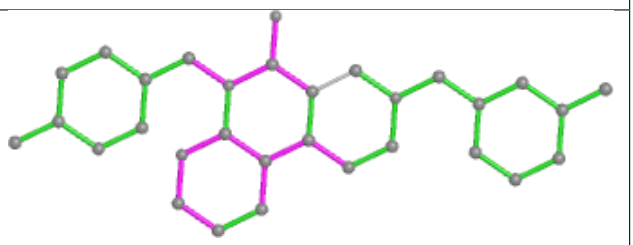


Rings

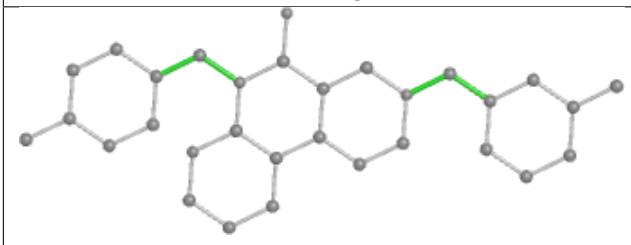
Ligand 9I3 F 301



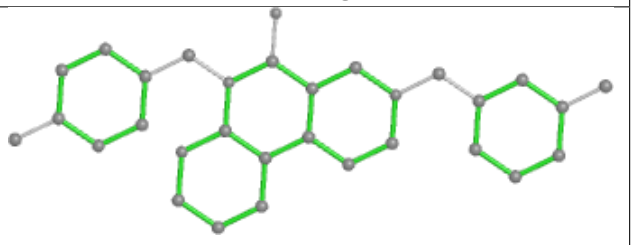
Bond lengths



Bond angles

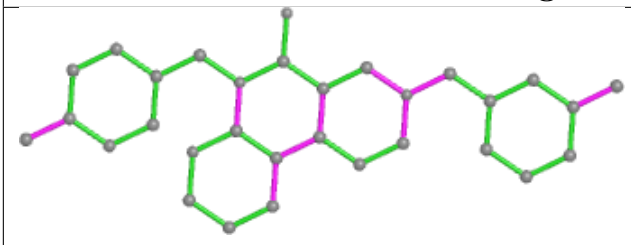


Torsions

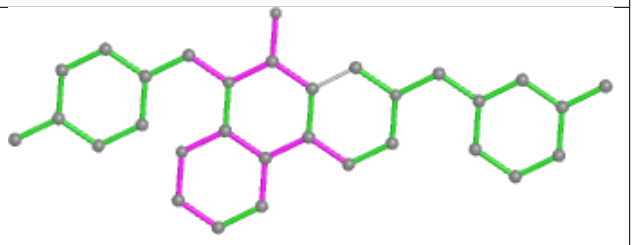


Rings

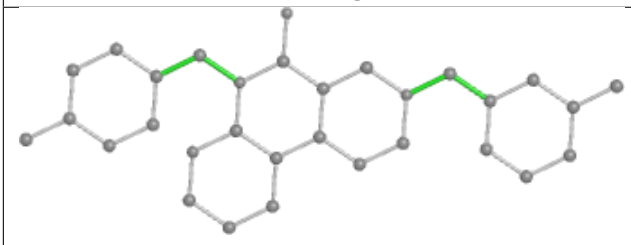
Ligand 9I3 E 302



Bond lengths



Bond angles



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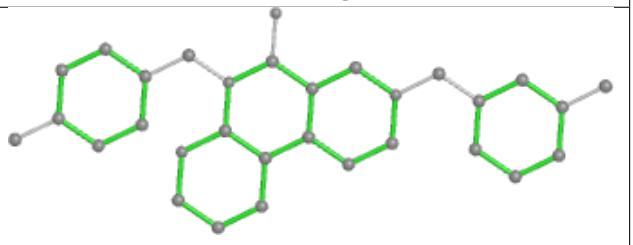

Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	175/223 (78%)	0.72	10 (5%) 30 24	23, 51, 81, 107	1 (0%)
1	B	176/223 (78%)	0.57	12 (6%) 25 19	32, 53, 90, 130	0
1	C	175/223 (78%)	0.67	15 (8%) 18 13	26, 52, 88, 122	2 (1%)
1	D	176/223 (78%)	0.95	19 (10%) 12 9	28, 55, 83, 102	1 (0%)
1	E	174/223 (78%)	0.75	18 (10%) 13 10	26, 55, 85, 113	1 (0%)
1	F	177/223 (79%)	1.18	25 (14%) 7 6	30, 56, 87, 129	1 (0%)
1	G	176/223 (78%)	0.82	15 (8%) 18 14	35, 58, 90, 116	0
1	H	175/223 (78%)	1.42	34 (19%) 4 4	37, 61, 92, 119	0
1	I	169/223 (75%)	1.55	48 (28%) 1 2	41, 63, 86, 104	0
1	J	168/223 (75%)	1.01	24 (14%) 7 6	40, 63, 92, 126	0
1	K	172/223 (77%)	1.29	28 (16%) 5 5	44, 69, 95, 142	0
1	L	172/223 (77%)	1.25	23 (13%) 8 7	43, 68, 95, 121	0
1	M	170/223 (76%)	1.68	59 (34%) 1 1	38, 71, 101, 137	1 (0%)
1	N	171/223 (76%)	1.62	49 (28%) 1 2	44, 72, 104, 160	0
All	All	2426/3122 (77%)	1.10	379 (15%) 6 5	23, 60, 92, 160	7 (0%)

All (379) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	149	GLY	6.8
1	K	149	GLY	6.7
1	H	151	ALA	6.7
1	B	173	SER	6.4
1	I	63	VAL	5.4
1	H	149	GLY	5.4
1	B	172	ASN	5.2
1	N	244	VAL	5.2

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Mol	Chain	Res	Type	RSRZ
1	I	100	ILE	4.8
1	D	86	CYS	4.8
1	K	148	VAL	4.5
1	F	65	GLN	4.3
1	M	229	TYR	4.2
1	N	162	GLY	4.2
1	J	86	CYS	4.1
1	M	177	ILE	4.1
1	I	173	SER	4.1
1	M	227	ASP	4.1
1	K	241	LEU	4.0
1	N	169	SER	4.0
1	N	216	SER	4.0
1	J	63	VAL	3.9
1	G	225	GLU	3.9
1	H	150	GLN	3.9
1	M	211	LYS	3.8
1	N	230	MET	3.8
1	J	87	VAL	3.8
1	H	231	SER	3.8
1	J	180	PRO	3.7
1	C	247	HIS	3.7
1	B	247	HIS	3.7
1	M	103	LEU	3.7
1	M	226	ARG	3.7
1	M	163	THR	3.7
1	N	89	GLY	3.7
1	I	225	GLU	3.6
1	H	241	LEU	3.6
1	N	63	VAL	3.6
1	D	84	ILE	3.6
1	L	177	ILE	3.6
1	F	148	VAL	3.5
1	J	231	SER	3.5
1	L	245	LEU	3.5
1	F	215	GLN	3.5
1	L	230	MET	3.5
1	M	63	VAL	3.5
1	H	58	LEU	3.5
1	F	201	LEU	3.4
1	H	248	PRO	3.4
1	K	156	SER	3.4

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Mol	Chain	Res	Type	RSRZ
1	C	144	CYS	3.4
1	J	88	MET	3.4
1	N	117	MET	3.4
1	L	244	VAL	3.4
1	H	75	ILE	3.3
1	H	126	VAL	3.3
1	J	246	VAL	3.3
1	K	246	VAL	3.3
1	N	237	GLU	3.3
1	L	240	ILE	3.3
1	G	174	ARG	3.2
1	H	144	CYS	3.2
1	M	213	THR	3.2
1	N	175	ILE	3.2
1	H	63	VAL	3.2
1	L	63	VAL	3.2
1	M	246	VAL	3.2
1	A	233	MET	3.2
1	L	154	MET	3.2
1	M	86	CYS	3.2
1	M	151	ALA	3.2
1	K	144	CYS	3.2
1	M	237	GLU	3.1
1	M	248	PRO	3.1
1	N	245	LEU	3.1
1	M	149	GLY	3.1
1	F	221	GLU	3.1
1	E	233[A]	MET	3.1
1	H	179	GLN	3.1
1	M	96	ALA	3.1
1	F	217	LEU	3.0
1	D	87	VAL	3.0
1	A	108	SER	3.0
1	M	153[A]	SER	3.0
1	F	214	LYS	3.0
1	N	248	PRO	3.0
1	D	197	GLU	3.0
1	K	195	ALA	3.0
1	N	173	SER	3.0
1	E	76	TYR	3.0
1	J	140	LEU	3.0
1	J	62	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	D	247	HIS	3.0
1	N	247	HIS	3.0
1	H	73	TYR	3.0
1	M	60	PRO	3.0
1	A	193	ILE	3.0
1	K	177	ILE	2.9
1	D	245	LEU	2.9
1	I	144	CYS	2.9
1	I	149	GLY	2.9
1	K	162	GLY	2.9
1	M	100	ILE	2.9
1	I	121	SER	2.9
1	I	58	LEU	2.9
1	J	245	LEU	2.9
1	D	65	GLN	2.9
1	I	179	GLN	2.9
1	F	161	ALA	2.9
1	G	148	VAL	2.9
1	F	174	ARG	2.9
1	M	233	MET	2.9
1	D	62	VAL	2.8
1	L	209	TYR	2.8
1	I	233	MET	2.8
1	M	89	GLY	2.8
1	M	210	ALA	2.8
1	M	87	VAL	2.8
1	C	105	PHE	2.8
1	H	113	LYS	2.8
1	G	191	ILE	2.8
1	H	233	MET	2.8
1	N	74	ASP	2.8
1	J	229	TYR	2.8
1	N	103	LEU	2.8
1	I	244	VAL	2.8
1	F	213	THR	2.8
1	I	203	LYS	2.8
1	H	218	GLN	2.7
1	M	195	ALA	2.7
1	H	118	TYR	2.7
1	H	229	TYR	2.7
1	H	234	GLU	2.7
1	M	159	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	M	144	CYS	2.7
1	H	153	SER	2.7
1	C	73	TYR	2.7
1	I	193	ILE	2.7
1	A	144	CYS	2.7
1	F	245	LEU	2.7
1	I	74	ASP	2.7
1	N	196	GLU	2.7
1	H	239	GLY	2.7
1	M	232	PRO	2.7
1	C	58	LEU	2.7
1	F	70	GLU	2.7
1	L	109	GLU	2.7
1	G	233	MET	2.7
1	J	117	MET	2.7
1	L	118	TYR	2.7
1	L	149	GLY	2.7
1	K	228	ARG	2.6
1	I	219	VAL	2.6
1	M	152	ALA	2.6
1	I	102	GLN	2.6
1	M	82	GLU	2.6
1	I	212	HIS	2.6
1	N	213	THR	2.6
1	F	195	ALA	2.6
1	K	160	ALA	2.6
1	I	140	LEU	2.6
1	I	194	GLN	2.6
1	K	58	LEU	2.6
1	E	111	ASN	2.6
1	G	75	ILE	2.6
1	B	88	MET	2.6
1	L	199	MET	2.6
1	N	166	MET	2.6
1	D	60	PRO	2.6
1	M	180	PRO	2.6
1	F	173	SER	2.6
1	C	71	ARG	2.6
1	F	134	ASP	2.6
1	J	161	ALA	2.6
1	K	209	TYR	2.6
1	N	145	THR	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	192	ALA	2.6
1	I	241	LEU	2.6
1	M	146	TRP	2.6
1	I	113	LYS	2.6
1	I	157	LEU	2.6
1	N	195	ALA	2.5
1	B	176	MET	2.5
1	M	75	ILE	2.5
1	G	218	GLN	2.5
1	C	245	LEU	2.5
1	M	119	ILE	2.5
1	F	103	LEU	2.5
1	N	79	LEU	2.5
1	J	76	TYR	2.5
1	M	206	TYR	2.5
1	N	118	TYR	2.5
1	K	72	ALA	2.5
1	L	181	SER	2.5
1	K	155	GLY	2.5
1	E	194	GLN	2.5
1	M	147	CYS	2.5
1	B	101	ALA	2.5
1	N	220	ILE	2.5
1	N	236	GLN	2.4
1	M	164	PRO	2.4
1	M	124	GLY	2.4
1	H	64	GLU	2.4
1	I	221	GLU	2.4
1	L	157	LEU	2.4
1	N	234	GLU	2.4
1	E	192	ALA	2.4
1	B	227	ASP	2.4
1	H	180	PRO	2.4
1	I	115	ILE	2.4
1	K	198	ILE	2.4
1	N	100	ILE	2.4
1	I	96	ALA	2.4
1	K	202	LYS	2.4
1	I	238	PHE	2.4
1	G	76	TYR	2.4
1	N	226	ARG	2.4
1	H	104	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
1	I	227	ASP	2.4
1	E	199	MET	2.4
1	J	154	MET	2.4
1	N	62	VAL	2.4
1	I	195	ALA	2.4
1	N	73	TYR	2.4
1	N	228	ARG	2.4
1	H	157	LEU	2.4
1	K	74	ASP	2.4
1	M	121	SER	2.4
1	N	153	SER	2.4
1	K	196	GLU	2.4
1	N	221	GLU	2.4
1	K	229	TYR	2.3
1	K	159	LEU	2.3
1	M	137	GLN	2.3
1	F	89	GLY	2.3
1	M	247	HIS	2.3
1	F	216	SER	2.3
1	N	219	VAL	2.3
1	C	237	GLU	2.3
1	J	84	ILE	2.3
1	L	195	ALA	2.3
1	H	86	CYS	2.3
1	E	218	GLN	2.3
1	F	218	GLN	2.3
1	A	62	VAL	2.3
1	N	240	ILE	2.3
1	I	242	ASP	2.3
1	M	74	ASP	2.3
1	N	174	ARG	2.3
1	J	135	THR	2.3
1	M	171	PRO	2.3
1	M	129	GLY	2.3
1	F	193	ILE	2.3
1	L	225	GLU	2.3
1	I	210	ALA	2.3
1	H	166	MET	2.3
1	N	140	LEU	2.3
1	L	120	ASN	2.3
1	D	73	TYR	2.3
1	H	76	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
1	M	218	GLN	2.3
1	G	124	GLY	2.3
1	C	64	GLU	2.3
1	C	233[A]	MET	2.3
1	D	233	MET	2.3
1	I	217	LEU	2.3
1	N	98	LEU	2.3
1	N	60	PRO	2.3
1	N	111	ASN	2.2
1	E	149	GLY	2.2
1	H	119	ILE	2.2
1	I	208	ILE	2.2
1	J	155	GLY	2.2
1	K	100	ILE	2.2
1	H	136	MET	2.2
1	I	127	THR	2.2
1	I	240	ILE	2.2
1	A	168	HIS	2.2
1	E	247	HIS	2.2
1	G	247	HIS	2.2
1	I	116	HIS	2.2
1	M	162	GLY	2.2
1	G	192	ALA	2.2
1	D	117	MET	2.2
1	I	130	LEU	2.2
1	D	232	PRO	2.2
1	N	142	PRO	2.2
1	I	177	ILE	2.2
1	H	168	HIS	2.2
1	J	194	GLN	2.2
1	B	174	ARG	2.2
1	E	86	CYS	2.2
1	A	70	GLU	2.2
1	I	117	MET	2.2
1	L	161	ALA	2.2
1	B	193	ILE	2.2
1	D	85	VAL	2.2
1	I	85	VAL	2.2
1	K	193	ILE	2.2
1	M	120	ASN	2.2
1	A	88	MET	2.2
1	G	117	MET	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	225	GLU	2.2
1	J	146	TRP	2.2
1	G	248	PRO	2.2
1	M	240	ILE	2.2
1	D	148	VAL	2.2
1	I	235	ALA	2.1
1	J	241	LEU	2.1
1	M	157	LEU	2.1
1	N	152	ALA	2.1
1	N	235	ALA	2.1
1	C	193	ILE	2.1
1	E	193	ILE	2.1
1	D	246	VAL	2.1
1	E	85	VAL	2.1
1	I	181	SER	2.1
1	L	156	SER	2.1
1	E	71	ARG	2.1
1	L	233	MET	2.1
1	C	192	ALA	2.1
1	C	195	ALA	2.1
1	J	75	ILE	2.1
1	I	118	TYR	2.1
1	I	138	TYR	2.1
1	I	229	TYR	2.1
1	M	138	TYR	2.1
1	B	197	GLU	2.1
1	L	197	GLU	2.1
1	N	147	CYS	2.1
1	M	155	GLY	2.1
1	N	199	MET	2.1
1	N	233	MET	2.1
1	C	236	GLN	2.1
1	I	231	SER	2.1
1	K	169	SER	2.1
1	L	107	GLN	2.1
1	M	102	GLN	2.1
1	E	223	ALA	2.1
1	D	64	GLU	2.1
1	H	142	PRO	2.1
1	N	122	PRO	2.1
1	M	198	ILE	2.1
1	A	63	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
1	L	246	VAL	2.1
1	F	117	MET	2.1
1	F	224	MET	2.1
1	M	58	LEU	2.0
1	H	145	THR	2.0
1	I	236	GLN	2.0
1	M	179	GLN	2.0
1	J	195	ALA	2.0
1	M	173	SER	2.0
1	B	229	TYR	2.0
1	K	197	GLU	2.0
1	D	198	ILE	2.0
1	I	84	ILE	2.0
1	N	91	ILE	2.0
1	F	244	VAL	2.0
1	J	85	VAL	2.0
1	K	63	VAL	2.0
1	M	117	MET	2.0
1	E	200	LYS	2.0
1	I	147	CYS	2.0
1	K	86	CYS	2.0
1	D	241	LEU	2.0
1	E	79	LEU	2.0
1	M	145	THR	2.0
1	N	223	ALA	2.0
1	F	156	SER	2.0
1	B	237	GLU	2.0
1	G	234	GLU	2.0
1	H	171	PRO	2.0
1	G	154	MET	2.0
1	M	88	MET	2.0
1	E	63	VAL	2.0
1	M	148	VAL	2.0
1	C	146	TRP	2.0
1	K	116	HIS	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

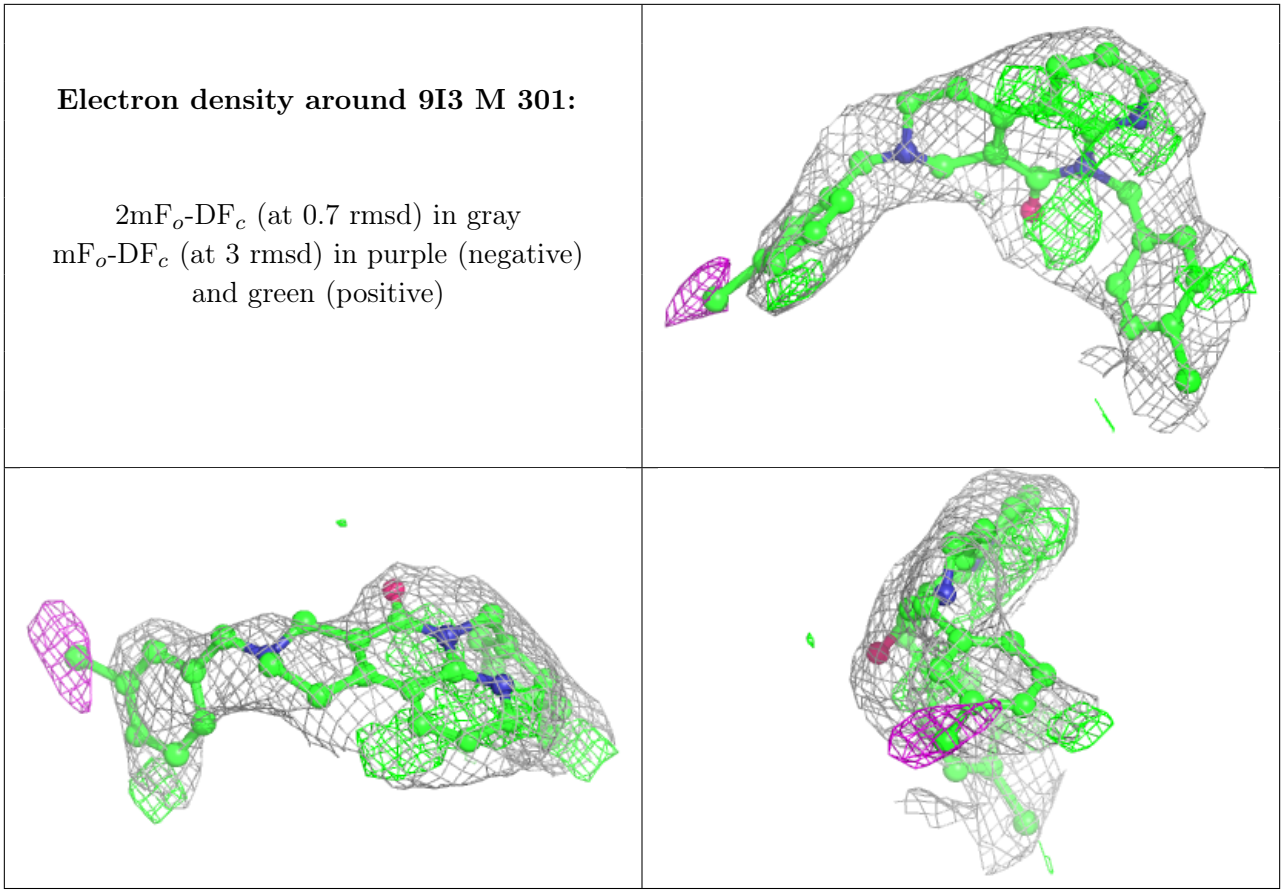
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	9I3	M	301	31/31	0.71	0.31	99,101,102,107	0
2	9I3	H	301	31/31	0.80	0.17	67,69,70,70	0
2	9I3	L	301	31/31	0.81	0.15	61,62,65,68	0
2	9I3	E	302	31/31	0.82	0.15	57,59,60,62	0
2	9I3	E	301	31/31	0.82	0.14	57,59,60,63	0
2	9I3	N	301	31/31	0.82	0.18	69,72,75,78	0
2	9I3	D	301	31/31	0.84	0.16	62,64,65,66	0
2	9I3	K	301	31/31	0.85	0.17	88,91,92,95	0
2	9I3	A	301	31/31	0.85	0.14	57,59,63,64	0
2	9I3	C	301	31/31	0.85	0.15	61,63,65,65	0
2	9I3	I	301	31/31	0.85	0.16	66,68,71,72	0
2	9I3	B	301	31/31	0.86	0.15	63,65,67,68	0
2	9I3	G	301	31/31	0.86	0.15	64,66,69,71	0
2	9I3	F	301	31/31	0.88	0.15	58,60,62,66	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.

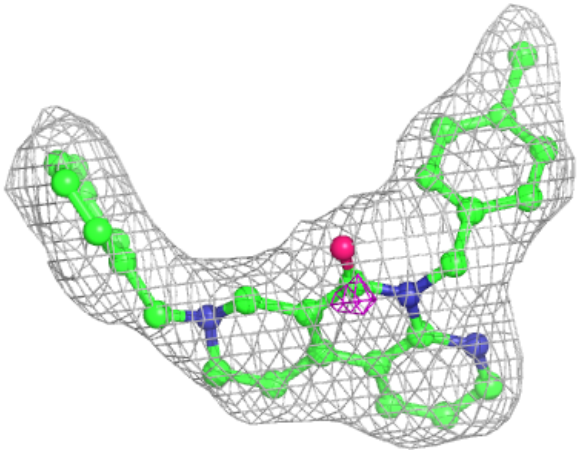
Electron density around 9I3 M 301:

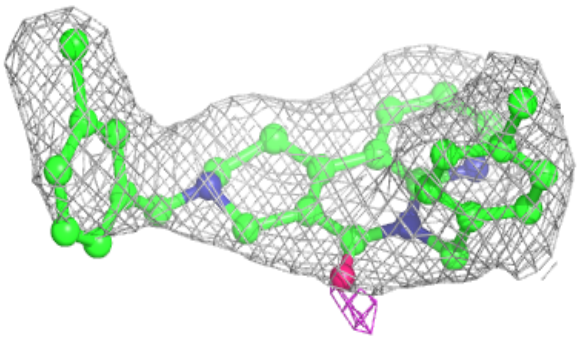
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

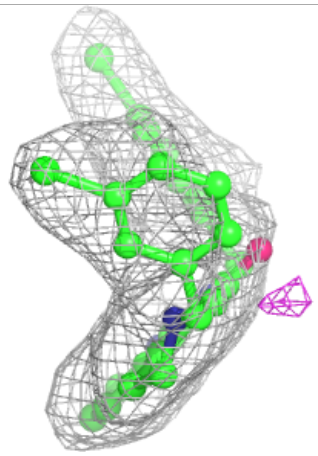


Electron density around 9I3 H 301:

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

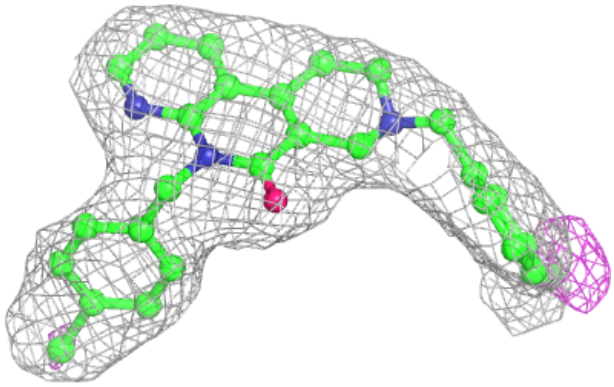


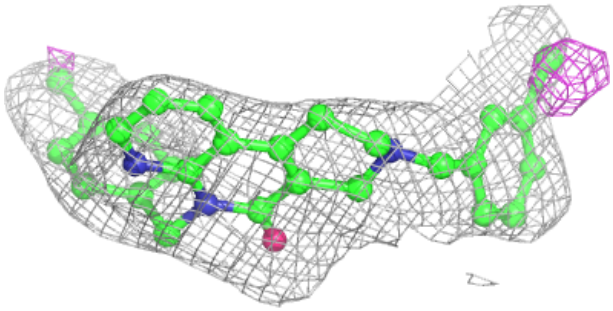


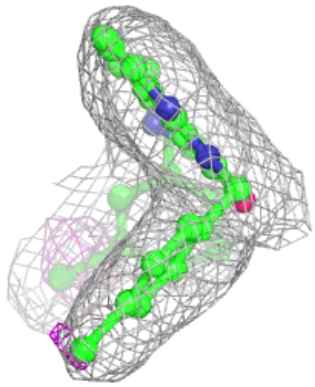


Electron density around 9I3 L 301:

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

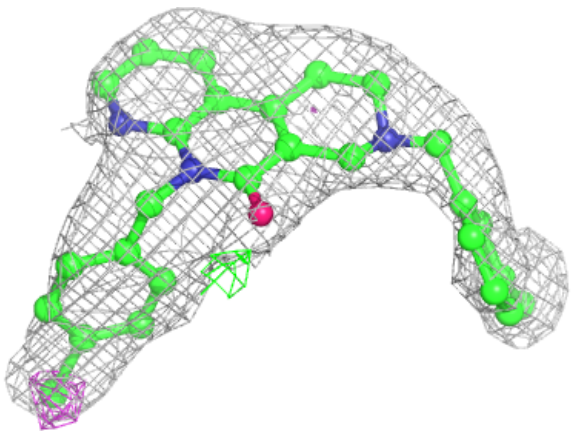


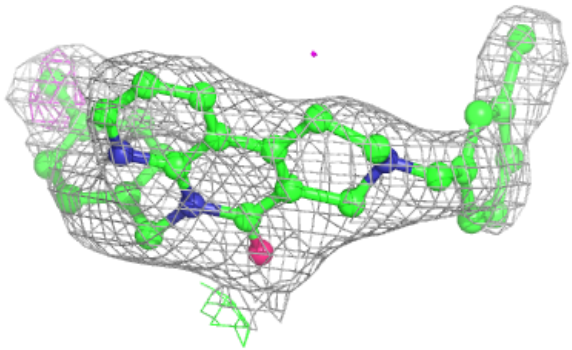


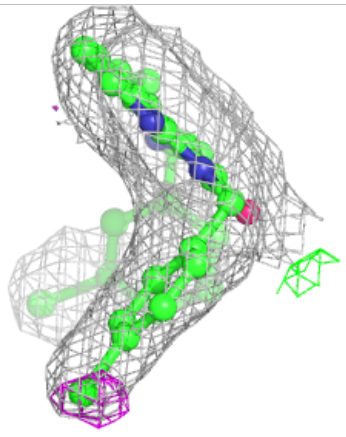


Electron density around 9I3 E 302:

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

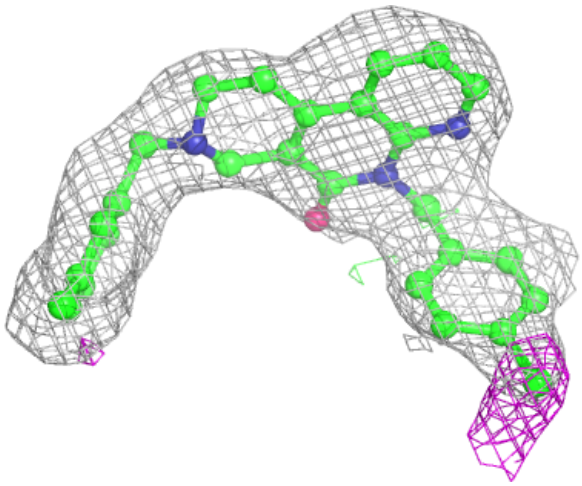


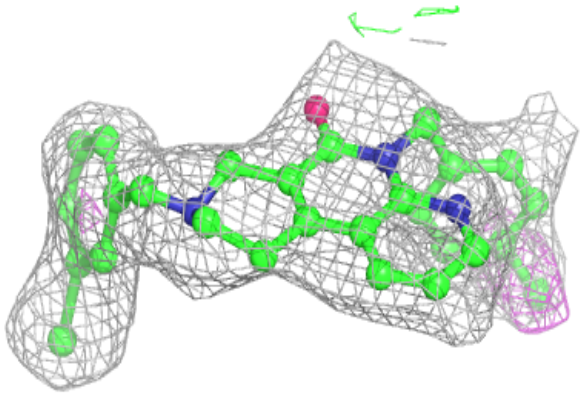


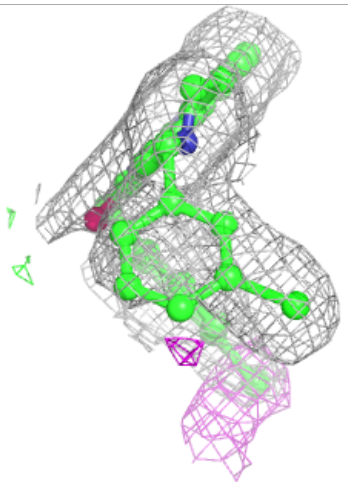


Electron density around 9I3 E 301:

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

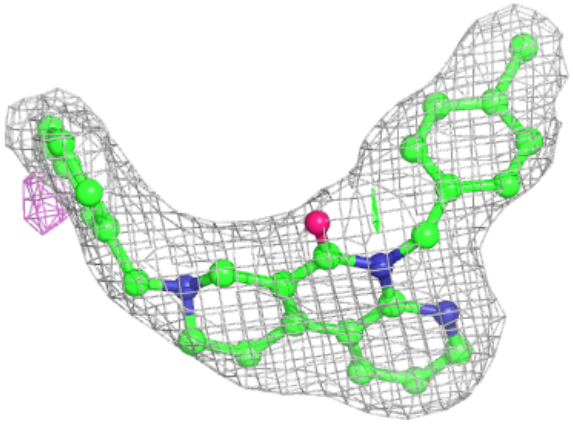


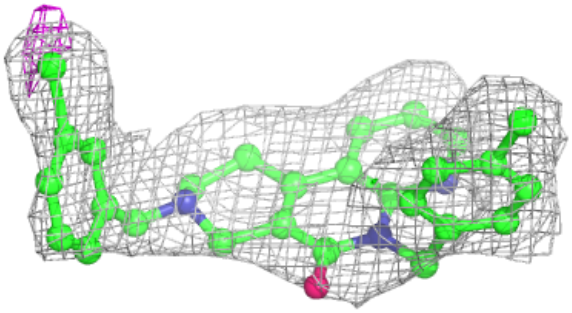


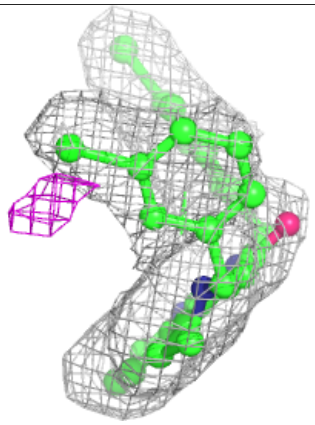


Electron density around 9I3 N 301:

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

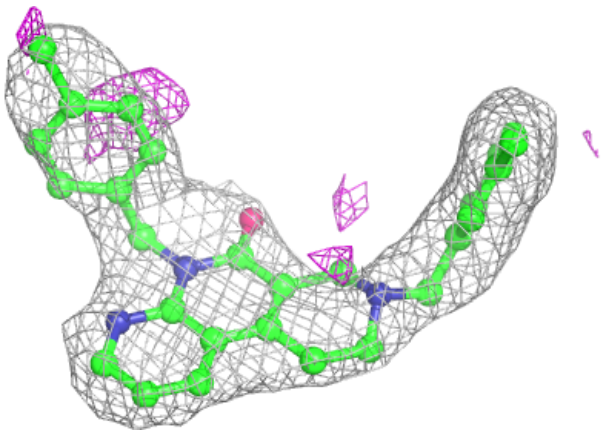


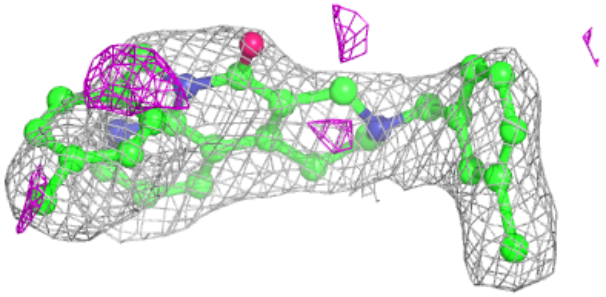


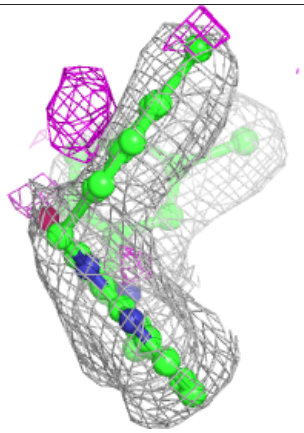


Electron density around 9I3 D 301:

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

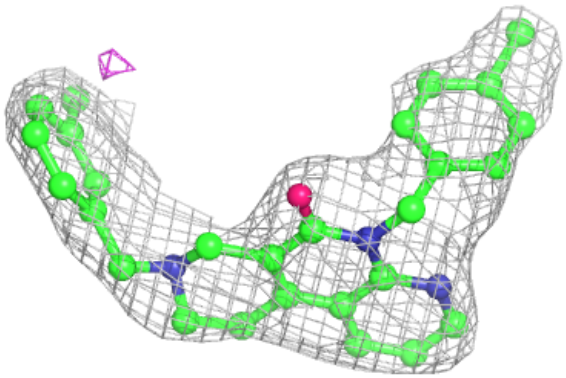


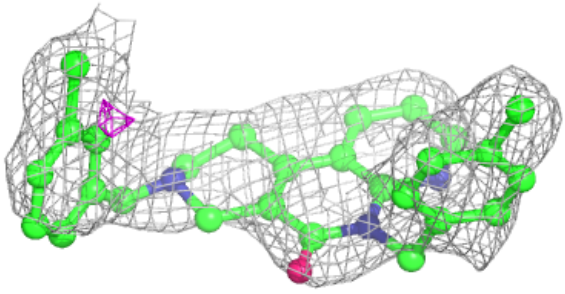


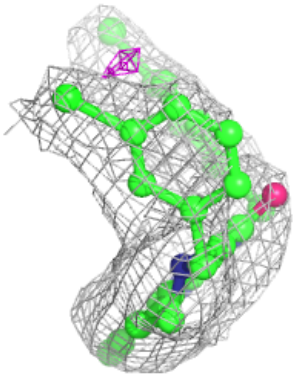


Electron density around 9I3 K 301:

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

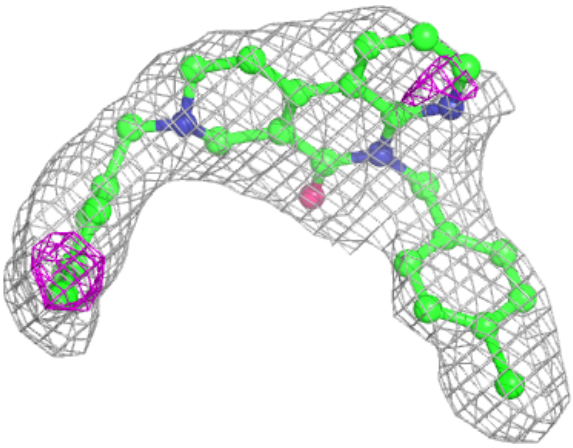


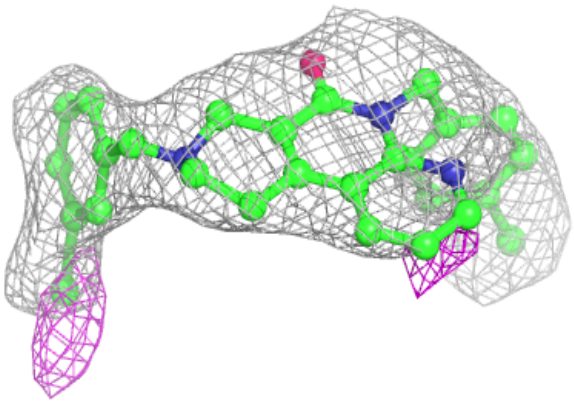


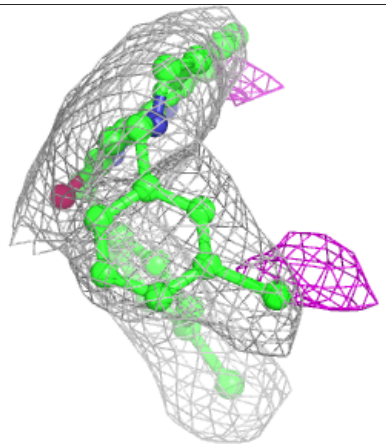


Electron density around 9I3 A 301:

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

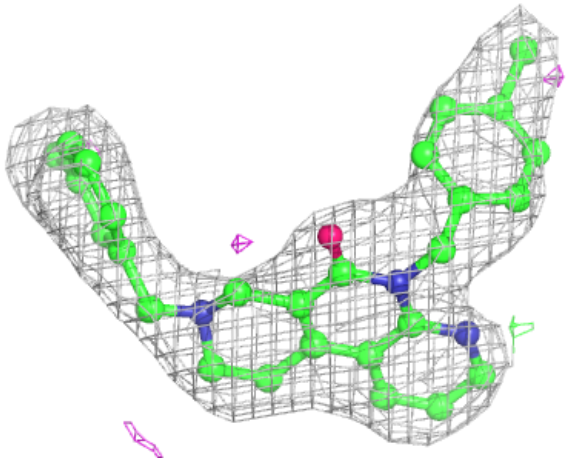


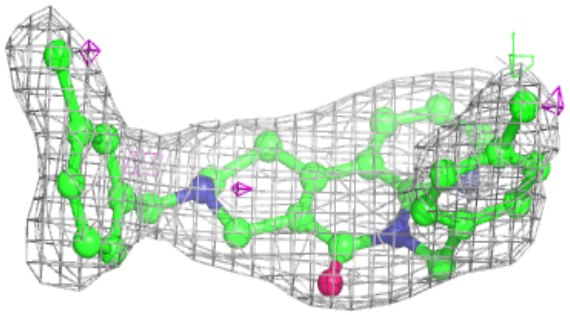


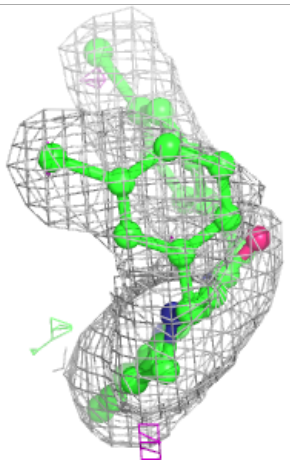


Electron density around 9I3 C 301:

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

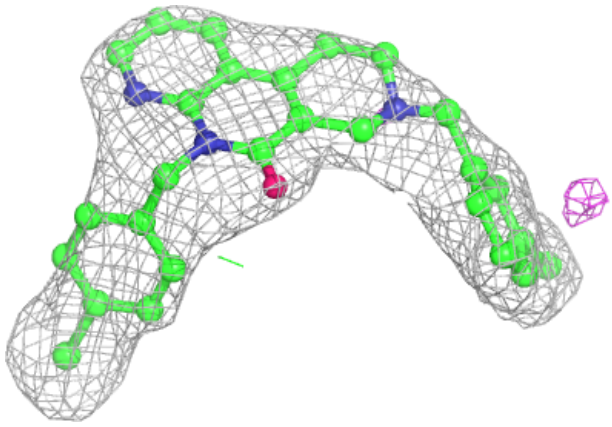


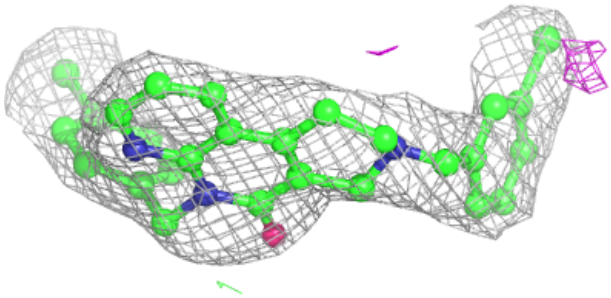


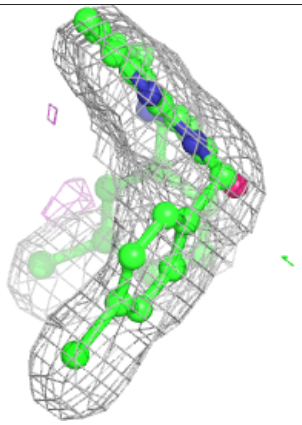


Electron density around 9I3 I 301:

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

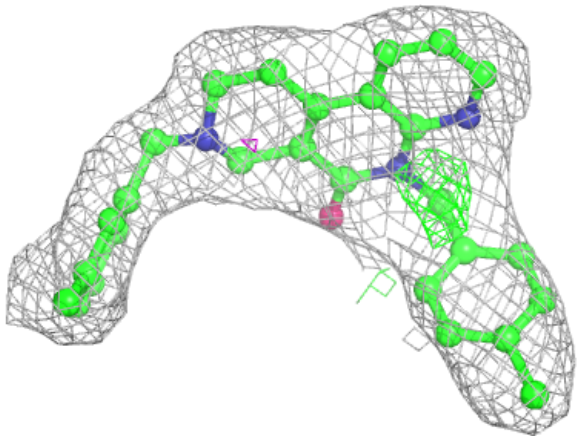


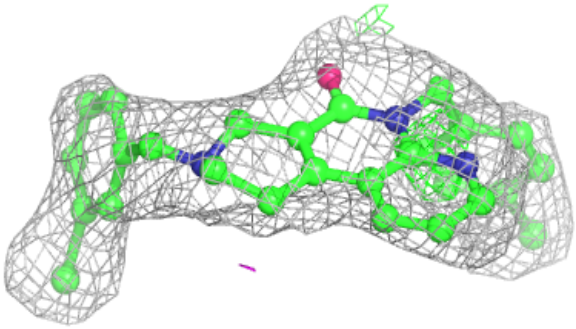


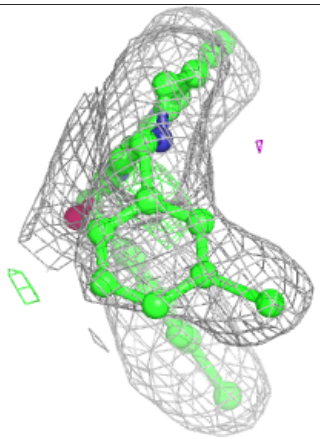


Electron density around 9I3 B 301:

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

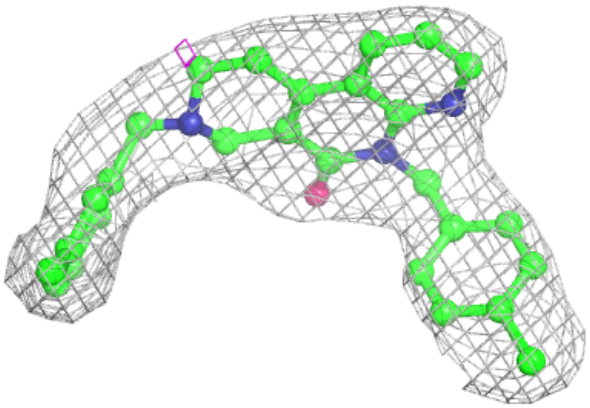


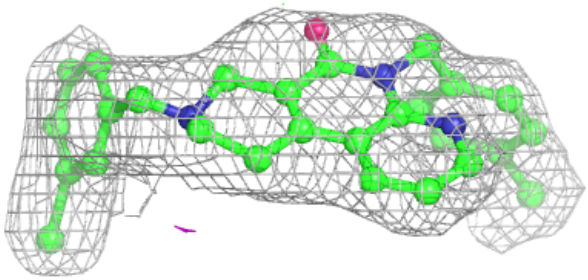


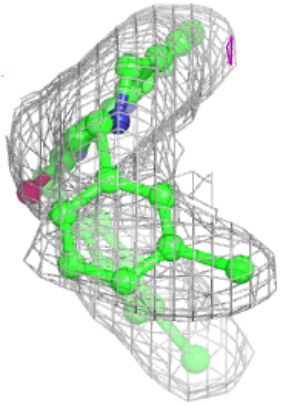


Electron density around 9I3 G 301:

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

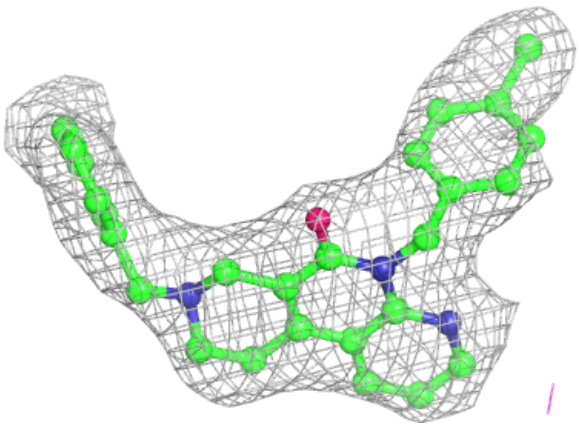


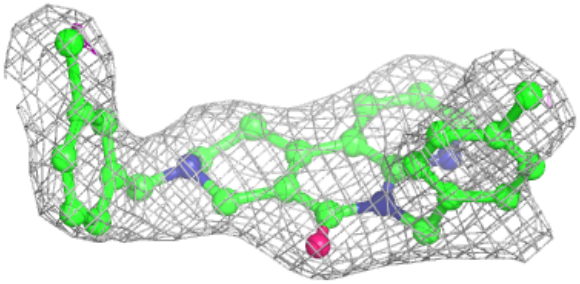


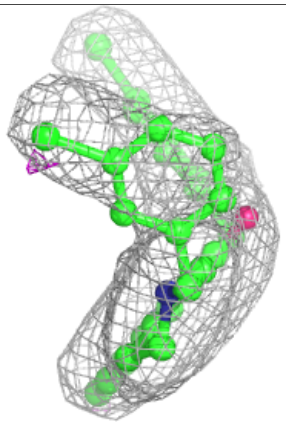


Electron density around 9I3 F 301:

$2mF_o$-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.