Full wwPDB X-ray Structure Validation Report (i)

Mar 6, 2026 – 04:13 PM UTC

PDB ID	:	6V6K / pdb_00006v6k
Title	:	EGFR(T790M/V948R) in complex with LN2057
Authors	:	Heppner, D.E.; Eck, M.J.
Deposited on	:	2019-12-05
Resolution	:	2.20 Å(reported)

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

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

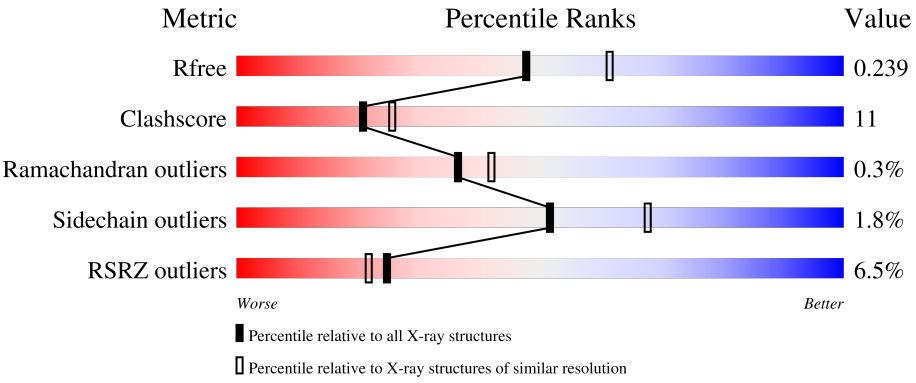
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 2.20 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	6164 (2.20-2.20)
Clashscore	190562	6851 (2.20-2.20)
Ramachandran outliers	187476	6768 (2.20-2.20)
Sidechain outliers	187428	6769 (2.20-2.20)
RSRZ outliers	180081	6166 (2.20-2.20)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	327	5% 73% 17% · 8%
1	B	327	5% 70% 21% 8%
1	C	327	4% 72% 20% 8%
1	D	327	8% 77% 19% ·
1	E	327	11% 69% 21% · 7%

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Mol	Chain	Length	Quality of chain
1	F	327	5% 75% 18% 6%
1	G	327	6% 77% 18%
1	H	327	4% 77% 19%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	CL	B	1201	-	-	X	-
3	QQJ	D	1202	-	X	-	-
3	QQJ	E	1202	-	X	-	-
3	QQJ	F	1202	-	X	-	-
3	QQJ	H	1202	-	X	-	-

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 20750 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 Epidermal growth factor receptor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	D	314	Total	C	N	O	S	0	0	0
			2521	1614	427	461	19			
1	A	300	Total	C	N	O	S	0	1	0
			2420	1553	408	440	19			
1	B	301	Total	C	N	O	S	0	0	0
			2424	1554	411	440	19			
1	C	302	Total	C	N	O	S	0	1	0
			2440	1564	413	444	19			
1	E	303	Total	C	N	O	S	0	1	0
			2441	1565	413	444	19			
1	F	306	Total	C	N	O	S	0	0	0
			2453	1572	416	446	19			
1	G	314	Total	C	N	O	S	0	1	0
			2530	1619	428	464	19			
1	H	314	Total	C	N	O	S	0	1	0
			2530	1619	428	464	19			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	790	MET	THR	engineered mutation	UNP P00533
D	948	ARG	VAL	engineered mutation	UNP P00533
A	790	MET	THR	engineered mutation	UNP P00533
A	948	ARG	VAL	engineered mutation	UNP P00533
B	790	MET	THR	engineered mutation	UNP P00533
B	948	ARG	VAL	engineered mutation	UNP P00533
C	790	MET	THR	engineered mutation	UNP P00533
C	948	ARG	VAL	engineered mutation	UNP P00533
E	790	MET	THR	engineered mutation	UNP P00533
E	948	ARG	VAL	engineered mutation	UNP P00533
F	790	MET	THR	engineered mutation	UNP P00533
F	948	ARG	VAL	engineered mutation	UNP P00533
G	790	MET	THR	engineered mutation	UNP P00533

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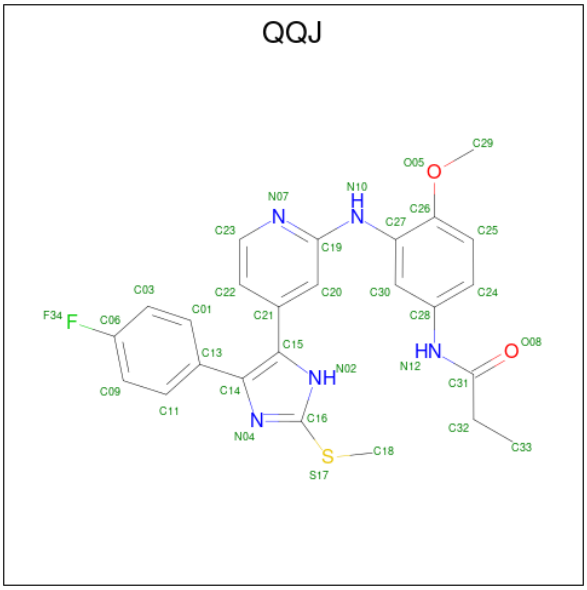
Chain	Residue	Modelled	Actual	Comment	Reference
G	948	ARG	VAL	engineered mutation	UNP P00533
H	790	MET	THR	engineered mutation	UNP P00533
H	948	ARG	VAL	engineered mutation	UNP P00533

- Molecule 2 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	D	1	Total Cl 1 1	0	0
2	A	1	Total Cl 1 1	0	0
2	B	1	Total Cl 1 1	0	0
2	C	1	Total Cl 1 1	0	0
2	E	1	Total Cl 1 1	0	0
2	F	1	Total Cl 1 1	0	0
2	G	1	Total Cl 1 1	0	0
2	H	1	Total Cl 1 1	0	0

- Molecule 3 is N-[3-({4-[4-(4-fluorophenyl)-2-(methylsulfanyl)-1H-imidazol-5-yl]pyridin-2-yl}amino)-4-methoxyphenyl]propanamide (CCD ID: QQJ) (formula: $C_{25}H_{24}FN_5O_2S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	D	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	A	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	B	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	C	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	E	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	F	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	G	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		
3	H	1	Total	C	F	N	O	S	0	0
			34	25	1	5	2	1		

- Molecule 4 is water.

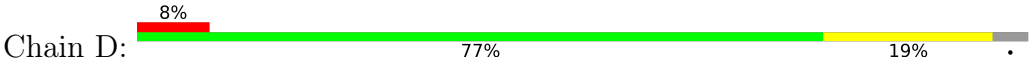
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	D	87	Total	O	0	0
			87	87		
4	A	81	Total	O	0	0
			81	81		
4	B	80	Total	O	0	0
			80	80		
4	C	103	Total	O	0	0
			103	103		
4	E	78	Total	O	0	0
			78	78		
4	F	85	Total	O	0	0
			85	85		
4	G	86	Total	O	0	0
			86	86		
4	H	111	Total	O	0	0
			111	111		

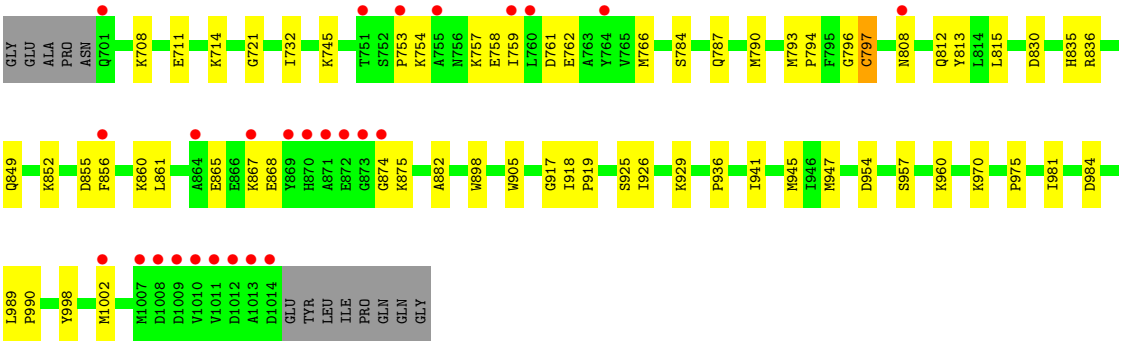
3 Residue-property plots (i)

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: Epidermal growth factor receptor

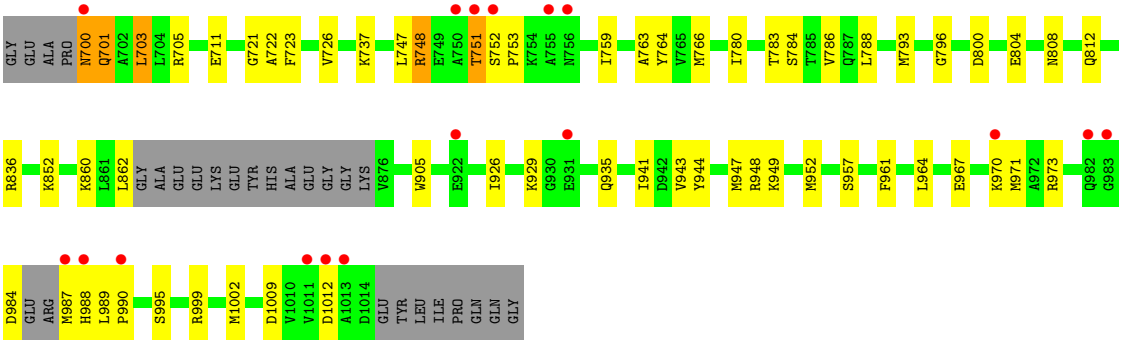
Chain D:





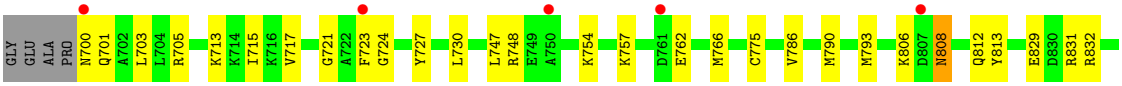
• Molecule 1: Epidermal growth factor receptor

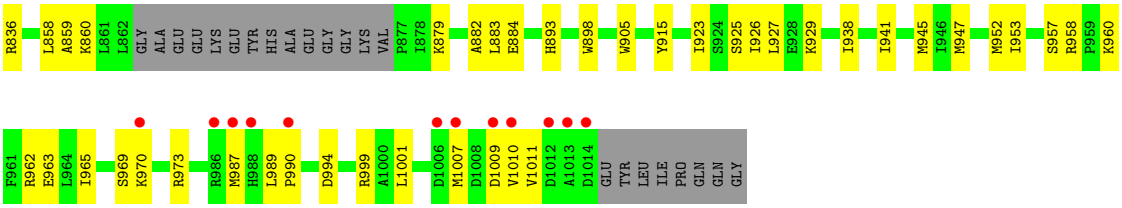
Chain A:



• Molecule 1: Epidermal growth factor receptor

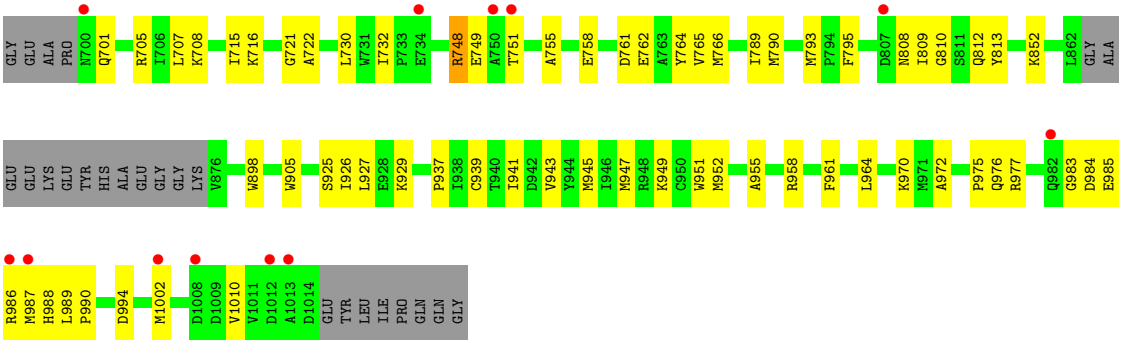
Chain B:





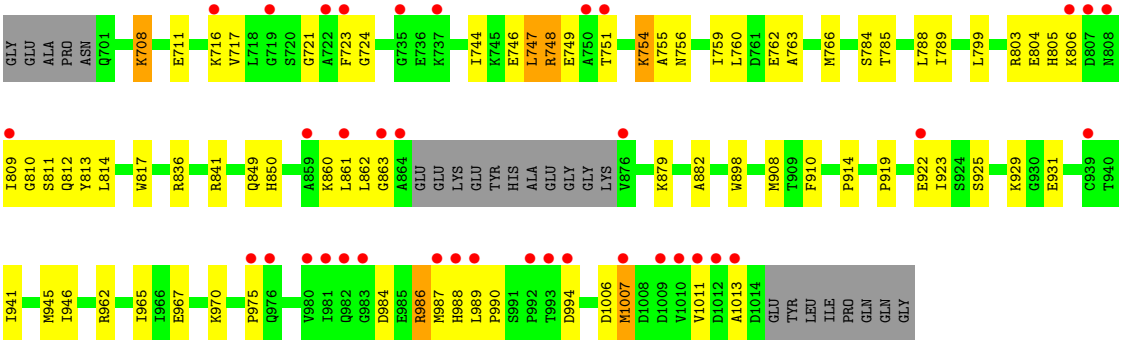
• Molecule 1: Epidermal growth factor receptor

Chain C:



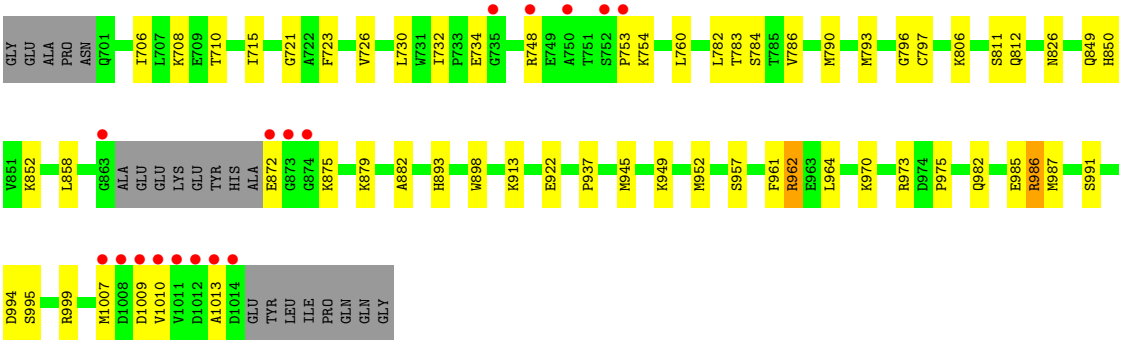
• Molecule 1: Epidermal growth factor receptor

Chain E:



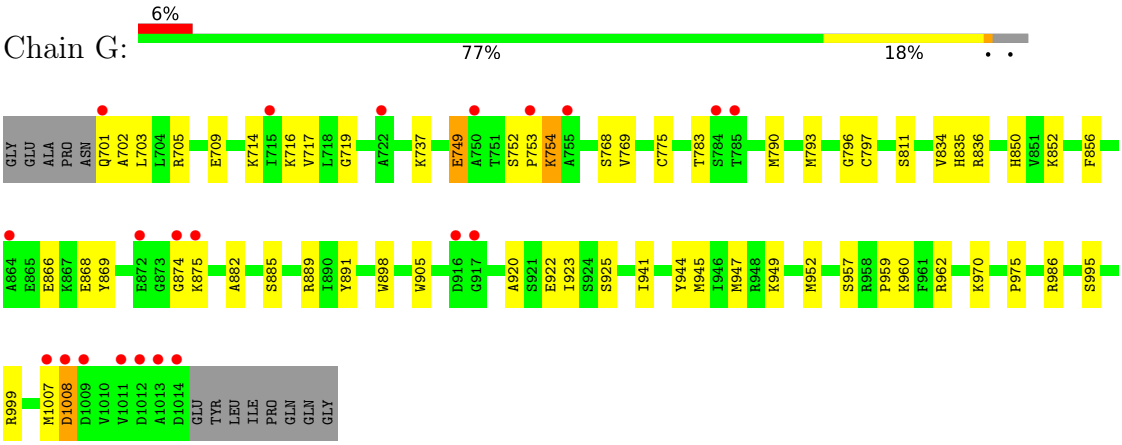
• Molecule 1: Epidermal growth factor receptor

Chain F:



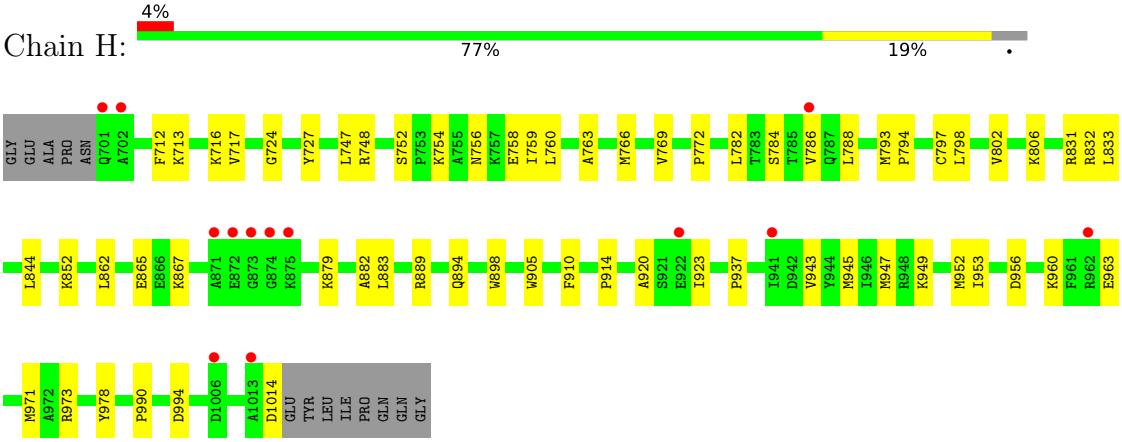
• Molecule 1: Epidermal growth factor receptor

Chain G:



• Molecule 1: Epidermal growth factor receptor

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	71.60Å 102.45Å 174.04Å 90.00° 101.25° 90.00°	Depositor
Resolution (Å)	85.35 – 2.20 85.35 – 2.20	Depositor EDS
% Data completeness (in resolution range)	93.7 (85.35-2.20) 87.8 (85.35-2.20)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.84 (at 2.20Å)	Xtriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.214 , 0.239 0.214 , 0.239	Depositor DCC
R_{free} test set	5816 reflections (4.64%)	wwPDB-VP
Wilson B-factor (Å^2)	27.7	Xtriage
Anisotropy	0.717	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 36.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.005 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	20750	wwPDB-VP
Average B, all atoms (Å^2)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 66.40 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 6.0839e-06. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[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: QQJ, CL

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	0.38	0/2471	0.64	0/3342
1	B	0.41	0/2476	0.68	4/3348 (0.1%)
1	C	0.40	0/2492	0.63	2/3371 (0.1%)
1	D	0.38	3/2576 (0.1%)	0.58	1/3483 (0.0%)
1	E	0.49	2/2493 (0.1%)	0.77	6/3372 (0.2%)
1	F	0.32	0/2505	0.61	0/3386
1	G	0.34	0/2585	0.60	0/3495
1	H	0.37	1/2585 (0.0%)	0.60	0/3495
All	All	0.39	6/20183 (0.0%)	0.64	13/27292 (0.0%)

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	797	CYS	CA-CB	6.48	1.64	1.53
1	D	970	LYS	C-O	-5.86	1.17	1.24
1	D	936	PRO	CA-C	5.82	1.55	1.51
1	E	970	LYS	C-O	-5.21	1.18	1.24
1	H	832	ARG	C-O	-5.20	1.17	1.23
1	E	760	LEU	C-O	-5.01	1.18	1.24

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	1007	MET	O-C-N	-6.85	114.92	123.27
1	E	817	TRP	N-CA-C	-6.07	104.75	111.36
1	B	923	ILE	CA-C-N	5.90	128.50	120.54
1	B	923	ILE	C-N-CA	5.90	128.50	120.54
1	E	1006	ASP	CA-C-N	5.78	132.09	122.73
1	E	1006	ASP	C-N-CA	5.78	132.09	122.73
1	E	988	HIS	CA-C-N	-5.43	112.43	120.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	988	HIS	C-N-CA	-5.43	112.43	120.68
1	C	751	THR	CB-CA-C	5.39	119.31	110.95
1	C	751	THR	CA-CB-OG1	-5.30	101.65	109.60
1	D	808	ASN	O-C-N	-5.18	115.25	122.19
1	B	1009	ASP	CA-C-N	-5.15	114.17	121.85
1	B	1009	ASP	C-N-CA	-5.15	114.17	121.85

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2420	0	2455	49	0
1	B	2424	0	2462	54	0
1	C	2440	0	2475	41	0
1	D	2521	0	2550	56	0
1	E	2441	0	2477	85	0
1	F	2453	0	2492	57	0
1	G	2530	0	2555	50	0
1	H	2530	0	2555	59	0
2	A	1	0	0	1	0
2	B	1	0	0	2	0
2	C	1	0	0	1	0
2	D	1	0	0	1	0
2	E	1	0	0	1	0
2	F	1	0	0	1	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
3	A	34	0	0	2	0
3	B	34	0	0	2	0
3	C	34	0	0	1	0
3	D	34	0	0	4	0
3	E	34	0	0	2	0
3	F	34	0	0	5	0
3	G	34	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	H	34	0	0	5	0
4	A	81	0	0	6	0
4	B	80	0	0	7	0
4	C	103	0	0	2	0
4	D	87	0	0	1	0
4	E	78	0	0	1	0
4	F	85	0	0	5	0
4	G	86	0	0	3	0
4	H	111	0	0	4	0
All	All	20750	0	20021	443	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 (443) 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:E:813:TYR:CZ	1:E:989:LEU:CD2	2.33	1.12
1:H:865:GLU:HB3	1:H:867:LYS:HZ3	1.24	1.03
1:E:724:GLY:HA2	1:E:748:ARG:HD3	1.41	1.03
1:E:813:TYR:CE2	1:E:989:LEU:HD23	1.95	1.02
1:E:721:GLY:HA3	2:E:1201:CL:CL	2.00	0.97
1:H:760:LEU:HD21	1:H:782:LEU:HD11	1.43	0.97
1:H:712:PHE:O	1:H:713:LYS:HD3	1.64	0.97
1:E:814:LEU:HB3	1:E:908:MET:HE1	1.45	0.95
1:G:952:MET:HE3	1:G:957:SER:HB3	1.47	0.94
1:E:811:SER:OG	1:E:975:PRO:HB2	1.66	0.94
1:H:760:LEU:HD21	1:H:782:LEU:CD1	1.99	0.92
1:H:760:LEU:CD2	1:H:782:LEU:HD11	2.00	0.91
1:F:986:ARG:HG2	1:F:986:ARG:HH21	1.33	0.91
1:E:813:TYR:CE1	1:E:989:LEU:HD21	2.06	0.91
1:E:813:TYR:CE1	1:E:989:LEU:CD2	2.54	0.91
1:H:889:ARG:HH21	1:H:889:ARG:HG3	1.33	0.91
1:F:732:ILE:HD12	1:F:732:ILE:O	1.73	0.89
1:B:762:GLU:HG3	1:B:766:MET:HE3	1.56	0.88
1:E:716:LYS:HD3	1:E:717:VAL:H	1.38	0.87
1:D:793:MET:HE1	1:D:852:LYS:HD3	1.54	0.86
1:A:800:ASP:O	1:A:804:GLU:HG3	1.76	0.86
1:E:813:TYR:CD1	1:E:989:LEU:HD21	2.10	0.86
1:A:970:LYS:HG3	4:A:1305:HOH:O	1.75	0.85
1:C:812:GLN:HG2	1:C:989:LEU:HG	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:813:TYR:CZ	1:E:989:LEU:HD23	2.08	0.84
1:B:812:GLN:HB3	1:B:989:LEU:HD11	1.57	0.83
1:E:747:LEU:O	1:E:785:THR:CG2	2.28	0.82
1:B:953:ILE:HD12	1:B:953:ILE:H	1.44	0.82
1:E:814:LEU:HB3	1:E:908:MET:CE	2.10	0.81
1:C:762:GLU:HG3	1:C:766:MET:HE2	1.60	0.81
1:D:708:LYS:HG2	1:D:711:GLU:OE1	1.81	0.81
1:E:723:PHE:HB3	1:E:862:LEU:HD12	1.61	0.81
1:E:836:ARG:CZ	1:E:860:LYS:HD3	2.11	0.81
1:D:941:ILE:HB	1:E:922[B]:GLU:HG2	1.63	0.80
1:D:945:MET:CE	1:E:931:GLU:HG2	2.11	0.80
1:E:810:GLY:HA2	1:E:987:MET:HE3	1.63	0.80
1:F:748:ARG:NH1	1:F:875:LYS:HD2	1.97	0.80
1:E:723:PHE:HB3	1:E:862:LEU:CD1	2.12	0.80
1:B:970:LYS:HG2	1:B:973:ARG:HH21	1.47	0.80
1:G:952:MET:CE	1:G:957:SER:HB3	2.10	0.79
1:E:813:TYR:CE2	1:E:989:LEU:CD2	2.59	0.78
1:D:865:GLU:CD	1:D:867:LYS:HG2	2.09	0.78
1:E:751:THR:OG1	1:E:755:ALA:HB3	1.83	0.77
1:G:952:MET:HE3	1:G:957:SER:CB	2.14	0.77
1:B:786:VAL:HG23	4:B:1320:HOH:O	1.86	0.76
1:G:811:SER:OG	1:G:975:PRO:HB2	1.86	0.76
1:B:989:LEU:HB3	1:B:990:PRO:HD2	1.68	0.74
1:G:716:LYS:HB2	1:G:716:LYS:NZ	2.01	0.74
1:G:949:LYS:HG2	1:G:959:PRO:HD3	1.69	0.74
1:D:868:GLU:OE2	1:D:874:GLY:HA3	1.86	0.74
1:E:814:LEU:CB	1:E:908:MET:HE1	2.16	0.74
1:E:941:ILE:HG21	1:G:922[B]:GLU:HG2	1.70	0.74
1:B:987:MET:HA	4:B:1355:HOH:O	1.88	0.74
1:E:716:LYS:HD3	1:E:717:VAL:N	2.03	0.73
1:D:868:GLU:HG3	1:D:875:LYS:HD3	1.69	0.73
1:G:749:GLU:HA	1:G:749:GLU:OE1	1.86	0.73
1:A:722:ALA:O	1:A:748:ARG:HD2	1.88	0.73
1:A:793:MET:HE1	1:A:852:LYS:HD3	1.70	0.72
1:F:793:MET:HE1	1:F:852:LYS:HD3	1.72	0.72
1:G:701:GLN:HG2	1:G:702:ALA:H	1.54	0.72
1:H:756:ASN:O	1:H:760:LEU:HD23	1.90	0.71
1:F:849:GLN:NE2	4:F:1301:HOH:O	2.23	0.71
1:D:754:LYS:HD3	1:D:759:ILE:HD11	1.73	0.71
1:E:763:ALA:HA	1:E:766:MET:HE3	1.73	0.71
1:E:813:TYR:CZ	1:E:989:LEU:HD22	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:949:LYS:HG3	1:G:952:MET:HE2	1.73	0.70
1:A:701:GLN:HG3	1:A:764:TYR:CE1	2.26	0.70
1:B:970:LYS:HG2	1:B:973:ARG:NH2	2.06	0.70
1:G:995:SER:HB3	1:G:999:ARG:NH1	2.06	0.70
1:G:716:LYS:HB2	1:G:716:LYS:HZ3	1.55	0.70
1:E:812:GLN:HE22	1:E:1013:ALA:H	1.39	0.69
1:D:998:TYR:O	1:D:1002:MET:HG2	1.93	0.69
1:A:763:ALA:HA	1:A:766:MET:HE3	1.74	0.69
1:H:794:PRO:HA	3:H:1202:QQJ:C29	2.23	0.69
1:H:831:ARG:HB2	1:H:833:LEU:HD12	1.75	0.69
1:E:812:GLN:HG2	1:E:975:PRO:HG3	1.74	0.69
1:G:719:GLY:HA3	4:G:1303:HOH:O	1.91	0.69
1:B:938:ILE:HG23	4:B:1335:HOH:O	1.93	0.68
1:E:747:LEU:O	1:E:785:THR:HG23	1.92	0.68
1:E:814:LEU:HD13	1:E:908:MET:CE	2.22	0.68
1:B:812:GLN:HB3	1:B:989:LEU:CD1	2.23	0.68
1:C:985:GLU:O	1:C:988:HIS:HE1	1.77	0.68
1:E:723:PHE:CB	1:E:862:LEU:HD12	2.23	0.68
1:H:716:LYS:HD2	1:H:717:VAL:N	2.09	0.68
1:F:850:HIS:CG	1:F:1007:MET:HE2	2.29	0.67
1:A:751:THR:HG21	1:A:786:VAL:HG23	1.75	0.67
1:E:836:ARG:NH2	1:E:860:LYS:HD3	2.10	0.67
1:E:723:PHE:CD1	1:E:862:LEU:HD12	2.30	0.66
1:E:990:PRO:HB2	1:E:994:ASP:HB3	1.77	0.66
1:G:905:TRP:HD1	1:G:947:MET:HE1	1.59	0.66
1:D:945:MET:HE2	1:E:931:GLU:HG2	1.78	0.66
1:C:732:ILE:O	1:C:732:ILE:HG23	1.94	0.66
1:C:989:LEU:HD13	1:C:1010:VAL:HG21	1.77	0.66
1:C:793:MET:HE1	1:C:852:LYS:HD3	1.77	0.65
1:C:984:ASP:HA	1:C:987:MET:HE2	1.78	0.65
1:H:889:ARG:HG3	1:H:889:ARG:NH2	2.09	0.65
1:F:872:GLU:HB3	1:H:956:ASP:OD2	1.97	0.65
1:H:905:TRP:HD1	1:H:947:MET:HE1	1.60	0.65
1:H:894:GLN:OE1	1:H:960:LYS:HE3	1.98	0.64
1:A:970:LYS:CG	4:A:1305:HOH:O	2.39	0.64
1:G:769:VAL:HG11	1:G:856:PHE:CZ	2.33	0.64
1:D:812:GLN:HG2	1:D:975:PRO:HG3	1.79	0.64
1:A:723:PHE:O	1:A:748:ARG:HG3	1.98	0.64
1:E:762:GLU:HG3	1:E:766:MET:HE2	1.79	0.63
1:G:752:SER:OG	1:G:753:PRO:HD2	1.98	0.63
1:H:889:ARG:HH21	1:H:889:ARG:CG	2.11	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:941:ILE:HG13	1:C:945:MET:HG2	1.80	0.63
1:C:925:SER:O	1:C:929:LYS:HG3	1.99	0.63
1:H:865:GLU:HB3	1:H:867:LYS:NZ	2.09	0.62
1:H:747:LEU:HD22	1:H:862:LEU:HD11	1.80	0.62
1:B:808:ASN:ND2	4:B:1303:HOH:O	2.32	0.62
1:F:991:SER:HB3	1:F:994:ASP:H	1.65	0.62
1:E:747:LEU:O	1:E:785:THR:HG21	1.97	0.62
1:E:814:LEU:HD13	1:E:908:MET:HE1	1.81	0.61
1:F:748:ARG:HH11	1:F:875:LYS:HD2	1.65	0.61
1:A:905:TRP:HD1	1:A:947:MET:HE1	1.65	0.61
1:E:805:HIS:HB2	1:E:809:ILE:HD11	1.82	0.61
1:E:812:GLN:HE22	1:E:1013:ALA:N	1.97	0.61
1:E:925:SER:O	1:E:929:LYS:HE3	1.99	0.61
1:D:830:ASP:HB3	1:G:717:VAL:HG21	1.82	0.61
1:B:990:PRO:HB2	1:B:994:ASP:HB2	1.83	0.60
1:G:775:CYS:HB3	1:G:790:MET:HE1	1.83	0.60
1:H:717:VAL:HG22	1:H:727:TYR:CE2	2.36	0.60
1:A:973:ARG:NH2	4:A:1305:HOH:O	2.33	0.60
1:D:865:GLU:OE2	1:D:867:LYS:HB3	2.02	0.60
1:E:810:GLY:CA	1:E:987:MET:HE3	2.31	0.60
1:A:759:ILE:HD13	1:A:786:VAL:HG21	1.82	0.59
1:H:943:VAL:HG22	1:H:971:MET:HE1	1.83	0.59
1:E:841:ARG:O	3:E:1202:QQJ:C18	2.50	0.59
1:C:795:PHE:HE2	1:C:1002:MET:HE1	1.67	0.59
1:A:808:ASN:HA	1:A:987:MET:HE2	1.85	0.59
1:B:762:GLU:HG3	1:B:766:MET:CE	2.32	0.58
1:H:763:ALA:HA	1:H:766:MET:HE3	1.84	0.58
1:G:944:TYR:HD1	1:G:947:MET:HE2	1.67	0.58
1:D:757:LYS:O	1:D:761:ASP:OD1	2.22	0.58
1:E:879:LYS:HZ2	1:E:923:ILE:HD11	1.69	0.58
1:D:766:MET:HA	1:D:856:PHE:CZ	2.39	0.57
1:E:813:TYR:CG	1:E:989:LEU:HD21	2.38	0.57
1:D:865:GLU:OE2	1:D:867:LYS:HG2	2.04	0.57
1:D:945:MET:HE1	1:E:931:GLU:HG2	1.84	0.57
1:C:937:PRO:HD2	4:C:1321:HOH:O	2.03	0.57
1:A:783:THR:OG1	1:A:784:SER:N	2.36	0.57
1:B:747:LEU:HD12	1:B:786:VAL:HB	1.87	0.57
1:C:795:PHE:CE2	1:C:1002:MET:HE1	2.40	0.56
1:F:782:LEU:HD22	1:F:786:VAL:HG22	1.85	0.56
1:B:724:GLY:HA2	1:B:748:ARG:HG2	1.87	0.56
1:D:790:MET:HG2	3:D:1202:QQJ:C06	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:939:CYS:HB3	1:C:943:VAL:HB	1.87	0.56
1:F:723:PHE:HB3	1:F:858:LEU:HD13	1.87	0.56
1:H:960:LYS:HE2	4:H:1314:HOH:O	2.06	0.56
1:E:806:LYS:HG2	1:E:910:PHE:CB	2.36	0.56
1:F:986:ARG:HH21	1:F:986:ARG:CG	2.09	0.56
1:B:905:TRP:HD1	1:B:947:MET:HE1	1.70	0.56
1:A:836:ARG:NH1	1:A:860:LYS:HG3	2.21	0.55
1:H:943:VAL:HG22	1:H:971:MET:CE	2.36	0.55
1:E:813:TYR:CE1	1:E:989:LEU:HD22	2.40	0.55
1:H:760:LEU:HD21	1:H:782:LEU:HD12	1.88	0.55
1:D:836:ARG:NH1	1:D:860:LYS:HD2	2.21	0.55
1:B:1010:VAL:HB	4:B:1304:HOH:O	2.07	0.55
1:E:751:THR:CG2	1:E:756:ASN:OD1	2.55	0.55
1:E:814:LEU:HD13	1:E:908:MET:HE2	1.89	0.55
1:H:882:ALA:HA	1:H:898:TRP:CD2	2.42	0.54
1:H:971:MET:HE3	1:H:978:TYR:CD1	2.41	0.54
1:A:752:SER:HB2	1:A:753:PRO:HD2	1.89	0.54
1:C:715:ILE:HG13	1:C:730:LEU:HG	1.89	0.54
1:E:962:ARG:HA	1:E:965:ILE:HD12	1.89	0.54
1:D:759:ILE:CD1	1:D:861:LEU:HD11	2.38	0.54
1:H:793:MET:O	3:H:1202:QQJ:C29	2.55	0.54
3:H:1202:QQJ:C20	3:H:1202:QQJ:C30	2.85	0.54
1:F:715:ILE:HG13	1:F:730:LEU:HG	1.90	0.54
1:G:775:CYS:HB3	1:G:790:MET:CE	2.38	0.54
1:G:944:TYR:CD1	1:G:947:MET:HE2	2.43	0.54
1:H:831:ARG:HB2	1:H:833:LEU:CD1	2.37	0.54
1:H:937:PRO:HD2	4:H:1375:HOH:O	2.07	0.54
1:E:746:GLU:HG3	1:E:785:THR:HG22	1.90	0.53
1:A:700:ASN:CG	1:A:703:LEU:HD22	2.33	0.53
1:E:850:HIS:ND1	1:E:1007:MET:HE2	2.23	0.53
1:D:905:TRP:HD1	1:D:947:MET:HE1	1.74	0.53
1:D:925:SER:O	1:D:929:LYS:HG2	2.09	0.53
1:D:960:LYS:NZ	1:D:960:LYS:HB3	2.22	0.53
1:B:999:ARG:HH21	1:B:1007:MET:HE2	1.73	0.53
1:C:762:GLU:O	1:C:766:MET:HG3	2.08	0.53
1:H:971:MET:HE2	1:H:978:TYR:HB3	1.91	0.53
1:A:944:TYR:CZ	1:A:948:ARG:HD3	2.43	0.53
1:H:973:ARG:HG2	1:H:1014:ASP:OD1	2.08	0.53
1:E:805:HIS:O	1:E:809:ILE:HD12	2.09	0.53
1:B:836:ARG:HE	1:B:860:LYS:HE3	1.73	0.53
1:D:758:GLU:HA	1:D:761:ASP:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:922[B]:GLU:HG3	1:G:925:SER:HB3	1.91	0.52
1:G:709:GLU:HG3	1:G:783:THR:HG21	1.90	0.52
1:D:836:ARG:CZ	1:D:860:LYS:HD2	2.40	0.52
1:B:721:GLY:HA3	2:B:1201:CL:CL	2.46	0.52
1:H:945:MET:O	1:H:949:LYS:HG3	2.10	0.52
1:C:708:LYS:HE3	1:G:889:ARG:NH1	2.25	0.52
1:H:943:VAL:CG2	1:H:971:MET:HE1	2.40	0.52
1:E:879:LYS:HE3	1:E:914:PRO:O	2.09	0.52
1:E:806:LYS:HG2	1:E:910:PHE:HB3	1.92	0.52
3:H:1202:QQJ:C29	3:H:1202:QQJ:N10	2.73	0.52
1:A:747:LEU:HD23	1:A:862:LEU:HD11	1.92	0.52
1:C:810:GLY:HA2	1:C:987:MET:HE3	1.93	0.51
1:H:905:TRP:CD1	1:H:947:MET:HE1	2.42	0.51
1:H:865:GLU:CB	1:H:867:LYS:HZ3	2.08	0.51
1:E:723:PHE:CG	1:E:862:LEU:HD12	2.44	0.51
1:H:724:GLY:HA2	1:H:748:ARG:HG2	1.93	0.51
1:D:917:GLY:N	4:D:1310:HOH:O	2.39	0.51
1:F:708:LYS:HE2	1:F:734:GLU:OE1	2.10	0.51
1:F:760:LEU:HD23	1:F:782:LEU:HD11	1.92	0.51
1:G:868:GLU:OE1	1:G:874:GLY:HA3	2.10	0.51
1:D:882:ALA:HA	1:D:898:TRP:CD2	2.46	0.51
1:D:998:TYR:HD1	1:D:1002:MET:SD	2.33	0.51
1:C:721:GLY:HA3	2:C:1201:CL:CL	2.48	0.51
1:A:722:ALA:O	1:A:748:ARG:CD	2.59	0.51
1:F:999:ARG:NH1	1:F:1007:MET:HB2	2.26	0.51
1:E:919:PRO:HD2	1:E:922[A]:GLU:OE1	2.11	0.50
1:G:866:GLU:HA	1:G:869:TYR:CD1	2.46	0.50
1:G:882:ALA:O	1:G:885:SER:HB2	2.10	0.50
1:F:872:GLU:OE1	1:F:872:GLU:HA	2.12	0.50
1:H:990:PRO:HA	4:H:1315:HOH:O	2.11	0.50
1:E:759:ILE:HD12	1:E:861:LEU:HD21	1.94	0.50
3:E:1202:QQJ:C30	3:E:1202:QQJ:C20	2.89	0.50
1:F:999:ARG:HH12	1:F:1007:MET:HG3	1.77	0.50
1:G:836:ARG:NE	4:G:1310:HOH:O	2.43	0.50
1:B:879:LYS:HD3	1:B:915:TYR:HB2	1.94	0.50
1:A:812:GLN:HG2	4:A:1312:HOH:O	2.12	0.49
1:H:960:LYS:CE	4:H:1314:HOH:O	2.58	0.49
1:B:973:ARG:HG2	1:B:1011:VAL:HG12	1.94	0.49
1:F:782:LEU:CD2	1:F:786:VAL:HG22	2.42	0.49
1:E:751:THR:HG21	1:E:756:ASN:OD1	2.13	0.49
1:A:721:GLY:HA3	2:A:1201:CL:CL	2.50	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:708:LYS:O	1:E:711:GLU:HG2	2.13	0.49
1:F:726:VAL:HG21	3:F:1202:QQJ:C16	2.43	0.49
1:B:813:TYR:OH	1:B:990:PRO:HD3	2.13	0.48
1:C:732:ILE:O	1:C:732:ILE:CG2	2.61	0.48
1:E:984:ASP:HA	1:E:987:MET:HE2	1.95	0.48
1:F:826:ASN:HD21	1:F:962:ARG:CZ	2.26	0.48
1:D:954:ASP:OD2	1:D:957:SER:OG	2.30	0.48
1:B:882:ALA:HA	1:B:898:TRP:CD2	2.48	0.48
1:C:949:LYS:O	1:C:952:MET:HG3	2.13	0.48
1:D:754:LYS:HD3	1:D:759:ILE:CD1	2.42	0.48
1:B:705:ARG:HG2	1:B:705:ARG:HH11	1.79	0.48
1:F:783:THR:OG1	1:F:784:SER:N	2.46	0.48
1:D:835:HIS:O	1:D:836:ARG:HB2	2.14	0.48
1:D:989:LEU:HB3	1:D:990:PRO:HD2	1.95	0.48
1:A:726:VAL:HG21	3:A:1202:QQJ:C16	2.43	0.48
1:B:927:LEU:HD11	4:B:1316:HOH:O	2.12	0.48
1:C:972:ALA:O	1:C:975:PRO:HD3	2.14	0.48
1:A:752:SER:HB2	1:A:753:PRO:CD	2.43	0.48
1:G:775:CYS:SG	1:G:793:MET:HE3	2.54	0.48
1:B:953:ILE:H	1:B:953:ILE:CD1	2.18	0.47
1:F:708:LYS:CE	1:F:734:GLU:OE1	2.62	0.47
1:G:949:LYS:O	1:G:952:MET:HG3	2.14	0.47
1:A:705:ARG:NH2	1:A:711:GLU:OE2	2.47	0.47
1:B:775:CYS:SG	1:B:793:MET:HE3	2.54	0.47
1:A:961:PHE:HA	1:A:964:LEU:HD12	1.97	0.47
1:B:836:ARG:HB2	1:B:859:ALA:HB3	1.96	0.47
1:E:754:LYS:HB2	4:E:1325:HOH:O	2.14	0.47
1:E:788:LEU:C	1:E:789:ILE:HD12	2.39	0.47
1:F:986:ARG:HG2	1:F:986:ARG:NH2	2.12	0.47
1:E:799:LEU:O	1:E:803:ARG:HG3	2.15	0.47
1:E:805:HIS:O	1:E:809:ILE:CD1	2.63	0.47
1:E:814:LEU:CD1	1:E:908:MET:HE1	2.45	0.47
1:F:732:ILE:O	1:F:732:ILE:CD1	2.55	0.47
1:F:982:GLN:HA	1:F:982:GLN:OE1	2.14	0.47
1:F:999:ARG:HH12	1:F:1007:MET:HB2	1.80	0.47
1:D:813:TYR:OH	1:D:990:PRO:HD3	2.15	0.47
1:G:797:CYS:HB3	3:G:1202:QQJ:C31	2.45	0.47
1:C:898:TRP:CE3	1:C:951:TRP:HA	2.50	0.47
1:H:943:VAL:CG2	1:H:971:MET:CE	2.93	0.47
1:B:836:ARG:NE	1:B:860:LYS:HE3	2.30	0.46
1:E:708:LYS:HG3	1:E:711:GLU:OE1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:836:ARG:HG2	1:G:891:TYR:CD1	2.50	0.46
1:H:752:SER:O	1:H:754:LYS:HG2	2.15	0.46
1:C:983:GLY:HA3	1:C:986:ARG:NH2	2.30	0.46
1:D:762:GLU:OE1	1:D:861:LEU:CD1	2.64	0.46
1:B:829:GLU:HG3	1:B:893:HIS:CD2	2.50	0.46
1:C:722:ALA:O	1:C:748:ARG:CD	2.63	0.46
1:C:808:ASN:ND2	4:C:1309:HOH:O	2.48	0.46
1:F:723:PHE:CB	1:F:858:LEU:HD13	2.45	0.46
1:G:703:LEU:HD13	1:G:768:SER:HA	1.98	0.46
1:G:850:HIS:CG	1:G:1007:MET:SD	3.08	0.46
1:H:793:MET:HE1	1:H:852:LYS:HD2	1.97	0.46
1:F:986:ARG:CG	1:F:986:ARG:NH2	2.73	0.46
1:G:920:ALA:HA	1:G:923:ILE:HG12	1.98	0.46
1:A:812:GLN:HB2	4:A:1356:HOH:O	2.15	0.46
3:B:1202:QQJ:C30	3:B:1202:QQJ:C20	2.94	0.46
1:E:849:GLN:CD	1:E:990:PRO:HG3	2.41	0.46
1:G:941:ILE:O	1:G:945:MET:HG2	2.15	0.46
1:B:700:ASN:HB2	1:B:703:LEU:HD12	1.98	0.46
1:B:723:PHE:HB2	2:B:1201:CL:CL	2.53	0.46
1:F:811:SER:OG	1:F:975:PRO:HB2	2.16	0.46
1:D:905:TRP:CD1	1:D:947:MET:HE1	2.50	0.46
1:E:751:THR:OG1	1:E:755:ALA:CB	2.58	0.46
1:B:926:ILE:HG13	1:B:927:LEU:N	2.30	0.46
1:F:970:LYS:HG2	1:F:973:ARG:HH22	1.81	0.46
1:A:780:ILE:HG13	1:A:788:LEU:HD23	1.98	0.46
1:G:868:GLU:HG3	1:G:875:LYS:HG2	1.98	0.46
1:F:985:GLU:H	1:F:985:GLU:CD	2.24	0.45
1:A:793:MET:CE	1:A:852:LYS:HD3	2.43	0.45
1:B:717:VAL:HG22	1:B:727:TYR:CE2	2.52	0.45
1:F:879:LYS:NZ	4:F:1307:HOH:O	2.43	0.45
1:F:961:PHE:HA	1:F:964:LEU:HD12	1.99	0.45
1:F:995:SER:O	1:F:999:ARG:HG3	2.17	0.45
1:G:1008:ASP:OD1	1:G:1008:ASP:N	2.49	0.45
1:B:965:ILE:O	1:B:969:SER:OG	2.31	0.45
1:F:945:MET:O	1:F:949:LYS:HG3	2.17	0.45
1:D:732:ILE:HD12	1:D:732:ILE:N	2.32	0.45
1:G:714:LYS:HE2	1:G:714:LYS:HB2	1.78	0.45
1:A:1002:MET:HE2	1:A:1002:MET:HB3	1.62	0.45
1:B:952:MET:CE	1:B:957:SER:OG	2.65	0.45
1:C:716:LYS:HZ2	1:C:716:LYS:HB3	1.82	0.45
1:C:990:PRO:HB2	1:C:994:ASP:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:759:ILE:HD12	1:D:861:LEU:HD11	1.99	0.45
1:F:812:GLN:HG3	1:F:975:PRO:HG3	1.99	0.45
1:F:893:HIS:HD2	4:F:1322:HOH:O	2.00	0.45
1:D:794:PRO:HA	3:D:1202:QQJ:C29	2.47	0.44
1:B:715:ILE:HG13	1:B:730:LEU:HG	1.99	0.44
1:G:790:MET:HG2	3:G:1202:QQJ:C03	2.47	0.44
1:H:759:ILE:HD13	1:H:786:VAL:HG21	1.98	0.44
1:H:920:ALA:HA	1:H:923:ILE:HG12	1.99	0.44
1:H:971:MET:CE	1:H:978:TYR:CD1	3.00	0.44
1:E:723:PHE:HB3	1:E:862:LEU:HD11	1.96	0.44
1:G:882:ALA:HA	1:G:898:TRP:CD2	2.52	0.44
1:H:806:LYS:HG3	1:H:910:PHE:CB	2.48	0.44
1:B:941:ILE:O	1:B:945:MET:HG3	2.18	0.44
1:E:882:ALA:HA	1:E:898:TRP:CD2	2.53	0.44
1:F:760:LEU:CD2	1:F:782:LEU:HD11	2.48	0.44
1:F:790:MET:HG2	3:F:1202:QQJ:C03	2.47	0.44
1:H:747:LEU:HD11	1:H:788:LEU:HG	1.99	0.44
1:D:714:LYS:NZ	1:D:787:GLN:OE1	2.35	0.44
1:D:797:CYS:HB3	3:D:1202:QQJ:C31	2.47	0.44
1:D:865:GLU:OE2	1:D:867:LYS:CG	2.65	0.44
1:C:905:TRP:HD1	1:C:947:MET:HE1	1.82	0.44
1:A:970:LYS:NZ	1:E:803:ARG:HB3	2.33	0.44
1:C:755:ALA:HB3	1:C:758:GLU:OE2	2.17	0.44
1:H:889:ARG:NH2	1:H:889:ARG:CG	2.73	0.44
1:D:793:MET:CE	1:D:852:LYS:HD3	2.38	0.44
3:H:1202:QQJ:O08	3:H:1202:QQJ:N02	2.51	0.44
1:A:943:VAL:HG22	1:A:971:MET:HE1	2.00	0.44
1:C:905:TRP:HB2	1:C:947:MET:HE3	2.00	0.44
1:F:987:MET:HA	4:F:1354:HOH:O	2.18	0.44
1:F:721:GLY:HA3	2:F:1201:CL:CL	2.54	0.43
1:A:812:GLN:HB3	1:A:989:LEU:HG	1.99	0.43
1:E:946:ILE:HD11	1:E:967:GLU:CD	2.42	0.43
1:F:796:GLY:HA2	3:F:1202:QQJ:C30	2.49	0.43
1:B:858:LEU:HD23	1:B:858:LEU:HA	1.89	0.43
1:C:761:ASP:O	1:C:765:VAL:HG23	2.18	0.43
1:E:751:THR:HG23	1:E:756:ASN:OD1	2.17	0.43
1:F:875:LYS:HE2	1:F:875:LYS:HB2	1.62	0.43
1:H:712:PHE:C	1:H:713:LYS:HD3	2.38	0.43
1:D:918:ILE:HG21	1:D:926:ILE:HD13	2.00	0.43
1:A:967:GLU:O	1:A:971:MET:HG3	2.19	0.43
1:B:790:MET:HG2	3:B:1202:QQJ:C03	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:809:ILE:HD11	1:C:813:TYR:CG	2.53	0.43
1:F:812:GLN:HE21	1:F:1013:ALA:HB2	1.84	0.43
1:G:852:LYS:NZ	4:G:1307:HOH:O	2.41	0.43
1:E:744:ILE:HG12	1:E:789:ILE:HG13	2.00	0.43
1:E:813:TYR:CD2	1:E:989:LEU:CD2	3.00	0.43
1:G:754:LYS:HE2	1:G:754:LYS:HB3	1.73	0.43
1:D:919:PRO:HG2	1:A:935:GLN:OE1	2.18	0.43
1:E:751:THR:HG1	1:E:755:ALA:HB3	1.81	0.43
1:A:1009:ASP:HA	4:A:1306:HOH:O	2.18	0.43
1:C:989:LEU:HB3	1:C:990:PRO:HD2	2.00	0.43
1:H:772:PRO:O	1:H:852:LYS:HE2	2.19	0.43
1:D:815:LEU:HD12	1:D:975:PRO:HB3	2.01	0.43
1:B:973:ARG:HG2	1:B:1011:VAL:CG1	2.49	0.43
1:F:797:CYS:HB3	3:F:1202:QQJ:C31	2.49	0.43
1:H:883:LEU:HD22	1:H:953:ILE:HD12	2.01	0.43
1:B:989:LEU:HB3	1:B:990:PRO:CD	2.45	0.43
1:C:961:PHE:HA	1:C:964:LEU:HD12	2.01	0.43
1:F:937:PRO:HD2	4:F:1349:HOH:O	2.18	0.43
1:F:1009:ASP:OD1	1:F:1010:VAL:N	2.52	0.43
1:G:709:GLU:CG	1:G:783:THR:HG21	2.49	0.43
1:D:849:GLN:HG2	1:D:990:PRO:HG3	2.01	0.43
1:F:858:LEU:HD23	1:F:858:LEU:HA	1.76	0.43
1:G:793:MET:HE1	1:G:852:LYS:HD3	2.01	0.42
1:A:836:ARG:CZ	1:A:860:LYS:HG3	2.49	0.42
1:E:850:HIS:CG	1:E:1007:MET:HE2	2.54	0.42
1:F:882:ALA:HA	1:F:898:TRP:CD2	2.53	0.42
1:F:913:LYS:NZ	1:H:963:GLU:OE2	2.50	0.42
1:H:879:LYS:HD3	1:H:914:PRO:O	2.20	0.42
1:E:748:ARG:H	1:E:748:ARG:HG2	1.74	0.42
1:D:759:ILE:HD13	1:D:861:LEU:HD11	2.02	0.42
1:A:796:GLY:HA2	3:A:1202:QQJ:C30	2.50	0.42
1:A:949:LYS:HA	1:A:952:MET:SD	2.60	0.42
1:C:701:GLN:HA	1:C:764:TYR:CE1	2.54	0.42
1:C:809:ILE:HD12	1:C:809:ILE:HA	1.68	0.42
1:A:926:ILE:HA	1:A:929:LYS:CD	2.50	0.42
1:A:952:MET:HE2	1:A:957:SER:HB3	2.02	0.42
1:F:706:ILE:CD1	1:F:760:LEU:HD11	2.50	0.42
1:F:952:MET:HE2	1:F:957:SER:OG	2.19	0.42
1:G:752:SER:OG	1:G:753:PRO:CD	2.67	0.42
1:G:834:VAL:HG12	1:G:836:ARG:HG3	2.00	0.42
1:H:798:LEU:HD12	1:H:798:LEU:HA	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:970:LYS:HG2	1:A:973:ARG:HH22	1.84	0.42
1:A:995:SER:O	1:A:999:ARG:HG3	2.19	0.42
1:C:955:ALA:HA	1:C:958:ARG:CZ	2.50	0.42
1:G:796:GLY:HA2	3:G:1202:QQJ:C30	2.50	0.42
1:H:747:LEU:CD2	1:H:862:LEU:HD11	2.48	0.42
1:A:700:ASN:HD22	1:A:701:GLN:H	1.67	0.42
1:D:766:MET:HA	1:D:856:PHE:HZ	1.82	0.42
1:E:987:MET:HE3	1:E:987:MET:HB2	1.84	0.42
1:F:760:LEU:HD23	1:F:782:LEU:CD1	2.50	0.42
1:H:754:LYS:HD3	1:H:758:GLU:OE1	2.19	0.42
1:E:989:LEU:HD23	1:E:989:LEU:HA	1.74	0.42
1:D:762:GLU:OE1	1:D:861:LEU:HD12	2.20	0.41
1:B:945:MET:HE2	1:B:945:MET:HB3	1.91	0.41
1:C:926:ILE:HG13	1:C:927:LEU:N	2.33	0.41
1:E:989:LEU:HB3	1:E:990:PRO:HD2	2.02	0.41
1:F:790:MET:HG2	3:F:1202:QQJ:C06	2.50	0.41
1:H:766:MET:O	1:H:769:VAL:HG22	2.20	0.41
1:H:798:LEU:O	1:H:802:VAL:HG22	2.19	0.41
1:D:796:GLY:HA2	3:D:1202:QQJ:C30	2.51	0.41
1:A:989:LEU:CD2	1:A:990:PRO:HD2	2.50	0.41
1:D:998:TYR:CD1	1:D:1002:MET:SD	3.13	0.41
1:B:713:LYS:HG3	1:B:715:ILE:HD11	2.02	0.41
1:H:797:CYS:HA	1:H:844:LEU:HA	2.01	0.41
1:D:745:LYS:NZ	1:D:855:ASP:OD2	2.54	0.41
1:B:1001:LEU:HD23	1:B:1001:LEU:HA	1.94	0.41
1:B:883:LEU:HD23	1:B:953:ILE:HG23	2.01	0.41
1:E:941:ILE:O	1:E:945:MET:HG3	2.20	0.41
1:A:952:MET:CE	1:A:957:SER:HB3	2.50	0.41
1:D:925:SER:HB2	1:A:941:ILE:HG21	2.02	0.41
1:G:835:HIS:O	1:G:836:ARG:HB2	2.20	0.41
1:H:949:LYS:HB3	1:H:952:MET:HE3	2.02	0.41
1:D:865:GLU:OE2	1:D:867:LYS:CB	2.66	0.41
1:A:705:ARG:HD2	1:H:994:ASP:OD1	2.20	0.40
1:A:1012:ASP:OD1	1:A:1012:ASP:N	2.47	0.40
1:B:884:GLU:CD	1:B:958:ARG:HH22	2.29	0.40
1:B:905:TRP:CD1	1:B:947:MET:HE1	2.52	0.40
1:B:925:SER:O	1:B:929:LYS:HE3	2.21	0.40
1:C:790:MET:HG2	3:C:1202:QQJ:C03	2.51	0.40
1:D:721:GLY:HA3	2:D:1201:CL:CL	2.58	0.40
1:D:981:ILE:O	1:D:984:ASP:HB2	2.21	0.40
1:B:829:GLU:HG3	1:B:893:HIS:CG	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:793:MET:CE	1:C:852:LYS:HD3	2.49	0.40
1:E:813:TYR:CD2	1:E:989:LEU:HD21	2.57	0.40
1:F:999:ARG:HH12	1:F:1007:MET:CG	2.34	0.40
1:G:960:LYS:HD3	1:G:962:ARG:NH1	2.36	0.40
1:B:962:ARG:HG3	4:B:1328:HOH:O	2.21	0.40
1:F:708:LYS:HG3	1:F:710:THR:OG1	2.21	0.40
1:B:705:ARG:HG2	1:B:705:ARG:NH1	2.36	0.40
1:B:960:LYS:HG2	1:B:963:GLU:CD	2.47	0.40
1:C:707:LEU:HD12	1:C:789:ILE:HD13	2.03	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	295/327 (90%)	288 (98%)	6 (2%)	1 (0%)	36	42
1	B	297/327 (91%)	285 (96%)	11 (4%)	1 (0%)	36	42
1	C	299/327 (91%)	290 (97%)	9 (3%)	0	100	100
1	D	312/327 (95%)	302 (97%)	9 (3%)	1 (0%)	36	42
1	E	300/327 (92%)	286 (95%)	11 (4%)	3 (1%)	12	11
1	F	302/327 (92%)	293 (97%)	7 (2%)	2 (1%)	18	19
1	G	313/327 (96%)	302 (96%)	11 (4%)	0	100	100
1	H	313/327 (96%)	304 (97%)	9 (3%)	0	100	100
All	All	2431/2616 (93%)	2350 (97%)	73 (3%)	8 (0%)	36	42

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	863	GLY

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Mol	Chain	Res	Type
1	F	806	LYS
1	A	701	GLN
1	E	749	GLU
1	F	753	PRO
1	E	986	ARG
1	B	806	LYS
1	D	753	PRO

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	269/287 (94%)	262 (97%)	7 (3%)	40	55
1	B	269/287 (94%)	263 (98%)	6 (2%)	45	61
1	C	271/287 (94%)	265 (98%)	6 (2%)	45	61
1	D	277/287 (96%)	276 (100%)	1 (0%)	84	92
1	E	270/287 (94%)	262 (97%)	8 (3%)	36	49
1	F	271/287 (94%)	267 (98%)	4 (2%)	57	73
1	G	278/287 (97%)	271 (98%)	7 (2%)	42	56
1	H	278/287 (97%)	277 (100%)	1 (0%)	84	92
All	All	2183/2296 (95%)	2143 (98%)	40 (2%)	51	68

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	784	SER
1	A	700	ASN
1	A	703	LEU
1	A	737	LYS
1	A	748	ARG
1	A	751	THR
1	A	984	ASP
1	A	988	HIS

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Mol	Chain	Res	Type
1	B	701	GLN
1	B	754	LYS
1	B	757	LYS
1	B	808	ASN
1	B	831	ARG
1	B	832	ARG
1	C	705	ARG
1	C	748	ARG
1	C	749	GLU
1	C	970	LYS
1	C	976	GLN
1	C	977	ARG
1	E	708	LYS
1	E	747	LEU
1	E	748	ARG
1	E	754	LYS
1	E	784	SER
1	E	804	GLU
1	E	986	ARG
1	E	1011	VAL
1	F	754	LYS
1	F	922	GLU
1	F	962	ARG
1	F	986	ARG
1	G	705	ARG
1	G	737	LYS
1	G	749	GLU
1	G	754	LYS
1	G	970	LYS
1	G	986	ARG
1	G	1008	ASP
1	H	784	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	756	ASN
1	D	805	HIS
1	D	888	HIS
1	D	982	GLN
1	A	700	ASN
1	A	805	HIS

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Mol	Chain	Res	Type
1	A	808	ASN
1	B	700	ASN
1	B	701	GLN
1	B	791	GLN
1	B	812	GLN
1	C	849	GLN
1	C	894	GLN
1	C	988	HIS
1	E	812	GLN
1	E	826	ASN
1	E	988	HIS
1	F	791	GLN
1	F	812	GLN
1	F	826	ASN
1	F	893	HIS
1	G	756	ASN
1	G	773	HIS
1	G	805	HIS
1	G	812	GLN
1	H	805	HIS
1	H	812	GLN
1	H	826	ASN
1	H	849	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

Of 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	QQJ	B	1202	1	37,37,37	5.11	30 (81%)	49,51,51	1.65	9 (18%)
3	QQJ	G	1202	1	37,37,37	6.07	30 (81%)	49,51,51	1.59	9 (18%)
3	QQJ	F	1202	1	37,37,37	5.92	29 (78%)	49,51,51	1.68	15 (30%)
3	QQJ	D	1202	1	37,37,37	6.01	29 (78%)	49,51,51	1.85	13 (26%)
3	QQJ	A	1202	1	37,37,37	5.89	29 (78%)	49,51,51	1.65	14 (28%)
3	QQJ	C	1202	1	37,37,37	6.00	29 (78%)	49,51,51	1.71	13 (26%)
3	QQJ	E	1202	1	37,37,37	4.97	29 (78%)	49,51,51	2.11	15 (30%)
3	QQJ	H	1202	1	37,37,37	6.13	31 (83%)	49,51,51	1.79	12 (24%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	QQJ	B	1202	1	-	0/22/22/22	0/4/4/4
3	QQJ	G	1202	1	-	4/22/22/22	0/4/4/4
3	QQJ	F	1202	1	-	6/22/22/22	0/4/4/4
3	QQJ	D	1202	1	-	4/22/22/22	0/4/4/4
3	QQJ	A	1202	1	-	2/22/22/22	0/4/4/4
3	QQJ	C	1202	1	-	2/22/22/22	0/4/4/4
3	QQJ	E	1202	1	-	4/22/22/22	0/4/4/4
3	QQJ	H	1202	1	-	5/22/22/22	0/4/4/4

All (236) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	F	1202	QQJ	C25-C24	10.27	1.55	1.38
3	A	1202	QQJ	C25-C24	10.10	1.55	1.38
3	G	1202	QQJ	C25-C24	10.03	1.55	1.38
3	D	1202	QQJ	C30-C28	9.94	1.55	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	1202	QQJ	C25-C24	9.92	1.54	1.38
3	H	1202	QQJ	C25-C24	9.91	1.54	1.38
3	C	1202	QQJ	C30-C28	9.89	1.55	1.39
3	A	1202	QQJ	C30-C28	9.59	1.55	1.39
3	G	1202	QQJ	C30-C28	9.53	1.55	1.39
3	B	1202	QQJ	C25-C24	9.52	1.54	1.38
3	D	1202	QQJ	C25-C24	9.51	1.54	1.38
3	C	1202	QQJ	C30-C27	9.40	1.54	1.39
3	H	1202	QQJ	C30-C28	9.39	1.54	1.39
3	G	1202	QQJ	C24-C28	9.37	1.55	1.39
3	F	1202	QQJ	C30-C27	9.34	1.54	1.39
3	A	1202	QQJ	C24-C28	9.27	1.54	1.39
3	F	1202	QQJ	C30-C28	9.25	1.54	1.39
3	G	1202	QQJ	C30-C27	9.24	1.54	1.39
3	G	1202	QQJ	C11-C13	9.10	1.53	1.39
3	D	1202	QQJ	C24-C28	9.09	1.54	1.39
3	D	1202	QQJ	C30-C27	9.09	1.53	1.39
3	H	1202	QQJ	C11-C13	9.06	1.53	1.39
3	D	1202	QQJ	C11-C13	9.05	1.53	1.39
3	F	1202	QQJ	C24-C28	9.03	1.54	1.39
3	H	1202	QQJ	C24-C28	8.99	1.54	1.39
3	A	1202	QQJ	C30-C27	8.97	1.53	1.39
3	H	1202	QQJ	C03-C01	8.95	1.53	1.38
3	H	1202	QQJ	C30-C27	8.91	1.53	1.39
3	E	1202	QQJ	C30-C28	8.90	1.54	1.39
3	E	1202	QQJ	C25-C24	8.88	1.53	1.38
3	C	1202	QQJ	C03-C01	8.82	1.53	1.38
3	A	1202	QQJ	C03-C01	8.79	1.53	1.38
3	C	1202	QQJ	C24-C28	8.77	1.54	1.39
3	A	1202	QQJ	C11-C13	8.69	1.52	1.39
3	G	1202	QQJ	C09-C11	8.66	1.52	1.38
3	C	1202	QQJ	C11-C13	8.65	1.52	1.39
3	H	1202	QQJ	C09-C11	8.65	1.52	1.38
3	G	1202	QQJ	C03-C01	8.63	1.52	1.38
3	H	1202	QQJ	C22-C23	8.61	1.55	1.38
3	D	1202	QQJ	C09-C11	8.61	1.52	1.38
3	F	1202	QQJ	C09-C11	8.60	1.52	1.38
3	C	1202	QQJ	C09-C11	8.60	1.52	1.38
3	D	1202	QQJ	C03-C01	8.55	1.52	1.38
3	F	1202	QQJ	C03-C01	8.54	1.52	1.38
3	G	1202	QQJ	C01-C13	8.39	1.52	1.39
3	F	1202	QQJ	C11-C13	8.32	1.52	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1202	QQJ	C09-C11	8.29	1.52	1.38
3	A	1202	QQJ	C22-C23	8.19	1.54	1.38
3	D	1202	QQJ	C01-C13	8.16	1.51	1.39
3	G	1202	QQJ	C22-C23	8.15	1.54	1.38
3	D	1202	QQJ	C22-C23	8.15	1.54	1.38
3	F	1202	QQJ	C01-C13	8.14	1.51	1.39
3	C	1202	QQJ	C01-C13	8.09	1.51	1.39
3	H	1202	QQJ	C01-C13	8.09	1.51	1.39
3	H	1202	QQJ	C03-C06	8.02	1.52	1.37
3	G	1202	QQJ	C03-C06	7.99	1.52	1.37
3	B	1202	QQJ	C15-N02	-7.97	1.23	1.37
3	C	1202	QQJ	C03-C06	7.97	1.52	1.37
3	C	1202	QQJ	C22-C23	7.96	1.53	1.38
3	F	1202	QQJ	C03-C06	7.96	1.52	1.37
3	F	1202	QQJ	C22-C23	7.96	1.53	1.38
3	A	1202	QQJ	C01-C13	7.93	1.51	1.39
3	H	1202	QQJ	C19-N07	7.92	1.48	1.34
3	D	1202	QQJ	C03-C06	7.88	1.52	1.37
3	A	1202	QQJ	C03-C06	7.86	1.52	1.37
3	G	1202	QQJ	C09-C06	7.81	1.52	1.37
3	B	1202	QQJ	C30-C28	7.66	1.52	1.39
3	H	1202	QQJ	C23-N07	7.63	1.50	1.34
3	D	1202	QQJ	C09-C06	7.56	1.52	1.37
3	G	1202	QQJ	C19-N07	7.56	1.47	1.34
3	E	1202	QQJ	C30-C27	7.54	1.51	1.39
3	B	1202	QQJ	C30-C27	7.50	1.51	1.39
3	H	1202	QQJ	C09-C06	7.46	1.51	1.37
3	H	1202	QQJ	C20-C21	7.46	1.50	1.39
3	D	1202	QQJ	C23-N07	7.45	1.50	1.34
3	F	1202	QQJ	C09-C06	7.44	1.51	1.37
3	C	1202	QQJ	C23-N07	7.41	1.50	1.34
3	C	1202	QQJ	C09-C06	7.41	1.51	1.37
3	A	1202	QQJ	C19-N07	7.39	1.47	1.34
3	C	1202	QQJ	C19-N07	7.36	1.47	1.34
3	F	1202	QQJ	C25-C26	7.35	1.54	1.39
3	E	1202	QQJ	C24-C28	7.35	1.51	1.39
3	B	1202	QQJ	C14-N04	-7.33	1.26	1.38
3	F	1202	QQJ	C19-N07	7.32	1.47	1.34
3	D	1202	QQJ	C19-N07	7.30	1.47	1.34
3	G	1202	QQJ	C23-N07	7.27	1.49	1.34
3	H	1202	QQJ	C25-C26	7.27	1.54	1.39
3	F	1202	QQJ	C23-N07	7.25	1.49	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1202	QQJ	C23-N07	7.25	1.49	1.34
3	A	1202	QQJ	C09-C06	7.23	1.51	1.37
3	G	1202	QQJ	C20-C21	7.18	1.50	1.39
3	G	1202	QQJ	C25-C26	7.17	1.54	1.39
3	D	1202	QQJ	C20-C21	7.17	1.50	1.39
3	A	1202	QQJ	C25-C26	7.16	1.54	1.39
3	B	1202	QQJ	C24-C28	7.15	1.51	1.39
3	C	1202	QQJ	C25-C26	7.13	1.54	1.39
3	D	1202	QQJ	C25-C26	7.12	1.54	1.39
3	B	1202	QQJ	C22-C23	7.03	1.52	1.38
3	F	1202	QQJ	C20-C21	6.86	1.49	1.39
3	B	1202	QQJ	C11-C13	6.83	1.49	1.39
3	B	1202	QQJ	C33-C32	-6.79	1.22	1.51
3	E	1202	QQJ	C09-C11	6.77	1.49	1.38
3	E	1202	QQJ	C14-N04	-6.69	1.27	1.38
3	H	1202	QQJ	C22-C21	6.68	1.49	1.39
3	E	1202	QQJ	C15-N02	-6.65	1.26	1.37
3	E	1202	QQJ	C03-C01	6.63	1.49	1.38
3	C	1202	QQJ	C20-C21	6.56	1.49	1.39
3	B	1202	QQJ	C03-C01	6.48	1.49	1.38
3	C	1202	QQJ	C33-C32	-6.46	1.23	1.51
3	H	1202	QQJ	C20-C19	6.44	1.55	1.39
3	A	1202	QQJ	C20-C21	6.43	1.49	1.39
3	E	1202	QQJ	C22-C23	6.37	1.50	1.38
3	G	1202	QQJ	C22-C21	6.36	1.49	1.39
3	F	1202	QQJ	C22-C21	6.34	1.49	1.39
3	D	1202	QQJ	C22-C21	6.32	1.49	1.39
3	G	1202	QQJ	C20-C19	6.31	1.55	1.39
3	B	1202	QQJ	O08-C31	-6.29	1.10	1.23
3	D	1202	QQJ	C20-C19	6.17	1.55	1.39
3	H	1202	QQJ	C27-C26	6.07	1.53	1.40
3	A	1202	QQJ	C22-C21	6.05	1.48	1.39
3	B	1202	QQJ	C01-C13	6.04	1.48	1.39
3	C	1202	QQJ	C22-C21	5.97	1.48	1.39
3	A	1202	QQJ	C20-C19	5.90	1.54	1.39
3	G	1202	QQJ	C31-N12	5.83	1.48	1.35
3	E	1202	QQJ	C11-C13	5.82	1.48	1.39
3	C	1202	QQJ	C20-C19	5.81	1.54	1.39
3	B	1202	QQJ	C09-C11	5.80	1.48	1.38
3	F	1202	QQJ	C31-N12	5.80	1.48	1.35
3	F	1202	QQJ	C20-C19	5.79	1.54	1.39
3	E	1202	QQJ	C01-C13	5.78	1.48	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	1202	QQJ	C25-C26	5.76	1.51	1.39
3	E	1202	QQJ	C25-C26	5.74	1.51	1.39
3	E	1202	QQJ	C03-C06	5.72	1.48	1.37
3	H	1202	QQJ	C31-N12	5.67	1.47	1.35
3	A	1202	QQJ	C27-C26	5.66	1.52	1.40
3	D	1202	QQJ	C27-C26	5.66	1.52	1.40
3	B	1202	QQJ	C03-C06	5.62	1.48	1.37
3	E	1202	QQJ	C20-C21	5.59	1.47	1.39
3	B	1202	QQJ	C19-N07	5.57	1.44	1.34
3	F	1202	QQJ	C27-C26	5.56	1.52	1.40
3	E	1202	QQJ	C23-N07	5.56	1.46	1.34
3	D	1202	QQJ	C31-N12	5.54	1.47	1.35
3	E	1202	QQJ	C20-C19	5.53	1.53	1.39
3	C	1202	QQJ	C27-C26	5.53	1.51	1.40
3	G	1202	QQJ	C27-C26	5.51	1.51	1.40
3	B	1202	QQJ	C09-C06	5.48	1.47	1.37
3	E	1202	QQJ	C19-N07	5.42	1.44	1.34
3	C	1202	QQJ	C31-N12	5.39	1.47	1.35
3	A	1202	QQJ	C31-N12	5.38	1.47	1.35
3	H	1202	QQJ	C21-C15	5.26	1.55	1.47
3	B	1202	QQJ	C20-C19	5.22	1.52	1.39
3	E	1202	QQJ	O08-C31	-5.22	1.12	1.23
3	B	1202	QQJ	C22-C21	5.20	1.47	1.39
3	E	1202	QQJ	C09-C06	5.19	1.47	1.37
3	H	1202	QQJ	C19-N10	5.14	1.47	1.38
3	D	1202	QQJ	C19-N10	5.09	1.47	1.38
3	G	1202	QQJ	C19-N10	4.90	1.47	1.38
3	C	1202	QQJ	C19-N10	4.88	1.47	1.38
3	G	1202	QQJ	C16-S17	4.86	1.82	1.75
3	H	1202	QQJ	C16-S17	4.66	1.82	1.75
3	B	1202	QQJ	C23-N07	4.63	1.44	1.34
3	F	1202	QQJ	C19-N10	4.60	1.46	1.38
3	E	1202	QQJ	C27-C26	4.51	1.49	1.40
3	G	1202	QQJ	C21-C15	4.45	1.54	1.47
3	A	1202	QQJ	C19-N10	4.37	1.46	1.38
3	D	1202	QQJ	C16-S17	4.32	1.82	1.75
3	A	1202	QQJ	C16-S17	4.20	1.81	1.75
3	B	1202	QQJ	C27-C26	4.16	1.49	1.40
3	F	1202	QQJ	C16-S17	4.15	1.81	1.75
3	D	1202	QQJ	C21-C15	4.13	1.54	1.47
3	D	1202	QQJ	C13-C14	4.07	1.54	1.48
3	G	1202	QQJ	C13-C14	4.07	1.54	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	1202	QQJ	C22-C21	4.05	1.45	1.39
3	A	1202	QQJ	C14-N04	-4.03	1.32	1.38
3	H	1202	QQJ	C13-C14	3.92	1.54	1.48
3	C	1202	QQJ	C21-C15	3.92	1.53	1.47
3	D	1202	QQJ	C14-N04	-3.85	1.32	1.38
3	C	1202	QQJ	C14-N04	-3.77	1.32	1.38
3	H	1202	QQJ	C14-N04	-3.76	1.32	1.38
3	F	1202	QQJ	C21-C15	3.75	1.53	1.47
3	D	1202	QQJ	C15-N02	-3.73	1.31	1.37
3	A	1202	QQJ	C13-C14	3.69	1.53	1.48
3	A	1202	QQJ	C21-C15	3.65	1.53	1.47
3	F	1202	QQJ	C14-N04	-3.65	1.32	1.38
3	F	1202	QQJ	C28-N12	3.64	1.49	1.41
3	C	1202	QQJ	C16-S17	3.63	1.81	1.75
3	G	1202	QQJ	C15-N02	-3.61	1.31	1.37
3	E	1202	QQJ	C16-S17	3.47	1.80	1.75
3	F	1202	QQJ	C15-N02	-3.44	1.31	1.37
3	E	1202	QQJ	C13-C14	3.40	1.53	1.48
3	C	1202	QQJ	C15-N02	-3.36	1.31	1.37
3	H	1202	QQJ	C15-N02	-3.35	1.31	1.37
3	B	1202	QQJ	C15-C14	-3.30	1.32	1.38
3	D	1202	QQJ	C27-N10	3.30	1.49	1.39
3	A	1202	QQJ	C15-N02	-3.29	1.31	1.37
3	B	1202	QQJ	C16-N02	-3.27	1.28	1.36
3	E	1202	QQJ	C16-N02	-3.22	1.28	1.36
3	B	1202	QQJ	C31-N12	3.17	1.42	1.35
3	G	1202	QQJ	C14-N04	-3.16	1.33	1.38
3	G	1202	QQJ	C28-N12	3.14	1.48	1.41
3	B	1202	QQJ	C20-C21	3.13	1.44	1.39
3	F	1202	QQJ	C13-C14	3.12	1.52	1.48
3	C	1202	QQJ	C28-N12	3.09	1.47	1.41
3	H	1202	QQJ	C27-N10	3.06	1.48	1.39
3	D	1202	QQJ	C16-N04	2.99	1.35	1.31
3	E	1202	QQJ	C31-N12	2.98	1.42	1.35
3	C	1202	QQJ	C27-N10	2.96	1.48	1.39
3	A	1202	QQJ	C28-N12	2.95	1.47	1.41
3	G	1202	QQJ	C27-N10	2.93	1.48	1.39
3	E	1202	QQJ	C21-C15	2.92	1.52	1.47
3	C	1202	QQJ	C13-C14	2.92	1.52	1.48
3	H	1202	QQJ	C33-C32	-2.91	1.39	1.51
3	D	1202	QQJ	C28-N12	2.88	1.47	1.41
3	H	1202	QQJ	C28-N12	2.85	1.47	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1202	QQJ	C27-N10	2.85	1.47	1.39
3	F	1202	QQJ	C27-N10	2.84	1.47	1.39
3	G	1202	QQJ	O05-C26	2.80	1.41	1.37
3	E	1202	QQJ	C15-C14	-2.72	1.33	1.38
3	G	1202	QQJ	C16-N04	2.62	1.35	1.31
3	B	1202	QQJ	C16-S17	2.57	1.79	1.75
3	B	1202	QQJ	C13-C14	2.53	1.51	1.48
3	C	1202	QQJ	O05-C26	2.47	1.41	1.37
3	F	1202	QQJ	C16-N04	2.44	1.35	1.31
3	B	1202	QQJ	F34-C06	-2.39	1.30	1.36
3	B	1202	QQJ	O05-C29	-2.39	1.36	1.42
3	H	1202	QQJ	O08-C31	-2.34	1.18	1.23
3	F	1202	QQJ	O05-C26	2.31	1.40	1.37
3	B	1202	QQJ	C32-C31	2.30	1.58	1.51
3	A	1202	QQJ	C16-N04	2.25	1.34	1.31
3	A	1202	QQJ	O05-C26	2.24	1.40	1.37
3	H	1202	QQJ	C16-N04	2.24	1.34	1.31
3	H	1202	QQJ	O05-C26	2.18	1.40	1.37
3	E	1202	QQJ	F34-C06	-2.18	1.31	1.36
3	E	1202	QQJ	O05-C29	-2.06	1.37	1.42
3	D	1202	QQJ	O08-C31	-2.06	1.19	1.23
3	G	1202	QQJ	O08-C31	-2.04	1.19	1.23

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E	1202	QQJ	C18-S17-C16	5.91	111.85	102.27
3	D	1202	QQJ	C13-C14-N04	5.06	127.02	119.53
3	H	1202	QQJ	C28-N12-C31	-5.06	118.56	127.52
3	E	1202	QQJ	C28-N12-C31	-4.96	118.73	127.52
3	B	1202	QQJ	O05-C26-C27	4.31	120.18	114.81
3	B	1202	QQJ	O08-C31-N12	-4.05	116.38	123.64
3	D	1202	QQJ	C20-C21-C15	-4.04	114.71	120.58
3	H	1202	QQJ	O05-C26-C27	3.98	119.77	114.81
3	E	1202	QQJ	C13-C14-N04	3.94	125.36	119.53
3	D	1202	QQJ	C20-C19-N07	-3.84	117.89	122.92
3	E	1202	QQJ	C15-C14-N04	-3.81	104.92	109.51
3	E	1202	QQJ	C22-C21-C15	-3.81	116.24	120.76
3	H	1202	QQJ	C18-S17-C16	3.76	108.36	102.27
3	B	1202	QQJ	C33-C32-C31	3.74	125.58	113.29
3	E	1202	QQJ	O05-C26-C27	3.73	119.46	114.81
3	E	1202	QQJ	C14-C15-N02	3.73	110.18	105.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	1202	QQJ	C22-C23-N07	-3.61	119.55	123.97
3	D	1202	QQJ	C14-C15-N02	3.54	109.94	105.63
3	B	1202	QQJ	C18-S17-C16	3.49	107.93	102.27
3	H	1202	QQJ	C13-C14-N04	3.47	124.66	119.53
3	G	1202	QQJ	C13-C14-N04	3.38	124.53	119.53
3	B	1202	QQJ	C22-C23-N07	-3.29	119.94	123.97
3	D	1202	QQJ	C23-N07-C19	3.28	121.90	117.21
3	G	1202	QQJ	C22-C23-N07	-3.28	119.96	123.97
3	A	1202	QQJ	C14-C15-N02	3.19	109.52	105.63
3	C	1202	QQJ	C13-C14-N04	3.18	124.24	119.53
3	A	1202	QQJ	C13-C14-N04	3.18	124.23	119.53
3	C	1202	QQJ	C22-C23-N07	-3.16	120.10	123.97
3	C	1202	QQJ	O05-C26-C27	3.15	118.74	114.81
3	F	1202	QQJ	C20-C21-C15	-3.09	116.09	120.58
3	G	1202	QQJ	C20-C19-N07	-3.08	118.88	122.92
3	F	1202	QQJ	C20-C19-N07	-3.08	118.88	122.92
3	F	1202	QQJ	C28-N12-C31	-3.05	122.13	127.52
3	H	1202	QQJ	C22-C23-N07	-3.04	120.25	123.97
3	G	1202	QQJ	C23-N07-C19	3.02	121.53	117.21
3	F	1202	QQJ	C13-C14-N04	3.01	123.98	119.53
3	E	1202	QQJ	C22-C23-N07	-3.00	120.29	123.97
3	C	1202	QQJ	C20-C21-C15	-2.99	116.23	120.58
3	G	1202	QQJ	O05-C26-C27	2.95	118.49	114.81
3	G	1202	QQJ	C28-N12-C31	-2.95	122.30	127.52
3	F	1202	QQJ	C14-C15-N02	2.92	109.19	105.63
3	C	1202	QQJ	C20-C19-N07	-2.91	119.10	122.92
3	F	1202	QQJ	C29-O05-C26	-2.91	113.25	117.51
3	C	1202	QQJ	C29-O05-C26	-2.90	113.26	117.51
3	A	1202	QQJ	C18-S17-C16	2.83	106.86	102.27
3	H	1202	QQJ	C20-C19-N07	-2.81	119.23	122.92
3	D	1202	QQJ	C13-C14-C15	-2.78	126.36	130.43
3	H	1202	QQJ	C29-O05-C26	-2.76	113.46	117.51
3	C	1202	QQJ	C23-N07-C19	2.75	121.14	117.21
3	C	1202	QQJ	C11-C13-C01	2.74	122.06	118.57
3	C	1202	QQJ	C14-C15-N02	2.70	108.92	105.63
3	A	1202	QQJ	C11-C13-C01	2.69	121.99	118.57
3	H	1202	QQJ	S17-C16-N02	2.69	125.47	119.66
3	H	1202	QQJ	O05-C26-C25	-2.64	119.86	124.30
3	F	1202	QQJ	C23-N07-C19	2.62	120.95	117.21
3	A	1202	QQJ	C23-N07-C19	2.61	120.94	117.21
3	H	1202	QQJ	C21-C15-C14	-2.58	128.61	133.06
3	F	1202	QQJ	C11-C13-C01	2.57	121.84	118.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	1202	QQJ	C22-C23-N07	-2.57	120.82	123.97
3	A	1202	QQJ	O05-C26-C27	2.56	118.00	114.81
3	E	1202	QQJ	C23-N07-C19	2.52	120.81	117.21
3	E	1202	QQJ	F34-C06-C03	2.51	122.57	118.55
3	F	1202	QQJ	O05-C26-C27	2.50	117.93	114.81
3	E	1202	QQJ	C21-C15-C14	-2.50	128.75	133.06
3	E	1202	QQJ	C09-C06-C03	-2.48	119.55	122.80
3	H	1202	QQJ	C23-N07-C19	2.46	120.72	117.21
3	D	1202	QQJ	C22-C21-C20	2.43	122.05	119.25
3	A	1202	QQJ	S17-C16-N02	2.42	124.89	119.66
3	D	1202	QQJ	C15-C14-N04	-2.40	106.62	109.51
3	A	1202	QQJ	C21-C15-C14	-2.39	128.94	133.06
3	D	1202	QQJ	O05-C26-C25	-2.38	120.29	124.30
3	C	1202	QQJ	C33-C32-C31	-2.38	105.49	113.29
3	G	1202	QQJ	C14-C15-N02	2.37	108.52	105.63
3	F	1202	QQJ	C22-C23-N07	-2.36	121.09	123.97
3	G	1202	QQJ	C33-C32-C31	-2.34	105.60	113.29
3	A	1202	QQJ	C20-C21-C15	-2.32	117.22	120.58
3	F	1202	QQJ	C18-S17-C16	2.30	106.00	102.27
3	F	1202	QQJ	C32-C31-N12	2.27	120.51	114.65
3	E	1202	QQJ	S17-C16-N02	2.25	124.53	119.66
3	B	1202	QQJ	C11-C09-C06	2.24	120.67	118.38
3	B	1202	QQJ	C13-C14-N04	2.24	122.84	119.53
3	F	1202	QQJ	C22-C21-C20	2.22	121.82	119.25
3	D	1202	QQJ	C28-N12-C31	-2.22	123.59	127.52
3	C	1202	QQJ	S17-C16-N02	2.22	124.46	119.66
3	A	1202	QQJ	C29-O05-C26	-2.21	114.27	117.51
3	C	1202	QQJ	C22-C21-C20	2.21	121.80	119.25
3	A	1202	QQJ	C20-C19-N07	-2.20	120.03	122.92
3	A	1202	QQJ	C22-C21-C20	2.19	121.79	119.25
3	D	1202	QQJ	O05-C26-C27	2.19	117.54	114.81
3	A	1202	QQJ	C09-C11-C13	-2.18	118.47	120.80
3	E	1202	QQJ	C20-C19-N07	-2.17	120.08	122.92
3	G	1202	QQJ	C20-C21-C15	-2.10	117.52	120.58
3	F	1202	QQJ	C21-C15-C14	-2.10	129.43	133.06
3	B	1202	QQJ	O05-C26-C25	-2.10	120.76	124.30
3	E	1202	QQJ	O05-C26-C25	-2.07	120.81	124.30
3	C	1202	QQJ	O05-C26-C25	-2.07	120.81	124.30
3	B	1202	QQJ	C14-C15-N02	2.06	108.14	105.63
3	D	1202	QQJ	C22-C21-C15	2.05	123.20	120.76
3	H	1202	QQJ	C13-C14-C15	-2.04	127.44	130.43
3	F	1202	QQJ	S17-C16-N02	2.04	124.08	119.66

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1202	QQJ	N02-C16-S17-C18
3	E	1202	QQJ	N02-C16-S17-C18
3	F	1202	QQJ	N02-C16-S17-C18
3	F	1202	QQJ	N04-C16-S17-C18
3	H	1202	QQJ	N02-C16-S17-C18
3	H	1202	QQJ	N04-C16-S17-C18
3	H	1202	QQJ	C27-C26-O05-C29
3	F	1202	QQJ	C27-C26-O05-C29
3	H	1202	QQJ	C25-C26-O05-C29
3	D	1202	QQJ	C27-C26-O05-C29
3	F	1202	QQJ	C25-C26-O05-C29
3	D	1202	QQJ	C25-C26-O05-C29
3	C	1202	QQJ	N04-C16-S17-C18
3	G	1202	QQJ	N04-C16-S17-C18
3	E	1202	QQJ	N12-C31-C32-C33
3	F	1202	QQJ	N12-C31-C32-C33
3	D	1202	QQJ	N04-C16-S17-C18
3	A	1202	QQJ	N04-C16-S17-C18
3	C	1202	QQJ	N02-C16-S17-C18
3	G	1202	QQJ	N02-C16-S17-C18
3	E	1202	QQJ	O08-C31-C32-C33
3	F	1202	QQJ	O08-C31-C32-C33
3	H	1202	QQJ	O08-C31-C32-C33
3	G	1202	QQJ	N12-C31-C32-C33
3	G	1202	QQJ	O08-C31-C32-C33
3	D	1202	QQJ	N02-C16-S17-C18
3	E	1202	QQJ	N04-C16-S17-C18

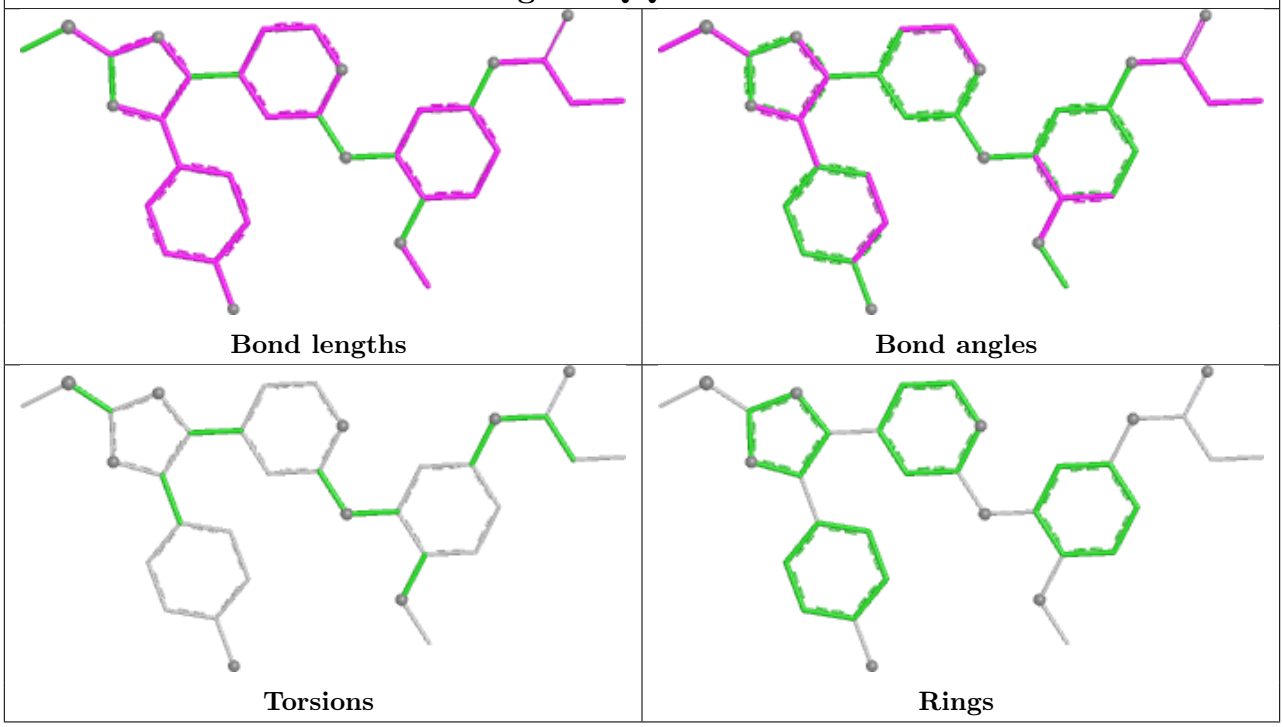
There are no ring outliers.

8 monomers are involved in 24 short contacts:

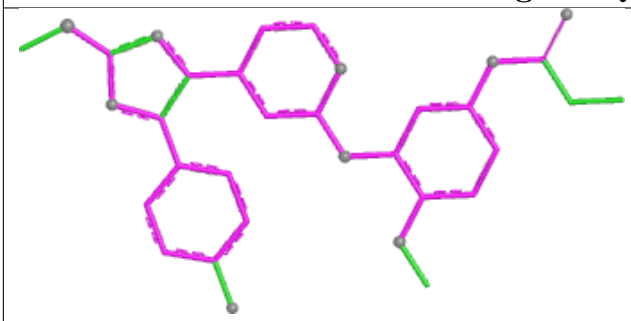
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	1202	QQJ	2	0
3	G	1202	QQJ	3	0
3	F	1202	QQJ	5	0
3	D	1202	QQJ	4	0
3	A	1202	QQJ	2	0
3	C	1202	QQJ	1	0
3	E	1202	QQJ	2	0
3	H	1202	QQJ	5	0

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.

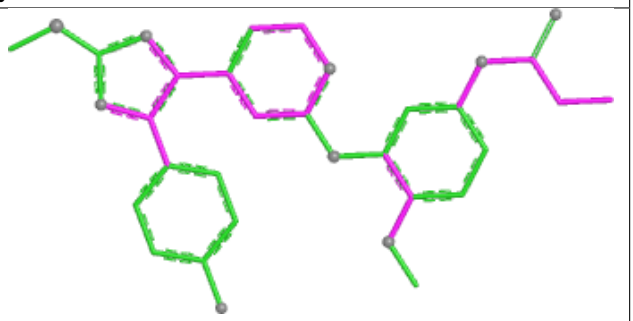
Ligand QQJ B 1202



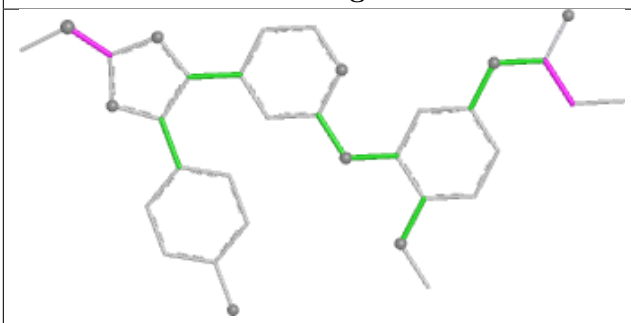
Ligand QQJ G 1202



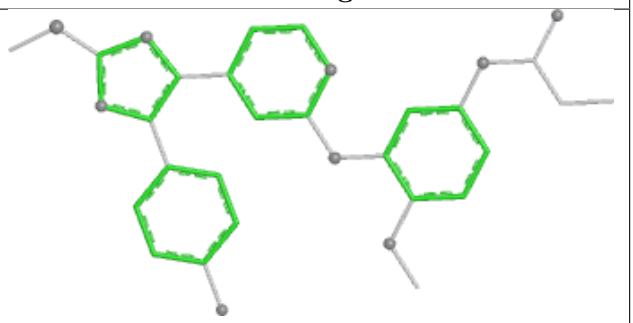
Bond lengths



Bond angles

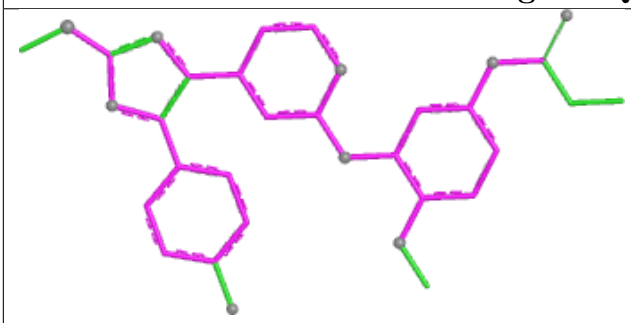


Torsions

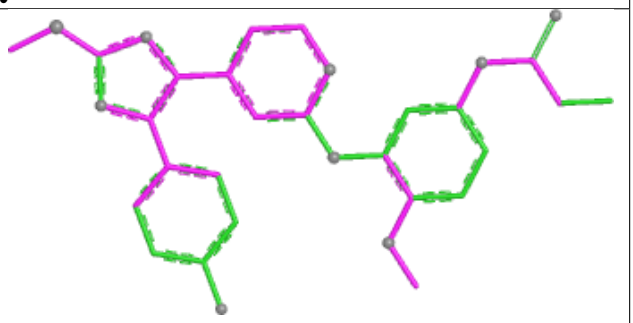


Rings

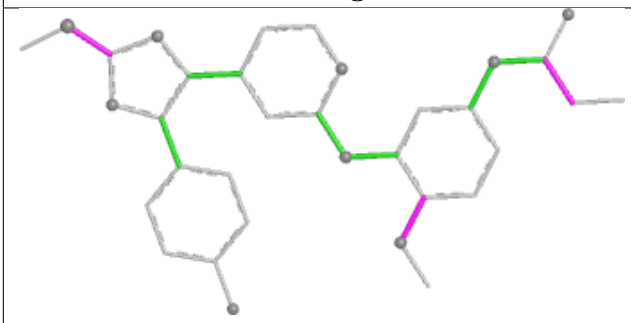
Ligand QQJ F 1202



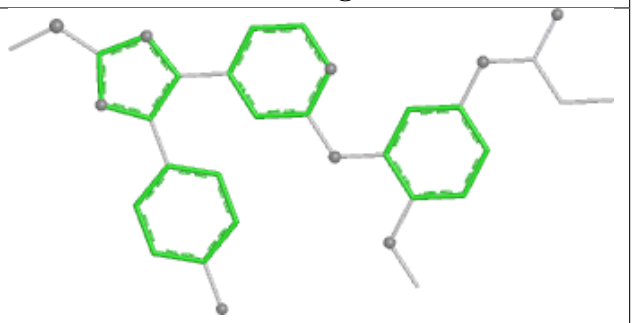
Bond lengths



Bond angles

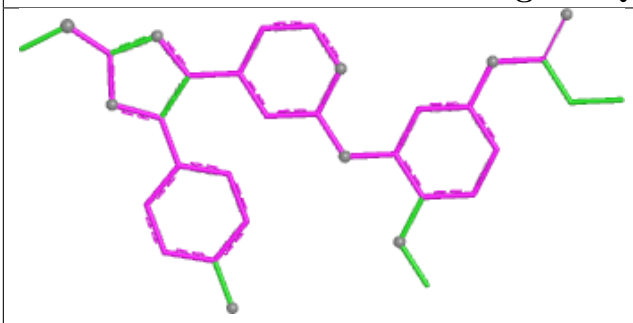


Torsions

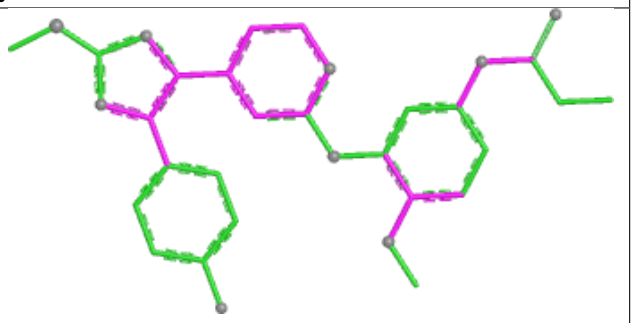


Rings

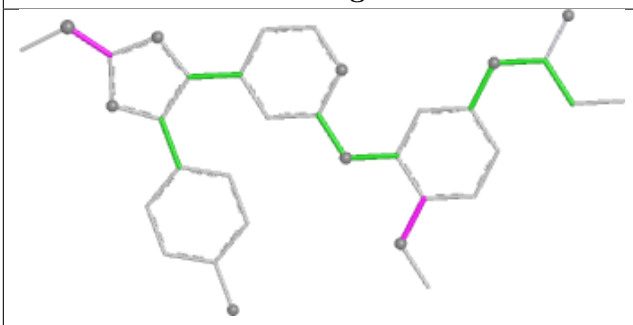
Ligand QQJ D 1202



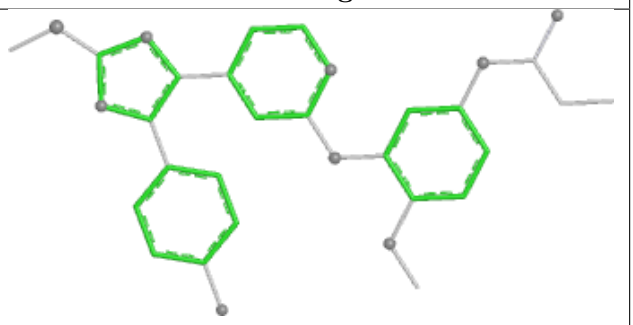
Bond lengths



Bond angles

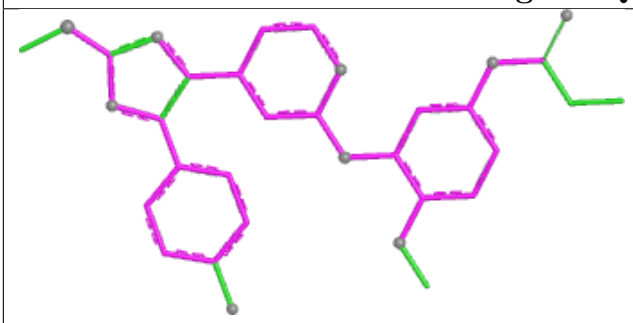


Torsions

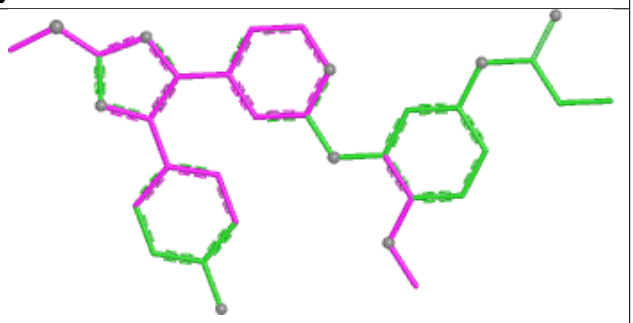


Rings

Ligand QQJ A 1202



Bond lengths



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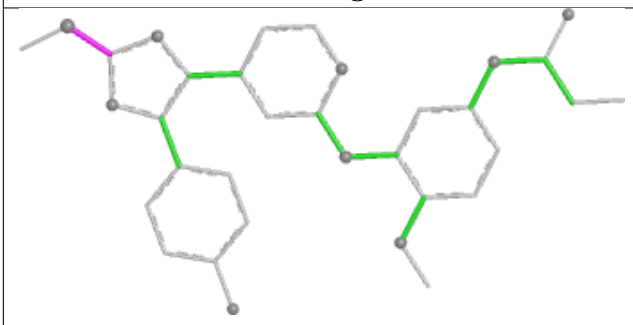
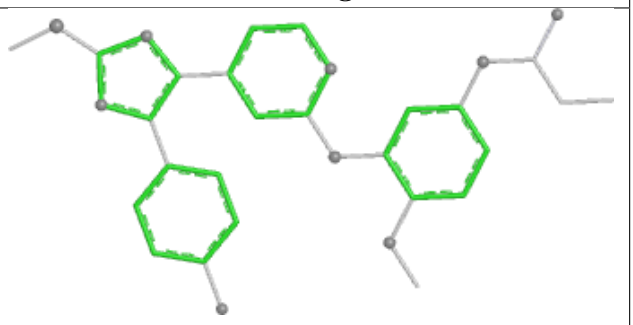
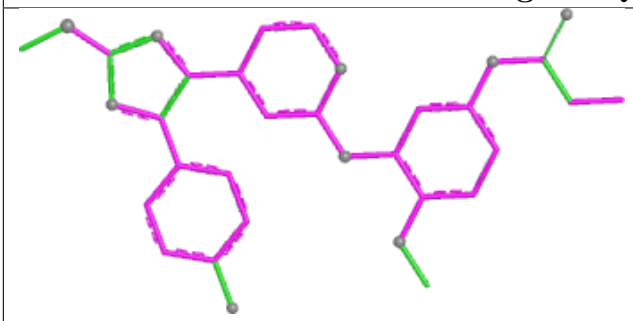


Torsions

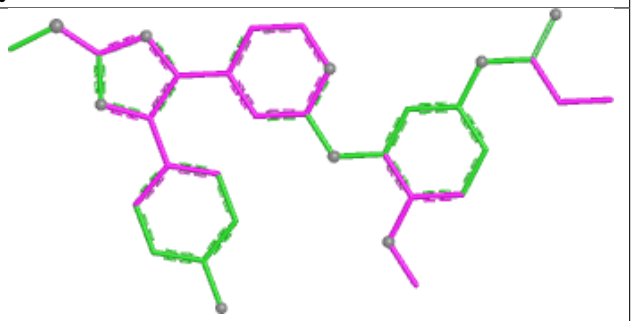


Rings

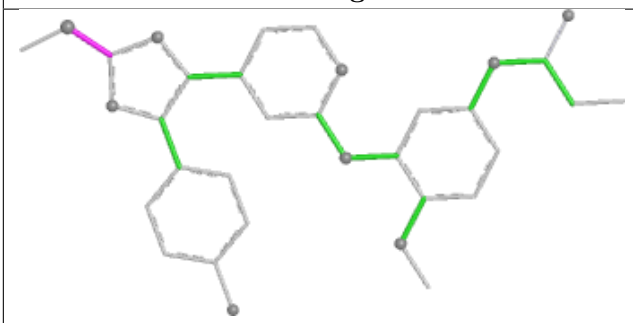
Ligand QQJ C 1202



Bond lengths



Bond angles



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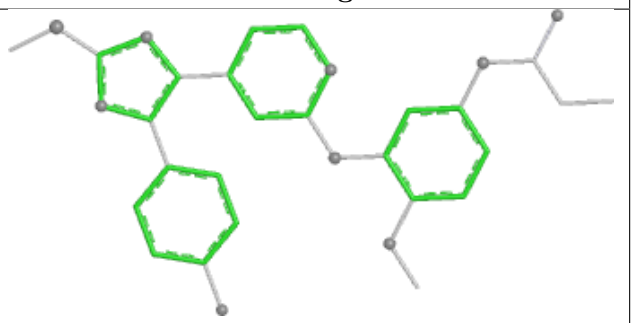
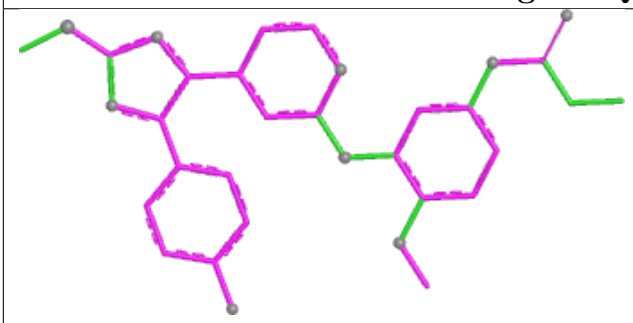


Rings

Ligand QQJ E 1202



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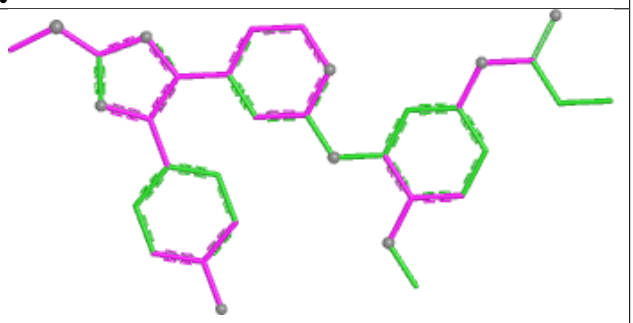
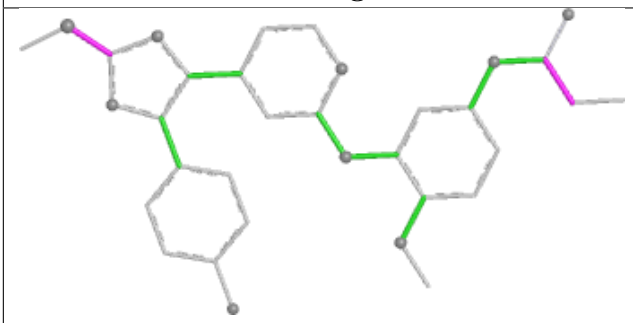


Bond angles



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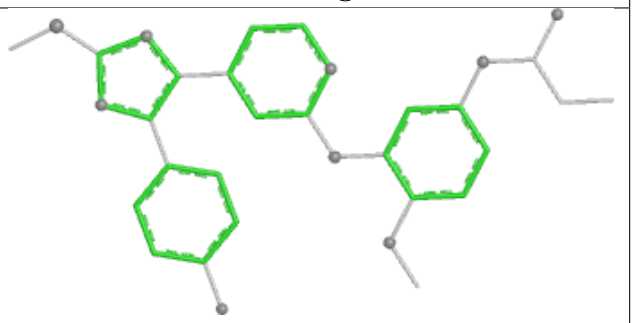
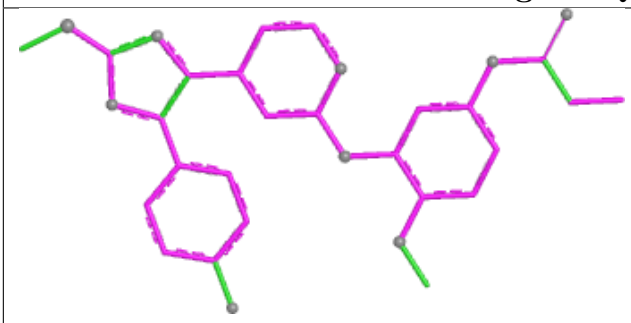
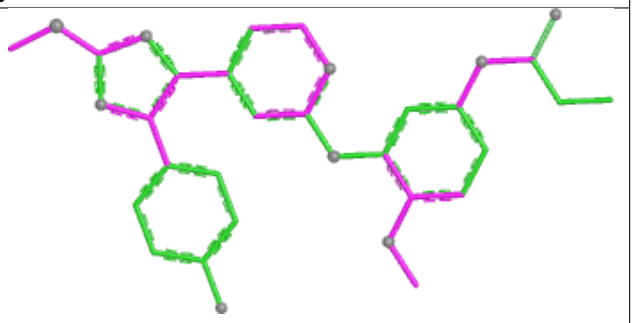


Rings

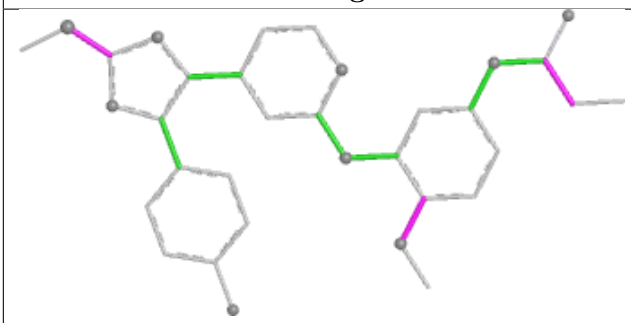
Ligand QQJ H 1202



Bond lengths



Bond angles



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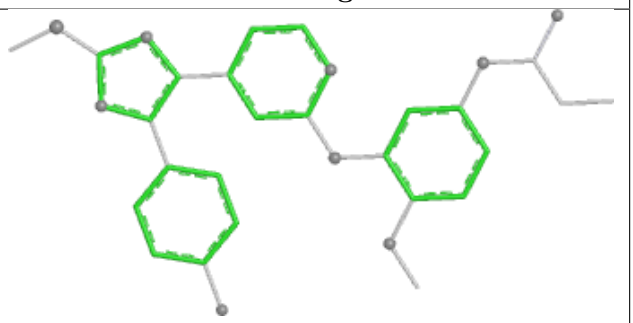

Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

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	300/327 (91%)	0.38	17 (5%)	29	26	18, 32, 57, 75	1 (0%)
1	B	301/327 (92%)	0.49	17 (5%)	30	27	18, 35, 61, 98	0
1	C	302/327 (92%)	0.20	12 (3%)	42	39	16, 30, 60, 87	1 (0%)
1	D	314/327 (96%)	0.39	26 (8%)	17	15	16, 33, 71, 92	0
1	E	303/327 (92%)	0.72	37 (12%)	8	6	16, 37, 76, 96	1 (0%)
1	F	306/327 (93%)	0.37	17 (5%)	30	27	16, 33, 64, 104	0
1	G	314/327 (96%)	0.49	21 (6%)	24	21	18, 35, 66, 84	1 (0%)
1	H	314/327 (96%)	0.50	13 (4%)	41	38	18, 34, 55, 70	1 (0%)
All	All	2454/2616 (93%)	0.44	160 (6%)	25	22	16, 34, 63, 104	5 (0%)

All (160) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	864	ALA	5.5
1	E	1013	ALA	4.6
1	D	873	GLY	4.6
1	E	1012	ASP	4.5
1	F	873	GLY	4.2
1	F	1011	VAL	4.1
1	D	1011	VAL	4.1
1	B	1013	ALA	4.1
1	F	1007	MET	4.0
1	F	1010	VAL	3.9
1	H	874	GLY	3.9
1	D	870	HIS	3.8
1	D	1013	ALA	3.8
1	A	750	ALA	3.8
1	D	871	ALA	3.6
1	E	1011	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
1	D	874	GLY	3.6
1	H	873	GLY	3.6
1	B	807	ASP	3.5
1	E	751	THR	3.5
1	A	922[A]	GLU	3.5
1	B	986	ARG	3.5
1	E	723	PHE	3.5
1	F	872	GLU	3.5
1	G	753	PRO	3.5
1	F	1009	ASP	3.5
1	E	987	MET	3.4
1	D	1010	VAL	3.4
1	D	764	TYR	3.4
1	A	987	MET	3.3
1	F	753	PRO	3.3
1	E	1007	MET	3.3
1	B	1010	VAL	3.3
1	G	1013	ALA	3.3
1	E	1009	ASP	3.3
1	F	1008	ASP	3.2
1	B	1012	ASP	3.2
1	E	807	ASP	3.2
1	E	939	CYS	3.1
1	B	988	HIS	3.1
1	E	989	LEU	3.1
1	E	922[A]	GLU	3.1
1	F	1012	ASP	3.1
1	E	1010	VAL	3.1
1	D	864	ALA	3.1
1	H	922[A]	GLU	3.0
1	G	784	SER	3.0
1	C	700	ASN	3.0
1	G	874	GLY	3.0
1	F	1013	ALA	2.9
1	B	750	ALA	2.9
1	E	750	ALA	2.9
1	E	876	VAL	2.9
1	D	1009	ASP	2.9
1	G	916	ASP	2.9
1	E	988	HIS	2.8
1	E	861	LEU	2.8
1	F	750	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
1	G	755	ALA	2.8
1	E	980	VAL	2.8
1	B	700	ASN	2.7
1	B	761	ASP	2.7
1	A	1013	ALA	2.7
1	A	752	SER	2.7
1	E	722	ALA	2.7
1	E	716	LYS	2.7
1	G	872	GLU	2.7
1	C	734	GLU	2.7
1	A	755	ALA	2.6
1	H	702	ALA	2.6
1	E	806	LYS	2.6
1	F	1014	ASP	2.6
1	E	859	ALA	2.6
1	C	751	THR	2.6
1	E	992	PRO	2.6
1	G	722	ALA	2.6
1	D	1012	ASP	2.6
1	F	863	GLY	2.6
1	H	941	ILE	2.6
1	G	1012	ASP	2.5
1	A	983	GLY	2.5
1	H	875	LYS	2.5
1	G	785	THR	2.5
1	A	756	ASN	2.5
1	A	988	HIS	2.5
1	B	990	PRO	2.5
1	G	701	GLN	2.5
1	G	875	LYS	2.4
1	E	975	PRO	2.4
1	G	864	ALA	2.4
1	H	871	ALA	2.4
1	H	1013	ALA	2.4
1	B	1007	MET	2.4
1	G	750	ALA	2.4
1	H	701	GLN	2.4
1	B	1009	ASP	2.4
1	D	753	PRO	2.4
1	E	983	GLY	2.4
1	D	1002	MET	2.4
1	G	1007	MET	2.4

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Mol	Chain	Res	Type	RSRZ
1	G	1011	VAL	2.4
1	D	1008	ASP	2.3
1	B	1006	ASP	2.3
1	E	863	GLY	2.3
1	C	750	ALA	2.3
1	A	1011	VAL	2.3
1	D	872	GLU	2.3
1	E	994	ASP	2.3
1	F	735	GLY	2.3
1	D	1007	MET	2.3
1	C	1002	MET	2.3
1	A	982	GLN	2.3
1	H	786	VAL	2.3
1	A	1012	ASP	2.3
1	G	1009	ASP	2.3
1	D	869	TYR	2.3
1	D	755	ALA	2.3
1	E	976	GLN	2.3
1	G	1008	ASP	2.3
1	F	874	GLY	2.3
1	B	987	MET	2.2
1	A	751	THR	2.2
1	D	759	ILE	2.2
1	H	1006	ASP	2.2
1	D	1014	ASP	2.2
1	F	748	ARG	2.2
1	C	1013	ALA	2.2
1	G	715	ILE	2.2
1	D	808	ASN	2.2
1	D	856	PHE	2.2
1	A	700	ASN	2.2
1	E	719	GLY	2.2
1	D	751	THR	2.2
1	E	981	ILE	2.1
1	C	807	ASP	2.1
1	G	917	GLY	2.1
1	E	735	GLY	2.1
1	E	737	LYS	2.1
1	C	1008	ASP	2.1
1	C	1012	ASP	2.1
1	E	809	ILE	2.1
1	C	986	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	970	LYS	2.1
1	C	987	MET	2.1
1	A	931	GLU	2.1
1	H	872	GLU	2.1
1	C	982	GLN	2.1
1	H	962	ARG	2.1
1	D	760	LEU	2.0
1	B	1014	ASP	2.0
1	E	808	ASN	2.0
1	B	723	PHE	2.0
1	E	993	THR	2.0
1	F	752	SER	2.0
1	D	701	GLN	2.0
1	E	982	GLN	2.0
1	G	1014	ASP	2.0
1	A	990	PRO	2.0
1	D	867	LYS	2.0
1	A	970	LYS	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	CL	E	1201	1/1	0.79	0.15	70,70,70,70	0
2	CL	B	1201	1/1	0.87	0.15	60,60,60,60	0
3	QQJ	G	1202	34/34	0.89	0.11	22,34,39,43	0
3	QQJ	H	1202	34/34	0.90	0.11	25,31,39,56	0
3	QQJ	E	1202	34/34	0.91	0.10	24,30,44,46	0

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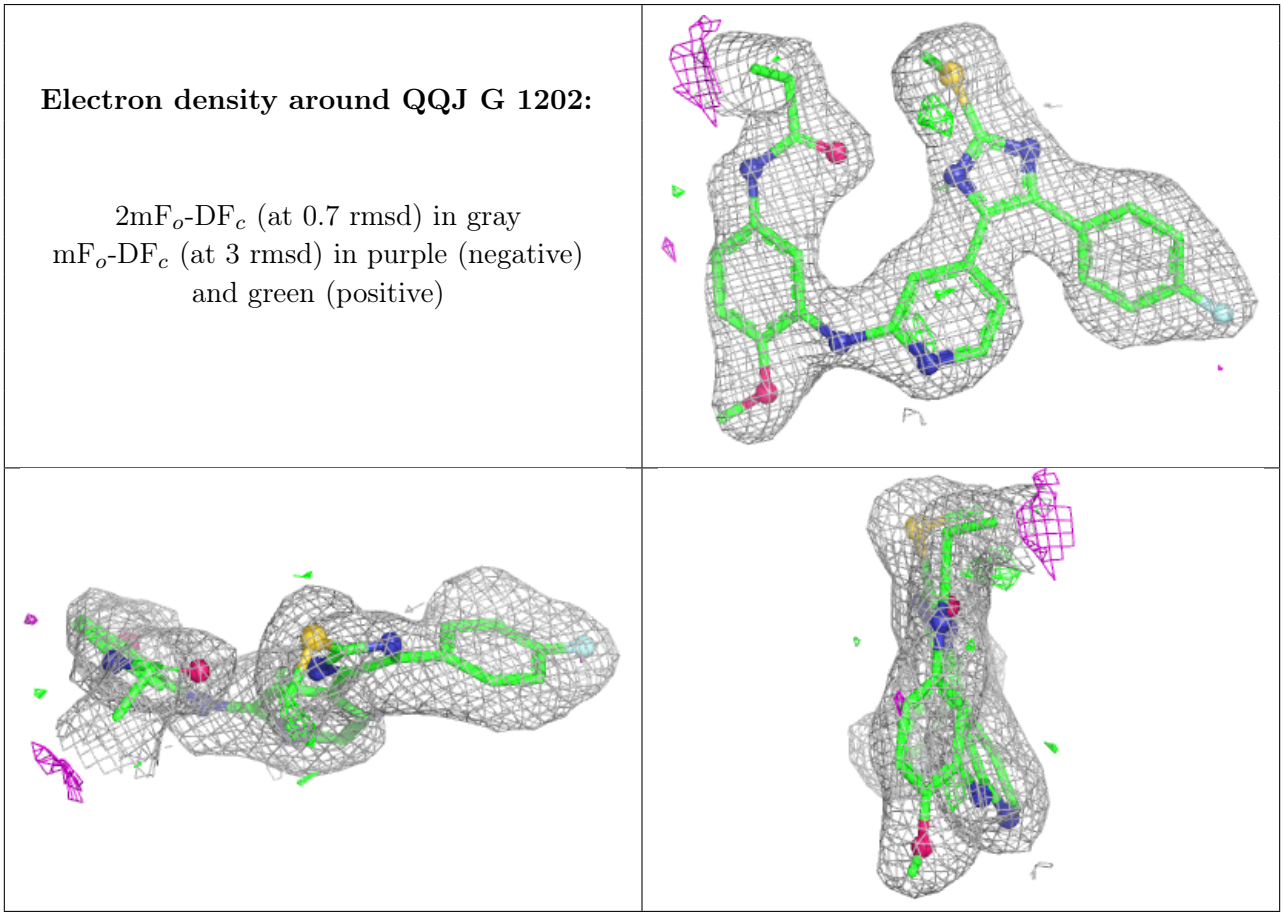
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	QQJ	D	1202	34/34	0.92	0.10	18,27,34,41	0
3	QQJ	F	1202	34/34	0.92	0.10	20,25,34,39	0
3	QQJ	A	1202	34/34	0.93	0.08	20,23,28,29	0
3	QQJ	C	1202	34/34	0.93	0.09	19,26,30,33	0
2	CL	F	1201	1/1	0.94	0.09	41,41,41,41	0
3	QQJ	B	1202	34/34	0.95	0.08	20,27,31,43	0
2	CL	A	1201	1/1	0.96	0.06	41,41,41,41	0
2	CL	C	1201	1/1	0.96	0.06	39,39,39,39	0
2	CL	G	1201	1/1	0.96	0.09	44,44,44,44	0
2	CL	H	1201	1/1	0.96	0.07	38,38,38,38	0
2	CL	D	1201	1/1	0.97	0.05	43,43,43,43	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.

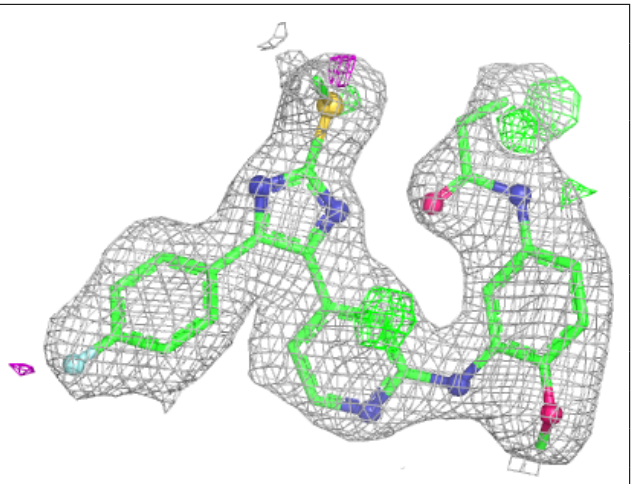
Electron density around QQJ G 1202:

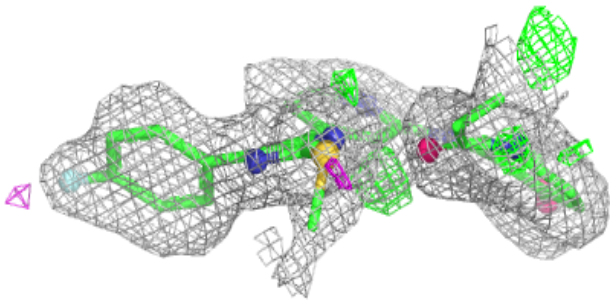
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

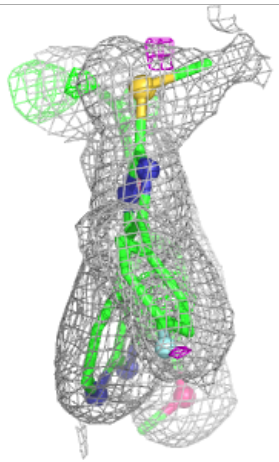


Electron density around QQJ H 1202:

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

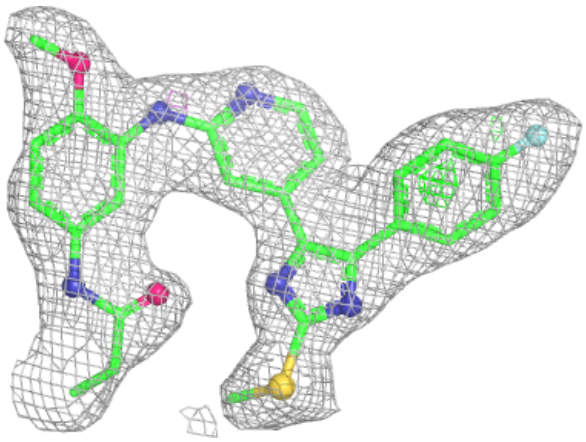


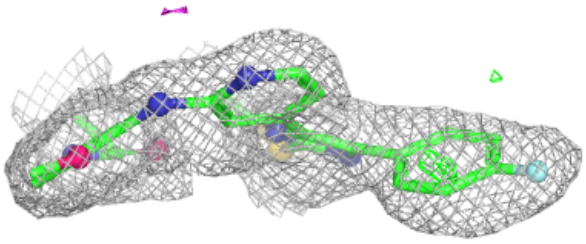


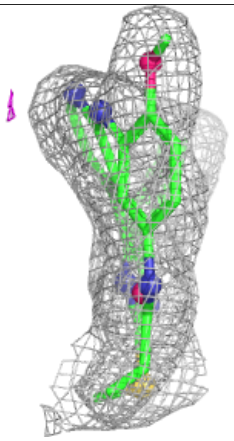


Electron density around QQJ E 1202:

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

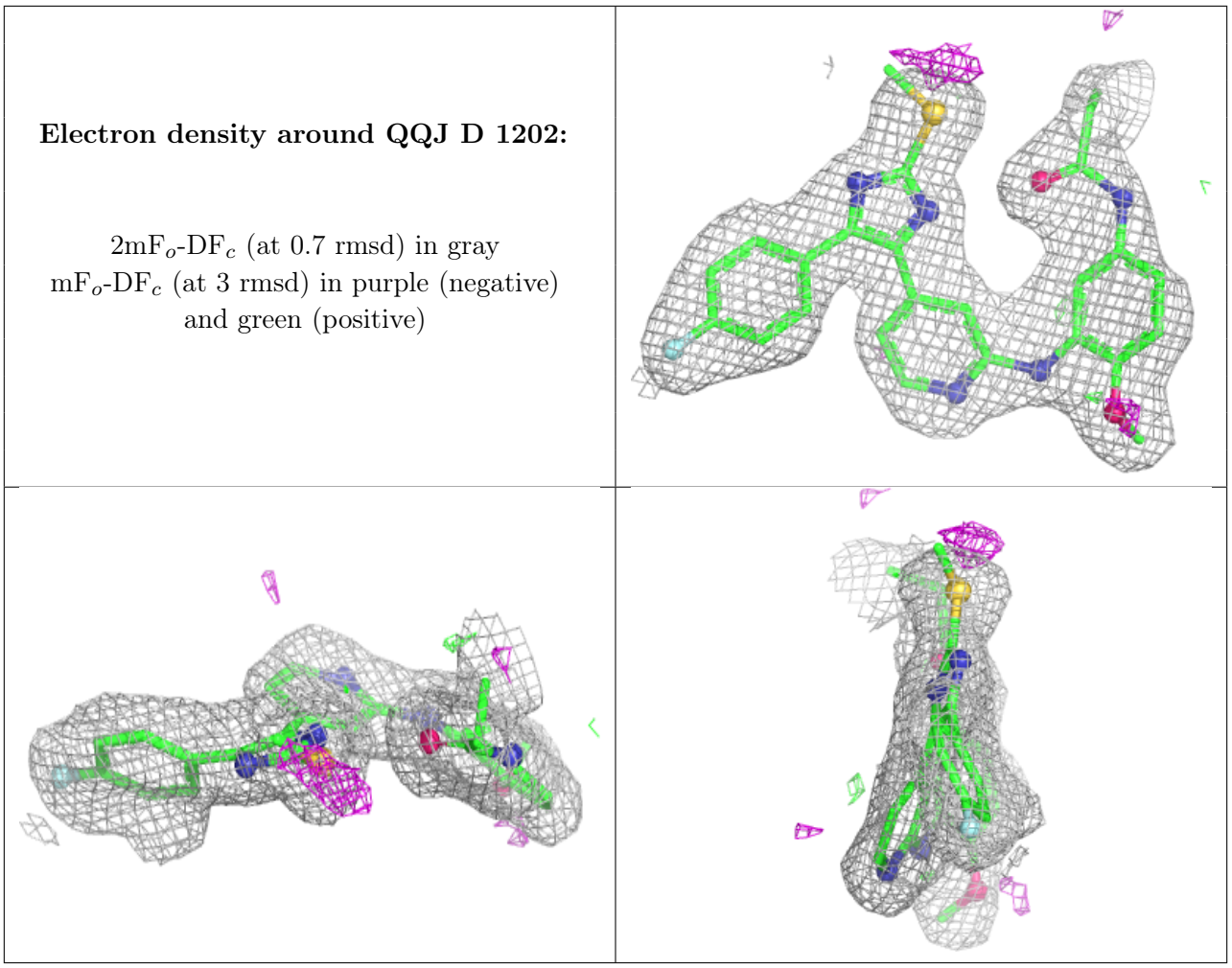






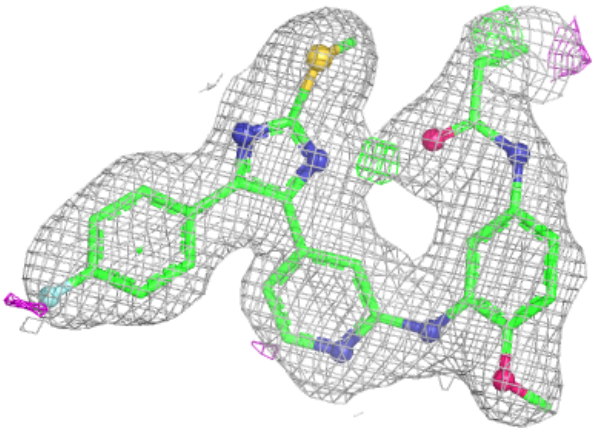
Electron density around QQJ D 1202:

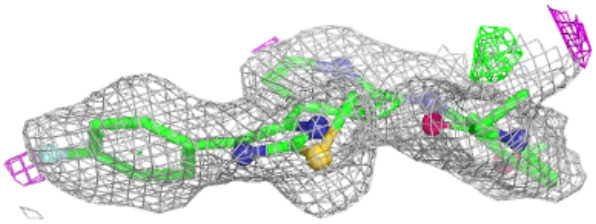
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

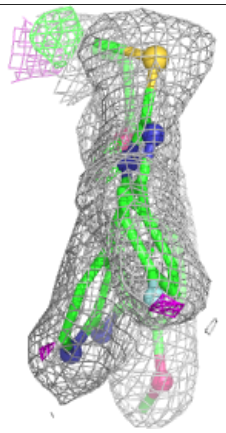


Electron density around QQJ F 1202:

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

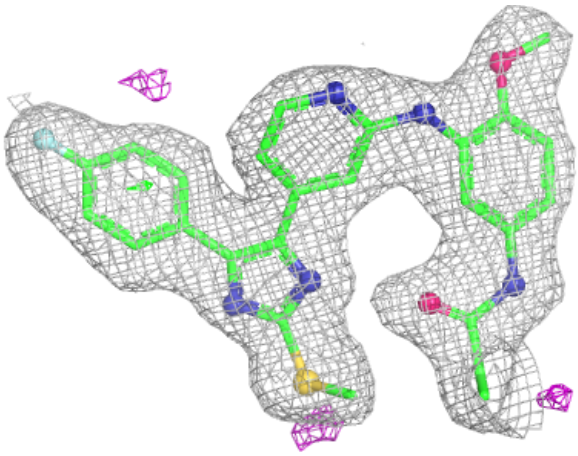


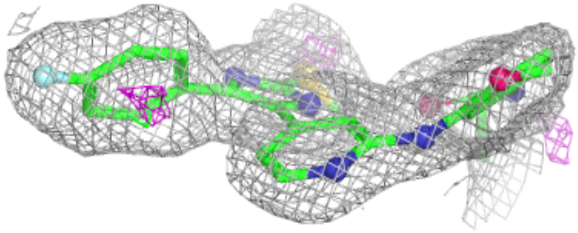


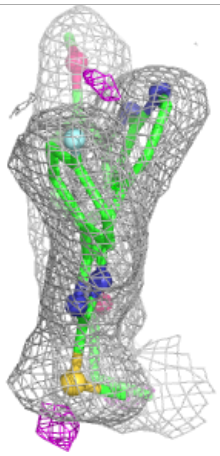


Electron density around QQJ A 1202:

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

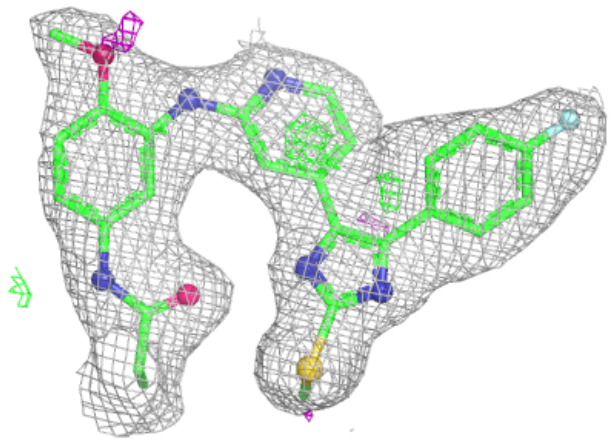


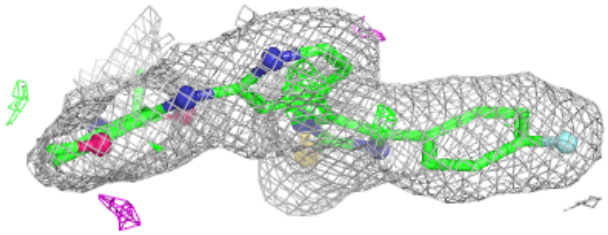


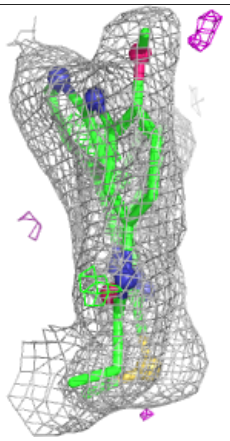


Electron density around QQJ C 1202:

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

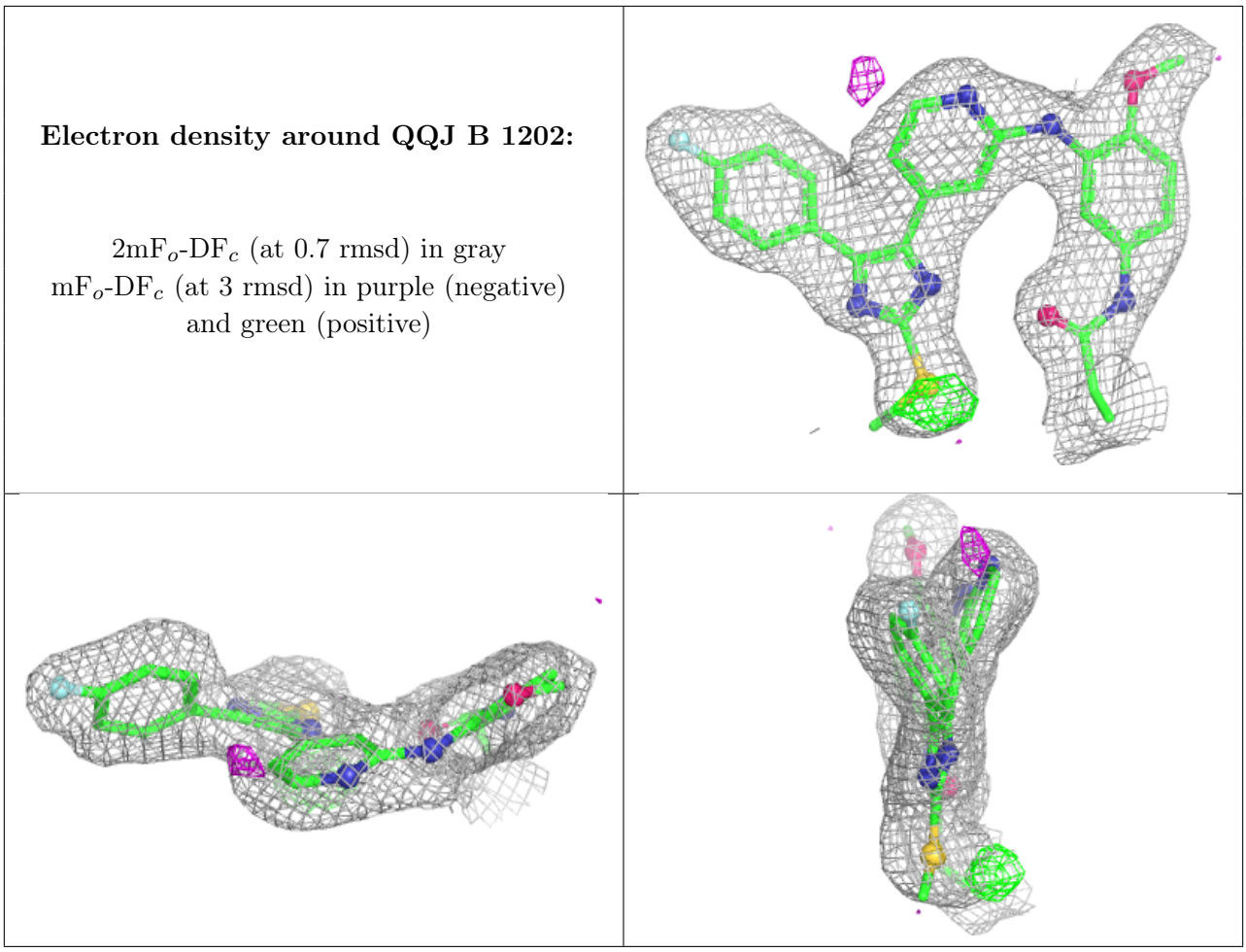






Electron density around QQJ B 1202:

$2mF_o$-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.