Full wwPDB X-ray Structure Validation Report (i)

Mar 8, 2026 – 04:56 PM UTC

PDB ID	:	9X7E / pdb_00009x7e
Title	:	Crystal of CCoV-HuPn-2018 3CL protease (3CLpro) in complex with nirmatrelvir
Authors	:	Nie, T.Q.; Su, H.X.; Li, M.J.; Xu, Y.C.
Deposited on	:	2025-10-16
Resolution	:	2.37 Å(reported)

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

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

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

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

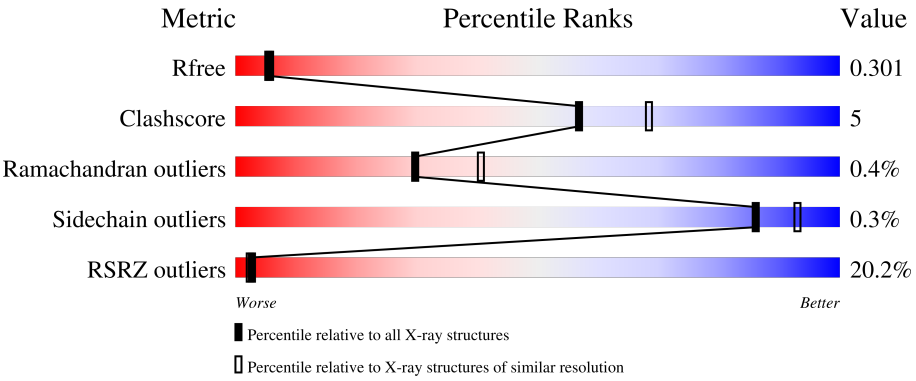
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 2.37 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	7164 (2.40-2.36)
Clashscore	190562	7722 (2.40-2.36)
Ramachandran outliers	187476	7626 (2.40-2.36)
Sidechain outliers	187428	7627 (2.40-2.36)
RSRZ outliers	180081	7170 (2.40-2.36)

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	302	2% 90% 8% ·
1	B	302	6% 89% 10% ·
1	C	302	9% 89% 10% ·
1	D	302	21% 83% 14% ·
1	E	302	22% 76% 11% 12%

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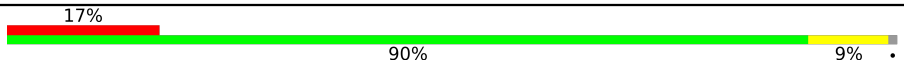
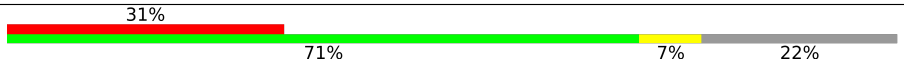
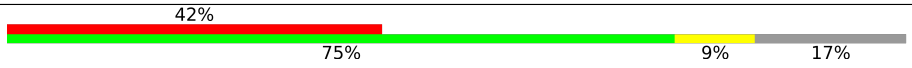
Mol	Chain	Length	Quality of chain
1	F	302	
1	G	302	
1	H	302	

2 Entry composition (i)

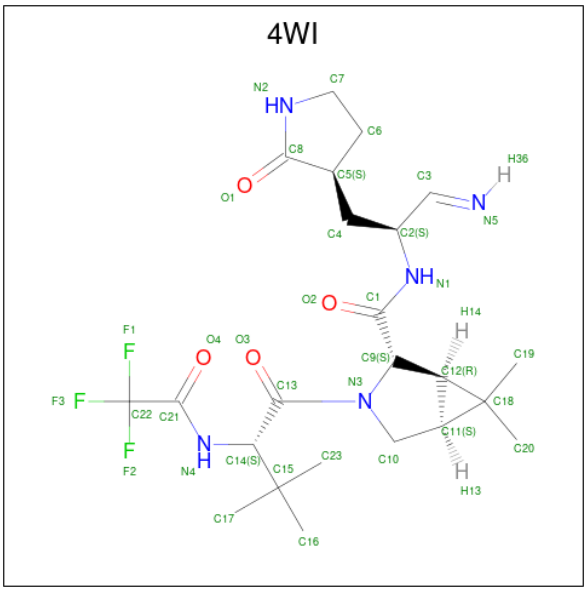
There are 3 unique types of molecules in this entry. The entry contains 15769 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 3C-like protease.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	297	Total	C	N	O	S	0	0	0
			2197	1391	366	425	15			
1	B	298	Total	C	N	O	S	0	0	0
			2196	1383	365	434	14			
1	C	298	Total	C	N	O	S	0	0	0
			2165	1365	363	422	15			
1	D	294	Total	C	N	O	S	0	0	0
			2043	1288	348	394	13			
1	E	265	Total	C	N	O	S	0	0	0
			1799	1118	307	363	11			
1	F	298	Total	C	N	O	S	0	0	0
			2117	1330	361	413	13			
1	G	236	Total	C	N	O	S	0	0	0
			1461	898	273	279	11			
1	H	252	Total	C	N	O	S	0	0	0
			1505	906	289	301	9			

- Molecule 2 is (1R,2S,5S)-N-{(1E,2S)-1-imino-3-[(3S)-2-oxopyrrolidin-3-yl]propan-2-yl}-6,6-dimethyl-3-[3-methyl-N-(trifluoroacetyl)-L-valyl]-3-azabicyclo[3.1.0]hexane-2-carboxamide (CCD ID: 4WI) (formula: $C_{23}H_{34}F_3N_5O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	B	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	C	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	D	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	F	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	G	1	Total	C	F	N	O	0	0
			35	23	3	5	4		
2	H	1	Total	C	F	N	O	0	0
			35	23	3	5	4		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	7	Total	O	0	0
			7	7		
3	B	8	Total	O	0	0
			8	8		
3	C	7	Total	O	0	0
			7	7		
3	D	4	Total	O	0	0
			4	4		
3	E	4	Total	O	0	0
			4	4		

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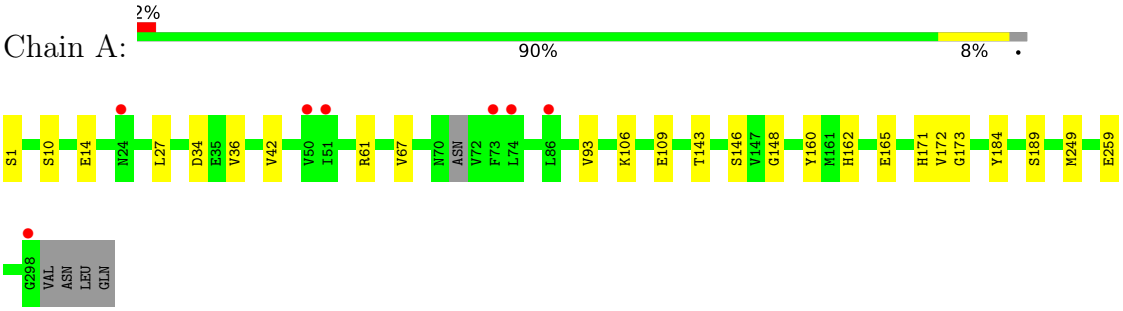
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	F	6	Total O 6 6	0	0
3	G	2	Total O 2 2	0	0
3	H	3	Total O 3 3	0	0

3 Residue-property plots (i)

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

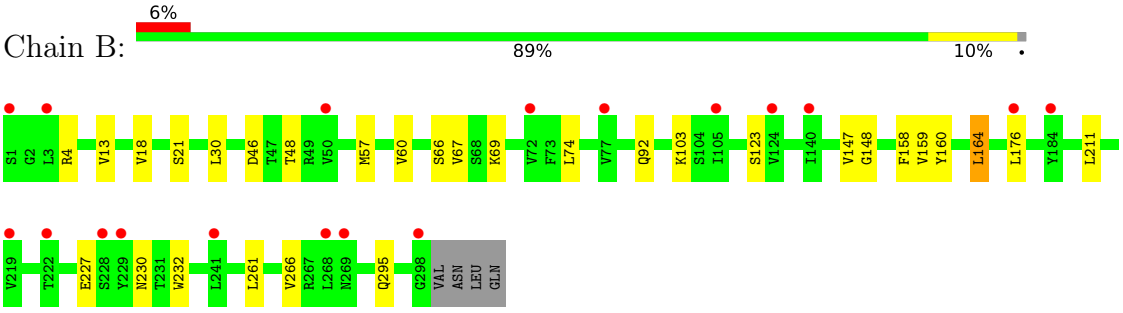
- Molecule 1: 3C-like protease

Chain A:



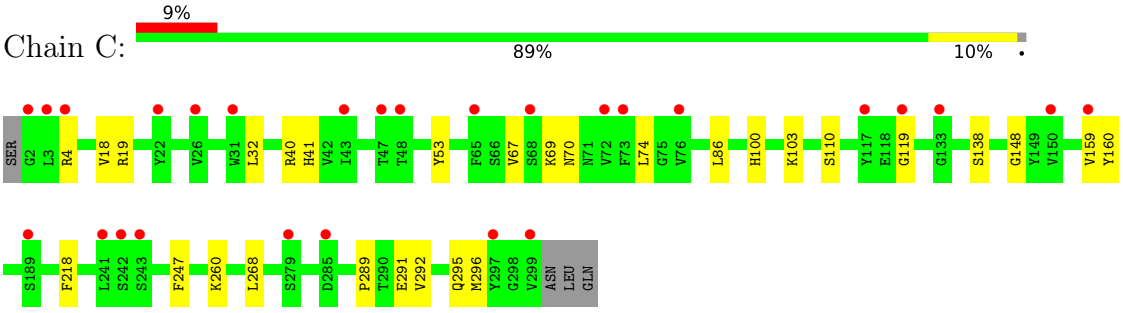
- Molecule 1: 3C-like protease

Chain B:



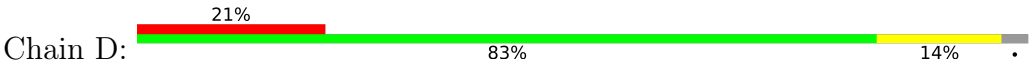
- Molecule 1: 3C-like protease

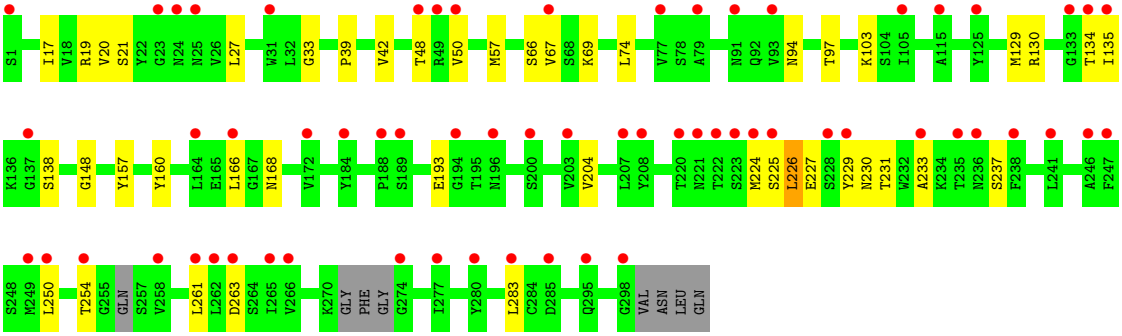
Chain C:



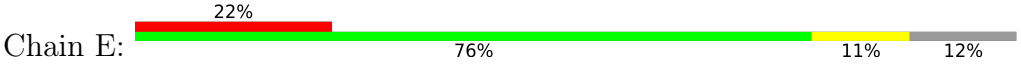
- Molecule 1: 3C-like protease

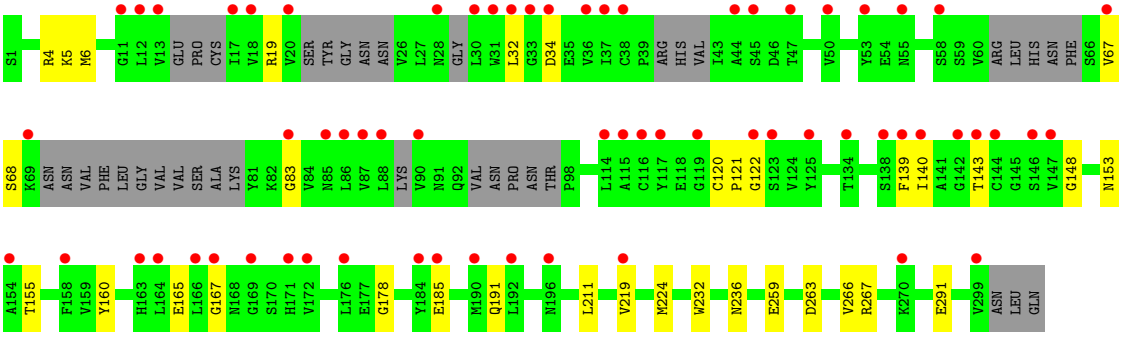
Chain D:



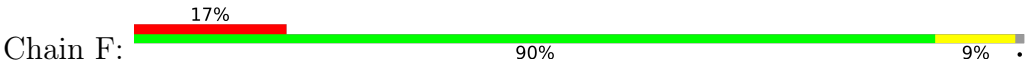


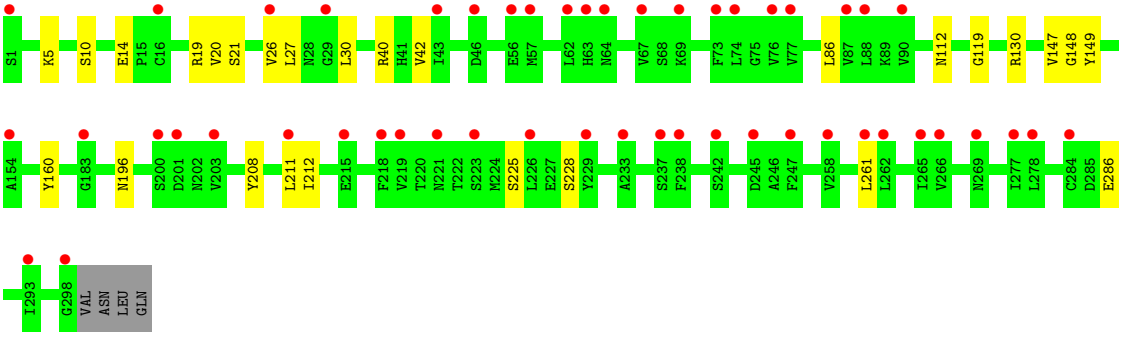
• Molecule 1: 3C-like protease



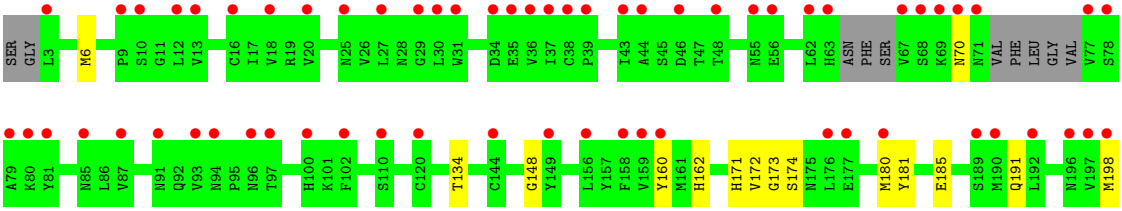


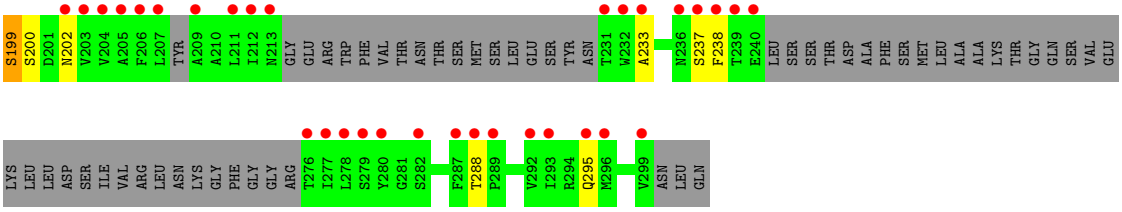
• Molecule 1: 3C-like protease





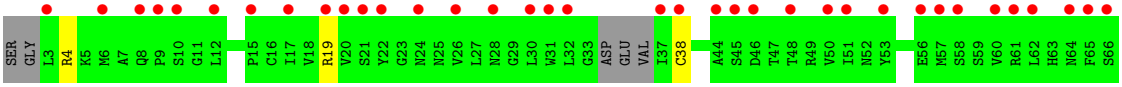
• Molecule 1: 3C-like protease

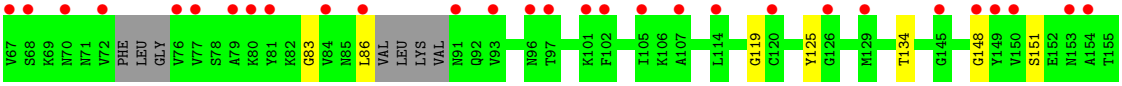


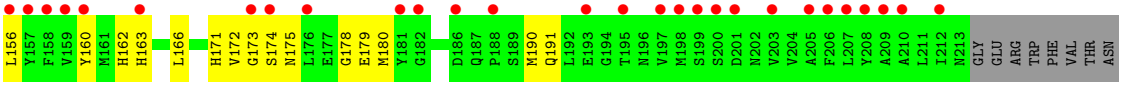


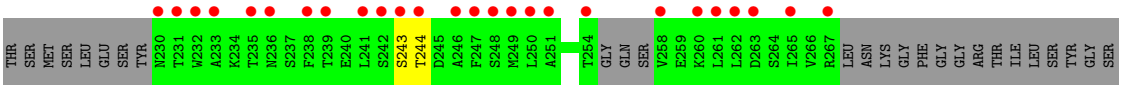
• Molecule 1: 3C-like protease

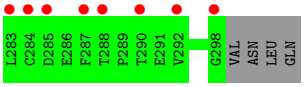
Chain H:











4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	159.99Å 126.45Å 159.80Å 90.00° 90.82° 90.00°	Depositor
Resolution (Å)	38.67 – 2.37 38.67 – 2.37	Depositor EDS
% Data completeness (in resolution range)	94.9 (38.67-2.37) 94.8 (38.67-2.37)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.20 (at 2.37Å)	Xtriage
Refinement program	PHENIX (1.17.1_3660: ???)	Depositor
R, R_{free}	0.263 , 0.300 0.264 , 0.301	Depositor DCC
R_{free} test set	6179 reflections (4.77%)	wwPDB-VP
Wilson B-factor (Å^2)	45.1	Xtriage
Anisotropy	0.779	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 52.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	0.025 for -h,-k,l	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	15769	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 10.51% 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: 4WI

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	0.10	0/2240	0.32	0/3043
1	B	0.25	0/2241	0.40	1/3049 (0.0%)
1	C	0.22	0/2209	0.38	1/3009 (0.0%)
1	D	0.28	0/2081	0.48	1/2835 (0.0%)
1	E	0.26	0/1824	0.45	0/2468
1	F	0.09	0/2161	0.29	0/2951
1	G	0.24	0/1484	0.38	0/2021
1	H	0.32	0/1520	0.41	0/2078
All	All	0.23	0/15760	0.39	3/21454 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	48	THR	N-CA-C	-8.10	103.61	113.97
1	C	41	HIS	CA-CB-CG	5.73	119.53	113.80
1	B	164	LEU	N-CA-C	5.02	115.94	108.60

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	2197	0	2094	16	0
1	B	2196	0	2050	16	0
1	C	2165	0	1996	15	0
1	D	2043	0	1826	26	0
1	E	1799	0	1500	21	0
1	F	2117	0	1886	14	0
1	G	1461	0	1057	12	0
1	H	1505	0	1060	18	0
2	A	35	0	0	2	0
2	B	35	0	0	0	0
2	C	35	0	0	0	0
2	D	35	0	0	0	0
2	F	35	0	0	0	0
2	G	35	0	0	0	0
2	H	35	0	0	1	0
3	A	7	0	0	0	0
3	B	8	0	0	0	0
3	C	7	0	0	0	0
3	D	4	0	0	0	0
3	E	4	0	0	0	0
3	F	6	0	0	0	0
3	G	2	0	0	0	0
3	H	3	0	0	0	0
All	All	15769	0	13469	134	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 5.

All (134) 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:B:227:GLU:HA	1:B:230:ASN:HB2	1.64	0.79
1:E:148:GLY:HA3	1:E:160:TYR:HB3	1.70	0.74
1:G:198:MET:O	1:G:200:SER:N	2.23	0.71
1:D:227:GLU:HA	1:D:230:ASN:HB2	1.72	0.71
1:D:94:ASN:HB3	1:D:97:THR:HG23	1.73	0.71
1:H:19:ARG:HB2	1:H:119:GLY:HA3	1.75	0.69
1:E:139:PHE:HD1	1:E:143:THR:CG2	2.06	0.69
1:H:134:THR:HG22	1:H:172:VAL:HG12	1.74	0.68
1:F:148:GLY:HA3	1:F:160:TYR:HB3	1.75	0.67
1:G:148:GLY:HA3	1:G:160:TYR:HB3	1.77	0.67
1:E:139:PHE:HD1	1:E:143:THR:HG22	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:227:GLU:O	1:D:231:THR:N	2.27	0.66
1:G:6:MET:SD	1:G:295:GLN:NE2	2.69	0.65
1:B:30:LEU:HD13	1:B:147:VAL:HG21	1.79	0.65
1:B:21:SER:HB3	1:B:66:SER:HB2	1.79	0.64
1:E:232:TRP:O	1:E:236:ASN:ND2	2.25	0.64
1:A:148:GLY:HA3	1:A:160:TYR:HB3	1.79	0.63
1:H:162:HIS:HE1	1:H:171:HIS:HB3	1.63	0.63
1:A:165:GLU:OE1	1:A:171:HIS:NE2	2.31	0.63
1:B:4:ARG:O	1:B:295:GLN:NE2	2.35	0.60
1:G:174:SER:HA	1:G:180:MET:HA	1.84	0.59
1:D:67:VAL:HG23	1:D:74:LEU:HB2	1.85	0.59
1:G:134:THR:HG22	1:G:172:VAL:HG22	1.85	0.59
1:C:148:GLY:HA3	1:C:160:TYR:HB3	1.84	0.58
1:C:110:SER:OG	1:C:291:GLU:OE2	2.22	0.58
1:C:218:PHE:HB2	1:C:268:LEU:HD11	1.86	0.58
1:E:4:ARG:HH11	1:E:4:ARG:HG3	1.69	0.58
1:C:103:LYS:HB3	1:C:159:VAL:HG12	1.87	0.57
1:D:148:GLY:HA3	1:D:160:TYR:HB3	1.87	0.57
1:B:57:MET:HG3	1:E:259:GLU:HG2	1.88	0.54
1:A:162:HIS:NE2	2:A:401:4WI:O1	2.33	0.54
1:D:20:VAL:HA	1:D:66:SER:O	2.08	0.54
1:B:211:LEU:HD11	1:B:261:LEU:HD21	1.89	0.53
1:D:27:LEU:HD21	1:D:42:VAL:HB	1.89	0.53
1:D:130:ARG:HD3	1:D:134:THR:O	2.09	0.53
1:B:148:GLY:HA3	1:B:160:TYR:HB3	1.90	0.52
1:H:148:GLY:HA3	1:H:160:TYR:HB3	1.92	0.52
1:C:18:VAL:HG12	1:C:69:LYS:HB2	1.92	0.52
1:G:185:GLU:O	1:G:191:GLN:NE2	2.40	0.52
1:A:106:LYS:HE2	1:A:109:GLU:OE2	2.09	0.52
1:H:4:ARG:HB3	1:H:4:ARG:NH1	2.25	0.52
1:D:168:ASN:HD21	1:D:193:GLU:HB3	1.75	0.51
1:A:36:VAL:HG21	1:A:67:VAL:HG11	1.93	0.50
1:C:40:ARG:HG3	1:C:53:TYR:CE1	2.46	0.50
1:D:250:LEU:O	1:D:254:THR:HG22	2.11	0.50
1:D:224:MET:HE2	1:D:263:ASP:HA	1.93	0.50
1:F:30:LEU:HD13	1:F:147:VAL:HG21	1.94	0.50
1:F:10:SER:O	1:F:14:GLU:HG3	2.12	0.49
1:F:211:LEU:HD11	1:F:261:LEU:HD21	1.93	0.49
1:E:165:GLU:HG2	1:E:167:GLY:H	1.76	0.49
1:F:5:LYS:NZ	1:F:286:GLU:O	2.44	0.49
1:F:20:VAL:HB	1:F:27:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:225:SER:OG	1:D:226:LEU:HD12	2.12	0.49
1:F:40:ARG:HA	1:F:86:LEU:HB2	1.95	0.49
1:E:5:LYS:NZ	1:E:291:GLU:OE2	2.46	0.49
1:E:83:GLY:HA3	1:E:178:GLY:HA3	1.94	0.49
1:C:32:LEU:HD13	1:C:100:HIS:CE1	2.48	0.49
1:C:40:ARG:HA	1:C:86:LEU:HB2	1.94	0.48
1:E:139:PHE:CD1	1:E:143:THR:HG22	2.45	0.48
1:E:224:MET:HE1	1:E:266:VAL:HG21	1.95	0.48
1:A:27:LEU:HD21	1:A:42:VAL:HB	1.95	0.48
1:D:229:TYR:O	1:D:233:ALA:N	2.40	0.48
1:C:67:VAL:HB	1:C:74:LEU:HB2	1.95	0.48
1:F:21:SER:HB2	1:F:26:VAL:HG12	1.97	0.47
1:A:172:VAL:HG11	1:A:184:TYR:HB2	1.96	0.47
1:B:67:VAL:HG12	1:B:74:LEU:HD12	1.95	0.47
1:D:33:GLY:H	1:D:97:THR:HG21	1.80	0.47
1:E:263:ASP:OD2	1:E:267:ARG:NH2	2.46	0.47
1:A:143:THR:O	1:A:146:SER:OG	2.30	0.46
1:C:19:ARG:HB2	1:C:119:GLY:HA3	1.97	0.46
1:E:185:GLU:O	1:E:191:GLN:NE2	2.36	0.46
1:E:153:ASN:C	1:E:155:THR:H	2.23	0.46
1:H:83:GLY:HA3	1:H:178:GLY:HA3	1.97	0.46
1:D:283:LEU:H	1:D:283:LEU:HD12	1.80	0.46
1:E:4:ARG:HG3	1:E:4:ARG:NH1	2.30	0.46
1:D:129:MET:HA	1:D:135:ILE:HG22	1.97	0.46
1:E:143:THR:HG22	1:E:143:THR:O	2.16	0.46
1:H:162:HIS:CE1	1:H:171:HIS:HB3	2.47	0.46
1:A:259:GLU:HG2	1:D:57:MET:HG3	1.97	0.46
1:E:6:MET:HE2	1:H:125:TYR:CE1	2.51	0.46
1:G:233:ALA:HB1	1:G:238:PHE:O	2.16	0.45
1:H:174:SER:HA	1:H:180:MET:HA	1.97	0.45
1:B:18:VAL:HG12	1:B:69:LYS:HB2	1.98	0.45
1:E:19:ARG:HA	1:E:67:VAL:HA	1.98	0.45
1:G:173:GLY:O	1:G:181:TYR:HD1	1.99	0.45
1:G:198:MET:HG2	1:G:199:SER:N	2.31	0.45
1:B:74:LEU:HD22	1:B:92:GLN:HB2	2.00	0.44
1:D:103:LYS:HE3	1:D:157:TYR:CD1	2.52	0.44
1:F:208:TYR:O	1:F:212:ILE:HG12	2.17	0.44
1:G:198:MET:O	1:G:199:SER:C	2.60	0.44
1:G:202:ASN:OD1	1:G:288:THR:HA	2.16	0.44
1:H:190:MET:HE3	1:H:190:MET:HB2	1.74	0.44
1:D:134:THR:HG21	1:D:166:LEU:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:163:HIS:CD2	1:H:174:SER:HB3	2.52	0.44
1:A:1:SER:O	1:C:138:SER:HA	2.17	0.44
1:H:173:GLY:O	1:H:180:MET:HG3	2.17	0.44
1:H:166:LEU:HA	2:H:401:4WI:F2	2.08	0.44
1:H:175:ASN:HD21	1:H:179:GLU:HB3	1.82	0.44
1:A:34:ASP:HB3	1:A:93:VAL:HG22	1.99	0.44
1:B:46:ASP:OD1	1:B:48:THR:OG1	2.32	0.44
1:C:260:LYS:HB3	1:C:260:LYS:HE2	1.67	0.43
1:C:292:VAL:O	1:C:296:MET:HG2	2.18	0.43
1:F:130:ARG:HG2	1:F:196:ASN:HD21	1.83	0.43
1:H:38:CYS:O	1:H:86:LEU:N	2.36	0.43
1:F:112:ASN:ND2	1:F:149:TYR:O	2.52	0.43
1:B:158:PHE:HB3	1:B:176:LEU:CD1	2.48	0.43
1:A:61:ARG:HA	1:A:61:ARG:NH1	2.34	0.43
1:D:19:ARG:O	1:D:67:VAL:HA	2.19	0.43
1:E:211:LEU:HD21	1:E:219:VAL:HG21	2.01	0.43
1:B:13:VAL:HG13	1:B:158:PHE:HE1	1.84	0.42
1:F:27:LEU:HD21	1:F:42:VAL:HB	2.01	0.42
1:H:166:LEU:HD22	1:H:191:GLN:HB2	2.01	0.42
1:H:151:SER:OG	1:H:156:LEU:HD13	2.19	0.42
1:B:103:LYS:HG3	1:B:159:VAL:HG12	2.02	0.42
1:D:17:ILE:O	1:D:69:LYS:HG3	2.19	0.42
1:D:21:SER:HB3	1:D:66:SER:OG	2.20	0.42
1:A:10:SER:O	1:A:14:GLU:HG3	2.20	0.41
1:G:162:HIS:HE1	1:G:171:HIS:HB3	1.85	0.41
1:D:27:LEU:HD13	1:D:39:PRO:HD2	2.03	0.41
1:H:243:SER:OG	1:H:244:THR:N	2.53	0.41
1:D:237:SER:O	1:D:237:SER:OG	2.29	0.41
1:A:189:SER:O	2:A:401:4WI:F3	2.28	0.41
1:D:138:SER:O	1:D:138:SER:OG	2.35	0.41
1:E:232:TRP:CD2	1:E:266:VAL:HG22	2.56	0.41
1:F:225:SER:HG	1:F:228:SER:HG	1.57	0.41
1:B:232:TRP:CD2	1:B:266:VAL:HG22	2.56	0.41
1:E:120:CYS:HA	1:E:121:PRO:HD3	1.95	0.41
1:A:160:TYR:CZ	1:A:173:GLY:HA3	2.56	0.41
1:C:4:ARG:O	1:C:295:GLN:NE2	2.52	0.41
1:A:249:MET:HE3	1:A:249:MET:HB3	1.99	0.40
1:F:19:ARG:HB2	1:F:119:GLY:HA3	2.04	0.40
1:D:204:VAL:HG13	1:D:261:LEU:HD12	2.03	0.40
1:B:57:MET:O	1:B:60:VAL:HG12	2.21	0.40
1:C:247:PHE:CE1	1:C:289:PRO:HG3	2.56	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	293/302 (97%)	282 (96%)	11 (4%)	0	100 100
1	B	296/302 (98%)	287 (97%)	9 (3%)	0	100 100
1	C	296/302 (98%)	287 (97%)	8 (3%)	1 (0%)	36 48
1	D	288/302 (95%)	274 (95%)	13 (4%)	1 (0%)	36 48
1	E	247/302 (82%)	223 (90%)	20 (8%)	4 (2%)	7 9
1	F	296/302 (98%)	286 (97%)	10 (3%)	0	100 100
1	G	224/302 (74%)	207 (92%)	14 (6%)	3 (1%)	9 12
1	H	238/302 (79%)	221 (93%)	17 (7%)	0	100 100
All	All	2178/2416 (90%)	2067 (95%)	102 (5%)	9 (0%)	30 40

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	226	LEU
1	E	32	LEU
1	G	199	SER
1	G	70	ASN
1	E	34	ASP
1	E	140	ILE
1	G	237	SER
1	C	70	ASN
1	E	122	GLY

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	233/258 (90%)	233 (100%)	0	100 100
1	B	232/258 (90%)	230 (99%)	2 (1%)	70 84
1	C	221/258 (86%)	221 (100%)	0	100 100
1	D	194/258 (75%)	193 (100%)	1 (0%)	81 90
1	E	157/258 (61%)	156 (99%)	1 (1%)	78 88
1	F	205/258 (80%)	205 (100%)	0	100 100
1	G	92/258 (36%)	92 (100%)	0	100 100
1	H	91/258 (35%)	91 (100%)	0	100 100
All	All	1425/2064 (69%)	1421 (100%)	4 (0%)	86 93

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	123	SER
1	B	164	LEU
1	D	50	VAL
1	E	68	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	269	ASN
1	B	196	ASN
1	B	269	ASN
1	C	213	ASN
1	C	269	ASN
1	D	171	HIS
1	D	191	GLN
1	E	132	GLN
1	E	196	ASN
1	F	41	HIS
1	F	52	ASN
1	F	92	GLN
1	F	269	ASN
1	G	132	GLN

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Mol	Chain	Res	Type
1	G	163	HIS
1	H	41	HIS
1	H	52	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

7 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	4WI	D	401	1	34,37,37	0.36	0	46,59,59	0.59	0
2	4WI	H	401	1	34,37,37	0.37	0	46,59,59	0.59	0
2	4WI	A	401	1	34,37,37	0.35	0	46,59,59	0.66	0
2	4WI	G	401	1	34,37,37	0.36	0	46,59,59	0.62	0
2	4WI	F	401	1	34,37,37	0.37	0	46,59,59	0.61	0
2	4WI	C	401	1	34,37,37	0.38	0	46,59,59	0.58	0
2	4WI	B	401	1	34,37,37	0.39	0	46,59,59	0.58	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.

'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	4WI	D	401	1	-	5/36/73/73	0/3/3/3
2	4WI	H	401	1	-	0/36/73/73	0/3/3/3
2	4WI	A	401	1	-	0/36/73/73	0/3/3/3
2	4WI	G	401	1	-	11/36/73/73	0/3/3/3
2	4WI	F	401	1	-	2/36/73/73	0/3/3/3
2	4WI	C	401	1	-	8/36/73/73	0/3/3/3
2	4WI	B	401	1	-	6/36/73/73	0/3/3/3

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (32) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	G	401	4WI	N1-C1-C9-N3
2	G	401	4WI	O2-C1-C9-C12
2	G	401	4WI	O2-C1-C9-N3
2	G	401	4WI	N1-C1-C9-C12
2	C	401	4WI	N1-C1-C9-N3
2	C	401	4WI	O2-C1-C9-N3
2	G	401	4WI	N4-C21-C22-F2
2	C	401	4WI	N4-C21-C22-F2
2	G	401	4WI	O4-C21-C22-F2
2	C	401	4WI	O4-C21-C22-F2
2	C	401	4WI	C4-C2-N1-C1
2	G	401	4WI	C4-C2-N1-C1
2	C	401	4WI	N4-C21-C22-F3
2	D	401	4WI	N4-C21-C22-F3
2	C	401	4WI	O4-C21-C22-F1
2	G	401	4WI	O4-C21-C22-F3
2	G	401	4WI	N4-C21-C22-F3
2	C	401	4WI	N4-C21-C22-F1
2	B	401	4WI	N4-C21-C22-F1
2	B	401	4WI	N4-C21-C22-F2
2	D	401	4WI	N4-C21-C22-F2
2	B	401	4WI	O4-C21-C22-F1
2	G	401	4WI	O4-C21-C22-F1
2	B	401	4WI	N4-C21-C22-F3
2	G	401	4WI	N4-C21-C22-F1

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Mol	Chain	Res	Type	Atoms
2	F	401	4WI	O4-C21-C22-F2
2	D	401	4WI	N4-C21-C22-F1
2	F	401	4WI	N4-C21-C22-F2
2	D	401	4WI	O4-C21-C22-F1
2	B	401	4WI	O4-C21-C22-F2
2	D	401	4WI	O4-C21-C22-F2
2	B	401	4WI	O4-C21-C22-F3

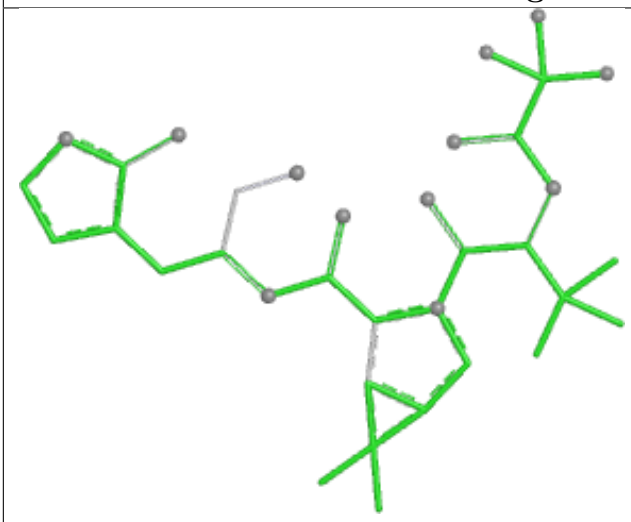
There are no ring outliers.

2 monomers are involved in 3 short contacts:

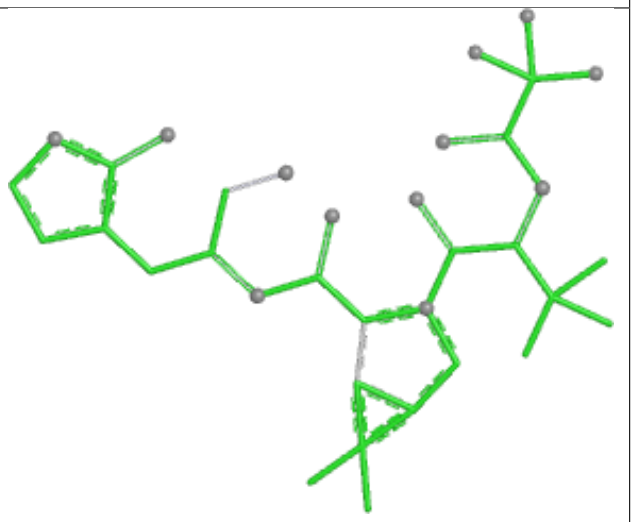
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	H	401	4WI	1	0
2	A	401	4WI	2	0

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.

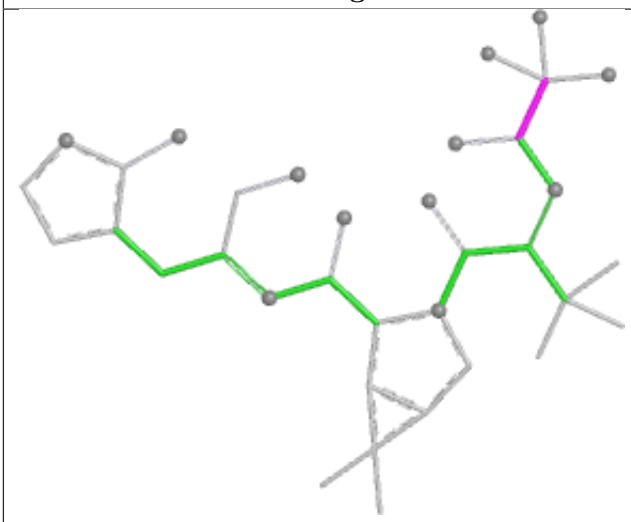
Ligand 4WI D 401



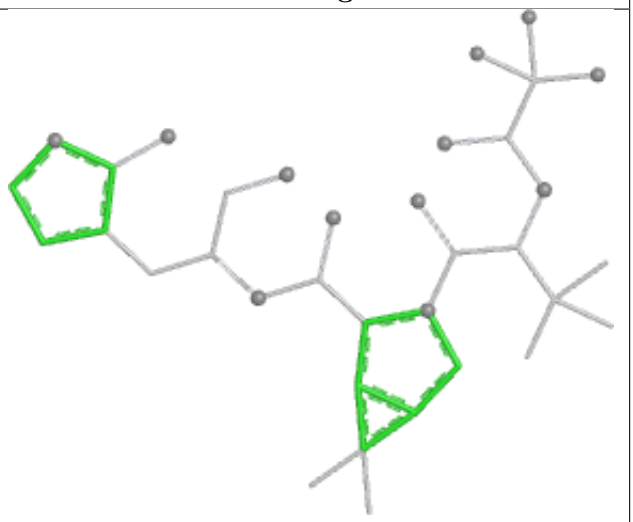
Bond lengths



Bond angles

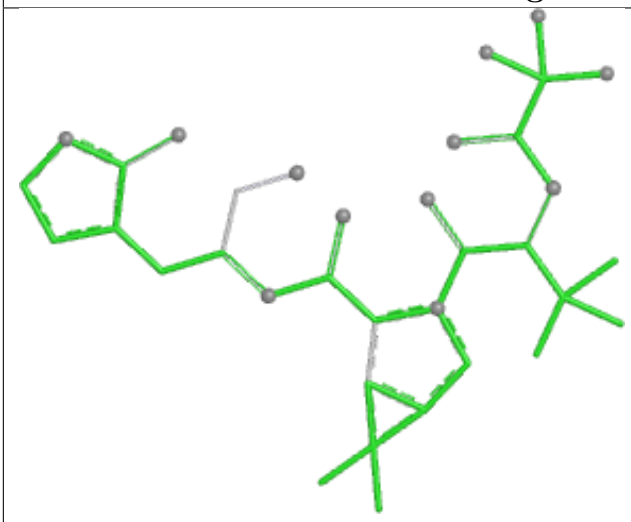


Torsions

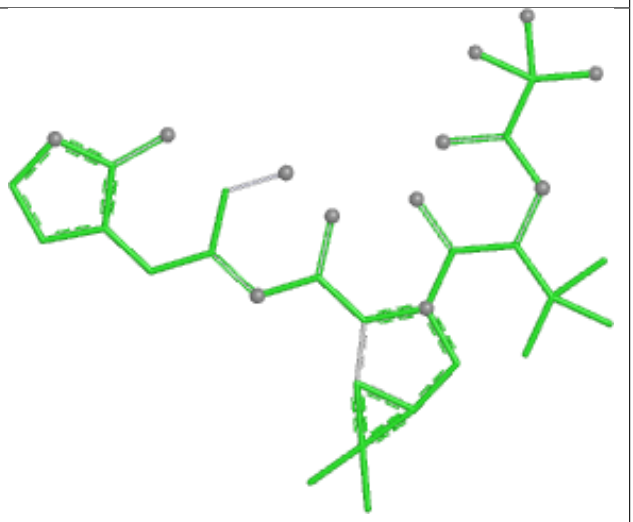


Rings

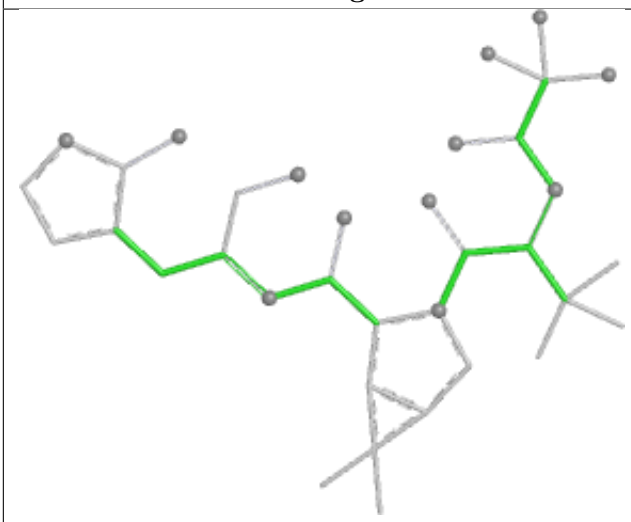
Ligand 4WI H 401



Bond lengths



Bond angles



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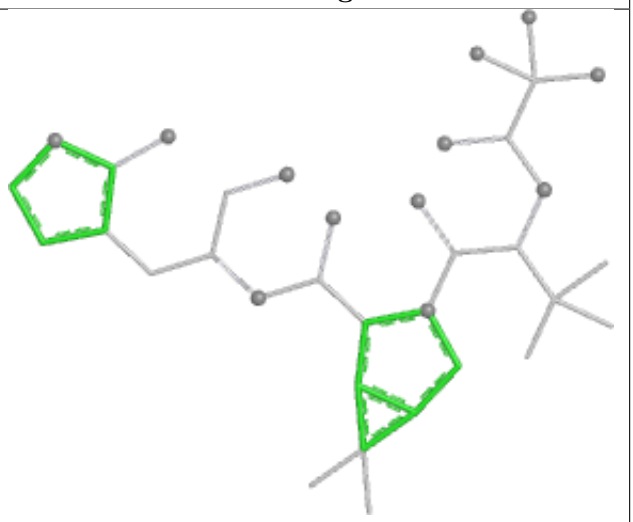
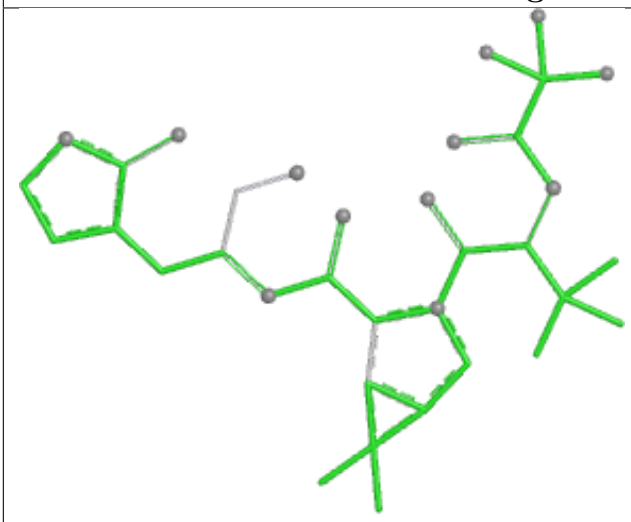
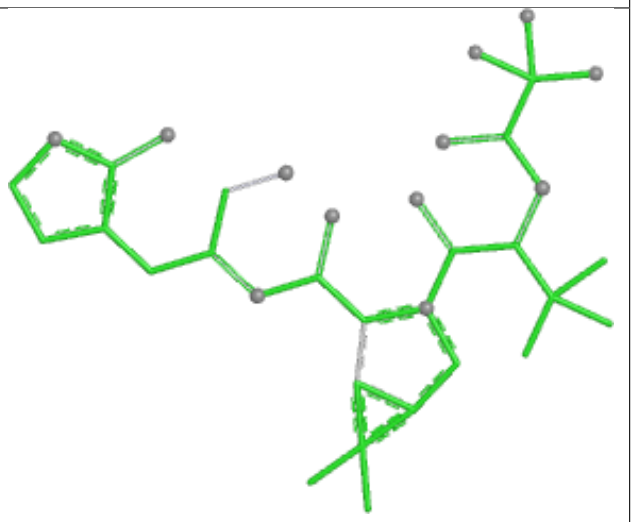


Rings

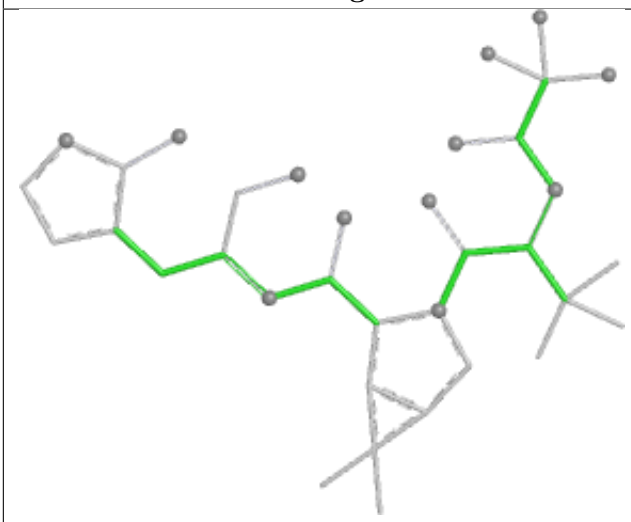
Ligand 4WI A 401



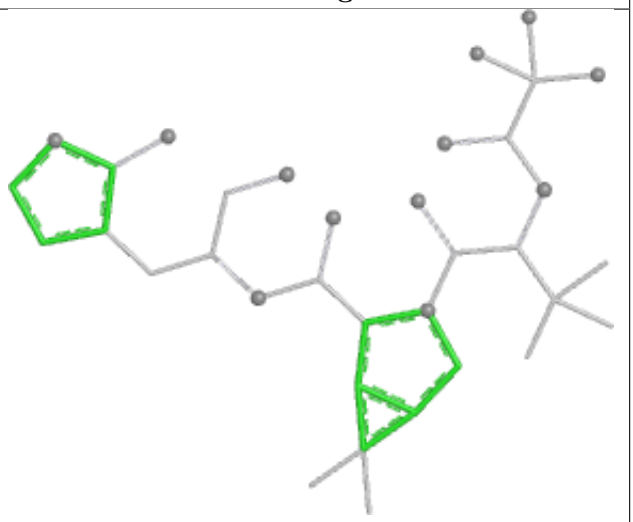
Bond lengths



Bond angles

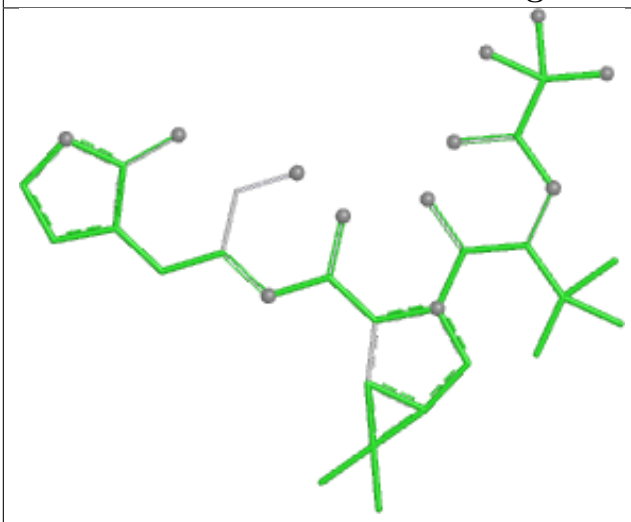


Torsions

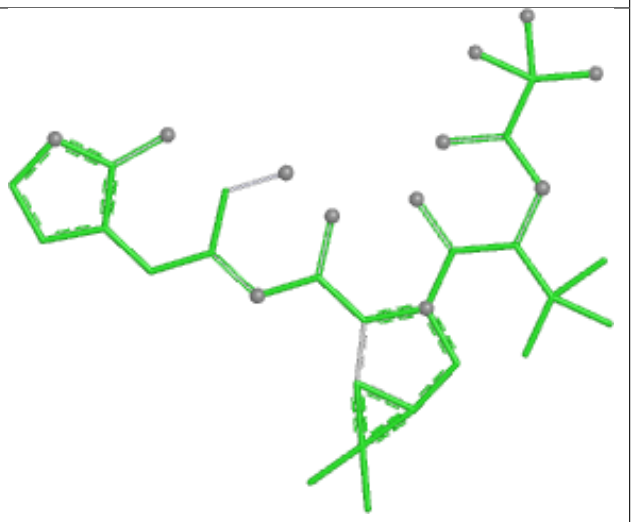


Rings

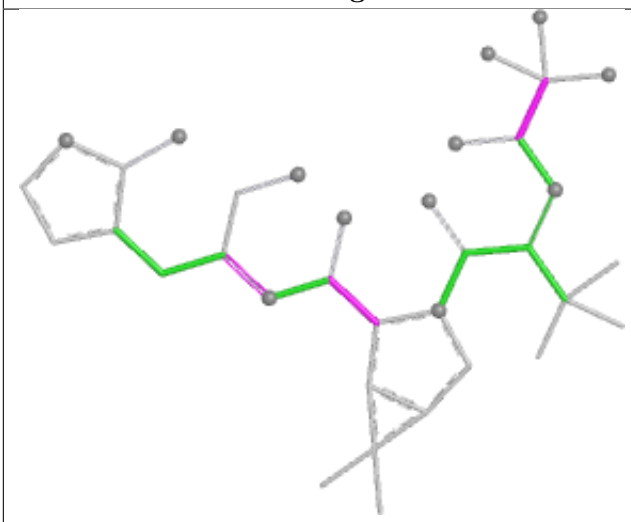
Ligand 4WI G 401



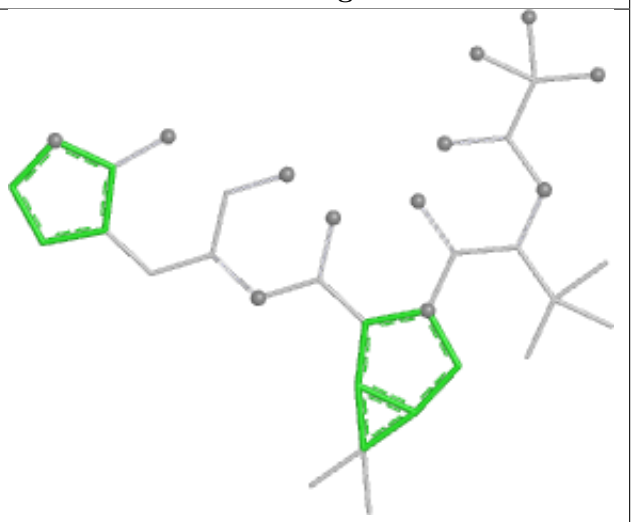
Bond lengths



Bond angles

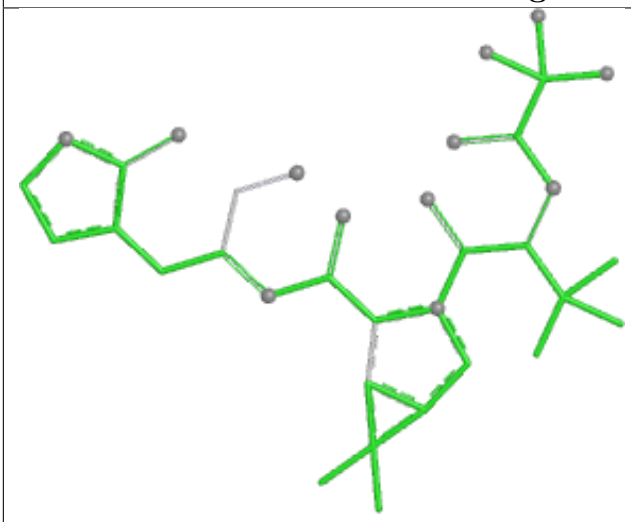


Torsions

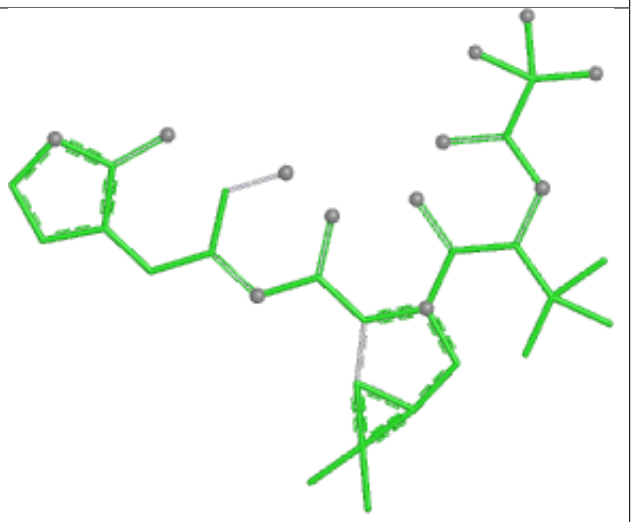


Rings

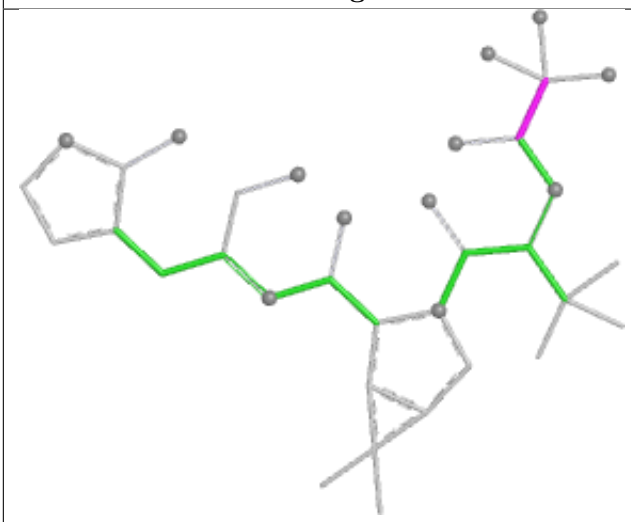
Ligand 4WI F 401



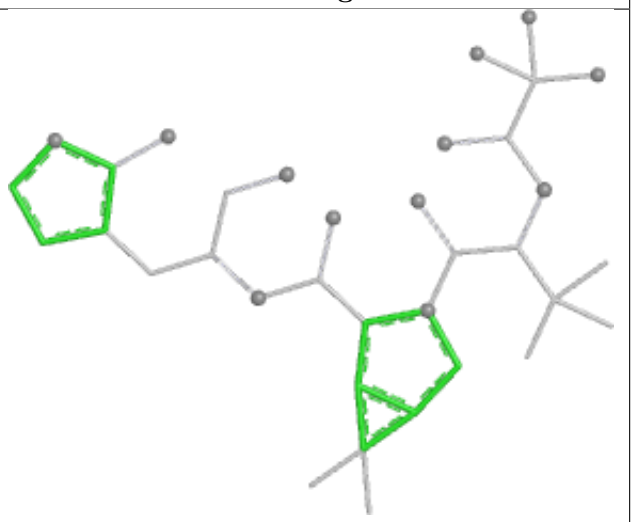
Bond lengths



Bond angles

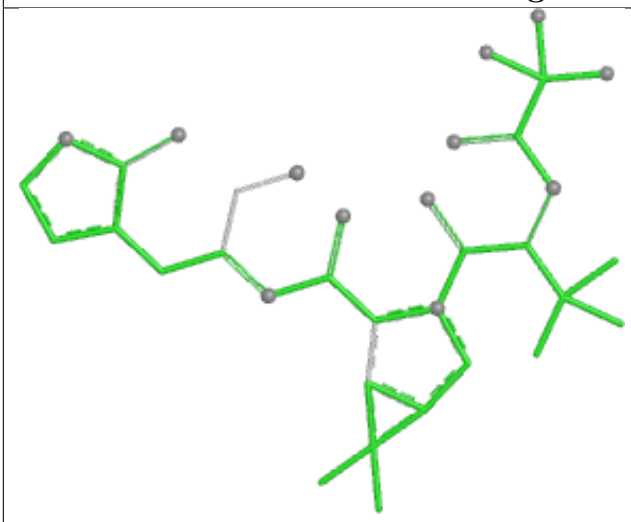


Torsions

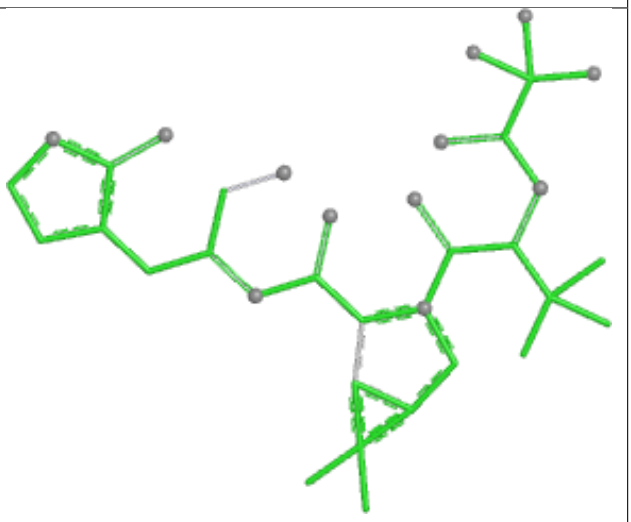


Rings

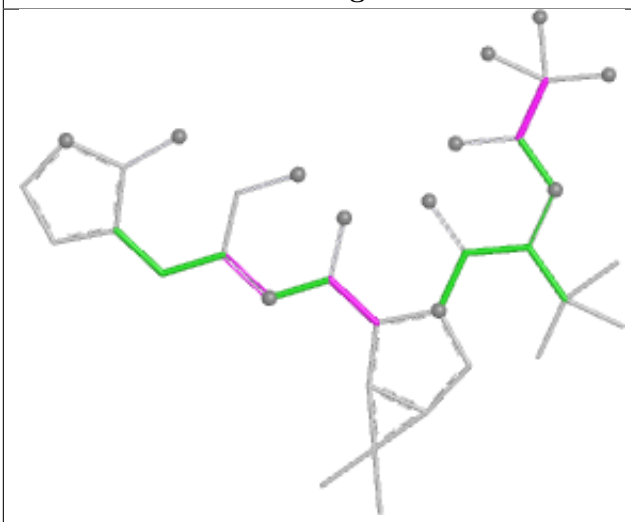
Ligand 4WI C 401



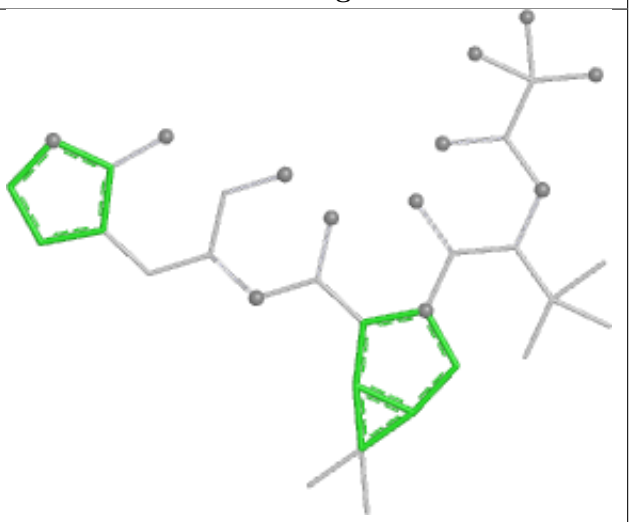
Bond lengths



Bond angles

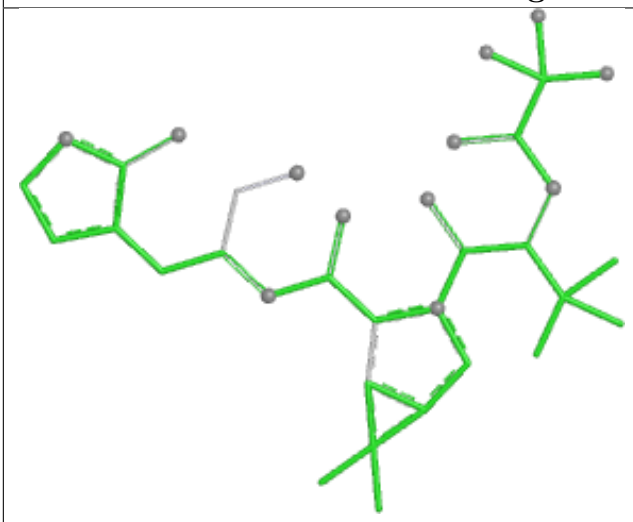


Torsions

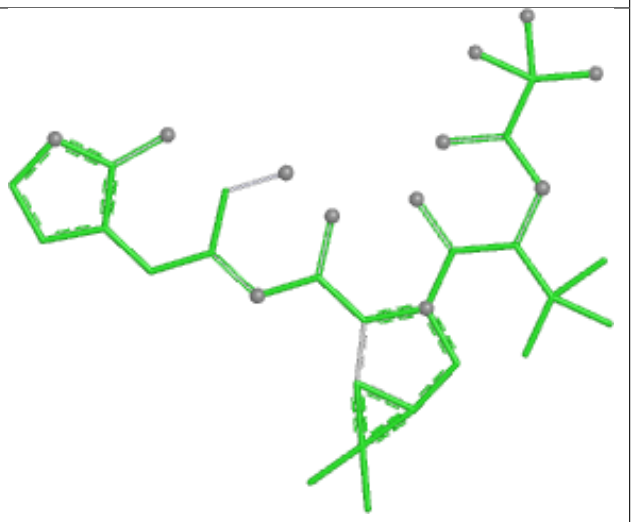


Rings

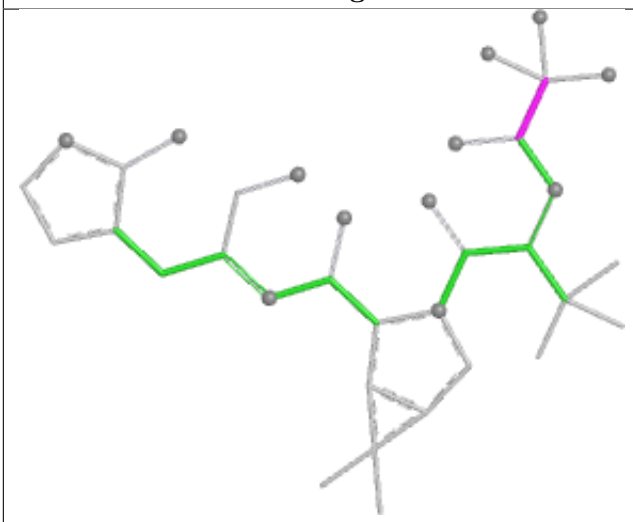
Ligand 4WI B 401



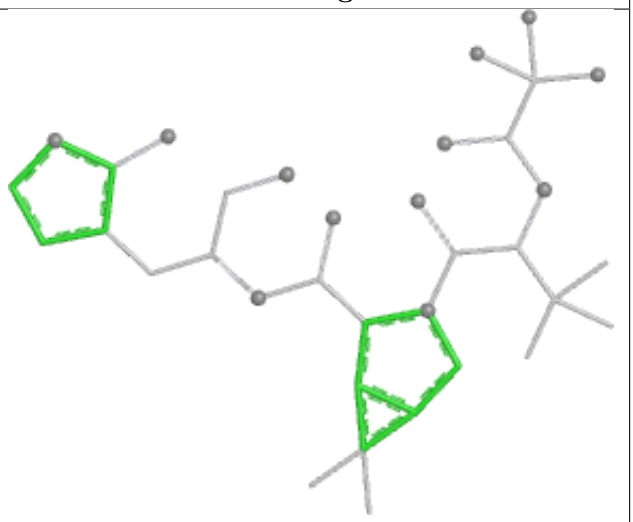
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

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	297/302 (98%)	0.68	7 (2%) 59 59	25, 41, 59, 74	0
1	B	298/302 (98%)	0.88	18 (6%) 27 26	28, 44, 62, 81	0
1	C	298/302 (98%)	1.09	27 (9%) 15 14	31, 49, 69, 77	0
1	D	294/302 (97%)	1.31	63 (21%) 2 2	28, 52, 75, 91	0
1	E	265/302 (87%)	1.36	65 (24%) 2 1	28, 50, 79, 91	0
1	F	298/302 (98%)	1.25	50 (16%) 4 4	32, 56, 75, 97	0
1	G	236/302 (78%)	1.79	95 (40%) 0 0	34, 62, 91, 100	0
1	H	252/302 (83%)	2.16	127 (50%) 0 0	35, 65, 108, 118	0
All	All	2238/2416 (92%)	1.28	452 (20%) 3 2	25, 51, 84, 118	0

All (452) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	17	ILE	6.3
1	H	230	ASN	6.0
1	E	299	VAL	5.8
1	H	210	ALA	5.8
1	E	30	LEU	4.8
1	E	166	LEU	4.6
1	H	37	ILE	4.5
1	H	208	TYR	4.5
1	H	150	VAL	4.5
1	H	22	TYR	4.4
1	H	76	VAL	4.4
1	H	265	ILE	4.4
1	H	65	PHE	4.4
1	H	232	TRP	4.4
1	E	144	CYS	4.3
1	G	43	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
1	C	299	VAL	4.2
1	H	53	TYR	4.2
1	E	11	GLY	4.2
1	H	21	SER	4.2
1	H	173	GLY	4.2
1	H	258	VAL	4.1
1	G	278	LEU	4.1
1	H	84	VAL	4.1
1	G	209	ALA	4.0
1	H	158	PHE	4.0
1	H	72	VAL	4.0
1	H	15	PRO	4.0
1	H	239	THR	4.0
1	H	68	SER	4.0
1	F	238	PHE	3.9
1	H	157	TYR	3.8
1	G	29	GLY	3.8
1	E	20	VAL	3.8
1	D	246	ALA	3.8
1	E	90	VAL	3.8
1	G	292	VAL	3.8
1	H	236	ASN	3.7
1	E	87	VAL	3.7
1	D	236	ASN	3.7
1	H	254	THR	3.7
1	D	225	SER	3.7
1	G	63	HIS	3.7
1	G	293	ILE	3.7
1	G	16	CYS	3.7
1	A	24	ASN	3.7
1	G	67	VAL	3.6
1	G	71	ASN	3.6
1	H	206	PHE	3.6
1	H	3	LEU	3.6
1	G	279	SER	3.6
1	D	265	ILE	3.6
1	D	194	GLY	3.5
1	E	36	VAL	3.5
1	H	79	ALA	3.5
1	H	209	ALA	3.5
1	H	12	LEU	3.5
1	H	238	PHE	3.5

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Mol	Chain	Res	Type	RSRZ
1	G	240	GLU	3.5
1	G	288	THR	3.5
1	H	38	CYS	3.5
1	E	172	VAL	3.4
1	H	30	LEU	3.4
1	G	238	PHE	3.4
1	H	284	CYS	3.4
1	E	196	ASN	3.4
1	H	156	LEU	3.4
1	H	247	PHE	3.4
1	H	159	VAL	3.4
1	B	184	TYR	3.4
1	H	153	ASN	3.4
1	E	88	LEU	3.3
1	D	233	ALA	3.3
1	E	18	VAL	3.3
1	H	26	VAL	3.3
1	H	66	SER	3.3
1	E	122	GLY	3.3
1	D	263	ASP	3.3
1	H	64	ASN	3.3
1	F	278	LEU	3.3
1	G	206	PHE	3.3
1	H	81	TYR	3.3
1	D	261	LEU	3.3
1	E	117	TYR	3.3
1	E	58	SER	3.3
1	E	115	ALA	3.3
1	H	231	THR	3.3
1	D	133	GLY	3.2
1	F	88	LEU	3.2
1	H	250	LEU	3.2
1	H	244	THR	3.2
1	D	200	SER	3.2
1	G	20	VAL	3.2
1	D	166	LEU	3.2
1	G	192	LEU	3.2
1	C	43	ILE	3.2
1	H	97	THR	3.2
1	G	37	ILE	3.2
1	D	235	THR	3.2
1	E	47	THR	3.2

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Mol	Chain	Res	Type	RSRZ
1	E	143	THR	3.2
1	E	83	GLY	3.2
1	H	241	LEU	3.2
1	D	23	GLY	3.1
1	D	24	ASN	3.1
1	F	245	ASP	3.1
1	H	203	VAL	3.1
1	E	86	LEU	3.1
1	H	246	ALA	3.1
1	F	76	VAL	3.1
1	H	67	VAL	3.1
1	H	283	LEU	3.1
1	H	45	SER	3.1
1	E	139	PHE	3.1
1	H	154	ALA	3.1
1	C	72	VAL	3.1
1	F	69	LYS	3.1
1	D	228	SER	3.1
1	H	46	ASP	3.1
1	H	93	VAL	3.1
1	F	62	LEU	3.1
1	B	105	ILE	3.0
1	G	212	ILE	3.0
1	D	295	GLN	3.0
1	D	137	GLY	3.0
1	H	20	VAL	3.0
1	E	37	ILE	3.0
1	H	212	ILE	3.0
1	H	195	THR	3.0
1	A	298	GLY	3.0
1	G	70	ASN	3.0
1	H	287	PHE	3.0
1	G	299	VAL	3.0
1	H	197	VAL	3.0
1	H	160	TYR	3.0
1	H	80	LYS	3.0
1	C	65	PHE	3.0
1	H	57	MET	3.0
1	E	13	VAL	3.0
1	F	242	SER	3.0
1	E	169	GLY	3.0
1	G	156	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
1	D	105	ILE	2.9
1	F	265	ILE	2.9
1	H	51	ILE	2.9
1	F	64	ASN	2.9
1	G	198	MET	2.9
1	H	233	ALA	2.9
1	E	50	VAL	2.9
1	G	120	CYS	2.9
1	G	231	THR	2.9
1	E	28	ASN	2.9
1	H	28	ASN	2.9
1	H	260	LYS	2.9
1	G	31	TRP	2.9
1	H	114	LEU	2.9
1	G	204	VAL	2.9
1	H	60	VAL	2.9
1	F	43	ILE	2.9
1	G	158	PHE	2.9
1	G	232	TRP	2.9
1	F	237	SER	2.8
1	H	242	SER	2.8
1	G	280	TYR	2.8
1	G	12	LEU	2.8
1	H	261	LEU	2.8
1	D	238	PHE	2.8
1	G	87	VAL	2.8
1	F	284	CYS	2.8
1	H	290	THR	2.8
1	D	189	SER	2.8
1	E	123	SER	2.8
1	G	295	GLN	2.8
1	H	102	PHE	2.8
1	H	31	TRP	2.8
1	H	235	THR	2.8
1	F	298	GLY	2.8
1	H	207	LEU	2.8
1	F	247	PHE	2.8
1	G	69	LYS	2.8
1	G	296	MET	2.8
1	H	61	ARG	2.8
1	B	222	THR	2.8
1	G	56	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
1	G	81	TYR	2.8
1	H	292	VAL	2.8
1	E	45	SER	2.7
1	E	167	GLY	2.7
1	F	200	SER	2.7
1	F	223	SER	2.7
1	H	182	GLY	2.7
1	H	56	GLU	2.7
1	G	3	LEU	2.7
1	G	190	MET	2.7
1	G	160	TYR	2.7
1	C	73	PHE	2.7
1	B	219	VAL	2.7
1	E	67	VAL	2.7
1	G	97	THR	2.7
1	E	140	ILE	2.7
1	D	298	GLY	2.7
1	E	31	TRP	2.7
1	E	12	LEU	2.7
1	E	158	PHE	2.7
1	G	77	VAL	2.7
1	E	34	ASP	2.7
1	F	201	ASP	2.7
1	D	277	ILE	2.7
1	G	78	SER	2.7
1	G	207	LEU	2.7
1	G	44	ALA	2.7
1	G	205	ALA	2.7
1	H	251	ALA	2.7
1	G	196	ASN	2.7
1	H	105	ILE	2.7
1	C	243	SER	2.7
1	G	149	TYR	2.6
1	F	266	VAL	2.6
1	H	96	ASN	2.6
1	G	48	THR	2.6
1	D	274	GLY	2.6
1	B	228	SER	2.6
1	F	63	HIS	2.6
1	E	154	ALA	2.6
1	B	298	GLY	2.6
1	H	126	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	H	145	GLY	2.6
1	H	288	THR	2.6
1	E	146	SER	2.6
1	F	226	LEU	2.6
1	H	263	ASP	2.6
1	C	133	GLY	2.6
1	F	87	VAL	2.6
1	F	203	VAL	2.6
1	D	223	SER	2.6
1	G	239	THR	2.6
1	D	67	VAL	2.6
1	E	138	SER	2.6
1	G	68	SER	2.6
1	G	110	SER	2.6
1	E	85	ASN	2.5
1	G	34	ASP	2.5
1	G	213	ASN	2.5
1	D	222	THR	2.5
1	B	77	VAL	2.5
1	D	135	ILE	2.5
1	C	117	TYR	2.5
1	C	3	LEU	2.5
1	E	164	LEU	2.5
1	H	32	LEU	2.5
1	H	262	LEU	2.5
1	F	221	ASN	2.5
1	G	91	ASN	2.5
1	G	96	ASN	2.5
1	H	120	CYS	2.5
1	G	10	SER	2.5
1	E	53	TYR	2.5
1	F	56	GLU	2.5
1	E	114	LEU	2.5
1	D	91	ASN	2.5
1	H	186	ASP	2.5
1	H	205	ALA	2.5
1	E	119	GLY	2.5
1	E	171	HIS	2.5
1	D	266	VAL	2.5
1	G	197	VAL	2.5
1	H	248	SER	2.5
1	H	17	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
1	H	249	MET	2.5
1	G	85	ASN	2.5
1	G	36	VAL	2.4
1	D	283	LEU	2.4
1	D	115	ALA	2.4
1	G	233	ALA	2.4
1	C	47	THR	2.4
1	D	48	THR	2.4
1	D	134	THR	2.4
1	C	242	SER	2.4
1	E	219	VAL	2.4
1	G	277	ILE	2.4
1	E	190	MET	2.4
1	B	268	LEU	2.4
1	D	262	LEU	2.4
1	C	4	ARG	2.4
1	H	91	ASN	2.4
1	G	177	GLU	2.4
1	H	193	GLU	2.4
1	E	44	ALA	2.4
1	G	289	PRO	2.4
1	F	29	GLY	2.4
1	H	48	THR	2.4
1	D	241	LEU	2.4
1	G	176	LEU	2.4
1	D	25	ASN	2.4
1	F	215	GLU	2.4
1	E	69	LYS	2.4
1	E	270	LYS	2.4
1	H	200	SER	2.4
1	A	50	VAL	2.4
1	C	76	VAL	2.4
1	H	129	MET	2.4
1	C	241	LEU	2.4
1	E	32	LEU	2.4
1	G	30	LEU	2.4
1	H	163	HIS	2.4
1	H	101	LYS	2.3
1	H	148	GLY	2.3
1	H	199	SER	2.3
1	E	116	CYS	2.3
1	H	19	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
1	H	8	GLN	2.3
1	G	46	ASP	2.3
1	C	297	TYR	2.3
1	D	229	TYR	2.3
1	C	189	SER	2.3
1	D	1	SER	2.3
1	C	159	VAL	2.3
1	D	203	VAL	2.3
1	H	50	VAL	2.3
1	A	74	LEU	2.3
1	F	261	LEU	2.3
1	G	62	LEU	2.3
1	F	46	ASP	2.3
1	G	25	ASN	2.3
1	G	55	ASN	2.3
1	G	236	ASN	2.3
1	B	229	TYR	2.3
1	E	33	GLY	2.3
1	E	125	TYR	2.3
1	B	1	SER	2.3
1	G	189	SER	2.3
1	E	163	HIS	2.3
1	G	35	GLU	2.3
1	D	93	VAL	2.3
1	F	258	VAL	2.3
1	D	250	LEU	2.3
1	G	211	LEU	2.3
1	H	62	LEU	2.3
1	H	86	LEU	2.3
1	G	39	PRO	2.3
1	C	2	GLY	2.3
1	D	254	THR	2.3
1	E	134	THR	2.3
1	G	276	THR	2.3
1	C	279	SER	2.3
1	H	58	SER	2.3
1	E	185	GLU	2.3
1	B	124	VAL	2.3
1	F	67	VAL	2.3
1	D	196	ASN	2.2
1	D	285	ASP	2.2
1	G	94	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	142	GLY	2.2
1	F	183	GLY	2.2
1	H	267	ARG	2.2
1	C	31	TRP	2.2
1	C	68	SER	2.2
1	G	282	SER	2.2
1	H	10	SER	2.2
1	D	172	VAL	2.2
1	H	176	LEU	2.2
1	H	285	ASP	2.2
1	F	16	CYS	2.2
1	G	79	ALA	2.2
1	G	80	LYS	2.2
1	F	229	TYR	2.2
1	F	74	LEU	2.2
1	G	18	VAL	2.2
1	F	73	PHE	2.2
1	F	218	PHE	2.2
1	H	24	ASN	2.2
1	H	6	MET	2.2
1	C	119	GLY	2.2
1	B	3	LEU	2.2
1	F	211	LEU	2.2
1	G	27	LEU	2.2
1	B	50	VAL	2.2
1	D	50	VAL	2.2
1	F	26	VAL	2.2
1	F	77	VAL	2.2
1	G	159	VAL	2.2
1	H	201	ASP	2.2
1	G	38	CYS	2.2
1	D	79	ALA	2.2
1	F	1	SER	2.2
1	H	44	ALA	2.2
1	H	174	SER	2.2
1	C	22	TYR	2.1
1	A	86	LEU	2.1
1	F	293	ILE	2.1
1	E	147	VAL	2.1
1	G	203	VAL	2.1
1	H	70	ASN	2.1
1	H	77	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	48	THR	2.1
1	F	154	ALA	2.1
1	D	125	TYR	2.1
1	D	184	TYR	2.1
1	D	208	TYR	2.1
1	B	176	LEU	2.1
1	D	249	MET	2.1
1	H	149	TYR	2.1
1	E	192	LEU	2.1
1	F	277	ILE	2.1
1	D	31	TRP	2.1
1	F	90	VAL	2.1
1	F	219	VAL	2.1
1	D	220	THR	2.1
1	F	233	ALA	2.1
1	H	243	SER	2.1
1	D	224	MET	2.1
1	H	198	MET	2.1
1	D	164	LEU	2.1
1	F	262	LEU	2.1
1	C	285	ASP	2.1
1	H	181	TYR	2.1
1	C	26	VAL	2.1
1	G	93	VAL	2.1
1	D	247	PHE	2.1
1	G	102	PHE	2.1
1	H	107	ALA	2.1
1	E	176	LEU	2.1
1	B	140	ILE	2.1
1	E	55	ASN	2.1
1	G	100	HIS	2.1
1	D	280	TYR	2.1
1	E	184	TYR	2.1
1	H	9	PRO	2.1
1	D	77	VAL	2.1
1	A	73	PHE	2.1
1	G	287	PHE	2.1
1	G	180	MET	2.0
1	E	38	CYS	2.0
1	G	144	CYS	2.0
1	F	269	ASN	2.0
1	D	188	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
1	B	72	VAL	2.0
1	C	150	VAL	2.0
1	D	258	VAL	2.0
1	G	13	VAL	2.0
1	H	298	GLY	2.0
1	F	57	MET	2.0
1	G	237	SER	2.0
1	B	241	LEU	2.0
1	B	269	ASN	2.0
1	D	207	LEU	2.0
1	D	221	ASN	2.0
1	G	202	ASN	2.0
1	A	51	ILE	2.0
1	D	49	ARG	2.0
1	G	9	PRO	2.0
1	H	188	PRO	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 oligosaccharides in this entry.

6.4 Ligands (i)

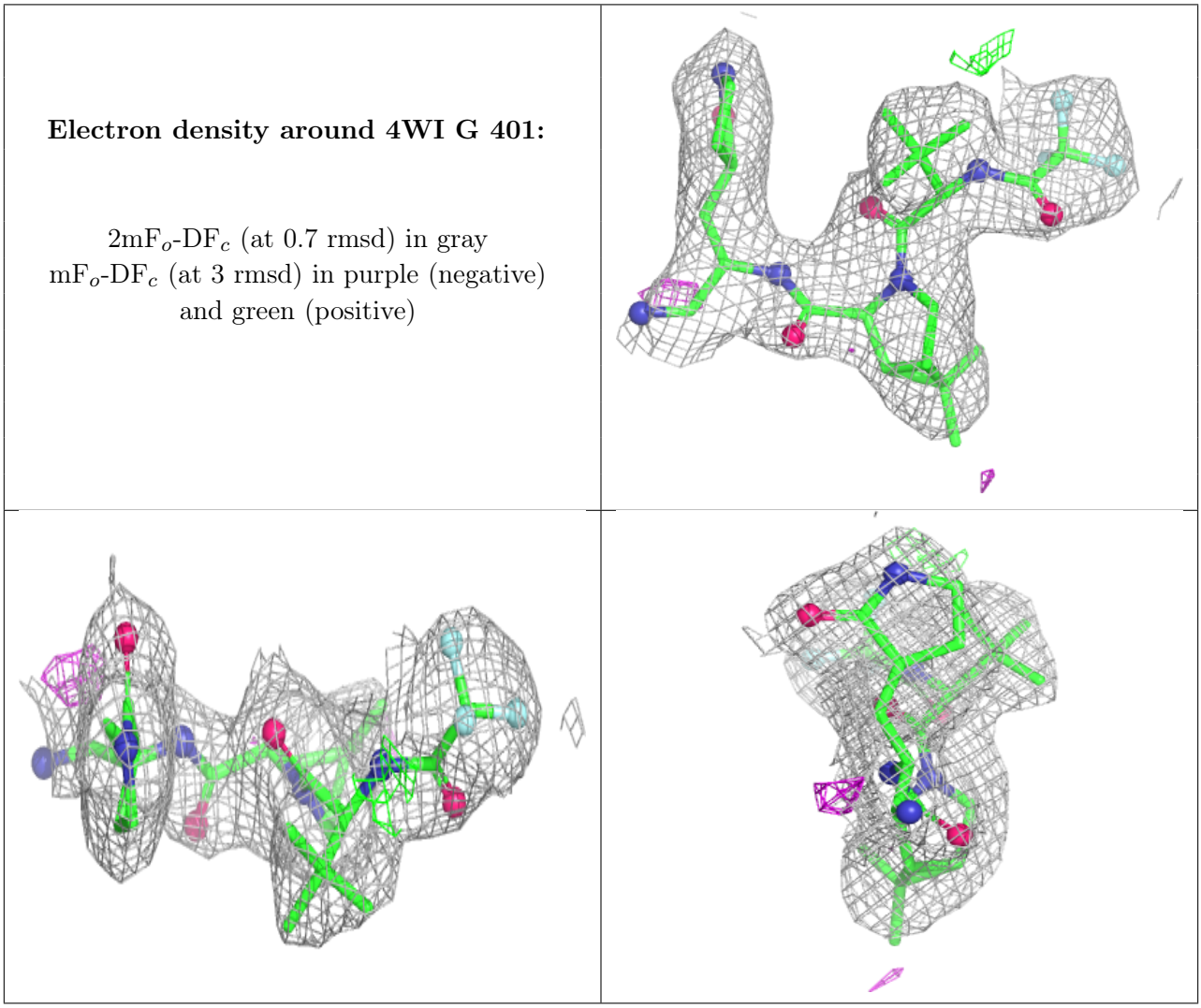
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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	4WI	G	401	35/35	0.86	0.12	33,50,64,75	0
2	4WI	F	401	35/35	0.88	0.12	32,41,64,79	0
2	4WI	C	401	35/35	0.91	0.10	28,44,53,68	0
2	4WI	D	401	35/35	0.91	0.12	49,66,82,96	0
2	4WI	A	401	35/35	0.91	0.12	32,47,68,74	0
2	4WI	B	401	35/35	0.91	0.12	34,43,61,68	0
2	4WI	H	401	35/35	0.91	0.10	32,44,55,61	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.

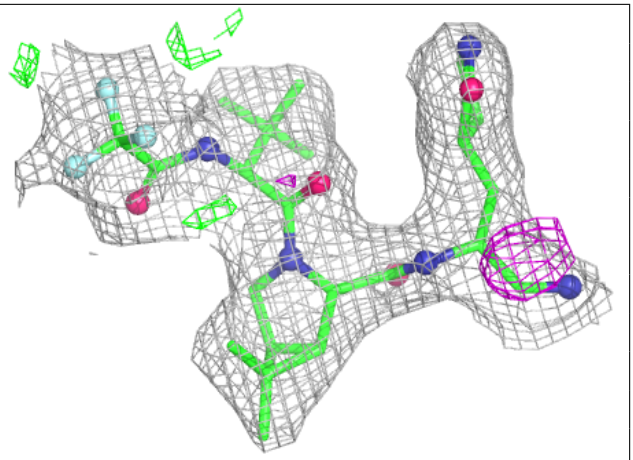
Electron density around 4WI G 401:

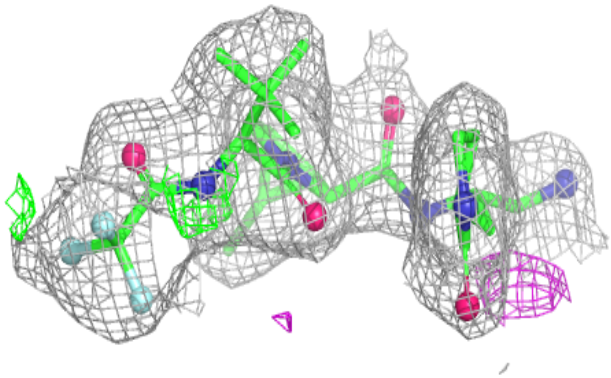
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

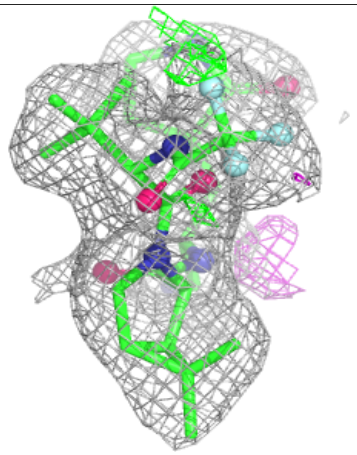


Electron density around 4WI F 401:

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

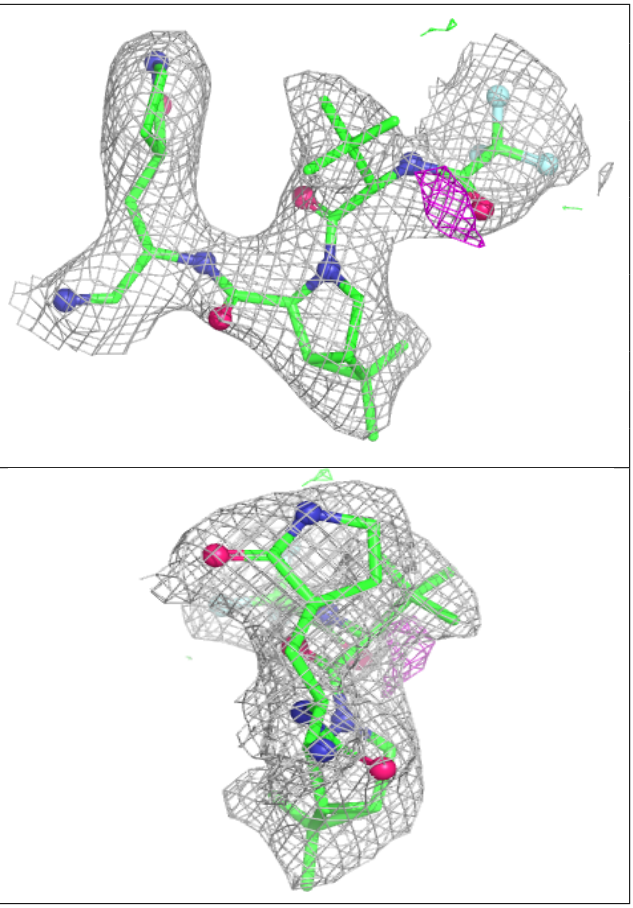


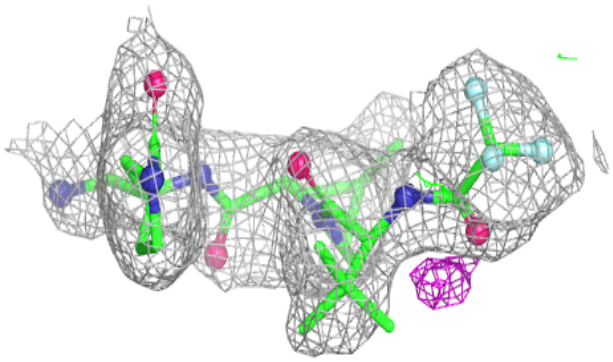




Electron density around 4WI C 401:

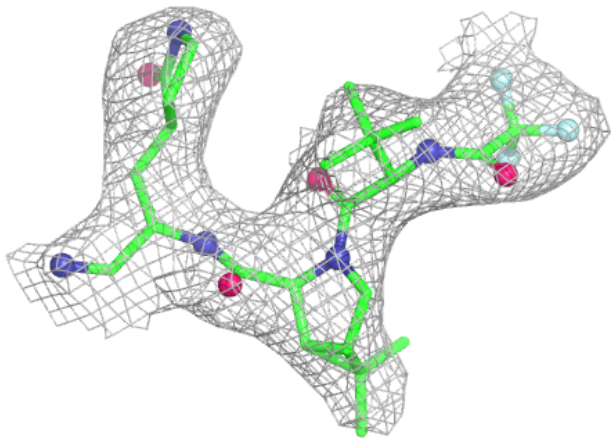
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

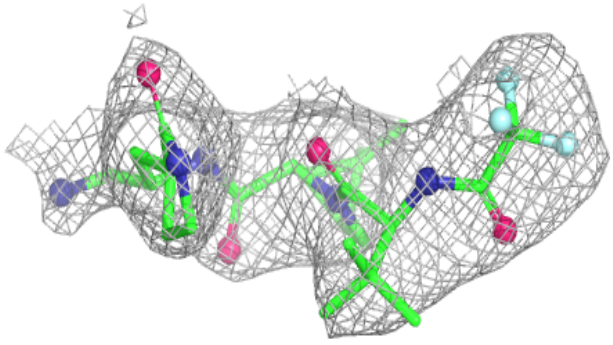


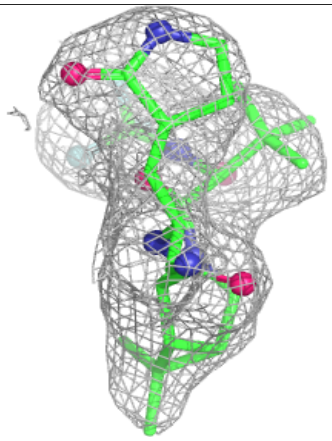


Electron density around 4WI D 401:

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

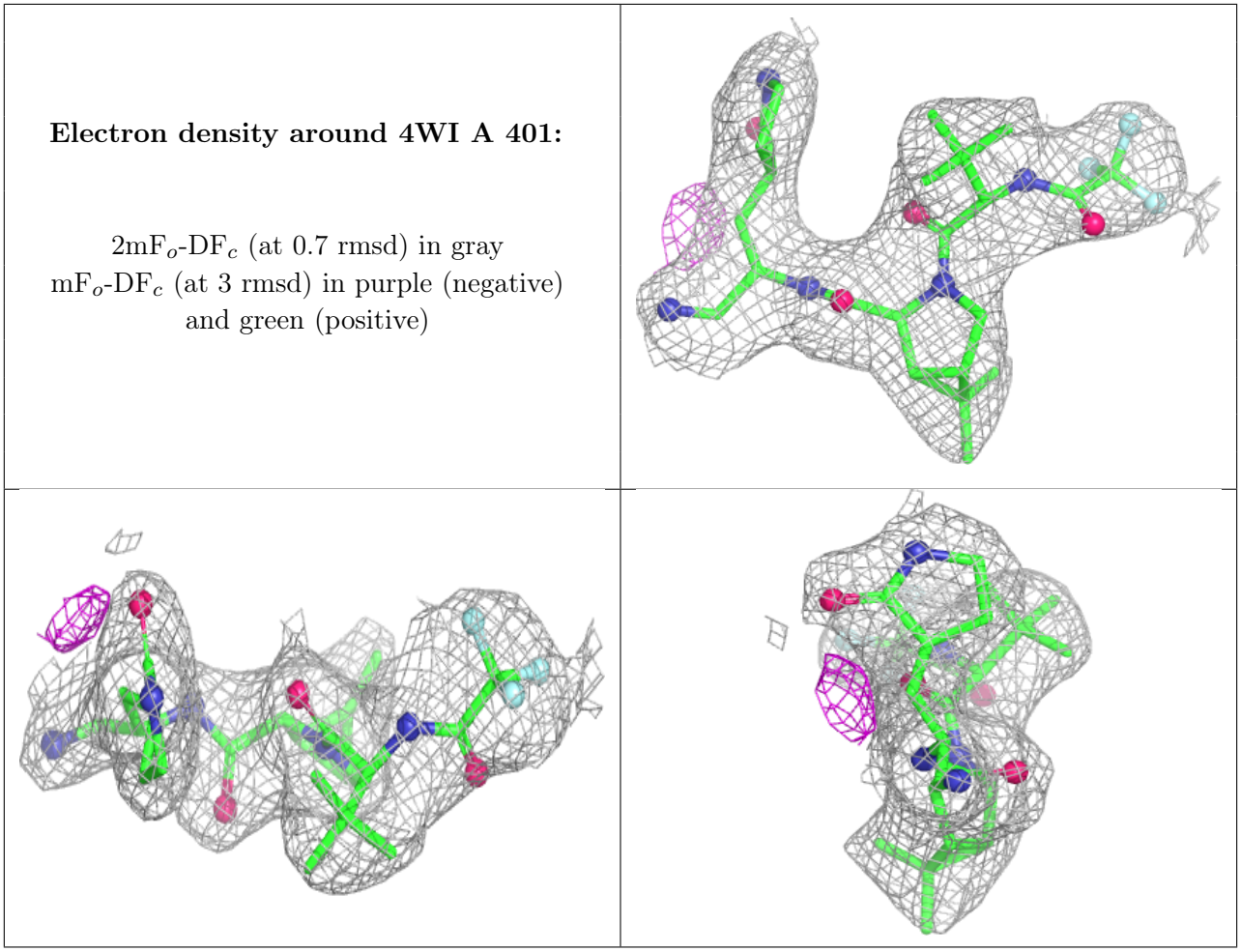






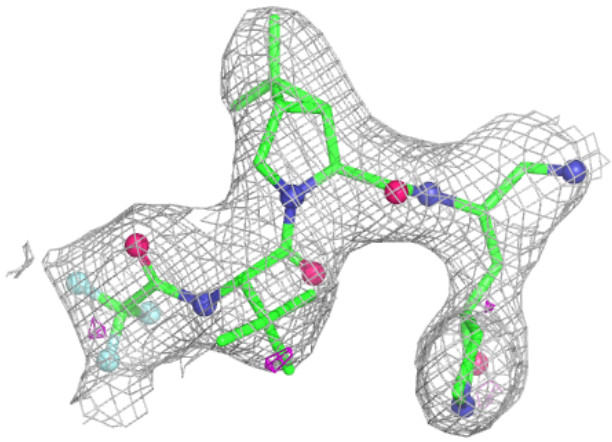
Electron density around 4WI A 401:

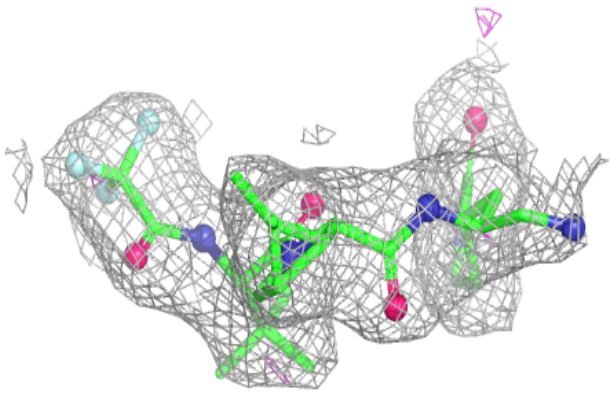
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

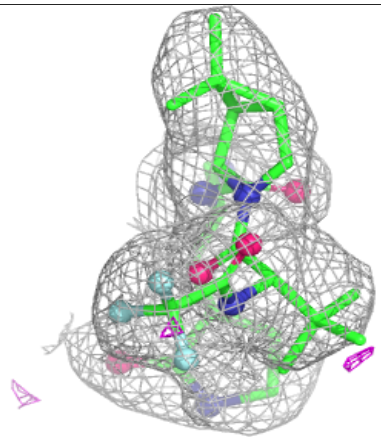


Electron density around 4WI B 401:

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

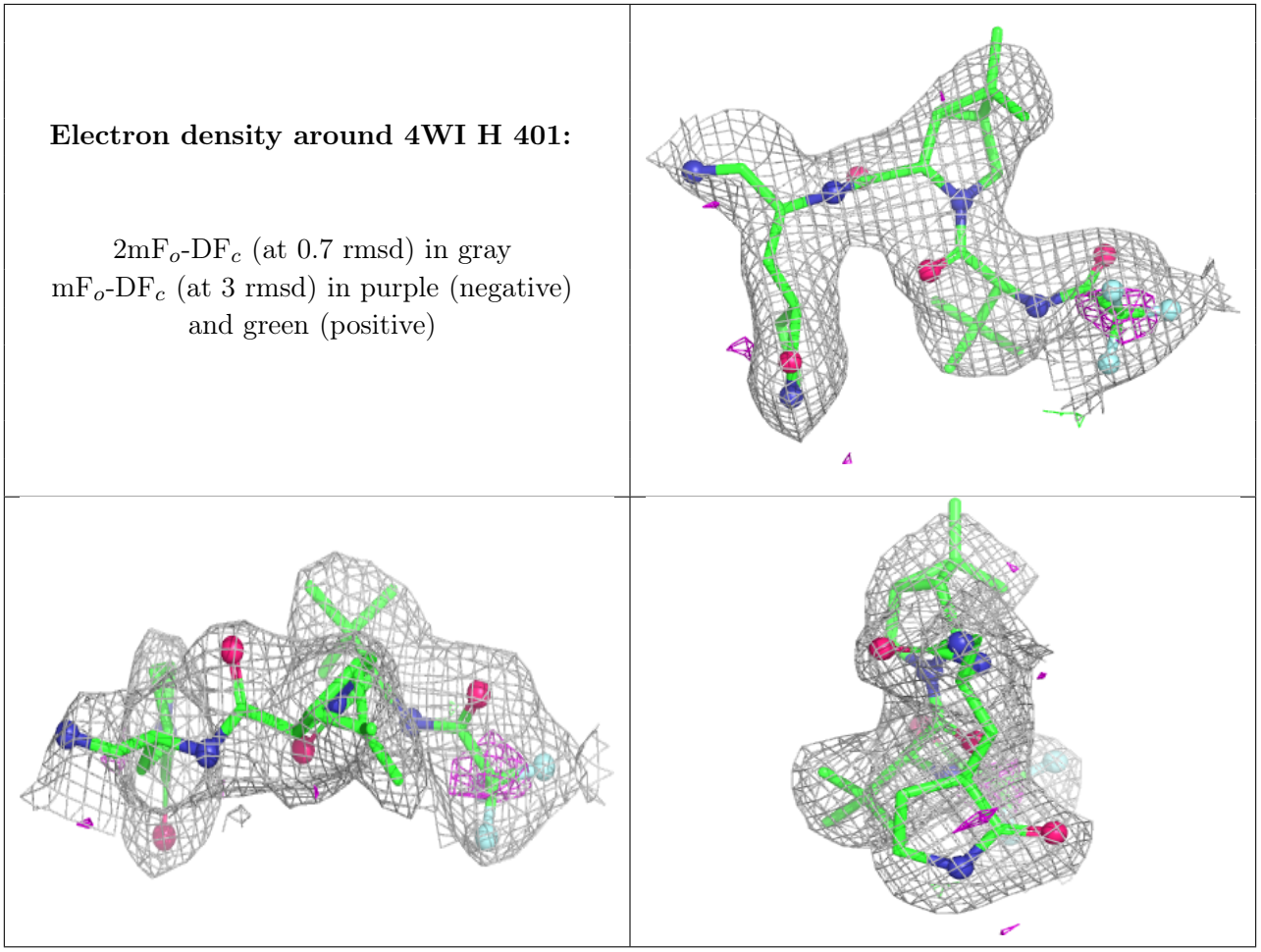






Electron density around 4WI H 401:

$2mF_o$-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

There are no such residues in this entry.