Full wwPDB X-ray Structure Validation Report ⓘ

Mar 17, 2026 – 12:20 PM UTC

PDB ID	:	6OCW / pdb_00006ocw
Title	:	Crystal Structure of Mycobacterium tuberculosis Proteasome in Complex with Phenylimidazole-based Inhibitor A85
Authors	:	Hsu, H.C.; Li, H.
Deposited on	:	2019-03-25
Resolution	:	2.60 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:

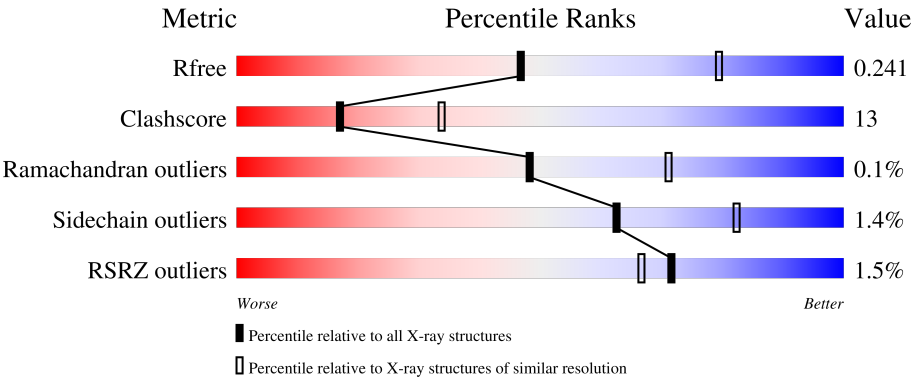
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.60 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	3775 (2.60-2.60)
Clashscore	180529	4181 (2.60-2.60)
Ramachandran outliers	177936	4129 (2.60-2.60)
Sidechain outliers	177891	4129 (2.60-2.60)
RSRZ outliers	164620	3775 (2.60-2.60)

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

Mol	Chain	Length	Quality of chain
1	A	240	68% 22% • 9%
1	B	240	5% 58% 30% • 10%
1	C	240	55% 34% • 10%
1	D	240	3% 66% 24% 10%
1	E	240	3% 61% 29% 10%

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Mol	Chain	Length	Quality of chain
1	F	240	57% 30% 11%
1	G	240	69% 21% 10%
1	O	240	55% 34% 10%
1	P	240	64% 25% 10%
1	Q	240	62% 27% 10%
1	R	240	65% 25% 10%
1	S	240	65% 26% 9%
1	T	240	64% 26% 10%
1	U	240	65% 25% 10%
2	H	234	79% 16% 5%
2	I	234	80% 14% 5%
2	J	234	77% 18% 5%
2	K	234	83% 12% 5%
2	L	234	79% 16% 5%
2	M	234	78% 17% 5%
2	N	234	76% 20% 5%
2	V	234	79% 15% 5%
2	W	234	77% 18% 5%
2	X	234	74% 21% 5%
2	Y	234	78% 17% 5%
2	Z	234	72% 22% 5%
2	a	234	77% 18% 5%
2	b	234	77% 17% 5%

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
5	CIT	H	302	-	X	-	-
5	CIT	X	302	-	-	X	-
5	CIT	a	302	-	-	X	-

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 48175 atoms, of which 175 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 Proteasome subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	218	Total	C	N	O	S	0	1	0
			1688	1056	310	318	4			
1	B	215	Total	C	N	O	S	0	0	0
			1660	1041	303	312	4			
1	C	216	Total	C	N	O	S	0	0	0
			1664	1043	304	313	4			
1	D	215	Total	C	N	O	S	0	0	0
			1655	1035	303	313	4			
1	E	216	Total	C	N	O	S	0	0	0
			1667	1045	304	314	4			
1	F	214	Total	C	N	O	S	0	1	0
			1664	1042	306	312	4			
1	G	216	Total	C	N	O	S	0	0	0
			1662	1040	304	314	4			
1	O	215	Total	C	N	O	S	0	0	0
			1660	1040	303	313	4			
1	P	216	Total	C	N	O	S	0	0	0
			1667	1045	304	314	4			
1	Q	215	Total	C	N	O	S	0	0	0
			1660	1041	303	312	4			
1	R	215	Total	C	N	O	S	0	0	0
			1657	1038	303	312	4			
1	S	218	Total	C	N	O	S	0	1	0
			1689	1056	310	319	4			
1	T	217	Total	C	N	O	S	0	0	0
			1671	1047	305	315	4			
1	U	216	Total	C	N	O	S	0	0	0
			1664	1043	304	313	4			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	9	MET	-	initiating methionine	UNP P9WHU1

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Chain	Residue	Modelled	Actual	Comment	Reference
B	9	MET	-	initiating methionine	UNP P9WHU1
C	9	MET	-	initiating methionine	UNP P9WHU1
D	9	MET	-	initiating methionine	UNP P9WHU1
E	9	MET	-	initiating methionine	UNP P9WHU1
F	9	MET	-	initiating methionine	UNP P9WHU1
G	9	MET	-	initiating methionine	UNP P9WHU1
O	9	MET	-	initiating methionine	UNP P9WHU1
P	9	MET	-	initiating methionine	UNP P9WHU1
Q	9	MET	-	initiating methionine	UNP P9WHU1
R	9	MET	-	initiating methionine	UNP P9WHU1
S	9	MET	-	initiating methionine	UNP P9WHU1
T	9	MET	-	initiating methionine	UNP P9WHU1
U	9	MET	-	initiating methionine	UNP P9WHU1

- Molecule 2 is a protein called Proteasome subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	I	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	J	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	K	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	L	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	M	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	N	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	V	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	W	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	X	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	Y	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			
2	Z	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			
2	a	223	Total	C	N	O	S	0	0	0
			1642	1029	283	325	5			

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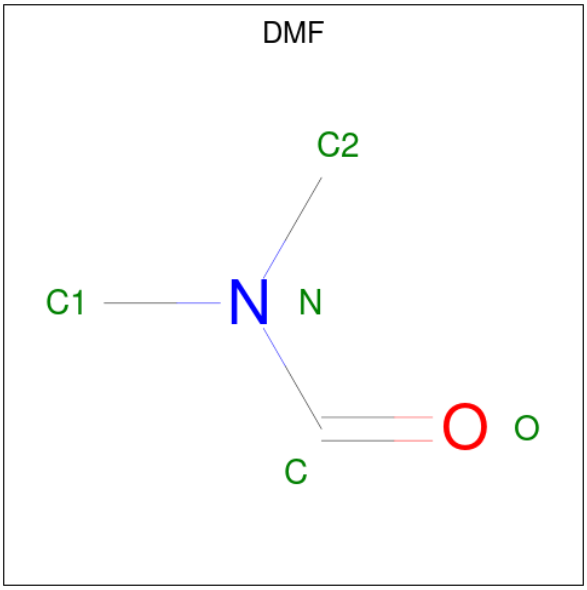
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	b	222	Total	C	N	O	S	0	0	0
			1638	1027	282	324	5			

- Molecule 3 is DIMETHYLFORMAMIDE (CCD ID: DMF) (formula: C_3H_7NO).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	C	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	D	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	E	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	F	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	J	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	O	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	P	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	Q	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	R	1	Total	C	H	N	O	0	0
			12	3	7	1	1		

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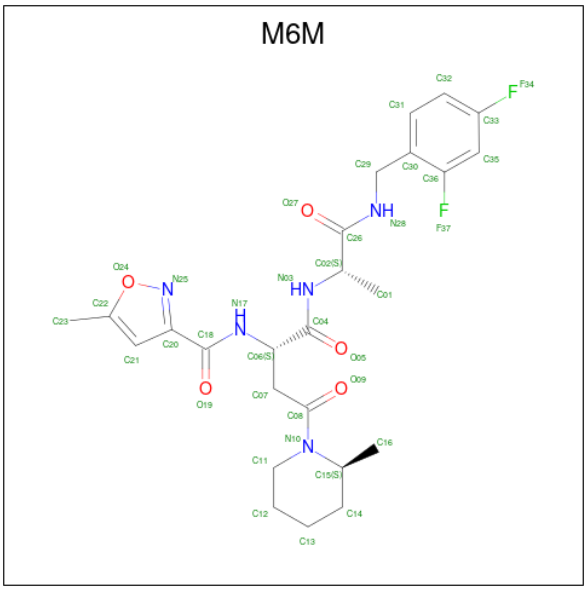
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	R	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	S	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	T	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	U	1	Total	C	H	N	O	0	0
			12	3	7	1	1		
3	a	1	Total	C	H	N	O	0	0
			12	3	7	1	1		

- Molecule 4 is N-{(2S)-1-({(2S)-1-[(2,4-difluorobenzyl)amino]-1-oxopropan-2-yl}amino)-4-[(2S)-2-methylpiperidin-1-yl]-1,4-dioxobutan-2-yl}-5-methyl-1,2-oxazole-3-carboxamide (non-preferred name) (CCD ID: M6M) (formula: $C_{25}H_{31}F_2N_5O_5$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	H	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	I	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	J	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	K	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	L	1	Total	C	F	N	O	0	0
			37	25	2	5	5		

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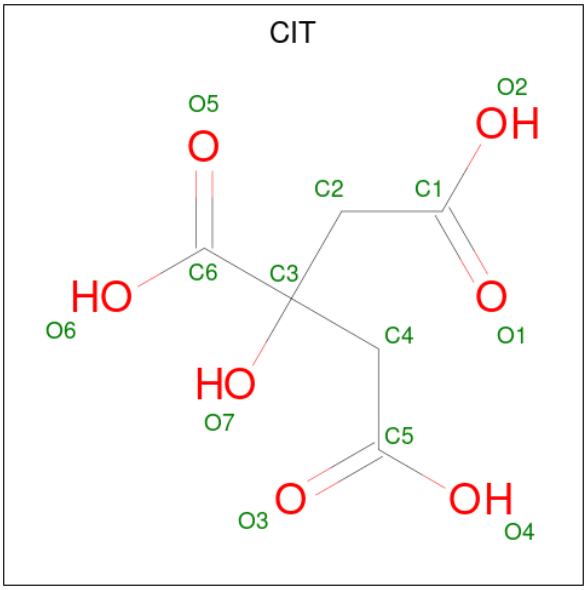
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	M	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	N	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	V	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	W	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	X	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	Y	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	Z	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	a	1	Total	C	F	N	O	0	0
			37	25	2	5	5		
4	b	1	Total	C	F	N	O	0	0
			37	25	2	5	5		

- Molecule 5 is CITRIC ACID (CCD ID: CIT) (formula: $C_6H_8O_7$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	H	1	Total	C	H	O		0	0
			18	6	5	7			
5	I	1	Total	C	H	O		0	0
			18	6	5	7			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	J	1	Total	C	H	O	0	0
			18	6	5	7		
5	K	1	Total	C	H	O	0	0
			18	6	5	7		
5	L	1	Total	C	H	O	0	0
			18	6	5	7		
5	M	1	Total	C	H	O	0	0
			18	6	5	7		
5	N	1	Total	C	H	O	0	0
			18	6	5	7		
5	V	1	Total	C	H	O	0	0
			18	6	5	7		
5	W	1	Total	C	H	O	0	0
			18	6	5	7		
5	X	1	Total	C	H	O	0	0
			18	6	5	7		
5	Y	1	Total	C	H	O	0	0
			18	6	5	7		
5	Z	1	Total	C	H	O	0	0
			18	6	5	7		
5	a	1	Total	C	H	O	0	0
			18	6	5	7		
5	b	1	Total	C	H	O	0	0
			18	6	5	7		

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	20	Total	O	0	0
			20	20		
6	B	18	Total	O	0	0
			18	18		
6	C	19	Total	O	0	0
			19	19		
6	D	20	Total	O	0	0
			20	20		
6	E	19	Total	O	0	0
			19	19		
6	F	17	Total	O	0	0
			17	17		
6	G	32	Total	O	0	0
			32	32		

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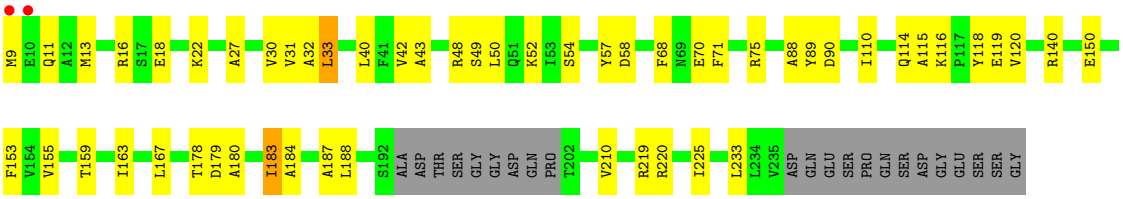
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	H	33	Total O 33 33	0	0
6	I	42	Total O 42 42	0	0
6	J	45	Total O 45 45	0	0
6	K	45	Total O 45 45	0	0
6	L	45	Total O 45 45	0	0
6	M	45	Total O 45 45	0	0
6	N	43	Total O 43 43	0	0
6	O	24	Total O 24 24	0	0
6	P	22	Total O 22 22	0	0
6	Q	35	Total O 35 35	0	0
6	R	24	Total O 24 24	0	0
6	S	30	Total O 30 30	0	0
6	T	19	Total O 19 19	0	0
6	U	22	Total O 22 22	0	0
6	V	53	Total O 53 53	0	0
6	W	47	Total O 47 47	0	0
6	X	47	Total O 47 47	0	0
6	Y	42	Total O 42 42	0	0
6	Z	50	Total O 50 50	0	0
6	a	38	Total O 38 38	0	0
6	b	41	Total O 41 41	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.

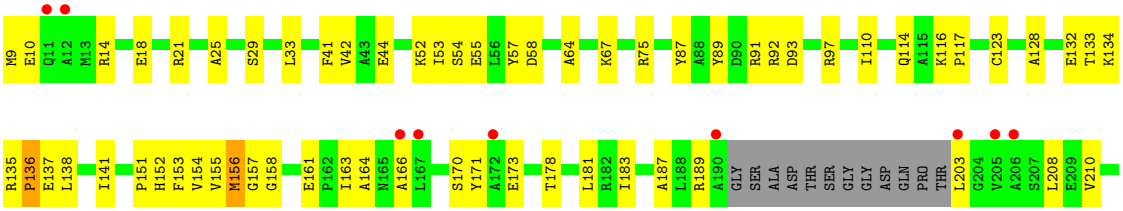
• Molecule 1: Proteasome subunit alpha

Chain A:



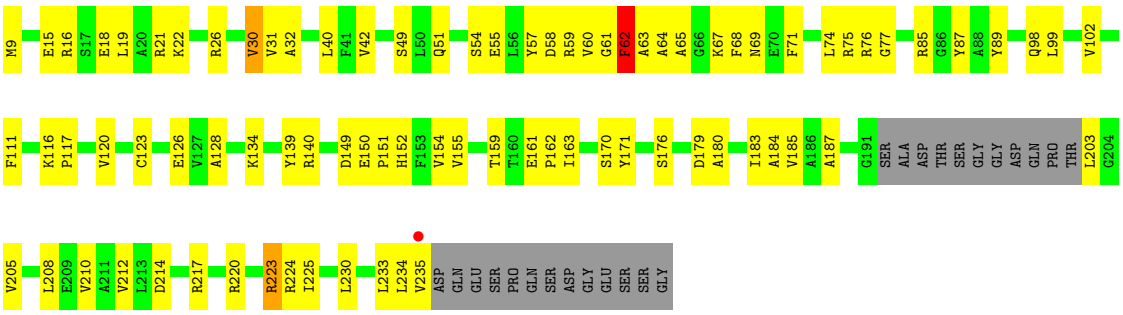
• Molecule 1: Proteasome subunit alpha

Chain B:



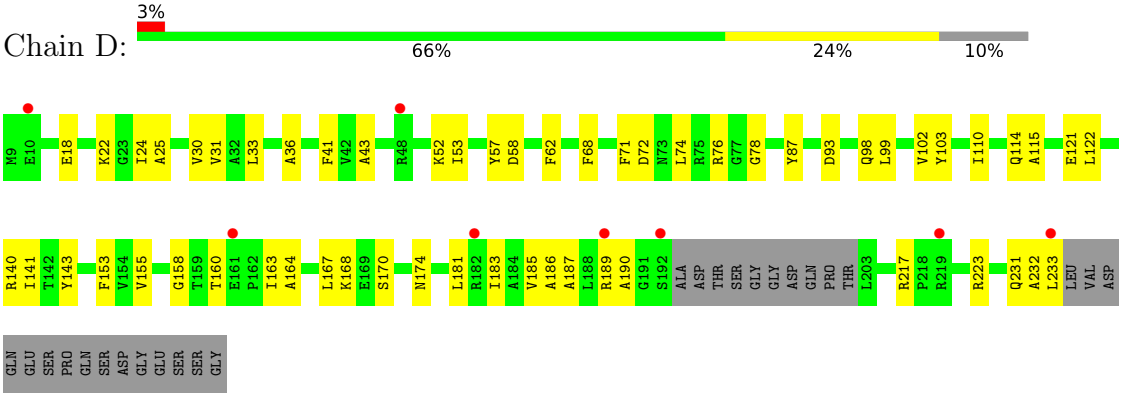
• Molecule 1: Proteasome subunit alpha

Chain C:



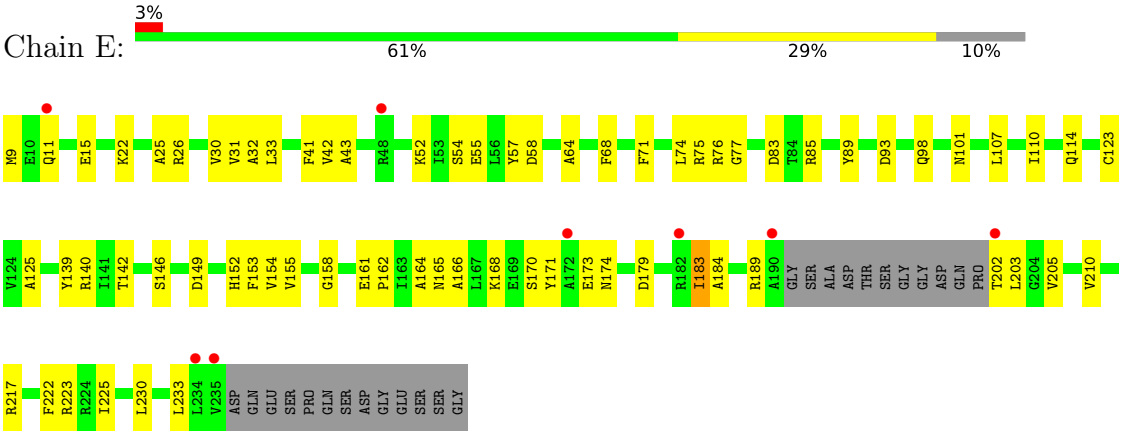
• Molecule 1: Proteasome subunit alpha

Chain D:



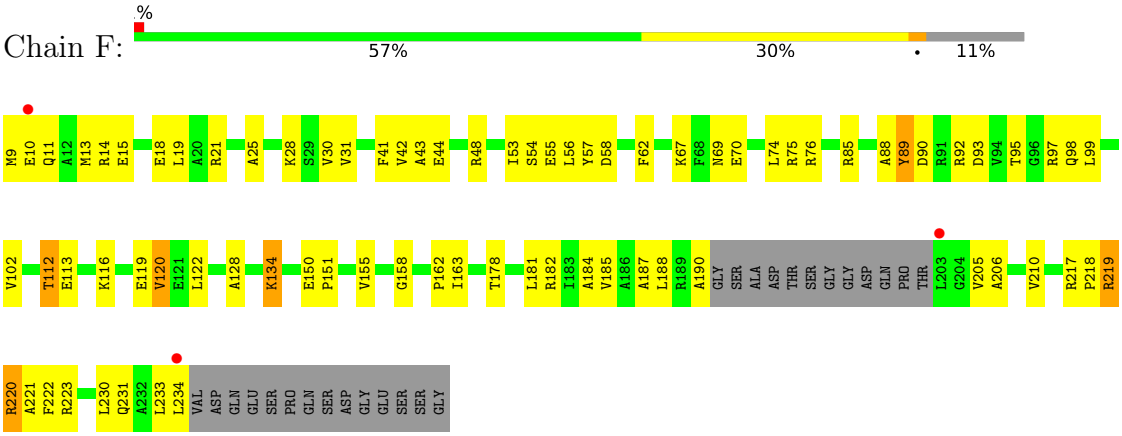
• Molecule 1: Proteasome subunit alpha

Chain E:



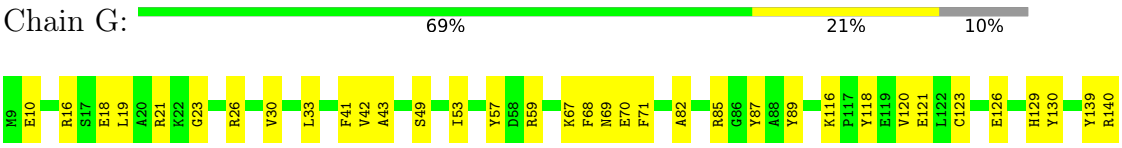
• Molecule 1: Proteasome subunit alpha

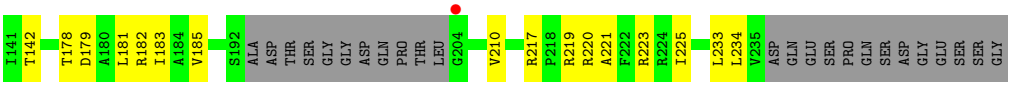
Chain F:



• Molecule 1: Proteasome subunit alpha

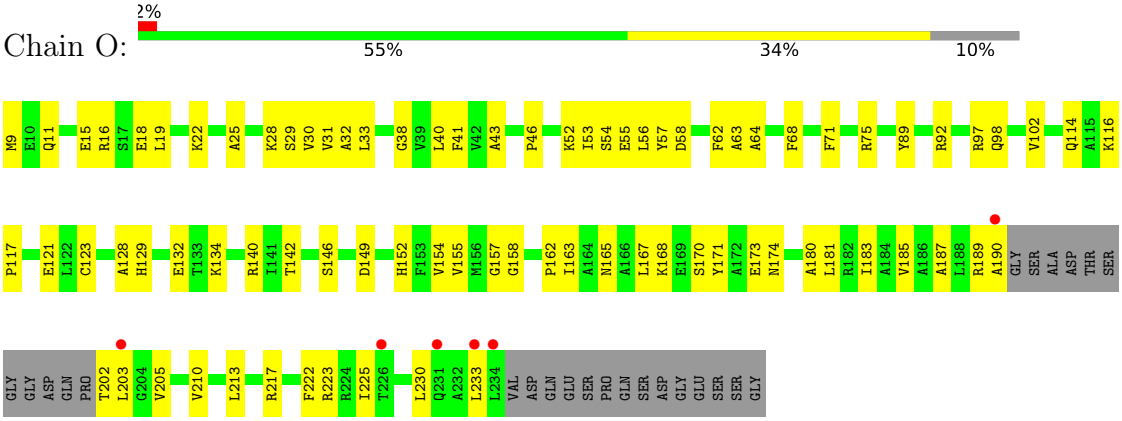
Chain G:





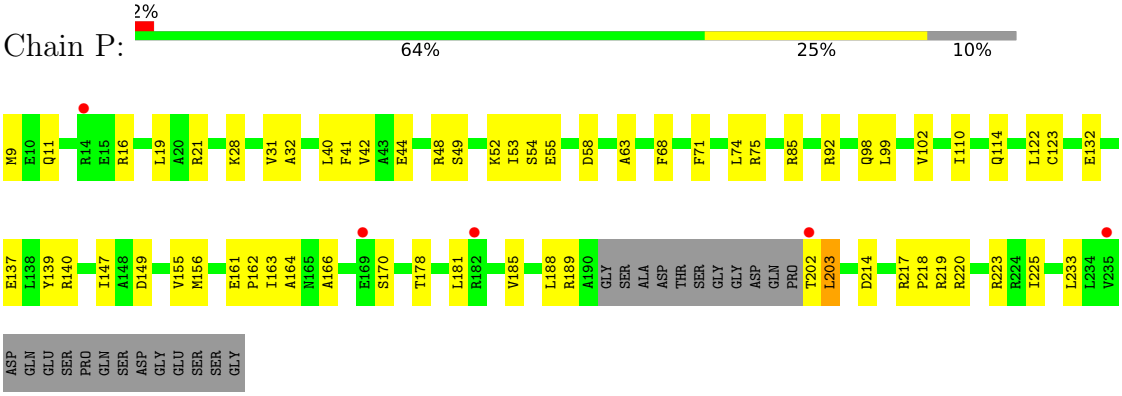
• Molecule 1: Proteasome subunit alpha

Chain O:



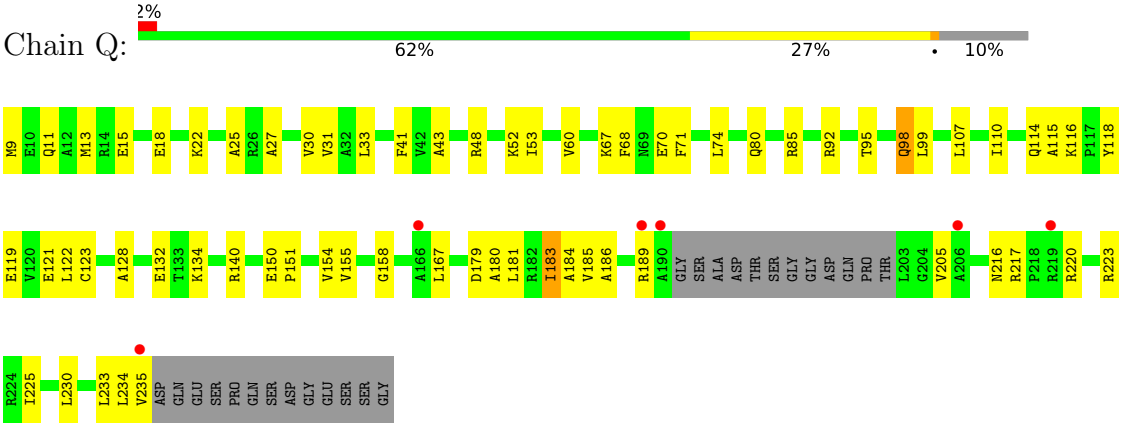
• Molecule 1: Proteasome subunit alpha

Chain P:



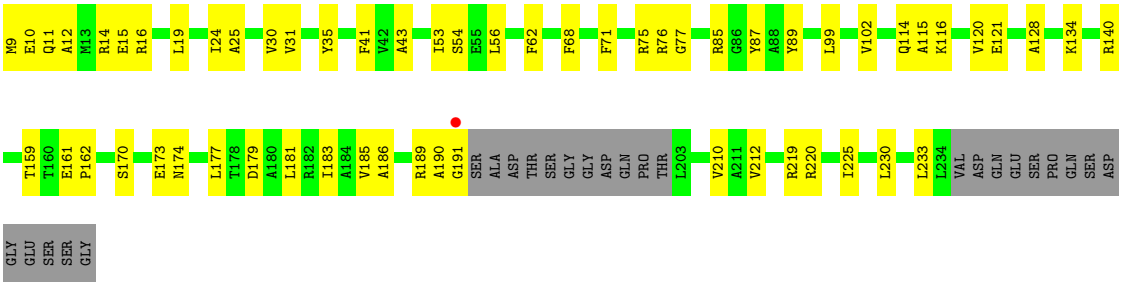
• Molecule 1: Proteasome subunit alpha

Chain Q:

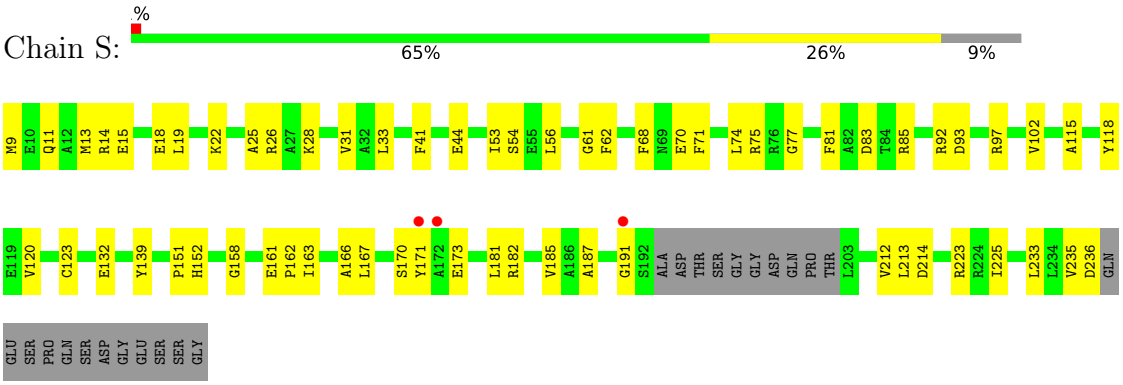


• Molecule 1: Proteasome subunit alpha

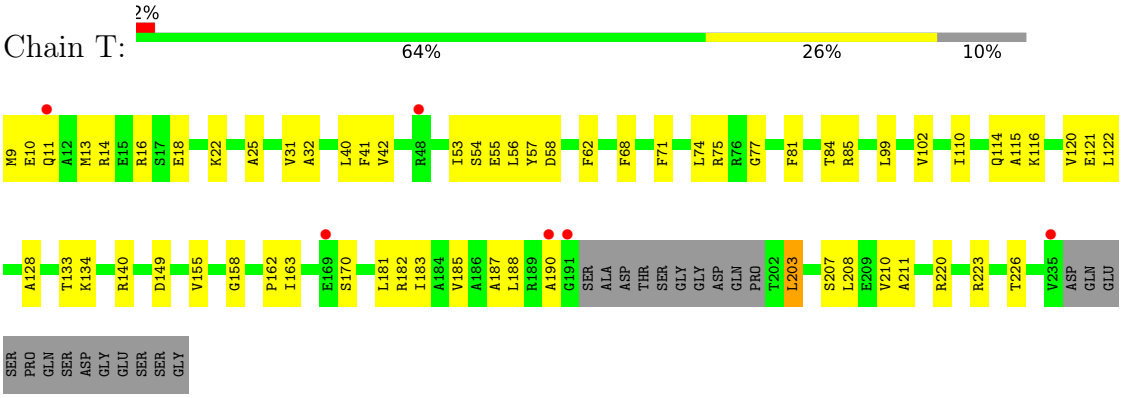
Chain R:



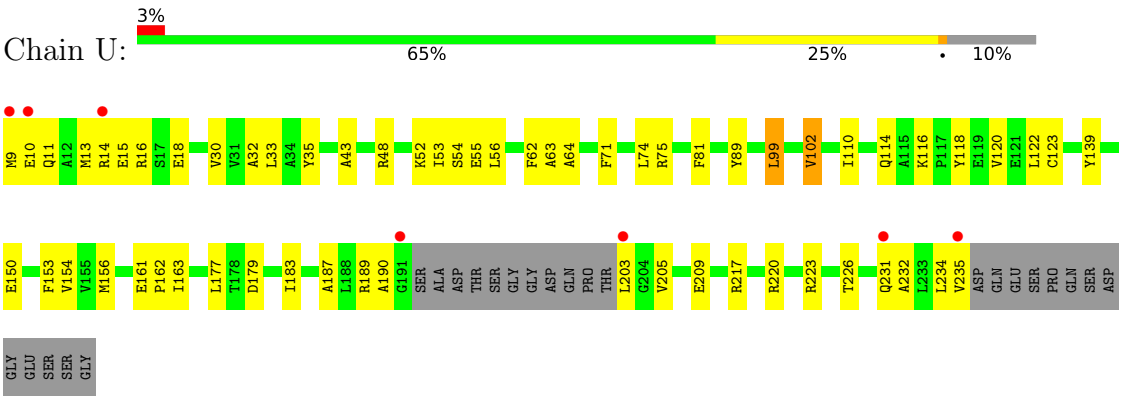
• Molecule 1: Proteasome subunit alpha



• Molecule 1: Proteasome subunit alpha

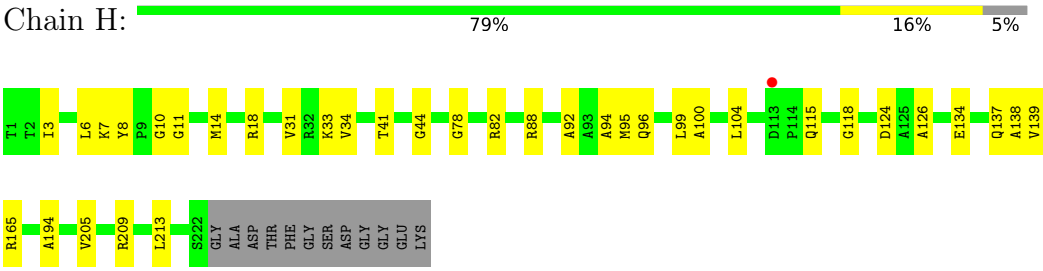


• Molecule 1: Proteasome subunit alpha



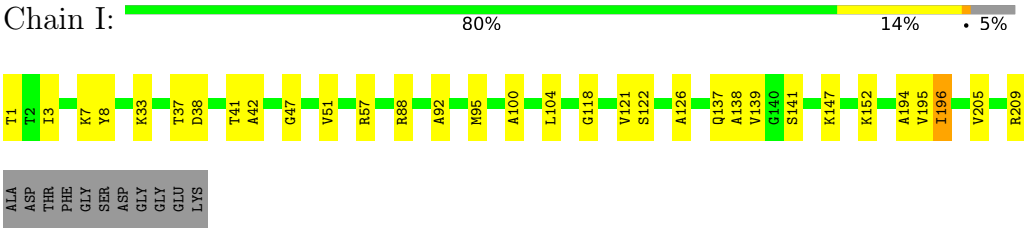
• Molecule 2: Proteasome subunit beta

Chain H:



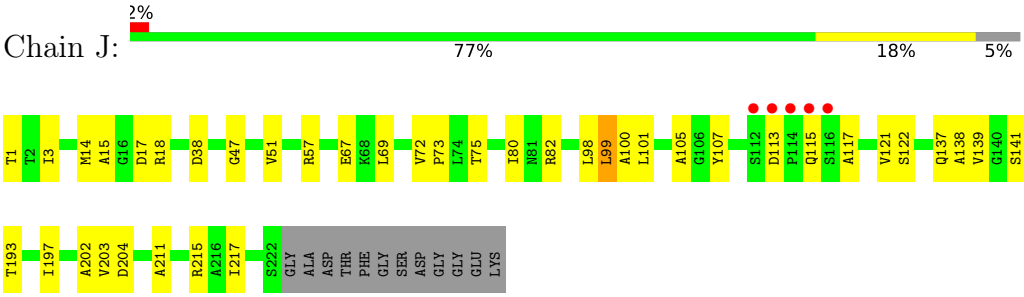
• Molecule 2: Proteasome subunit beta

Chain I:



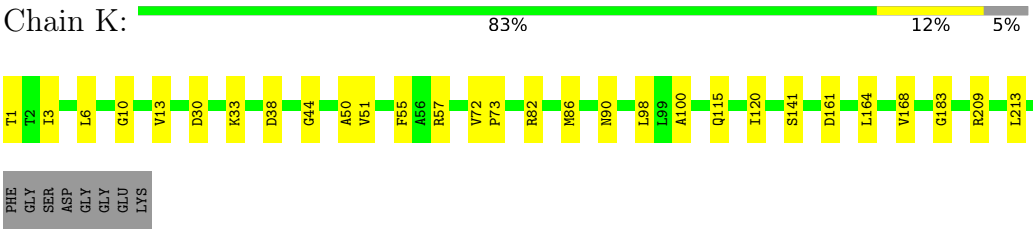
• Molecule 2: Proteasome subunit beta

Chain J:



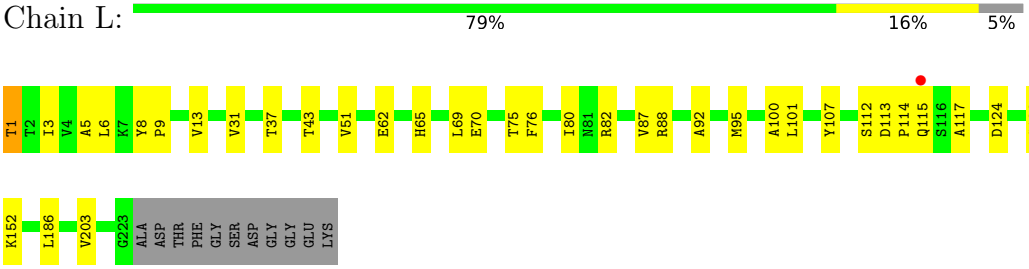
• Molecule 2: Proteasome subunit beta

Chain K:



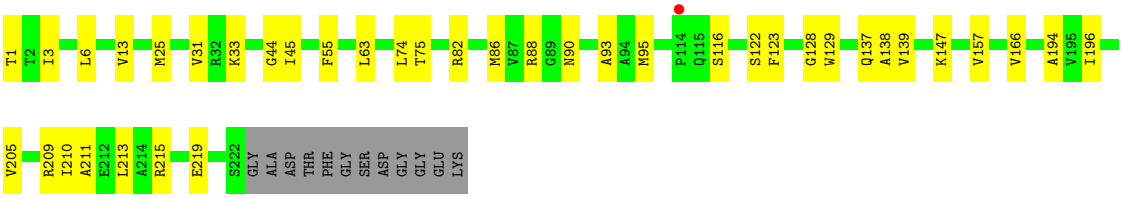
• Molecule 2: Proteasome subunit beta

Chain L:



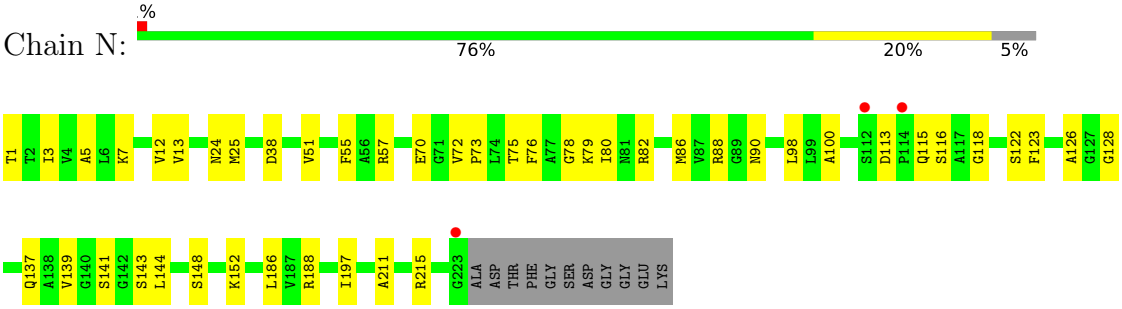
• Molecule 2: Proteasome subunit beta

Chain M:



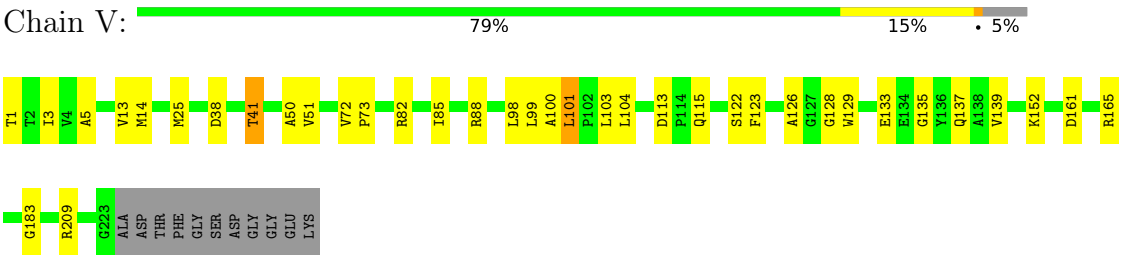
• Molecule 2: Proteasome subunit beta

Chain N:



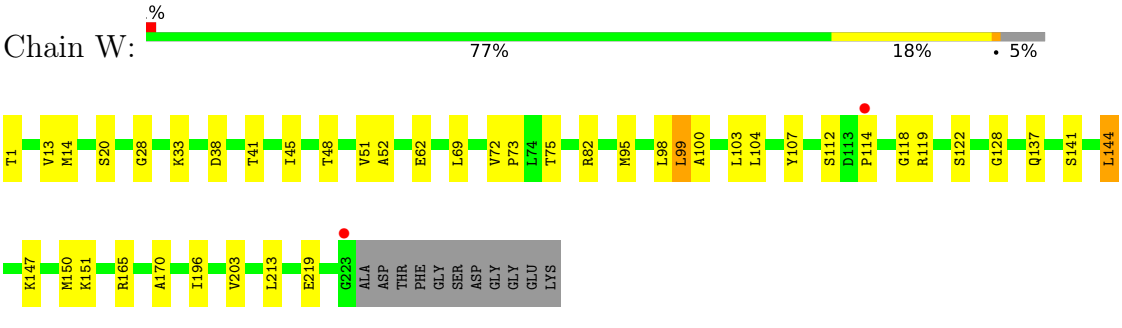
• Molecule 2: Proteasome subunit beta

Chain V:



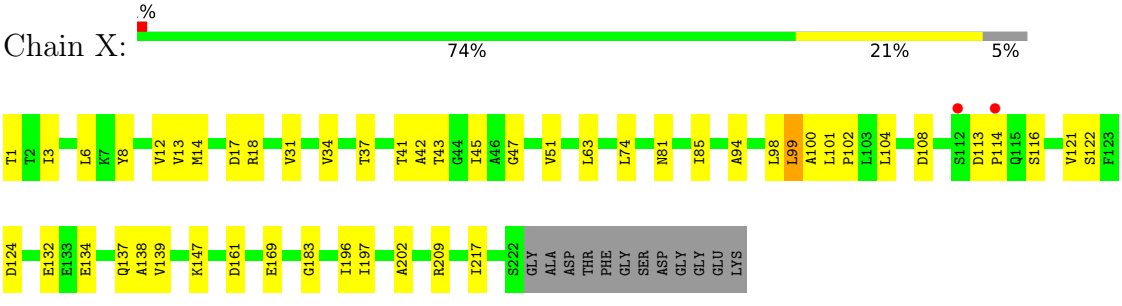
• Molecule 2: Proteasome subunit beta

Chain W:



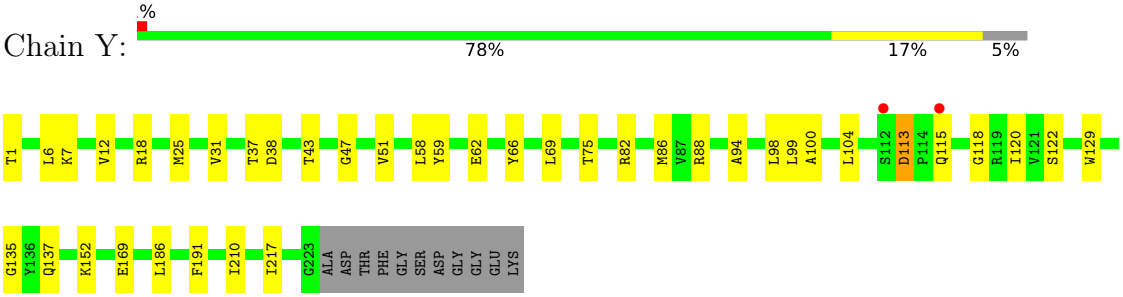
• Molecule 2: Proteasome subunit beta

Chain X:



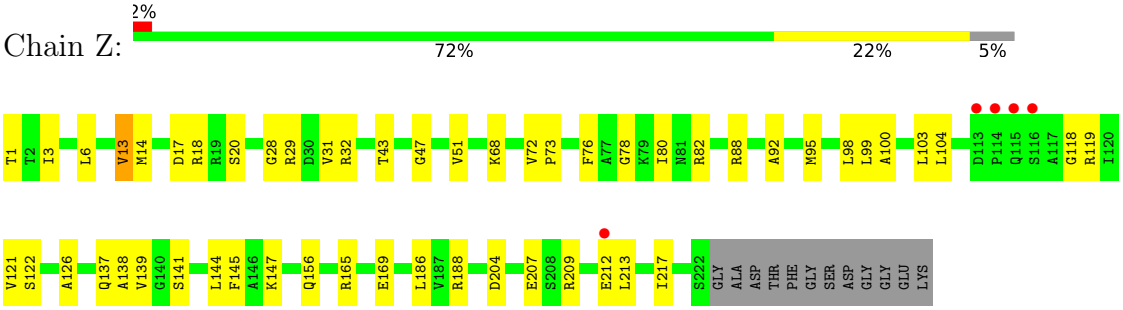
• Molecule 2: Proteasome subunit beta

Chain Y:



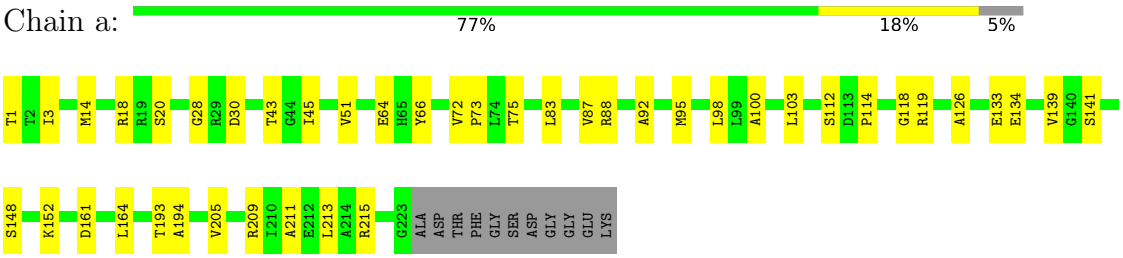
• Molecule 2: Proteasome subunit beta

Chain Z:



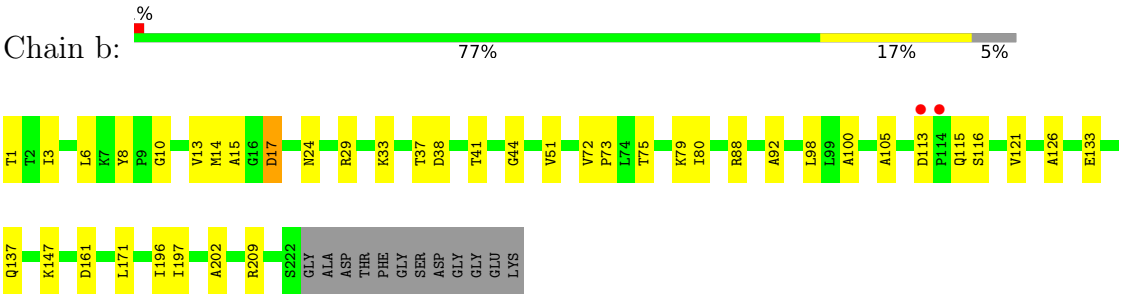
• Molecule 2: Proteasome subunit beta

Chain a:



• Molecule 2: Proteasome subunit beta

Chain b:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	120.18Å 198.65Å 166.35Å 90.00° 103.58° 90.00°	Depositor
Resolution (Å)	42.82 – 2.60 42.82 – 2.60	Depositor EDS
% Data completeness (in resolution range)	96.6 (42.82-2.60) 96.6 (42.82-2.60)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.14 (at 2.61Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.185 , 0.241 0.187 , 0.241	Depositor DCC
R_{free} test set	11138 reflections (4.79%)	wwPDB-VP
Wilson B-factor (Å^2)	29.0	Xtriage
Anisotropy	0.358	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 43.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	48175	wwPDB-VP
Average B, all atoms (Å^2)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.87% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DMF, CIT, M6M

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	0.61	5/1712 (0.3%)	0.62	2/2311 (0.1%)
1	B	0.27	0/1684	0.49	0/2274
1	C	0.59	6/1688 (0.4%)	0.55	1/2279 (0.0%)
1	D	0.26	0/1679	0.51	0/2266
1	E	0.28	0/1691	0.51	0/2284
1	F	0.66	8/1688 (0.5%)	0.56	0/2278
1	G	0.48	3/1686 (0.2%)	0.54	0/2276
1	O	0.27	0/1684	0.50	0/2274
1	P	0.28	0/1691	0.52	0/2284
1	Q	0.33	0/1684	0.54	0/2274
1	R	0.28	0/1681	0.51	0/2269
1	S	0.31	0/1713	0.53	0/2312
1	T	0.26	0/1695	0.50	0/2289
1	U	0.29	0/1688	0.53	0/2279
2	H	0.31	0/1662	0.51	0/2254
2	I	0.32	0/1662	0.53	0/2254
2	J	0.29	0/1662	0.49	0/2254
2	K	0.31	0/1666	0.54	0/2259
2	L	0.31	0/1666	0.53	0/2259
2	M	0.29	0/1662	0.52	0/2254
2	N	0.30	0/1666	0.50	0/2259
2	V	0.31	0/1666	0.52	0/2259
2	W	0.38	1/1666 (0.1%)	0.54	0/2259
2	X	0.31	0/1662	0.51	0/2254
2	Y	0.32	0/1666	0.52	0/2259
2	Z	0.31	0/1662	0.52	0/2254
2	a	0.30	0/1666	0.50	0/2259
2	b	0.31	0/1662	0.52	0/2254
All	All	0.36	23/46960 (0.0%)	0.52	3/63540 (0.0%)

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	60	VAL	C-O	-10.07	1.13	1.24
1	C	62	PHE	C-O	-8.93	1.13	1.23
2	W	144	LEU	C-O	-7.54	1.15	1.24
1	A	89	TYR	C-O	-7.35	1.14	1.24
1	C	63	ALA	C-O	-7.16	1.15	1.23
1	A	50	LEU	C-O	-6.95	1.15	1.23
1	F	88	ALA	C-O	-6.82	1.15	1.24
1	F	220	ARG	C-O	-6.58	1.16	1.24
1	G	219	ARG	C-O	-6.23	1.16	1.24
1	C	64	ALA	C-O	-6.14	1.16	1.23
1	A	90	ASP	C-O	-6.08	1.16	1.23
1	A	49	SER	C-O	-6.05	1.16	1.23
1	F	219	ARG	C-O	-5.98	1.16	1.24
1	F	90	ASP	C-O	-5.95	1.16	1.23
1	F	89	TYR	C-O	-5.94	1.16	1.24
1	C	61	GLY	C-O	-5.91	1.15	1.23
1	F	218	PRO	C-O	-5.79	1.17	1.24
1	G	221	ALA	C-O	-5.62	1.16	1.24
1	F	220	ARG	CZ-NH2	-5.57	1.26	1.33
1	G	220	ARG	CZ-NH2	-5.26	1.26	1.33
1	C	61	GLY	CA-C	-5.23	1.47	1.52
1	A	88	ALA	C-O	-5.20	1.18	1.24
1	F	221	ALA	C-O	-5.00	1.17	1.24

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	49	SER	N-CA-C	5.27	122.65	114.64
1	A	159	THR	N-CA-C	-5.24	100.18	108.73
1	C	60	VAL	N-CA-C	5.06	115.41	108.12

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	1688	0	1692	35	0
1	B	1660	0	1665	71	0
1	C	1664	0	1668	76	0
1	D	1655	0	1653	48	0
1	E	1667	0	1672	68	0
1	F	1664	0	1668	64	0
1	G	1662	0	1662	37	0
1	O	1660	0	1663	65	0
1	P	1667	0	1672	59	0
1	Q	1660	0	1665	65	0
1	R	1657	0	1659	51	0
1	S	1689	0	1689	44	0
1	T	1671	0	1675	52	1
1	U	1664	0	1668	52	0
2	H	1638	0	1633	27	0
2	I	1638	0	1633	29	0
2	J	1638	0	1633	33	0
2	K	1642	0	1636	26	0
2	L	1642	0	1636	31	0
2	M	1638	0	1633	32	0
2	N	1642	0	1636	40	0
2	V	1642	0	1636	36	0
2	W	1642	0	1636	35	1
2	X	1638	0	1633	42	0
2	Y	1642	0	1636	48	0
2	Z	1638	0	1633	44	0
2	a	1642	0	1636	37	0
2	b	1638	0	1633	30	0
3	A	5	7	7	0	0
3	C	5	7	7	2	0
3	D	5	7	7	0	0
3	E	5	7	7	2	0
3	F	5	7	7	0	0
3	J	5	7	7	1	0
3	O	5	7	7	2	0
3	P	5	7	7	0	0
3	Q	5	7	7	2	0
3	R	10	14	14	2	0
3	S	5	7	7	2	0
3	T	5	7	7	2	0
3	U	5	7	7	0	0
3	a	5	7	7	1	0
4	H	37	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	I	37	0	0	0	0
4	J	37	0	0	0	0
4	K	37	0	0	0	0
4	L	37	0	0	0	0
4	M	37	0	0	1	0
4	N	37	0	0	0	0
4	V	37	0	0	0	0
4	W	37	0	0	1	0
4	X	37	0	0	0	0
4	Y	37	0	0	0	0
4	Z	37	0	0	0	0
4	a	37	0	0	0	0
4	b	37	0	0	0	0
5	H	13	5	5	1	0
5	I	13	5	5	5	0
5	J	13	5	5	3	0
5	K	13	5	5	5	0
5	L	13	5	5	2	0
5	M	13	5	5	4	0
5	N	13	5	5	2	0
5	V	13	5	5	5	0
5	W	13	5	5	2	0
5	X	13	5	5	6	0
5	Y	13	5	5	5	0
5	Z	13	5	5	4	0
5	a	13	5	5	6	0
5	b	13	5	5	4	0
6	A	20	0	0	3	0
6	B	18	0	0	3	0
6	C	19	0	0	4	0
6	D	20	0	0	4	0
6	E	19	0	0	1	0
6	F	17	0	0	2	0
6	G	32	0	0	6	0
6	H	33	0	0	0	0
6	I	42	0	0	0	0
6	J	45	0	0	0	0
6	K	45	0	0	2	0
6	L	45	0	0	1	0
6	M	45	0	0	2	0
6	N	43	0	0	0	0
6	O	24	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	P	22	0	0	5	0
6	Q	35	0	0	6	0
6	R	24	0	0	2	0
6	S	30	0	0	1	0
6	T	19	0	0	2	0
6	U	22	0	0	0	0
6	V	53	0	0	5	0
6	W	47	0	0	2	0
6	X	47	0	0	2	0
6	Y	42	0	0	3	0
6	Z	50	0	0	2	0
6	a	38	0	0	2	0
6	b	41	0	0	3	0
All	All	48000	175	46429	1172	1

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 13.

All (1172) 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:F:231:GLN:HA	1:F:234:LEU:HD23	1.34	1.10
1:Q:30:VAL:HG13	1:Q:43:ALA:HB2	1.37	1.06
1:R:210:VAL:HG11	1:R:230:LEU:HD13	1.40	1.02
1:E:30:VAL:HG13	1:E:43:ALA:HB2	1.42	1.01
1:C:185:VAL:HG13	1:C:203:LEU:HD23	1.42	1.00
1:E:217:ARG:HD2	1:E:223:ARG:HD2	1.45	0.99
1:C:42:VAL:HG23	1:C:210:VAL:HG22	1.46	0.97
2:X:14:MET:HE3	2:X:34:VAL:HG13	1.43	0.97
1:F:210:VAL:HG11	1:F:230:LEU:HD13	1.47	0.95
2:X:13:VAL:HG22	2:X:196:ILE:HD13	1.47	0.95
1:Q:110:ILE:HG23	1:Q:114:GLN:HG3	1.50	0.94
1:B:217:ARG:CZ	1:B:223:ARG:HD3	1.98	0.93
1:Q:121:GLU:OE2	1:Q:140:ARG:NH1	2.03	0.91
1:E:110:ILE:HG23	1:E:114:GLN:HG3	1.53	0.91
1:P:110:ILE:HG23	1:P:114:GLN:HG3	1.52	0.91
1:B:18:GLU:OE1	1:B:21:ARG:NH2	2.03	0.90
2:b:24:ASN:HB2	6:b:438:HOH:O	1.70	0.90
1:B:178:THR:HG22	1:B:233:LEU:HD12	1.53	0.89
1:U:53:ILE:HD12	1:U:209:GLU:HG2	1.55	0.87
2:V:1:THR:HB	5:V:302:CIT:O3	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:30:VAL:HG13	1:G:43:ALA:HB2	1.57	0.86
2:X:14:MET:CE	2:X:34:VAL:HG13	2.04	0.86
2:K:1:THR:HB	5:K:302:CIT:O2	1.75	0.86
1:R:186:ALA:O	1:R:189:ARG:HG2	1.77	0.85
1:U:162:PRO:HB2	1:U:190:ALA:O	1.76	0.85
1:O:41:PHE:HB3	1:O:53:ILE:HD13	1.58	0.85
1:Q:31:VAL:HG12	1:Q:155:VAL:HG12	1.57	0.85
1:F:112:THR:HG22	1:F:113:GLU:HG3	1.59	0.84
1:O:31:VAL:HG12	1:O:155:VAL:HG22	1.57	0.84
2:Z:51:VAL:HG12	2:Z:100:ALA:HB2	1.59	0.84
1:C:85:ARG:HH21	1:C:98:GLN:NE2	1.74	0.84
1:C:42:VAL:HG23	1:C:210:VAL:CG2	2.08	0.84
2:M:88:ARG:HD2	6:M:421:HOH:O	1.77	0.84
1:A:31:VAL:HG12	1:A:155:VAL:HG12	1.58	0.83
1:P:137:GLU:HG2	1:Q:48:ARG:HH21	1.40	0.83
1:T:42:VAL:HG22	1:T:210:VAL:HG22	1.61	0.82
2:V:25:MET:HE1	2:W:144:LEU:HD11	1.62	0.81
1:R:177:LEU:HD12	1:R:233:LEU:HD22	1.61	0.81
2:Y:37:THR:HG22	6:Y:422:HOH:O	1.77	0.81
1:Q:186:ALA:O	1:Q:189:ARG:HG2	1.81	0.81
2:X:8:TYR:CE1	2:X:196:ILE:HD11	2.16	0.81
2:X:13:VAL:HG22	2:X:196:ILE:CD1	2.11	0.80
1:G:41:PHE:HB3	1:G:53:ILE:HD13	1.62	0.80
1:S:9:MET:HE1	1:T:115:ALA:O	1.82	0.80
1:Q:205:VAL:HG13	1:Q:230:LEU:HD23	1.64	0.80
2:a:92:ALA:HA	2:a:95:MET:HE2	1.64	0.80
1:B:228:SER:O	1:B:231:GLN:HB3	1.80	0.80
1:B:232:ALA:O	1:B:235:VAL:HG22	1.81	0.79
1:G:18:GLU:OE1	1:G:21:ARG:NH1	2.14	0.79
1:U:231:GLN:HA	1:U:234:LEU:HD12	1.63	0.79
1:O:210:VAL:HG21	1:O:230:LEU:HD13	1.63	0.79
1:D:121:GLU:OE1	1:D:140:ARG:NH2	2.16	0.79
1:D:31:VAL:HG12	1:D:155:VAL:HG12	1.66	0.79
1:O:18:GLU:HG3	1:O:22:LYS:HE3	1.64	0.78
1:C:150:GLU:HG3	1:C:154:VAL:HG12	1.65	0.78
2:I:51:VAL:HG12	2:I:100:ALA:HB2	1.65	0.77
1:R:177:LEU:HD12	1:R:233:LEU:CD2	2.14	0.77
2:Y:43:THR:HG22	2:Y:104:LEU:CD1	2.14	0.77
1:O:117:PRO:HD2	1:U:9:MET:HE2	1.66	0.77
1:Q:167:LEU:CD2	1:Q:183:ILE:HD12	2.15	0.77
1:A:115:ALA:HB3	6:G:324:HOH:O	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:209:ARG:O	2:Z:212:GLU:HG2	1.86	0.76
1:Q:183:ILE:HG13	1:Q:184:ALA:N	1.99	0.76
1:E:33:LEU:HD23	1:E:153:PHE:HB3	1.66	0.75
1:B:10:GLU:OE1	1:C:15:GLU:HG2	1.86	0.75
1:C:18:GLU:OE1	1:C:21:ARG:NH1	2.20	0.75
1:C:85:ARG:HH21	1:C:98:GLN:HE21	1.36	0.74
2:N:51:VAL:HG12	2:N:100:ALA:HB2	1.68	0.74
2:X:1:THR:HB	5:X:302:CIT:O3	1.87	0.74
2:J:1:THR:HB	5:J:302:CIT:O4	1.87	0.74
1:F:30:VAL:HG23	1:F:43:ALA:HB2	1.70	0.74
2:V:1:THR:HB	5:V:302:CIT:C5	2.18	0.74
1:A:178:THR:HG22	1:A:233:LEU:HD22	1.70	0.73
2:W:95:MET:HE2	2:W:95:MET:HA	1.70	0.73
1:O:149:ASP:OD2	1:P:48:ARG:HG2	1.88	0.73
2:Y:25:MET:HE1	2:Z:144:LEU:HD21	1.70	0.73
1:B:170:SER:O	1:B:183:ILE:HD13	1.87	0.73
1:F:42:VAL:HG11	1:F:184:ALA:HB1	1.71	0.73
2:X:108:ASP:HA	6:X:411:HOH:O	1.87	0.73
1:E:170:SER:OG	1:E:183:ILE:HD11	1.89	0.72
2:b:51:VAL:HG12	2:b:100:ALA:HB2	1.70	0.72
1:T:10:GLU:HB3	1:T:14:ARG:NH1	2.04	0.72
1:B:178:THR:HG22	1:B:233:LEU:CD1	2.19	0.72
1:D:217:ARG:HH11	1:D:223:ARG:HD3	1.52	0.72
1:P:137:GLU:HG2	1:Q:48:ARG:NH2	2.04	0.72
1:B:225:ILE:HA	6:B:313:HOH:O	1.89	0.72
1:T:149:ASP:OD2	1:U:48:ARG:HG2	1.90	0.72
1:E:22:LYS:HB3	1:E:26:ARG:HH12	1.55	0.72
2:X:161:ASP:OD2	2:X:209:ARG:NH2	2.21	0.72
1:E:166:ALA:O	1:E:170:SER:OG	2.08	0.72
2:I:3:ILE:HB	2:I:139:VAL:HG12	1.72	0.72
2:H:3:ILE:HB	2:H:139:VAL:HG12	1.71	0.71
2:L:112:SER:O	2:L:114:PRO:HD3	1.90	0.71
1:U:30:VAL:HG22	1:U:43:ALA:CB	2.20	0.71
1:E:165:ASN:CB	1:E:168:LYS:HE2	2.20	0.71
1:E:165:ASN:HA	1:E:168:LYS:HE2	1.71	0.71
2:I:141:SER:HB3	5:I:302:CIT:H21	1.72	0.71
1:E:77:GLY:HA3	3:E:301:DMF:H22	1.73	0.71
1:P:140:ARG:NH1	1:P:155:VAL:O	2.18	0.71
2:Z:43:THR:HG22	2:Z:104:LEU:HD12	1.71	0.71
1:B:33:LEU:HD22	1:B:153:PHE:HB3	1.71	0.71
1:S:214:ASP:OD2	1:S:223:ARG:NH2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:42:VAL:HG11	1:E:184:ALA:HB1	1.71	0.70
1:F:11:GLN:OE1	1:F:14:ARG:NH1	2.25	0.70
2:X:8:TYR:HE1	2:X:196:ILE:HD11	1.57	0.70
1:B:9:MET:CE	1:C:19:LEU:HD13	2.21	0.70
1:P:74:LEU:HD13	1:P:122:LEU:HD11	1.72	0.70
2:M:1:THR:HB	5:M:302:CIT:C5	2.21	0.70
1:Q:116:LYS:NZ	1:Q:119:GLU:OE2	2.24	0.70
1:U:14:ARG:NH2	1:U:18:GLU:HG3	2.07	0.70
2:I:88:ARG:HD3	2:I:126:ALA:O	1.91	0.69
1:A:13:MET:HE3	1:B:116:LYS:HB2	1.74	0.69
1:A:179:ASP:O	1:A:183:ILE:HG23	1.92	0.69
1:E:183:ILE:HD12	1:E:183:ILE:O	1.92	0.69
1:P:178:THR:HG22	1:P:233:LEU:CD2	2.22	0.69
1:F:31:VAL:HG23	1:F:188:LEU:HD21	1.74	0.69
1:O:97:ARG:NH1	1:P:49:SER:O	2.26	0.68
2:Y:62:GLU:OE2	2:Y:82:ARG:HD3	1.94	0.68
2:Z:3:ILE:HB	2:Z:139:VAL:HG12	1.75	0.68
1:G:87:TYR:O	2:N:57:ARG:NH2	2.26	0.68
1:O:162:PRO:HB2	1:O:190:ALA:O	1.94	0.68
2:L:92:ALA:HA	2:L:95:MET:HE2	1.74	0.68
1:R:210:VAL:HG13	1:R:225:ILE:HB	1.75	0.68
1:O:202:THR:HG23	1:O:203:LEU:HD13	1.74	0.68
1:B:110:ILE:HA	1:B:114:GLN:HG3	1.75	0.68
2:L:62:GLU:OE2	2:L:82:ARG:HD3	1.93	0.68
2:M:1:THR:HB	5:M:302:CIT:O4	1.93	0.68
1:R:121:GLU:OE2	1:R:140:ARG:NH1	2.27	0.68
2:b:72:VAL:HG23	2:b:73:PRO:HD2	1.74	0.68
2:X:1:THR:HB	5:X:302:CIT:C5	2.24	0.67
1:O:30:VAL:HG22	1:O:43:ALA:CB	2.24	0.67
1:P:41:PHE:HB3	1:P:53:ILE:HD13	1.76	0.67
1:T:16:ARG:NH2	1:T:114:GLN:O	2.21	0.67
1:F:18:GLU:OE2	1:F:21:ARG:NH1	2.26	0.67
2:Y:1:THR:HB	5:Y:302:CIT:O4	1.94	0.67
2:Y:43:THR:HG22	2:Y:104:LEU:HD13	1.75	0.67
2:Z:43:THR:HG22	2:Z:104:LEU:CD1	2.24	0.67
1:A:30:VAL:HG13	1:A:43:ALA:HB2	1.77	0.67
1:E:179:ASP:O	1:E:183:ILE:HG22	1.94	0.67
2:I:1:THR:HB	5:I:302:CIT:O3	1.95	0.67
1:C:116:LYS:HE3	6:C:414:HOH:O	1.95	0.67
2:N:113:ASP:OD2	2:N:115:GLN:HB3	1.95	0.67
1:B:128:ALA:HB2	1:B:134:LYS:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:41:PHE:HB3	1:D:53:ILE:HD12	1.77	0.66
1:P:28:LYS:HE3	1:P:44:GLU:CB	2.26	0.66
1:E:76:ARG:HD3	6:E:402:HOH:O	1.95	0.66
2:J:3:ILE:HB	2:J:139:VAL:HG12	1.78	0.66
1:S:81:PHE:CE2	1:S:102:VAL:HG21	2.29	0.66
1:Q:85:ARG:HH12	1:Q:98:GLN:NE2	1.94	0.66
1:T:68:PHE:HA	1:T:71:PHE:CE2	2.31	0.66
2:a:1:THR:HB	5:a:302:CIT:O1	1.95	0.66
1:F:85:ARG:HB3	6:F:403:HOH:O	1.95	0.66
1:F:178:THR:HG22	1:F:182:ARG:HE	1.61	0.66
1:Q:225:ILE:HG21	1:Q:233:LEU:HD12	1.78	0.66
2:K:72:VAL:HG23	2:K:73:PRO:HD2	1.78	0.66
1:B:9:MET:HE3	1:C:19:LEU:HD13	1.77	0.65
1:C:180:ALA:O	1:C:183:ILE:HG22	1.97	0.65
1:D:163:ILE:HG23	1:D:187:ALA:C	2.21	0.65
1:O:225:ILE:O	1:O:230:LEU:HB2	1.95	0.65
1:A:16:ARG:NH1	1:A:114:GLN:O	2.20	0.65
1:G:85:ARG:HD2	6:G:315:HOH:O	1.95	0.65
2:Z:95:MET:HE2	2:Z:95:MET:HA	1.77	0.65
2:N:141:SER:HB3	5:N:302:CIT:H42	1.78	0.65
1:O:68:PHE:HA	1:O:71:PHE:CE2	2.32	0.65
1:T:31:VAL:HG22	1:T:155:VAL:HG22	1.79	0.65
2:Z:72:VAL:HG22	2:Z:73:PRO:HD2	1.78	0.65
1:C:77:GLY:HA3	3:C:301:DMF:H13	1.78	0.65
1:C:31:VAL:HG12	1:C:155:VAL:HG13	1.78	0.65
1:E:189:ARG:HG2	1:E:203:LEU:HD13	1.79	0.65
1:Q:27:ALA:HB1	6:Q:416:HOH:O	1.95	0.65
2:Y:37:THR:HG21	2:Y:43:THR:HG23	1.78	0.65
2:I:152:LYS:HG3	2:Y:152:LYS:HB2	1.79	0.65
2:J:99:LEU:HD22	2:J:100:ALA:N	2.12	0.64
1:D:87:TYR:O	2:K:57:ARG:NH2	2.31	0.64
1:T:203:LEU:HD21	1:T:208:LEU:HD21	1.80	0.64
1:E:170:SER:HB2	1:E:183:ILE:HD13	1.79	0.64
1:O:30:VAL:HG22	1:O:43:ALA:HB1	1.80	0.64
1:A:118:TYR:HB3	1:A:120:VAL:HG22	1.80	0.64
1:G:41:PHE:CB	1:G:53:ILE:HD13	2.26	0.64
1:P:68:PHE:HA	1:P:71:PHE:CE2	2.33	0.64
1:T:10:GLU:HB3	1:T:14:ARG:HH12	1.60	0.64
1:T:203:LEU:CD2	1:T:208:LEU:HD21	2.28	0.64
1:S:85:ARG:HB3	6:S:420:HOH:O	1.98	0.63
1:F:89:TYR:CD1	2:N:82:ARG:HD3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:181:LEU:HD23	1:D:233:LEU:HB3	1.80	0.63
1:F:67:LYS:HE3	1:F:69:ASN:OD1	1.98	0.63
1:P:140:ARG:HD2	6:P:422:HOH:O	1.98	0.63
1:U:217:ARG:NH1	1:U:223:ARG:HG2	2.14	0.63
2:V:113:ASP:OD2	2:V:115:GLN:HB2	1.98	0.63
2:X:113:ASP:HB3	2:X:116:SER:OG	1.99	0.63
2:L:1:THR:HB	5:L:302:CIT:O2	1.99	0.63
2:Z:29:ARG:HD3	6:Z:440:HOH:O	1.99	0.63
1:S:77:GLY:HA3	3:S:301:DMF:H12	1.79	0.63
1:E:152:HIS:HB3	1:E:171:TYR:CE2	2.34	0.62
3:Q:301:DMF:H13	2:Y:69:LEU:HD12	1.80	0.62
1:U:33:LEU:HD23	1:U:153:PHE:HB3	1.79	0.62
1:D:33:LEU:HD23	1:D:153:PHE:CB	2.28	0.62
1:U:30:VAL:HG22	1:U:43:ALA:HB2	1.80	0.62
1:E:22:LYS:HB3	1:E:26:ARG:NH1	2.14	0.62
1:E:161:GLU:HB2	1:E:162:PRO:HD3	1.80	0.62
1:T:42:VAL:HG12	1:T:188:LEU:HD11	1.82	0.62
2:L:152:LYS:HB2	2:V:152:LYS:HG3	1.81	0.62
2:N:25:MET:HE3	2:Z:145:PHE:HZ	1.64	0.62
1:Q:85:ARG:NH1	1:Q:98:GLN:NE2	2.47	0.62
2:Y:88:ARG:HD2	6:Y:442:HOH:O	1.97	0.62
1:R:181:LEU:O	1:R:185:VAL:HG23	2.00	0.62
1:B:155:VAL:HG11	1:B:164:ALA:HB2	1.81	0.62
2:H:88:ARG:HD3	2:H:126:ALA:O	1.99	0.62
1:Q:30:VAL:HG13	1:Q:43:ALA:CB	2.23	0.62
2:V:3:ILE:HB	2:V:139:VAL:HG12	1.80	0.62
1:F:178:THR:CG2	1:F:182:ARG:HE	2.12	0.62
1:O:181:LEU:O	1:O:185:VAL:HG23	1.98	0.62
1:R:210:VAL:HG11	1:R:230:LEU:CD1	2.25	0.62
1:S:152:HIS:HB3	1:S:171:TYR:CZ	2.34	0.62
2:b:1:THR:OG1	5:b:302:CIT:O2	2.13	0.62
1:A:33:LEU:HD21	1:A:184:ALA:HB2	1.81	0.62
1:F:128:ALA:HB2	1:F:134:LYS:HB3	1.80	0.62
1:T:32:ALA:HA	1:T:40:LEU:O	2.00	0.62
1:D:33:LEU:HD23	1:D:153:PHE:HB3	1.81	0.61
2:J:72:VAL:CG2	2:J:73:PRO:HD2	2.30	0.61
2:X:63:LEU:HD22	2:X:74:LEU:HD12	1.82	0.61
2:a:1:THR:OG1	5:a:302:CIT:O2	2.19	0.61
2:I:137:GLN:OE1	2:I:147:LYS:HD3	2.00	0.61
1:D:164:ALA:O	1:D:168:LYS:HG3	2.00	0.61
1:C:214:ASP:OD2	1:C:223:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:211:ALA:O	2:M:215:ARG:HG3	2.01	0.61
1:C:51:GLN:OE1	1:C:224:ARG:NH2	2.33	0.61
1:E:140:ARG:HE	1:E:154:VAL:HG13	1.66	0.61
1:F:210:VAL:HG11	1:F:230:LEU:CD1	2.27	0.61
1:R:128:ALA:HB2	1:R:134:LYS:HB3	1.82	0.61
1:C:170:SER:C	1:C:183:ILE:HD11	2.25	0.61
1:F:30:VAL:CG2	1:F:43:ALA:HB2	2.30	0.61
2:J:47:GLY:HA2	5:J:302:CIT:H41	1.81	0.61
2:X:94:ALA:HB1	2:X:99:LEU:HD23	1.82	0.61
2:Z:137:GLN:OE1	2:Z:147:LYS:HD3	2.00	0.61
1:P:28:LYS:HE3	1:P:44:GLU:HB2	1.81	0.61
2:V:88:ARG:HD3	2:V:126:ALA:O	2.01	0.61
2:W:141:SER:HB3	5:W:302:CIT:H21	1.82	0.61
2:Z:88:ARG:HD3	2:Z:126:ALA:O	2.01	0.61
1:E:165:ASN:CA	1:E:168:LYS:HE2	2.31	0.61
2:J:72:VAL:HG23	2:J:73:PRO:HD2	1.83	0.61
1:U:56:LEU:HD13	1:U:99:LEU:HD22	1.83	0.61
1:O:142:THR:CG2	1:O:146:SER:HB2	2.31	0.60
1:P:58:ASP:OD1	1:P:219:ARG:NH1	2.34	0.60
1:B:9:MET:HE1	1:C:116:LYS:HG3	1.83	0.60
1:F:41:PHE:HB3	1:F:53:ILE:HD13	1.83	0.60
1:O:11:GLN:O	1:O:15:GLU:HG3	2.02	0.60
1:P:178:THR:HG22	1:P:233:LEU:HD23	1.82	0.60
1:S:81:PHE:CZ	1:S:102:VAL:HG21	2.36	0.60
1:B:42:VAL:HG13	1:B:210:VAL:HG22	1.83	0.60
1:C:217:ARG:HD2	1:C:223:ARG:HD2	1.83	0.60
1:G:182:ARG:NH2	1:G:234:LEU:O	2.34	0.60
2:N:51:VAL:HG21	2:N:98:LEU:HB3	1.83	0.60
1:C:217:ARG:NH2	1:C:223:ARG:HG2	2.16	0.60
1:E:68:PHE:HA	1:E:71:PHE:CE2	2.37	0.60
1:O:210:VAL:HG23	1:O:225:ILE:HB	1.81	0.60
2:X:37:THR:OG1	2:X:41:THR:HG22	2.00	0.60
2:W:48:THR:HG22	6:W:421:HOH:O	2.01	0.60
1:C:68:PHE:HA	1:C:71:PHE:CZ	2.36	0.60
1:U:232:ALA:O	1:U:235:VAL:HG22	2.01	0.60
1:C:235:VAL:HG11	6:C:419:HOH:O	2.00	0.60
1:R:9:MET:HE1	1:S:115:ALA:O	2.01	0.60
2:J:113:ASP:OD1	2:J:115:GLN:N	2.35	0.60
1:P:85:ARG:HD2	6:P:409:HOH:O	2.02	0.60
1:A:48:ARG:O	1:A:48:ARG:HG3	2.01	0.59
1:B:161:GLU:HG2	6:B:305:HOH:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:166:ALA:O	1:B:170:SER:HB3	2.01	0.59
1:D:68:PHE:HA	1:D:71:PHE:CE2	2.36	0.59
2:Z:1:THR:HB	5:Z:302:CIT:O4	2.01	0.59
1:D:167:LEU:HG	1:D:187:ALA:CB	2.33	0.59
2:b:17:ASP:OD1	2:b:33:LYS:NZ	2.33	0.59
2:b:197:ILE:HG12	2:b:202:ALA:CB	2.31	0.59
1:F:74:LEU:HD13	1:F:122:LEU:HD11	1.84	0.59
2:I:92:ALA:HA	2:I:95:MET:CE	2.32	0.59
2:K:141:SER:HB3	5:K:302:CIT:C4	2.32	0.59
2:M:63:LEU:HD22	2:M:74:LEU:HD12	1.85	0.59
2:Y:122:SER:HB3	2:Y:137:GLN:HG2	1.85	0.59
1:E:33:LEU:CD2	1:E:153:PHE:HB3	2.33	0.59
1:Q:216:ASN:HB3	6:Q:431:HOH:O	2.03	0.59
1:T:56:LEU:HG	1:T:62:PHE:HB2	1.85	0.59
1:T:81:PHE:CE1	1:T:102:VAL:HG11	2.37	0.59
1:T:203:LEU:HG	1:T:207:SER:OG	2.02	0.59
1:O:202:THR:HG23	1:O:203:LEU:CD1	2.32	0.59
2:a:118:GLY:O	2:a:119:ARG:NH1	2.36	0.59
2:X:113:ASP:OD1	2:X:114:PRO:HD2	2.03	0.59
1:D:170:SER:O	1:D:183:ILE:HD13	2.02	0.59
1:E:54:SER:CB	1:E:75:ARG:HD2	2.33	0.59
1:G:179:ASP:O	1:G:183:ILE:HG12	2.03	0.59
2:M:1:THR:HB	5:M:302:CIT:O3	2.03	0.59
1:O:25:ALA:O	1:O:158:GLY:HA2	2.03	0.58
1:R:179:ASP:O	1:R:183:ILE:HG13	2.03	0.58
1:C:9:MET:HE1	1:D:115:ALA:O	2.03	0.58
1:E:140:ARG:NH2	1:E:155:VAL:H	2.01	0.58
1:S:225:ILE:HG21	1:S:233:LEU:CD1	2.33	0.58
2:N:55:PHE:HZ	2:N:90:ASN:HB2	1.68	0.58
1:P:155:VAL:HG21	1:P:164:ALA:HB2	1.85	0.58
1:D:186:ALA:O	1:D:189:ARG:HG2	2.03	0.58
1:Q:92:ARG:NH2	1:Q:132:GLU:OE2	2.36	0.58
1:O:116:LYS:HA	1:U:9:MET:HE1	1.83	0.58
1:U:189:ARG:HG2	1:U:203:LEU:HD22	1.85	0.58
2:V:122:SER:HB3	2:V:137:GLN:HG2	1.85	0.58
1:B:217:ARG:NH1	1:B:223:ARG:HD3	2.18	0.58
1:C:176:SER:HB3	1:C:179:ASP:OD2	2.04	0.58
1:F:205:VAL:O	1:F:206:ALA:HB3	2.04	0.58
1:F:231:GLN:CA	1:F:234:LEU:HD23	2.21	0.58
2:a:43:THR:HG22	2:a:45:ILE:HD11	1.86	0.58
2:W:122:SER:HB3	2:W:137:GLN:HG2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:37:THR:HG21	2:Y:43:THR:CG2	2.34	0.58
1:D:167:LEU:HG	1:D:187:ALA:HB2	1.86	0.58
1:E:77:GLY:HA3	3:E:301:DMF:C2	2.33	0.58
1:G:85:ARG:HB3	6:G:315:HOH:O	2.04	0.58
1:O:98:GLN:O	1:O:102:VAL:HG23	2.03	0.58
1:P:85:ARG:NH1	1:P:98:GLN:OE1	2.36	0.58
2:a:141:SER:HB3	5:a:302:CIT:H42	1.84	0.58
2:N:122:SER:HB3	2:N:137:GLN:HG2	1.84	0.58
1:O:121:GLU:OE2	1:O:140:ARG:NH2	2.36	0.58
1:Q:9:MET:HE1	1:R:115:ALA:O	2.03	0.58
1:B:9:MET:HE2	1:C:117:PRO:HD2	1.85	0.58
1:D:33:LEU:CD2	1:D:153:PHE:HB3	2.34	0.58
1:E:25:ALA:O	1:E:158:GLY:HA2	2.04	0.58
1:F:85:ARG:HD2	6:F:403:HOH:O	2.04	0.58
1:S:13:MET:HE3	1:T:116:LYS:HB2	1.84	0.58
2:W:72:VAL:CG2	2:W:73:PRO:HD2	2.33	0.58
1:F:11:GLN:HE22	1:F:14:ARG:HD2	1.69	0.57
2:M:45:ILE:N	2:M:45:ILE:HD12	2.19	0.57
2:M:137:GLN:OE1	2:M:147:LYS:HD3	2.03	0.57
1:O:116:LYS:HB2	1:U:13:MET:HE3	1.86	0.57
1:O:170:SER:OG	1:O:183:ILE:HG23	2.03	0.57
1:P:181:LEU:O	1:P:185:VAL:HG23	2.04	0.57
1:D:232:ALA:C	1:D:233:LEU:HD12	2.28	0.57
1:G:217:ARG:HE	1:G:223:ARG:HD2	1.69	0.57
2:K:10:GLY:HA2	2:K:115:GLN:HA	1.85	0.57
2:M:196:ILE:HG13	2:M:205:VAL:CG2	2.34	0.57
2:M:209:ARG:NH2	2:M:213:LEU:HD21	2.18	0.57
1:C:31:VAL:HG23	1:C:42:VAL:HG12	1.85	0.57
2:K:1:THR:HB	5:K:302:CIT:C1	2.34	0.57
1:O:129:HIS:HB2	1:O:132:GLU:CD	2.29	0.57
1:S:70:GLU:HB3	1:S:118:TYR:CD2	2.39	0.57
1:U:118:TYR:HB3	1:U:120:VAL:HG22	1.86	0.57
2:b:92:ALA:HB3	6:b:407:HOH:O	2.03	0.57
1:D:25:ALA:O	1:D:158:GLY:HA2	2.05	0.57
1:O:225:ILE:HG21	1:O:233:LEU:HD22	1.87	0.57
1:F:89:TYR:CE1	2:N:82:ARG:HD3	2.40	0.57
2:Y:1:THR:HB	5:Y:302:CIT:C5	2.34	0.57
1:P:110:ILE:HG23	1:P:114:GLN:CG	2.32	0.57
1:E:165:ASN:HB3	1:E:168:LYS:HE2	1.86	0.57
1:S:152:HIS:HB3	1:S:171:TYR:CE2	2.40	0.57
1:U:110:ILE:HA	1:U:114:GLN:HG3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:25:MET:HE1	2:W:144:LEU:CD1	2.33	0.57
2:V:161:ASP:CG	2:V:209:ARG:HH21	2.12	0.57
1:E:42:VAL:CG1	1:E:184:ALA:HB1	2.35	0.57
1:F:9:MET:HG3	1:G:19:LEU:HD13	1.86	0.57
1:F:41:PHE:CB	1:F:53:ILE:HD13	2.34	0.57
2:H:18:ARG:O	2:H:31:VAL:HG22	2.05	0.57
1:R:85:ARG:HD3	6:R:423:HOH:O	2.05	0.57
1:E:42:VAL:HG23	1:E:210:VAL:HG22	1.87	0.56
1:F:112:THR:HG21	6:G:318:HOH:O	2.04	0.56
1:C:123:CYS:SG	1:C:154:VAL:HG21	2.45	0.56
2:N:1:THR:HB	5:N:302:CIT:O2	2.04	0.56
1:D:30:VAL:CG2	1:D:43:ALA:HB2	2.35	0.56
1:F:97[B]:ARG:NH2	2:N:70:GLU:OE2	2.38	0.56
1:Q:92:ARG:HB3	2:Y:75:THR:HG21	1.87	0.56
1:U:52:LYS:HE2	1:U:64:ALA:O	2.04	0.56
2:V:135:GLY:N	6:V:401:HOH:O	2.28	0.56
1:C:217:ARG:HH21	1:C:223:ARG:HG2	1.70	0.56
1:C:163:ILE:HG23	1:C:187:ALA:O	2.05	0.56
1:Q:33:LEU:HD11	1:Q:180:ALA:HB1	1.87	0.56
1:R:219:ARG:HG3	1:R:220:ARG:H	1.71	0.56
2:I:209:ARG:O	2:I:213:LEU:HD22	2.06	0.56
1:S:33:LEU:HD11	1:S:171:TYR:CD1	2.40	0.56
1:T:85:ARG:HB3	6:T:404:HOH:O	2.05	0.56
1:P:21:ARG:HG2	1:P:21:ARG:HH11	1.70	0.56
1:Q:217:ARG:HD2	1:Q:223:ARG:HD3	1.88	0.56
1:F:205:VAL:HG21	1:F:231:GLN:HB2	1.87	0.56
1:O:128:ALA:HB2	1:O:134:LYS:HB3	1.88	0.56
2:I:42:ALA:HB2	2:I:195:VAL:HG11	1.87	0.56
1:U:74:LEU:HD13	1:U:122:LEU:HD11	1.87	0.56
1:B:33:LEU:HD22	1:B:153:PHE:CB	2.36	0.55
1:E:140:ARG:HH21	1:E:155:VAL:H	1.55	0.55
1:F:13:MET:HE3	1:G:116:LYS:HB2	1.87	0.55
1:T:54:SER:CB	1:T:75:ARG:HD2	2.36	0.55
1:C:19:LEU:C	1:C:19:LEU:HD23	2.31	0.55
1:C:67:LYS:HE3	1:C:69:ASN:OD1	2.06	0.55
2:N:88:ARG:HD3	2:N:126:ALA:O	2.07	0.55
1:S:181:LEU:O	1:S:185:VAL:HG23	2.05	0.55
2:Y:99:LEU:HD22	2:Y:100:ALA:H	1.71	0.55
2:a:1:THR:HB	5:a:302:CIT:C1	2.35	0.55
1:F:93:ASP:OD1	2:N:75:THR:HG23	2.06	0.55
1:T:121:GLU:OE1	1:T:140:ARG:NH1	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:99:LEU:O	1:C:102:VAL:HG12	2.05	0.55
1:F:54:SER:CB	1:F:75:ARG:HD2	2.36	0.55
1:P:166:ALA:O	1:P:170:SER:HB3	2.07	0.55
1:D:62:PHE:CE2	1:D:122:LEU:HD22	2.41	0.55
1:S:92:ARG:HB3	2:a:75:THR:HG21	1.89	0.55
1:S:166:ALA:O	1:S:170:SER:HB3	2.07	0.55
1:T:163:ILE:HG23	1:T:187:ALA:C	2.32	0.55
1:E:165:ASN:HA	1:E:168:LYS:HG3	1.87	0.55
2:M:25:MET:HE1	2:N:144:LEU:HD21	1.88	0.55
1:U:205:VAL:HG21	1:U:231:GLN:HB2	1.87	0.55
1:E:54:SER:HB2	1:E:75:ARG:HD2	1.89	0.55
1:E:225:ILE:HG21	1:E:233:LEU:HD12	1.87	0.55
1:G:142:THR:HB	6:G:321:HOH:O	2.06	0.55
1:E:149:ASP:OD2	1:F:48:ARG:HG2	2.07	0.55
2:N:186:LEU:HD12	2:N:215:ARG:CZ	2.37	0.55
1:A:11:GLN:HA	1:A:11:GLN:OE1	2.07	0.55
1:D:163:ILE:HG23	1:D:187:ALA:O	2.07	0.55
2:I:51:VAL:CG1	2:I:100:ALA:HB2	2.34	0.55
2:J:107:TYR:CE2	2:J:117:ALA:HB3	2.42	0.55
1:E:101:ASN:ND2	1:F:76:ARG:HH21	2.05	0.55
1:O:19:LEU:C	1:O:19:LEU:HD23	2.32	0.55
2:b:80:ILE:HD11	2:b:121:VAL:HG21	1.89	0.55
1:D:74:LEU:HD13	1:D:122:LEU:HD11	1.88	0.54
1:E:164:ALA:O	1:E:168:LYS:HG3	2.07	0.54
1:G:121:GLU:OE2	1:G:140:ARG:NH1	2.40	0.54
1:G:217:ARG:NE	1:G:223:ARG:HD2	2.21	0.54
2:N:76:PHE:O	2:N:80:ILE:HG13	2.08	0.54
1:T:55:GLU:OE1	1:T:220:ARG:NH2	2.38	0.54
1:T:99:LEU:HA	1:T:102:VAL:HG22	1.89	0.54
1:U:10:GLU:OE2	1:U:11:GLN:HG2	2.08	0.54
2:K:6:LEU:C	2:K:120:ILE:HD11	2.32	0.54
2:M:219:GLU:OE1	2:M:219:GLU:HA	2.08	0.54
1:Q:11:GLN:NE2	1:Q:15:GLU:OE2	2.40	0.54
2:K:141:SER:HB3	5:K:302:CIT:H42	1.88	0.54
2:V:165:ARG:NE	6:V:402:HOH:O	2.29	0.54
1:C:62:PHE:C	1:C:62:PHE:CD2	2.85	0.54
1:P:219:ARG:NH2	1:P:220:ARG:HD2	2.22	0.54
1:S:161:GLU:HB2	1:S:162:PRO:HD3	1.89	0.54
6:a:407:HOH:O	2:b:133:GLU:HG3	2.08	0.54
2:L:152:LYS:CB	2:V:152:LYS:HG3	2.38	0.54
2:Z:51:VAL:CG1	2:Z:100:ALA:HB2	2.34	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:9:MET:HE3	1:C:19:LEU:CD1	2.38	0.54
1:D:72:ASP:O	1:D:76:ARG:HG3	2.08	0.54
1:E:33:LEU:HD23	1:E:153:PHE:CB	2.37	0.54
1:F:74:LEU:HD12	1:F:120:VAL:HG21	1.90	0.54
1:G:225:ILE:HG21	1:G:233:LEU:HD12	1.88	0.54
1:R:16:ARG:NH2	1:R:114:GLN:O	2.21	0.54
1:S:41:PHE:HB3	1:S:53:ILE:HD13	1.88	0.54
2:H:41:THR:CG2	2:H:104:LEU:HD21	2.38	0.54
2:L:51:VAL:HG12	2:L:100:ALA:HB2	1.89	0.54
1:S:68:PHE:HA	1:S:71:PHE:CE2	2.43	0.54
1:T:162:PRO:HB2	1:T:190:ALA:O	2.07	0.54
2:J:99:LEU:HD22	2:J:100:ALA:H	1.71	0.54
2:N:78:GLY:O	2:N:82:ARG:HG2	2.08	0.54
1:T:81:PHE:CZ	1:T:102:VAL:HG11	2.42	0.54
1:U:123:CYS:HA	1:U:139:TYR:O	2.08	0.54
1:D:110:ILE:HA	1:D:114:GLN:HG3	1.90	0.53
1:R:210:VAL:CG1	1:R:230:LEU:HD13	2.28	0.53
1:D:30:VAL:HG23	1:D:43:ALA:HB2	1.90	0.53
1:R:54:SER:CB	1:R:75:ARG:HD2	2.38	0.53
2:X:1:THR:HB	5:X:302:CIT:O4	2.08	0.53
2:a:209:ARG:HG2	6:a:411:HOH:O	2.08	0.53
1:P:28:LYS:HB2	1:P:52:LYS:NZ	2.24	0.53
1:U:32:ALA:HB3	1:U:154:VAL:HG22	1.90	0.53
2:b:3:ILE:HG21	2:b:44:GLY:HA3	1.89	0.53
1:F:28:LYS:HB3	1:F:44:GLU:HB3	1.89	0.53
2:M:116:SER:HA	6:M:415:HOH:O	2.08	0.53
2:X:122:SER:HB3	2:X:137:GLN:HG2	1.90	0.53
1:D:68:PHE:HA	1:D:71:PHE:CZ	2.43	0.53
2:H:78:GLY:O	2:H:82:ARG:HG2	2.09	0.53
1:O:165:ASN:O	1:O:168:LYS:HB3	2.09	0.53
2:b:8:TYR:CZ	2:b:196:ILE:HD11	2.44	0.53
1:C:76:ARG:HD3	6:C:401:HOH:O	2.09	0.53
1:O:41:PHE:CB	1:O:53:ILE:HD13	2.35	0.53
1:Q:33:LEU:HD22	1:Q:183:ILE:HD11	1.89	0.53
2:W:72:VAL:HG23	2:W:73:PRO:HD2	1.89	0.53
1:D:181:LEU:HD23	1:D:233:LEU:CB	2.39	0.53
1:E:52:LYS:HE2	1:E:64:ALA:O	2.08	0.53
1:F:11:GLN:HE22	1:F:14:ARG:HH11	1.56	0.53
1:Q:33:LEU:CD2	1:Q:183:ILE:HD11	2.38	0.53
1:R:19:LEU:C	1:R:19:LEU:HD23	2.33	0.53
1:T:56:LEU:HD13	1:T:99:LEU:CD2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:9:MET:HE2	1:C:19:LEU:HD13	1.90	0.53
2:I:152:LYS:HB2	2:Y:152:LYS:HG3	1.89	0.53
2:Z:72:VAL:CG2	2:Z:73:PRO:HD2	2.38	0.53
1:P:28:LYS:HE3	1:P:44:GLU:HB3	1.89	0.53
1:A:167:LEU:HG	1:A:187:ALA:CB	2.39	0.53
1:C:76:ARG:HG2	2:J:69:LEU:HD22	1.89	0.53
1:R:9:MET:N	1:S:15:GLU:OE2	2.42	0.53
1:T:170:SER:O	1:T:183:ILE:HD13	2.09	0.53
1:U:163:ILE:HG23	1:U:187:ALA:C	2.34	0.53
2:V:99:LEU:HD11	2:V:101:LEU:CD2	2.38	0.53
1:T:77:GLY:HA3	3:T:301:DMF:C1	2.39	0.52
1:G:41:PHE:HB3	1:G:53:ILE:CD1	2.38	0.52
1:Q:167:LEU:HD23	1:Q:183:ILE:HD12	1.90	0.52
2:X:14:MET:HE3	2:X:34:VAL:CG1	2.28	0.52
2:b:8:TYR:OH	2:b:196:ILE:HD11	2.09	0.52
1:B:181:LEU:C	1:B:181:LEU:HD13	2.35	0.52
1:C:85:ARG:NH2	1:C:98:GLN:NE2	2.53	0.52
1:O:167:LEU:HG	1:O:187:ALA:CB	2.40	0.52
2:a:3:ILE:HB	2:a:139:VAL:HG12	1.91	0.52
1:E:32:ALA:O	1:E:153:PHE:HA	2.09	0.52
2:M:1:THR:CB	5:M:302:CIT:O3	2.57	0.52
6:P:412:HOH:O	1:Q:67:LYS:HE2	2.09	0.52
1:R:12:ALA:O	1:R:16:ARG:HG3	2.09	0.52
2:Z:6:LEU:HG	2:Z:13:VAL:HG13	1.91	0.52
1:B:25:ALA:O	1:B:158:GLY:HA2	2.09	0.52
1:B:87:TYR:O	2:I:57:ARG:NH2	2.43	0.52
1:F:92:ARG:HB3	2:N:75:THR:HG21	1.91	0.52
2:K:6:LEU:CA	2:K:120:ILE:HD11	2.40	0.52
1:R:35:TYR:OH	1:R:212:VAL:HG21	2.10	0.52
1:U:161:GLU:OE1	1:U:161:GLU:N	2.37	0.52
2:b:72:VAL:CG2	2:b:73:PRO:HD2	2.37	0.52
2:H:194:ALA:HB3	2:H:205:VAL:HB	1.92	0.52
1:S:33:LEU:HD11	1:S:171:TYR:HD1	1.75	0.52
2:X:183:GLY:HA2	6:X:428:HOH:O	2.07	0.52
2:Z:76:PHE:CE2	2:Z:80:ILE:HD11	2.45	0.52
1:D:217:ARG:HD2	1:D:223:ARG:HD3	1.92	0.52
1:O:185:VAL:O	1:O:189:ARG:HG3	2.09	0.52
1:O:68:PHE:HA	1:O:71:PHE:CZ	2.44	0.52
1:P:217:ARG:NH2	1:P:218:PRO:HD2	2.24	0.52
2:X:47:GLY:HA2	5:X:302:CIT:H41	1.92	0.52
1:E:217:ARG:HD2	1:E:223:ARG:CD	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:173:GLU:O	1:O:174:ASN:HB2	2.10	0.52
1:U:54:SER:CB	1:U:75:ARG:HD2	2.40	0.52
2:W:33:LYS:HE2	4:W:301:M6M:C30	2.40	0.52
2:Y:37:THR:CG2	2:Y:43:THR:HG23	2.40	0.52
1:C:87:TYR:O	2:J:57:ARG:NH2	2.43	0.51
2:J:211:ALA:O	2:J:215:ARG:HG3	2.09	0.51
1:P:140:ARG:HH22	1:P:155:VAL:H	1.57	0.51
1:U:163:ILE:HG23	1:U:187:ALA:O	2.09	0.51
2:Y:169:GLU:HA	2:Y:217:ILE:HD13	1.91	0.51
2:b:37:THR:OG1	2:b:41:THR:HG22	2.10	0.51
1:F:9:MET:HG3	1:G:19:LEU:CD1	2.40	0.51
1:P:52:LYS:HE2	6:P:417:HOH:O	2.10	0.51
1:T:41:PHE:HB3	1:T:53:ILE:CD1	2.40	0.51
1:B:163:ILE:HG23	1:B:187:ALA:C	2.35	0.51
1:B:217:ARG:NH2	1:B:223:ARG:HD3	2.24	0.51
1:E:9:MET:N	1:F:15:GLU:OE1	2.43	0.51
1:S:61:GLY:N	1:S:213:LEU:HD11	2.26	0.51
2:V:183:GLY:HA2	6:V:442:HOH:O	2.11	0.51
2:Z:47:GLY:HA2	5:Z:302:CIT:H41	1.93	0.51
2:M:44:GLY:C	2:M:45:ILE:HD12	2.35	0.51
2:X:138:ALA:HB3	2:X:147:LYS:HG3	1.91	0.51
2:X:197:ILE:HG12	2:X:202:ALA:CB	2.40	0.51
2:Y:62:GLU:OE2	2:Y:82:ARG:CD	2.58	0.51
1:P:92:ARG:HH22	1:P:132:GLU:CD	2.17	0.51
1:Q:85:ARG:HB3	6:Q:409:HOH:O	2.10	0.51
1:Q:225:ILE:HG21	1:Q:233:LEU:CD1	2.40	0.51
1:R:189:ARG:C	1:R:191:GLY:H	2.18	0.51
2:Z:51:VAL:HG21	2:Z:98:LEU:HB3	1.92	0.51
1:F:163:ILE:HG23	1:F:187:ALA:C	2.35	0.51
1:T:110:ILE:HA	1:T:114:GLN:HG3	1.93	0.51
2:K:141:SER:HB3	5:K:302:CIT:H41	1.93	0.51
2:L:6:LEU:HD12	2:L:6:LEU:C	2.35	0.51
2:L:152:LYS:HG3	2:V:152:LYS:HB2	1.92	0.51
2:X:3:ILE:HB	2:X:139:VAL:HG12	1.91	0.51
1:E:55:GLU:HB2	1:E:222:PHE:CD2	2.46	0.51
2:H:92:ALA:HA	2:H:95:MET:HE2	1.92	0.51
2:H:94:ALA:HB1	2:H:99:LEU:HD23	1.93	0.51
1:D:18:GLU:O	1:D:22:LYS:HG3	2.10	0.51
1:D:217:ARG:NH1	1:D:223:ARG:HD3	2.22	0.51
1:F:41:PHE:HB3	1:F:53:ILE:CD1	2.40	0.51
1:G:89:TYR:CD1	2:H:82:ARG:HD3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:122:SER:HB3	2:J:137:GLN:HG2	1.93	0.51
2:K:51:VAL:HG21	2:K:98:LEU:HB3	1.93	0.51
1:P:28:LYS:CE	1:P:44:GLU:HB3	2.41	0.51
1:P:85:ARG:HB3	6:P:409:HOH:O	2.11	0.51
1:P:185:VAL:HG13	1:P:203:LEU:CD1	2.41	0.51
1:P:225:ILE:HG21	1:P:233:LEU:HD12	1.93	0.51
1:S:22:LYS:O	1:S:26:ARG:HG3	2.10	0.51
1:S:171:TYR:CE2	1:S:173:GLU:HG2	2.46	0.50
1:T:41:PHE:HB3	1:T:53:ILE:HD13	1.93	0.50
2:a:112:SER:O	2:a:114:PRO:HD3	2.11	0.50
2:b:1:THR:HB	5:b:302:CIT:O1	2.11	0.50
2:H:164:LEU:HD21	2:H:205:VAL:HG11	1.94	0.50
1:S:19:LEU:C	1:S:19:LEU:HD23	2.36	0.50
2:N:24:ASN:OD1	2:N:24:ASN:N	2.38	0.50
1:P:203:LEU:HD12	1:P:203:LEU:O	2.11	0.50
1:Q:128:ALA:HB2	1:Q:134:LYS:HB3	1.94	0.50
1:S:235:VAL:HG23	1:S:236:ASP:H	1.76	0.50
1:B:9:MET:CE	1:C:117:PRO:HD2	2.40	0.50
1:B:135:ARG:NH2	1:B:173:GLU:HG3	2.25	0.50
1:C:22:LYS:O	1:C:26:ARG:HG3	2.12	0.50
1:D:189:ARG:HG3	1:D:190:ALA:N	2.27	0.50
1:F:28:LYS:HD2	1:F:44:GLU:CD	2.36	0.50
1:F:150:GLU:OE1	1:F:151:PRO:HD2	2.11	0.50
2:L:137:GLN:HG3	2:L:138:ALA:N	2.27	0.50
2:N:72:VAL:HG23	2:N:73:PRO:HD2	1.92	0.50
1:A:68:PHE:HA	1:A:71:PHE:CE2	2.46	0.50
2:Y:1:THR:OG1	5:Y:302:CIT:O3	2.15	0.50
2:Y:12:VAL:HG23	2:Y:120:ILE:HD11	1.93	0.50
2:b:137:GLN:OE1	2:b:147:LYS:HD3	2.12	0.50
1:A:219:ARG:NH2	1:A:220:ARG:HD2	2.27	0.50
1:Q:217:ARG:NH1	1:Q:220:ARG:O	2.45	0.50
2:W:118:GLY:O	2:W:119:ARG:NH1	2.36	0.50
2:X:132:GLU:OE1	2:X:134:GLU:HB2	2.11	0.50
2:Z:209:ARG:HG3	2:Z:212:GLU:OE2	2.12	0.50
2:H:165:ARG:CG	2:H:213:LEU:HD22	2.41	0.50
2:M:209:ARG:CZ	2:M:213:LEU:HD21	2.41	0.50
1:Q:95:THR:HG21	6:Q:420:HOH:O	2.12	0.50
1:A:150:GLU:HG3	6:A:410:HOH:O	2.11	0.50
1:C:30:VAL:HG12	1:C:65:ALA:HB2	1.93	0.50
2:M:6:LEU:HD12	2:M:6:LEU:O	2.12	0.50
1:P:9:MET:HE3	1:Q:116:LYS:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:8:TYR:CZ	2:I:196:ILE:HD11	2.47	0.50
2:J:51:VAL:HG12	2:J:100:ALA:HB2	1.93	0.50
2:K:6:LEU:HA	2:K:120:ILE:CD1	2.41	0.50
2:L:62:GLU:OE2	2:L:82:ARG:CD	2.59	0.50
1:R:159:THR:HG22	1:R:162:PRO:CD	2.41	0.50
2:a:66:TYR:CD2	3:a:303:DMF:HC	2.47	0.50
1:T:9:MET:HE3	1:U:16:ARG:HG2	1.93	0.49
1:U:15:GLU:HA	1:U:18:GLU:HB2	1.93	0.49
2:b:29:ARG:NH2	6:b:402:HOH:O	2.45	0.49
1:U:81:PHE:CE2	1:U:102:VAL:HG21	2.46	0.49
1:B:54:SER:CB	1:B:75:ARG:HD2	2.42	0.49
1:Q:9:MET:HB3	1:R:15:GLU:HB3	1.94	0.49
1:Q:74:LEU:HD11	1:Q:107:LEU:HD21	1.94	0.49
2:W:1:THR:HB	5:W:302:CIT:O3	2.13	0.49
2:W:137:GLN:OE1	2:W:147:LYS:HD3	2.13	0.49
2:Z:122:SER:HB3	2:Z:137:GLN:HG2	1.94	0.49
2:a:43:THR:HG22	2:a:45:ILE:CD1	2.42	0.49
2:b:14:MET:HE3	2:b:105:ALA:CB	2.42	0.49
2:I:47:GLY:HA2	5:I:302:CIT:H41	1.94	0.49
2:X:1:THR:CB	5:X:302:CIT:O4	2.59	0.49
2:X:51:VAL:HG21	2:X:98:LEU:HB3	1.95	0.49
1:B:44:GLU:HG2	1:B:203:LEU:CD2	2.43	0.49
1:C:89:TYR:CD1	2:K:82:ARG:HD3	2.47	0.49
2:I:104:LEU:HB3	2:I:121:VAL:HB	1.95	0.49
1:R:177:LEU:HD13	1:R:177:LEU:C	2.37	0.49
1:U:232:ALA:C	1:U:234:LEU:H	2.21	0.49
2:Y:25:MET:HE1	2:Z:144:LEU:HD11	1.94	0.49
1:C:234:LEU:O	1:C:235:VAL:HB	2.13	0.49
1:E:11:GLN:O	1:E:15:GLU:HG3	2.13	0.49
2:K:72:VAL:CG2	2:K:73:PRO:HD2	2.43	0.49
1:P:9:MET:HE1	1:Q:116:LYS:HG3	1.94	0.49
1:Q:74:LEU:HD13	1:Q:122:LEU:HD11	1.94	0.49
2:X:45:ILE:HG12	2:X:102:PRO:HB3	1.93	0.49
1:B:91:ARG:NH2	1:B:219:ARG:HH11	2.11	0.49
1:O:29:SER:OG	1:O:157:GLY:O	2.27	0.49
1:Q:150:GLU:OE1	1:Q:151:PRO:HD2	2.12	0.49
2:W:14:MET:HE1	2:W:103:LEU:O	2.12	0.49
2:X:14:MET:HE1	2:X:43:THR:C	2.38	0.49
2:Y:94:ALA:HB1	2:Y:99:LEU:HD23	1.95	0.49
2:b:88:ARG:HD3	2:b:126:ALA:O	2.12	0.49
1:C:205:VAL:HG13	1:C:230:LEU:HD23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:93:ASP:OD1	2:L:75:THR:HG23	2.13	0.49
1:G:23:GLY:HA2	1:G:26:ARG:NH1	2.28	0.49
1:O:210:VAL:CG2	1:O:225:ILE:HB	2.42	0.49
1:S:54:SER:CB	1:S:75:ARG:HD2	2.43	0.49
2:a:88:ARG:HD3	2:a:126:ALA:O	2.13	0.49
1:B:163:ILE:HG12	1:B:187:ALA:O	2.13	0.49
1:F:181:LEU:O	1:F:185:VAL:HG23	2.12	0.49
1:Q:25:ALA:O	1:Q:158:GLY:HA2	2.13	0.49
1:R:161:GLU:HB2	1:R:162:PRO:HD3	1.95	0.49
1:U:33:LEU:HD23	1:U:153:PHE:CB	2.41	0.49
2:X:12:VAL:O	2:X:196:ILE:HD12	2.13	0.49
1:B:189:ARG:CG	1:B:203:LEU:HD12	2.43	0.48
1:C:55:GLU:OE2	1:C:220:ARG:HD2	2.13	0.48
1:D:33:LEU:HD23	1:D:153:PHE:HB2	1.93	0.48
1:E:74:LEU:HD11	1:E:107:LEU:HD21	1.95	0.48
1:E:93:ASP:OD1	2:M:75:THR:HG23	2.13	0.48
2:H:99:LEU:HD22	2:H:100:ALA:H	1.78	0.48
2:M:55:PHE:CE2	2:M:86:MET:HG2	2.47	0.48
2:N:152:LYS:HG3	2:a:152:LYS:HB2	1.95	0.48
1:P:149:ASP:OD2	1:Q:48:ARG:HG2	2.12	0.48
1:B:44:GLU:HG2	1:B:203:LEU:HD21	1.95	0.48
1:F:233:LEU:C	1:F:234:LEU:HD22	2.38	0.48
2:I:152:LYS:HG3	2:Y:152:LYS:CB	2.43	0.48
1:P:189:ARG:NE	1:P:202:THR:OG1	2.46	0.48
2:X:169:GLU:HA	2:X:217:ILE:HD13	1.95	0.48
1:C:16:ARG:NH1	1:C:111:PHE:O	2.47	0.48
1:R:9:MET:HB3	1:S:15:GLU:HG3	1.94	0.48
2:V:133:GLU:OE2	2:V:133:GLU:HA	2.12	0.48
2:W:99:LEU:HD22	2:W:100:ALA:H	1.78	0.48
1:C:31:VAL:CG2	1:C:42:VAL:HG12	2.43	0.48
1:D:36:ALA:HB2	1:D:174:ASN:O	2.13	0.48
1:E:55:GLU:HB2	1:E:222:PHE:CG	2.48	0.48
1:S:56:LEU:HG	1:S:62:PHE:HB2	1.95	0.48
1:T:42:VAL:HG12	1:T:188:LEU:CD1	2.42	0.48
2:X:8:TYR:HE1	2:X:196:ILE:CD1	2.25	0.48
2:Z:156:GLN:OE1	2:Z:165:ARG:NH2	2.38	0.48
1:C:161:GLU:HB2	1:C:162:PRO:HD3	1.96	0.48
1:G:68:PHE:HA	1:G:71:PHE:CE2	2.48	0.48
1:S:93:ASP:OD1	2:a:75:THR:HG23	2.13	0.48
1:U:30:VAL:HG22	1:U:43:ALA:HB1	1.95	0.48
1:P:110:ILE:HA	1:P:114:GLN:HG2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:76:ARG:HG2	2:Y:69:LEU:HD22	1.94	0.48
1:S:182:ARG:HH22	1:S:236:ASP:C	2.21	0.48
2:H:161:ASP:CG	2:H:209:ARG:HH21	2.22	0.48
1:P:11:GLN:OE1	1:P:11:GLN:HA	2.14	0.48
1:Q:115:ALA:HB3	6:Q:427:HOH:O	2.12	0.48
2:W:20:SER:HB3	2:W:28:GLY:HA3	1.94	0.48
2:a:72:VAL:HG23	2:a:73:PRO:HD2	1.94	0.48
2:I:194:ALA:HB3	2:I:205:VAL:HB	1.96	0.48
1:B:89:TYR:CD1	2:J:82:ARG:HD3	2.48	0.48
1:B:123:CYS:SG	1:B:154:VAL:HG21	2.54	0.48
1:F:25:ALA:O	1:F:158:GLY:HA2	2.13	0.48
1:S:25:ALA:O	1:S:158:GLY:HA2	2.14	0.48
2:X:6:LEU:HD12	2:X:6:LEU:C	2.39	0.48
2:X:197:ILE:HG12	2:X:202:ALA:HB2	1.96	0.48
2:Y:6:LEU:HD12	2:Y:6:LEU:C	2.39	0.48
1:B:52:LYS:HE2	1:B:64:ALA:O	2.13	0.48
1:E:57:TYR:O	1:E:58:ASP:C	2.57	0.48
1:E:189:ARG:CG	1:E:203:LEU:HD13	2.44	0.48
1:T:25:ALA:O	1:T:158:GLY:HA2	2.13	0.48
2:X:81:ASN:O	2:X:85:ILE:HG13	2.14	0.48
1:E:31:VAL:HG23	1:E:42:VAL:HG12	1.96	0.47
1:G:42:VAL:HG13	1:G:210:VAL:HG22	1.96	0.47
2:H:137:GLN:HG3	2:H:138:ALA:N	2.29	0.47
1:O:52:LYS:NZ	1:O:64:ALA:O	2.46	0.47
1:R:56:LEU:HG	1:R:62:PHE:HB2	1.96	0.47
1:U:14:ARG:HH22	1:U:18:GLU:HG3	1.76	0.47
1:G:70:GLU:HB3	1:G:118:TYR:CD2	2.48	0.47
2:W:196:ILE:HG13	2:W:203:VAL:HG22	1.96	0.47
2:Y:43:THR:HG22	2:Y:104:LEU:HD12	1.93	0.47
2:a:1:THR:CB	5:a:302:CIT:O2	2.63	0.47
1:E:170:SER:HB2	1:E:183:ILE:CD1	2.45	0.47
2:H:165:ARG:HG2	2:H:213:LEU:HD22	1.95	0.47
1:O:210:VAL:CG2	1:O:230:LEU:HD13	2.41	0.47
2:V:113:ASP:HB3	6:V:451:HOH:O	2.13	0.47
2:W:13:VAL:HG23	2:W:196:ILE:HG22	1.96	0.47
1:D:98:GLN:HG2	2:L:70:GLU:OE1	2.14	0.47
1:F:112:THR:HG22	1:F:113:GLU:CG	2.38	0.47
2:L:88:ARG:HD2	6:L:445:HOH:O	2.14	0.47
1:O:152:HIS:HB3	1:O:171:TYR:CE2	2.49	0.47
1:P:9:MET:N	1:Q:15:GLU:OE1	2.48	0.47
1:T:55:GLU:CD	1:T:220:ARG:HH21	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:78:GLY:O	2:Z:82:ARG:HG2	2.15	0.47
1:C:150:GLU:CG	1:C:154:VAL:HG12	2.40	0.47
1:O:41:PHE:CD1	1:O:63:ALA:HB2	2.49	0.47
1:Q:70:GLU:HB3	1:Q:118:TYR:CD2	2.49	0.47
1:Q:80:GLN:HG2	6:Q:435:HOH:O	2.15	0.47
1:F:97[A]:ARG:HD2	1:G:49:SER:HB2	1.96	0.47
1:P:31:VAL:HG23	1:P:188:LEU:HD21	1.96	0.47
1:R:25:ALA:HA	6:R:411:HOH:O	2.15	0.47
2:V:72:VAL:CG2	2:V:73:PRO:HD2	2.44	0.47
1:B:41:PHE:HB3	1:B:53:ILE:HD13	1.97	0.47
1:C:123:CYS:HA	1:C:139:TYR:O	2.15	0.47
2:I:38:ASP:OD1	2:I:41:THR:HG23	2.14	0.47
2:J:169:GLU:HA	2:J:217:ILE:HD13	1.96	0.47
1:O:54:SER:CB	1:O:75:ARG:HD2	2.45	0.47
1:Q:52:LYS:HB3	1:Q:52:LYS:HE2	1.64	0.47
1:S:92:ARG:NH2	1:S:132:GLU:OE2	2.43	0.47
2:V:14:MET:HE1	2:V:103:LEU:O	2.15	0.47
2:W:62:GLU:OE2	2:W:82:ARG:CD	2.63	0.47
2:b:75:THR:O	2:b:79:LYS:HG3	2.14	0.47
1:B:156:MET:HE2	1:B:156:MET:HB2	1.86	0.47
2:I:3:ILE:HD11	2:I:33:LYS:HB2	1.96	0.47
2:L:65:HIS:NE2	2:L:69:LEU:HD11	2.29	0.47
1:Q:123:CYS:SG	1:Q:154:VAL:HG21	2.55	0.47
2:a:72:VAL:CG2	2:a:73:PRO:HD2	2.45	0.47
1:A:70:GLU:HB3	1:A:118:TYR:CD2	2.49	0.47
1:B:93:ASP:OD1	2:J:75:THR:HG23	2.15	0.47
2:J:69:LEU:HB2	3:J:303:DMF:H12	1.97	0.47
2:M:3:ILE:HB	2:M:139:VAL:HG12	1.97	0.47
2:N:152:LYS:HB2	2:a:152:LYS:HG3	1.96	0.47
1:O:54:SER:HB2	1:O:75:ARG:HD2	1.97	0.47
2:Z:212:GLU:HG3	2:Z:213:LEU:N	2.29	0.47
1:A:27:ALA:HB1	6:A:419:HOH:O	2.15	0.47
1:B:152:HIS:HB3	1:B:171:TYR:CE2	2.50	0.47
1:C:225:ILE:HG21	1:C:233:LEU:HD12	1.96	0.47
1:U:150:GLU:HG3	1:U:154:VAL:HG12	1.96	0.47
2:I:92:ALA:HA	2:I:95:MET:HE2	1.95	0.46
1:P:19:LEU:HD23	1:P:19:LEU:C	2.39	0.46
1:P:32:ALA:HA	1:P:40:LEU:O	2.15	0.46
1:R:170:SER:OG	1:R:183:ILE:HG23	2.15	0.46
2:L:107:TYR:CZ	2:L:117:ALA:HB3	2.50	0.46
1:O:55:GLU:HB2	1:O:222:PHE:CG	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:214:ASP:OD2	1:P:223:ARG:NH1	2.48	0.46
1:F:9:MET:HE3	1:G:16:ARG:HG2	1.96	0.46
2:N:113:ASP:OD1	2:N:116:SER:HB3	2.15	0.46
1:A:140:ARG:NH2	1:A:155:VAL:O	2.48	0.46
1:G:178:THR:HG22	1:G:182:ARG:NH1	2.30	0.46
2:M:3:ILE:O	2:M:138:ALA:HA	2.14	0.46
1:P:28:LYS:HB2	1:P:52:LYS:HZ3	1.78	0.46
1:S:171:TYR:HE2	1:S:173:GLU:HG2	1.80	0.46
5:V:302:CIT:O3	5:V:302:CIT:H21	2.15	0.46
2:Y:25:MET:HE1	2:Z:144:LEU:CD2	2.41	0.46
1:E:83:ASP:OD2	2:L:65:HIS:ND1	2.37	0.46
2:J:137:GLN:OE1	2:J:147:LYS:HD3	2.16	0.46
1:Q:60:VAL:HG11	1:Q:99:LEU:HD13	1.97	0.46
1:Q:60:VAL:HG11	1:Q:99:LEU:CD1	2.46	0.46
1:Q:167:LEU:HD22	1:Q:183:ILE:HD12	1.95	0.46
1:T:13:MET:HE3	1:U:116:LYS:HB2	1.98	0.46
1:U:205:VAL:HG23	1:U:231:GLN:OE1	2.15	0.46
2:V:1:THR:CB	5:V:302:CIT:C5	2.93	0.46
1:A:9:MET:HE2	1:B:117:PRO:HD2	1.97	0.46
1:B:141:ILE:N	1:B:141:ILE:HD12	2.31	0.46
1:U:55:GLU:OE2	1:U:220:ARG:HD2	2.16	0.46
2:b:10:GLY:HA2	2:b:115:GLN:HA	1.98	0.46
1:E:89:TYR:CD1	2:M:82:ARG:HD3	2.50	0.46
2:H:3:ILE:HG21	2:H:44:GLY:HA3	1.97	0.46
2:J:14:MET:HE3	2:J:105:ALA:HB3	1.98	0.46
1:O:16:ARG:NH1	1:O:114:GLN:O	2.32	0.46
1:Q:181:LEU:O	1:Q:185:VAL:HG23	2.16	0.46
2:Y:18:ARG:O	2:Y:31:VAL:HG22	2.16	0.46
2:Z:92:ALA:HB3	6:Z:436:HOH:O	2.15	0.46
2:a:211:ALA:O	2:a:215:ARG:HG3	2.15	0.46
1:C:185:VAL:HG13	1:C:203:LEU:CD2	2.31	0.46
1:G:118:TYR:HB3	1:G:120:VAL:HG22	1.98	0.46
5:I:302:CIT:O1	5:I:302:CIT:C5	2.64	0.46
1:O:32:ALA:HA	1:O:40:LEU:O	2.16	0.46
1:T:128:ALA:HB2	1:T:134:LYS:HB3	1.98	0.46
2:Y:1:THR:CB	5:Y:302:CIT:O3	2.64	0.46
2:Z:104:LEU:HB3	2:Z:121:VAL:HB	1.98	0.46
2:a:18:ARG:HD3	2:a:193:THR:HG23	1.98	0.46
1:F:11:GLN:NE2	1:F:14:ARG:HH11	2.14	0.46
2:N:72:VAL:CG2	2:N:73:PRO:HD2	2.46	0.46
2:N:148:SER:HB3	2:a:148:SER:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:18:GLU:HG3	1:T:22:LYS:HE2	1.98	0.46
1:B:55:GLU:HB2	1:B:222:PHE:CG	2.51	0.46
2:H:134:GLU:OE2	2:N:188:ARG:HD3	2.16	0.46
1:O:92:ARG:HB3	2:W:75:THR:HG21	1.98	0.46
1:R:87:TYR:CZ	2:Y:58:LEU:HD13	2.51	0.46
2:Z:99:LEU:HD22	2:Z:100:ALA:H	1.81	0.46
2:a:30:ASP:OD1	2:a:30:ASP:N	2.50	0.46
1:E:9:MET:HE3	1:F:19:LEU:HD13	1.98	0.45
1:E:189:ARG:HG3	1:E:203:LEU:HD22	1.97	0.45
1:R:189:ARG:O	1:R:191:GLY:N	2.49	0.45
1:A:32:ALA:HA	1:A:40:LEU:O	2.16	0.45
1:O:9:MET:HE3	1:P:16:ARG:HG2	1.97	0.45
1:B:9:MET:CE	1:C:116:LYS:HG3	2.47	0.45
2:J:14:MET:HE3	2:J:105:ALA:CB	2.46	0.45
2:V:51:VAL:HG21	2:V:98:LEU:HB3	1.98	0.45
2:Y:99:LEU:HD22	2:Y:100:ALA:N	2.31	0.45
2:Z:20:SER:HB3	2:Z:28:GLY:HA3	1.98	0.45
2:b:161:ASP:OD1	2:b:209:ARG:NH2	2.48	0.45
2:I:152:LYS:CB	2:Y:152:LYS:HG3	2.45	0.45
2:K:183:GLY:HA2	6:K:424:HOH:O	2.15	0.45
1:Q:179:ASP:O	1:Q:183:ILE:HG23	2.16	0.45
1:U:89:TYR:CD1	2:V:82:ARG:HD3	2.52	0.45
1:C:170:SER:O	1:C:183:ILE:HD11	2.15	0.45
1:E:42:VAL:HG11	1:E:184:ALA:CB	2.43	0.45
2:J:141:SER:HB3	5:J:302:CIT:H22	1.99	0.45
2:M:122:SER:HB3	2:M:137:GLN:HG2	1.99	0.45
2:M:157:VAL:HG23	2:M:166:VAL:HG21	1.98	0.45
2:a:20:SER:HB3	2:a:28:GLY:HA3	1.99	0.45
1:B:234:LEU:HD23	1:B:234:LEU:HA	1.86	0.45
1:D:190:ALA:CB	6:D:402:HOH:O	2.63	0.45
1:O:33:LEU:HD11	1:O:180:ALA:HB1	1.99	0.45
1:S:83:ASP:OD1	2:Z:68:LYS:NZ	2.43	0.45
2:Y:99:LEU:C	2:Y:99:LEU:HD13	2.42	0.45
1:G:67:LYS:HD3	1:G:69:ASN:OD1	2.17	0.45
5:H:302:CIT:O6	5:H:302:CIT:C1	2.64	0.45
2:N:86:MET:HE3	2:N:86:MET:HB2	1.78	0.45
1:T:56:LEU:HD13	1:T:99:LEU:HD23	1.98	0.45
2:W:150:MET:HG3	2:W:170:ALA:HB2	1.99	0.45
2:Z:1:THR:HB	5:Z:302:CIT:C5	2.46	0.45
1:F:56:LEU:HG	1:F:62:PHE:HB2	1.99	0.45
2:I:8:TYR:OH	2:I:196:ILE:HD11	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:51:VAL:CG1	2:N:100:ALA:HB2	2.41	0.45
1:Q:110:ILE:HA	1:Q:114:GLN:HG2	1.99	0.45
1:G:129:HIS:O	1:G:130:TYR:C	2.59	0.45
1:R:68:PHE:HA	1:R:71:PHE:CE2	2.52	0.45
1:R:89:TYR:CD1	2:Z:82:ARG:HD3	2.52	0.45
2:W:45:ILE:HD12	2:W:52:ALA:O	2.16	0.45
1:B:54:SER:HB2	6:B:317:HOH:O	2.17	0.45
1:D:141:ILE:HD12	1:D:141:ILE:N	2.32	0.45
2:H:10:GLY:HA2	2:H:115:GLN:HA	1.99	0.45
2:I:141:SER:HB3	5:I:302:CIT:C2	2.45	0.45
2:M:122:SER:O	2:M:129:TRP:HA	2.17	0.45
2:a:43:THR:CG2	2:a:45:ILE:HD11	2.47	0.45
1:D:181:LEU:O	1:D:185:VAL:HG23	2.17	0.44
1:E:217:ARG:HH11	1:E:223:ARG:HG2	1.81	0.44
2:M:31:VAL:HG11	4:M:301:M6M:C36	2.47	0.44
2:M:33:LYS:O	2:M:44:GLY:HA2	2.18	0.44
2:Z:99:LEU:HD13	2:Z:99:LEU:C	2.43	0.44
1:C:42:VAL:HG11	1:C:184:ALA:HB1	1.98	0.44
2:I:7:LYS:HE3	2:I:118:GLY:O	2.17	0.44
1:Q:31:VAL:CG1	1:Q:155:VAL:HG12	2.37	0.44
1:T:74:LEU:HD13	1:T:122:LEU:HD11	1.99	0.44
1:B:14:ARG:O	1:B:18:GLU:HG2	2.17	0.44
1:D:99:LEU:HA	1:D:102:VAL:HG12	1.98	0.44
2:J:113:ASP:OD1	2:J:115:GLN:HB2	2.17	0.44
1:P:41:PHE:CB	1:P:53:ILE:HD13	2.46	0.44
1:Q:70:GLU:HG2	1:Q:118:TYR:CE1	2.52	0.44
1:Q:185:VAL:HG21	1:Q:234:LEU:HD21	1.99	0.44
1:R:68:PHE:HA	1:R:71:PHE:CZ	2.52	0.44
1:U:179:ASP:O	1:U:183:ILE:HG23	2.17	0.44
1:D:170:SER:OG	1:D:183:ILE:HG23	2.17	0.44
1:E:41:PHE:HZ	1:E:125:ALA:HB3	1.82	0.44
2:K:51:VAL:HG12	2:K:100:ALA:HB2	2.00	0.44
2:N:12:VAL:HG12	2:N:197:ILE:HB	1.99	0.44
1:O:134:LYS:HA	6:O:401:HOH:O	2.17	0.44
1:O:163:ILE:HG23	1:O:187:ALA:C	2.42	0.44
1:S:162:PRO:HB2	1:S:191:GLY:HA2	2.00	0.44
1:B:57:TYR:O	1:B:58:ASP:C	2.59	0.44
1:D:24:ILE:HD13	6:D:413:HOH:O	2.18	0.44
1:F:99:LEU:O	1:F:102:VAL:HG12	2.18	0.44
2:I:8:TYR:CE1	2:I:196:ILE:HD11	2.52	0.44
2:K:86:MET:HE3	2:K:86:MET:HB2	1.68	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:38:ASP:OD1	2:V:41:THR:OG1	2.20	0.44
1:G:89:TYR:CE1	2:H:82:ARG:HD3	2.53	0.44
2:V:72:VAL:HG23	2:V:73:PRO:HD2	1.99	0.44
2:Z:186:LEU:N	2:Z:186:LEU:HD22	2.33	0.44
1:C:74:LEU:HD23	1:C:74:LEU:HA	1.82	0.44
1:E:173:GLU:HG2	1:E:174:ASN:OD1	2.18	0.44
1:F:55:GLU:HB2	1:F:222:PHE:CG	2.53	0.44
2:L:101:LEU:HD12	2:L:101:LEU:HA	1.78	0.44
2:L:107:TYR:CE2	2:L:117:ALA:HB3	2.53	0.44
2:M:194:ALA:HB3	2:M:210:ILE:HD11	1.99	0.44
1:S:74:LEU:HD23	3:S:301:DMF:H13	1.98	0.44
2:Y:113:ASP:C	2:Y:115:GLN:N	2.75	0.44
2:Z:118:GLY:O	2:Z:119:ARG:NH1	2.50	0.44
1:T:181:LEU:O	1:T:185:VAL:HG22	2.18	0.44
2:W:62:GLU:OE2	2:W:82:ARG:HD2	2.17	0.44
1:C:32:ALA:HA	1:C:40:LEU:O	2.17	0.44
1:C:155:VAL:HG11	1:C:163:ILE:HB	1.99	0.44
1:F:116:LYS:HE2	1:F:119:GLU:OE1	2.17	0.44
2:H:33:LYS:HE2	4:H:301:M6M:C30	2.48	0.44
2:J:197:ILE:HG12	2:J:202:ALA:HB2	2.00	0.44
1:T:68:PHE:HA	1:T:71:PHE:CZ	2.53	0.44
1:T:71:PHE:HB3	1:T:120:VAL:HG22	1.98	0.44
1:U:63:ALA:O	1:U:156:MET:HE1	2.17	0.44
1:B:97:ARG:NH1	1:C:49:SER:O	2.51	0.43
1:C:31:VAL:CG1	1:C:155:VAL:HG13	2.48	0.43
1:D:143:TYR:HD2	6:D:413:HOH:O	2.01	0.43
1:E:142:THR:OG1	1:E:146:SER:HB2	2.17	0.43
1:E:205:VAL:HG13	1:E:230:LEU:HD23	2.00	0.43
1:R:173:GLU:O	1:R:174:ASN:HB2	2.18	0.43
1:T:77:GLY:HA3	3:T:301:DMF:H12	2.00	0.43
1:C:220:ARG:HH22	2:J:67:GLU:CD	2.26	0.43
1:O:28:LYS:NZ	1:O:46:PRO:HG3	2.33	0.43
1:P:42:VAL:HG12	1:P:188:LEU:CD1	2.48	0.43
1:T:62:PHE:CD1	1:T:62:PHE:C	2.96	0.43
1:A:54:SER:CB	1:A:75:ARG:HD2	2.48	0.43
1:B:170:SER:O	1:B:170:SER:OG	2.33	0.43
1:F:42:VAL:HG11	1:F:184:ALA:CB	2.45	0.43
1:P:55:GLU:OE2	1:P:220:ARG:NH2	2.49	0.43
1:Q:68:PHE:HA	1:Q:71:PHE:CZ	2.54	0.43
1:S:163:ILE:HG23	1:S:187:ALA:HB1	2.00	0.43
2:H:8:TYR:CZ	2:H:11:GLY:HA3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:118:TYR:HB3	1:S:120:VAL:HG22	2.00	0.43
2:W:112:SER:O	2:W:114:PRO:HD3	2.18	0.43
1:A:188:LEU:HD23	1:A:188:LEU:HA	1.84	0.43
1:B:33:LEU:CD2	1:B:153:PHE:CB	2.96	0.43
1:E:85:ARG:NH1	1:E:98:GLN:OE1	2.51	0.43
2:H:6:LEU:C	2:H:6:LEU:HD12	2.44	0.43
2:L:37:THR:HG21	2:L:43:THR:OG1	2.19	0.43
2:N:3:ILE:HB	2:N:139:VAL:HG12	2.01	0.43
1:O:33:LEU:O	1:O:33:LEU:HD12	2.18	0.43
1:O:117:PRO:HD2	1:U:9:MET:CE	2.44	0.43
2:Y:43:THR:HG21	2:Y:59:TYR:CE2	2.54	0.43
2:Y:47:GLY:HA2	5:Y:302:CIT:H41	2.01	0.43
2:b:113:ASP:HB2	2:b:116:SER:OG	2.18	0.43
1:E:202:THR:HB	1:E:203:LEU:HD12	2.00	0.43
1:G:181:LEU:O	1:G:185:VAL:HG23	2.19	0.43
2:I:122:SER:HB3	2:I:137:GLN:HG2	2.01	0.43
2:L:124:ASP:C	2:L:124:ASP:OD1	2.61	0.43
1:R:77:GLY:HA3	3:R:301:DMF:C2	2.48	0.43
2:V:1:THR:OG1	5:V:302:CIT:O4	2.19	0.43
1:A:178:THR:HG22	1:A:233:LEU:CD2	2.44	0.43
2:N:186:LEU:HD11	2:N:215:ARG:HG2	2.00	0.43
1:O:117:PRO:CD	1:U:9:MET:HE2	2.44	0.43
1:S:14:ARG:O	1:S:18:GLU:HG3	2.19	0.43
1:S:235:VAL:HG23	1:S:236:ASP:N	2.34	0.43
2:V:122:SER:O	2:V:129:TRP:HA	2.19	0.43
1:G:217:ARG:CD	1:G:223:ARG:HD2	2.49	0.43
2:J:18:ARG:HD3	2:J:193:THR:HG23	2.01	0.43
2:N:139:VAL:C	2:N:143:SER:HB3	2.44	0.43
1:R:177:LEU:CD1	1:R:233:LEU:HD22	2.42	0.43
2:V:165:ARG:NH1	6:V:402:HOH:O	2.51	0.43
2:Y:191:PHE:HB3	2:Y:210:ILE:HG22	2.01	0.43
2:Z:188:ARG:NE	2:a:134:GLU:OE2	2.41	0.43
2:a:14:MET:HE1	2:a:103:LEU:O	2.19	0.43
1:A:57:TYR:O	1:A:58:ASP:C	2.61	0.43
1:A:110:ILE:HA	1:A:114:GLN:HG3	2.01	0.43
1:C:128:ALA:HB2	1:C:134:LYS:HB3	2.01	0.43
1:E:170:SER:OG	1:E:183:ILE:CD1	2.63	0.43
2:K:55:PHE:HZ	2:K:90:ASN:HB2	1.84	0.43
2:M:90:ASN:OD1	2:M:93:ALA:HB3	2.19	0.43
1:O:225:ILE:HG22	1:O:230:LEU:HA	1.99	0.43
1:P:161:GLU:N	1:P:162:PRO:CD	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:89:TYR:CE1	2:V:82:ARG:HD3	2.54	0.43
2:X:47:GLY:CA	5:X:302:CIT:H41	2.49	0.43
2:a:164:LEU:HG	2:a:213:LEU:CD1	2.49	0.43
2:b:51:VAL:HG21	2:b:98:LEU:HB3	1.99	0.43
2:J:203:VAL:HG12	2:J:204:ASP:N	2.34	0.43
2:L:8:TYR:HB2	2:L:9:PRO:CD	2.49	0.43
1:O:210:VAL:HG22	1:O:225:ILE:O	2.19	0.43
1:A:18:GLU:O	1:A:22:LYS:HG3	2.19	0.42
1:B:137:GLU:O	1:B:138:LEU:HD23	2.19	0.42
1:F:70:GLU:OE1	1:F:116:LYS:NZ	2.52	0.42
2:H:7:LYS:HE3	2:H:118:GLY:O	2.19	0.42
2:J:3:ILE:O	2:J:138:ALA:HA	2.19	0.42
2:M:95:MET:HA	2:M:95:MET:HE2	2.00	0.42
1:R:24:ILE:HD11	1:R:120:VAL:O	2.19	0.42
2:a:83:LEU:O	2:a:87:VAL:HG23	2.19	0.42
2:b:197:ILE:HG12	2:b:202:ALA:HB2	2.01	0.42
1:A:52:LYS:HB2	1:A:52:LYS:HE3	1.92	0.42
2:J:197:ILE:HG12	2:J:202:ALA:CB	2.49	0.42
2:K:50:ALA:HB2	2:L:128:GLY:N	2.33	0.42
1:R:99:LEU:O	1:R:102:VAL:HG12	2.19	0.42
1:R:219:ARG:HG3	1:R:220:ARG:N	2.33	0.42
2:W:51:VAL:HG21	2:W:98:LEU:HB3	2.01	0.42
2:Y:12:VAL:CG2	2:Y:120:ILE:HD11	2.49	0.42
1:B:18:GLU:OE1	1:B:18:GLU:HA	2.19	0.42
1:B:203:LEU:HD22	1:B:208:LEU:HD21	1.99	0.42
1:D:231:GLN:C	1:D:233:LEU:H	2.27	0.42
2:N:152:LYS:HG3	2:a:152:LYS:CB	2.50	0.42
1:R:177:LEU:HD13	1:R:177:LEU:O	2.18	0.42
1:R:210:VAL:CG1	1:R:225:ILE:HB	2.48	0.42
2:Z:32:ARG:NH1	2:Z:204:ASP:OD1	2.50	0.42
1:B:135:ARG:HD2	1:B:136:PRO:HD2	2.02	0.42
1:C:89:TYR:CE1	2:K:82:ARG:HD3	2.54	0.42
1:F:217:ARG:NE	1:F:223:ARG:HD2	2.34	0.42
2:K:30:ASP:OD1	2:K:30:ASP:N	2.52	0.42
2:K:164:LEU:HG	2:K:213:LEU:CD1	2.50	0.42
1:O:89:TYR:OH	3:O:301:DMF:HC	2.19	0.42
1:R:35:TYR:CZ	1:R:177:LEU:HD23	2.54	0.42
2:X:161:ASP:CG	2:X:209:ARG:HH21	2.23	0.42
2:Y:51:VAL:HG21	2:Y:98:LEU:HB3	2.00	0.42
2:Z:141:SER:HB3	5:Z:302:CIT:H21	2.01	0.42
2:b:1:THR:HB	5:b:302:CIT:C1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:15:ALA:HA	2:J:193:THR:O	2.20	0.42
2:K:164:LEU:O	2:K:168:VAL:HG23	2.20	0.42
1:A:163:ILE:HG12	1:A:187:ALA:O	2.19	0.42
1:B:178:THR:CG2	1:B:233:LEU:CD1	2.95	0.42
1:C:150:GLU:HA	1:C:151:PRO:HD3	1.88	0.42
1:F:57:TYR:O	1:F:58:ASP:C	2.62	0.42
2:H:124:ASP:OD1	2:H:124:ASP:C	2.62	0.42
2:K:33:LYS:O	2:K:44:GLY:HA2	2.20	0.42
2:L:76:PHE:O	2:L:80:ILE:HG13	2.20	0.42
1:O:152:HIS:CD2	1:O:171:TYR:HE2	2.38	0.42
1:S:28:LYS:HD2	1:S:44:GLU:CD	2.44	0.42
1:U:217:ARG:NH1	1:U:223:ARG:CG	2.81	0.42
2:Y:122:SER:O	2:Y:129:TRP:HA	2.19	0.42
1:F:10:GLU:OE2	1:G:19:LEU:HB2	2.20	0.42
1:F:162:PRO:HB2	1:F:190:ALA:O	2.19	0.42
2:I:138:ALA:HB3	2:I:147:LYS:HG3	2.01	0.42
2:K:161:ASP:CG	2:K:209:ARG:HH11	2.27	0.42
1:U:217:ARG:HH11	1:U:223:ARG:HD2	1.85	0.42
2:W:38:ASP:C	2:W:38:ASP:OD1	2.62	0.42
2:X:104:LEU:HB3	2:X:121:VAL:HB	2.01	0.42
2:a:51:VAL:HG21	2:a:98:LEU:HB3	2.01	0.42
1:E:170:SER:CB	1:E:183:ILE:CD1	2.98	0.42
2:H:18:ARG:C	2:H:31:VAL:HG22	2.45	0.42
2:L:152:LYS:HG3	2:V:152:LYS:CB	2.50	0.42
1:O:38:GLY:HA3	1:O:213:LEU:O	2.20	0.42
2:V:82:ARG:NH2	2:V:85:ILE:HD12	2.35	0.42
2:W:41:THR:CG2	2:W:104:LEU:HD11	2.50	0.42
2:Y:7:LYS:HE3	2:Y:118:GLY:O	2.19	0.42
2:Z:14:MET:HE1	2:Z:103:LEU:O	2.20	0.42
2:Z:137:GLN:HG3	2:Z:138:ALA:N	2.35	0.42
1:D:57:TYR:O	1:D:58:ASP:C	2.63	0.42
1:F:55:GLU:OE2	1:F:220:ARG:HD2	2.20	0.42
2:N:38:ASP:OD2	2:N:79:LYS:NZ	2.34	0.42
1:O:225:ILE:C	1:O:230:LEU:HB2	2.45	0.42
1:P:99:LEU:O	1:P:102:VAL:HG12	2.20	0.42
1:R:85:ARG:CZ	3:R:302:DMF:H12	2.50	0.42
1:T:182:ARG:HA	1:T:185:VAL:HG22	2.02	0.42
2:X:18:ARG:O	2:X:31:VAL:HG22	2.20	0.42
1:E:123:CYS:HA	1:E:139:TYR:O	2.20	0.42
1:E:170:SER:CB	1:E:183:ILE:HD13	2.49	0.42
1:F:178:THR:HG21	1:F:182:ARG:HH21	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:38:ASP:C	2:J:38:ASP:OD1	2.62	0.42
1:T:32:ALA:HB2	1:T:41:PHE:CD1	2.55	0.42
2:W:20:SER:HB3	2:W:28:GLY:CA	2.50	0.42
2:Z:169:GLU:HA	2:Z:217:ILE:HD13	2.02	0.42
2:a:1:THR:HB	5:a:302:CIT:O2	2.19	0.42
1:A:33:LEU:HD11	1:A:180:ALA:HB1	2.02	0.41
1:B:29:SER:OG	1:B:157:GLY:O	2.36	0.41
1:B:92:ARG:NH1	1:B:132:GLU:OE2	2.52	0.41
1:C:59:ARG:O	1:C:126:GLU:HA	2.19	0.41
2:K:38:ASP:C	2:K:38:ASP:OD1	2.62	0.41
1:O:128:ALA:CB	1:O:134:LYS:HB3	2.50	0.41
1:Q:68:PHE:HA	1:Q:71:PHE:CE2	2.55	0.41
1:Q:85:ARG:NH1	1:Q:98:GLN:HE22	2.17	0.41
1:R:11:GLN:HA	1:R:14:ARG:NH1	2.35	0.41
2:X:51:VAL:HG12	2:X:100:ALA:HB2	2.02	0.41
2:Y:38:ASP:C	2:Y:38:ASP:OD1	2.62	0.41
1:B:55:GLU:CD	1:B:220:ARG:HH21	2.28	0.41
1:G:217:ARG:NH2	6:G:304:HOH:O	2.53	0.41
2:M:25:MET:HE1	2:N:144:LEU:HD11	2.01	0.41
3:O:301:DMF:H13	2:W:69:LEU:HD12	2.01	0.41
1:P:48:ARG:HG3	1:P:49:SER:N	2.36	0.41
1:P:123:CYS:HA	1:P:139:TYR:O	2.19	0.41
1:Q:9:MET:N	1:R:15:GLU:OE1	2.53	0.41
1:U:205:VAL:CG2	1:U:231:GLN:HB2	2.51	0.41
2:W:107:TYR:OH	2:W:114:PRO:HB3	2.20	0.41
2:Y:186:LEU:N	2:Y:186:LEU:CD2	2.82	0.41
1:C:77:GLY:HA3	3:C:301:DMF:C1	2.48	0.41
1:C:149:ASP:OD1	1:C:149:ASP:N	2.50	0.41
1:C:208:LEU:HD23	1:C:208:LEU:HA	1.91	0.41
2:N:123:PHE:HA	2:N:128:GLY:O	2.19	0.41
2:N:211:ALA:O	2:N:215:ARG:HG3	2.20	0.41
1:P:54:SER:CB	1:P:75:ARG:HD2	2.50	0.41
1:P:233:LEU:HD23	1:P:233:LEU:HA	1.80	0.41
1:Q:13:MET:HE3	1:R:116:LYS:HB2	2.02	0.41
2:Z:99:LEU:HD22	2:Z:100:ALA:N	2.36	0.41
1:B:189:ARG:HG3	1:B:203:LEU:HD12	2.02	0.41
1:D:52:LYS:HE2	1:D:52:LYS:HB3	1.90	0.41
1:G:123:CYS:HA	1:G:139:TYR:O	2.20	0.41
1:Q:18:GLU:HB3	1:Q:22:LYS:HE3	2.02	0.41
1:R:30:VAL:HG22	1:R:43:ALA:CB	2.50	0.41
1:T:207:SER:O	1:T:208:LEU:HD23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:35:TYR:CZ	1:U:177:LEU:HD13	2.56	0.41
2:N:7:LYS:HE3	2:N:118:GLY:C	2.46	0.41
1:O:57:TYR:O	1:O:58:ASP:C	2.63	0.41
1:U:56:LEU:HD11	1:U:62:PHE:HB2	2.02	0.41
2:V:41:THR:CG2	2:V:104:LEU:HD11	2.50	0.41
2:W:99:LEU:HD22	2:W:100:ALA:N	2.35	0.41
2:X:124:ASP:OD1	2:X:124:ASP:C	2.63	0.41
2:Z:18:ARG:O	2:Z:31:VAL:HG22	2.20	0.41
6:A:405:HOH:O	1:B:67:LYS:HE2	2.19	0.41
2:H:96:GLN:OE1	2:H:96:GLN:HA	2.19	0.41
2:V:5:ALA:HA	2:V:13:VAL:O	2.20	0.41
2:a:161:ASP:OD2	2:a:209:ARG:NH2	2.47	0.41
1:C:54:SER:CB	1:C:75:ARG:HD2	2.51	0.41
1:Q:41:PHE:HB3	1:Q:53:ILE:HD13	2.02	0.41
2:a:194:ALA:HB3	2:a:205:VAL:HB	2.02	0.41
1:B:203:LEU:HB3	1:B:208:LEU:HD21	2.03	0.41
1:C:42:VAL:O	1:C:42:VAL:HG13	2.21	0.41
1:F:95:THR:OG1	1:F:98:GLN:HG3	2.20	0.41
2:I:95:MET:HE3	2:I:95:MET:HB2	1.97	0.41
6:K:438:HOH:O	2:W:151:LYS:HE3	2.21	0.41
1:T:211:ALA:HB1	1:T:223:ARG:O	2.20	0.41
2:V:51:VAL:HG12	2:V:100:ALA:HB2	2.03	0.41
2:X:14:MET:HE2	2:X:42:ALA:HB1	2.02	0.41
1:A:33:LEU:HB3	1:A:153:PHE:HB3	2.03	0.41
1:A:42:VAL:HG22	1:A:210:VAL:HG22	2.03	0.41
1:A:225:ILE:HG21	1:A:233:LEU:HD12	2.03	0.41
1:C:57:TYR:O	1:C:58:ASP:C	2.62	0.41
2:L:152:LYS:HD3	2:L:152:LYS:HA	1.93	0.41
2:M:123:PHE:HA	2:M:128:GLY:O	2.21	0.41
1:P:63:ALA:O	1:P:156:MET:HE1	2.21	0.41
1:P:185:VAL:HG13	1:P:203:LEU:HD13	2.02	0.41
3:Q:301:DMF:H12	2:Y:66:TYR:HA	2.03	0.41
1:T:41:PHE:CB	1:T:53:ILE:HD13	2.51	0.41
1:T:84:THR:HG23	6:T:411:HOH:O	2.20	0.41
1:U:11:GLN:O	1:U:15:GLU:HG2	2.21	0.41
2:V:123:PHE:HA	2:V:128:GLY:O	2.20	0.41
2:Y:86:MET:HE3	2:Y:86:MET:HB2	1.92	0.41
2:b:6:LEU:C	2:b:6:LEU:HD12	2.46	0.41
1:B:55:GLU:HB2	1:B:222:PHE:CD2	2.56	0.41
1:C:140:ARG:CD	6:C:409:HOH:O	2.68	0.41
2:L:186:LEU:HD22	2:L:186:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:5:ALA:HA	2:N:13:VAL:O	2.21	0.41
1:O:56:LEU:HD11	1:O:62:PHE:HB2	2.02	0.41
1:U:54:SER:HB2	1:U:75:ARG:HD2	2.01	0.41
2:V:50:ALA:HB2	2:W:128:GLY:N	2.36	0.41
2:W:95:MET:HE2	2:W:95:MET:CA	2.44	0.41
2:W:213:LEU:HD23	2:W:213:LEU:HA	1.92	0.41
2:Y:135:GLY:N	6:Y:402:HOH:O	2.42	0.41
2:a:51:VAL:HG12	2:a:100:ALA:HB2	2.02	0.41
1:D:78:GLY:HA3	1:D:103:TYR:OH	2.21	0.40
1:G:57:TYR:CD1	1:G:82:ALA:HB1	2.56	0.40
2:J:80:ILE:HD11	2:J:121:VAL:HG21	2.03	0.40
1:S:123:CYS:HA	1:S:139:TYR:O	2.21	0.40
1:T:57:TYR:O	1:T:58:ASP:C	2.64	0.40
2:W:165:ARG:NH1	6:W:404:HOH:O	2.54	0.40
1:B:10:GLU:O	1:B:14:ARG:HB2	2.20	0.40
1:E:30:VAL:CG1	1:E:43:ALA:HB2	2.31	0.40
1:G:59:ARG:O	1:G:126:GLU:HA	2.20	0.40
1:O:123:CYS:SG	1:O:154:VAL:HG21	2.60	0.40
1:O:217:ARG:HD2	1:O:223:ARG:NH1	2.36	0.40
1:Q:41:PHE:CB	1:Q:53:ILE:HD13	2.51	0.40
1:A:9:MET:HE2	1:B:116:LYS:HG3	2.02	0.40
1:A:167:LEU:HG	1:A:187:ALA:HB2	2.02	0.40
1:B:9:MET:HB3	1:C:15:GLU:HB3	2.03	0.40
2:J:51:VAL:HG21	2:J:98:LEU:HB3	2.03	0.40
1:Q:205:VAL:HG22	1:Q:230:LEU:HG	2.04	0.40
2:X:12:VAL:HG12	2:X:197:ILE:HB	2.04	0.40
1:D:190:ALA:HB3	6:D:402:HOH:O	2.22	0.40
2:H:14:MET:HG2	2:H:34:VAL:HG11	2.04	0.40
2:L:1:THR:HB	5:L:302:CIT:C1	2.50	0.40
2:L:5:ALA:HA	2:L:13:VAL:O	2.22	0.40
1:T:220:ARG:HD2	2:a:64:GLU:OE2	2.22	0.40
2:Y:98:LEU:HD23	2:Y:98:LEU:HA	1.83	0.40
2:b:15:ALA:C	2:b:171:LEU:HD11	2.46	0.40
1:A:116:LYS:NZ	1:A:119:GLU:OE1	2.44	0.40
1:C:74:LEU:HD12	1:C:120:VAL:HG21	2.03	0.40
1:C:152:HIS:CD2	1:C:171:TYR:CE2	3.09	0.40
2:L:87:VAL:O	2:L:88:ARG:C	2.63	0.40
2:L:113:ASP:OD1	2:L:115:GLN:HB3	2.21	0.40
1:P:163:ILE:H	1:P:163:ILE:HG13	1.72	0.40
1:Q:33:LEU:CD1	1:Q:180:ALA:HB1	2.50	0.40
1:R:41:PHE:HB3	1:R:53:ILE:HD13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:167:LEU:O	1:S:171:TYR:HB2	2.21	0.40
1:U:71:PHE:C	1:U:71:PHE:CD1	3.00	0.40
2:b:1:THR:CB	5:b:302:CIT:O2	2.70	0.40
2:b:38:ASP:OD1	2:b:38:ASP:C	2.64	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:11:GLN:NE2	2:W:219:GLU:OE2[2_848]	2.18	0.02

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	215/240 (90%)	209 (97%)	6 (3%)	0	100	100
1	B	211/240 (88%)	203 (96%)	6 (3%)	2 (1%)	14	31
1	C	212/240 (88%)	204 (96%)	8 (4%)	0	100	100
1	D	211/240 (88%)	198 (94%)	13 (6%)	0	100	100
1	E	212/240 (88%)	205 (97%)	7 (3%)	0	100	100
1	F	211/240 (88%)	199 (94%)	12 (6%)	0	100	100
1	G	212/240 (88%)	203 (96%)	9 (4%)	0	100	100
1	O	211/240 (88%)	205 (97%)	6 (3%)	0	100	100
1	P	212/240 (88%)	201 (95%)	11 (5%)	0	100	100
1	Q	211/240 (88%)	202 (96%)	9 (4%)	0	100	100
1	R	211/240 (88%)	204 (97%)	6 (3%)	1 (0%)	25	47
1	S	215/240 (90%)	207 (96%)	7 (3%)	1 (0%)	25	47
1	T	213/240 (89%)	204 (96%)	9 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	U	212/240 (88%)	203 (96%)	9 (4%)	0	100	100
2	H	220/234 (94%)	214 (97%)	6 (3%)	0	100	100
2	I	220/234 (94%)	216 (98%)	4 (2%)	0	100	100
2	J	220/234 (94%)	218 (99%)	2 (1%)	0	100	100
2	K	221/234 (94%)	218 (99%)	3 (1%)	0	100	100
2	L	221/234 (94%)	215 (97%)	6 (3%)	0	100	100
2	M	220/234 (94%)	217 (99%)	3 (1%)	0	100	100
2	N	221/234 (94%)	216 (98%)	5 (2%)	0	100	100
2	V	221/234 (94%)	217 (98%)	4 (2%)	0	100	100
2	W	221/234 (94%)	217 (98%)	4 (2%)	0	100	100
2	X	220/234 (94%)	217 (99%)	3 (1%)	0	100	100
2	Y	221/234 (94%)	213 (96%)	8 (4%)	0	100	100
2	Z	220/234 (94%)	216 (98%)	4 (2%)	0	100	100
2	a	221/234 (94%)	215 (97%)	6 (3%)	0	100	100
2	b	220/234 (94%)	216 (98%)	4 (2%)	0	100	100
All	All	6056/6636 (91%)	5872 (97%)	180 (3%)	4 (0%)	48	71

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	R	190	ALA
1	S	151	PRO
1	B	136	PRO
1	B	151	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	168/184 (91%)	166 (99%)	2 (1%)	67	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	165/184 (90%)	163 (99%)	2 (1%)	67 85
1	C	165/184 (90%)	160 (97%)	5 (3%)	36 63
1	D	164/184 (89%)	163 (99%)	1 (1%)	84 94
1	E	166/184 (90%)	165 (99%)	1 (1%)	84 94
1	F	165/184 (90%)	160 (97%)	5 (3%)	36 63
1	G	165/184 (90%)	163 (99%)	2 (1%)	67 85
1	O	165/184 (90%)	164 (99%)	1 (1%)	84 94
1	P	166/184 (90%)	164 (99%)	2 (1%)	67 85
1	Q	165/184 (90%)	162 (98%)	3 (2%)	54 77
1	R	164/184 (89%)	162 (99%)	2 (1%)	67 85
1	S	168/184 (91%)	164 (98%)	4 (2%)	44 70
1	T	166/184 (90%)	163 (98%)	3 (2%)	54 77
1	U	165/184 (90%)	162 (98%)	3 (2%)	54 77
2	H	165/172 (96%)	165 (100%)	0	100 100
2	I	165/172 (96%)	161 (98%)	4 (2%)	44 70
2	J	165/172 (96%)	162 (98%)	3 (2%)	54 77
2	K	165/172 (96%)	163 (99%)	2 (1%)	67 85
2	L	165/172 (96%)	161 (98%)	4 (2%)	44 70
2	M	165/172 (96%)	164 (99%)	1 (1%)	84 94
2	N	165/172 (96%)	165 (100%)	0	100 100
2	V	165/172 (96%)	163 (99%)	2 (1%)	67 85
2	W	165/172 (96%)	164 (99%)	1 (1%)	84 94
2	X	165/172 (96%)	162 (98%)	3 (2%)	54 77
2	Y	165/172 (96%)	164 (99%)	1 (1%)	84 94
2	Z	165/172 (96%)	162 (98%)	3 (2%)	54 77
2	a	165/172 (96%)	164 (99%)	1 (1%)	84 94
2	b	165/172 (96%)	163 (99%)	2 (1%)	67 85
All	All	4627/4984 (93%)	4564 (99%)	63 (1%)	62 82

All (63) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	LEU

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Mol	Chain	Res	Type
1	A	183	ILE
1	B	133	THR
1	B	156	MET
1	C	30	VAL
1	C	62	PHE
1	C	159	THR
1	C	212	VAL
1	C	223	ARG
1	D	160	THR
1	E	183	ILE
1	F	112	THR
1	F	120	VAL
1	F	134	LYS
1	F	155	VAL
1	F	219	ARG
1	G	10	GLU
1	G	33	LEU
2	I	37	THR
2	I	196	ILE
2	I	213	LEU
2	I	222	SER
2	J	17	ASP
2	J	99	LEU
2	J	101	LEU
2	K	3	ILE
2	K	13	VAL
2	L	1	THR
2	L	3	ILE
2	L	31	VAL
2	L	203	VAL
2	M	13	VAL
1	O	205	VAL
1	P	147	ILE
1	P	203	LEU
1	Q	98	GLN
1	Q	183	ILE
1	Q	235	VAL
1	R	10	GLU
1	R	31	VAL
1	S	11	GLN
1	S	31	VAL
1	S	97	ARG

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Mol	Chain	Res	Type
1	S	212	VAL
1	T	133	THR
1	T	203	LEU
1	T	226	THR
1	U	99	LEU
1	U	102	VAL
1	U	226	THR
2	V	41	THR
2	V	101	LEU
2	W	99	LEU
2	X	17	ASP
2	X	99	LEU
2	X	101	LEU
2	Y	113	ASP
2	Z	13	VAL
2	Z	17	ASP
2	Z	207	GLU
2	a	133	GLU
2	b	13	VAL
2	b	17	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	73	ASN
1	A	101	ASN
1	B	129	HIS
1	C	98	GLN
1	C	101	ASN
1	E	98	GLN
1	E	101	ASN
1	G	98	GLN
1	G	105	GLN
2	H	130	ASN
2	I	110	HIS
2	L	130	ASN
1	O	105	GLN
1	P	101	ASN
1	P	105	GLN
1	P	231	GLN
1	Q	98	GLN
1	Q	105	GLN

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Mol	Chain	Res	Type
1	Q	216	ASN
1	R	231	GLN
1	S	98	GLN
1	S	101	ASN
1	T	105	GLN
1	U	51	GLN
2	Z	110	HIS

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

43 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	$\#\|Z\| > 2$
3	DMF	T	301	-	4,4,4	0.42	0	4,4,4	0.47	0
4	M6M	Z	301	-	37,39,39	3.11	14 (37%)	45,54,54	2.51	12 (26%)
5	CIT	X	302	-	12,12,12	1.26	1 (8%)	17,17,17	1.77	3 (17%)
4	M6M	Y	301	-	37,39,39	3.06	12 (32%)	45,54,54	2.44	12 (26%)
3	DMF	a	303	-	4,4,4	0.45	0	4,4,4	0.40	0
4	M6M	L	301	-	37,39,39	3.02	13 (35%)	45,54,54	2.67	11 (24%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	M6M	a	301	-	37,39,39	3.13	13 (35%)	45,54,54	2.71	17 (37%)
5	CIT	N	302	-	12,12,12	1.05	0	17,17,17	1.52	2 (11%)
3	DMF	E	301	-	4,4,4	0.44	0	4,4,4	0.46	0
3	DMF	R	302	-	4,4,4	0.37	0	4,4,4	0.56	0
5	CIT	Z	302	-	12,12,12	1.07	0	17,17,17	1.89	6 (35%)
5	CIT	M	302	-	12,12,12	1.10	0	17,17,17	1.75	6 (35%)
3	DMF	D	301	-	4,4,4	0.37	0	4,4,4	0.31	0
3	DMF	J	303	-	4,4,4	0.32	0	4,4,4	0.34	0
4	M6M	N	301	-	37,39,39	3.21	13 (35%)	45,54,54	2.61	15 (33%)
4	M6M	M	301	-	37,39,39	3.00	14 (37%)	45,54,54	2.76	18 (40%)
5	CIT	H	302	-	12,12,12	1.02	0	17,17,17	2.30	9 (52%)
3	DMF	C	301	-	4,4,4	0.38	0	4,4,4	0.47	0
5	CIT	I	302	-	12,12,12	1.14	0	17,17,17	2.00	5 (29%)
3	DMF	Q	301	-	4,4,4	0.44	0	4,4,4	0.67	0
3	DMF	O	301	-	4,4,4	0.48	0	4,4,4	0.53	0
3	DMF	R	301	-	4,4,4	0.36	0	4,4,4	0.53	0
5	CIT	V	302	-	12,12,12	1.10	0	17,17,17	2.09	6 (35%)
3	DMF	F	301	-	4,4,4	0.34	0	4,4,4	0.53	0
4	M6M	V	301	-	37,39,39	3.13	12 (32%)	45,54,54	2.44	16 (35%)
4	M6M	X	301	-	37,39,39	2.90	14 (37%)	45,54,54	2.58	14 (31%)
3	DMF	A	301	-	4,4,4	0.42	0	4,4,4	0.29	0
4	M6M	I	301	-	37,39,39	3.10	13 (35%)	45,54,54	2.65	12 (26%)
4	M6M	K	301	-	37,39,39	3.10	14 (37%)	45,54,54	2.52	13 (28%)
4	M6M	J	301	-	37,39,39	3.13	13 (35%)	45,54,54	2.75	15 (33%)
5	CIT	a	302	-	12,12,12	1.13	0	17,17,17	1.75	3 (17%)
5	CIT	L	302	-	12,12,12	1.05	0	17,17,17	1.50	2 (11%)
3	DMF	S	301	-	4,4,4	0.32	0	4,4,4	0.39	0
4	M6M	b	301	-	37,39,39	3.13	13 (35%)	45,54,54	2.76	16 (35%)
4	M6M	W	301	-	37,39,39	3.08	13 (35%)	45,54,54	2.53	13 (28%)
4	M6M	H	301	-	37,39,39	3.14	14 (37%)	45,54,54	2.56	14 (31%)
3	DMF	U	301	-	4,4,4	0.43	0	4,4,4	0.63	0
3	DMF	P	301	-	4,4,4	0.46	0	4,4,4	0.74	0
5	CIT	b	302	-	12,12,12	1.22	1 (8%)	17,17,17	2.05	5 (29%)
5	CIT	Y	302	-	12,12,12	1.24	0	17,17,17	1.99	6 (35%)
5	CIT	K	302	-	12,12,12	0.96	0	17,17,17	1.77	3 (17%)
5	CIT	J	302	-	12,12,12	1.15	0	17,17,17	1.77	4 (23%)
5	CIT	W	302	-	12,12,12	1.25	0	17,17,17	2.44	6 (35%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	DMF	T	301	-	-	0/2/2/2	-
4	M6M	Z	301	-	-	2/30/44/44	1/3/3/3
5	CIT	X	302	-	-	6/16/16/16	-
4	M6M	Y	301	-	-	1/30/44/44	1/3/3/3
3	DMF	a	303	-	-	1/2/2/2	-
4	M6M	L	301	-	-	2/30/44/44	0/3/3/3
4	M6M	a	301	-	-	3/30/44/44	0/3/3/3
5	CIT	N	302	-	-	8/16/16/16	-
3	DMF	E	301	-	-	0/2/2/2	-
3	DMF	R	302	-	-	2/2/2/2	-
5	CIT	Z	302	-	-	10/16/16/16	-
5	CIT	M	302	-	-	11/16/16/16	-
3	DMF	D	301	-	-	0/2/2/2	-
3	DMF	J	303	-	-	2/2/2/2	-
4	M6M	N	301	-	-	3/30/44/44	1/3/3/3
4	M6M	M	301	-	-	2/30/44/44	0/3/3/3
5	CIT	H	302	-	-	10/16/16/16	-
3	DMF	C	301	-	-	2/2/2/2	-
5	CIT	I	302	-	-	8/16/16/16	-
3	DMF	Q	301	-	-	2/2/2/2	-
3	DMF	O	301	-	-	0/2/2/2	-
3	DMF	R	301	-	-	0/2/2/2	-
5	CIT	V	302	-	-	7/16/16/16	-
3	DMF	F	301	-	-	0/2/2/2	-
4	M6M	V	301	-	-	3/30/44/44	0/3/3/3
4	M6M	X	301	-	-	2/30/44/44	0/3/3/3
3	DMF	A	301	-	-	0/2/2/2	-
4	M6M	I	301	-	-	1/30/44/44	0/3/3/3
4	M6M	K	301	-	-	3/30/44/44	0/3/3/3
4	M6M	J	301	-	-	3/30/44/44	0/3/3/3
5	CIT	a	302	-	-	8/16/16/16	-
5	CIT	L	302	-	-	8/16/16/16	-
3	DMF	S	301	-	-	0/2/2/2	-
4	M6M	b	301	-	-	2/30/44/44	1/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	M6M	W	301	-	-	1/30/44/44	1/3/3/3
4	M6M	H	301	-	-	2/30/44/44	1/3/3/3
3	DMF	U	301	-	-	0/2/2/2	-
3	DMF	P	301	-	-	2/2/2/2	-
5	CIT	b	302	-	-	6/16/16/16	-
5	CIT	Y	302	-	-	8/16/16/16	-
5	CIT	K	302	-	-	7/16/16/16	-
5	CIT	J	302	-	-	8/16/16/16	-
5	CIT	W	302	-	-	9/16/16/16	-

All (187) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	N	301	M6M	C15-N10	10.66	1.59	1.47
4	V	301	M6M	C15-N10	10.42	1.59	1.47
4	b	301	M6M	C15-N10	10.19	1.59	1.47
4	J	301	M6M	C15-N10	9.97	1.58	1.47
4	I	301	M6M	C15-N10	9.76	1.58	1.47
4	H	301	M6M	C15-N10	9.51	1.58	1.47
4	K	301	M6M	C15-N10	9.45	1.58	1.47
4	Y	301	M6M	C15-N10	9.42	1.58	1.47
4	Z	301	M6M	C15-N10	9.33	1.58	1.47
4	W	301	M6M	C15-N10	9.29	1.58	1.47
4	a	301	M6M	C15-N10	8.99	1.57	1.47
4	M	301	M6M	C15-N10	8.79	1.57	1.47
4	L	301	M6M	C15-N10	8.63	1.57	1.47
4	X	301	M6M	C15-N10	8.32	1.57	1.47
4	H	301	M6M	C26-N28	6.81	1.49	1.33
4	I	301	M6M	C26-N28	6.67	1.49	1.33
4	J	301	M6M	C26-N28	6.60	1.49	1.33
4	M	301	M6M	C26-N28	6.51	1.48	1.33
4	Z	301	M6M	C18-N17	6.50	1.49	1.34
4	a	301	M6M	C18-N17	6.49	1.49	1.34
4	a	301	M6M	C04-N03	6.45	1.47	1.34
4	Z	301	M6M	C26-N28	6.42	1.48	1.33
4	V	301	M6M	C26-N28	6.40	1.48	1.33
4	N	301	M6M	C11-N10	6.34	1.57	1.47
4	L	301	M6M	C26-N28	6.33	1.48	1.33
4	a	301	M6M	C26-N28	6.31	1.48	1.33
4	K	301	M6M	C26-N28	6.30	1.48	1.33
4	L	301	M6M	C13-C14	-6.30	1.37	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	W	301	M6M	C26-N28	6.29	1.48	1.33
4	b	301	M6M	C13-C14	-6.27	1.37	1.53
4	Y	301	M6M	C18-N17	6.27	1.48	1.34
4	W	301	M6M	C11-N10	6.26	1.57	1.47
4	K	301	M6M	C18-N17	6.26	1.48	1.34
4	I	301	M6M	C18-N17	6.26	1.48	1.34
4	M	301	M6M	C18-N17	6.21	1.48	1.34
4	Y	301	M6M	C26-N28	6.21	1.48	1.33
4	H	301	M6M	C11-N10	6.21	1.57	1.47
4	Z	301	M6M	C11-N10	6.20	1.57	1.47
4	b	301	M6M	C18-N17	6.15	1.48	1.34
4	J	301	M6M	C18-N17	6.13	1.48	1.34
4	Y	301	M6M	C11-N10	6.12	1.57	1.47
4	H	301	M6M	C13-C14	-6.11	1.37	1.53
4	X	301	M6M	C26-N28	6.11	1.47	1.33
4	b	301	M6M	C26-N28	6.10	1.47	1.33
4	Y	301	M6M	C13-C14	-6.09	1.37	1.53
4	W	301	M6M	C18-N17	6.09	1.48	1.34
4	K	301	M6M	C11-N10	6.07	1.57	1.47
4	N	301	M6M	C26-N28	6.06	1.47	1.33
4	M	301	M6M	C13-C14	-6.04	1.38	1.53
4	H	301	M6M	C18-N17	6.03	1.48	1.34
4	a	301	M6M	C11-N10	6.02	1.57	1.47
4	Z	301	M6M	C13-C14	-6.01	1.38	1.53
4	N	301	M6M	C18-N17	6.01	1.48	1.34
4	K	301	M6M	C04-N03	5.99	1.46	1.34
4	L	301	M6M	C18-N17	5.98	1.48	1.34
4	W	301	M6M	C04-N03	5.97	1.46	1.34
4	a	301	M6M	C13-C14	-5.94	1.38	1.53
4	W	301	M6M	C13-C14	-5.93	1.38	1.53
4	J	301	M6M	C04-N03	5.92	1.46	1.34
4	K	301	M6M	C13-C14	-5.90	1.38	1.53
4	I	301	M6M	C13-C14	-5.89	1.38	1.53
4	X	301	M6M	C13-C14	-5.82	1.38	1.53
4	V	301	M6M	C13-C14	-5.82	1.38	1.53
4	X	301	M6M	C18-N17	5.81	1.47	1.34
4	b	301	M6M	C11-N10	5.80	1.56	1.47
4	N	301	M6M	C04-N03	5.79	1.46	1.34
4	N	301	M6M	C13-C14	-5.77	1.38	1.53
4	V	301	M6M	C11-N10	5.72	1.56	1.47
4	L	301	M6M	C11-N10	5.72	1.56	1.47
4	V	301	M6M	C04-N03	5.65	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	I	301	M6M	C11-N10	5.63	1.56	1.47
4	L	301	M6M	C04-N03	5.63	1.46	1.34
4	V	301	M6M	C18-N17	5.61	1.47	1.34
4	J	301	M6M	C11-N10	5.59	1.56	1.47
4	I	301	M6M	C04-N03	5.58	1.46	1.34
4	J	301	M6M	C13-C14	-5.57	1.39	1.53
4	Z	301	M6M	C04-N03	5.48	1.45	1.34
4	M	301	M6M	C11-N10	5.45	1.56	1.47
4	H	301	M6M	C04-N03	5.43	1.45	1.34
4	X	301	M6M	C11-N10	5.41	1.56	1.47
4	X	301	M6M	C04-N03	5.36	1.45	1.34
4	Y	301	M6M	C04-N03	5.33	1.45	1.34
4	b	301	M6M	C04-N03	5.11	1.45	1.34
4	M	301	M6M	C04-N03	5.10	1.45	1.34
4	N	301	M6M	C08-N10	4.67	1.48	1.35
4	b	301	M6M	C08-N10	4.46	1.48	1.35
4	J	301	M6M	C08-N10	4.39	1.48	1.35
4	Y	301	M6M	C08-N10	4.33	1.47	1.35
4	M	301	M6M	C08-N10	4.31	1.47	1.35
4	L	301	M6M	C08-N10	4.24	1.47	1.35
4	a	301	M6M	C08-N10	4.23	1.47	1.35
4	H	301	M6M	C08-N10	4.21	1.47	1.35
4	V	301	M6M	C08-N10	4.20	1.47	1.35
4	K	301	M6M	C08-N10	4.20	1.47	1.35
4	Z	301	M6M	C08-N10	4.18	1.47	1.35
4	I	301	M6M	C08-N10	4.03	1.46	1.35
4	W	301	M6M	C08-N10	4.02	1.46	1.35
4	L	301	M6M	C12-C13	-3.97	1.37	1.51
4	Z	301	M6M	C12-C13	-3.94	1.37	1.51
4	H	301	M6M	C12-C13	-3.87	1.37	1.51
4	a	301	M6M	C23-C22	3.87	1.53	1.48
4	X	301	M6M	C12-C13	-3.85	1.37	1.51
4	Y	301	M6M	C12-C13	-3.83	1.37	1.51
4	b	301	M6M	C12-C13	-3.80	1.37	1.51
4	V	301	M6M	C12-C13	-3.77	1.37	1.51
4	a	301	M6M	C12-C13	-3.73	1.38	1.51
4	M	301	M6M	C12-C13	-3.73	1.38	1.51
4	I	301	M6M	C12-C13	-3.68	1.38	1.51
4	J	301	M6M	C12-C13	-3.67	1.38	1.51
4	N	301	M6M	C12-C13	-3.65	1.38	1.51
4	K	301	M6M	C12-C13	-3.60	1.38	1.51
4	X	301	M6M	C08-N10	3.60	1.45	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	W	301	M6M	C12-C13	-3.56	1.38	1.51
4	X	301	M6M	C23-C22	3.52	1.52	1.48
4	N	301	M6M	C23-C22	3.46	1.52	1.48
4	M	301	M6M	C23-C22	3.45	1.52	1.48
4	L	301	M6M	C23-C22	3.40	1.52	1.48
4	V	301	M6M	C23-C22	3.28	1.52	1.48
4	J	301	M6M	C23-C22	3.25	1.52	1.48
4	Z	301	M6M	C23-C22	3.16	1.52	1.48
4	W	301	M6M	C23-C22	3.16	1.52	1.48
4	b	301	M6M	C23-C22	3.15	1.52	1.48
4	I	301	M6M	C23-C22	3.10	1.52	1.48
4	H	301	M6M	C23-C22	3.06	1.52	1.48
4	K	301	M6M	C23-C22	2.92	1.52	1.48
4	Y	301	M6M	C23-C22	2.81	1.52	1.48
4	M	301	M6M	O05-C04	-2.70	1.18	1.23
4	K	301	M6M	C07-C08	2.58	1.56	1.51
4	N	301	M6M	O05-C04	-2.57	1.18	1.23
4	X	301	M6M	O27-C26	-2.56	1.18	1.23
4	Y	301	M6M	O05-C04	-2.54	1.18	1.23
4	L	301	M6M	O27-C26	-2.54	1.18	1.23
4	b	301	M6M	C07-C08	2.52	1.55	1.51
4	I	301	M6M	O09-C08	-2.48	1.17	1.23
4	K	301	M6M	O27-C26	-2.47	1.18	1.23
4	L	301	M6M	O09-C08	-2.47	1.17	1.23
4	N	301	M6M	O19-C18	-2.45	1.17	1.23
4	H	301	M6M	O09-C08	-2.45	1.17	1.23
4	b	301	M6M	O27-C26	-2.44	1.18	1.23
4	V	301	M6M	O05-C04	-2.44	1.18	1.23
4	Z	301	M6M	O09-C08	-2.41	1.17	1.23
4	H	301	M6M	O19-C18	-2.41	1.17	1.23
4	V	301	M6M	O19-C18	-2.39	1.17	1.23
4	W	301	M6M	O09-C08	-2.39	1.17	1.23
4	Z	301	M6M	O05-C04	-2.34	1.18	1.23
4	J	301	M6M	O27-C26	-2.33	1.18	1.23
4	H	301	M6M	C07-C08	2.32	1.55	1.51
4	Z	301	M6M	C07-C08	2.30	1.55	1.51
4	W	301	M6M	C07-C08	2.29	1.55	1.51
4	a	301	M6M	O09-C08	-2.29	1.18	1.23
4	a	301	M6M	O19-C18	-2.29	1.18	1.23
4	H	301	M6M	O27-C26	-2.29	1.19	1.23
4	N	301	M6M	C07-C08	2.26	1.55	1.51
4	b	301	M6M	O19-C18	-2.26	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	J	301	M6M	O05-C04	-2.26	1.19	1.23
4	J	301	M6M	O09-C08	-2.26	1.18	1.23
4	a	301	M6M	C07-C08	2.25	1.55	1.51
4	H	301	M6M	O05-C04	-2.25	1.19	1.23
4	M	301	M6M	C31-C30	-2.22	1.36	1.39
4	I	301	M6M	O27-C26	-2.19	1.19	1.23
4	M	301	M6M	O19-C18	-2.18	1.18	1.23
4	J	301	M6M	O19-C18	-2.18	1.18	1.23
4	X	301	M6M	O09-C08	-2.17	1.18	1.23
5	X	302	CIT	C4-C3	-2.17	1.51	1.54
4	b	301	M6M	O05-C04	-2.17	1.19	1.23
4	a	301	M6M	O27-C26	-2.16	1.19	1.23
4	Y	301	M6M	C07-C08	2.14	1.55	1.51
4	I	301	M6M	O19-C18	-2.14	1.18	1.23
4	W	301	M6M	O27-C26	-2.13	1.19	1.23
4	W	301	M6M	O19-C18	-2.12	1.18	1.23
4	X	301	M6M	O05-C04	-2.11	1.19	1.23
4	Z	301	M6M	O19-C18	-2.11	1.18	1.23
4	N	301	M6M	O27-C26	-2.11	1.19	1.23
4	K	301	M6M	O09-C08	-2.10	1.18	1.23
4	X	301	M6M	C29-C30	2.09	1.57	1.51
4	Z	301	M6M	O27-C26	-2.08	1.19	1.23
4	K	301	M6M	O05-C04	-2.08	1.19	1.23
4	L	301	M6M	O05-C04	-2.08	1.19	1.23
4	K	301	M6M	O19-C18	-2.07	1.18	1.23
4	Y	301	M6M	O19-C18	-2.07	1.18	1.23
4	L	301	M6M	O19-C18	-2.06	1.18	1.23
5	b	302	CIT	C3-C6	2.06	1.55	1.53
4	V	301	M6M	O27-C26	-2.05	1.19	1.23
4	X	301	M6M	O19-C18	-2.03	1.18	1.23
4	M	301	M6M	O27-C26	-2.03	1.19	1.23
4	I	301	M6M	C07-C08	2.02	1.55	1.51
4	M	301	M6M	O09-C08	-2.00	1.18	1.23

All (264) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	a	301	M6M	C11-N10-C15	-13.82	91.91	114.75
4	M	301	M6M	C11-N10-C15	-12.78	93.63	114.75
4	I	301	M6M	C11-N10-C15	-12.75	93.67	114.75
4	L	301	M6M	C11-N10-C15	-12.68	93.79	114.75
4	J	301	M6M	C11-N10-C15	-12.24	94.52	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	Z	301	M6M	C11-N10-C15	-11.81	95.23	114.75
4	b	301	M6M	C11-N10-C15	-11.68	95.45	114.75
4	W	301	M6M	C11-N10-C15	-11.31	96.05	114.75
4	K	301	M6M	C11-N10-C15	-11.26	96.14	114.75
4	X	301	M6M	C11-N10-C15	-11.10	96.41	114.75
4	N	301	M6M	C11-N10-C15	-11.04	96.50	114.75
4	H	301	M6M	C11-N10-C15	-10.91	96.72	114.75
4	Y	301	M6M	C11-N10-C15	-10.88	96.77	114.75
4	V	301	M6M	C11-N10-C15	-9.94	98.33	114.75
4	L	301	M6M	C14-C15-N10	6.00	118.06	109.60
5	W	302	CIT	O6-C6-C3	5.98	124.62	113.14
4	b	301	M6M	C14-C15-N10	5.94	117.98	109.60
5	b	302	CIT	O6-C6-C3	5.92	124.50	113.14
4	b	301	M6M	C29-N28-C26	-5.73	114.42	122.29
4	V	301	M6M	C14-C15-N10	5.69	117.63	109.60
4	N	301	M6M	C14-C15-N10	5.51	117.38	109.60
4	H	301	M6M	C14-C15-N10	5.39	117.20	109.60
4	K	301	M6M	C14-C15-N10	5.27	117.03	109.60
5	W	302	CIT	C3-C4-C5	5.19	128.12	113.92
4	J	301	M6M	C14-C15-N10	5.13	116.83	109.60
4	M	301	M6M	C11-N10-C08	5.05	136.33	123.38
4	W	301	M6M	C14-C15-N10	4.97	116.62	109.60
4	N	301	M6M	C29-N28-C26	-4.93	115.52	122.29
5	Z	302	CIT	O6-C6-C3	4.88	122.50	113.14
4	M	301	M6M	C14-C15-N10	4.82	116.40	109.60
4	a	301	M6M	C11-N10-C08	4.75	135.57	123.38
5	a	302	CIT	O6-C6-C3	4.72	122.19	113.14
5	X	302	CIT	O6-C6-C3	4.65	122.06	113.14
5	Y	302	CIT	O6-C6-C3	4.63	122.02	113.14
5	J	302	CIT	O6-C6-C3	4.62	122.00	113.14
5	I	302	CIT	O6-C6-C3	4.55	121.87	113.14
5	H	302	CIT	O6-C6-C3	4.52	121.82	113.14
4	L	301	M6M	C11-N10-C08	4.50	134.92	123.38
4	K	301	M6M	C12-C13-C14	4.49	120.65	111.42
4	X	301	M6M	C12-C13-C14	4.47	120.61	111.42
5	K	302	CIT	O6-C6-C3	4.47	121.71	113.14
4	Y	301	M6M	C26-C02-N03	-4.45	100.58	111.59
4	J	301	M6M	C12-C13-C14	4.39	120.44	111.42
4	W	301	M6M	C11-N10-C08	4.38	134.60	123.38
4	X	301	M6M	C14-C15-N10	4.36	115.76	109.60
4	I	301	M6M	C12-C13-C14	4.28	120.22	111.42
5	V	302	CIT	O6-C6-C3	4.28	121.34	113.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	K	301	M6M	C11-N10-C08	4.27	134.34	123.38
4	I	301	M6M	C11-N10-C08	4.27	134.32	123.38
4	H	301	M6M	C26-C02-N03	-4.25	101.05	111.59
4	X	301	M6M	C13-C14-C15	4.24	120.64	112.17
4	Y	301	M6M	C11-N10-C08	4.23	134.23	123.38
5	N	302	CIT	O6-C6-C3	4.22	121.23	113.14
4	Y	301	M6M	C14-C15-N10	4.19	115.52	109.60
4	N	301	M6M	C26-C02-N03	-4.11	101.40	111.59
4	W	301	M6M	C26-C02-N03	-4.11	101.42	111.59
4	J	301	M6M	C11-N10-C08	4.07	133.82	123.38
4	Z	301	M6M	C11-N10-C08	4.05	133.77	123.38
4	M	301	M6M	C29-N28-C26	-3.97	116.84	122.29
4	J	301	M6M	C26-C02-N03	-3.95	101.81	111.59
5	L	302	CIT	O6-C6-C3	3.93	120.68	113.14
4	a	301	M6M	C29-N28-C26	-3.89	116.94	122.29
4	Z	301	M6M	C26-C02-N03	-3.88	101.97	111.59
4	I	301	M6M	C14-C15-N10	3.88	115.08	109.60
4	I	301	M6M	C26-C02-N03	-3.87	102.00	111.59
4	b	301	M6M	C12-C11-N10	3.86	116.61	110.65
4	N	301	M6M	C12-C11-N10	3.84	116.59	110.65
4	Z	301	M6M	C14-C15-N10	3.83	115.00	109.60
4	H	301	M6M	C12-C11-N10	3.79	116.50	110.65
4	V	301	M6M	C26-C02-N03	-3.79	102.21	111.59
4	H	301	M6M	C11-N10-C08	3.75	132.99	123.38
4	X	301	M6M	C06-N17-C18	-3.71	112.67	121.56
4	L	301	M6M	C16-C15-N10	-3.68	105.67	111.55
4	J	301	M6M	C13-C14-C15	3.66	119.50	112.17
4	b	301	M6M	C11-N10-C08	3.64	132.72	123.38
4	X	301	M6M	C26-C02-N03	-3.62	102.62	111.59
4	W	301	M6M	C12-C11-N10	3.55	116.14	110.65
4	Z	301	M6M	C30-C29-N28	-3.45	106.19	113.15
4	X	301	M6M	C11-N10-C08	3.44	132.21	123.38
5	V	302	CIT	O7-C3-C6	3.43	113.82	108.96
5	H	302	CIT	O7-C3-C2	-3.37	101.69	109.38
5	a	302	CIT	O7-C3-C6	-3.32	104.25	108.96
4	b	301	M6M	O27-C26-N28	-3.31	115.98	122.98
5	I	302	CIT	O2-C1-O1	-3.24	114.99	123.33
4	N	301	M6M	C11-N10-C08	3.23	131.65	123.38
5	H	302	CIT	C2-C3-C6	3.21	117.14	110.03
4	V	301	M6M	C12-C13-C14	3.19	117.97	111.42
4	I	301	M6M	C13-C14-C15	3.17	118.52	112.17
4	V	301	M6M	C12-C11-N10	3.16	115.54	110.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	V	302	CIT	C4-C3-C2	3.16	117.41	109.31
4	K	301	M6M	C13-C14-C15	3.13	118.43	112.17
4	Y	301	M6M	C06-N17-C18	-3.11	114.09	121.56
4	M	301	M6M	C26-C02-N03	-3.11	103.89	111.59
4	M	301	M6M	C30-C29-N28	-3.09	106.92	113.15
4	I	301	M6M	C29-N28-C26	-3.09	118.04	122.29
5	Y	302	CIT	O7-C3-C4	-3.05	102.42	109.38
5	M	302	CIT	O6-C6-C3	3.05	118.99	113.14
4	Y	301	M6M	C29-N28-C26	-3.05	118.10	122.29
4	L	301	M6M	C26-C02-N03	-3.04	104.07	111.59
4	J	301	M6M	C30-C29-N28	-3.03	107.04	113.15
4	a	301	M6M	C26-C02-N03	-3.03	104.09	111.59
4	N	301	M6M	C30-C29-N28	-3.01	107.09	113.15
5	H	302	CIT	O7-C3-C6	-2.99	104.72	108.96
4	Y	301	M6M	C12-C11-N10	2.97	115.24	110.65
4	W	301	M6M	C06-N17-C18	-2.95	114.48	121.56
5	M	302	CIT	O7-C3-C4	-2.94	102.66	109.38
5	H	302	CIT	C4-C3-C2	2.94	116.86	109.31
5	I	302	CIT	O7-C3-C6	-2.94	104.79	108.96
4	H	301	M6M	C36-C35-C33	2.87	119.72	116.67
4	Y	301	M6M	C36-C35-C33	2.85	119.70	116.67
4	V	301	M6M	C13-C14-C15	2.84	117.85	112.17
4	J	301	M6M	C36-C35-C33	2.83	119.69	116.67
4	H	301	M6M	C16-C15-N10	-2.83	107.03	111.55
4	b	301	M6M	C02-C26-N28	2.82	122.98	116.47
5	b	302	CIT	O4-C5-C4	2.82	123.28	114.35
5	K	302	CIT	O7-C3-C6	-2.81	104.97	108.96
4	H	301	M6M	C02-C26-N28	2.80	122.93	116.47
5	M	302	CIT	O3-C5-C4	-2.78	115.09	122.95
4	M	301	M6M	C31-C30-C36	2.77	121.38	116.62
4	W	301	M6M	C32-C33-C35	-2.75	119.60	123.23
4	I	301	M6M	C31-C32-C33	2.75	121.20	118.38
4	V	301	M6M	C11-N10-C08	2.75	130.44	123.38
4	V	301	M6M	C29-N28-C26	-2.74	118.52	122.29
4	K	301	M6M	C29-N28-C26	-2.74	118.52	122.29
4	Y	301	M6M	C16-C15-N10	-2.74	107.17	111.55
4	Y	301	M6M	C35-C36-C30	-2.71	119.58	123.76
4	a	301	M6M	C06-N17-C18	-2.70	115.09	121.56
4	V	301	M6M	C06-N17-C18	-2.70	115.10	121.56
4	b	301	M6M	C26-C02-N03	-2.69	104.94	111.59
4	Z	301	M6M	C12-C11-N10	2.68	114.79	110.65
5	M	302	CIT	C4-C3-C2	2.66	116.15	109.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	Z	301	M6M	C32-C33-C35	-2.66	119.72	123.23
4	K	301	M6M	C36-C35-C33	2.66	119.50	116.67
4	W	301	M6M	C16-C15-N10	-2.65	107.32	111.55
4	I	301	M6M	O27-C26-N28	-2.65	117.38	122.98
5	V	302	CIT	O2-C1-C2	2.64	122.71	114.35
4	N	301	M6M	C20-C18-N17	2.64	120.26	115.19
4	b	301	M6M	C36-C35-C33	2.63	119.47	116.67
4	M	301	M6M	C12-C13-C14	2.61	116.79	111.42
4	L	301	M6M	C31-C30-C36	2.60	121.09	116.62
4	b	301	M6M	C07-C06-C04	-2.59	104.46	110.57
5	M	302	CIT	O4-C5-C4	2.58	122.53	114.35
5	Y	302	CIT	O7-C3-C6	2.58	112.62	108.96
4	I	301	M6M	C32-C33-C35	-2.58	119.83	123.23
4	J	301	M6M	C06-N17-C18	-2.57	115.39	121.56
4	V	301	M6M	O27-C26-N28	-2.57	117.53	122.98
5	W	302	CIT	O3-C5-C4	-2.57	115.67	122.95
5	b	302	CIT	O6-C6-O5	-2.56	115.65	123.86
4	Y	301	M6M	C31-C30-C36	2.56	121.02	116.62
4	J	301	M6M	C07-C06-N17	-2.55	105.77	110.64
4	a	301	M6M	C14-C15-N10	2.55	113.19	109.60
4	N	301	M6M	C31-C30-C36	2.54	120.99	116.62
4	Y	301	M6M	C30-C29-N28	-2.54	108.02	113.15
4	X	301	M6M	O19-C18-N17	-2.54	117.64	122.47
4	a	301	M6M	C36-C35-C33	2.53	119.37	116.67
4	V	301	M6M	O19-C18-N17	-2.53	117.65	122.47
4	M	301	M6M	C36-C35-C33	2.53	119.36	116.67
4	N	301	M6M	O27-C26-N28	-2.52	117.64	122.98
4	a	301	M6M	O27-C26-N28	-2.52	117.64	122.98
5	J	302	CIT	O2-C1-C2	2.50	122.26	114.35
4	J	301	M6M	C16-C15-C14	-2.50	108.10	112.74
5	Y	302	CIT	O3-C5-C4	-2.48	115.91	122.95
5	J	302	CIT	O6-C6-O5	-2.47	115.94	123.86
5	I	302	CIT	C3-C2-C1	2.47	120.68	113.92
4	a	301	M6M	C07-C06-C04	-2.47	104.75	110.57
4	a	301	M6M	C12-C13-C14	2.46	116.48	111.42
4	V	301	M6M	C07-C06-N17	-2.45	105.96	110.64
4	H	301	M6M	O27-C26-N28	-2.45	117.80	122.98
4	V	301	M6M	C31-C30-C36	2.45	120.83	116.62
4	L	301	M6M	C35-C36-C30	-2.44	119.99	123.76
4	M	301	M6M	C12-C11-N10	2.43	114.42	110.65
4	L	301	M6M	C36-C35-C33	2.43	119.25	116.67
5	H	302	CIT	C4-C3-C6	-2.42	104.69	110.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	K	302	CIT	O6-C6-O5	-2.42	116.12	123.86
4	W	301	M6M	C30-C29-N28	-2.42	108.28	113.15
4	L	301	M6M	C29-N28-C26	-2.42	118.97	122.29
5	b	302	CIT	O7-C3-C2	-2.41	103.88	109.38
5	Z	302	CIT	O2-C1-C2	2.41	121.97	114.35
4	X	301	M6M	C36-C35-C33	2.39	119.22	116.67
4	b	301	M6M	C16-C15-N10	-2.39	107.73	111.55
4	W	301	M6M	C36-C35-C33	2.39	119.22	116.67
4	M	301	M6M	C07-C06-C04	-2.39	104.94	110.57
4	M	301	M6M	C32-C33-C35	-2.39	120.08	123.23
4	J	301	M6M	C35-C36-C30	-2.38	120.08	123.76
4	V	301	M6M	C07-C06-C04	-2.38	104.95	110.57
4	K	301	M6M	O27-C26-N28	-2.38	117.94	122.98
4	Z	301	M6M	C36-C35-C33	2.38	119.20	116.67
4	M	301	M6M	O27-C26-N28	-2.36	118.00	122.98
4	b	301	M6M	C16-C15-C14	-2.35	108.38	112.74
4	H	301	M6M	C35-C36-C30	-2.34	120.15	123.76
4	N	301	M6M	C35-C36-C30	-2.33	120.16	123.76
4	H	301	M6M	C32-C33-C35	-2.33	120.16	123.23
4	X	301	M6M	O05-C04-N03	-2.33	118.79	122.96
4	K	301	M6M	C13-C12-C11	2.33	115.51	111.19
4	H	301	M6M	C07-C06-C04	-2.32	105.10	110.57
4	b	301	M6M	C31-C30-C36	2.32	120.60	116.62
4	X	301	M6M	C32-C33-C35	-2.31	120.18	123.23
4	H	301	M6M	C31-C30-C36	2.31	120.59	116.62
4	Z	301	M6M	C31-C30-C36	2.30	120.57	116.62
4	J	301	M6M	C06-C07-C08	2.29	116.80	112.22
4	J	301	M6M	C31-C30-C36	2.29	120.56	116.62
5	W	302	CIT	O6-C6-O5	-2.29	116.53	123.86
4	N	301	M6M	C06-N17-C18	-2.29	116.08	121.56
4	b	301	M6M	C32-C33-C35	-2.28	120.22	123.23
5	L	302	CIT	O6-C6-O5	-2.27	116.59	123.86
4	N	301	M6M	C36-C35-C33	2.26	119.08	116.67
4	W	301	M6M	C12-C13-C14	2.26	116.06	111.42
4	M	301	M6M	C35-C36-C30	-2.26	120.28	123.76
4	Z	301	M6M	C06-C07-C08	2.25	116.71	112.22
4	L	301	M6M	O27-C26-N28	-2.24	118.23	122.98
4	K	301	M6M	C26-C02-N03	-2.24	106.04	111.59
4	b	301	M6M	C06-N17-C18	-2.23	116.21	121.56
4	a	301	M6M	C32-C33-C35	-2.23	120.29	123.23
5	Z	302	CIT	O3-C5-C4	-2.23	116.64	122.95
4	N	301	M6M	C16-C15-C14	-2.22	108.60	112.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	V	301	M6M	C36-C35-C33	2.22	119.04	116.67
5	H	302	CIT	O4-C5-C4	2.21	121.35	114.35
5	H	302	CIT	O4-C5-O3	-2.21	117.65	123.33
4	I	301	M6M	C02-C26-N28	2.20	121.54	116.47
4	Z	301	M6M	C07-C06-C04	-2.20	105.39	110.57
4	L	301	M6M	C12-C11-N10	2.18	114.03	110.65
4	V	301	M6M	C35-C36-C30	-2.18	120.40	123.76
5	Z	302	CIT	C4-C3-C2	2.17	114.89	109.31
4	M	301	M6M	C20-C18-N17	2.17	119.36	115.19
4	W	301	M6M	C31-C32-C33	2.17	120.61	118.38
4	M	301	M6M	C02-C26-N28	2.16	121.45	116.47
5	H	302	CIT	O5-C6-C3	-2.16	117.91	122.09
4	X	301	M6M	C07-C06-N17	-2.15	106.53	110.64
4	K	301	M6M	C02-C26-N28	2.15	121.43	116.47
5	X	302	CIT	C4-C3-C2	2.15	114.83	109.31
4	a	301	M6M	C16-C15-C14	-2.14	108.75	112.74
4	Z	301	M6M	C12-C13-C14	2.14	115.82	111.42
4	K	301	M6M	C32-C33-C35	-2.13	120.41	123.23
5	Z	302	CIT	O1-C1-C2	-2.13	116.92	122.95
5	a	302	CIT	O6-C6-O5	-2.12	117.07	123.86
4	b	301	M6M	C35-C36-C30	-2.12	120.49	123.76
5	N	302	CIT	O2-C1-C2	2.12	121.05	114.35
5	I	302	CIT	O6-C6-O5	-2.10	117.13	123.86
5	M	302	CIT	C2-C3-C6	-2.10	105.38	110.03
4	a	301	M6M	C35-C36-C30	-2.10	120.52	123.76
5	W	302	CIT	O7-C3-C6	-2.10	105.98	108.96
5	X	302	CIT	O2-C1-C2	2.10	120.99	114.35
4	H	301	M6M	C29-N28-C26	-2.10	119.41	122.29
4	I	301	M6M	C32-C31-C30	-2.09	118.66	121.39
5	Y	302	CIT	O6-C6-O5	-2.08	117.19	123.86
4	a	301	M6M	C02-C26-N28	2.08	121.27	116.47
4	K	301	M6M	C35-C36-C30	-2.08	120.55	123.76
5	V	302	CIT	O2-C1-O1	-2.08	117.99	123.33
4	M	301	M6M	C32-C31-C30	-2.08	118.68	121.39
4	a	301	M6M	O19-C18-N17	-2.08	118.52	122.47
4	X	301	M6M	C16-C15-N10	-2.08	108.23	111.55
4	J	301	M6M	C32-C33-C35	-2.06	120.51	123.23
5	J	302	CIT	C3-C4-C5	-2.06	108.29	113.92
4	X	301	M6M	O27-C26-N28	-2.05	118.65	122.98
5	V	302	CIT	O7-C3-C4	-2.05	104.71	109.38
4	M	301	M6M	C06-N17-C18	-2.04	116.66	121.56
4	N	301	M6M	O19-C18-N17	-2.04	118.58	122.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	a	301	M6M	C20-C18-N17	2.04	119.10	115.19
5	W	302	CIT	C3-C2-C1	2.03	119.47	113.92
4	W	301	M6M	O19-C18-N17	-2.01	118.64	122.47
5	Z	302	CIT	O6-C6-O5	-2.01	117.42	123.86
4	a	301	M6M	C31-C30-C36	2.01	120.08	116.62
5	b	302	CIT	O4-C5-O3	-2.01	118.17	123.33
5	Y	302	CIT	O2-C1-C2	2.00	120.68	114.35

There are no chirality outliers.

All (155) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	L	301	M6M	O19-C18-C20-C21
4	N	301	M6M	O19-C18-C20-C21
4	W	301	M6M	O19-C18-C20-C21
4	X	301	M6M	O19-C18-C20-C21
4	Y	301	M6M	O19-C18-C20-C21
4	Z	301	M6M	O19-C18-C20-C21
4	a	301	M6M	O19-C18-C20-C21
4	b	301	M6M	O19-C18-C20-C21
5	H	302	CIT	C1-C2-C3-O7
5	H	302	CIT	C1-C2-C3-C4
5	H	302	CIT	C2-C3-C4-C5
5	H	302	CIT	O7-C3-C4-C5
5	H	302	CIT	C6-C3-C4-C5
5	I	302	CIT	C1-C2-C3-C4
5	I	302	CIT	O7-C3-C6-O5
5	I	302	CIT	O7-C3-C6-O6
5	I	302	CIT	C4-C3-C6-O5
5	I	302	CIT	C4-C3-C6-O6
5	J	302	CIT	O7-C3-C6-O5
5	J	302	CIT	O7-C3-C6-O6
5	J	302	CIT	C4-C3-C6-O5
5	J	302	CIT	C4-C3-C6-O6
5	K	302	CIT	C2-C3-C6-O5
5	K	302	CIT	C2-C3-C6-O6
5	K	302	CIT	O7-C3-C6-O5
5	K	302	CIT	O7-C3-C6-O6
5	L	302	CIT	C2-C3-C6-O5
5	L	302	CIT	C2-C3-C6-O6
5	L	302	CIT	O7-C3-C6-O5
5	L	302	CIT	O7-C3-C6-O6

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Mol	Chain	Res	Type	Atoms
5	M	302	CIT	O7-C3-C6-O5
5	M	302	CIT	O7-C3-C6-O6
5	M	302	CIT	C4-C3-C6-O5
5	M	302	CIT	C4-C3-C6-O6
5	N	302	CIT	C2-C3-C6-O5
5	N	302	CIT	C2-C3-C6-O6
5	N	302	CIT	O7-C3-C6-O5
5	N	302	CIT	O7-C3-C6-O6
5	V	302	CIT	C2-C3-C4-C5
5	V	302	CIT	O7-C3-C4-C5
5	V	302	CIT	C6-C3-C4-C5
5	V	302	CIT	O7-C3-C6-O5
5	V	302	CIT	O7-C3-C6-O6
5	V	302	CIT	C4-C3-C6-O5
5	V	302	CIT	C4-C3-C6-O6
5	W	302	CIT	O7-C3-C6-O5
5	W	302	CIT	O7-C3-C6-O6
5	W	302	CIT	C4-C3-C6-O5
5	W	302	CIT	C4-C3-C6-O6
5	X	302	CIT	O7-C3-C6-O5
5	X	302	CIT	O7-C3-C6-O6
5	X	302	CIT	C4-C3-C6-O5
5	X	302	CIT	C4-C3-C6-O6
5	Y	302	CIT	O7-C3-C6-O5
5	Y	302	CIT	O7-C3-C6-O6
5	Y	302	CIT	C4-C3-C6-O5
5	Y	302	CIT	C4-C3-C6-O6
5	Z	302	CIT	O7-C3-C6-O5
5	Z	302	CIT	O7-C3-C6-O6
5	Z	302	CIT	C4-C3-C6-O5
5	Z	302	CIT	C4-C3-C6-O6
5	a	302	CIT	C2-C3-C4-C5
5	a	302	CIT	C2-C3-C6-O5
5	a	302	CIT	C2-C3-C6-O6
5	a	302	CIT	O7-C3-C6-O5
5	a	302	CIT	O7-C3-C6-O6
5	b	302	CIT	C2-C3-C6-O5
5	b	302	CIT	C2-C3-C6-O6
5	b	302	CIT	O7-C3-C6-O5
5	b	302	CIT	O7-C3-C6-O6
5	H	302	CIT	C1-C2-C3-C6
5	I	302	CIT	C1-C2-C3-O7

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Mol	Chain	Res	Type	Atoms
5	M	302	CIT	C1-C2-C3-C4
5	a	302	CIT	O7-C3-C4-C5
3	Q	301	DMF	O-C-N-C1
3	R	302	DMF	O-C-N-C1
5	M	302	CIT	C2-C3-C6-O6
3	P	301	DMF	O-C-N-C1
3	Q	301	DMF	O-C-N-C2
3	R	302	DMF	O-C-N-C2
5	I	302	CIT	C1-C2-C3-C6
5	a	302	CIT	C6-C3-C4-C5
3	J	303	DMF	O-C-N-C1
5	K	302	CIT	O2-C1-C2-C3
5	M	302	CIT	C3-C4-C5-O4
3	P	301	DMF	O-C-N-C2
3	J	303	DMF	O-C-N-C2
5	K	302	CIT	O1-C1-C2-C3
5	M	302	CIT	C3-C4-C5-O3
5	H	302	CIT	O7-C3-C6-O6
5	H	302	CIT	C4-C3-C6-O6
3	C	301	DMF	O-C-N-C1
5	b	302	CIT	C2-C3-C4-C5
4	H	301	M6M	N28-C29-C30-C36
4	M	301	M6M	N28-C29-C30-C36
5	W	302	CIT	C2-C3-C6-O5
5	W	302	CIT	C2-C3-C6-O6
4	K	301	M6M	C04-C06-C07-C08
3	C	301	DMF	O-C-N-C2
5	J	302	CIT	O7-C3-C4-C5
5	W	302	CIT	O7-C3-C4-C5
5	Y	302	CIT	O7-C3-C4-C5
5	Z	302	CIT	O7-C3-C4-C5
4	J	301	M6M	N17-C06-C07-C08
4	K	301	M6M	N17-C06-C07-C08
5	L	302	CIT	O2-C1-C2-C3
5	I	302	CIT	O7-C3-C4-C5
5	L	302	CIT	C1-C2-C3-O7
5	N	302	CIT	C1-C2-C3-O7
5	a	302	CIT	C1-C2-C3-O7
5	b	302	CIT	C1-C2-C3-O7
5	H	302	CIT	C4-C3-C6-O5
5	M	302	CIT	C2-C3-C6-O5
5	Z	302	CIT	C2-C3-C6-O5

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Mol	Chain	Res	Type	Atoms
5	L	302	CIT	O1-C1-C2-C3
5	N	302	CIT	C2-C3-C4-C5
4	M	301	M6M	N03-C02-C26-N28
5	J	302	CIT	C2-C3-C4-C5
5	L	302	CIT	C2-C3-C4-C5
5	W	302	CIT	C1-C2-C3-C4
5	Z	302	CIT	C2-C3-C4-C5
5	N	302	CIT	O2-C1-C2-C3
4	L	301	M6M	N03-C02-C26-N28
5	Z	302	CIT	C2-C3-C6-O6
5	N	302	CIT	O1-C1-C2-C3
4	Z	301	M6M	N03-C02-C26-N28
4	N	301	M6M	N28-C29-C30-C36
4	V	301	M6M	N28-C29-C30-C36
4	H	301	M6M	O19-C18-C20-C21
4	J	301	M6M	O19-C18-C20-C21
4	V	301	M6M	O19-C18-C20-C21
4	K	301	M6M	N03-C02-C26-N28
5	K	302	CIT	C1-C2-C3-O7
5	M	302	CIT	O7-C3-C4-C5
5	W	302	CIT	C2-C3-C4-C5
5	X	302	CIT	O7-C3-C4-C5
5	H	302	CIT	O7-C3-C6-O5
5	J	302	CIT	C3-C4-C5-O4
5	Z	302	CIT	C3-C4-C5-O4
4	N	301	M6M	N03-C02-C26-N28
5	J	302	CIT	C3-C4-C5-O3
5	Y	302	CIT	C3-C4-C5-O3
5	Y	302	CIT	C3-C4-C5-O4
5	Z	302	CIT	C3-C4-C5-O3
3	a	303	DMF	O-C-N-C1
5	X	302	CIT	C1-C2-C3-C4
5	Y	302	CIT	C2-C3-C4-C5
4	I	301	M6M	N28-C29-C30-C36
4	J	301	M6M	N28-C29-C30-C36
4	a	301	M6M	N28-C29-C30-C36
4	b	301	M6M	N28-C29-C30-C36
4	V	301	M6M	N03-C02-C26-N28
4	X	301	M6M	N03-C02-C26-N28
4	a	301	M6M	N03-C02-C26-N28
5	M	302	CIT	C1-C2-C3-C6

All (6) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	W	301	M6M	C11-C12-C13-C14-C15-N10
4	b	301	M6M	C11-C12-C13-C14-C15-N10
4	N	301	M6M	C11-C12-C13-C14-C15-N10
4	Z	301	M6M	C11-C12-C13-C14-C15-N10
4	Y	301	M6M	C11-C12-C13-C14-C15-N10
4	H	301	M6M	C11-C12-C13-C14-C15-N10

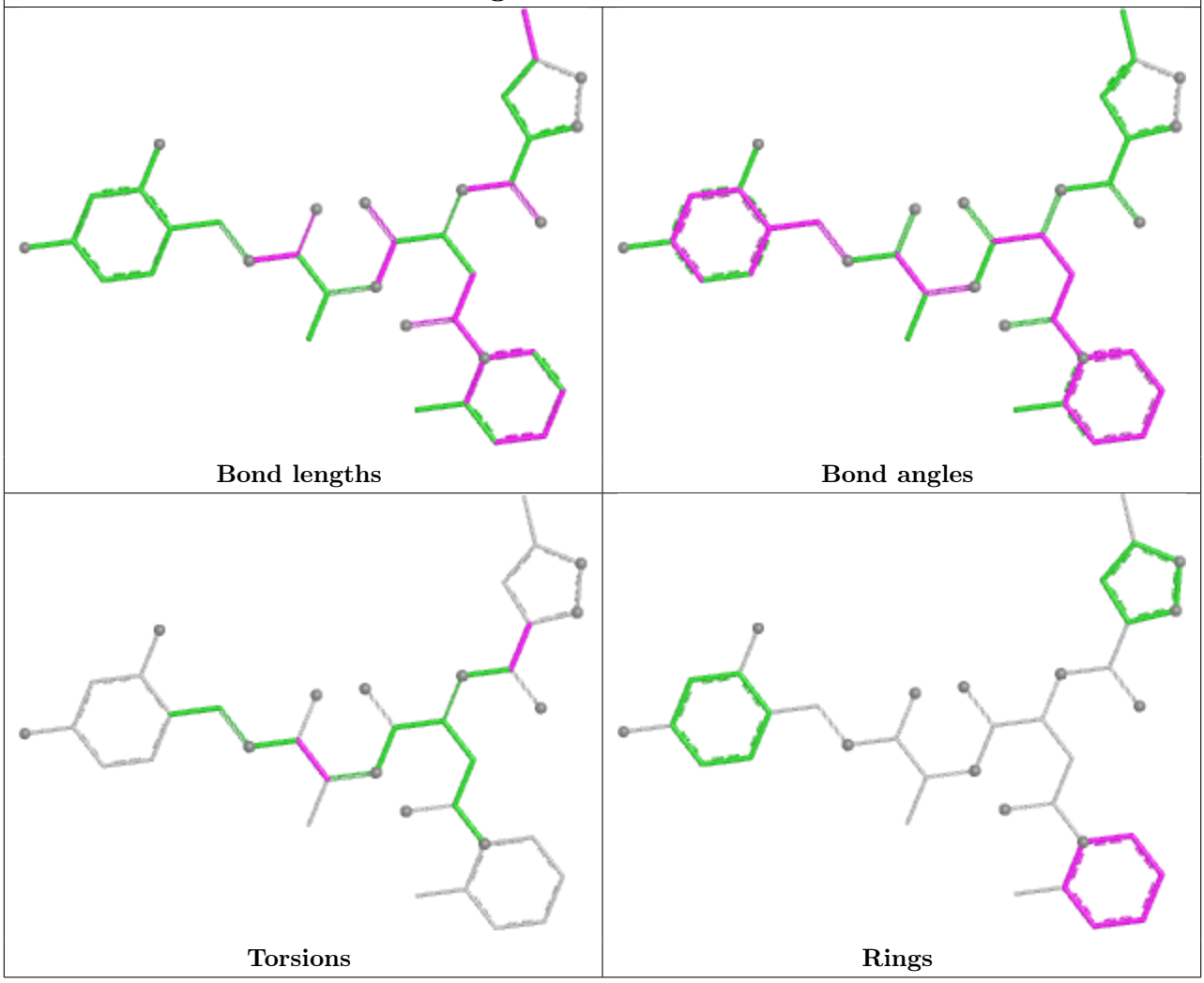
27 monomers are involved in 73 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	T	301	DMF	2	0
5	X	302	CIT	6	0
3	a	303	DMF	1	0
5	N	302	CIT	2	0
3	E	301	DMF	2	0
3	R	302	DMF	1	0
5	Z	302	CIT	4	0
5	M	302	CIT	4	0
3	J	303	DMF	1	0
4	M	301	M6M	1	0
5	H	302	CIT	1	0
3	C	301	DMF	2	0
5	I	302	CIT	5	0
3	Q	301	DMF	2	0
3	O	301	DMF	2	0
3	R	301	DMF	1	0
5	V	302	CIT	5	0
5	a	302	CIT	6	0
5	L	302	CIT	2	0
3	S	301	DMF	2	0
4	W	301	M6M	1	0
4	H	301	M6M	1	0
5	b	302	CIT	4	0
5	Y	302	CIT	5	0
5	K	302	CIT	5	0
5	J	302	CIT	3	0
5	W	302	CIT	2	0

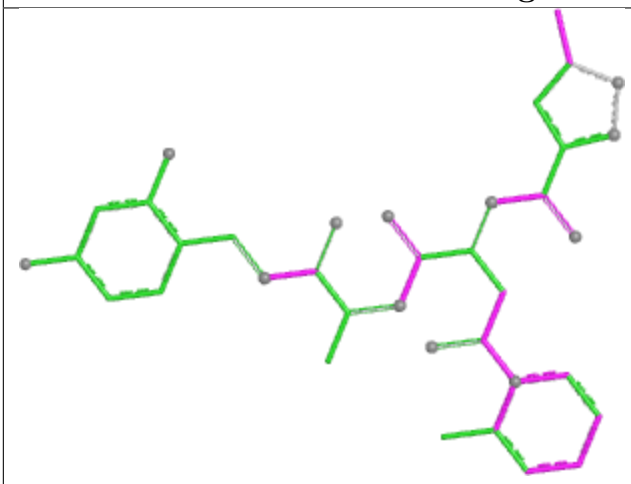
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

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

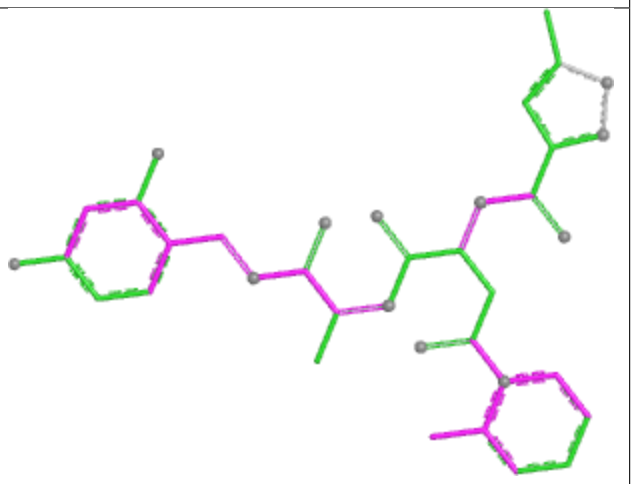
Ligand M6M Z 301



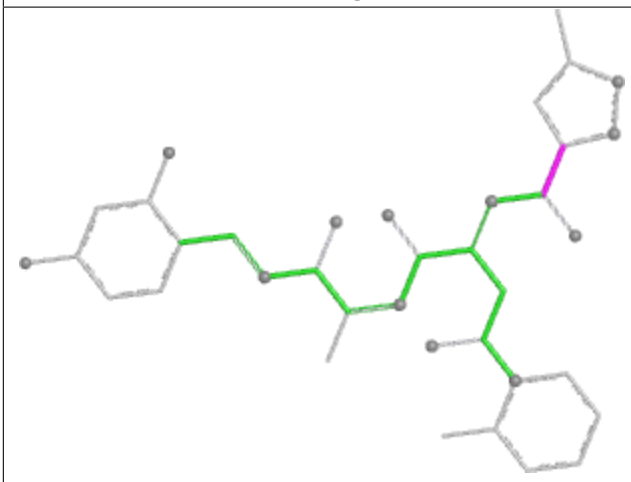
Ligand M6M Y 301



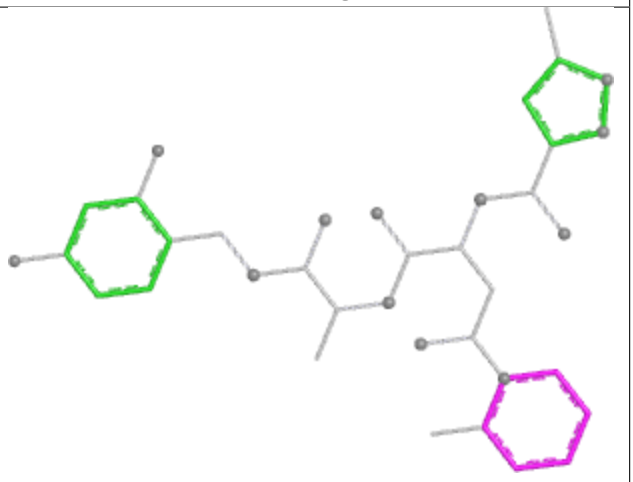
Bond lengths



Bond angles

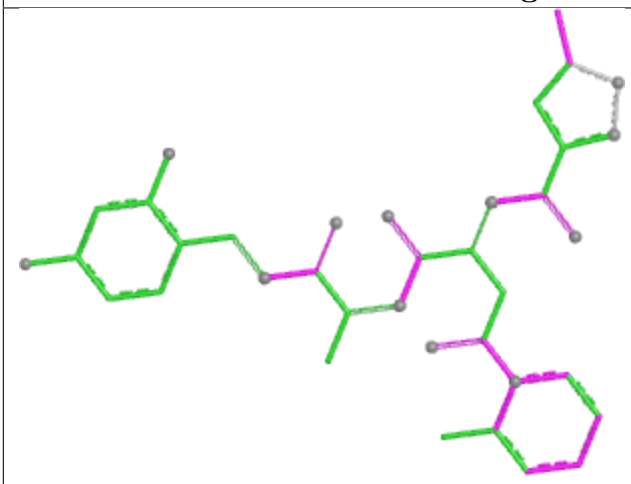


Torsions

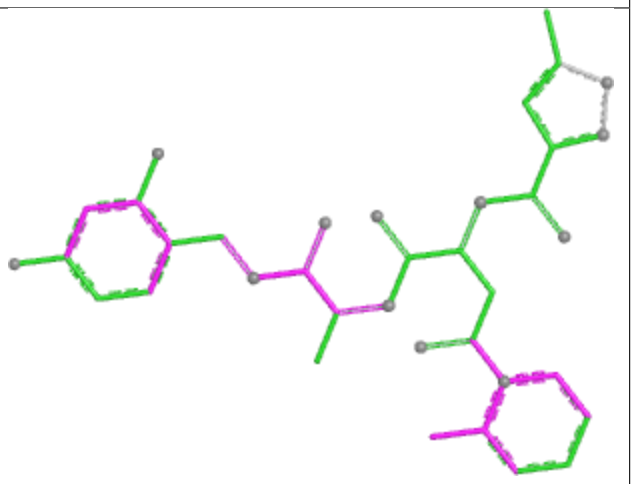


Rings

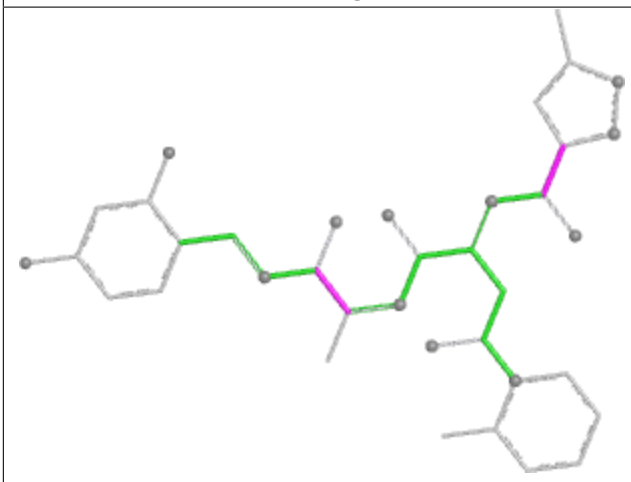
Ligand M6M L 301



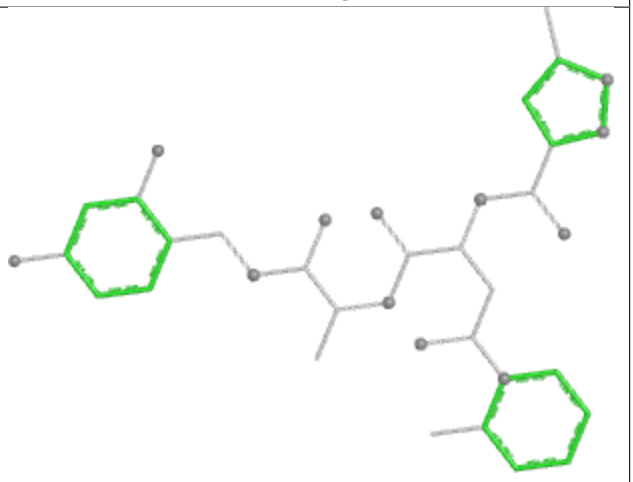
Bond lengths



Bond angles

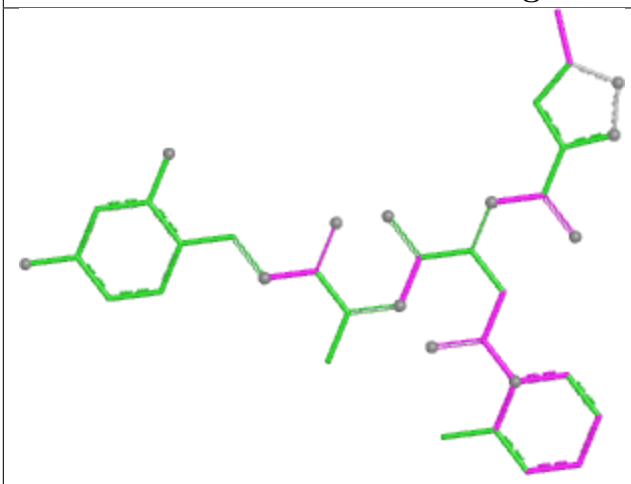


Torsions

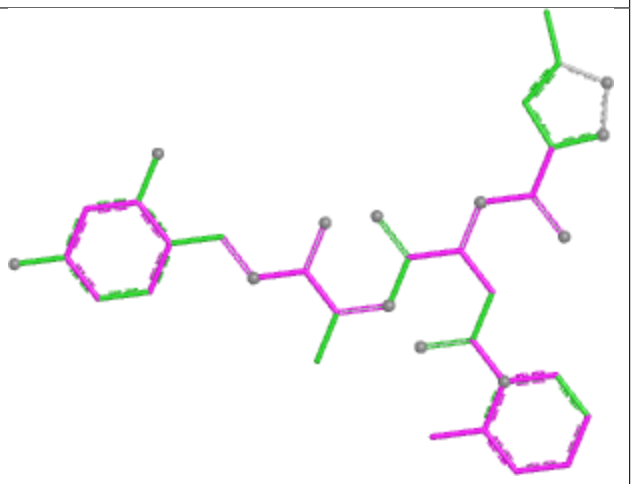


Rings

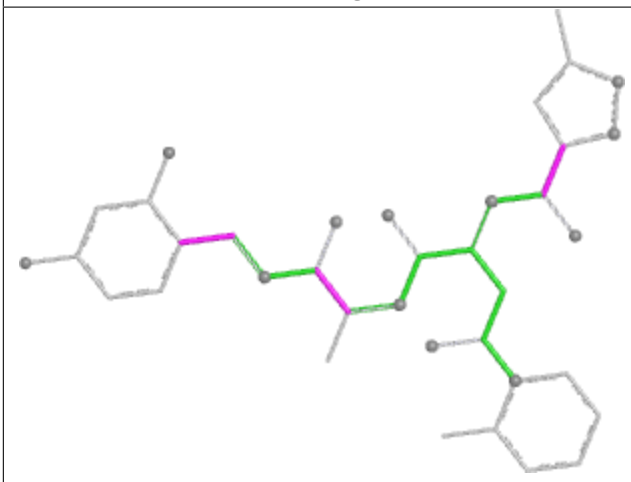
Ligand M6M a 301



Bond lengths



Bond angles



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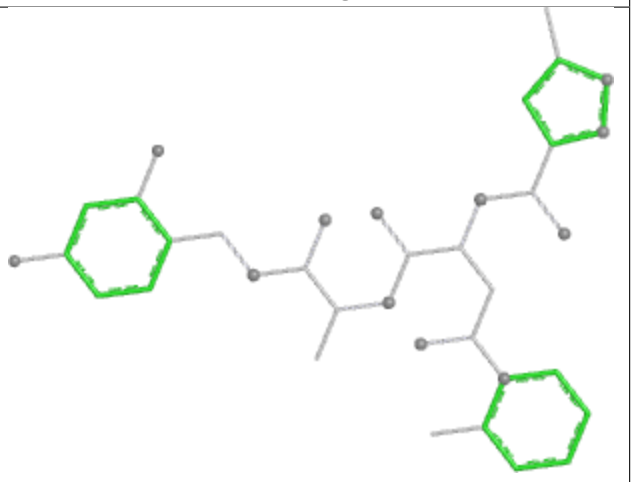
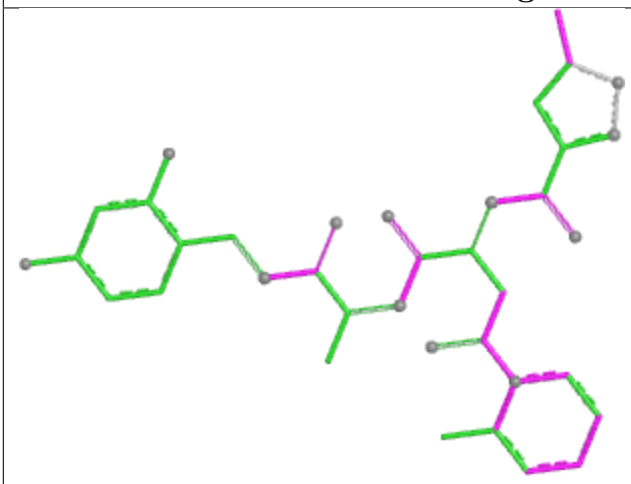
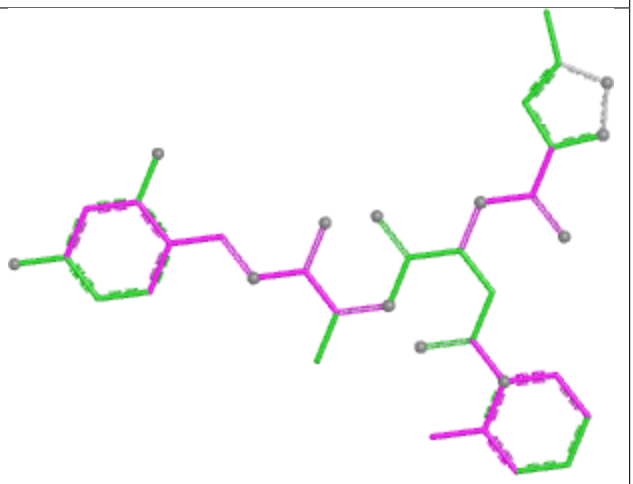


Rings

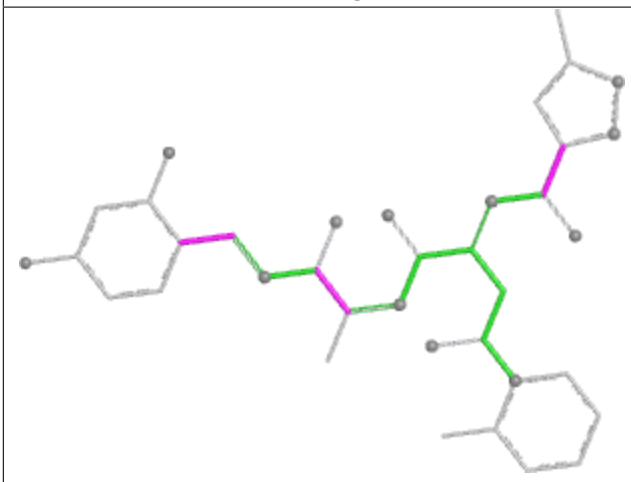
Ligand M6M N 301



Bond lengths



Bond angles



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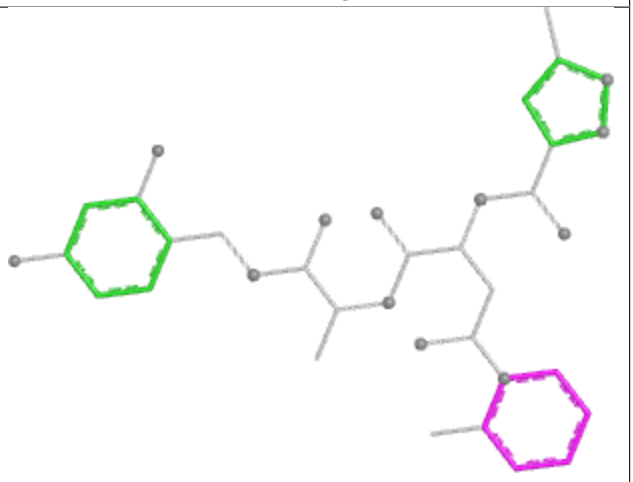
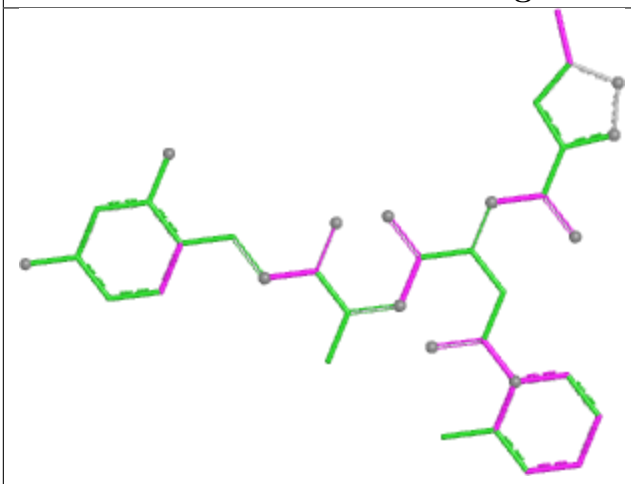


Rings

Ligand M6M M 301



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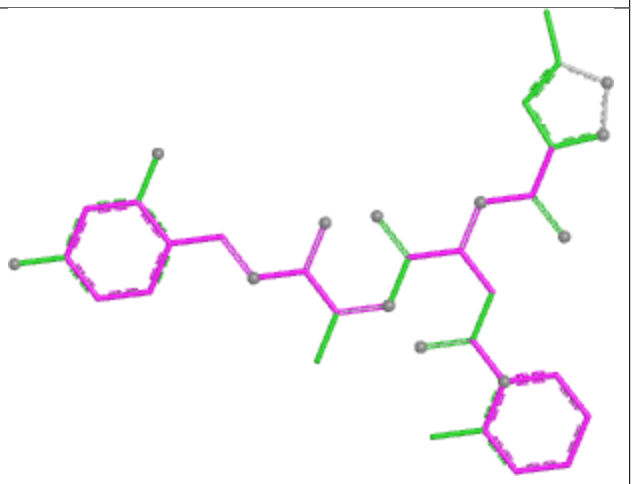
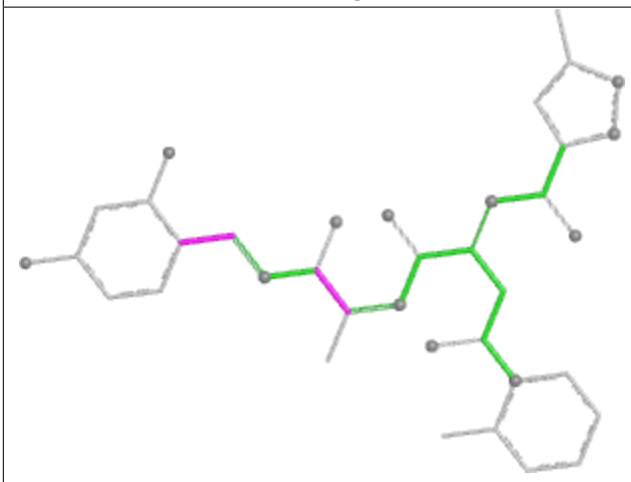
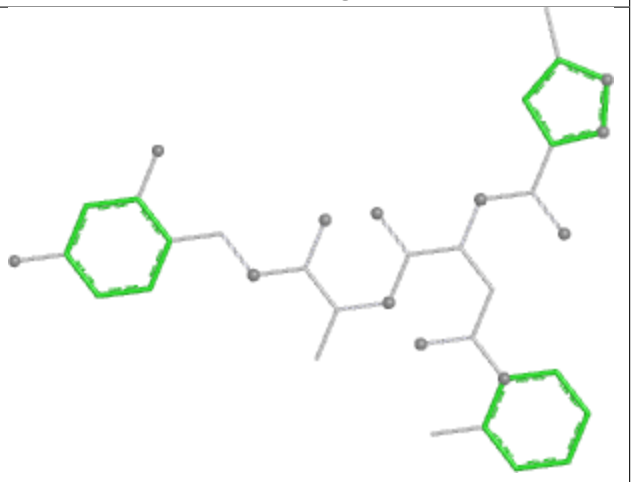


Bond angles

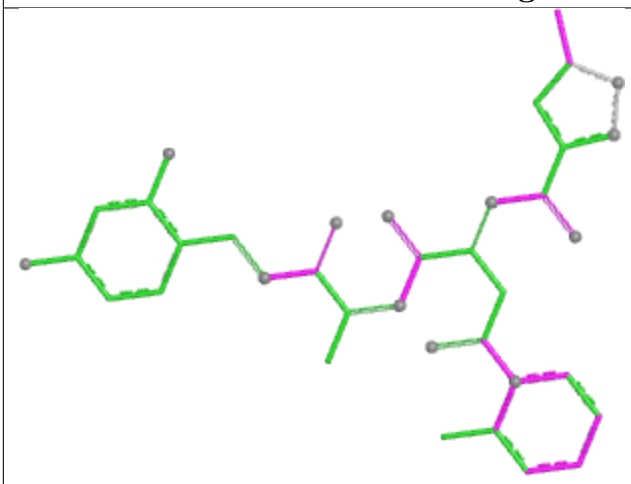


Torsions

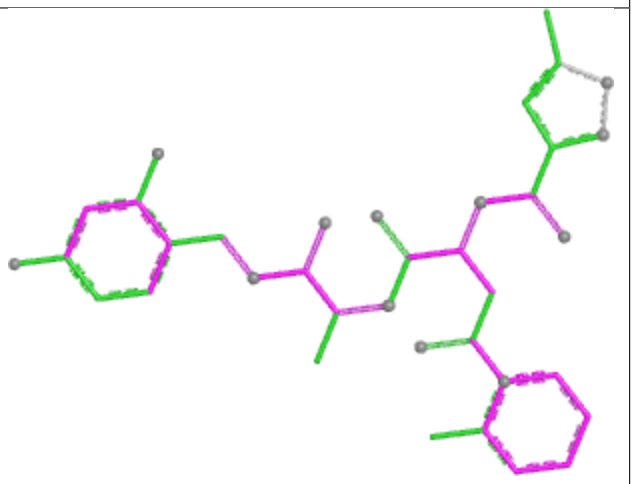


Rings

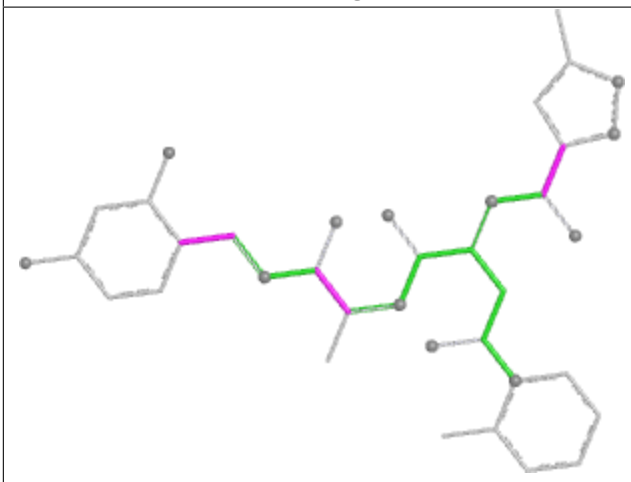
Ligand M6M V 301



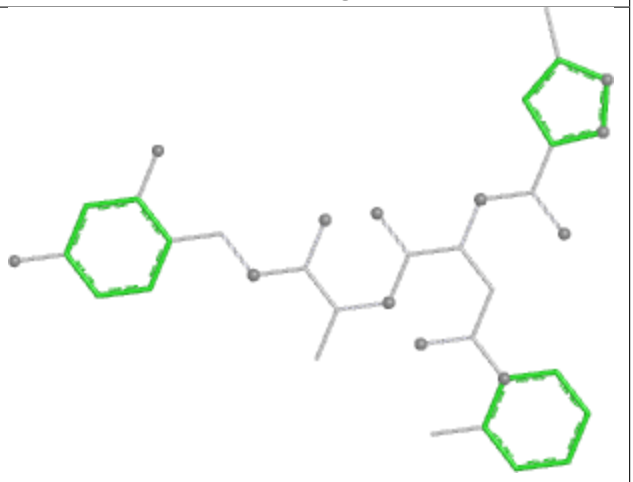
Bond lengths



Bond angles

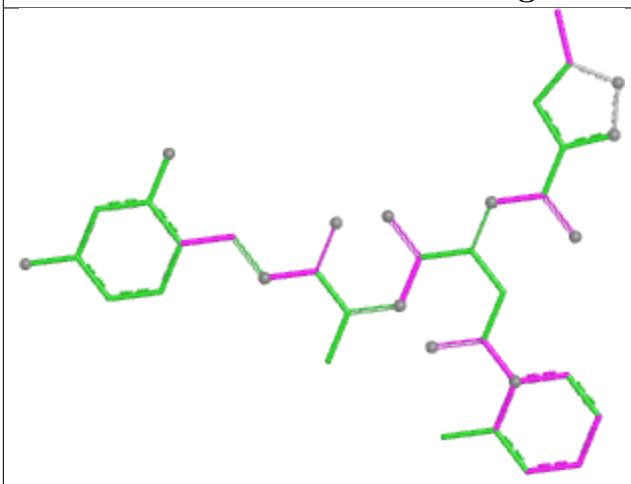


Torsions

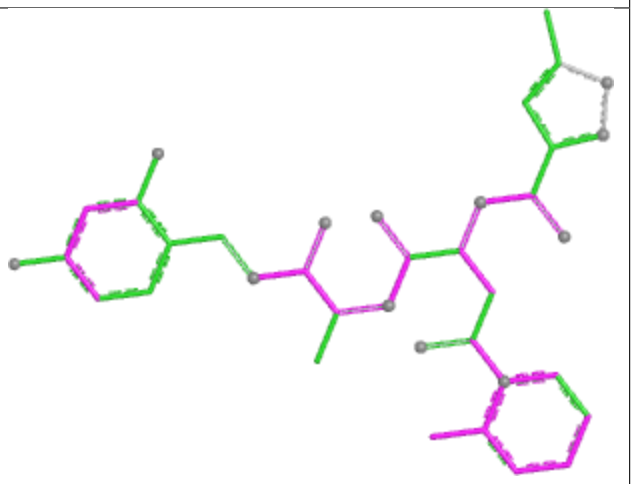


Rings

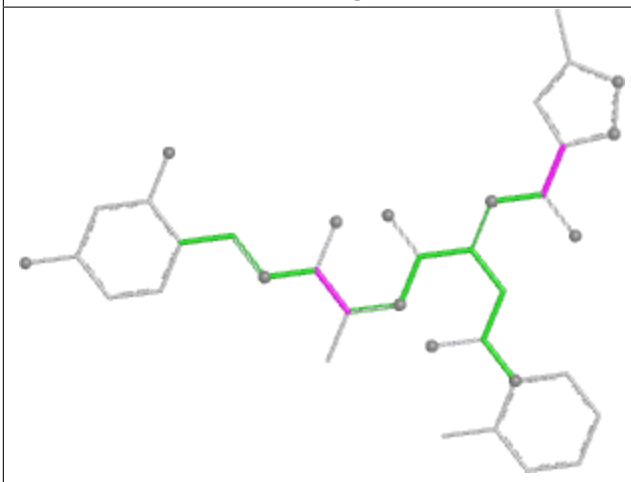
Ligand M6M X 301



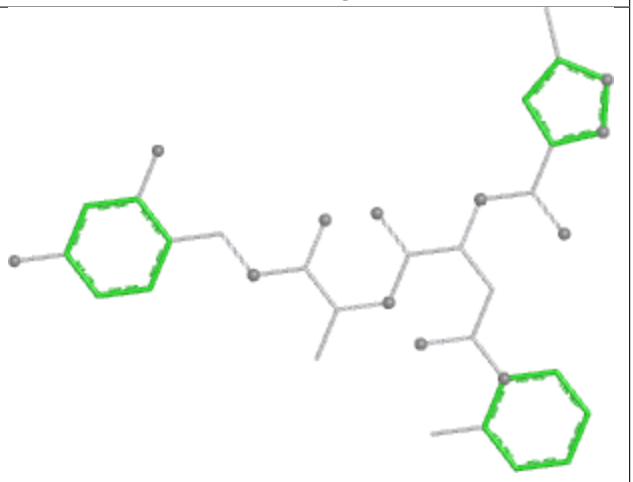
Bond lengths



Bond angles

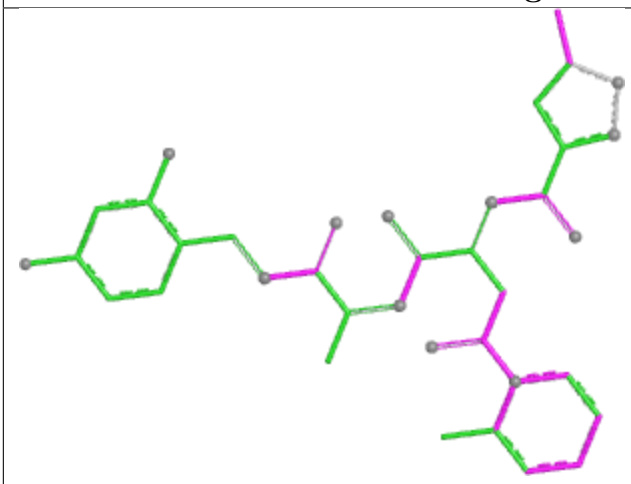


Torsions

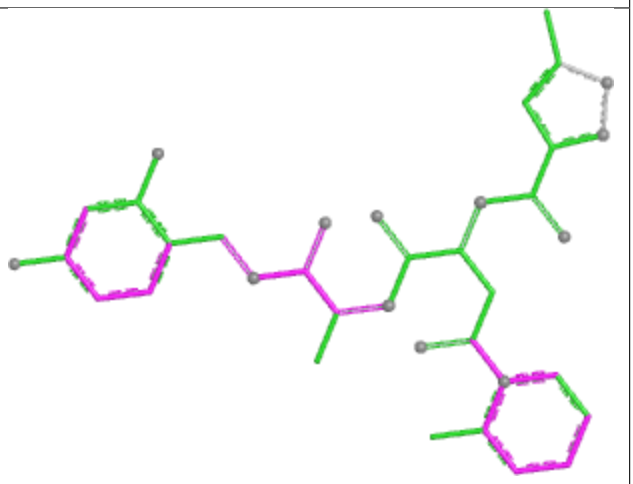


Rings

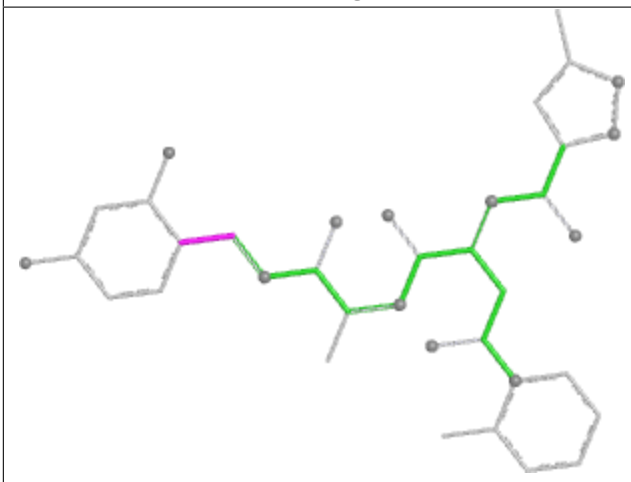
Ligand M6M I 301



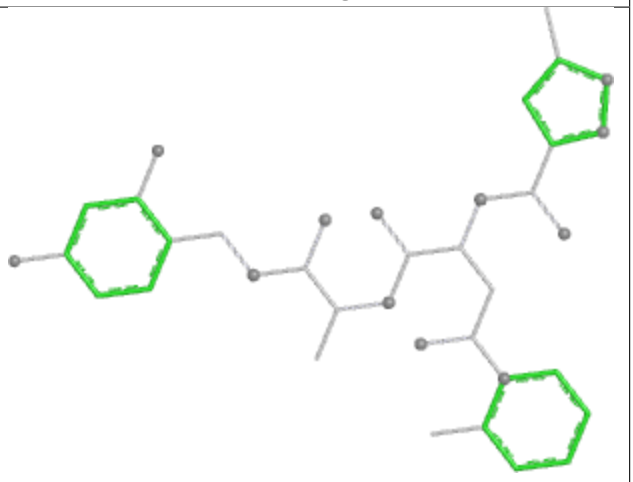
Bond lengths



Bond angles

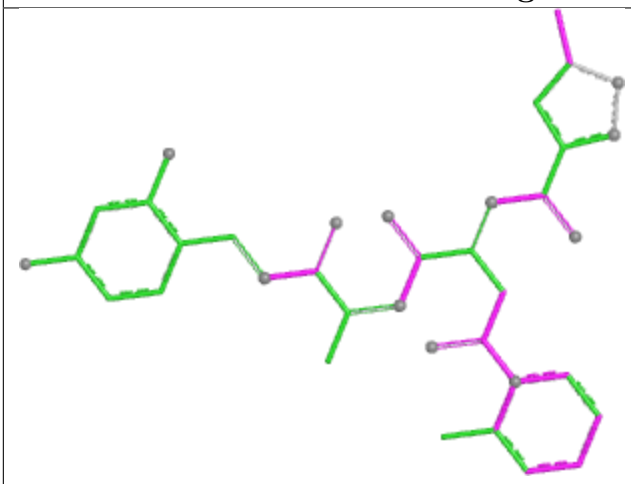


Torsions

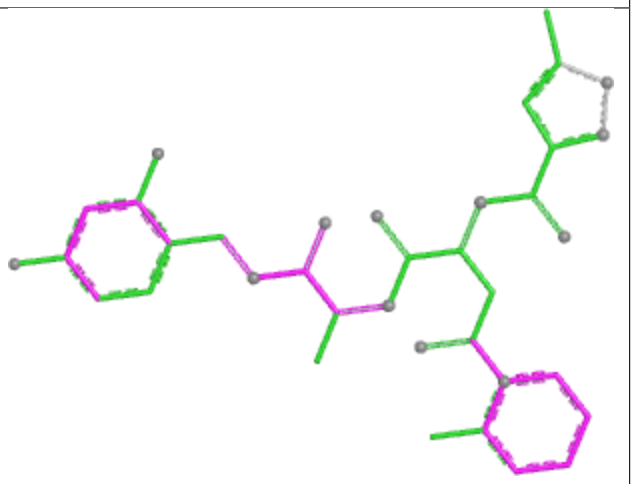


Rings

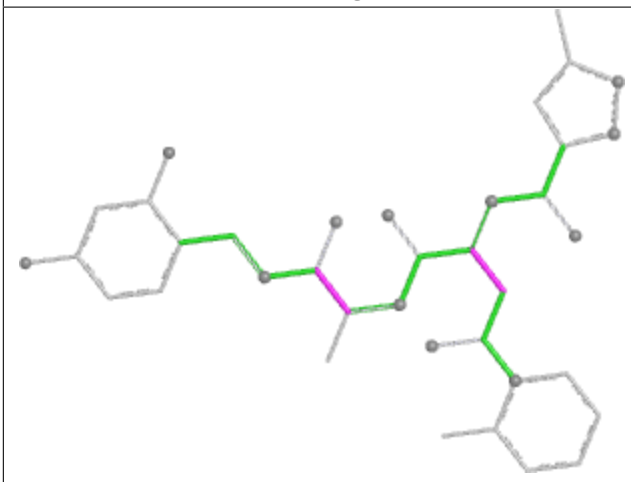
Ligand M6M K 301



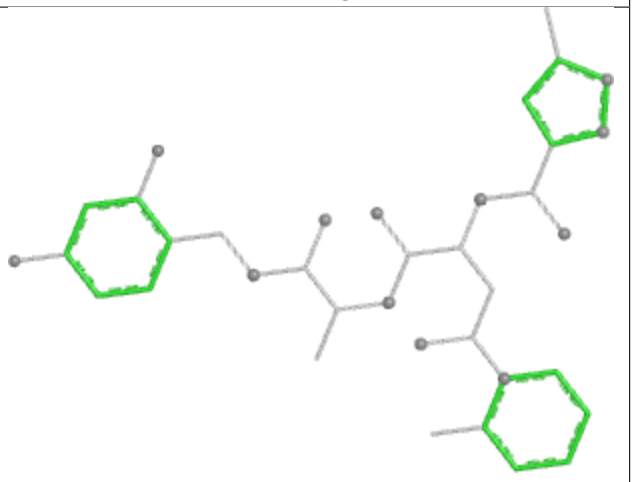
Bond lengths



Bond angles

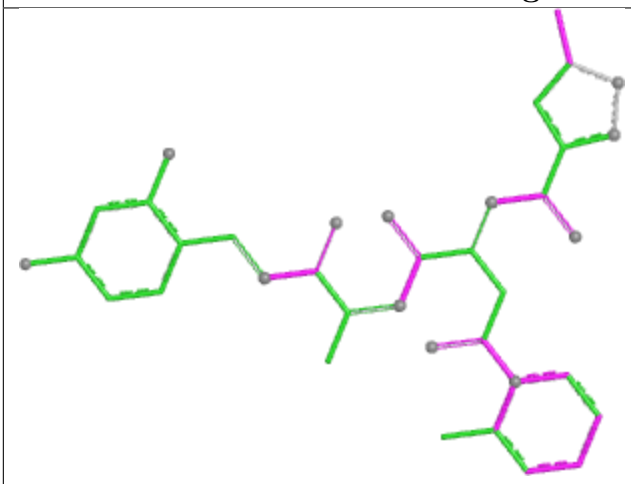


Torsions

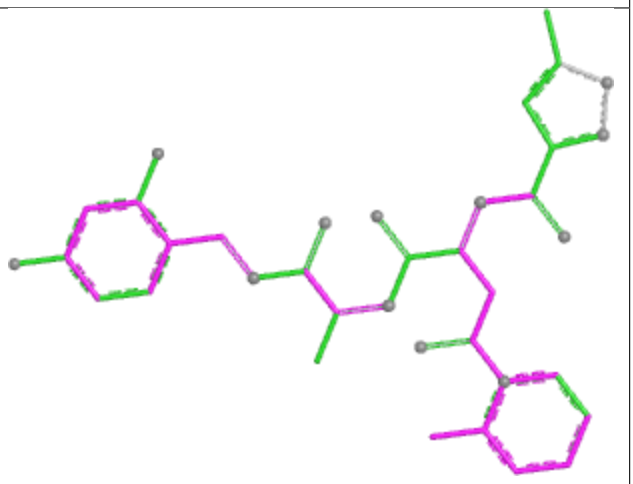


Rings

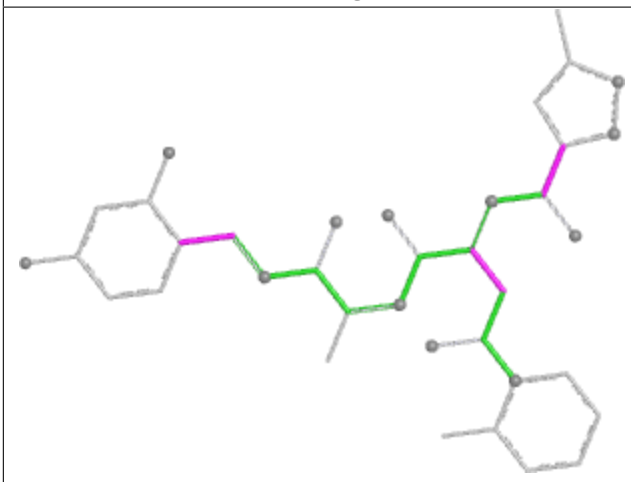
Ligand M6M J 301



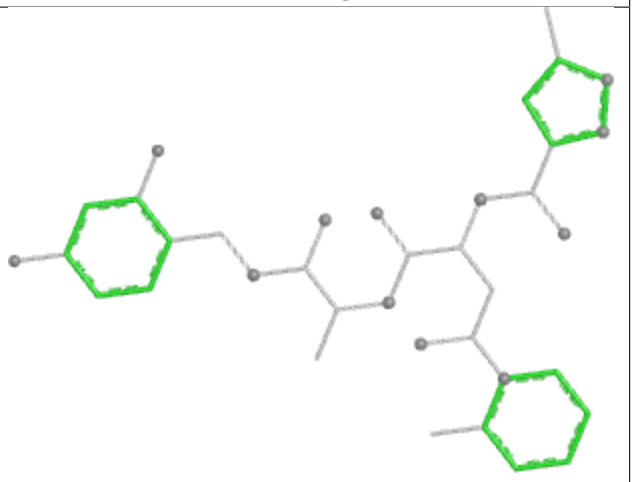
Bond lengths



Bond angles

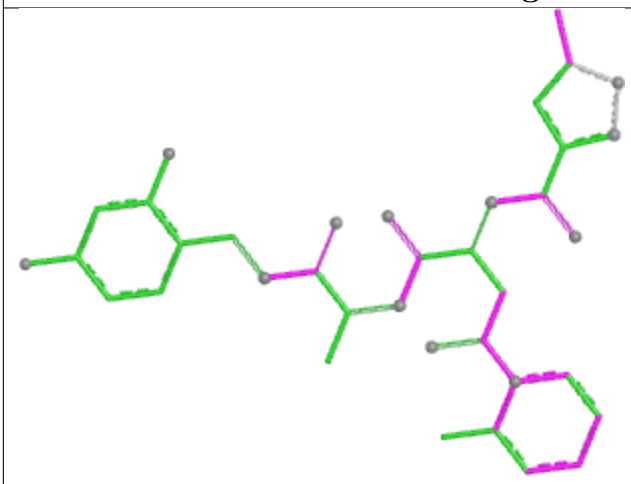


Torsions

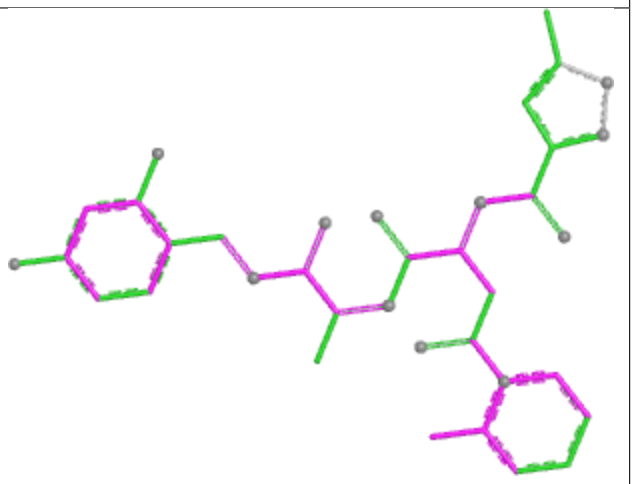


Rings

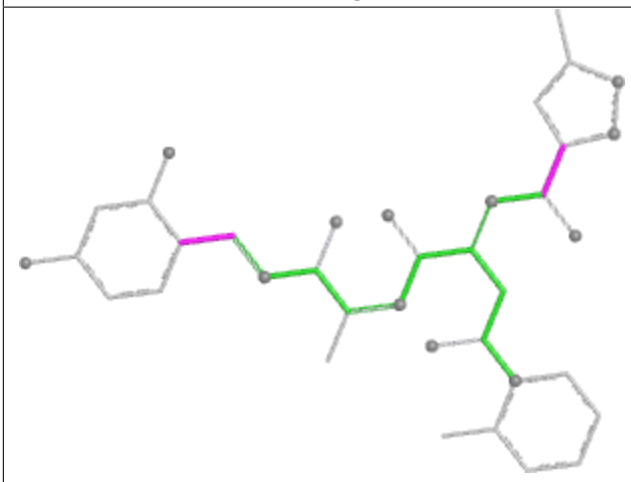
Ligand M6M b 301



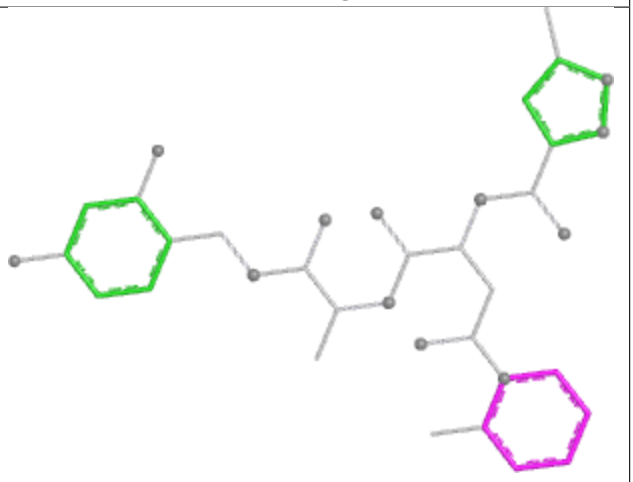
Bond lengths



Bond angles

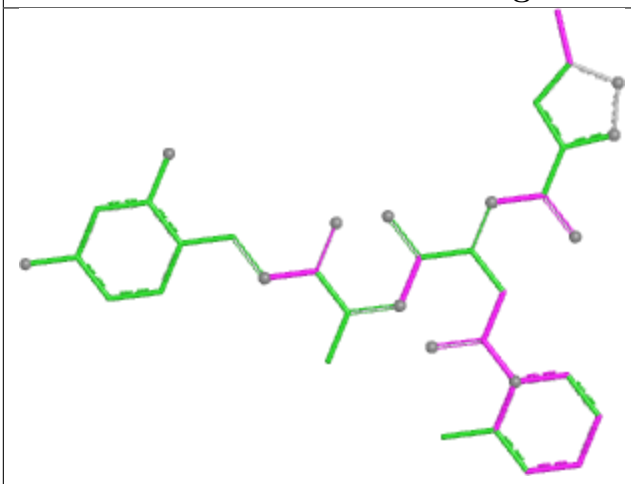


Torsions

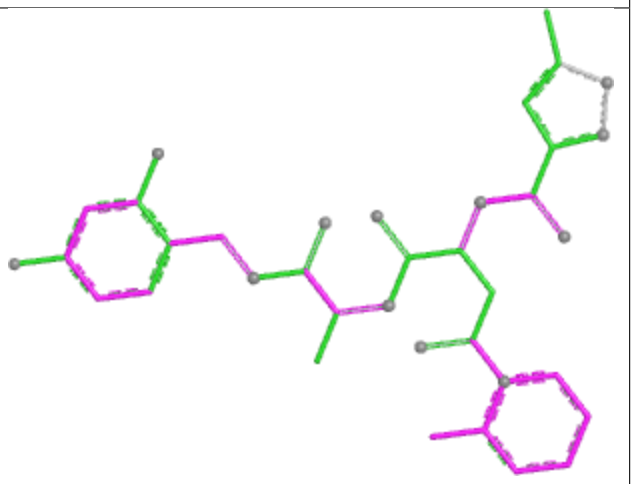


Rings

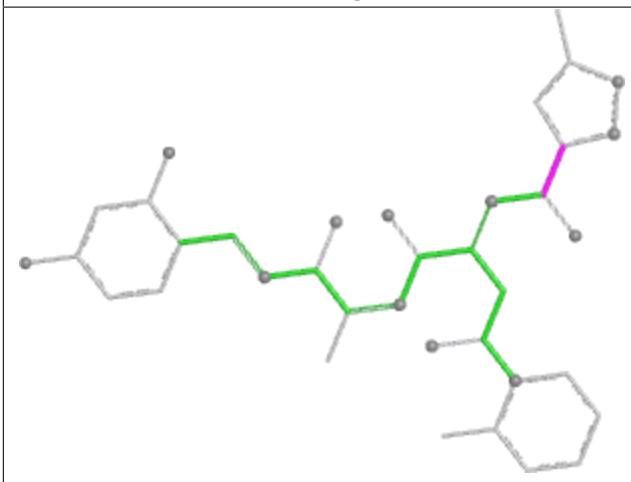
Ligand M6M W 301



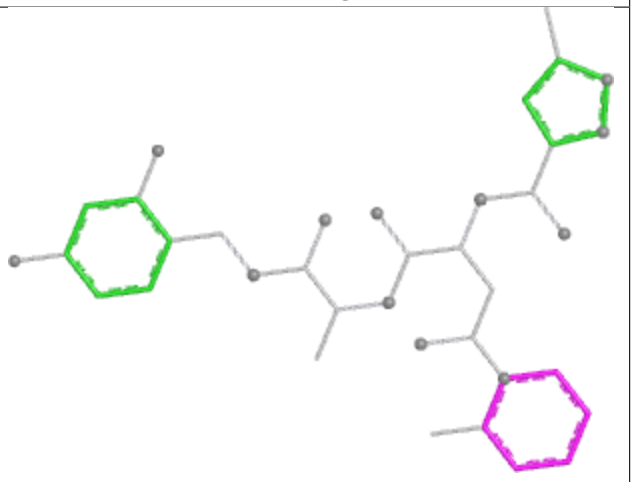
Bond lengths



Bond angles

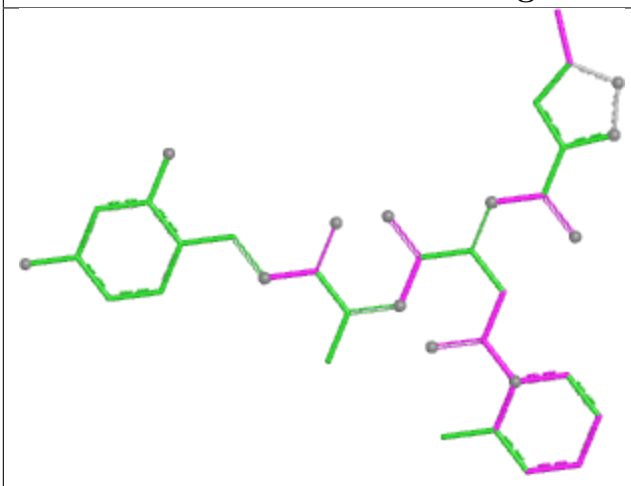


Torsions

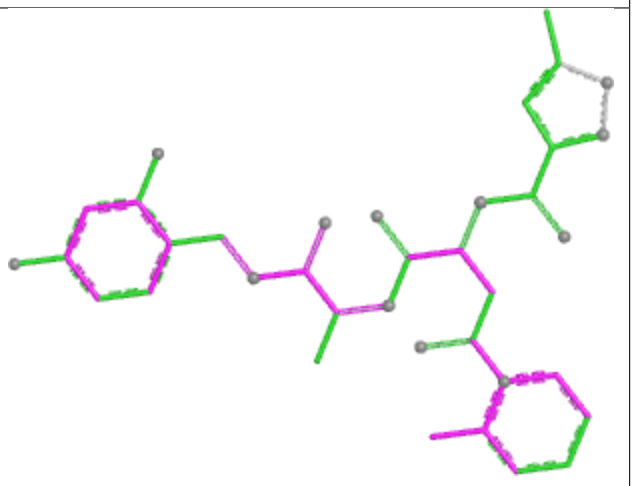


Rings

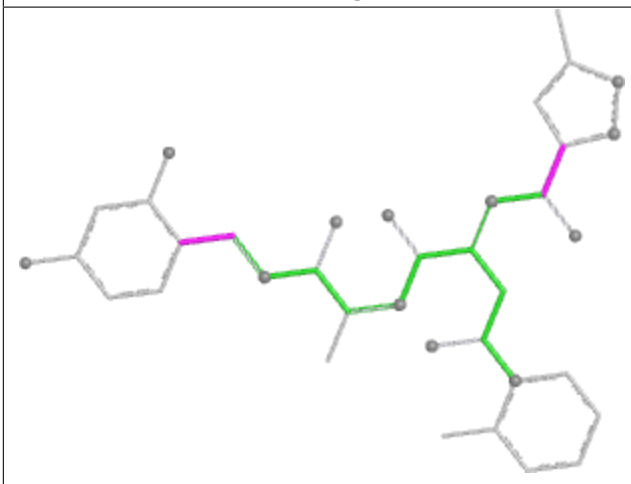
Ligand M6M H 301



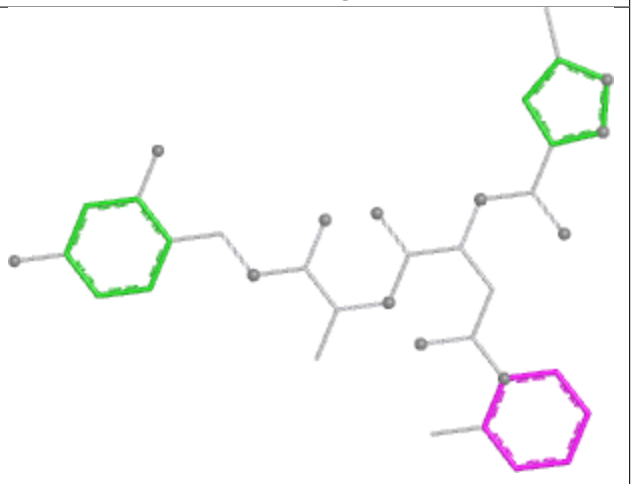
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	218/240 (90%)	-0.29	2 (0%)	81	77	16, 31, 54, 76	1 (0%)
1	B	215/240 (89%)	0.35	13 (6%)	29	23	20, 43, 75, 83	0
1	C	216/240 (90%)	0.03	1 (0%)	87	84	19, 36, 64, 74	0
1	D	215/240 (89%)	0.11	8 (3%)	45	39	18, 38, 66, 80	0
1	E	216/240 (90%)	0.12	8 (3%)	45	39	19, 39, 66, 78	0
1	F	214/240 (89%)	0.13	3 (1%)	73	68	16, 41, 66, 75	1 (0%)
1	G	216/240 (90%)	-0.29	1 (0%)	87	84	16, 32, 56, 67	0
1	O	215/240 (89%)	0.20	6 (2%)	55	49	20, 43, 70, 88	0
1	P	216/240 (90%)	-0.07	5 (2%)	61	55	16, 35, 62, 79	0
1	Q	215/240 (89%)	-0.02	6 (2%)	55	49	17, 35, 60, 72	0
1	R	215/240 (89%)	-0.14	1 (0%)	87	84	17, 34, 58, 71	0
1	S	218/240 (90%)	-0.20	3 (1%)	73	68	16, 30, 57, 75	1 (0%)
1	T	217/240 (90%)	0.09	6 (2%)	55	49	19, 39, 67, 78	0
1	U	216/240 (90%)	-0.08	7 (3%)	50	45	16, 33, 60, 81	0
2	H	222/234 (94%)	-0.58	1 (0%)	87	84	16, 23, 41, 74	0
2	I	222/234 (94%)	-0.65	0	100	100	13, 21, 38, 66	0
2	J	222/234 (94%)	-0.59	5 (2%)	61	55	16, 23, 39, 81	0
2	K	223/234 (95%)	-0.63	0	100	100	15, 22, 40, 53	0
2	L	223/234 (95%)	-0.59	1 (0%)	89	86	15, 22, 37, 71	0
2	M	222/234 (94%)	-0.56	1 (0%)	87	84	16, 24, 41, 72	0
2	N	223/234 (95%)	-0.51	3 (1%)	74	70	16, 24, 43, 67	0
2	V	223/234 (95%)	-0.67	0	100	100	14, 22, 40, 54	0
2	W	223/234 (95%)	-0.56	2 (0%)	81	77	17, 23, 40, 61	0
2	X	222/234 (94%)	-0.56	2 (0%)	81	77	16, 23, 37, 68	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
2	Y	223/234 (95%)	-0.61	2 (0%) 81 77	14, 22, 37, 77	0
2	Z	222/234 (94%)	-0.56	5 (2%) 61 55	15, 22, 41, 71	0
2	a	223/234 (95%)	-0.55	0 100 100	17, 25, 43, 63	0
2	b	222/234 (94%)	-0.56	2 (0%) 81 77	16, 24, 41, 75	0
All	All	6137/6636 (92%)	-0.30	94 (1%) 71 67	13, 28, 60, 88	3 (0%)

All (94) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	U	235	VAL	4.3
1	O	231	GLN	3.6
1	E	202	THR	3.4
1	B	227	GLY	3.4
2	J	114	PRO	3.3
1	B	235	VAL	3.3
2	M	114	PRO	3.3
1	F	203	LEU	3.3
1	D	233	LEU	3.1
1	T	190	ALA	3.1
1	B	11	GLN	3.0
1	Q	206	ALA	3.0
1	S	191	GLY	3.0
2	b	114	PRO	3.0
2	Y	115	GLN	2.9
1	O	203	LEU	2.9
1	C	235	VAL	2.9
1	F	10	GLU	2.8
1	S	172	ALA	2.8
1	B	172	ALA	2.8
1	U	10	GLU	2.7
1	P	235	VAL	2.7
1	T	11	GLN	2.7
1	O	233	LEU	2.7
1	P	169	GLU	2.7
1	B	12	ALA	2.7
1	O	234	LEU	2.7
1	O	190	ALA	2.7
2	J	115	GLN	2.6
1	F	234	LEU	2.6
2	X	114	PRO	2.6
2	N	223	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	205	VAL	2.6
1	D	10	GLU	2.5
1	E	182	ARG	2.5
2	Z	115	GLN	2.5
1	B	190	ALA	2.5
1	E	190	ALA	2.5
1	Q	190	ALA	2.5
1	T	169	GLU	2.5
1	D	161	GLU	2.5
1	B	230	LEU	2.5
2	J	112	SER	2.5
1	Q	235	VAL	2.5
2	W	223	GLY	2.5
1	T	235	VAL	2.4
1	U	9	MET	2.4
2	Z	116	SER	2.4
1	B	166	ALA	2.4
1	S	171	TYR	2.4
1	Q	189	ARG	2.4
1	U	14	ARG	2.3
1	E	235	VAL	2.3
1	R	191	GLY	2.3
1	B	231	GLN	2.3
2	X	112	SER	2.3
2	J	113	ASP	2.3
1	E	234	LEU	2.2
1	T	191	GLY	2.2
1	Q	219	ARG	2.2
2	L	115	GLN	2.2
1	A	9	MET	2.2
2	Z	212	GLU	2.2
1	O	226	THR	2.2
1	U	191	GLY	2.2
1	A	10	GLU	2.2
1	P	202	THR	2.2
2	Z	113	ASP	2.2
1	D	219	ARG	2.2
2	b	113	ASP	2.1
1	B	167	LEU	2.1
2	J	116	SER	2.1
2	H	113	ASP	2.1
1	E	172	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	T	48	ARG	2.1
1	U	231	GLN	2.1
1	D	182	ARG	2.1
1	P	14	ARG	2.1
1	Q	166	ALA	2.1
2	N	114	PRO	2.1
1	D	192	SER	2.1
2	N	112	SER	2.1
2	Y	112	SER	2.1
1	B	206	ALA	2.1
1	G	204	GLY	2.1
2	W	114	PRO	2.0
1	E	11	GLN	2.0
1	U	203	LEU	2.0
1	D	189	ARG	2.0
2	Z	114	PRO	2.0
1	B	203	LEU	2.0
1	D	48	ARG	2.0
1	E	48	ARG	2.0
1	P	182	ARG	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
5	CIT	W	302	13/13	0.77	0.15	32,48,71,85	0
5	CIT	N	302	13/13	0.81	0.13	27,39,69,83	0
5	CIT	M	302	13/13	0.81	0.14	32,40,48,56	0

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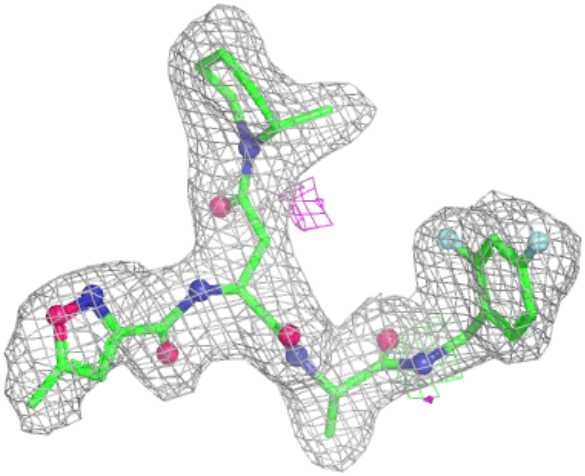
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
5	CIT	V	302	13/13	0.83	0.12	34,45,52,59	0
5	CIT	I	302	13/13	0.83	0.13	29,41,58,70	0
5	CIT	Z	302	13/13	0.83	0.12	28,39,49,59	0
5	CIT	b	302	13/13	0.84	0.12	28,42,64,77	0
5	CIT	K	302	13/13	0.85	0.15	23,34,45,45	0
5	CIT	Y	302	13/13	0.86	0.12	28,37,48,58	0
3	DMF	P	301	5/5	0.86	0.16	25,38,51,52	0
5	CIT	X	302	13/13	0.86	0.12	32,39,57,68	0
5	CIT	a	302	13/13	0.87	0.10	24,39,57,68	0
5	CIT	L	302	13/13	0.88	0.10	24,40,52,62	0
5	CIT	H	302	13/13	0.88	0.14	28,33,38,38	0
3	DMF	a	303	5/5	0.89	0.19	27,35,50,50	0
3	DMF	S	301	5/5	0.89	0.16	26,34,40,40	0
3	DMF	U	301	5/5	0.90	0.13	24,31,44,44	0
3	DMF	R	302	5/5	0.90	0.15	31,38,49,49	0
3	DMF	T	301	5/5	0.90	0.15	34,41,45,45	0
5	CIT	J	302	13/13	0.91	0.13	29,36,49,59	0
3	DMF	R	301	5/5	0.91	0.15	28,37,37,40	0
3	DMF	Q	301	5/5	0.92	0.12	24,35,49,51	0
3	DMF	F	301	5/5	0.92	0.12	19,30,36,40	0
3	DMF	E	301	5/5	0.92	0.13	19,29,41,41	0
3	DMF	J	303	5/5	0.93	0.18	19,33,46,46	0
3	DMF	O	301	5/5	0.93	0.14	25,30,41,43	0
3	DMF	C	301	5/5	0.93	0.10	26,31,39,47	0
3	DMF	D	301	5/5	0.93	0.11	30,36,42,42	0
4	M6M	V	301	37/37	0.94	0.09	13,20,31,35	0
3	DMF	A	301	5/5	0.94	0.12	20,33,38,39	0
4	M6M	I	301	37/37	0.94	0.08	14,20,28,41	0
4	M6M	W	301	37/37	0.95	0.08	14,19,35,40	0
4	M6M	X	301	37/37	0.95	0.08	19,23,34,37	0
4	M6M	Y	301	37/37	0.95	0.08	13,19,31,40	0
4	M6M	Z	301	37/37	0.95	0.08	14,20,34,39	0
4	M6M	a	301	37/37	0.95	0.09	15,22,34,36	0
4	M6M	b	301	37/37	0.95	0.08	15,20,34,41	0
4	M6M	K	301	37/37	0.95	0.08	14,20,39,42	0
4	M6M	M	301	37/37	0.95	0.09	14,21,39,47	0
4	M6M	N	301	37/37	0.95	0.09	13,19,34,38	0
4	M6M	J	301	37/37	0.95	0.08	13,20,31,37	0
4	M6M	L	301	37/37	0.96	0.08	12,18,40,46	0
4	M6M	H	301	37/37	0.96	0.07	12,21,38,45	0

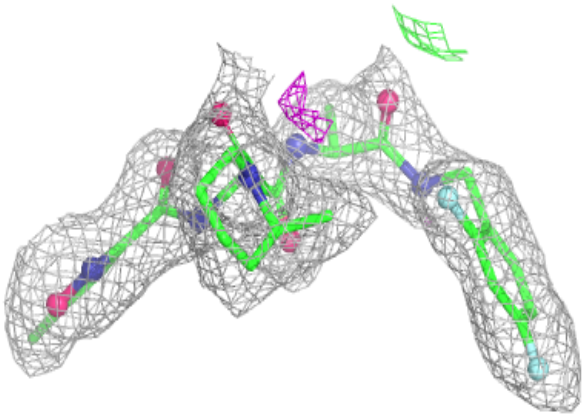
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers

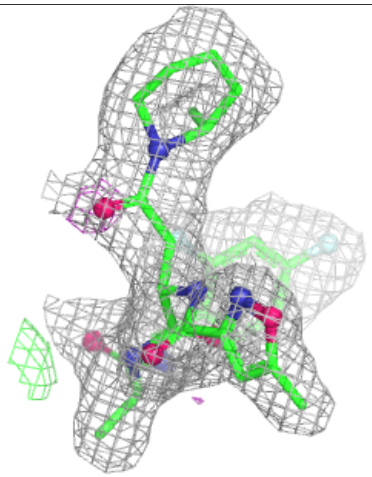
as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around M6M V 301:

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

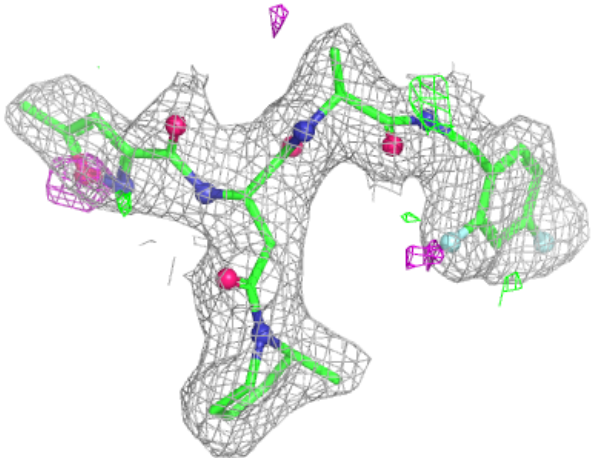


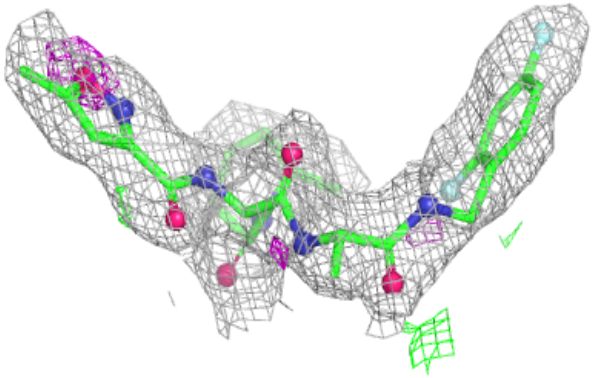




Electron density around M6M I 301:

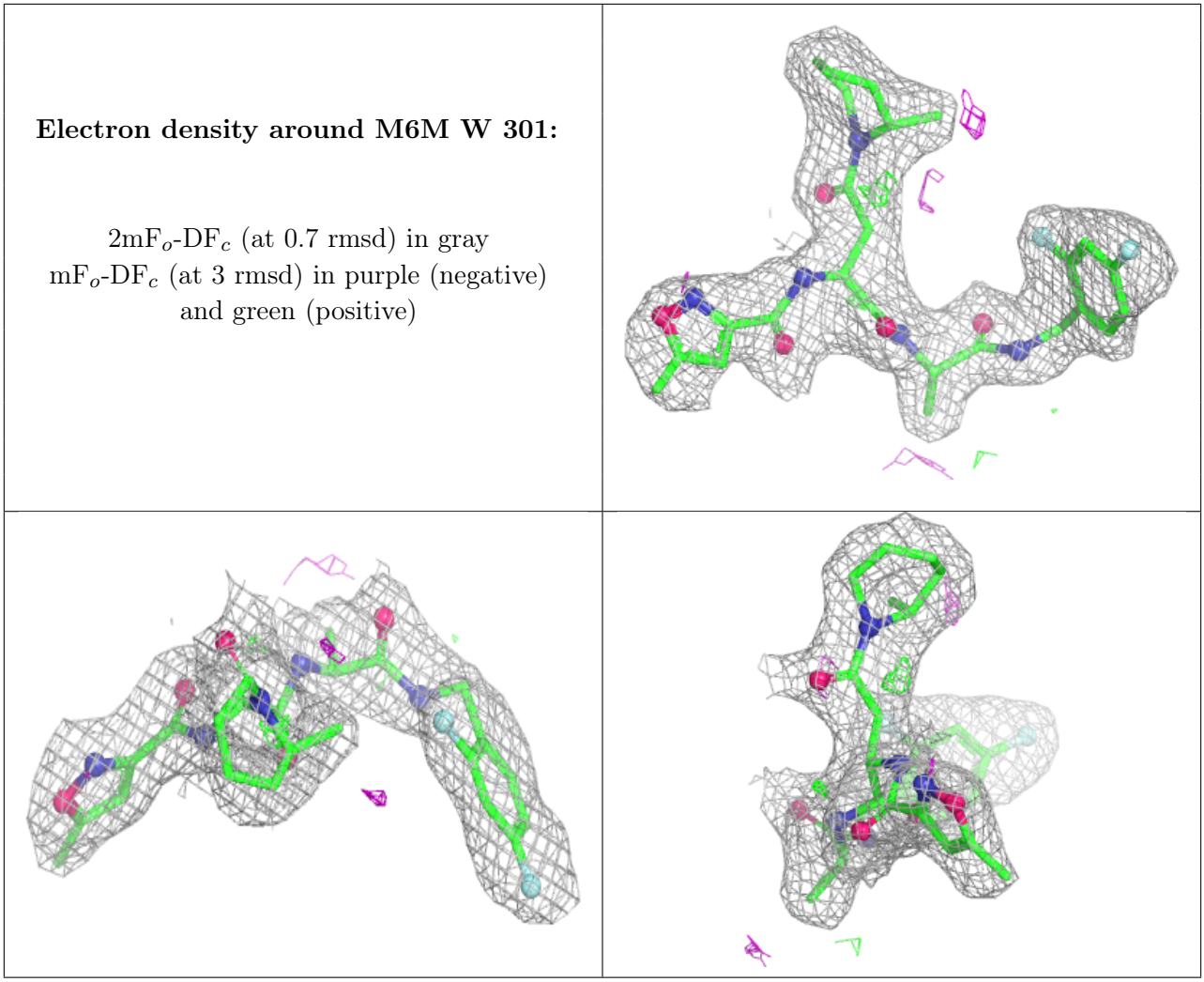
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





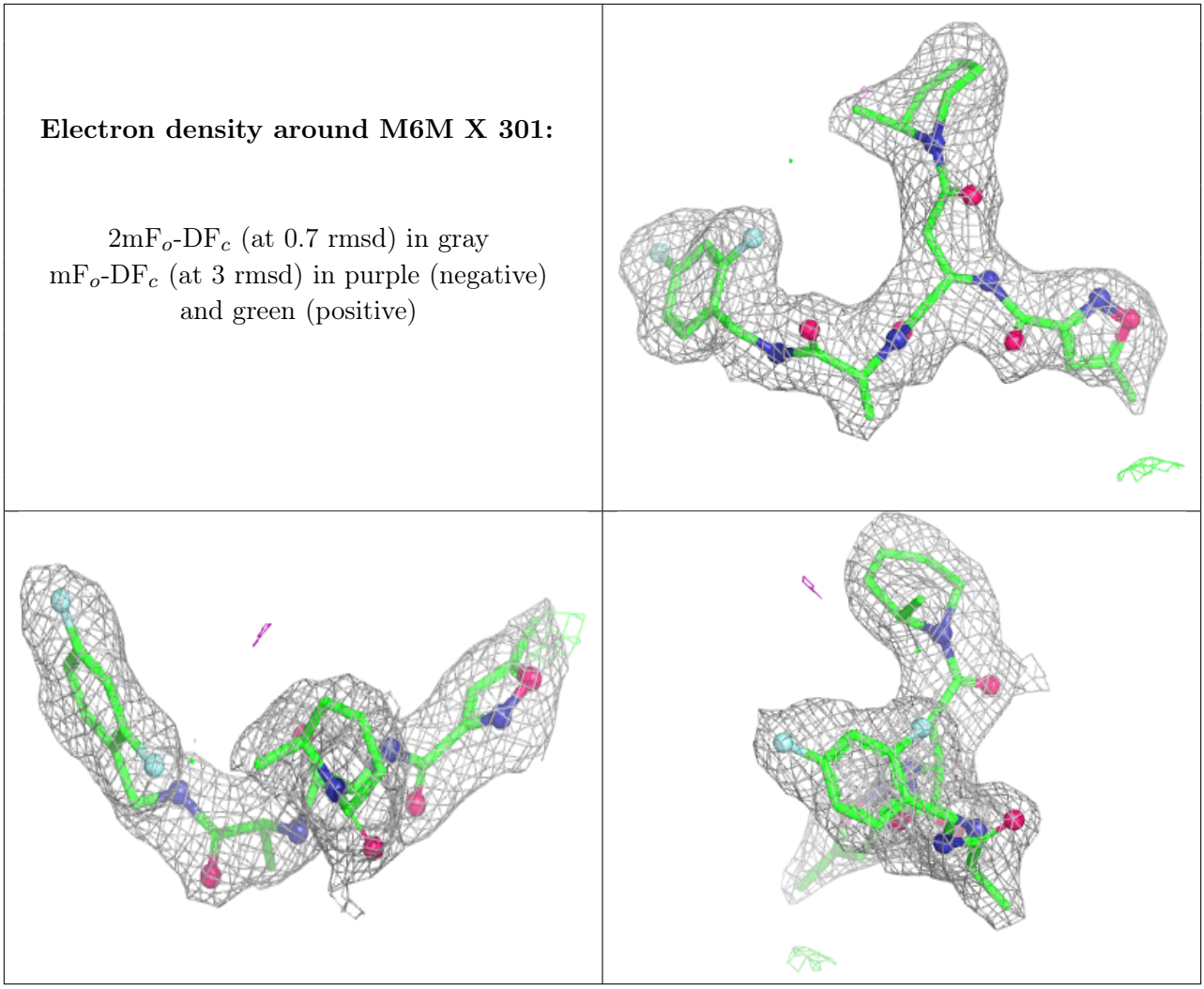
Electron density around M6M W 301:

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



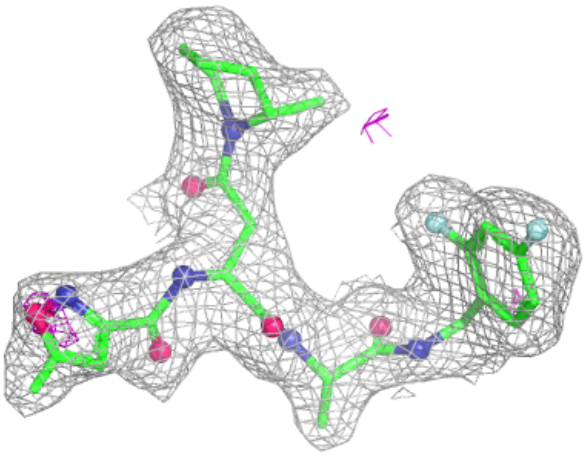
Electron density around M6M X 301:

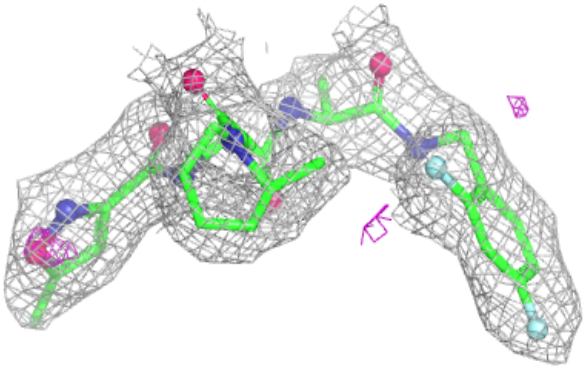
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

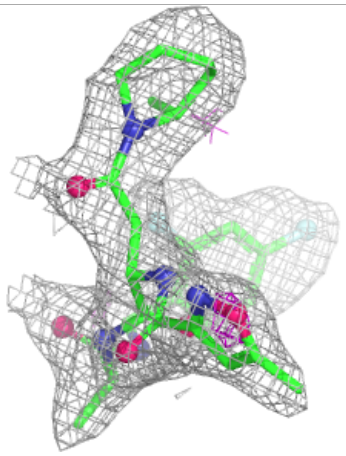


Electron density around M6M Y 301:

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

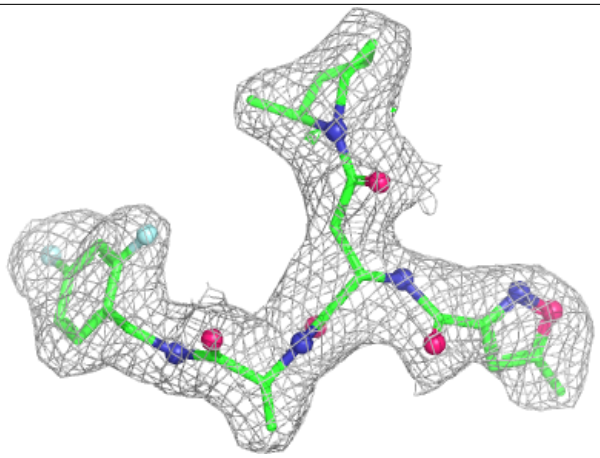


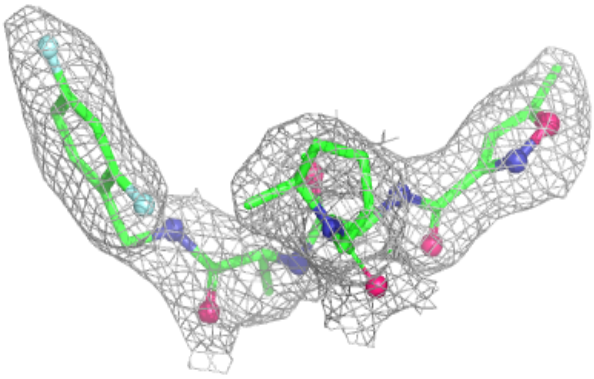


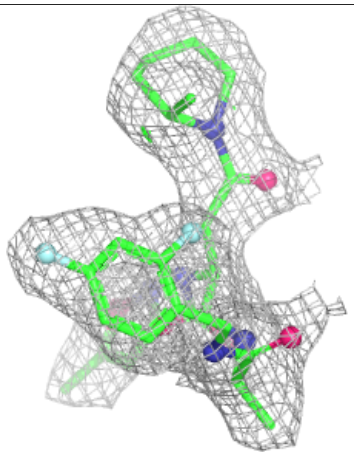


Electron density around M6M Z 301:

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

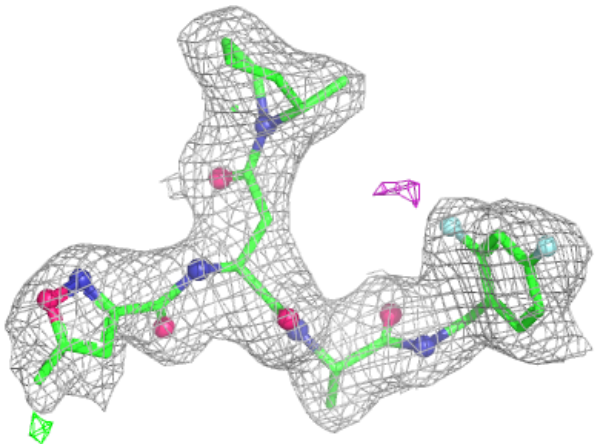


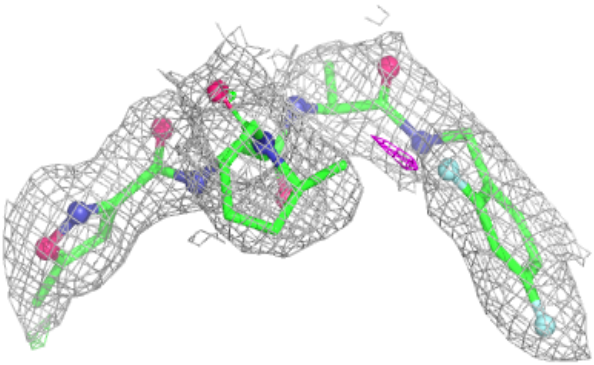


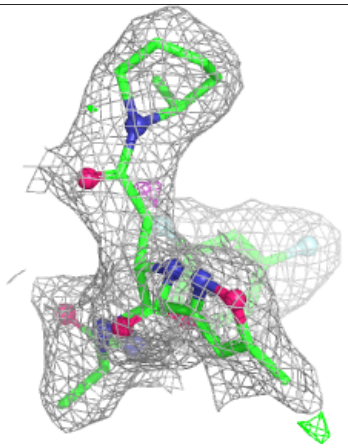


Electron density around M6M a 301:

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

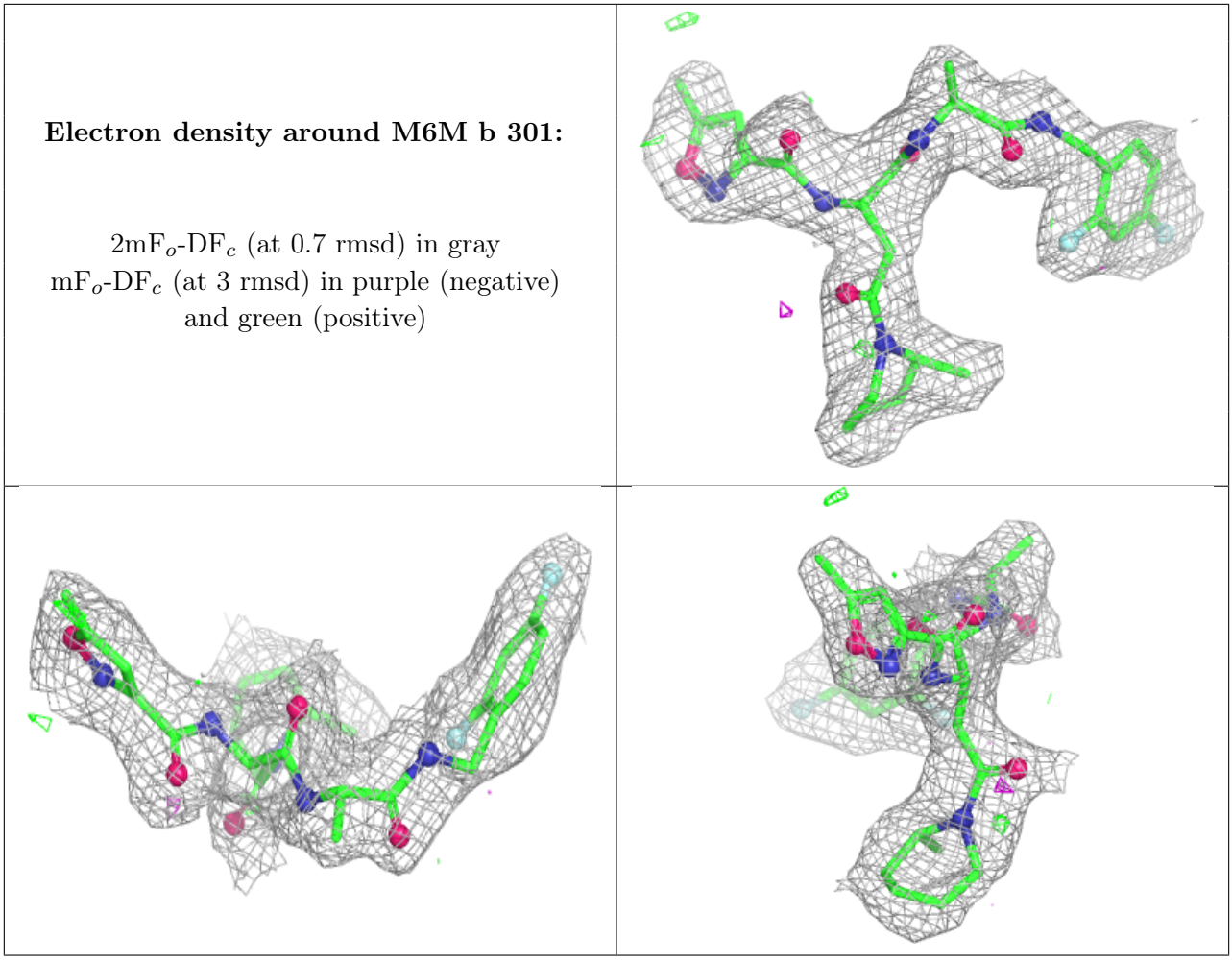






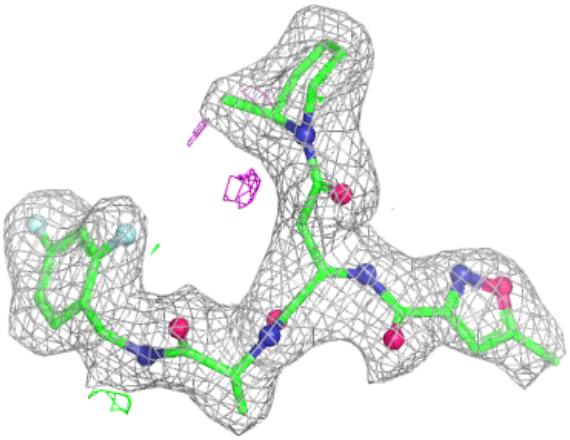
Electron density around M6M b 301:

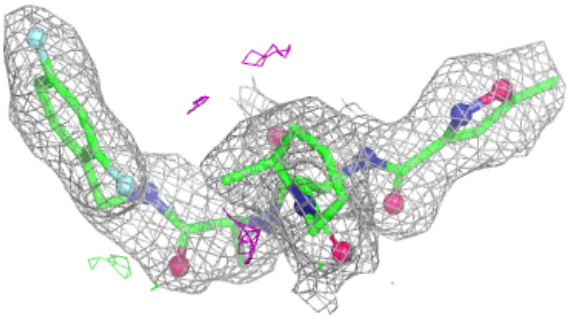
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

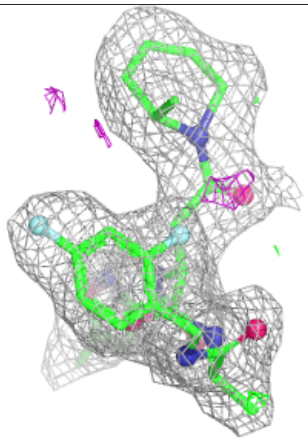


Electron density around M6M K 301:

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

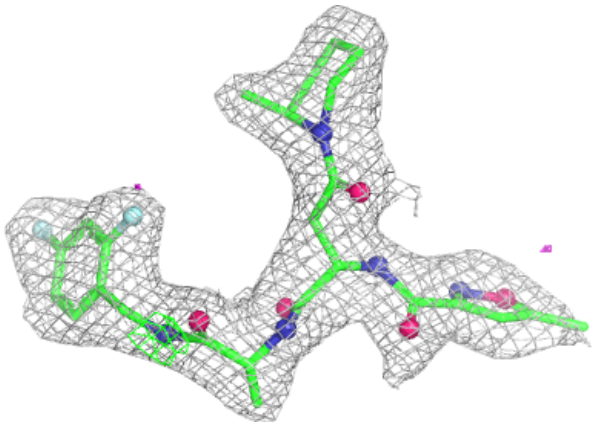


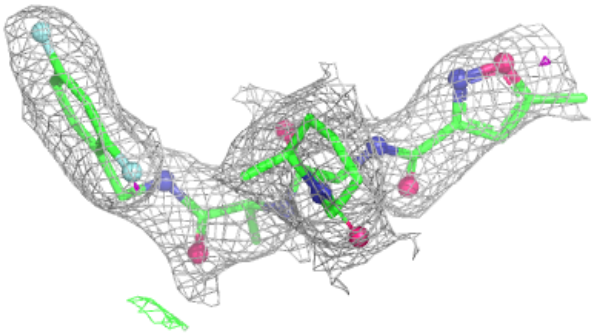


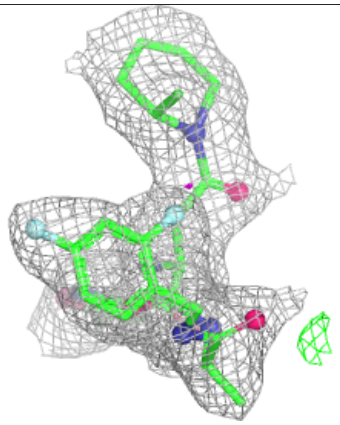


Electron density around M6M M 301:

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

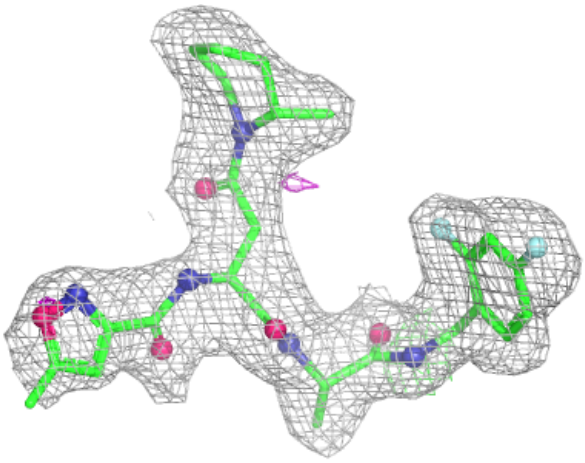


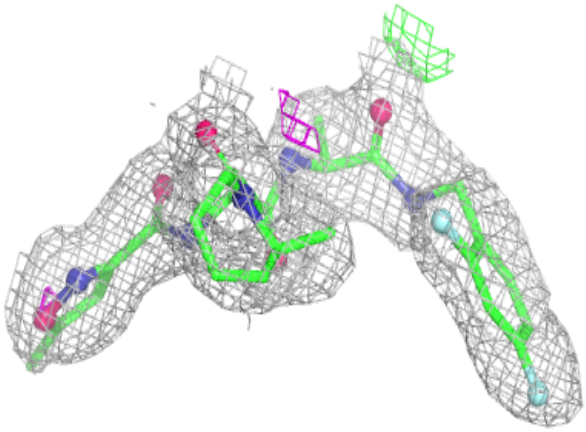


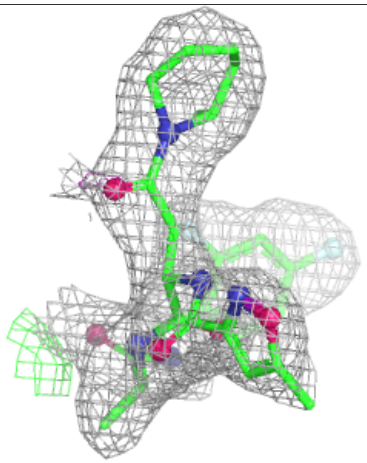


Electron density around M6M N 301:

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

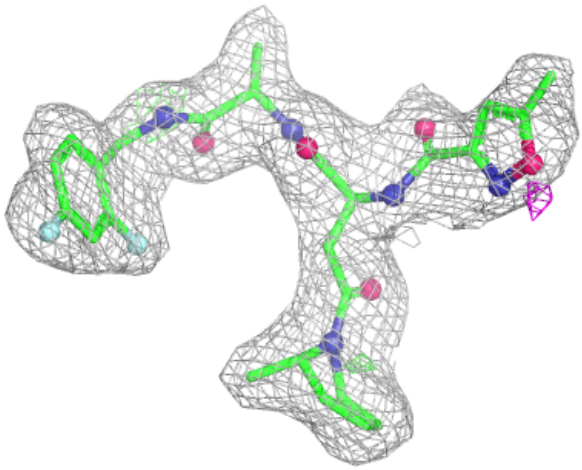


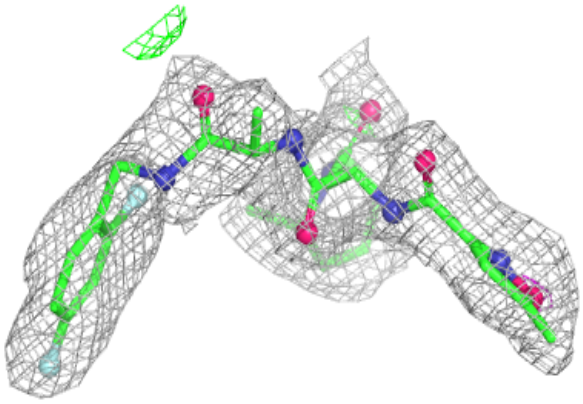


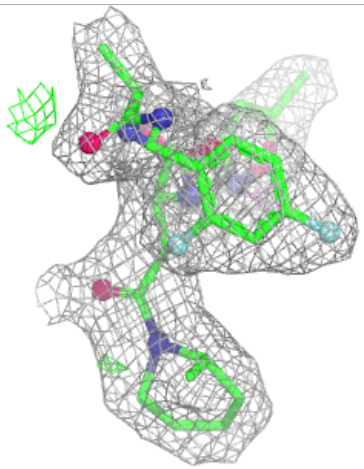


Electron density around M6M J 301:

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

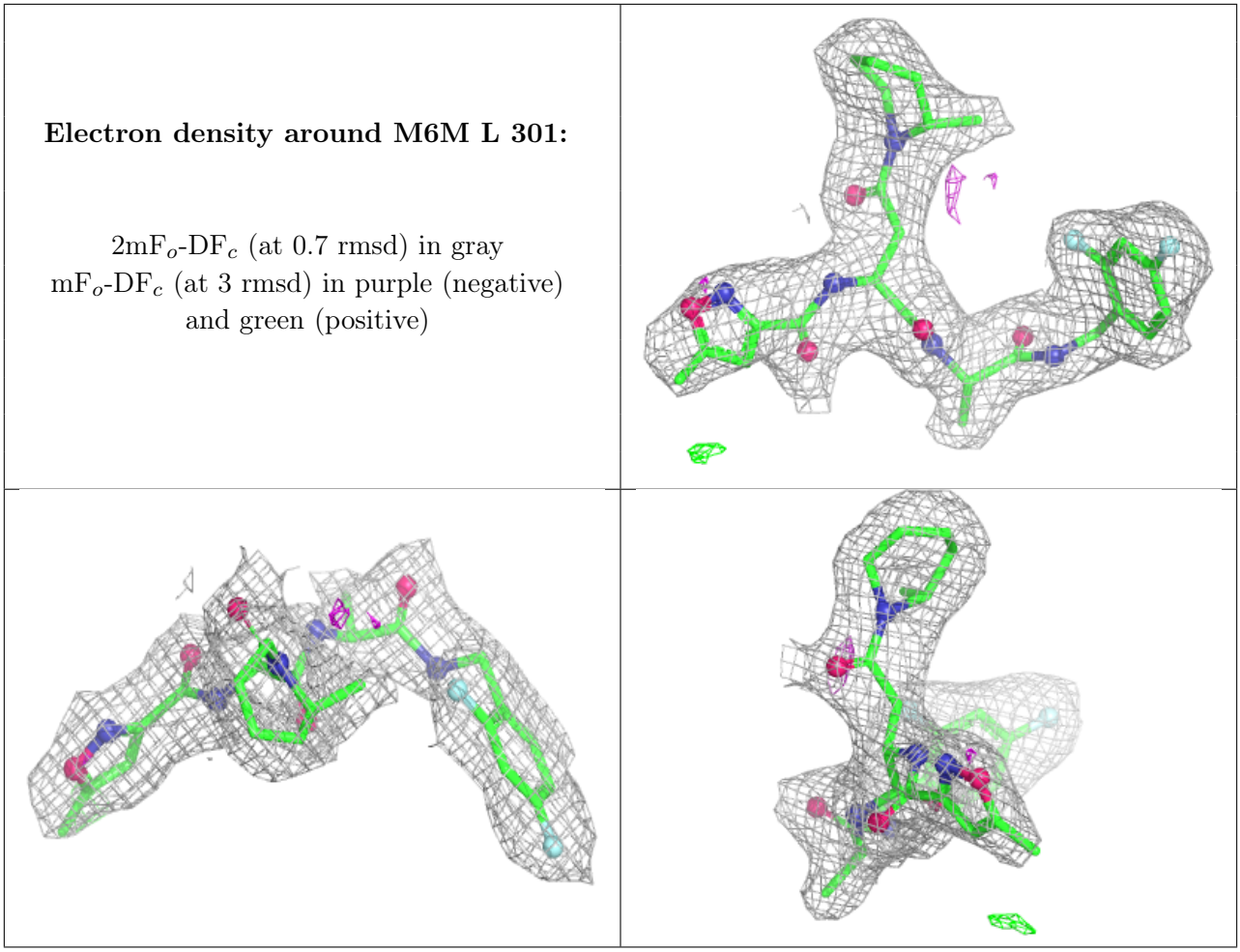






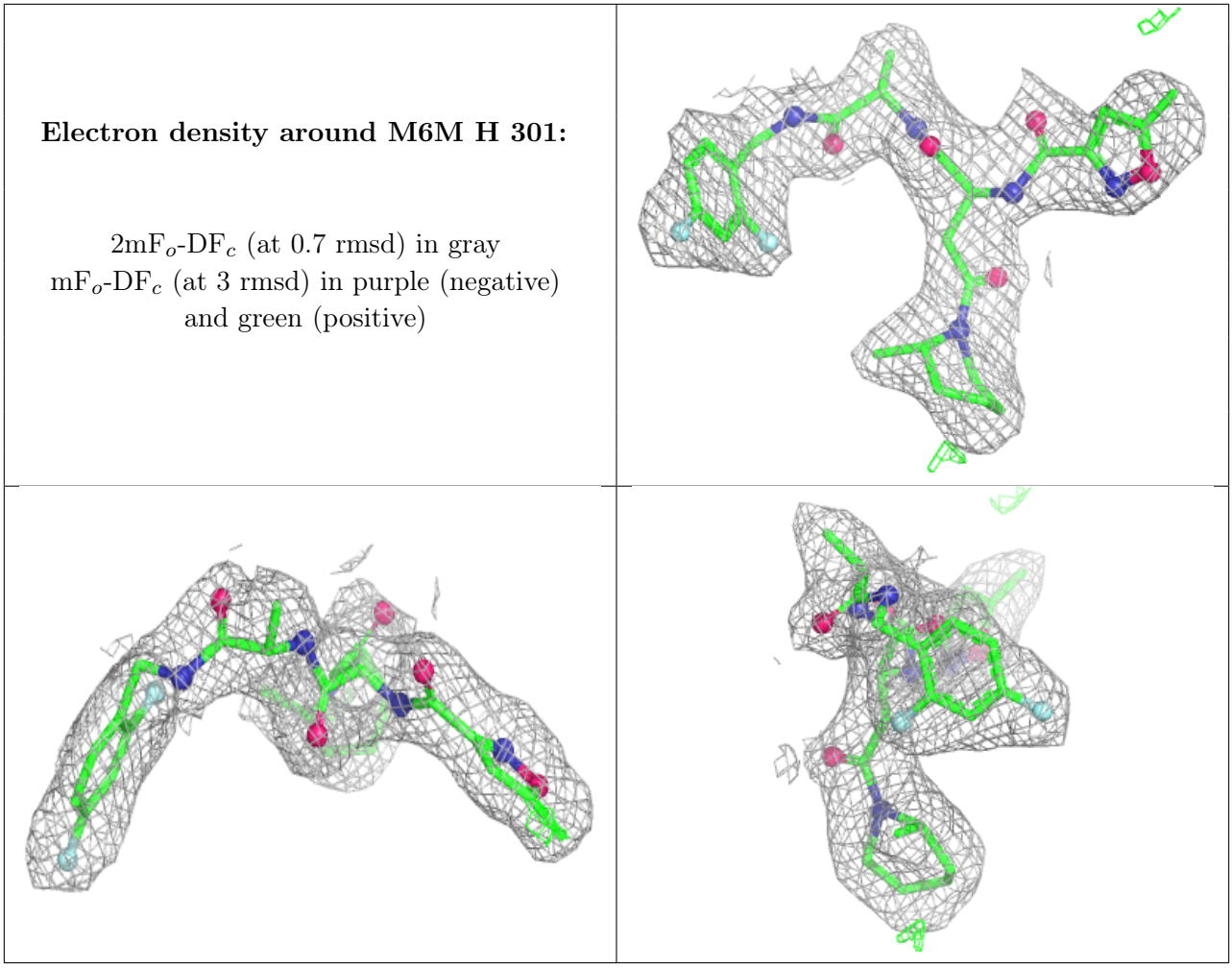
Electron density around M6M L 301:

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



Electron density around M6M H 301:

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



6.5 Other polymers (i)

There are no such residues in this entry.