



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 01:15 PM UTC

PDB ID : 2P6G / pdb_00002p6g
Title : Crystal structures of *Saccharomyces cerevisiae* N-myristoyltransferase with bound myristoyl-CoA and inhibitors
Authors : Wu, J.; Ding, J.
Deposited on : 2007-03-18
Resolution : 3.00 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	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

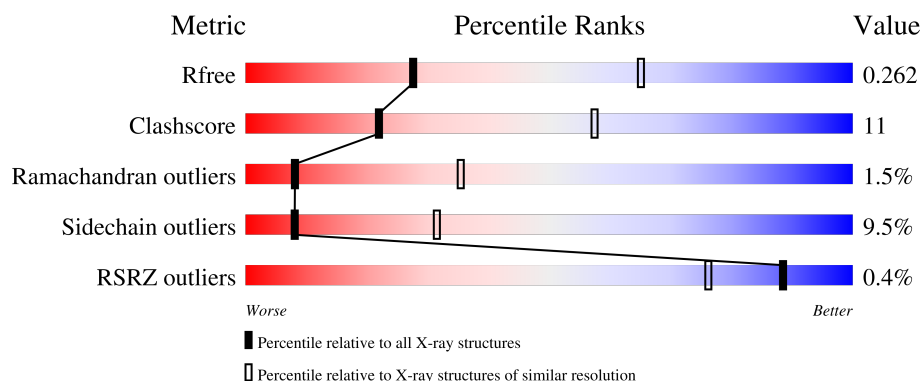
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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	2672 (3.00-3.00)
Clashscore	190562	2977 (3.00-3.00)
Ramachandran outliers	187476	2877 (3.00-3.00)
Sidechain outliers	187428	2880 (3.00-3.00)
RSRZ outliers	180081	2671 (3.00-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	455	69% 23% . .
1	B	455	67% 25% . .
1	C	455	66% 26% . .
1	D	455	% 69% 23% . .
1	E	455	66% 26% . .

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Mol	Chain	Length	Quality of chain
1	F	455	% 68% 24%

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	MYA	A	601	X	-	-	-
2	MYA	B	602	X	-	-	-
2	MYA	C	603	X	-	-	-
2	MYA	D	604	X	-	-	-
2	MYA	E	605	X	-	-	-
2	MYA	F	606	X	-	-	-
3	3LP	F	706	-	-	X	-

2 Entry composition [i](#)

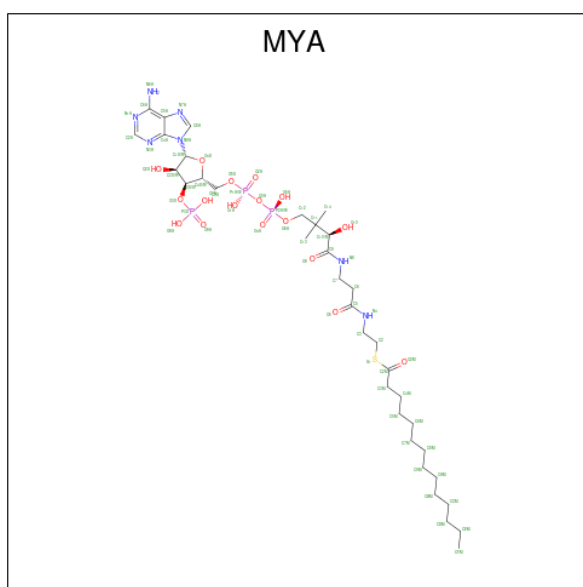
There are 3 unique types of molecules in this entry. The entry contains 21848 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Glycylpeptide N-tetradecanoyltransferase.

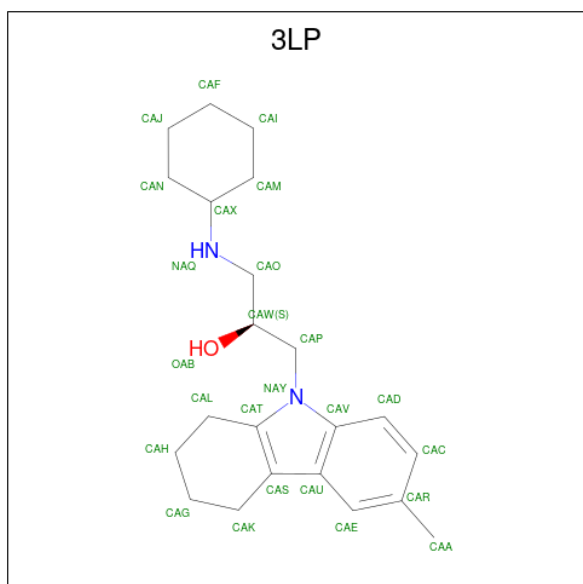
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			
1	B	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			
1	C	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			
1	D	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			
1	E	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			
1	F	435	Total	C	N	O	S	0	0	0
			3570	2314	595	652	9			

- Molecule 2 is TETRADECANOYL-COA (CCD ID: MYA) (formula: $C_{35}H_{62}N_7O_{17}P_3S$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		
2	B	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		
2	C	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		
2	D	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		
2	E	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		
2	F	1	Total	C	N	O	P	S	0	0
			63	35	7	17	3	1		

- Molecule 3 is 1-(CYCLOHEXYLAMINO)-3-(6-METHYL-3,4-DIHYDRO-1H-CARBAZOL-9(2H)-YL)PROPAN-2-OL (CCD ID: 3LP) (formula: C₂₂H₃₂N₂O).

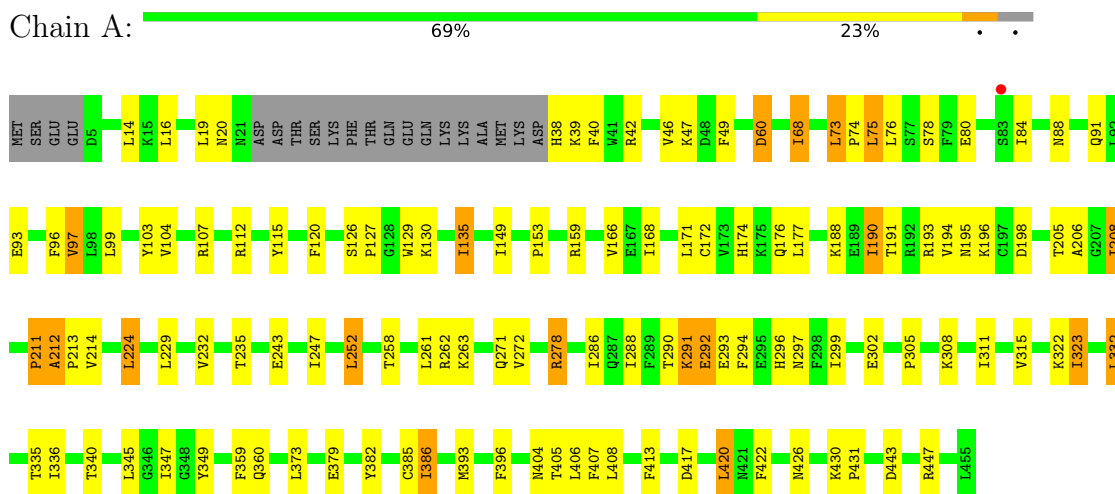


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	C	1	Total	C	N	O	0	0
			25	22	2	1		
3	F	1	Total	C	N	O	0	0
			25	22	2	1		

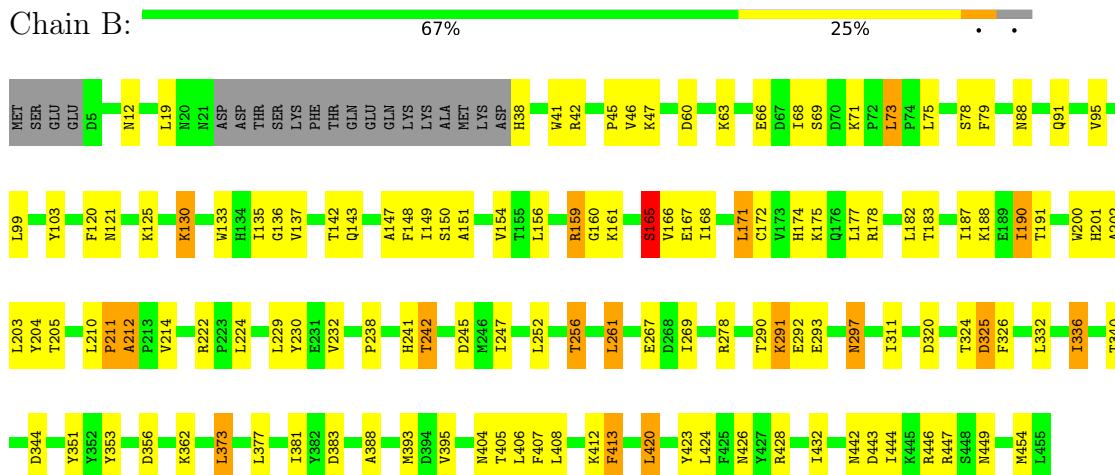
3 Residue-property plots

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

- Molecule 1: Glycylpeptide N-tetradecanoyltransferase

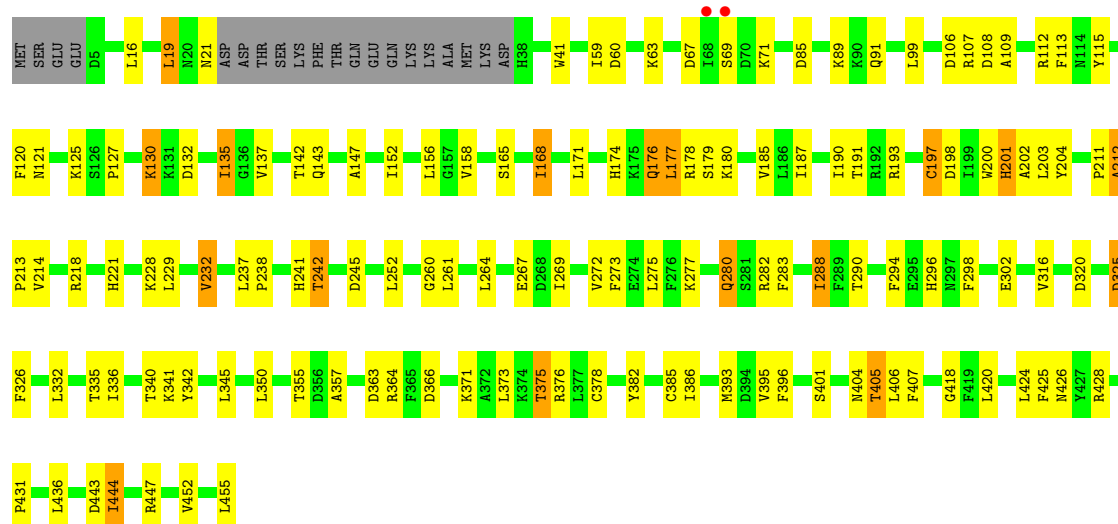


- Molecule 1: Glycylpeptide N-tetradecanoyltransferase

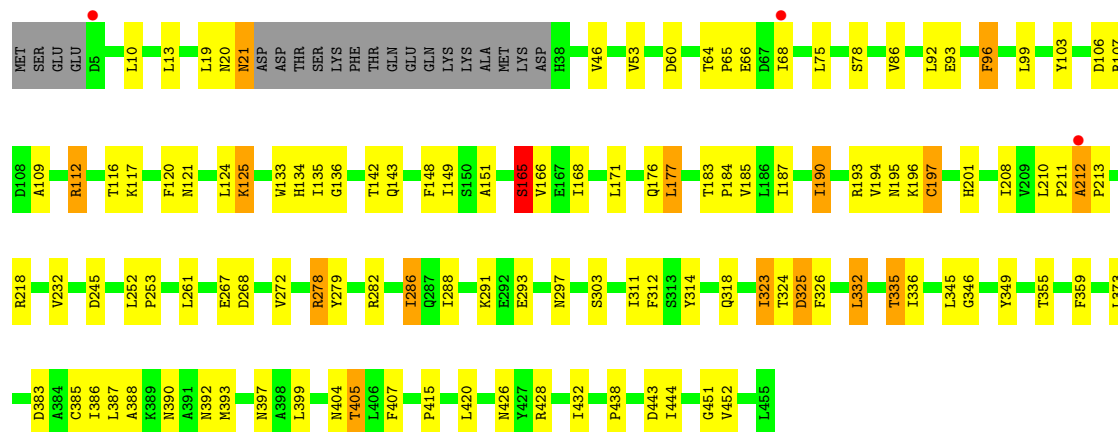


- Molecule 1: Glycylpeptide N-tetradecanoyltransferase

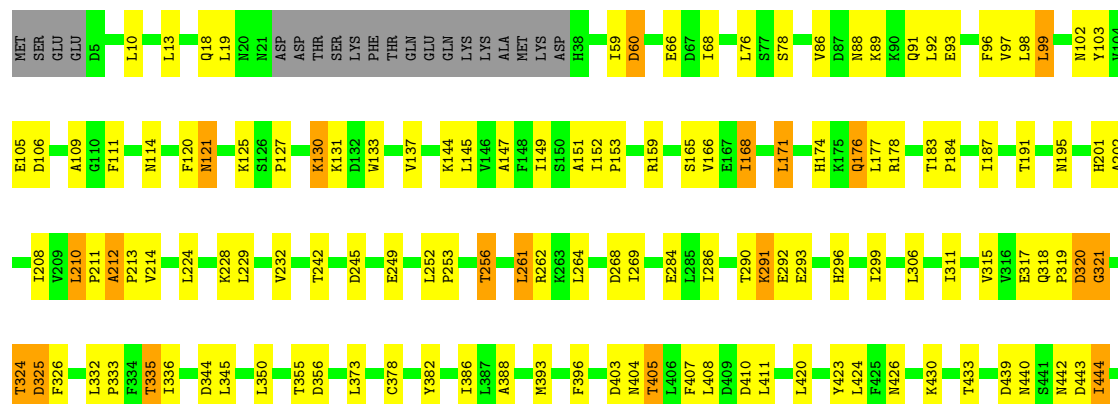


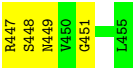


• Molecule 1: Glycylpeptide N-tetradecanoyltransferase

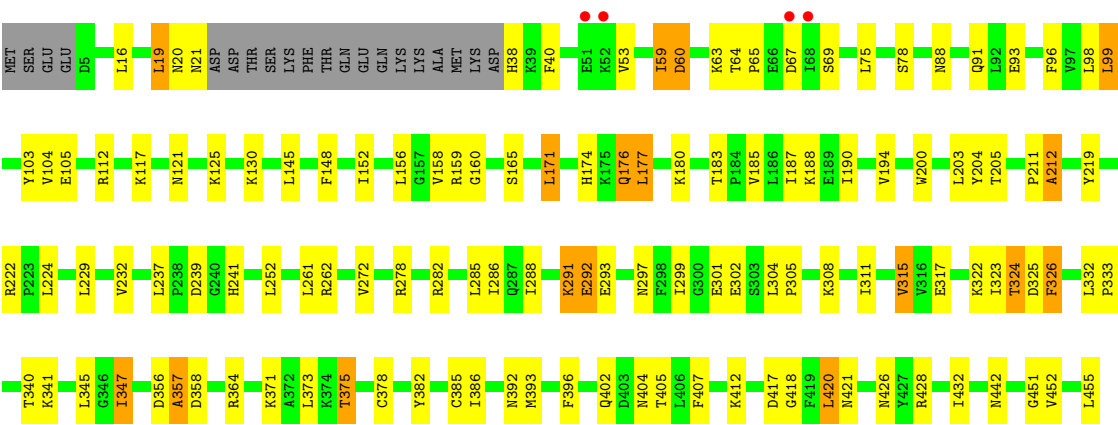


• Molecule 1: Glycylpeptide N-tetradecanoyltransferase





● Molecule 1: Glycylpeptide N-tetradecanoyltransferase



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	188.85Å 151.30Å 134.19Å 90.00° 107.64° 90.00°	Depositor
Resolution (Å)	20.00 – 3.00 20.00 – 3.00	Depositor EDS
% Data completeness (in resolution range)	97.6 (20.00-3.00) 97.2 (20.00-3.00)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	0.18	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.25 (at 3.01Å)	Xtrriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.260 , 0.318 0.262 , 0.262	Depositor DCC
R_{free} test set	3536 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å ²)	33.3	Xtrriage
Anisotropy	0.418	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 15.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.39$, $\langle L^2 \rangle = 0.22$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	21848	wwPDB-VP
Average B, all atoms (Å ²)	33.0	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 43.51 % 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 1.7446e-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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 3LP, MYA

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	0.43	0/3658	0.82	3/4946 (0.1%)
1	B	0.41	0/3658	0.80	2/4946 (0.0%)
1	C	0.43	0/3658	0.81	0/4946
1	D	0.42	0/3658	0.82	1/4946 (0.0%)
1	E	0.42	0/3658	0.79	0/4946
1	F	0.43	0/3658	0.81	1/4946 (0.0%)
All	All	0.42	0/21948	0.81	7/29676 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	224	LEU	N-CA-C	-6.22	105.37	114.39
1	B	165	SER	N-CA-C	6.08	116.11	108.45
1	A	97	VAL	N-CA-C	-5.41	106.53	111.67
1	D	165	SER	N-CA-C	5.19	114.89	108.19
1	F	59	ILE	N-CA-C	-5.18	107.36	111.81
1	A	224	LEU	N-CA-C	-5.07	108.12	114.56
1	A	214	VAL	N-CA-C	-5.06	106.22	111.58

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	211	PRO	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3570	0	3569	69	0
1	B	3570	0	3569	82	0
1	C	3570	0	3569	76	0
1	D	3570	0	3569	74	0
1	E	3570	0	3569	89	0
1	F	3570	0	3569	83	0
2	A	63	0	58	3	0
2	B	63	0	58	11	0
2	C	63	0	58	5	0
2	D	63	0	58	3	0
2	E	63	0	58	9	0
2	F	63	0	58	4	0
3	C	25	0	32	4	0
3	F	25	0	32	10	0
All	All	21848	0	21826	466	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 (466) 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:D:112:ARG:HG2	1:D:112:ARG:HH11	1.09	1.11
1:D:212:ALA:H	1:D:213:PRO:HD3	1.18	1.02
1:D:60:ASP:H	1:D:426:ASN:HD21	1.21	0.87
1:A:127:PRO:HG2	1:A:293:GLU:HA	1.56	0.85
1:D:212:ALA:N	1:D:213:PRO:HD3	1.89	0.85
1:F:418:GLY:HA3	3:F:706:3LP:HAH2	1.59	0.85
1:A:159:ARG:NH2	1:A:430:LYS:O	2.10	0.84
1:C:60:ASP:H	1:C:426:ASN:HD21	1.28	0.82
1:D:212:ALA:H	1:D:213:PRO:CD	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:198:ASP:HA	1:C:200:TRP:HZ3	1.47	0.80
1:E:212:ALA:H	1:E:213:PRO:CD	1.95	0.80
1:D:112:ARG:HG2	1:D:112:ARG:NH1	1.88	0.80
1:E:350:LEU:HB2	1:E:396:PHE:HE2	1.48	0.78
1:F:222:ARG:HH21	1:F:412:LYS:HG3	1.47	0.77
1:A:336:ILE:HD11	1:A:345:LEU:HB2	1.66	0.77
1:B:168:ILE:HG13	2:B:602:MYA:HAMA	1.67	0.77
1:A:127:PRO:HD3	1:A:296:HIS:CD2	2.20	0.76
1:A:104:VAL:HG21	1:A:112:ARG:HA	1.65	0.75
1:D:187:ILE:HD12	2:D:604:MYA:H7M	1.69	0.75
1:A:305:PRO:HG2	1:A:308:LYS:HG3	1.67	0.75
1:D:218:ARG:HH21	1:D:415:PRO:HB2	1.52	0.75
1:A:191:THR:HA	2:A:601:MYA:HDM	1.70	0.74
1:C:198:ASP:HA	1:C:200:TRP:CZ3	2.22	0.73
1:D:405:THR:HG21	1:D:443:ASP:O	1.87	0.73
1:A:47:LYS:HB3	1:A:212:ALA:HB1	1.71	0.72
1:B:404:ASN:HA	1:B:407:PHE:CE2	2.24	0.72
1:A:99:LEU:O	1:A:103:TYR:HB2	1.90	0.71
1:B:60:ASP:H	1:B:426:ASN:HD21	1.37	0.71
1:D:107:ARG:HH22	1:F:21:ASN:HB3	1.55	0.71
2:C:603:MYA:HN8	2:C:603:MYA:H13B	1.56	0.70
1:D:112:ARG:HH11	1:D:112:ARG:CG	1.96	0.70
1:E:318:GLN:HB3	1:E:319:PRO:HD2	1.73	0.69
1:E:165:SER:HB3	1:E:201:HIS:HB2	1.73	0.69
1:B:242:THR:HB	1:B:245:ASP:H	1.57	0.69
1:B:222:ARG:HH21	1:B:412:LYS:HG3	1.56	0.68
1:C:60:ASP:N	1:C:426:ASN:HD21	1.91	0.68
1:E:290:THR:H	1:E:293:GLU:HG2	1.58	0.68
1:C:336:ILE:HD11	1:C:345:LEU:HB2	1.75	0.68
1:E:212:ALA:H	1:E:213:PRO:HD2	1.57	0.68
1:F:418:GLY:H	3:F:706:3LP:HAG2	1.58	0.67
1:E:168:ILE:HG21	2:E:605:MYA:H7M	1.77	0.67
1:B:405:THR:HG23	1:B:442:ASN:HB3	1.75	0.67
1:D:176:GLN:HG2	1:F:19:LEU:HB2	1.76	0.67
1:F:156:LEU:HD11	1:F:203:LEU:HB2	1.77	0.67
1:F:405:THR:HG23	1:F:442:ASN:HB3	1.75	0.67
1:E:403:ASP:OD1	1:E:447:ARG:HD2	1.95	0.66
1:F:219:TYR:CD1	3:F:706:3LP:HAL1	2.31	0.66
1:E:262:ARG:HH21	1:E:317:GLU:HB2	1.61	0.66
1:A:47:LYS:O	1:A:212:ALA:HB2	1.96	0.66
1:B:151:ALA:HB2	1:B:190:ILE:HD11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:60:ASP:H	1:F:426:ASN:HD21	1.42	0.65
1:C:156:LEU:HG	1:C:165:SER:OG	1.96	0.65
1:E:159:ARG:NH2	1:E:430:LYS:O	2.30	0.65
1:B:135:ILE:HD12	1:B:190:ILE:HG12	1.77	0.65
1:A:205:THR:HB	1:A:420:LEU:HD21	1.79	0.64
1:F:418:GLY:HA3	3:F:706:3LP:CAH	2.27	0.64
1:D:151:ALA:HB2	1:D:190:ILE:HD11	1.80	0.64
1:F:104:VAL:HG21	1:F:112:ARG:HA	1.79	0.64
1:C:371:LYS:O	1:C:375:THR:HG22	1.98	0.64
1:A:205:THR:HB	1:A:420:LEU:CD2	2.28	0.64
1:E:350:LEU:HB2	1:E:396:PHE:CE2	2.31	0.63
1:A:107:ARG:HH22	1:C:21:ASN:C	2.05	0.63
1:B:137:VAL:HB	1:B:147:ALA:HB3	1.80	0.63
1:B:63:LYS:HB2	1:B:200:TRP:CZ2	2.34	0.62
1:E:111:PHE:HA	1:E:335:THR:O	1.99	0.62
1:B:191:THR:HA	2:B:602:MYA:HDM	1.82	0.62
1:D:107:ARG:NH2	1:F:21:ASN:HB3	2.14	0.62
1:B:232:VAL:CG1	1:B:336:ILE:HG12	2.30	0.62
1:D:325:ASP:HB3	1:D:355:THR:HA	1.81	0.62
1:C:237:LEU:HD21	1:C:241:HIS:O	2.00	0.62
1:E:405:THR:HG21	1:E:443:ASP:O	2.00	0.61
1:B:47:LYS:HD2	1:B:212:ALA:HB1	1.83	0.61
1:F:382:TYR:O	1:F:386:ILE:HG12	2.00	0.61
1:C:405:THR:HG21	1:C:443:ASP:O	2.01	0.61
1:A:229:LEU:HB3	1:A:235:THR:HG22	1.83	0.61
1:C:242:THR:HB	1:C:245:ASP:H	1.65	0.61
1:B:408:LEU:O	1:B:413:PHE:HB2	2.00	0.60
1:F:117:LYS:O	1:F:121:ASN:HB2	2.01	0.60
1:D:60:ASP:H	1:D:426:ASN:ND2	1.95	0.60
1:C:121:ASN:O	1:C:125:LYS:HB2	2.02	0.60
1:C:418:GLY:HA3	3:C:703:3LP:HAH2	1.83	0.60
1:A:88:ASN:HD22	1:A:91:GLN:H	1.48	0.60
1:B:38:HIS:N	1:B:42:ARG:HH21	2.00	0.59
1:D:121:ASN:O	1:D:125:LYS:HB2	2.02	0.59
1:E:102:ASN:O	1:E:178:ARG:NH2	2.35	0.59
1:E:325:ASP:HB3	1:E:355:THR:HA	1.83	0.59
1:B:130:LYS:HE3	1:F:322:LYS:HB2	1.85	0.59
1:B:183:THR:O	1:B:187:ILE:HG12	2.02	0.59
1:E:60:ASP:H	1:E:426:ASN:HD21	1.49	0.59
1:C:214:VAL:HG21	1:C:424:LEU:HD12	1.84	0.58
1:B:205:THR:CG2	1:B:454:MET:HG3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:252:LEU:HD21	1:D:385:CYS:HB3	1.85	0.58
1:F:177:LEU:HB2	1:F:180:LYS:HD2	1.84	0.58
1:A:135:ILE:HD11	1:A:193:ARG:HD2	1.85	0.58
1:B:174:HIS:HB3	1:B:177:LEU:CD2	2.33	0.58
1:C:168:ILE:HG22	1:C:204:TYR:HB3	1.85	0.58
1:C:191:THR:HA	2:C:603:MYA:HDM	1.86	0.58
1:A:60:ASP:H	1:A:426:ASN:HD21	1.50	0.58
1:D:19:LEU:HD11	1:E:177:LEU:HD22	1.86	0.58
1:D:99:LEU:HD12	1:D:120:PHE:HZ	1.68	0.58
1:B:432:ILE:HG23	1:B:449:ASN:HB2	1.85	0.58
1:C:41:TRP:HB3	1:C:211:PRO:HG2	1.86	0.58
1:E:191:THR:HA	2:E:605:MYA:HDM	1.84	0.58
1:D:165:SER:HB3	1:D:201:HIS:HB2	1.85	0.57
1:B:256:THR:HG21	1:B:261:LEU:HD12	1.86	0.57
1:E:284:GLU:H	1:E:449:ASN:HB3	1.67	0.57
1:C:187:ILE:HG23	2:C:603:MYA:H9M	1.86	0.57
1:A:406:LEU:HG	1:A:447:ARG:HD3	1.86	0.57
1:B:232:VAL:HG11	1:B:336:ILE:HG12	1.86	0.57
1:D:96:PHE:HE2	1:D:117:LYS:HB3	1.70	0.57
1:B:41:TRP:HB3	1:B:211:PRO:HG2	1.87	0.56
1:C:455:LEU:O	3:C:703:3LP:HAI2	2.05	0.56
1:C:130:LYS:HG3	1:C:132:ASP:HB2	1.87	0.56
1:F:252:LEU:HG	1:F:386:ILE:HD13	1.86	0.56
1:F:404:ASN:HA	1:F:407:PHE:CE2	2.41	0.56
1:F:174:HIS:HD2	1:F:176:GLN:HB3	1.71	0.56
1:B:159:ARG:O	1:B:161:LYS:N	2.31	0.56
1:C:187:ILE:HG12	2:C:603:MYA:H7MA	1.87	0.56
1:A:47:LYS:HB3	1:A:212:ALA:CB	2.35	0.55
1:F:38:HIS:HA	2:F:606:MYA:P3X	2.46	0.55
1:E:60:ASP:H	1:E:426:ASN:ND2	2.04	0.55
1:E:210:LEU:O	1:E:423:TYR:HE2	1.89	0.55
1:F:156:LEU:HG	1:F:165:SER:OG	2.06	0.55
1:F:158:VAL:C	1:F:160:GLY:H	2.14	0.55
1:F:315:VAL:HG22	1:F:323:ILE:HG23	1.89	0.55
1:C:378:CYS:O	1:C:382:TYR:HB2	2.07	0.55
1:D:293:GLU:O	1:D:297:ASN:HB2	2.07	0.55
1:A:405:THR:HG21	1:A:443:ASP:C	2.32	0.55
1:B:149:ILE:HD12	1:B:171:LEU:HG	1.88	0.55
1:D:171:LEU:HD12	2:D:604:MYA:H5MA	1.88	0.55
1:E:183:THR:O	1:E:187:ILE:HG12	2.06	0.55
1:A:60:ASP:H	1:A:426:ASN:ND2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:104:VAL:CG2	1:A:112:ARG:HA	2.37	0.55
1:B:151:ALA:HB2	1:B:190:ILE:CD1	2.37	0.54
1:C:404:ASN:HA	1:C:407:PHE:CE2	2.42	0.54
1:F:98:LEU:HD22	1:F:145:LEU:HG	1.89	0.54
1:D:93:GLU:HA	1:D:96:PHE:CE2	2.42	0.54
1:F:286:ILE:HG22	1:F:451:GLY:HA3	1.89	0.54
1:D:272:VAL:HG22	1:D:323:ILE:HG21	1.89	0.54
1:A:408:LEU:O	1:A:413:PHE:HB2	2.07	0.54
1:B:174:HIS:HB3	1:B:177:LEU:HD21	1.88	0.54
1:E:106:ASP:HB3	1:E:109:ALA:HB2	1.88	0.53
1:A:405:THR:HG21	1:A:443:ASP:O	2.08	0.53
1:D:183:THR:O	1:D:187:ILE:HG12	2.08	0.53
1:D:405:THR:CG2	1:D:444:ILE:HA	2.38	0.53
1:F:305:PRO:HG2	1:F:308:LYS:HG3	1.89	0.53
1:E:212:ALA:HB3	1:E:423:TYR:HD2	1.73	0.53
1:A:126:SER:O	1:A:129:TRP:HD1	1.91	0.53
1:A:404:ASN:HA	1:A:407:PHE:CE2	2.43	0.53
1:B:147:ALA:HA	1:B:172:CYS:O	2.09	0.53
2:E:605:MYA:H13	2:E:605:MYA:N7A	2.23	0.53
1:F:418:GLY:N	3:F:706:3LP:CAG	2.72	0.53
1:C:63:LYS:HB3	1:C:67:ASP:HB2	1.91	0.53
1:F:60:ASP:H	1:F:426:ASN:ND2	2.06	0.53
1:F:222:ARG:NH2	1:F:412:LYS:HG3	2.21	0.53
1:B:204:TYR:CD2	2:B:602:MYA:H6MA	2.44	0.52
1:E:232:VAL:HG12	1:E:232:VAL:O	2.09	0.52
1:F:20:ASN:HD22	1:F:417:ASP:HB2	1.73	0.52
1:C:252:LEU:HD21	1:C:385:CYS:HB3	1.92	0.52
1:D:253:PRO:HD2	1:D:386:ILE:HG12	1.89	0.52
1:B:238:PRO:HB2	1:B:241:HIS:HD2	1.73	0.52
1:E:378:CYS:HA	1:E:411:LEU:HD11	1.92	0.52
1:B:63:LYS:HB2	1:B:200:TRP:HZ2	1.74	0.52
1:B:121:ASN:O	1:B:125:LYS:HB2	2.10	0.52
1:E:149:ILE:HD12	1:E:171:LEU:HG	1.91	0.52
1:C:238:PRO:HB2	1:C:241:HIS:HD2	1.75	0.52
1:C:325:ASP:HB3	1:C:355:THR:HA	1.91	0.52
1:E:211:PRO:O	1:E:212:ALA:HB2	2.09	0.52
1:A:84:ILE:HG23	1:A:91:GLN:HB3	1.91	0.52
1:B:256:THR:HG22	1:B:383:ASP:CG	2.35	0.51
1:E:93:GLU:O	1:E:97:VAL:HG23	2.09	0.51
1:F:418:GLY:H	3:F:706:3LP:CAG	2.22	0.51
1:D:232:VAL:O	1:D:232:VAL:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:176:GLN:HB3	1:C:19:LEU:HD12	1.93	0.51
1:F:211:PRO:O	1:F:212:ALA:HB3	2.11	0.51
1:E:174:HIS:HB3	1:E:177:LEU:CD2	2.40	0.51
1:B:214:VAL:HG21	1:B:424:LEU:HD12	1.92	0.51
1:F:262:ARG:HH21	1:F:317:GLU:HB2	1.76	0.51
1:D:112:ARG:NH1	1:D:112:ARG:CG	2.62	0.51
1:F:63:LYS:HB2	1:F:200:TRP:HZ2	1.76	0.50
1:A:271:GLN:OE1	1:A:322:LYS:HA	2.11	0.50
1:C:444:ILE:HD13	1:C:444:ILE:H	1.76	0.50
1:E:174:HIS:CD2	1:E:176:GLN:H	2.29	0.50
1:B:187:ILE:HG23	2:B:602:MYA:H9M	1.93	0.50
1:D:106:ASP:HB3	1:D:109:ALA:HB2	1.94	0.50
1:F:20:ASN:CG	1:F:21:ASN:H	2.20	0.50
1:F:418:GLY:N	3:F:706:3LP:HAG2	2.26	0.50
1:B:99:LEU:O	1:B:103:TYR:HB2	2.11	0.50
1:C:273:PHE:CE2	1:C:277:LYS:HG3	2.47	0.50
1:B:60:ASP:H	1:B:426:ASN:ND2	2.09	0.49
1:C:197:CYS:O	1:C:198:ASP:HB2	2.11	0.49
1:C:59:ILE:HG23	1:C:428:ARG:NH2	2.26	0.49
1:C:294:PHE:O	1:C:298:PHE:HD1	1.95	0.49
1:F:63:LYS:HB3	1:F:67:ASP:HB2	1.94	0.49
1:F:171:LEU:HB2	2:F:606:MYA:H3M	1.95	0.49
1:A:38:HIS:HA	2:A:601:MYA:P3X	2.52	0.49
1:C:178:ARG:C	1:C:180:LYS:H	2.20	0.49
1:C:202:ALA:HB3	1:C:425:PHE:HB3	1.94	0.49
2:F:606:MYA:N1A	2:F:606:MYA:H3MA	2.27	0.49
1:B:88:ASN:HB3	1:B:91:GLN:HB2	1.94	0.49
1:C:156:LEU:HD11	1:C:203:LEU:HB2	1.95	0.49
1:D:183:THR:HB	1:D:184:PRO:HD3	1.94	0.49
1:B:205:THR:HG21	1:B:454:MET:HG3	1.95	0.49
1:C:228:LYS:O	1:C:232:VAL:HB	2.12	0.49
1:A:126:SER:O	1:A:129:TRP:CD1	2.65	0.49
1:B:142:THR:O	1:B:143:GLN:HB2	2.13	0.49
1:F:171:LEU:HD11	1:F:183:THR:HG23	1.94	0.49
1:A:252:LEU:HD21	1:A:385:CYS:HB3	1.94	0.49
1:B:205:THR:HG23	1:B:454:MET:HG3	1.94	0.49
1:C:115:TYR:OH	3:C:703:3LP:HAF1	2.12	0.49
1:A:258:THR:HG21	1:A:379:GLU:HB3	1.95	0.49
1:D:318:GLN:HG2	1:D:324:THR:OG1	2.11	0.49
1:D:286:ILE:HG22	1:D:451:GLY:HA3	1.95	0.48
1:E:59:ILE:H	1:E:426:ASN:ND2	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:324:THR:HG22	1:F:356:ASP:OD2	2.13	0.48
1:A:205:THR:HG22	1:A:422:PHE:HA	1.95	0.48
1:D:64:THR:C	1:D:66:GLU:H	2.21	0.48
1:D:210:LEU:O	1:D:213:PRO:HG3	2.12	0.48
1:C:260:GLY:O	1:C:316:VAL:HA	2.13	0.48
1:C:364:ARG:HH21	1:C:447:ARG:HD2	1.79	0.48
1:F:356:ASP:O	1:F:358:ASP:N	2.46	0.48
1:A:14:LEU:HD21	1:A:213:PRO:HG3	1.95	0.48
1:A:75:LEU:H	1:A:75:LEU:HD23	1.78	0.48
1:B:187:ILE:HD12	2:B:602:MYA:H7MA	1.94	0.48
1:D:177:LEU:HD22	1:F:19:LEU:HD12	1.95	0.48
1:B:165:SER:HB3	1:B:201:HIS:HB2	1.95	0.48
1:B:229:LEU:HD11	1:B:395:VAL:HB	1.96	0.48
1:B:297:ASN:ND2	1:B:351:TYR:HE2	2.11	0.48
1:F:237:LEU:HD21	1:F:241:HIS:O	2.14	0.48
1:F:252:LEU:HD21	1:F:385:CYS:HB3	1.95	0.48
1:E:151:ALA:HB1	1:E:166:VAL:HG22	1.95	0.48
1:E:214:VAL:HG21	1:E:424:LEU:HG	1.96	0.48
1:A:115:TYR:CE2	1:A:332:LEU:HD11	2.49	0.48
1:E:68:ILE:HG13	1:E:195:ASN:HB3	1.96	0.48
1:E:183:THR:HB	1:E:184:PRO:HD3	1.95	0.48
1:A:243:GLU:O	1:A:247:ILE:HG12	2.14	0.48
1:F:16:LEU:O	1:F:19:LEU:HD22	2.14	0.48
1:A:382:TYR:O	1:A:386:ILE:HD12	2.14	0.48
1:C:142:THR:O	1:C:143:GLN:HB2	2.14	0.47
1:A:232:VAL:HG12	1:A:232:VAL:O	2.14	0.47
1:E:242:THR:HG23	1:E:245:ASP:H	1.79	0.47
1:C:401:SER:O	1:C:404:ASN:HB2	2.14	0.47
1:D:124:LEU:HB3	1:D:134:HIS:NE2	2.30	0.47
1:B:38:HIS:HA	2:B:602:MYA:P3X	2.54	0.47
1:D:278:ARG:HD2	1:D:359:PHE:CE1	2.50	0.47
1:D:267:GLU:CD	1:D:267:GLU:H	2.22	0.47
1:E:130:LYS:HD2	1:E:130:LYS:HA	1.79	0.47
1:E:444:ILE:HD13	1:E:444:ILE:H	1.79	0.47
1:A:93:GLU:O	1:A:97:VAL:HG23	2.15	0.47
1:B:187:ILE:O	1:B:190:ILE:HG22	2.14	0.47
1:B:324:THR:HG23	1:B:356:ASP:OD1	2.15	0.47
1:F:232:VAL:HG12	1:F:232:VAL:O	2.14	0.47
1:F:291:LYS:HD2	1:F:292:GLU:N	2.29	0.47
1:A:272:VAL:HG22	1:A:323:ILE:HG21	1.97	0.47
1:D:404:ASN:HA	1:D:407:PHE:CE2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:99:LEU:O	1:E:103:TYR:HB2	2.15	0.47
1:A:68:ILE:HG12	1:A:195:ASN:HB3	1.97	0.47
1:A:278:ARG:HD2	1:A:359:PHE:CE1	2.50	0.47
1:E:212:ALA:N	1:E:213:PRO:CD	2.69	0.47
1:F:286:ILE:HD11	1:F:288:ILE:HD13	1.97	0.47
1:A:16:LEU:HD21	1:B:79:PHE:CZ	2.50	0.46
1:B:388:ALA:O	1:B:393:MET:HG3	2.15	0.46
1:E:171:LEU:HB3	2:E:605:MYA:H3A	1.97	0.46
1:E:290:THR:C	1:E:292:GLU:H	2.24	0.46
1:F:88:ASN:HB3	1:F:91:GLN:HB2	1.98	0.46
1:F:148:PHE:O	1:F:171:LEU:HA	2.16	0.46
1:B:353:TYR:OH	1:B:404:ASN:ND2	2.49	0.46
1:E:121:ASN:O	1:E:125:LYS:HB2	2.14	0.46
1:E:256:THR:HG21	1:E:261:LEU:CD1	2.44	0.46
1:E:439:ASP:O	1:E:440:ASN:HB2	2.16	0.46
1:F:404:ASN:H	1:F:404:ASN:HD22	1.63	0.46
1:B:222:ARG:NH2	1:B:412:LYS:HG3	2.29	0.46
1:C:264:LEU:HD11	1:C:272:VAL:HG21	1.97	0.46
1:D:211:PRO:O	1:D:212:ALA:HB2	2.15	0.46
1:F:190:ILE:O	1:F:194:VAL:HG23	2.15	0.46
1:B:171:LEU:HB2	2:B:602:MYA:C3M	2.45	0.46
1:B:69:SER:OG	1:B:71:LYS:HG2	2.16	0.46
1:F:99:LEU:O	1:F:103:TYR:HB2	2.16	0.45
1:C:238:PRO:O	1:C:241:HIS:HB2	2.16	0.45
1:C:280:GLN:HG2	1:C:283:PHE:HD1	1.79	0.45
1:B:38:HIS:HB3	1:B:41:TRP:HB2	1.98	0.45
1:D:96:PHE:CE2	1:D:117:LYS:HB3	2.51	0.45
1:E:171:LEU:HB2	2:E:605:MYA:H3MA	1.97	0.45
1:B:45:PRO:HB2	1:B:426:ASN:HD22	1.81	0.45
1:E:264:LEU:HD12	1:E:315:VAL:HB	1.99	0.45
1:A:290:THR:O	1:A:292:GLU:N	2.49	0.45
1:E:99:LEU:HD13	1:E:103:TYR:CD1	2.52	0.45
1:E:187:ILE:CD1	2:E:605:MYA:H7MA	2.46	0.45
1:C:218:ARG:HB3	1:C:436:LEU:HD21	1.97	0.45
1:E:242:THR:HG22	1:E:245:ASP:CG	2.42	0.45
1:A:20:ASN:HD22	1:A:417:ASP:HB2	1.82	0.45
1:A:88:ASN:HB3	1:A:91:GLN:HB2	1.98	0.45
1:C:113:PHE:HE2	3:C:703:3LP:HAM2	1.81	0.45
1:C:135:ILE:HD11	1:C:193:ARG:HD2	1.98	0.45
1:B:154:VAL:HG21	1:B:167:GLU:HG3	1.98	0.45
1:E:407:PHE:CD1	1:E:407:PHE:C	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:59:ILE:HG23	1:F:428:ARG:NH2	2.32	0.45
1:B:171:LEU:HB2	2:B:602:MYA:H3M	1.99	0.44
1:E:99:LEU:HD13	1:E:103:TYR:CE1	2.52	0.44
1:F:333:PRO:HA	1:F:347:ILE:HG12	1.99	0.44
1:D:124:LEU:HB3	1:D:134:HIS:HE2	1.81	0.44
1:E:290:THR:C	1:E:292:GLU:N	2.76	0.44
1:C:280:GLN:C	1:C:282:ARG:H	2.24	0.44
1:D:166:VAL:HG11	1:D:194:VAL:HG11	2.00	0.44
1:B:325:ASP:OD2	1:B:325:ASP:N	2.50	0.44
1:D:312:PHE:HB3	1:D:314:TYR:HE1	1.82	0.44
1:D:388:ALA:O	1:D:393:MET:HG3	2.18	0.44
1:E:114:ASN:HB3	1:E:333:PRO:HG2	1.99	0.44
1:E:131:LYS:C	1:E:133:TRP:H	2.24	0.44
1:E:320:ASP:CG	1:E:321:GLY:H	2.26	0.44
1:A:153:PRO:HA	1:A:166:VAL:HA	2.00	0.44
1:E:60:ASP:N	1:E:426:ASN:HD21	2.14	0.44
1:E:228:LYS:HE2	1:E:345:LEU:HD12	1.99	0.44
1:F:371:LYS:O	1:F:375:THR:HG22	2.17	0.44
1:A:20:ASN:ND2	1:A:417:ASP:O	2.50	0.44
1:A:190:ILE:HD12	1:A:194:VAL:HG23	2.00	0.44
1:A:232:VAL:HG11	1:A:336:ILE:HD13	1.99	0.44
1:E:88:ASN:HB3	1:E:91:GLN:HB2	2.00	0.44
1:E:92:LEU:HD11	1:E:120:PHE:HB3	2.00	0.44
1:E:171:LEU:HD11	1:E:183:THR:HG23	2.00	0.44
1:C:212:ALA:N	1:C:213:PRO:HD3	2.33	0.44
1:D:124:LEU:HB3	1:D:134:HIS:CD2	2.53	0.44
1:D:232:VAL:O	1:D:232:VAL:CG1	2.65	0.44
1:E:212:ALA:O	1:E:213:PRO:C	2.61	0.44
1:B:443:ASP:OD2	1:B:446:ARG:HB2	2.18	0.43
1:C:85:ASP:H	1:C:91:GLN:NE2	2.15	0.43
1:E:153:PRO:HA	1:E:166:VAL:HG23	1.99	0.43
1:D:96:PHE:CD1	1:D:96:PHE:C	2.96	0.43
1:F:418:GLY:HA3	3:F:706:3LP:CAG	2.49	0.43
1:B:135:ILE:O	1:B:148:PHE:CD1	2.71	0.43
1:B:406:LEU:HG	1:B:447:ARG:HD3	1.99	0.43
1:C:350:LEU:HB2	1:C:396:PHE:CE2	2.53	0.43
1:D:46:VAL:HB	1:D:211:PRO:O	2.18	0.43
1:A:38:HIS:HB2	1:A:42:ARG:NE	2.33	0.43
1:B:135:ILE:CG2	1:B:136:GLY:N	2.81	0.43
1:C:252:LEU:HG	1:C:386:ILE:HG13	2.01	0.43
1:A:262:ARG:HG2	1:A:263:LYS:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:107:ARG:O	1:C:112:ARG:NH2	2.50	0.43
1:E:433:THR:O	1:E:448:SER:OG	2.33	0.43
1:F:204:TYR:CD2	2:F:606:MYA:H6MA	2.53	0.43
1:A:294:PHE:C	1:A:294:PHE:CD2	2.96	0.43
1:B:47:LYS:HB3	1:B:212:ALA:CB	2.47	0.43
1:C:106:ASP:HB3	1:C:109:ALA:HB2	2.01	0.43
1:C:341:LYS:HD2	1:C:342:TYR:CZ	2.54	0.43
1:D:336:ILE:HD11	1:D:345:LEU:HB2	2.01	0.43
1:E:187:ILE:HG23	2:E:605:MYA:H9MA	2.00	0.43
1:A:49:PHE:CZ	1:A:211:PRO:HA	2.54	0.43
1:B:168:ILE:HG21	2:B:602:MYA:H7M	2.00	0.43
1:C:336:ILE:CD1	1:C:345:LEU:HB2	2.44	0.43
1:D:99:LEU:HD12	1:D:120:PHE:CZ	2.51	0.43
1:D:332:LEU:HB3	1:D:349:TYR:CE1	2.54	0.43
1:E:19:LEU:HG	1:F:176:GLN:HG2	2.01	0.43
1:F:205:THR:HB	1:F:420:LEU:CD2	2.49	0.43
1:C:69:SER:HB3	1:C:71:LYS:HG2	2.01	0.43
1:C:211:PRO:O	1:C:212:ALA:HB3	2.19	0.43
1:D:212:ALA:N	1:D:213:PRO:CD	2.63	0.43
1:E:98:LEU:HD13	1:E:145:LEU:O	2.18	0.43
1:D:142:THR:O	1:D:143:GLN:HB2	2.18	0.42
1:B:202:ALA:HB2	2:B:602:MYA:HCM	2.00	0.42
1:F:174:HIS:CD2	1:F:176:GLN:HB3	2.52	0.42
1:F:229:LEU:HD23	1:F:345:LEU:HD11	2.00	0.42
1:F:378:CYS:O	1:F:382:TYR:HB2	2.18	0.42
1:A:93:GLU:HA	1:A:96:PHE:CE2	2.54	0.42
1:B:210:LEU:O	1:B:423:TYR:HE2	2.02	0.42
1:C:115:TYR:HB3	1:C:120:PHE:CE1	2.55	0.42
1:C:137:VAL:HB	1:C:147:ALA:HB3	2.02	0.42
1:D:53:VAL:HG22	1:D:428:ARG:HG2	2.00	0.42
1:D:195:ASN:C	1:D:197:CYS:H	2.27	0.42
1:E:174:HIS:HB3	1:E:177:LEU:HD21	2.00	0.42
1:F:301:GLU:HB3	1:F:304:LEU:HD11	2.02	0.42
1:A:174:HIS:CD2	1:A:176:GLN:H	2.36	0.42
1:A:206:ALA:HB1	1:A:208:ILE:HD13	2.00	0.42
1:A:224:LEU:HD11	1:A:396:PHE:HB2	2.00	0.42
1:B:175:LYS:HA	1:B:178:ARG:HD2	2.01	0.42
1:B:290:THR:C	1:B:292:GLU:H	2.28	0.42
1:C:363:ASP:HB3	1:C:366:ASP:HB2	2.02	0.42
1:E:382:TYR:HB2	1:E:411:LEU:HD22	2.02	0.42
1:A:75:LEU:HD23	1:A:75:LEU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:200:TRP:C	1:C:201:HIS:CG	2.97	0.42
1:C:357:ALA:HB2	1:C:376:ARG:HG2	2.01	0.42
1:D:93:GLU:HA	1:D:96:PHE:CZ	2.54	0.42
1:E:127:PRO:HD3	1:E:296:HIS:CD2	2.54	0.42
1:C:174:HIS:CD2	1:C:176:GLN:H	2.38	0.42
1:A:115:TYR:HB3	1:A:120:PHE:CE1	2.55	0.42
1:B:133:TRP:HB3	1:B:151:ALA:HB3	2.02	0.42
1:C:16:LEU:HA	1:C:19:LEU:HD22	2.02	0.42
1:D:86:VAL:HG13	1:D:92:LEU:HD13	2.02	0.42
1:D:135:ILE:HD11	1:D:193:ARG:HD2	2.00	0.42
1:E:103:TYR:HA	2:E:605:MYA:H7A	2.01	0.42
1:F:20:ASN:CG	1:F:21:ASN:N	2.78	0.42
1:F:293:GLU:O	1:F:297:ASN:HB2	2.20	0.42
1:B:99:LEU:HD12	1:B:120:PHE:HZ	1.84	0.42
1:B:156:LEU:HD11	1:B:203:LEU:HB2	2.00	0.42
1:B:232:VAL:HG12	1:B:232:VAL:O	2.19	0.42
1:D:151:ALA:CB	1:D:190:ILE:HD11	2.48	0.42
1:E:202:ALA:HB2	2:E:605:MYA:HEM	2.02	0.42
1:B:73:LEU:HD13	1:B:188:LYS:HB3	2.01	0.42
1:C:127:PRO:HD3	1:C:296:HIS:CD2	2.55	0.42
1:D:112:ARG:HB2	1:D:335:THR:HB	2.01	0.42
1:D:168:ILE:HG21	2:D:604:MYA:H8M	2.00	0.42
1:D:405:THR:HG21	1:D:444:ILE:HA	2.01	0.42
1:E:388:ALA:O	1:E:393:MET:HG3	2.20	0.42
1:F:418:GLY:N	3:F:706:3LP:HAG1	2.35	0.42
1:A:205:THR:HB	1:A:420:LEU:HD22	2.02	0.41
1:B:151:ALA:CB	1:B:190:ILE:HD11	2.45	0.41
1:B:373:LEU:HD22	1:B:377:LEU:HG	2.02	0.41
1:F:315:VAL:HG23	1:F:326:PHE:HB2	2.02	0.41
1:C:405:THR:CG2	1:C:444:ILE:HA	2.50	0.41
1:D:279:TYR:O	1:D:282:ARG:HG2	2.20	0.41
1:B:187:ILE:CG2	2:B:602:MYA:H9M	2.50	0.41
1:C:406:LEU:HG	1:C:447:ARG:HD3	2.01	0.41
1:A:347:ILE:HG22	1:A:349:TYR:CE1	2.55	0.41
1:C:275:LEU:HD21	1:C:325:ASP:HA	2.03	0.41
1:D:346:GLY:HA3	1:D:393:MET:HA	2.03	0.41
1:E:324:THR:HB	1:E:325:ASP:OD2	2.21	0.41
1:F:272:VAL:HG22	1:F:323:ILE:HG21	2.03	0.41
1:F:402:GLN:HB2	1:F:404:ASN:ND2	2.36	0.41
1:F:420:LEU:HD23	1:F:420:LEU:HA	1.96	0.41
1:A:190:ILE:HD13	1:A:190:ILE:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:93:GLU:HA	1:E:96:PHE:CE2	2.55	0.41
1:E:224:LEU:HD21	1:E:396:PHE:HB2	2.01	0.41
1:F:455:LEU:O	3:F:706:3LP:HAI2	2.20	0.41
1:A:190:ILE:HG23	2:A:601:MYA:HCMA	2.02	0.41
1:A:211:PRO:O	1:A:212:ALA:CB	2.68	0.41
1:C:135:ILE:HD13	1:C:190:ILE:HD12	2.01	0.41
1:C:174:HIS:HB3	1:C:177:LEU:CD2	2.51	0.41
1:C:277:LYS:HZ3	1:C:288:ILE:HA	1.84	0.41
1:D:390:ASN:C	1:D:392:ASN:H	2.29	0.41
1:F:53:VAL:HG11	1:F:428:ARG:HB3	2.02	0.41
1:B:238:PRO:O	1:B:241:HIS:HB2	2.20	0.41
1:C:178:ARG:C	1:C:180:LYS:N	2.79	0.41
1:D:21:ASN:C	1:E:176:GLN:HE22	2.29	0.41
1:D:383:ASP:O	1:D:387:LEU:HG	2.21	0.41
1:E:88:ASN:O	1:E:89:LYS:C	2.64	0.41
1:E:211:PRO:O	1:E:212:ALA:CB	2.68	0.41
1:E:404:ASN:O	1:E:408:LEU:HG	2.21	0.41
1:F:93:GLU:HA	1:F:96:PHE:CZ	2.56	0.41
1:F:158:VAL:O	1:F:160:GLY:N	2.53	0.41
1:F:224:LEU:HD21	1:F:396:PHE:HB2	2.03	0.41
2:C:603:MYA:HN6A	2:C:603:MYA:H3	1.86	0.41
1:E:151:ALA:HB2	1:E:168:ILE:HG13	2.03	0.41
1:E:252:LEU:HA	1:E:253:PRO:HD3	1.93	0.41
1:F:64:THR:HB	1:F:65:PRO:HD2	2.03	0.41
1:F:174:HIS:HB3	1:F:177:LEU:CD2	2.50	0.41
1:F:341:LYS:HE3	1:F:341:LYS:HB2	1.89	0.41
1:F:356:ASP:O	1:F:357:ALA:C	2.63	0.41
1:E:232:VAL:O	1:E:232:VAL:CG1	2.69	0.41
1:E:286:ILE:HG22	1:E:451:GLY:HA3	2.03	0.41
1:E:290:THR:O	1:E:292:GLU:N	2.54	0.41
1:C:85:ASP:HB3	1:C:91:GLN:HE22	1.87	0.40
1:A:40:PHE:HE1	1:A:188:LYS:HG3	1.86	0.40
1:A:73:LEU:HD23	1:A:74:PRO:HD2	2.03	0.40
1:B:205:THR:HB	1:B:420:LEU:CD2	2.51	0.40
1:D:136:GLY:HA2	1:D:148:PHE:HA	2.03	0.40
1:D:397:ASN:HD22	1:D:397:ASN:N	2.19	0.40
1:F:205:THR:HA	1:F:421:ASN:O	2.21	0.40
1:B:293:GLU:O	1:B:297:ASN:HB2	2.21	0.40
1:E:137:VAL:HB	1:E:147:ALA:HB3	2.03	0.40
1:E:336:ILE:HD11	1:E:345:LEU:HB2	2.04	0.40
1:E:356:ASP:C	1:E:356:ASP:OD1	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:290:THR:C	1:B:292:GLU:N	2.80	0.40
1:C:229:LEU:HD11	1:C:395:VAL:HB	2.04	0.40
1:F:40:PHE:HE1	1:F:188:LYS:HE3	1.86	0.40
1:F:282:ARG:HD3	1:F:364:ARG:HD2	2.04	0.40
1:B:230:TYR:C	1:B:232:VAL:H	2.30	0.40
1:D:133:TRP:CE2	1:D:194:VAL:HG22	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	431/455 (95%)	381 (88%)	45 (10%)	5 (1%)	10	40
1	B	431/455 (95%)	399 (93%)	23 (5%)	9 (2%)	5	27
1	C	431/455 (95%)	378 (88%)	47 (11%)	6 (1%)	9	36
1	D	431/455 (95%)	384 (89%)	41 (10%)	6 (1%)	9	36
1	E	431/455 (95%)	380 (88%)	44 (10%)	7 (2%)	7	34
1	F	431/455 (95%)	387 (90%)	39 (9%)	5 (1%)	10	40
All	All	2586/2730 (95%)	2309 (89%)	239 (9%)	38 (2%)	8	35

All (38) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	212	ALA
1	D	212	ALA
1	E	78	SER
1	E	212	ALA
1	F	69	SER
1	F	212	ALA

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Mol	Chain	Res	Type
1	F	357	ALA
1	A	39	LYS
1	A	78	SER
1	A	291	LYS
1	B	78	SER
1	B	159	ARG
1	B	160	GLY
1	B	211	PRO
1	C	89	LYS
1	C	212	ALA
1	D	78	SER
1	E	76	LEU
1	B	413	PHE
1	C	197	CYS
1	C	269	ILE
1	D	303	SER
1	E	291	LYS
1	F	78	SER
1	F	159	ARG
1	B	291	LYS
1	D	20	ASN
1	D	65	PRO
1	C	179	SER
1	D	438	PRO
1	B	269	ILE
1	B	362	LYS
1	C	431	PRO
1	E	320	ASP
1	B	212	ALA
1	E	269	ILE
1	E	321	GLY
1	A	431	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	393/413 (95%)	353 (90%)	40 (10%)	7	29
1	B	393/413 (95%)	356 (91%)	37 (9%)	8	32
1	C	393/413 (95%)	358 (91%)	35 (9%)	9	34
1	D	393/413 (95%)	356 (91%)	37 (9%)	8	32
1	E	393/413 (95%)	354 (90%)	39 (10%)	7	30
1	F	393/413 (95%)	357 (91%)	36 (9%)	8	33
All	All	2358/2478 (95%)	2134 (90%)	224 (10%)	8	31

All (224) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	19	LEU
1	A	46	VAL
1	A	60	ASP
1	A	68	ILE
1	A	73	LEU
1	A	75	LEU
1	A	76	LEU
1	A	80	GLU
1	A	130	LYS
1	A	135	ILE
1	A	149	ILE
1	A	168	ILE
1	A	171	LEU
1	A	172	CYS
1	A	177	LEU
1	A	190	ILE
1	A	196	LYS
1	A	198	ASP
1	A	208	ILE
1	A	252	LEU
1	A	261	LEU
1	A	278	ARG
1	A	286	ILE
1	A	288	ILE
1	A	291	LYS
1	A	292	GLU
1	A	297	ASN
1	A	299	ILE
1	A	302	GLU
1	A	311	ILE

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Mol	Chain	Res	Type
1	A	315	VAL
1	A	323	ILE
1	A	332	LEU
1	A	335	THR
1	A	340	THR
1	A	360	GLN
1	A	373	LEU
1	A	386	ILE
1	A	393	MET
1	A	420	LEU
1	B	12	ASN
1	B	19	LEU
1	B	46	VAL
1	B	66	GLU
1	B	68	ILE
1	B	73	LEU
1	B	75	LEU
1	B	95	VAL
1	B	130	LYS
1	B	150	SER
1	B	165	SER
1	B	166	VAL
1	B	171	LEU
1	B	182	LEU
1	B	190	ILE
1	B	242	THR
1	B	247	ILE
1	B	252	LEU
1	B	256	THR
1	B	261	LEU
1	B	267	GLU
1	B	278	ARG
1	B	291	LYS
1	B	297	ASN
1	B	311	ILE
1	B	320	ASP
1	B	325	ASP
1	B	326	PHE
1	B	332	LEU
1	B	336	ILE
1	B	340	THR
1	B	344	ASP

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Mol	Chain	Res	Type
1	B	373	LEU
1	B	381	ILE
1	B	420	LEU
1	B	428	ARG
1	B	444	ILE
1	C	19	LEU
1	C	99	LEU
1	C	108	ASP
1	C	130	LYS
1	C	135	ILE
1	C	152	ILE
1	C	158	VAL
1	C	168	ILE
1	C	171	LEU
1	C	176	GLN
1	C	177	LEU
1	C	185	VAL
1	C	201	HIS
1	C	221	HIS
1	C	232	VAL
1	C	242	THR
1	C	261	LEU
1	C	267	GLU
1	C	280	GLN
1	C	288	ILE
1	C	290	THR
1	C	302	GLU
1	C	320	ASP
1	C	325	ASP
1	C	326	PHE
1	C	332	LEU
1	C	335	THR
1	C	340	THR
1	C	373	LEU
1	C	375	THR
1	C	393	MET
1	C	405	THR
1	C	420	LEU
1	C	444	ILE
1	C	452	VAL
1	D	10	LEU
1	D	13	LEU

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Mol	Chain	Res	Type
1	D	21	ASN
1	D	68	ILE
1	D	75	LEU
1	D	96	PHE
1	D	103	TYR
1	D	112	ARG
1	D	116	THR
1	D	125	LYS
1	D	149	ILE
1	D	165	SER
1	D	177	LEU
1	D	185	VAL
1	D	190	ILE
1	D	196	LYS
1	D	197	CYS
1	D	208	ILE
1	D	245	ASP
1	D	261	LEU
1	D	268	ASP
1	D	278	ARG
1	D	286	ILE
1	D	288	ILE
1	D	291	LYS
1	D	311	ILE
1	D	323	ILE
1	D	325	ASP
1	D	326	PHE
1	D	332	LEU
1	D	335	THR
1	D	373	LEU
1	D	399	LEU
1	D	405	THR
1	D	420	LEU
1	D	432	ILE
1	D	452	VAL
1	E	10	LEU
1	E	13	LEU
1	E	18	GLN
1	E	60	ASP
1	E	66	GLU
1	E	86	VAL
1	E	99	LEU

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Mol	Chain	Res	Type
1	E	105	GLU
1	E	121	ASN
1	E	130	LYS
1	E	144	LYS
1	E	152	ILE
1	E	168	ILE
1	E	171	LEU
1	E	176	GLN
1	E	208	ILE
1	E	210	LEU
1	E	229	LEU
1	E	249	GLU
1	E	256	THR
1	E	261	LEU
1	E	268	ASP
1	E	291	LYS
1	E	299	ILE
1	E	306	LEU
1	E	311	ILE
1	E	324	THR
1	E	325	ASP
1	E	326	PHE
1	E	332	LEU
1	E	335	THR
1	E	344	ASP
1	E	373	LEU
1	E	386	ILE
1	E	405	THR
1	E	410	ASP
1	E	420	LEU
1	E	442	ASN
1	E	444	ILE
1	F	19	LEU
1	F	60	ASP
1	F	75	LEU
1	F	99	LEU
1	F	105	GLU
1	F	125	LYS
1	F	130	LYS
1	F	152	ILE
1	F	171	LEU
1	F	176	GLN

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Mol	Chain	Res	Type
1	F	177	LEU
1	F	185	VAL
1	F	187	ILE
1	F	239	ASP
1	F	261	LEU
1	F	278	ARG
1	F	285	LEU
1	F	291	LYS
1	F	292	GLU
1	F	299	ILE
1	F	302	GLU
1	F	311	ILE
1	F	315	VAL
1	F	324	THR
1	F	325	ASP
1	F	326	PHE
1	F	332	LEU
1	F	340	THR
1	F	347	ILE
1	F	373	LEU
1	F	375	THR
1	F	392	ASN
1	F	393	MET
1	F	420	LEU
1	F	432	ILE
1	F	452	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (59) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	21	ASN
1	A	44	GLN
1	A	88	ASN
1	A	114	ASN
1	A	143	GLN
1	A	174	HIS
1	A	287	GLN
1	A	296	HIS
1	A	318	GLN
1	A	339	ASN
1	A	397	ASN
1	A	426	ASN

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Mol	Chain	Res	Type
1	A	437	ASN
1	B	114	ASN
1	B	174	HIS
1	B	176	GLN
1	B	195	ASN
1	B	241	HIS
1	B	397	ASN
1	B	402	GLN
1	B	404	ASN
1	B	426	ASN
1	B	437	ASN
1	C	18	GLN
1	C	21	ASN
1	C	91	GLN
1	C	114	ASN
1	C	134	HIS
1	C	195	ASN
1	C	397	ASN
1	C	421	ASN
1	C	426	ASN
1	D	18	GLN
1	D	21	ASN
1	D	44	GLN
1	D	176	GLN
1	D	250	ASN
1	D	397	ASN
1	D	402	GLN
1	D	421	ASN
1	D	426	ASN
1	E	18	GLN
1	E	88	ASN
1	E	176	GLN
1	E	195	ASN
1	E	338	ASN
1	E	421	ASN
1	E	426	ASN
1	F	20	ASN
1	F	174	HIS
1	F	176	GLN
1	F	318	GLN
1	F	390	ASN
1	F	402	GLN

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Mol	Chain	Res	Type
1	F	404	ASN
1	F	421	ASN
1	F	426	ASN
1	F	437	ASN
1	F	442	ASN

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 ⓘ

8 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	MYA	E	605	-	63,65,65	0.94	5 (7%)	85,91,91	1.69	14 (16%)
2	MYA	A	601	-	63,65,65	0.97	5 (7%)	85,91,91	1.57	16 (18%)
2	MYA	F	606	-	63,65,65	0.94	4 (6%)	85,91,91	1.63	15 (17%)
2	MYA	C	603	-	63,65,65	0.92	5 (7%)	85,91,91	1.73	16 (18%)
3	3LP	C	703	-	28,28,28	0.98	2 (7%)	37,39,39	1.22	4 (10%)
3	3LP	F	706	-	28,28,28	1.01	2 (7%)	37,39,39	1.36	5 (13%)
2	MYA	B	602	-	63,65,65	0.93	5 (7%)	85,91,91	1.70	15 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	MYA	D	604	-	63,65,65	1.00	4 (6%)	85,91,91	1.61	15 (17%)

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	MYA	E	605	-	1/1/12/14	20/64/80/80	0/3/3/3
2	MYA	A	601	-	1/1/12/14	19/64/80/80	0/3/3/3
2	MYA	F	606	-	1/1/12/14	14/64/80/80	0/3/3/3
2	MYA	C	603	-	1/1/12/14	21/64/80/80	0/3/3/3
3	3LP	C	703	-	-	2/9/24/24	0/4/4/4
3	3LP	F	706	-	-	3/9/24/24	0/4/4/4
2	MYA	B	602	-	1/1/12/14	14/64/80/80	0/3/3/3
2	MYA	D	604	-	1/1/12/14	22/64/80/80	0/3/3/3

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	604	MYA	C2M-S1	-3.89	1.67	1.76
2	A	601	MYA	C2M-S1	-3.87	1.67	1.76
2	F	606	MYA	C2M-S1	-3.84	1.67	1.76
2	E	605	MYA	C2M-S1	-3.71	1.67	1.76
2	B	602	MYA	C2M-S1	-3.57	1.67	1.76
2	C	603	MYA	C2M-S1	-3.53	1.67	1.76
3	F	706	3LP	CAU-CAS	-3.43	1.37	1.44
3	C	703	3LP	CAU-CAS	-3.12	1.38	1.44
2	D	604	MYA	P1A-O3A	2.85	1.62	1.59
2	D	604	MYA	P2A-O3A	2.73	1.62	1.59
2	A	601	MYA	P1A-O3A	2.62	1.62	1.59
2	B	602	MYA	P1A-O3A	2.54	1.62	1.59
2	A	601	MYA	P2A-O3A	2.46	1.62	1.59
2	E	605	MYA	P1A-O3A	2.46	1.62	1.59
2	E	605	MYA	P2A-O3A	2.40	1.62	1.59
2	B	602	MYA	P2A-O3A	2.35	1.62	1.59
2	D	604	MYA	C5A-N7A	-2.27	1.34	1.39
2	F	606	MYA	P2A-O3A	2.26	1.61	1.59
3	C	703	3LP	CAV-NAY	-2.26	1.35	1.39
2	B	602	MYA	C5A-N7A	-2.25	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	603	MYA	P1A-O3A	2.23	1.61	1.59
2	C	603	MYA	P2A-O3A	2.21	1.61	1.59
2	F	606	MYA	P1A-O3A	2.20	1.61	1.59
3	F	706	3LP	CAV-NAY	-2.19	1.35	1.39
2	F	606	MYA	C5A-N7A	-2.18	1.35	1.39
2	C	603	MYA	C8A-N7A	2.13	1.35	1.31
2	A	601	MYA	C5A-N7A	-2.11	1.35	1.39
2	E	605	MYA	C8A-N7A	2.09	1.35	1.31
2	C	603	MYA	C5A-N7A	-2.08	1.35	1.39
2	A	601	MYA	C8A-N7A	2.06	1.35	1.31
2	E	605	MYA	C5A-N7A	-2.04	1.35	1.39
2	B	602	MYA	C8A-N7A	2.01	1.35	1.31

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	605	MYA	C3M-C2M-S1	6.36	120.99	113.40
2	C	603	MYA	C3M-C2M-S1	6.32	120.93	113.40
2	B	602	MYA	C3M-C2M-S1	5.70	120.20	113.40
2	B	602	MYA	C5A-C4A-N3A	-5.50	119.14	126.72
2	F	606	MYA	C5A-C4A-N3A	-5.49	119.15	126.72
2	C	603	MYA	C5A-C4A-N3A	-5.40	119.28	126.72
2	E	605	MYA	C5A-C4A-N3A	-5.31	119.41	126.72
2	D	604	MYA	C5A-C4A-N3A	-5.20	119.56	126.72
2	F	606	MYA	N3A-C2A-N1A	-5.08	120.89	128.58
2	A	601	MYA	C5A-C4A-N3A	-5.07	119.74	126.72
2	A	601	MYA	N3A-C2A-N1A	-5.05	120.93	128.58
2	E	605	MYA	N3A-C2A-N1A	-5.01	121.00	128.58
2	C	603	MYA	N3A-C2A-N1A	-4.99	121.02	128.58
2	B	602	MYA	N3A-C2A-N1A	-4.87	121.22	128.58
2	C	603	MYA	O2M-C2M-C3M	-4.86	118.38	123.98
2	F	606	MYA	C3M-C2M-S1	4.81	119.14	113.40
2	D	604	MYA	N3A-C2A-N1A	-4.77	121.36	128.58
2	D	604	MYA	C3M-C2M-S1	4.22	118.43	113.40
2	D	604	MYA	C2-C3-N4	-4.19	103.67	112.41
2	E	605	MYA	O2M-C2M-C3M	-4.19	119.15	123.98
2	A	601	MYA	C3M-C2M-S1	4.12	118.31	113.40
2	B	602	MYA	O2M-C2M-C3M	-4.11	119.24	123.98
2	F	606	MYA	N3A-C4A-N9A	3.75	133.54	127.17
2	D	604	MYA	N9A-C8A-N7A	-3.62	108.80	113.94
2	B	602	MYA	N3A-C4A-N9A	3.60	133.30	127.17
2	C	603	MYA	C2A-N3A-C4A	3.60	120.62	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	606	MYA	C2A-N3A-C4A	3.59	120.59	111.83
2	E	605	MYA	N9A-C8A-N7A	-3.59	108.85	113.94
3	F	706	3LP	CAL-CAT-CAS	-3.55	122.44	125.42
2	A	601	MYA	N9A-C8A-N7A	-3.55	108.90	113.94
2	E	605	MYA	C2A-N3A-C4A	3.53	120.45	111.83
2	B	602	MYA	C2A-N3A-C4A	3.53	120.44	111.83
2	E	605	MYA	N3A-C4A-N9A	3.51	133.13	127.17
2	C	603	MYA	N3A-C4A-N9A	3.47	133.07	127.17
2	A	601	MYA	N3A-C4A-N9A	3.46	133.06	127.17
3	F	706	3LP	CAD-CAV-CAU	-3.44	118.11	121.95
2	A	601	MYA	C2A-N3A-C4A	3.43	120.22	111.83
2	D	604	MYA	C2A-N3A-C4A	3.41	120.15	111.83
2	D	604	MYA	N3A-C4A-N9A	3.35	132.86	127.17
2	B	602	MYA	N9A-C8A-N7A	-3.33	109.21	113.94
2	C	603	MYA	N9A-C8A-N7A	-3.31	109.24	113.94
2	A	601	MYA	C2-C3-N4	-3.30	105.53	112.41
3	C	703	3LP	CAD-CAV-CAU	-3.26	118.31	121.95
2	F	606	MYA	N9A-C8A-N7A	-3.23	109.36	113.94
3	F	706	3LP	CAL-CAT-NAY	3.16	128.32	125.02
2	B	602	MYA	C7-N8-C9	3.09	128.10	122.55
2	F	606	MYA	O2M-C2M-C3M	-3.08	120.42	123.98
2	B	602	MYA	C6-C7-N8	-3.08	105.45	112.00
3	C	703	3LP	CAL-CAT-CAS	-3.06	122.85	125.42
2	B	602	MYA	C3-N4-C5	3.06	128.51	122.82
2	D	604	MYA	C3-N4-C5	2.96	128.34	122.82
2	A	601	MYA	C7-N8-C9	2.94	127.83	122.55
2	D	604	MYA	C4A-C5A-N7A	-2.94	107.22	110.58
2	E	605	MYA	C2-C3-N4	-2.93	106.29	112.41
2	D	604	MYA	C7-N8-C9	2.84	127.65	122.55
3	C	703	3LP	CAL-CAT-NAY	2.84	127.99	125.02
2	D	604	MYA	C5A-N7A-C8A	2.84	107.91	103.45
2	E	605	MYA	C4A-C5A-N7A	-2.81	107.36	110.58
2	A	601	MYA	C4A-N9A-C8A	2.81	108.69	105.74
2	D	604	MYA	C14-C11-C10	2.79	113.52	108.77
2	C	603	MYA	C4A-C5A-N7A	-2.77	107.41	110.58
2	F	606	MYA	C2-C3-N4	-2.76	106.66	112.41
2	B	602	MYA	C4A-C5A-N7A	-2.74	107.45	110.58
2	E	605	MYA	C4A-N9A-C8A	2.73	108.60	105.74
2	E	605	MYA	C5A-N7A-C8A	2.72	107.72	103.45
2	E	605	MYA	C14-C11-C10	2.69	113.35	108.77
2	F	606	MYA	C7-N8-C9	2.68	127.36	122.55
2	B	602	MYA	C5A-N7A-C8A	2.65	107.61	103.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	603	MYA	C5A-N7A-C8A	2.64	107.60	103.45
2	D	604	MYA	C4A-N9A-C8A	2.62	108.48	105.74
2	B	602	MYA	C14-C11-C10	2.61	113.22	108.77
2	A	601	MYA	C5A-N7A-C8A	2.59	107.52	103.45
2	A	601	MYA	C4A-C5A-N7A	-2.53	107.69	110.58
2	F	606	MYA	C5A-N7A-C8A	2.52	107.41	103.45
2	F	606	MYA	O3X-P3X-O9A	-2.49	100.47	109.33
2	F	606	MYA	C4A-C5A-N7A	-2.47	107.75	110.58
2	A	601	MYA	C3-N4-C5	2.43	127.35	122.82
3	F	706	3LP	CAE-CAU-CAV	2.42	122.70	119.82
2	E	605	MYA	C3-N4-C5	2.41	127.30	122.82
2	F	606	MYA	C3-N4-C5	2.36	127.21	122.82
2	C	603	MYA	C2-C3-N4	-2.33	107.55	112.41
2	B	602	MYA	C4A-N9A-C8A	2.31	108.17	105.74
2	F	606	MYA	C4A-N9A-C8A	2.31	108.16	105.74
2	A	601	MYA	C6-C7-N8	-2.30	107.11	112.00
2	C	603	MYA	C4A-N9A-C8A	2.24	108.09	105.74
2	D	604	MYA	O2M-C2M-S1	-2.24	119.84	122.68
2	C	603	MYA	C7-N8-C9	2.23	126.54	122.55
2	A	601	MYA	C14-C11-C10	2.22	112.56	108.77
2	E	605	MYA	O2M-C2M-S1	-2.22	119.86	122.68
2	C	603	MYA	C6-C7-N8	-2.20	107.32	112.00
2	C	603	MYA	C3-N4-C5	2.19	126.90	122.82
2	C	603	MYA	C10-C9-N8	2.14	120.55	116.48
2	B	602	MYA	C2-C3-N4	-2.13	107.97	112.41
3	C	703	3LP	CAE-CAU-CAV	2.10	122.33	119.82
2	C	603	MYA	C3X-C2X-C1X	2.09	104.49	99.89
2	F	606	MYA	C14-C11-C10	2.08	112.31	108.77
2	A	601	MYA	O2M-C2M-S1	-2.07	120.05	122.68
3	F	706	3LP	CAU-CAE-CAR	-2.04	118.55	121.65
2	A	601	MYA	O2M-C2M-C3M	-2.02	121.64	123.98
2	D	604	MYA	O4X-C1X-N9A	2.00	111.94	108.09

All (6) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	A	601	MYA	C10
2	B	602	MYA	C10
2	C	603	MYA	C10
2	D	604	MYA	C10
2	E	605	MYA	C10
2	F	606	MYA	C10

All (115) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	MYA	C3-C2-S1-C2M
2	A	601	MYA	O2M-C2M-S1-C2
2	A	601	MYA	C3M-C2M-S1-C2
2	A	601	MYA	C2M-C3M-C4M-C5M
2	B	602	MYA	O2M-C2M-S1-C2
2	B	602	MYA	C3M-C2M-S1-C2
2	B	602	MYA	S1-C2-C3-N4
2	C	603	MYA	C11-C10-C9-N8
2	C	603	MYA	C11-C10-C9-O9
2	C	603	MYA	C12-O6A-P2A-O4A
2	C	603	MYA	S1-C2M-C3M-C4M
2	C	603	MYA	O2M-C2M-C3M-C4M
2	C	603	MYA	C2M-C3M-C4M-C5M
2	D	604	MYA	O2M-C2M-S1-C2
2	D	604	MYA	C3M-C2M-S1-C2
2	D	604	MYA	C5-C6-C7-N8
2	D	604	MYA	O10-C10-C9-O9
2	D	604	MYA	O10-C10-C11-C12
2	D	604	MYA	O10-C10-C11-C14
2	D	604	MYA	C5X-O5X-P1A-O2A
2	D	604	MYA	C5X-O5X-P1A-O3A
2	D	604	MYA	C2M-C3M-C4M-C5M
2	E	605	MYA	O2M-C2M-S1-C2
2	E	605	MYA	C3M-C2M-S1-C2
2	E	605	MYA	C5X-O5X-P1A-O2A
2	E	605	MYA	C5X-O5X-P1A-O3A
2	E	605	MYA	C2M-C3M-C4M-C5M
2	F	606	MYA	O2M-C2M-S1-C2
2	F	606	MYA	C3M-C2M-S1-C2
3	C	703	3LP	CAN-CAX-NAQ-CAO
3	F	706	3LP	CAN-CAX-NAQ-CAO
2	A	601	MYA	CAM-CBM-CCM-CDM
2	F	606	MYA	C8M-C9M-CAM-CBM
2	D	604	MYA	C8M-C9M-CAM-CBM
2	A	601	MYA	C4M-C5M-C6M-C7M
2	D	604	MYA	C3M-C4M-C5M-C6M
2	E	605	MYA	C4M-C5M-C6M-C7M
2	B	602	MYA	CAM-CBM-CCM-CDM
2	C	603	MYA	C8M-C9M-CAM-CBM
2	E	605	MYA	C7M-C8M-C9M-CAM
2	C	603	MYA	C7M-C8M-C9M-CAM
2	D	604	MYA	C6M-C7M-C8M-C9M

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Mol	Chain	Res	Type	Atoms
2	F	606	MYA	CBM-CCM-CDM-CEM
2	B	602	MYA	C4M-C5M-C6M-C7M
2	A	601	MYA	C3M-C4M-C5M-C6M
2	C	603	MYA	CAM-CBM-CCM-CDM
2	F	606	MYA	C4M-C5M-C6M-C7M
2	F	606	MYA	C7M-C8M-C9M-CAM
2	D	604	MYA	CAM-CBM-CCM-CDM
2	A	601	MYA	CBM-CCM-CDM-CEM
3	F	706	3LP	NAQ-CAO-CAW-OAB
2	A	601	MYA	C7M-C8M-C9M-CAM
2	C	603	MYA	C4M-C5M-C6M-C7M
2	F	606	MYA	CAM-CBM-CCM-CDM
2	A	601	MYA	C5M-C6M-C7M-C8M
2	B	602	MYA	C7M-C8M-C9M-CAM
2	C	603	MYA	C5M-C6M-C7M-C8M
2	D	604	MYA	O10-C10-C11-C13
2	A	601	MYA	S1-C2-C3-N4
2	C	603	MYA	C3M-C4M-C5M-C6M
2	E	605	MYA	C11-C10-C9-N8
2	F	606	MYA	C3M-C4M-C5M-C6M
2	C	603	MYA	O10-C10-C9-N8
2	F	606	MYA	C6M-C7M-C8M-C9M
2	E	605	MYA	O2M-C2M-C3M-C4M
2	E	605	MYA	CAM-CBM-CCM-CDM
2	C	603	MYA	C6M-C7M-C8M-C9M
2	A	601	MYA	P1A-O3A-P2A-O5A
2	B	602	MYA	P1A-O3A-P2A-O5A
2	B	602	MYA	O10-C10-C9-O9
2	E	605	MYA	O10-C10-C9-O9
2	B	602	MYA	C14-C11-C12-O6A
2	E	605	MYA	C14-C11-C12-O6A
2	A	601	MYA	C8M-C9M-CAM-CBM
2	C	603	MYA	C12-O6A-P2A-O3A
2	C	603	MYA	C12-O6A-P2A-O5A
2	E	605	MYA	C5X-O5X-P1A-O1A
2	D	604	MYA	S1-C2-C3-N4
2	B	602	MYA	C8M-C9M-CAM-CBM
2	D	604	MYA	C4M-C5M-C6M-C7M
3	F	706	3LP	NAQ-CAO-CAW-CAP
2	D	604	MYA	O10-C10-C9-N8
2	E	605	MYA	O10-C10-C9-N8
2	A	601	MYA	O5-C5-C6-C7

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Mol	Chain	Res	Type	Atoms
2	C	603	MYA	O2M-C2M-S1-C2
2	D	604	MYA	CBM-CCM-CDM-CEM
3	C	703	3LP	CAM-CAX-NAQ-CAO
2	E	605	MYA	S1-C2M-C3M-C4M
2	C	603	MYA	CCM-CDM-CEM-CFM
2	C	603	MYA	O5-C5-C6-C7
2	F	606	MYA	C5-C6-C7-N8
2	F	606	MYA	C2X-C1X-N9A-C8A
2	D	604	MYA	C5M-C6M-C7M-C8M
2	C	603	MYA	N4-C5-C6-C7
2	B	602	MYA	CCM-CDM-CEM-CFM
2	D	604	MYA	C9-C10-C11-C14
2	A	601	MYA	C6M-C7M-C8M-C9M
2	A	601	MYA	P1A-O3A-P2A-O4A
2	B	602	MYA	P1A-O3A-P2A-O4A
2	E	605	MYA	P1A-O3A-P2A-O4A
2	A	601	MYA	N4-C5-C6-C7
2	E	605	MYA	C11-C10-C9-O9
2	D	604	MYA	C3X-O3X-P3X-O8A
2	F	606	MYA	C3X-O3X-P3X-O8A
2	A	601	MYA	C13-C11-C12-O6A
2	A	601	MYA	C14-C11-C12-O6A
2	B	602	MYA	C13-C11-C12-O6A
2	D	604	MYA	C13-C11-C12-O6A
2	E	605	MYA	C13-C11-C12-O6A
2	C	603	MYA	C3-C2-S1-C2M
2	E	605	MYA	C3X-O3X-P3X-O9A
2	F	606	MYA	C3-C2-S1-C2M
2	B	602	MYA	O10-C10-C9-N8
2	F	606	MYA	O10-C10-C9-N8
2	E	605	MYA	P1A-O3A-P2A-O5A

There are no ring outliers.

8 monomers are involved in 49 short contacts:

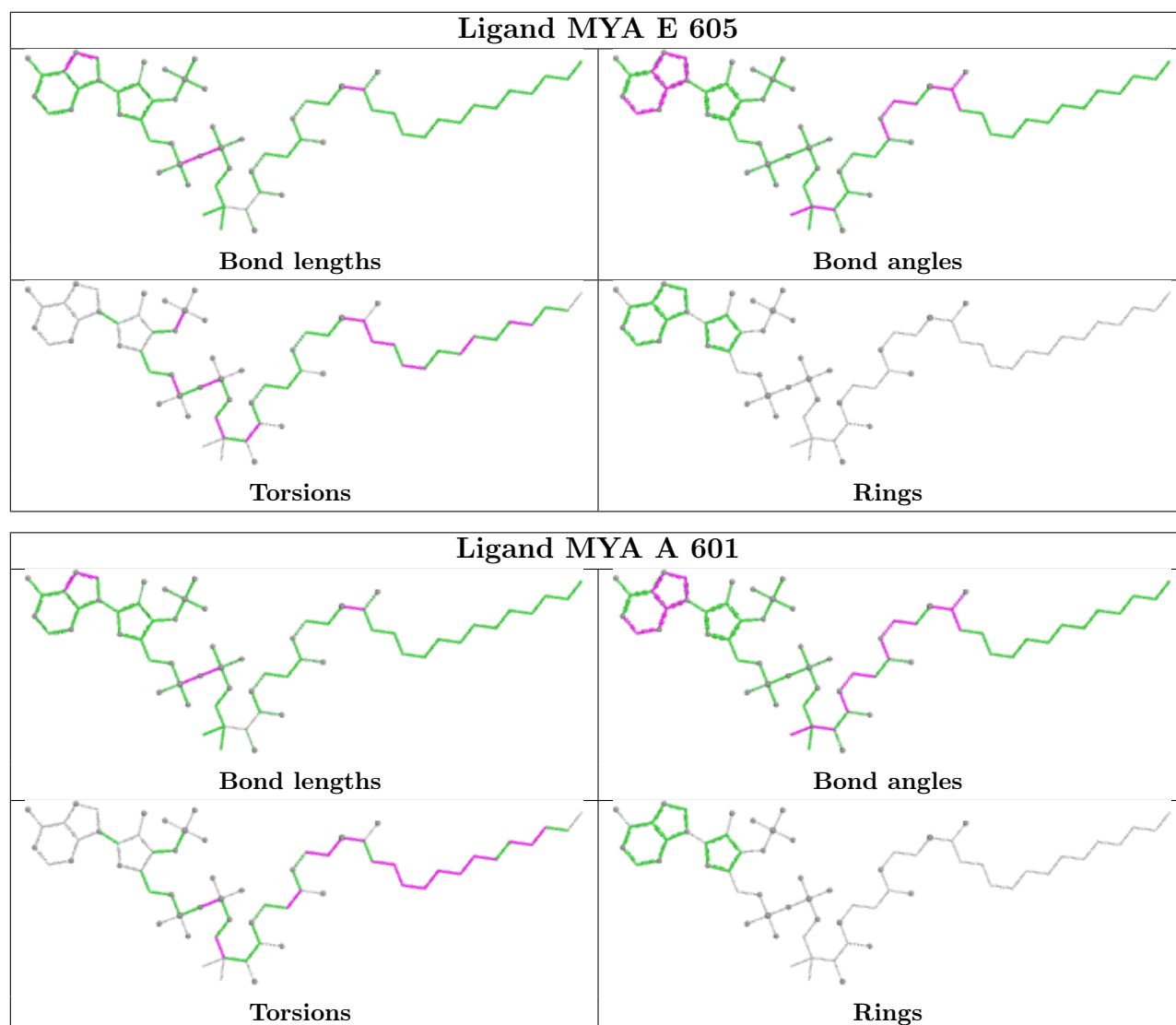
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	E	605	MYA	9	0
2	A	601	MYA	3	0
2	F	606	MYA	4	0
2	C	603	MYA	5	0
3	C	703	3LP	4	0
3	F	706	3LP	10	0

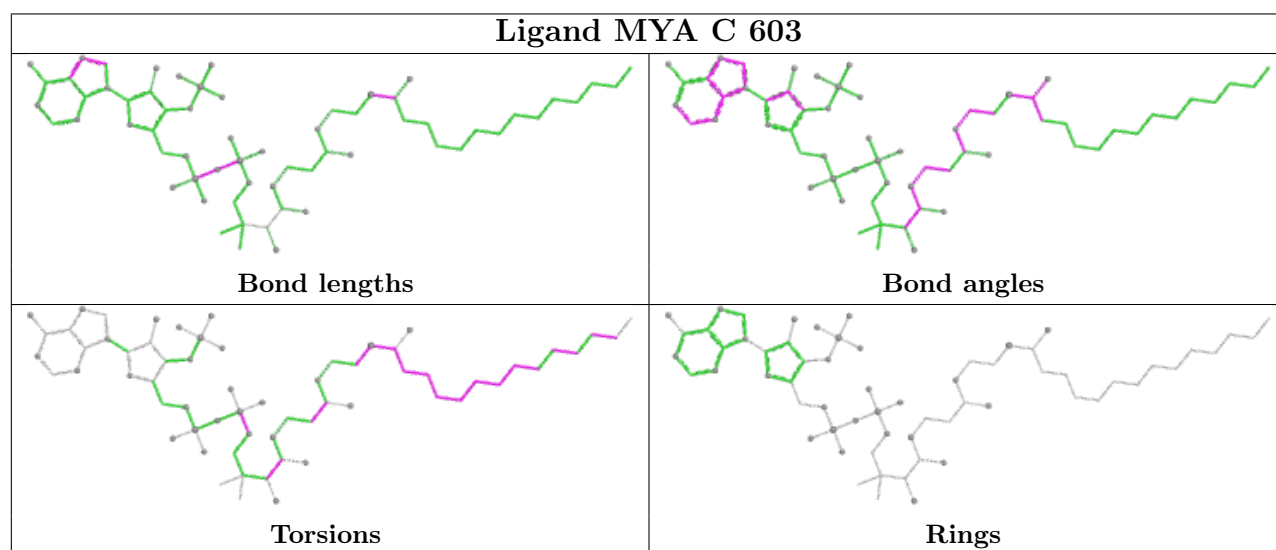
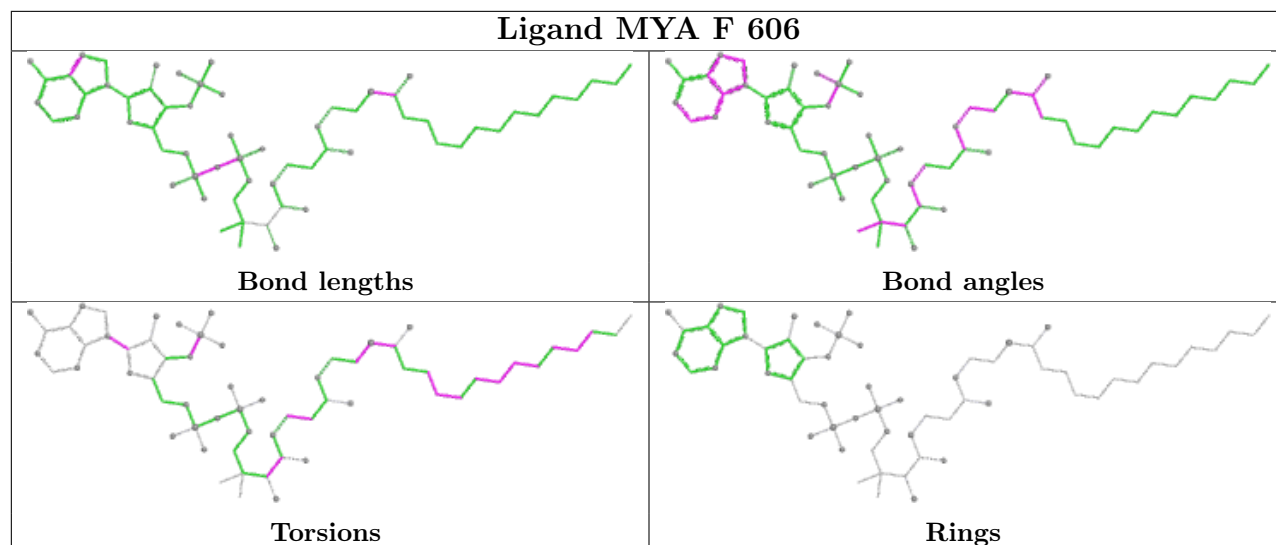
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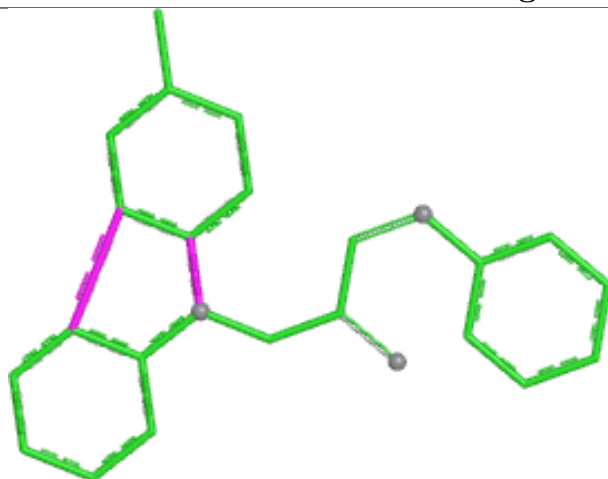
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	602	MYA	11	0
2	D	604	MYA	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

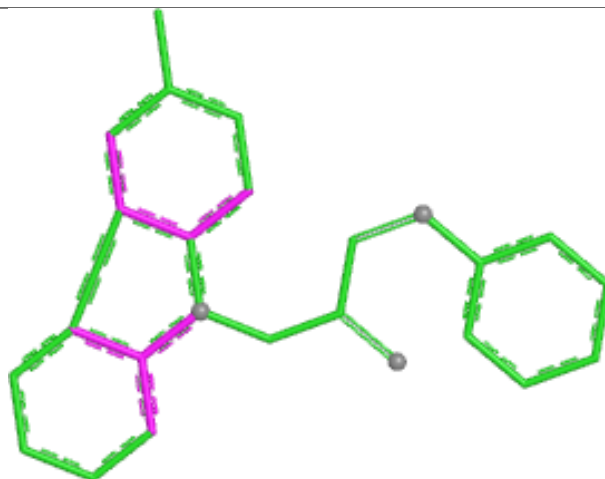




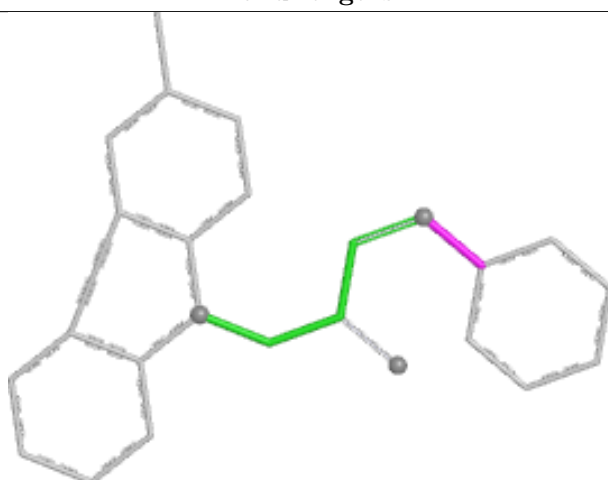
Ligand 3LP C 703



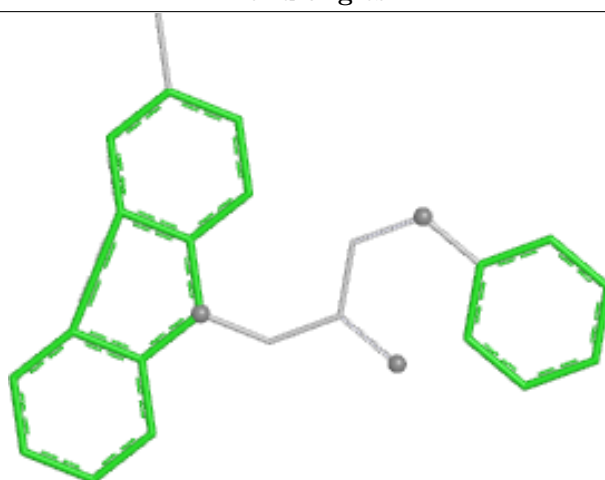
Bond lengths



Bond angles

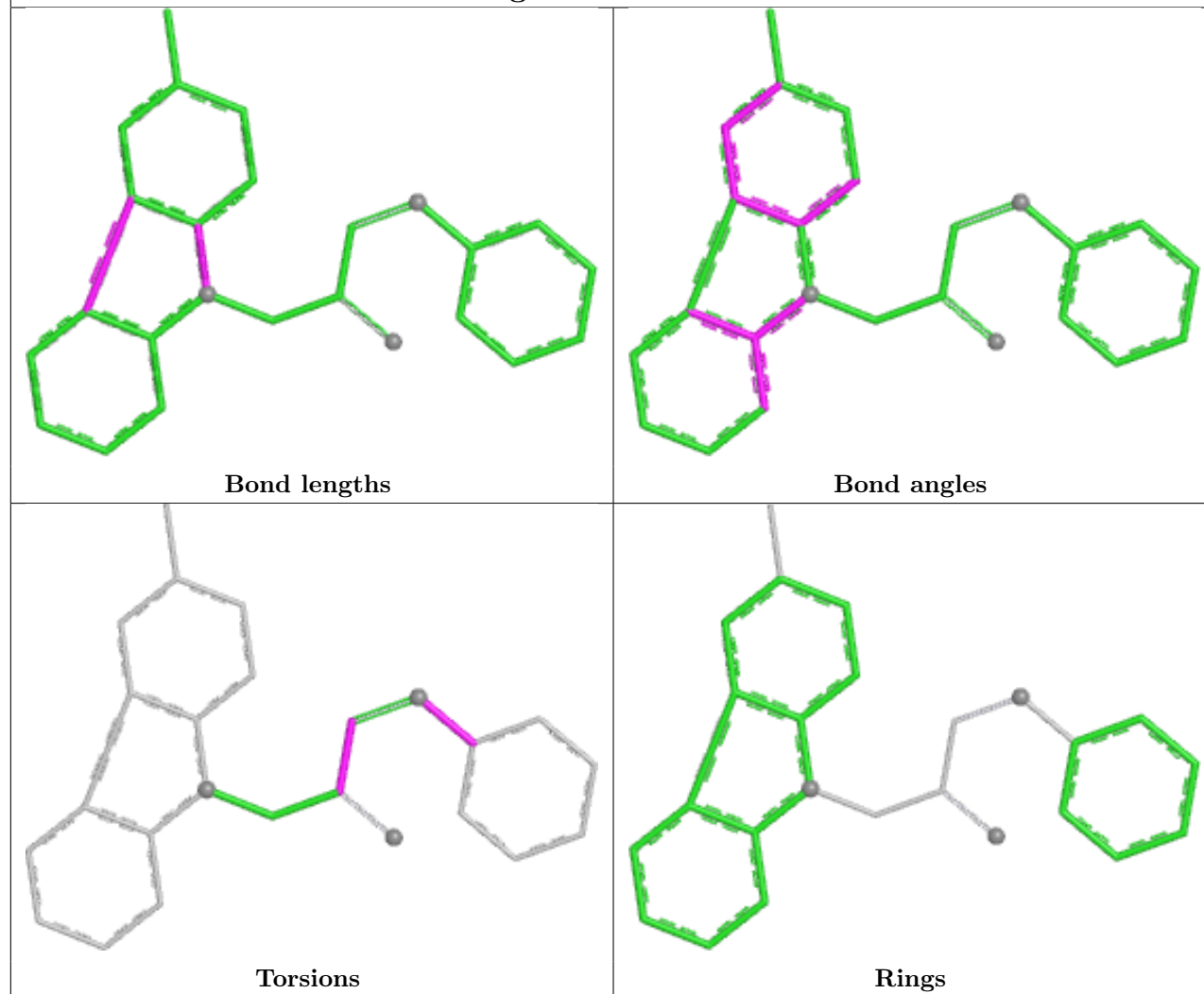


Torsions

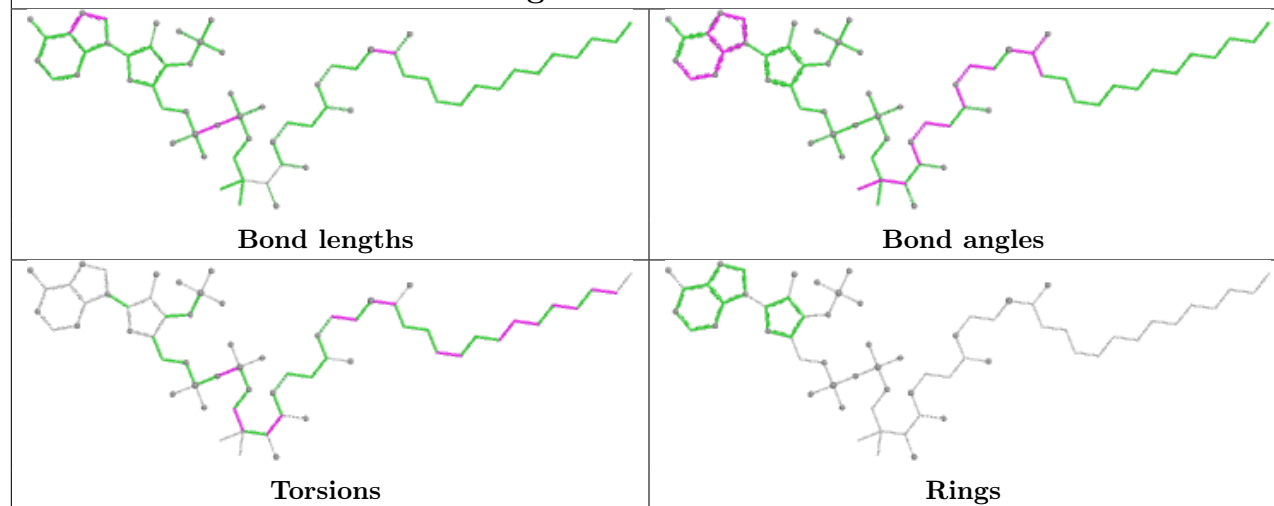


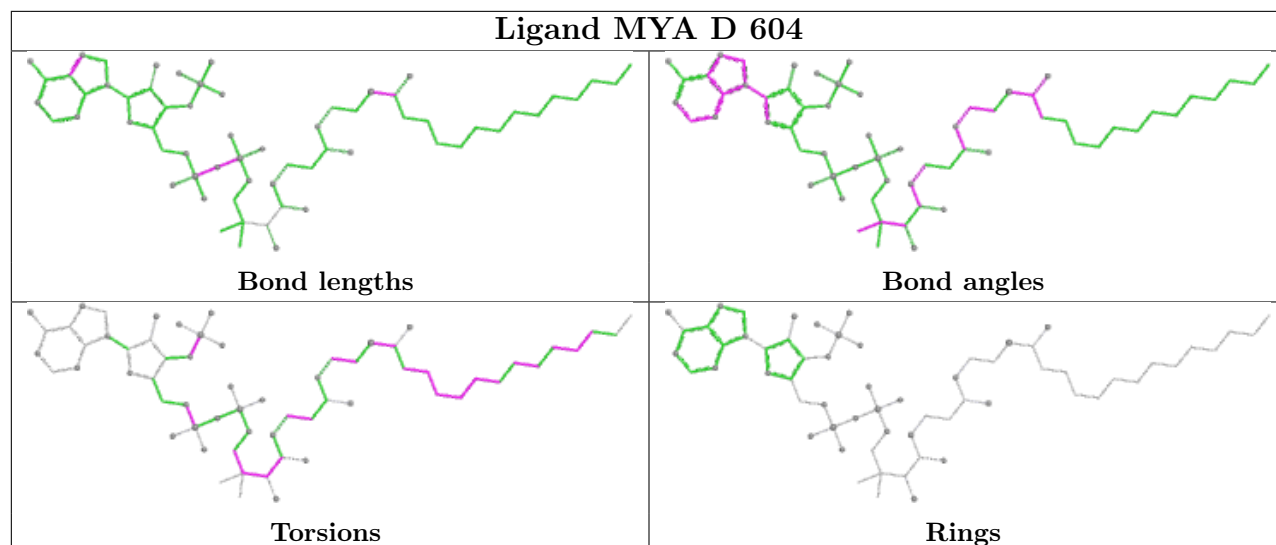
Rings

Ligand 3LP F 706



Ligand MYA B 602





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	435/455 (95%)	-0.27	1 (0%) 91 83	11, 30, 58, 80	0
1	B	435/455 (95%)	-0.43	0 100 100	11, 24, 47, 81	0
1	C	435/455 (95%)	-0.05	2 (0%) 87 72	13, 40, 77, 95	0
1	D	435/455 (95%)	-0.29	3 (0%) 84 66	12, 29, 59, 82	0
1	E	435/455 (95%)	-0.35	0 100 100	11, 26, 54, 79	0
1	F	435/455 (95%)	-0.07	4 (0%) 81 61	11, 36, 77, 93	0
All	All	2610/2730 (95%)	-0.24	10 (0%) 88 76	11, 30, 73, 95	0

All (10) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	68	ILE	3.0
1	D	212	ALA	2.6
1	D	5	ASP	2.5
1	F	67	ASP	2.4
1	F	51	GLU	2.4
1	F	52	LYS	2.3
1	C	69	SER	2.3
1	A	83	SER	2.2
1	C	68	ILE	2.1
1	F	68	ILE	2.0

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

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

6.3 Carbohydrates

There are no oligosaccharides in this entry.

6.4 Ligands

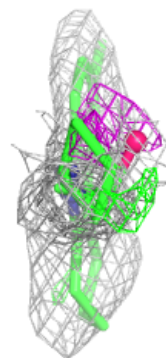
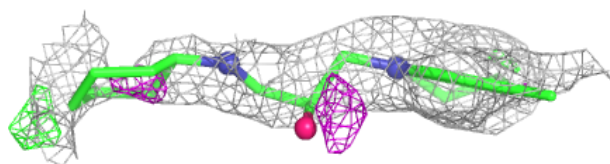
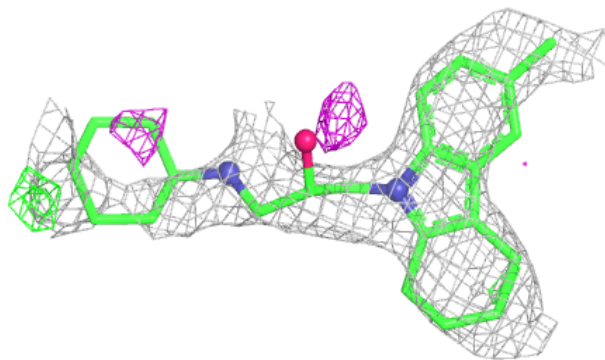
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	3LP	C	703	25/25	0.66	0.25	71,72,73,74	0
3	3LP	F	706	25/25	0.74	0.20	71,72,73,74	0
2	MYA	F	606	63/63	0.89	0.13	39,40,51,52	0
2	MYA	C	603	63/63	0.91	0.11	41,43,49,49	0
2	MYA	E	605	63/63	0.95	0.08	16,31,36,36	0
2	MYA	B	602	63/63	0.95	0.08	23,26,28,28	0
2	MYA	A	601	63/63	0.95	0.09	25,38,44,44	0
2	MYA	D	604	63/63	0.95	0.09	18,30,35,36	0

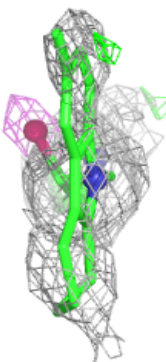
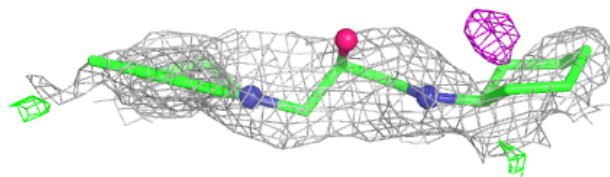
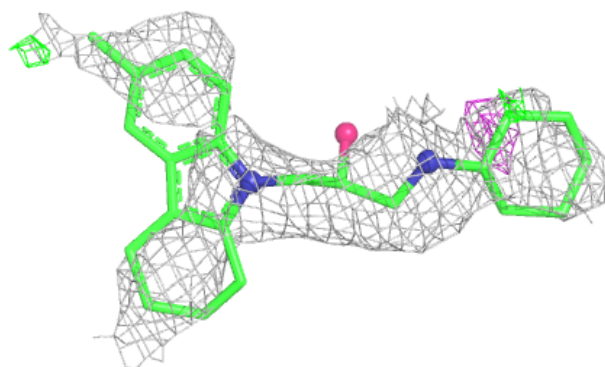
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around 3LP C 703:

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

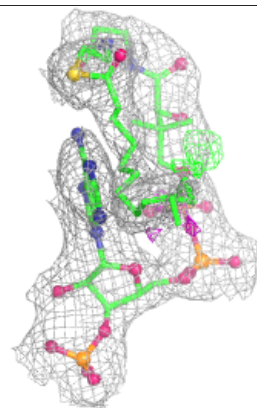
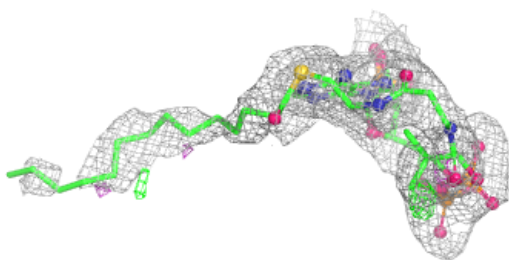
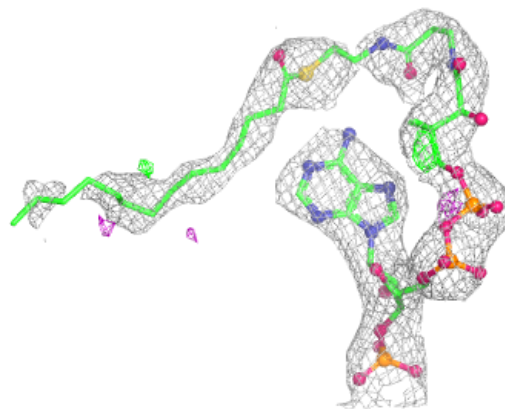
**Electron density around 3LP F 706:**

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

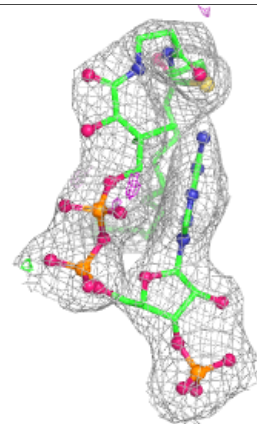
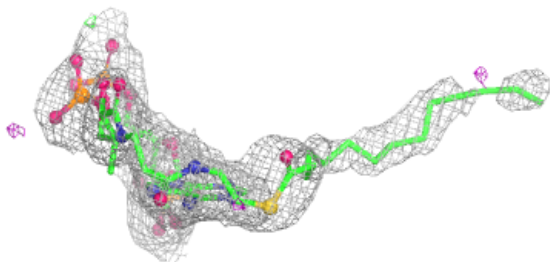
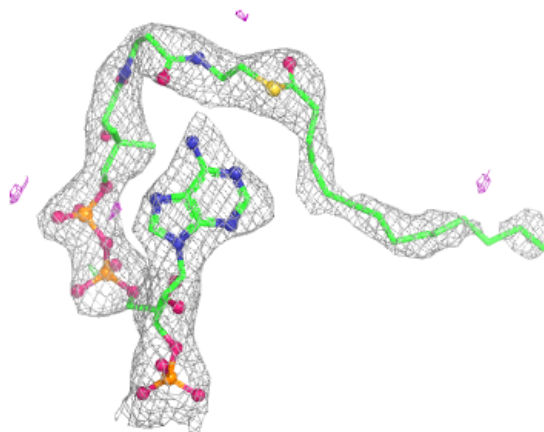


Electron density around MYA F 606:

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

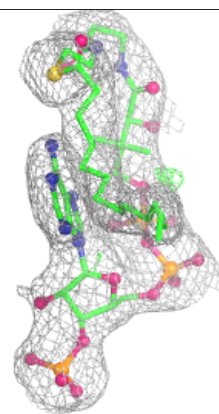
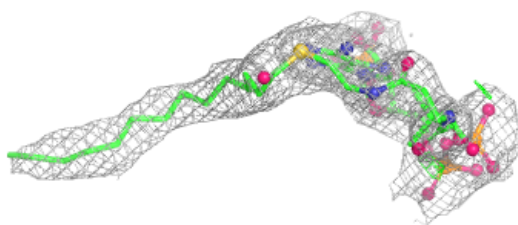
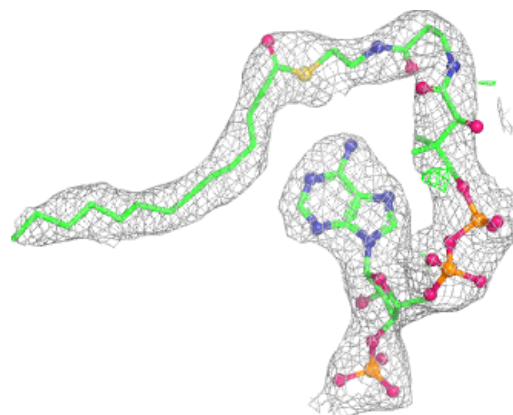
**Electron density around MYA C 603:**

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

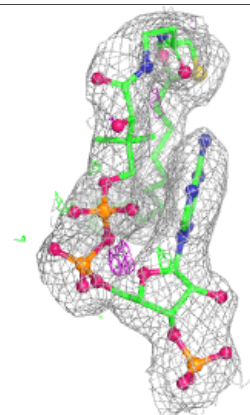
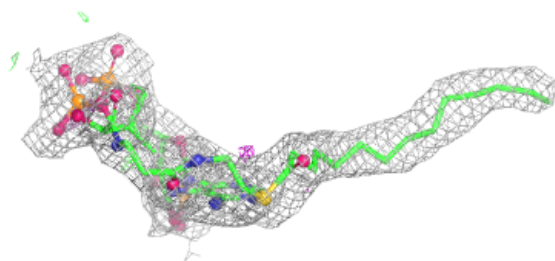
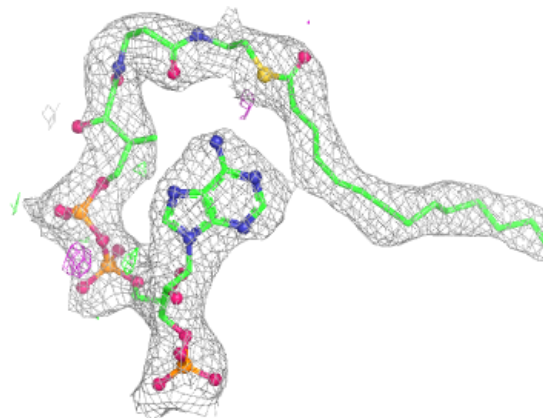


Electron density around MYA E 605:

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

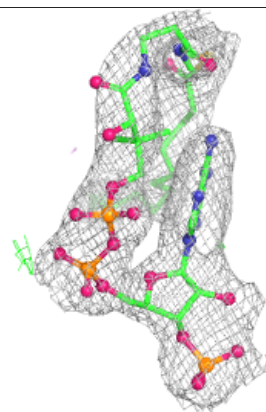
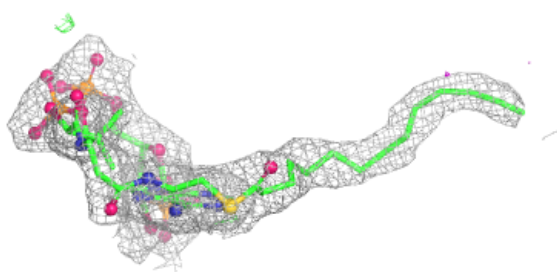
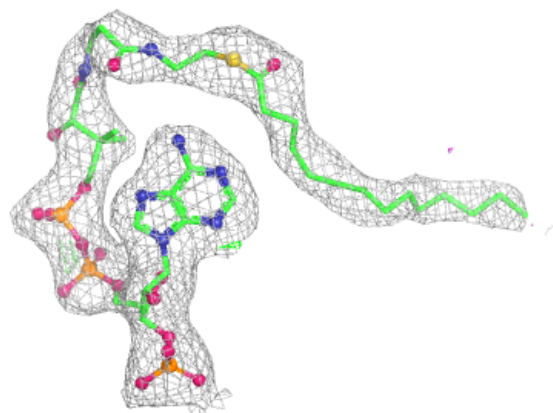
**Electron density around MYA B 602:**

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

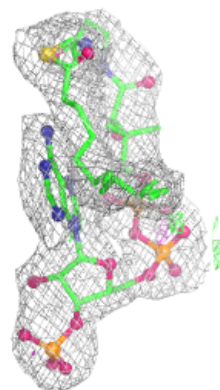
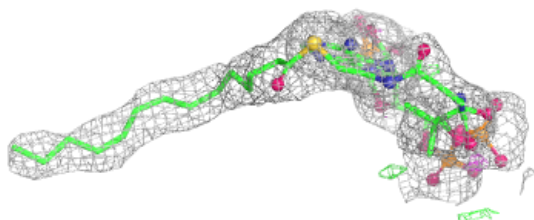
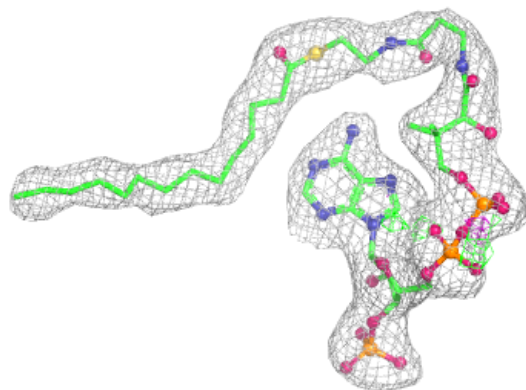


Electron density around MYA A 601:

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

**Electron density around MYA D 604:**

$2mF_o-DF_c$ (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.