



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 24, 2023 – 08:04 PM EDT

PDB ID : 2ZCY
Title : yeast 20S proteasome:syringolin A-complex
Authors : Groll, M.; Dudler, R.; Kaiser, M.
Deposited on : 2007-11-15
Resolution : 2.90 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 : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
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) : 2.36

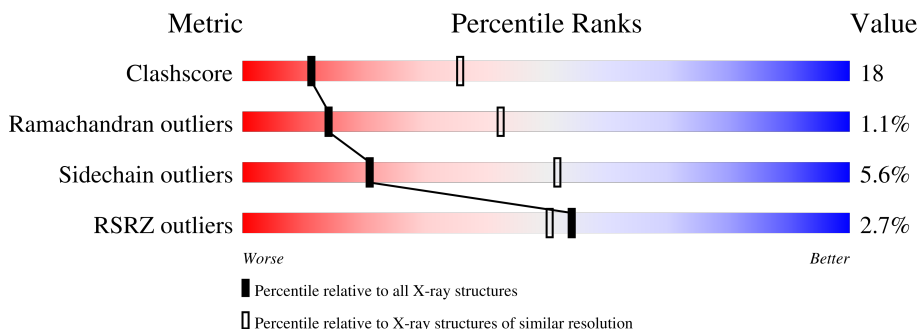
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 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.



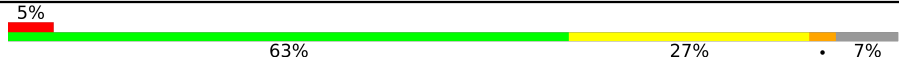

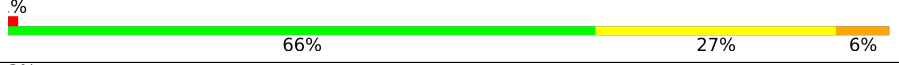

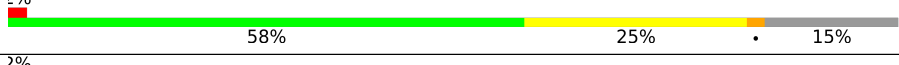
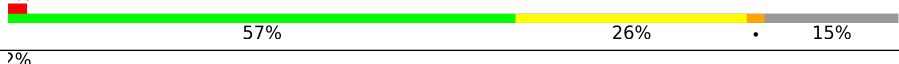
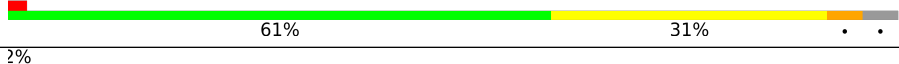

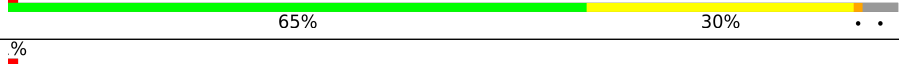


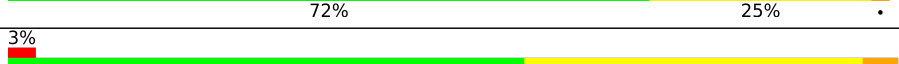
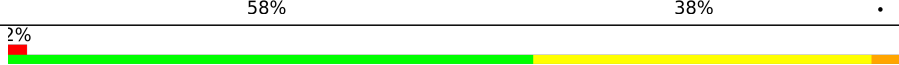
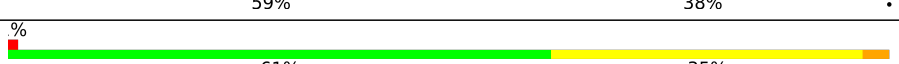

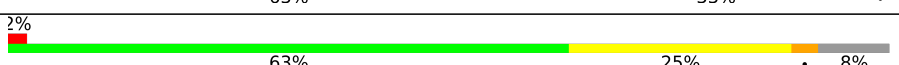
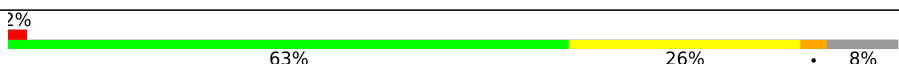
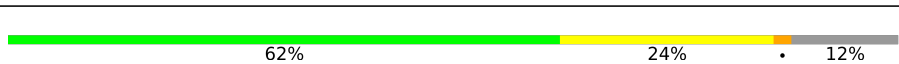
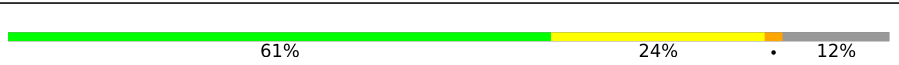



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)

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	 71% 27% 2% 0%
1	O	250	 70% 28% 2% 0% 3%
2	B	258	 59% 31% 5% 5% 4%
2	P	258	 59% 31% 5% 5% 6%
3	C	254	 54% 37% 5% 2% 6%
3	Q	254	 55% 36% 5% 4% 8%

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Mol	Chain	Length	Quality of chain
4	D	260	 5% 63% 27% 7%
4	R	260	 5% 62% 28% 7%
5	E	234	 % 66% 27% 6%
5	S	234	 3% 65% 29% 5%
6	F	287	 2% 58% 25% 15%
6	T	287	 2% 57% 26% 15%
7	G	252	 2% 61% 31% 8%
7	U	252	 2% 63% 29% 8%
8	H	232	 % 65% 30% 5%
8	V	232	 % 69% 26% 5%
9	I	205	 % 74% 23% 1%
9	W	205	 % 72% 25% 3%
10	J	198	 3% 58% 38% 1%
10	X	198	 2% 59% 38% 1%
11	K	212	 % 61% 35% 4%
11	Y	212	 2% 63% 33% 2%
12	L	241	 2% 63% 25% 8%
12	Z	241	 2% 63% 26% 8%
13	O	266	 % 62% 24% 12%
13	M	266	 % 61% 24% 12%
14	1	196	 % 69% 29% 2%
14	N	196	 % 69% 29% 2%

2 Entry composition

There are 16 unique types of molecules in this entry. The entry contains 50766 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 component Y7.

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

- Molecule 2 is a protein called Proteasome component Y13.

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

- Molecule 3 is a protein called Proteasome component PRE6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	241	Total	C	N	O	S	0	0	0
			1890	1181	331	374	4			
3	Q	241	Total	C	N	O	S	0	0	0
			1890	1181	331	374	4			

- Molecule 4 is a protein called Proteasome component PUP2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	242	Total	C	N	O	S	0	0	0
			1861	1162	314	378	7			
4	R	242	Total	C	N	O	S	0	0	0
			1861	1162	314	378	7			

- Molecule 5 is a protein called Proteasome component PRE5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	233	Total	C	N	O	S	0	0	0
			1795	1129	312	350	4			
5	S	233	Total	C	N	O	S	0	0	0
			1795	1129	312	350	4			

- Molecule 6 is a protein called Proteasome component C1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	244	Total	C	N	O	S	0	0	0
			1896	1205	330	357	4			
6	T	244	Total	C	N	O	S	0	0	0
			1896	1205	330	357	4			

- Molecule 7 is a protein called Proteasome component C7-alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	243	Total	C	N	O	S	0	0	0
			1921	1221	322	370	8			
7	U	243	Total	C	N	O	S	0	0	0
			1921	1221	322	370	8			

- Molecule 8 is a protein called Proteasome component PUP1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	222	Total	C	N	O	S	0	0	0
			1684	1061	293	323	7			
8	V	222	Total	C	N	O	S	0	0	0
			1684	1061	293	323	7			

- Molecule 9 is a protein called Proteasome component PUP3.

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

- Molecule 10 is a protein called Proteasome component C11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	198	Total	C	N	O	S	0	0	0
			1585	1005	269	305	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	X	198	Total 1585	C 1005	N 269	O 305	S 6	0	0	0

- Molecule 11 is a protein called Proteasome component PRE2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	K	212	Total 1644	C 1045	N 280	O 312	S 7	0	0	0
11	Y	212	Total 1644	C 1045	N 280	O 312	S 7	0	0	0

- Molecule 12 is a protein called Proteasome component C5.

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

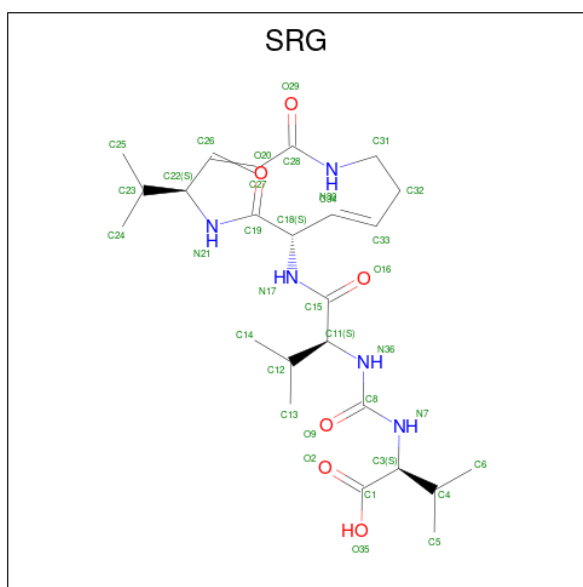
- Molecule 13 is a protein called Proteasome component PRE4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	M	233	Total 1824	C 1154	N 312	O 351	S 7	0	0	0
13	0	233	Total 1824	C 1154	N 312	O 351	S 7	0	0	0

- Molecule 14 is a protein called Proteasome component PRE3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	N	196	Total 1512	C 955	N 250	O 300	S 7	0	0	0
14	1	196	Total 1512	C 955	N 250	O 300	S 7	0	0	0

- Molecule 15 is (2S)-2-[[[(2S)-1-[[[(5S,8S,9E)-2,7-dioxo-5-propan-2-yl-1,6-diazacyclododeca-3,9-dien-8-yl]amino]-3-methyl-1-oxo-butan-2-yl]carbamoylamino]-3-methyl-butanoic acid (three-letter code: SRG) (formula: C₂₄H₃₉N₅O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
			Total	C	N			O
15	H	1	35	24	5	6	0	0
15	K	1	35	24	5	6	0	0
15	N	1	35	24	5	6	0	0
15	V	1	35	24	5	6	0	0
15	Y	1	35	24	5	6	0	0
15	1	1	35	24	5	6	0	0

- Molecule 16 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
16	A	38	38	38	0	0
16	B	24	24	24	0	0
16	C	33	33	33	0	0
16	D	24	24	24	0	0
16	E	17	17	17	0	0
16	F	39	39	39	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
16	G	47	Total O 47 47	0	0
16	H	43	Total O 43 43	0	0
16	I	56	Total O 56 56	0	0
16	J	36	Total O 36 36	0	0
16	K	28	Total O 28 28	0	0
16	L	46	Total O 46 46	0	0
16	M	62	Total O 62 62	0	0
16	N	50	Total O 50 50	0	0
16	O	26	Total O 26 26	0	0
16	P	20	Total O 20 20	0	0
16	Q	21	Total O 21 21	0	0
16	R	19	Total O 19 19	0	0
16	S	16	Total O 16 16	0	0
16	T	30	Total O 30 30	0	0
16	U	50	Total O 50 50	0	0
16	V	41	Total O 41 41	0	0
16	W	37	Total O 37 37	0	0
16	X	33	Total O 33 33	0	0
16	Y	29	Total O 29 29	0	0
16	Z	38	Total O 38 38	0	0
16	0	60	Total O 60 60	0	0

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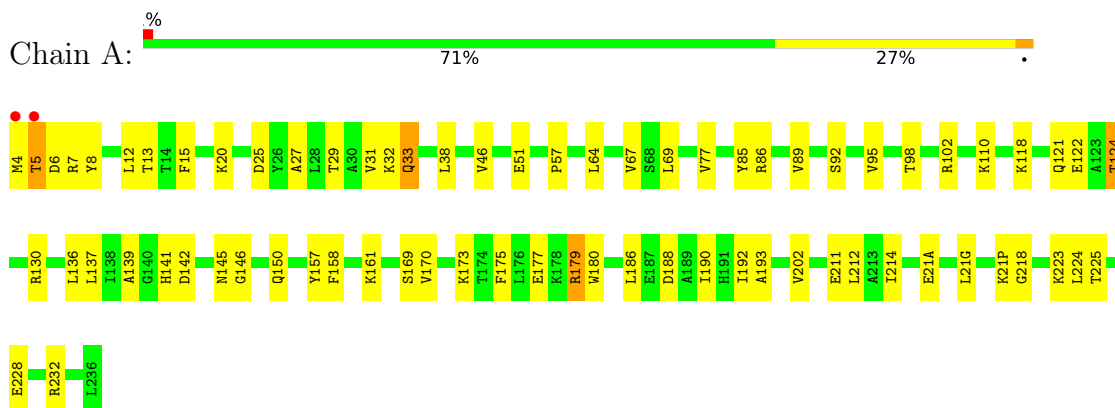
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	1	55	Total	O	0	0
			55	55		

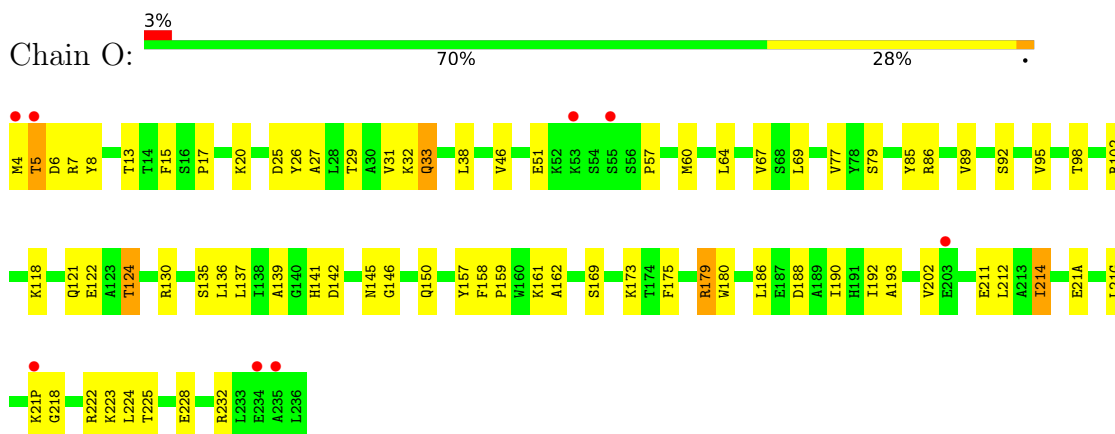
3 Residue-property plots

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

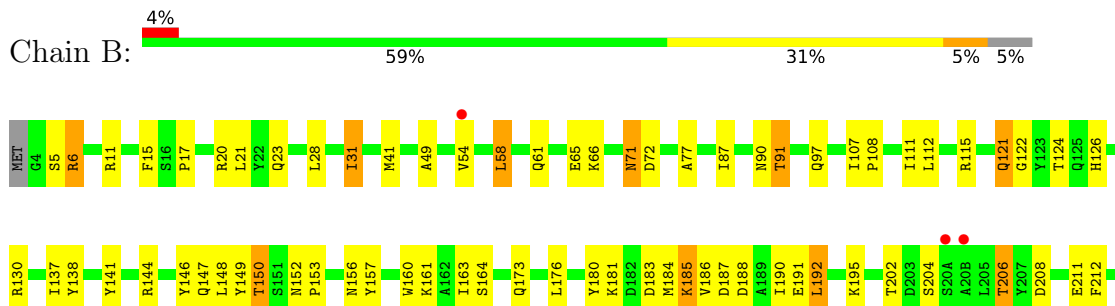
- Molecule 1: Proteasome component Y7

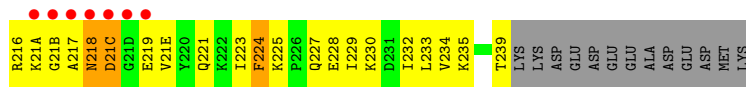


- Molecule 1: Proteasome component Y7

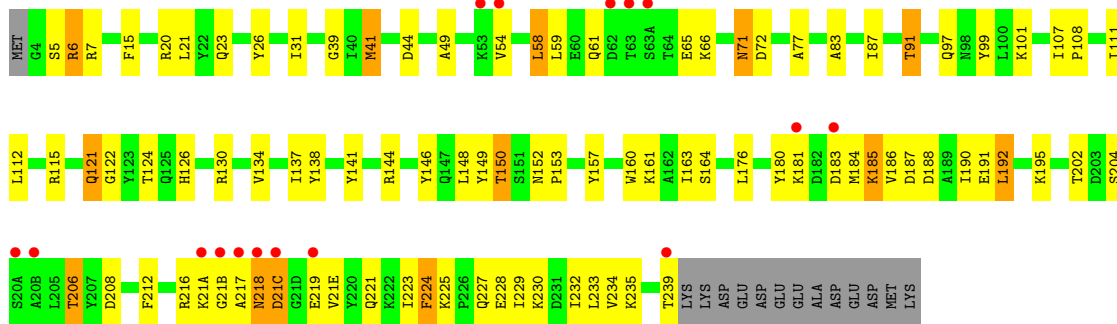


- Molecule 2: Proteasome component Y13

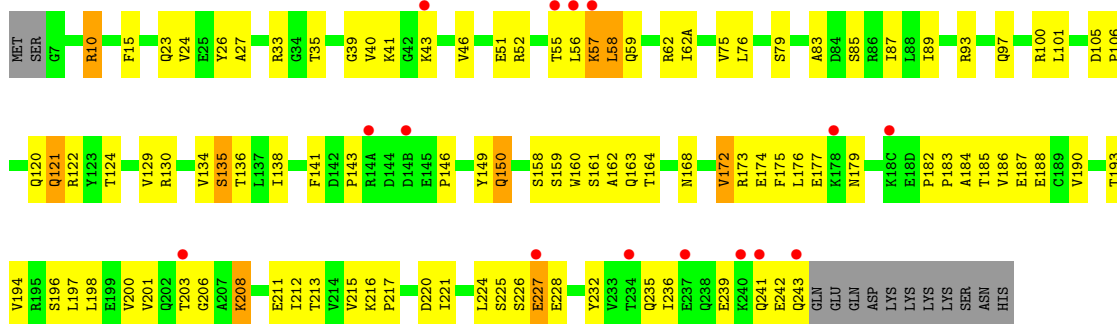




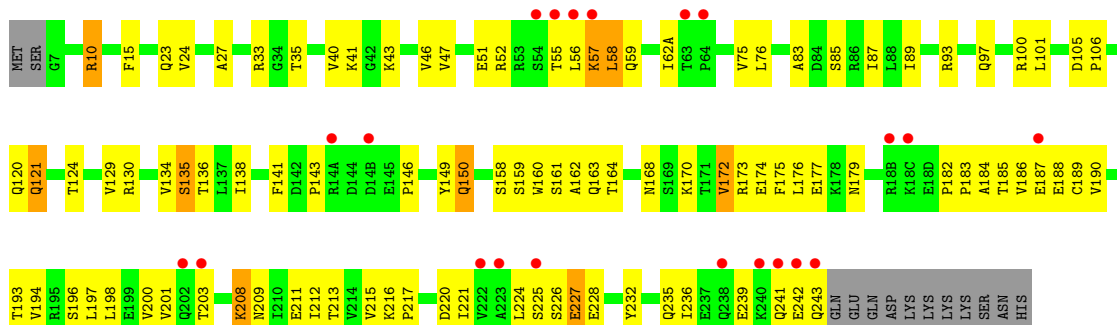
• Molecule 2: Proteasome component Y13



• Molecule 3: Proteasome component PRE6

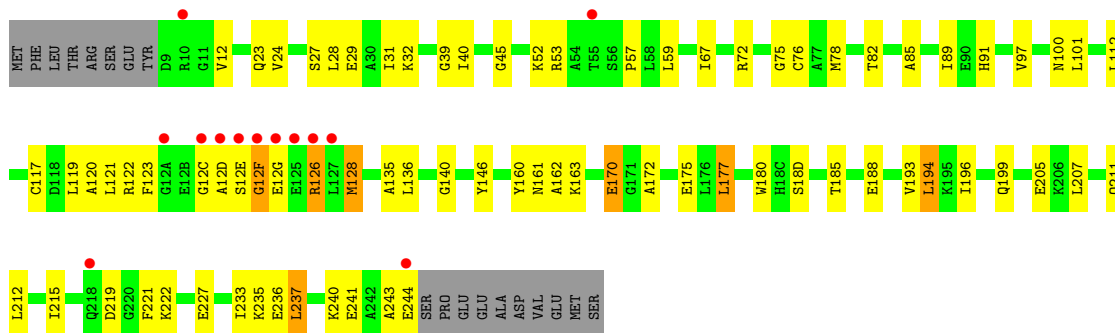


• Molecule 3: Proteasome component PRE6

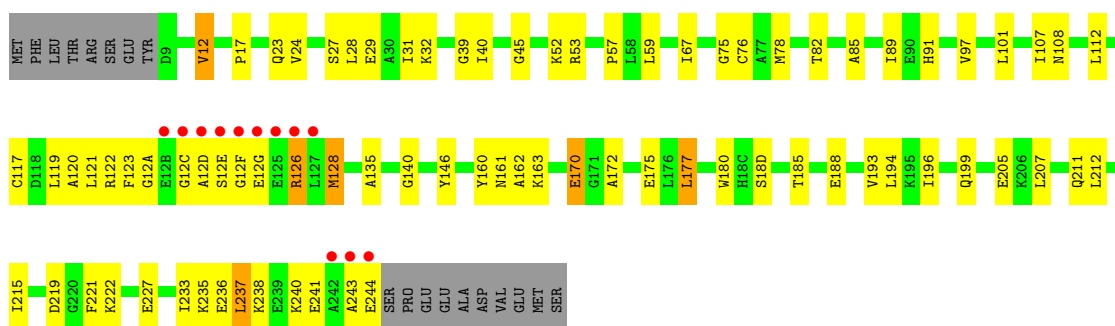


• Molecule 4: Proteasome component PUP2

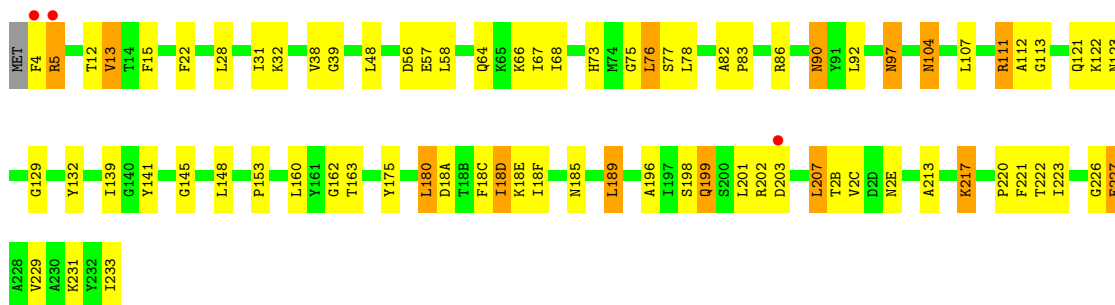




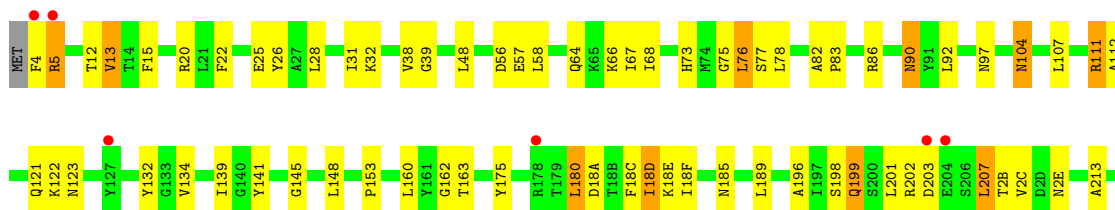
• Molecule 4: Proteasome component PUP2

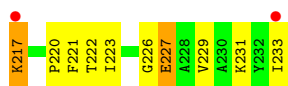


• Molecule 5: Proteasome component PRE5

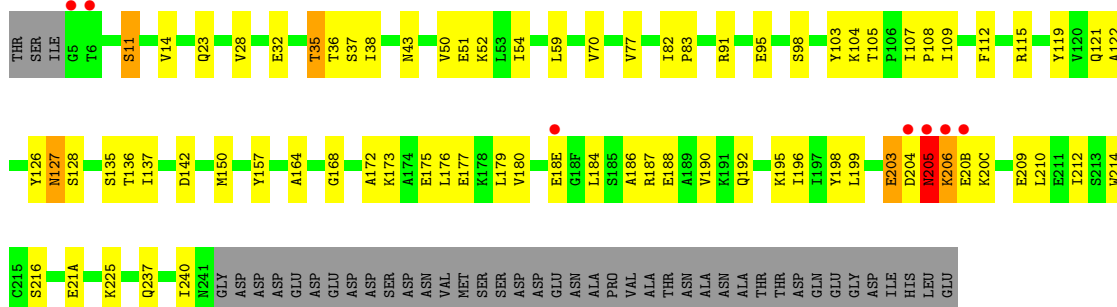


• Molecule 5: Proteasome component PRE5

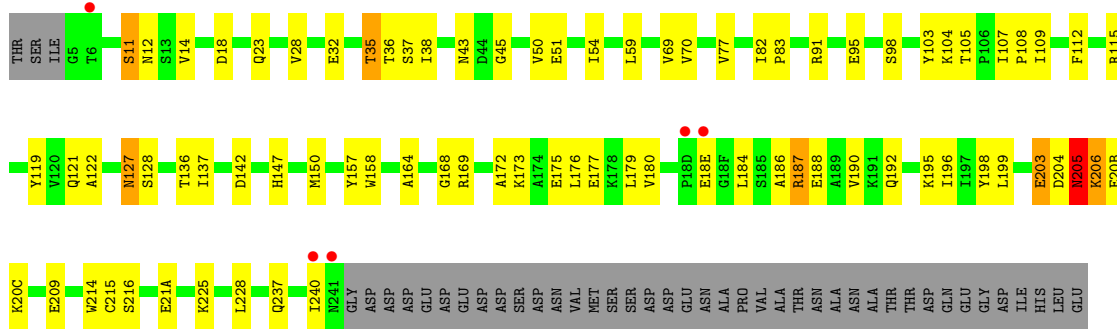




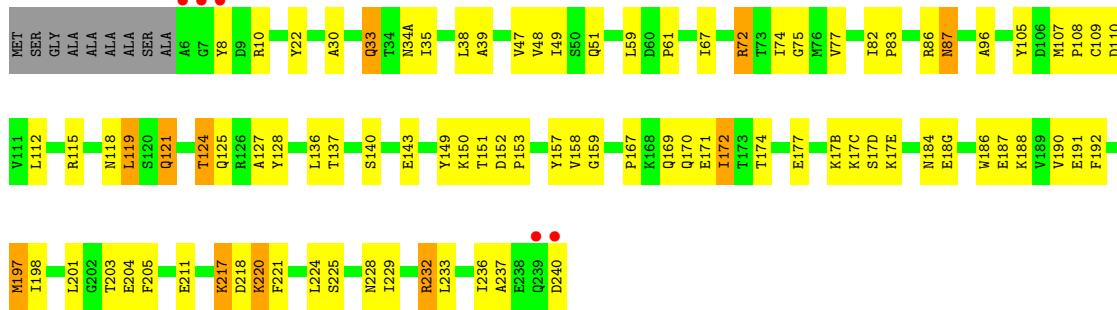
• Molecule 6: Proteasome component C1



• Molecule 6: Proteasome component C1

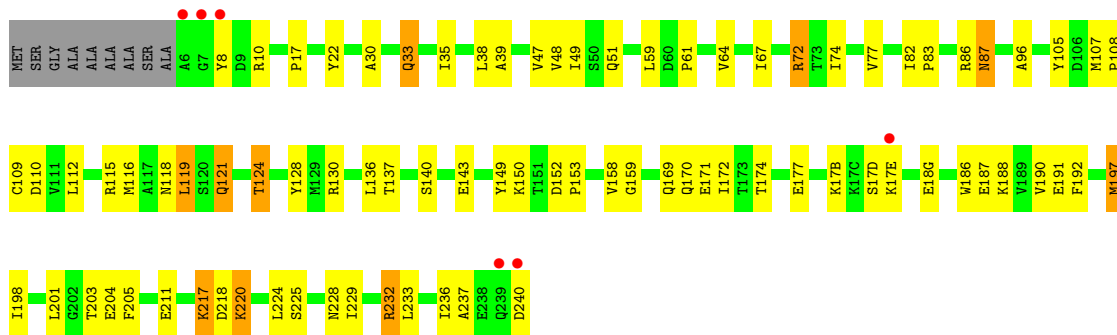


• Molecule 7: Proteasome component C7-alpha

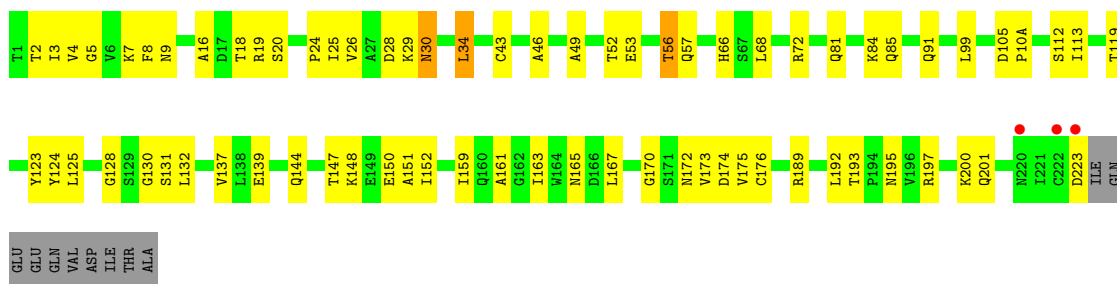


• Molecule 7: Proteasome component C7-alpha

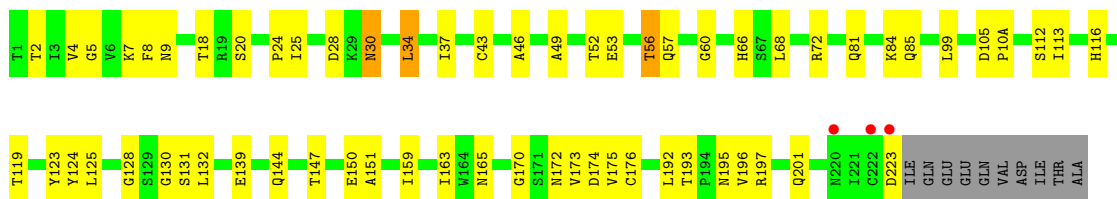




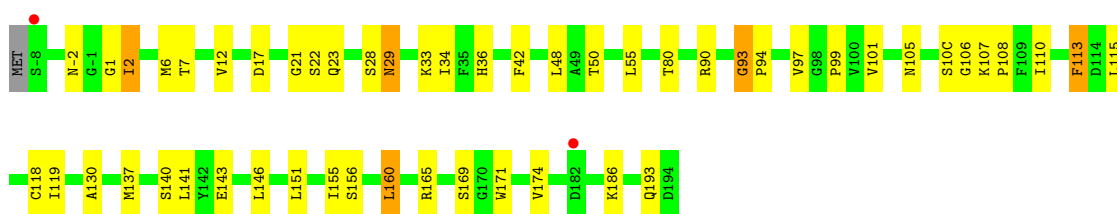
• Molecule 8: Proteasome component PUP1



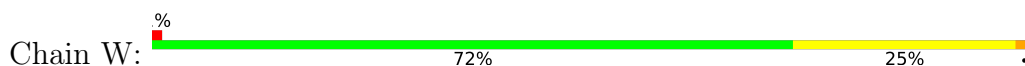
• Molecule 8: Proteasome component PUP1

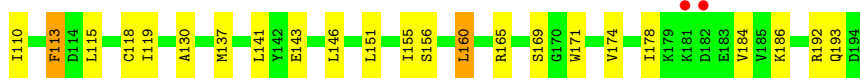


• Molecule 9: Proteasome component PUP3

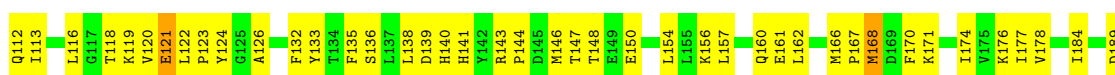


• Molecule 9: Proteasome component PUP3





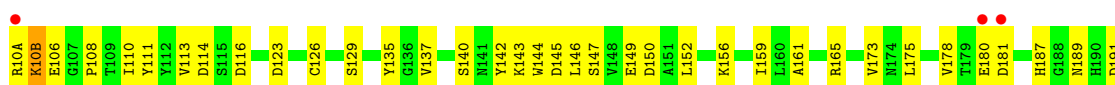
• Molecule 10: Proteasome component C11



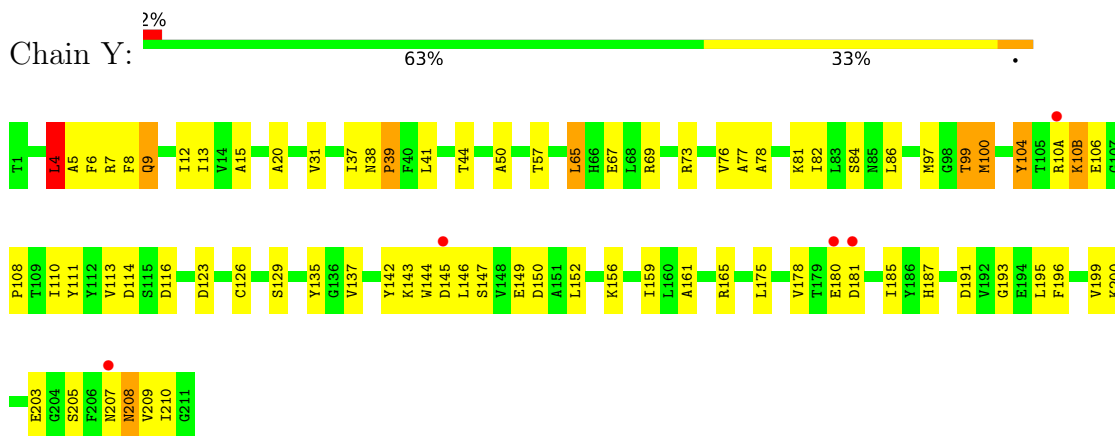
• Molecule 10: Proteasome component C11



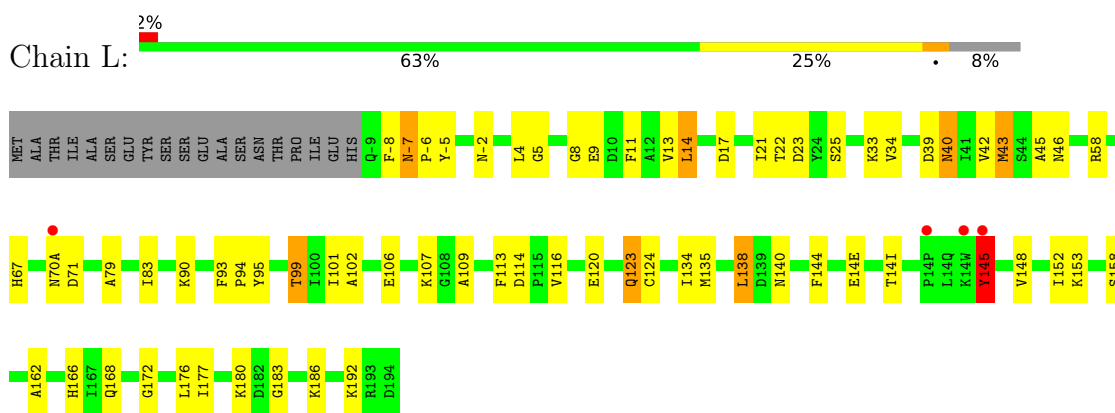
• Molecule 11: Proteasome component PRE2



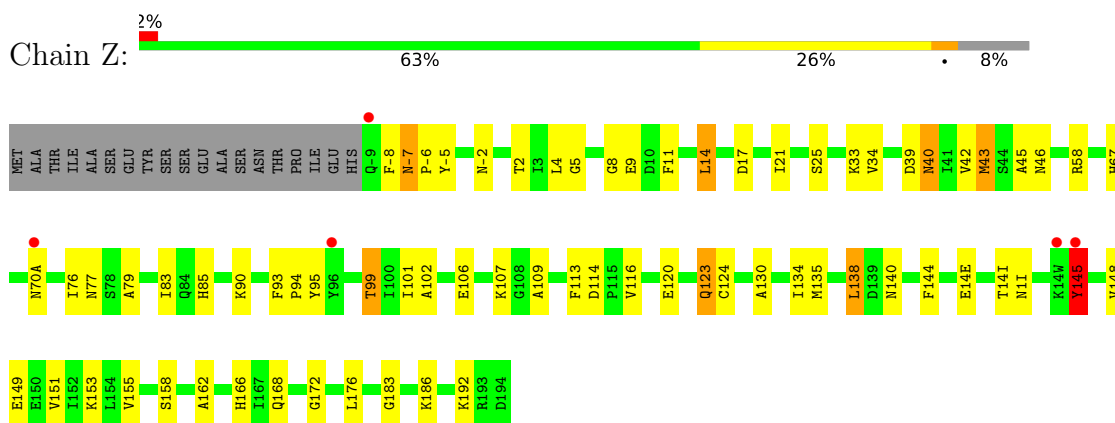
• Molecule 11: Proteasome component PRE2



• Molecule 12: Proteasome component C5



• Molecule 12: Proteasome component C5

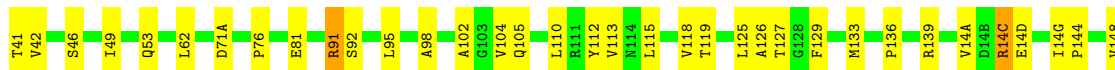
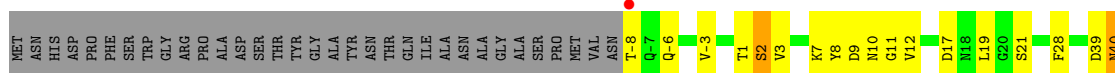


• Molecule 13: Proteasome component PRE4





• Molecule 13: Proteasome component PRE4



• Molecule 14: Proteasome component PRE3



• Molecule 14: Proteasome component PRE3



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	135.05Å 301.96Å 143.84Å 90.00° 112.87° 90.00°	Depositor
Resolution (Å)	15.00 – 2.90 20.02 – 2.82	Depositor EDS
% Data completeness (in resolution range)	99.6 (15.00-2.90) 99.2 (20.02-2.82)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.30 (at 2.83Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.215 , 0.245 0.204 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å ²)	48.9	Xtrriage
Anisotropy	0.729	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 65.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	50766	wwPDB-VP
Average B, all atoms (Å ²)	48.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.64% 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 i

5.1 Standard geometry i

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.38	0/1952	0.64	0/2642
1	O	0.38	0/1952	0.64	0/2642
2	B	0.36	0/1934	0.63	0/2618
2	P	0.38	0/1934	0.63	0/2618
3	C	0.35	0/1919	0.61	0/2598
3	Q	0.36	0/1919	0.61	0/2598
4	D	0.35	0/1886	0.62	0/2541
4	R	0.35	0/1886	0.62	0/2541
5	E	0.35	0/1823	0.62	0/2463
5	S	0.36	0/1823	0.62	0/2463
6	F	0.36	0/1936	0.61	0/2614
6	T	0.38	0/1936	0.62	0/2614
7	G	0.41	0/1959	0.63	0/2652
7	U	0.41	0/1959	0.63	0/2652
8	H	0.37	0/1715	0.66	0/2326
8	V	0.37	0/1715	0.66	0/2326
9	I	0.39	0/1611	0.65	0/2174
9	W	0.41	0/1611	0.66	0/2174
10	J	0.38	0/1613	0.64	0/2173
10	X	0.39	0/1613	0.64	0/2173
11	K	0.39	0/1681	0.65	1/2274 (0.0%)
11	Y	0.39	0/1681	0.65	1/2274 (0.0%)
12	L	0.40	0/1795	0.67	0/2420
12	Z	0.39	0/1795	0.67	0/2420
13	0	0.39	0/1855	0.67	1/2514 (0.0%)
13	M	0.39	0/1855	0.67	1/2514 (0.0%)
14	1	0.41	0/1541	0.66	0/2087
14	N	0.42	0/1541	0.66	0/2087
All	All	0.38	0/50440	0.64	4/68192 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if

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

Mol	Chain	#Chirality outliers	#Planarity outliers
12	L	0	1
12	Z	0	1
All	All	0	2

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	0	95	LEU	N-CA-C	-5.83	95.27	111.00
13	M	95	LEU	N-CA-C	-5.78	95.39	111.00
11	K	4	LEU	CA-CB-CG	5.06	126.94	115.30
11	Y	4	LEU	CA-CB-CG	5.04	126.89	115.30

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	L	145	TYR	Sidechain
12	Z	145	TYR	Sidechain

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	1926	65	0
1	O	1915	0	1926	73	0
2	B	1904	0	1901	99	0
2	P	1904	0	1901	96	0
3	C	1890	0	1900	104	0
3	Q	1890	0	1900	94	0
4	D	1861	0	1836	63	0
4	R	1861	0	1836	63	0
5	E	1795	0	1797	66	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	S	1795	0	1797	69	0
6	F	1896	0	1886	68	0
6	T	1896	0	1886	79	0
7	G	1921	0	1910	77	0
7	U	1921	0	1910	75	0
8	H	1684	0	1687	52	0
8	V	1684	0	1687	47	0
9	I	1581	0	1574	40	0
9	W	1581	0	1574	41	0
10	J	1585	0	1590	87	0
10	X	1585	0	1590	89	0
11	K	1644	0	1594	77	0
11	Y	1644	0	1594	77	0
12	L	1757	0	1711	53	0
12	Z	1757	0	1711	56	0
13	0	1824	0	1832	57	0
13	M	1824	0	1832	58	0
14	1	1512	0	1480	51	0
14	N	1512	0	1480	51	0
15	1	35	0	37	3	0
15	H	35	0	37	3	0
15	K	35	0	37	2	0
15	N	35	0	37	3	0
15	V	35	0	37	3	0
15	Y	35	0	37	2	0
16	0	60	0	0	2	0
16	1	55	0	0	1	0
16	A	38	0	0	2	0
16	B	24	0	0	5	0
16	C	33	0	0	6	0
16	D	24	0	0	3	0
16	E	17	0	0	1	0
16	F	39	0	0	1	0
16	G	47	0	0	2	0
16	H	43	0	0	1	0
16	I	56	0	0	3	0
16	J	36	0	0	3	0
16	K	28	0	0	4	0
16	L	46	0	0	3	0
16	M	62	0	0	4	0
16	N	50	0	0	3	0
16	O	26	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	P	20	0	0	3	0
16	Q	21	0	0	4	0
16	R	19	0	0	3	0
16	S	16	0	0	1	0
16	T	30	0	0	4	0
16	U	50	0	0	3	0
16	V	41	0	0	4	0
16	W	37	0	0	1	0
16	X	33	0	0	3	0
16	Y	29	0	0	8	0
16	Z	38	0	0	2	0
All	All	50766	0	49470	1761	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 18.

All (1761) 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)
11:K:10(B):LYS:H	11:K:10(B):LYS:HD2	1.12	1.14
14:N:107:LYS:HG2	14:N:108:GLY:H	1.15	1.11
11:Y:10(B):LYS:H	11:Y:10(B):LYS:HD2	1.12	1.10
14:1:107:LYS:HG2	14:1:108:GLY:H	1.13	1.09
7:U:96:ALA:HA	7:U:107:MET:HE2	1.35	1.09
7:G:96:ALA:HA	7:G:107:MET:HE2	1.33	1.09
10:X:-1:MET:HG2	10:X:1:ASP:H	1.14	1.08
14:N:136:GLY:HA2	14:1:161:GLN:HE21	1.18	1.07
10:J:-1:MET:HG2	10:J:1:ASP:H	1.15	1.05
14:N:161:GLN:HE21	14:1:136:GLY:HA2	1.20	1.05
2:P:202:THR:HG22	2:P:204:SER:H	1.22	1.03
3:Q:100:ARG:NH1	3:Q:106:PRO:HB3	1.77	1.00
1:O:15:PHE:H	2:P:23:GLN:HE22	1.09	0.99
13:O:157:ASN:HD22	13:O:160:ARG:HH11	1.03	0.98
14:N:107:LYS:HG2	14:N:108:GLY:N	1.79	0.97
3:C:100:ARG:NH1	3:C:106:PRO:HB3	1.77	0.97
1:O:124:THR:HG22	2:P:130:ARG:HH21	1.29	0.97
1:O:130:ARG:HH21	7:U:124:THR:HG22	1.29	0.97
11:K:207:ASN:HD21	10:X:144:PRO:HG3	1.25	0.96
2:B:202:THR:HG22	2:B:204:SER:H	1.26	0.96
2:P:71:ASN:ND2	2:P:72:ASP:H	1.65	0.94
12:Z:43:MET:HB2	12:Z:101:ILE:HG22	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:163:GLN:HE21	3:C:164:THR:H	0.97	0.94
14:1:107:LYS:HG2	14:1:108:GLY:N	1.78	0.94
2:B:15:PHE:H	3:C:23:GLN:HE22	1.12	0.93
6:F:95:GLU:HG3	6:F:115:ARG:HH11	1.33	0.93
2:B:71:ASN:ND2	2:B:72:ASP:H	1.66	0.93
6:T:95:GLU:HG3	6:T:115:ARG:HH11	1.31	0.93
4:D:177:LEU:HD22	5:E:58:LEU:HD13	1.50	0.93
9:I:6:MET:HE3	9:I:155:ILE:HG13	1.51	0.93
13:M:157:ASN:HD22	13:M:160:ARG:HH11	1.00	0.92
3:Q:15:PHE:H	4:R:23:GLN:HE22	1.13	0.91
14:N:20:THR:HG22	15:N:7710:SRG:H25B	1.52	0.91
5:S:15:PHE:H	6:T:23:GLN:HE22	1.14	0.91
14:1:20:THR:HG22	15:1:7710:SRG:H25B	1.51	0.91
3:C:15:PHE:H	4:D:23:GLN:HE22	1.16	0.90
5:E:207:LEU:HD23	5:E:207:LEU:H	1.35	0.90
12:L:43:MET:HB2	12:L:101:ILE:HG22	1.51	0.90
10:J:144:PRO:HG3	11:Y:207:ASN:HD21	1.35	0.90
4:R:177:LEU:HD22	5:S:58:LEU:HD13	1.54	0.90
1:A:15:PHE:H	2:B:23:GLN:HE22	1.15	0.89
9:W:6:MET:HE3	9:W:155:ILE:HG13	1.55	0.89
5:S:207:LEU:HD23	5:S:207:LEU:H	1.36	0.89
11:Y:10(B):LYS:H	11:Y:10(B):LYS:CD	1.85	0.89
3:Q:163:GLN:HE21	3:Q:164:THR:H	0.99	0.88
1:A:130:ARG:HH21	7:G:124:THR:HG22	1.37	0.88
1:O:86:ARG:HE	7:U:118:ASN:HD21	1.20	0.87
8:V:163:ILE:HG23	8:V:170:GLY:HA2	1.54	0.87
14:1:107:LYS:CG	14:1:108:GLY:H	1.87	0.87
1:A:124:THR:HG22	2:B:130:ARG:HH21	1.37	0.87
4:D:40:ILE:HD12	4:D:193:VAL:HG23	1.56	0.87
3:C:185:THR:HB	3:C:188:GLU:HG2	1.57	0.87
12:L:123:GLN:HG3	12:L:145:TYR:OH	1.75	0.86
10:X:-1:MET:HG2	10:X:1:ASP:N	1.90	0.86
12:Z:123:GLN:HG3	12:Z:145:TYR:OH	1.76	0.86
3:Q:100:ARG:HH11	3:Q:106:PRO:HB3	1.41	0.85
8:H:163:ILE:HG23	8:H:170:GLY:HA2	1.59	0.85
10:J:-1:MET:HG2	10:J:1:ASP:N	1.91	0.85
3:Q:185:THR:HB	3:Q:188:GLU:HG2	1.56	0.85
3:C:185:THR:HG22	3:C:187:GLU:H	1.41	0.85
3:Q:185:THR:HG22	3:Q:187:GLU:H	1.39	0.84
5:E:15:PHE:H	6:F:23:GLN:HE22	1.23	0.84
2:P:185:LYS:HD3	2:P:186:VAL:N	1.93	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:185:LYS:HD3	2:B:186:VAL:N	1.93	0.84
4:R:40:ILE:HD12	4:R:193:VAL:HG23	1.58	0.84
3:C:100:ARG:HH11	3:C:106:PRO:HB3	1.42	0.83
5:S:2(B):THR:H	5:S:2(E):ASN:HD22	1.22	0.83
5:E:18(D):ILE:O	5:E:18(D):ILE:HD13	1.79	0.83
14:N:136:GLY:HA2	14:1:161:GLN:NE2	1.94	0.83
5:E:2(B):THR:H	5:E:2(E):ASN:HD22	1.22	0.83
3:Q:52:ARG:HH21	3:Q:211:GLU:HB3	1.40	0.83
13:M:149:GLN:NE2	13:M:149:GLN:H	1.77	0.82
11:K:10(B):LYS:H	11:K:10(B):LYS:CD	1.85	0.82
14:N:107:LYS:CG	14:N:108:GLY:H	1.87	0.82
3:C:52:ARG:HH21	3:C:211:GLU:HB3	1.42	0.82
11:Y:143:LYS:O	11:Y:146:LEU:HD13	1.79	0.82
6:T:184:LEU:HD11	6:T:188:GLU:HB3	1.60	0.82
5:S:18(D):ILE:O	5:S:18(D):ILE:HD13	1.80	0.81
3:C:101:LEU:HD11	10:J:57:GLU:HB3	1.61	0.81
5:S:201:LEU:HD11	5:S:207:LEU:HD22	1.62	0.81
1:O:86:ARG:HE	7:U:118:ASN:ND2	1.79	0.80
14:1:36:ARG:HG3	14:1:42:TRP:CE2	2.15	0.80
2:P:202:THR:HG22	2:P:204:SER:N	1.96	0.80
13:O:149:GLN:NE2	13:O:149:GLN:H	1.80	0.80
3:Q:101:LEU:HD11	10:X:57:GLU:HB3	1.64	0.80
2:B:124:THR:HG22	3:C:130:ARG:HH21	1.45	0.80
6:F:36:THR:HG22	6:F:51:GLU:OE2	1.82	0.80
14:N:161:GLN:NE2	14:1:136:GLY:HA2	1.96	0.80
6:F:184:LEU:HD11	6:F:188:GLU:HB3	1.62	0.80
1:O:130:ARG:HH21	7:U:124:THR:CG2	1.93	0.80
5:E:227:GLU:H	5:E:227:GLU:CD	1.86	0.80
7:G:198:ILE:HG23	7:G:203:THR:O	1.82	0.79
6:T:36:THR:HG22	6:T:51:GLU:OE2	1.81	0.79
5:E:201:LEU:HD11	5:E:207:LEU:HD22	1.62	0.79
2:B:202:THR:HG22	2:B:204:SER:N	1.98	0.79
1:A:86:ARG:HE	7:G:118:ASN:HD21	1.30	0.79
11:K:99:THR:HG22	11:K:113:VAL:O	1.82	0.79
11:K:143:LYS:O	11:K:146:LEU:HD13	1.83	0.78
2:P:71:ASN:HD22	2:P:72:ASP:H	1.29	0.78
14:N:36:ARG:HG3	14:N:42:TRP:CE2	2.18	0.78
5:S:227:GLU:H	5:S:227:GLU:CD	1.86	0.77
1:A:130:ARG:HH21	7:G:124:THR:CG2	1.97	0.77
4:D:177:LEU:HD22	5:E:58:LEU:CD1	2.15	0.77
6:F:35:THR:HG23	6:F:51:GLU:HB3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:20:THR:HG23	14:N:31:THR:OG1	1.85	0.77
2:P:61:GLN:OE1	2:P:208:ASP:HA	1.85	0.77
3:Q:106:PRO:HG2	3:Q:143:PRO:CG	2.14	0.76
3:C:106:PRO:HG2	3:C:143:PRO:CG	2.15	0.76
13:M:157:ASN:HD22	13:M:160:ARG:NH1	1.81	0.76
7:U:198:ILE:HG23	7:U:203:THR:O	1.86	0.76
2:B:71:ASN:HD22	2:B:72:ASP:H	1.32	0.75
2:P:124:THR:HG22	3:Q:130:ARG:HH21	1.49	0.75
14:1:20:THR:HG23	14:1:31:THR:OG1	1.86	0.75
6:T:35:THR:HG23	6:T:51:GLU:HB3	1.68	0.75
11:K:207:ASN:HD21	10:X:144:PRO:CG	2.00	0.75
8:V:53:GLU:O	8:V:56:THR:HG22	1.87	0.74
7:G:217:LYS:HA	7:G:217:LYS:HE3	1.69	0.74
1:O:124:THR:CG2	2:P:130:ARG:HH21	1.99	0.74
2:P:15:PHE:H	3:Q:23:GLN:HE22	1.35	0.74
12:L:4:LEU:HD11	12:L:138:LEU:HD21	1.69	0.74
5:S:207:LEU:HA	5:S:2(E):ASN:ND2	2.03	0.74
2:B:61:GLN:OE1	2:B:208:ASP:HA	1.87	0.74
7:U:217:LYS:HA	7:U:217:LYS:HE3	1.68	0.74
8:H:52:THR:O	8:H:56:THR:HB	1.88	0.74
3:Q:185:THR:HG22	3:Q:187:GLU:N	2.02	0.73
7:U:121:GLN:O	7:U:124:THR:HB	1.88	0.73
8:V:173:VAL:HB	8:V:192:LEU:HB2	1.68	0.73
9:W:2:ILE:HG21	9:W:130:ALA:HB3	1.69	0.73
3:C:163:GLN:NE2	3:C:164:THR:H	1.81	0.73
3:C:185:THR:HG22	3:C:187:GLU:N	2.02	0.73
5:E:207:LEU:HA	5:E:2(E):ASN:ND2	2.03	0.73
11:Y:99:THR:HG22	11:Y:113:VAL:O	1.89	0.73
2:B:181:LYS:O	2:B:184:MET:HG3	1.89	0.72
8:H:173:VAL:HB	8:H:192:LEU:HB2	1.71	0.72
9:I:2:ILE:HG21	9:I:130:ALA:HB3	1.71	0.72
12:Z:4:LEU:HD11	12:Z:138:LEU:HD21	1.70	0.72
3:C:41:LYS:HG2	3:C:161:SER:O	1.89	0.72
11:Y:114:ASP:OD1	11:Y:116:ASP:HB2	1.90	0.72
13:O:157:ASN:HD22	13:O:160:ARG:NH1	1.83	0.72
4:D:52:LYS:HE3	4:D:211:GLN:HB2	1.72	0.72
6:F:35:THR:HG21	6:F:51:GLU:O	1.88	0.72
3:Q:106:PRO:HG2	3:Q:143:PRO:HG3	1.72	0.72
3:C:106:PRO:HG2	3:C:143:PRO:HG3	1.72	0.71
13:M:157:ASN:ND2	13:M:160:ARG:HH11	1.83	0.71
11:Y:10(B):LYS:HD2	11:Y:10(B):LYS:N	1.96	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:R:52:LYS:HE3	4:R:211:GLN:HB2	1.73	0.71
10:X:156:LYS:O	10:X:160:GLN:HG3	1.90	0.71
2:P:71:ASN:HD22	2:P:72:ASP:N	1.86	0.71
5:S:207:LEU:H	5:S:207:LEU:CD2	2.03	0.71
2:P:181:LYS:O	2:P:184:MET:HG3	1.89	0.71
7:G:121:GLN:O	7:G:124:THR:HB	1.90	0.71
3:Q:163:GLN:NE2	3:Q:164:THR:H	1.83	0.71
5:S:132:TYR:O	5:S:153:PRO:HB3	1.91	0.71
1:O:159:PRO:O	2:P:59:LEU:HD12	1.91	0.71
5:E:132:TYR:O	5:E:153:PRO:HB3	1.91	0.70
3:Q:41:LYS:HG2	3:Q:161:SER:O	1.92	0.70
8:H:53:GLU:O	8:H:56:THR:HG22	1.91	0.70
8:V:52:THR:O	8:V:56:THR:HB	1.90	0.70
10:J:156:LYS:O	10:J:160:GLN:HG3	1.92	0.70
2:P:121:GLN:O	2:P:124:THR:HB	1.91	0.70
3:Q:85:SER:O	3:Q:89:ILE:HD12	1.90	0.70
1:A:20:LYS:HE3	1:A:25:ASP:OD1	1.92	0.70
12:L:-7:ASN:HD22	12:L:-6:PRO:HD2	1.56	0.70
2:B:121:GLN:O	2:B:124:THR:HB	1.92	0.69
8:V:81:GLN:O	8:V:85:GLN:HG3	1.92	0.69
5:E:207:LEU:H	5:E:207:LEU:CD2	2.03	0.69
6:T:35:THR:HG21	6:T:51:GLU:O	1.92	0.69
12:L:4:LEU:CD1	12:L:138:LEU:HD21	2.23	0.69
2:B:71:ASN:HD22	2:B:72:ASP:N	1.89	0.69
2:P:71:ASN:ND2	2:P:72:ASP:N	2.40	0.69
12:Z:-7:ASN:HD22	12:Z:-6:PRO:HD2	1.57	0.69
14:N:106:ASN:O	14:N:107:LYS:HB3	1.90	0.69
1:O:57:PRO:HG3	7:U:177:GLU:CD	2.12	0.69
13:M:139:ARG:HH11	8:V:165:ASN:HD22	1.40	0.69
12:Z:4:LEU:CD1	12:Z:138:LEU:HD21	2.22	0.69
1:A:124:THR:CG2	2:B:130:ARG:HH21	2.04	0.68
3:Q:163:GLN:HE21	3:Q:164:THR:N	1.84	0.68
10:J:52:THR:HG22	10:J:53:VAL:N	2.07	0.68
14:1:106:ASN:O	14:1:107:LYS:HB3	1.92	0.68
3:C:85:SER:O	3:C:89:ILE:HD12	1.94	0.68
3:C:216:LYS:HB2	3:C:220:ASP:HB3	1.76	0.68
2:P:152:ASN:HB2	2:P:153:PRO:HD2	1.74	0.68
11:K:143:LYS:HB2	11:K:146:LEU:HD11	1.76	0.68
2:B:41:MET:HE1	3:C:62:ARG:HH21	1.57	0.68
8:H:165:ASN:HD22	13:0:139:ARG:HH11	1.40	0.68
1:O:20:LYS:HE3	1:O:25:ASP:OD1	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:34:LEU:HB2	16:V:7725:HOH:O	1.93	0.68
2:P:6:ARG:HG2	3:Q:10:ARG:HH21	1.59	0.68
11:K:10(B):LYS:HD2	11:K:10(B):LYS:N	1.96	0.68
11:Y:143:LYS:HB2	11:Y:146:LEU:HD11	1.74	0.68
5:S:2(B):THR:N	5:S:2(E):ASN:HD22	1.92	0.68
14:N:112:THR:HG22	14:N:120:HIS:HB2	1.76	0.67
8:H:81:GLN:O	8:H:85:GLN:HG3	1.93	0.67
7:U:233:LEU:O	7:U:236:ILE:HG13	1.94	0.67
3:C:163:GLN:HE21	3:C:164:THR:N	1.82	0.67
7:G:233:LEU:O	7:G:236:ILE:HG13	1.93	0.67
13:O:41:THR:OG1	13:O:76:PRO:HG3	1.94	0.67
12:L:33:LYS:HD2	12:L:46:ASN:ND2	2.09	0.67
6:F:192:GLN:O	6:F:196:ILE:HG12	1.94	0.67
6:T:127:ASN:HD22	6:T:128:SER:N	1.93	0.67
1:A:86:ARG:HE	7:G:118:ASN:ND2	1.92	0.67
1:O:32:LYS:HE2	1:O:32:LYS:HA	1.77	0.67
5:S:141:TYR:CE2	5:S:217:LYS:HA	2.30	0.67
4:D:72:ARG:HG3	16:D:268:HOH:O	1.94	0.67
10:X:52:THR:HG22	10:X:53:VAL:N	2.10	0.67
13:O:40:ASN:H	13:O:40:ASN:HD22	1.43	0.67
12:L:40:ASN:HD21	12:L:183:GLY:HA2	1.60	0.66
3:Q:216:LYS:HB2	3:Q:220:ASP:HB3	1.76	0.66
4:R:177:LEU:HD22	5:S:58:LEU:CD1	2.25	0.66
2:B:71:ASN:ND2	2:B:72:ASP:N	2.42	0.66
5:E:2(B):THR:N	5:E:2(E):ASN:HD22	1.92	0.66
12:Z:33:LYS:HD2	12:Z:46:ASN:ND2	2.10	0.66
12:Z:166:HIS:HD2	12:Z:168:GLN:H	1.39	0.66
12:L:166:HIS:HD2	12:L:168:GLN:H	1.41	0.66
1:O:232:ARG:HH11	1:O:232:ARG:HG3	1.60	0.66
10:X:113:ILE:HG12	10:X:119:LYS:HG3	1.77	0.66
2:B:15:PHE:H	3:C:23:GLN:NE2	1.91	0.66
6:F:127:ASN:HD22	6:F:128:SER:N	1.93	0.66
13:M:149:GLN:H	13:M:149:GLN:HE21	1.44	0.66
6:F:109:ILE:HD12	6:F:109:ILE:N	2.11	0.66
13:O:157:ASN:ND2	13:O:160:ARG:HH11	1.86	0.66
1:A:7:ARG:HB2	2:B:5:SER:OG	1.96	0.65
11:Y:10(A):ARG:HG2	11:Y:10(A):ARG:HH11	1.62	0.65
2:B:15:PHE:N	3:C:23:GLN:HE22	1.91	0.65
13:M:40:ASN:HD22	13:M:40:ASN:H	1.43	0.65
2:B:152:ASN:HB2	2:B:153:PRO:HD2	1.76	0.65
14:1:112:THR:HG22	14:1:120:HIS:HB2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:232:ARG:HG3	1:A:232:ARG:HH11	1.61	0.65
2:B:126:HIS:HB3	3:C:129:VAL:HG12	1.79	0.65
14:N:107:LYS:NZ	14:N:145:ASN:HD21	1.95	0.65
1:A:32:LYS:HE2	1:A:32:LYS:HA	1.78	0.65
11:K:99:THR:HG22	11:K:113:VAL:HB	1.78	0.65
5:S:48:LEU:HG	5:S:139:ILE:HD13	1.79	0.65
2:P:121:GLN:CG	3:Q:83:ALA:HB1	2.27	0.65
5:S:227:GLU:CD	5:S:227:GLU:N	2.50	0.65
10:J:133:TYR:CD1	16:Y:7726:HOH:O	2.50	0.64
11:K:114:ASP:OD1	11:K:116:ASP:HB2	1.96	0.64
6:T:109:ILE:HD12	6:T:109:ILE:N	2.11	0.64
7:U:96:ALA:HA	7:U:107:MET:CE	2.21	0.64
12:Z:134:ILE:HD11	12:Z:162:ALA:HB2	1.80	0.64
6:T:192:GLN:O	6:T:196:ILE:HG12	1.97	0.64
13:O:149:GLN:H	13:O:149:GLN:HE21	1.45	0.64
10:J:136:SER:HA	10:J:139:ASP:HB2	1.79	0.64
14:1:55:ILE:HD11	14:1:95:LEU:HD13	1.79	0.64
5:S:92:LEU:HD11	5:S:112:ALA:HB1	1.80	0.64
5:E:48:LEU:HG	5:E:139:ILE:HD13	1.80	0.64
5:E:141:TYR:CE2	5:E:217:LYS:HA	2.33	0.64
10:J:38:SER:HB2	10:J:39:PRO:HD2	1.80	0.64
11:K:10(A):ARG:HG2	11:K:10(A):ARG:HH11	1.63	0.64
4:R:177:LEU:HA	5:S:58:LEU:HD11	1.79	0.64
10:X:38:SER:HB2	10:X:39:PRO:HD2	1.79	0.64
4:R:185:THR:OG1	4:R:188:GLU:HG3	1.97	0.64
7:U:87:ASN:C	7:U:87:ASN:HD22	2.01	0.63
6:T:95:GLU:HG2	6:T:115:ARG:HB3	1.79	0.63
14:1:116:GLY:HA3	16:1:7713:HOH:O	1.98	0.63
5:E:227:GLU:CD	5:E:227:GLU:N	2.50	0.63
6:F:95:GLU:HG2	6:F:115:ARG:HB3	1.81	0.63
11:Y:135:TYR:CB	16:Y:7726:HOH:O	2.47	0.63
12:Z:40:ASN:HD21	12:Z:183:GLY:HA2	1.63	0.63
10:J:123:PRO:HB2	10:J:124:TYR:CD1	2.34	0.63
1:O:179:ARG:NH1	1:O:179:ARG:HB3	2.14	0.63
5:E:92:LEU:HD11	5:E:112:ALA:HB1	1.80	0.63
10:J:144:PRO:CG	11:Y:207:ASN:HD21	2.08	0.63
7:U:115:ARG:HH12	7:U:119:LEU:HD13	1.64	0.62
10:X:136:SER:HA	10:X:139:ASP:HB2	1.80	0.62
13:O:170:SER:HA	16:O:270:HOH:O	1.99	0.62
16:I:247:HOH:O	11:Y:210:ILE:HB	1.99	0.62
1:O:7:ARG:HB2	2:P:5:SER:OG	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:99:THR:HG22	11:Y:113:VAL:HB	1.80	0.62
1:A:85:TYR:O	1:A:89:VAL:HG23	2.00	0.62
10:J:113:ILE:HG12	10:J:119:LYS:HG3	1.81	0.62
10:X:32:ASP:OD2	10:X:34:THR:HG22	2.00	0.62
2:B:152:ASN:HB2	2:B:153:PRO:CD	2.30	0.62
14:1:107:LYS:NZ	14:1:145:ASN:HD21	1.97	0.62
10:X:123:PRO:HB2	10:X:124:TYR:CD1	2.34	0.62
13:M:41:THR:OG1	13:M:76:PRO:HG3	2.00	0.62
3:Q:55:THR:O	3:Q:56:LEU:HD22	1.99	0.62
14:N:55:ILE:HD11	14:N:95:LEU:HD13	1.81	0.62
6:T:237:GLN:O	6:T:240:ILE:HG22	2.00	0.62
10:X:147:THR:HG23	10:X:150:GLU:OE2	2.00	0.62
4:D:185:THR:OG1	4:D:188:GLU:HG3	1.99	0.62
7:G:96:ALA:HA	7:G:107:MET:CE	2.21	0.62
11:Y:104:TYR:CE2	11:Y:108:PRO:HG3	2.35	0.62
1:A:179:ARG:NH1	1:A:179:ARG:HB3	2.15	0.62
3:C:55:THR:O	3:C:56:LEU:HD22	2.00	0.62
12:L:134:ILE:HD11	12:L:162:ALA:HB2	1.80	0.62
2:P:152:ASN:HB2	2:P:153:PRO:CD	2.30	0.62
3:C:160:TRP:CE2	4:D:59:LEU:HD23	2.35	0.61
7:U:172:ILE:HD12	7:U:197:MET:CE	2.30	0.61
5:S:123:ASN:HD22	5:S:123:ASN:N	1.98	0.61
11:K:6:PHE:HA	11:K:123:ASP:O	1.99	0.61
12:L:8:GLY:HA3	12:L:11:PHE:CE2	2.35	0.61
10:X:178:VAL:HG22	10:X:184:ILE:HG12	1.82	0.61
14:1:36:ARG:HG3	14:1:42:TRP:CZ2	2.35	0.61
7:G:115:ARG:HH12	7:G:119:LEU:HD13	1.65	0.61
3:C:175:PHE:O	3:C:179:ASN:HB2	2.00	0.61
5:E:86:ARG:HH11	5:E:86:ARG:HG3	1.65	0.61
16:L:200:HOH:O	9:W:192:ARG:HG3	2.01	0.61
1:O:225:THR:OG1	1:O:228:GLU:HG3	2.00	0.61
3:Q:15:PHE:N	4:R:23:GLN:HE22	1.92	0.61
7:G:87:ASN:C	7:G:87:ASN:HD22	2.04	0.61
13:M:40:ASN:HD22	13:M:40:ASN:N	1.97	0.61
1:A:177:GLU:HA	2:B:58:LEU:HD11	1.83	0.61
11:K:104:TYR:CE2	11:K:108:PRO:HG3	2.36	0.61
1:O:121:GLN:O	1:O:124:THR:HB	2.01	0.61
11:Y:6:PHE:HA	11:Y:123:ASP:O	1.99	0.61
7:G:218:ASP:O	7:G:220:LYS:HB2	2.00	0.61
14:N:163:ILE:HG23	14:N:170:GLY:HA2	1.83	0.61
7:U:236:ILE:HD12	7:U:237:ALA:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:179:LEU:HD21	6:T:192:GLN:HG2	1.83	0.60
7:U:35:ILE:HG23	7:U:51:GLN:HB2	1.83	0.60
1:A:225:THR:OG1	1:A:228:GLU:HG3	2.01	0.60
9:I:1:GLY:HA3	9:I:33:LYS:HE2	1.83	0.60
4:R:207:LEU:HD23	4:R:207:LEU:C	2.21	0.60
7:U:218:ASP:O	7:U:220:LYS:HB2	2.00	0.60
10:X:113:ILE:HA	10:X:118:THR:O	2.01	0.60
12:Z:8:GLY:HA3	12:Z:11:PHE:CE2	2.36	0.60
7:G:35:ILE:HG23	7:G:51:GLN:HB2	1.82	0.60
10:J:178:VAL:HG22	10:J:184:ILE:HG12	1.83	0.60
13:O:40:ASN:HD22	13:O:40:ASN:N	1.98	0.60
3:C:15:PHE:N	4:D:23:GLN:HE22	1.95	0.60
4:R:85:ALA:O	4:R:89:ILE:HG12	2.02	0.60
13:M:57:ARG:NE	16:M:246:HOH:O	2.34	0.60
4:D:40:ILE:CD1	4:D:193:VAL:HG23	2.30	0.60
4:D:140:GLY:HA2	4:D:215:ILE:HG12	1.82	0.60
13:O:76:PRO:HD2	13:O:105:GLN:OE1	2.02	0.60
2:B:141:TYR:CD1	2:B:21(E):VAL:HG21	2.36	0.60
3:C:227:GLU:OE1	3:C:227:GLU:N	2.34	0.60
10:J:52:THR:CG2	10:J:53:VAL:N	2.64	0.60
10:J:133:TYR:HE1	16:X:216:HOH:O	1.84	0.60
14:N:18(A):ILE:HD13	14:N:18(B):PHE:N	2.17	0.60
1:O:86:ARG:HH21	7:U:118:ASN:HD22	1.50	0.60
2:P:126:HIS:HB3	3:Q:129:VAL:HG12	1.83	0.60
3:Q:160:TRP:CE2	4:R:59:LEU:HD23	2.37	0.60
5:E:175:TYR:CD2	5:E:196:ALA:HA	2.37	0.60
4:R:12(D):ALA:HB3	4:R:126:ARG:HD3	1.82	0.60
9:W:174:VAL:HG21	9:W:186:LYS:HE3	1.84	0.60
8:H:72:ARG:HH11	8:H:72:ARG:HG3	1.67	0.59
3:Q:175:PHE:O	3:Q:179:ASN:HB2	2.02	0.59
13:O:-6:GLN:HG3	13:O:-6:GLN:O	2.01	0.59
8:V:84:LYS:HG3	8:V:85:GLN:N	2.17	0.59
4:D:207:LEU:C	4:D:207:LEU:HD23	2.23	0.59
5:E:2(B):THR:H	5:E:2(E):ASN:ND2	1.98	0.59
11:K:67:GLU:OE2	11:K:73:ARG:HA	2.02	0.59
14:N:105:ASP:OD2	14:N:106:ASN:HB2	2.02	0.59
2:P:21:LEU:HD13	2:P:124:THR:HG23	1.84	0.59
5:S:75:GLY:HA3	5:S:221:PHE:CE2	2.37	0.59
10:J:18:LYS:HG2	10:J:174:ILE:HG13	1.84	0.59
11:Y:67:GLU:OE2	11:Y:73:ARG:HA	2.02	0.59
5:E:75:GLY:HA3	5:E:221:PHE:CE2	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:179:LEU:HD11	6:F:192:GLN:CG	2.32	0.59
7:G:172:ILE:HD12	7:G:197:MET:CE	2.31	0.59
14:N:147:SER:OG	14:N:150:GLU:HG3	2.03	0.59
5:E:2(B):THR:OG1	5:E:2(E):ASN:HB3	2.01	0.59
7:G:236:ILE:HD12	7:G:237:ALA:N	2.17	0.59
4:D:12(D):ALA:HB3	4:D:126:ARG:HD3	1.85	0.59
4:D:12(F):GLY:HA3	16:D:271:HOH:O	2.02	0.59
10:X:48:GLU:HB2	10:X:96:GLN:HB2	1.84	0.59
1:A:33:GLN:HA	1:A:33:GLN:HE21	1.68	0.59
2:P:141:TYR:CD1	2:P:21(E):VAL:HG21	2.38	0.59
6:T:82:ILE:HB	6:T:83:PRO:HD3	1.85	0.59
4:D:24:VAL:O	4:D:27:SER:HB3	2.03	0.59
3:Q:215:VAL:HG23	3:Q:221:ILE:HG12	1.85	0.59
5:S:86:ARG:HH11	5:S:86:ARG:HG3	1.67	0.59
5:S:207:LEU:HA	5:S:2(E):ASN:HD21	1.68	0.59
7:U:59:LEU:O	7:U:61:PRO:HD3	2.03	0.59
4:D:85:ALA:O	4:D:89:ILE:HG12	2.03	0.58
10:J:147:THR:HG23	10:J:150:GLU:OE2	2.02	0.58
11:K:4:LEU:HD12	11:K:159:ILE:HD11	1.84	0.58
2:P:65:GLU:HG3	2:P:66:LYS:HG3	1.84	0.58
6:T:203:GLU:O	6:T:206:LYS:HD2	2.03	0.58
2:B:21:LEU:HD13	2:B:124:THR:HG23	1.85	0.58
5:E:123:ASN:N	5:E:123:ASN:HD22	1.98	0.58
6:F:179:LEU:HD11	6:F:192:GLN:HG3	1.85	0.58
7:G:77:VAL:CG1	7:G:137:THR:HB	2.33	0.58
3:Q:186:VAL:O	3:Q:190:VAL:HG23	2.03	0.58
10:X:18:LYS:HG2	10:X:174:ILE:HG13	1.85	0.58
10:X:48:GLU:CB	10:X:96:GLN:HB2	2.33	0.58
14:1:147:SER:OG	14:1:150:GLU:HG3	2.03	0.58
6:F:237:GLN:O	6:F:240:ILE:HG22	2.03	0.58
3:Q:15:PHE:H	4:R:23:GLN:NE2	1.94	0.58
4:R:40:ILE:CD1	4:R:193:VAL:HG23	2.33	0.58
5:S:2(B):THR:OG1	5:S:2(E):ASN:HB3	2.04	0.58
6:T:179:LEU:HD11	6:T:192:GLN:CG	2.33	0.58
12:Z:-6:PRO:O	13:0:91:ARG:NH1	2.35	0.58
10:J:113:ILE:HA	10:J:118:THR:O	2.03	0.58
3:Q:168:ASN:HB2	3:Q:200:VAL:HG11	1.86	0.58
10:X:44:SER:OG	10:X:100:LEU:HB2	2.03	0.58
11:Y:4:LEU:HD12	11:Y:159:ILE:HD11	1.84	0.58
2:B:186:VAL:HG11	2:B:216:ARG:HD3	1.85	0.58
4:D:177:LEU:HA	5:E:58:LEU:HD11	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:143:ARG:HB2	10:J:146:MET:HG3	1.86	0.58
2:P:224:PHE:N	2:P:224:PHE:CD2	2.72	0.58
10:X:190:PHE:C	10:X:192:ALA:H	2.06	0.58
3:C:235:GLN:O	3:C:239:GLU:HG2	2.04	0.58
6:F:109:ILE:HD12	6:F:109:ILE:H	1.69	0.58
12:L:90:LYS:HD3	12:L:95:TYR:CZ	2.39	0.58
14:N:36:ARG:HG3	14:N:42:TRP:CZ2	2.38	0.58
2:P:186:VAL:HG21	2:P:216:ARG:HG2	1.85	0.58
3:Q:173:ARG:O	3:Q:177:GLU:HG3	2.04	0.58
6:T:69:VAL:HG12	16:T:301:HOH:O	2.02	0.58
14:1:18(A):ILE:HD13	14:1:18(B):PHE:N	2.19	0.58
4:D:205:GLU:HA	4:D:205:GLU:OE2	2.04	0.58
6:F:203:GLU:O	6:F:206:LYS:HD2	2.04	0.58
8:V:20:SER:HB3	8:V:28:ASP:HB3	1.86	0.58
6:T:179:LEU:HD11	6:T:192:GLN:HG3	1.86	0.58
2:B:224:PHE:N	2:B:224:PHE:HD2	2.02	0.58
5:E:207:LEU:HA	5:E:2(E):ASN:HD21	1.69	0.58
9:I:48:LEU:HG	9:I:50:THR:HG22	1.86	0.58
10:J:32:ASP:OD2	10:J:34:THR:HG22	2.03	0.58
14:1:163:ILE:HG23	14:1:170:GLY:HA2	1.85	0.58
2:P:101:LYS:NZ	10:X:85:GLN:NE2	2.52	0.57
10:X:52:THR:CG2	10:X:53:VAL:N	2.67	0.57
14:1:176:VAL:HG12	14:1:178:LEU:HD13	1.85	0.57
2:B:124:THR:CG2	3:C:130:ARG:HH21	2.16	0.57
3:C:215:VAL:HG23	3:C:221:ILE:HG12	1.86	0.57
7:G:77:VAL:HG12	7:G:137:THR:HB	1.86	0.57
8:H:20:SER:HB3	8:H:28:ASP:HB3	1.85	0.57
10:J:19:ALA:HB2	10:J:171:LYS:HG2	1.86	0.57
2:P:186:VAL:HG11	2:P:216:ARG:HD3	1.86	0.57
14:1:105:ASP:OD2	14:1:106:ASN:HB2	2.04	0.57
6:F:20(B):GLU:HG3	6:F:20(C):LYS:H	1.70	0.57
11:Y:20:ALA:HB2	11:Y:31:VAL:HG21	1.86	0.57
6:F:82:ILE:HB	6:F:83:PRO:HD3	1.85	0.57
11:K:99:THR:CG2	11:K:113:VAL:HB	2.34	0.57
13:M:-6:GLN:HG3	13:M:-6:GLN:O	2.03	0.57
2:P:224:PHE:N	2:P:224:PHE:HD2	2.02	0.57
13:0:110:LEU:HG	13:0:125:LEU:HD12	1.87	0.57
2:B:149:TYR:OH	3:C:62(A):ILE:HB	2.04	0.57
2:B:224:PHE:N	2:B:224:PHE:CD2	2.72	0.57
3:C:227:GLU:H	3:C:227:GLU:CD	2.07	0.57
9:I:174:VAL:HG21	9:I:186:LYS:HE3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:17:ASP:HA	13:M:173:PHE:CB	2.34	0.57
1:O:33:GLN:HE21	1:O:33:GLN:HA	1.68	0.57
2:P:185:LYS:O	2:P:188:ASP:HB2	2.03	0.57
4:R:121:LEU:HA	4:R:123:PHE:CE1	2.39	0.57
11:Y:135:TYR:HB2	16:Y:7726:HOH:O	2.04	0.57
7:G:136:LEU:O	7:G:150:LYS:HA	2.04	0.57
11:K:67:GLU:CD	11:K:73:ARG:HA	2.25	0.57
14:N:13:ILE:HD12	14:N:151:THR:CG2	2.35	0.57
3:Q:235:GLN:O	3:Q:239:GLU:HG2	2.04	0.57
4:R:162:ALA:HB3	5:S:58:LEU:HD23	1.86	0.57
2:B:121:GLN:CG	3:C:83:ALA:HB1	2.35	0.57
10:J:190:PHE:C	10:J:192:ALA:H	2.06	0.57
4:R:205:GLU:HA	4:R:205:GLU:OE2	2.04	0.57
5:S:2(B):THR:H	5:S:2(E):ASN:ND2	1.98	0.57
6:T:37:SER:HB3	6:T:50:VAL:HG23	1.86	0.57
7:U:136:LEU:O	7:U:150:LYS:HA	2.04	0.57
7:G:96:ALA:CA	7:G:107:MET:HE2	2.21	0.57
13:M:147:THR:HG23	16:M:262:HOH:O	2.04	0.57
14:N:92:ASP:HB2	16:N:7722:HOH:O	2.05	0.57
10:X:17:SER:HB2	10:X:170:PHE:HB2	1.87	0.57
2:B:185:LYS:O	2:B:188:ASP:HB2	2.04	0.57
6:T:179:LEU:HD21	6:T:192:GLN:CG	2.34	0.57
8:V:72:ARG:HH11	8:V:72:ARG:HG3	1.69	0.57
2:B:41:MET:HE1	3:C:62:ARG:NH2	2.20	0.57
9:I:2:ILE:H	9:I:2:ILE:HD13	1.70	0.57
14:N:175:MET:HB2	14:N:187:LEU:HB2	1.86	0.57
14:N:176:VAL:HG12	14:N:178:LEU:HD13	1.86	0.57
3:C:172:VAL:HG23	3:C:196:SER:HB2	1.86	0.56
11:K:191:ASP:OD2	11:K:193:GLY:N	2.37	0.56
13:M:76:PRO:HD2	13:M:105:GLN:OE1	2.05	0.56
9:W:48:LEU:HG	9:W:50:THR:HG22	1.86	0.56
1:O:60:MET:HE1	16:U:255:HOH:O	2.04	0.56
4:R:140:GLY:HA2	4:R:215:ILE:HG12	1.87	0.56
3:C:168:ASN:HB2	3:C:200:VAL:HG11	1.86	0.56
5:S:175:TYR:CD2	5:S:196:ALA:HA	2.40	0.56
7:U:77:VAL:CG1	7:U:137:THR:HB	2.35	0.56
10:X:19:ALA:HB2	10:X:171:LYS:HG2	1.86	0.56
2:B:17:PRO:HA	3:C:26:TYR:CE1	2.39	0.56
6:F:37:SER:HB3	6:F:50:VAL:HG23	1.87	0.56
9:I:6:MET:HE1	9:I:155:ILE:HA	1.86	0.56
11:K:20:ALA:HB2	11:K:31:VAL:HG21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:179:ARG:HB3	1:A:179:ARG:HH11	1.70	0.56
7:G:59:LEU:O	7:G:61:PRO:HD3	2.05	0.56
13:M:110:LEU:HG	13:M:125:LEU:HD12	1.87	0.56
2:P:218:ASN:O	2:P:21(C):ASP:HB2	2.05	0.56
11:Y:135:TYR:HB3	16:Y:7726:HOH:O	2.05	0.56
2:B:65:GLU:HG3	2:B:66:LYS:HG3	1.85	0.56
2:B:87:ILE:O	2:B:91:THR:HG23	2.06	0.56
4:D:194:LEU:HD21	4:D:233:ILE:HD12	1.87	0.56
5:E:226:GLY:O	5:E:229:VAL:HG22	2.05	0.56
10:J:48:GLU:CB	10:J:96:GLN:HB2	2.35	0.56
4:R:12(D):ALA:HB3	4:R:126:ARG:CD	2.35	0.56
2:B:218:ASN:O	2:B:21(C):ASP:HB2	2.05	0.56
3:C:186:VAL:O	3:C:190:VAL:HG23	2.06	0.56
6:F:179:LEU:HD21	6:F:192:GLN:HG2	1.87	0.56
16:R:831:HOH:O	12:Z:85:HIS:HD2	1.89	0.56
6:T:20(B):GLU:HG3	6:T:20(C):LYS:H	1.71	0.56
8:V:139:GLU:HA	8:V:139:GLU:OE2	2.06	0.56
11:Y:78:ALA:O	11:Y:82:ILE:HG12	2.06	0.56
13:O:39:ASP:HA	13:O:184:LEU:HD12	1.87	0.56
1:A:121:GLN:O	1:A:124:THR:HB	2.06	0.56
2:B:17:PRO:HA	3:C:26:TYR:CD1	2.41	0.56
6:F:95:GLU:HG3	6:F:115:ARG:NH1	2.14	0.56
13:M:14(C):ARG:HG3	13:M:14(C):ARG:HH11	1.71	0.56
9:W:1:GLY:HA3	9:W:33:LYS:HE2	1.88	0.56
12:Z:90:LYS:HD3	12:Z:95:TYR:CZ	2.41	0.56
10:J:2:ILE:HD12	10:J:162:LEU:HD13	1.88	0.56
2:P:87:ILE:O	2:P:91:THR:HG23	2.06	0.56
12:Z:93:PHE:N	12:Z:94:PRO:HD3	2.21	0.56
4:D:161:ASN:HB3	4:D:180:TRP:CE2	2.41	0.56
7:U:228:ASN:HB3	16:U:242:HOH:O	2.05	0.56
9:W:2:ILE:HD13	9:W:2:ILE:H	1.70	0.56
9:W:101:VAL:O	9:W:110:ILE:HA	2.06	0.56
12:Z:21:ILE:C	12:Z:21:ILE:HD12	2.27	0.56
2:B:6:ARG:HG2	3:C:10:ARG:HH21	1.71	0.55
7:G:18(G):GLU:HG2	7:G:188:LYS:CB	2.36	0.55
4:R:161:ASN:HB3	4:R:180:TRP:CE2	2.41	0.55
9:W:6:MET:HE3	9:W:155:ILE:CG1	2.32	0.55
9:W:143:GLU:HG3	9:W:146:LEU:HD21	1.87	0.55
2:P:121:GLN:HG2	3:Q:83:ALA:HB1	1.87	0.55
3:Q:172:VAL:HG23	3:Q:196:SER:HB2	1.88	0.55
11:Y:191:ASP:OD2	11:Y:193:GLY:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:179:LEU:HD21	6:F:192:GLN:CG	2.36	0.55
10:J:44:SER:OG	10:J:100:LEU:HB2	2.07	0.55
11:Y:50:ALA:CB	12:Z:116:VAL:HG23	2.35	0.55
10:J:147:THR:OG1	10:J:150:GLU:HG3	2.07	0.55
1:O:179:ARG:HB3	1:O:179:ARG:HH11	1.71	0.55
10:X:143:ARG:HB2	10:X:146:MET:HG3	1.88	0.55
14:1:175:MET:HB2	14:1:187:LEU:HB2	1.87	0.55
2:B:186:VAL:HG21	2:B:216:ARG:HG2	1.87	0.55
10:J:-1:MET:CG	10:J:1:ASP:H	2.03	0.55
1:O:69:LEU:C	1:O:69:LEU:HD23	2.27	0.55
4:D:121:LEU:HA	4:D:123:PHE:CE1	2.41	0.55
10:J:17:SER:HB2	10:J:170:PHE:HB2	1.88	0.55
1:O:118:LYS:HE2	1:O:122:GLU:OE1	2.07	0.55
3:Q:227:GLU:H	3:Q:227:GLU:CD	2.09	0.55
5:S:15:PHE:H	6:T:23:GLN:NE2	1.95	0.55
11:Y:67:GLU:CD	11:Y:73:ARG:HA	2.26	0.55
13:O:17:ASP:HA	13:O:173:PHE:CB	2.36	0.55
8:H:84:LYS:HG3	8:H:85:GLN:N	2.20	0.55
10:J:2:ILE:O	10:J:3:ILE:HD12	2.07	0.55
12:L:21:ILE:C	12:L:21:ILE:HD12	2.27	0.55
3:Q:40:VAL:HG12	3:Q:162:ALA:HB1	1.89	0.55
13:O:14(C):ARG:HH11	13:O:14(C):ARG:HG3	1.70	0.55
2:B:185:LYS:HD3	2:B:186:VAL:H	1.72	0.55
12:L:79:ALA:O	12:L:83:ILE:HG12	2.07	0.55
4:R:24:VAL:O	4:R:27:SER:HB3	2.07	0.55
7:U:39:ALA:HB2	7:U:48:VAL:HG12	1.89	0.55
3:C:224:LEU:HD12	3:C:224:LEU:N	2.21	0.55
13:M:39:ASP:HA	13:M:184:LEU:HD12	1.89	0.55
3:Q:227:GLU:OE1	3:Q:227:GLU:N	2.36	0.55
5:S:15:PHE:N	6:T:23:GLN:HE22	1.96	0.55
7:U:77:VAL:HG12	7:U:137:THR:HB	1.87	0.55
10:J:52:THR:HG22	10:J:53:VAL:H	1.70	0.55
4:D:97:VAL:HG11	11:K:65:LEU:HD22	1.89	0.54
11:K:4:LEU:HD12	11:K:159:ILE:CD1	2.37	0.54
11:K:195:LEU:O	11:K:199:VAL:HG23	2.07	0.54
1:A:5:THR:O	1:A:7:ARG:HG2	2.07	0.54
4:D:170:GLU:N	4:D:170:GLU:OE1	2.40	0.54
5:S:111:ARG:HG2	5:S:111:ARG:HH11	1.72	0.54
5:S:221:PHE:HE1	5:S:223:ILE:HD11	1.72	0.54
5:S:226:GLY:O	5:S:229:VAL:HG22	2.07	0.54
3:C:173:ARG:O	3:C:177:GLU:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:4:PHE:CG	5:E:5:ARG:N	2.75	0.54
6:F:109:ILE:H	6:F:109:ILE:CD1	2.19	0.54
5:S:4:PHE:CG	5:S:5:ARG:N	2.75	0.54
6:T:184:LEU:CD1	6:T:188:GLU:HB3	2.34	0.54
6:T:198:TYR:HE2	6:T:237:GLN:HE21	1.55	0.54
9:I:2:ILE:HD12	9:I:169:SER:HB3	1.88	0.54
14:N:89:GLU:HG3	16:N:7754:HOH:O	2.08	0.54
3:Q:224:LEU:HD12	3:Q:224:LEU:N	2.22	0.54
16:T:291:HOH:O	7:U:130:ARG:HB2	2.06	0.54
4:D:122:ARG:HG2	4:D:122:ARG:HH11	1.73	0.54
6:F:198:TYR:HE2	6:F:237:GLN:HE21	1.54	0.54
10:J:48:GLU:HB2	10:J:96:GLN:HB2	1.88	0.54
1:O:85:TYR:O	1:O:89:VAL:HG23	2.06	0.54
6:T:173:LYS:O	6:T:177:GLU:HG3	2.07	0.54
8:V:105:ASP:HB2	8:V:10(A):PRO:CD	2.36	0.54
10:X:2:ILE:HD12	10:X:162:LEU:HD13	1.89	0.54
12:Z:-7:ASN:ND2	12:Z:-5:TYR:H	2.06	0.54
12:Z:109:ALA:HA	16:Z:205:HOH:O	2.07	0.54
1:A:69:LEU:HD23	1:A:69:LEU:C	2.27	0.54
1:A:177:GLU:HG2	2:B:58:LEU:HD13	1.90	0.54
11:K:50:ALA:CB	12:L:116:VAL:HG23	2.37	0.54
4:R:91:HIS:CG	4:R:119:LEU:HD11	2.43	0.54
6:T:95:GLU:HG3	6:T:115:ARG:NH1	2.12	0.54
8:V:175:VAL:HG12	8:V:176:CYS:N	2.23	0.54
1:A:21(G):LEU:HD13	1:A:218:GLY:HA2	1.88	0.54
4:D:91:HIS:CG	4:D:119:LEU:HD11	2.43	0.54
8:H:195:ASN:HB3	12:Z:192:LYS:HE3	1.90	0.54
6:T:109:ILE:CD1	6:T:109:ILE:H	2.20	0.54
7:U:96:ALA:CA	7:U:107:MET:HE2	2.23	0.54
14:1:13:ILE:HD12	14:1:151:THR:CG2	2.38	0.54
14:1:84:LYS:HG3	14:1:119:VAL:HG22	1.89	0.54
1:A:118:LYS:HE2	1:A:122:GLU:OE1	2.08	0.54
2:B:21(C):ASP:OD2	2:B:219:GLU:HB3	2.07	0.54
6:F:184:LEU:CD1	6:F:188:GLU:HB3	2.36	0.54
8:H:105:ASP:HB2	8:H:10(A):PRO:CD	2.38	0.54
9:I:101:VAL:O	9:I:110:ILE:HA	2.08	0.54
2:P:6:ARG:HG2	3:Q:10:ARG:NH2	2.23	0.54
6:T:38:ILE:HG22	6:T:164:ALA:HB2	1.90	0.54
5:E:221:PHE:HE1	5:E:223:ILE:HD11	1.72	0.54
8:H:105:ASP:HB2	8:H:10(A):PRO:HD2	1.90	0.54
2:P:21(C):ASP:OD2	2:P:219:GLU:HB3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:115:ARG:NH1	7:U:119:LEU:HD13	2.22	0.54
1:A:67:VAL:HB	1:A:223:LYS:HZ2	1.73	0.54
4:D:12(D):ALA:HA	5:E:129:GLY:HA2	1.89	0.54
4:D:227:GLU:H	4:D:227:GLU:CD	2.11	0.54
11:K:37:ILE:HB	11:K:41:LEU:HB3	1.90	0.54
5:S:199:GLN:N	5:S:199:GLN:HE21	2.06	0.53
4:D:12(D):ALA:HB3	4:D:126:ARG:CD	2.37	0.53
5:E:28:LEU:HD12	5:E:153:PRO:HD2	1.91	0.53
6:F:28:VAL:O	6:F:32:GLU:HG3	2.08	0.53
4:R:227:GLU:H	4:R:227:GLU:CD	2.11	0.53
7:U:18(G):GLU:HG2	7:U:188:LYS:CB	2.37	0.53
10:X:-1:MET:CG	10:X:1:ASP:H	2.02	0.53
10:X:2:ILE:O	10:X:3:ILE:HD12	2.08	0.53
11:K:10(A):ARG:HG2	11:K:10(A):ARG:NH1	2.24	0.53
13:M:8:TYR:CE2	13:M:148:VAL:HG22	2.43	0.53
5:S:148:LEU:CD2	5:S:162:GLY:HA2	2.38	0.53
7:U:225:SER:O	7:U:229:ILE:HG12	2.08	0.53
7:G:197:MET:HG2	7:G:205:PHE:CE1	2.43	0.53
13:M:179:ASP:HB3	13:M:18(A):THR:OG1	2.07	0.53
1:O:5:THR:O	1:O:7:ARG:HG2	2.08	0.53
11:K:207:ASN:ND2	10:X:144:PRO:HD3	2.23	0.53
14:N:84:LYS:HG3	14:N:119:VAL:HG22	1.90	0.53
2:P:219:GLU:HG2	2:P:21(E):VAL:N	2.24	0.53
5:S:123:ASN:N	5:S:123:ASN:ND2	2.56	0.53
1:A:86:ARG:HH21	7:G:118:ASN:HD22	1.56	0.53
1:O:4:MET:O	1:O:5:THR:O	2.27	0.53
3:Q:208:LYS:HD2	3:Q:208:LYS:O	2.08	0.53
4:R:97:VAL:HG11	11:Y:65:LEU:HD22	1.91	0.53
9:I:143:GLU:HG3	9:I:146:LEU:HD21	1.90	0.53
12:L:93:PHE:N	12:L:94:PRO:HD3	2.22	0.53
1:A:51:GLU:OE1	1:A:202:VAL:HG22	2.09	0.53
5:E:199:GLN:HE21	5:E:199:GLN:N	2.06	0.53
7:G:115:ARG:NH1	7:G:119:LEU:HD13	2.24	0.53
7:G:225:SER:O	7:G:229:ILE:HG12	2.09	0.53
13:M:14(D):GLU:O	13:M:14(G):ILE:HG12	2.09	0.53
8:V:4:VAL:HG22	8:V:159:ILE:HD11	1.91	0.53
9:W:97:VAL:HG23	9:W:99:PRO:HD3	1.90	0.53
1:A:188:ASP:O	1:A:192:ILE:HG12	2.09	0.53
3:C:216:LYS:HD2	3:C:220:ASP:OD1	2.09	0.53
6:F:173:LYS:O	6:F:177:GLU:HG3	2.09	0.53
12:L:14:LEU:HD13	12:L:34:VAL:HG13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:46:SER:HA	15:N:7710:SRG:H24A	1.91	0.53
1:O:212:LEU:HD22	1:O:224:LEU:HD12	1.91	0.53
3:Q:216:LYS:HD2	3:Q:220:ASP:OD1	2.09	0.53
2:B:219:GLU:HG2	2:B:21(E):VAL:N	2.24	0.53
3:C:40:VAL:HG12	3:C:162:ALA:HB1	1.91	0.53
12:L:-2:ASN:HA	12:L:21:ILE:O	2.08	0.53
12:L:153:LYS:HG2	8:V:201:GLN:HG3	1.90	0.53
2:P:202:THR:CG2	2:P:204:SER:H	2.10	0.53
6:T:172:ALA:O	6:T:176:LEU:HD23	2.09	0.53
9:W:2:ILE:HD12	9:W:169:SER:HB3	1.90	0.53
10:X:52:THR:HG22	10:X:53:VAL:H	1.73	0.53
11:Y:143:LYS:HB2	11:Y:146:LEU:CD1	2.39	0.53
10:J:34:THR:HG21	10:J:176:LYS:NZ	2.24	0.52
11:K:78:ALA:O	11:K:82:ILE:HG12	2.09	0.52
10:X:147:THR:OG1	10:X:150:GLU:HG3	2.08	0.52
11:Y:99:THR:CG2	11:Y:113:VAL:HB	2.39	0.52
12:Z:79:ALA:O	12:Z:83:ILE:HG12	2.09	0.52
13:O:179:ASP:HB3	13:O:18(A):THR:OG1	2.09	0.52
1:A:161:LYS:HD3	1:A:180:TRP:CZ3	2.44	0.52
11:K:142:TYR:O	11:K:143:LYS:HD2	2.09	0.52
2:P:122:GLY:C	2:P:124:THR:H	2.13	0.52
8:V:105:ASP:HB2	8:V:10(A):PRO:HD2	1.90	0.52
12:Z:-7:ASN:HD22	12:Z:-6:PRO:CD	2.20	0.52
1:A:13:THR:O	2:B:130:ARG:HD3	2.10	0.52
5:E:18(C):PHE:HA	5:E:18(F):ILE:CD1	2.40	0.52
8:H:4:VAL:HG22	8:H:159:ILE:HD11	1.90	0.52
11:K:86:LEU:HD13	11:K:86:LEU:C	2.30	0.52
5:S:220:PRO:O	5:S:222:THR:HG23	2.09	0.52
6:T:136:THR:O	6:T:150:MET:HA	2.09	0.52
11:Y:195:LEU:O	11:Y:199:VAL:HG23	2.09	0.52
1:A:212:LEU:HD22	1:A:224:LEU:HD12	1.90	0.52
5:E:111:ARG:HG2	5:E:111:ARG:HH11	1.74	0.52
8:H:8:PHE:HB3	8:H:151:ALA:HB2	1.92	0.52
10:J:18:LYS:CG	10:J:174:ILE:HG13	2.40	0.52
12:L:5:GLY:O	12:L:124:CYS:HA	2.10	0.52
12:L:192:LYS:HE3	8:V:195:ASN:HB3	1.92	0.52
13:M:46:SER:OG	13:M:98:ALA:HB3	2.10	0.52
1:O:161:LYS:HD3	1:O:180:TRP:CZ3	2.43	0.52
6:T:38:ILE:HG22	6:T:164:ALA:CB	2.40	0.52
12:L:-7:ASN:HD22	12:L:-6:PRO:CD	2.21	0.52
14:N:67:THR:HA	14:N:72:GLY:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:8:TYR:C	7:U:10:ARG:H	2.13	0.52
11:Y:104:TYR:CD1	11:Y:180:GLU:HG3	2.45	0.52
11:Y:10(A):ARG:HG2	11:Y:10(A):ARG:NH1	2.23	0.52
11:Y:200:LYS:HG2	16:Y:7731:HOH:O	2.09	0.52
11:K:143:LYS:HB2	11:K:146:LEU:CD1	2.40	0.52
11:K:207:ASN:ND2	10:X:144:PRO:HG3	2.10	0.52
12:L:-6:PRO:O	13:M:91:ARG:NH1	2.34	0.52
13:M:139:ARG:NH1	8:V:165:ASN:HD22	2.07	0.52
5:S:18(C):PHE:HA	5:S:18(F):ILE:CD1	2.39	0.52
9:W:6:MET:CE	9:W:155:ILE:HA	2.39	0.52
10:X:34:THR:HG21	10:X:176:LYS:NZ	2.25	0.52
11:Y:10(B):LYS:CD	11:Y:10(B):LYS:N	2.64	0.52
2:B:186:VAL:HG11	2:B:216:ARG:CD	2.39	0.52
5:E:82:ALA:HB3	5:E:83:PRO:HD3	1.92	0.52
2:P:181:LYS:HE2	2:P:183:ASP:OD1	2.10	0.52
4:R:194:LEU:HD21	4:R:233:ILE:HD12	1.90	0.52
10:X:77:GLN:C	10:X:77:GLN:NE2	2.63	0.52
8:H:165:ASN:HD22	13:O:139:ARG:NH1	2.07	0.52
11:K:200:LYS:HE2	16:K:7731:HOH:O	2.10	0.52
6:T:109:ILE:HD12	6:T:109:ILE:H	1.72	0.52
6:T:127:ASN:HD22	6:T:127:ASN:C	2.13	0.52
6:T:186:ALA:O	6:T:190:VAL:HG23	2.10	0.52
10:X:112:GLN:NE2	16:X:211:HOH:O	2.43	0.52
5:E:123:ASN:N	5:E:123:ASN:ND2	2.58	0.52
5:E:148:LEU:CD2	5:E:162:GLY:HA2	2.40	0.52
7:G:105:TYR:OH	8:H:66:HIS:HE1	1.93	0.52
7:G:191:GLU:HG3	7:G:232:ARG:HG3	1.90	0.52
8:H:175:VAL:HG12	8:H:176:CYS:N	2.24	0.52
10:J:189:ASP:O	10:J:193:GLN:HB2	2.09	0.52
2:P:235:LYS:HD3	2:P:235:LYS:N	2.25	0.52
8:V:112:SER:HB3	8:V:125:LEU:HD13	1.92	0.52
10:X:18:LYS:HD3	10:X:174:ILE:HG13	1.92	0.52
11:Y:4:LEU:HD12	11:Y:159:ILE:CD1	2.40	0.52
2:B:202:THR:CG2	2:B:204:SER:H	2.12	0.52
1:O:188:ASP:O	1:O:192:ILE:HG12	2.10	0.52
2:P:219:GLU:HG2	2:P:21(E):VAL:H	1.75	0.52
2:P:227:GLN:OE1	2:P:230:LYS:HD3	2.10	0.52
4:R:122:ARG:HG2	4:R:122:ARG:HH11	1.75	0.52
6:T:109:ILE:N	6:T:109:ILE:CD1	2.73	0.52
7:U:10:ARG:HG2	7:U:22:TYR:CD2	2.44	0.52
11:Y:156:LYS:HB2	11:Y:175:LEU:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Y:7710:SRG:HN17	15:Y:7710:SRG:H13B	1.75	0.52
13:0:14(D):GLU:O	13:0:14(G):ILE:HG12	2.10	0.52
14:1:46:SER:HA	15:1:7710:SRG:H24A	1.93	0.52
2:B:146:TYR:OH	2:B:21(A):LYS:HB2	2.10	0.51
7:G:39:ALA:HB2	7:G:48:VAL:HG12	1.91	0.51
8:H:139:GLU:HA	8:H:139:GLU:OE2	2.09	0.51
1:O:27:ALA:O	1:O:31:VAL:HG23	2.10	0.51
2:P:41:MET:HE3	16:Q:257:HOH:O	2.09	0.51
2:P:186:VAL:HG11	2:P:216:ARG:CD	2.40	0.51
10:X:189:ASP:O	10:X:193:GLN:HB2	2.10	0.51
13:0:104:VAL:HG23	13:0:178:ILE:HG22	1.91	0.51
1:A:67:VAL:HB	1:A:223:LYS:NZ	2.26	0.51
6:F:127:ASN:HD22	6:F:127:ASN:C	2.13	0.51
7:G:74:ILE:HD12	7:G:109:CYS:HA	1.92	0.51
11:K:152:LEU:HD11	11:K:187:HIS:CE1	2.45	0.51
12:L:-7:ASN:ND2	12:L:-5:TYR:H	2.08	0.51
13:M:49:ILE:O	13:M:53:GLN:HG3	2.10	0.51
2:P:223:ILE:HD12	2:P:223:ILE:N	2.25	0.51
7:U:87:ASN:C	7:U:87:ASN:ND2	2.63	0.51
13:0:46:SER:OG	13:0:98:ALA:HB3	2.10	0.51
4:D:112:LEU:C	4:D:112:LEU:HD13	2.31	0.51
6:F:95:GLU:CG	6:F:115:ARG:HD2	2.41	0.51
12:Z:-2:ASN:HA	12:Z:21:ILE:O	2.10	0.51
9:I:6:MET:CE	9:I:155:ILE:HA	2.40	0.51
14:N:25:TYR:HD1	13:0:129:PHE:HZ	1.58	0.51
1:O:51:GLU:OE1	1:O:202:VAL:HG22	2.10	0.51
2:P:229:ILE:O	2:P:233:LEU:HB2	2.10	0.51
3:Q:57:LYS:HG2	3:Q:208:LYS:NZ	2.25	0.51
5:S:160:LEU:CD2	6:T:59:LEU:HD12	2.40	0.51
8:V:46:ALA:HA	15:V:7710:SRG:H24A	1.93	0.51
11:Y:152:LEU:HD11	11:Y:187:HIS:CE1	2.46	0.51
12:Z:-8:PHE:HB2	13:0:-8:THR:HG23	1.93	0.51
5:E:220:PRO:O	5:E:222:THR:HG23	2.10	0.51
8:H:53:GLU:O	8:H:57:GLN:HG3	2.11	0.51
13:M:129:PHE:HZ	14:1:25:TYR:HD1	1.57	0.51
3:Q:197:LEU:O	3:Q:201:VAL:HG23	2.11	0.51
4:R:29:GLU:OE2	4:R:32:LYS:HD2	2.10	0.51
5:S:75:GLY:HA3	5:S:221:PHE:CZ	2.46	0.51
5:S:198:SER:HA	5:S:201:LEU:HG	1.93	0.51
9:W:2:ILE:HD13	9:W:2:ILE:N	2.25	0.51
7:G:172:ILE:HD12	7:G:197:MET:HE1	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:201:GLN:HG3	12:Z:153:LYS:HG2	1.92	0.51
9:I:97:VAL:HG23	9:I:99:PRO:HD3	1.92	0.51
10:J:3:ILE:O	10:J:3:ILE:HG22	2.11	0.51
10:J:88:ALA:O	10:J:90(A):ILE:HG22	2.10	0.51
11:K:4:LEU:CD1	11:K:159:ILE:HD11	2.40	0.51
14:N:48:SER:HB3	14:N:51:ASP:HB2	1.93	0.51
2:P:146:TYR:OH	2:P:21(A):LYS:HB2	2.11	0.51
4:R:170:GLU:OE1	4:R:170:GLU:N	2.43	0.51
5:S:82:ALA:HB3	5:S:83:PRO:HD3	1.92	0.51
7:U:191:GLU:HG3	7:U:232:ARG:HG3	1.92	0.51
1:A:4:MET:O	1:A:5:THR:O	2.28	0.51
2:B:223:ILE:HD12	2:B:223:ILE:N	2.26	0.51
5:E:207:LEU:HD23	5:E:207:LEU:N	2.15	0.51
4:R:108:ASN:HB3	16:R:828:HOH:O	2.10	0.51
8:V:196:VAL:HG23	16:V:7729:HOH:O	2.11	0.51
11:Y:37:ILE:HB	11:Y:41:LEU:HB3	1.92	0.51
12:Z:14:LEU:HD13	12:Z:34:VAL:HG13	1.91	0.51
12:Z:113:PHE:N	12:Z:113:PHE:CD1	2.78	0.51
14:1:104:TYR:OH	14:1:180:ALA:HB2	2.11	0.51
1:A:21(A):GLU:OE2	1:A:21(P):LYS:HB2	2.11	0.51
2:B:147:GLN:HG2	3:C:62(A):ILE:HG21	1.92	0.51
14:N:156:LYS:HG2	14:N:18(J):LEU:HD11	1.93	0.51
2:P:150:THR:O	2:P:157:TYR:HA	2.11	0.51
6:T:28:VAL:O	6:T:32:GLU:HG3	2.11	0.51
2:B:219:GLU:HG2	2:B:21(E):VAL:H	1.75	0.51
4:D:97:VAL:HG11	11:K:65:LEU:CD2	2.41	0.51
7:G:74:ILE:HG21	7:G:112:LEU:HD23	1.93	0.51
11:K:156:LYS:HB2	11:K:175:LEU:HD11	1.92	0.51
15:K:7710:SRG:HN17	15:K:7710:SRG:H13B	1.75	0.51
7:U:152:ASP:HB2	7:U:153:PRO:CD	2.41	0.51
7:U:172:ILE:HD12	7:U:197:MET:HE1	1.92	0.51
10:J:77:GLN:NE2	10:J:77:GLN:C	2.64	0.50
10:J:112:GLN:NE2	10:J:126:ALA:H	2.09	0.50
12:L:113:PHE:N	12:L:113:PHE:CD1	2.79	0.50
10:X:18:LYS:CG	10:X:174:ILE:HG13	2.40	0.50
11:Y:44:THR:OG1	11:Y:100:MET:HB2	2.11	0.50
14:1:20:THR:HG22	15:1:7710:SRG:C25	2.34	0.50
2:B:234:VAL:HA	2:B:239:THR:HA	1.93	0.50
2:B:235:LYS:HD3	2:B:235:LYS:N	2.25	0.50
1:O:67:VAL:HB	1:O:223:LYS:NZ	2.25	0.50
2:P:234:VAL:HA	2:P:239:THR:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:74:ILE:HG21	7:U:112:LEU:HD23	1.93	0.50
7:U:172:ILE:HD11	7:U:201:LEU:HD21	1.93	0.50
13:0:113:VAL:HA	13:0:118:VAL:O	2.11	0.50
3:C:208:LYS:HD2	3:C:208:LYS:O	2.11	0.50
3:C:232:TYR:O	3:C:236:ILE:HG13	2.12	0.50
5:E:198:SER:HA	5:E:201:LEU:HG	1.93	0.50
7:G:8:TYR:C	7:G:10:ARG:H	2.14	0.50
9:I:105:ASN:HB3	9:I:10(C):SER:OG	2.10	0.50
10:J:133:TYR:HD1	16:Y:7726:HOH:O	1.87	0.50
13:M:14(G):ILE:N	13:M:144:PRO:HD2	2.27	0.50
5:S:207:LEU:HD23	5:S:207:LEU:N	2.16	0.50
6:T:109:ILE:HD13	6:T:142:ASP:HB3	1.93	0.50
10:X:88:ALA:O	10:X:90(A):ILE:HG22	2.11	0.50
11:Y:142:TYR:O	11:Y:143:LYS:HD2	2.12	0.50
12:Z:4:LEU:HD12	12:Z:5:GLY:H	1.75	0.50
2:B:41:MET:HE3	16:B:253:HOH:O	2.11	0.50
2:B:227:GLN:OE1	2:B:230:LYS:HD3	2.12	0.50
3:C:35:THR:HB	3:C:51:GLU:HG3	1.93	0.50
14:1:48:SER:HB3	14:1:51:ASP:HB2	1.92	0.50
1:A:27:ALA:O	1:A:31:VAL:HG23	2.11	0.50
2:B:150:THR:O	2:B:157:TYR:HA	2.11	0.50
6:F:186:ALA:O	6:F:190:VAL:HG23	2.11	0.50
7:G:152:ASP:HB2	7:G:153:PRO:CD	2.41	0.50
9:I:2:ILE:HD13	9:I:2:ILE:N	2.26	0.50
12:L:4:LEU:HD12	12:L:5:GLY:N	2.26	0.50
12:L:4:LEU:HD12	12:L:5:GLY:H	1.76	0.50
3:Q:35:THR:HB	3:Q:51:GLU:HG3	1.94	0.50
2:B:229:ILE:O	2:B:233:LEU:HB2	2.11	0.50
3:C:57:LYS:HG2	3:C:208:LYS:NZ	2.26	0.50
11:K:44:THR:OG1	11:K:100:MET:HB2	2.11	0.50
4:R:75:GLY:HA3	4:R:221:PHE:CD2	2.47	0.50
8:V:43:CYS:SG	8:V:99:LEU:HB3	2.51	0.50
2:B:160:TRP:HA	3:C:59:GLN:HA	1.94	0.50
4:D:91:HIS:CE1	4:D:119:LEU:HD21	2.47	0.50
6:F:109:ILE:N	6:F:109:ILE:CD1	2.74	0.50
11:K:104:TYR:CD1	11:K:180:GLU:HG3	2.47	0.50
14:N:112:THR:CG2	14:N:120:HIS:HB2	2.41	0.50
2:P:185:LYS:HD3	2:P:186:VAL:H	1.73	0.50
4:R:236:GLU:O	4:R:240:LYS:HG3	2.11	0.50
5:S:5:ARG:HG3	5:S:22:PHE:CZ	2.46	0.50
7:U:74:ILE:HD12	7:U:109:CYS:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:4:LEU:HD12	12:Z:5:GLY:N	2.26	0.50
1:A:142:ASP:OD1	1:A:145:ASN:HB2	2.11	0.50
6:F:216:SER:HB3	6:F:21(A):GLU:HB2	1.92	0.50
10:J:144:PRO:HD3	11:Y:207:ASN:ND2	2.27	0.50
14:N:30:VAL:HG11	13:0:199:PHE:CE2	2.46	0.50
1:O:232:ARG:HG3	1:O:232:ARG:NH1	2.26	0.50
4:R:233:ILE:HG22	4:R:235:LYS:N	2.27	0.50
6:F:38:ILE:HG22	6:F:164:ALA:HB2	1.95	0.49
4:R:91:HIS:CE1	4:R:119:LEU:HD21	2.47	0.49
4:R:112:LEU:HD13	4:R:112:LEU:C	2.32	0.49
13:0:1:THR:OG1	13:0:2:SER:N	2.44	0.49
1:A:67:VAL:CG2	1:A:211:GLU:HG2	2.42	0.49
3:Q:105:ASP:OD2	3:Q:106:PRO:HD2	2.12	0.49
7:U:47:VAL:HG12	7:U:49:ILE:CD1	2.41	0.49
8:V:172:ASN:ND2	8:V:193:THR:HA	2.27	0.49
1:A:150:GLN:O	1:A:157:TYR:HA	2.12	0.49
6:F:136:THR:O	6:F:150:MET:HA	2.12	0.49
14:N:20:THR:HG22	15:N:7710:SRG:C25	2.34	0.49
1:O:21(G):LEU:HD13	1:O:218:GLY:HA2	1.94	0.49
3:Q:242:GLU:O	3:Q:243:GLN:HB2	2.12	0.49
16:T:284:HOH:O	7:U:86:ARG:HD2	2.11	0.49
12:Z:-8:PHE:CB	13:0:-8:THR:HG23	2.42	0.49
6:F:203:GLU:C	6:F:205:ASN:H	2.16	0.49
6:F:20(B):GLU:HG3	6:F:20(C):LYS:N	2.28	0.49
10:J:32:ASP:HA	16:J:204:HOH:O	2.13	0.49
5:S:73:HIS:HE1	5:S:107:LEU:O	1.93	0.49
6:T:11:SER:HB3	6:T:14:VAL:HG23	1.95	0.49
13:M:139:ARG:HH11	8:V:165:ASN:ND2	2.09	0.49
14:N:104:TYR:OH	14:N:180:ALA:HB2	2.12	0.49
7:U:197:MET:HG2	7:U:205:PHE:CE1	2.47	0.49
8:V:8:PHE:HB3	8:V:151:ALA:HB2	1.93	0.49
12:Z:14(E):GLU:HB2	12:Z:14(I):THR:HG21	1.95	0.49
14:1:156:LYS:HG2	14:1:18(J):LEU:HD11	1.93	0.49
2:P:115:ARG:NH1	2:P:115:ARG:HG3	2.28	0.49
7:U:67:ILE:HD12	7:U:211:GLU:HG2	1.93	0.49
12:Z:5:GLY:O	12:Z:124:CYS:HA	2.11	0.49
12:Z:140:ASN:O	12:Z:144:PHE:HA	2.13	0.49
2:B:90:ASN:HB2	16:B:272:HOH:O	2.12	0.49
4:D:236:GLU:O	4:D:240:LYS:HG3	2.12	0.49
11:K:180:GLU:N	16:K:7728:HOH:O	2.40	0.49
1:O:67:VAL:CG2	1:O:211:GLU:HG2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:163:ILE:HG13	2:P:164:SER:N	2.28	0.49
4:R:175:GLU:OE2	4:R:199:GLN:NE2	2.42	0.49
8:H:24:PRO:HG2	8:H:25:ILE:HD12	1.95	0.49
14:N:13:ILE:HD12	14:N:151:THR:HG22	1.94	0.49
1:O:142:ASP:OD1	1:O:145:ASN:HB2	2.12	0.49
7:U:187:GLU:O	7:U:232:ARG:HD3	2.13	0.49
9:W:105:ASN:O	9:W:106:GLY:N	2.43	0.49
14:1:161:GLN:NE2	14:1:165:TRP:HE1	2.11	0.49
1:A:190:ILE:O	1:A:193:ALA:HB3	2.13	0.49
2:B:11:ARG:HD2	3:C:10:ARG:NH1	2.27	0.49
3:C:197:LEU:O	3:C:201:VAL:HG23	2.13	0.49
5:E:75:GLY:HA3	5:E:221:PHE:CZ	2.47	0.49
7:G:87:ASN:C	7:G:87:ASN:ND2	2.66	0.49
10:J:90(A):ILE:CD1	10:J:116:LEU:HD23	2.43	0.49
13:M:113:VAL:HA	13:M:118:VAL:O	2.12	0.49
1:O:67:VAL:HB	1:O:223:LYS:HZ2	1.77	0.49
4:R:45:GLY:HA2	4:R:146:TYR:CD1	2.48	0.49
7:U:186:TRP:O	7:U:190:VAL:HG23	2.13	0.49
5:E:5:ARG:HG3	5:E:22:PHE:CZ	2.48	0.49
5:E:160:LEU:CD2	6:F:59:LEU:HD12	2.43	0.49
7:G:187:GLU:O	7:G:232:ARG:HD3	2.13	0.49
9:I:29:ASN:HB2	16:I:224:HOH:O	2.12	0.49
10:J:162:LEU:O	10:J:166:MET:HB2	2.13	0.49
11:K:7:ARG:HH11	11:K:108:PRO:HB2	1.78	0.49
11:K:10(A):ARG:HB3	11:K:10(B):LYS:HE3	1.95	0.49
1:O:150:GLN:O	1:O:157:TYR:HA	2.12	0.49
3:Q:232:TYR:O	3:Q:236:ILE:HG13	2.13	0.49
4:R:123:PHE:HB3	4:R:128:MET:HE2	1.95	0.49
6:T:77:VAL:HG12	6:T:137:ILE:HB	1.94	0.49
12:Z:42:VAL:CG2	12:Z:102:ALA:HB3	2.43	0.49
13:O:8:TYR:CE2	13:O:148:VAL:HG22	2.48	0.49
1:A:225:THR:N	1:A:228:GLU:OE1	2.44	0.48
3:C:177:GLU:OE2	4:D:57:PRO:HD2	2.12	0.48
4:D:175:GLU:OE2	4:D:199:GLN:NE2	2.44	0.48
7:G:47:VAL:HG12	7:G:49:ILE:CD1	2.43	0.48
8:V:172:ASN:HD22	8:V:193:THR:HA	1.78	0.48
9:W:105:ASN:HB3	9:W:10(C):SER:OG	2.12	0.48
11:Y:86:LEU:C	11:Y:86:LEU:HD13	2.33	0.48
1:A:224:LEU:HA	1:A:228:GLU:OE1	2.13	0.48
3:C:241:GLN:O	3:C:243:GLN:N	2.43	0.48
8:H:43:CYS:SG	8:H:99:LEU:HB3	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:133:MET:HG3	8:V:132:LEU:HD23	1.95	0.48
5:S:160:LEU:HD13	5:S:163:THR:HB	1.95	0.48
10:X:90(A):ILE:CD1	10:X:116:LEU:HD23	2.43	0.48
3:C:242:GLU:O	3:C:243:GLN:HB2	2.11	0.48
7:G:177:GLU:O	7:G:17(B):LYS:HG3	2.13	0.48
10:J:6:ILE:HD11	10:J:154:LEU:HD23	1.96	0.48
12:L:135:MET:HE3	9:W:165:ARG:NH2	2.28	0.48
2:P:115:ARG:HG3	2:P:115:ARG:HH11	1.78	0.48
9:W:12:VAL:CG1	9:W:108:PRO:HB3	2.43	0.48
9:I:105:ASN:O	9:I:106:GLY:N	2.41	0.48
11:K:207:ASN:ND2	10:X:144:PRO:CG	2.74	0.48
12:L:42:VAL:CG2	12:L:102:ALA:HB3	2.42	0.48
13:M:199:PHE:CE2	14:1:30:VAL:HG11	2.48	0.48
14:N:107:LYS:HZ1	14:N:145:ASN:HD21	1.60	0.48
1:O:77:VAL:HG12	1:O:137:LEU:HB2	1.94	0.48
6:T:95:GLU:CG	6:T:115:ARG:HD2	2.44	0.48
6:T:203:GLU:C	6:T:205:ASN:H	2.16	0.48
10:X:112:GLN:NE2	10:X:126:ALA:H	2.11	0.48
2:B:181:LYS:HE2	2:B:183:ASP:OD1	2.14	0.48
3:C:122:ARG:NH2	16:C:279:HOH:O	2.46	0.48
11:K:5:ALA:HA	11:K:13:ILE:O	2.14	0.48
11:K:97:MET:O	11:K:114:ASP:HA	2.13	0.48
2:P:191:GLU:O	2:P:195:LYS:HG2	2.14	0.48
4:R:237:LEU:O	4:R:241:GLU:HG3	2.14	0.48
7:U:105:TYR:OH	8:V:66:HIS:HE1	1.97	0.48
9:W:6:MET:HB3	9:W:151:LEU:HD11	1.96	0.48
1:A:161:LYS:HD3	1:A:180:TRP:CH2	2.49	0.48
6:F:38:ILE:HG22	6:F:164:ALA:CB	2.43	0.48
13:M:11:GLY:HA3	13:M:178:ILE:O	2.12	0.48
1:O:21(A):GLU:OE2	1:O:21(P):LYS:HB2	2.13	0.48
7:U:17(D):SER:O	7:U:17(E):LYS:HB2	2.13	0.48
8:V:24:PRO:HG2	8:V:25:ILE:HD12	1.96	0.48
9:W:6:MET:HE1	9:W:155:ILE:HA	1.95	0.48
13:O:205:GLY:HA3	13:O:209:GLN:HB3	1.96	0.48
14:1:66:TYR:CD2	14:1:74:PRO:HB3	2.48	0.48
4:D:237:LEU:O	4:D:241:GLU:HG3	2.14	0.48
7:G:172:ILE:HD11	7:G:201:LEU:HD21	1.94	0.48
2:P:101:LYS:NZ	10:X:85:GLN:HE22	2.12	0.48
6:T:216:SER:HB3	6:T:21(A):GLU:HB2	1.94	0.48
8:V:49:ALA:HB2	15:V:7710:SRG:H25A	1.95	0.48
6:F:77:VAL:HG12	6:F:137:ILE:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:1:THR:OG1	13:M:2:SER:N	2.43	0.48
4:R:67:ILE:HG22	4:R:221:PHE:HZ	1.79	0.48
6:T:192:GLN:NE2	6:T:195:LYS:CE	2.77	0.48
8:V:84:LYS:HE2	8:V:119:THR:HG23	1.96	0.48
13:O:49:ILE:O	13:O:53:GLN:HG3	2.13	0.48
4:D:75:GLY:HA3	4:D:221:PHE:CD2	2.48	0.48
12:L:14(E):GLU:HB2	12:L:14(I):THR:HG21	1.96	0.48
3:Q:93:ARG:HD2	16:Q:258:HOH:O	2.14	0.48
9:I:1:GLY:HA2	9:I:17:ASP:OD1	2.14	0.48
12:L:140:ASN:O	12:L:144:PHE:HA	2.13	0.48
1:O:57:PRO:HG2	7:U:177:GLU:HG2	1.95	0.48
1:O:224:LEU:HA	1:O:228:GLU:OE1	2.14	0.48
6:T:20(B):GLU:OE1	6:T:20(C):LYS:HE3	2.14	0.48
11:Y:97:MET:O	11:Y:114:ASP:HA	2.14	0.48
1:A:29:THR:O	1:A:33:GLN:HG2	2.13	0.47
3:C:105:ASP:OD2	3:C:106:PRO:HD2	2.14	0.47
7:G:67:ILE:HD12	7:G:211:GLU:HG2	1.95	0.47
12:L:33:LYS:HD2	12:L:46:ASN:HD22	1.79	0.47
7:U:18(G):GLU:HG2	7:U:188:LYS:HB2	1.95	0.47
4:D:29:GLU:OE2	4:D:32:LYS:HD2	2.14	0.47
8:H:165:ASN:ND2	13:O:139:ARG:HH11	2.09	0.47
9:I:12:VAL:CG1	9:I:108:PRO:HB3	2.45	0.47
11:K:12:ILE:HG23	11:K:110:ILE:HD11	1.96	0.47
1:O:161:LYS:HD3	1:O:180:TRP:CH2	2.49	0.47
10:X:3:ILE:O	10:X:3:ILE:HG22	2.12	0.47
11:Y:38:ASN:HB2	11:Y:39:PRO:HD2	1.96	0.47
8:H:147:THR:OG1	8:H:150:GLU:HG3	2.13	0.47
2:P:124:THR:CG2	3:Q:130:ARG:HH21	2.25	0.47
3:Q:46:VAL:HG22	3:Q:146:PRO:HB2	1.95	0.47
6:T:20(B):GLU:HG3	6:T:20(C):LYS:N	2.29	0.47
8:V:25:ILE:HB	16:V:7740:HOH:O	2.14	0.47
14:1:67:THR:HA	14:1:72:GLY:O	2.14	0.47
2:B:122:GLY:C	2:B:124:THR:H	2.15	0.47
2:B:163:ILE:HG13	2:B:164:SER:N	2.29	0.47
4:D:123:PHE:HB3	4:D:128:MET:HE2	1.96	0.47
4:D:233:ILE:HG22	4:D:235:LYS:N	2.29	0.47
5:E:38:VAL:HG12	5:E:39:GLY:N	2.29	0.47
13:O:11:GLY:HA3	13:O:178:ILE:O	2.13	0.47
13:O:14(G):ILE:N	13:O:144:PRO:HD2	2.29	0.47
2:B:49:ALA:HB2	2:B:212:PHE:CE1	2.50	0.47
4:D:39:GLY:O	4:D:162:ALA:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:18(G):GLU:HG2	7:G:188:LYS:HB2	1.96	0.47
8:H:46:ALA:HA	15:H:7710:SRG:H24A	1.96	0.47
12:L:109:ALA:HA	16:L:227:HOH:O	2.13	0.47
12:L:135:MET:CE	9:W:165:ARG:NH2	2.78	0.47
14:N:161:GLN:NE2	14:N:165:TRP:HE1	2.12	0.47
3:Q:190:VAL:O	3:Q:194:VAL:HG23	2.14	0.47
8:V:147:THR:OG1	8:V:150:GLU:HG3	2.15	0.47
13:O:133:MET:O	13:O:136:PRO:HD2	2.15	0.47
1:A:169:SER:O	1:A:173:LYS:HG3	2.15	0.47
4:D:45:GLY:HA2	4:D:146:TYR:CE1	2.50	0.47
6:F:11:SER:HB3	6:F:14:VAL:HG23	1.96	0.47
7:G:10:ARG:HG2	7:G:22:TYR:CD2	2.50	0.47
7:G:18(G):GLU:HG2	7:G:188:LYS:HB3	1.95	0.47
7:G:192:PHE:C	7:G:192:PHE:CD1	2.88	0.47
9:I:193:GLN:HG3	11:Y:196:PHE:CE1	2.50	0.47
10:J:18:LYS:HD3	10:J:174:ILE:HG13	1.96	0.47
11:K:10(B):LYS:CD	11:K:10(B):LYS:N	2.64	0.47
11:K:126:CYS:HB2	11:K:135:TYR:CE1	2.49	0.47
12:L:176:LEU:CD1	12:L:186:LYS:HG2	2.45	0.47
14:N:146:MET:HB3	14:N:150:GLU:HB2	1.96	0.47
3:Q:43:LYS:O	3:Q:43:LYS:HG2	2.15	0.47
4:R:97:VAL:HG11	11:Y:65:LEU:CD2	2.45	0.47
5:S:38:VAL:HG12	5:S:39:GLY:N	2.29	0.47
11:Y:5:ALA:HA	11:Y:13:ILE:O	2.14	0.47
5:E:73:HIS:HE1	5:E:107:LEU:O	1.97	0.47
9:I:156:SER:O	9:I:160:LEU:HB2	2.15	0.47
11:K:38:ASN:HB2	11:K:39:PRO:HD2	1.96	0.47
1:O:26:TYR:CD1	7:U:17:PRO:HA	2.50	0.47
3:Q:76:LEU:HD12	3:Q:138:ILE:HG12	1.97	0.47
4:R:45:GLY:HA2	4:R:146:TYR:CE1	2.48	0.47
5:S:28:LEU:HD12	5:S:153:PRO:HD2	1.96	0.47
5:E:5:ARG:HG3	5:E:22:PHE:CE2	2.49	0.47
8:H:172:ASN:ND2	8:H:193:THR:HA	2.30	0.47
3:Q:149:TYR:CE1	3:Q:159:SER:HB3	2.50	0.47
4:R:17:PRO:HA	5:S:26:TYR:CD1	2.49	0.47
7:U:158:VAL:HG22	7:U:159:GLY:N	2.30	0.47
10:X:6:ILE:HD11	10:X:154:LEU:HD23	1.96	0.47
1:A:77:VAL:HG12	1:A:137:LEU:HB2	1.96	0.47
1:A:232:ARG:HG3	1:A:232:ARG:NH1	2.28	0.47
3:C:163:GLN:HG3	3:C:164:THR:N	2.30	0.47
11:K:180:GLU:CB	16:K:7728:HOH:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:19:LEU:HB2	13:M:170:SER:HB2	1.97	0.47
2:P:101:LYS:HZ2	10:X:85:GLN:NE2	2.13	0.47
11:Y:12:ILE:HG23	11:Y:110:ILE:HD11	1.96	0.47
2:B:161:LYS:HB3	2:B:180:TYR:CE2	2.50	0.46
5:E:113:GLY:HA3	16:E:245:HOH:O	2.15	0.46
7:G:110:ASP:HB3	7:G:149:TYR:CZ	2.50	0.46
7:G:158:VAL:HG22	7:G:159:GLY:N	2.30	0.46
3:Q:158:SER:HB2	4:R:59:LEU:HD21	1.97	0.46
1:A:57:PRO:HG3	7:G:177:GLU:CD	2.35	0.46
2:B:225:LYS:HG3	2:B:228:GLU:OE1	2.16	0.46
3:C:57:LYS:O	3:C:58:LEU:HB2	2.15	0.46
4:D:45:GLY:HA2	4:D:146:TYR:CD1	2.50	0.46
6:F:192:GLN:NE2	6:F:195:LYS:CE	2.79	0.46
8:H:49:ALA:HB2	15:H:7710:SRG:H25A	1.98	0.46
9:I:55:LEU:CD1	9:I:97:VAL:HG21	2.45	0.46
10:J:141:HIS:HB2	10:J:154:LEU:HD11	1.97	0.46
13:M:184:LEU:HD23	13:M:184:LEU:C	2.34	0.46
1:O:225:THR:N	1:O:228:GLU:OE1	2.44	0.46
5:S:5:ARG:HG3	5:S:22:PHE:CE2	2.51	0.46
13:O:19:LEU:HD12	13:O:28:PHE:O	2.15	0.46
14:1:146:MET:HB3	14:1:150:GLU:HB2	1.95	0.46
2:B:144:ARG:O	2:B:144:ARG:HG2	2.15	0.46
6:F:91:ARG:HG2	6:F:119:TYR:CD2	2.50	0.46
7:G:17(D):SER:O	7:G:17(E):LYS:HB2	2.13	0.46
11:K:74:ILE:HA	16:K:7729:HOH:O	2.15	0.46
1:O:190:ILE:O	1:O:193:ALA:HB3	2.15	0.46
6:T:175:GLU:HB3	6:T:196:ILE:CD1	2.45	0.46
14:1:112:THR:CG2	14:1:120:HIS:HB2	2.44	0.46
2:B:115:ARG:HG3	2:B:115:ARG:NH1	2.29	0.46
12:L:-8:PHE:HB2	13:M:-8:THR:HG23	1.98	0.46
13:M:165:ARG:HA	14:1:26:ILE:HB	1.96	0.46
14:N:26:ILE:HB	13:O:165:ARG:HA	1.97	0.46
2:P:160:TRP:CD2	2:P:163:ILE:HD13	2.50	0.46
3:Q:87:ILE:N	3:Q:87:ILE:CD1	2.79	0.46
6:T:103:TYR:O	6:T:104:LYS:HB3	2.15	0.46
2:B:97:GLN:NE2	16:B:259:HOH:O	2.48	0.46
2:B:115:ARG:HG3	2:B:115:ARG:HH11	1.79	0.46
3:C:190:VAL:O	3:C:194:VAL:HG23	2.14	0.46
10:J:52:THR:HG22	10:J:53:VAL:HG23	1.98	0.46
13:M:1:THR:HG22	16:M:214:HOH:O	2.16	0.46
14:N:66:TYR:CD2	14:N:74:PRO:HB3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:32:LYS:HA	1:O:32:LYS:CE	2.44	0.46
3:Q:159:SER:HB2	16:Q:272:HOH:O	2.16	0.46
5:S:13:VAL:HG13	5:S:13:VAL:O	2.14	0.46
7:U:110:ASP:HB3	7:U:149:TYR:CZ	2.50	0.46
12:Z:4:LEU:HD13	12:Z:138:LEU:HD21	1.98	0.46
2:B:112:LEU:HD23	2:B:112:LEU:C	2.36	0.46
3:C:57:LYS:HG2	3:C:208:LYS:HZ3	1.80	0.46
11:K:196:PHE:CE1	9:W:193:GLN:HG3	2.50	0.46
15:K:7710:SRG:H13B	15:K:7710:SRG:N17	2.31	0.46
13:M:19:LEU:HD12	13:M:28:PHE:O	2.15	0.46
14:N:114:PRO:HD2	14:N:118:SER:O	2.16	0.46
2:P:112:LEU:HD23	2:P:112:LEU:C	2.36	0.46
3:Q:57:LYS:O	3:Q:58:LEU:HB2	2.16	0.46
3:Q:177:GLU:OE2	4:R:57:PRO:HD2	2.15	0.46
6:T:91:ARG:HG2	6:T:119:TYR:CD2	2.50	0.46
3:C:79:SER:HA	16:C:272:HOH:O	2.15	0.46
3:C:106:PRO:HG2	3:C:143:PRO:HG2	1.94	0.46
3:C:226:SER:HB2	3:C:227:GLU:OE1	2.15	0.46
2:P:91:THR:HG22	16:P:263:HOH:O	2.14	0.46
2:P:161:LYS:HB3	2:P:180:TYR:CE2	2.51	0.46
3:Q:163:GLN:HE22	3:Q:173:ARG:HE	1.64	0.46
6:T:179:LEU:CD2	6:T:192:GLN:HG2	2.44	0.46
11:Y:10(A):ARG:HB3	11:Y:10(B):LYS:HE3	1.98	0.46
13:O:7:LYS:HG3	13:O:14(G):ILE:HD12	1.97	0.46
4:D:237:LEU:HD22	4:D:241:GLU:HG3	1.97	0.46
6:F:109:ILE:HD13	6:F:142:ASP:HB3	1.98	0.46
9:I:6:MET:HB3	9:I:151:LEU:HD11	1.98	0.46
5:S:104:ASN:HB2	13:O:81:GLU:HG2	1.98	0.46
11:Y:126:CYS:HB2	11:Y:135:TYR:CE1	2.51	0.46
14:1:107:LYS:HZ1	14:1:145:ASN:HD21	1.63	0.46
2:B:160:TRP:CD2	2:B:163:ILE:HD13	2.51	0.46
3:C:158:SER:HB2	4:D:59:LEU:HD21	1.97	0.46
13:M:205:GLY:HA3	13:M:209:GLN:HB3	1.97	0.46
3:Q:40:VAL:HG22	3:Q:193:THR:OG1	2.15	0.46
1:A:98:THR:HA	1:A:102:ARG:HD2	1.97	0.46
6:F:36:THR:HB	6:F:168:GLY:H	1.81	0.46
13:M:3:VAL:O	13:M:126:ALA:HA	2.16	0.46
1:O:15:PHE:H	2:P:23:GLN:NE2	1.93	0.46
3:Q:106:PRO:HG2	3:Q:143:PRO:HG2	1.95	0.46
11:Y:7:ARG:HH11	11:Y:108:PRO:HB2	1.81	0.46
1:A:175:PHE:O	1:A:179:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:18(C):PHE:HA	5:E:18(F):ILE:HG13	1.97	0.45
6:F:179:LEU:CD2	6:F:192:GLN:HG2	2.46	0.45
7:G:109:CYS:HB2	7:G:140:SER:OG	2.16	0.45
8:H:5:GLY:O	8:H:124:TYR:HA	2.17	0.45
8:H:72:ARG:HG3	8:H:72:ARG:NH1	2.30	0.45
3:C:224:LEU:N	3:C:224:LEU:CD1	2.79	0.45
5:E:86:ARG:HG3	5:E:86:ARG:NH1	2.31	0.45
8:H:34:LEU:HB2	16:H:7732:HOH:O	2.15	0.45
9:I:28:SER:HB2	10:J:120:VAL:HG21	1.98	0.45
5:S:18(C):PHE:HA	5:S:18(F):ILE:HG13	1.98	0.45
7:U:72:ARG:HB2	7:U:72:ARG:NH1	2.32	0.45
15:Y:7710:SRG:H13B	15:Y:7710:SRG:N17	2.31	0.45
3:C:40:VAL:HG22	3:C:193:THR:OG1	2.16	0.45
3:C:75:VAL:HG13	3:C:221:ILE:HD13	1.98	0.45
10:J:121:GLU:O	10:J:122:LEU:HD23	2.16	0.45
13:M:104:VAL:HG23	13:M:178:ILE:HG22	1.97	0.45
3:Q:33:ARG:CB	3:Q:33:ARG:HH11	2.30	0.45
3:Q:121:GLN:NE2	3:Q:121:GLN:C	2.70	0.45
6:T:192:GLN:NE2	6:T:195:LYS:HE3	2.31	0.45
10:X:121:GLU:O	10:X:122:LEU:HD23	2.16	0.45
11:Y:145:ASP:O	11:Y:146:LEU:HD12	2.17	0.45
13:O:19:LEU:HB2	13:O:170:SER:HB2	1.96	0.45
1:A:130:ARG:HG2	7:G:125:GLN:HG3	1.99	0.45
2:B:77:ALA:HB3	2:B:137:ILE:HB	1.98	0.45
2:B:191:GLU:O	2:B:195:LYS:HG2	2.16	0.45
3:C:43:LYS:O	3:C:43:LYS:HG2	2.17	0.45
11:K:76:VAL:N	11:K:106:GLU:OE2	2.48	0.45
3:Q:87:ILE:N	3:Q:87:ILE:HD12	2.31	0.45
6:T:95:GLU:HG2	6:T:115:ARG:CB	2.46	0.45
3:C:87:ILE:HD12	3:C:87:ILE:N	2.31	0.45
6:F:175:GLU:HB3	6:F:196:ILE:CD1	2.47	0.45
6:F:20(B):GLU:OE1	6:F:20(C):LYS:HE3	2.16	0.45
9:I:107:LYS:HA	9:I:108:PRO:HD3	1.83	0.45
1:O:29:THR:O	1:O:33:GLN:HG2	2.15	0.45
1:O:38:LEU:C	1:O:38:LEU:HD12	2.37	0.45
3:Q:194:VAL:O	3:Q:198:LEU:HG	2.17	0.45
3:Q:226:SER:HB2	3:Q:227:GLU:OE1	2.16	0.45
4:R:237:LEU:HD22	4:R:241:GLU:HG3	1.98	0.45
10:X:113:ILE:CG1	10:X:119:LYS:HG3	2.45	0.45
10:X:148:THR:CG2	10:X:177:ILE:HD13	2.47	0.45
14:1:13:ILE:HD12	14:1:151:THR:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:110:LYS:HG2	16:A:246:HOH:O	2.16	0.45
4:D:53:ARG:O	4:D:53:ARG:HG2	2.17	0.45
4:D:160:TYR:CZ	4:D:163:LYS:HD3	2.51	0.45
11:K:12:ILE:HB	11:K:178:VAL:HB	1.99	0.45
11:K:77:ALA:HA	11:K:111:TYR:CE2	2.52	0.45
11:K:142:TYR:C	11:K:143:LYS:HD2	2.37	0.45
13:M:9:ASP:OD1	13:M:10:ASN:N	2.50	0.45
1:O:92:SER:O	1:O:95:VAL:HG12	2.17	0.45
2:P:97:GLN:NE2	16:P:258:HOH:O	2.48	0.45
2:P:107:ILE:HD11	2:P:111:ILE:HG22	1.98	0.45
4:R:101:LEU:CD1	11:Y:57:THR:HG22	2.46	0.45
5:S:20:ARG:HB3	5:S:25:GLU:OE2	2.16	0.45
6:T:36:THR:HB	6:T:168:GLY:H	1.81	0.45
11:Y:12:ILE:HB	11:Y:178:VAL:HB	1.98	0.45
12:Z:90:LYS:HE3	12:Z:93:PHE:O	2.17	0.45
14:1:84:LYS:HG3	14:1:119:VAL:CG2	2.46	0.45
14:1:161:GLN:HE22	14:1:165:TRP:HE1	1.65	0.45
1:A:170:VAL:N	16:A:252:HOH:O	2.49	0.45
3:C:182:PRO:O	3:C:184:ALA:N	2.50	0.45
8:H:132:LEU:HD23	13:O:133:MET:HG3	1.98	0.45
3:Q:164:THR:HG21	3:Q:172:VAL:HG13	1.99	0.45
3:Q:182:PRO:O	3:Q:184:ALA:N	2.50	0.45
7:U:192:PHE:CD1	7:U:192:PHE:C	2.90	0.45
11:Y:4:LEU:CD1	11:Y:159:ILE:HD11	2.45	0.45
8:H:128:GLY:O	8:H:131:SER:HB2	2.17	0.45
9:I:137:MET:HE3	9:I:141:LEU:HD11	1.99	0.45
10:J:168:MET:HE1	10:X:167:PRO:HB2	1.98	0.45
10:J:190:PHE:HA	10:J:193:GLN:HB2	1.98	0.45
1:O:141:HIS:HA	1:O:146:GLY:O	2.17	0.45
6:T:54:ILE:HD11	6:T:209:GLU:HB2	1.99	0.45
10:X:141:HIS:HB2	10:X:154:LEU:HD11	1.99	0.45
11:Y:81:LYS:HA	11:Y:84:SER:HB3	1.98	0.45
1:A:38:LEU:C	1:A:38:LEU:HD12	2.37	0.45
3:C:97:GLN:NE2	16:C:255:HOH:O	2.49	0.45
3:C:194:VAL:O	3:C:198:LEU:HG	2.16	0.45
10:J:167:PRO:HB2	10:X:168:MET:HE1	1.98	0.45
12:L:134:ILE:HD12	12:L:158:SER:HB3	1.99	0.45
1:O:98:THR:HA	1:O:102:ARG:HD2	1.99	0.45
3:Q:228:GLU:O	3:Q:232:TYR:HD1	2.00	0.45
4:R:194:LEU:HD22	4:R:212:LEU:HD11	1.99	0.45
5:S:134:VAL:O	5:S:153:PRO:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:X:60:GLN:O	10:X:64:GLN:HG3	2.17	0.45
10:X:162:LEU:O	10:X:166:MET:HB2	2.16	0.45
12:Z:166:HIS:CD2	12:Z:168:GLN:H	2.28	0.45
1:A:6:ASP:OD2	1:A:8:TYR:HB2	2.17	0.45
1:A:212:LEU:HD23	1:A:212:LEU:C	2.36	0.45
9:I:6:MET:HE3	9:I:155:ILE:CG1	2.33	0.45
12:L:13:VAL:HG12	12:L:177:ILE:HG13	1.98	0.45
5:S:78:LEU:HD12	5:S:78:LEU:C	2.38	0.45
7:U:236:ILE:HD12	7:U:236:ILE:C	2.37	0.45
11:Y:4:LEU:HD11	11:Y:15:ALA:HB3	1.98	0.45
11:Y:210:ILE:HD12	11:Y:210:ILE:HA	1.88	0.45
5:E:111:ARG:HG2	5:E:111:ARG:NH1	2.32	0.44
7:G:197:MET:HG2	7:G:205:PHE:HE1	1.82	0.44
8:H:112:SER:HB3	8:H:125:LEU:HD13	1.97	0.44
10:J:17:SER:CB	10:J:170:PHE:HB2	2.47	0.44
11:K:33:LYS:HA	11:K:45:MET:HE2	1.99	0.44
3:Q:212:ILE:HG22	3:Q:213:THR:N	2.31	0.44
8:V:116:HIS:HB2	16:V:7749:HOH:O	2.16	0.44
2:B:138:TYR:HB2	2:B:149:TYR:HB2	1.98	0.44
3:C:101:LEU:CD1	10:J:57:GLU:HB3	2.39	0.44
4:D:172:ALA:HB1	4:D:196:ILE:HG21	1.99	0.44
6:F:103:TYR:O	6:F:104:LYS:HB3	2.18	0.44
10:J:168:MET:HE2	10:X:168:MET:HE2	1.99	0.44
2:P:176:LEU:HD23	2:P:192:LEU:HD22	1.99	0.44
3:Q:75:VAL:HG13	3:Q:221:ILE:HD13	1.99	0.44
5:S:111:ARG:HG2	5:S:111:ARG:NH1	2.31	0.44
5:S:148:LEU:HD23	5:S:162:GLY:HA2	1.99	0.44
14:I:44:CYS:HB2	14:I:100:ILE:HB	1.99	0.44
3:C:33:ARG:HB3	3:C:33:ARG:HH11	1.82	0.44
10:J:148:THR:CG2	10:J:177:ILE:HD13	2.48	0.44
11:K:140:SER:OG	10:X:137:LEU:HD21	2.17	0.44
11:K:147:SER:C	11:K:149:GLU:N	2.70	0.44
14:N:156:LYS:HG2	14:N:18(J):LEU:CD1	2.47	0.44
2:P:225:LYS:HG3	2:P:228:GLU:OE1	2.16	0.44
3:Q:47:VAL:HG23	3:Q:189:CYS:SG	2.58	0.44
5:S:180:LEU:HA	5:S:18(C):PHE:CE2	2.52	0.44
7:U:18(G):GLU:HG2	7:U:188:LYS:HB3	1.98	0.44
8:V:18:THR:HB	8:V:30:ASN:HD22	1.82	0.44
9:W:29:ASN:HB2	16:W:213:HOH:O	2.17	0.44
10:X:161:GLU:OE2	10:X:161:GLU:HA	2.16	0.44
1:A:32:LYS:HA	1:A:32:LYS:CE	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:18(A):ASP:O	5:E:18(E):LYS:HD3	2.17	0.44
8:H:172:ASN:HD22	8:H:193:THR:HA	1.82	0.44
12:L:-8:PHE:CB	13:M:-8:THR:HG23	2.47	0.44
2:P:190:ILE:HG21	2:P:232:ILE:HD11	2.00	0.44
3:Q:33:ARG:HH11	3:Q:33:ARG:HB3	1.81	0.44
3:Q:224:LEU:N	3:Q:224:LEU:CD1	2.80	0.44
3:Q:241:GLN:O	3:Q:243:GLN:N	2.44	0.44
11:Y:12:ILE:HG13	11:Y:108:PRO:HB3	1.99	0.44
1:A:8:TYR:HD2	7:G:128:TYR:HB3	1.83	0.44
4:D:240:LYS:O	4:D:243:ALA:HB3	2.17	0.44
6:F:172:ALA:O	6:F:176:LEU:HD23	2.17	0.44
7:G:38:LEU:C	7:G:38:LEU:HD12	2.38	0.44
10:J:9:GLN:HG3	10:J:10:ASP:OD1	2.18	0.44
11:K:81:LYS:HA	11:K:84:SER:HB3	1.99	0.44
14:N:116:GLY:HA3	16:N:7719:HOH:O	2.17	0.44
2:P:97:GLN:NE2	2:P:97:GLN:HA	2.33	0.44
9:W:28:SER:HB2	10:X:120:VAL:HG21	1.98	0.44
10:X:7:ARG:HG2	10:X:7:ARG:HH11	1.82	0.44
10:X:17:SER:CB	10:X:170:PHE:HB2	2.47	0.44
12:Z:45:ALA:HA	12:Z:99:THR:HB	2.00	0.44
14:1:156:LYS:HG2	14:1:18(J):LEU:CD1	2.47	0.44
2:B:148:LEU:N	16:B:253:HOH:O	2.41	0.44
3:C:76:LEU:HD12	3:C:138:ILE:HG12	2.00	0.44
8:H:18:THR:HB	8:H:30:ASN:HD22	1.82	0.44
1:O:175:PHE:O	1:O:179:ARG:HG2	2.17	0.44
8:V:24:PRO:HG2	8:V:25:ILE:CD1	2.48	0.44
1:A:186:LEU:O	1:A:190:ILE:HG13	2.18	0.44
12:L:42:VAL:HG23	12:L:102:ALA:HB3	2.00	0.44
2:P:77:ALA:HB3	2:P:137:ILE:HB	1.99	0.44
3:Q:163:GLN:HG3	3:Q:164:THR:N	2.33	0.44
3:Q:225:SER:OG	3:Q:228:GLU:HG3	2.16	0.44
8:V:53:GLU:O	8:V:57:GLN:HG3	2.17	0.44
10:X:190:PHE:HA	10:X:193:GLN:HB2	1.98	0.44
11:Y:4:LEU:CD1	11:Y:15:ALA:HB3	2.48	0.44
11:Y:37:ILE:HB	11:Y:41:LEU:CB	2.48	0.44
12:Z:123:GLN:HG3	12:Z:145:TYR:HH	1.80	0.44
13:0:3:VAL:O	13:0:126:ALA:HA	2.17	0.44
13:0:113:VAL:HG23	13:0:119:THR:HG22	1.99	0.44
3:C:163:GLN:HE22	3:C:173:ARG:HE	1.65	0.44
3:C:164:THR:HG21	3:C:172:VAL:HG13	1.99	0.44
5:E:160:LEU:HD13	5:E:163:THR:HB	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:120:VAL:HG13	10:J:122:LEU:HG	1.99	0.44
11:K:165:ARG:NE	10:X:135:PHE:HB3	2.32	0.44
12:L:148:VAL:O	12:L:152:ILE:HG12	2.18	0.44
5:S:86:ARG:HG3	5:S:86:ARG:NH1	2.33	0.44
5:S:122:LYS:C	5:S:123:ASN:HD22	2.21	0.44
8:V:37:ILE:HG23	8:V:60:GLY:HA2	2.00	0.44
11:Y:147:SER:C	11:Y:149:GLU:N	2.70	0.44
11:Y:200:LYS:HE2	16:Y:7731:HOH:O	2.18	0.44
2:B:121:GLN:HG2	3:C:83:ALA:HB1	1.98	0.44
3:C:87:ILE:N	3:C:87:ILE:CD1	2.80	0.44
10:J:48:GLU:HB3	10:J:96:GLN:HB2	2.00	0.44
11:K:4:LEU:HD11	11:K:15:ALA:HB3	2.00	0.44
13:M:7:LYS:HG3	13:M:14(G):ILE:HD12	1.98	0.44
3:Q:141:PHE:CE1	3:Q:217:PRO:HG3	2.53	0.44
9:W:55:LEU:CD1	9:W:97:VAL:HG21	2.47	0.44
10:X:52:THR:HG22	10:X:53:VAL:HG23	1.99	0.44
10:X:143:ARG:HA	10:X:144:PRO:HD3	1.84	0.44
12:Z:33:LYS:HD2	12:Z:46:ASN:HD22	1.83	0.44
2:B:97:GLN:NE2	2:B:97:GLN:HA	2.33	0.43
2:B:230:LYS:O	2:B:234:VAL:HG23	2.18	0.43
3:C:134:VAL:HG12	3:C:135:SER:N	2.32	0.43
4:D:67:ILE:HG22	4:D:221:PHE:HZ	1.81	0.43
5:E:122:LYS:C	5:E:123:ASN:HD22	2.20	0.43
5:E:180:LEU:HA	5:E:18(C):PHE:CE2	2.53	0.43
6:F:95:GLU:HG2	6:F:115:ARG:HD2	2.00	0.43
6:F:199:LEU:HD12	6:F:240:ILE:HD13	2.00	0.43
7:G:30:ALA:O	7:G:33:GLN:HB2	2.18	0.43
7:G:171:GLU:N	7:G:171:GLU:OE1	2.51	0.43
9:I:113:PHE:HA	9:I:118:CYS:O	2.18	0.43
10:J:136:SER:N	16:J:198:HOH:O	2.46	0.43
12:L:45:ALA:HA	12:L:99:THR:HB	1.99	0.43
13:M:12:VAL:HG21	13:M:102:ALA:HB1	2.01	0.43
1:O:6:ASP:OD2	1:O:8:TYR:HB2	2.18	0.43
4:R:172:ALA:HB1	4:R:196:ILE:HG21	1.99	0.43
7:U:170:GLN:NE2	7:U:174:THR:HG23	2.33	0.43
9:W:113:PHE:HA	9:W:118:CYS:O	2.17	0.43
3:C:33:ARG:HG2	3:C:33:ARG:O	2.18	0.43
5:E:66:LYS:O	5:E:77:SER:HA	2.18	0.43
6:F:54:ILE:HD11	6:F:209:GLU:HB2	1.99	0.43
6:F:107:ILE:HA	6:F:108:PRO:HD3	1.91	0.43
10:J:60:GLN:O	10:J:64:GLN:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:17:ASP:HA	13:M:173:PHE:HB3	2.00	0.43
2:P:138:TYR:HB2	2:P:149:TYR:HB2	2.00	0.43
2:P:144:ARG:O	2:P:144:ARG:HG2	2.18	0.43
7:U:39:ALA:HA	7:U:47:VAL:O	2.18	0.43
8:V:113:ILE:HG12	8:V:119:THR:HG22	2.00	0.43
11:Y:185:ILE:HD12	11:Y:185:ILE:N	2.33	0.43
3:C:24:VAL:O	3:C:27:ALA:HB3	2.18	0.43
3:C:46:VAL:HG22	3:C:146:PRO:HB2	1.98	0.43
3:C:212:ILE:HG22	3:C:213:THR:N	2.33	0.43
5:E:67:ILE:HG21	5:E:213:ALA:HB2	2.00	0.43
8:H:7:LYS:HG3	8:H:123:TYR:HA	2.00	0.43
12:L:180:LYS:HG2	16:L:234:HOH:O	2.19	0.43
2:P:121:GLN:NE2	16:P:262:HOH:O	2.51	0.43
3:Q:33:ARG:HG2	3:Q:33:ARG:O	2.18	0.43
16:S:241:HOH:O	6:T:12:ASN:HB2	2.16	0.43
6:T:35:THR:CG2	6:T:36:THR:N	2.81	0.43
6:T:127:ASN:C	6:T:127:ASN:ND2	2.71	0.43
6:T:175:GLU:HB3	6:T:196:ILE:HD12	2.01	0.43
9:W:-2:ASN:HA	9:W:21:GLY:O	2.19	0.43
9:W:143:GLU:CG	9:W:146:LEU:HD21	2.48	0.43
9:W:156:SER:O	9:W:160:LEU:HB2	2.18	0.43
10:X:6:ILE:CD1	10:X:154:LEU:HD23	2.49	0.43
10:X:9:GLN:HG3	10:X:10:ASP:OD1	2.17	0.43
11:Y:4:LEU:C	11:Y:4:LEU:HD22	2.38	0.43
11:Y:77:ALA:HA	11:Y:111:TYR:CE2	2.53	0.43
2:B:176:LEU:HD23	2:B:192:LEU:HD22	1.99	0.43
3:C:121:GLN:NE2	3:C:121:GLN:C	2.71	0.43
3:C:141:PHE:CE1	3:C:217:PRO:HG3	2.53	0.43
5:E:68:ILE:HB	5:E:76:LEU:CD2	2.49	0.43
5:E:104:ASN:HB2	13:M:81:GLU:HG2	2.00	0.43
7:G:143:GLU:HG2	16:G:263:HOH:O	2.18	0.43
9:I:22:SER:O	9:I:23:GLN:HB2	2.18	0.43
13:M:39:ASP:N	13:M:39:ASP:OD2	2.51	0.43
13:M:42:VAL:CG2	13:M:178:ILE:HD11	2.48	0.43
2:P:49:ALA:HB2	2:P:212:PHE:CE1	2.52	0.43
4:R:160:TYR:CZ	4:R:163:LYS:HD3	2.53	0.43
6:T:70:VAL:HG11	6:T:112:PHE:CE1	2.53	0.43
3:C:225:SER:OG	3:C:228:GLU:HG3	2.19	0.43
12:L:123:GLN:HG3	12:L:145:TYR:CZ	2.53	0.43
1:O:169:SER:O	1:O:173:LYS:HG3	2.18	0.43
3:Q:172:VAL:O	3:Q:176:LEU:HG	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:R:31:ILE:HD13	4:R:135:ALA:HB2	2.00	0.43
5:S:68:ILE:HB	5:S:76:LEU:CD2	2.48	0.43
10:X:48:GLU:HB3	10:X:96:GLN:HB2	2.00	0.43
11:Y:76:VAL:N	11:Y:106:GLU:OE2	2.52	0.43
12:Z:176:LEU:CD1	12:Z:186:LYS:HG2	2.49	0.43
2:B:173:GLN:HG2	3:C:56:LEU:CD1	2.49	0.43
7:G:82:ILE:CG2	7:G:83:PRO:HD3	2.48	0.43
7:G:143:GLU:HA	7:G:217:LYS:NZ	2.33	0.43
7:G:186:TRP:O	7:G:190:VAL:HG23	2.19	0.43
8:H:24:PRO:HG2	8:H:25:ILE:CD1	2.47	0.43
14:N:146:MET:HE3	14:N:150:GLU:HB3	2.00	0.43
2:P:21(A):LYS:O	2:P:217:ALA:N	2.52	0.43
3:Q:170:LYS:HB2	16:Q:267:HOH:O	2.18	0.43
6:T:199:LEU:HD12	6:T:240:ILE:HD13	2.00	0.43
4:D:31:ILE:HD13	4:D:135:ALA:HB2	2.00	0.43
4:D:194:LEU:HD12	4:D:194:LEU:HA	1.88	0.43
10:J:168:MET:HG2	10:X:168:MET:CE	2.49	0.43
12:L:90:LYS:HE3	12:L:93:PHE:O	2.18	0.43
1:O:17:PRO:HA	2:P:26:TYR:CD1	2.53	0.43
1:O:33:GLN:HE21	1:O:33:GLN:CA	2.28	0.43
1:O:186:LEU:O	1:O:190:ILE:HG13	2.19	0.43
5:S:31:ILE:HD11	5:S:153:PRO:CD	2.49	0.43
7:U:82:ILE:CG2	7:U:83:PRO:HD3	2.49	0.43
12:Z:43:MET:CB	12:Z:101:ILE:HG22	2.35	0.43
12:Z:83:ILE:HB	12:Z:113:PHE:CE2	2.53	0.43
2:B:206:THR:HB	2:B:208:ASP:OD1	2.19	0.43
8:H:147:THR:HG23	8:H:150:GLU:OE1	2.18	0.43
10:J:161:GLU:HA	10:J:161:GLU:OE2	2.19	0.43
3:Q:58:LEU:HD12	3:Q:58:LEU:HA	1.86	0.43
5:S:67:ILE:HG21	5:S:213:ALA:HB2	2.00	0.43
6:T:18:ASP:OD2	6:T:18:ASP:N	2.45	0.43
8:V:2:THR:OG1	8:V:130:GLY:HA3	2.18	0.43
8:V:128:GLY:O	8:V:131:SER:HB2	2.18	0.43
11:Y:142:TYR:C	11:Y:143:LYS:HD2	2.39	0.43
13:O:9:ASP:OD1	13:O:10:ASN:N	2.51	0.43
3:C:228:GLU:O	3:C:232:TYR:HD1	2.02	0.43
6:F:192:GLN:NE2	6:F:195:LYS:HE3	2.34	0.43
10:J:51:ASP:HB3	10:J:95:TYR:HD1	1.84	0.43
5:S:18(F):ILE:O	5:S:18(F):ILE:HG22	2.19	0.43
9:W:22:SER:O	9:W:23:GLN:HB2	2.19	0.43
14:1:113:ILE:HG12	14:1:119:VAL:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1:114:PRO:HD2	14:1:118:SER:O	2.19	0.43
2:B:20:ARG:NH1	2:B:20:ARG:HG2	2.34	0.43
2:B:21(A):LYS:O	2:B:217:ALA:N	2.52	0.43
5:E:148:LEU:HD23	5:E:162:GLY:HA2	2.00	0.43
6:F:179:LEU:HD11	6:F:192:GLN:HG2	2.01	0.43
7:G:34(A):ASN:HD22	7:G:167:PRO:HG2	1.84	0.43
8:H:113:ILE:HG12	8:H:119:THR:HG22	2.01	0.43
8:H:174:ASP:OD2	8:H:189:ARG:NH1	2.49	0.43
10:J:133:TYR:CE1	16:Y:7726:HOH:O	2.68	0.43
13:M:113:VAL:HG23	13:M:119:THR:HG22	2.00	0.43
1:O:212:LEU:HD23	1:O:212:LEU:C	2.39	0.43
6:T:157:TYR:CD1	6:T:157:TYR:C	2.92	0.43
9:W:80:THR:HG22	9:W:119:ILE:HD13	2.01	0.43
13:O:112:TYR:HE1	13:O:127:THR:HG22	1.83	0.43
1:A:136:LEU:O	1:A:150:GLN:HA	2.19	0.42
2:B:156:ASN:HB2	16:C:285:HOH:O	2.18	0.42
2:B:190:ILE:HG21	2:B:232:ILE:HD11	2.01	0.42
5:E:78:LEU:C	5:E:78:LEU:HD12	2.39	0.42
16:F:286:HOH:O	7:G:86:ARG:HD2	2.18	0.42
7:G:107:MET:HA	7:G:108:PRO:HD3	1.87	0.42
10:J:157:LEU:HA	10:J:157:LEU:HD12	1.87	0.42
11:K:4:LEU:HD22	11:K:4:LEU:C	2.40	0.42
11:K:37:ILE:HB	11:K:41:LEU:CB	2.48	0.42
2:P:44:ASP:OD2	2:P:186:VAL:HG23	2.19	0.42
5:S:86:ARG:O	5:S:90:ASN:HB2	2.19	0.42
7:U:177:GLU:O	7:U:17(B):LYS:HG3	2.19	0.42
13:O:149:GLN:NE2	13:O:149:GLN:N	2.58	0.42
2:B:107:ILE:HD11	2:B:111:ILE:HG22	2.00	0.42
7:G:236:ILE:HD12	7:G:236:ILE:C	2.39	0.42
10:J:7:ARG:HG2	10:J:7:ARG:HH11	1.84	0.42
13:M:-3:VAL:HA	13:M:21:SER:O	2.20	0.42
2:P:121:GLN:HG3	3:Q:83:ALA:HB1	1.99	0.42
14:1:14:LEU:O	14:1:175:MET:HA	2.18	0.42
3:C:15:PHE:H	4:D:23:GLN:NE2	1.97	0.42
3:C:57:LYS:HD2	3:C:57:LYS:C	2.40	0.42
10:J:105:ASP:O	10:J:106:ASN:N	2.47	0.42
11:K:145:ASP:O	11:K:146:LEU:HD12	2.20	0.42
7:U:38:LEU:C	7:U:38:LEU:HD12	2.39	0.42
12:Z:17:ASP:HA	12:Z:172:GLY:O	2.20	0.42
12:Z:134:ILE:HD12	12:Z:158:SER:HB3	2.01	0.42
3:C:39:GLY:O	3:C:162:ALA:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:122:ARG:HG2	4:D:122:ARG:NH1	2.34	0.42
14:N:161:GLN:HE22	14:N:165:TRP:HE1	1.66	0.42
2:P:202:THR:CG2	2:P:204:SER:HB2	2.49	0.42
4:R:78:MET:HG3	4:R:82:THR:HG22	2.01	0.42
5:S:18(A):ASP:O	5:S:18(E):LYS:HD3	2.19	0.42
6:T:119:TYR:O	6:T:122:ALA:HB3	2.20	0.42
7:U:109:CYS:HB2	7:U:140:SER:OG	2.19	0.42
10:X:9:GLN:HG3	10:X:10:ASP:CG	2.40	0.42
10:X:120:VAL:HG13	10:X:122:LEU:HG	2.01	0.42
13:O:40:ASN:N	13:O:40:ASN:ND2	2.67	0.42
1:A:141:HIS:HA	1:A:146:GLY:O	2.19	0.42
6:F:210:LEU:HD21	6:F:212:ILE:HD11	2.02	0.42
7:G:74:ILE:CD1	7:G:109:CYS:HA	2.50	0.42
8:H:84:LYS:HE2	8:H:119:THR:HG23	2.01	0.42
10:J:35:ARG:HA	10:J:35:ARG:HD3	1.84	0.42
10:J:113:ILE:CG1	10:J:119:LYS:HG3	2.48	0.42
11:K:207:ASN:ND2	10:X:144:PRO:CD	2.82	0.42
14:N:14:LEU:O	14:N:175:MET:HA	2.18	0.42
14:N:84:LYS:HG3	14:N:119:VAL:CG2	2.49	0.42
6:T:109:ILE:CD1	6:T:142:ASP:HB3	2.48	0.42
7:U:143:GLU:HA	7:U:217:LYS:NZ	2.35	0.42
11:Y:145:ASP:C	11:Y:146:LEU:HD12	2.40	0.42
5:E:18(F):ILE:O	5:E:18(F):ILE:HG22	2.19	0.42
6:F:119:TYR:O	6:F:122:ALA:HB3	2.19	0.42
9:I:2:ASN:HA	9:I:21:GLY:O	2.19	0.42
4:R:238:LYS:HE2	4:R:238:LYS:HB3	1.88	0.42
6:T:95:GLU:HG2	6:T:115:ARG:CG	2.49	0.42
8:V:7:LYS:HG3	8:V:123:TYR:HA	2.00	0.42
9:W:137:MET:HE3	9:W:141:LEU:HD11	2.02	0.42
3:C:149:TYR:CE1	3:C:159:SER:HB3	2.54	0.42
4:D:194:LEU:HD22	4:D:212:LEU:HD11	2.01	0.42
6:F:109:ILE:CD1	6:F:142:ASP:HB3	2.50	0.42
7:G:170:GLN:NE2	7:G:174:THR:HG23	2.34	0.42
7:G:228:ASN:HB3	16:G:253:HOH:O	2.19	0.42
10:J:168:MET:CE	10:X:168:MET:CE	2.98	0.42
11:K:12:ILE:HG13	11:K:108:PRO:HB3	2.00	0.42
2:P:149:TYR:OH	3:Q:62(A):ILE:HB	2.20	0.42
2:P:230:LYS:O	2:P:234:VAL:HG23	2.20	0.42
5:S:66:LYS:O	5:S:77:SER:HA	2.19	0.42
6:T:45:GLY:HA3	6:T:215:CYS:O	2.20	0.42
7:U:30:ALA:O	7:U:33:GLN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:107:MET:HA	7:U:108:PRO:HD3	1.87	0.42
10:X:19:ALA:HB2	10:X:171:LYS:CG	2.49	0.42
13:0:12:VAL:HG21	13:0:102:ALA:HB1	2.02	0.42
3:C:33:ARG:HH11	3:C:33:ARG:CB	2.33	0.42
4:D:100:ASN:HB3	16:D:257:HOH:O	2.19	0.42
6:F:175:GLU:HB3	6:F:196:ILE:HD12	2.01	0.42
7:G:72:ARG:NH1	7:G:72:ARG:HB2	2.35	0.42
8:H:148:LYS:O	8:H:152:ILE:HG13	2.20	0.42
9:I:137:MET:CE	9:I:141:LEU:HD11	2.49	0.42
10:J:135:PHE:HB3	11:Y:165:ARG:NE	2.35	0.42
11:K:137:VAL:HG21	11:K:161:ALA:HB2	2.02	0.42
2:P:206:THR:HB	2:P:208:ASP:OD1	2.19	0.42
6:T:95:GLU:CG	6:T:115:ARG:HH11	2.17	0.42
9:W:178:ILE:HG23	9:W:184:VAL:HG22	2.02	0.42
12:Z:42:VAL:HG23	12:Z:102:ALA:HB3	2.02	0.42
1:A:92:SER:O	1:A:95:VAL:HG12	2.20	0.42
6:F:157:TYR:CD1	6:F:157:TYR:C	2.92	0.42
10:J:6:ILE:CD1	10:J:154:LEU:HD23	2.49	0.42
10:J:45:PHE:CE1	10:J:52:THR:HG23	2.55	0.42
10:J:168:MET:HE1	10:X:167:PRO:CB	2.50	0.42
13:M:91:ARG:HG3	13:M:92:SER:N	2.34	0.42
1:O:31:VAL:HG13	1:O:79:SER:O	2.20	0.42
1:O:21(G):LEU:HD12	1:O:21(G):LEU:HA	1.88	0.42
2:P:122:GLY:C	2:P:124:THR:N	2.73	0.42
6:T:176:LEU:O	6:T:180:VAL:HG23	2.20	0.42
6:T:179:LEU:HD11	6:T:192:GLN:HG2	2.02	0.42
10:X:76:PRO:HD2	16:X:202:HOH:O	2.20	0.42
10:X:185:ARG:HG2	10:X:185:ARG:HH11	1.85	0.42
11:Y:137:VAL:HG21	11:Y:161:ALA:HB2	2.02	0.42
13:0:184:LEU:HD23	13:0:184:LEU:C	2.39	0.42
1:A:4:MET:HG3	6:F:126:TYR:CE2	2.54	0.42
1:A:67:VAL:HG23	1:A:211:GLU:HG2	2.02	0.42
2:B:186:VAL:CB	2:B:216:ARG:HD3	2.50	0.42
5:E:233:ILE:HG22	5:E:233:ILE:OXT	2.20	0.42
6:F:52:LYS:HB2	6:F:209:GLU:O	2.20	0.42
6:F:127:ASN:C	6:F:127:ASN:ND2	2.72	0.42
6:F:176:LEU:O	6:F:180:VAL:HG23	2.19	0.42
11:K:9:GLN:HB3	11:K:144:TRP:O	2.20	0.42
14:N:113:ILE:HG12	14:N:119:VAL:HG13	2.01	0.42
1:O:179:ARG:HB3	1:O:192:ILE:HD12	2.02	0.42
1:O:232:ARG:NH1	1:O:232:ARG:CG	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:120:GLN:O	3:Q:124:THR:HG23	2.20	0.42
12:Z:76:ILE:HG23	12:Z:77:ASN:N	2.35	0.42
9:I:80:THR:HG22	9:I:119:ILE:HD13	2.00	0.41
10:J:112:GLN:HE22	10:J:126:ALA:H	1.67	0.41
11:K:7:ARG:HG2	11:K:108:PRO:HB2	2.02	0.41
11:K:205:SER:C	11:K:207:ASN:N	2.72	0.41
8:V:175:VAL:CG1	8:V:176:CYS:N	2.83	0.41
10:X:157:LEU:HA	10:X:157:LEU:HD12	1.87	0.41
10:X:190:PHE:C	10:X:192:ALA:N	2.73	0.41
11:Y:147:SER:O	11:Y:150:ASP:N	2.53	0.41
2:B:202:THR:CG2	2:B:204:SER:HB2	2.50	0.41
3:C:172:VAL:O	3:C:176:LEU:HG	2.20	0.41
4:D:78:MET:HG3	4:D:82:THR:HG22	2.03	0.41
9:I:113:PHE:CD2	9:I:113:PHE:N	2.88	0.41
10:J:140:HIS:CE1	11:Y:203:GLU:OE2	2.73	0.41
12:L:90:LYS:HD3	12:L:95:TYR:CE1	2.55	0.41
13:M:112:TYR:HE1	13:M:127:THR:HG22	1.86	0.41
1:O:232:ARG:HH11	1:O:232:ARG:CG	2.30	0.41
2:P:134:VAL:O	2:P:153:PRO:HD3	2.20	0.41
2:P:186:VAL:CB	2:P:216:ARG:HD3	2.50	0.41
3:Q:57:LYS:HG2	3:Q:208:LYS:HZ3	1.86	0.41
6:T:107:ILE:HA	6:T:108:PRO:HD3	1.90	0.41
10:X:146:MET:HB3	10:X:146:MET:HE2	1.92	0.41
13:O:-3:VAL:HA	13:O:21:SER:O	2.20	0.41
13:O:14(A):VAL:HG23	13:O:14(A):VAL:O	2.20	0.41
13:O:14(G):ILE:HB	13:O:144:PRO:CD	2.50	0.41
1:A:12:LEU:HD11	7:G:127:ALA:HB2	2.02	0.41
2:B:186:VAL:CG1	2:B:216:ARG:HD3	2.50	0.41
11:K:210:ILE:HD12	11:K:210:ILE:HA	1.87	0.41
12:L:39:ASP:OD2	12:L:67:HIS:HE1	2.03	0.41
2:P:20:ARG:NH1	2:P:20:ARG:HG2	2.35	0.41
4:R:53:ARG:O	4:R:53:ARG:HG2	2.20	0.41
7:U:18(G):GLU:CG	7:U:188:LYS:HB2	2.50	0.41
10:X:35:ARG:HA	10:X:35:ARG:HD3	1.88	0.41
13:O:125:LEU:HA	16:O:217:HOH:O	2.19	0.41
3:C:93:ARG:HD2	16:C:260:HOH:O	2.19	0.41
5:E:141:TYR:HA	5:E:145:GLY:O	2.20	0.41
6:F:50:VAL:HG22	6:F:51:GLU:N	2.35	0.41
8:H:19:ARG:NH1	8:H:167:LEU:O	2.54	0.41
8:H:26:VAL:HG11	8:H:29:LYS:HG2	2.01	0.41
8:H:201:GLN:HG2	12:Z:153:LYS:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:18:LYS:HD3	10:J:174:ILE:CG1	2.50	0.41
10:J:191:GLN:O	10:J:192:ALA:HB2	2.19	0.41
11:K:4:LEU:CD1	11:K:15:ALA:HB3	2.50	0.41
13:M:14(A):VAL:HG23	13:M:14(A):VAL:O	2.19	0.41
1:O:214:ILE:HD13	1:O:222:ARG:O	2.21	0.41
7:U:38:LEU:HD23	7:U:197:MET:HE3	2.02	0.41
9:W:1:GLY:HA2	9:W:17:ASP:OD1	2.20	0.41
9:W:99:PRO:HB2	9:W:113:PHE:CD2	2.56	0.41
13:O:42:VAL:CG2	13:O:178:ILE:HD11	2.50	0.41
2:B:126:HIS:HA	16:C:276:HOH:O	2.20	0.41
4:D:185:THR:HG23	4:D:188:GLU:OE1	2.21	0.41
7:G:75:GLY:HA3	7:G:221:PHE:CE2	2.55	0.41
8:H:201:GLN:CG	12:Z:153:LYS:HG2	2.51	0.41
10:J:124:TYR:CE2	10:J:138:LEU:HB2	2.55	0.41
12:L:9:GLU:O	12:L:107:LYS:HA	2.20	0.41
3:Q:185:THR:CB	3:Q:188:GLU:HG2	2.39	0.41
4:R:39:GLY:O	4:R:162:ALA:HA	2.20	0.41
5:S:141:TYR:HA	5:S:145:GLY:O	2.20	0.41
9:W:66:TYR:CZ	9:W:70:GLU:HG3	2.55	0.41
4:D:101:LEU:CD1	11:K:57:THR:HG22	2.50	0.41
7:G:18(G):GLU:CG	7:G:188:LYS:HB2	2.50	0.41
10:J:143:ARG:HA	10:J:144:PRO:HD3	1.83	0.41
10:J:146:MET:HB3	10:J:146:MET:HE2	1.90	0.41
3:Q:24:VAL:O	3:Q:27:ALA:HB3	2.20	0.41
3:Q:212:ILE:CG2	3:Q:213:THR:N	2.83	0.41
4:R:240:LYS:O	4:R:243:ALA:HB3	2.19	0.41
7:U:171:GLU:OE1	7:U:171:GLU:N	2.52	0.41
11:Y:9:GLN:HB3	11:Y:144:TRP:O	2.20	0.41
12:Z:-7:ASN:HD22	12:Z:-7:ASN:C	2.24	0.41
12:Z:2:THR:HG21	12:Z:130:ALA:HB3	2.03	0.41
3:C:59:GLN:H	3:C:59:GLN:HG3	1.51	0.41
9:I:55:LEU:HD12	9:I:97:VAL:HG21	2.02	0.41
9:I:143:GLU:CG	9:I:146:LEU:HD21	2.49	0.41
13:M:157:ASN:ND2	16:M:273:HOH:O	2.54	0.41
2:P:186:VAL:HG21	2:P:216:ARG:CG	2.49	0.41
4:R:75:GLY:HA3	4:R:221:PHE:CE2	2.55	0.41
5:S:233:ILE:HG22	5:S:233:ILE:OXT	2.21	0.41
6:T:95:GLU:HG2	6:T:115:ARG:HD2	2.03	0.41
7:U:116:MET:HE3	16:U:257:HOH:O	2.20	0.41
7:U:172:ILE:H	7:U:172:ILE:HG12	1.61	0.41
10:X:34:THR:HG21	10:X:176:LYS:HZ2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:179:ARG:HB3	1:A:192:ILE:HD12	2.02	0.41
3:C:136:THR:O	3:C:150:GLN:HA	2.21	0.41
3:C:185:THR:CB	3:C:188:GLU:HG2	2.40	0.41
4:D:219:ASP:O	4:D:222:LYS:HE2	2.20	0.41
6:F:70:VAL:HG11	6:F:112:PHE:CE1	2.54	0.41
9:I:165:ARG:NH2	12:Z:135:MET:CE	2.84	0.41
10:J:9:GLN:HG3	10:J:10:ASP:CG	2.40	0.41
10:J:167:PRO:CB	10:X:168:MET:HE1	2.50	0.41
2:P:39:GLY:O	2:P:148:LEU:HD21	2.21	0.41
3:Q:136:THR:O	3:Q:150:GLN:HA	2.20	0.41
4:R:122:ARG:HG2	4:R:122:ARG:NH1	2.36	0.41
9:W:107:LYS:HA	9:W:108:PRO:HD3	1.84	0.41
9:W:160:LEU:HD12	9:W:160:LEU:HA	1.93	0.41
11:Y:9:GLN:NE2	11:Y:146:LEU:O	2.52	0.41
2:B:20:ARG:HG2	2:B:20:ARG:HH11	1.86	0.41
2:B:122:GLY:C	2:B:124:THR:N	2.74	0.41
2:B:211:GLU:HA	16:B:265:HOH:O	2.21	0.41
4:D:117:CYS:O	4:D:120:ALA:HB3	2.20	0.41
6:F:205:ASN:C	6:F:20(B):GLU:H	2.24	0.41
7:G:39:ALA:HA	7:G:47:VAL:O	2.20	0.41
7:G:17(C):LYS:HB2	7:G:17(C):LYS:HE3	1.87	0.41
7:G:224:LEU:HB3	7:G:228:ASN:HB2	2.03	0.41
8:H:2:THR:OG1	8:H:130:GLY:HA3	2.20	0.41
9:I:36:HIS:HB3	9:I:42:PHE:CD2	2.56	0.41
10:J:24:ILE:O	10:J:24:ILE:HG13	2.21	0.41
11:K:173:VAL:O	11:K:189:ASN:HA	2.21	0.41
12:L:17:ASP:HA	12:L:172:GLY:O	2.21	0.41
13:M:14(G):ILE:HB	13:M:144:PRO:CD	2.51	0.41
13:M:149:GLN:NE2	13:M:149:GLN:N	2.56	0.41
1:O:122:GLU:C	1:O:124:THR:H	2.24	0.41
1:O:162:ALA:O	2:P:58:LEU:HD23	2.21	0.41
2:P:99:TYR:CD2	2:P:107:ILE:HA	2.56	0.41
2:P:107:ILE:HA	2:P:108:PRO:HD3	1.99	0.41
2:P:185:LYS:HE2	2:P:187:ASP:OD1	2.21	0.41
3:Q:52:ARG:HB2	3:Q:209:ASN:HA	2.02	0.41
3:Q:134:VAL:HG12	3:Q:135:SER:N	2.34	0.41
3:Q:201:VAL:O	3:Q:201:VAL:HG12	2.21	0.41
4:R:12:VAL:CG2	4:R:12(A):GLY:HA2	2.51	0.41
4:R:97:VAL:HG21	11:Y:65:LEU:HD13	2.02	0.41
6:T:147:HIS:HD2	16:T:282:HOH:O	2.04	0.41
7:U:74:ILE:CD1	7:U:109:CYS:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:188:LYS:HD3	7:U:188:LYS:HA	1.90	0.41
7:U:203:THR:HG22	7:U:204:GLU:O	2.21	0.41
10:X:18:LYS:HD3	10:X:174:ILE:CG1	2.50	0.41
10:X:36:GLN:OE1	10:X:39:PRO:HA	2.21	0.41
12:Z:9:GLU:O	12:Z:107:LYS:HA	2.20	0.41
13:O:133:MET:C	13:O:136:PRO:HD2	2.41	0.41
14:1:146:MET:HE3	14:1:150:GLU:HB3	2.03	0.41
1:A:46:VAL:HG11	1:A:139:ALA:HB1	2.03	0.41
2:B:28:LEU:HA	2:B:31:ILE:HG13	2.03	0.41
2:B:185:LYS:HE2	2:B:187:ASP:OD1	2.21	0.41
4:D:97:VAL:HG21	11:K:65:LEU:HD13	2.02	0.41
5:E:13:VAL:O	5:E:13:VAL:HG13	2.21	0.41
5:E:31:ILE:HD11	5:E:153:PRO:CD	2.51	0.41
7:G:203:THR:HG22	7:G:204:GLU:O	2.21	0.41
8:H:25:ILE:HD12	8:H:25:ILE:N	2.36	0.41
8:H:175:VAL:CG1	8:H:176:CYS:N	2.84	0.41
10:J:46:ALA:HA	16:J:212:HOH:O	2.21	0.41
12:L:166:HIS:CD2	12:L:168:GLN:H	2.29	0.41
1:O:136:LEU:O	1:O:150:GLN:HA	2.21	0.41
2:P:5:SER:O	2:P:7:ARG:N	2.54	0.41
4:R:107:ILE:HG22	16:R:338:HOH:O	2.20	0.41
6:T:158:TRP:CZ3	7:U:64:VAL:HA	2.56	0.41
6:T:187:ARG:NH1	6:T:228:LEU:HD13	2.36	0.41
9:W:14:ILE:HG12	9:W:34:ILE:CD1	2.51	0.41
10:X:191:GLN:O	10:X:192:ALA:HB2	2.20	0.41
12:Z:39:ASP:OD2	12:Z:67:HIS:HE1	2.04	0.41
13:O:39:ASP:OD2	13:O:39:ASP:N	2.53	0.41
3:C:100:ARG:HH12	3:C:106:PRO:HB3	1.74	0.40
6:F:95:GLU:HG2	6:F:115:ARG:CB	2.49	0.40
7:G:8:TYR:C	7:G:10:ARG:N	2.75	0.40
8:H:3:ILE:HG22	8:H:16:ALA:HB2	2.03	0.40
8:H:200:LYS:HE3	9:I:140:SER:O	2.21	0.40
9:I:34:ILE:HB	16:I:243:HOH:O	2.21	0.40
10:J:168:MET:CE	10:X:168:MET:HG2	2.51	0.40
13:M:133:MET:O	13:M:136:PRO:HD2	2.21	0.40
1:O:26:TYR:O	1:O:29:THR:HB	2.20	0.40
5:S:4:PHE:CD2	5:S:5:ARG:N	2.89	0.40
6:T:196:ILE:HG12	6:T:196:ILE:H	1.72	0.40
6:T:205:ASN:C	6:T:20(B):GLU:H	2.24	0.40
7:U:82:ILE:HG22	7:U:83:PRO:HD3	2.03	0.40
15:V:7710:SRG:N17	15:V:7710:SRG:H13B	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:7:THR:HG23	9:W:110:ILE:HD13	2.03	0.40
10:X:14:LEU:HD12	10:X:42:LEU:HD23	2.03	0.40
10:X:103:GLY:HA2	10:X:178:VAL:HG11	2.03	0.40
11:Y:13:ILE:HD12	11:Y:152:LEU:HD23	2.02	0.40
14:1:107:LYS:CG	14:1:108:GLY:N	2.54	0.40
4:D:135:ALA:O	4:D:136:LEU:HD23	2.22	0.40
5:E:86:ARG:O	5:E:90:ASN:HB2	2.21	0.40
7:G:151:THR:HG22	7:G:157:TYR:HB2	2.03	0.40
8:H:137:VAL:HG21	8:H:161:ALA:HB2	2.03	0.40
9:I:93:GLY:N	9:I:94:PRO:CD	2.85	0.40
11:K:147:SER:O	11:K:150:ASP:N	2.54	0.40
12:L:153:LYS:HA	8:V:201:GLN:HG2	2.02	0.40
14:N:8:PHE:CE1	14:N:10:ASP:HB2	2.56	0.40
1:O:13:THR:O	2:P:130:ARG:HD3	2.21	0.40
1:O:46:VAL:HG11	1:O:139:ALA:HB1	2.03	0.40
6:T:32:GLU:HB3	6:T:169:ARG:NH2	2.36	0.40
6:T:172:ALA:O	6:T:176:LEU:CD2	2.69	0.40
7:U:224:LEU:HB3	7:U:228:ASN:HB2	2.02	0.40
8:V:34:LEU:HD22	8:V:174:ASP:HB3	2.02	0.40
8:V:72:ARG:HG3	8:V:72:ARG:NH1	2.32	0.40
11:Y:147:SER:O	11:Y:149:GLU:N	2.54	0.40
12:Z:99:THR:CG2	16:Z:201:HOH:O	2.69	0.40
12:Z:151:VAL:O	12:Z:155:VAL:HG23	2.21	0.40
14:1:3:ILE:HB	14:1:44:CYS:HB3	2.03	0.40
2:B:184:MET:HE3	2:B:188:ASP:HB3	2.04	0.40
3:C:120:GLN:O	3:C:124:THR:HG23	2.22	0.40
4:D:75:GLY:HA3	4:D:221:PHE:CE2	2.56	0.40
5:E:189:LEU:HD23	5:E:189:LEU:HA	1.86	0.40
6:F:35:THR:CG2	6:F:36:THR:N	2.84	0.40
9:I:7:THR:HG23	9:I:110:ILE:HD13	2.03	0.40
12:L:4:LEU:HD13	12:L:138:LEU:HD21	2.01	0.40
12:L:22:THR:O	12:L:23:ASP:HB2	2.21	0.40
14:N:32:ASP:OD1	14:N:186:ARG:NH2	2.52	0.40
14:N:18(G):TYR:HA	14:N:18(J):LEU:HG	2.03	0.40
1:O:121:GLN:CG	2:P:83:ALA:HB1	2.52	0.40
3:Q:97:GLN:HA	3:Q:97:GLN:NE2	2.37	0.40
4:R:121:LEU:HA	4:R:123:PHE:HE1	1.86	0.40
4:R:219:ASP:O	4:R:222:LYS:HE2	2.21	0.40
8:V:5:GLY:O	8:V:124:TYR:HA	2.21	0.40
9:W:36:HIS:HB3	9:W:42:PHE:CD2	2.55	0.40
14:1:18(G):TYR:HA	14:1:18(J):LEU:HG	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:7710:SRG:N17	15:H:7710:SRG:H13B	2.37	0.40
2:P:66:LYS:O	2:P:77:ALA:HA	2.21	0.40
11:Y:205:SER:C	11:Y:207:ASN:N	2.72	0.40
12:Z:148:VAL:HG13	12:Z:149:GLU:N	2.36	0.40
14:1:65:LEU:HG	14:1:69:GLN:HE21	1.86	0.40
2:B:107:ILE:HA	2:B:108:PRO:HD3	1.98	0.40
2:B:173:GLN:HG2	3:C:56:LEU:HD12	2.04	0.40
3:C:58:LEU:HD12	3:C:58:LEU:HA	1.88	0.40
5:E:97:ASN:HD22	5:E:97:ASN:HA	1.70	0.40
7:G:119:LEU:HD12	7:G:119:LEU:HA	1.88	0.40
11:K:145:ASP:C	11:K:146:LEU:HD12	2.41	0.40
12:L:83:ILE:HB	12:L:113:PHE:CE2	2.57	0.40
1:O:31:VAL:HG11	1:O:135:SER:HB2	2.03	0.40
4:R:117:CYS:O	4:R:120:ALA:HB3	2.21	0.40
6:T:187:ARG:HG3	6:T:187:ARG:HH11	1.85	0.40
10:X:112:GLN:HE22	10:X:126:ALA:H	1.69	0.40
13:0:91:ARG:HG3	13:0:92:SER:N	2.36	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%)	232 (94%)	15 (6%)	1 (0%)	34 66
1	O	248/250 (99%)	233 (94%)	14 (6%)	1 (0%)	34 66
2	B	242/258 (94%)	219 (90%)	19 (8%)	4 (2%)	9 31
2	P	242/258 (94%)	218 (90%)	20 (8%)	4 (2%)	9 31
3	C	239/254 (94%)	218 (91%)	17 (7%)	4 (2%)	9 31
3	Q	239/254 (94%)	219 (92%)	17 (7%)	3 (1%)	12 37
4	D	240/260 (92%)	215 (90%)	19 (8%)	6 (2%)	5 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	R	240/260 (92%)	215 (90%)	19 (8%)	6 (2%)	5	21
5	E	231/234 (99%)	210 (91%)	16 (7%)	5 (2%)	6	24
5	S	231/234 (99%)	211 (91%)	15 (6%)	5 (2%)	6	24
6	F	242/287 (84%)	230 (95%)	10 (4%)	2 (1%)	19	51
6	T	242/287 (84%)	230 (95%)	10 (4%)	2 (1%)	19	51
7	G	241/252 (96%)	226 (94%)	14 (6%)	1 (0%)	34	66
7	U	241/252 (96%)	227 (94%)	13 (5%)	1 (0%)	34	66
8	H	220/232 (95%)	204 (93%)	14 (6%)	2 (1%)	17	48
8	V	220/232 (95%)	207 (94%)	12 (6%)	1 (0%)	29	61
9	I	202/205 (98%)	188 (93%)	13 (6%)	1 (0%)	29	61
9	W	202/205 (98%)	187 (93%)	14 (7%)	1 (0%)	29	61
10	J	196/198 (99%)	181 (92%)	11 (6%)	4 (2%)	7	27
10	X	196/198 (99%)	182 (93%)	10 (5%)	4 (2%)	7	27
11	K	210/212 (99%)	196 (93%)	11 (5%)	3 (1%)	11	36
11	Y	210/212 (99%)	196 (93%)	11 (5%)	3 (1%)	11	36
12	L	220/241 (91%)	208 (94%)	11 (5%)	1 (0%)	29	61
12	Z	220/241 (91%)	209 (95%)	11 (5%)	0	100	100
13	0	231/266 (87%)	215 (93%)	15 (6%)	1 (0%)	34	66
13	M	231/266 (87%)	216 (94%)	14 (6%)	1 (0%)	34	66
14	1	194/196 (99%)	187 (96%)	7 (4%)	0	100	100
14	N	194/196 (99%)	188 (97%)	6 (3%)	0	100	100
All	All	6312/6690 (94%)	5867 (93%)	378 (6%)	67 (1%)	14	42

All (67) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	5	THR
3	C	58	LEU
3	C	203	THR
4	D	12(G)	GLU
10	J	192	ALA
1	O	5	THR
3	Q	58	LEU
3	Q	203	THR
4	R	12(G)	GLU

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Mol	Chain	Res	Type
10	X	192	ALA
2	B	21(B)	GLY
2	B	21(C)	ASP
4	D	12(E)	SER
4	D	128	MET
4	D	18(D)	SER
5	E	180	LEU
8	H	9	ASN
10	J	8	VAL
2	P	6	ARG
2	P	21(B)	GLY
2	P	21(C)	ASP
4	R	12(E)	SER
4	R	18(D)	SER
5	S	180	LEU
8	V	9	ASN
10	X	8	VAL
2	B	6	ARG
3	C	183	PRO
4	D	12(F)	GLY
5	E	202	ARG
6	F	205	ASN
6	F	206	LYS
7	G	220	LYS
10	J	132	PHE
13	M	2	SER
3	Q	183	PRO
4	R	128	MET
5	S	202	ARG
5	S	217	LYS
6	T	205	ASN
6	T	206	LYS
7	U	220	LYS
10	X	132	PHE
2	B	54	VAL
5	E	5	ARG
5	E	203	ASP
5	E	217	LYS
12	L	71	ASP
2	P	54	VAL
4	R	12(F)	GLY
5	S	5	ARG

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Mol	Chain	Res	Type
5	S	203	ASP
11	K	39	PRO
11	K	208	ASN
11	K	209	VAL
11	Y	208	ASN
11	Y	209	VAL
13	O	2	SER
8	H	91	GLN
10	J	191	GLN
10	X	191	GLN
11	Y	39	PRO
4	D	12(C)	GLY
9	I	93	GLY
4	R	12(C)	GLY
9	W	93	GLY
3	C	206	GLY

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 76
1	O	209/209 (100%)	203 (97%)	6 (3%)	42 76
2	B	203/216 (94%)	191 (94%)	12 (6%)	19 49
2	P	203/216 (94%)	190 (94%)	13 (6%)	17 45
3	C	213/226 (94%)	204 (96%)	9 (4%)	30 63
3	Q	213/226 (94%)	203 (95%)	10 (5%)	26 59
4	D	198/215 (92%)	189 (96%)	9 (4%)	27 61
4	R	198/215 (92%)	190 (96%)	8 (4%)	31 65
5	E	192/193 (100%)	172 (90%)	20 (10%)	7 21
5	S	192/193 (100%)	172 (90%)	20 (10%)	7 21
6	F	201/238 (84%)	186 (92%)	15 (8%)	13 37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	T	201/238 (84%)	187 (93%)	14 (7%)	15	41
7	G	207/210 (99%)	194 (94%)	13 (6%)	18	46
7	U	207/210 (99%)	195 (94%)	12 (6%)	20	50
8	H	181/190 (95%)	174 (96%)	7 (4%)	32	66
8	V	181/190 (95%)	174 (96%)	7 (4%)	32	66
9	I	172/173 (99%)	165 (96%)	7 (4%)	30	64
9	W	172/173 (99%)	165 (96%)	7 (4%)	30	64
10	J	175/175 (100%)	169 (97%)	6 (3%)	37	71
10	X	175/175 (100%)	168 (96%)	7 (4%)	31	65
11	K	169/169 (100%)	158 (94%)	11 (6%)	17	45
11	Y	169/169 (100%)	157 (93%)	12 (7%)	14	40
12	L	185/201 (92%)	171 (92%)	14 (8%)	13	36
12	Z	185/201 (92%)	170 (92%)	15 (8%)	11	33
13	O	199/224 (89%)	190 (96%)	9 (4%)	27	61
13	M	199/224 (89%)	190 (96%)	9 (4%)	27	61
14	I	162/162 (100%)	152 (94%)	10 (6%)	18	47
14	N	162/162 (100%)	153 (94%)	9 (6%)	21	52
All	All	5332/5602 (95%)	5035 (94%)	297 (6%)	21	52

All (297) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	GLN
1	A	64	LEU
1	A	124	THR
1	A	158	PHE
1	A	179	ARG
1	A	214	ILE
2	B	31	ILE
2	B	58	LEU
2	B	71	ASN
2	B	91	THR
2	B	121	GLN
2	B	150	THR
2	B	185	LYS
2	B	192	LEU

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Mol	Chain	Res	Type
2	B	206	THR
2	B	218	ASN
2	B	221	GLN
2	B	224	PHE
3	C	10	ARG
3	C	57	LYS
3	C	121	GLN
3	C	135	SER
3	C	150	GLN
3	C	172	VAL
3	C	174	GLU
3	C	208	LYS
3	C	227	GLU
4	D	12	VAL
4	D	28	LEU
4	D	76	CYS
4	D	126	ARG
4	D	170	GLU
4	D	177	LEU
4	D	194	LEU
4	D	237	LEU
4	D	244	GLU
5	E	12	THR
5	E	13	VAL
5	E	32	LYS
5	E	56	ASP
5	E	57	GLU
5	E	64	GLN
5	E	76	LEU
5	E	90	ASN
5	E	97	ASN
5	E	104	ASN
5	E	111	ARG
5	E	121	GLN
5	E	18(D)	ILE
5	E	185	ASN
5	E	189	LEU
5	E	199	GLN
5	E	207	LEU
5	E	2(C)	VAL
5	E	227	GLU
5	E	231	LYS

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Mol	Chain	Res	Type
6	F	11	SER
6	F	35	THR
6	F	43	ASN
6	F	98	SER
6	F	105	THR
6	F	121	GLN
6	F	127	ASN
6	F	135	SER
6	F	18(E)	GLU
6	F	187	ARG
6	F	203	GLU
6	F	204	ASP
6	F	205	ASN
6	F	214	TRP
6	F	225	LYS
7	G	33	GLN
7	G	72	ARG
7	G	87	ASN
7	G	119	LEU
7	G	121	GLN
7	G	124	THR
7	G	169	GLN
7	G	172	ILE
7	G	184	ASN
7	G	197	MET
7	G	217	LYS
7	G	232	ARG
7	G	240	ASP
8	H	30	ASN
8	H	34	LEU
8	H	56	THR
8	H	68	LEU
8	H	144	GLN
8	H	197	ARG
8	H	223	ASP
9	I	2	ILE
9	I	29	ASN
9	I	90	ARG
9	I	113	PHE
9	I	115	LEU
9	I	160	LEU
9	I	171	TRP

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Mol	Chain	Res	Type
10	J	3	ILE
10	J	52	THR
10	J	70	GLU
10	J	77	GLN
10	J	121	GLU
10	J	168	MET
11	K	4	LEU
11	K	8	PHE
11	K	9	GLN
11	K	65	LEU
11	K	69	ARG
11	K	99	THR
11	K	100	MET
11	K	104	TYR
11	K	10(B)	LYS
11	K	129	SER
11	K	181	ASP
12	L	-7	ASN
12	L	14	LEU
12	L	25	SER
12	L	40	ASN
12	L	43	MET
12	L	58	ARG
12	L	70(A)	ASN
12	L	99	THR
12	L	106	GLU
12	L	114	ASP
12	L	120	GLU
12	L	123	GLN
12	L	138	LEU
12	L	145	TYR
13	M	40	ASN
13	M	62	LEU
13	M	71(A)	ASP
13	M	91	ARG
13	M	115	LEU
13	M	14(C)	ARG
13	M	149	GLN
13	M	191	GLN
13	M	204	LYS
14	N	70	TYR
14	N	84	LYS

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Mol	Chain	Res	Type
14	N	89	GLU
14	N	105	ASP
14	N	10(A)	ASP
14	N	115	LEU
14	N	119	VAL
14	N	18(A)	ILE
14	N	18(I)	GLN
1	O	33	GLN
1	O	64	LEU
1	O	124	THR
1	O	158	PHE
1	O	179	ARG
1	O	214	ILE
2	P	31	ILE
2	P	41	MET
2	P	58	LEU
2	P	71	ASN
2	P	91	THR
2	P	121	GLN
2	P	150	THR
2	P	185	LYS
2	P	192	LEU
2	P	206	THR
2	P	218	ASN
2	P	221	GLN
2	P	224	PHE
3	Q	10	ARG
3	Q	57	LYS
3	Q	59	GLN
3	Q	121	GLN
3	Q	135	SER
3	Q	150	GLN
3	Q	172	VAL
3	Q	174	GLU
3	Q	208	LYS
3	Q	227	GLU
4	R	12	VAL
4	R	28	LEU
4	R	76	CYS
4	R	126	ARG
4	R	170	GLU
4	R	177	LEU

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Mol	Chain	Res	Type
4	R	237	LEU
4	R	244	GLU
5	S	12	THR
5	S	13	VAL
5	S	32	LYS
5	S	56	ASP
5	S	57	GLU
5	S	64	GLN
5	S	76	LEU
5	S	90	ASN
5	S	97	ASN
5	S	104	ASN
5	S	111	ARG
5	S	121	GLN
5	S	18(D)	ILE
5	S	185	ASN
5	S	189	LEU
5	S	199	GLN
5	S	207	LEU
5	S	2(C)	VAL
5	S	227	GLU
5	S	231	LYS
6	T	11	SER
6	T	35	THR
6	T	43	ASN
6	T	98	SER
6	T	105	THR
6	T	121	GLN
6	T	127	ASN
6	T	18(E)	GLU
6	T	187	ARG
6	T	203	GLU
6	T	204	ASP
6	T	205	ASN
6	T	214	TRP
6	T	225	LYS
7	U	33	GLN
7	U	72	ARG
7	U	87	ASN
7	U	119	LEU
7	U	121	GLN
7	U	124	THR

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Mol	Chain	Res	Type
7	U	128	TYR
7	U	169	GLN
7	U	197	MET
7	U	217	LYS
7	U	232	ARG
7	U	240	ASP
8	V	30	ASN
8	V	34	LEU
8	V	56	THR
8	V	68	LEU
8	V	144	GLN
8	V	197	ARG
8	V	223	ASP
9	W	2	ILE
9	W	29	ASN
9	W	90	ARG
9	W	113	PHE
9	W	115	LEU
9	W	160	LEU
9	W	171	TRP
10	X	3	ILE
10	X	52	THR
10	X	70	GLU
10	X	77	GLN
10	X	121	GLU
10	X	140	HIS
10	X	168	MET
11	Y	4	LEU
11	Y	8	PHE
11	Y	9	GLN
11	Y	65	LEU
11	Y	69	ARG
11	Y	99	THR
11	Y	100	MET
11	Y	104	TYR
11	Y	10(B)	LYS
11	Y	129	SER
11	Y	181	ASP
11	Y	208	ASN
12	Z	-7	ASN
12	Z	14	LEU
12	Z	25	SER

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Mol	Chain	Res	Type
12	Z	40	ASN
12	Z	43	MET
12	Z	58	ARG
12	Z	70(A)	ASN
12	Z	99	THR
12	Z	106	GLU
12	Z	114	ASP
12	Z	120	GLU
12	Z	123	GLN
12	Z	138	LEU
12	Z	1(I)	ASN
12	Z	145	TYR
13	0	40	ASN
13	0	62	LEU
13	0	71(A)	ASP
13	0	91	ARG
13	0	115	LEU
13	0	14(C)	ARG
13	0	149	GLN
13	0	191	GLN
13	0	204	LYS
14	1	36	ARG
14	1	70	TYR
14	1	84	LYS
14	1	89	GLU
14	1	105	ASP
14	1	10(A)	ASP
14	1	115	LEU
14	1	119	VAL
14	1	18(A)	ILE
14	1	18(I)	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (200) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	33	GLN
1	A	97	HIS
2	B	23	GLN
2	B	71	ASN
2	B	97	GLN
2	B	121	GLN
2	B	125	GLN

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Mol	Chain	Res	Type
2	B	156	ASN
2	B	177	GLN
2	B	218	ASN
3	C	23	GLN
3	C	82	ASN
3	C	97	GLN
3	C	121	GLN
3	C	125	GLN
3	C	150	GLN
3	C	163	GLN
3	C	238	GLN
3	C	243	GLN
4	D	23	GLN
4	D	108	ASN
4	D	147	GLN
4	D	161	ASN
4	D	211	GLN
4	D	218	GLN
4	D	226	ASN
5	E	7	ASN
5	E	33	GLN
5	E	73	HIS
5	E	97	ASN
5	E	104	ASN
5	E	121	GLN
5	E	123	ASN
5	E	125	GLN
5	E	156	ASN
5	E	185	ASN
5	E	199	GLN
5	E	2(E)	ASN
6	F	23	GLN
6	F	43	ASN
6	F	87	HIS
6	F	90	ASN
6	F	121	GLN
6	F	127	ASN
6	F	192	GLN
6	F	237	GLN
7	G	34(A)	ASN
7	G	87	ASN
7	G	118	ASN

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Mol	Chain	Res	Type
7	G	121	GLN
7	G	125	GLN
7	G	169	GLN
7	G	170	GLN
7	G	178	ASN
7	G	18(C)	HIS
7	G	184	ASN
7	G	228	ASN
8	H	30	ASN
8	H	66	HIS
8	H	144	GLN
8	H	165	ASN
8	H	172	ASN
8	H	190	ASN
9	I	29	ASN
9	I	81	GLN
10	J	54	GLN
10	J	64	GLN
10	J	77	GLN
10	J	85	GLN
10	J	112	GLN
10	J	186	GLN
11	K	85	ASN
11	K	174	ASN
11	K	207	ASN
12	L	-9	GLN
12	L	-7	ASN
12	L	40	ASN
12	L	46	ASN
12	L	61	ASN
12	L	67	HIS
12	L	70(A)	ASN
12	L	85	HIS
12	L	1(I)	ASN
12	L	166	HIS
13	M	-7	GLN
13	M	10	ASN
13	M	40	ASN
13	M	89	GLN
13	M	93	ASN
13	M	132	HIS
13	M	149	GLN

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Mol	Chain	Res	Type
13	M	157	ASN
13	M	191	GLN
14	N	69	GLN
14	N	141	ASN
14	N	145	ASN
14	N	161	GLN
1	O	33	GLN
1	O	97	HIS
2	P	23	GLN
2	P	71	ASN
2	P	97	GLN
2	P	121	GLN
2	P	125	GLN
2	P	156	ASN
2	P	177	GLN
2	P	218	ASN
3	Q	23	GLN
3	Q	82	ASN
3	Q	97	GLN
3	Q	121	GLN
3	Q	125	GLN
3	Q	150	GLN
3	Q	163	GLN
3	Q	238	GLN
3	Q	243	GLN
4	R	23	GLN
4	R	108	ASN
4	R	147	GLN
4	R	161	ASN
4	R	211	GLN
4	R	218	GLN
4	R	226	ASN
5	S	7	ASN
5	S	33	GLN
5	S	73	HIS
5	S	97	ASN
5	S	104	ASN
5	S	121	GLN
5	S	123	ASN
5	S	125	GLN
5	S	156	ASN
5	S	199	GLN

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Mol	Chain	Res	Type
5	S	2(E)	ASN
6	T	23	GLN
6	T	43	ASN
6	T	87	HIS
6	T	90	ASN
6	T	121	GLN
6	T	127	ASN
6	T	147	HIS
6	T	192	GLN
6	T	237	GLN
7	U	11	HIS
7	U	34(A)	ASN
7	U	87	ASN
7	U	118	ASN
7	U	121	GLN
7	U	125	GLN
7	U	169	GLN
7	U	170	GLN
7	U	178	ASN
7	U	18(C)	HIS
7	U	184	ASN
7	U	228	ASN
8	V	30	ASN
8	V	66	HIS
8	V	91	GLN
8	V	144	GLN
8	V	165	ASN
8	V	172	ASN
8	V	190	ASN
9	W	64	ASN
9	W	81	GLN
10	X	54	GLN
10	X	64	GLN
10	X	77	GLN
10	X	85	GLN
10	X	112	GLN
10	X	186	GLN
10	X	193	GLN
11	Y	85	ASN
11	Y	174	ASN
11	Y	207	ASN
11	Y	208	ASN

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Mol	Chain	Res	Type
12	Z	-9	GLN
12	Z	-7	ASN
12	Z	40	ASN
12	Z	46	ASN
12	Z	61	ASN
12	Z	67	HIS
12	Z	70(A)	ASN
12	Z	85	HIS
12	Z	1(I)	ASN
12	Z	166	HIS
13	0	-7	GLN
13	0	10	ASN
13	0	40	ASN
13	0	89	GLN
13	0	93	ASN
13	0	132	HIS
13	0	149	GLN
13	0	157	ASN
13	0	191	GLN
14	1	60	GLN
14	1	69	GLN
14	1	141	ASN
14	1	145	ASN
14	1	157	HIS
14	1	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

6 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
15	SRG	N	7710	14	33,35,35	2.21	4 (12%)	43,47,47	2.17	9 (20%)
15	SRG	Y	7710	11	33,35,35	2.44	6 (18%)	43,47,47	2.20	9 (20%)
15	SRG	1	7710	14	33,35,35	2.27	5 (15%)	43,47,47	2.15	9 (20%)
15	SRG	V	7710	8	33,35,35	2.32	5 (15%)	43,47,47	2.25	9 (20%)
15	SRG	K	7710	11	33,35,35	2.46	6 (18%)	43,47,47	2.19	10 (23%)
15	SRG	H	7710	8	33,35,35	2.39	6 (18%)	43,47,47	2.22	10 (23%)

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
15	SRG	N	7710	14	-	17/53/53/53	0/0/1/1
15	SRG	Y	7710	11	-	21/53/53/53	0/0/1/1
15	SRG	1	7710	14	-	18/53/53/53	0/0/1/1
15	SRG	V	7710	8	-	20/53/53/53	0/0/1/1
15	SRG	K	7710	11	-	21/53/53/53	0/0/1/1
15	SRG	H	7710	8	-	18/53/53/53	0/0/1/1

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	Y	7710	SRG	C27-C26	11.43	1.59	1.32
15	K	7710	SRG	C27-C26	11.34	1.59	1.32
15	H	7710	SRG	C27-C26	11.31	1.59	1.32
15	1	7710	SRG	C27-C26	11.13	1.58	1.32
15	V	7710	SRG	C27-C26	11.12	1.58	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	N	7710	SRG	C27-C26	10.79	1.57	1.32
15	Y	7710	SRG	C31-C32	4.85	1.58	1.53
15	K	7710	SRG	C31-C32	4.66	1.58	1.53
15	H	7710	SRG	C31-C32	4.12	1.57	1.53
15	V	7710	SRG	C31-C32	3.80	1.57	1.53
15	H	7710	SRG	C27-C28	3.60	1.55	1.48
15	1	7710	SRG	C31-C32	3.06	1.56	1.53
15	N	7710	SRG	C31-C32	3.05	1.56	1.53
15	V	7710	SRG	C27-C28	2.89	1.54	1.48
15	K	7710	SRG	C27-C28	2.84	1.54	1.48
15	K	7710	SRG	C23-C22	2.83	1.59	1.54
15	K	7710	SRG	C28-N30	2.74	1.40	1.34
15	Y	7710	SRG	C28-N30	2.64	1.39	1.34
15	Y	7710	SRG	C23-C22	2.60	1.58	1.54
15	Y	7710	SRG	C27-C28	2.55	1.53	1.48
15	1	7710	SRG	C28-N30	2.55	1.39	1.34
15	V	7710	SRG	C23-C22	2.53	1.58	1.54
15	1	7710	SRG	C27-C28	2.45	1.53	1.48
15	N	7710	SRG	C27-C28	2.45	1.53	1.48
15	H	7710	SRG	C28-N30	2.37	1.39	1.34
15	V	7710	SRG	C28-N30	2.37	1.39	1.34
15	H	7710	SRG	C23-C22	2.31	1.58	1.54
15	Y	7710	SRG	C22-C26	2.30	1.55	1.49
15	N	7710	SRG	C28-N30	2.28	1.39	1.34
15	K	7710	SRG	C22-C26	2.12	1.55	1.49
15	1	7710	SRG	C22-C26	2.12	1.55	1.49
15	H	7710	SRG	C22-N21	-2.05	1.43	1.46

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	N	7710	SRG	C22-C26-C27	-8.15	112.09	126.78
15	1	7710	SRG	C22-C26-C27	-7.91	112.53	126.78
15	H	7710	SRG	C22-C26-C27	-7.87	112.59	126.78
15	K	7710	SRG	C22-C26-C27	-7.86	112.61	126.78
15	V	7710	SRG	C22-C26-C27	-7.79	112.74	126.78
15	Y	7710	SRG	C22-C26-C27	-7.73	112.85	126.78
15	V	7710	SRG	C27-C28-N30	6.22	126.70	114.97
15	H	7710	SRG	C27-C28-N30	6.02	126.32	114.97
15	Y	7710	SRG	C27-C28-N30	5.98	126.25	114.97
15	N	7710	SRG	C27-C28-N30	5.96	126.20	114.97
15	1	7710	SRG	C27-C28-N30	5.95	126.19	114.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	K	7710	SRG	C27-C28-N30	5.85	125.99	114.97
15	1	7710	SRG	C26-C27-C28	-5.22	109.63	122.69
15	N	7710	SRG	C26-C27-C28	-4.91	110.41	122.69
15	V	7710	SRG	C31-N30-C28	4.68	129.40	122.54
15	Y	7710	SRG	C31-N30-C28	4.66	129.38	122.54
15	H	7710	SRG	C31-N30-C28	4.63	129.33	122.54
15	Y	7710	SRG	C26-C27-C28	-4.41	111.66	122.69
15	K	7710	SRG	C31-N30-C28	4.39	128.97	122.54
15	1	7710	SRG	C31-N30-C28	4.37	128.96	122.54
15	V	7710	SRG	C26-C27-C28	-4.36	111.78	122.69
15	H	7710	SRG	C26-C27-C28	-4.31	111.92	122.69
15	N	7710	SRG	C31-N30-C28	4.29	128.83	122.54
15	K	7710	SRG	C26-C27-C28	-4.15	112.30	122.69
15	K	7710	SRG	C23-C22-N21	3.57	115.82	111.17
15	Y	7710	SRG	C23-C22-N21	3.30	115.47	111.17
15	V	7710	SRG	C23-C22-N21	3.21	115.35	111.17
15	1	7710	SRG	O29-C28-C27	-3.21	115.72	123.03
15	Y	7710	SRG	O29-C28-C27	-3.20	115.73	123.03
15	V	7710	SRG	O29-C28-C27	-3.16	115.83	123.03
15	H	7710	SRG	O29-C28-N30	-3.13	117.05	122.23
15	K	7710	SRG	O29-C28-C27	-3.09	115.98	123.03
15	N	7710	SRG	O29-C28-C27	-3.04	116.09	123.03
15	H	7710	SRG	C23-C22-N21	2.91	114.96	111.17
15	V	7710	SRG	O29-C28-N30	-2.88	117.47	122.23
15	N	7710	SRG	C1-C3-N7	-2.84	104.09	110.28
15	H	7710	SRG	O29-C28-C27	-2.80	116.64	123.03
15	N	7710	SRG	C31-C32-C33	-2.77	108.99	111.95
15	N	7710	SRG	O29-C28-N30	-2.73	117.71	122.23
15	K	7710	SRG	O29-C28-N30	-2.54	118.02	122.23
15	Y	7710	SRG	O29-C28-N30	-2.54	118.03	122.23
15	1	7710	SRG	C31-C32-C33	-2.54	109.24	111.95
15	1	7710	SRG	O29-C28-N30	-2.50	118.09	122.23
15	V	7710	SRG	C31-C32-C33	-2.49	109.29	111.95
15	K	7710	SRG	C1-C3-N7	-2.43	104.98	110.28
15	1	7710	SRG	C1-C3-N7	-2.39	105.06	110.28
15	Y	7710	SRG	C1-C3-N7	-2.32	105.21	110.28
15	1	7710	SRG	C23-C22-N21	2.28	114.14	111.17
15	N	7710	SRG	C23-C22-N21	2.27	114.13	111.17
15	H	7710	SRG	C31-C32-C33	-2.26	109.54	111.95
15	K	7710	SRG	C31-C32-C33	-2.24	109.56	111.95
15	H	7710	SRG	N36-C8-N7	2.14	118.25	115.25
15	H	7710	SRG	C26-C22-N21	-2.09	104.81	109.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	V	7710	SRG	C26-C22-N21	-2.07	104.84	109.51
15	Y	7710	SRG	C31-C32-C33	-2.03	109.78	111.95
15	K	7710	SRG	C4-C3-C1	2.02	115.64	111.05

There are no chirality outliers.

All (115) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
15	H	7710	SRG	N17-C18-C34-C33
15	H	7710	SRG	C19-C18-C34-C33
15	H	7710	SRG	N21-C22-C26-C27
15	H	7710	SRG	C23-C22-C26-C27
15	H	7710	SRG	C22-C26-C27-C28
15	H	7710	SRG	C27-C28-N30-C31
15	H	7710	SRG	O29-C28-N30-C31
15	K	7710	SRG	C19-C18-C34-C33
15	K	7710	SRG	N21-C22-C26-C27
15	K	7710	SRG	C23-C22-C26-C27
15	K	7710	SRG	C22-C26-C27-C28
15	K	7710	SRG	C27-C28-N30-C31
15	K	7710	SRG	O29-C28-N30-C31
15	K	7710	SRG	N30-C31-C32-C33
15	N	7710	SRG	N17-C18-C34-C33
15	N	7710	SRG	C19-C18-C34-C33
15	N	7710	SRG	N21-C22-C26-C27
15	N	7710	SRG	C23-C22-C26-C27
15	N	7710	SRG	C22-C26-C27-C28
15	N	7710	SRG	C27-C28-N30-C31
15	N	7710	SRG	O29-C28-N30-C31
15	V	7710	SRG	N17-C18-C34-C33
15	V	7710	SRG	C19-C18-C34-C33
15	V	7710	SRG	N21-C22-C26-C27
15	V	7710	SRG	C23-C22-C26-C27
15	V	7710	SRG	C22-C26-C27-C28
15	V	7710	SRG	C27-C28-N30-C31
15	V	7710	SRG	O29-C28-N30-C31
15	Y	7710	SRG	C19-C18-C34-C33
15	Y	7710	SRG	N21-C22-C26-C27
15	Y	7710	SRG	C23-C22-C26-C27
15	Y	7710	SRG	C22-C26-C27-C28
15	Y	7710	SRG	C27-C28-N30-C31
15	Y	7710	SRG	O29-C28-N30-C31

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Mol	Chain	Res	Type	Atoms
15	Y	7710	SRG	N30-C31-C32-C33
15	1	7710	SRG	N17-C18-C34-C33
15	1	7710	SRG	C19-C18-C34-C33
15	1	7710	SRG	N21-C22-C26-C27
15	1	7710	SRG	C23-C22-C26-C27
15	1	7710	SRG	C22-C26-C27-C28
15	1	7710	SRG	C27-C28-N30-C31
15	1	7710	SRG	O29-C28-N30-C31
15	N	7710	SRG	C19-C18-N17-C15
15	1	7710	SRG	C19-C18-N17-C15
15	K	7710	SRG	C26-C27-C28-N30
15	Y	7710	SRG	C26-C27-C28-N30
15	H	7710	SRG	C19-C18-N17-C15
15	V	7710	SRG	C19-C18-N17-C15
15	Y	7710	SRG	C19-C18-N17-C15
15	K	7710	SRG	C19-C18-N17-C15
15	H	7710	SRG	C26-C27-C28-O29
15	K	7710	SRG	C26-C27-C28-O29
15	V	7710	SRG	C26-C27-C28-O29
15	Y	7710	SRG	C26-C27-C28-O29
15	H	7710	SRG	C26-C27-C28-N30
15	V	7710	SRG	C26-C27-C28-N30
15	N	7710	SRG	C26-C27-C28-N30
15	1	7710	SRG	C26-C27-C28-N30
15	N	7710	SRG	C26-C27-C28-O29
15	1	7710	SRG	C26-C27-C28-O29
15	Y	7710	SRG	N36-C11-C15-O16
15	K	7710	SRG	N17-C18-C34-C33
15	Y	7710	SRG	N17-C18-C34-C33
15	H	7710	SRG	N30-C31-C32-C33
15	N	7710	SRG	N30-C31-C32-C33
15	V	7710	SRG	N30-C31-C32-C33
15	1	7710	SRG	N30-C31-C32-C33
15	H	7710	SRG	N17-C18-C19-O20
15	K	7710	SRG	N36-C11-C15-O16
15	K	7710	SRG	N17-C18-C19-O20
15	V	7710	SRG	N17-C18-C19-O20
15	Y	7710	SRG	N17-C18-C19-O20
15	N	7710	SRG	N17-C18-C19-O20
15	1	7710	SRG	N17-C18-C19-O20
15	K	7710	SRG	N36-C11-C15-N17
15	Y	7710	SRG	C12-C11-C15-N17

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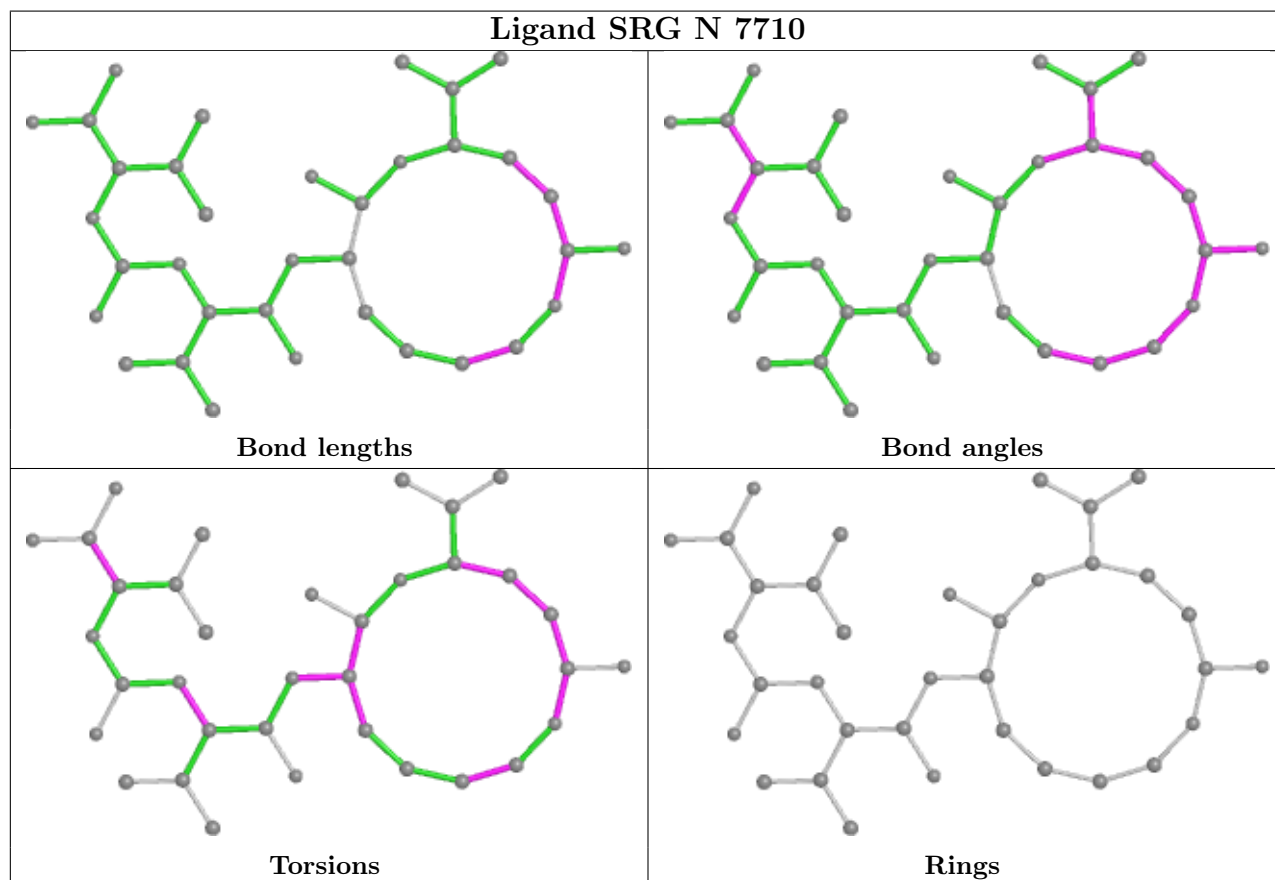
Mol	Chain	Res	Type	Atoms
15	K	7710	SRG	O20-C19-N21-C22
15	H	7710	SRG	N17-C18-C19-N21
15	V	7710	SRG	N17-C18-C19-N21
15	N	7710	SRG	N17-C18-C19-N21
15	1	7710	SRG	N17-C18-C19-N21
15	K	7710	SRG	C12-C11-C15-N17
15	Y	7710	SRG	N36-C11-C15-N17
15	V	7710	SRG	N36-C11-C15-O16
15	Y	7710	SRG	C12-C11-C15-O16
15	K	7710	SRG	N17-C18-C19-N21
15	Y	7710	SRG	N17-C18-C19-N21
15	Y	7710	SRG	O20-C19-N21-C22
15	K	7710	SRG	C18-C19-N21-C22
15	Y	7710	SRG	C34-C18-C19-O20
15	H	7710	SRG	C34-C18-C19-O20
15	K	7710	SRG	C34-C18-C19-O20
15	V	7710	SRG	C34-C18-C19-O20
15	V	7710	SRG	N36-C11-C15-N17
15	K	7710	SRG	C12-C11-C15-O16
15	H	7710	SRG	N36-C11-C15-O16
15	N	7710	SRG	C34-C18-C19-O20
15	1	7710	SRG	C34-C18-C19-O20
15	H	7710	SRG	N36-C11-C15-N17
15	H	7710	SRG	C12-C11-N36-C8
15	N	7710	SRG	C12-C11-N36-C8
15	V	7710	SRG	C12-C11-N36-C8
15	1	7710	SRG	C12-C11-N36-C8
15	N	7710	SRG	O35-C1-C3-N7
15	1	7710	SRG	O35-C1-C3-N7
15	Y	7710	SRG	C18-C19-N21-C22
15	H	7710	SRG	C34-C18-C19-N21
15	V	7710	SRG	C34-C18-C19-N21
15	K	7710	SRG	C34-C18-C19-N21
15	Y	7710	SRG	C34-C18-C19-N21
15	1	7710	SRG	O2-C1-C3-N7
15	N	7710	SRG	C34-C18-C19-N21
15	1	7710	SRG	C34-C18-C19-N21
15	V	7710	SRG	C12-C11-C15-O16
15	V	7710	SRG	C12-C11-C15-N17

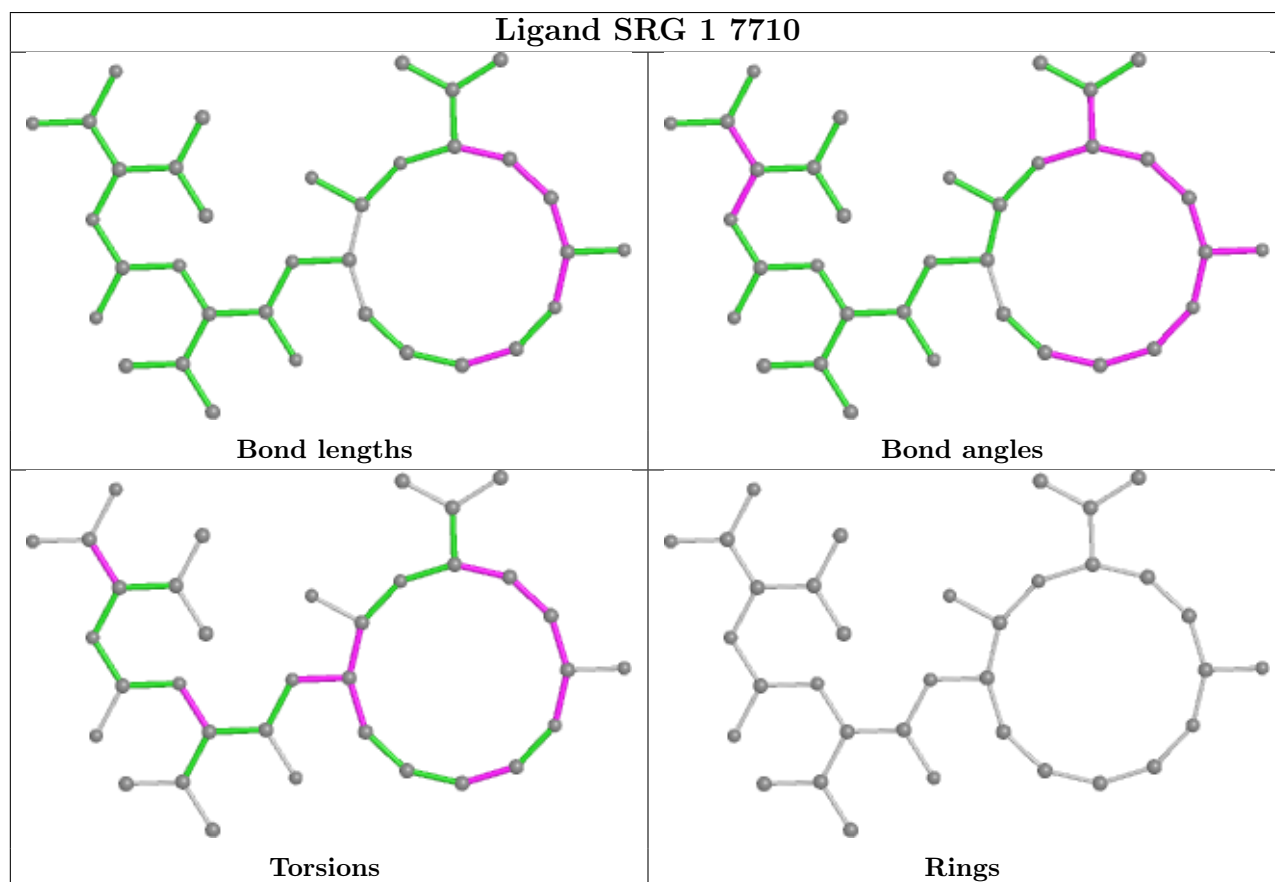
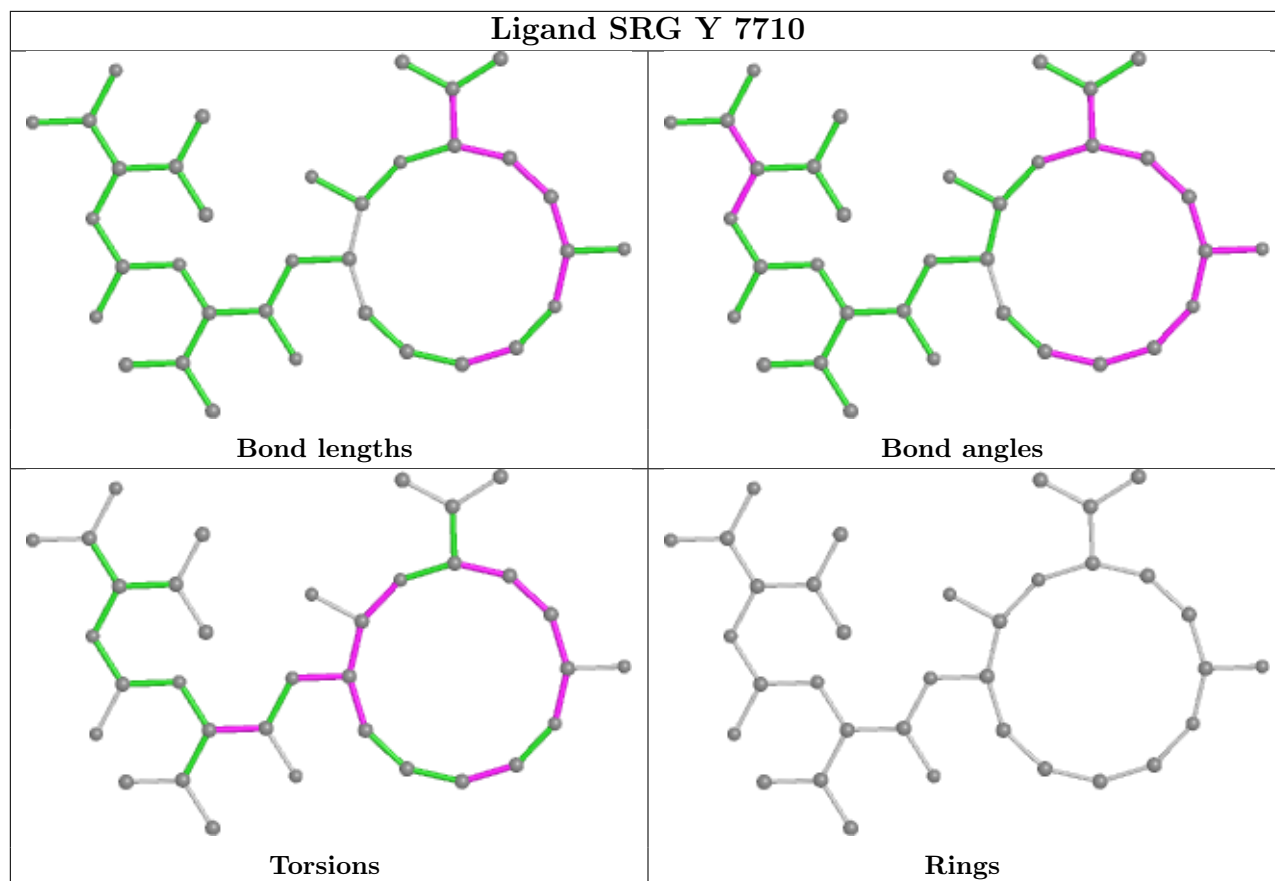
There are no ring outliers.

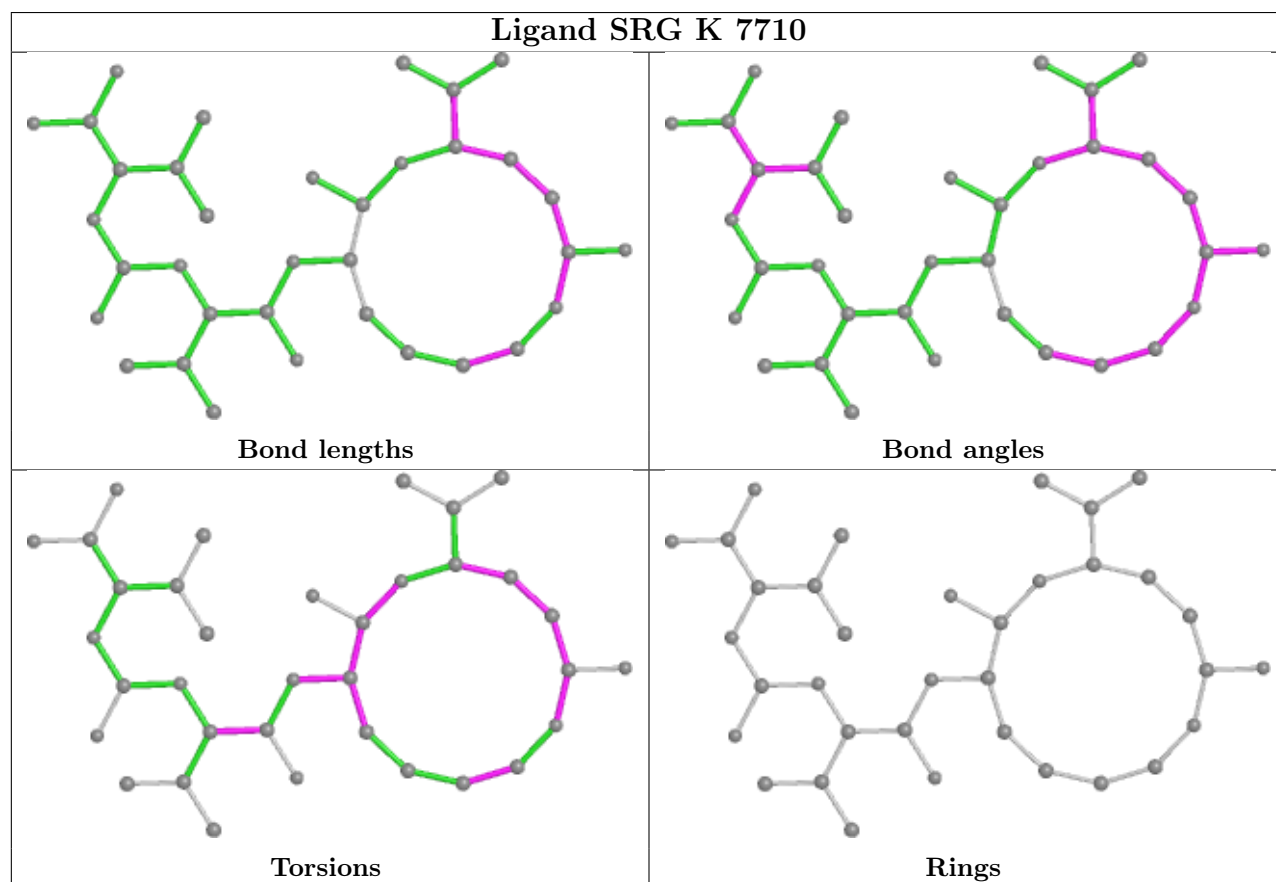
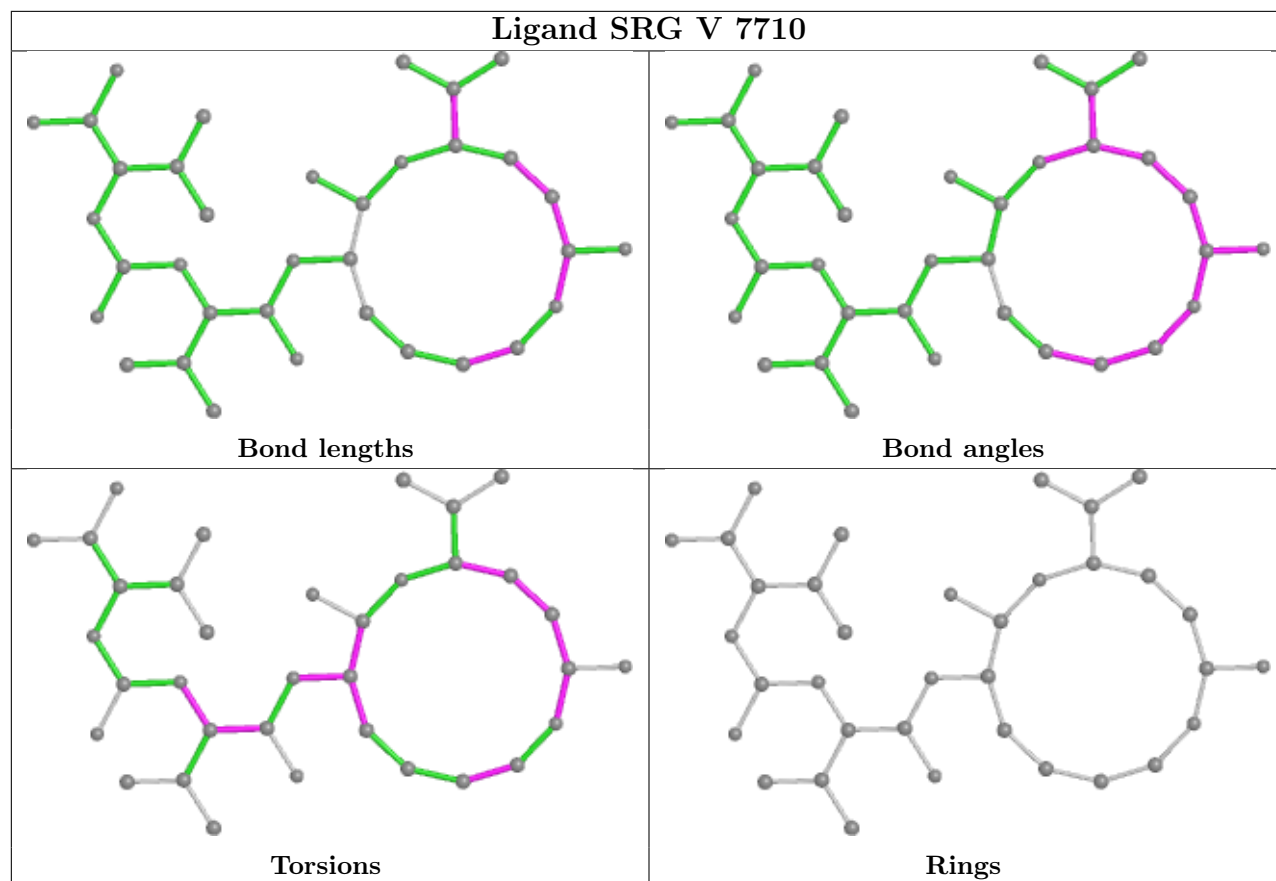
6 monomers are involved in 16 short contacts:

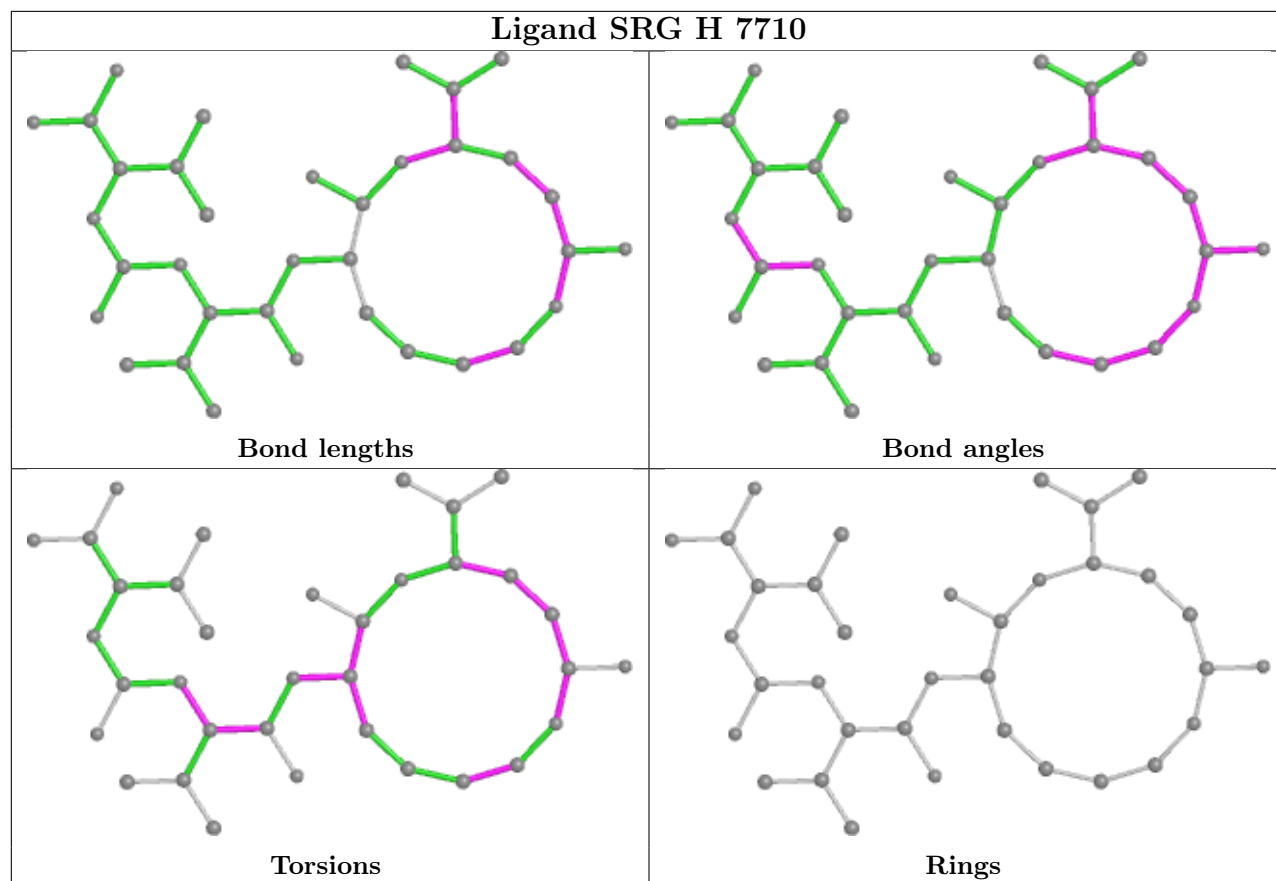
Mol	Chain	Res	Type	Clashes	Symm-Clashes
15	N	7710	SRG	3	0
15	Y	7710	SRG	2	0
15	1	7710	SRG	3	0
15	V	7710	SRG	3	0
15	K	7710	SRG	2	0
15	H	7710	SRG	3	0

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









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%)	-0.28	2 (0%) 86 86	32, 46, 76, 99	0
1	O	250/250 (100%)	-0.22	8 (3%) 47 43	31, 48, 77, 99	0
2	B	244/258 (94%)	-0.05	10 (4%) 37 32	32, 49, 83, 112	0
2	P	244/258 (94%)	-0.01	16 (6%) 18 14	33, 50, 84, 111	0
3	C	241/254 (94%)	0.09	15 (6%) 20 16	34, 54, 103, 116	0
3	Q	241/254 (94%)	0.24	21 (8%) 10 7	35, 55, 104, 116	0
4	D	242/260 (93%)	0.04	13 (5%) 25 22	35, 52, 85, 115	0
4	R	242/260 (93%)	0.04	12 (4%) 28 25	34, 53, 85, 115	0
5	E	233/234 (99%)	-0.16	3 (1%) 77 77	35, 53, 79, 104	0
5	S	233/234 (99%)	-0.23	8 (3%) 45 40	36, 52, 79, 104	0
6	F	244/287 (85%)	-0.33	7 (2%) 51 47	30, 45, 84, 99	0
6	T	244/287 (85%)	-0.36	5 (2%) 65 63	29, 45, 83, 99	0
7	G	243/252 (96%)	-0.32	5 (2%) 63 61	26, 41, 68, 107	0
7	U	243/252 (96%)	-0.31	6 (2%) 57 55	25, 41, 69, 107	0
8	H	222/232 (95%)	-0.49	3 (1%) 75 75	26, 38, 59, 87	0
8	V	222/232 (95%)	-0.58	3 (1%) 75 75	27, 39, 58, 87	0
9	I	204/205 (99%)	-0.59	2 (0%) 82 82	29, 41, 57, 75	0
9	W	204/205 (99%)	-0.52	3 (1%) 73 73	29, 41, 58, 74	0
10	J	198/198 (100%)	-0.28	5 (2%) 57 55	31, 45, 62, 115	0
10	X	198/198 (100%)	-0.28	4 (2%) 65 63	30, 45, 62, 116	0
11	K	212/212 (100%)	-0.34	3 (1%) 75 75	28, 43, 65, 72	0
11	Y	212/212 (100%)	-0.37	5 (2%) 59 56	31, 44, 64, 72	0
12	L	222/241 (92%)	-0.44	4 (1%) 68 67	27, 41, 62, 84	0
12	Z	222/241 (92%)	-0.44	5 (2%) 60 58	28, 41, 62, 84	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	0	233/266 (87%)	-0.53	1 (0%) 92 93	27, 38, 51, 57	0
13	M	233/266 (87%)	-0.54	1 (0%) 92 93	28, 39, 52, 59	0
14	1	196/196 (100%)	-0.54	1 (0%) 91 91	25, 36, 54, 73	0
14	N	196/196 (100%)	-0.54	0 100 100	26, 35, 55, 72	0
All	All	6368/6690 (95%)	-0.29	171 (2%) 54 50	25, 44, 76, 116	0

All (171) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	D	12(D)	ALA	10.5
3	C	55	THR	10.5
4	D	12(C)	GLY	9.5
4	R	12(E)	SER	9.0
7	U	240	ASP	8.6
4	R	12(D)	ALA	8.3
4	D	12(E)	SER	8.3
10	X	192	ALA	7.7
4	R	12(F)	GLY	7.6
2	B	218	ASN	7.0
10	J	191	GLN	7.0
10	J	192	ALA	7.0
7	G	240	ASP	6.9
10	X	193	GLN	6.7
6	F	5	GLY	6.6
3	Q	55	THR	6.6
2	P	217	ALA	6.5
4	R	12(C)	GLY	6.4
2	P	218	ASN	6.0
2	B	54	VAL	6.0
4	D	12(F)	GLY	5.8
7	U	6	ALA	5.7
10	X	191	GLN	5.7
2	B	217	ALA	5.6
3	C	56	LEU	5.6
2	P	54	VAL	5.2
7	G	6	ALA	4.9
10	J	193	GLN	4.8
2	P	219	GLU	4.8
1	O	5	THR	4.8
9	I	-8	SER	4.7
12	L	145	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
3	Q	56	LEU	4.5
5	E	203	ASP	4.4
1	A	5	THR	4.4
9	W	-8	SER	4.3
3	Q	243	GLN	4.3
1	A	4	MET	4.2
1	O	4	MET	4.1
3	Q	54	SER	4.1
4	D	12(G)	GLU	4.0
6	F	204	ASP	4.0
14	1	18(I)	GLN	3.9
4	R	242	ALA	3.9
3	Q	63	THR	3.9
12	Z	145	TYR	3.9
1	O	21(P)	LYS	3.9
4	D	125	GLU	3.9
3	Q	203	THR	3.8
3	Q	240	LYS	3.8
4	R	125	GLU	3.7
8	H	222	CYS	3.7
5	S	5	ARG	3.7
4	R	12(G)	GLU	3.7
2	P	21(B)	GLY	3.7
3	Q	242	GLU	3.7
13	M	-8	THR	3.7
3	Q	241	GLN	3.6
3	Q	223	ALA	3.6
11	Y	181	ASP	3.5
3	C	241	GLN	3.5
2	P	21(C)	ASP	3.5
11	K	181	ASP	3.5
8	V	222	CYS	3.5
2	P	21(A)	LYS	3.5
5	S	4	PHE	3.5
13	0	-8	THR	3.4
6	F	20(B)	GLU	3.4
3	Q	64	PRO	3.4
1	O	53	LYS	3.3
2	B	219	GLU	3.3
2	B	20(A)	SER	3.3
7	G	239	GLN	3.3
1	O	235	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
3	Q	238	GLN	3.2
4	R	126	ARG	3.2
3	Q	202	GLN	3.2
6	F	206	LYS	3.2
4	R	12(B)	GLU	3.2
5	E	5	ARG	3.1
4	D	126	ARG	3.1
4	R	243	ALA	3.0
3	Q	187	GLU	3.0
4	R	127	LEU	3.0
6	F	6	THR	3.0
2	B	21(B)	GLY	2.9
7	G	7	GLY	2.9
5	S	203	ASP	2.9
5	E	4	PHE	2.9
8	V	223	ASP	2.8
2	P	20(A)	SER	2.8
3	Q	14(B)	ASP	2.8
2	B	21(A)	LYS	2.7
7	U	17(E)	LYS	2.7
8	V	220	ASN	2.7
5	S	178	ARG	2.7
2	P	63(A)	SER	2.7
3	Q	57	LYS	2.7
7	G	8	TYR	2.6
4	D	218	GLN	2.6
3	C	234	THR	2.6
11	Y	10(A)	ARG	2.6
8	H	223	ASP	2.6
6	T	6	THR	2.6
2	B	21(C)	ASP	2.6
11	Y	180	GLU	2.6
1	O	55	SER	2.6
7	U	239	GLN	2.5
9	W	182	ASP	2.5
6	T	18(E)	GLU	2.5
3	C	240	LYS	2.5
3	C	243	GLN	2.5
4	D	244	GLU	2.5
2	P	53	LYS	2.5
2	P	181	LYS	2.5
3	C	203	THR	2.5

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Mol	Chain	Res	Type	RSRZ
11	K	180	GLU	2.5
6	T	240	ILE	2.5
11	K	10(A)	ARG	2.5
7	U	8	TYR	2.5
3	C	14(A)	ARG	2.4
5	S	204	GLU	2.4
3	Q	14(A)	ARG	2.4
9	I	182	ASP	2.4
5	S	233	ILE	2.4
2	P	62	ASP	2.4
3	Q	225	SER	2.4
3	C	18(C)	LYS	2.4
10	X	189	ASP	2.3
3	Q	18(C)	LYS	2.3
12	L	14(W)	LYS	2.3
4	R	244	GLU	2.3
2	P	63	THR	2.3
7	U	7	GLY	2.3
4	D	55	THR	2.3
2	P	183	ASP	2.3
3	C	43	LYS	2.3
6	T	241	ASN	2.3
3	Q	222	VAL	2.3
5	S	217	LYS	2.3
10	J	92	ARG	2.3
6	F	18(E)	GLU	2.3
6	F	205	ASN	2.3
11	Y	207	ASN	2.3
4	D	12(A)	GLY	2.3
5	S	127	TYR	2.2
1	O	234	GLU	2.2
8	H	220	ASN	2.2
2	B	21(D)	GLY	2.2
12	L	14(P)	PRO	2.2
3	Q	18(B)	ARG	2.2
4	D	127	LEU	2.2
6	T	18(D)	PRO	2.2
3	C	57	LYS	2.1
12	L	70(A)	ASN	2.1
10	J	-1	MET	2.1
2	P	239	THR	2.1
12	Z	14(W)	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
3	C	14(B)	ASP	2.1
2	B	20(B)	ALA	2.1
1	O	203	GLU	2.1
3	C	178	LYS	2.1
3	C	227	GLU	2.0
3	C	237	GLU	2.0
4	D	10	ARG	2.0
12	Z	96	TYR	2.0
12	Z	70(A)	ASN	2.0
11	Y	145	ASP	2.0
9	W	181	LYS	2.0
2	P	20(B)	ALA	2.0
12	Z	-9	GLN	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](#)

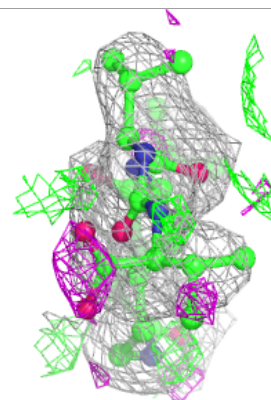
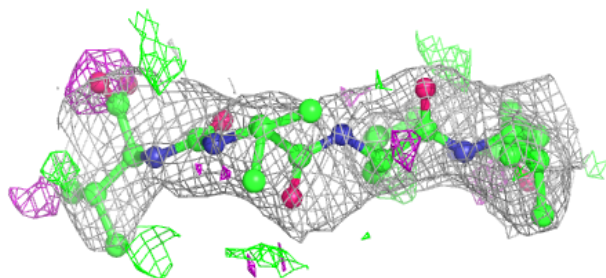
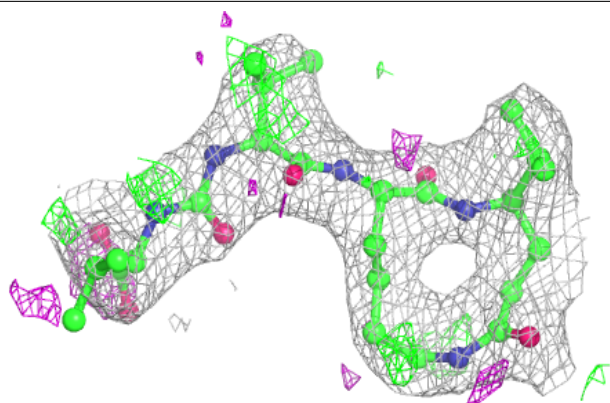
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists 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	SRG	1	7710	35/35	0.86	0.25	25,40,58,61	0
15	SRG	N	7710	35/35	0.90	0.24	25,40,59,61	0
15	SRG	Y	7710	35/35	0.91	0.20	36,42,47,48	0
15	SRG	H	7710	35/35	0.92	0.22	34,38,45,47	0
15	SRG	V	7710	35/35	0.92	0.21	33,39,46,47	0
15	SRG	K	7710	35/35	0.94	0.17	34,41,47,48	0

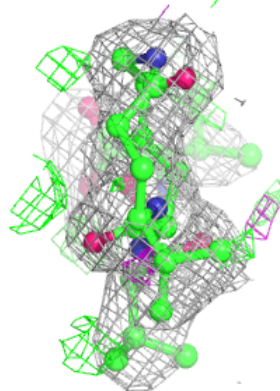
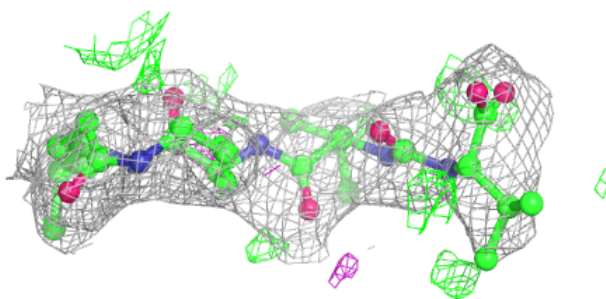
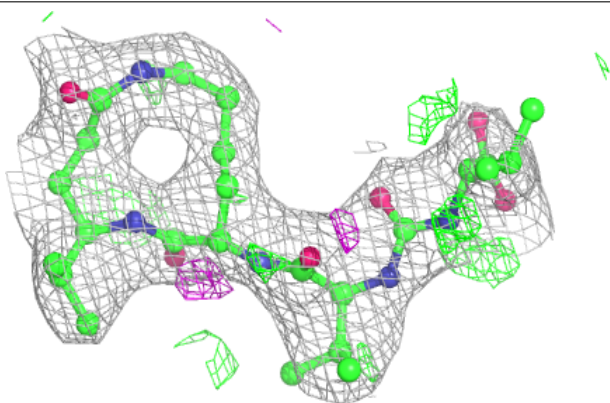
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around SRG 1 7710:

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

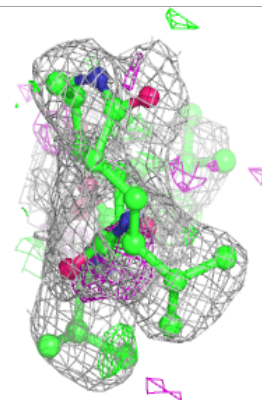
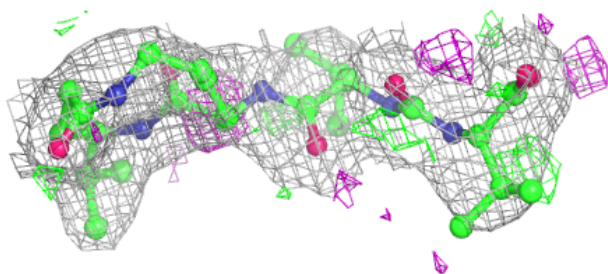
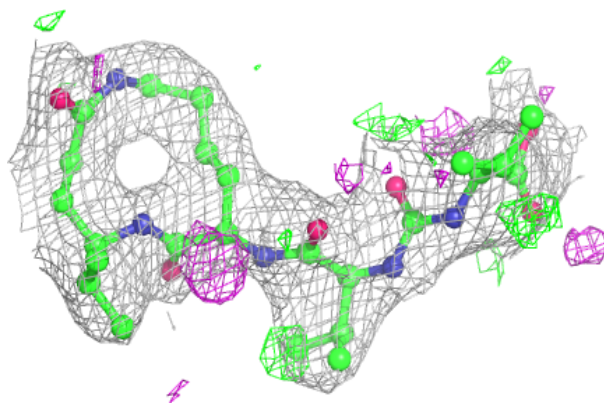
**Electron density around SRG N 7710:**

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

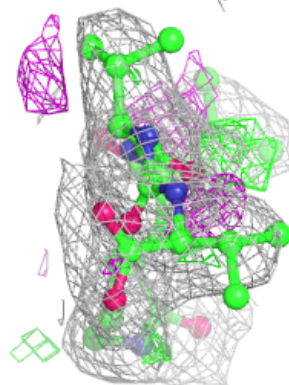
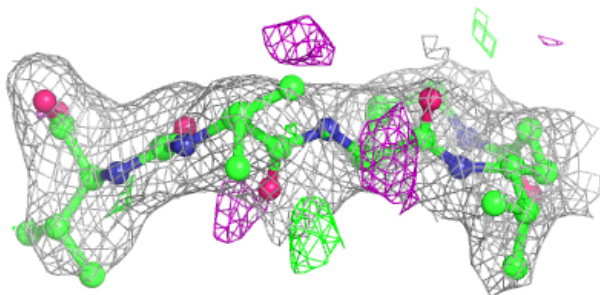
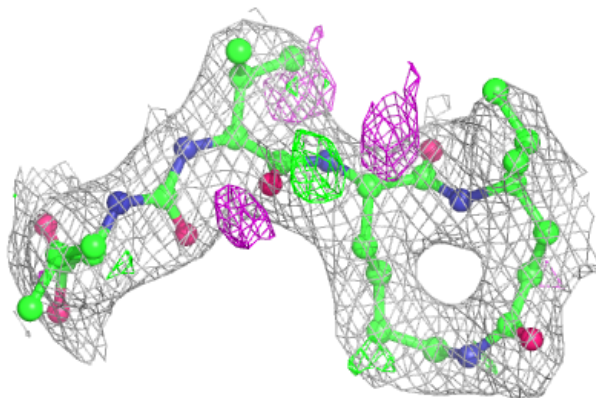


Electron density around SRG Y 7710:

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

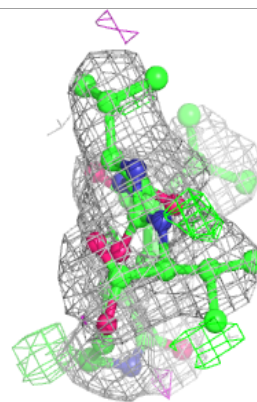
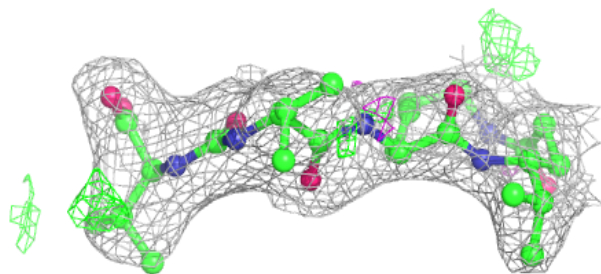
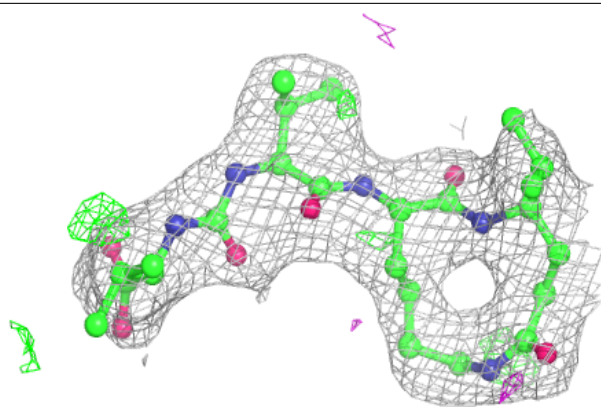
**Electron density around SRG H 7710:**

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

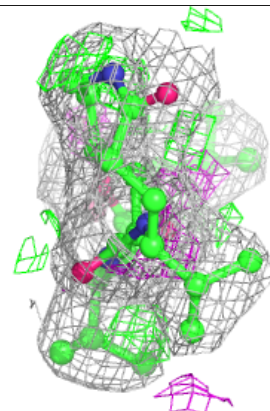
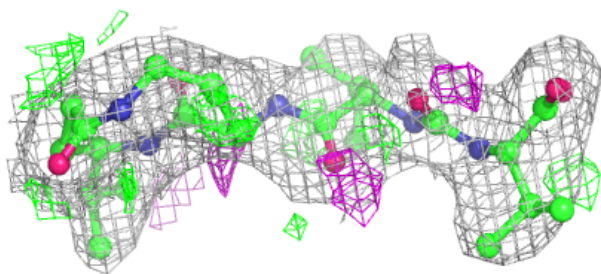
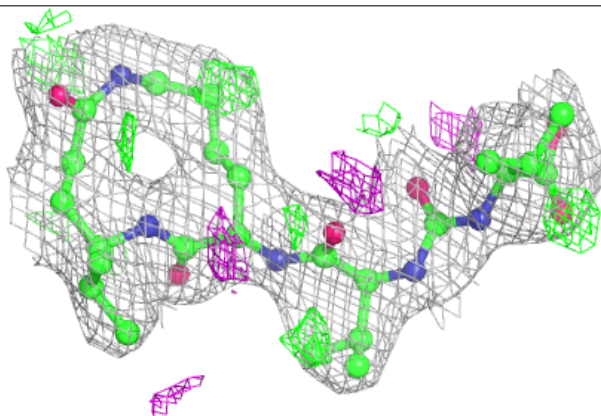


Electron density around SRG V 7710:

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

**Electron density around SRG K 7710:**

$2mF_o-DF_c$ (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.