



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 10, 2024 – 01:05 am BST

PDB ID : 9FSV
Title : Yeast 20S proteasome with human beta2i (1-53) in complex with epoxyketone inhibitor 42
Authors : Maurits, E.; Huber, E.M.; Dekker, P.M.; Wang, X.; Heinemeyer, W.; Florea, B.I.; Groll, M.; Overkleeft, H.S.
Deposited on : 2024-06-22
Resolution : 2.75 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 : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : 2.37.1
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

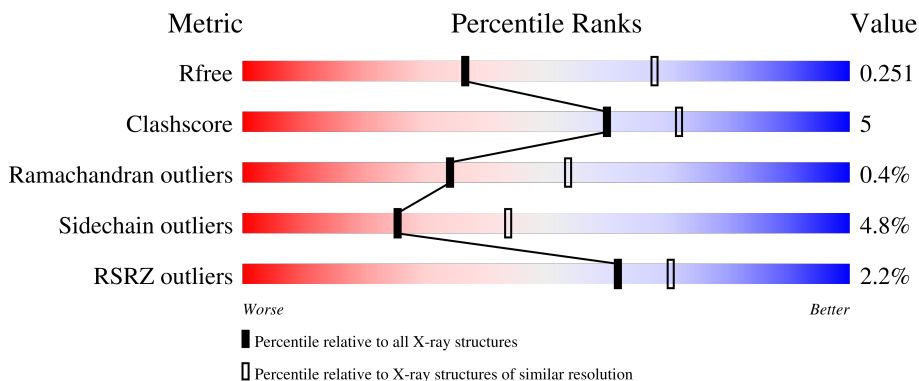
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.75 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1235 (2.78-2.74)
Clashscore	141614	1277 (2.78-2.74)
Ramachandran outliers	138981	1257 (2.78-2.74)
Sidechain outliers	138945	1257 (2.78-2.74)
RSRZ outliers	127900	1207 (2.78-2.74)

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

Mol	Chain	Length	Quality of chain
1	A	250	 2% 92% 8%
1	O	250	 4% 92% 8%
2	B	258	 4% 80% 14% 5%
2	P	258	 4% 80% 14% 5%

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Mol	Chain	Length	Quality of chain
3	C	254	6% 84% 10% 6%
3	Q	254	6% 81% 11% 6%
4	D	260	% 78% 12% 10%
4	R	260	2% 80% 10% 10%
5	E	234	2% 86% 11% ..
5	S	234	3% 81% 16% ..
6	F	288	2% 74% 10% 16%
6	T	288	4% 73% 11% 16%
7	G	252	% 82% 12% . .
7	U	252	2% 85% 10% . .
8	H	225	3% 90% 8% .
8	V	225	2% 84% 14% ..
9	I	205	88% 11%
9	W	205	87% 12% .
10	J	198	% 86% 10% . . .
10	X	198	% 86% 12% ..
11	K	211	% 86% 13% .
11	Y	211	% 84% 15% .
12	L	222	86% 12% .
12	Z	222	86% 11% .
13	M	246	% 88% 7% 5%
13	a	246	89% 6% 5%
14	N	196	2% 86% 13% .
14	b	196	% 96% .

2 Entry composition

There are 20 unique types of molecules in this entry. The entry contains 49917 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Proteasome subunit alpha type-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	250	Total 1915	C 1219	N 315	O 377	S 4	0	0	0
1	O	250	Total 1915	C 1219	N 315	O 377	S 4	0	0	0

- Molecule 2 is a protein called Proteasome subunit alpha type-3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	244	Total 1904	C 1201	N 321	O 379	S 3	0	0	0
2	P	244	Total 1904	C 1201	N 321	O 379	S 3	0	0	0

- Molecule 3 is a protein called Proteasome subunit alpha type-4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	240	Total 1881	C 1176	N 329	O 372	S 4	0	0	0
3	Q	240	Total 1881	C 1176	N 329	O 372	S 4	0	0	0

- Molecule 4 is a protein called Proteasome subunit alpha type-5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	235	Total 1813	C 1136	N 304	O 366	S 7	0	0	0
4	R	235	Total 1813	C 1136	N 304	O 366	S 7	0	0	0

- Molecule 5 is a protein called Proteasome subunit alpha type-6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	E	231	Total 1773	C 1114	N 307	O 348	S 4	0	0	0
5	S	231	Total 1773	C 1114	N 307	O 348	S 4	0	0	0

- Molecule 6 is a protein called Probable proteasome subunit alpha type-7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	F	243	Total 1892	C 1203	N 329	O 356	S 4	0	0	0
6	T	243	Total 1892	C 1203	N 329	O 356	S 4	0	0	0

- Molecule 7 is a protein called Proteasome subunit alpha type-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	G	241	Total 1907	C 1214	N 320	O 365	S 8	0	0	0
7	U	241	Total 1907	C 1214	N 320	O 365	S 8	0	0	0

- Molecule 8 is a protein called Proteasome subunit beta type-10, Proteasome subunit beta type-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	H	225	Total 1709	C 1077	N 290	O 334	S 8	0	0	0
8	V	222	Total 1681	C 1062	N 286	O 325	S 8	0	0	0

- Molecule 9 is a protein called Proteasome subunit beta type-3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	I	204	Total 1581	C 1010	N 258	O 305	S 8	0	0	0
9	W	204	Total 1581	C 1010	N 258	O 305	S 8	0	0	0

- Molecule 10 is a protein called Proteasome subunit beta type-4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	J	195	Total 1561	C 992	N 264	O 299	S 6	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	X	195	Total	C	N	O	S	0	0	0
			1561	992	264	299	6			

- Molecule 11 is a protein called Proteasome subunit beta type-5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	211	Total	C	N	O	S	0	0	0
			1637	1041	279	310	7			
11	Y	211	Total	C	N	O	S	0	0	0
			1637	1041	279	310	7			

- Molecule 12 is a protein called Proteasome subunit beta type-6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	222	Total	C	N	O	S	0	0	0
			1757	1115	303	335	4			
12	Z	222	Total	C	N	O	S	0	0	0
			1757	1115	303	335	4			

- Molecule 13 is a protein called Proteasome subunit beta type-7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	233	Total	C	N	O	S	0	1	0
			1835	1160	316	352	7			
13	a	233	Total	C	N	O	S	0	1	0
			1835	1160	316	352	7			

- Molecule 14 is a protein called Proteasome subunit beta type-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	196	Total	C	N	O	S	0	0	0
			1512	955	250	300	7			
14	b	196	Total	C	N	O	S	0	0	0
			1512	955	250	300	7			

- Molecule 15 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
15	G	1	Total	Mg	0	0
			1	1		
15	I	1	Total	Mg	0	0
			1	1		

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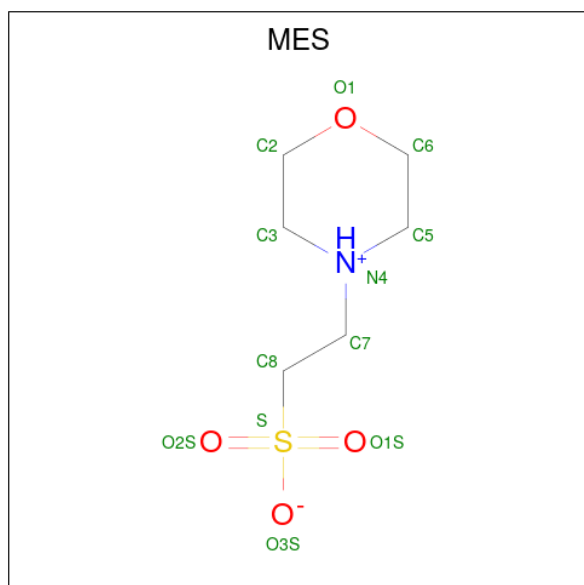
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
15	K	1	Total Mg 1 1	0	0
15	N	1	Total Mg 1 1	0	0
15	V	1	Total Mg 1 1	0	0
15	W	1	Total Mg 1 1	0	0
15	Y	1	Total Mg 1 1	0	0
15	Z	1	Total Mg 1 1	0	0

- Molecule 16 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

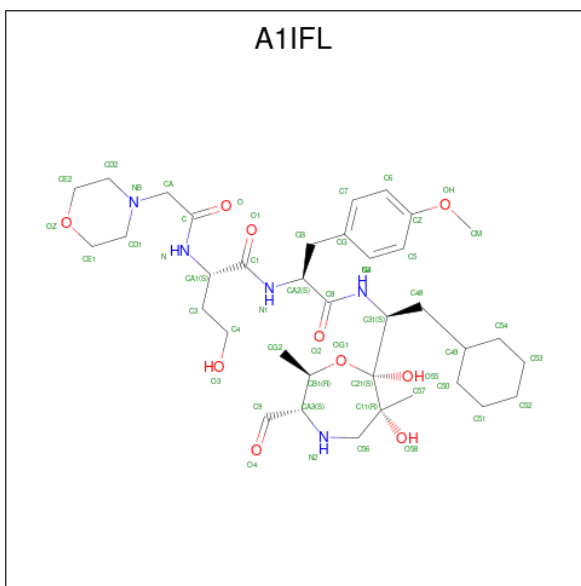
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
16	G	1	Total Cl 1 1	0	0
16	N	1	Total Cl 1 1	0	0
16	U	1	Total Cl 1 1	0	0

- Molecule 17 is 2-(N-MORPHOLINO)-ETHANESULFONIC ACID (three-letter code: MES) (formula: C₆H₁₃NO₄S).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
17	H	1	Total	C	N	O	S	0	0
			12	6	1	4	1		
17	K	1	Total	C	N	O	S	0	0
			12	6	1	4	1		
17	V	1	Total	C	N	O	S	0	0
			12	6	1	4	1		
17	Y	1	Total	C	N	O	S	0	0
			12	6	1	4	1		

- Molecule 18 is (2S)-N-[(2S)-1-[[[(1S)-2-cyclohexyl-1-[(2R,3S,6R,7S)-3-methanoyl-2,6-dimethyl-6,7-bis(oxidanyl)-1,4-oxazepan-7-yl]ethyl]amino]-3-(4-methoxyphenyl)-1-oxidanylidene-propan-2-yl]-2-(2-morpholin-4-ylethanoylamino)-4-oxidanyl-butanamide (three-letter code: A1IFL) (formula: C₃₆H₅₇N₅O₁₀) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
18	H	1	Total	C	N	O		
			51	36	5	10	0	0
18	K	1	Total	C	N	O		
			51	36	5	10	0	0
18	V	1	Total	C	N	O		
			51	36	5	10	0	0
18	Y	1	Total	C	N	O		
			51	36	5	10	0	0

- Molecule 19 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
19	K	1	Total	O	S	0	0
			5	4	1		
19	N	1	Total	O	S	0	0
			5	4	1		
19	Y	1	Total	O	S	0	0
			5	4	1		
19	b	1	Total	O	S	0	0
			5	4	1		

- Molecule 20 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
20	A	7	Total	O	0	0
			7	7		
20	B	14	Total	O	0	0
			14	14		
20	C	6	Total	O	0	0
			6	6		
20	D	9	Total	O	0	0
			9	9		
20	E	3	Total	O	0	0
			3	3		
20	F	13	Total	O	0	0
			13	13		
20	G	12	Total	O	0	0
			12	12		
20	H	14	Total	O	0	0
			14	14		

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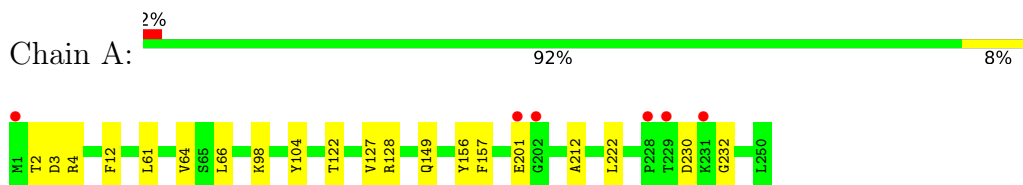
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	I	12	Total O 12 12	0	0
20	J	10	Total O 10 10	0	0
20	K	19	Total O 19 19	0	0
20	L	25	Total O 25 25	0	0
20	M	18	Total O 18 18	0	0
20	N	10	Total O 10 10	0	0
20	O	6	Total O 6 6	0	0
20	P	3	Total O 3 3	0	0
20	Q	7	Total O 7 7	0	0
20	R	5	Total O 5 5	0	0
20	S	3	Total O 3 3	0	0
20	T	8	Total O 8 8	0	0
20	U	16	Total O 16 16	0	0
20	V	10	Total O 10 10	0	0
20	W	10	Total O 10 10	0	0
20	X	15	Total O 15 15	0	0
20	Y	11	Total O 11 11	0	0
20	Z	12	Total O 12 12	0	0
20	a	17	Total O 17 17	0	0
20	b	13	Total O 13 13	0	0

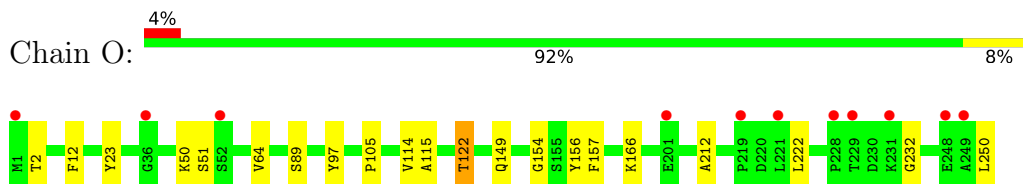
3 Residue-property plots [i](#)

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.

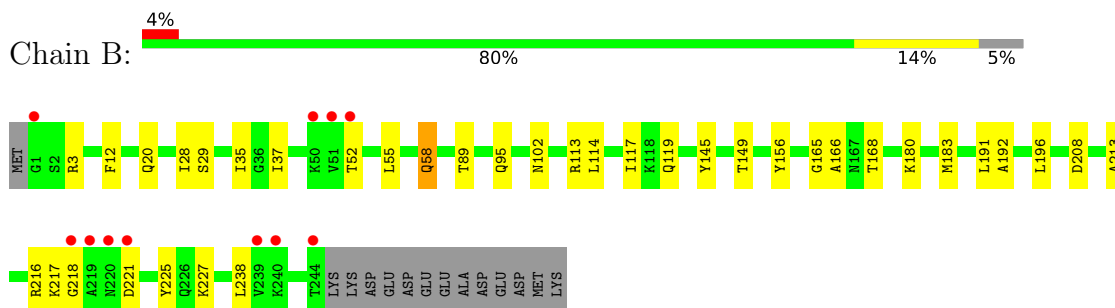
- Molecule 1: Proteasome subunit alpha type-2



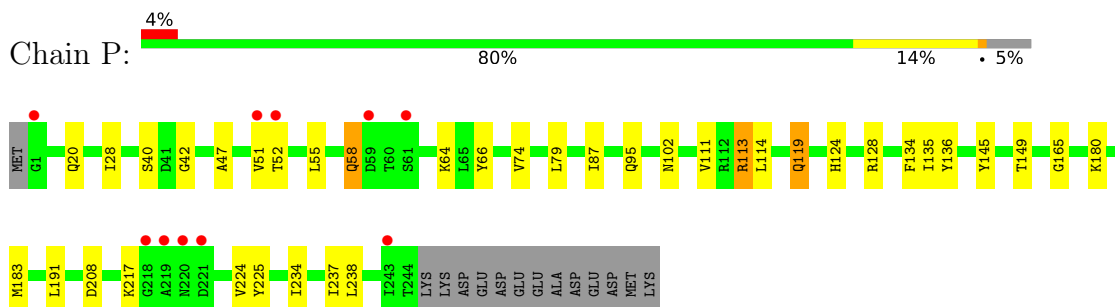
- Molecule 1: Proteasome subunit alpha type-2



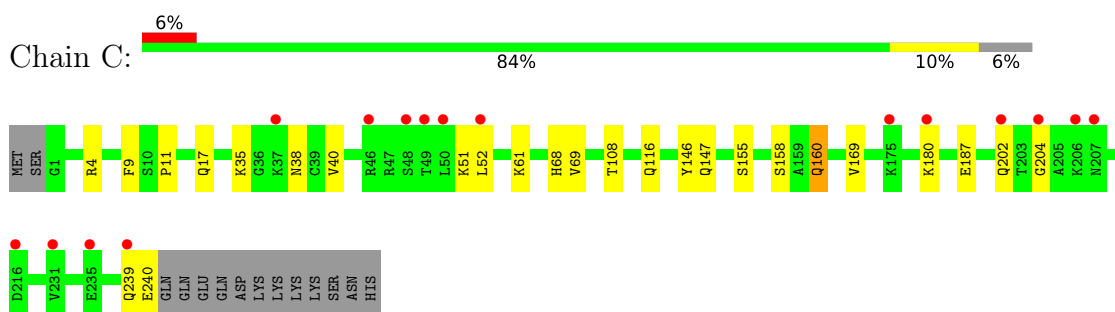
- Molecule 2: Proteasome subunit alpha type-3



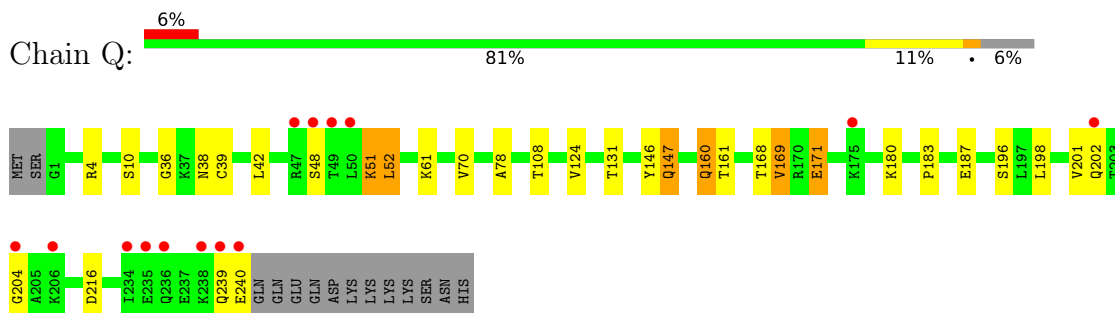
- Molecule 2: Proteasome subunit alpha type-3



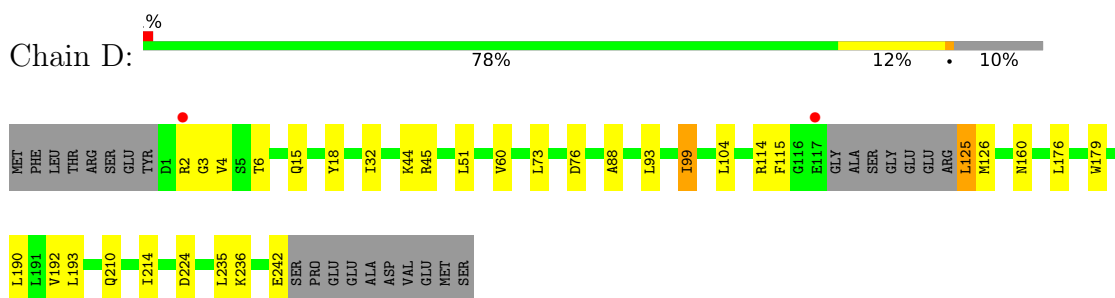
- Molecule 3: Proteasome subunit alpha type-4



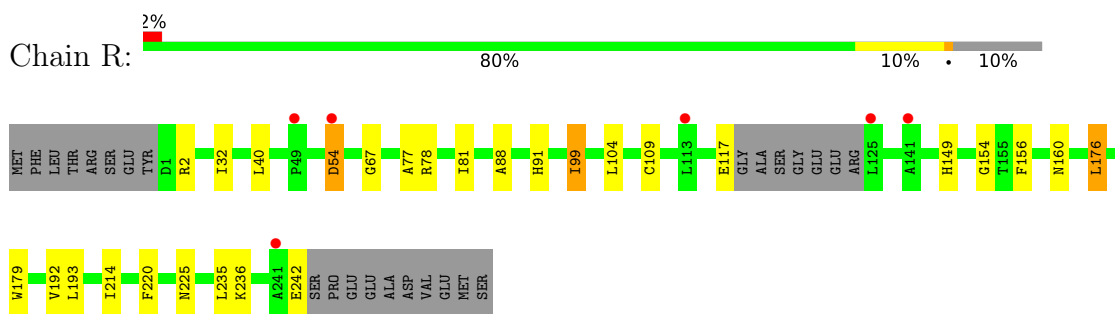
- Molecule 3: Proteasome subunit alpha type-4



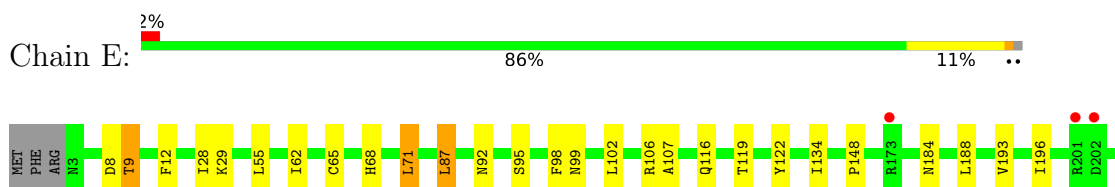
- Molecule 4: Proteasome subunit alpha type-5

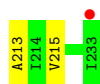


- Molecule 4: Proteasome subunit alpha type-5

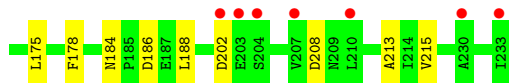
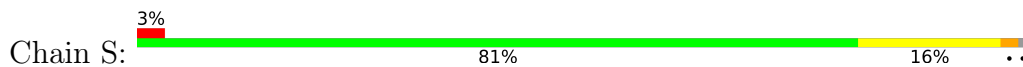


- Molecule 5: Proteasome subunit alpha type-6

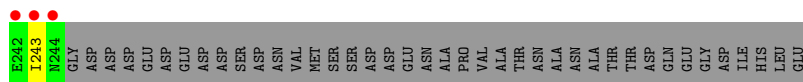
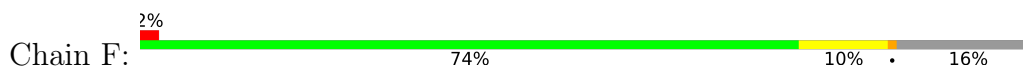




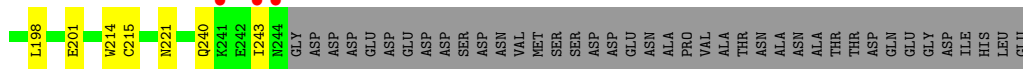
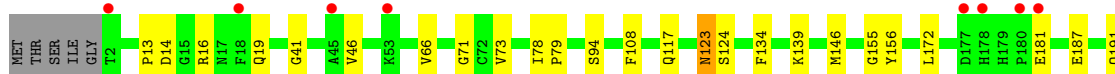
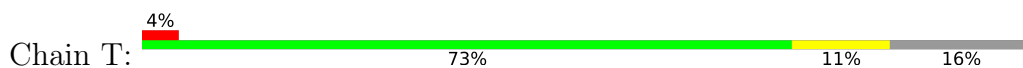
- Molecule 5: Proteasome subunit alpha type-6



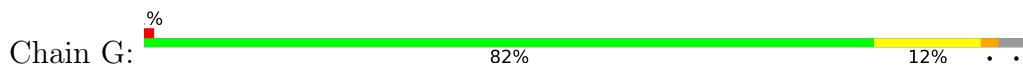
- Molecule 6: Probable proteasome subunit alpha type-7



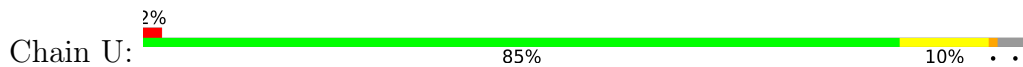
- Molecule 6: Probable proteasome subunit alpha type-7

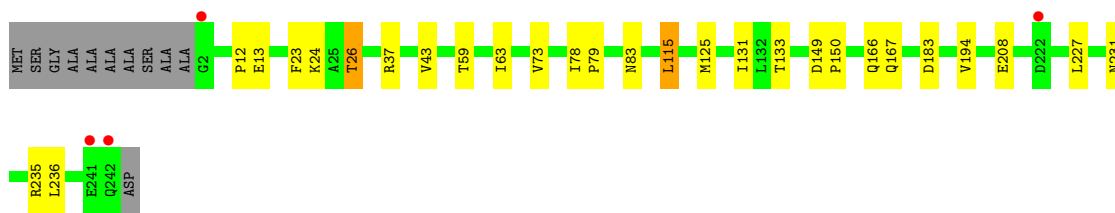


- Molecule 7: Proteasome subunit alpha type-1

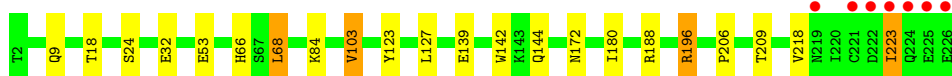
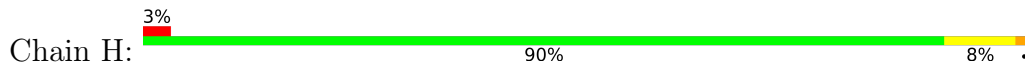


- Molecule 7: Proteasome subunit alpha type-1

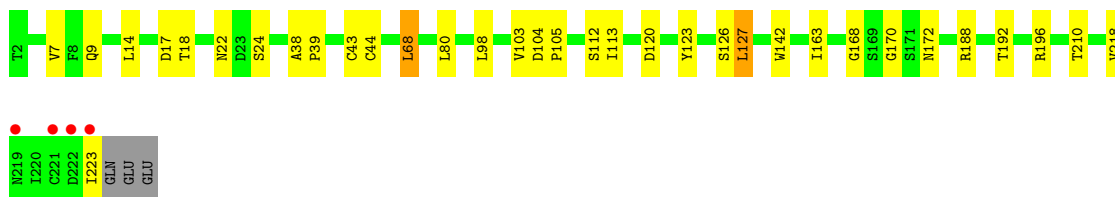
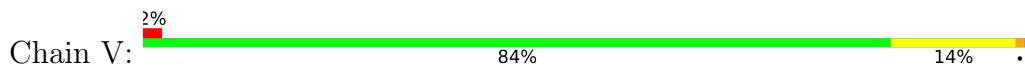




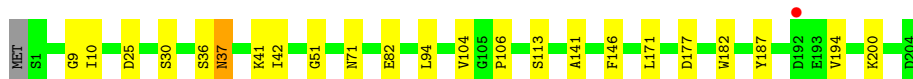
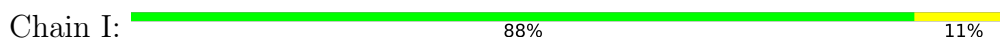
• Molecule 8: Proteasome subunit beta type-10, Proteasome subunit beta type-2



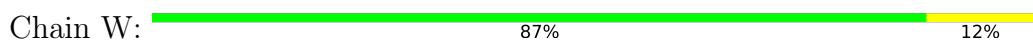
• Molecule 8: Proteasome subunit beta type-10, Proteasome subunit beta type-2



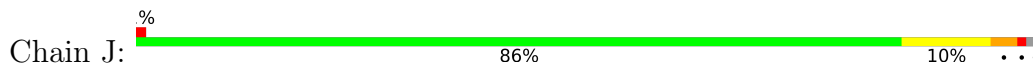
• Molecule 9: Proteasome subunit beta type-3



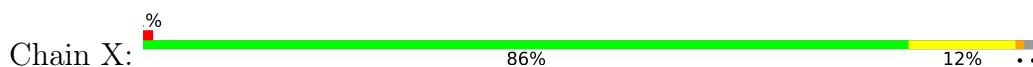
• Molecule 9: Proteasome subunit beta type-3



• Molecule 10: Proteasome subunit beta type-4

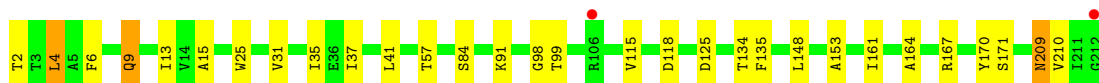
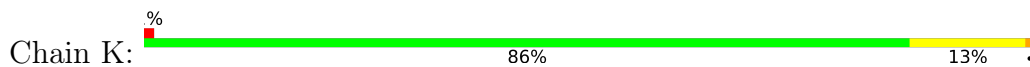


• Molecule 10: Proteasome subunit beta type-4

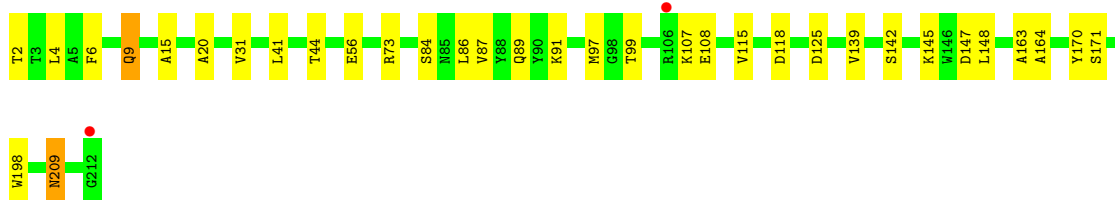
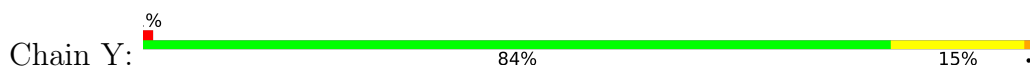




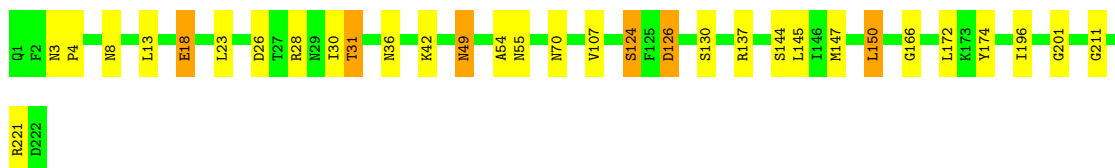
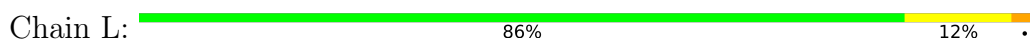
- Molecule 11: Proteasome subunit beta type-5



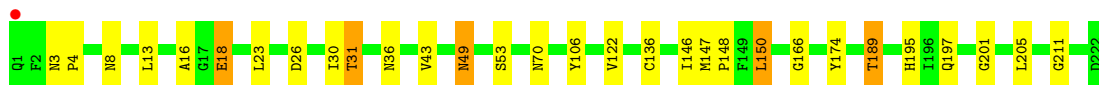
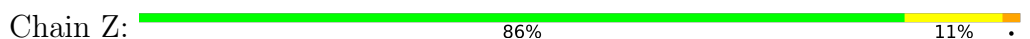
- Molecule 11: Proteasome subunit beta type-5



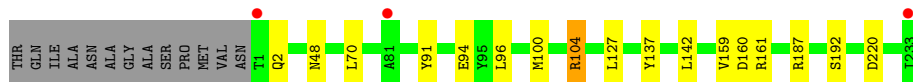
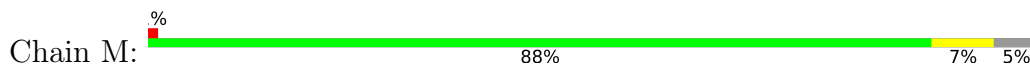
- Molecule 12: Proteasome subunit beta type-6



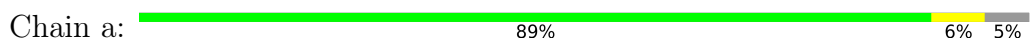
- Molecule 12: Proteasome subunit beta type-6



- Molecule 13: Proteasome subunit beta type-7

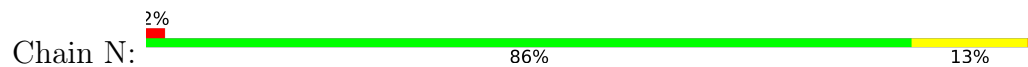


- Molecule 13: Proteasome subunit beta type-7

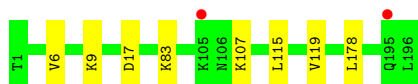




- Molecule 14: Proteasome subunit beta type-1



- Molecule 14: Proteasome subunit beta type-1



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	134.70Å 300.60Å 144.48Å 90.00° 112.83° 90.00°	Depositor
Resolution (Å)	30.00 – 2.75 29.99 – 2.75	Depositor EDS
% Data completeness (in resolution range)	94.9 (30.00-2.75) 95.0 (29.99-2.75)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.98 (at 2.76Å)	Xtrriage
Refinement program	REFMAC 5.8.0267	Depositor
R, R_{free}	0.213 , 0.247 0.220 , 0.251	Depositor DCC
R_{free} test set	12976 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	58.7	Xtrriage
Anisotropy	0.539	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 31.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	49917	wwPDB-VP
Average B, all atoms (Å ²)	70.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.85% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1IFL, SO4, MES, CL, MG

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	0.68	0/1952	0.76	0/2642
1	O	0.68	0/1952	0.77	0/2642
2	B	0.66	0/1934	0.79	0/2618
2	P	0.67	0/1934	0.80	0/2618
3	C	0.69	0/1910	0.79	0/2586
3	Q	0.69	0/1910	0.78	0/2586
4	D	0.69	0/1837	0.79	0/2475
4	R	0.68	0/1837	0.77	0/2475
5	E	0.67	0/1800	0.79	0/2433
5	S	0.68	0/1800	0.76	0/2433
6	F	0.67	0/1932	0.79	0/2609
6	T	0.68	0/1932	0.80	0/2609
7	G	0.68	0/1945	0.80	0/2634
7	U	0.68	0/1945	0.80	0/2634
8	H	0.68	0/1739	0.82	0/2355
8	V	0.67	0/1711	0.81	0/2319
9	I	0.70	0/1611	0.80	0/2174
9	W	0.68	0/1611	0.81	0/2174
10	J	0.65	0/1589	0.79	0/2142
10	X	0.67	0/1589	0.78	0/2142
11	K	0.68	0/1674	0.83	0/2264
11	Y	0.67	0/1674	0.77	0/2264
12	L	0.67	0/1795	0.81	0/2420
12	Z	0.66	0/1795	0.81	0/2420
13	M	0.67	0/1866	0.82	0/2528
13	a	0.68	0/1866	0.86	0/2528
14	N	0.66	0/1541	0.79	0/2087
14	b	0.68	0/1541	0.78	0/2087
All	All	0.68	0/50222	0.80	0/67898

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1915	0	1929	11	0
1	O	1915	0	1929	10	0
2	B	1904	0	1904	21	0
2	P	1904	0	1904	22	0
3	C	1881	0	1895	13	0
3	Q	1881	0	1895	14	0
4	D	1813	0	1797	20	0
4	R	1813	0	1797	16	0
5	E	1773	0	1775	20	0
5	S	1773	0	1775	24	0
6	F	1892	0	1883	16	0
6	T	1892	0	1883	15	0
7	G	1907	0	1901	26	0
7	U	1907	0	1901	14	0
8	H	1709	0	1693	15	0
8	V	1681	0	1673	22	0
9	I	1581	0	1574	17	0
9	W	1581	0	1574	21	0
10	J	1561	0	1569	20	0
10	X	1561	0	1569	13	0
11	K	1637	0	1585	21	0
11	Y	1637	0	1585	24	0
12	L	1757	0	1711	29	0
12	Z	1757	0	1711	19	0
13	M	1835	0	1844	8	0
13	a	1835	0	1844	0	0
14	N	1512	0	1481	17	0
14	b	1512	0	1481	0	0
15	G	1	0	0	0	0
15	I	1	0	0	0	0
15	K	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	N	1	0	0	0	0
15	V	1	0	0	0	0
15	W	1	0	0	0	0
15	Y	1	0	0	0	0
15	Z	1	0	0	0	0
16	G	1	0	0	0	0
16	N	1	0	0	0	0
16	U	1	0	0	0	0
17	H	12	0	13	0	0
17	K	12	0	13	1	0
17	V	12	0	13	0	0
17	Y	12	0	13	0	0
18	H	51	0	0	1	0
18	K	51	0	0	2	0
18	V	51	0	0	3	0
18	Y	51	0	0	2	0
19	K	5	0	0	0	0
19	N	5	0	0	0	0
19	Y	5	0	0	0	0
19	b	5	0	0	0	0
20	A	7	0	0	0	0
20	B	14	0	0	0	0
20	C	6	0	0	0	0
20	D	9	0	0	2	0
20	E	3	0	0	0	0
20	F	13	0	0	0	0
20	G	12	0	0	0	0
20	H	14	0	0	1	0
20	I	12	0	0	0	0
20	J	10	0	0	0	0
20	K	19	0	0	0	0
20	L	25	0	0	0	0
20	M	18	0	0	0	0
20	N	10	0	0	0	0
20	O	6	0	0	0	0
20	P	3	0	0	0	0
20	Q	7	0	0	1	0
20	R	5	0	0	0	0
20	S	3	0	0	0	0
20	T	8	0	0	0	0
20	U	16	0	0	0	0
20	V	10	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	W	10	0	0	0	0
20	X	15	0	0	0	0
20	Y	11	0	0	0	0
20	Z	12	0	0	0	0
20	a	17	0	0	0	0
20	b	13	0	0	0	0
All	All	49917	0	49114	402	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 5.

All (402) 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)
10:X:1:MET:HA	10:X:34:LYS:HE2	1.21	1.14
10:J:3:ILE:CG2	10:J:18:SER:HB3	1.97	0.95
4:D:88:ALA:HA	4:D:99:ILE:HG21	1.55	0.88
12:L:31:THR:HG23	12:L:36:ASN:HD21	1.36	0.86
10:X:1:MET:CA	10:X:34:LYS:HE2	2.09	0.81
7:U:23:PHE:O	7:U:26:THR:HB	1.80	0.81
10:J:16:ALA:HB2	10:J:161:LEU:HD21	1.63	0.81
8:V:218:VAL:HB	9:W:194:VAL:CG1	2.12	0.80
5:E:92:ASN:HD21	12:L:70:ASN:HD21	1.31	0.79
10:J:143:LEU:HD21	11:Y:142:SER:OG	1.87	0.75
10:J:3:ILE:HG21	10:J:18:SER:HB3	1.69	0.74
8:V:218:VAL:HB	9:W:194:VAL:HG11	1.70	0.73
3:C:160:GLN:HE21	3:C:160:GLN:HA	1.54	0.72
5:E:12:PHE:H	6:F:19:GLN:HE22	1.36	0.72
11:Y:31:VAL:HG11	18:Y:304:A1IFL:C53	2.20	0.72
4:D:32:ILE:HD12	4:D:192:VAL:HG23	1.71	0.71
5:S:68:HIS:HE1	5:S:102:LEU:O	1.73	0.71
10:J:3:ILE:CG2	10:J:18:SER:CB	2.69	0.70
12:Z:31:THR:HG23	12:Z:36:ASN:HD21	1.56	0.70
11:Y:87:VAL:HG11	11:Y:97:MET:CE	2.22	0.70
12:L:31:THR:CG2	12:L:36:ASN:HD21	2.04	0.70
11:K:209:ASN:O	9:W:37:ASN:ND2	2.25	0.69
11:K:4:LEU:HD23	11:K:161:ILE:HD11	1.75	0.69
10:J:2:ASP:O	10:J:3:ILE:HB	1.92	0.68
12:L:42:LYS:HD2	12:L:55:ASN:HD22	1.59	0.67
3:Q:51:LYS:O	3:Q:52:LEU:HB2	1.95	0.67
9:W:192:ASP:N	9:W:192:ASP:OD1	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:23:PHE:O	7:G:26:THR:HB	1.95	0.66
14:N:14:LEU:HD11	14:N:100:ALA:HB3	1.77	0.66
10:X:1:MET:SD	10:X:2:ASP:N	2.62	0.66
10:X:16:ALA:HB2	10:X:161:LEU:HD21	1.78	0.66
14:N:6:VAL:HG23	14:N:155:ILE:HD11	1.78	0.65
4:D:114:ARG:HD3	20:D:309:HOH:O	1.97	0.65
12:L:13:LEU:HD13	12:L:150:LEU:HD21	1.80	0.64
9:I:37:ASN:ND2	11:Y:209:ASN:O	2.31	0.63
3:Q:52:LEU:N	20:Q:301:HOH:O	2.30	0.63
3:C:51:LYS:O	3:C:52:LEU:HB2	1.97	0.63
11:Y:209:ASN:HD22	11:Y:209:ASN:H	1.45	0.63
12:L:13:LEU:CD1	12:L:150:LEU:HD21	2.29	0.63
11:Y:4:LEU:HD11	11:Y:15:ALA:HB3	1.79	0.63
2:B:95:GLN:HE22	9:I:71:ASN:HD22	1.47	0.63
4:R:32:ILE:HD12	4:R:192:VAL:HG23	1.80	0.63
2:B:58:GLN:NE2	2:B:208:ASP:HA	2.15	0.62
12:Z:49:ASN:HD21	12:Z:211:GLY:HA2	1.64	0.62
2:P:95:GLN:HE22	9:W:71:ASN:HD22	1.46	0.62
8:V:218:VAL:HB	9:W:194:VAL:HG12	1.80	0.62
4:D:160:ASN:HB3	4:D:179:TRP:CE2	2.34	0.62
10:J:16:ALA:CB	10:J:161:LEU:HD21	2.31	0.61
9:I:9:GLY:HA2	9:I:25:ASP:OD2	2.01	0.61
9:W:194:VAL:HG12	9:W:194:VAL:O	2.02	0.60
8:H:218:VAL:CG2	9:I:194:VAL:HG12	2.32	0.59
11:K:31:VAL:HG11	18:K:304:A1IFL:C53	2.32	0.59
14:N:83:LYS:HG3	14:N:119:VAL:CG2	2.32	0.59
4:R:77:ALA:O	4:R:81:ILE:HG12	2.02	0.59
3:C:9:PHE:H	4:D:15:GLN:HE22	1.48	0.59
11:Y:2:THR:HG21	11:Y:164:ALA:CB	2.33	0.59
1:A:149:GLN:O	1:A:156:TYR:HA	2.03	0.59
12:Z:13:LEU:HD13	12:Z:150:LEU:HD21	1.84	0.59
1:A:222:LEU:HD13	1:A:232:GLY:HA2	1.84	0.58
12:Z:195:HIS:HD2	12:Z:197:GLN:H	1.52	0.58
8:H:103:VAL:HG11	8:H:180:ILE:HA	1.85	0.58
14:N:34:LEU:HD13	14:N:176:VAL:HG23	1.86	0.58
5:S:86:TYR:CD1	5:S:114:LYS:HE2	2.39	0.58
6:T:123:ASN:HD22	6:T:124:SER:N	2.02	0.58
4:D:45:ARG:NH1	20:D:301:HOH:O	2.37	0.57
6:F:123:ASN:C	6:F:123:ASN:HD22	2.07	0.57
10:J:3:ILE:O	10:J:3:ILE:HG23	2.04	0.57
4:R:176:LEU:HD22	5:S:55:LEU:HD22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:29:SER:O	2:B:166:ALA:HA	2.04	0.57
9:I:36:SER:HB2	10:J:126:VAL:HG11	1.87	0.57
12:Z:18:GLU:HG3	12:Z:174:TYR:CD2	2.39	0.57
5:E:92:ASN:HD21	12:L:70:ASN:ND2	2.00	0.56
5:S:12:PHE:H	6:T:19:GLN:HE22	1.53	0.56
1:O:12:PHE:H	2:P:20:GLN:HE22	1.54	0.56
3:C:11:PRO:HA	4:D:18:TYR:CD1	2.41	0.56
4:R:88:ALA:HA	4:R:99:ILE:HG21	1.88	0.56
7:G:167:GLN:HE21	7:G:171:THR:HG23	1.70	0.56
4:D:125:LEU:HD12	4:D:125:LEU:O	2.05	0.55
14:N:36:ARG:HG3	14:N:42:TRP:CE2	2.41	0.55
6:F:123:ASN:HD22	6:F:124:SER:N	2.04	0.55
4:D:99:ILE:HD11	4:D:104:LEU:HB2	1.88	0.55
2:P:225:TYR:CD1	8:V:223:ILE:HG21	2.42	0.55
5:S:92:ASN:HD21	12:Z:70:ASN:HD21	1.54	0.55
18:V:303:A1IFL:C8	18:V:303:A1IFL:C57	2.85	0.55
12:L:31:THR:HG23	12:L:36:ASN:ND2	2.16	0.55
3:Q:198:LEU:HA	3:Q:201:VAL:HG12	1.89	0.55
9:W:10:ILE:HG21	9:W:141:ALA:HB3	1.88	0.54
14:N:55:ILE:HD11	14:N:93:LEU:HD13	1.89	0.54
7:G:126:ARG:HG3	7:G:126:ARG:HH11	1.72	0.54
10:J:3:ILE:HG22	10:J:18:SER:OG	2.08	0.54
6:T:41:GLY:HA3	6:T:215:CYS:O	2.08	0.54
5:E:92:ASN:ND2	12:L:70:ASN:HD21	2.04	0.54
9:I:10:ILE:HG21	9:I:141:ALA:HB3	1.90	0.54
3:C:35:LYS:HG2	3:C:158:SER:O	2.08	0.53
4:R:160:ASN:HB3	4:R:179:TRP:CE2	2.44	0.53
5:S:87:LEU:HD21	5:S:107:ALA:HB1	1.89	0.53
8:V:172:ASN:HD22	8:V:192:THR:HA	1.73	0.53
7:G:78:ILE:HG22	7:G:79:PRO:HD3	1.89	0.53
4:D:93:LEU:CD1	11:K:57:THR:HG22	2.38	0.53
8:H:218:VAL:HB	9:I:194:VAL:CG1	2.38	0.53
11:K:98:GLY:HA3	17:K:302:MES:H32	1.90	0.53
1:O:222:LEU:HD13	1:O:232:GLY:HA2	1.90	0.52
12:L:126:ASP:OD1	12:L:126:ASP:C	2.46	0.52
4:R:67:GLY:HA3	4:R:220:PHE:CE1	2.43	0.52
2:P:113:ARG:CG	2:P:113:ARG:HH21	2.22	0.52
2:P:113:ARG:HH21	2:P:113:ARG:HG3	1.73	0.52
2:B:145:TYR:OH	2:B:217:LYS:HB2	2.09	0.52
11:K:134:THR:HG22	10:X:139:TYR:CZ	2.45	0.52
7:G:73:VAL:HG12	7:G:133:THR:HB	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:13:LEU:CD1	12:Z:150:LEU:HD21	2.39	0.52
2:B:95:GLN:NE2	9:I:71:ASN:HD22	2.07	0.51
10:J:3:ILE:HG23	10:J:18:SER:HB3	1.88	0.51
8:V:126:SER:O	8:V:127:LEU:HD13	2.10	0.51
12:Z:8:ASN:HA	12:Z:30:ILE:O	2.09	0.51
4:D:88:ALA:HA	4:D:99:ILE:HD12	1.91	0.51
7:G:37:ARG:NH2	7:G:183:ASP:HB3	2.26	0.51
7:G:125:MET:HE3	7:G:125:MET:HA	1.93	0.51
3:Q:160:GLN:HA	3:Q:160:GLN:HE21	1.75	0.51
4:R:149:HIS:O	4:R:156:PHE:HA	2.11	0.51
12:L:3:ASN:HD22	12:L:4:PRO:HD2	1.75	0.51
12:L:145:LEU:O	9:W:147:GLY:HA3	2.10	0.51
2:P:74:VAL:HA	2:P:135:ILE:O	2.10	0.51
11:Y:6:PHE:HA	11:Y:125:ASP:O	2.11	0.51
7:G:37:ARG:HH21	7:G:183:ASP:HB3	1.77	0.50
12:L:49:ASN:HD21	12:L:211:GLY:HA2	1.76	0.50
6:F:201:GLU:N	6:F:201:GLU:OE1	2.44	0.50
7:G:166:GLN:HG3	7:G:167:GLN:N	2.25	0.50
11:K:99:THR:HG22	11:K:115:VAL:O	2.11	0.50
5:S:38:ARG:NH1	5:S:39:SER:O	2.44	0.50
2:P:47:ALA:HB1	2:P:64:LYS:HD2	1.93	0.50
11:Y:87:VAL:CG1	11:Y:97:MET:CE	2.88	0.50
11:Y:87:VAL:CG1	11:Y:97:MET:HE1	2.42	0.50
6:F:146:MET:O	6:F:153:TYR:HA	2.12	0.50
2:P:145:TYR:OH	2:P:217:LYS:N	2.45	0.50
2:B:225:TYR:CD1	8:H:223:ILE:HG21	2.46	0.50
10:J:160:LEU:HD12	10:J:160:LEU:O	2.11	0.50
2:P:58:GLN:NE2	2:P:208:ASP:HA	2.27	0.50
14:N:176:VAL:HG12	14:N:178:LEU:HD13	1.93	0.49
4:R:91:HIS:HB3	4:R:99:ILE:CG2	2.41	0.49
9:I:42:ILE:HG21	9:I:187:TYR:CD1	2.48	0.49
1:O:149:GLN:O	1:O:156:TYR:HA	2.12	0.49
2:P:145:TYR:OH	2:P:217:LYS:HB2	2.12	0.49
1:O:97:TYR:CE1	1:O:105:PRO:HA	2.48	0.49
10:X:50:ALA:O	11:Y:91:LYS:NZ	2.45	0.49
1:A:128:ARG:NE	7:G:120:THR:O	2.39	0.49
7:G:147:LYS:O	7:G:154:TYR:HA	2.12	0.49
6:T:198:LEU:HD12	6:T:243:ILE:HG22	1.94	0.49
5:E:12:PHE:HB2	6:F:19:GLN:HE22	1.78	0.49
13:M:127:LEU:HG	13:M:142:LEU:HD12	1.95	0.49
18:H:302:A1IFL:C8	18:H:302:A1IFL:C57	2.91	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:169:VAL:HG23	3:Q:196:SER:HB2	1.95	0.49
1:A:4:ARG:CZ	5:E:122:TYR:HE2	2.26	0.49
6:F:198:LEU:HD12	6:F:243:ILE:HG22	1.95	0.49
11:Y:44:THR:O	11:Y:99:THR:OG1	2.29	0.49
7:G:34:LEU:C	7:G:34:LEU:HD23	2.33	0.48
10:J:49:GLU:O	10:J:53:THR:HG23	2.14	0.48
6:T:14:ASP:OD2	6:T:16:ARG:NH1	2.46	0.48
6:T:123:ASN:HD22	6:T:123:ASN:C	2.17	0.48
9:W:62:LEU:CD1	9:W:104:VAL:HG21	2.44	0.48
11:K:13:ILE:HG13	11:K:153:ALA:HB1	1.95	0.48
12:L:26:ASP:HA	12:L:201:GLY:O	2.13	0.48
7:U:78:ILE:N	7:U:79:PRO:CD	2.76	0.48
5:E:65:CYS:SG	5:E:71:LEU:HD13	2.54	0.48
4:R:91:HIS:HB3	4:R:99:ILE:HG21	1.95	0.48
7:U:149:ASP:HB2	7:U:150:PRO:CD	2.43	0.48
7:U:166:GLN:HG3	7:U:167:GLN:N	2.29	0.48
5:E:62:ILE:HG21	5:E:213:ALA:HB2	1.94	0.48
8:V:104:ASP:HB2	8:V:105:PRO:HD2	1.95	0.48
11:Y:2:THR:OG1	11:Y:171:SER:OG	2.31	0.48
8:H:218:VAL:HB	9:I:194:VAL:HG12	1.94	0.48
9:I:94:LEU:HD11	9:I:106:PRO:HG2	1.96	0.48
11:K:2:THR:OG1	11:K:171:SER:OG	2.32	0.48
5:S:175:LEU:HA	5:S:178:PHE:CE2	2.49	0.48
2:P:134:PHE:O	2:P:149:THR:HA	2.14	0.48
5:S:71:LEU:C	5:S:71:LEU:CD2	2.82	0.48
8:V:80:LEU:HD12	8:V:113:ILE:HD11	1.96	0.48
1:A:64:VAL:HG11	1:A:212:ALA:HB3	1.96	0.47
11:Y:170:TYR:O	18:Y:304:A1IFL:C56	2.62	0.47
3:Q:202:GLN:CG	3:Q:202:GLN:O	2.61	0.47
1:A:127:VAL:HG12	7:G:122:ARG:HD2	1.96	0.47
9:W:36:SER:HB2	10:X:126:VAL:HG11	1.96	0.47
3:C:202:GLN:O	3:C:202:GLN:HG2	2.14	0.47
5:S:71:LEU:HA	5:S:132:LEU:O	2.14	0.47
2:B:149:THR:O	2:B:156:TYR:HA	2.13	0.47
4:D:3:GLY:O	4:D:6:THR:OG1	2.21	0.47
8:V:112:SER:OG	8:V:120:ASP:HB2	2.13	0.47
11:Y:87:VAL:HG11	11:Y:97:MET:HE2	1.95	0.47
7:G:83:ASN:C	7:G:83:ASN:HD22	2.18	0.47
11:K:9:GLN:NE2	11:K:148:LEU:O	2.48	0.47
2:B:180:LYS:O	2:B:183:MET:HB2	2.15	0.47
4:D:4:VAL:HG13	4:D:15:GLN:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:12:PHE:H	6:F:19:GLN:NE2	2.10	0.47
11:K:4:LEU:HD21	11:K:15:ALA:HB3	1.97	0.47
2:P:42:GLY:HA2	2:P:145:TYR:CE1	2.50	0.47
6:T:13:PRO:O	7:U:24:LYS:HD2	2.15	0.47
9:W:27:ARG:HD3	9:W:179:LEU:O	2.15	0.47
9:W:65:MET:O	9:W:68:TYR:HB3	2.14	0.47
7:G:149:ASP:HB2	7:G:150:PRO:CD	2.45	0.47
5:S:92:ASN:ND2	12:Z:70:ASN:HD21	2.13	0.47
8:V:126:SER:O	8:V:127:LEU:CD1	2.63	0.47
7:G:78:ILE:CG2	7:G:79:PRO:HD3	2.45	0.47
12:L:8:ASN:HA	12:L:30:ILE:O	2.15	0.47
3:Q:108:THR:HG21	3:Q:146:TYR:HB3	1.97	0.47
5:E:87:LEU:HD21	5:E:107:ALA:HB1	1.96	0.46
5:S:131:LEU:HB2	5:S:146:PHE:HB3	1.97	0.46
4:D:73:LEU:O	4:D:76:ASP:HB2	2.15	0.46
5:E:28:ILE:HD11	5:E:148:PRO:HD3	1.97	0.46
5:S:71:LEU:C	5:S:71:LEU:HD22	2.36	0.46
8:V:163:ILE:HG23	8:V:170:GLY:HA2	1.97	0.46
14:N:6:VAL:HG13	14:N:124:TYR:HB2	1.97	0.46
2:P:124:HIS:HB3	3:Q:124:VAL:HG12	1.96	0.46
7:U:73:VAL:HG12	7:U:133:THR:HB	1.98	0.46
3:C:68:HIS:CE1	3:C:69:VAL:HG23	2.50	0.46
3:C:202:GLN:O	3:C:202:GLN:CG	2.63	0.46
14:N:152:VAL:HA	14:N:175:MET:HE3	1.98	0.46
4:R:54:ASP:OD1	4:R:54:ASP:N	2.39	0.46
4:R:176:LEU:HA	5:S:55:LEU:HD21	1.98	0.46
5:S:118:ASN:N	5:S:118:ASN:HD22	2.14	0.46
12:Z:31:THR:CG2	12:Z:36:ASN:HD21	2.25	0.46
2:B:12:PHE:H	3:C:17:GLN:HE22	1.63	0.45
3:C:108:THR:HG21	3:C:146:TYR:HB3	1.99	0.45
5:E:99:ASN:HB2	13:M:94:GLU:HG2	1.98	0.45
10:J:46:PHE:HD1	10:J:53:THR:HB	1.80	0.45
11:K:170:TYR:O	18:K:304:A1IFL:C56	2.65	0.45
11:Y:145:LYS:HB2	11:Y:148:LEU:CD1	2.47	0.45
7:G:235:ARG:HA	7:G:235:ARG:NE	2.32	0.45
1:O:23:TYR:CD1	7:U:12:PRO:HA	2.52	0.45
12:Z:16:ALA:HB2	12:Z:122:VAL:HG23	1.99	0.45
6:F:95:PHE:CE1	6:F:103:ILE:HA	2.52	0.45
6:F:200:HIS:CG	6:F:200:HIS:O	2.70	0.45
7:G:78:ILE:N	7:G:79:PRO:CD	2.79	0.45
11:K:209:ASN:ND2	11:K:210:VAL:HG23	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:89:SER:OG	1:O:114:VAL:HG22	2.16	0.45
4:R:99:ILE:HD11	4:R:104:LEU:HB2	1.99	0.45
2:P:234:ILE:O	2:P:237:ILE:HG22	2.17	0.45
8:H:196:ARG:NH1	12:Z:189:THR:HB	2.32	0.44
14:N:14:LEU:O	14:N:175:MET:HA	2.17	0.44
10:X:11:ASP:OD1	10:X:11:ASP:N	2.50	0.44
2:B:28:ILE:O	2:B:165:GLY:HA2	2.17	0.44
2:B:114:LEU:HD23	2:B:114:LEU:HA	1.84	0.44
3:C:35:LYS:HA	3:C:40:VAL:HA	1.99	0.44
10:J:46:PHE:CD1	10:J:53:THR:HB	2.52	0.44
12:L:28:ARG:HG2	12:L:30:ILE:HG23	1.99	0.44
8:V:192:THR:HG22	8:V:192:THR:O	2.17	0.44
8:V:210:THR:HG21	9:W:167:SER:HB3	1.99	0.44
12:Z:3:ASN:HD22	12:Z:4:PRO:HD2	1.82	0.44
4:R:91:HIS:CD2	4:R:99:ILE:HG22	2.52	0.44
8:V:14:LEU:HB3	8:V:44:CYS:SG	2.57	0.44
10:X:19:LYS:HD2	10:X:31:SER:HA	1.99	0.44
11:K:2:THR:HG21	11:K:164:ALA:CB	2.48	0.44
3:Q:42:LEU:HD11	3:Q:70:VAL:HG23	1.99	0.44
5:S:71:LEU:HD22	5:S:71:LEU:O	2.17	0.44
8:V:218:VAL:CB	9:W:194:VAL:HG12	2.46	0.44
18:V:303:A1IFL:C57	18:V:303:A1IFL:N4	2.79	0.44
2:B:145:TYR:OH	2:B:217:LYS:N	2.48	0.44
8:H:18:THR:HG23	8:H:172:ASN:O	2.18	0.44
8:H:218:VAL:HG23	9:I:194:VAL:HG12	1.99	0.44
14:N:163:ILE:HG23	14:N:170:GLY:HA2	1.98	0.44
1:O:64:VAL:HG11	1:O:212:ALA:CB	2.48	0.44
5:E:95:SER:O	5:E:99:ASN:HA	2.18	0.44
8:H:24:SER:HB2	20:H:403:HOH:O	2.18	0.44
12:L:4:PRO:O	13:M:104:ARG:NH1	2.46	0.44
12:L:55:ASN:O	12:L:107:VAL:HA	2.18	0.44
12:L:42:LYS:HD2	12:L:55:ASN:ND2	2.30	0.44
6:T:14:ASP:CB	6:T:16:ARG:HD3	2.48	0.44
11:Y:56:GLU:OE2	11:Y:99:THR:OG1	2.36	0.44
12:Z:43:VAL:HG12	12:Z:205:LEU:HD22	2.00	0.44
4:D:93:LEU:HD12	11:K:57:THR:HG22	2.00	0.43
5:E:68:HIS:HE1	5:E:102:LEU:O	2.01	0.43
7:G:101:TYR:OH	8:H:66:HIS:HE1	2.01	0.43
7:G:126:ARG:HH11	7:G:126:ARG:CG	2.31	0.43
14:N:67:THR:HA	14:N:71:GLY:O	2.18	0.43
5:S:48:LEU:O	5:S:61:LYS:HE2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:200:LYS:HE3	11:Y:198:TRP:CE2	2.52	0.43
11:K:135:PHE:CE1	11:K:167:ARG:HB3	2.53	0.43
4:D:115:PHE:HA	4:D:126:MET:O	2.18	0.43
6:F:17:ASN:ND2	6:F:20:VAL:HG23	2.34	0.43
6:F:78:ILE:HB	6:F:79:PRO:HD3	2.01	0.43
9:I:41:LYS:O	9:I:51:GLY:HA2	2.18	0.43
3:Q:131:THR:O	3:Q:147:GLN:HA	2.19	0.43
6:T:146:MET:HB3	6:T:156:TYR:CE1	2.54	0.43
12:Z:26:ASP:HA	12:Z:201:GLY:O	2.17	0.43
6:F:216:SER:HB3	6:F:219:GLU:HB2	2.01	0.43
9:I:104:VAL:HG23	9:I:106:PRO:HD3	1.99	0.43
12:Z:147:MET:N	12:Z:148:PRO:CD	2.81	0.43
1:A:64:VAL:HG11	1:A:212:ALA:CB	2.48	0.43
7:G:125:MET:HE2	7:G:125:MET:HB3	1.92	0.43
10:J:174:MET:HA	10:X:174:MET:HA	2.00	0.43
6:T:78:ILE:HB	6:T:79:PRO:HD3	2.01	0.43
7:U:115:LEU:HD12	7:U:115:LEU:HA	1.83	0.43
2:B:3:ARG:CZ	5:E:122:TYR:OH	2.66	0.43
7:G:68:ARG:O	7:G:223:LYS:HA	2.19	0.43
9:I:141:ALA:HB2	9:I:177:ASP:HB2	2.01	0.43
12:L:36:ASN:HB3	13:M:137:TYR:CD1	2.53	0.43
12:L:54:ALA:HB1	12:L:107:VAL:HG21	2.00	0.43
6:F:9:SER:HB2	7:G:126:ARG:HD3	2.01	0.43
12:L:18:GLU:HG3	12:L:174:TYR:CD2	2.54	0.43
2:B:89:THR:HG21	2:B:117:ILE:HD13	2.01	0.43
5:E:193:VAL:O	5:E:196:ILE:HG22	2.19	0.43
2:P:114:LEU:HD23	2:P:114:LEU:HA	1.91	0.43
3:C:155:SER:HB2	4:D:51:LEU:HD11	2.00	0.42
5:E:65:CYS:SG	5:E:71:LEU:CD1	3.07	0.42
8:H:139:GLU:OE1	14:N:29:ARG:NE	2.51	0.42
10:J:36:ARG:NH1	10:J:58:GLU:OE2	2.52	0.42
8:H:206:PRO:O	8:H:209:THR:OG1	2.20	0.42
12:L:124:SER:HB2	12:L:137:ARG:HG2	2.00	0.42
14:N:13:ILE:HG21	14:N:175:MET:CE	2.49	0.42
11:Y:2:THR:HG21	11:Y:164:ALA:HB3	2.00	0.42
11:Y:107:LYS:HG3	11:Y:108:GLU:HG3	2.01	0.42
5:S:9:THR:HG21	5:S:119:THR:HA	2.01	0.42
10:X:1:MET:HG2	10:X:34:LYS:CE	2.49	0.42
10:X:92:ILE:HD12	10:X:92:ILE:HA	1.92	0.42
11:K:25:TRP:CZ3	12:L:144:SER:HA	2.55	0.42
12:L:49:ASN:HD22	12:L:49:ASN:HA	1.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:43:CYS:SG	8:V:98:LEU:HB3	2.59	0.42
12:L:196:ILE:HG12	8:V:24:SER:O	2.20	0.42
1:O:122:THR:HG22	2:P:128:ARG:HH21	1.85	0.42
2:P:111:VAL:HG22	2:P:136:TYR:CG	2.55	0.42
9:W:52:ILE:HG22	9:W:59:VAL:HG22	2.00	0.42
11:Y:139:VAL:HG21	11:Y:163:ALA:HB2	2.01	0.42
4:D:104:LEU:HD13	4:D:104:LEU:C	2.41	0.42
1:O:122:THR:CG2	2:P:128:ARG:HH21	2.32	0.42
11:Y:99:THR:HG22	11:Y:115:VAL:O	2.19	0.42
1:A:222:LEU:HD12	1:A:222:LEU:HA	1.92	0.42
2:B:213:ALA:HA	2:B:227:LYS:O	2.20	0.42
7:G:43:VAL:HG11	7:G:194:VAL:HA	2.01	0.42
9:I:82:GLU:OE2	9:I:113:SER:OG	2.37	0.42
13:M:159:VAL:HG23	13:M:159:VAL:O	2.20	0.42
2:P:119:GLN:HG3	3:Q:78:ALA:HB1	2.02	0.41
8:V:123:TYR:HB3	8:V:142:TRP:CZ2	2.53	0.41
3:C:155:SER:HB2	4:D:51:LEU:CD1	2.50	0.41
8:H:123:TYR:HB3	8:H:142:TRP:CZ2	2.55	0.41
14:N:32:ASP:OD2	14:N:185:ARG:NH2	2.54	0.41
11:K:37:ILE:HB	11:K:41:LEU:HB3	2.01	0.41
14:N:6:VAL:HG13	14:N:124:TYR:CB	2.50	0.41
3:Q:160:GLN:HG3	3:Q:161:THR:N	2.36	0.41
5:S:8:ASP:OD1	5:S:10:VAL:HG12	2.20	0.41
5:S:62:ILE:HG21	5:S:213:ALA:HB2	2.01	0.41
5:S:77:ALA:N	5:S:78:PRO:CD	2.84	0.41
7:U:26:THR:HG21	7:U:131:ILE:HD12	2.03	0.41
7:U:37:ARG:NH2	7:U:183:ASP:HB3	2.35	0.41
7:U:227:LEU:HB3	7:U:231:ASN:HB2	2.02	0.41
6:F:116:VAL:HG21	6:F:147:LEU:HD21	2.02	0.41
11:K:6:PHE:HA	11:K:125:ASP:O	2.20	0.41
2:P:28:ILE:O	2:P:165:GLY:HA2	2.20	0.41
12:Z:43:VAL:HG22	12:Z:53:SER:HB2	2.02	0.41
2:B:165:GLY:O	2:B:168:THR:HG23	2.20	0.41
7:G:73:VAL:CG1	7:G:133:THR:HB	2.50	0.41
10:J:50:ALA:O	11:K:91:LYS:NZ	2.53	0.41
6:T:66:VAL:HG11	6:T:108:PHE:CE1	2.56	0.41
6:T:187:GLU:O	6:T:191:GLN:HG2	2.19	0.41
5:E:98:PHE:O	13:M:91:TYR:HA	2.21	0.41
11:Y:86:LEU:O	11:Y:89:GLN:HB2	2.19	0.41
2:B:216:ARG:C	2:B:218:GLY:H	2.24	0.41
8:H:68:LEU:HD12	8:H:68:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:R:67:GLY:HA3	4:R:220:PHE:CD1	2.56	0.41
8:V:18:THR:HG21	8:V:172:ASN:HB2	2.02	0.41
10:X:130:TYR:CB	10:X:144:LEU:HD13	2.51	0.41
1:A:12:PHE:H	2:B:20:GLN:HE22	1.69	0.41
1:A:66:LEU:C	1:A:66:LEU:HD23	2.41	0.41
2:B:216:ARG:HB3	2:B:218:GLY:H	1.86	0.41
4:D:44:LYS:HE3	4:D:210:GLN:HB2	2.03	0.41
6:F:175:LEU:HD21	6:F:191:GLN:NE2	2.35	0.41
10:J:35:THR:HG23	10:J:43:LEU:HD11	2.02	0.41
12:L:221:ARG:NH2	13:M:160:ASP:O	2.54	0.41
3:Q:36:GLY:N	3:Q:39:CYS:O	2.51	0.41
3:Q:168:THR:O	3:Q:171:GLU:HB3	2.20	0.41
4:R:109:CYS:HB3	4:R:154:GLY:O	2.21	0.41
5:S:127:TYR:O	5:S:148:PRO:CB	2.69	0.41
6:T:71:GLY:O	6:T:134:PHE:HA	2.20	0.41
6:T:155:GLY:HA3	7:U:59:THR:HG21	2.02	0.41
9:W:62:LEU:HD23	9:W:62:LEU:HA	1.95	0.41
9:W:73:TYR:CZ	9:W:77:GLU:HG3	2.56	0.41
11:Y:20:ALA:HB2	11:Y:31:VAL:HG21	2.01	0.41
14:N:83:LYS:HG3	14:N:119:VAL:HG22	2.03	0.41
2:P:180:LYS:O	2:P:183:MET:HB2	2.21	0.41
5:S:92:ASN:HD21	12:Z:70:ASN:ND2	2.16	0.41
5:S:134:ILE:HD12	5:S:215:VAL:HG12	2.03	0.41
7:U:43:VAL:HG11	7:U:194:VAL:HA	2.02	0.41
1:A:98:LYS:HE3	1:A:104:TYR:CZ	2.56	0.40
13:M:96:LEU:O	13:M:100:MET:HG2	2.22	0.40
2:B:35:ILE:HD12	2:B:196:LEU:HG	2.02	0.40
10:J:2:ASP:O	10:J:3:ILE:CB	2.67	0.40
4:R:78:ARG:HA	4:R:78:ARG:HD3	1.92	0.40
6:T:46:VAL:HB	6:T:73:VAL:HG21	2.02	0.40
9:W:62:LEU:HD11	9:W:104:VAL:HG21	2.02	0.40
11:K:161:ILE:HD13	11:K:161:ILE:HA	1.93	0.40
8:V:168:GLY:O	18:V:303:A1IFL:C56	2.69	0.40
12:Z:146:ILE:HG22	12:Z:150:LEU:HD22	2.04	0.40
5:E:134:ILE:HD12	5:E:215:VAL:HG12	2.02	0.40
7:G:33:SER:O	7:G:161:ALA:HA	2.22	0.40
8:H:32:GLU:OE1	8:H:188:ARG:HD2	2.22	0.40
12:L:147:MET:CE	9:W:176:ARG:NH2	2.85	0.40
1:O:115:ALA:HB1	1:O:154:GLY:O	2.21	0.40
8:V:38:ALA:HB1	8:V:39:PRO:CD	2.51	0.40
8:V:68:LEU:HD12	8:V:68:LEU:HA	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:125:LEU:HD23	9:W:125:LEU:H	1.87	0.40
2:B:37:ILE:HD12	2:B:192:ALA:HB2	2.03	0.40
5:E:9:THR:HG21	5:E:119:THR:HA	2.02	0.40
12:L:30:ILE:C	12:L:30:ILE:HD12	2.42	0.40
2:P:66:TYR:CG	2:P:87:ILE:HD13	2.56	0.40
7:U:63:ILE:HG12	7:U:73:VAL:HG23	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	248/250 (99%)	234 (94%)	13 (5%)	1 (0%)	34 53
1	O	248/250 (99%)	238 (96%)	8 (3%)	2 (1%)	19 34
2	B	242/258 (94%)	234 (97%)	7 (3%)	1 (0%)	34 53
2	P	242/258 (94%)	235 (97%)	7 (3%)	0	100 100
3	C	238/254 (94%)	227 (95%)	9 (4%)	2 (1%)	19 34
3	Q	238/254 (94%)	230 (97%)	4 (2%)	4 (2%)	9 16
4	D	231/260 (89%)	223 (96%)	7 (3%)	1 (0%)	34 53
4	R	231/260 (89%)	222 (96%)	8 (4%)	1 (0%)	34 53
5	E	229/234 (98%)	219 (96%)	10 (4%)	0	100 100
5	S	229/234 (98%)	220 (96%)	9 (4%)	0	100 100
6	F	241/288 (84%)	236 (98%)	5 (2%)	0	100 100
6	T	241/288 (84%)	236 (98%)	5 (2%)	0	100 100
7	G	239/252 (95%)	235 (98%)	3 (1%)	1 (0%)	34 53
7	U	239/252 (95%)	232 (97%)	7 (3%)	0	100 100
8	H	223/225 (99%)	215 (96%)	7 (3%)	1 (0%)	34 53

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	V	220/225 (98%)	211 (96%)	9 (4%)	0	100	100
9	I	202/205 (98%)	188 (93%)	14 (7%)	0	100	100
9	W	202/205 (98%)	190 (94%)	12 (6%)	0	100	100
10	J	193/198 (98%)	184 (95%)	6 (3%)	3 (2%)	9	16
10	X	193/198 (98%)	181 (94%)	11 (6%)	1 (0%)	29	47
11	K	209/211 (99%)	197 (94%)	12 (6%)	0	100	100
11	Y	209/211 (99%)	200 (96%)	8 (4%)	1 (0%)	29	47
12	L	220/222 (99%)	211 (96%)	8 (4%)	1 (0%)	29	47
12	Z	220/222 (99%)	212 (96%)	7 (3%)	1 (0%)	29	47
13	M	232/246 (94%)	224 (97%)	8 (3%)	0	100	100
13	a	232/246 (94%)	219 (94%)	11 (5%)	2 (1%)	17	31
14	N	194/196 (99%)	188 (97%)	6 (3%)	0	100	100
14	b	194/196 (99%)	184 (95%)	10 (5%)	0	100	100
All	All	6279/6598 (95%)	6025 (96%)	231 (4%)	23 (0%)	34	53

All (23) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
10	J	3	ILE
1	A	3	ASP
3	C	204	GLY
3	C	239	GLN
1	O	50	LYS
1	O	166	LYS
3	Q	52	LEU
3	Q	204	GLY
3	Q	239	GLN
12	L	166	GLY
12	Z	166	GLY
4	D	2	ARG
3	Q	183	PRO
4	R	2	ARG
11	Y	9	GLN
13	a	83	ALA
2	B	221	ASP
8	H	223	ILE
7	G	105	CYS

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Mol	Chain	Res	Type
10	J	24	GLY
10	X	24	GLY
13	a	229	GLY
10	J	9	VAL

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	209/209 (100%)	203 (97%)	6 (3%)	42 62
1	O	209/209 (100%)	204 (98%)	5 (2%)	49 68
2	B	203/216 (94%)	195 (96%)	8 (4%)	32 52
2	P	203/216 (94%)	191 (94%)	12 (6%)	19 34
3	C	212/226 (94%)	202 (95%)	10 (5%)	26 45
3	Q	212/226 (94%)	198 (93%)	14 (7%)	16 29
4	D	194/215 (90%)	183 (94%)	11 (6%)	20 36
4	R	194/215 (90%)	183 (94%)	11 (6%)	20 36
5	E	190/193 (98%)	180 (95%)	10 (5%)	22 38
5	S	190/193 (98%)	175 (92%)	15 (8%)	12 22
6	F	201/239 (84%)	191 (95%)	10 (5%)	24 42
6	T	201/239 (84%)	191 (95%)	10 (5%)	24 42
7	G	206/210 (98%)	198 (96%)	8 (4%)	32 52
7	U	206/210 (98%)	198 (96%)	8 (4%)	32 52
8	H	183/183 (100%)	175 (96%)	8 (4%)	28 47
8	V	180/183 (98%)	171 (95%)	9 (5%)	24 42
9	I	172/173 (99%)	167 (97%)	5 (3%)	42 62
9	W	172/173 (99%)	165 (96%)	7 (4%)	30 50
10	J	173/175 (99%)	161 (93%)	12 (7%)	15 27
10	X	173/175 (99%)	162 (94%)	11 (6%)	17 31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	K	168/168 (100%)	162 (96%)	6 (4%)	35	55
11	Y	168/168 (100%)	161 (96%)	7 (4%)	30	49
12	L	185/185 (100%)	176 (95%)	9 (5%)	25	43
12	Z	185/185 (100%)	177 (96%)	8 (4%)	29	48
13	M	200/208 (96%)	192 (96%)	8 (4%)	31	51
13	a	200/208 (96%)	188 (94%)	12 (6%)	19	33
14	N	162/162 (100%)	157 (97%)	5 (3%)	40	60
14	b	162/162 (100%)	154 (95%)	8 (5%)	25	43
All	All	5313/5524 (96%)	5060 (95%)	253 (5%)	25	44

All (253) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	THR
1	A	61	LEU
1	A	122	THR
1	A	157	PHE
1	A	201	GLU
1	A	230	ASP
2	B	52	THR
2	B	55	LEU
2	B	58	GLN
2	B	102	ASN
2	B	113	ARG
2	B	119	GLN
2	B	191	LEU
2	B	238	LEU
3	C	4	ARG
3	C	38	ASN
3	C	61	LYS
3	C	116	GLN
3	C	147	GLN
3	C	160	GLN
3	C	169	VAL
3	C	180	LYS
3	C	187	GLU
3	C	240	GLU
4	D	60	VAL
4	D	99	ILE

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Mol	Chain	Res	Type
4	D	125	LEU
4	D	176	LEU
4	D	190	LEU
4	D	193	LEU
4	D	214	ILE
4	D	224	ASP
4	D	235	LEU
4	D	236	LYS
4	D	242	GLU
5	E	8	ASP
5	E	9	THR
5	E	29	LYS
5	E	55	LEU
5	E	71	LEU
5	E	87	LEU
5	E	106	ARG
5	E	116	GLN
5	E	184	ASN
5	E	188	LEU
6	F	94	SER
6	F	117	GLN
6	F	123	ASN
6	F	139	LYS
6	F	172	LEU
6	F	181	GLU
6	F	201	GLU
6	F	214	TRP
6	F	221	ASN
6	F	240	GLN
7	G	83	ASN
7	G	115	LEU
7	G	122	ARG
7	G	125	MET
7	G	208	GLU
7	G	215	GLU
7	G	235	ARG
7	G	236	LEU
8	H	9	GLN
8	H	53	GLU
8	H	68	LEU
8	H	84	LYS
8	H	103	VAL

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Mol	Chain	Res	Type
8	H	127	LEU
8	H	144	GLN
8	H	196	ARG
9	I	30	SER
9	I	37	ASN
9	I	146	PHE
9	I	171	LEU
9	I	182	TRP
10	J	2	ASP
10	J	3	ILE
10	J	35	THR
10	J	49	GLU
10	J	78	GLN
10	J	90	LYS
10	J	99	GLN
10	J	130	TYR
10	J	136	SER
10	J	160	LEU
10	J	165	VAL
10	J	174	MET
11	K	4	LEU
11	K	9	GLN
11	K	35	ILE
11	K	84	SER
11	K	118	ASP
11	K	209	ASN
12	L	18	GLU
12	L	23	LEU
12	L	31	THR
12	L	49	ASN
12	L	124	SER
12	L	126	ASP
12	L	130	SER
12	L	150	LEU
12	L	172	LEU
13	M	2	GLN
13	M	48	ASN
13	M	70	LEU
13	M	104	ARG
13	M	161	ARG
13	M	187	ARG
13	M	192	SER

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Mol	Chain	Res	Type
13	M	220	ASP
14	N	6	VAL
14	N	9	LYS
14	N	83	LYS
14	N	104	ASP
14	N	107	LYS
1	O	2	THR
1	O	51	SER
1	O	122	THR
1	O	157	PHE
1	O	250	LEU
2	P	40	SER
2	P	51	VAL
2	P	52	THR
2	P	55	LEU
2	P	58	GLN
2	P	79	LEU
2	P	102	ASN
2	P	113	ARG
2	P	119	GLN
2	P	191	LEU
2	P	224	VAL
2	P	238	LEU
3	Q	4	ARG
3	Q	10	SER
3	Q	38	ASN
3	Q	48	SER
3	Q	51	LYS
3	Q	61	LYS
3	Q	147	GLN
3	Q	160	GLN
3	Q	169	VAL
3	Q	171	GLU
3	Q	180	LYS
3	Q	187	GLU
3	Q	216	ASP
3	Q	240	GLU
4	R	40	LEU
4	R	54	ASP
4	R	99	ILE
4	R	117	GLU
4	R	176	LEU

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Mol	Chain	Res	Type
4	R	193	LEU
4	R	214	ILE
4	R	225	ASN
4	R	235	LEU
4	R	236	LYS
4	R	242	GLU
5	S	8	ASP
5	S	9	THR
5	S	29	LYS
5	S	54	GLU
5	S	55	LEU
5	S	56	SER
5	S	71	LEU
5	S	99	ASN
5	S	116	GLN
5	S	118	ASN
5	S	184	ASN
5	S	186	ASP
5	S	188	LEU
5	S	202	ASP
5	S	208	ASP
6	T	94	SER
6	T	117	GLN
6	T	123	ASN
6	T	139	LYS
6	T	172	LEU
6	T	181	GLU
6	T	201	GLU
6	T	214	TRP
6	T	221	ASN
6	T	240	GLN
7	U	13	GLU
7	U	26	THR
7	U	83	ASN
7	U	115	LEU
7	U	125	MET
7	U	208	GLU
7	U	235	ARG
7	U	236	LEU
8	V	7	VAL
8	V	9	GLN
8	V	17	ASP

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Mol	Chain	Res	Type
8	V	22	ASN
8	V	68	LEU
8	V	103	VAL
8	V	127	LEU
8	V	188	ARG
8	V	196	ARG
9	W	31	GLN
9	W	37	ASN
9	W	134	ASP
9	W	171	LEU
9	W	182	TRP
9	W	190	LYS
9	W	192	ASP
10	X	2	ASP
10	X	3	ILE
10	X	35	THR
10	X	78	GLN
10	X	90	LYS
10	X	99	GLN
10	X	110	LYS
10	X	136	SER
10	X	172	MET
10	X	174	MET
10	X	193	ASP
11	Y	9	GLN
11	Y	41	LEU
11	Y	73	ARG
11	Y	84	SER
11	Y	118	ASP
11	Y	147	ASP
11	Y	209	ASN
12	Z	18	GLU
12	Z	23	LEU
12	Z	31	THR
12	Z	49	ASN
12	Z	106	TYR
12	Z	136	CYS
12	Z	150	LEU
12	Z	189	THR
13	a	2	GLN
13	a	10	SER
13	a	48	ASN

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Mol	Chain	Res	Type
13	a	65	ARG
13	a	69	ASP
13	a	70	LEU
13	a	104	ARG
13	a	119	VAL
13	a	161	ARG
13	a	187	ARG
13	a	192	SER
13	a	220	ASP
14	b	6	VAL
14	b	9	LYS
14	b	17	ASP
14	b	83	LYS
14	b	107	LYS
14	b	115	LEU
14	b	119	VAL
14	b	178	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (131) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	30	GLN
1	A	94	HIS
2	B	20	GLN
2	B	58	GLN
2	B	95	GLN
2	B	119	GLN
2	B	123	GLN
2	B	155	ASN
2	B	176	GLN
3	C	17	GLN
3	C	38	ASN
3	C	77	ASN
3	C	116	GLN
3	C	120	GLN
3	C	147	GLN
3	C	160	GLN
4	D	15	GLN
4	D	100	ASN
4	D	106	GLN
4	D	146	GLN
4	D	160	ASN

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Mol	Chain	Res	Type
4	D	225	ASN
5	E	68	HIS
5	E	99	ASN
5	E	116	GLN
5	E	120	GLN
5	E	147	GLN
5	E	184	ASN
6	F	19	GLN
6	F	83	HIS
6	F	86	ASN
6	F	117	GLN
6	F	123	ASN
6	F	191	GLN
6	F	240	GLN
7	G	6	HIS
7	G	83	ASN
7	G	114	ASN
7	G	117	GLN
7	G	121	GLN
7	G	167	GLN
7	G	175	ASN
8	H	66	HIS
8	H	165	ASN
8	H	172	ASN
9	I	88	GLN
10	J	55	GLN
10	J	191	GLN
11	K	85	ASN
11	K	176	ASN
11	K	209	ASN
12	L	3	ASN
12	L	36	ASN
12	L	49	ASN
12	L	55	ASN
12	L	70	ASN
12	L	79	HIS
12	L	152	ASN
12	L	153	GLN
12	L	158	ASN
13	M	18	ASN
13	M	48	ASN
13	M	102	GLN

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Mol	Chain	Res	Type
13	M	179	ASN
13	M	194	ASN
13	M	211	ASN
13	M	213	GLN
14	N	38	HIS
14	N	69	GLN
14	N	161	GLN
1	O	30	GLN
1	O	94	HIS
2	P	20	GLN
2	P	58	GLN
2	P	95	GLN
2	P	119	GLN
2	P	123	GLN
2	P	155	ASN
3	Q	77	ASN
3	Q	147	GLN
3	Q	160	GLN
4	R	15	GLN
4	R	91	HIS
4	R	146	GLN
4	R	225	ASN
5	S	68	HIS
5	S	99	ASN
5	S	116	GLN
5	S	118	ASN
5	S	120	GLN
6	T	19	GLN
6	T	86	ASN
6	T	117	GLN
6	T	123	ASN
6	T	191	GLN
6	T	240	GLN
7	U	83	ASN
7	U	114	ASN
7	U	117	GLN
7	U	121	GLN
7	U	172	ASN
7	U	175	ASN
7	U	186	ASN
7	U	231	ASN
8	V	66	HIS

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Mol	Chain	Res	Type
8	V	172	ASN
9	W	88	GLN
10	X	55	GLN
10	X	63	ASN
10	X	191	GLN
11	Y	9	GLN
11	Y	85	ASN
11	Y	176	ASN
11	Y	209	ASN
12	Z	3	ASN
12	Z	36	ASN
12	Z	49	ASN
12	Z	70	ASN
12	Z	76	HIS
12	Z	80	ASN
12	Z	152	ASN
12	Z	153	GLN
12	Z	158	ASN
12	Z	165	ASN
12	Z	195	HIS
13	a	18	ASN
13	a	48	ASN
13	a	102	GLN
13	a	108	ASN
13	a	179	ASN
14	b	161	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 23 ligands modelled in this entry, 11 are monoatomic - leaving 12 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
19	SO4	K	303	-	4,4,4	0.37	0	6,6,6	0.05	0
19	SO4	Y	303	-	4,4,4	0.37	0	6,6,6	0.05	0
17	MES	Y	302	-	12,12,12	0.67	0	14,16,16	0.46	0
17	MES	V	302	-	12,12,12	0.71	0	14,16,16	0.56	0
19	SO4	b	201	-	4,4,4	0.38	0	6,6,6	0.09	0
18	A1IFL	K	304	11	47,54,54	1.59	5 (10%)	52,75,75	0.95	3 (5%)
17	MES	H	301	-	12,12,12	0.73	0	14,16,16	0.54	0
18	A1IFL	Y	304	11	47,54,54	1.69	6 (12%)	52,75,75	1.10	4 (7%)
19	SO4	N	202	-	4,4,4	0.37	0	6,6,6	0.06	0
18	A1IFL	V	303	8	47,54,54	1.63	5 (10%)	52,75,75	1.20	5 (9%)
18	A1IFL	H	302	8	47,54,54	1.30	3 (6%)	52,75,75	1.09	6 (11%)
17	MES	K	302	-	12,12,12	0.69	0	14,16,16	0.42	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	MES	Y	302	-	-	3/6/14/14	0/1/1/1
17	MES	V	302	-	-	2/6/14/14	0/1/1/1
18	A1IFL	K	304	11	-	10/37/85/85	0/3/4/4
17	MES	H	301	-	-	1/6/14/14	0/1/1/1
18	A1IFL	Y	304	11	-	7/37/85/85	0/3/4/4
18	A1IFL	V	303	8	-	10/37/85/85	0/3/4/4
18	A1IFL	H	302	8	-	9/37/85/85	0/3/4/4
17	MES	K	302	-	-	2/6/14/14	0/1/1/1

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	K	304	A1IFL	CB-CG	-6.39	1.35	1.51
18	V	303	A1IFL	OG1-CB1	-6.13	1.34	1.43
18	Y	304	A1IFL	CB-CG	-6.03	1.36	1.51
18	H	302	A1IFL	CB-CG	-5.82	1.37	1.51
18	Y	304	A1IFL	O58-C11	-5.78	1.36	1.44
18	V	303	A1IFL	CB-CG	-4.91	1.39	1.51
18	K	304	A1IFL	O58-C11	-4.83	1.37	1.44
18	V	303	A1IFL	O58-C11	-4.00	1.38	1.44
18	Y	304	A1IFL	OG1-CB1	-3.86	1.38	1.43
18	V	303	A1IFL	CB1-CA3	-3.49	1.47	1.53
18	K	304	A1IFL	OG1-CB1	-3.17	1.39	1.43
18	K	304	A1IFL	OG1-C21	-2.79	1.37	1.43
18	V	303	A1IFL	OG1-C21	-2.64	1.38	1.43
18	H	302	A1IFL	OG1-CB1	-2.61	1.40	1.43
18	K	304	A1IFL	C54-C49	-2.49	1.45	1.52
18	Y	304	A1IFL	OG1-C21	-2.28	1.38	1.43
18	Y	304	A1IFL	C54-C49	-2.15	1.46	1.52
18	Y	304	A1IFL	C-N	-2.10	1.29	1.34
18	H	302	A1IFL	C54-C49	-2.03	1.46	1.52

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	V	303	A1IFL	O58-C11-C57	-3.30	102.99	108.66
18	H	302	A1IFL	CB-CA2-N1	-3.07	104.31	110.79
18	H	302	A1IFL	CM-OH-CZ	-2.96	111.08	117.51
18	K	304	A1IFL	CM-OH-CZ	-2.85	111.33	117.51
18	H	302	A1IFL	C48-C31-N4	-2.56	103.60	109.46
18	V	303	A1IFL	C-CA-NB	-2.50	107.57	113.36
18	V	303	A1IFL	C48-C49-C50	-2.49	106.32	111.73
18	Y	304	A1IFL	CM-OH-CZ	-2.48	112.12	117.51
18	Y	304	A1IFL	C48-C49-C50	-2.38	106.56	111.73
18	V	303	A1IFL	CA-NB-CD1	-2.32	107.49	111.09
18	H	302	A1IFL	C57-C11-C56	-2.18	104.02	109.02
18	H	302	A1IFL	C53-C54-C49	-2.14	108.11	112.15
18	H	302	A1IFL	C-CA-NB	-2.13	108.41	113.36
18	K	304	A1IFL	C53-C54-C49	-2.12	108.14	112.15
18	K	304	A1IFL	C57-C11-C56	-2.12	104.16	109.02
18	Y	304	A1IFL	C48-C31-N4	-2.11	104.64	109.46
18	V	303	A1IFL	CM-OH-CZ	-2.09	112.97	117.51
18	Y	304	A1IFL	CA2-N1-C1	2.09	126.15	121.67

There are no chirality outliers.

All (44) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
17	H	301	MES	N4-C7-C8-S
17	Y	302	MES	C7-C8-S-O2S
18	H	302	A1IFL	CA1-C3-C4-O3
18	H	302	A1IFL	C31-C48-C49-C54
18	K	304	A1IFL	C21-C31-C48-C49
18	V	303	A1IFL	CA1-C3-C4-O3
18	V	303	A1IFL	C4-C3-CA1-C1
18	V	303	A1IFL	C21-C31-C48-C49
18	V	303	A1IFL	C31-C48-C49-C54
18	Y	304	A1IFL	C21-C31-C48-C49
18	H	302	A1IFL	N1-CA2-CB-CG
18	H	302	A1IFL	C8-CA2-CB-CG
18	H	302	A1IFL	N4-C31-C48-C49
18	V	303	A1IFL	N4-C31-C48-C49
18	Y	304	A1IFL	N4-C31-C48-C49
18	K	304	A1IFL	N4-C31-C48-C49
18	V	303	A1IFL	C4-C3-CA1-N
18	H	302	A1IFL	C31-C48-C49-C50
17	Y	302	MES	C7-C8-S-O3S
18	H	302	A1IFL	C6-CZ-OH-CM
18	H	302	A1IFL	C5-CZ-OH-CM
18	Y	304	A1IFL	N1-CA2-CB-CG
17	K	302	MES	C8-C7-N4-C3
17	K	302	MES	C8-C7-N4-C5
18	K	304	A1IFL	O2-C8-CA2-N1
18	V	303	A1IFL	C31-C48-C49-C50
18	H	302	A1IFL	C21-C31-C48-C49
17	Y	302	MES	C7-C8-S-O1S
18	K	304	A1IFL	N4-C8-CA2-N1
18	Y	304	A1IFL	O1-C1-CA1-N
17	V	302	MES	C8-C7-N4-C3
17	V	302	MES	C8-C7-N4-C5
18	Y	304	A1IFL	O2-C8-CA2-N1
18	V	303	A1IFL	N1-CA2-CB-CG
18	K	304	A1IFL	C31-C48-C49-C54
18	K	304	A1IFL	N1-CA2-CB-CG
18	K	304	A1IFL	O2-C8-CA2-CB
18	Y	304	A1IFL	N4-C8-CA2-N1
18	Y	304	A1IFL	N1-C1-CA1-N
18	K	304	A1IFL	C31-C48-C49-C50
18	K	304	A1IFL	O1-C1-CA1-N
18	V	303	A1IFL	O2-C8-CA2-N1

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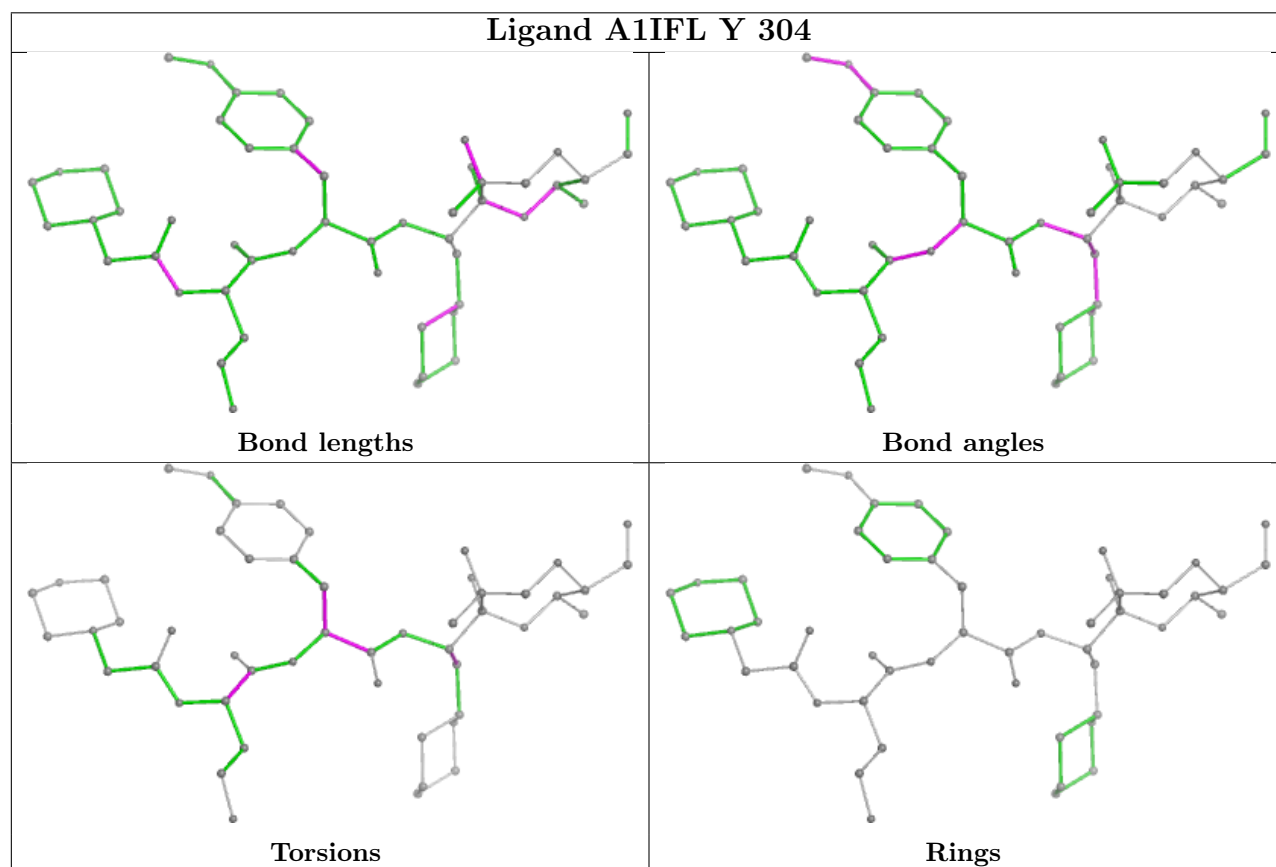
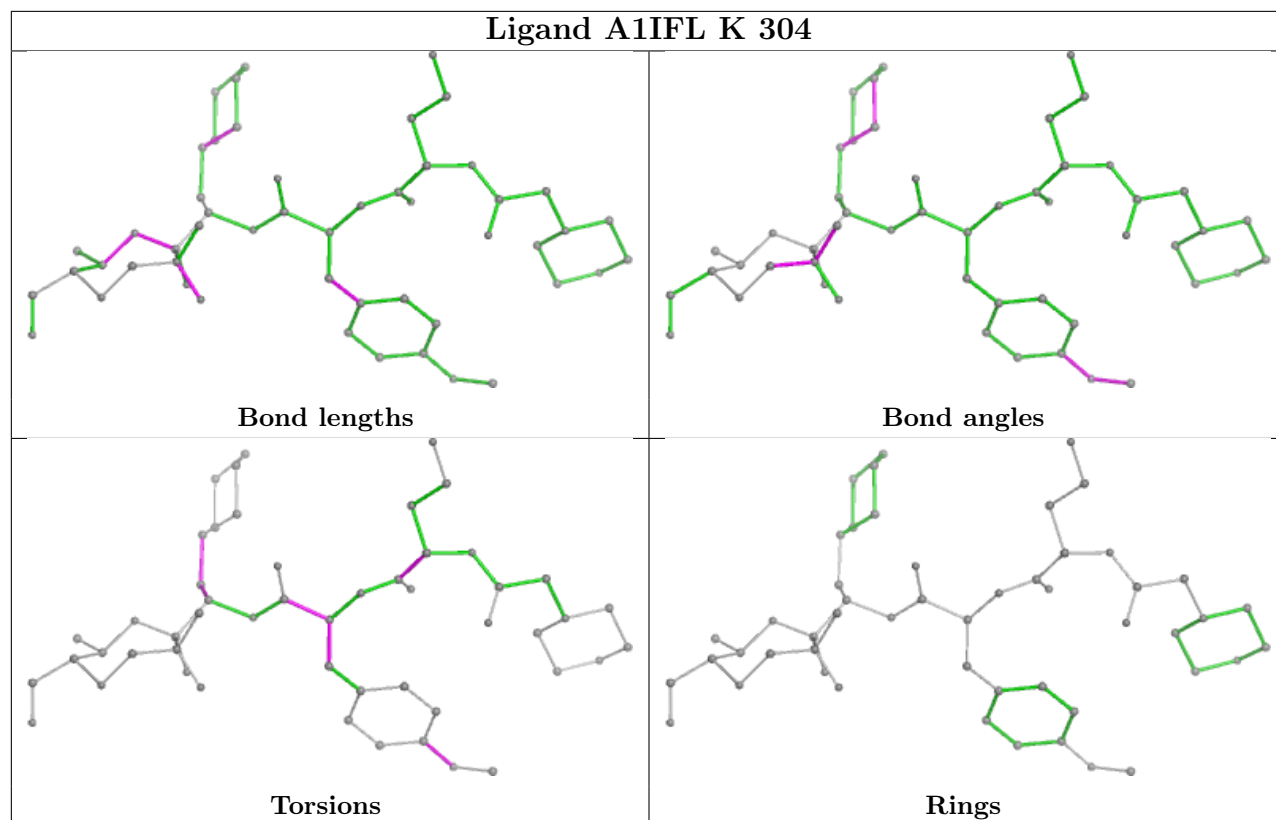
Mol	Chain	Res	Type	Atoms
18	K	304	A1IFL	C6-CZ-OH-CM
18	V	303	A1IFL	N4-C8-CA2-N1

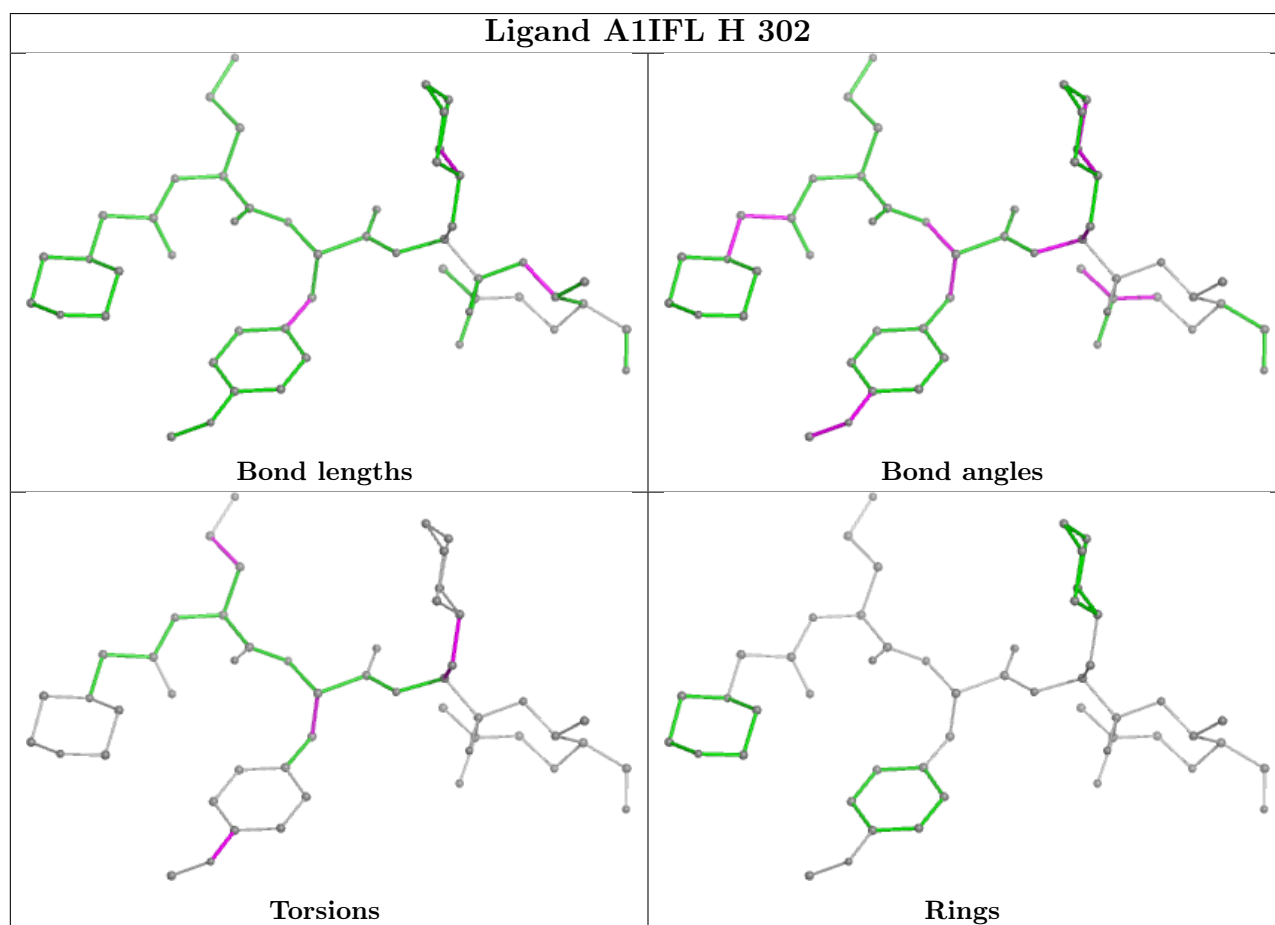
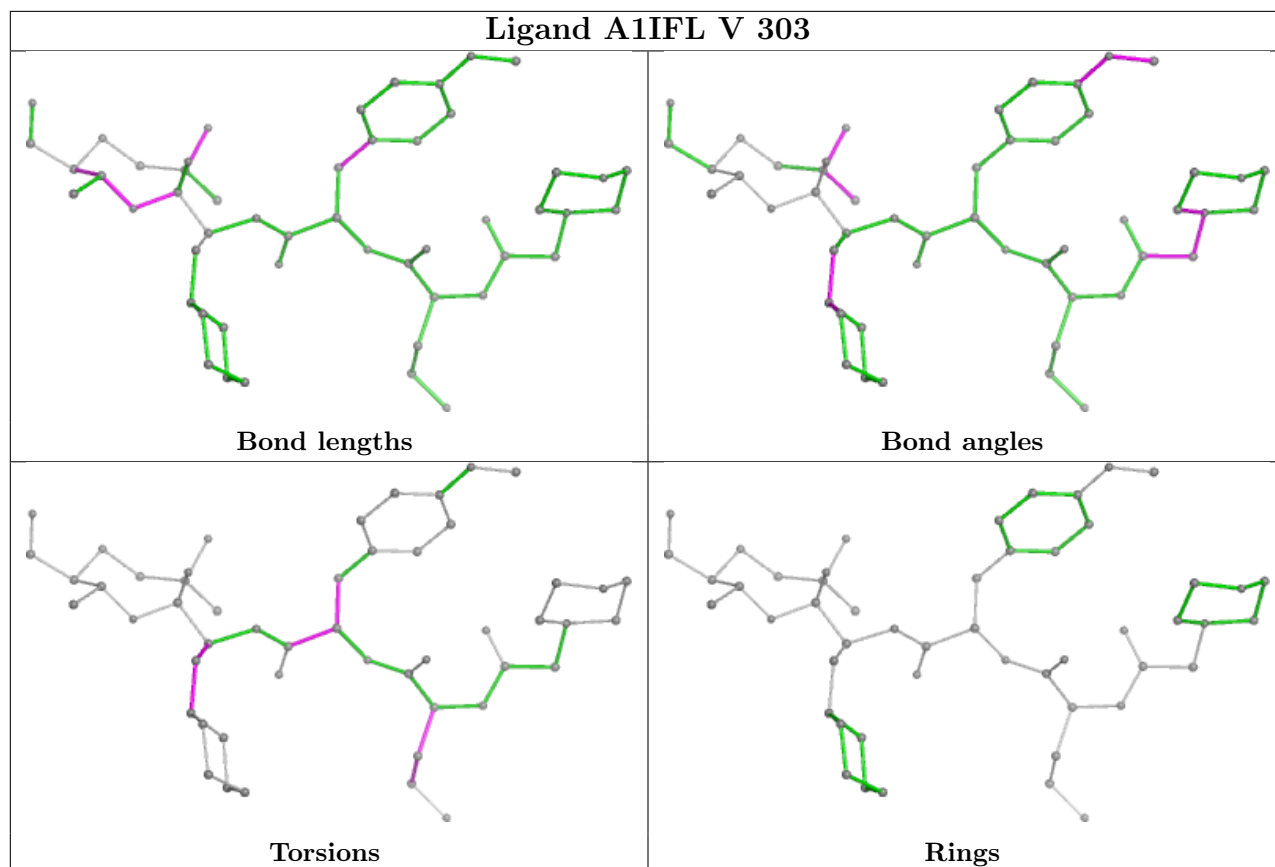
There are no ring outliers.

5 monomers are involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
18	K	304	A1IFL	2	0
18	Y	304	A1IFL	2	0
18	V	303	A1IFL	3	0
18	H	302	A1IFL	1	0
17	K	302	MES	1	0

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





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 i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	250/250 (100%)	0.03	6 (2%) 59 68	49, 64, 99, 127	0
1	O	250/250 (100%)	0.10	11 (4%) 34 41	54, 74, 108, 127	0
2	B	244/258 (94%)	0.14	11 (4%) 33 39	53, 69, 107, 149	0
2	P	244/258 (94%)	0.12	10 (4%) 37 44	57, 72, 118, 144	0
3	C	240/254 (94%)	0.13	16 (6%) 17 21	53, 73, 131, 143	0
3	Q	240/254 (94%)	0.37	14 (5%) 23 28	58, 83, 150, 160	0
4	D	235/260 (90%)	-0.12	2 (0%) 84 89	54, 71, 93, 123	0
4	R	235/260 (90%)	0.11	6 (2%) 56 65	59, 77, 106, 131	0
5	E	231/234 (98%)	0.01	4 (1%) 70 78	56, 73, 100, 121	0
5	S	231/234 (98%)	0.19	8 (3%) 44 52	59, 80, 115, 131	0
6	F	243/288 (84%)	-0.05	5 (2%) 63 72	49, 68, 107, 130	0
6	T	243/288 (84%)	0.13	11 (4%) 33 39	54, 72, 108, 139	0
7	G	241/252 (95%)	-0.13	2 (0%) 86 90	49, 64, 90, 126	0
7	U	241/252 (95%)	-0.12	4 (1%) 70 78	53, 68, 91, 126	0
8	H	225/225 (100%)	-0.05	7 (3%) 49 58	49, 60, 86, 162	0
8	V	222/225 (98%)	-0.03	4 (1%) 68 76	51, 62, 84, 141	0
9	I	204/205 (99%)	-0.22	1 (0%) 91 94	45, 60, 78, 96	0
9	W	204/205 (99%)	-0.21	1 (0%) 91 94	49, 60, 77, 97	0
10	J	195/198 (98%)	0.00	2 (1%) 82 87	50, 61, 82, 104	0
10	X	195/198 (98%)	-0.15	2 (1%) 82 87	53, 64, 82, 120	0
11	K	211/211 (100%)	-0.08	2 (0%) 84 89	49, 59, 78, 87	0
11	Y	211/211 (100%)	-0.08	2 (0%) 84 89	52, 62, 83, 98	0
12	L	222/222 (100%)	-0.22	0 100 100	47, 61, 85, 100	0
12	Z	222/222 (100%)	-0.19	1 (0%) 91 94	50, 62, 87, 101	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	M	233/246 (94%)	-0.21	3 (1%) 77 84	46, 60, 79, 90	0
13	a	233/246 (94%)	-0.18	1 (0%) 92 95	50, 61, 76, 84	0
14	N	196/196 (100%)	-0.19	3 (1%) 73 81	48, 57, 78, 101	0
14	b	196/196 (100%)	-0.18	2 (1%) 82 87	48, 59, 83, 106	0
All	All	6337/6598 (96%)	-0.03	141 (2%) 62 70	45, 66, 104, 162	0

All (141) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	Q	50	LEU	9.6
8	H	224	GLN	7.1
3	Q	49	THR	6.8
8	V	223	ILE	5.9
1	A	228	PRO	5.7
1	A	229	THR	5.7
1	A	1	MET	5.6
8	H	226	GLU	5.4
1	O	229	THR	5.3
8	H	221	CYS	5.0
2	P	220	ASN	5.0
3	C	49	THR	4.9
2	P	219	ALA	4.8
2	B	220	ASN	4.7
6	T	2	THR	4.7
8	H	222	ASP	4.7
2	P	52	THR	4.6
2	B	221	ASP	4.5
5	S	202	ASP	4.4
3	Q	202	GLN	4.4
1	O	1	MET	4.4
5	E	202	ASP	4.3
8	H	225	GLU	4.3
1	O	228	PRO	4.3
4	R	241	ALA	4.2
3	Q	236	GLN	4.1
3	Q	48	SER	4.0
2	P	1	GLY	4.0
10	J	1	MET	4.0
5	S	233	ILE	3.9
10	X	194	ASP	3.9
3	C	202	GLN	3.9

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Mol	Chain	Res	Type	RSRZ
2	B	240	LYS	3.8
2	B	219	ALA	3.8
5	S	204	SER	3.7
8	V	222	ASP	3.7
14	b	195	GLN	3.7
1	O	249	ALA	3.6
3	C	50	LEU	3.6
13	a	1	THR	3.6
6	T	244	ASN	3.6
6	T	53	LYS	3.6
2	B	52	THR	3.5
2	B	51	VAL	3.5
1	A	201	GLU	3.4
8	H	223	ILE	3.4
3	Q	47	ARG	3.4
1	A	202	GLY	3.4
3	C	231	VAL	3.3
4	D	2	ARG	3.2
2	P	221	ASP	3.2
6	T	181	GLU	3.2
7	U	242	GLN	3.2
6	T	241	LYS	3.1
3	C	48	SER	3.1
4	R	49	PRO	3.1
2	P	218	GLY	3.0
3	Q	234	ILE	3.0
1	O	221	LEU	3.0
1	A	231	LYS	3.0
8	V	221	CYS	3.0
5	S	210	LEU	3.0
5	E	201	ARG	2.9
3	Q	240	GLU	2.9
3	Q	175	LYS	2.9
3	Q	206	LYS	2.8
3	Q	238	LYS	2.8
6	T	243	ILE	2.8
5	E	233	ILE	2.8
6	F	243	ILE	2.8
3	C	180	LYS	2.8
12	Z	1	GLN	2.7
13	M	81	ALA	2.7
14	N	195	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
3	C	206	LYS	2.7
1	O	231	LYS	2.7
14	b	105	LYS	2.7
2	B	1	GLY	2.6
6	T	177	ASP	2.6
13	M	1	THR	2.6
4	D	117	GLU	2.6
4	R	125	LEU	2.6
4	R	113	LEU	2.6
1	O	201	GLU	2.5
5	S	207	VAL	2.5
8	H	219	ASN	2.5
6	T	180	PRO	2.5
11	Y	106	ARG	2.5
1	O	52	SER	2.5
3	C	37	LYS	2.4
5	S	54	GLU	2.4
3	C	175	LYS	2.4
4	R	141	ALA	2.4
3	Q	239	GLN	2.4
7	U	222	ASP	2.4
11	K	212	GLY	2.4
6	T	18	PHE	2.4
1	O	248	GLU	2.4
7	G	241	GLU	2.4
5	S	230	ALA	2.3
6	F	242	GLU	2.3
2	P	61	SER	2.3
11	K	106	ARG	2.3
4	R	54	ASP	2.3
2	B	239	VAL	2.3
10	J	194	ASP	2.3
9	I	192	ASP	2.3
5	E	173	ARG	2.3
2	P	243	ILE	2.3
6	T	178	HIS	2.2
1	O	219	PRO	2.2
14	N	105	LYS	2.2
7	U	241	GLU	2.2
2	B	50	LYS	2.2
3	Q	235	GLU	2.2
6	F	205	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
7	U	2	GLY	2.1
11	Y	212	GLY	2.1
1	O	36	GLY	2.1
3	Q	204	GLY	2.1
10	X	174	MET	2.1
3	C	207	ASN	2.1
6	F	2	THR	2.1
6	F	244	ASN	2.1
3	C	204	GLY	2.1
13	M	233	ILE	2.1
6	T	45	ALA	2.1
3	C	46	ARG	2.1
5	S	203	GLU	2.1
3	C	52	LEU	2.0
9	W	191	LYS	2.0
8	V	219	ASN	2.0
2	B	218	GLY	2.0
2	B	244	THR	2.0
2	P	59	ASP	2.0
3	C	235	GLU	2.0
7	G	179	LYS	2.0
3	C	216	ASP	2.0
14	N	191	ASP	2.0
3	C	239	GLN	2.0
2	P	51	VAL	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

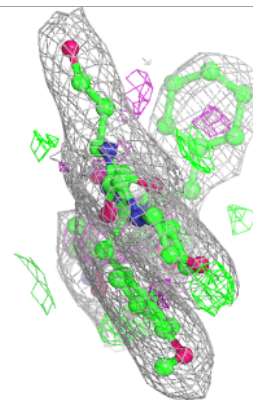
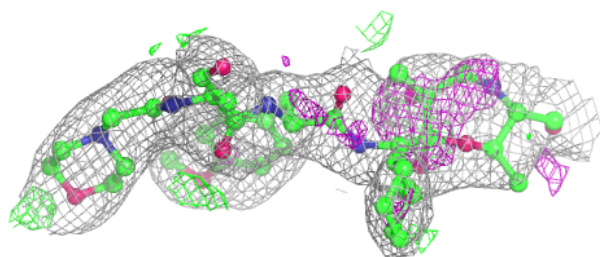
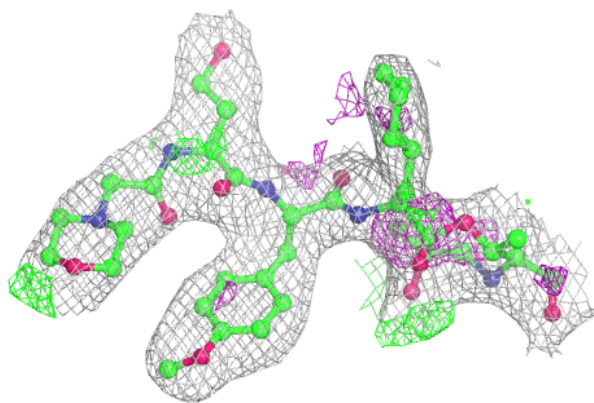
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
15	MG	I	301	1/1	0.87	0.25	87,87,87,87	0
19	SO4	N	202	5/5	0.88	0.28	81,83,84,85	5
15	MG	G	301	1/1	0.90	0.14	61,61,61,61	0
17	MES	Y	302	12/12	0.91	0.25	47,51,53,56	12
15	MG	N	201	1/1	0.91	0.15	64,64,64,64	0
15	MG	Z	301	1/1	0.92	0.12	73,73,73,73	0
18	A1IFL	H	302	51/51	0.92	0.19	56,61,72,73	0
18	A1IFL	K	304	51/51	0.92	0.16	49,51,59,60	0
17	MES	V	302	12/12	0.92	0.23	55,58,59,59	12
19	SO4	b	201	5/5	0.92	0.24	64,64,67,71	5
18	A1IFL	V	303	51/51	0.93	0.20	60,64,69,69	0
15	MG	K	301	1/1	0.93	0.14	65,65,65,65	0
16	CL	G	302	1/1	0.93	0.16	49,49,49,49	0
17	MES	H	301	12/12	0.94	0.20	50,51,51,52	12
19	SO4	Y	303	5/5	0.94	0.27	92,93,97,102	0
19	SO4	K	303	5/5	0.94	0.30	92,95,95,96	0
15	MG	W	301	1/1	0.95	0.10	66,66,66,66	0
18	A1IFL	Y	304	51/51	0.95	0.14	53,54,65,66	0
17	MES	K	302	12/12	0.95	0.20	45,47,50,50	12
15	MG	Y	301	1/1	0.97	0.16	70,70,70,70	0
16	CL	N	203	1/1	0.97	0.20	79,79,79,79	0
16	CL	U	301	1/1	0.97	0.12	55,55,55,55	0
15	MG	V	301	1/1	0.98	0.10	75,75,75,75	0

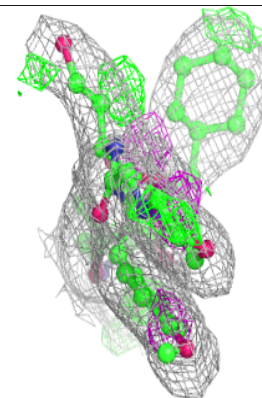
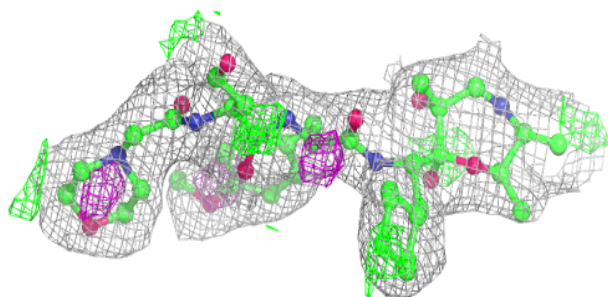
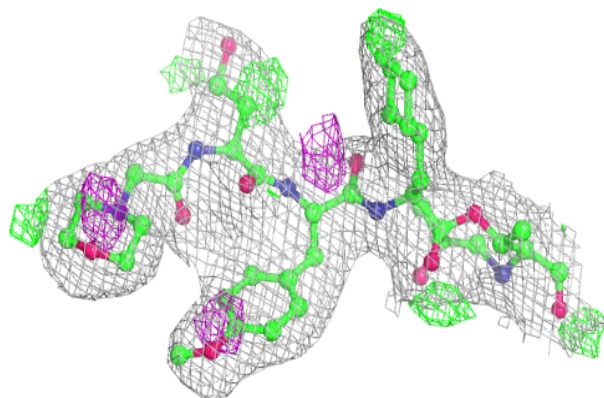
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around A1IFL H 302:

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

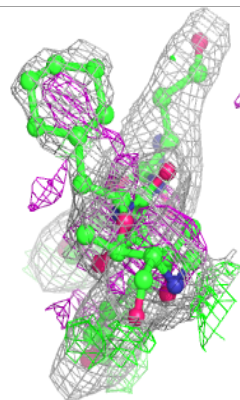
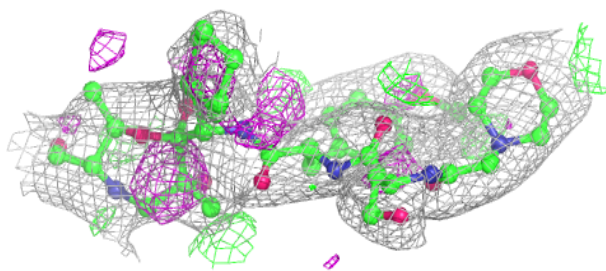
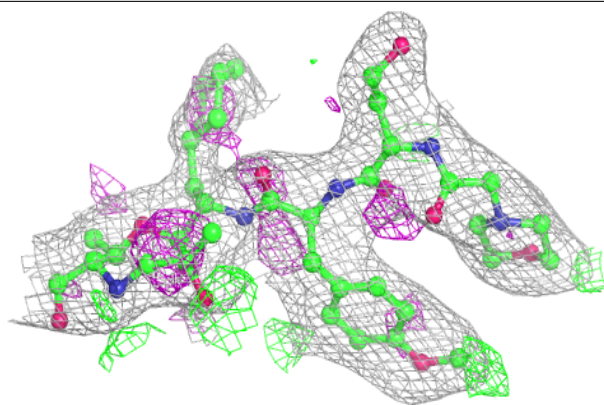
**Electron density around A1IFL K 304:**

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

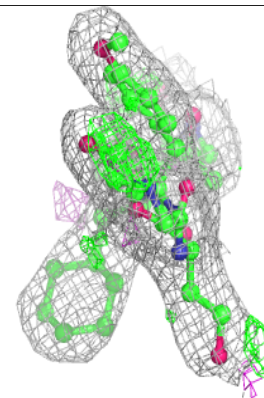
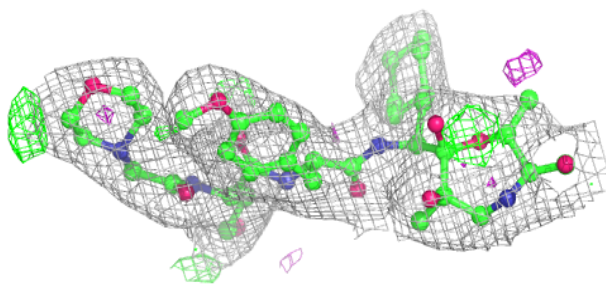
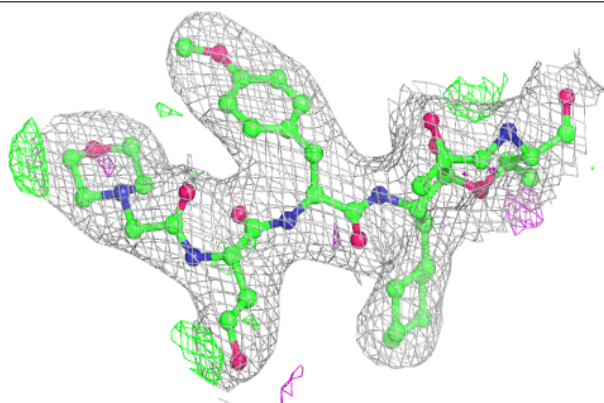


Electron density around A1IFL V 303:

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

**Electron density around A1IFL Y 304:**

$2mF_o-DF_c$ (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.