



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 7, 2026 – 02:08 AM UTC

PDB ID : 3NZX / pdb_00003nzx
Title : Crystal structure of the yeast 20S proteasome in complex with ligand 2c
Authors : Groll, M.; Gallastegui, N.; Marechal, X.; Le Ravalec, V.; Basse, N.; Richy, N.;
Genin, E.; Huber, R.; Moroder, M.; Vidal, V.; Reboud-Ravaux, M.
Deposited on : 2010-07-17
Resolution : 2.70 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

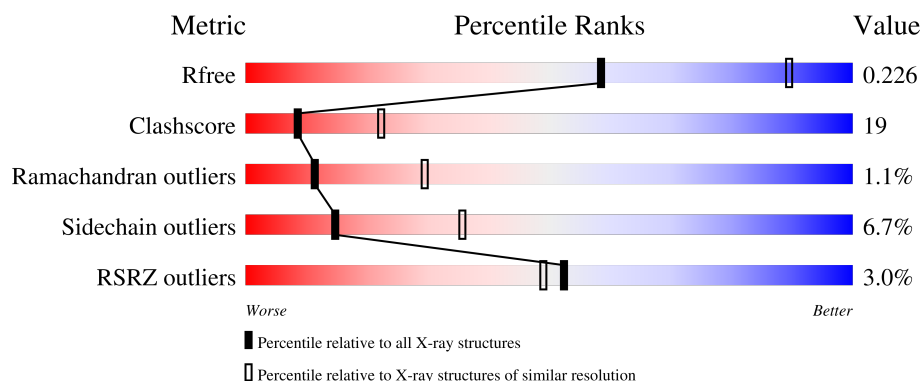
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3538 (2.70-2.70)
Clashscore	190562	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)
RSRZ outliers	180081	3538 (2.70-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	250	2% 72% 25% .
1	O	250	2% 72% 25% .
2	B	258	4% 55% 36% 5%
2	P	258	4% 54% 36% 5%
3	C	254	6% 56% 35% 5%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
3	Q	254	
4	D	260	
4	R	260	
5	E	234	
5	S	234	
6	F	288	
6	T	288	
7	G	252	
7	U	252	
8	H	261	
8	V	261	
9	I	205	
9	W	205	
10	J	198	
10	X	198	
11	K	287	
11	Y	287	
12	L	241	
12	Z	241	
13	1	266	
13	M	266	
14	2	215	
14	N	215	
15	3	5	
15	4	5	

2 Entry composition

There are 16 unique types of molecules in this entry. The entry contains 50982 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
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
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
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
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			

Continued on next page...

Continued from previous page...

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

- Molecule 11 is a protein called Proteasome component PRE2.

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

- Molecule 12 is a protein called Proteasome component C5.

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

- Molecule 13 is a protein called Proteasome component PRE4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	233	Total	C	N	O	S	0	0	0
			1824	1154	312	351	7			
13	1	233	Total	C	N	O	S	0	0	0
			1824	1154	312	351	7			

- Molecule 14 is a protein called Proteasome component PRE3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	196	Total	C	N	O	S	0	0	0
			1512	955	250	300	7			
14	2	196	Total	C	N	O	S	0	0	0
			1512	955	250	300	7			

- Molecule 15 is a protein called TMC-95A mimic ligand 2c.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	3	5	Total	C	N	O	0	0	0
			55	42	5	8			
15	4	5	Total	C	N	O	0	0	0
			55	42	5	8			

- Molecule 16 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
16	A	57	Total O 57 57	0	0
16	B	36	Total O 36 36	0	0
16	C	44	Total O 44 44	0	0
16	D	41	Total O 41 41	0	0
16	E	23	Total O 23 23	0	0
16	F	45	Total O 45 45	0	0
16	G	64	Total O 64 64	0	0
16	H	51	Total O 51 51	0	0
16	I	69	Total O 69 69	0	0
16	J	51	Total O 51 51	0	0
16	K	40	Total O 40 40	0	0
16	L	56	Total O 56 56	0	0
16	M	73	Total O 73 73	0	0
16	N	54	Total O 54 54	0	0
16	O	34	Total O 34 34	0	0
16	P	29	Total O 29 29	0	0
16	Q	27	Total O 27 27	0	0
16	R	31	Total O 31 31	0	0
16	S	20	Total O 20 20	0	0
16	T	38	Total O 38 38	0	0
16	U	64	Total O 64 64	0	0

Continued on next page...

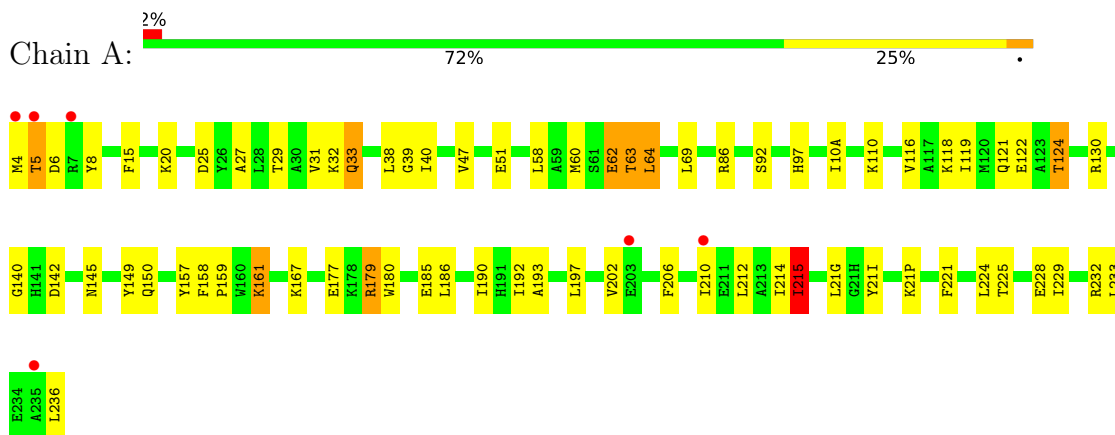
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	V	47	Total 47	O 47	0	0
16	W	61	Total 61	O 61	0	0
16	X	48	Total 48	O 48	0	0
16	Y	47	Total 47	O 47	0	0
16	Z	48	Total 48	O 48	0	0
16	1	78	Total 78	O 78	0	0
16	2	58	Total 58	O 58	0	0

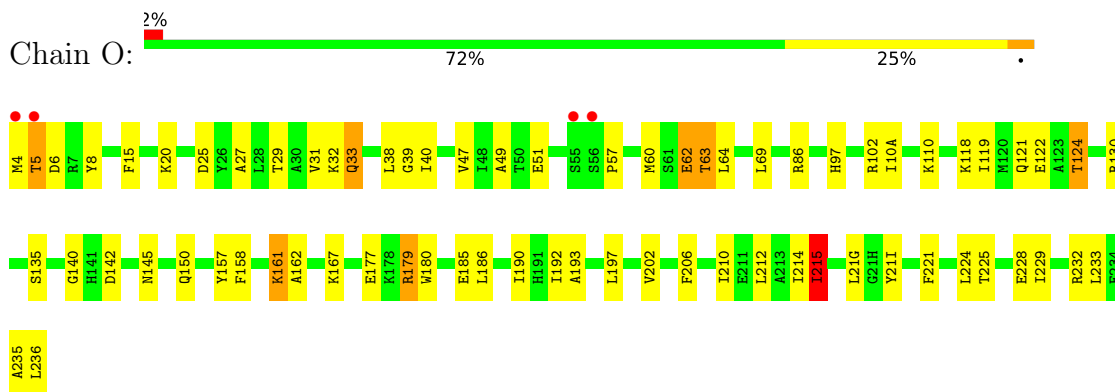
3 Residue-property plots

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.

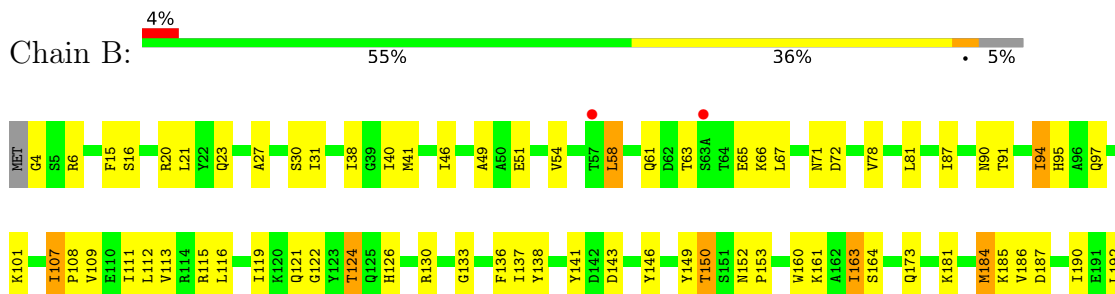
• Molecule 1: Proteasome component Y7

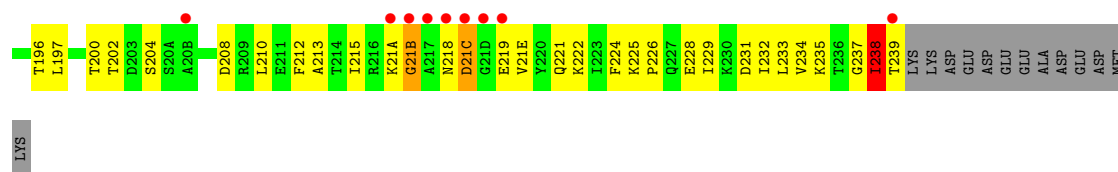


• Molecule 1: Proteasome component Y7

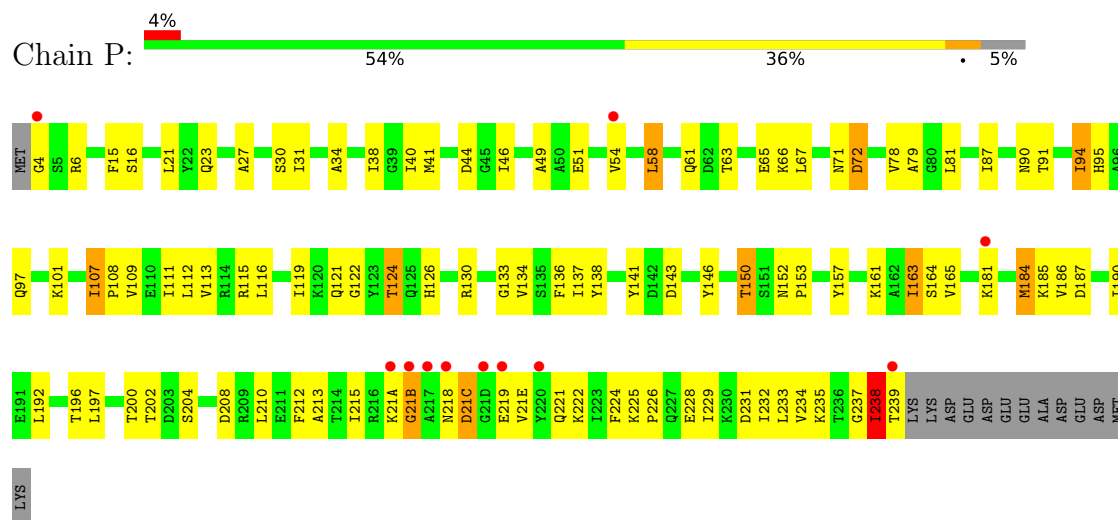


• Molecule 2: Proteasome component Y13

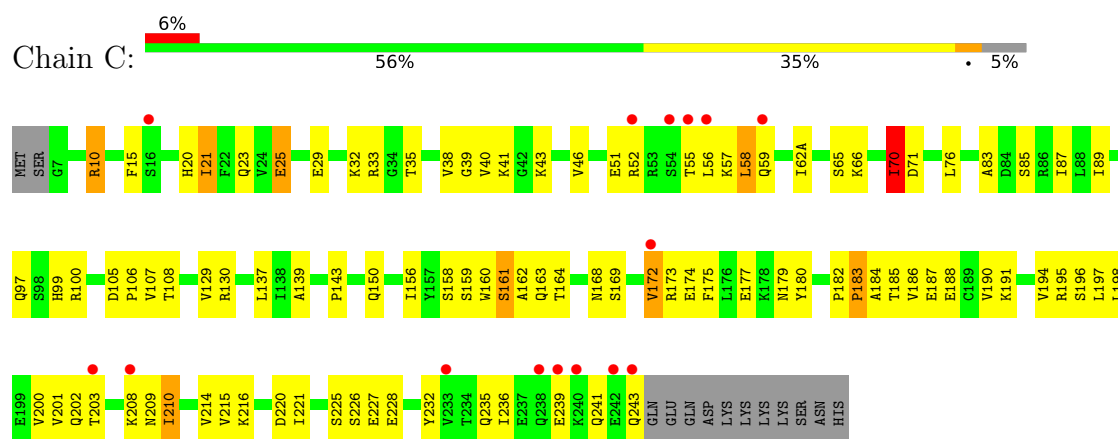




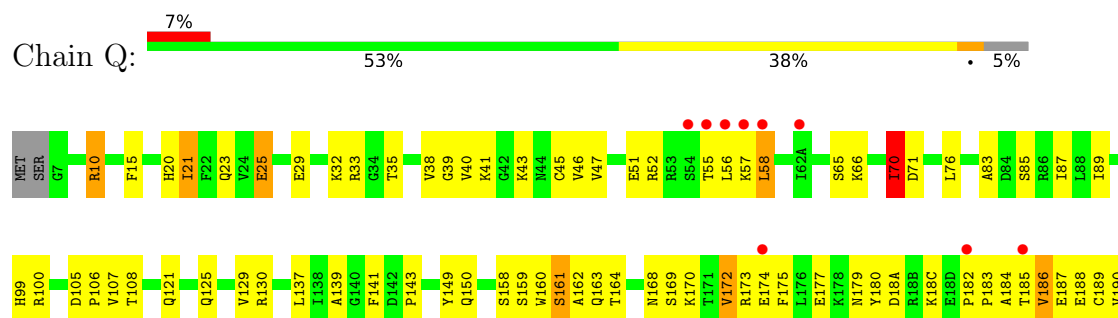
• Molecule 2: Proteasome component Y13

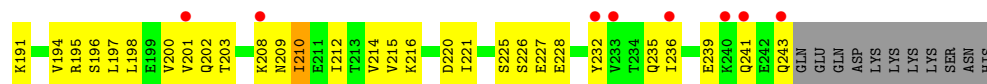


• Molecule 3: Proteasome component PRE6

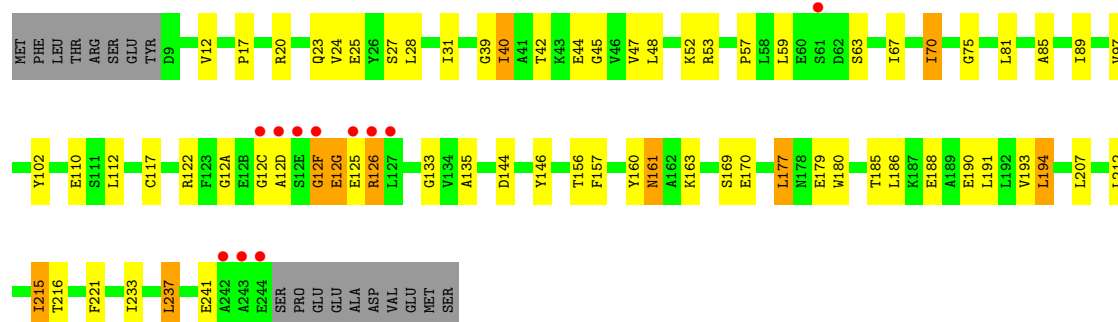


• Molecule 3: Proteasome component PRE6

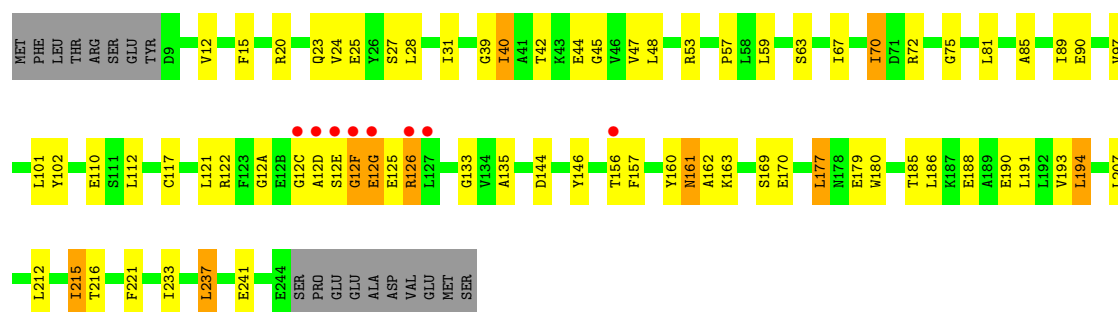




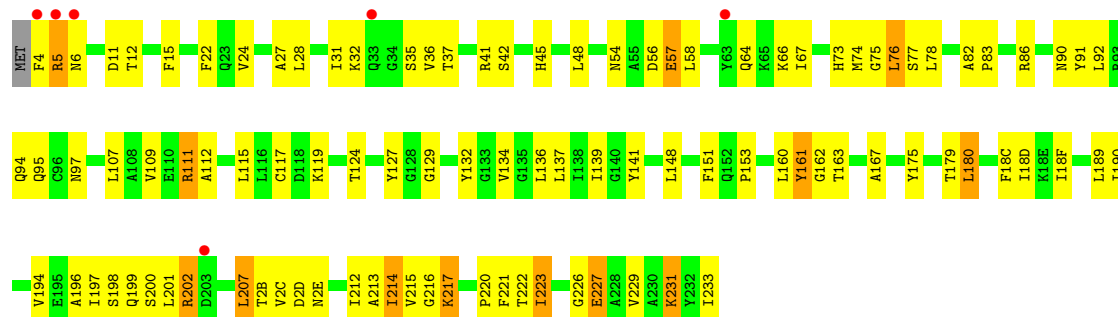
• Molecule 4: Proteasome component PUP2



• Molecule 4: Proteasome component PUP2

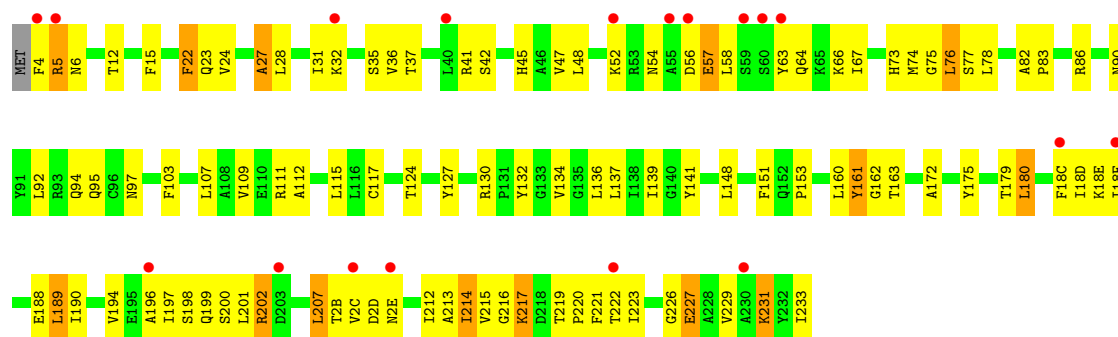


• Molecule 5: Proteasome component PRE5

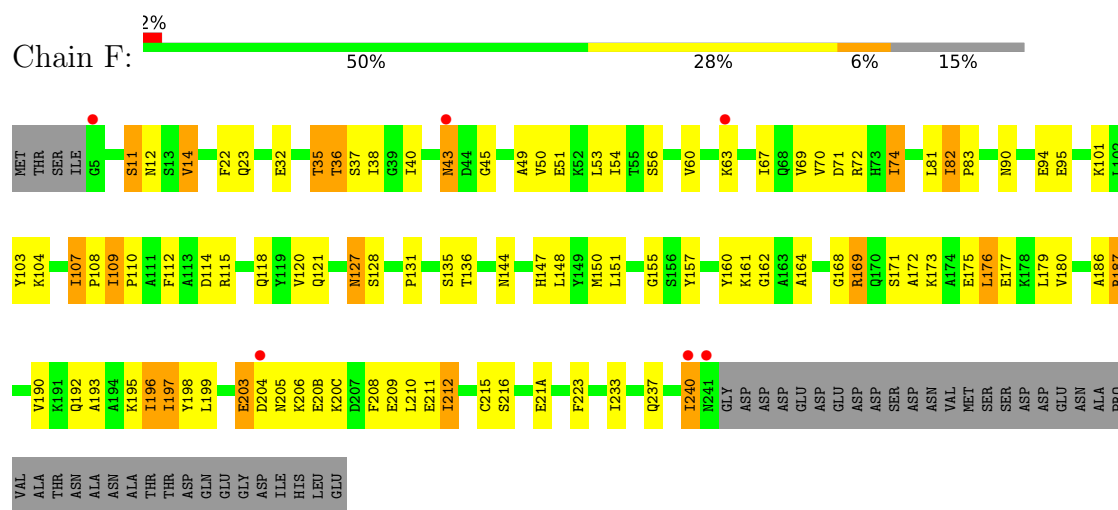


• Molecule 5: Proteasome component PRE5

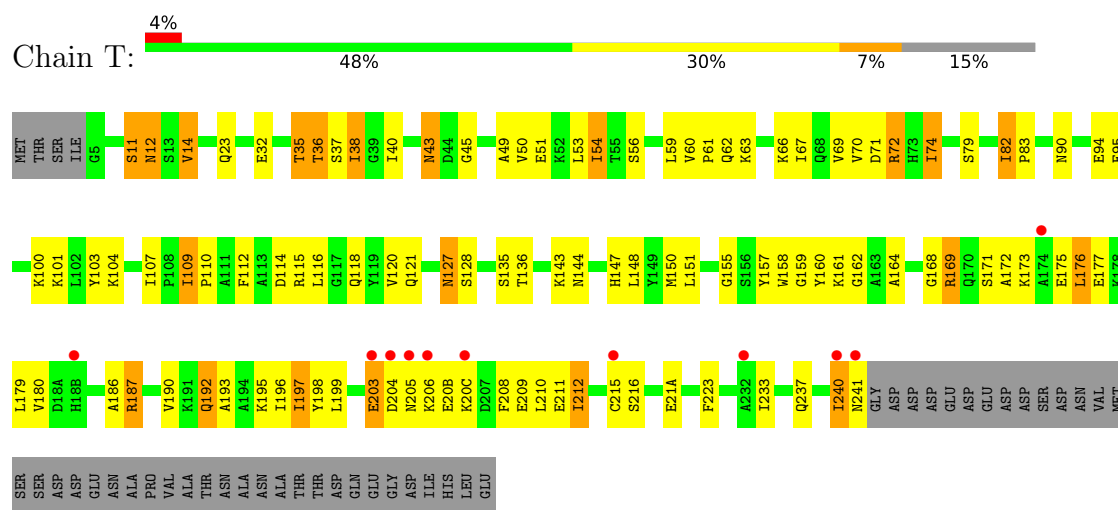




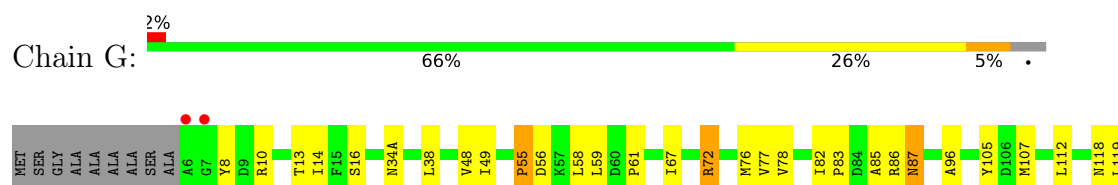
• Molecule 6: Proteasome component C1

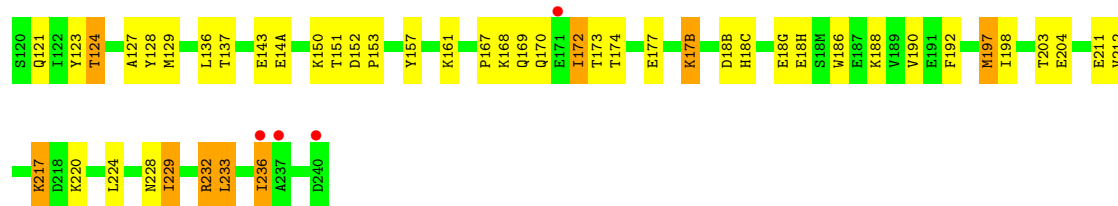


• Molecule 6: Proteasome component C1

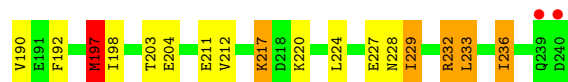
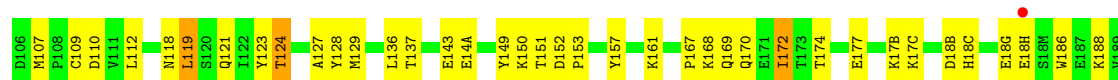
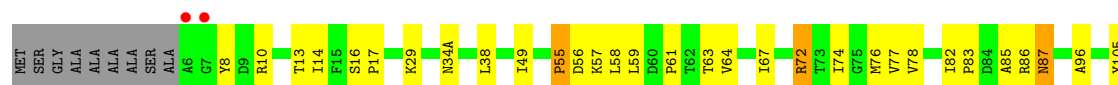


• Molecule 7: Proteasome component C7-alpha

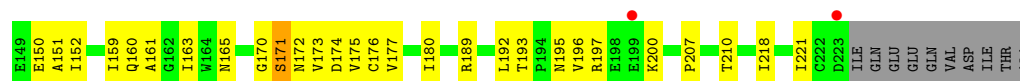
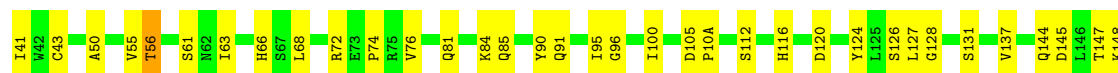
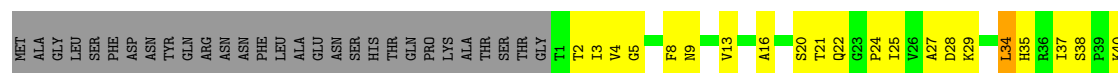




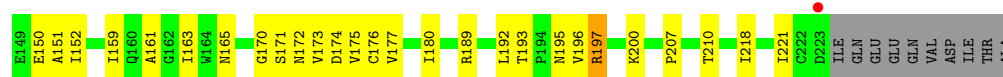
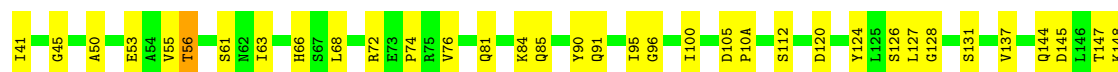
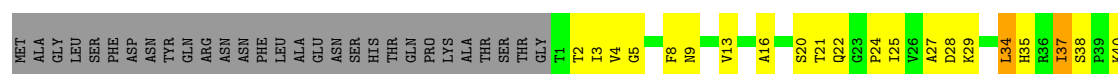
• Molecule 7: Proteasome component C7-alpha



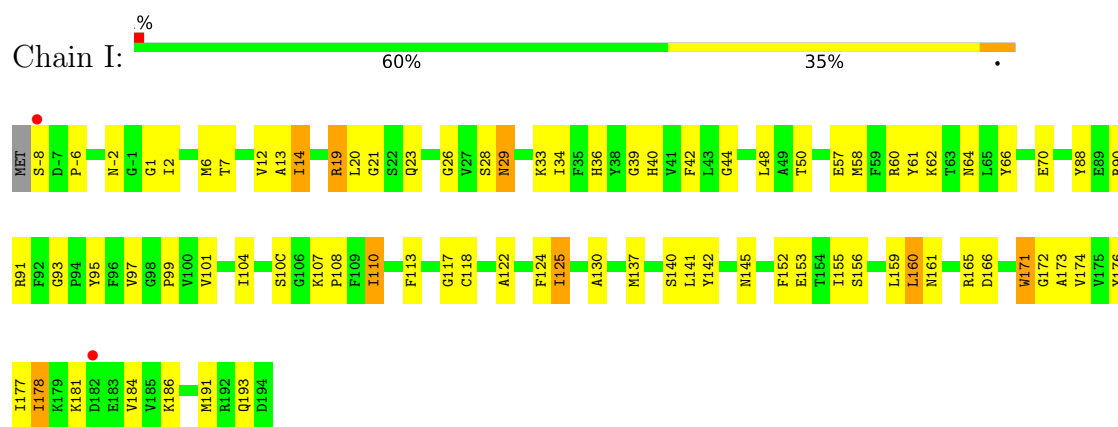
• Molecule 8: Proteasome component PUP1



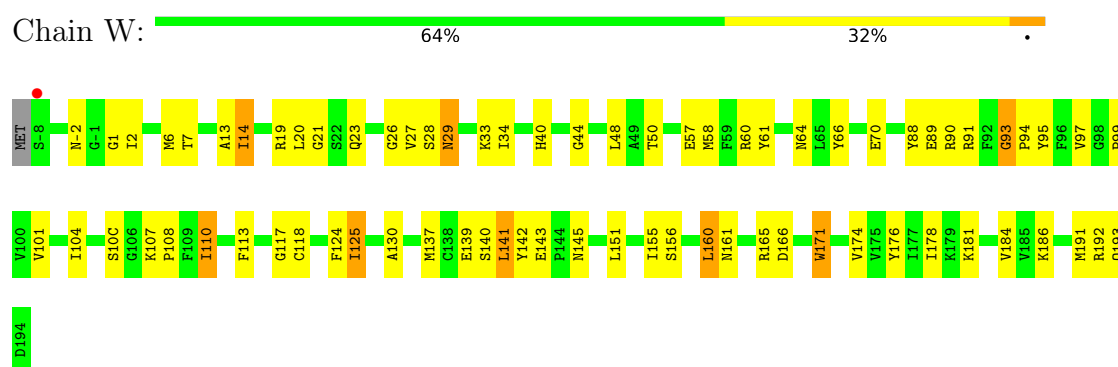
• Molecule 8: Proteasome component PUP1



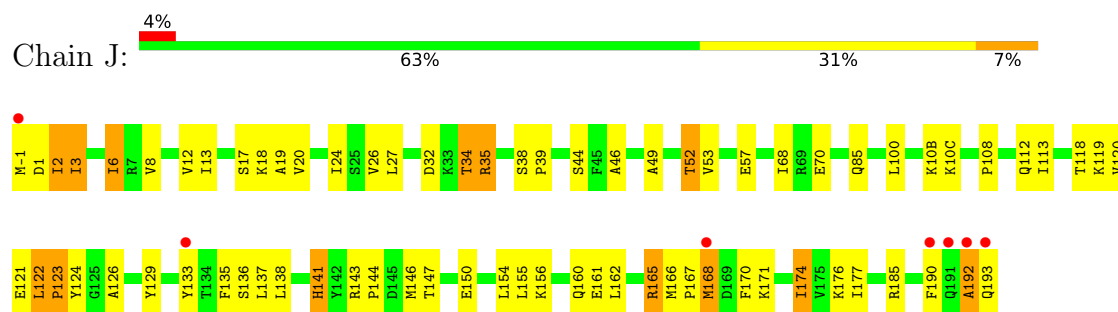
• Molecule 9: Proteasome component PUP3



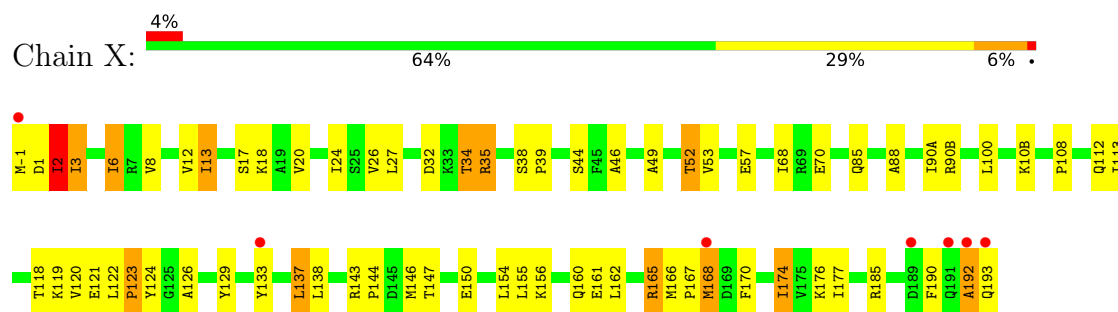
• Molecule 9: Proteasome component PUP3



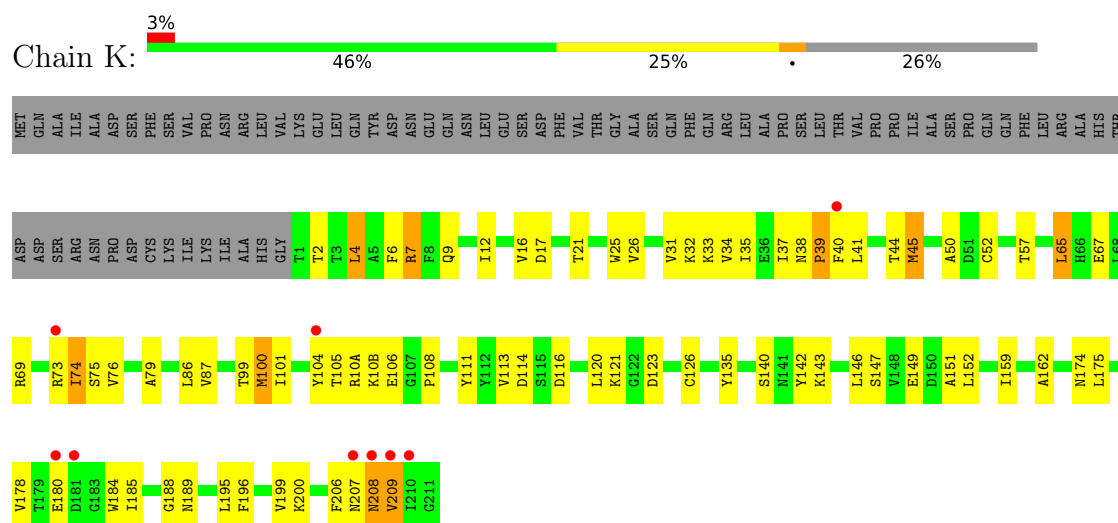
• Molecule 10: Proteasome component C11



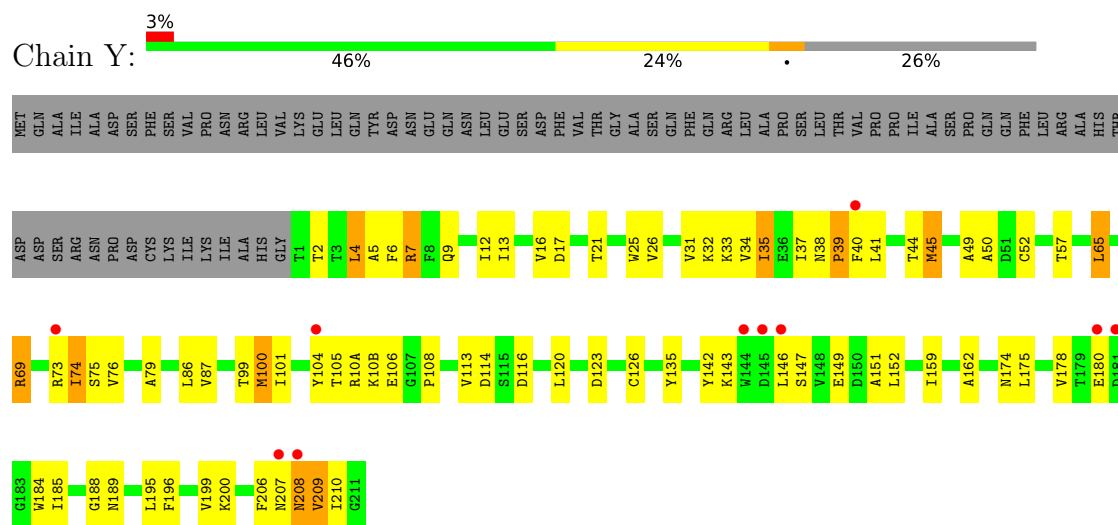
• Molecule 10: Proteasome component C11



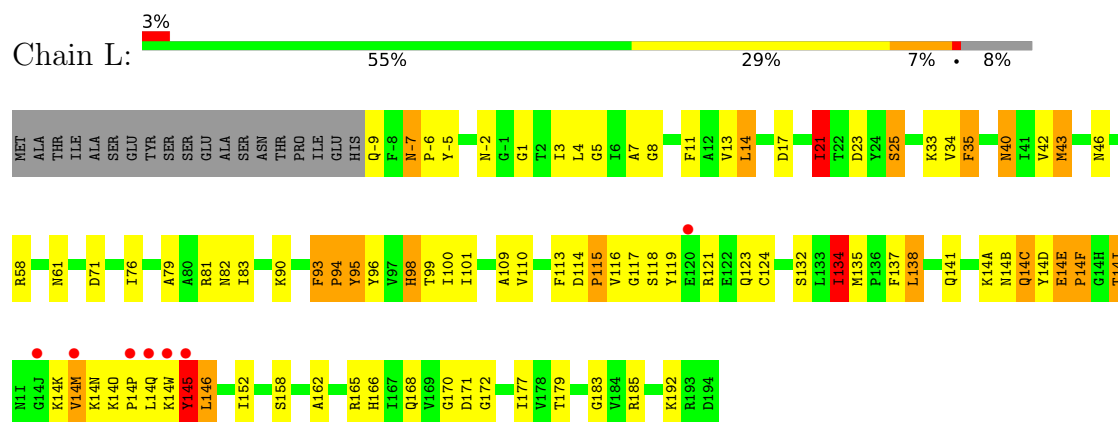
• Molecule 11: Proteasome component PRE2



• Molecule 11: Proteasome component PRE2

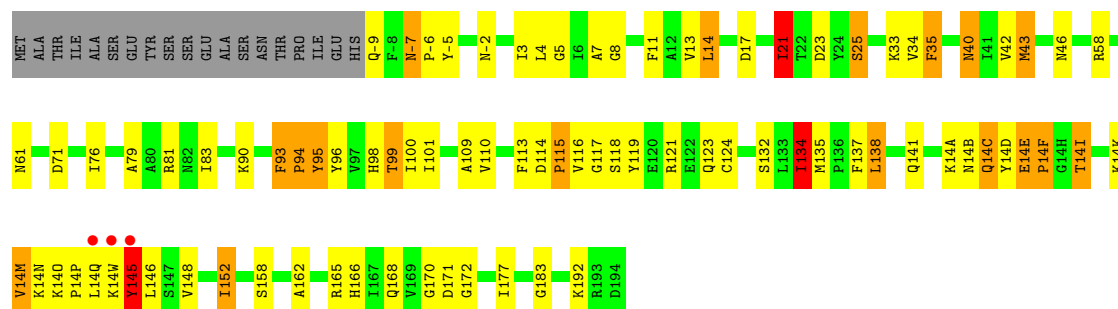


• Molecule 12: Proteasome component C5



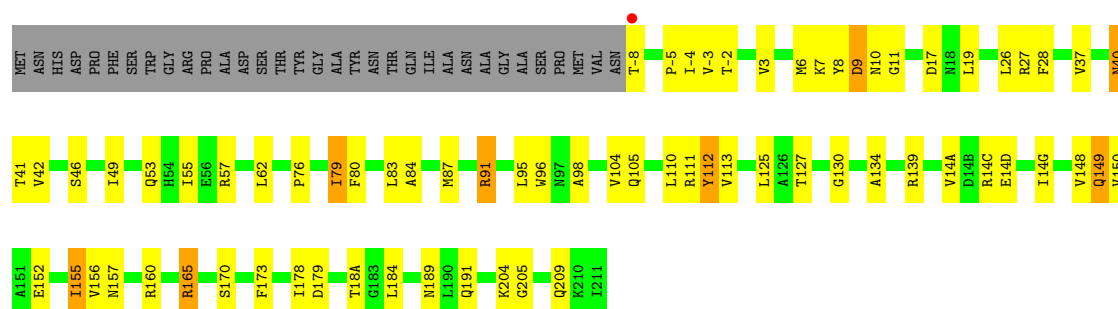
• Molecule 12: Proteasome component C5





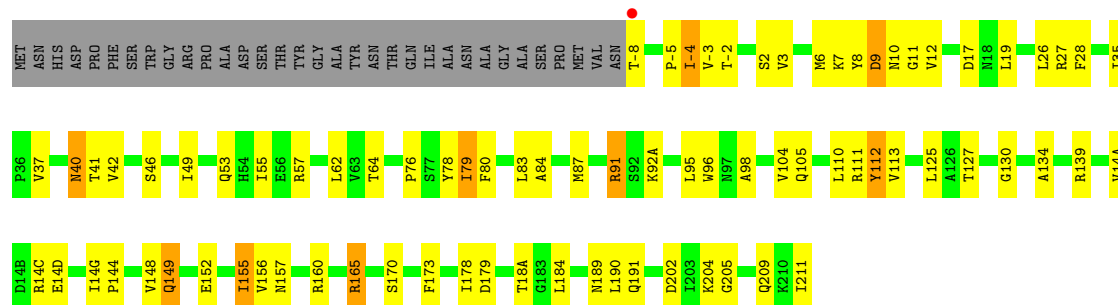
• Molecule 13: Proteasome component PRE4

Chain M: 61% 24% 12%



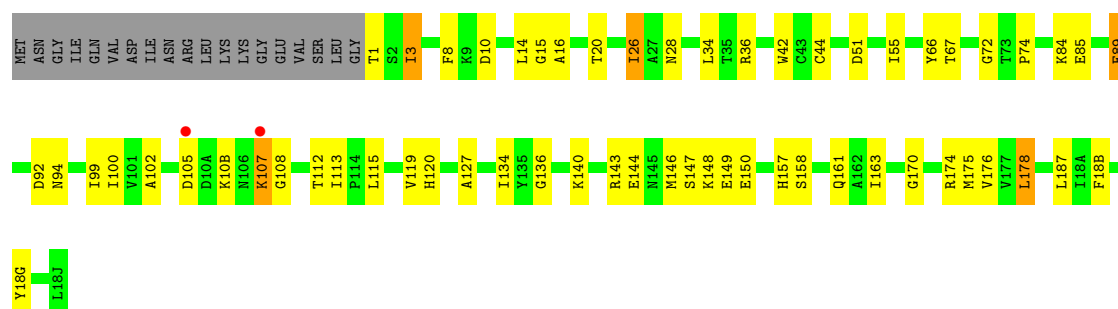
• Molecule 13: Proteasome component PRE4

Chain 1: 57% 27% 12%

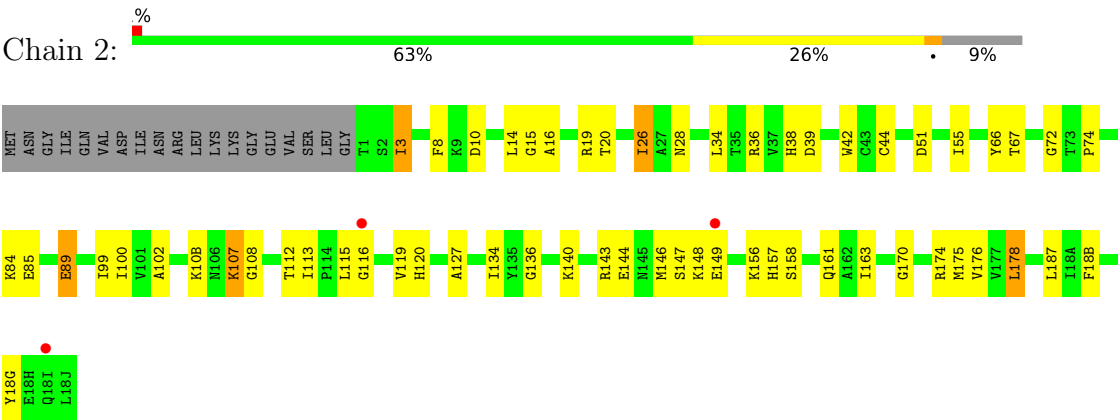


• Molecule 14: Proteasome component PRE3

Chain N: 63% 26% 9%



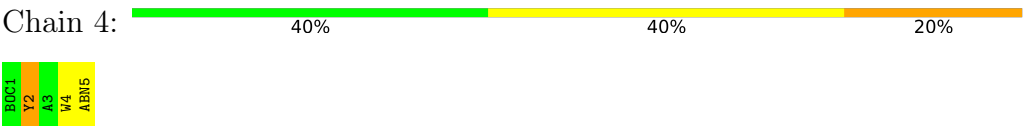
● Molecule 14: Proteasome component PRE3



● Molecule 15: TMC-95A mimic ligand 2c



● Molecule 15: TMC-95A mimic ligand 2c



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	134.20Å 300.11Å 143.63Å 90.00° 112.60° 90.00°	Depositor
Resolution (Å)	15.00 – 2.70 15.00 – 2.70	Depositor EDS
% Data completeness (in resolution range)	99.7 (15.00-2.70) 99.1 (15.00-2.70)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.42 (at 2.51Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.226 , 0.248 0.225 , 0.226	Depositor DCC
R_{free} test set	17956 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	39.7	Xtriage
Anisotropy	0.902	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 60.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	50982	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.37% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: BOC, RE3, ABN, TY5

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	0.44	0/1952	0.93	3/2642 (0.1%)
1	O	0.43	0/1952	0.92	4/2642 (0.2%)
2	B	0.44	0/1934	0.94	8/2618 (0.3%)
2	P	0.45	0/1934	0.94	10/2618 (0.4%)
3	C	0.43	0/1919	0.93	4/2598 (0.2%)
3	Q	0.45	0/1919	0.93	5/2598 (0.2%)
4	D	0.43	0/1886	0.92	6/2541 (0.2%)
4	R	0.43	0/1886	0.92	6/2541 (0.2%)
5	E	0.42	0/1823	0.92	2/2463 (0.1%)
5	S	0.43	0/1823	0.93	4/2463 (0.2%)
6	F	0.46	0/1936	0.98	12/2614 (0.5%)
6	T	0.45	0/1936	0.99	13/2614 (0.5%)
7	G	0.48	0/1959	0.97	6/2652 (0.2%)
7	U	0.46	0/1959	0.97	8/2652 (0.3%)
8	H	0.46	0/1715	0.94	2/2326 (0.1%)
8	V	0.44	0/1715	0.94	3/2326 (0.1%)
9	I	0.47	0/1611	1.03	9/2174 (0.4%)
9	W	0.47	0/1611	1.03	11/2174 (0.5%)
10	J	0.53	0/1613	0.99	7/2173 (0.3%)
10	X	0.52	0/1613	1.00	7/2173 (0.3%)
11	K	0.52	0/1681	0.95	4/2274 (0.2%)
11	Y	0.51	0/1681	0.95	3/2274 (0.1%)
12	L	0.47	0/1795	1.02	13/2420 (0.5%)
12	Z	0.47	0/1795	1.03	12/2420 (0.5%)
13	1	0.47	0/1855	0.98	10/2514 (0.4%)
13	M	0.47	0/1855	0.97	7/2514 (0.3%)
14	2	0.48	0/1541	0.95	2/2087 (0.1%)
14	N	0.48	0/1541	0.95	2/2087 (0.1%)
15	3	0.79	0/4	2.16	0/4
15	4	0.96	0/4	2.22	0/4
All	All	0.46	0/50448	0.96	183/68200 (0.3%)

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 (183) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	M	27	ARG	N-CA-C	10.59	122.40	111.07
13	1	27	ARG	N-CA-C	10.57	122.38	111.07
6	F	12	ASN	N-CA-C	9.31	121.03	111.07
6	T	12	ASN	N-CA-C	9.10	120.80	111.07
2	P	238	ILE	N-CA-C	-8.64	104.75	113.47
1	A	161	LYS	N-CA-C	-8.23	101.00	112.45
2	B	238	ILE	N-CA-C	-8.07	105.31	113.47
3	Q	161	SER	N-CA-C	-8.05	102.09	112.23
4	R	169	SER	N-CA-C	7.85	119.53	110.97
1	O	161	LYS	N-CA-C	-7.79	101.62	112.45
7	G	161	LYS	N-CA-C	-7.76	102.45	112.23
13	1	2	SER	N-CA-C	7.66	120.19	110.24
4	D	169	SER	N-CA-C	7.58	119.23	110.97
7	U	161	LYS	N-CA-C	-7.54	102.72	112.23
3	C	161	SER	N-CA-C	-7.44	102.86	112.23
12	Z	93	PHE	CA-C-N	7.38	127.42	119.89
12	Z	93	PHE	C-N-CA	7.38	127.42	119.89
6	T	135	SER	N-CA-C	-7.25	97.92	109.59
10	J	123	PRO	N-CA-C	-7.16	103.80	113.40
2	P	16	SER	N-CA-C	-7.15	101.91	110.13
12	Z	95	TYR	N-CA-C	-7.13	97.62	108.67
7	G	127	ALA	N-CA-C	7.10	119.88	111.71
12	L	95	TYR	N-CA-C	-7.10	97.67	108.67
6	T	161	LYS	N-CA-C	-7.09	102.97	111.69
5	E	161	TYR	N-CA-C	-7.06	103.66	112.90
8	H	37	ILE	N-CA-C	-7.02	104.92	111.45
5	S	57	GLU	N-CA-C	-6.99	104.36	113.17
11	K	188	GLY	N-CA-C	6.99	123.15	112.81
9	W	60	ARG	N-CA-C	-6.97	103.61	111.14
13	1	95	LEU	N-CA-C	-6.97	96.29	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	60	ARG	N-CA-C	-6.96	103.63	111.14
6	F	135	SER	N-CA-C	-6.92	97.92	109.07
4	R	161	ASN	N-CA-C	-6.89	103.54	112.23
12	L	93	PHE	CA-C-N	6.84	126.87	119.89
12	L	93	PHE	C-N-CA	6.84	126.87	119.89
10	X	123	PRO	N-CA-C	-6.76	104.33	113.40
6	F	161	LYS	N-CA-C	-6.74	103.40	111.69
11	Y	188	GLY	N-CA-C	6.73	122.77	112.81
4	D	161	ASN	N-CA-C	-6.70	103.79	112.23
5	E	57	GLU	N-CA-C	-6.69	104.74	113.17
2	B	137	ILE	N-CA-C	-6.68	98.00	107.75
7	U	16	SER	N-CA-C	-6.64	101.70	110.40
13	M	95	LEU	N-CA-C	-6.63	96.86	108.20
4	D	70	ILE	N-CA-C	-6.63	105.29	111.45
2	P	137	ILE	N-CA-C	-6.63	98.08	107.75
2	B	16	SER	N-CA-C	-6.62	102.52	110.13
8	V	37	ILE	N-CA-C	-6.60	105.31	111.45
7	U	127	ALA	N-CA-C	6.56	119.43	111.82
7	G	16	SER	N-CA-C	-6.53	101.84	110.40
6	F	14	VAL	N-CA-C	6.46	117.38	109.30
7	G	13	THR	N-CA-C	6.43	119.62	109.39
13	M	98	ALA	N-CA-C	-6.40	97.85	108.34
9	W	142	TYR	N-CA-C	6.37	119.49	110.50
6	T	82	ILE	CB-CA-C	-6.37	107.65	113.70
6	T	14	VAL	N-CA-C	6.36	117.25	109.30
10	J	27	LEU	N-CA-C	6.31	118.97	111.71
13	1	98	ALA	N-CA-C	-6.30	98.00	108.34
9	I	142	TYR	N-CA-C	6.29	119.37	110.50
5	S	161	TYR	N-CA-C	-6.28	104.67	112.90
9	W	95	TYR	N-CA-C	-6.28	99.78	109.76
10	X	27	LEU	N-CA-C	6.25	118.90	111.71
11	K	206	PHE	N-CA-C	-6.25	104.25	112.24
3	C	70	ILE	N-CA-C	-6.24	104.77	110.82
12	L	134	ILE	N-CA-C	6.21	118.16	111.58
1	O	215	ILE	N-CA-C	-6.15	97.51	107.28
13	M	189	ASN	N-CA-C	6.13	120.33	112.86
11	Y	206	PHE	N-CA-C	-6.12	104.41	112.24
9	I	95	TYR	N-CA-C	-6.09	100.08	109.76
13	1	-2	THR	N-CA-C	6.08	118.95	109.52
12	Z	134	ILE	N-CA-C	5.99	117.93	111.58
14	N	99	ILE	N-CA-C	5.98	117.09	108.48
7	U	13	THR	N-CA-C	5.97	118.88	109.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	L	21	ILE	N-CA-C	5.96	116.10	108.82
3	Q	70	ILE	N-CA-C	-5.95	105.05	110.82
1	A	215	ILE	N-CA-C	-5.94	97.84	107.28
3	Q	108	THR	N-CA-C	-5.92	101.75	110.52
6	F	82	ILE	CB-CA-C	-5.92	108.08	113.70
7	U	220	LYS	N-CA-C	5.91	117.39	108.46
4	R	63	SER	N-CA-C	-5.91	105.65	112.92
2	B	78	VAL	N-CA-C	5.90	117.50	108.71
7	G	220	LYS	N-CA-C	5.88	117.34	108.46
10	X	165	ARG	N-CA-C	5.88	120.73	113.50
13	M	-2	THR	N-CA-C	5.88	118.63	109.52
2	B	109	VAL	N-CA-C	5.88	116.53	110.36
14	2	99	ILE	N-CA-C	5.87	116.93	108.48
2	P	109	VAL	N-CA-C	5.86	116.51	110.36
2	P	107	ILE	N-CA-C	5.85	114.68	108.95
12	Z	35	PHE	N-CA-C	5.84	118.72	109.50
10	J	165	ARG	N-CA-C	5.82	120.66	113.50
4	R	70	ILE	N-CA-C	-5.80	105.19	110.82
2	B	107	ILE	N-CA-C	5.79	114.62	108.95
6	T	38	ILE	N-CA-C	5.73	115.52	108.53
2	P	78	VAL	N-CA-C	5.70	117.20	108.71
6	T	107	ILE	CA-C-N	5.68	125.63	119.78
6	T	107	ILE	C-N-CA	5.68	125.63	119.78
9	I	26	GLY	N-CA-C	-5.66	102.76	111.64
12	L	35	PHE	N-CA-C	5.65	118.43	109.50
6	F	107	ILE	CA-C-N	5.64	125.59	119.78
6	F	107	ILE	C-N-CA	5.64	125.59	119.78
2	B	161	LYS	N-CA-C	-5.63	104.63	112.45
3	C	108	THR	N-CA-C	-5.63	102.19	110.52
12	L	94	PRO	N-CA-C	5.60	120.02	111.11
13	1	189	ASN	N-CA-C	5.59	119.69	112.86
12	L	117	GLY	N-CA-C	5.59	123.15	115.27
1	O	185	GLU	N-CA-C	-5.59	102.48	110.59
8	V	45	GLY	N-CA-C	5.59	119.45	110.90
1	A	185	GLU	N-CA-C	-5.59	102.48	110.59
12	Z	21	ILE	N-CA-C	5.58	115.63	108.82
13	1	9	ASP	N-CA-C	5.58	117.36	111.28
9	W	23	GLN	CB-CA-C	-5.58	110.16	116.63
4	D	63	SER	N-CA-C	-5.56	106.08	112.92
13	M	9	ASP	N-CA-C	5.55	117.33	111.28
12	Z	94	PRO	N-CA-C	5.55	119.93	111.11
12	Z	145	TYR	N-CA-C	5.52	118.82	109.76

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	122	LEU	N-CA-C	5.52	117.17	108.55
11	Y	116	ASP	N-CA-C	-5.47	106.10	112.89
2	B	210	LEU	N-CA-C	5.46	117.48	109.24
6	F	22	PHE	N-CA-C	5.46	117.93	111.33
12	Z	145	TYR	CA-CB-CG	-5.45	104.09	113.90
6	T	63	LYS	N-CA-C	5.44	119.87	112.04
13	1	35	ILE	N-CA-C	5.43	112.93	107.55
9	I	117	GLY	N-CA-C	5.43	121.98	114.92
2	P	72	ASP	N-CA-C	-5.43	106.66	113.28
2	P	134	VAL	N-CA-C	5.42	115.51	108.35
6	F	63	LYS	N-CA-C	5.42	119.84	112.04
12	Z	119	TYR	N-CA-C	5.41	117.30	109.07
2	P	161	LYS	N-CA-C	-5.41	104.93	112.45
6	F	71	ASP	CB-CA-C	-5.40	110.36	116.63
7	U	74	ILE	N-CA-C	5.39	115.72	108.17
10	X	122	LEU	CA-C-N	5.37	124.70	118.85
10	X	122	LEU	C-N-CA	5.37	124.70	118.85
12	L	145	TYR	CA-CB-CG	-5.37	104.23	113.90
6	T	54	ILE	CB-CA-C	-5.33	106.60	112.68
9	I	23	GLN	CB-CA-C	-5.33	110.45	116.63
9	I	178	ILE	N-CA-C	5.33	115.57	108.11
8	V	21	THR	N-CA-C	5.30	118.07	109.06
12	L	145	TYR	N-CA-C	5.29	118.43	109.76
9	W	26	GLY	N-CA-C	-5.29	103.34	111.64
4	D	144	ASP	N-CA-C	5.28	117.84	111.40
6	T	71	ASP	CB-CA-C	-5.28	110.51	116.63
14	2	107	LYS	CB-CA-C	-5.27	110.52	116.63
8	H	21	THR	N-CA-C	5.25	117.98	109.06
3	Q	137	LEU	N-CA-C	-5.24	99.75	108.34
1	O	235	ALA	N-CA-C	-5.23	106.21	112.59
4	R	144	ASP	N-CA-C	5.22	117.77	111.40
2	P	210	LEU	N-CA-C	5.21	117.11	109.24
9	W	117	GLY	N-CA-C	5.21	121.99	115.21
10	J	141	HIS	N-CA-C	5.21	119.35	113.15
14	N	107	LYS	CB-CA-C	-5.21	110.59	116.63
3	C	137	LEU	N-CA-C	-5.20	99.81	108.34
11	K	116	ASP	N-CA-C	-5.18	106.47	112.89
5	S	22	PHE	N-CA-C	5.18	116.92	111.28
9	I	19	ARG	N-CA-C	5.17	117.79	110.50
10	X	122	LEU	N-CA-C	5.14	116.56	108.55
4	R	179	GLU	N-CA-C	5.13	117.77	111.82
6	T	155	GLY	N-CA-C	-5.13	108.04	115.27

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	W	141	LEU	N-CA-C	5.13	117.77	111.82
6	T	107	ILE	N-CA-C	5.13	119.95	108.88
10	J	122	LEU	CA-C-N	5.12	124.44	118.85
10	J	122	LEU	C-N-CA	5.12	124.44	118.85
13	M	165	ARG	N-CA-C	5.12	120.38	113.72
12	L	119	TYR	N-CA-C	5.11	116.84	109.07
12	Z	117	GLY	N-CA-C	5.11	122.48	115.27
10	X	2	ILE	CB-CA-C	-5.11	104.78	110.96
12	Z	23	ASP	CB-CA-C	-5.10	110.29	117.23
9	W	143	GLU	CA-C-N	5.10	126.22	119.84
9	W	143	GLU	C-N-CA	5.10	126.22	119.84
7	G	17(B)	LYS	N-CA-C	-5.10	105.85	111.71
7	U	17(B)	LYS	N-CA-C	-5.10	105.85	111.71
6	F	155	GLY	N-CA-C	-5.10	108.30	114.92
4	D	179	GLU	N-CA-C	5.09	117.72	111.82
3	Q	186	VAL	N-CA-C	-5.07	105.60	110.72
7	U	197	MET	N-CA-C	-5.06	105.76	111.28
13	1	92(A)	LYS	N-CA-C	-5.05	106.70	112.92
11	K	57	THR	N-CA-C	-5.05	105.86	111.36
6	F	107	ILE	N-CA-C	5.04	119.76	108.88
12	L	146	LEU	N-CA-C	5.04	117.60	110.50
12	L	23	ASP	CB-CA-C	-5.03	110.39	117.23
9	W	93	GLY	N-CA-C	-5.02	102.10	112.34
9	W	94	PRO	N-CA-C	5.02	118.94	111.41
9	I	172	GLY	N-CA-C	-5.01	107.02	112.08
5	S	27	ALA	N-CA-C	-5.01	105.73	111.14
13	1	165	ARG	N-CA-C	5.00	120.22	113.72

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	60	0
1	O	1915	0	1926	61	0
2	B	1904	0	1901	94	0
2	P	1904	0	1901	93	0
3	C	1890	0	1900	102	0
3	Q	1890	0	1900	104	0
4	D	1861	0	1836	54	0
4	R	1861	0	1836	56	0
5	E	1795	0	1797	99	0
5	S	1795	0	1797	111	0
6	F	1896	0	1886	74	0
6	T	1896	0	1886	85	0
7	G	1921	0	1910	76	0
7	U	1921	0	1910	80	0
8	H	1684	0	1688	58	0
8	V	1684	0	1688	59	0
9	I	1581	0	1574	65	0
9	W	1581	0	1574	58	0
10	J	1585	0	1590	90	0
10	X	1585	0	1590	80	0
11	K	1644	0	1595	75	0
11	Y	1644	0	1595	82	0
12	L	1757	0	1711	71	0
12	Z	1757	0	1711	72	0
13	1	1824	0	1832	65	0
13	M	1824	0	1832	59	0
14	2	1512	0	1481	57	0
14	N	1512	0	1481	54	0
15	3	55	0	44	4	0
15	4	55	0	44	4	0
16	1	78	0	0	4	0
16	2	58	0	0	3	0
16	A	57	0	0	2	0
16	B	36	0	0	2	0
16	C	44	0	0	2	0
16	D	41	0	0	2	0
16	E	23	0	0	3	0
16	F	45	0	0	2	0
16	G	64	0	0	0	0
16	H	51	0	0	5	0
16	I	69	0	0	4	0
16	J	51	0	0	8	0
16	K	40	0	0	4	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	L	56	0	0	7	0
16	M	73	0	0	4	0
16	N	54	0	0	4	0
16	O	34	0	0	1	0
16	P	29	0	0	3	0
16	Q	27	0	0	3	0
16	R	31	0	0	2	0
16	S	20	0	0	1	0
16	T	38	0	0	3	0
16	U	64	0	0	7	0
16	V	47	0	0	4	0
16	W	61	0	0	1	0
16	X	48	0	0	3	0
16	Y	47	0	0	8	0
16	Z	48	0	0	3	0
All	All	50982	0	49342	1870	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 19.

All (1870) 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:208:ASN:ND2	9:W:29:ASN:HD21	1.22	1.32
9:I:29:ASN:HD21	11:Y:208:ASN:ND2	1.23	1.30
11:K:10(B):LYS:H	11:K:10(B):LYS:HD2	1.05	1.18
10:J:168:MET:HE3	10:X:168:MET:HE3	1.26	1.15
2:P:202:THR:HG22	2:P:204:SER:H	1.10	1.14
11:Y:10(B):LYS:H	11:Y:10(B):LYS:HD2	1.05	1.13
2:B:202:THR:HG22	2:B:204:SER:H	1.11	1.09
10:J:133:TYR:HD1	16:Y:593:HOH:O	1.38	1.05
11:K:208:ASN:ND2	9:W:29:ASN:ND2	2.05	1.04
12:L:43:MET:HB2	12:L:101:ILE:HG22	1.37	1.04
12:Z:43:MET:HB2	12:Z:101:ILE:HG22	1.37	1.03
10:J:133:TYR:HE1	16:X:876:HOH:O	1.43	1.01
2:B:71:ASN:ND2	2:B:72:ASP:H	1.58	1.01
9:I:29:ASN:ND2	11:Y:208:ASN:ND2	2.07	1.01
9:I:29:ASN:ND2	11:Y:208:ASN:HD21	1.59	1.00
11:K:208:ASN:HD21	9:W:29:ASN:ND2	1.59	1.00
6:T:95:GLU:HG2	6:T:115:ARG:HB3	1.41	1.00
2:B:15:PHE:H	3:C:23:GLN:HE22	1.08	0.98

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:71:ASN:ND2	2:P:72:ASP:H	1.60	0.97
11:K:207:ASN:ND2	10:X:144:PRO:HG3	1.79	0.96
11:K:207:ASN:HD21	10:X:144:PRO:HG3	1.30	0.96
14:N:136:GLY:HA2	14:2:161:GLN:HE21	1.29	0.96
14:N:161:GLN:HE21	14:2:136:GLY:HA2	1.29	0.95
6:F:95:GLU:HG2	6:F:115:ARG:HB3	1.46	0.94
1:O:86:ARG:HE	7:U:118:ASN:HD21	1.16	0.93
3:Q:163:GLN:HE21	3:Q:164:THR:H	0.93	0.93
3:C:163:GLN:NE2	3:C:164:THR:H	1.66	0.93
2:B:71:ASN:HD22	2:B:72:ASP:H	1.14	0.92
13:M:6:MET:HG2	13:M:155:ILE:HD11	1.52	0.91
1:A:15:PHE:H	2:B:23:GLN:HE22	1.17	0.91
1:O:124:THR:HG22	2:P:130:ARG:HH21	1.36	0.91
3:Q:163:GLN:NE2	3:Q:164:THR:H	1.68	0.90
13:1:6:MET:HG2	13:1:155:ILE:HD11	1.52	0.90
1:O:15:PHE:H	2:P:23:GLN:HE22	1.13	0.89
3:C:163:GLN:HE21	3:C:164:THR:N	1.69	0.89
3:C:163:GLN:HE21	3:C:164:THR:H	0.91	0.89
13:M:157:ASN:ND2	13:M:160:ARG:HH11	1.69	0.89
1:A:86:ARG:HE	7:G:118:ASN:HD21	1.18	0.89
3:Q:163:GLN:HE21	3:Q:164:THR:N	1.71	0.89
3:Q:185:THR:HB	3:Q:188:GLU:HG2	1.55	0.88
3:Q:185:THR:HG22	3:Q:187:GLU:H	1.38	0.88
13:M:157:ASN:HD22	13:M:160:ARG:HH11	0.89	0.88
2:P:71:ASN:HD22	2:P:72:ASP:H	1.15	0.88
9:W:14:ILE:HG12	9:W:34:ILE:HD12	1.55	0.88
10:J:144:PRO:HG3	11:Y:207:ASN:ND2	1.89	0.88
9:I:29:ASN:HD21	11:Y:208:ASN:HD21	0.91	0.87
11:K:208:ASN:HD21	9:W:29:ASN:HD21	0.91	0.87
13:1:157:ASN:ND2	13:1:160:ARG:HH11	1.72	0.87
10:J:144:PRO:HG3	11:Y:207:ASN:HD21	1.38	0.87
11:Y:99:THR:HG22	11:Y:113:VAL:O	1.73	0.87
5:S:207:LEU:HD23	5:S:207:LEU:H	1.39	0.86
3:C:185:THR:HG22	3:C:187:GLU:H	1.38	0.86
7:G:96:ALA:HA	7:G:107:MET:HE2	1.57	0.86
11:K:73:ARG:NH2	11:K:104:TYR:O	2.09	0.86
13:M:157:ASN:HD22	13:M:160:ARG:NH1	1.72	0.86
13:1:157:ASN:HD22	13:1:160:ARG:HH11	0.92	0.86
5:E:207:LEU:HD23	5:E:207:LEU:H	1.40	0.85
11:K:10(B):LYS:HD2	11:K:10(B):LYS:N	1.89	0.85
11:Y:73:ARG:NH2	11:Y:104:TYR:O	2.09	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:10(B):LYS:HD2	11:Y:10(B):LYS:N	1.90	0.85
11:K:99:THR:HG22	11:K:113:VAL:O	1.76	0.85
11:Y:10(B):LYS:H	11:Y:10(B):LYS:CD	1.87	0.85
12:L:114:ASP:HB2	12:L:118:SER:HB3	1.56	0.85
12:Z:114:ASP:HB2	12:Z:118:SER:HB3	1.59	0.85
13:1:157:ASN:HD22	13:1:160:ARG:NH1	1.75	0.85
14:N:136:GLY:HA2	14:2:161:GLN:NE2	1.92	0.85
7:U:96:ALA:HA	7:U:107:MET:HE2	1.59	0.84
9:I:14:ILE:HG12	9:I:34:ILE:HD12	1.58	0.84
1:A:177:GLU:HG2	2:B:58:LEU:HD22	1.56	0.84
3:C:185:THR:HB	3:C:188:GLU:HG2	1.58	0.83
14:N:161:GLN:NE2	14:2:136:GLY:HA2	1.93	0.83
5:E:201:LEU:HD11	5:E:207:LEU:HD22	1.58	0.83
1:A:124:THR:HG22	2:B:130:ARG:HH21	1.43	0.83
5:S:201:LEU:HD11	5:S:207:LEU:HD22	1.59	0.83
11:K:142:TYR:O	11:K:143:LYS:HD2	1.79	0.82
4:D:97:VAL:HG21	11:K:65:LEU:HD13	1.58	0.82
10:J:-1:MET:HG2	10:J:1:ASP:H	1.44	0.82
5:S:97:ASN:HD21	12:Z:61:ASN:HD21	1.28	0.82
9:I:165:ARG:NH2	12:Z:135:MET:HE3	1.94	0.82
2:B:71:ASN:HD22	2:B:72:ASP:N	1.78	0.82
11:K:208:ASN:HB3	16:K:776:HOH:O	1.79	0.82
5:E:207:LEU:HA	5:E:2(E):ASN:ND2	1.94	0.82
2:P:15:PHE:H	3:Q:23:GLN:HE22	1.26	0.81
5:S:207:LEU:HA	5:S:2(E):ASN:ND2	1.95	0.81
11:Y:143:LYS:HB2	11:Y:146:LEU:CD1	2.09	0.81
5:E:97:ASN:HD21	12:L:61:ASN:HD21	1.28	0.81
2:P:71:ASN:HD22	2:P:72:ASP:N	1.78	0.81
7:U:87:ASN:C	7:U:87:ASN:HD22	1.88	0.80
11:Y:142:TYR:O	11:Y:143:LYS:HD2	1.81	0.80
2:P:202:THR:HG22	2:P:204:SER:N	1.95	0.80
9:I:6:MET:HE3	9:I:155:ILE:HG13	1.64	0.80
11:K:10(B):LYS:H	11:K:10(B):LYS:CD	1.87	0.80
6:T:109:ILE:HD13	6:T:109:ILE:N	1.97	0.79
4:R:97:VAL:HG21	11:Y:65:LEU:HD13	1.62	0.79
7:G:87:ASN:C	7:G:87:ASN:HD22	1.90	0.79
11:K:143:LYS:HB2	11:K:146:LEU:CD1	2.12	0.79
13:1:14(C):ARG:HH11	13:1:14(C):ARG:HG3	1.48	0.79
5:E:15:PHE:HB2	6:F:23:GLN:HE22	1.48	0.79
6:F:35:THR:HG21	6:F:51:GLU:O	1.82	0.79
8:H:165:ASN:HD22	13:1:139:ARG:HH11	1.31	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:X:-1:MET:HG2	10:X:1:ASP:H	1.46	0.79
6:T:35:THR:HG23	6:T:51:GLU:HB3	1.65	0.78
1:O:179:ARG:HB3	1:O:179:ARG:HH11	1.47	0.78
6:F:35:THR:HG23	6:F:51:GLU:HB3	1.65	0.78
3:C:160:TRP:CE2	4:D:59:LEU:HD23	2.19	0.78
3:C:232:TYR:O	3:C:236:ILE:HG12	1.83	0.78
6:T:35:THR:HG21	6:T:51:GLU:O	1.82	0.77
1:O:86:ARG:HE	7:U:118:ASN:ND2	1.82	0.77
2:P:61:GLN:OE1	2:P:208:ASP:HA	1.84	0.77
1:O:124:THR:CG2	2:P:130:ARG:HH21	1.97	0.77
1:A:179:ARG:HB3	1:A:179:ARG:HH11	1.49	0.77
5:S:18(C):PHE:HA	5:S:18(F):ILE:HG13	1.65	0.77
12:L:166:HIS:HD2	12:L:168:GLN:H	1.33	0.77
12:Z:166:HIS:HD2	12:Z:168:GLN:H	1.31	0.77
3:C:106:PRO:HG2	3:C:143:PRO:CG	2.15	0.77
14:N:3:ILE:O	14:N:3:ILE:HD13	1.84	0.77
3:Q:232:TYR:O	3:Q:236:ILE:HG12	1.84	0.77
9:W:137:MET:HE2	9:W:161:ASN:HB2	1.66	0.77
12:L:135:MET:HE3	9:W:165:ARG:NH2	1.99	0.76
5:E:48:LEU:HG	5:E:139:ILE:HD13	1.66	0.76
5:E:167:ALA:HB3	16:E:1131:HOH:O	1.85	0.76
6:F:109:ILE:HD13	6:F:109:ILE:N	2.00	0.76
10:J:168:MET:CE	10:X:168:MET:HE3	2.13	0.76
4:R:162:ALA:HB3	5:S:58:LEU:HD23	1.68	0.76
9:W:6:MET:HE3	9:W:155:ILE:HG13	1.66	0.76
12:L:21:ILE:C	12:L:21:ILE:HD13	2.11	0.76
2:B:61:GLN:OE1	2:B:208:ASP:HA	1.86	0.75
2:B:202:THR:HG22	2:B:204:SER:N	1.95	0.75
2:B:124:THR:HG22	3:C:130:ARG:HH21	1.52	0.75
13:M:14(C):ARG:HG3	13:M:14(C):ARG:HH11	1.51	0.75
11:K:208:ASN:HD22	9:W:29:ASN:HD21	1.28	0.75
1:O:130:ARG:HH21	7:U:124:THR:CG2	1.99	0.75
3:Q:65:SER:HB2	16:Q:303:HOH:O	1.86	0.75
3:Q:106:PRO:HG2	3:Q:143:PRO:CG	2.15	0.75
5:S:48:LEU:HG	5:S:139:ILE:HD13	1.69	0.75
6:T:37:SER:HB3	6:T:50:VAL:HG23	1.67	0.75
13:1:104:VAL:HG23	13:1:178:ILE:HG22	1.69	0.75
3:Q:160:TRP:CE2	4:R:59:LEU:HD23	2.21	0.75
9:I:137:MET:HE2	9:I:161:ASN:HB2	1.68	0.75
13:M:139:ARG:HH11	8:V:165:ASN:HD22	1.33	0.74
12:Z:21:ILE:C	12:Z:21:ILE:HD13	2.11	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:7:THR:HG23	9:I:110:ILE:HD13	1.68	0.74
11:K:37:ILE:HB	11:K:41:LEU:HB3	1.69	0.74
9:I:29:ASN:HD21	11:Y:208:ASN:HD22	1.30	0.74
1:A:86:ARG:HE	7:G:118:ASN:ND2	1.85	0.74
2:P:101:LYS:HZ2	10:X:85:GLN:NE2	1.86	0.74
11:Y:37:ILE:HB	11:Y:41:LEU:HB3	1.69	0.74
12:L:40:ASN:HD21	12:L:183:GLY:HA2	1.52	0.74
10:J:2:ILE:O	10:J:3:ILE:HD13	1.87	0.74
2:P:71:ASN:ND2	2:P:72:ASP:N	2.36	0.74
10:X:2:ILE:O	10:X:3:ILE:HD13	1.87	0.74
2:B:124:THR:CG2	3:C:130:ARG:HH21	2.01	0.73
5:E:18(C):PHE:HA	5:E:18(F):ILE:HG13	1.68	0.73
7:U:18(G):GLU:HG2	7:U:188:LYS:HB2	1.70	0.73
5:E:221:PHE:CE1	5:E:223:ILE:HD11	2.22	0.73
5:S:221:PHE:CE1	5:S:223:ILE:HD11	2.24	0.73
12:Z:4:LEU:HD11	12:Z:138:LEU:HD21	1.71	0.73
2:B:71:ASN:ND2	2:B:72:ASP:N	2.34	0.73
7:G:18(G):GLU:HG2	7:G:188:LYS:HB2	1.70	0.73
12:Z:4:LEU:CD1	12:Z:138:LEU:HD21	2.18	0.73
12:L:4:LEU:CD1	12:L:138:LEU:HD21	2.18	0.73
7:G:59:LEU:O	7:G:61:PRO:HD3	1.88	0.73
5:S:15:PHE:H	6:T:23:GLN:HE22	1.36	0.72
7:U:67:ILE:HD13	7:U:211:GLU:CD	2.15	0.72
7:U:59:LEU:O	7:U:61:PRO:HD3	1.89	0.72
7:U:172:ILE:HD13	7:U:197:MET:HE1	1.71	0.72
9:I:6:MET:HE1	9:I:155:ILE:HA	1.69	0.72
2:P:101:LYS:NZ	10:X:85:GLN:NE2	2.38	0.72
2:P:124:THR:HG22	3:Q:130:ARG:HH21	1.54	0.72
10:J:24:ILE:O	10:X:133:TYR:OH	2.08	0.72
9:W:7:THR:HG23	9:W:110:ILE:HD13	1.70	0.72
9:W:27:VAL:HG13	16:X:622:HOH:O	1.88	0.72
5:S:97:ASN:HD21	12:Z:61:ASN:ND2	1.87	0.72
8:V:53:GLU:HB2	16:V:1327:HOH:O	1.88	0.72
1:A:20:LYS:HE3	1:A:25:ASP:OD1	1.89	0.71
5:E:97:ASN:HD21	12:L:61:ASN:ND2	1.88	0.71
7:U:34(A):ASN:HD22	7:U:167:PRO:HG2	1.55	0.71
12:Z:40:ASN:HD21	12:Z:183:GLY:HA2	1.54	0.71
1:O:20:LYS:HE3	1:O:25:ASP:OD1	1.90	0.71
1:A:124:THR:CG2	2:B:130:ARG:HH21	2.03	0.71
6:F:37:SER:HB3	6:F:50:VAL:HG23	1.71	0.71
13:M:104:VAL:HG23	13:M:178:ILE:HG22	1.72	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:67:ILE:HD13	7:G:211:GLU:CD	2.15	0.71
10:J:168:MET:HE3	10:X:168:MET:CE	2.14	0.71
12:L:4:LEU:HD11	12:L:138:LEU:HD21	1.70	0.71
5:S:136:LEU:HB2	5:S:151:PHE:HB3	1.72	0.71
11:Y:180:GLU:N	16:Y:812:HOH:O	2.06	0.71
3:C:71:ASP:HA	10:J:68:ILE:HD13	1.71	0.71
1:O:130:ARG:HH21	7:U:124:THR:HG22	1.55	0.70
7:G:34(A):ASN:HD22	7:G:167:PRO:HG2	1.55	0.70
4:R:156:THR:HG22	5:S:83:PRO:HD3	1.72	0.70
4:R:177:LEU:HD22	5:S:58:LEU:HD13	1.72	0.70
6:T:237:GLN:O	6:T:240:ILE:HG22	1.91	0.70
9:W:6:MET:HE1	9:W:155:ILE:HA	1.72	0.70
5:E:12:THR:HG21	5:E:124:THR:HA	1.74	0.70
14:2:14:LEU:HD11	14:2:102:ALA:HB3	1.74	0.70
6:T:79:SER:HA	16:T:1238:HOH:O	1.92	0.70
5:E:136:LEU:HB2	5:E:151:PHE:HB3	1.73	0.70
7:U:17:PRO:HD3	16:U:584:HOH:O	1.91	0.70
7:U:86:ARG:HD2	16:U:248:HOH:O	1.90	0.70
12:Z:14:LEU:HD13	12:Z:34:VAL:HG13	1.72	0.70
1:O:225:THR:OG1	1:O:228:GLU:HG3	1.92	0.70
3:Q:191:LYS:HG3	3:Q:236:ILE:HD11	1.74	0.70
14:N:14:LEU:HD11	14:N:102:ALA:HB3	1.74	0.69
12:L:98:HIS:HD2	16:L:199:HOH:O	1.76	0.69
5:S:75:GLY:HA3	5:S:221:PHE:CZ	2.27	0.69
7:G:18(G):GLU:HG2	7:G:188:LYS:CB	2.22	0.69
5:E:207:LEU:H	5:E:207:LEU:CD2	2.06	0.69
6:F:38:ILE:HG22	6:F:164:ALA:HB2	1.74	0.69
6:T:38:ILE:HG22	6:T:164:ALA:HB2	1.73	0.69
4:D:215:ILE:C	4:D:215:ILE:HD13	2.18	0.69
5:S:207:LEU:H	5:S:207:LEU:CD2	2.05	0.69
2:P:163:ILE:HG12	2:P:164:SER:H	1.57	0.69
4:R:194:LEU:HD22	4:R:212:LEU:HD11	1.74	0.69
5:S:75:GLY:HA3	5:S:221:PHE:CE2	2.27	0.69
14:2:3:ILE:HD11	14:2:127:ALA:HB3	1.74	0.69
2:B:107:ILE:HD11	2:B:111:ILE:HG22	1.75	0.69
12:Z:-7:ASN:C	12:Z:-7:ASN:HD22	2.01	0.69
2:P:97:GLN:HE22	9:W:64:ASN:HD22	1.41	0.69
2:B:121:GLN:O	2:B:124:THR:HB	1.93	0.69
3:C:163:GLN:HE22	3:C:173:ARG:HE	1.39	0.68
9:I:6:MET:CE	9:I:155:ILE:HA	2.22	0.68
13:1:76:PRO:HD2	13:1:105:GLN:OE1	1.93	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:14:LEU:HD13	12:L:34:VAL:HG13	1.75	0.68
5:S:2(B):THR:H	5:S:2(E):ASN:HD22	1.39	0.68
12:Z:-7:ASN:ND2	12:Z:-5:TYR:H	1.91	0.68
12:Z:114:ASP:HB3	12:Z:118:SER:H	1.58	0.68
13:1:-3:VAL:HG12	13:1:49:ILE:HG13	1.75	0.68
5:E:207:LEU:HA	5:E:2(E):ASN:HD22	1.59	0.68
12:L:96:TYR:CD1	15:3:2:TY5:H49	2.28	0.68
14:N:3:ILE:H	14:N:3:ILE:HD12	1.58	0.68
1:O:179:ARG:HB3	1:O:179:ARG:NH1	2.08	0.68
7:U:67:ILE:HD13	7:U:211:GLU:HG2	1.76	0.68
11:K:207:ASN:HD21	10:X:144:PRO:CG	2.04	0.68
6:T:54:ILE:HG12	6:T:208:PHE:HA	1.74	0.68
2:P:126:HIS:HB3	3:Q:129:VAL:HG12	1.74	0.68
14:2:51:ASP:O	14:2:55:ILE:HG12	1.94	0.68
1:O:121:GLN:O	1:O:124:THR:HB	1.94	0.68
13:M:-3:VAL:HG12	13:M:49:ILE:HG13	1.75	0.68
1:O:118:LYS:HE2	1:O:122:GLU:OE1	1.94	0.68
3:Q:163:GLN:HE22	3:Q:173:ARG:HE	1.39	0.68
5:S:15:PHE:HB2	6:T:23:GLN:HE22	1.56	0.68
12:Z:96:TYR:CD1	15:4:2:TY5:H49	2.28	0.68
6:T:120:VAL:HG21	6:T:151:LEU:HD21	1.75	0.67
7:U:18(G):GLU:HG2	7:U:188:LYS:CB	2.24	0.67
8:V:163:ILE:HG23	8:V:170:GLY:HA2	1.76	0.67
3:C:186:VAL:O	3:C:190:VAL:HG23	1.95	0.67
3:C:191:LYS:HG3	3:C:236:ILE:HD11	1.74	0.67
4:D:194:LEU:HD22	4:D:212:LEU:HD11	1.77	0.67
3:Q:33:ARG:HB2	3:Q:33:ARG:NH1	2.10	0.67
9:W:6:MET:CE	9:W:155:ILE:HA	2.24	0.67
14:2:3:ILE:HG22	14:2:16:ALA:CB	2.24	0.67
1:A:130:ARG:HH21	7:G:124:THR:CG2	2.07	0.67
3:Q:186:VAL:O	3:Q:190:VAL:HG23	1.95	0.67
5:E:75:GLY:HA3	5:E:221:PHE:CE2	2.30	0.67
5:E:2(B):THR:H	5:E:2(E):ASN:HD22	1.39	0.67
12:L:7:ALA:HB2	12:L:110:VAL:HG23	1.76	0.67
12:L:165:ARG:NH2	8:V:29:LYS:HE2	2.09	0.67
5:S:198:SER:HA	5:S:201:LEU:HG	1.76	0.67
1:A:130:ARG:HH21	7:G:124:THR:HG22	1.58	0.67
12:L:114:ASP:HB3	12:L:118:SER:H	1.60	0.67
5:S:12:THR:HG21	5:S:124:THR:HA	1.75	0.67
9:I:165:ARG:NH2	12:Z:135:MET:CE	2.58	0.67
2:B:237:GLY:C	2:B:238:ILE:HD13	2.20	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S:201:LEU:HD11	5:S:207:LEU:CD2	2.25	0.67
1:O:232:ARG:HH11	1:O:232:ARG:HG3	1.59	0.67
2:B:15:PHE:H	3:C:23:GLN:NE2	1.89	0.67
11:K:40:PHE:CB	11:K:73:ARG:NH2	2.58	0.67
12:L:-7:ASN:ND2	12:L:-5:TYR:H	1.92	0.67
7:U:217:LYS:HA	7:U:217:LYS:HE3	1.77	0.67
6:F:54:ILE:HD11	6:F:209:GLU:HB2	1.75	0.66
7:G:172:ILE:HD13	7:G:197:MET:CE	2.26	0.66
10:J:133:TYR:OH	10:X:24:ILE:O	2.12	0.66
4:R:72:ARG:HG3	16:R:1302:HOH:O	1.95	0.66
2:B:65:GLU:HG3	2:B:66:LYS:HG3	1.77	0.66
8:V:148:LYS:O	8:V:152:ILE:HG12	1.95	0.66
12:Z:7:ALA:HB2	12:Z:110:VAL:HG23	1.78	0.66
1:A:225:THR:OG1	1:A:228:GLU:HG3	1.95	0.66
7:G:170:GLN:HE21	7:G:174:THR:HG23	1.59	0.66
5:E:198:SER:HA	5:E:201:LEU:HG	1.77	0.66
2:P:121:GLN:O	2:P:124:THR:HB	1.94	0.66
8:V:128:GLY:O	8:V:131:SER:HB2	1.94	0.66
1:A:179:ARG:HB3	1:A:179:ARG:NH1	2.09	0.66
2:B:97:GLN:HE22	9:I:64:ASN:HD22	1.42	0.66
2:B:126:HIS:HB3	3:C:129:VAL:HG12	1.78	0.66
6:F:237:GLN:O	6:F:240:ILE:HG22	1.94	0.66
7:G:107:MET:HE3	7:G:112:LEU:HD13	1.78	0.66
13:1:14(D):GLU:O	13:1:14(G):ILE:HG12	1.96	0.66
10:J:144:PRO:CG	11:Y:207:ASN:HD21	2.09	0.66
2:P:65:GLU:HG3	2:P:66:LYS:HG3	1.77	0.66
2:P:124:THR:CG2	3:Q:130:ARG:HH21	2.08	0.66
10:X:32:ASP:OD2	10:X:34:THR:HG22	1.96	0.66
5:E:15:PHE:H	6:F:23:GLN:HE22	1.43	0.66
6:F:120:VAL:HG21	6:F:151:LEU:HD21	1.77	0.66
8:H:148:LYS:O	8:H:152:ILE:HG12	1.95	0.66
1:A:33:GLN:HA	1:A:33:GLN:HE21	1.60	0.66
1:A:118:LYS:HE2	1:A:122:GLU:OE1	1.96	0.66
5:E:75:GLY:HA3	5:E:221:PHE:CZ	2.31	0.66
14:N:51:ASP:O	14:N:55:ILE:HG12	1.94	0.66
2:P:101:LYS:NZ	10:X:85:GLN:HE22	1.93	0.66
7:U:107:MET:HE3	7:U:112:LEU:HD13	1.77	0.66
7:G:67:ILE:HD13	7:G:211:GLU:HG2	1.77	0.65
11:K:207:ASN:ND2	10:X:144:PRO:CG	2.57	0.65
7:U:121:GLN:O	7:U:124:THR:HB	1.95	0.65
3:C:41:LYS:HG2	3:C:161:SER:O	1.95	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:15:PHE:HB2	6:F:23:GLN:NE2	2.11	0.65
8:H:163:ILE:HG23	8:H:170:GLY:HA2	1.76	0.65
1:O:33:GLN:HE21	1:O:33:GLN:HA	1.61	0.65
5:S:201:LEU:O	5:S:202:ARG:HB2	1.96	0.65
13:1:149:GLN:NE2	13:1:149:GLN:H	1.94	0.65
12:L:-7:ASN:HD22	12:L:-7:ASN:C	2.02	0.65
5:E:227:GLU:H	5:E:227:GLU:CD	2.04	0.65
5:S:207:LEU:HA	5:S:2(E):ASN:HD22	1.60	0.65
9:W:137:MET:HE3	9:W:141:LEU:HD11	1.77	0.65
1:A:86:ARG:HH21	7:G:118:ASN:HD22	1.44	0.65
6:F:54:ILE:HG12	6:F:208:PHE:HA	1.77	0.65
13:M:149:GLN:NE2	13:M:149:GLN:H	1.95	0.65
9:I:137:MET:HE3	9:I:141:LEU:HD11	1.77	0.65
3:Q:55:THR:HG22	3:Q:56:LEU:HD22	1.79	0.65
7:G:121:GLN:O	7:G:124:THR:HB	1.97	0.65
6:T:54:ILE:HD11	6:T:209:GLU:HB2	1.77	0.65
1:A:232:ARG:HG3	1:A:232:ARG:HH11	1.61	0.65
3:C:106:PRO:HG2	3:C:143:PRO:HG3	1.78	0.65
8:H:128:GLY:O	8:H:131:SER:HB2	1.96	0.65
2:P:237:GLY:C	2:P:238:ILE:HD13	2.22	0.65
3:Q:15:PHE:H	4:R:23:GLN:HE22	1.43	0.65
2:B:152:ASN:HB2	2:B:153:PRO:HD2	1.78	0.65
5:E:201:LEU:HD11	5:E:207:LEU:CD2	2.25	0.65
9:W:174:VAL:HG21	9:W:186:LYS:HE3	1.78	0.65
5:S:82:ALA:HB3	5:S:83:PRO:HD3	1.79	0.64
12:L:114:ASP:CB	12:L:118:SER:HB3	2.26	0.64
3:Q:21:ILE:HD13	3:Q:21:ILE:N	2.12	0.64
5:S:141:TYR:CE2	5:S:217:LYS:HA	2.32	0.64
5:E:221:PHE:HE1	5:E:223:ILE:HD11	1.61	0.64
6:F:36:THR:HG22	6:F:51:GLU:OE2	1.97	0.64
2:P:107:ILE:HD11	2:P:111:ILE:HG22	1.78	0.64
3:Q:106:PRO:HG2	3:Q:143:PRO:HG3	1.79	0.64
7:U:170:GLN:HE21	7:U:174:THR:HG23	1.61	0.64
11:Y:31:VAL:HG11	15:4:5:ABN:H3	1.79	0.64
3:C:55:THR:HG22	3:C:56:LEU:HD22	1.79	0.64
7:U:87:ASN:C	7:U:87:ASN:ND2	2.54	0.64
1:A:121:GLN:O	1:A:124:THR:HB	1.97	0.64
4:D:177:LEU:HD22	5:E:58:LEU:HD13	1.80	0.64
8:H:29:LYS:HE2	12:Z:165:ARG:NH2	2.13	0.64
4:R:215:ILE:HD13	4:R:215:ILE:C	2.22	0.64
5:E:201:LEU:O	5:E:202:ARG:HB2	1.97	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:172:ASN:HD22	8:H:193:THR:HA	1.63	0.64
11:K:31:VAL:HG11	15:3:5:ABN:H3	1.80	0.64
3:C:33:ARG:NH1	3:C:33:ARG:HB2	2.12	0.64
6:T:36:THR:HG22	6:T:51:GLU:OE2	1.97	0.64
11:Y:10(A):ARG:HG2	11:Y:10(A):ARG:HH11	1.63	0.64
13:M:14(D):GLU:O	13:M:14(G):ILE:HG12	1.97	0.64
7:G:172:ILE:HD13	7:G:197:MET:HE1	1.78	0.63
7:U:172:ILE:HD13	7:U:197:MET:CE	2.28	0.63
1:O:86:ARG:HH21	7:U:118:ASN:HD22	1.46	0.63
8:V:196:VAL:HG23	16:V:652:HOH:O	1.96	0.63
14:2:107:LYS:HG2	14:2:108:GLY:H	1.63	0.63
5:E:82:ALA:HB3	5:E:83:PRO:HD3	1.81	0.63
2:P:152:ASN:HB2	2:P:153:PRO:HD2	1.80	0.63
5:S:227:GLU:H	5:S:227:GLU:CD	2.04	0.63
13:M:7:LYS:HG3	13:M:14(G):ILE:HD12	1.80	0.63
4:R:53:ARG:O	4:R:53:ARG:HG2	1.97	0.63
14:2:176:VAL:HG12	14:2:178:LEU:HD13	1.80	0.63
5:E:35:SER:HB3	5:E:66:LYS:HZ3	1.64	0.63
11:K:10(A):ARG:HG2	11:K:10(A):ARG:HH11	1.64	0.63
12:L:135:MET:CE	9:W:165:ARG:NH2	2.61	0.63
5:S:221:PHE:HE1	5:S:223:ILE:HD11	1.61	0.63
6:T:177:GLU:OE2	7:U:57:LYS:HE2	1.99	0.63
2:B:163:ILE:HG12	2:B:164:SER:H	1.63	0.63
9:I:174:VAL:HG21	9:I:186:LYS:HE3	1.81	0.63
5:E:207:LEU:HD23	5:E:207:LEU:N	2.14	0.63
7:G:56:ASP:HB3	7:G:59:LEU:HG	1.81	0.63
5:S:97:ASN:ND2	12:Z:61:ASN:HD21	1.97	0.63
6:T:109:ILE:N	6:T:109:ILE:CD1	2.62	0.63
12:Z:21:ILE:C	12:Z:21:ILE:CD1	2.72	0.63
5:E:73:HIS:HE1	5:E:107:LEU:O	1.81	0.62
3:Q:41:LYS:HG2	3:Q:161:SER:O	1.99	0.62
12:Z:114:ASP:CB	12:Z:118:SER:HB3	2.29	0.62
5:S:214:ILE:HG12	5:S:215:VAL:N	2.13	0.62
6:T:109:ILE:HG21	6:T:147:HIS:HB2	1.81	0.62
7:U:67:ILE:HD13	7:U:211:GLU:CG	2.30	0.62
5:S:78:LEU:HD12	5:S:78:LEU:C	2.24	0.62
11:Y:40:PHE:CB	11:Y:73:ARG:NH2	2.62	0.62
5:E:141:TYR:CE2	5:E:217:LYS:HA	2.35	0.62
14:N:107:LYS:HG2	14:N:108:GLY:H	1.64	0.62
1:O:60:MET:HE3	1:O:63:THR:HG21	1.80	0.62
5:S:132:TYR:O	5:S:153:PRO:HB3	1.99	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:56:ASP:HB3	7:U:59:LEU:HG	1.80	0.62
13:1:7:LYS:HG3	13:1:14(G):ILE:HD12	1.82	0.62
10:X:-1:MET:HG2	10:X:1:ASP:N	2.15	0.62
2:B:219:GLU:HG2	2:B:21(E):VAL:N	2.14	0.62
8:H:90:TYR:CB	8:H:95:ILE:HD13	2.30	0.62
2:P:185:LYS:HD3	2:P:186:VAL:N	2.15	0.62
8:V:90:TYR:CB	8:V:95:ILE:HD13	2.30	0.62
4:D:53:ARG:O	4:D:53:ARG:HG2	2.00	0.62
13:M:76:PRO:HD2	13:M:105:GLN:OE1	1.99	0.62
8:V:221:ILE:HD12	9:W:40:HIS:HA	1.82	0.62
13:1:152:GLU:O	13:1:156:VAL:HG23	1.99	0.62
5:E:97:ASN:ND2	12:L:61:ASN:HD21	1.98	0.61
10:J:-1:MET:HG2	10:J:1:ASP:N	2.13	0.61
11:K:184:TRP:O	11:K:185:ILE:HD13	2.00	0.61
16:P:462:HOH:O	3:Q:87:ILE:HD11	2.00	0.61
10:X:44:SER:OG	10:X:100:LEU:HB2	2.00	0.61
14:N:3:ILE:HD13	14:N:3:ILE:C	2.25	0.61
7:G:217:LYS:HA	7:G:217:LYS:HE3	1.81	0.61
10:J:144:PRO:CG	11:Y:207:ASN:ND2	2.63	0.61
13:1:37:VAL:HG11	13:1:79:ILE:CD1	2.30	0.61
12:L:21:ILE:C	12:L:21:ILE:CD1	2.73	0.61
2:P:163:ILE:HG12	2:P:164:SER:N	2.14	0.61
5:S:73:HIS:HE1	5:S:107:LEU:O	1.81	0.61
8:V:4:VAL:HG22	8:V:159:ILE:HD11	1.82	0.61
9:I:165:ARG:HH21	12:Z:135:MET:HE3	1.65	0.61
13:M:37:VAL:HG11	13:M:79:ILE:CD1	2.30	0.61
14:N:176:VAL:HG12	14:N:178:LEU:HD13	1.82	0.61
6:F:38:ILE:HG22	6:F:164:ALA:CB	2.30	0.61
3:Q:52:ARG:HB2	3:Q:209:ASN:HA	1.82	0.61
3:Q:71:ASP:HA	10:X:68:ILE:HD13	1.82	0.61
6:T:38:ILE:HG22	6:T:164:ALA:CB	2.30	0.61
10:X:2:ILE:HD13	10:X:2:ILE:N	2.14	0.61
2:B:152:ASN:HB2	2:B:153:PRO:CD	2.31	0.61
5:E:214:ILE:HG12	5:E:215:VAL:N	2.16	0.61
13:M:152:GLU:O	13:M:156:VAL:HG23	2.01	0.60
5:E:78:LEU:C	5:E:78:LEU:HD12	2.26	0.60
10:J:32:ASP:OD2	10:J:34:THR:HG22	2.02	0.60
4:R:24:VAL:O	4:R:27:SER:HB3	2.00	0.60
1:A:177:GLU:CG	2:B:58:LEU:HD22	2.30	0.60
2:B:15:PHE:N	3:C:23:GLN:HE22	1.90	0.60
2:B:141:TYR:CD1	2:B:21(E):VAL:HG21	2.35	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:57:LYS:O	3:C:58:LEU:HB2	2.01	0.60
12:L:90:LYS:HE3	12:L:93:PHE:O	2.02	0.60
3:Q:185:THR:HG22	3:Q:187:GLU:N	2.12	0.60
9:W:178:ILE:HG23	9:W:184:VAL:HG22	1.82	0.60
7:G:67:ILE:HD13	7:G:211:GLU:CG	2.31	0.60
13:M:40:ASN:HD22	13:M:40:ASN:H	1.49	0.60
7:U:107:MET:HE3	7:U:112:LEU:HB2	1.82	0.60
8:V:81:GLN:O	8:V:85:GLN:HG3	2.00	0.60
4:D:102:TYR:O	12:L:81:ARG:HG3	2.02	0.60
3:C:15:PHE:H	4:D:23:GLN:HE22	1.47	0.60
14:N:34:LEU:HD13	14:N:176:VAL:HG23	1.84	0.60
3:Q:33:ARG:CB	3:Q:33:ARG:HH11	2.15	0.60
3:Q:170:LYS:HB2	16:Q:833:HOH:O	2.00	0.60
8:V:172:ASN:HD22	8:V:193:THR:HA	1.66	0.60
12:Z:90:LYS:HE3	12:Z:93:PHE:O	2.02	0.60
13:M:8:TYR:CE2	13:M:148:VAL:HG22	2.37	0.60
3:Q:100:ARG:NH1	3:Q:106:PRO:HB3	2.17	0.60
12:Z:8:GLY:HA3	12:Z:11:PHE:CE2	2.37	0.60
2:B:185:LYS:HD3	2:B:186:VAL:N	2.16	0.60
8:H:4:VAL:HG22	8:H:159:ILE:HD11	1.83	0.60
11:K:40:PHE:HB3	11:K:73:ARG:NH2	2.15	0.60
5:S:15:PHE:HB2	6:T:23:GLN:NE2	2.16	0.60
5:S:227:GLU:CD	5:S:227:GLU:N	2.60	0.59
2:P:143:ASP:OD2	10:X:10(B):LYS:HE2	2.03	0.59
2:P:219:GLU:HG2	2:P:21(E):VAL:N	2.15	0.59
4:R:186:LEU:O	4:R:190:GLU:HG3	2.02	0.59
6:T:216:SER:HB3	6:T:21(A):GLU:HB2	1.84	0.59
8:V:34:LEU:HB2	16:V:578:HOH:O	2.00	0.59
11:Y:210:ILE:HB	16:Y:1226:HOH:O	2.01	0.59
1:A:40:ILE:HD13	1:A:193:ALA:HB2	1.83	0.59
3:C:185:THR:HG22	3:C:187:GLU:N	2.13	0.59
10:J:44:SER:OG	10:J:100:LEU:HB2	2.03	0.59
9:W:28:SER:HB2	10:X:120:VAL:HG21	1.85	0.59
5:E:132:TYR:O	5:E:153:PRO:HB3	2.02	0.59
9:I:28:SER:HB2	10:J:120:VAL:HG21	1.84	0.59
12:L:13:VAL:HG12	12:L:177:ILE:HG13	1.83	0.59
13:1:40:ASN:H	13:1:40:ASN:HD22	1.50	0.59
14:2:36:ARG:HG3	14:2:42:TRP:CE2	2.37	0.59
5:E:227:GLU:CD	5:E:227:GLU:N	2.60	0.59
14:N:36:ARG:HG3	14:N:42:TRP:CE2	2.37	0.59
9:I:97:VAL:HG23	9:I:99:PRO:HD3	1.83	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S:207:LEU:HD23	5:S:207:LEU:N	2.13	0.59
12:Z:13:VAL:HG12	12:Z:177:ILE:HG13	1.84	0.59
8:H:81:GLN:O	8:H:85:GLN:HG3	2.02	0.59
2:P:141:TYR:CD1	2:P:21(E):VAL:HG21	2.37	0.59
3:Q:168:ASN:HB2	3:Q:200:VAL:HG11	1.85	0.59
10:X:147:THR:OG1	10:X:150:GLU:HG3	2.03	0.59
10:J:147:THR:OG1	10:J:150:GLU:HG3	2.02	0.59
13:M:17:ASP:HA	13:M:173:PHE:CB	2.33	0.59
9:I:178:ILE:HG23	9:I:184:VAL:HG22	1.83	0.59
11:K:10(A):ARG:HB3	11:K:10(B):LYS:HE3	1.85	0.59
14:N:3:ILE:HD11	14:N:127:ALA:HB3	1.84	0.59
10:X:113:ILE:HA	10:X:118:THR:O	2.03	0.59
11:K:12:ILE:HB	11:K:178:VAL:HB	1.84	0.58
10:X:13:ILE:N	10:X:13:ILE:HD12	2.17	0.58
12:Z:3:ILE:HG13	12:Z:100:ILE:HD12	1.85	0.58
14:2:3:ILE:H	14:2:3:ILE:HD12	1.69	0.58
13:1:8:TYR:CE2	13:1:148:VAL:HG22	2.38	0.58
3:C:71:ASP:HA	10:J:68:ILE:CD1	2.33	0.58
4:D:12(D):ALA:HA	5:E:129:GLY:HA2	1.84	0.58
4:D:177:LEU:HD22	5:E:58:LEU:CD1	2.34	0.58
9:I:39:GLY:HA3	16:I:416:HOH:O	2.02	0.58
10:J:10(B):LYS:HB2	10:J:10(B):LYS:HZ2	1.68	0.58
9:W:97:VAL:HG23	9:W:99:PRO:HD3	1.84	0.58
10:X:52:THR:CG2	10:X:53:VAL:N	2.66	0.58
13:1:19:LEU:HD12	13:1:28:PHE:O	2.04	0.58
5:E:54:ASN:ND2	5:E:56:ASP:O	2.35	0.58
6:F:109:ILE:HG21	6:F:147:HIS:HB2	1.84	0.58
7:G:87:ASN:C	7:G:87:ASN:ND2	2.56	0.58
7:G:96:ALA:CA	7:G:107:MET:HE2	2.31	0.58
12:Z:177:ILE:HD12	12:Z:177:ILE:N	2.18	0.58
4:D:24:VAL:O	4:D:27:SER:HB3	2.03	0.58
4:R:160:TYR:CE2	4:R:163:LYS:HD3	2.39	0.58
8:V:3:ILE:HD11	8:V:127:LEU:HB2	1.84	0.58
5:E:226:GLY:O	5:E:229:VAL:HG22	2.04	0.58
14:2:112:THR:HG22	14:2:120:HIS:HB2	1.84	0.58
11:K:40:PHE:CG	11:K:73:ARG:CZ	2.87	0.58
2:P:152:ASN:HB2	2:P:153:PRO:CD	2.33	0.58
11:Y:40:PHE:HB3	11:Y:73:ARG:NH2	2.19	0.58
3:C:186:VAL:HG21	3:C:216:LYS:HE2	1.86	0.58
7:G:233:LEU:O	7:G:236:ILE:HG13	2.04	0.58
10:J:-1:MET:N	16:J:1335:HOH:O	2.35	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:52:THR:CG2	10:J:53:VAL:N	2.66	0.58
4:R:40:ILE:HG13	4:R:193:VAL:CG2	2.34	0.58
5:S:18(D):ILE:O	5:S:18(D):ILE:HG12	2.04	0.58
14:2:10(B):LYS:HD3	14:2:10(B):LYS:C	2.29	0.58
14:2:3:ILE:HG22	14:2:16:ALA:HB1	1.86	0.58
1:A:60:MET:HE3	1:A:63:THR:HG21	1.85	0.57
1:A:186:LEU:O	1:A:190:ILE:HG13	2.04	0.57
6:F:67:ILE:HB	6:F:223:PHE:CE2	2.39	0.57
6:F:109:ILE:N	6:F:109:ILE:CD1	2.66	0.57
8:H:3:ILE:HD11	8:H:127:LEU:HB2	1.86	0.57
14:N:3:ILE:HD12	14:N:3:ILE:N	2.19	0.57
5:S:194:VAL:O	5:S:197:ILE:HG22	2.04	0.57
4:R:102:TYR:O	12:Z:81:ARG:HG3	2.03	0.57
4:D:40:ILE:HG13	4:D:193:VAL:CG2	2.35	0.57
8:H:221:ILE:HD12	9:I:40:HIS:HA	1.86	0.57
5:S:226:GLY:O	5:S:229:VAL:HG22	2.05	0.57
11:Y:184:TRP:O	11:Y:185:ILE:HD13	2.03	0.57
2:B:219:GLU:HG2	2:B:21(E):VAL:H	1.69	0.57
3:C:185:THR:HG22	3:C:186:VAL:N	2.19	0.57
4:D:186:LEU:O	4:D:190:GLU:HG3	2.05	0.57
6:F:216:SER:HB3	6:F:21(A):GLU:HB2	1.85	0.57
1:O:40:ILE:HD13	1:O:193:ALA:HB2	1.84	0.57
10:X:38:SER:HB2	10:X:39:PRO:HD2	1.86	0.57
3:C:33:ARG:CB	3:C:33:ARG:HH11	2.17	0.57
7:G:186:TRP:O	7:G:190:VAL:HG23	2.05	0.57
10:J:133:TYR:HE2	10:J:166:MET:SD	2.28	0.57
1:O:62:GLU:C	1:O:64:LEU:H	2.10	0.57
7:U:233:LEU:O	7:U:236:ILE:HG13	2.05	0.57
7:G:107:MET:HE3	7:G:112:LEU:HB2	1.85	0.57
12:L:21:ILE:HB	12:L:25:SER:O	2.04	0.57
12:Z:21:ILE:HB	12:Z:25:SER:O	2.04	0.57
4:D:75:GLY:HA3	4:D:221:PHE:CD2	2.39	0.57
3:Q:186:VAL:HG21	3:Q:216:LYS:HE2	1.86	0.57
2:B:101:LYS:HZ2	10:J:85:GLN:NE2	2.03	0.57
4:D:160:TYR:CE2	4:D:163:LYS:HD3	2.40	0.57
10:X:161:GLU:OE2	10:X:161:GLU:HA	2.04	0.57
11:Y:12:ILE:HB	11:Y:178:VAL:HB	1.87	0.57
12:L:145:TYR:CD1	12:L:146:LEU:N	2.72	0.57
3:C:172:VAL:HG23	3:C:196:SER:HB2	1.87	0.57
8:H:112:SER:OG	8:H:120:ASP:HB2	2.05	0.57
12:L:96:TYR:CE1	15:3:2:TY5:H49	2.39	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:172:ALA:O	6:T:176:LEU:HD22	2.05	0.57
7:U:107:MET:CE	7:U:112:LEU:HD13	2.35	0.57
7:U:227:GLU:HG2	16:U:1255:HOH:O	2.04	0.57
10:X:90(B):ARG:NH1	16:X:266:HOH:O	2.33	0.57
11:Y:40:PHE:CG	11:Y:73:ARG:CZ	2.88	0.57
12:Z:145:TYR:CD1	12:Z:146:LEU:N	2.73	0.57
13:1:17:ASP:HA	13:1:173:PHE:CB	2.35	0.57
1:A:62:GLU:C	1:A:64:LEU:H	2.13	0.56
5:S:54:ASN:ND2	5:S:56:ASP:O	2.38	0.56
5:E:160:LEU:HD13	5:E:163:THR:HB	1.87	0.56
10:J:10(B):LYS:HB2	10:J:10(B):LYS:NZ	2.19	0.56
12:L:135:MET:HE3	9:W:165:ARG:HH21	1.69	0.56
14:N:10(B):LYS:C	14:N:10(B):LYS:HD3	2.29	0.56
3:C:46:VAL:O	3:C:215:VAL:HG12	2.05	0.56
11:K:174:ASN:HD21	11:K:189:ASN:HD22	1.53	0.56
3:Q:185:THR:HG22	3:Q:186:VAL:N	2.20	0.56
6:F:172:ALA:O	6:F:176:LEU:HD22	2.06	0.56
10:J:52:THR:HG22	10:J:53:VAL:N	2.21	0.56
3:Q:57:LYS:O	3:Q:58:LEU:HB2	2.05	0.56
1:A:69:LEU:HD23	1:A:69:LEU:C	2.30	0.56
3:C:52:ARG:HB2	3:C:209:ASN:HA	1.87	0.56
4:D:112:LEU:C	4:D:112:LEU:HD13	2.30	0.56
12:L:1:GLY:N	16:L:755:HOH:O	2.39	0.56
4:R:112:LEU:HD13	4:R:112:LEU:C	2.31	0.56
6:T:173:LYS:O	6:T:177:GLU:HG3	2.06	0.56
13:1:14(C):ARG:HH11	13:1:14(C):ARG:CG	2.17	0.56
14:2:107:LYS:HG2	14:2:108:GLY:N	2.20	0.56
8:H:35:HIS:HB3	8:H:56:THR:HG21	1.87	0.56
4:R:75:GLY:HA3	4:R:221:PHE:CD2	2.41	0.56
8:V:90:TYR:HB3	8:V:95:ILE:HD13	1.87	0.56
11:Y:86:LEU:C	11:Y:86:LEU:HD13	2.31	0.56
3:Q:172:VAL:HG23	3:Q:196:SER:HB2	1.87	0.56
7:U:96:ALA:CA	7:U:107:MET:HE2	2.33	0.56
12:Z:123:GLN:HG3	12:Z:145:TYR:OH	2.06	0.56
11:K:44:THR:OG1	11:K:100:MET:HB2	2.05	0.56
12:L:8:GLY:HA3	12:L:11:PHE:CE2	2.41	0.56
14:N:112:THR:HG22	14:N:120:HIS:HB2	1.87	0.56
4:R:215:ILE:HD13	4:R:216:THR:N	2.21	0.56
7:U:186:TRP:O	7:U:190:VAL:HG23	2.05	0.56
5:E:194:VAL:O	5:E:197:ILE:HG22	2.06	0.56
13:M:19:LEU:HD12	13:M:28:PHE:O	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:219:GLU:HG2	2:P:21(E):VAL:H	1.70	0.56
10:X:10(B):LYS:HB2	10:X:10(B):LYS:NZ	2.21	0.56
11:Y:10(A):ARG:HB3	11:Y:10(B):LYS:HE3	1.87	0.56
1:A:97:HIS:HD2	8:H:61:SER:OG	1.89	0.56
3:C:168:ASN:HB2	3:C:200:VAL:HG11	1.87	0.56
14:N:44:CYS:HB2	14:N:100:ILE:HB	1.88	0.56
2:P:21:LEU:HD13	2:P:124:THR:HG23	1.88	0.56
11:Y:44:THR:OG1	11:Y:100:MET:HB2	2.06	0.56
14:2:34:LEU:HD13	14:2:176:VAL:HG23	1.88	0.56
1:A:206:PHE:CD1	1:A:210:ILE:HD11	2.41	0.55
2:B:21:LEU:HD13	2:B:124:THR:HG23	1.87	0.55
4:R:20:ARG:HD3	4:R:25:GLU:CD	2.32	0.55
6:T:95:GLU:CG	6:T:115:ARG:HB3	2.27	0.55
10:X:52:THR:HG22	10:X:53:VAL:H	1.70	0.55
2:B:143:ASP:OD2	10:J:10(B):LYS:HE2	2.06	0.55
12:L:177:ILE:HD12	12:L:177:ILE:N	2.21	0.55
6:T:67:ILE:HB	6:T:223:PHE:CE2	2.40	0.55
2:B:215:ILE:HG12	2:B:221:GLN:HG2	1.88	0.55
7:G:107:MET:CE	7:G:112:LEU:HD13	2.36	0.55
10:J:13:ILE:HG22	10:J:155:LEU:HD11	1.88	0.55
10:J:38:SER:HB2	10:J:39:PRO:HD2	1.88	0.55
10:J:113:ILE:HA	10:J:118:THR:O	2.05	0.55
11:K:10(B):LYS:N	11:K:10(B):LYS:CD	2.60	0.55
14:2:3:ILE:HD12	14:2:127:ALA:O	2.05	0.55
8:H:90:TYR:HB3	8:H:95:ILE:HD13	1.89	0.55
2:P:234:VAL:HA	2:P:239:THR:HA	1.88	0.55
6:T:51:GLU:OE1	6:T:53:LEU:HD21	2.07	0.55
7:U:8:TYR:C	7:U:10:ARG:H	2.14	0.55
9:W:156:SER:O	9:W:160:LEU:HB2	2.06	0.55
10:X:156:LYS:O	10:X:160:GLN:HG3	2.07	0.55
14:N:107:LYS:HG2	14:N:108:GLY:N	2.21	0.55
4:R:31:ILE:HD13	4:R:135:ALA:HB2	1.88	0.55
12:Z:96:TYR:CE1	15:4:2:TY5:H49	2.42	0.55
3:C:100:ARG:NH1	3:C:106:PRO:HB3	2.22	0.55
7:G:8:TYR:C	7:G:10:ARG:H	2.14	0.55
14:N:3:ILE:HG22	14:N:16:ALA:CB	2.36	0.55
3:Q:46:VAL:O	3:Q:215:VAL:HG12	2.07	0.55
7:U:38:LEU:HD23	7:U:197:MET:HE3	1.89	0.55
10:X:52:THR:HG22	10:X:53:VAL:N	2.21	0.55
2:B:49:ALA:HB2	2:B:212:PHE:CE1	2.41	0.55
4:R:121:LEU:HD13	5:S:130:ARG:HH21	1.72	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:147:HIS:HD2	16:T:282:HOH:O	1.90	0.55
6:F:51:GLU:OE1	6:F:53:LEU:HD21	2.07	0.55
6:F:82:ILE:HB	6:F:83:PRO:HD3	1.89	0.55
1:O:186:LEU:O	1:O:190:ILE:HG13	2.07	0.55
1:A:177:GLU:HG2	2:B:58:LEU:CD2	2.35	0.55
6:F:173:LYS:O	6:F:177:GLU:HG3	2.07	0.55
10:J:135:PHE:HZ	16:J:898:HOH:O	1.89	0.55
1:O:69:LEU:C	1:O:69:LEU:HD23	2.32	0.55
5:S:160:LEU:HD13	5:S:163:THR:HB	1.88	0.55
7:G:55:PRO:HG2	7:G:56:ASP:H	1.72	0.54
9:I:101:VAL:O	9:I:110:ILE:HA	2.07	0.54
14:N:8:PHE:CE1	14:N:10:ASP:HB2	2.42	0.54
2:P:121:GLN:CG	3:Q:83:ALA:HB1	2.37	0.54
13:1:41:THR:OG1	13:1:76:PRO:HG3	2.07	0.54
7:G:38:LEU:HD23	7:G:197:MET:HE3	1.89	0.54
10:J:13:ILE:HD12	10:J:13:ILE:N	2.23	0.54
11:K:142:TYR:C	11:K:143:LYS:HD2	2.31	0.54
6:F:192:GLN:O	6:F:196:ILE:HG13	2.07	0.54
7:G:152:ASP:HB2	7:G:153:PRO:CD	2.37	0.54
6:T:186:ALA:O	6:T:190:VAL:HG23	2.07	0.54
4:D:20:ARG:HD3	4:D:25:GLU:CD	2.32	0.54
4:D:122:ARG:HG2	4:D:122:ARG:HH11	1.72	0.54
13:M:179:ASP:HB3	13:M:18(A):THR:OG1	2.08	0.54
13:1:148:VAL:HG23	16:1:182:HOH:O	2.06	0.54
10:J:161:GLU:HA	10:J:161:GLU:OE2	2.07	0.54
12:L:-7:ASN:ND2	12:L:-7:ASN:C	2.66	0.54
4:R:215:ILE:C	4:R:215:ILE:CD1	2.81	0.54
5:S:175:TYR:CD2	5:S:196:ALA:HA	2.42	0.54
10:X:133:TYR:HE2	10:X:166:MET:SD	2.30	0.54
3:C:21:ILE:N	3:C:21:ILE:CD1	2.71	0.54
3:C:215:VAL:HG23	3:C:221:ILE:HG12	1.88	0.54
7:G:77:VAL:CG1	7:G:137:THR:HB	2.38	0.54
7:G:170:GLN:NE2	7:G:174:THR:HG23	2.22	0.54
14:N:3:ILE:HD12	14:N:127:ALA:O	2.08	0.54
2:P:215:ILE:HG12	2:P:221:GLN:HG2	1.89	0.54
4:R:15:PHE:HB2	5:S:23:GLN:OE1	2.07	0.54
13:1:179:ASP:HB3	13:1:18(A):THR:OG1	2.08	0.54
14:2:3:ILE:O	14:2:3:ILE:CD1	2.55	0.54
2:B:234:VAL:HA	2:B:239:THR:HA	1.89	0.54
3:C:35:THR:HB	3:C:51:GLU:HG3	1.90	0.54
10:J:52:THR:HG22	10:J:53:VAL:H	1.71	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:105:ASP:HB2	16:N:775:HOH:O	2.07	0.54
2:P:4:GLY:HA3	5:S:127:TYR:CE1	2.42	0.54
2:P:97:GLN:NE2	9:W:64:ASN:HD22	2.05	0.54
11:Y:32:LYS:N	11:Y:32:LYS:HD2	2.22	0.54
13:M:-5:PRO:C	13:M:-4:ILE:HD12	2.33	0.54
5:S:78:LEU:HD12	5:S:78:LEU:O	2.08	0.54
7:U:55:PRO:HG2	7:U:56:ASP:H	1.72	0.54
2:B:108:PRO:HB2	2:B:111:ILE:HD12	1.89	0.54
2:B:185:LYS:HE2	2:B:187:ASP:OD1	2.08	0.54
3:Q:159:SER:O	4:R:59:LEU:HD22	2.08	0.54
7:U:77:VAL:CG1	7:U:137:THR:HB	2.37	0.54
7:U:152:ASP:HB2	7:U:153:PRO:CD	2.38	0.54
3:C:175:PHE:O	3:C:179:ASN:HB2	2.09	0.53
5:E:74:MET:HE2	5:E:109:VAL:HG22	1.90	0.53
11:K:31:VAL:HG11	15:3:5:ABN:C3	2.38	0.53
11:K:32:LYS:N	11:K:32:LYS:HD2	2.23	0.53
4:R:121:LEU:HB2	16:R:853:HOH:O	2.07	0.53
11:Y:31:VAL:HG11	15:4:5:ABN:C3	2.38	0.53
11:Y:200:LYS:HE2	16:Y:772:HOH:O	2.07	0.53
2:B:181:LYS:O	2:B:184:MET:HG3	2.09	0.53
6:F:187:ARG:HG3	6:F:187:ARG:HH11	1.74	0.53
9:I:156:SER:O	9:I:160:LEU:HB2	2.08	0.53
10:J:133:TYR:C	16:J:198:HOH:O	2.51	0.53
13:M:14(C):ARG:HH11	13:M:14(C):ARG:CG	2.20	0.53
8:V:35:HIS:HB3	8:V:56:THR:HG21	1.89	0.53
1:A:142:ASP:OD1	1:A:145:ASN:HB2	2.09	0.53
11:K:67:GLU:OE2	16:K:959:HOH:O	2.18	0.53
12:L:123:GLN:HG3	12:L:145:TYR:OH	2.08	0.53
13:M:110:LEU:HG	13:M:125:LEU:HD12	1.89	0.53
1:O:142:ASP:OD1	1:O:145:ASN:HB2	2.08	0.53
1:O:232:ARG:HG3	1:O:232:ARG:NH1	2.23	0.53
9:W:2:ILE:HG21	9:W:130:ALA:HB3	1.91	0.53
9:W:28:SER:CB	10:X:120:VAL:HG21	2.39	0.53
11:Y:210:ILE:HB	16:Y:1150:HOH:O	2.08	0.53
14:2:8:PHE:CE1	14:2:10:ASP:HB2	2.44	0.53
2:B:163:ILE:HG12	2:B:164:SER:N	2.22	0.53
9:I:66:TYR:CZ	9:I:70:GLU:HG3	2.44	0.53
10:J:156:LYS:O	10:J:160:GLN:HG3	2.09	0.53
2:P:185:LYS:HE2	2:P:187:ASP:OD1	2.08	0.53
1:A:232:ARG:HG3	1:A:232:ARG:NH1	2.24	0.53
5:E:175:TYR:CD2	5:E:196:ALA:HA	2.44	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:18(D):ILE:HG12	5:E:18(D):ILE:O	2.09	0.53
1:O:206:PHE:CD1	1:O:210:ILE:HD11	2.42	0.53
3:Q:215:VAL:HG23	3:Q:221:ILE:HG12	1.89	0.53
3:C:21:ILE:N	3:C:21:ILE:HD13	2.23	0.53
2:P:27:ALA:O	2:P:31:ILE:HG12	2.09	0.53
2:P:108:PRO:HB2	2:P:111:ILE:HD12	1.90	0.53
6:T:187:ARG:HH11	6:T:187:ARG:HG3	1.73	0.53
11:Y:174:ASN:HD21	11:Y:189:ASN:HD22	1.57	0.53
13:1:184:LEU:C	13:1:184:LEU:HD23	2.34	0.53
3:C:241:GLN:C	3:C:243:GLN:H	2.17	0.53
4:D:12(F):GLY:O	4:D:12(G):GLU:HB2	2.08	0.53
8:H:165:ASN:ND2	13:1:139:ARG:HH11	2.05	0.53
2:P:63:THR:O	2:P:63:THR:HG22	2.09	0.53
4:R:177:LEU:HD22	5:S:58:LEU:CD1	2.39	0.53
11:Y:142:TYR:C	11:Y:143:LYS:HD2	2.33	0.53
2:B:121:GLN:CG	3:C:83:ALA:HB1	2.39	0.53
2:B:218:ASN:O	2:B:21(C):ASP:HB2	2.09	0.53
4:D:31:ILE:HD13	4:D:135:ALA:HB2	1.89	0.53
11:K:74:ILE:HG12	11:K:79:ALA:HB2	1.91	0.53
1:O:33:GLN:HE21	1:O:33:GLN:CA	2.22	0.53
3:Q:235:GLN:O	3:Q:239:GLU:HG2	2.09	0.53
3:Q:241:GLN:C	3:Q:243:GLN:H	2.17	0.53
6:T:67:ILE:HG12	6:T:211:GLU:OE1	2.09	0.53
7:U:170:GLN:NE2	7:U:174:THR:HG23	2.23	0.53
9:W:66:TYR:CZ	9:W:70:GLU:HG3	2.43	0.53
12:Z:134:ILE:HD11	12:Z:162:ALA:HB2	1.91	0.53
14:2:3:ILE:CD1	14:2:3:ILE:C	2.81	0.53
10:J:18:LYS:HG2	10:J:174:ILE:HG13	1.91	0.53
11:K:86:LEU:HD13	11:K:86:LEU:C	2.34	0.53
3:Q:197:LEU:O	3:Q:201:VAL:HG23	2.09	0.53
7:U:72:ARG:HB2	7:U:72:ARG:NH1	2.25	0.53
3:C:235:GLN:O	3:C:239:GLU:HG2	2.09	0.52
4:R:122:ARG:HG2	4:R:122:ARG:HH11	1.74	0.52
7:U:228:ASN:HB3	16:U:242:HOH:O	2.09	0.52
2:B:27:ALA:O	2:B:31:ILE:HG12	2.09	0.52
6:F:101:LYS:NZ	14:N:85:GLU:OE1	2.42	0.52
13:M:41:THR:OG1	13:M:76:PRO:HG3	2.09	0.52
7:U:49:ILE:CD1	7:U:212:VAL:HG22	2.39	0.52
2:P:49:ALA:HB2	2:P:212:PHE:CE1	2.44	0.52
13:1:110:LEU:HG	13:1:125:LEU:HD12	1.91	0.52
2:B:101:LYS:NZ	10:J:85:GLN:NE2	2.57	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4:MET:SD	1:A:5:THR:N	2.68	0.52
10:J:13:ILE:CG2	10:J:155:LEU:HD11	2.40	0.52
11:K:74:ILE:HG13	11:K:75:SER:N	2.24	0.52
2:P:238:ILE:HD13	2:P:238:ILE:N	2.24	0.52
3:Q:35:THR:HB	3:Q:51:GLU:HG3	1.91	0.52
6:T:36:THR:CG2	6:T:51:GLU:OE2	2.58	0.52
12:Z:-2:ASN:C	12:Z:21:ILE:HD12	2.35	0.52
8:V:38:SER:OG	8:V:41:ILE:HD13	2.10	0.52
8:V:112:SER:OG	8:V:120:ASP:HB2	2.09	0.52
10:X:13:ILE:HG22	10:X:155:LEU:HD11	1.91	0.52
3:C:20:HIS:HB3	3:C:25:GLU:OE1	2.10	0.52
14:N:3:ILE:HG22	14:N:16:ALA:HB1	1.92	0.52
3:Q:182:PRO:O	3:Q:184:ALA:N	2.43	0.52
4:R:12(F):GLY:O	4:R:12(G):GLU:HB2	2.08	0.52
12:Z:14(I):THR:HB	12:Z:14(M):VAL:HG23	1.92	0.52
3:C:216:LYS:HB2	3:C:220:ASP:HB3	1.92	0.52
5:E:78:LEU:HD12	5:E:78:LEU:O	2.10	0.52
10:J:17:SER:HB2	10:J:170:PHE:HB2	1.92	0.52
12:L:3:ILE:HG13	12:L:100:ILE:HD12	1.92	0.52
12:L:79:ALA:O	12:L:83:ILE:HG12	2.09	0.52
1:O:150:GLN:O	1:O:157:TYR:HA	2.10	0.52
2:P:218:ASN:O	2:P:21(C):ASP:HB2	2.10	0.52
3:Q:33:ARG:NH1	3:Q:33:ARG:CB	2.73	0.52
9:W:101:VAL:O	9:W:110:ILE:HA	2.10	0.52
1:A:150:GLN:O	1:A:157:TYR:HA	2.09	0.52
11:K:104:TYR:CE1	11:K:180:GLU:OE2	2.63	0.52
11:K:196:PHE:CE1	9:W:193:GLN:HG3	2.44	0.52
3:Q:85:SER:O	3:Q:89:ILE:HG13	2.10	0.52
5:S:92:LEU:HD11	5:S:112:ALA:HB1	1.92	0.52
10:X:143:ARG:HB2	10:X:146:MET:HG3	1.91	0.52
13:1:80:PHE:CE1	13:1:111:ARG:HD3	2.45	0.52
3:C:43:LYS:O	3:C:43:LYS:HG2	2.10	0.52
4:D:237:LEU:O	4:D:241:GLU:HG3	2.10	0.52
7:G:198:ILE:HG23	7:G:203:THR:O	2.10	0.52
10:J:133:TYR:CD1	16:Y:593:HOH:O	2.28	0.52
3:C:106:PRO:HG2	3:C:143:PRO:HG2	1.91	0.51
7:G:49:ILE:CD1	7:G:212:VAL:HG22	2.40	0.51
9:I:28:SER:CB	10:J:120:VAL:HG21	2.40	0.51
11:K:180:GLU:HB2	16:K:924:HOH:O	2.09	0.51
2:P:87:ILE:O	2:P:91:THR:HG23	2.10	0.51
3:Q:38:VAL:HG22	3:Q:39:GLY:N	2.24	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:198:ILE:HG23	7:U:203:THR:O	2.10	0.51
14:2:44:CYS:HB2	14:2:100:ILE:HB	1.92	0.51
9:I:193:GLN:HG3	11:Y:196:PHE:CE1	2.45	0.51
12:L:-6:PRO:O	13:M:91:ARG:NH1	2.38	0.51
13:M:83:LEU:O	13:M:87:MET:HG2	2.10	0.51
2:P:186:VAL:O	2:P:190:ILE:HG13	2.10	0.51
3:Q:15:PHE:CE1	3:Q:21:ILE:HD11	2.45	0.51
11:Y:38:ASN:ND2	16:Y:1288:HOH:O	2.14	0.51
13:1:19:LEU:HD21	13:1:26:LEU:HD22	1.91	0.51
8:H:35:HIS:CB	8:H:56:THR:HG21	2.39	0.51
10:J:143:ARG:HB2	10:J:146:MET:HG3	1.92	0.51
10:J:193:GLN:OXT	10:J:193:GLN:HG2	2.11	0.51
7:U:192:PHE:C	7:U:192:PHE:CD1	2.88	0.51
12:Z:79:ALA:O	12:Z:83:ILE:HG12	2.10	0.51
2:B:63:THR:O	2:B:63:THR:HG22	2.11	0.51
9:I:1:GLY:HA3	9:I:33:LYS:HE2	1.92	0.51
3:Q:57:LYS:HD2	3:Q:58:LEU:N	2.25	0.51
4:R:185:THR:OG1	4:R:188:GLU:HG3	2.11	0.51
5:E:95:GLN:HG3	5:E:115:LEU:HD13	1.91	0.51
6:F:186:ALA:O	6:F:190:VAL:HG23	2.10	0.51
11:K:105:THR:OG1	11:K:106:GLU:HG3	2.10	0.51
1:O:177:GLU:HG2	2:P:58:LEU:HD22	1.92	0.51
3:Q:201:VAL:HG21	3:Q:210:ILE:HD11	1.90	0.51
5:S:148:LEU:CD2	5:S:162:GLY:HA2	2.40	0.51
10:X:10(B):LYS:HB2	10:X:10(B):LYS:HZ2	1.74	0.51
11:Y:74:ILE:HG12	11:Y:79:ALA:HB2	1.91	0.51
9:I:2:ILE:HG21	9:I:130:ALA:HB3	1.93	0.51
3:Q:106:PRO:HG2	3:Q:143:PRO:HG2	1.90	0.51
7:U:77:VAL:HG12	7:U:137:THR:HB	1.91	0.51
11:Y:74:ILE:HG13	11:Y:75:SER:N	2.26	0.51
3:C:182:PRO:O	3:C:184:ALA:N	2.43	0.51
3:C:227:GLU:OE1	3:C:227:GLU:N	2.42	0.51
6:F:127:ASN:HD22	6:F:127:ASN:C	2.19	0.51
10:J:168:MET:HE1	10:X:167:PRO:HB2	1.93	0.51
5:S:35:SER:HB3	5:S:66:LYS:HZ3	1.75	0.51
9:W:-2:ASN:HA	9:W:21:GLY:O	2.11	0.51
12:Z:21:ILE:HD13	12:Z:21:ILE:O	2.10	0.51
2:B:21(A):LYS:O	2:B:21(B):GLY:C	2.54	0.51
5:E:2(C):VAL:HG13	5:E:2(D):ASP:N	2.26	0.51
9:I:90:ARG:HD2	16:I:1159:HOH:O	2.10	0.51
12:L:-7:ASN:HD22	12:L:-6:PRO:N	2.09	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:14(C):GLN:HG2	8:V:210:THR:CG2	2.40	0.51
1:O:57:PRO:HG2	7:U:177:GLU:HG2	1.91	0.51
13:M:184:LEU:HD23	13:M:184:LEU:C	2.36	0.51
2:P:181:LYS:O	2:P:184:MET:HG3	2.10	0.51
6:T:159:GLY:HA3	7:U:63:THR:HG21	1.93	0.51
10:X:193:GLN:HG2	10:X:193:GLN:OXT	2.11	0.51
13:1:37:VAL:HG11	13:1:79:ILE:HD13	1.92	0.51
14:2:10(B):LYS:HD3	14:2:10(B):LYS:O	2.11	0.51
9:I:19:ARG:HB2	9:I:171:TRP:HB2	1.93	0.51
13:M:80:PHE:CE1	13:M:111:ARG:HD3	2.46	0.51
6:T:82:ILE:HB	6:T:83:PRO:HD3	1.93	0.51
9:W:1:GLY:HA3	9:W:33:LYS:HE2	1.93	0.51
2:B:87:ILE:O	2:B:91:THR:HG23	2.11	0.50
3:C:159:SER:O	4:D:59:LEU:HD22	2.11	0.50
14:N:157:HIS:HD2	14:2:140:LYS:NZ	2.09	0.50
3:Q:216:LYS:HB2	3:Q:220:ASP:HB3	1.93	0.50
8:V:20:SER:HB3	8:V:28:ASP:HB3	1.93	0.50
14:2:163:ILE:HG23	14:2:170:GLY:HA2	1.92	0.50
2:B:51:GLU:OE2	2:B:202:THR:HG23	2.12	0.50
3:C:57:LYS:HD2	3:C:58:LEU:N	2.26	0.50
4:D:89:ILE:HB	16:D:1044:HOH:O	2.10	0.50
6:F:36:THR:CG2	6:F:51:GLU:OE2	2.60	0.50
3:Q:175:PHE:O	3:Q:179:ASN:HB2	2.11	0.50
3:Q:191:LYS:CG	3:Q:236:ILE:HD11	2.41	0.50
6:T:127:ASN:HD22	6:T:127:ASN:C	2.19	0.50
12:Z:166:HIS:CD2	12:Z:168:GLN:H	2.21	0.50
13:1:83:LEU:O	13:1:87:MET:HG2	2.11	0.50
5:E:148:LEU:CD2	5:E:162:GLY:HA2	2.41	0.50
2:P:229:ILE:O	2:P:233:LEU:HB2	2.12	0.50
4:R:237:LEU:O	4:R:241:GLU:HG3	2.11	0.50
5:E:223:ILE:HD12	5:E:223:ILE:N	2.26	0.50
6:F:69:VAL:HG12	16:M:319:HOH:O	2.12	0.50
6:F:20(B):GLU:HG3	6:F:20(C):LYS:HG3	1.93	0.50
7:G:105:TYR:OH	8:H:66:HIS:HE1	1.95	0.50
9:I:-2:ASN:HA	9:I:21:GLY:O	2.11	0.50
10:J:26:VAL:HG23	10:X:165:ARG:O	2.11	0.50
10:J:156:LYS:HE2	10:J:160:GLN:NE2	2.26	0.50
13:M:40:ASN:HD22	13:M:40:ASN:N	2.08	0.50
14:N:26:ILE:HG13	13:1:165:ARG:O	2.12	0.50
2:P:122:GLY:C	2:P:124:THR:H	2.20	0.50
5:S:223:ILE:HD12	5:S:223:ILE:N	2.26	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:3:ILE:HD13	12:Z:46:ASN:HB2	1.93	0.50
6:F:210:LEU:HD21	6:F:212:ILE:HD11	1.94	0.50
8:H:165:ASN:HD22	13:1:139:ARG:NH1	2.06	0.50
10:J:167:PRO:HB2	10:X:168:MET:HE1	1.93	0.50
5:S:95:GLN:HG3	5:S:115:LEU:HD13	1.93	0.50
13:1:157:ASN:HB3	16:1:558:HOH:O	2.10	0.50
3:C:38:VAL:HG22	3:C:39:GLY:N	2.25	0.50
3:C:158:SER:HB2	4:D:59:LEU:HD21	1.92	0.50
14:N:140:LYS:NZ	14:2:157:HIS:HD2	2.09	0.50
6:T:179:LEU:HD11	6:T:192:GLN:HG3	1.94	0.50
9:W:19:ARG:HB2	9:W:171:TRP:HB2	1.92	0.50
9:W:48:LEU:HG	9:W:50:THR:HG22	1.93	0.50
10:X:156:LYS:HE2	10:X:160:GLN:NE2	2.27	0.50
12:Z:4:LEU:HD13	12:Z:138:LEU:HD21	1.94	0.50
3:C:15:PHE:CE1	3:C:21:ILE:HD11	2.46	0.50
6:F:203:GLU:C	6:F:205:ASN:H	2.18	0.50
8:H:20:SER:HB3	8:H:28:ASP:HB3	1.94	0.50
8:H:210:THR:CG2	12:Z:14(C):GLN:HG2	2.42	0.50
4:R:42:THR:C	4:R:44:GLU:H	2.20	0.50
8:V:84:LYS:HG3	8:V:85:GLN:N	2.25	0.50
2:B:31:ILE:HD11	2:B:133:GLY:C	2.37	0.50
7:G:77:VAL:HG12	7:G:137:THR:HB	1.93	0.50
5:S:2(C):VAL:HG13	5:S:2(D):ASP:N	2.25	0.50
9:W:124:PHE:O	9:W:125:ILE:HD13	2.12	0.50
12:Z:114:ASP:OD2	12:Z:115:PRO:HD2	2.11	0.50
12:L:134:ILE:HD13	12:L:158:SER:HB3	1.94	0.50
3:Q:20:HIS:HB3	3:Q:25:GLU:OE1	2.11	0.50
5:S:86:ARG:HH11	5:S:86:ARG:HG3	1.77	0.50
9:W:104:ILE:HD13	9:W:108:PRO:HA	1.94	0.50
11:Y:37:ILE:HB	11:Y:41:LEU:CB	2.40	0.50
14:N:10(B):LYS:HD3	14:N:10(B):LYS:O	2.11	0.49
2:P:21(A):LYS:O	2:P:21(B):GLY:C	2.55	0.49
3:Q:173:ARG:O	3:Q:177:GLU:HG3	2.11	0.49
6:T:40:ILE:HD12	6:T:193:ALA:HB2	1.93	0.49
6:F:40:ILE:HD12	6:F:193:ALA:HB2	1.94	0.49
7:G:192:PHE:C	7:G:192:PHE:CD1	2.89	0.49
10:J:10(C):LYS:NZ	16:J:1133:HOH:O	2.45	0.49
5:E:86:ARG:HH11	5:E:86:ARG:HG3	1.77	0.49
6:F:179:LEU:HD11	6:F:192:GLN:HG3	1.94	0.49
7:G:18(G):GLU:HG2	7:G:188:LYS:HB3	1.93	0.49
10:J:112:GLN:NE2	16:J:898:HOH:O	2.39	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:31:ILE:HD11	2:P:133:GLY:C	2.37	0.49
6:T:203:GLU:O	6:T:206:LYS:HD2	2.13	0.49
10:X:112:GLN:NE2	10:X:126:ALA:H	2.10	0.49
4:D:215:ILE:C	4:D:215:ILE:CD1	2.85	0.49
2:P:101:LYS:HZ1	10:X:85:GLN:HE22	1.56	0.49
11:Y:114:ASP:C	11:Y:114:ASP:OD1	2.55	0.49
2:B:95:HIS:CD2	2:B:115:ARG:HG2	2.48	0.49
5:E:48:LEU:HD13	5:E:77:SER:HB3	1.94	0.49
12:L:21:ILE:HD13	12:L:21:ILE:O	2.11	0.49
5:S:74:MET:HE2	5:S:109:VAL:HG22	1.94	0.49
10:X:20:VAL:HG11	11:Y:120:LEU:HD11	1.94	0.49
11:Y:76:VAL:N	11:Y:106:GLU:OE2	2.43	0.49
12:Z:-7:ASN:HD22	12:Z:-6:PRO:N	2.10	0.49
12:Z:35:PHE:O	12:Z:42:VAL:HA	2.11	0.49
3:C:197:LEU:O	3:C:201:VAL:HG23	2.13	0.49
12:L:-2:ASN:C	12:L:21:ILE:HD12	2.38	0.49
13:M:37:VAL:HG11	13:M:79:ILE:HD13	1.94	0.49
11:Y:104:TYR:CE1	11:Y:180:GLU:OE2	2.65	0.49
12:Z:-6:PRO:O	13:1:91:ARG:NH1	2.37	0.49
12:Z:14(E):GLU:O	12:Z:14(F):PRO:C	2.55	0.49
13:1:130:GLY:O	13:1:134:ALA:HB3	2.13	0.49
2:B:229:ILE:O	2:B:233:LEU:HB2	2.12	0.49
4:D:42:THR:C	4:D:44:GLU:H	2.20	0.49
8:H:144:GLN:O	8:H:145:ASP:HB2	2.12	0.49
12:L:14(I):THR:HB	12:L:14(M):VAL:HG23	1.94	0.49
5:S:74:MET:HE2	5:S:109:VAL:HA	1.95	0.49
11:Y:16:VAL:HG21	11:Y:34:VAL:HG23	1.95	0.49
13:1:40:ASN:HD22	13:1:40:ASN:N	2.10	0.49
3:C:216:LYS:HD2	3:C:220:ASP:OD1	2.13	0.49
7:G:136:LEU:O	7:G:150:LYS:HA	2.12	0.49
12:L:134:ILE:HD11	12:L:162:ALA:HB2	1.94	0.49
3:Q:43:LYS:O	3:Q:43:LYS:HG2	2.12	0.49
8:H:112:SER:HG	8:H:120:ASP:HB2	1.78	0.49
11:K:200:LYS:HE2	16:K:1088:HOH:O	2.12	0.49
12:L:166:HIS:CD2	12:L:168:GLN:H	2.22	0.49
9:W:160:LEU:HD11	9:W:191:MET:HB3	1.93	0.49
11:Y:4:LEU:C	11:Y:4:LEU:HD22	2.38	0.49
2:B:101:LYS:HG3	9:I:57:GLU:HB3	1.95	0.49
3:C:99:HIS:CG	3:C:107:VAL:HG12	2.48	0.49
5:E:92:LEU:HD11	5:E:112:ALA:HB1	1.95	0.49
6:F:49:ALA:HA	6:F:211:GLU:O	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:19:LEU:HD21	13:M:26:LEU:HD22	1.95	0.49
14:N:143:ARG:NH2	14:N:146:MET:HE3	2.27	0.49
2:P:6:ARG:HG2	3:Q:10:ARG:HH21	1.76	0.49
6:T:158:TRP:CZ3	7:U:64:VAL:HA	2.48	0.49
2:B:112:LEU:HD23	2:B:112:LEU:C	2.38	0.48
16:B:328:HOH:O	3:C:87:ILE:HD11	2.11	0.48
8:H:84:LYS:HG3	8:H:85:GLN:N	2.27	0.48
13:M:84:ALA:HA	13:M:113:VAL:HG21	1.95	0.48
13:M:165:ARG:C	14:2:26:ILE:HG13	2.37	0.48
14:N:85:GLU:O	14:N:89:GLU:HB2	2.13	0.48
3:Q:21:ILE:N	3:Q:21:ILE:CD1	2.75	0.48
6:T:203:GLU:C	6:T:205:ASN:H	2.20	0.48
8:V:40:LYS:C	8:V:41:ILE:HD12	2.38	0.48
13:1:84:ALA:HA	13:1:113:VAL:HG21	1.95	0.48
1:A:8:TYR:HD2	7:G:128:TYR:HB3	1.78	0.48
9:I:48:LEU:HG	9:I:50:THR:HG22	1.95	0.48
5:S:48:LEU:HD13	5:S:77:SER:HB3	1.95	0.48
5:S:64:GLN:NE2	5:S:82:ALA:HB2	2.28	0.48
10:X:17:SER:HB2	10:X:170:PHE:HB2	1.95	0.48
11:Y:105:THR:OG1	11:Y:106:GLU:HG3	2.12	0.48
12:Z:40:ASN:ND2	16:Z:799:HOH:O	2.46	0.48
3:Q:99:HIS:CG	3:Q:107:VAL:HG12	2.48	0.48
3:Q:125:GLN:NE2	16:Q:872:HOH:O	2.45	0.48
8:V:152:ILE:HD11	8:V:177:VAL:HG22	1.96	0.48
3:C:65:SER:HB2	16:C:274:HOH:O	2.13	0.48
2:P:141:TYR:CD1	2:P:141:TYR:C	2.90	0.48
6:T:176:LEU:O	6:T:180:VAL:HG23	2.13	0.48
1:A:233:LEU:O	1:A:236:LEU:HB2	2.13	0.48
14:N:14:LEU:O	14:N:175:MET:HA	2.13	0.48
11:Y:38:ASN:OD1	11:Y:38:ASN:C	2.57	0.48
14:N:67:THR:HA	14:N:72:GLY:O	2.13	0.48
7:U:136:LEU:O	7:U:150:LYS:HA	2.13	0.48
1:A:97:HIS:CD2	8:H:61:SER:OG	2.66	0.48
2:B:97:GLN:NE2	9:I:64:ASN:HD22	2.10	0.48
6:F:67:ILE:HG12	6:F:211:GLU:OE1	2.13	0.48
6:F:198:TYR:HE2	6:F:237:GLN:HE21	1.62	0.48
12:L:4:LEU:HD13	12:L:138:LEU:HD21	1.94	0.48
16:L:352:HOH:O	13:M:139:ARG:HD3	2.13	0.48
3:Q:227:GLU:OE1	3:Q:227:GLU:N	2.43	0.48
12:Z:-7:ASN:C	12:Z:-7:ASN:ND2	2.66	0.48
14:2:14:LEU:O	14:2:175:MET:HA	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:122:GLY:C	2:B:124:THR:H	2.21	0.48
2:B:141:TYR:CD1	2:B:141:TYR:C	2.92	0.48
4:D:215:ILE:HD13	4:D:216:THR:N	2.28	0.48
8:H:38:SER:OG	8:H:41:ILE:HD13	2.13	0.48
9:I:160:LEU:HD11	9:I:191:MET:HB3	1.95	0.48
13:M:139:ARG:NH1	8:V:165:ASN:HD22	2.07	0.48
2:P:126:HIS:CB	3:Q:129:VAL:HG12	2.41	0.48
3:Q:158:SER:HB2	4:R:59:LEU:HD21	1.96	0.48
4:R:45:GLY:HA2	4:R:146:TYR:CE1	2.48	0.48
7:U:18(H):GLU:CD	7:U:18(H):GLU:N	2.72	0.48
8:V:35:HIS:CB	8:V:56:THR:HG21	2.42	0.48
10:J:123:PRO:HB2	10:J:124:TYR:CD1	2.49	0.48
14:2:66:TYR:CD2	14:2:74:PRO:HB3	2.48	0.48
3:C:33:ARG:NH1	3:C:33:ARG:CB	2.75	0.48
6:F:67:ILE:HB	6:F:223:PHE:HE2	1.77	0.48
8:H:175:VAL:HG12	8:H:176:CYS:N	2.28	0.48
12:L:33:LYS:HD2	12:L:46:ASN:ND2	2.29	0.48
2:P:136:PHE:O	2:P:150:THR:HA	2.14	0.48
6:F:109:ILE:HB	6:F:110:PRO:HD3	1.97	0.47
11:K:114:ASP:C	11:K:114:ASP:OD1	2.57	0.47
2:P:231:ASP:O	2:P:235:LYS:HG2	2.14	0.47
6:T:20(B):GLU:HG3	6:T:20(C):LYS:HG3	1.94	0.47
11:K:76:VAL:N	11:K:106:GLU:OE2	2.43	0.47
12:L:14(E):GLU:O	12:L:14(F):PRO:C	2.58	0.47
14:N:26:ILE:HG13	13:1:165:ARG:C	2.39	0.47
14:N:175:MET:HE3	14:N:18(B):PHE:CE2	2.49	0.47
1:O:86:ARG:NE	7:U:118:ASN:HD21	1.99	0.47
1:O:110:LYS:HG2	16:O:376:HOH:O	2.14	0.47
5:S:190:ILE:HG23	5:S:212:ILE:HD13	1.96	0.47
6:T:127:ASN:HD22	6:T:128:SER:N	2.12	0.47
14:2:85:GLU:O	14:2:89:GLU:HB2	2.14	0.47
2:B:90:ASN:O	2:B:94:ILE:HD12	2.14	0.47
4:D:45:GLY:HA2	4:D:146:TYR:CE1	2.49	0.47
2:P:112:LEU:HD23	2:P:112:LEU:C	2.39	0.47
4:R:85:ALA:O	4:R:89:ILE:HG12	2.13	0.47
6:T:109:ILE:HB	6:T:110:PRO:HD3	1.96	0.47
7:U:203:THR:HG22	7:U:204:GLU:O	2.14	0.47
10:X:13:ILE:CG2	10:X:155:LEU:HD11	2.44	0.47
3:C:173:ARG:O	3:C:177:GLU:HG3	2.13	0.47
10:J:18:LYS:HD3	10:J:174:ILE:HG12	1.96	0.47
11:K:10(A):ARG:HG2	11:K:10(A):ARG:NH1	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:66:TYR:CD2	14:N:74:PRO:HB3	2.50	0.47
1:O:10(A):ILE:HD13	1:O:10(A):ILE:N	2.28	0.47
4:R:12(G):GLU:HG2	4:R:125:GLU:H	1.80	0.47
7:U:18(H):GLU:CD	7:U:18(H):GLU:H	2.21	0.47
8:V:63:ILE:HG23	8:V:74:PRO:HB3	1.96	0.47
14:2:89:GLU:OE1	14:2:89:GLU:HA	2.14	0.47
14:2:175:MET:HB2	14:2:187:LEU:HB2	1.95	0.47
2:B:41:MET:HE3	16:B:253:HOH:O	2.15	0.47
2:B:238:ILE:HD13	2:B:238:ILE:N	2.27	0.47
9:I:104:ILE:HG21	9:I:181:LYS:HG2	1.96	0.47
12:L:114:ASP:OD2	12:L:115:PRO:HD2	2.15	0.47
3:Q:40:VAL:HG12	3:Q:162:ALA:HB1	1.97	0.47
3:Q:197:LEU:HB3	3:Q:210:ILE:HD13	1.96	0.47
4:R:67:ILE:HG22	4:R:221:PHE:HZ	1.78	0.47
6:T:175:GLU:OE1	6:T:199:LEU:HD23	2.14	0.47
7:U:82:ILE:N	7:U:83:PRO:HD2	2.29	0.47
9:W:66:TYR:CE1	9:W:70:GLU:HG3	2.50	0.47
11:Y:38:ASN:O	11:Y:40:PHE:N	2.48	0.47
1:A:33:GLN:HE21	1:A:33:GLN:CA	2.23	0.47
2:B:186:VAL:O	2:B:190:ILE:HG13	2.13	0.47
5:E:2(C):VAL:HA	5:E:233:ILE:HD11	1.96	0.47
12:L:3:ILE:HD13	12:L:46:ASN:HB2	1.96	0.47
2:P:81:LEU:HD23	2:P:133:GLY:HA3	1.96	0.47
2:P:224:PHE:HD2	2:P:224:PHE:N	2.13	0.47
3:Q:225:SER:HG	3:Q:228:GLU:HG3	1.80	0.47
11:Y:35:ILE:HG13	16:Y:521:HOH:O	2.14	0.47
13:1:125:LEU:HA	16:1:219:HOH:O	2.14	0.47
14:2:15:GLY:HA2	14:2:174:ARG:O	2.14	0.47
1:A:38:LEU:C	1:A:38:LEU:HD12	2.39	0.47
1:A:221:PHE:C	1:A:221:PHE:CD2	2.92	0.47
2:B:136:PHE:O	2:B:150:THR:HA	2.14	0.47
3:C:85:SER:O	3:C:89:ILE:HG13	2.14	0.47
16:E:574:HOH:O	6:F:131:PRO:HD3	2.15	0.47
7:G:8:TYR:C	7:G:10:ARG:N	2.73	0.47
7:G:49:ILE:HD12	7:G:212:VAL:HG22	1.96	0.47
7:G:203:THR:HG22	7:G:204:GLU:O	2.15	0.47
8:H:40:LYS:C	8:H:41:ILE:HD12	2.39	0.47
8:H:126:SER:O	8:H:127:LEU:HD23	2.14	0.47
10:J:85:GLN:HB3	16:J:201:HOH:O	2.14	0.47
10:J:112:GLN:NE2	10:J:126:ALA:H	2.12	0.47
12:L:137:PHE:CE1	12:L:141:GLN:HG3	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:38:LEU:C	1:O:38:LEU:HD12	2.40	0.47
1:O:233:LEU:O	1:O:236:LEU:HB2	2.14	0.47
4:R:101:LEU:CD1	11:Y:57:THR:HG22	2.44	0.47
5:S:2(C):VAL:HA	5:S:233:ILE:HD11	1.96	0.47
6:T:11:SER:HB3	6:T:14:VAL:HG23	1.97	0.47
7:U:212:VAL:HG23	7:U:229:ILE:HD13	1.95	0.47
10:X:12:VAL:CG2	10:X:108:PRO:HB2	2.45	0.47
12:Z:93:PHE:N	12:Z:94:PRO:HD3	2.30	0.47
12:Z:109:ALA:HB2	12:Z:121:ARG:NH2	2.30	0.47
13:1:9:ASP:OD1	13:1:10:ASN:N	2.48	0.47
14:2:67:THR:HA	14:2:72:GLY:O	2.15	0.47
14:2:107:LYS:CG	14:2:108:GLY:H	2.25	0.47
1:A:10(A):ILE:HD13	1:A:10(A):ILE:N	2.29	0.47
1:A:161:LYS:HD3	1:A:180:TRP:CZ3	2.49	0.47
3:C:163:GLN:HE22	3:C:173:ARG:NE	2.10	0.47
4:D:170:GLU:OE1	4:D:170:GLU:N	2.48	0.47
5:E:64:GLN:NE2	5:E:82:ALA:HB2	2.29	0.47
7:G:82:ILE:N	7:G:83:PRO:HD2	2.29	0.47
11:K:147:SER:C	11:K:149:GLU:N	2.72	0.47
1:O:214:ILE:C	1:O:215:ILE:HD13	2.39	0.47
2:P:101:LYS:HG3	9:W:57:GLU:HB3	1.97	0.47
5:S:134:VAL:O	5:S:153:PRO:HG3	2.15	0.47
6:T:69:VAL:HG12	16:T:811:HOH:O	2.14	0.47
10:X:113:ILE:CG1	10:X:119:LYS:HG3	2.45	0.47
10:X:113:ILE:HG12	10:X:119:LYS:HG3	1.96	0.47
14:2:3:ILE:HD12	14:2:3:ILE:O	2.15	0.47
14:2:3:ILE:CD1	14:2:127:ALA:HB3	2.44	0.47
4:D:12:VAL:CG2	4:D:12(A):GLY:HA2	2.45	0.47
9:I:104:ILE:HD13	9:I:108:PRO:HA	1.96	0.47
9:I:107:LYS:HA	9:I:108:PRO:HD3	1.81	0.47
2:P:6:ARG:HG2	3:Q:10:ARG:NH2	2.30	0.47
2:P:224:PHE:N	2:P:224:PHE:CD2	2.83	0.47
3:Q:197:LEU:HB3	3:Q:210:ILE:CD1	2.45	0.47
5:S:190:ILE:CG2	5:S:212:ILE:HD13	2.45	0.47
6:T:70:VAL:HG11	6:T:112:PHE:CE1	2.50	0.47
6:T:198:TYR:HE2	6:T:237:GLN:HE21	1.62	0.47
11:Y:10(B):LYS:N	11:Y:10(B):LYS:CD	2.61	0.47
13:1:-5:PRO:C	13:1:-4:ILE:HD12	2.40	0.47
1:A:58:LEU:HD12	7:G:173:THR:HG23	1.96	0.47
3:C:158:SER:CB	4:D:59:LEU:HD21	2.45	0.47
5:E:190:ILE:HG23	5:E:212:ILE:HD13	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:16:VAL:HG21	11:K:34:VAL:HG23	1.96	0.47
13:M:139:ARG:HH11	8:V:165:ASN:ND2	2.07	0.47
1:O:97:HIS:HD2	8:V:61:SER:OG	1.97	0.47
3:Q:105:ASP:OD2	3:Q:106:PRO:HD2	2.15	0.47
3:Q:163:GLN:HG3	3:Q:164:THR:N	2.30	0.47
5:S:76:LEU:HD23	5:S:76:LEU:C	2.40	0.47
6:T:36:THR:HB	6:T:168:GLY:H	1.80	0.47
6:T:67:ILE:HB	6:T:223:PHE:HE2	1.79	0.47
8:V:175:VAL:HG12	8:V:176:CYS:N	2.30	0.47
10:X:18:LYS:HD3	10:X:174:ILE:HG12	1.97	0.47
10:X:44:SER:HG	10:X:100:LEU:HB2	1.79	0.47
2:B:149:TYR:OH	3:C:62(A):ILE:HB	2.15	0.46
3:C:40:VAL:HG12	3:C:162:ALA:HB1	1.97	0.46
3:C:201:VAL:HG21	3:C:210:ILE:HD11	1.97	0.46
4:D:67:ILE:HG22	4:D:221:PHE:HZ	1.80	0.46
4:D:161:ASN:HB3	4:D:180:TRP:CE2	2.50	0.46
8:H:5:GLY:O	8:H:124:TYR:HA	2.15	0.46
11:K:38:ASN:O	11:K:40:PHE:N	2.48	0.46
3:C:70:ILE:HD13	3:C:70:ILE:N	2.30	0.46
3:C:191:LYS:CG	3:C:236:ILE:HD11	2.42	0.46
4:D:156:THR:HG22	5:E:83:PRO:HD3	1.97	0.46
5:E:76:LEU:HD23	5:E:76:LEU:C	2.40	0.46
6:F:36:THR:HB	6:F:168:GLY:H	1.79	0.46
6:F:95:GLU:CG	6:F:115:ARG:HB3	2.31	0.46
7:G:76:MET:HE3	7:G:78:VAL:CG2	2.46	0.46
10:J:20:VAL:HG11	11:K:120:LEU:HD11	1.96	0.46
10:J:113:ILE:HG12	10:J:119:LYS:HG3	1.97	0.46
11:K:38:ASN:C	11:K:38:ASN:OD1	2.57	0.46
1:O:161:LYS:HD3	1:O:180:TRP:CZ3	2.50	0.46
3:Q:29:GLU:OE2	3:Q:32:LYS:HE2	2.15	0.46
9:W:104:ILE:HG21	9:W:181:LYS:HG2	1.98	0.46
12:Z:-9:GLN:HE21	13:1:-8:THR:HG21	1.80	0.46
14:2:20:THR:OG1	14:2:28:ASN:HB3	2.15	0.46
14:2:174:ARG:HD2	16:2:307:HOH:O	2.15	0.46
2:B:81:LEU:HD23	2:B:133:GLY:HA3	1.97	0.46
6:F:127:ASN:HD22	6:F:128:SER:N	2.13	0.46
11:K:152:LEU:HD22	11:K:175:LEU:HD13	1.97	0.46
12:L:35:PHE:O	12:L:42:VAL:HA	2.16	0.46
1:O:221:PHE:CD2	1:O:221:PHE:C	2.92	0.46
8:V:152:ILE:HD11	8:V:177:VAL:CG2	2.46	0.46
1:A:40:ILE:N	1:A:40:ILE:HD12	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4:GLY:HA3	5:E:127:TYR:CE1	2.50	0.46
4:D:185:THR:OG1	4:D:188:GLU:HG3	2.14	0.46
5:E:2(B):THR:N	5:E:2(E):ASN:HD22	2.09	0.46
10:J:162:LEU:O	10:J:166:MET:HB2	2.15	0.46
12:L:109:ALA:HB2	12:L:121:ARG:NH2	2.30	0.46
1:O:21(G):LEU:HD23	1:O:21(I):TYR:O	2.16	0.46
5:S:4:PHE:CG	5:S:5:ARG:N	2.83	0.46
5:S:35:SER:HB3	5:S:66:LYS:NZ	2.30	0.46
6:T:127:ASN:C	6:T:127:ASN:ND2	2.73	0.46
10:X:190:PHE:C	10:X:192:ALA:H	2.23	0.46
11:Y:195:LEU:O	11:Y:199:VAL:HG23	2.15	0.46
12:Z:99:THR:HG23	16:Z:231:HOH:O	2.15	0.46
13:1:6:MET:CG	13:1:155:ILE:HD11	2.36	0.46
2:B:146:TYR:OH	2:B:21(A):LYS:HB2	2.16	0.46
6:F:50:VAL:HG22	6:F:51:GLU:N	2.30	0.46
16:H:953:HOH:O	9:I:153:GLU:HB2	2.16	0.46
10:J:34:THR:HG21	10:J:176:LYS:NZ	2.30	0.46
12:L:-9:GLN:HE21	13:M:-8:THR:HG21	1.80	0.46
4:R:12:VAL:CG2	4:R:12(A):GLY:HA2	2.45	0.46
4:R:81:LEU:HD12	4:R:133:GLY:HA3	1.97	0.46
6:T:49:ALA:HA	6:T:211:GLU:O	2.16	0.46
6:T:101:LYS:NZ	14:2:85:GLU:OE1	2.46	0.46
6:T:162:GLY:O	7:U:58:LEU:HB3	2.16	0.46
2:B:107:ILE:HD13	2:B:112:LEU:HB2	1.98	0.46
3:C:97:GLN:NE2	16:C:255:HOH:O	2.46	0.46
3:C:161:SER:HB3	3:C:180:TYR:CE1	2.50	0.46
6:F:162:GLY:O	7:G:58:LEU:HB3	2.15	0.46
9:I:124:PHE:C	9:I:125:ILE:HD13	2.40	0.46
11:K:4:LEU:HD22	11:K:4:LEU:C	2.41	0.46
11:K:209:VAL:HG13	16:W:348:HOH:O	2.16	0.46
13:M:112:TYR:C	13:M:112:TYR:CD2	2.94	0.46
14:N:92:ASP:HB2	16:N:197:HOH:O	2.16	0.46
2:P:51:GLU:OE2	2:P:202:THR:HG23	2.16	0.46
6:T:101:LYS:HE2	13:1:57:ARG:NH2	2.30	0.46
13:1:205:GLY:HA3	13:1:209:GLN:HB3	1.98	0.46
6:F:107:ILE:HA	6:F:108:PRO:HD3	1.81	0.46
7:G:212:VAL:HB	7:G:224:LEU:HD12	1.96	0.46
11:K:140:SER:OG	10:X:137:LEU:HD21	2.15	0.46
3:Q:194:VAL:O	3:Q:198:LEU:HG	2.16	0.46
3:Q:216:LYS:HD2	3:Q:220:ASP:OD1	2.15	0.46
5:S:31:ILE:HD11	5:S:153:PRO:CD	2.45	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:144:GLN:O	8:V:145:ASP:HB2	2.15	0.46
14:2:175:MET:HE3	14:2:18(B):PHE:CE2	2.51	0.46
2:B:6:ARG:HB2	5:E:127:TYR:OH	2.16	0.46
2:B:6:ARG:HG2	3:C:10:ARG:HH21	1.81	0.46
2:B:224:PHE:N	2:B:224:PHE:CD2	2.83	0.46
6:F:103:TYR:O	6:F:104:LYS:HB3	2.16	0.46
7:G:18(H):GLU:CD	7:G:18(H):GLU:N	2.74	0.46
14:N:175:MET:HB2	14:N:187:LEU:HB2	1.98	0.46
4:R:207:LEU:HD23	4:R:207:LEU:C	2.41	0.46
10:X:100:LEU:CD2	10:X:112:GLN:HG3	2.46	0.46
3:C:185:THR:CG2	3:C:186:VAL:N	2.79	0.46
7:G:72:ARG:NH1	7:G:72:ARG:HB2	2.31	0.46
10:J:166:MET:HE3	10:J:166:MET:HB3	1.72	0.46
2:P:202:THR:CG2	2:P:204:SER:HB2	2.46	0.46
8:V:173:VAL:HB	8:V:192:LEU:HB2	1.98	0.46
12:Z:137:PHE:CE1	12:Z:141:GLN:HG3	2.51	0.46
13:1:14(C):ARG:CG	13:1:14(C):ARG:NH1	2.77	0.46
3:C:194:VAL:O	3:C:198:LEU:HG	2.15	0.46
4:D:81:LEU:HD12	4:D:133:GLY:HA3	1.98	0.46
5:E:4:PHE:CG	5:E:5:ARG:N	2.83	0.46
6:F:157:TYR:CD1	6:F:157:TYR:C	2.94	0.46
8:H:105:ASP:HB2	8:H:10(A):PRO:HD2	1.98	0.46
9:I:20:LEU:HD13	9:I:20:LEU:C	2.41	0.46
13:M:157:ASN:ND2	16:M:1332:HOH:O	2.48	0.46
7:U:18(G):GLU:HG2	7:U:188:LYS:HB3	1.98	0.46
8:V:90:TYR:CG	8:V:95:ILE:HD13	2.51	0.46
13:1:14(A):VAL:HG23	13:1:14(A):VAL:O	2.16	0.46
2:B:224:PHE:N	2:B:224:PHE:HD2	2.13	0.45
6:F:74:ILE:CD1	6:F:109:ILE:HD12	2.46	0.45
13:M:9:ASP:OD1	13:M:10:ASN:N	2.50	0.45
13:M:14(A):VAL:HG23	13:M:14(A):VAL:O	2.17	0.45
13:M:205:GLY:HA3	13:M:209:GLN:HB3	1.98	0.45
1:O:62:GLU:CD	1:O:62:GLU:H	2.24	0.45
2:P:225:LYS:HG3	2:P:228:GLU:OE1	2.16	0.45
4:R:161:ASN:HB3	4:R:180:TRP:CE2	2.52	0.45
5:S:76:LEU:HD23	5:S:76:LEU:O	2.16	0.45
6:T:50:VAL:HG22	6:T:51:GLU:N	2.31	0.45
11:Y:2:THR:HG21	11:Y:162:ALA:CB	2.46	0.45
11:Y:147:SER:C	11:Y:149:GLU:N	2.71	0.45
3:C:105:ASP:OD2	3:C:106:PRO:HD2	2.16	0.45
4:D:117:CYS:SG	4:D:157:PHE:HB3	2.57	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:31:ILE:HD11	5:E:153:PRO:CD	2.46	0.45
5:E:190:ILE:CG2	5:E:212:ILE:HD13	2.45	0.45
10:J:12:VAL:CG2	10:J:108:PRO:HB2	2.46	0.45
13:M:150:VAL:HG21	16:M:1069:HOH:O	2.16	0.45
14:N:163:ILE:HG23	14:N:170:GLY:HA2	1.97	0.45
5:S:67:ILE:HG21	5:S:213:ALA:HB2	1.99	0.45
16:S:656:HOH:O	6:T:12:ASN:HB2	2.16	0.45
9:W:33:LYS:O	9:W:44:GLY:HA2	2.15	0.45
6:F:11:SER:HB3	6:F:14:VAL:HG23	1.98	0.45
6:F:203:GLU:O	6:F:206:LYS:HD2	2.15	0.45
8:H:50:ALA:HB2	9:I:118:CYS:HB2	1.98	0.45
13:M:19:LEU:HB2	13:M:170:SER:HB2	1.99	0.45
13:M:130:GLY:O	13:M:134:ALA:HB3	2.16	0.45
14:N:3:ILE:C	14:N:3:ILE:CD1	2.88	0.45
13:1:19:LEU:HB2	13:1:170:SER:HB2	1.98	0.45
14:2:143:ARG:NH2	14:2:146:MET:HE3	2.32	0.45
2:B:160:TRP:HA	3:C:59:GLN:HA	1.98	0.45
2:B:202:THR:CG2	2:B:204:SER:HB2	2.46	0.45
8:V:105:ASP:HB2	8:V:10(A):PRO:CD	2.46	0.45
10:X:35:ARG:NH1	10:X:57:GLU:CG	2.80	0.45
4:D:12(G):GLU:HG2	4:D:125:GLU:H	1.81	0.45
9:I:33:LYS:O	9:I:44:GLY:HA2	2.17	0.45
10:J:165:ARG:O	10:X:26:VAL:HG23	2.17	0.45
12:L:17:ASP:HA	12:L:172:GLY:O	2.16	0.45
14:N:3:ILE:HG12	14:N:44:CYS:HB3	1.98	0.45
5:S:36:VAL:HG22	5:S:37:THR:N	2.32	0.45
6:T:103:TYR:O	6:T:104:LYS:HB3	2.15	0.45
8:V:105:ASP:HB2	8:V:10(A):PRO:HD2	1.98	0.45
9:W:61:TYR:CD1	9:W:61:TYR:C	2.94	0.45
11:Y:7:ARG:HH11	11:Y:108:PRO:HB2	1.81	0.45
12:Z:17:ASP:HA	12:Z:172:GLY:O	2.17	0.45
9:I:88:TYR:CE1	9:I:91:ARG:HD3	2.51	0.45
10:J:113:ILE:CG1	10:J:119:LYS:HG3	2.46	0.45
11:K:7:ARG:HH11	11:K:108:PRO:HB2	1.81	0.45
13:M:40:ASN:H	13:M:40:ASN:ND2	2.14	0.45
14:N:20:THR:OG1	14:N:28:ASN:HB3	2.17	0.45
14:N:94:ASN:ND2	16:N:946:HOH:O	2.39	0.45
1:O:29:THR:O	1:O:33:GLN:HG2	2.15	0.45
3:Q:163:GLN:HE22	3:Q:173:ARG:NE	2.09	0.45
5:S:162:GLY:O	5:S:163:THR:HB	2.16	0.45
6:T:49:ALA:CB	6:T:197:ILE:HD11	2.46	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:41:ILE:HG13	8:V:76:VAL:HG22	1.99	0.45
13:1:42:VAL:CG2	13:1:178:ILE:HD11	2.47	0.45
13:1:104:VAL:CG2	13:1:178:ILE:HG22	2.42	0.45
14:2:3:ILE:O	14:2:3:ILE:HD13	2.16	0.45
1:A:39:GLY:HA2	1:A:47:VAL:O	2.17	0.45
2:B:38:ILE:HD12	2:B:197:LEU:HG	1.97	0.45
3:C:163:GLN:HG3	3:C:164:THR:N	2.31	0.45
4:D:85:ALA:O	4:D:89:ILE:HG12	2.16	0.45
5:E:36:VAL:HG22	5:E:37:THR:N	2.32	0.45
7:G:212:VAL:HG23	7:G:229:ILE:HD13	1.98	0.45
8:H:41:ILE:HG13	8:H:76:VAL:HG22	1.99	0.45
8:H:90:TYR:CG	8:H:95:ILE:HD13	2.52	0.45
9:I:58:MET:O	9:I:61:TYR:HB3	2.17	0.45
10:J:190:PHE:C	10:J:192:ALA:H	2.24	0.45
1:O:39:GLY:HA2	1:O:47:VAL:O	2.16	0.45
3:Q:164:THR:HG21	3:Q:172:VAL:HG13	1.98	0.45
5:S:180:LEU:HA	5:S:18(C):PHE:CE2	2.52	0.45
8:V:126:SER:O	8:V:127:LEU:HD23	2.17	0.45
9:W:20:LEU:C	9:W:20:LEU:HD13	2.41	0.45
11:Y:6:PHE:HA	11:Y:123:ASP:O	2.16	0.45
12:Z:33:LYS:HD2	12:Z:46:ASN:ND2	2.31	0.45
13:1:104:VAL:HG23	13:1:178:ILE:CG2	2.43	0.45
5:E:231:LYS:H	5:E:231:LYS:HD2	1.81	0.45
8:H:95:ILE:HB	16:H:234:HOH:O	2.16	0.45
12:L:5:GLY:O	12:L:124:CYS:HA	2.17	0.45
1:O:122:GLU:C	1:O:124:THR:H	2.24	0.45
1:O:212:LEU:HD22	1:O:224:LEU:HD12	1.99	0.45
3:Q:185:THR:CG2	3:Q:186:VAL:N	2.79	0.45
8:V:137:VAL:HG21	8:V:161:ALA:HB2	1.98	0.45
9:W:99:PRO:HB2	9:W:113:PHE:CD2	2.52	0.45
13:1:112:TYR:C	13:1:112:TYR:CD2	2.93	0.45
14:2:3:ILE:HD12	14:2:3:ILE:N	2.29	0.45
3:C:177:GLU:OE2	4:D:57:PRO:HD2	2.17	0.45
7:G:18(H):GLU:CD	7:G:18(H):GLU:H	2.24	0.45
8:H:63:ILE:HG23	8:H:74:PRO:HB3	1.97	0.45
11:K:2:THR:HG21	11:K:162:ALA:CB	2.46	0.45
12:L:82:ASN:C	12:L:82:ASN:HD22	2.25	0.45
1:O:40:ILE:N	1:O:40:ILE:HD12	2.31	0.45
2:P:67:LEU:HD23	2:P:213:ALA:HB2	1.98	0.45
2:P:90:ASN:O	2:P:94:ILE:HD12	2.17	0.45
3:Q:177:GLU:OE2	4:R:57:PRO:HD2	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:226:SER:HB2	3:Q:227:GLU:OE1	2.17	0.45
6:T:45:GLY:HA3	6:T:215:CYS:O	2.16	0.45
6:T:49:ALA:HB1	6:T:197:ILE:CD1	2.47	0.45
11:Y:4:LEU:C	11:Y:4:LEU:CD2	2.90	0.45
1:A:29:THR:O	1:A:33:GLN:HG2	2.17	0.45
2:B:101:LYS:NZ	10:J:85:GLN:HE22	2.15	0.45
5:E:180:LEU:HA	5:E:18(C):PHE:CE2	2.52	0.45
6:F:101:LYS:HE2	13:M:57:ARG:NH2	2.32	0.45
9:I:14:ILE:CG1	9:I:34:ILE:HD12	2.40	0.45
13:M:148:VAL:HG23	16:M:502:HOH:O	2.17	0.45
2:P:121:GLN:NE2	16:P:462:HOH:O	2.48	0.45
1:A:86:ARG:HH21	7:G:118:ASN:ND2	2.13	0.44
4:D:45:GLY:HA2	4:D:146:TYR:CD1	2.52	0.44
16:F:306:HOH:O	7:G:86:ARG:HD2	2.16	0.44
4:R:45:GLY:HA2	4:R:146:TYR:CD1	2.52	0.44
5:S:77:SER:OG	5:S:137:LEU:HB2	2.18	0.44
11:Y:152:LEU:HD22	11:Y:175:LEU:HD13	1.99	0.44
13:I:202:ASP:HA	16:I:1172:HOH:O	2.16	0.44
2:B:173:GLN:HG2	3:C:56:LEU:HD12	1.99	0.44
2:B:181:LYS:HG3	2:B:184:MET:HG3	1.99	0.44
4:D:17:PRO:HD2	16:D:1171:HOH:O	2.17	0.44
8:H:207:PRO:HG2	8:H:210:THR:OG1	2.17	0.44
9:I:66:TYR:CE1	9:I:70:GLU:HG3	2.51	0.44
10:X:6:ILE:CD1	10:X:154:LEU:HD23	2.47	0.44
12:Z:5:GLY:O	12:Z:124:CYS:HA	2.16	0.44
5:E:35:SER:HB3	5:E:66:LYS:NZ	2.30	0.44
5:E:74:MET:HE2	5:E:109:VAL:HA	1.99	0.44
5:E:220:PRO:O	5:E:222:THR:HG23	2.17	0.44
8:H:105:ASP:HB2	8:H:10(A):PRO:CD	2.47	0.44
3:Q:40:VAL:HG23	3:Q:189:CYS:SG	2.57	0.44
6:T:32:GLU:HB3	6:T:169:ARG:NH2	2.33	0.44
6:T:157:TYR:CD1	6:T:157:TYR:C	2.95	0.44
7:U:212:VAL:HB	7:U:224:LEU:HD12	2.00	0.44
11:Y:17:ASP:CG	11:Y:33:LYS:HZ2	2.25	0.44
12:Z:-2:ASN:HA	12:Z:21:ILE:O	2.17	0.44
5:E:223:ILE:N	5:E:223:ILE:CD1	2.80	0.44
6:F:49:ALA:CB	6:F:197:ILE:HD11	2.47	0.44
8:H:173:VAL:HB	8:H:192:LEU:HB2	1.98	0.44
12:L:109:ALA:HA	16:L:975:HOH:O	2.16	0.44
3:Q:71:ASP:HA	10:X:68:ILE:CD1	2.46	0.44
5:S:197:ILE:HG23	5:S:198:SER:N	2.33	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:35:THR:CG2	6:T:36:THR:N	2.81	0.44
10:X:6:ILE:HD13	10:X:154:LEU:HD23	2.00	0.44
10:X:18:LYS:HG2	10:X:174:ILE:HG13	1.99	0.44
2:B:231:ASP:O	2:B:235:LYS:HG2	2.18	0.44
7:G:177:GLU:O	7:G:17(B):LYS:HG3	2.18	0.44
11:K:99:THR:CG2	11:K:113:VAL:HB	2.48	0.44
13:M:165:ARG:O	14:2:26:ILE:HG13	2.18	0.44
14:N:15:GLY:HA2	14:N:174:ARG:O	2.16	0.44
2:P:95:HIS:CD2	2:P:115:ARG:HG2	2.52	0.44
2:P:225:LYS:O	2:P:226:PRO:C	2.59	0.44
10:X:35:ARG:HH11	10:X:57:GLU:HG2	1.83	0.44
10:X:162:LEU:O	10:X:166:MET:HB2	2.18	0.44
14:2:116:GLY:HA3	16:2:192:HOH:O	2.18	0.44
1:A:92:SER:OG	1:A:116:VAL:HG22	2.17	0.44
1:A:214:ILE:C	1:A:215:ILE:HD13	2.42	0.44
4:D:207:LEU:HD23	4:D:233:ILE:HD13	1.99	0.44
5:E:45:HIS:CD2	5:E:214:ILE:HD11	2.52	0.44
6:F:136:THR:O	6:F:150:MET:HA	2.18	0.44
7:G:212:VAL:HG23	7:G:229:ILE:CD1	2.48	0.44
10:J:2:ILE:N	10:J:2:ILE:CD1	2.81	0.44
11:K:6:PHE:HA	11:K:123:ASP:O	2.17	0.44
7:U:8:TYR:C	7:U:10:ARG:N	2.74	0.44
7:U:168:LYS:O	7:U:172:ILE:HG13	2.16	0.44
3:C:197:LEU:HB3	3:C:210:ILE:CD1	2.48	0.44
5:E:76:LEU:HD23	5:E:76:LEU:O	2.18	0.44
2:P:113:VAL:HG22	2:P:138:TYR:CG	2.53	0.44
3:Q:41:LYS:HD3	3:Q:161:SER:HA	2.00	0.44
3:Q:186:VAL:HG13	3:Q:214:VAL:HG11	1.99	0.44
4:R:170:GLU:OE1	4:R:170:GLU:N	2.49	0.44
5:S:58:LEU:N	5:S:58:LEU:HD12	2.33	0.44
5:S:90:ASN:O	5:S:94:GLN:HG3	2.18	0.44
6:T:100:LYS:O	6:T:104:LYS:N	2.49	0.44
7:U:151:THR:HG22	7:U:157:TYR:HB2	2.00	0.44
8:V:174:ASP:OD2	8:V:189:ARG:NH1	2.48	0.44
2:B:225:LYS:O	2:B:226:PRO:C	2.59	0.44
8:H:8:PHE:HB3	8:H:151:ALA:HB2	2.00	0.44
8:H:195:ASN:HB3	12:Z:192:LYS:HE3	2.00	0.44
10:J:133:TYR:CE2	10:J:166:MET:SD	3.10	0.44
12:L:93:PHE:N	12:L:94:PRO:HD3	2.32	0.44
16:L:200:HOH:O	9:W:192:ARG:HG3	2.18	0.44
4:R:40:ILE:HG13	4:R:193:VAL:HG23	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:5:GLY:O	8:V:124:TYR:HA	2.17	0.44
10:X:123:PRO:HB2	10:X:124:TYR:CD1	2.52	0.44
2:B:190:ILE:HG21	2:B:232:ILE:HD11	2.00	0.44
2:B:213:ALA:HA	2:B:222:LYS:O	2.17	0.44
3:C:160:TRP:NE1	4:D:59:LEU:HD23	2.33	0.44
10:J:12:VAL:HG23	10:J:108:PRO:HB2	2.00	0.44
10:J:24:ILE:HD11	10:X:129:TYR:HB3	2.00	0.44
10:J:35:ARG:HH11	10:J:57:GLU:HG2	1.83	0.44
10:J:136:SER:N	16:J:198:HOH:O	2.44	0.44
11:K:4:LEU:HD13	11:K:159:ILE:HD11	1.99	0.44
12:L:185:ARG:NH1	16:L:1161:HOH:O	2.46	0.44
14:N:89:GLU:OE1	14:N:89:GLU:HA	2.17	0.44
3:Q:161:SER:HB3	3:Q:180:TYR:CE1	2.52	0.44
5:S:45:HIS:CD2	5:S:214:ILE:HD11	2.53	0.44
7:U:78:VAL:HG11	7:U:85:ALA:CB	2.48	0.44
13:1:49:ILE:O	13:1:53:GLN:HG3	2.17	0.44
2:B:225:LYS:HG3	2:B:228:GLU:OE1	2.17	0.43
5:E:161:TYR:CE2	6:F:60:VAL:HA	2.53	0.43
6:F:45:GLY:HA3	6:F:215:CYS:O	2.17	0.43
8:H:147:THR:OG1	8:H:150:GLU:HG3	2.17	0.43
14:N:3:ILE:N	14:N:3:ILE:CD1	2.81	0.43
6:T:136:THR:O	6:T:150:MET:HA	2.17	0.43
4:D:207:LEU:HD23	4:D:207:LEU:C	2.42	0.43
6:F:43:ASN:N	6:F:43:ASN:HD22	2.16	0.43
7:G:151:THR:HG22	7:G:157:TYR:HB2	2.01	0.43
5:S:2(C):VAL:CG1	5:S:2(D):ASP:N	2.82	0.43
6:T:192:GLN:HE21	6:T:195:LYS:CE	2.31	0.43
11:Y:126:CYS:HB2	11:Y:135:TYR:CE1	2.53	0.43
1:A:86:ARG:NE	7:G:118:ASN:HD21	2.00	0.43
1:A:140:GLY:HA2	1:A:215:ILE:HG13	2.00	0.43
4:D:40:ILE:HG13	4:D:193:VAL:HG23	1.99	0.43
6:F:175:GLU:OE1	6:F:199:LEU:HD23	2.17	0.43
8:H:72:ARG:HH11	8:H:72:ARG:HG3	1.82	0.43
9:I:10(C):SER:C	9:I:107:LYS:H	2.27	0.43
3:Q:70:ILE:N	3:Q:70:ILE:HD13	2.33	0.43
8:V:37:ILE:HB	8:V:41:ILE:HG22	1.99	0.43
9:W:13:ALA:HA	9:W:176:TYR:O	2.18	0.43
9:W:124:PHE:C	9:W:125:ILE:HD13	2.43	0.43
1:A:62:GLU:CD	1:A:62:GLU:H	2.25	0.43
1:A:236:LEU:C	1:A:236:LEU:HD13	2.44	0.43
3:C:57:LYS:HD2	3:C:57:LYS:C	2.44	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:226:SER:HB2	3:C:227:GLU:OE1	2.18	0.43
8:H:137:VAL:HG21	8:H:161:ALA:HB2	2.01	0.43
8:H:152:ILE:HD11	8:H:177:VAL:HG22	2.00	0.43
9:I:99:PRO:HB2	9:I:113:PHE:CD2	2.53	0.43
10:J:100:LEU:CD2	10:J:112:GLN:HG3	2.47	0.43
11:K:45:MET:HB3	11:K:52:CYS:HB3	1.99	0.43
12:L:-7:ASN:HD22	12:L:-6:PRO:CD	2.32	0.43
3:Q:57:LYS:HD2	3:Q:57:LYS:C	2.43	0.43
5:S:41:ARG:NH1	5:S:42:SER:O	2.52	0.43
8:V:172:ASN:ND2	8:V:193:THR:HA	2.32	0.43
8:V:207:PRO:HG2	8:V:210:THR:OG1	2.18	0.43
2:B:121:GLN:NE2	2:B:121:GLN:C	2.77	0.43
6:F:20(B):GLU:HG3	6:F:20(C):LYS:N	2.33	0.43
7:G:224:LEU:HB3	7:G:228:ASN:HB2	2.00	0.43
9:I:122:ALA:HB3	9:I:125:ILE:CD1	2.49	0.43
12:L:192:LYS:HE3	8:V:195:ASN:HB3	2.01	0.43
1:O:102:ARG:C	1:O:10(A):ILE:HD13	2.43	0.43
2:P:121:GLN:NE2	2:P:121:GLN:C	2.77	0.43
5:S:231:LYS:H	5:S:231:LYS:HD2	1.83	0.43
10:X:12:VAL:HG23	10:X:108:PRO:HB2	1.99	0.43
11:Y:10(A):ARG:H	11:Y:10(B):LYS:HZ2	1.67	0.43
1:A:62:GLU:C	1:A:64:LEU:N	2.76	0.43
5:E:45:HIS:HD2	5:E:214:ILE:HD11	1.83	0.43
5:E:162:GLY:O	5:E:163:THR:HB	2.18	0.43
13:M:42:VAL:CG2	13:M:178:ILE:HD11	2.49	0.43
13:M:49:ILE:O	13:M:53:GLN:HG3	2.19	0.43
2:P:196:THR:O	2:P:200:THR:HG23	2.19	0.43
9:W:130:ALA:HB2	9:W:166:ASP:CB	2.49	0.43
11:Y:45:MET:HB3	11:Y:52:CYS:HB3	2.00	0.43
12:Z:170:GLY:O	12:Z:171:ASP:HB2	2.18	0.43
1:A:122:GLU:C	1:A:124:THR:H	2.26	0.43
3:C:29:GLU:OE2	3:C:32:LYS:HE2	2.19	0.43
6:F:70:VAL:HG11	6:F:112:PHE:CE1	2.52	0.43
7:G:78:VAL:HG11	7:G:85:ALA:CB	2.49	0.43
11:K:10(A):ARG:H	11:K:10(B):LYS:NZ	2.17	0.43
11:K:195:LEU:O	11:K:199:VAL:HG23	2.18	0.43
2:P:146:TYR:OH	2:P:21(A):LYS:HB2	2.18	0.43
2:P:181:LYS:HG3	2:P:184:MET:HG3	2.00	0.43
2:P:231:ASP:C	2:P:233:LEU:N	2.75	0.43
3:Q:169:SER:HA	3:Q:172:VAL:CG1	2.48	0.43
5:S:45:HIS:HD2	5:S:214:ILE:HD11	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:20(B):GLU:HG3	6:T:20(C):LYS:N	2.33	0.43
7:U:224:LEU:HB3	7:U:228:ASN:HB2	2.01	0.43
11:Y:50:ALA:CB	12:Z:116:VAL:HG23	2.49	0.43
12:Z:40:ASN:HD22	12:Z:40:ASN:HA	1.67	0.43
1:A:51:GLU:OE1	1:A:202:VAL:HG22	2.18	0.43
2:B:113:VAL:HG22	2:B:138:TYR:CG	2.54	0.43
5:E:2(C):VAL:CG1	5:E:2(D):ASP:N	2.82	0.43
8:H:196:VAL:HG23	16:H:520:HOH:O	2.18	0.43
9:I:13:ALA:HA	9:I:176:TYR:O	2.18	0.43
11:K:37:ILE:HB	11:K:41:LEU:CB	2.42	0.43
14:N:107:LYS:CG	14:N:108:GLY:H	2.26	0.43
4:R:207:LEU:HD23	4:R:233:ILE:HD13	2.00	0.43
6:T:43:ASN:HD22	6:T:43:ASN:N	2.17	0.43
6:T:192:GLN:NE2	6:T:195:LYS:CE	2.82	0.43
7:U:29:LYS:HD2	7:U:29:LYS:HA	1.79	0.43
8:V:147:THR:OG1	8:V:150:GLU:HG3	2.19	0.43
2:B:231:ASP:C	2:B:233:LEU:N	2.77	0.43
4:D:177:LEU:CD2	5:E:58:LEU:HD13	2.46	0.43
4:D:215:ILE:HG23	4:D:215:ILE:O	2.18	0.43
5:E:58:LEU:HD12	5:E:58:LEU:N	2.33	0.43
5:E:77:SER:OG	5:E:137:LEU:HB2	2.18	0.43
6:F:176:LEU:O	6:F:180:VAL:HG23	2.18	0.43
9:I:90:ARG:HA	9:I:90:ARG:HH11	1.84	0.43
11:K:40:PHE:CD1	11:K:73:ARG:NH1	2.87	0.43
14:N:26:ILE:HB	13:1:165:ARG:HA	2.01	0.43
14:N:113:ILE:HD12	14:N:113:ILE:N	2.34	0.43
1:O:49:ALA:HB2	1:O:212:LEU:HG	2.01	0.43
3:Q:55:THR:C	3:Q:56:LEU:HD22	2.44	0.43
3:Q:190:VAL:O	3:Q:194:VAL:HG23	2.18	0.43
5:S:201:LEU:O	5:S:202:ARG:CB	2.65	0.43
6:T:210:LEU:HD21	6:T:212:ILE:HD11	2.00	0.43
9:W:58:MET:O	9:W:61:TYR:HB3	2.19	0.43
11:Y:4:LEU:HD13	11:Y:159:ILE:HD11	2.01	0.43
14:2:19:ARG:NE	14:2:26:ILE:HD13	2.34	0.43
3:C:164:THR:HG21	3:C:172:VAL:HG13	2.00	0.43
9:I:61:TYR:CD1	9:I:61:TYR:C	2.97	0.43
12:L:113:PHE:N	12:L:113:PHE:CD1	2.86	0.43
2:P:34:ALA:HB1	16:P:1134:HOH:O	2.17	0.43
10:X:133:TYR:CE2	10:X:166:MET:SD	3.12	0.43
11:Y:4:LEU:CD1	11:Y:159:ILE:HG12	2.49	0.43
11:Y:25:TRP:CH2	12:Z:132:SER:HA	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:10(A):ARG:HG2	11:Y:10(A):ARG:NH1	2.28	0.43
12:Z:134:ILE:HD13	12:Z:158:SER:HB3	2.01	0.43
12:Z:148:VAL:O	12:Z:152:ILE:HG13	2.19	0.43
5:E:111:ARG:HG2	5:E:111:ARG:HH11	1.84	0.42
7:G:172:ILE:CD1	7:G:197:MET:HE1	2.49	0.42
7:G:232:ARG:NE	7:G:232:ARG:HA	2.33	0.42
8:H:116:HIS:HB2	16:H:324:HOH:O	2.19	0.42
10:J:52:THR:HG22	10:J:53:VAL:HG23	2.01	0.42
10:J:190:PHE:C	10:J:192:ALA:N	2.77	0.42
5:S:160:LEU:CD2	6:T:59:LEU:HD12	2.49	0.42
3:C:186:VAL:HG13	3:C:214:VAL:HG11	2.00	0.42
3:C:197:LEU:HB3	3:C:210:ILE:HD13	2.01	0.42
5:E:197:ILE:HG23	5:E:198:SER:N	2.33	0.42
7:G:67:ILE:N	7:G:67:ILE:HD12	2.34	0.42
1:O:27:ALA:O	1:O:31:VAL:HG23	2.18	0.42
4:R:215:ILE:O	4:R:215:ILE:HG23	2.19	0.42
5:S:4:PHE:O	5:S:6:ASN:N	2.52	0.42
7:U:168:LYS:HE3	16:U:800:HOH:O	2.18	0.42
10:X:124:TYR:HB2	10:X:138:LEU:HD13	2.01	0.42
14:2:113:ILE:HD12	14:2:113:ILE:N	2.33	0.42
14:2:18(G):TYR:C	14:2:18(G):TYR:CD1	2.97	0.42
3:C:46:VAL:HG11	3:C:139:ALA:HB1	2.00	0.42
8:H:172:ASN:ND2	8:H:193:THR:HA	2.32	0.42
10:J:35:ARG:NH1	10:J:57:GLU:CG	2.82	0.42
14:N:18(G):TYR:CD1	14:N:18(G):TYR:C	2.97	0.42
7:U:76:MET:HE3	7:U:78:VAL:CG2	2.48	0.42
10:X:3:ILE:HG12	10:X:46:ALA:HB2	2.01	0.42
11:Y:5:ALA:HA	11:Y:13:ILE:O	2.19	0.42
1:A:110:LYS:HG2	16:A:285:HOH:O	2.20	0.42
4:D:97:VAL:HG11	11:K:65:LEU:HD22	2.01	0.42
5:E:201:LEU:O	5:E:202:ARG:CB	2.66	0.42
6:F:127:ASN:C	6:F:127:ASN:ND2	2.74	0.42
7:G:82:ILE:CG2	7:G:83:PRO:HD3	2.49	0.42
9:I:36:HIS:HB3	9:I:42:PHE:CD2	2.55	0.42
11:K:50:ALA:CB	12:L:116:VAL:HG23	2.49	0.42
5:S:52:LYS:O	5:S:63:TYR:HD2	2.03	0.42
5:S:103:PHE:O	13:1:78:TYR:HA	2.18	0.42
11:Y:21:THR:HG22	11:Y:26:VAL:HA	2.00	0.42
6:F:90:ASN:O	6:F:94:GLU:HG3	2.20	0.42
11:K:4:LEU:C	11:K:4:LEU:CD2	2.93	0.42
11:K:126:CYS:HB2	11:K:135:TYR:CE1	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:51:GLU:OE1	1:O:202:VAL:HG22	2.20	0.42
1:O:236:LEU:C	1:O:236:LEU:HD13	2.44	0.42
6:T:90:ASN:O	6:T:94:GLU:HG3	2.18	0.42
8:V:50:ALA:HB2	9:W:118:CYS:HB2	2.02	0.42
10:X:137:LEU:HA	10:X:137:LEU:HD23	1.80	0.42
10:X:154:LEU:HD12	10:X:154:LEU:HA	1.88	0.42
3:C:225:SER:OG	3:C:228:GLU:HG3	2.20	0.42
7:G:18(G):GLU:CG	7:G:188:LYS:HB2	2.44	0.42
3:Q:158:SER:CB	4:R:59:LEU:HD21	2.49	0.42
3:Q:168:ASN:O	3:Q:172:VAL:HG12	2.20	0.42
3:Q:225:SER:O	3:Q:226:SER:C	2.63	0.42
4:R:121:LEU:HD13	5:S:130:ARG:NH2	2.35	0.42
8:V:197:ARG:NH2	9:W:139:GLU:HG3	2.35	0.42
10:X:146:MET:HE1	10:X:154:LEU:HD22	2.01	0.42
10:X:190:PHE:C	10:X:192:ALA:N	2.76	0.42
14:2:3:ILE:C	14:2:3:ILE:HD13	2.43	0.42
14:2:147:SER:O	14:2:148:LYS:C	2.62	0.42
1:A:212:LEU:HD22	1:A:224:LEU:HD12	2.00	0.42
2:B:202:THR:HG21	2:B:204:SER:HB2	2.02	0.42
5:E:41:ARG:NH1	5:E:42:SER:O	2.53	0.42
6:F:192:GLN:HE21	6:F:195:LYS:CE	2.32	0.42
6:F:192:GLN:NE2	6:F:195:LYS:CE	2.83	0.42
6:F:203:GLU:OE1	6:F:203:GLU:HA	2.20	0.42
7:G:152:ASP:HB2	7:G:153:PRO:HD2	2.01	0.42
9:I:124:PHE:O	9:I:125:ILE:HD13	2.19	0.42
13:M:104:VAL:HG23	13:M:178:ILE:CG2	2.46	0.42
13:M:104:VAL:CG2	13:M:178:ILE:HG22	2.45	0.42
2:P:38:ILE:HD12	2:P:197:LEU:HG	2.01	0.42
2:P:107:ILE:HD13	2:P:112:LEU:HB2	2.01	0.42
3:Q:149:TYR:CE1	3:Q:159:SER:HB3	2.54	0.42
4:R:117:CYS:SG	4:R:157:PHE:HB3	2.60	0.42
5:S:18(D):ILE:HG23	5:S:18(E):LYS:HG3	2.01	0.42
5:S:216:GLY:O	5:S:219:THR:N	2.40	0.42
9:W:90:ARG:HA	9:W:90:ARG:HH11	1.83	0.42
1:A:21(P):LYS:HB2	16:A:1147:HOH:O	2.20	0.42
2:B:185:LYS:CD	2:B:187:ASP:H	2.33	0.42
3:C:41:LYS:HD3	3:C:161:SER:HA	2.00	0.42
4:D:177:LEU:HD13	5:E:58:LEU:HD11	2.01	0.42
5:E:67:ILE:HG21	5:E:213:ALA:HB2	2.02	0.42
7:G:18(B):ASP:O	7:G:18(C):HIS:HB3	2.19	0.42
10:J:129:TYR:HB3	10:X:24:ILE:HD11	2.02	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:147:SER:O	14:N:148:LYS:C	2.62	0.42
1:O:97:HIS:CD2	8:V:61:SER:OG	2.72	0.42
2:P:190:ILE:HG23	2:P:212:PHE:CE2	2.54	0.42
3:Q:46:VAL:HG11	3:Q:139:ALA:HB1	2.00	0.42
5:S:2(B):THR:OG1	5:S:2(E):ASN:HB3	2.20	0.42
6:T:172:ALA:O	6:T:176:LEU:CD2	2.67	0.42
7:U:110:ASP:HB3	7:U:149:TYR:CZ	2.55	0.42
8:V:24:PRO:HG2	8:V:25:ILE:HD12	2.01	0.42
9:W:6:MET:HB3	9:W:151:LEU:HD11	2.02	0.42
10:X:100:LEU:HD23	10:X:112:GLN:HG3	2.02	0.42
11:Y:143:LYS:HB2	11:Y:146:LEU:HD13	1.97	0.42
12:Z:109:ALA:HA	16:Z:375:HOH:O	2.19	0.42
13:1:190:LEU:N	13:1:190:LEU:CD1	2.82	0.42
14:2:38:HIS:O	14:2:39:ASP:C	2.63	0.42
14:2:176:VAL:HG12	14:2:178:LEU:CD1	2.48	0.42
1:A:6:ASP:OD2	1:A:8:TYR:HB2	2.20	0.42
2:B:67:LEU:HD23	2:B:213:ALA:HB2	2.02	0.42
3:C:225:SER:O	3:C:226:SER:C	2.63	0.42
8:H:200:LYS:HE3	9:I:140:SER:O	2.19	0.42
9:I:12:VAL:CG2	9:I:178:ILE:HB	2.50	0.42
10:J:141:HIS:HB2	10:J:154:LEU:HD11	2.02	0.42
12:L:33:LYS:HB3	12:L:33:LYS:HE2	1.74	0.42
2:P:44:ASP:OD2	2:P:44:ASP:N	2.52	0.42
5:S:220:PRO:O	5:S:222:THR:HG23	2.19	0.42
6:T:72:ARG:HD2	13:1:64:THR:OG1	2.20	0.42
10:X:185:ARG:HG2	10:X:185:ARG:HH11	1.84	0.42
11:Y:146:LEU:HD23	11:Y:151:ALA:HA	2.01	0.42
12:Z:113:PHE:CD1	12:Z:113:PHE:N	2.87	0.42
13:1:112:TYR:CE1	13:1:127:THR:HG22	2.55	0.42
1:A:27:ALA:O	1:A:31:VAL:HG23	2.20	0.42
5:E:90:ASN:O	5:E:94:GLN:HG3	2.20	0.42
9:I:130:ALA:HB2	9:I:166:ASP:CB	2.49	0.42
16:I:510:HOH:O	10:J:122:LEU:HD22	2.19	0.42
12:L:179:THR:HG21	16:L:1161:HOH:O	2.19	0.42
1:O:62:GLU:C	1:O:64:LEU:N	2.75	0.42
3:Q:208:LYS:HD2	3:Q:208:LYS:O	2.20	0.42
5:S:52:LYS:CB	5:S:63:TYR:HB3	2.50	0.42
7:U:232:ARG:HA	7:U:232:ARG:NE	2.34	0.42
5:E:207:LEU:HA	5:E:2(E):ASN:HD21	1.80	0.41
8:H:174:ASP:OD2	8:H:189:ARG:NH1	2.48	0.41
9:I:62:LYS:NZ	16:I:341:HOH:O	2.53	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:146:MET:HE1	10:J:154:LEU:HD22	2.01	0.41
12:L:17:ASP:OD2	12:L:33:LYS:NZ	2.52	0.41
13:M:6:MET:CG	13:M:155:ILE:HD11	2.37	0.41
5:S:47:VAL:HG12	5:S:48:LEU:N	2.35	0.41
5:S:76:LEU:HA	5:S:137:LEU:O	2.20	0.41
8:V:128:GLY:O	8:V:131:SER:CB	2.64	0.41
14:2:3:ILE:HG22	14:2:16:ALA:HB2	2.01	0.41
14:2:134:ILE:HG21	14:2:158:SER:O	2.19	0.41
14:2:156:LYS:HE3	16:2:1010:HOH:O	2.20	0.41
2:B:122:GLY:C	2:B:124:THR:N	2.78	0.41
3:C:195:ARG:CG	3:C:236:ILE:HD12	2.50	0.41
5:E:179:THR:O	5:E:180:LEU:C	2.62	0.41
6:F:35:THR:CG2	6:F:36:THR:N	2.82	0.41
6:F:70:VAL:HB	6:F:74:ILE:HB	2.02	0.41
9:I:8:SER:O	9:I:6:PRO:HD3	2.21	0.41
10:J:13:ILE:HG21	10:J:155:LEU:CD1	2.50	0.41
11:K:21:THR:HG22	11:K:26:VAL:HA	2.00	0.41
11:K:111:TYR:CE1	11:K:121:LYS:HB2	2.54	0.41
1:O:140:GLY:HA2	1:O:215:ILE:HG13	2.02	0.41
3:Q:39:GLY:O	3:Q:162:ALA:HA	2.20	0.41
3:Q:195:ARG:CG	3:Q:236:ILE:HD12	2.49	0.41
7:U:18(B):ASP:O	7:U:18(C):HIS:HB3	2.19	0.41
12:Z:14:LEU:HA	12:Z:14:LEU:HD23	1.79	0.41
4:D:12(F):GLY:HA3	16:E:965:HOH:O	2.20	0.41
5:E:134:VAL:O	5:E:153:PRO:HG3	2.20	0.41
13:M:11:GLY:HA3	13:M:178:ILE:O	2.20	0.41
16:N:583:HOH:O	13:1:211:ILE:HD11	2.20	0.41
4:R:122:ARG:C	4:R:126:ARG:HB2	2.45	0.41
5:S:198:SER:C	5:S:200:SER:H	2.28	0.41
6:T:148:LEU:HB3	6:T:160:TYR:O	2.20	0.41
10:X:88:ALA:O	10:X:90(A):ILE:HG22	2.20	0.41
2:B:20:ARG:NH1	2:B:20:ARG:HG2	2.35	0.41
3:C:46:VAL:HB	3:C:215:VAL:CG1	2.51	0.41
3:C:225:SER:HG	3:C:228:GLU:HG3	1.85	0.41
5:E:194:VAL:HG13	5:E:207:LEU:HD11	2.02	0.41
5:E:198:SER:C	5:E:200:SER:H	2.28	0.41
8:H:22:GLN:HG3	8:H:27:ALA:HB2	2.02	0.41
8:H:170:GLY:O	8:H:171:SER:HB2	2.21	0.41
14:N:176:VAL:HG12	14:N:178:LEU:CD1	2.48	0.41
3:Q:45:CYS:HA	3:Q:141:PHE:HZ	1.86	0.41
3:Q:121:GLN:NE2	3:Q:121:GLN:C	2.78	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:R:161:ASN:N	5:S:58:LEU:O	2.49	0.41
5:S:2(B):THR:N	5:S:2(E):ASN:HD22	2.09	0.41
7:U:17(C):LYS:HB2	7:U:17(C):LYS:HE3	1.82	0.41
8:V:8:PHE:HB3	8:V:151:ALA:HB2	2.02	0.41
9:W:10(C):SER:C	9:W:107:LYS:H	2.28	0.41
11:Y:40:PHE:CD1	11:Y:73:ARG:NH1	2.89	0.41
11:Y:50:ALA:HB2	12:Z:116:VAL:HG23	2.02	0.41
5:E:4:PHE:O	5:E:6:ASN:N	2.54	0.41
6:F:32:GLU:HB3	6:F:169:ARG:NH2	2.35	0.41
11:K:146:LEU:HD23	11:K:151:ALA:HA	2.01	0.41
13:M:14(C):ARG:CG	13:M:14(C):ARG:NH1	2.79	0.41
1:O:197:LEU:O	1:O:202:VAL:HG23	2.20	0.41
2:P:202:THR:HG21	2:P:204:SER:HB2	2.03	0.41
3:Q:225:SER:OG	3:Q:228:GLU:HG3	2.20	0.41
4:R:12(D):ALA:HB3	4:R:126:ARG:HD3	2.03	0.41
5:S:207:LEU:HA	5:S:2(E):ASN:HD21	1.80	0.41
7:U:123:TYR:CE1	7:U:129:MET:HE3	2.55	0.41
4:D:39:GLY:HA2	4:D:47:VAL:O	2.21	0.41
7:G:168:LYS:O	7:G:172:ILE:HG13	2.20	0.41
9:I:14:ILE:HG23	9:I:176:TYR:HB2	2.02	0.41
11:K:208:ASN:O	11:K:209:VAL:C	2.63	0.41
1:O:4:MET:SD	1:O:5:THR:N	2.71	0.41
1:O:31:VAL:HG11	1:O:135:SER:HB2	2.03	0.41
4:R:90:GLU:OE2	11:Y:69:ARG:NH1	2.53	0.41
5:S:45:HIS:HB2	5:S:189:LEU:HD12	2.02	0.41
5:S:179:THR:O	5:S:180:LEU:C	2.63	0.41
9:W:88:TYR:CE1	9:W:91:ARG:HD3	2.55	0.41
13:1:14(G):ILE:HB	13:1:144:PRO:CD	2.51	0.41
13:1:190:LEU:N	13:1:190:LEU:HD12	2.36	0.41
1:A:21(G):LEU:HD23	1:A:21(I):TYR:O	2.20	0.41
2:B:113:VAL:HG22	2:B:138:TYR:CD2	2.56	0.41
3:C:33:ARG:HB2	3:C:33:ARG:HH11	1.79	0.41
5:E:179:THR:O	5:E:179:THR:HG22	2.21	0.41
9:I:6:MET:HE3	9:I:155:ILE:HA	2.00	0.41
10:J:2:ILE:N	10:J:2:ILE:HD13	2.36	0.41
10:J:68:ILE:HG13	16:J:810:HOH:O	2.20	0.41
2:P:121:GLN:HG2	3:Q:83:ALA:HB1	2.00	0.41
2:P:122:GLY:C	2:P:124:THR:N	2.78	0.41
3:Q:76:LEU:C	3:Q:76:LEU:HD23	2.45	0.41
5:S:24:VAL:O	5:S:27:ALA:HB3	2.21	0.41
7:U:18(G):GLU:CG	7:U:188:LYS:HB2	2.45	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:197:ARG:HH21	9:W:139:GLU:HG3	1.86	0.41
5:E:24:VAL:O	5:E:27:ALA:HB3	2.20	0.41
8:H:24:PRO:HG2	8:H:25:ILE:HD12	2.03	0.41
8:H:34:LEU:HB2	16:H:540:HOH:O	2.20	0.41
10:J:3:ILE:HG12	10:J:46:ALA:HB2	2.03	0.41
10:J:44:SER:HG	10:J:100:LEU:HB2	1.86	0.41
13:M:112:TYR:CE1	13:M:127:THR:HG22	2.56	0.41
2:P:27:ALA:O	2:P:30:SER:HB3	2.21	0.41
3:Q:47:VAL:HG23	3:Q:189:CYS:SG	2.61	0.41
3:Q:100:ARG:HH11	3:Q:106:PRO:HB3	1.84	0.41
3:Q:18(A):ASP:OD2	3:Q:18(C):LYS:HG2	2.20	0.41
5:S:194:VAL:HG13	5:S:207:LEU:HD11	2.02	0.41
7:U:82:ILE:CG2	7:U:83:PRO:HD3	2.51	0.41
11:Y:17:ASP:O	11:Y:33:LYS:HD2	2.21	0.41
1:A:197:LEU:O	1:A:202:VAL:HG23	2.21	0.41
3:C:39:GLY:O	3:C:162:ALA:HA	2.20	0.41
3:C:182:PRO:O	3:C:183:PRO:C	2.63	0.41
3:C:208:LYS:HD2	3:C:208:LYS:O	2.21	0.41
4:D:122:ARG:C	4:D:126:ARG:HB2	2.45	0.41
6:F:81:LEU:HA	16:F:313:HOH:O	2.21	0.41
8:H:128:GLY:O	8:H:131:SER:CB	2.68	0.41
10:J:19:ALA:HB2	10:J:171:LYS:HG2	2.03	0.41
10:J:100:LEU:HD23	10:J:112:GLN:HG3	2.03	0.41
10:J:124:TYR:HB2	10:J:138:LEU:HD13	2.02	0.41
11:K:17:ASP:O	11:K:33:LYS:HD2	2.20	0.41
12:L:-2:ASN:HA	12:L:21:ILE:O	2.20	0.41
13:M:3:VAL:HG23	13:M:46:SER:HB3	2.03	0.41
13:M:165:ARG:HA	14:2:26:ILE:HB	2.02	0.41
2:P:113:VAL:HG22	2:P:138:TYR:CD2	2.56	0.41
5:S:161:TYR:CE2	6:T:60:VAL:HA	2.56	0.41
5:S:172:ALA:CB	5:S:196:ALA:O	2.69	0.41
6:T:61:PRO:O	6:T:62:GLN:HB2	2.21	0.41
6:T:204:ASP:OD1	6:T:204:ASP:N	2.52	0.41
7:U:72:ARG:HB2	7:U:72:ARG:HH11	1.84	0.41
7:U:109:CYS:HB3	16:U:1330:HOH:O	2.20	0.41
7:U:168:LYS:HG3	16:U:800:HOH:O	2.21	0.41
8:V:200:LYS:HE3	9:W:140:SER:O	2.21	0.41
10:X:13:ILE:HG21	10:X:155:LEU:HD12	2.03	0.41
10:X:166:MET:HE3	10:X:166:MET:HB3	1.70	0.41
13:1:7:LYS:HB3	13:1:12:VAL:HG12	2.03	0.41
5:E:2(B):THR:OG1	5:E:2(E):ASN:HB3	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:123:TYR:CE1	7:G:129:MET:HE3	2.56	0.41
7:G:212:VAL:CG2	7:G:229:ILE:HD13	2.51	0.41
11:K:25:TRP:CH2	12:L:132:SER:HA	2.55	0.41
12:L:170:GLY:O	12:L:171:ASP:HB2	2.21	0.41
14:N:134:ILE:HG21	14:N:158:SER:O	2.21	0.41
1:O:4:MET:CG	1:O:5:THR:H	2.31	0.41
1:O:62:GLU:O	1:O:64:LEU:N	2.54	0.41
6:T:66:LYS:HE3	6:T:82:ILE:CD1	2.51	0.41
6:T:74:ILE:CD1	6:T:109:ILE:HD12	2.51	0.41
6:T:114:ASP:O	6:T:118:GLN:HG2	2.21	0.41
6:T:116:LEU:O	6:T:120:VAL:HG23	2.21	0.41
6:T:240:ILE:HG23	6:T:241:ASN:ND2	2.36	0.41
7:U:203:THR:HG22	7:U:204:GLU:N	2.35	0.41
8:V:152:ILE:CD1	8:V:177:VAL:HG22	2.51	0.41
11:Y:208:ASN:O	11:Y:209:VAL:C	2.64	0.41
13:1:11:GLY:HA3	13:1:178:ILE:O	2.21	0.41
1:A:149:TYR:CE1	1:A:159:PRO:HB3	2.56	0.40
3:C:76:LEU:HD23	3:C:76:LEU:C	2.45	0.40
3:C:169:SER:HA	3:C:172:VAL:CG1	2.51	0.40
3:C:190:VAL:O	3:C:194:VAL:HG23	2.21	0.40
6:F:148:LEU:HB3	6:F:160:TYR:O	2.21	0.40
8:H:160:GLN:O	8:H:161:ALA:C	2.63	0.40
9:I:152:PHE:HB2	9:I:177:ILE:HD11	2.03	0.40
10:J:185:ARG:HG2	10:J:185:ARG:HH11	1.86	0.40
13:M:40:ASN:N	13:M:40:ASN:ND2	2.66	0.40
1:O:8:TYR:HD2	7:U:128:TYR:HB3	1.86	0.40
2:P:213:ALA:HA	2:P:222:LYS:O	2.21	0.40
5:S:175:TYR:CE2	5:S:196:ALA:HB2	2.56	0.40
7:U:34(A):ASN:HA	7:U:167:PRO:HG2	2.02	0.40
7:U:143:GLU:HA	7:U:217:LYS:NZ	2.37	0.40
8:V:22:GLN:HG3	8:V:27:ALA:HB2	2.02	0.40
8:V:25:ILE:HD13	16:V:1105:HOH:O	2.20	0.40
11:Y:99:THR:CG2	11:Y:113:VAL:HB	2.51	0.40
5:E:5:ARG:HG3	5:E:22:PHE:CZ	2.56	0.40
6:F:114:ASP:O	6:F:118:GLN:HG2	2.22	0.40
7:G:34(A):ASN:HA	7:G:167:PRO:HG2	2.02	0.40
7:G:48:VAL:O	7:G:48:VAL:HG23	2.21	0.40
7:G:151:THR:HG22	7:G:157:TYR:CB	2.51	0.40
8:H:152:ILE:HD11	8:H:177:VAL:CG2	2.51	0.40
11:K:4:LEU:CD1	11:K:159:ILE:HG12	2.52	0.40
1:O:39:GLY:O	1:O:162:ALA:HA	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:79:ALA:HB2	2:P:165:VAL:HG23	2.03	0.40
2:P:150:THR:O	2:P:157:TYR:HA	2.22	0.40
4:R:39:GLY:HA2	4:R:47:VAL:O	2.21	0.40
5:S:223:ILE:N	5:S:223:ILE:CD1	2.84	0.40
8:V:2:THR:O	8:V:16:ALA:HA	2.22	0.40
9:W:89:GLU:O	9:W:90:ARG:NH1	2.53	0.40
12:Z:90:LYS:HD3	12:Z:95:TYR:CZ	2.57	0.40
13:1:40:ASN:N	13:1:40:ASN:ND2	2.69	0.40
2:B:196:THR:O	2:B:200:THR:HG23	2.20	0.40
3:C:58:LEU:HD12	3:C:58:LEU:HA	1.86	0.40
6:F:204:ASP:N	6:F:204:ASP:OD1	2.54	0.40
14:N:146:MET:HE2	14:N:150:GLU:HB3	2.03	0.40
1:O:6:ASP:OD2	1:O:8:TYR:HB2	2.21	0.40
1:O:21(G):LEU:HG	1:O:21(I):TYR:CE1	2.56	0.40
2:P:190:ILE:HG21	2:P:232:ILE:HD11	2.03	0.40
5:S:15:PHE:H	6:T:23:GLN:NE2	2.10	0.40
5:S:179:THR:O	5:S:179:THR:HG22	2.20	0.40
5:S:18(F):ILE:HD13	5:S:188:GLU:HB3	2.03	0.40
5:S:214:ILE:O	5:S:221:PHE:HA	2.22	0.40
7:U:105:TYR:OH	8:V:66:HIS:HE1	2.04	0.40
8:V:72:ARG:HH11	8:V:72:ARG:HG3	1.86	0.40
11:Y:10(A):ARG:H	11:Y:10(B):LYS:NZ	2.18	0.40
12:Z:33:LYS:HB3	12:Z:33:LYS:HE2	1.72	0.40
2:B:27:ALA:O	2:B:30:SER:HB3	2.22	0.40
5:E:216:GLY:O	5:E:217:LYS:C	2.65	0.40
10:J:3:ILE:HD12	10:J:3:ILE:HA	1.90	0.40
10:J:6:ILE:CD1	10:J:154:LEU:HD23	2.52	0.40
12:L:90:LYS:HD3	12:L:95:TYR:CZ	2.57	0.40
5:S:5:ARG:HG3	5:S:22:PHE:CZ	2.56	0.40
5:S:12:THR:CG2	5:S:124:THR:HA	2.49	0.40
5:S:111:ARG:HG2	5:S:111:ARG:HH11	1.87	0.40
6:T:53:LEU:HD11	6:T:205:ASN:OD1	2.22	0.40
7:U:119:LEU:HD12	7:U:119:LEU:HA	1.95	0.40
11:Y:49:ALA:HB1	12:Z:118:SER:OG	2.21	0.40
12:Z:-7:ASN:HD22	12:Z:-5:TYR:H	1.68	0.40
2:B:124:THR:HG22	3:C:130:ARG:NH2	2.29	0.40
4:D:12(D):ALA:HB3	4:D:126:ARG:HD3	2.03	0.40
5:E:91:TYR:CD1	5:E:119:LYS:HD2	2.56	0.40
5:E:214:ILE:O	5:E:221:PHE:HA	2.21	0.40
7:G:143:GLU:HA	7:G:217:LYS:NZ	2.36	0.40
7:G:203:THR:HG22	7:G:204:GLU:N	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:2:THR:O	8:H:16:ALA:HA	2.21	0.40
9:I:159:LEU:HD21	9:I:173:ALA:HB1	2.03	0.40
2:P:185:LYS:CD	2:P:187:ASP:H	2.34	0.40
4:R:97:VAL:HG11	11:Y:65:LEU:HD22	2.04	0.40
9:W:130:ALA:HB2	9:W:166:ASP:OD1	2.21	0.40
10:X:34:THR:HG21	10:X:176:LYS:NZ	2.35	0.40
13:1:3:VAL:HG23	13:1:46:SER:HB3	2.04	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%)	235 (95%)	10 (4%)	3 (1%)	10	27
1	O	248/250 (99%)	234 (94%)	11 (4%)	3 (1%)	10	27
2	B	242/258 (94%)	220 (91%)	18 (7%)	4 (2%)	7	19
2	P	242/258 (94%)	221 (91%)	17 (7%)	4 (2%)	7	19
3	C	239/254 (94%)	222 (93%)	13 (5%)	4 (2%)	7	19
3	Q	239/254 (94%)	221 (92%)	14 (6%)	4 (2%)	7	19
4	D	240/260 (92%)	217 (90%)	20 (8%)	3 (1%)	9	25
4	R	240/260 (92%)	216 (90%)	20 (8%)	4 (2%)	7	19
5	E	231/234 (99%)	207 (90%)	20 (9%)	4 (2%)	7	19
5	S	231/234 (99%)	208 (90%)	19 (8%)	4 (2%)	7	19
6	F	242/288 (84%)	228 (94%)	14 (6%)	0	100	100
6	T	242/288 (84%)	228 (94%)	13 (5%)	1 (0%)	30	54
7	G	241/252 (96%)	229 (95%)	11 (5%)	1 (0%)	30	54
7	U	241/252 (96%)	228 (95%)	12 (5%)	1 (0%)	30	54

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	H	220/261 (84%)	207 (94%)	9 (4%)	4 (2%)	6	18
8	V	220/261 (84%)	208 (94%)	8 (4%)	4 (2%)	6	18
9	I	202/205 (98%)	192 (95%)	8 (4%)	2 (1%)	12	32
9	W	202/205 (98%)	193 (96%)	7 (4%)	2 (1%)	12	32
10	J	196/198 (99%)	185 (94%)	8 (4%)	3 (2%)	8	22
10	X	196/198 (99%)	185 (94%)	8 (4%)	3 (2%)	8	22
11	K	210/287 (73%)	198 (94%)	9 (4%)	3 (1%)	9	23
11	Y	210/287 (73%)	199 (95%)	8 (4%)	3 (1%)	9	23
12	L	220/241 (91%)	202 (92%)	17 (8%)	1 (0%)	24	48
12	Z	220/241 (91%)	200 (91%)	19 (9%)	1 (0%)	24	48
13	1	231/266 (87%)	216 (94%)	14 (6%)	1 (0%)	30	54
13	M	231/266 (87%)	217 (94%)	13 (6%)	1 (0%)	30	54
14	2	194/215 (90%)	184 (95%)	10 (5%)	0	100	100
14	N	194/215 (90%)	185 (95%)	9 (5%)	0	100	100
15	3	1/5 (20%)	1 (100%)	0	0	100	100
15	4	1/5 (20%)	1 (100%)	0	0	100	100
All	All	6314/6948 (91%)	5887 (93%)	359 (6%)	68 (1%)	11	29

All (68) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	58	LEU
3	C	203	THR
4	D	12(G)	GLU
5	E	5	ARG
5	E	202	ARG
5	E	217	LYS
3	Q	58	LEU
3	Q	203	THR
4	R	12(G)	GLU
5	S	5	ARG
5	S	202	ARG
5	S	217	LYS
1	A	5	THR
1	A	63	THR
1	A	167	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	B	54	VAL
2	B	21(B)	GLY
2	B	21(C)	ASP
3	C	183	PRO
8	H	91	GLN
9	I	145	ASN
10	J	49	ALA
10	J	192	ALA
11	K	209	VAL
12	L	71	ASP
1	O	5	THR
1	O	63	THR
1	O	167	LYS
2	P	54	VAL
2	P	21(B)	GLY
2	P	21(C)	ASP
3	Q	183	PRO
8	V	91	GLN
9	W	145	ASN
10	X	49	ALA
10	X	192	ALA
11	Y	209	VAL
12	Z	71	ASP
2	B	184	MET
4	D	12(F)	GLY
5	E	180	LEU
11	K	39	PRO
4	R	12(F)	GLY
5	S	180	LEU
8	V	9	ASN
11	Y	39	PRO
13	1	96	TRP
3	C	202	GLN
4	D	12(C)	GLY
8	H	9	ASN
8	H	171	SER
13	M	96	TRP
2	P	184	MET
3	Q	202	GLN
4	R	12(C)	GLY
8	H	96	GLY
11	K	208	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	T	143	LYS
8	V	171	SER
10	J	8	VAL
4	R	12(E)	SER
7	U	55	PRO
11	Y	208	ASN
7	G	55	PRO
8	V	96	GLY
10	X	8	VAL
9	I	93	GLY
9	W	93	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%)	198 (95%)	11 (5%)	20	46
1	O	209/209 (100%)	199 (95%)	10 (5%)	23	50
2	B	203/216 (94%)	192 (95%)	11 (5%)	20	45
2	P	203/216 (94%)	191 (94%)	12 (6%)	18	42
3	C	213/226 (94%)	203 (95%)	10 (5%)	23	51
3	Q	213/226 (94%)	203 (95%)	10 (5%)	23	51
4	D	198/215 (92%)	186 (94%)	12 (6%)	17	40
4	R	198/215 (92%)	187 (94%)	11 (6%)	19	44
5	E	192/193 (100%)	178 (93%)	14 (7%)	13	32
5	S	192/193 (100%)	181 (94%)	11 (6%)	18	43
6	F	201/239 (84%)	180 (90%)	21 (10%)	7	17
6	T	201/239 (84%)	179 (89%)	22 (11%)	6	16
7	G	207/210 (99%)	193 (93%)	14 (7%)	14	35
7	U	207/210 (99%)	193 (93%)	14 (7%)	14	35
8	H	181/214 (85%)	171 (94%)	10 (6%)	19	45

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	V	181/214 (85%)	172 (95%)	9 (5%)	22	48
9	I	172/173 (99%)	166 (96%)	6 (4%)	32	61
9	W	172/173 (99%)	166 (96%)	6 (4%)	32	61
10	J	175/175 (100%)	163 (93%)	12 (7%)	14	34
10	X	175/175 (100%)	162 (93%)	13 (7%)	13	32
11	K	169/235 (72%)	157 (93%)	12 (7%)	13	33
11	Y	169/235 (72%)	157 (93%)	12 (7%)	13	33
12	L	185/201 (92%)	157 (85%)	28 (15%)	3	7
12	Z	185/201 (92%)	157 (85%)	28 (15%)	3	7
13	1	199/224 (89%)	188 (94%)	11 (6%)	19	45
13	M	199/224 (89%)	189 (95%)	10 (5%)	22	48
14	2	162/178 (91%)	153 (94%)	9 (6%)	19	44
14	N	162/178 (91%)	152 (94%)	10 (6%)	16	39
All	All	5332/5816 (92%)	4973 (93%)	359 (7%)	15	36

All (359) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	32	LYS
1	A	33	GLN
1	A	62	GLU
1	A	64	LEU
1	A	119	ILE
1	A	124	THR
1	A	158	PHE
1	A	179	ARG
1	A	192	ILE
1	A	215	ILE
1	A	229	ILE
2	B	40	ILE
2	B	46	ILE
2	B	58	LEU
2	B	94	ILE
2	B	116	LEU
2	B	119	ILE
2	B	124	THR
2	B	150	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	B	163	ILE
2	B	192	LEU
2	B	238	ILE
3	C	10	ARG
3	C	21	ILE
3	C	25	GLU
3	C	66	LYS
3	C	70	ILE
3	C	150	GLN
3	C	156	ILE
3	C	172	VAL
3	C	174	GLU
3	C	210	ILE
4	D	28	LEU
4	D	40	ILE
4	D	48	LEU
4	D	52	LYS
4	D	70	ILE
4	D	110	GLU
4	D	126	ARG
4	D	177	LEU
4	D	191	LEU
4	D	194	LEU
4	D	215	ILE
4	D	237	LEU
5	E	11	ASP
5	E	28	LEU
5	E	32	LYS
5	E	57	GLU
5	E	76	LEU
5	E	111	ARG
5	E	117	CYS
5	E	189	LEU
5	E	199	GLN
5	E	207	LEU
5	E	214	ILE
5	E	223	ILE
5	E	227	GLU
5	E	231	LYS
6	F	11	SER
6	F	35	THR
6	F	36	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	F	43	ASN
6	F	56	SER
6	F	72	ARG
6	F	74	ILE
6	F	109	ILE
6	F	121	GLN
6	F	127	ASN
6	F	144	ASN
6	F	169	ARG
6	F	171	SER
6	F	176	LEU
6	F	187	ARG
6	F	196	ILE
6	F	197	ILE
6	F	203	GLU
6	F	212	ILE
6	F	233	ILE
6	F	240	ILE
7	G	14	ILE
7	G	72	ARG
7	G	87	ASN
7	G	119	LEU
7	G	124	THR
7	G	14(A)	GLU
7	G	169	GLN
7	G	172	ILE
7	G	197	MET
7	G	217	LYS
7	G	229	ILE
7	G	232	ARG
7	G	233	LEU
7	G	236	ILE
8	H	13	VAL
8	H	34	LEU
8	H	43	CYS
8	H	55	VAL
8	H	56	THR
8	H	68	LEU
8	H	100	ILE
8	H	180	ILE
8	H	197	ARG
8	H	218	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
9	I	14	ILE
9	I	29	ASN
9	I	110	ILE
9	I	125	ILE
9	I	160	LEU
9	I	171	TRP
10	J	2	ILE
10	J	3	ILE
10	J	6	ILE
10	J	34	THR
10	J	35	ARG
10	J	52	THR
10	J	70	GLU
10	J	121	GLU
10	J	137	LEU
10	J	168	MET
10	J	174	ILE
10	J	177	ILE
11	K	4	LEU
11	K	7	ARG
11	K	9	GLN
11	K	35	ILE
11	K	39	PRO
11	K	45	MET
11	K	65	LEU
11	K	69	ARG
11	K	74	ILE
11	K	87	VAL
11	K	100	MET
11	K	101	ILE
12	L	-7	ASN
12	L	14	LEU
12	L	21	ILE
12	L	25	SER
12	L	40	ASN
12	L	43	MET
12	L	58	ARG
12	L	76	ILE
12	L	98	HIS
12	L	99	THR
12	L	115	PRO
12	L	134	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	L	138	LEU
12	L	14(A)	LYS
12	L	14(B)	ASN
12	L	14(C)	GLN
12	L	14(D)	TYR
12	L	14(E)	GLU
12	L	14(F)	PRO
12	L	14(I)	THR
12	L	14(K)	LYS
12	L	14(M)	VAL
12	L	14(N)	LYS
12	L	14(O)	LYS
12	L	14(P)	PRO
12	L	14(Q)	LEU
12	L	14(W)	LYS
12	L	152	ILE
13	M	40	ASN
13	M	55	ILE
13	M	62	LEU
13	M	79	ILE
13	M	91	ARG
13	M	112	TYR
13	M	149	GLN
13	M	155	ILE
13	M	191	GLN
13	M	204	LYS
14	N	1	THR
14	N	3	ILE
14	N	26	ILE
14	N	84	LYS
14	N	89	GLU
14	N	115	LEU
14	N	119	VAL
14	N	144	GLU
14	N	149	GLU
14	N	178	LEU
1	O	32	LYS
1	O	33	GLN
1	O	62	GLU
1	O	119	ILE
1	O	124	THR
1	O	158	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	O	179	ARG
1	O	192	ILE
1	O	215	ILE
1	O	229	ILE
2	P	40	ILE
2	P	41	MET
2	P	46	ILE
2	P	58	LEU
2	P	94	ILE
2	P	116	LEU
2	P	119	ILE
2	P	124	THR
2	P	150	THR
2	P	163	ILE
2	P	192	LEU
2	P	238	ILE
3	Q	10	ARG
3	Q	21	ILE
3	Q	25	GLU
3	Q	66	LYS
3	Q	70	ILE
3	Q	150	GLN
3	Q	172	VAL
3	Q	174	GLU
3	Q	210	ILE
3	Q	212	ILE
4	R	28	LEU
4	R	40	ILE
4	R	48	LEU
4	R	70	ILE
4	R	110	GLU
4	R	126	ARG
4	R	177	LEU
4	R	191	LEU
4	R	194	LEU
4	R	215	ILE
4	R	237	LEU
5	S	28	LEU
5	S	32	LYS
5	S	57	GLU
5	S	76	LEU
5	S	117	CYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	S	189	LEU
5	S	199	GLN
5	S	207	LEU
5	S	214	ILE
5	S	227	GLU
5	S	231	LYS
6	T	11	SER
6	T	35	THR
6	T	36	THR
6	T	43	ASN
6	T	56	SER
6	T	72	ARG
6	T	74	ILE
6	T	109	ILE
6	T	121	GLN
6	T	127	ASN
6	T	144	ASN
6	T	169	ARG
6	T	171	SER
6	T	176	LEU
6	T	187	ARG
6	T	192	GLN
6	T	196	ILE
6	T	197	ILE
6	T	203	GLU
6	T	212	ILE
6	T	233	ILE
6	T	240	ILE
7	U	14	ILE
7	U	72	ARG
7	U	87	ASN
7	U	119	LEU
7	U	124	THR
7	U	14(A)	GLU
7	U	169	GLN
7	U	172	ILE
7	U	197	MET
7	U	217	LYS
7	U	229	ILE
7	U	232	ARG
7	U	233	LEU
7	U	236	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	V	13	VAL
8	V	34	LEU
8	V	55	VAL
8	V	56	THR
8	V	68	LEU
8	V	100	ILE
8	V	180	ILE
8	V	197	ARG
8	V	218	ILE
9	W	14	ILE
9	W	29	ASN
9	W	110	ILE
9	W	125	ILE
9	W	160	LEU
9	W	171	TRP
10	X	2	ILE
10	X	3	ILE
10	X	6	ILE
10	X	13	ILE
10	X	34	THR
10	X	35	ARG
10	X	52	THR
10	X	70	GLU
10	X	121	GLU
10	X	137	LEU
10	X	168	MET
10	X	174	ILE
10	X	177	ILE
11	Y	4	LEU
11	Y	7	ARG
11	Y	9	GLN
11	Y	35	ILE
11	Y	39	PRO
11	Y	45	MET
11	Y	65	LEU
11	Y	69	ARG
11	Y	74	ILE
11	Y	87	VAL
11	Y	100	MET
11	Y	101	ILE
12	Z	-7	ASN
12	Z	14	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	Z	21	ILE
12	Z	25	SER
12	Z	40	ASN
12	Z	43	MET
12	Z	58	ARG
12	Z	76	ILE
12	Z	98	HIS
12	Z	99	THR
12	Z	115	PRO
12	Z	134	ILE
12	Z	138	LEU
12	Z	14(A)	LYS
12	Z	14(B)	ASN
12	Z	14(C)	GLN
12	Z	14(D)	TYR
12	Z	14(E)	GLU
12	Z	14(F)	PRO
12	Z	14(I)	THR
12	Z	14(K)	LYS
12	Z	14(M)	VAL
12	Z	14(N)	LYS
12	Z	14(O)	LYS
12	Z	14(P)	PRO
12	Z	14(Q)	LEU
12	Z	14(W)	LYS
12	Z	152	ILE
13	1	-4	ILE
13	1	40	ASN
13	1	55	ILE
13	1	62	LEU
13	1	79	ILE
13	1	91	ARG
13	1	112	TYR
13	1	149	GLN
13	1	155	ILE
13	1	191	GLN
13	1	204	LYS
14	2	3	ILE
14	2	26	ILE
14	2	84	LYS
14	2	89	GLU
14	2	115	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	2	119	VAL
14	2	144	GLU
14	2	149	GLU
14	2	178	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (234) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	33	GLN
1	A	97	HIS
1	A	145	ASN
1	A	150	GLN
2	B	23	GLN
2	B	71	ASN
2	B	95	HIS
2	B	97	GLN
2	B	121	GLN
2	B	125	GLN
2	B	156	ASN
2	B	173	GLN
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	209	ASN
3	C	243	GLN
4	D	23	GLN
4	D	108	ASN
4	D	147	GLN
4	D	161	ASN
4	D	226	ASN
5	E	7	ASN
5	E	33	GLN
5	E	73	HIS
5	E	104	ASN
5	E	121	GLN
5	E	125	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	E	156	ASN
5	E	199	GLN
5	E	2(E)	ASN
6	F	23	GLN
6	F	43	ASN
6	F	90	ASN
6	F	121	GLN
6	F	127	ASN
6	F	192	GLN
6	F	241	ASN
7	G	34(A)	ASN
7	G	87	ASN
7	G	118	ASN
7	G	121	GLN
7	G	125	GLN
7	G	169	GLN
7	G	170	GLN
7	G	178	ASN
7	G	184	ASN
7	G	208	ASN
7	G	228	ASN
8	H	10	ASN
8	H	30	ASN
8	H	35	HIS
8	H	66	HIS
8	H	109	HIS
8	H	141	HIS
8	H	144	GLN
8	H	165	ASN
8	H	172	ASN
8	H	190	ASN
8	H	201	GLN
9	I	56	ASN
9	I	81	GLN
9	I	145	ASN
10	J	36	GLN
10	J	54	GLN
10	J	62	ASN
10	J	77	GLN
10	J	85	GLN
10	J	112	GLN
10	J	141	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	J	160	GLN
10	J	186	GLN
10	J	193	GLN
11	K	9	GLN
11	K	24	ASN
11	K	85	ASN
11	K	131	GLN
11	K	141	ASN
11	K	174	ASN
11	K	187	HIS
11	K	207	ASN
11	K	208	ASN
12	L	-9	GLN
12	L	-7	ASN
12	L	40	ASN
12	L	61	ASN
12	L	70(A)	ASN
12	L	82	ASN
12	L	141	GLN
12	L	14(B)	ASN
12	L	1(I)	ASN
12	L	166	HIS
12	L	168	GLN
13	M	-7	GLN
13	M	10	ASN
13	M	40	ASN
13	M	54	HIS
13	M	89	GLN
13	M	93	ASN
13	M	149	GLN
13	M	157	ASN
13	M	189	ASN
13	M	191	GLN
14	N	69	GLN
14	N	141	ASN
14	N	157	HIS
14	N	161	GLN
1	O	33	GLN
1	O	97	HIS
1	O	145	ASN
1	O	150	GLN
2	P	23	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	P	71	ASN
2	P	95	HIS
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	209	ASN
3	Q	243	GLN
4	R	23	GLN
4	R	108	ASN
4	R	147	GLN
4	R	161	ASN
4	R	20(A)	ASN
4	R	226	ASN
5	S	7	ASN
5	S	64	GLN
5	S	73	HIS
5	S	104	ASN
5	S	121	GLN
5	S	123	ASN
5	S	125	GLN
5	S	156	ASN
5	S	170	GLN
5	S	199	GLN
5	S	2(E)	ASN
6	T	12	ASN
6	T	23	GLN
6	T	43	ASN
6	T	62	GLN
6	T	90	ASN
6	T	121	GLN
6	T	127	ASN
6	T	144	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	T	147	HIS
6	T	192	GLN
6	T	237	GLN
6	T	241	ASN
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	184	ASN
7	U	208	ASN
7	U	228	ASN
8	V	10	ASN
8	V	30	ASN
8	V	35	HIS
8	V	66	HIS
8	V	141	HIS
8	V	144	GLN
8	V	165	ASN
8	V	172	ASN
8	V	190	ASN
8	V	201	GLN
9	W	56	ASN
9	W	81	GLN
9	W	145	ASN
10	X	36	GLN
10	X	54	GLN
10	X	62	ASN
10	X	77	GLN
10	X	85	GLN
10	X	112	GLN
10	X	141	HIS
10	X	160	GLN
10	X	186	GLN
10	X	193	GLN
11	Y	9	GLN
11	Y	24	ASN
11	Y	62	GLN
11	Y	85	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	Y	131	GLN
11	Y	141	ASN
11	Y	174	ASN
11	Y	187	HIS
11	Y	207	ASN
11	Y	208	ASN
12	Z	-9	GLN
12	Z	-7	ASN
12	Z	27	ASN
12	Z	40	ASN
12	Z	61	ASN
12	Z	70(A)	ASN
12	Z	82	ASN
12	Z	141	GLN
12	Z	14(B)	ASN
12	Z	1(I)	ASN
12	Z	166	HIS
12	Z	168	GLN
13	1	-7	GLN
13	1	10	ASN
13	1	40	ASN
13	1	54	HIS
13	1	89	GLN
13	1	93	ASN
13	1	149	GLN
13	1	157	ASN
13	1	189	ASN
13	1	191	GLN
14	2	62	HIS
14	2	141	ASN
14	2	157	HIS
14	2	161	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

4 non-standard protein/DNA/RNA residues 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	RE3	3	4	15	15,17,18	1.97	8 (53%)	19,25,27	2.17	6 (31%)
15	TY5	4	2	15	19,20,21	1.93	7 (36%)	20,25,27	1.01	1 (5%)
15	TY5	3	2	15	19,20,21	1.95	7 (36%)	20,25,27	0.96	1 (5%)
15	RE3	4	4	15	15,17,18	2.08	6 (40%)	19,25,27	2.20	6 (31%)

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	RE3	3	4	15	-	2/6/23/25	0/2/2/2
15	TY5	4	2	15	-	1/10/11/13	0/2/2/2
15	TY5	3	2	15	-	1/10/11/13	0/2/2/2
15	RE3	4	4	15	-	2/6/23/25	0/2/2/2

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	3	2	TY5	CE2-CZ	3.98	1.46	1.38
15	4	4	RE3	CZ3-CE3	3.68	1.45	1.38
15	4	2	TY5	CE2-CZ	3.64	1.45	1.38
15	3	4	RE3	OG-CG	3.15	1.45	1.42
15	4	4	RE3	CE3-CD2	2.95	1.43	1.39
15	4	4	RE3	CH2-CZ2	2.74	1.43	1.38
15	4	4	RE3	CZ2-CE2	2.59	1.43	1.39
15	4	2	TY5	CD2-CG	2.57	1.44	1.38
15	3	4	RE3	CH2-CZ2	2.57	1.43	1.38
15	3	4	RE3	CE3-CD2	2.54	1.42	1.39
15	4	2	TY5	C54-C53	2.47	1.43	1.38
15	3	2	TY5	C54-C55	2.47	1.43	1.38
15	4	4	RE3	CZ3-CH2	2.46	1.43	1.38
15	3	4	RE3	CZ3-CE3	2.45	1.43	1.38
15	3	4	RE3	CE2-CD2	2.45	1.42	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	3	4	RE3	CB-CA	-2.43	1.50	1.54
15	4	2	TY5	OH-CZ	2.42	1.43	1.37
15	4	4	RE3	CG-CD2	2.38	1.53	1.51
15	3	2	TY5	C54-C53	2.38	1.43	1.38
15	3	2	TY5	OH-CZ	2.37	1.43	1.37
15	4	2	TY5	C53-C52	2.28	1.43	1.38
15	3	2	TY5	C53-C52	2.26	1.43	1.38
15	3	2	TY5	C51-C50	2.25	1.43	1.38
15	4	2	TY5	C51-C50	2.21	1.43	1.38
15	3	2	TY5	CD2-CG	2.16	1.43	1.38
15	4	2	TY5	C54-C55	2.10	1.42	1.38
15	3	4	RE3	CG-CD2	2.05	1.53	1.51
15	3	4	RE3	CZ3-CH2	2.05	1.42	1.38

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	3	4	RE3	CG-CD2-CE2	-4.63	106.97	108.86
15	4	4	RE3	CG-CD1-NE1	4.57	111.16	108.43
15	4	4	RE3	CG-CD2-CE2	-4.46	107.04	108.86
15	3	4	RE3	CG-CD1-NE1	4.17	110.92	108.43
15	3	4	RE3	CE2-NE1-CD1	-4.10	109.14	111.85
15	4	4	RE3	CE2-NE1-CD1	-4.05	109.17	111.85
15	3	4	RE3	CD2-CE2-NE1	3.62	112.02	109.60
15	4	2	TY5	C49-OH-CZ	3.36	125.61	117.62
15	3	2	TY5	C49-OH-CZ	3.07	124.93	117.62
15	4	4	RE3	CD2-CE2-NE1	2.97	111.59	109.60
15	4	4	RE3	OD1-CD1-CG	-2.92	122.55	124.95
15	4	4	RE3	CZ2-CE2-NE1	-2.49	125.79	130.83
15	3	4	RE3	CZ2-CE2-NE1	-2.43	125.92	130.83
15	3	4	RE3	OD1-CD1-CG	-2.17	123.17	124.95

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
15	3	2	TY5	O-C-CA-CB
15	3	4	RE3	N-CA-CB-CG
15	4	2	TY5	O-C-CA-CB
15	4	4	RE3	N-CA-CB-CG
15	3	4	RE3	C-CA-CB-CG
15	4	4	RE3	C-CA-CB-CG

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
15	4	2	TY5	2	0
15	3	2	TY5	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	250/250 (100%)	-0.16	6 (2%) 59 56	40, 54, 84, 107	0
1	O	250/250 (100%)	-0.07	4 (1%) 70 68	40, 56, 85, 107	0
2	B	244/258 (94%)	0.13	11 (4%) 38 34	41, 58, 95, 120	0
2	P	244/258 (94%)	0.21	11 (4%) 38 34	41, 59, 96, 120	0
3	C	241/254 (94%)	0.32	15 (6%) 26 23	42, 63, 112, 129	0
3	Q	241/254 (94%)	0.45	17 (7%) 22 19	45, 65, 112, 129	0
4	D	242/260 (93%)	0.23	11 (4%) 38 34	43, 61, 96, 127	0
4	R	242/260 (93%)	0.25	8 (3%) 49 45	44, 62, 96, 127	0
5	E	233/234 (99%)	0.22	6 (2%) 57 54	45, 65, 91, 113	0
5	S	233/234 (99%)	0.64	18 (7%) 19 17	45, 67, 93, 113	0
6	F	244/288 (84%)	0.03	6 (2%) 58 55	42, 58, 91, 108	0
6	T	244/288 (84%)	0.34	11 (4%) 38 34	43, 58, 92, 107	0
7	G	243/252 (96%)	-0.11	6 (2%) 58 55	38, 53, 79, 118	0
7	U	243/252 (96%)	-0.02	5 (2%) 63 61	39, 54, 79, 118	0
8	H	222/261 (85%)	-0.18	2 (0%) 81 80	37, 52, 70, 103	0
8	V	222/261 (85%)	-0.23	1 (0%) 87 86	38, 52, 70, 104	0
9	I	204/205 (99%)	-0.38	2 (0%) 79 78	37, 50, 68, 87	0
9	W	204/205 (99%)	-0.36	1 (0%) 87 86	37, 50, 68, 86	0
10	J	198/198 (100%)	-0.18	7 (3%) 47 43	37, 51, 69, 127	0
10	X	198/198 (100%)	-0.19	7 (3%) 47 43	39, 51, 69, 127	0
11	K	212/287 (73%)	-0.08	9 (4%) 40 37	36, 49, 76, 85	0
11	Y	212/287 (73%)	-0.11	10 (4%) 36 33	35, 51, 77, 86	0
12	L	222/241 (92%)	-0.19	7 (3%) 50 46	35, 51, 72, 100	0
12	Z	222/241 (92%)	-0.24	3 (1%) 73 72	35, 51, 72, 100	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	1	233/266 (87%)	-0.26	1 (0%) 88 87	37, 51, 64, 70	0
13	M	233/266 (87%)	-0.33	1 (0%) 88 87	37, 51, 64, 70	0
14	2	196/215 (91%)	-0.30	3 (1%) 72 70	35, 48, 67, 81	0
14	N	196/215 (91%)	-0.29	2 (1%) 79 78	37, 47, 67, 82	0
15	3	1/5 (20%)	0.01	0 100 100	46, 46, 46, 46	0
15	4	1/5 (20%)	0.18	0 100 100	48, 48, 48, 48	0
All	All	6370/6948 (91%)	-0.02	191 (2%) 52 49	35, 54, 87, 129	0

All (191) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
12	L	145	TYR	7.3
4	D	12(D)	ALA	7.2
3	Q	56	LEU	7.1
12	Z	145	TYR	7.0
7	U	240	ASP	6.7
4	R	12(D)	ALA	6.6
4	D	12(C)	GLY	6.4
11	Y	208	ASN	6.3
3	C	56	LEU	6.0
10	J	192	ALA	6.0
10	X	192	ALA	5.7
11	K	104	TYR	5.6
4	R	12(C)	GLY	5.6
4	D	126	ARG	5.6
2	B	21(B)	GLY	5.5
3	C	55	THR	5.5
2	P	217	ALA	5.4
11	K	207	ASN	5.4
11	Y	104	TYR	5.4
2	B	217	ALA	5.3
5	S	4	PHE	5.1
3	C	54	SER	4.9
4	D	12(E)	SER	4.9
11	K	208	ASN	4.9
10	X	133	TYR	4.8
4	R	12(E)	SER	4.8
4	R	126	ARG	4.6
11	K	180	GLU	4.6
3	Q	58	LEU	4.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
10	J	193	GLN	4.3
7	G	6	ALA	4.0
7	U	6	ALA	4.0
5	S	5	ARG	3.9
11	Y	180	GLU	3.9
2	B	239	THR	3.9
8	V	223	ASP	3.9
5	E	4	PHE	3.8
4	D	242	ALA	3.8
10	X	193	GLN	3.7
4	R	12(F)	GLY	3.7
2	P	239	THR	3.7
10	X	-1	MET	3.5
2	P	21(B)	GLY	3.5
5	S	55	ALA	3.5
11	K	181	ASP	3.5
11	Y	207	ASN	3.5
4	D	127	LEU	3.5
9	W	-8	SER	3.4
2	P	21(D)	GLY	3.4
2	P	218	ASN	3.3
8	H	223	ASP	3.3
13	M	-8	THR	3.3
12	L	14(P)	PRO	3.3
14	2	116	GLY	3.3
1	O	5	THR	3.2
3	Q	55	THR	3.2
3	C	59	GLN	3.2
3	C	243	GLN	3.2
2	B	21(D)	GLY	3.2
5	S	2(E)	ASN	3.1
2	B	21(A)	LYS	3.1
3	Q	57	LYS	3.1
2	B	218	ASN	3.1
7	U	18(H)	GLU	3.1
7	G	237	ALA	3.1
3	C	52	ARG	3.1
2	B	63(A)	SER	3.0
7	G	236	ILE	3.0
5	S	203	ASP	3.0
11	Y	181	ASP	3.0
10	J	191	GLN	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
11	K	73	ARG	2.9
11	Y	73	ARG	2.9
3	Q	236	ILE	2.9
10	J	-1	MET	2.9
6	F	240	ILE	2.9
8	H	199	GLU	2.9
5	S	2(C)	VAL	2.9
12	L	14(M)	VAL	2.9
2	P	219	GLU	2.9
12	L	14(W)	LYS	2.9
12	L	120	GLU	2.8
4	R	127	LEU	2.8
3	C	203	THR	2.8
2	P	54	VAL	2.8
5	S	18(C)	PHE	2.8
10	J	168	MET	2.8
6	T	232	ALA	2.8
1	A	235	ALA	2.7
10	X	168	MET	2.7
5	S	230	ALA	2.7
10	X	191	GLN	2.7
11	K	210	ILE	2.7
1	A	4	MET	2.7
2	P	220	TYR	2.7
6	F	5	GLY	2.7
3	Q	243	GLN	2.6
12	Z	14(Q)	LEU	2.6
3	C	208	LYS	2.6
7	G	7	GLY	2.6
7	U	7	GLY	2.6
5	S	59	SER	2.6
14	2	149	GLU	2.6
3	Q	241	GLN	2.6
5	S	63	TYR	2.5
11	K	209	VAL	2.5
1	O	4	MET	2.5
9	I	-8	SER	2.5
10	J	190	PHE	2.5
7	G	240	ASP	2.5
3	C	242	GLU	2.5
2	P	4	GLY	2.5
3	Q	233	VAL	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
11	K	40	PHE	2.5
2	P	21(A)	LYS	2.5
5	E	63	TYR	2.5
7	U	239	GLN	2.5
3	Q	240	LYS	2.4
3	Q	54	SER	2.4
6	T	215	CYS	2.4
6	T	204	ASP	2.4
3	C	239	GLU	2.4
3	Q	182	PRO	2.4
10	J	133	TYR	2.4
11	Y	40	PHE	2.4
5	S	32	LYS	2.4
6	T	20(C)	LYS	2.4
3	Q	62(A)	ILE	2.3
6	T	240	ILE	2.3
5	S	222	THR	2.3
13	1	-8	THR	2.3
1	O	56	SER	2.3
5	S	60	SER	2.3
1	A	7	ARG	2.3
1	A	5	THR	2.3
1	A	203	GLU	2.3
4	D	244	GLU	2.3
5	E	5	ARG	2.3
5	S	18(F)	ILE	2.3
4	R	12(G)	GLU	2.3
6	T	203	GLU	2.3
3	C	16	SER	2.3
9	I	182	ASP	2.3
11	Y	145	ASP	2.3
14	2	18(I)	GLN	2.3
5	S	52	LYS	2.2
6	F	241	ASN	2.2
6	T	205	ASN	2.2
6	F	204	ASP	2.2
10	X	189	ASP	2.2
11	Y	146	LEU	2.2
3	Q	232	TYR	2.2
3	Q	208	LYS	2.2
3	C	238	GLN	2.2
5	E	203	ASP	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	Q	185	THR	2.1
5	E	33	GLN	2.1
1	A	210	ILE	2.1
3	C	233	VAL	2.1
5	S	56	ASP	2.1
14	N	105	ASP	2.1
3	C	240	LYS	2.1
14	N	107	LYS	2.1
5	S	40	LEU	2.1
4	D	12(F)	GLY	2.1
5	S	196	ALA	2.1
6	T	174	ALA	2.1
12	Z	14(W)	LYS	2.1
12	L	14(Q)	LEU	2.1
5	E	6	ASN	2.1
4	D	125	GLU	2.1
2	P	181	LYS	2.1
6	F	63	LYS	2.1
2	B	57	THR	2.1
12	L	14(J)	GLY	2.1
3	Q	174	GLU	2.0
4	D	61	SER	2.0
6	T	206	LYS	2.0
4	R	156	THR	2.0
6	T	18(B)	HIS	2.0
6	T	241	ASN	2.0
2	B	20(B)	ALA	2.0
2	B	21(C)	ASP	2.0
2	B	219	GLU	2.0
7	G	171	GLU	2.0
4	D	243	ALA	2.0
1	O	55	SER	2.0
11	Y	144	TRP	2.0
6	F	43	ASN	2.0
3	C	172	VAL	2.0
3	Q	201	VAL	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column

labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
15	RE3	4	4	16/17	0.90	0.09	50,52,54,57	0
15	RE3	3	4	16/17	0.92	0.09	49,51,52,54	0
15	TY5	4	2	19/20	0.94	0.08	41,46,55,55	0
15	TY5	3	2	19/20	0.96	0.08	42,45,54,55	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.