



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 28, 2020 – 06:17 PM BST

PDB ID : 6TFN
Title : Linalool Dehydratase Isomerase in complex with Myrcene
Authors : Cuetos, A.; Zukic, E.; Danesh-Azari, H.R.; Grogan, G.
Deposited on : 2019-11-14
Resolution : 2.18 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.14.6
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.14.6

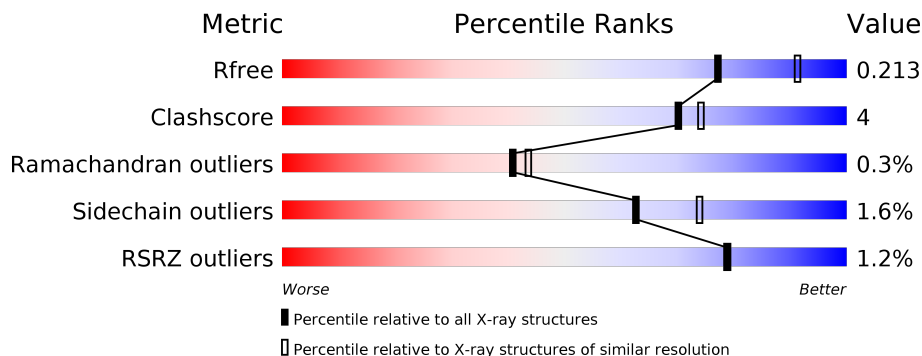
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.18 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.



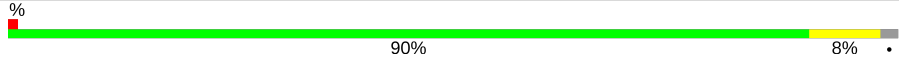

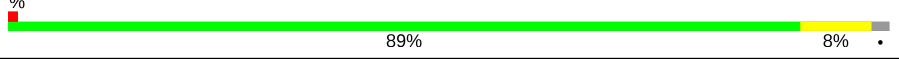

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	6864 (2.20-2.16)
Clashscore	141614	7689 (2.20-2.16)
Ramachandran outliers	138981	7564 (2.20-2.16)
Sidechain outliers	138945	7564 (2.20-2.16)
RSRZ outliers	127900	6738 (2.20-2.16)

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

Mol	Chain	Length	Quality of chain
1	A	372	 3% 89% 8% •
1	B	372	 % 90% 7% •
1	C	372	 % 89% 8% •
1	D	372	 2% 89% 8% •
1	E	372	 % 89% 8% ••
1	F	372	 2% 90% 8% •

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Mol	Chain	Length	Quality of chain
1	G	372	 <p>% 90% 8% •</p>
1	H	372	 <p>% 88% 9% ••</p>
1	I	372	 <p>% 89% 8% •</p>
1	J	372	 <p>% 90% 8% •</p>

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 29676 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 Linalool dehydratase-isomerase protein LDI.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	362	2830	1837	470	510	13	0	0	0
1	B	362	2844	1845	471	515	13	0	0	0
1	C	362	2859	1854	471	521	13	0	0	0
1	D	361	2838	1845	460	519	14	0	1	0
1	E	364	2872	1861	477	521	13	0	0	0
1	F	361	2846	1844	472	517	13	0	0	0
1	G	364	2869	1858	477	521	13	0	0	0
1	H	363	2904	1877	487	526	14	0	2	0
1	I	363	2896	1872	483	527	14	0	1	0
1	J	364	2894	1872	478	530	14	0	1	0

There are 10 discrepancies between the modelled and reference sequences:

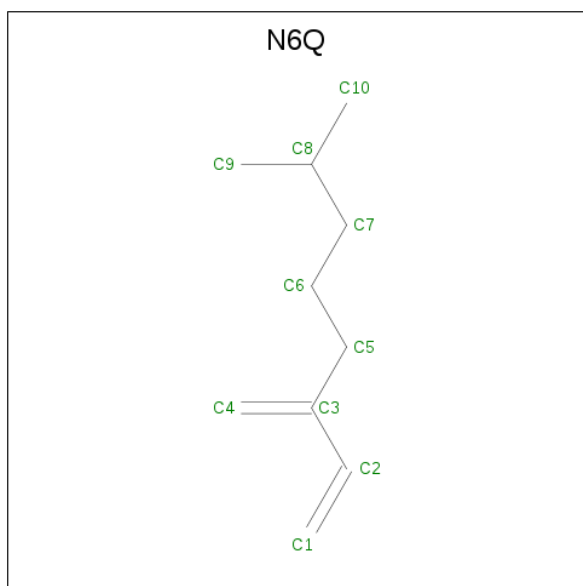
Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP W8X534
B	1	MET	-	initiating methionine	UNP W8X534
C	1	MET	-	initiating methionine	UNP W8X534
D	1	MET	-	initiating methionine	UNP W8X534
E	1	MET	-	initiating methionine	UNP W8X534
F	1	MET	-	initiating methionine	UNP W8X534
G	1	MET	-	initiating methionine	UNP W8X534
H	1	MET	-	initiating methionine	UNP W8X534
I	1	MET	-	initiating methionine	UNP W8X534

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Chain	Residue	Modelled	Actual	Comment	Reference
J	1	MET	-	initiating methionine	UNP W8X534

- Molecule 2 is 7-methyl-3-methylidene-oct-1-ene (three-letter code: N6Q) (formula: C₁₀H₁₈) (labeled as "Ligand of Interest" by author).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	D	1	Total C 10 10	0	0
2	F	1	Total C 10 10	0	0
2	G	1	Total C 10 10	0	0
2	H	1	Total C 10 10	0	0
2	I	1	Total C 10 10	0	0
2	J	1	Total C 10 10	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	32	Total O 32 32	0	0
3	B	63	Total O 63 63	0	0

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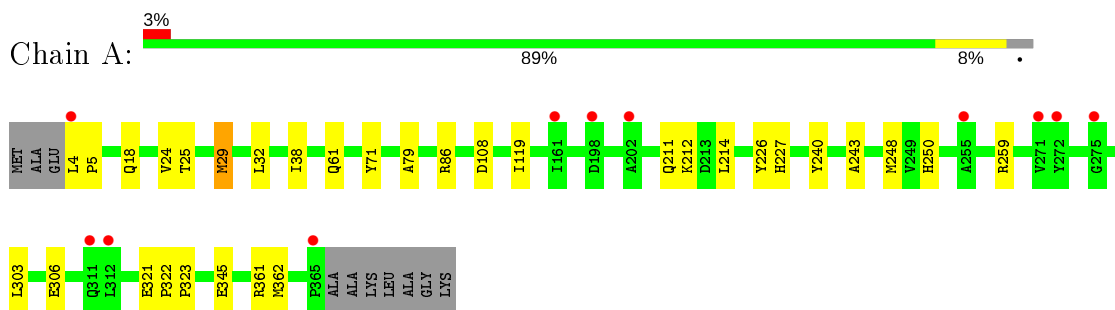
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	C	70	Total 70	O 70	0	0
3	D	37	Total 37	O 37	0	0
3	E	68	Total 68	O 68	0	0
3	F	81	Total 81	O 81	0	0
3	G	144	Total 144	O 144	0	0
3	H	172	Total 172	O 172	0	0
3	I	134	Total 134	O 134	0	0
3	J	163	Total 163	O 163	0	0

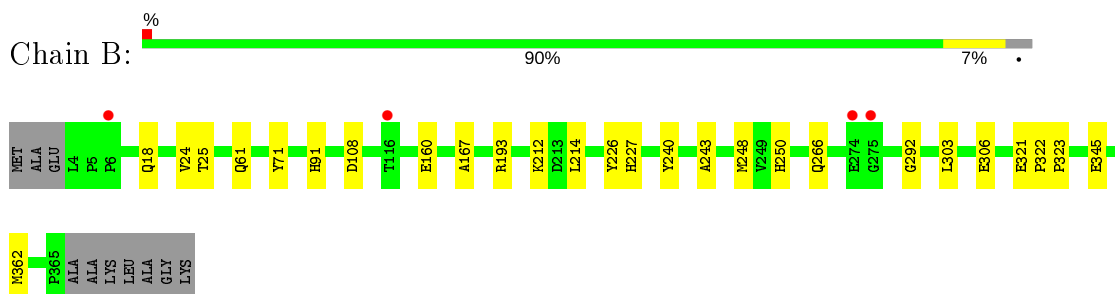
3 Residue-property plots [i](#)

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.

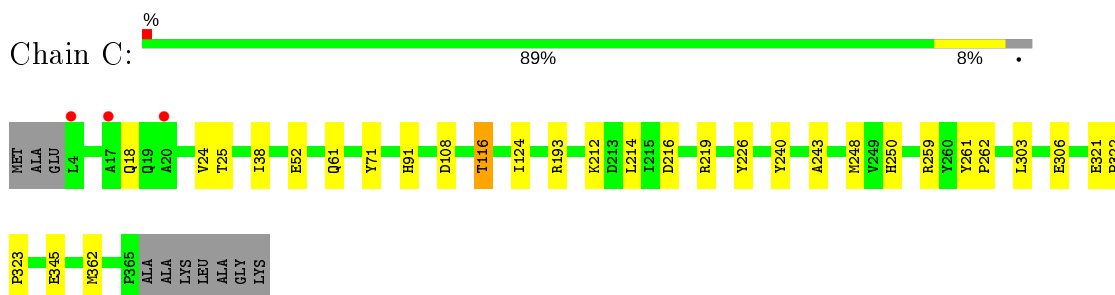
- Molecule 1: Linalool dehydratase-isomerase protein LDI



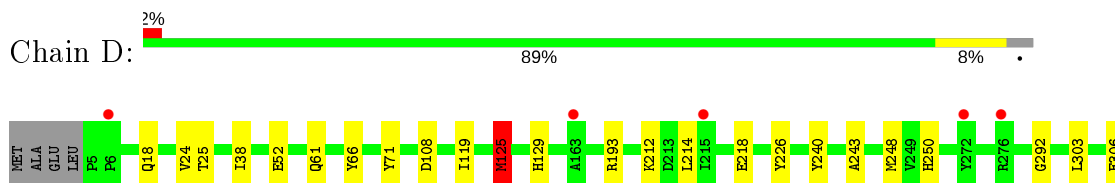
- Molecule 1: Linalool dehydratase-isomerase protein LDI

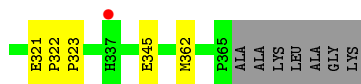


- Molecule 1: Linalool dehydratase-isomerase protein LDI

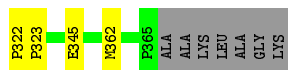
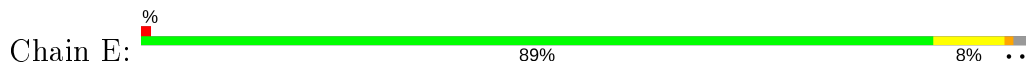


- Molecule 1: Linalool dehydratase-isomerase protein LDI

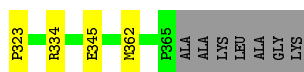
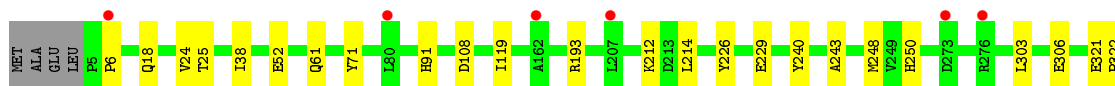
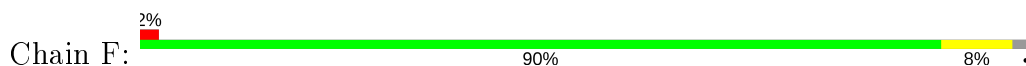




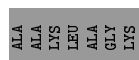
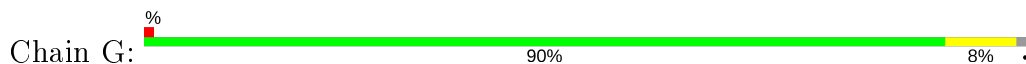
- Molecule 1: Linalool dehydratase-isomerase protein LDI



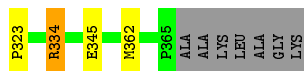
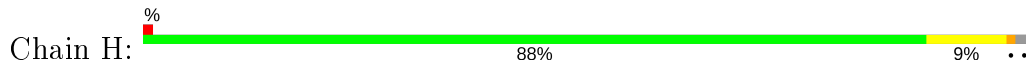
- Molecule 1: Linalool dehydratase-isomerase protein LDI



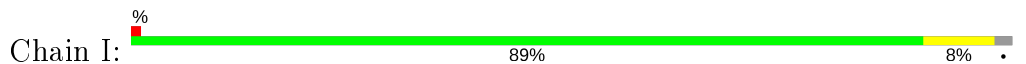
- Molecule 1: Linalool dehydratase-isomerase protein LDI

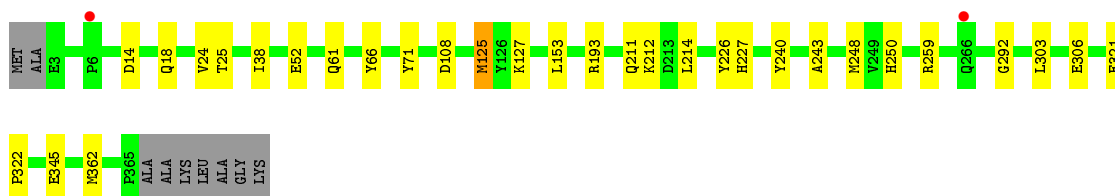


- Molecule 1: Linalool dehydratase-isomerase protein LDI

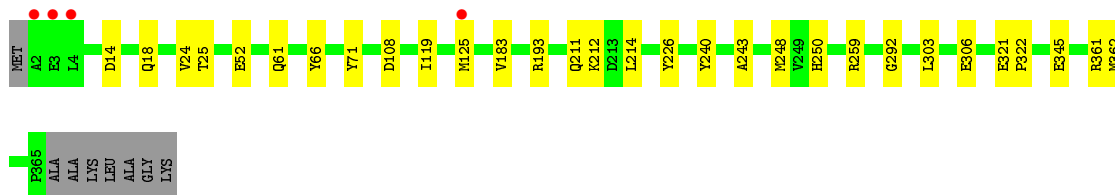
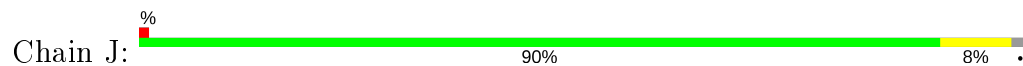


- Molecule 1: Linalool dehydratase-isomerase protein LDI





• Molecule 1: Linalool dehydratase-isomerase protein LDI



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	87.78Å 110.44Å 236.49Å 90.00° 99.20° 90.00°	Depositor
Resolution (Å)	49.97 – 2.18 49.92 – 2.18	Depositor EDS
% Data completeness (in resolution range)	98.6 (49.97-2.18) 98.6 (49.92-2.18)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.11 (at 2.18Å)	Xtrriage
Refinement program	REFMAC 5.8.0238	Depositor
R, R_{free}	0.189 , 0.209 0.195 , 0.213	Depositor DCC
R_{free} test set	11484 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	32.4	Xtrriage
Anisotropy	0.101	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 30.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.000 for h,-k,-h-l	Xtrriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	29676	wwPDB-VP
Average B, all atoms (Å ²)	38.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 37.18 % 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 4.4591e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: N6Q

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	0.67	0/2915	0.73	0/3973
1	B	0.67	0/2930	0.74	0/3992
1	C	0.65	0/2945	0.75	1/4011 (0.0%)
1	D	0.66	0/2924	0.73	2/3983 (0.1%)
1	E	0.67	0/2958	0.76	1/4028 (0.0%)
1	F	0.67	0/2931	0.75	0/3990
1	G	0.70	0/2954	0.77	2/4023 (0.0%)
1	H	0.69	0/2990	0.78	0/4067
1	I	0.68	0/2982	0.76	0/4057
1	J	0.71	0/2980	0.77	0/4056
All	All	0.68	0/29509	0.75	6/40180 (0.0%)

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	116	THR	CA-CB-OG1	-5.82	96.78	109.00
1	D	125[A]	MET	CB-CG-SD	5.57	129.11	112.40
1	D	125[B]	MET	CB-CG-SD	5.57	129.11	112.40
1	G	259	ARG	NE-CZ-NH2	-5.12	117.74	120.30
1	E	219	ARG	NE-CZ-NH2	5.08	122.84	120.30
1	G	259	ARG	CG-CD-NE	-5.02	101.26	111.80

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	2830	0	2694	18	0
1	B	2844	0	2711	15	0
1	C	2859	0	2732	17	0
1	D	2838	0	2695	19	0
1	E	2872	0	2751	29	0
1	F	2846	0	2715	15	0
1	G	2869	0	2741	19	0
1	H	2904	0	2792	25	0
1	I	2896	0	2782	26	0
1	J	2894	0	2771	31	0
2	D	10	0	0	0	0
2	F	10	0	0	0	0
2	G	10	0	0	0	0
2	H	10	0	0	0	0
2	I	10	0	0	0	0
2	J	10	0	0	0	0
3	A	32	0	0	0	0
3	B	63	0	0	2	0
3	C	70	0	0	1	0
3	D	37	0	0	1	0
3	E	68	0	0	0	0
3	F	81	0	0	1	0
3	G	144	0	0	2	0
3	H	172	0	0	4	0
3	I	134	0	0	2	0
3	J	163	0	0	3	0
All	All	29676	0	27384	204	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 4.

All (204) 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:J:125[B]:MET:HA	1:J:125[B]:MET:HE3	1.43	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:125[B]:MET:CE	1:J:125[B]:MET:HA	1.91	0.99
1:G:229:GLU:CG	3:H:644:HOH:O	2.17	0.93
1:G:156:ILE:CB	1:G:156:ILE:CD1	2.50	0.89
1:D:125[B]:MET:CE	1:D:125[B]:MET:HA	2.11	0.81
1:I:125[B]:MET:CE	1:I:125[B]:MET:HA	2.11	0.81
1:G:47:ARG:NH2	1:G:145:ARG:NH2	2.30	0.80
1:G:174:ASP:OD2	3:G:501:HOH:O	2.00	0.79
1:G:47:ARG:NH2	1:G:145:ARG:HH21	1.81	0.78
1:E:183:VAL:HG22	1:E:248:MET:HE1	1.63	0.78
1:D:125[B]:MET:HA	1:D:125[B]:MET:HE3	1.67	0.76
1:A:4:LEU:HB3	1:A:5:PRO:HD3	1.68	0.74
1:J:183:VAL:HG22	1:J:248:MET:CE	2.16	0.74
1:E:125:MET:HE2	1:E:129:HIS:CD2	2.21	0.74
1:J:183:VAL:HG22	1:J:248:MET:HE1	1.69	0.74
1:E:183:VAL:HG22	1:E:248:MET:CE	2.17	0.73
1:H:125[A]:MET:CE	1:H:125[A]:MET:HA	2.19	0.73
1:H:125[A]:MET:HA	1:H:125[A]:MET:HE3	1.75	0.69
1:E:183:VAL:HA	1:E:248:MET:CE	2.24	0.68
1:J:183:VAL:HA	1:J:248:MET:CE	2.24	0.68
1:I:125[B]:MET:HE3	1:I:125[B]:MET:HA	1.76	0.67
1:J:361:ARG:HD2	3:J:529:HOH:O	1.94	0.67
1:I:211:GLN:HE22	1:I:259:ARG:HH21	1.43	0.66
1:E:125:MET:CE	1:E:129:HIS:CD2	2.80	0.64
1:D:125[B]:MET:HE2	1:D:125[B]:MET:O	1.99	0.63
1:J:183:VAL:HA	1:J:248:MET:HE1	1.81	0.62
1:E:183:VAL:HA	1:E:248:MET:HE1	1.83	0.61
1:H:125[A]:MET:O	1:H:125[A]:MET:HE2	2.01	0.60
1:B:193:ARG:NH2	1:B:362:MET:O	2.34	0.60
1:F:193:ARG:NH2	1:F:362:MET:O	2.34	0.60
1:E:125:MET:HE1	1:E:129:HIS:NE2	2.17	0.60
1:A:211:GLN:HE22	1:A:259:ARG:HH21	1.48	0.60
1:G:193:ARG:NH2	1:G:362:MET:O	2.36	0.59
1:H:5:PRO:CB	1:H:6:PRO:HD2	2.33	0.59
1:D:193:ARG:NH2	1:D:362:MET:O	2.36	0.59
1:I:250:HIS:HD2	1:I:306:GLU:OE2	1.86	0.59
1:C:250:HIS:HD2	1:C:306:GLU:OE2	1.86	0.59
1:C:193:ARG:NH2	1:C:362:MET:O	2.37	0.58
1:A:250:HIS:HD2	1:A:306:GLU:OE2	1.86	0.58
1:E:193:ARG:NH2	1:E:362:MET:O	2.36	0.58
1:E:250:HIS:HD2	1:E:306:GLU:OE2	1.87	0.58
1:I:18:GLN:HE21	1:I:24:VAL:HA	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:193:ARG:NH2	1:H:362:MET:O	2.36	0.58
1:E:18:GLN:HE21	1:E:24:VAL:HA	1.69	0.58
1:H:18:GLN:HE21	1:H:24:VAL:HA	1.69	0.58
1:H:250:HIS:HD2	1:H:306:GLU:OE2	1.86	0.58
1:J:18:GLN:HE21	1:J:24:VAL:HA	1.69	0.58
1:G:250:HIS:HD2	1:G:306:GLU:OE2	1.86	0.57
1:J:193:ARG:NH2	1:J:362:MET:O	2.37	0.57
1:J:250:HIS:HD2	1:J:306:GLU:OE2	1.88	0.57
1:B:250:HIS:HD2	1:B:306:GLU:OE2	1.86	0.57
1:D:18:GLN:HE21	1:D:24:VAL:HA	1.69	0.57
1:F:250:HIS:HD2	1:F:306:GLU:OE2	1.87	0.57
1:A:18:GLN:HE21	1:A:24:VAL:HA	1.69	0.57
1:B:18:GLN:HE21	1:B:24:VAL:HA	1.70	0.57
1:G:18:GLN:HE21	1:G:24:VAL:HA	1.70	0.57
1:I:193:ARG:NH2	1:I:362:MET:O	2.37	0.57
1:D:250:HIS:HD2	1:D:306:GLU:OE2	1.87	0.57
1:E:125:MET:HE2	1:E:125:MET:O	2.05	0.56
1:F:18:GLN:HE21	1:F:24:VAL:HA	1.70	0.56
1:E:125:MET:CE	1:E:129:HIS:NE2	2.68	0.56
1:E:66:TYR:OH	1:E:125:MET:HG2	2.05	0.56
1:C:18:GLN:HE21	1:C:24:VAL:HA	1.69	0.55
1:G:18:GLN:HE21	1:G:25:THR:H	1.54	0.55
1:A:18:GLN:HE21	1:A:25:THR:H	1.54	0.55
1:B:18:GLN:HE21	1:B:25:THR:H	1.55	0.55
1:E:18:GLN:HE21	1:E:25:THR:H	1.55	0.55
1:F:18:GLN:HE21	1:F:25:THR:H	1.55	0.55
1:J:125[B]:MET:CA	1:J:125[B]:MET:CE	2.77	0.55
1:D:18:GLN:HE21	1:D:25:THR:H	1.55	0.54
1:J:18:GLN:HE21	1:J:25:THR:H	1.54	0.54
1:C:18:GLN:HE21	1:C:25:THR:H	1.55	0.54
1:H:66:TYR:OH	1:H:125[A]:MET:HG2	2.06	0.54
1:I:125[B]:MET:HE2	1:I:125[B]:MET:HA	1.90	0.54
1:J:66:TYR:CE1	1:J:125[B]:MET:HG2	2.43	0.54
1:I:14:ASP:OD2	3:I:501:HOH:O	2.19	0.53
1:F:61:GLN:NE2	3:F:501:HOH:O	2.38	0.53
1:J:125[B]:MET:HE2	1:J:125[B]:MET:HA	1.84	0.53
1:H:18:GLN:HE21	1:H:25:THR:H	1.56	0.52
1:H:5:PRO:HA	3:H:650:HOH:O	2.09	0.52
1:I:125[B]:MET:HE2	1:I:125[B]:MET:O	2.09	0.52
1:I:18:GLN:HE21	1:I:25:THR:H	1.56	0.52
1:D:125[A]:MET:HE1	3:D:532:HOH:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:66:TYR:HE1	1:J:125[B]:MET:CG	2.22	0.52
1:J:14:ASP:OD2	3:J:501:HOH:O	2.19	0.51
1:A:4:LEU:HB3	1:A:5:PRO:CD	2.40	0.51
1:J:125[B]:MET:HE2	1:J:125[B]:MET:O	2.10	0.51
1:H:211:GLN:HE22	1:H:259[A]:ARG:HH21	1.59	0.51
1:A:38:ILE:HG12	1:D:292:GLY:HA2	1.92	0.50
1:B:214:LEU:HD21	1:B:226:TYR:HB2	1.93	0.50
1:J:66:TYR:HE1	1:J:125[B]:MET:HG2	1.77	0.49
1:B:160:GLU:OE2	3:B:401:HOH:O	2.20	0.49
1:G:214:LEU:HD21	1:G:226:TYR:HB2	1.93	0.49
1:I:61:GLN:HE22	1:I:108:ASP:HB3	1.78	0.49
1:J:183:VAL:HG22	1:J:248:MET:HE2	1.93	0.49
1:A:61:GLN:HE22	1:A:108:ASP:HB3	1.78	0.49
1:I:66:TYR:CE1	1:I:125[B]:MET:HG2	2.47	0.48
1:C:214:LEU:HD21	1:C:226:TYR:HB2	1.95	0.48
1:D:66:TYR:OH	1:D:125[B]:MET:HG2	2.12	0.48
1:E:61:GLN:HE22	1:E:108:ASP:HB3	1.77	0.48
1:B:227:HIS:CD2	1:C:91:HIS:CE1	3.01	0.48
1:E:211:GLN:HE22	1:E:259:ARG:NH2	2.12	0.48
1:H:178:VAL:CG1	1:H:245:THR:HG21	2.44	0.48
1:F:229:GLU:OE2	1:G:145:ARG:HD2	2.14	0.47
1:J:61:GLN:HE22	1:J:108:ASP:HB3	1.79	0.47
1:E:214:LEU:HD21	1:E:226:TYR:HB2	1.95	0.47
1:F:61:GLN:HE22	1:F:108:ASP:HB3	1.79	0.47
1:C:61:GLN:HE22	1:C:108:ASP:HB3	1.79	0.47
1:D:61:GLN:HE22	1:D:108:ASP:HB3	1.80	0.47
1:H:125[A]:MET:HE2	1:H:129:HIS:CD2	2.50	0.47
1:J:61:GLN:NE2	3:J:509:HOH:O	2.47	0.47
1:J:321:GLU:HB3	1:J:322:PRO:HD3	1.97	0.47
1:A:79:ALA:HB1	1:A:86:ARG:HG3	1.97	0.46
1:J:211:GLN:HE22	1:J:259:ARG:NH2	2.13	0.46
1:B:322:PRO:HB2	1:B:323:PRO:HD3	1.97	0.46
1:J:66:TYR:CE1	1:J:125[B]:MET:CG	2.98	0.46
1:D:125[B]:MET:HE2	1:D:129:HIS:CD2	2.50	0.46
1:H:61:GLN:HE22	1:H:108:ASP:HB3	1.80	0.46
1:I:214:LEU:HD21	1:I:226:TYR:HB2	1.97	0.46
1:G:227:HIS:CD2	1:H:91:HIS:CE1	3.04	0.46
1:F:214:LEU:HD21	1:F:226:TYR:HB2	1.96	0.45
1:A:214:LEU:HD21	1:A:226:TYR:HB2	1.98	0.45
1:B:167:ALA:HA	3:B:406:HOH:O	2.16	0.45
1:D:214:LEU:HD21	1:D:226:TYR:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:214:LEU:HD21	1:J:226:TYR:HB2	1.99	0.45
1:G:321:GLU:HB3	1:G:322:PRO:HD3	1.98	0.45
1:H:214:LEU:HD21	1:H:226:TYR:HB2	1.97	0.45
1:E:125:MET:SD	1:E:180:CYS:SG	3.11	0.45
1:I:61:GLN:NE2	3:I:508:HOH:O	2.48	0.44
1:J:183:VAL:CG2	1:J:248:MET:CE	2.92	0.44
1:C:321:GLU:HB3	1:C:322:PRO:HD3	1.99	0.44
1:D:321:GLU:HB3	1:D:322:PRO:HD3	2.00	0.44
1:E:183:VAL:CG2	1:E:248:MET:HE1	2.41	0.44
1:C:216:ASP:OD2	1:C:219:ARG:HD2	2.17	0.44
1:B:61:GLN:HE22	1:B:108:ASP:HB3	1.83	0.43
1:E:321:GLU:HB3	1:E:322:PRO:HD3	2.00	0.43
1:J:243:ALA:HA	1:J:303:LEU:HD22	2.00	0.43
1:H:322:PRO:HB2	1:H:323:PRO:HD3	2.00	0.43
1:I:243:ALA:HA	1:I:303:LEU:HD22	2.00	0.43
1:G:61:GLN:HE22	1:G:108:ASP:HB3	1.81	0.43
1:I:38:ILE:HG12	1:J:292:GLY:HA2	1.99	0.43
1:H:321:GLU:HB3	1:H:322:PRO:HD3	2.00	0.43
1:E:183:VAL:CA	1:E:248:MET:CE	2.96	0.43
1:A:243:ALA:HA	1:A:303:LEU:HD22	2.00	0.43
1:A:321:GLU:HB3	1:A:322:PRO:HD3	2.00	0.43
1:H:334:ARG:HG3	3:H:512:HOH:O	2.18	0.43
1:G:61:GLN:NE2	3:G:511:HOH:O	2.49	0.43
1:B:243:ALA:HA	1:B:303:LEU:HD22	2.01	0.43
1:F:243:ALA:HA	1:F:303:LEU:HD22	2.01	0.43
1:H:259[A]:ARG:NH2	3:H:505:HOH:O	2.51	0.43
1:I:211:GLN:NE2	1:I:259:ARG:HH21	2.14	0.43
1:J:18:GLN:NE2	1:J:25:THR:H	2.17	0.43
1:D:243:ALA:HA	1:D:303:LEU:HD22	2.00	0.42
1:A:18:GLN:NE2	1:A:25:THR:H	2.17	0.42
1:E:219:ARG:HE	1:E:237:ILE:HD13	1.84	0.42
1:I:321:GLU:HB3	1:I:322:PRO:HD3	2.00	0.42
1:J:183:VAL:CA	1:J:248:MET:CE	2.95	0.42
1:E:183:VAL:CG2	1:E:248:MET:CE	2.92	0.42
1:B:292:GLY:HA2	1:C:38:ILE:HG12	2.01	0.42
1:C:18:GLN:NE2	1:C:25:THR:H	2.17	0.42
1:G:243:ALA:HA	1:G:303:LEU:HD22	2.00	0.42
1:H:243:ALA:HA	1:H:303:LEU:HD22	2.01	0.42
1:E:125:MET:HA	1:E:125:MET:CE	2.50	0.42
1:G:18:GLN:NE2	1:G:25:THR:H	2.17	0.42
1:A:71:TYR:CZ	1:A:345:GLU:HG3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:322:PRO:HB2	1:F:323:PRO:HD3	2.00	0.42
1:D:18:GLN:NE2	1:D:25:THR:H	2.17	0.42
1:G:323:PRO:O	1:G:325:LYS:CD	2.68	0.42
1:I:66:TYR:HE1	1:I:125[B]:MET:CG	2.32	0.42
1:G:71:TYR:CZ	1:G:345:GLU:HG3	2.55	0.42
1:I:127:LYS:HB2	1:I:153:LEU:HD11	2.01	0.42
1:A:29:MET:CE	1:A:32:LEU:HD12	2.50	0.42
1:B:71:TYR:CZ	1:B:345:GLU:HG3	2.55	0.42
1:E:71:TYR:CZ	1:E:345:GLU:HG3	2.55	0.42
1:I:18:GLN:NE2	1:I:25:THR:H	2.17	0.42
1:E:183:VAL:HG22	1:E:248:MET:HE2	1.99	0.41
1:H:18:GLN:NE2	1:H:25:THR:H	2.18	0.41
1:B:321:GLU:HB3	1:B:322:PRO:HD3	2.01	0.41
1:F:321:GLU:HB3	1:F:322:PRO:HD3	2.01	0.41
1:I:71:TYR:CZ	1:I:345:GLU:HG3	2.55	0.41
1:C:243:ALA:HA	1:C:303:LEU:HD22	2.02	0.41
1:D:71:TYR:CZ	1:D:345:GLU:HG3	2.55	0.41
1:A:227:HIS:CD2	1:B:91:HIS:CE1	3.08	0.41
1:C:71:TYR:CZ	1:C:345:GLU:HG3	2.55	0.41
1:I:66:TYR:CE1	1:I:125[B]:MET:CG	3.04	0.41
1:H:71:TYR:CZ	1:H:345:GLU:HG3	2.55	0.41
1:D:322:PRO:HB2	1:D:323:PRO:HD3	2.03	0.41
1:J:71:TYR:CZ	1:J:345:GLU:HG3	2.55	0.41
1:F:71:TYR:CZ	1:F:345:GLU:HG3	2.55	0.41
1:H:5:PRO:HB3	1:H:6:PRO:HD2	2.01	0.41
1:A:250:HIS:CD2	1:A:306:GLU:OE2	2.71	0.41
1:D:38:ILE:HG12	1:E:292:GLY:HA2	2.02	0.41
1:E:322:PRO:HB2	1:E:323:PRO:HD3	2.03	0.41
1:A:322:PRO:HB2	1:A:323:PRO:HD3	2.03	0.41
1:E:243:ALA:HA	1:E:303:LEU:HD22	2.02	0.41
1:C:322:PRO:HB2	1:C:323:PRO:HD3	2.02	0.41
1:C:61:GLN:NE2	3:C:408:HOH:O	2.52	0.41
1:F:38:ILE:HG12	1:I:292:GLY:HA2	2.02	0.41
1:F:18:GLN:NE2	1:F:25:THR:H	2.17	0.40
1:I:250:HIS:CD2	1:I:306:GLU:OE2	2.71	0.40
1:C:124:ILE:HD12	1:C:124:ILE:HA	1.97	0.40
1:C:261:TYR:HB3	1:C:262:PRO:HD3	2.03	0.40
1:H:124:ILE:HD12	1:H:124:ILE:HA	1.95	0.40
1:F:91:HIS:CE1	1:I:227:HIS:CD2	3.09	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	360/372 (97%)	353 (98%)	6 (2%)	1 (0%)	41	43
1	B	360/372 (97%)	352 (98%)	7 (2%)	1 (0%)	41	43
1	C	360/372 (97%)	351 (98%)	8 (2%)	1 (0%)	41	43
1	D	360/372 (97%)	351 (98%)	8 (2%)	1 (0%)	41	43
1	E	362/372 (97%)	353 (98%)	8 (2%)	1 (0%)	41	43
1	F	359/372 (96%)	351 (98%)	6 (2%)	2 (1%)	25	24
1	G	362/372 (97%)	353 (98%)	8 (2%)	1 (0%)	41	43
1	H	363/372 (98%)	352 (97%)	9 (2%)	2 (1%)	25	24
1	I	362/372 (97%)	354 (98%)	7 (2%)	1 (0%)	41	43
1	J	363/372 (98%)	355 (98%)	7 (2%)	1 (0%)	41	43
All	All	3611/3720 (97%)	3525 (98%)	74 (2%)	12 (0%)	41	43

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	6	PRO
1	H	6	PRO
1	A	212	LYS
1	B	212	LYS
1	C	212	LYS
1	D	212	LYS
1	E	212	LYS
1	F	212	LYS
1	G	212	LYS
1	H	212	LYS
1	I	212	LYS
1	J	212	LYS

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	280/303 (92%)	274 (98%)	6 (2%)	53	64
1	B	283/303 (93%)	280 (99%)	3 (1%)	73	83
1	C	287/303 (95%)	282 (98%)	5 (2%)	60	72
1	D	282/303 (93%)	275 (98%)	7 (2%)	47	57
1	E	288/303 (95%)	284 (99%)	4 (1%)	67	78
1	F	284/303 (94%)	279 (98%)	5 (2%)	59	70
1	G	287/303 (95%)	284 (99%)	3 (1%)	76	85
1	H	294/303 (97%)	287 (98%)	7 (2%)	49	59
1	I	294/303 (97%)	289 (98%)	5 (2%)	60	72
1	J	293/303 (97%)	290 (99%)	3 (1%)	76	85
All	All	2872/3030 (95%)	2824 (98%)	48 (2%)	62	72

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	29	MET
1	A	119	ILE
1	A	240	TYR
1	A	248	MET
1	A	361	ARG
1	A	362	MET
1	B	240	TYR
1	B	248	MET
1	B	266	GLN
1	C	52	GLU
1	C	116	THR
1	C	240	TYR
1	C	248	MET
1	C	259	ARG
1	D	52	GLU
1	D	119	ILE

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Mol	Chain	Res	Type
1	D	125[A]	MET
1	D	125[B]	MET
1	D	218	GLU
1	D	240	TYR
1	D	248	MET
1	E	52	GLU
1	E	119	ILE
1	E	125	MET
1	E	240	TYR
1	F	52	GLU
1	F	119	ILE
1	F	240	TYR
1	F	248	MET
1	F	334	ARG
1	G	46	SER
1	G	240	TYR
1	G	248	MET
1	H	52	GLU
1	H	119	ILE
1	H	125[A]	MET
1	H	125[B]	MET
1	H	240	TYR
1	H	248	MET
1	H	334	ARG
1	I	52	GLU
1	I	125[A]	MET
1	I	125[B]	MET
1	I	240	TYR
1	I	248	MET
1	J	52	GLU
1	J	119	ILE
1	J	240	TYR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (60) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	61	GLN
1	A	91	HIS
1	A	211	GLN
1	A	227	HIS
1	A	250	HIS

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Mol	Chain	Res	Type
1	A	310	GLN
1	B	18	GLN
1	B	61	GLN
1	B	158	HIS
1	B	227	HIS
1	B	250	HIS
1	B	310	GLN
1	C	18	GLN
1	C	61	GLN
1	C	195	HIS
1	C	227	HIS
1	C	250	HIS
1	C	310	GLN
1	D	18	GLN
1	D	61	GLN
1	D	91	HIS
1	D	227	HIS
1	D	250	HIS
1	D	310	GLN
1	E	18	GLN
1	E	61	GLN
1	E	211	GLN
1	E	227	HIS
1	E	250	HIS
1	E	310	GLN
1	F	18	GLN
1	F	61	GLN
1	F	227	HIS
1	F	250	HIS
1	F	310	GLN
1	G	18	GLN
1	G	22	GLN
1	G	61	GLN
1	G	227	HIS
1	G	250	HIS
1	G	310	GLN
1	H	18	GLN
1	H	61	GLN
1	H	211	GLN
1	H	227	HIS
1	H	250	HIS
1	H	310	GLN

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Mol	Chain	Res	Type
1	I	18	GLN
1	I	61	GLN
1	I	211	GLN
1	I	227	HIS
1	I	250	HIS
1	I	310	GLN
1	J	18	GLN
1	J	61	GLN
1	J	211	GLN
1	J	227	HIS
1	J	250	HIS
1	J	310	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

6 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	N6Q	I	401	-	8,9,9	1.18	1 (12%)	8,10,10	1.69	3 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	N6Q	G	401	-	8,9,9	1.07	1 (12%)	8,10,10	1.54	1 (12%)
2	N6Q	F	401	-	8,9,9	1.14	1 (12%)	8,10,10	1.48	1 (12%)
2	N6Q	D	401	-	8,9,9	1.08	1 (12%)	8,10,10	1.54	1 (12%)
2	N6Q	J	401	-	8,9,9	1.14	1 (12%)	8,10,10	1.46	2 (25%)
2	N6Q	H	401	-	8,9,9	1.24	2 (25%)	8,10,10	1.57	2 (25%)

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	N6Q	I	401	-	-	5/7/8/8	-
2	N6Q	G	401	-	-	2/7/8/8	-
2	N6Q	F	401	-	-	4/7/8/8	-
2	N6Q	D	401	-	-	3/7/8/8	-
2	N6Q	J	401	-	-	4/7/8/8	-
2	N6Q	H	401	-	-	4/7/8/8	-

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	401	N6Q	C7-C8	-2.71	1.33	1.51
2	J	401	N6Q	C7-C8	-2.68	1.33	1.51
2	G	401	N6Q	C7-C8	-2.68	1.33	1.51
2	D	401	N6Q	C7-C8	-2.64	1.33	1.51
2	I	401	N6Q	C7-C8	-2.60	1.33	1.51
2	H	401	N6Q	C7-C8	-2.60	1.33	1.51
2	H	401	N6Q	C5-C3	2.07	1.54	1.51

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	401	N6Q	C6-C7-C8	3.12	130.70	115.98
2	J	401	N6Q	C6-C7-C8	2.92	129.74	115.98
2	H	401	N6Q	C6-C7-C8	2.86	129.46	115.98
2	D	401	N6Q	C6-C7-C8	2.81	129.21	115.98
2	F	401	N6Q	C6-C7-C8	2.61	128.26	115.98
2	G	401	N6Q	C6-C7-C8	2.45	127.54	115.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	401	N6Q	C6-C5-C3	2.16	118.11	114.21
2	I	401	N6Q	C9-C8-C7	2.10	124.49	111.54
2	H	401	N6Q	C10-C8-C7	2.07	124.33	111.54
2	J	401	N6Q	C10-C8-C7	2.01	123.99	111.54

There are no chirality outliers.

All (22) torsion outliers are listed below:

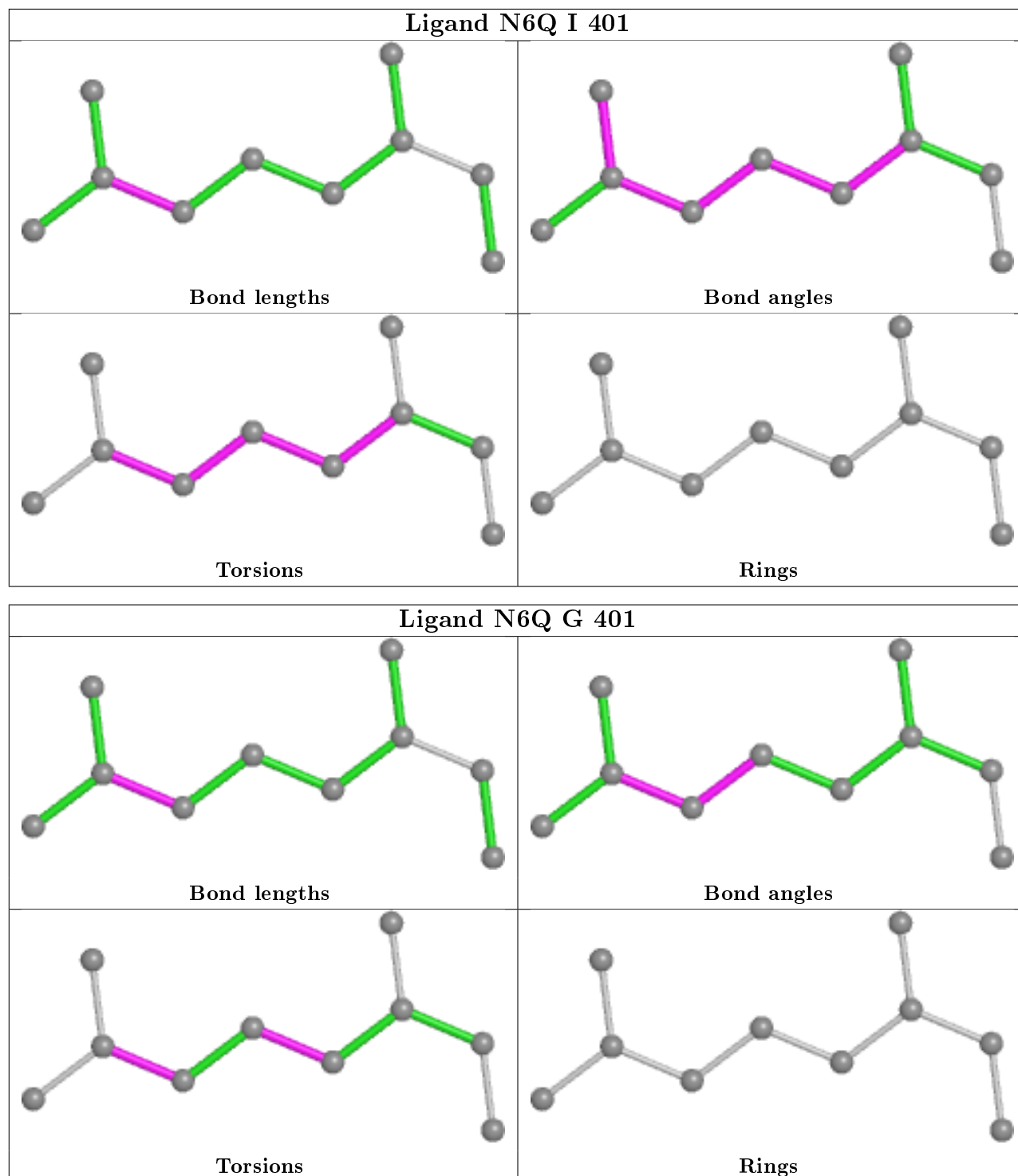
Mol	Chain	Res	Type	Atoms
2	H	401	N6Q	C1-C2-C3-C4
2	F	401	N6Q	C3-C5-C6-C7
2	G	401	N6Q	C3-C5-C6-C7
2	J	401	N6Q	C5-C6-C7-C8
2	H	401	N6Q	C5-C6-C7-C8
2	H	401	N6Q	C3-C5-C6-C7
2	G	401	N6Q	C6-C7-C8-C9
2	I	401	N6Q	C5-C6-C7-C8
2	J	401	N6Q	C3-C5-C6-C7
2	I	401	N6Q	C3-C5-C6-C7
2	J	401	N6Q	C6-C7-C8-C10
2	H	401	N6Q	C6-C7-C8-C10
2	I	401	N6Q	C6-C7-C8-C9
2	D	401	N6Q	C6-C7-C8-C9
2	F	401	N6Q	C6-C7-C8-C9
2	F	401	N6Q	C6-C7-C8-C10
2	I	401	N6Q	C2-C3-C5-C6
2	I	401	N6Q	C4-C3-C5-C6
2	F	401	N6Q	C4-C3-C5-C6
2	J	401	N6Q	C4-C3-C5-C6
2	D	401	N6Q	C3-C5-C6-C7
2	D	401	N6Q	C5-C6-C7-C8

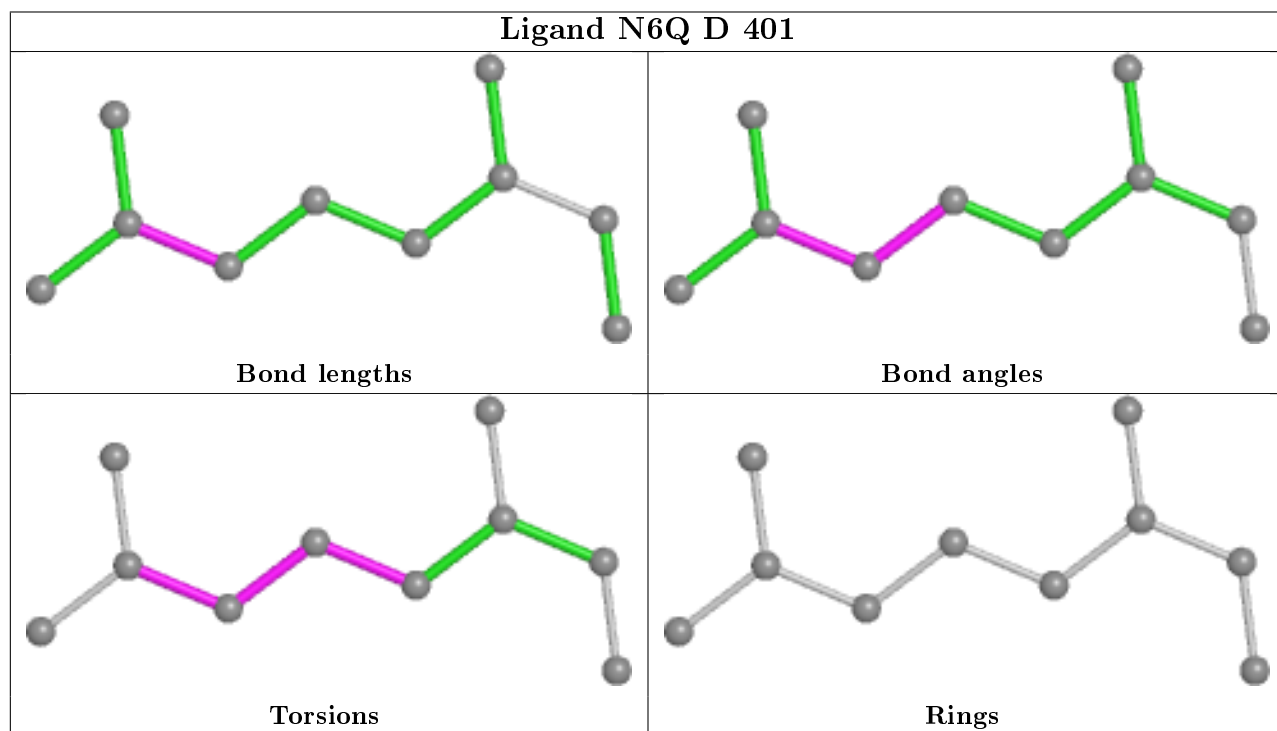
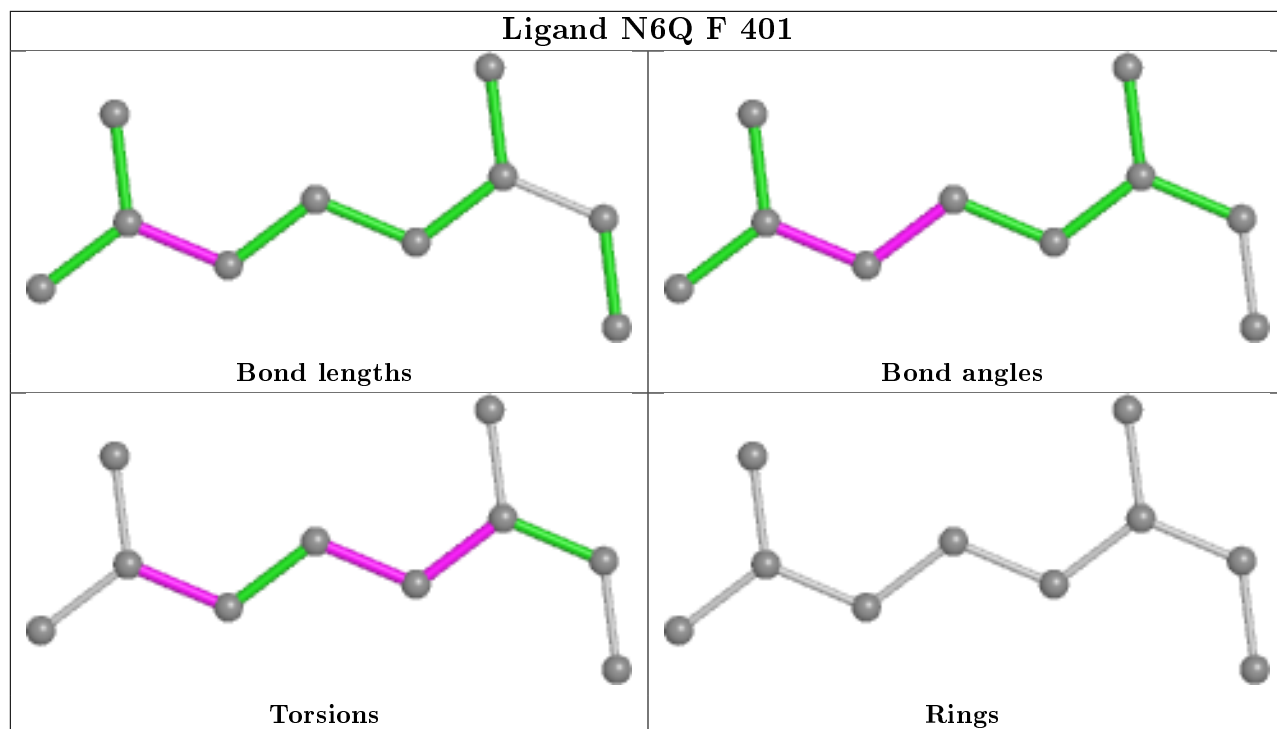
There are no ring outliers.

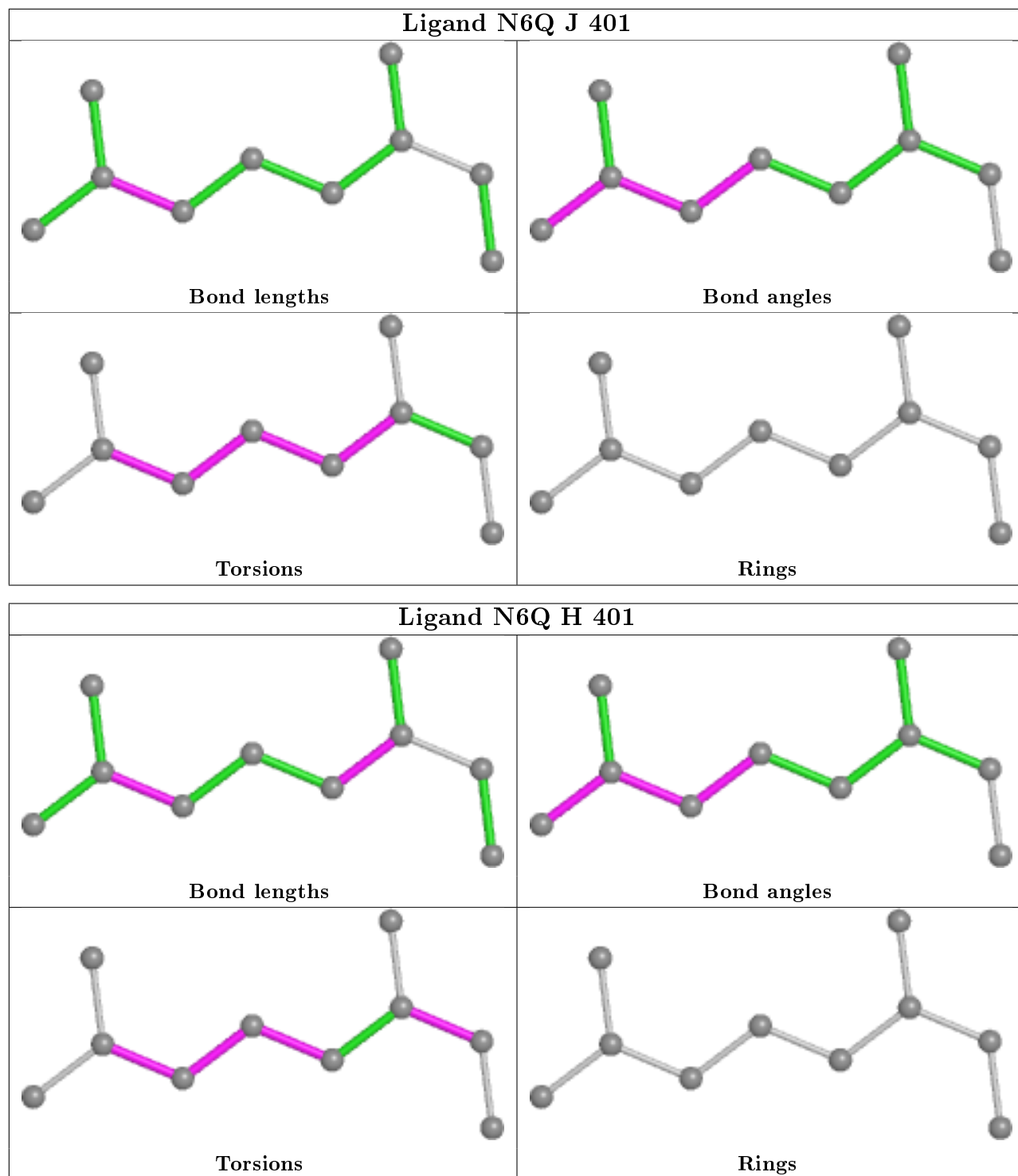
No monomer is involved in short contacts.

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

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







5.7 Other polymers [i](#)

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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	362/372 (97%)	0.24	11 (3%) 50 51	34, 47, 62, 101	0
1	B	362/372 (97%)	0.02	4 (1%) 80 80	25, 40, 57, 83	0
1	C	362/372 (97%)	-0.08	3 (0%) 86 86	28, 40, 57, 82	0
1	D	361/372 (97%)	0.12	6 (1%) 70 70	32, 48, 68, 95	0
1	E	364/372 (97%)	-0.03	2 (0%) 91 91	26, 39, 61, 93	0
1	F	361/372 (97%)	0.15	6 (1%) 70 70	24, 39, 58, 90	0
1	G	364/372 (97%)	-0.15	2 (0%) 91 91	20, 28, 46, 80	0
1	H	363/372 (97%)	-0.15	3 (0%) 86 86	19, 28, 43, 73	0
1	I	363/372 (97%)	-0.16	2 (0%) 89 89	19, 28, 46, 71	0
1	J	364/372 (97%)	-0.17	4 (1%) 80 80	18, 26, 44, 80	0
All	All	3626/3720 (97%)	-0.02	43 (1%) 79 79	18, 37, 59, 101	0

All (43) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	2	ALA	4.7
1	H	4	LEU	4.3
1	E	2	ALA	4.1
1	A	4	LEU	3.7
1	A	271	VAL	3.6
1	C	4	LEU	3.5
1	J	2	ALA	3.4
1	G	3	GLU	3.2
1	D	272	TYR	3.2
1	A	202	ALA	3.0
1	J	3	GLU	2.9
1	B	275	GLY	2.9
1	A	365	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
1	B	6	PRO	2.7
1	D	6	PRO	2.7
1	A	272	TYR	2.7
1	D	276	ARG	2.7
1	C	20	ALA	2.7
1	J	125[A]	MET	2.6
1	F	80	LEU	2.6
1	E	4	LEU	2.5
1	C	17	ALA	2.5
1	F	276	ARG	2.5
1	B	274	GLU	2.4
1	A	161	ILE	2.4
1	I	266	GLN	2.4
1	A	312	LEU	2.3
1	I	6	PRO	2.3
1	A	311	GLN	2.2
1	F	273	ASP	2.2
1	A	255	ALA	2.1
1	D	337	HIS	2.1
1	F	6	PRO	2.1
1	D	215	ILE	2.1
1	J	4	LEU	2.1
1	H	5	PRO	2.1
1	H	6	PRO	2.1
1	D	163	ALA	2.1
1	A	198	ASP	2.0
1	B	116	THR	2.0
1	F	162	ALA	2.0
1	A	275	GLY	2.0
1	F	207	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

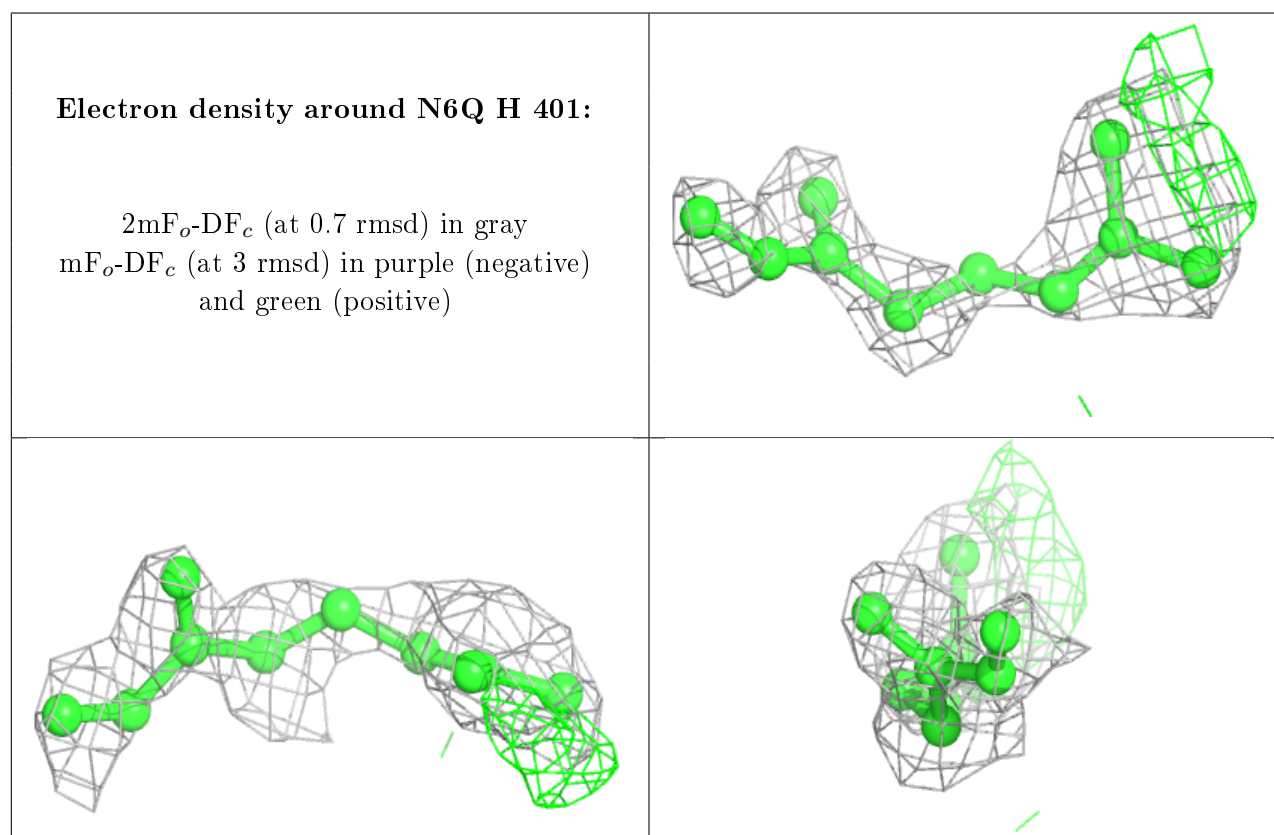
There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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

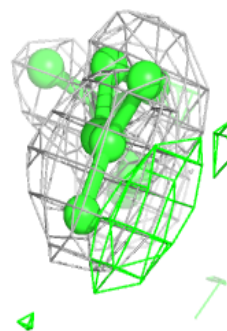
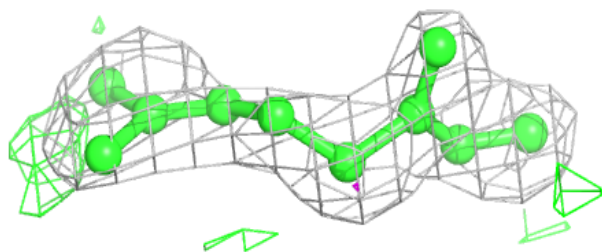
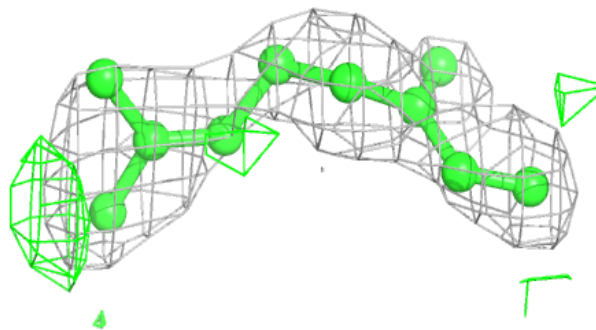
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	N6Q	H	401	10/10	0.73	0.36	57,63,69,71	0
2	N6Q	I	401	10/10	0.76	0.33	49,56,58,60	0
2	N6Q	D	401	10/10	0.81	0.33	65,71,77,77	0
2	N6Q	F	401	10/10	0.84	0.23	51,63,71,73	0
2	N6Q	J	401	10/10	0.86	0.33	61,63,69,69	0
2	N6Q	G	401	10/10	0.86	0.41	57,62,72,75	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.

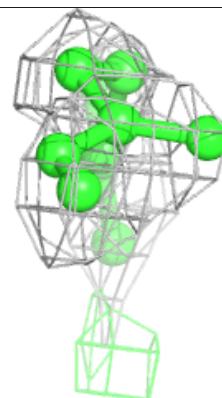
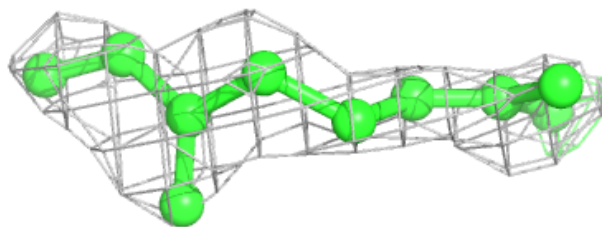
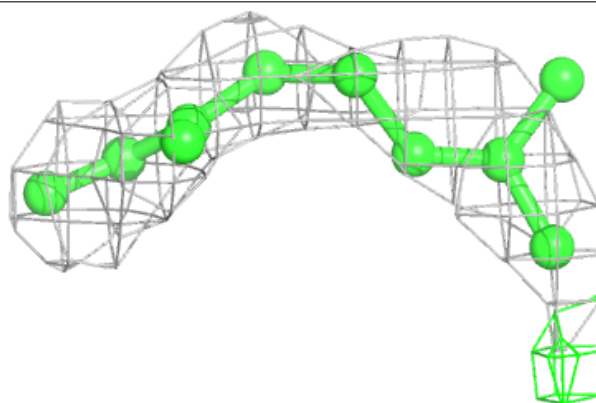


Electron density around N6Q I 401:

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

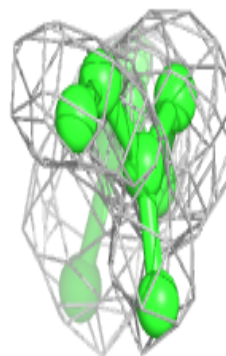
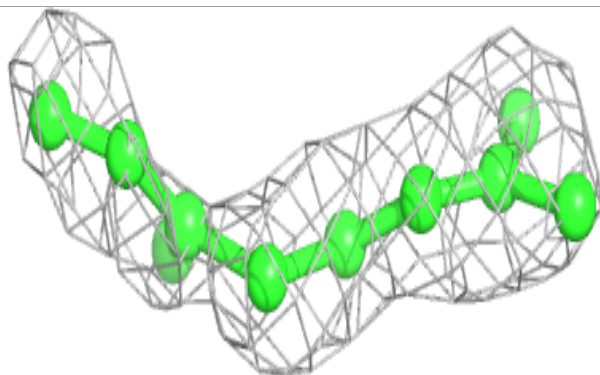
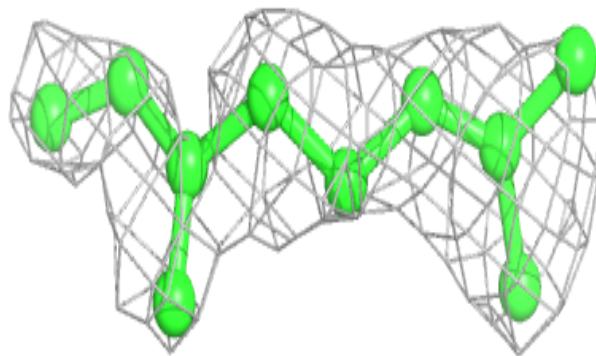
**Electron density around N6Q D 401:**

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

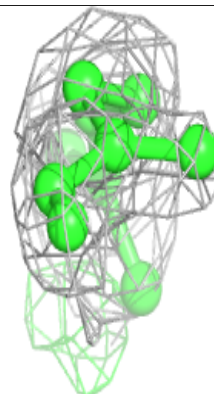
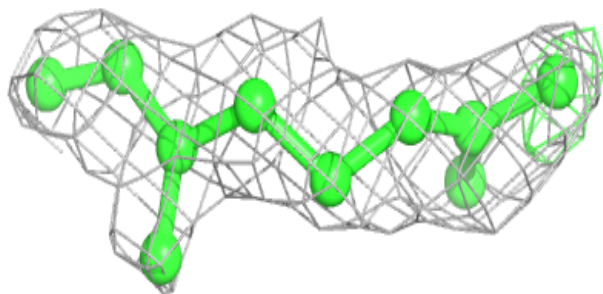
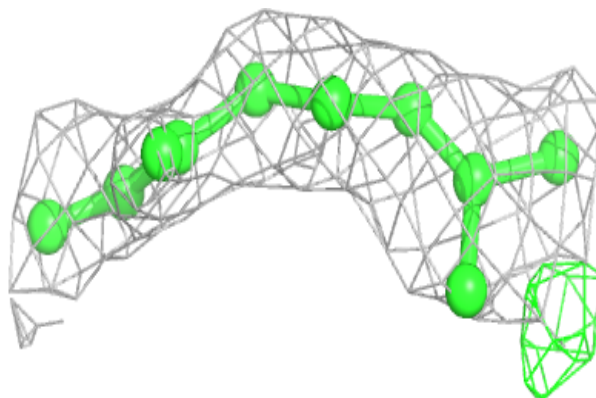


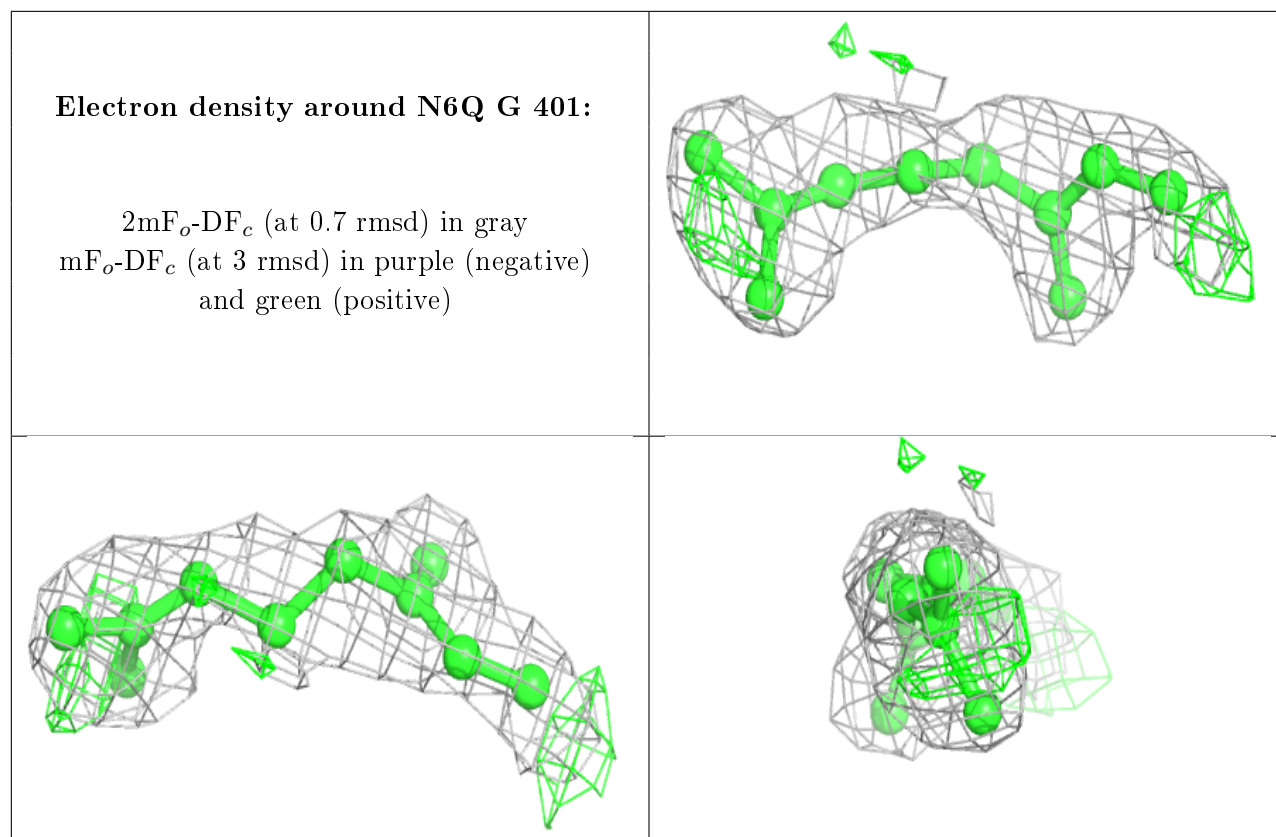
Electron density around N6Q F 401:

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

**Electron density around N6Q J 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 [i](#)

There are no such residues in this entry.