



## Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 07:30 pm GMT

PDB ID : 4CR4  
EMDB ID : EMD-2596  
Title : Deep classification of a large cryo-EM dataset defines the conformational landscape of the 26S proteasome  
Authors : Unverdorben, P.; Beck, F.; Sledz, P.; Schweitzer, A.; Pfeifer, G.; Plitzko, J.M.; Baumeister, W.; Foerster, F.  
Deposited on : 2014-02-25  
Resolution : 8.80 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

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>.

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

EMDB validation analysis : 0.0.1.dev43  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

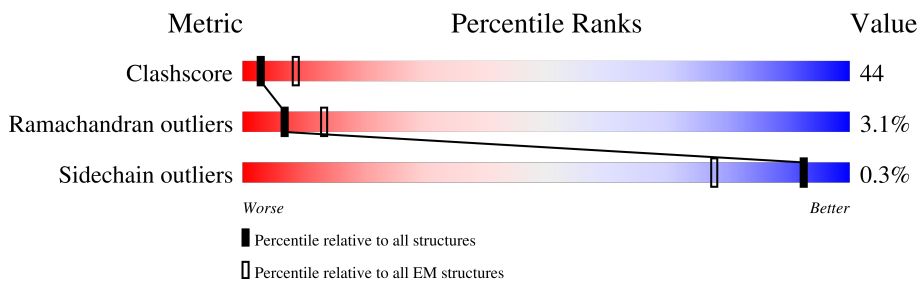
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 8.80 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)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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 EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	215	<div style="display: flex; justify-content: space-between;"> <span>46%</span> <span>50%</span> <span>42%</span> <span>5%</span> </div>
2	2	261	<div style="display: flex; justify-content: space-between;"> <span>35%</span> <span>54%</span> <span>28%</span> <span>15%</span> </div>
3	3	205	<div style="display: flex; justify-content: space-between;"> <span>49%</span> <span>56%</span> <span>40%</span> </div>
4	4	198	<div style="display: flex; justify-content: space-between;"> <span>32%</span> <span>63%</span> <span>35%</span> </div>
5	5	287	<div style="display: flex; justify-content: space-between;"> <span>28%</span> <span>44%</span> <span>27%</span> <span>26%</span> </div>
6	6	241	<div style="display: flex; justify-content: space-between;"> <span>35%</span> <span>49%</span> <span>41%</span> <span>8%</span> </div>
7	7	266	<div style="display: flex; justify-content: space-between;"> <span>36%</span> <span>50%</span> <span>36%</span> <span>12%</span> </div>
8	A	252	<div style="display: flex; justify-content: space-between;"> <span>40%</span> <span>50%</span> <span>43%</span> </div>

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Mol	Chain	Length	Quality of chain
9	B	250	44% 64% 34% .
10	C	258	36% 54% 39% . 5%
11	D	254	32% 56% 37% . 5%
12	E	260	39% 55% 34% 5% 7%
13	F	234	37% 56% 42% .
14	G	288	28% 45% 36% 5% 15%
15	H	467	27% 39% 33% . 23%
16	I	437	38% 45% 34% . 17%
17	J	405	33% 50% 38% . 8%
18	K	428	34% 49% 36% . 11%
19	L	437	28% 42% 38% . 17%
20	M	434	35% 45% 35% . 15%
21	N	945	26% 50% 36% . 10%
22	O	393	23% 44% 48% 6% . .
23	P	445	12% 52% 37% . 7%
24	Q	434	19% 57% 39% . .
25	R	429	19% 49% 41% . 7%
26	S	523	24% 38% 27% . 33%
27	T	274	23% 54% 41% . .
28	U	338	21% 43% 30% . 25%
29	V	306	31% 41% 34% 6% . 19%
30	W	268	31% 34% 35% . . 26%
31	X	156	29% 25% 40% 13% . 19%
32	Y	89	. 13% 8% 79%
33	Z	993	31% 40% 38% . 18%

## 2 Entry composition i

There are 33 unique types of molecules in this entry. The entry contains 80139 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 PRE3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	205	1576	996	261	312	7	0	0

- Molecule 2 is a protein called PROTEASOME COMPONENT PUP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	2	223	1692	1067	294	324	7	0	0

- Molecule 3 is a protein called PROTEASOME COMPONENT PUP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	204	1581	1010	258	305	8	0	0

- Molecule 4 is a protein called PROTEASOME COMPONENT C11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	4	198	1585	1005	269	305	6	0	0

- Molecule 5 is a protein called PROTEASOME COMPONENT PRE2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	5	212	1646	1045	282	312	7	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
5	33	ARG	LYS	SEE REMARK 999	UNP P30656

- Molecule 6 is a protein called PROTEASOME COMPONENT C5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	6	222	Total	C	N	O	S	0	0
			1757	1115	303	335	4		

- Molecule 7 is a protein called PROTEASOME COMPONENT PRE4.

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

- Molecule 8 is a protein called PROTEASOME COMPONENT C7-ALPHA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	A	243	Total	C	N	O	S	0	0
			1921	1221	322	370	8		

- Molecule 9 is a protein called PROTEASOME COMPONENT Y7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	B	250	Total	C	N	O	S	0	0
			1915	1219	315	377	4		

- Molecule 10 is a protein called PROTEASOME COMPONENT Y13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	C	245	Total	C	N	O	S	0	0
			1913	1207	323	380	3		

- Molecule 11 is a protein called PROTEASOME COMPONENT PRE6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	D	242	Total	C	N	O	S	0	0
			1899	1186	333	376	4		

- Molecule 12 is a protein called PROTEASOME COMPONENT PUP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	E	243	Total	C	N	O	S	0	0
			1867	1165	315	380	7		

- Molecule 13 is a protein called PROTEASOME COMPONENT PRE5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	F	233	1795	1129	312	350	4	0	0

- Molecule 14 is a protein called PROTEASOME COMPONENT C1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	G	245	1900	1207	331	358	4	0	0

- Molecule 15 is a protein called 26S PROTEASE REGULATORY SUBUNIT 7 HOMOLOG.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	H	359	2792	1755	499	523	15	0	0

- Molecule 16 is a protein called 26S PROTEASE REGULATORY SUBUNIT 4 HOMOLOG.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	I	362	2822	1773	471	563	15	0	0

- Molecule 17 is a protein called 26S PROTEASE REGULATORY SUBUNIT 8 HOMOLOG.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	J	373	2928	1837	527	547	17	0	0

- Molecule 18 is a protein called 26S PROTEASE REGULATORY SUBUNIT 6B HOMOLOG.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	K	381	3019	1898	530	581	10	0	0

- Molecule 19 is a protein called 26S PROTEASE SUBUNIT RPT4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	L	361	2853	1798	507	536	12	0	0

- Molecule 20 is a protein called 26S PROTEASE REGULATORY SUBUNIT 6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	M	367	2866	1799	503	553	11	0	0

- Molecule 21 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	N	849	6562	4174	1099	1261	28	0	0

- Molecule 22 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	O	387	3182	2047	520	606	9	0	0

- Molecule 23 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	P	415	3401	2166	571	655	9	0	0

- Molecule 24 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	Q	431	3471	2205	574	676	16	0	0

- Molecule 25 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	R	400	3218	2051	527	630	10	0	0

- Molecule 26 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	S	353	2893	1857	482	541	13	0	0

- Molecule 27 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN12.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	T	272	Total	C	N	O	S	0	0
			2235	1432	355	441	7		

- Molecule 28 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN8.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	U	255	Total	C	N	O	S	0	0
			2061	1312	352	391	6		

- Molecule 29 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN11.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	V	247	Total	C	N	O	S	0	0
			1942	1225	328	376	13		

- Molecule 30 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN10.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	W	197	Total	C	N	O	S	0	0
			1534	962	269	300	3		

- Molecule 31 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN13.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	X	127	Total	C	N	O	S	0	0
			1032	664	169	195	4		

- Molecule 32 is a protein called 26S PROTEASOME COMPLEX SUBUNIT SEM1.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	Y	19	Total	C	N	O	0	0
			168	101	30	37		

- Molecule 33 is a protein called 26S PROTEASOME REGULATORY SUBUNIT RPN1.

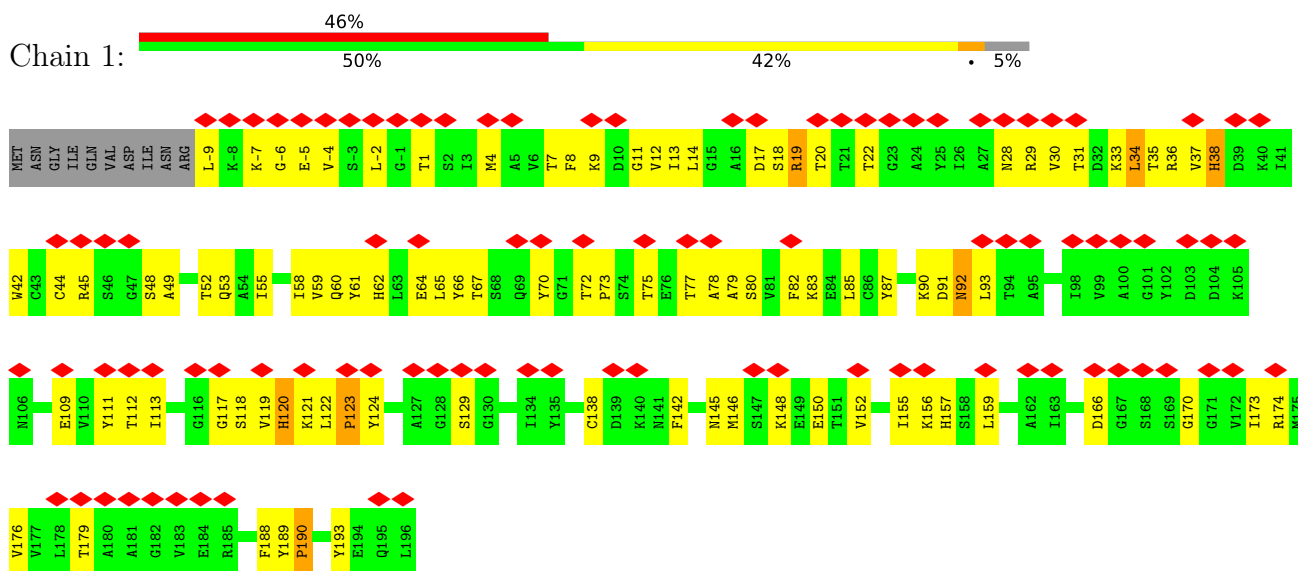
Mol	Chain	Residues	Atoms					AltConf	Trace
33	Z	813	Total	C	N	O	S	0	0
			6289	3995	1029	1236	29		



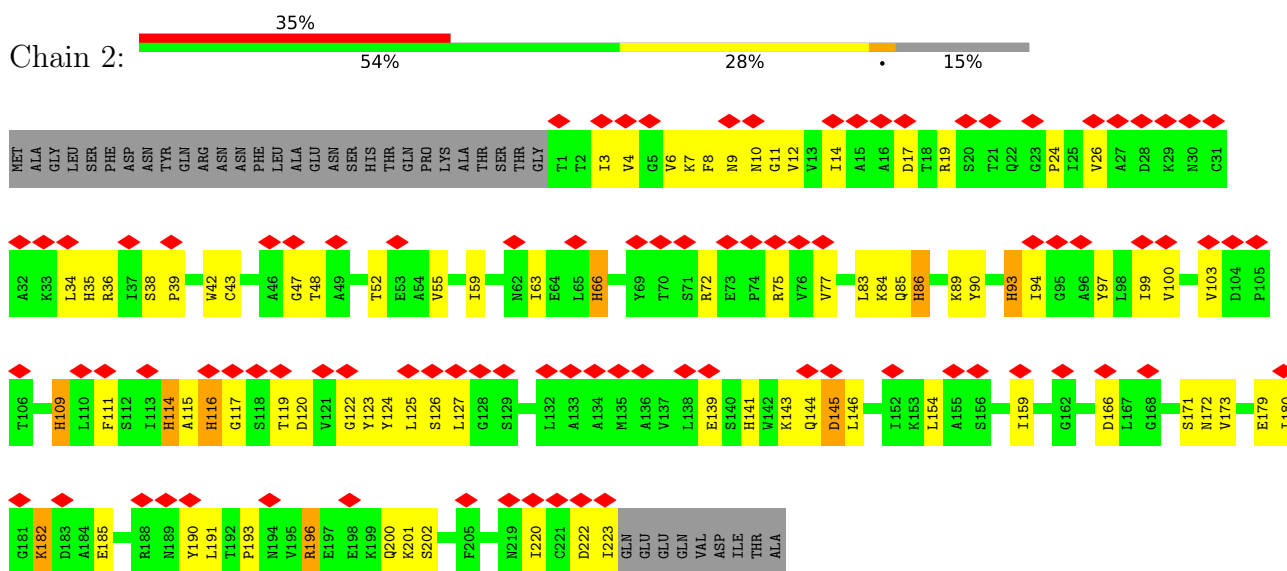
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

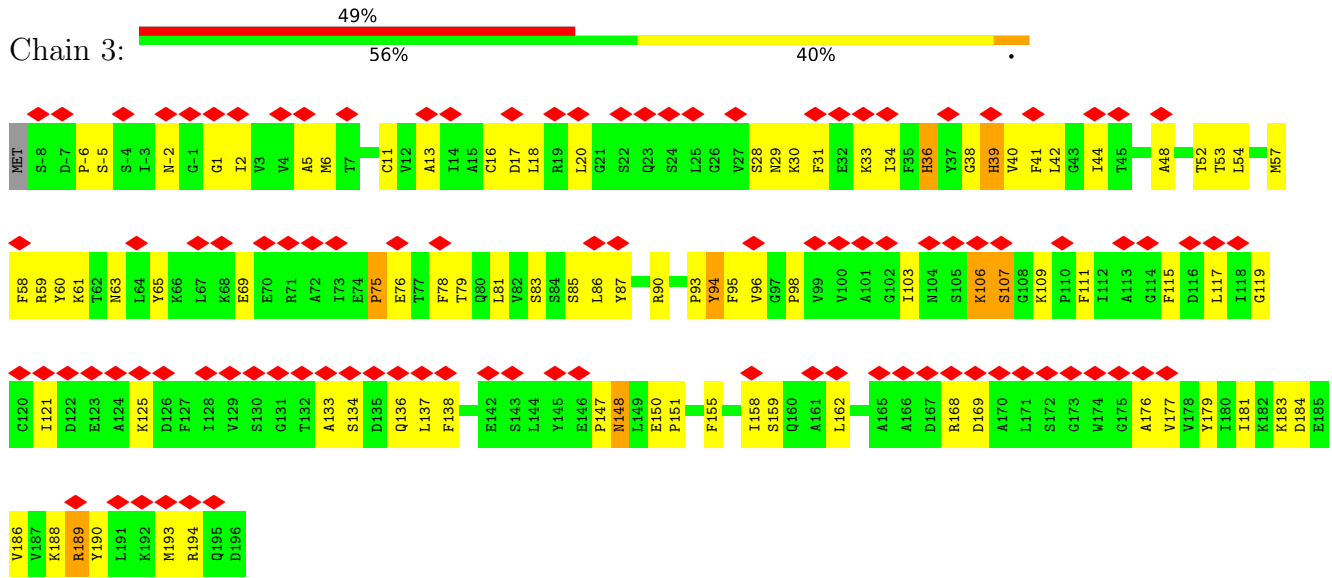
- Molecule 1: PROTEASOME COMPONENT PRE3



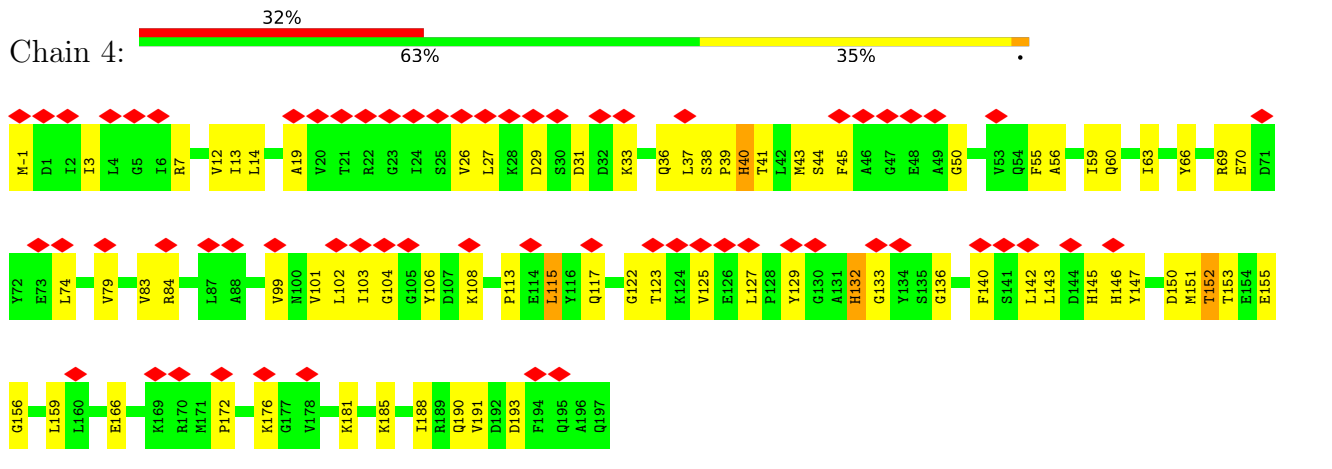
- Molecule 2: PROTEASOME COMPONENT PUP1



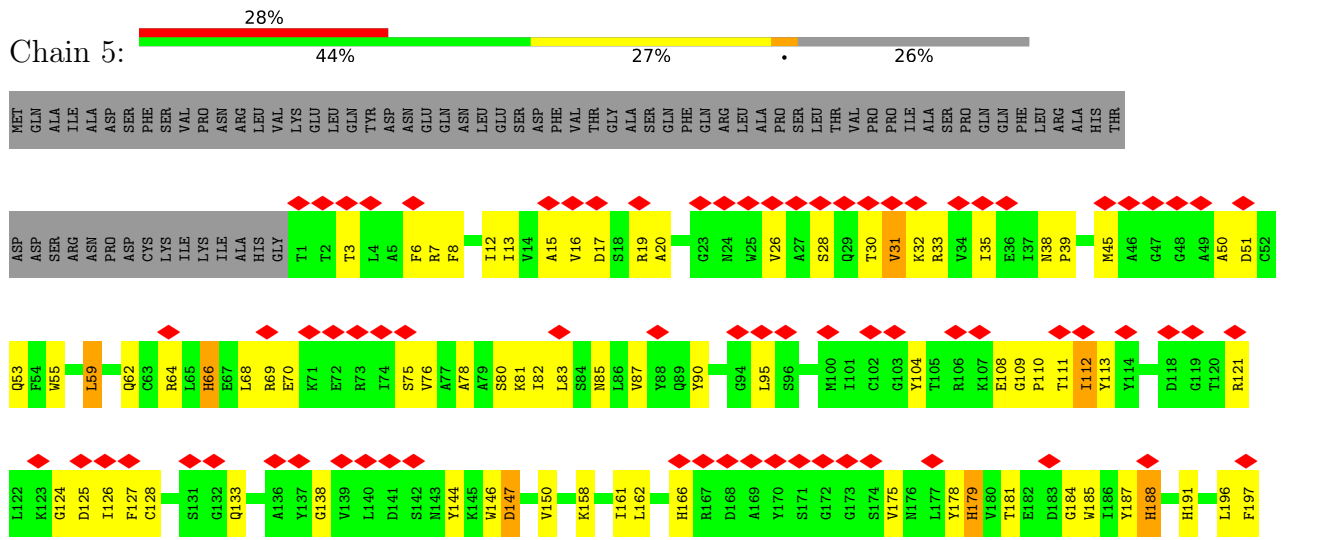
- Molecule 3: PROTEASOME COMPONENT PUP3



• Molecule 4: PROTEASOME COMPONENT C11

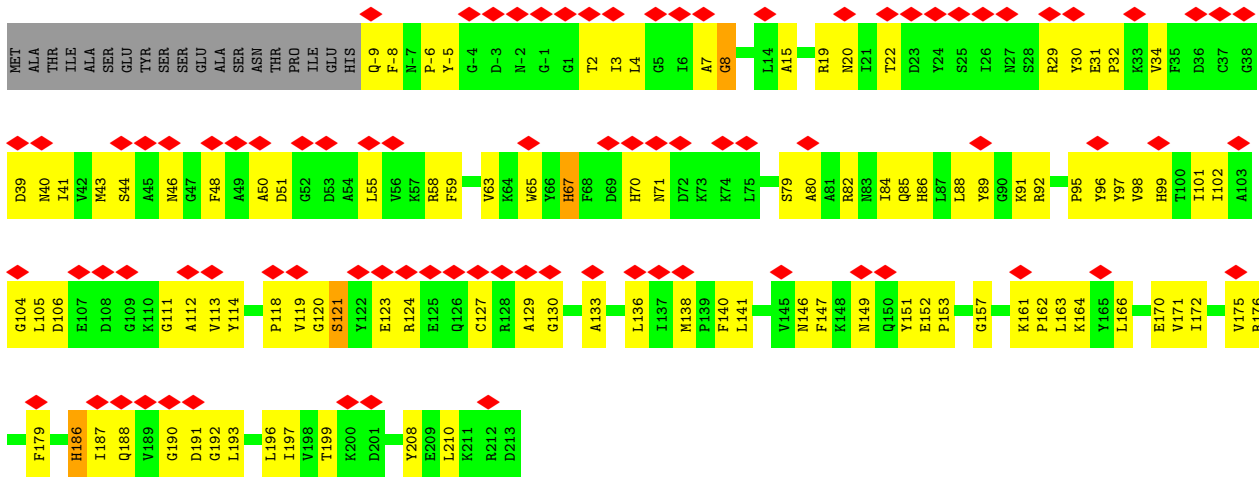


• Molecule 5: PROTEASOME COMPONENT PRE2

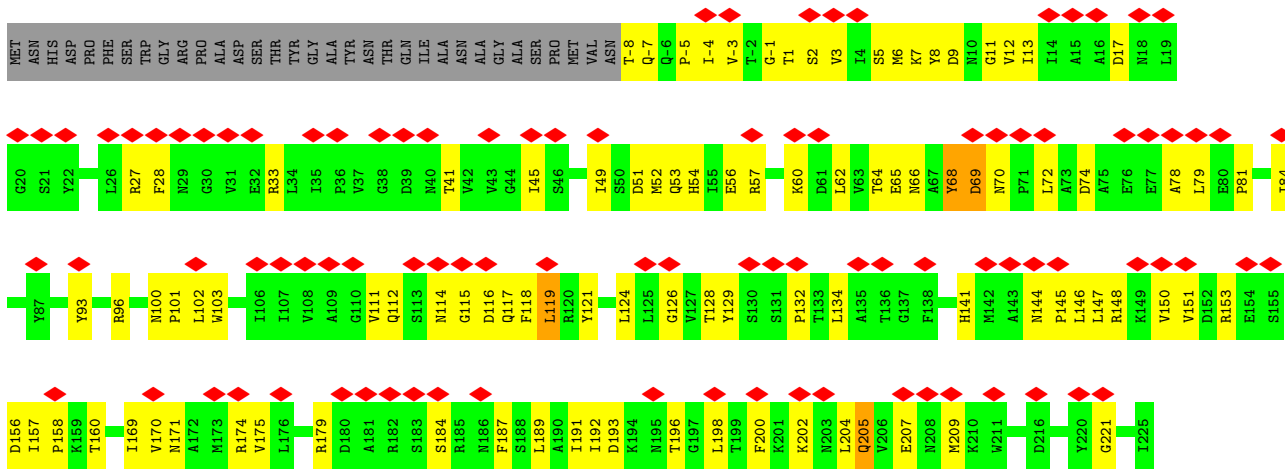




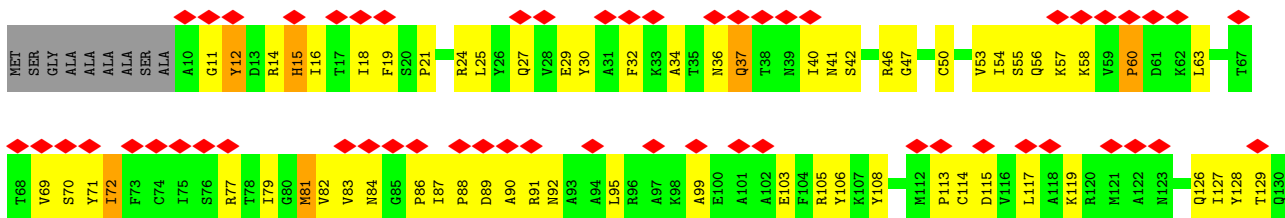
• Molecule 6: PROTEASOME COMPONENT C5

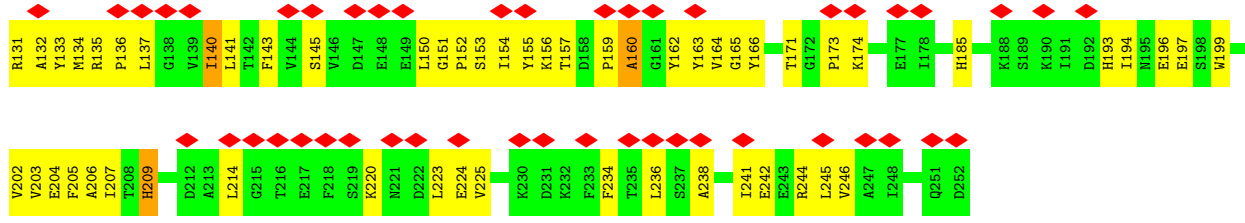


• Molecule 7: PROTEASOME COMPONENT PRE4

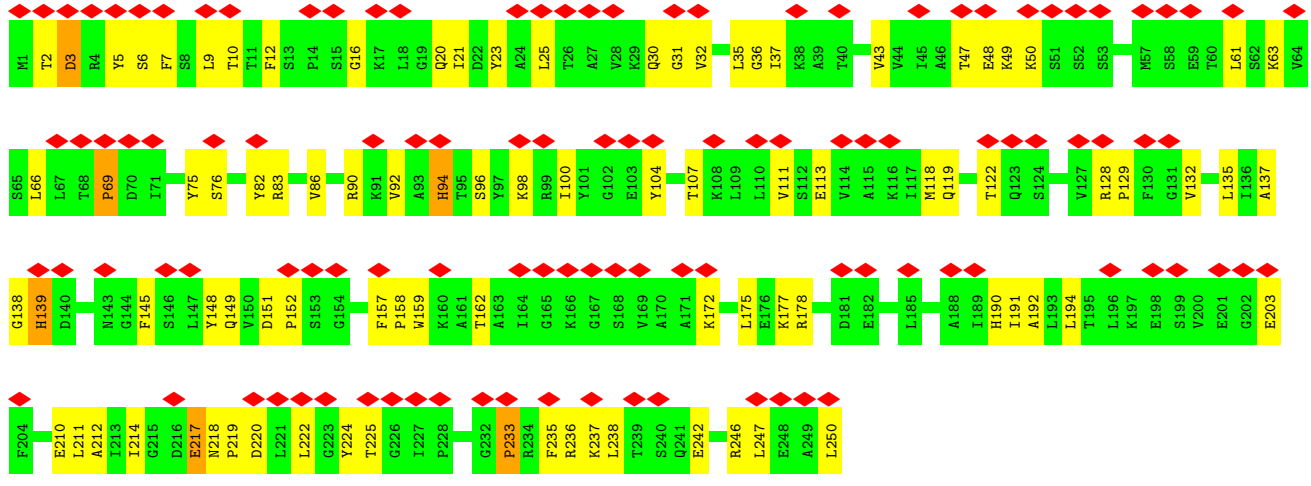


• Molecule 8: PROTEASOME COMPONENT C7-ALPHA

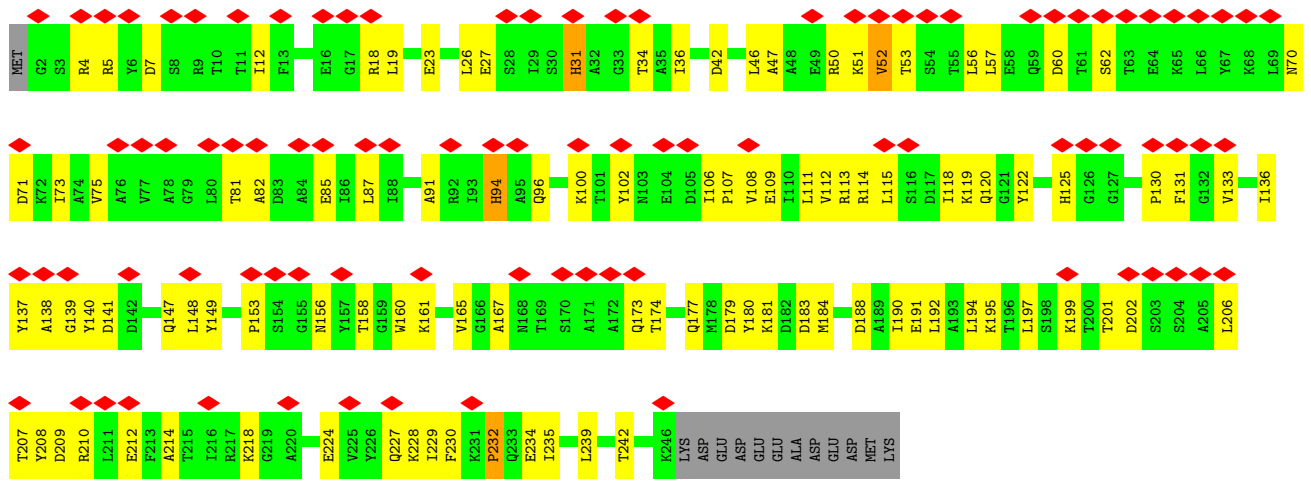




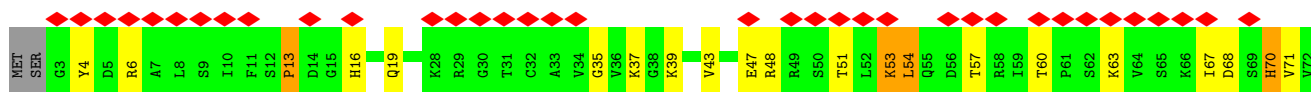
• Molecule 9: PROTEASOME COMPONENT Y7

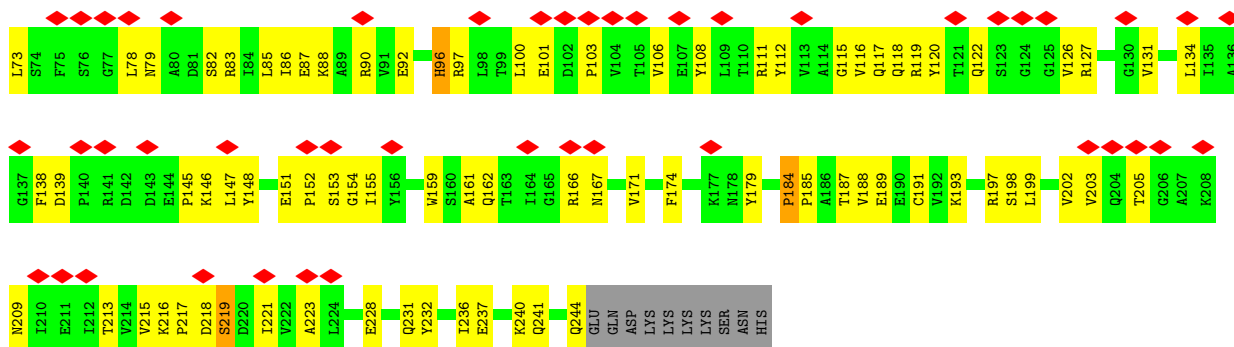


• Molecule 10: PROTEASOME COMPONENT Y13

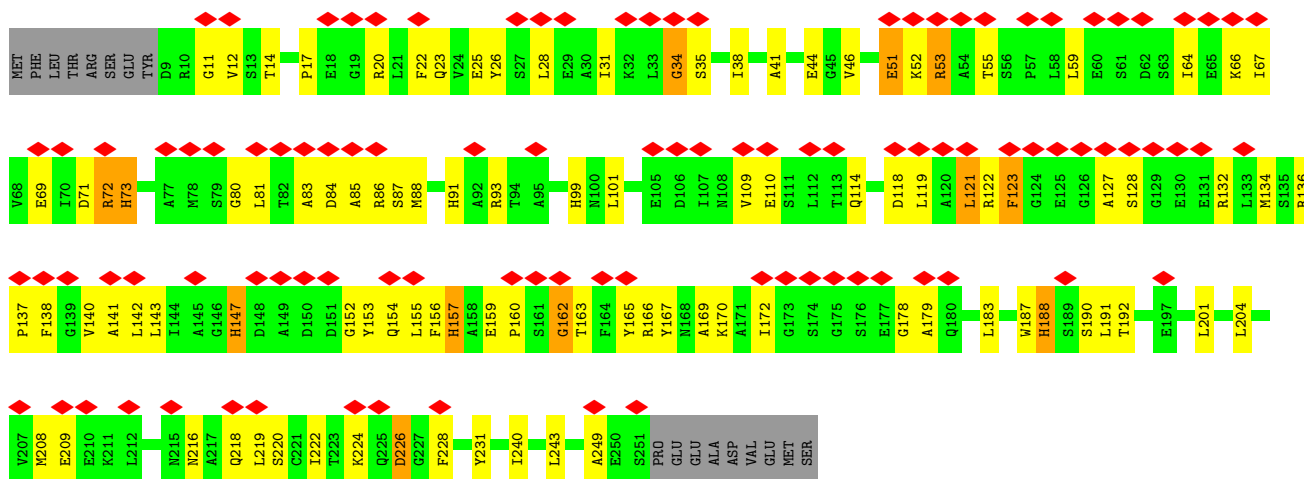
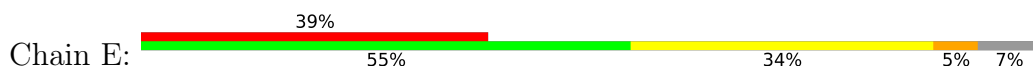


• Molecule 11: PROTEASOME COMPONENT PRE6

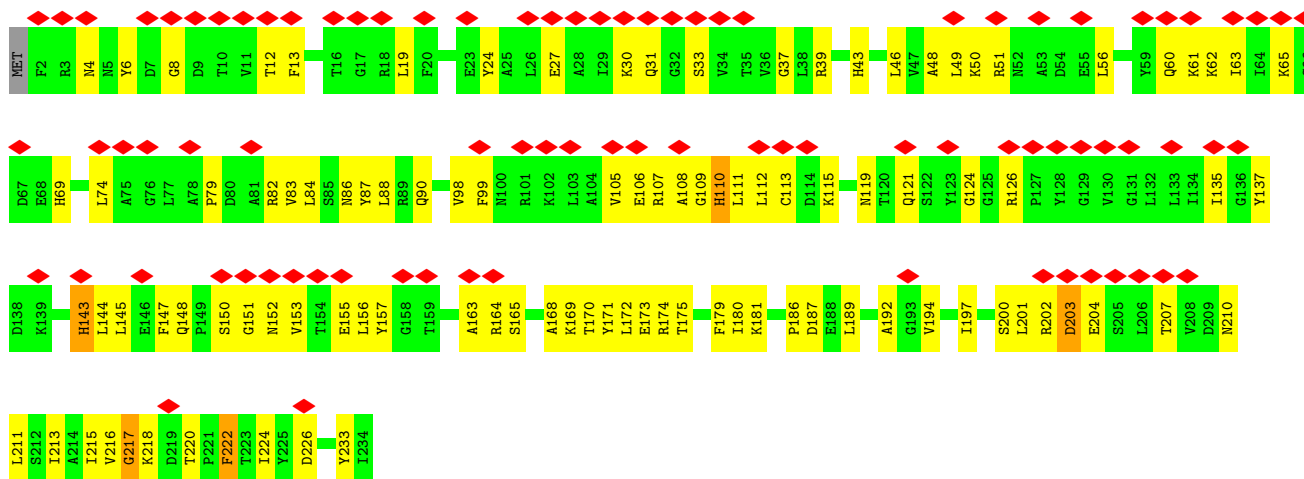




• Molecule 12: PROTEASOME COMPONENT PUP2

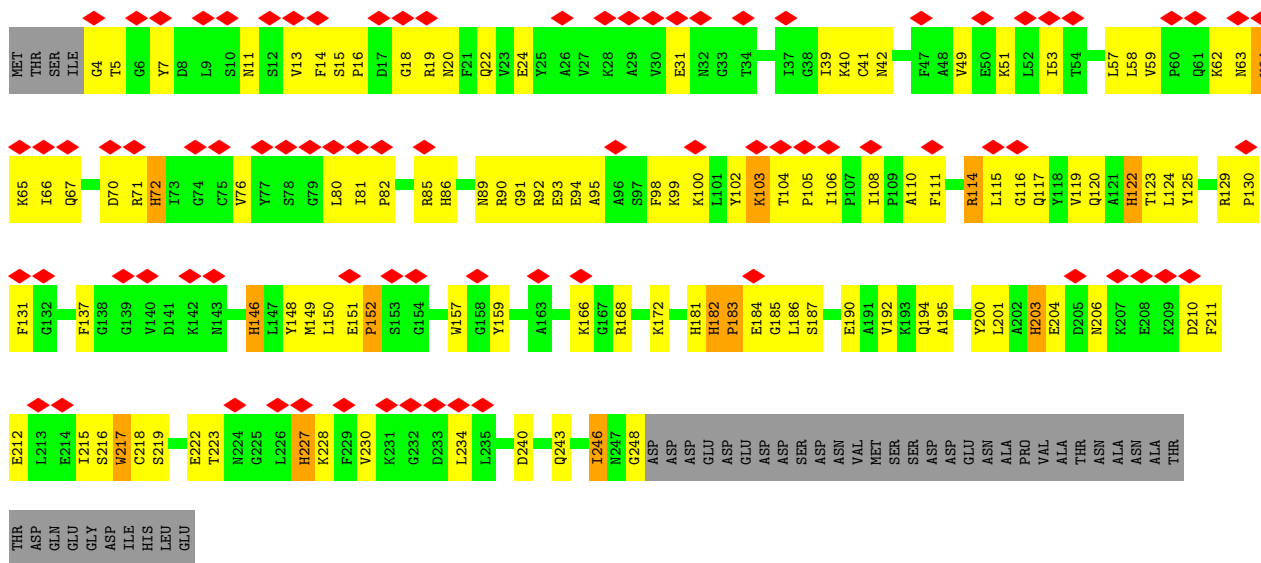


• Molecule 13: PROTEASOME COMPONENT PRE5

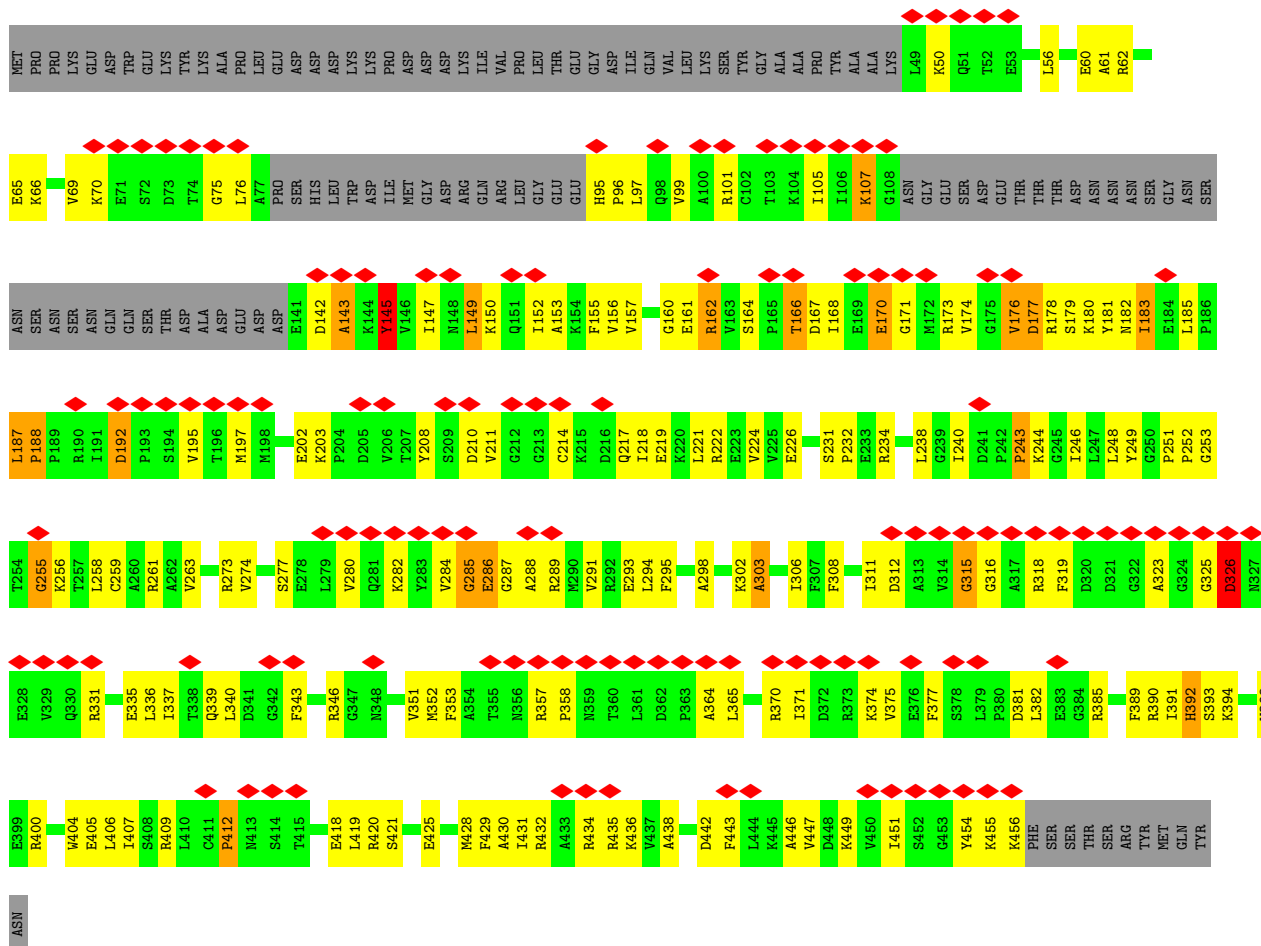
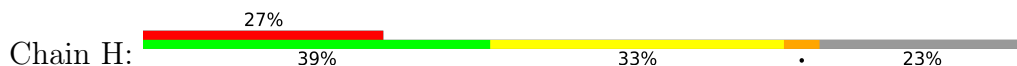


• Molecule 14: PROTEASOME COMPONENT C1





● Molecule 15: 26S PROTEASE REGULATORY SUBUNIT 7 HOMOLOG

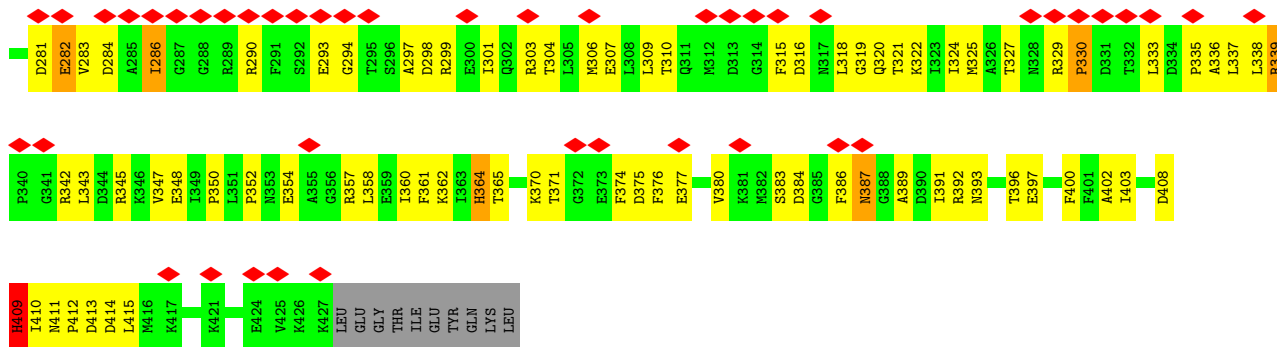


● Molecule 16: 26S PROTEASE REGULATORY SUBUNIT 4 HOMOLOG

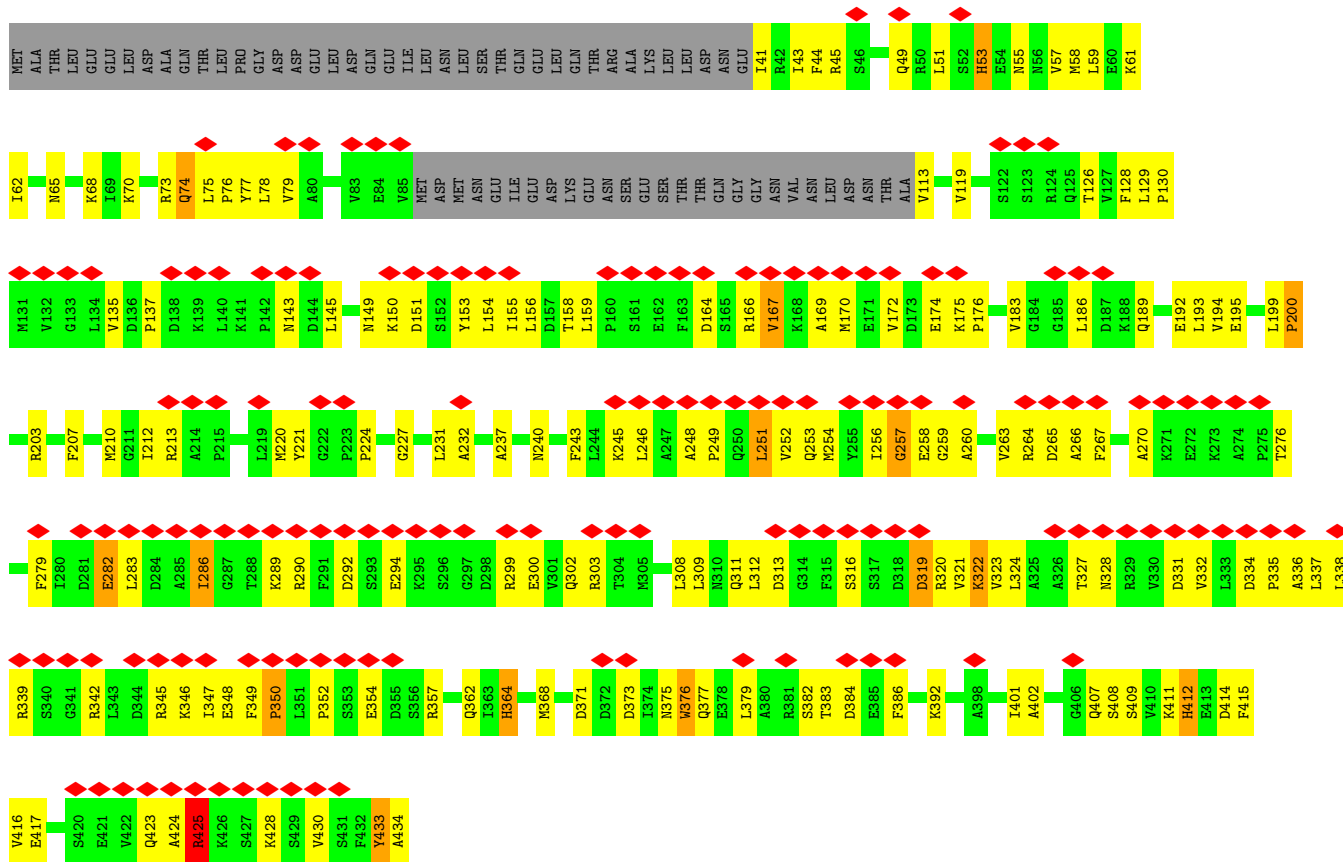




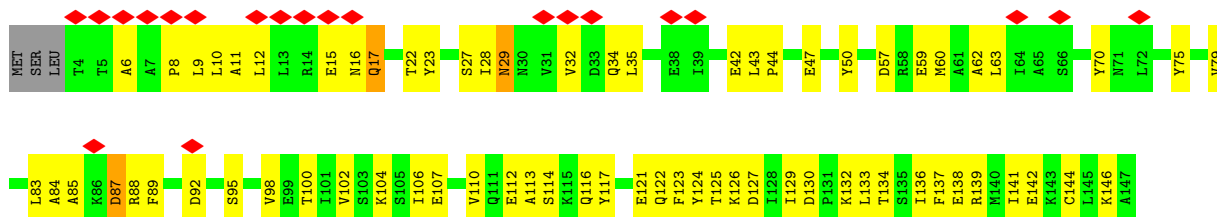


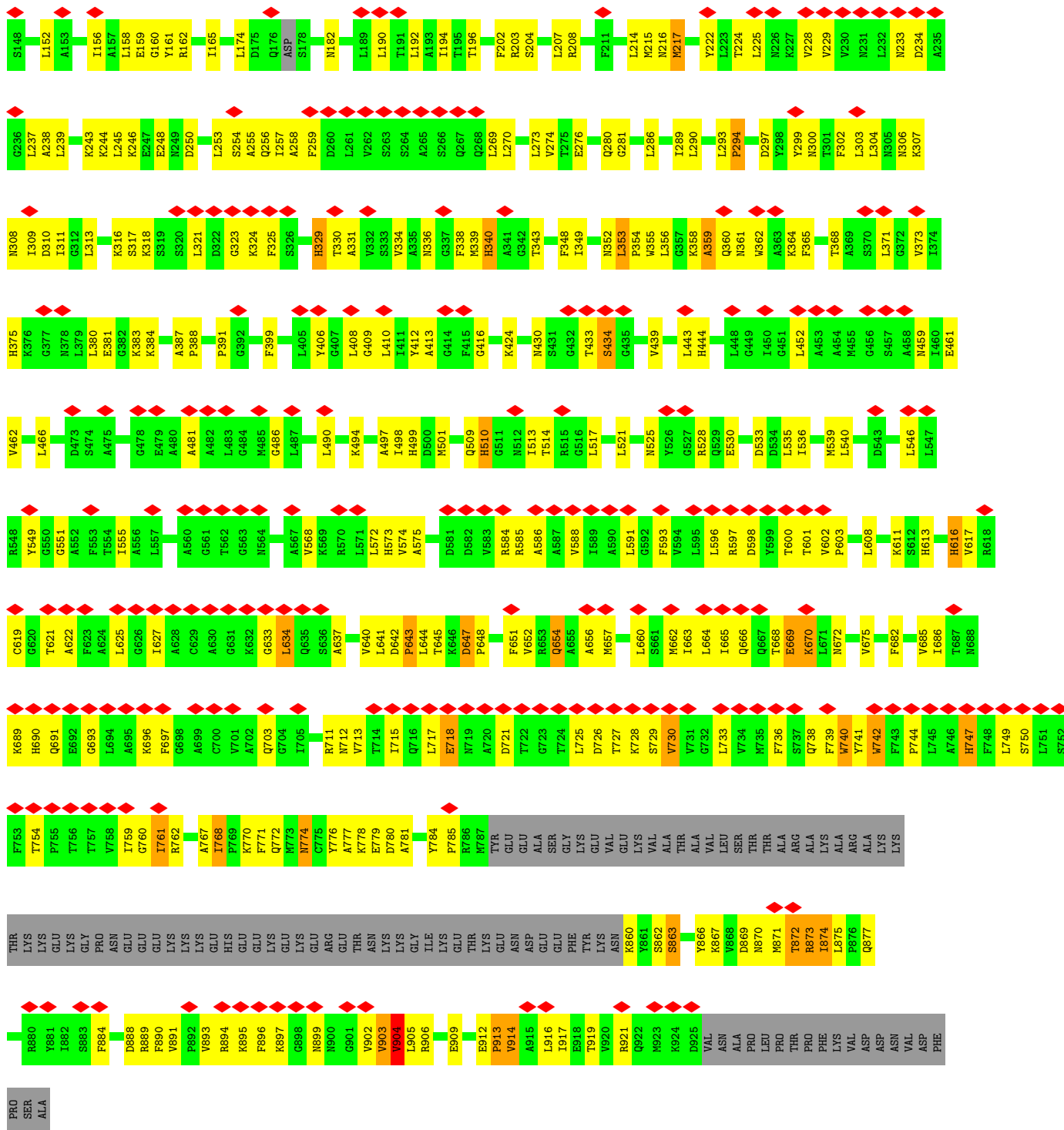


• Molecule 20: 26S PROTEASE REGULATORY SUBUNIT 6A

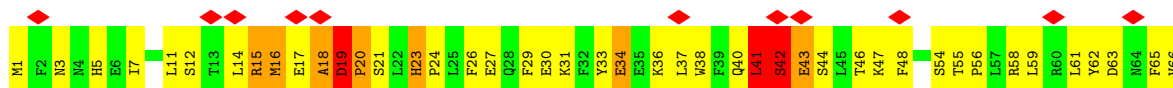


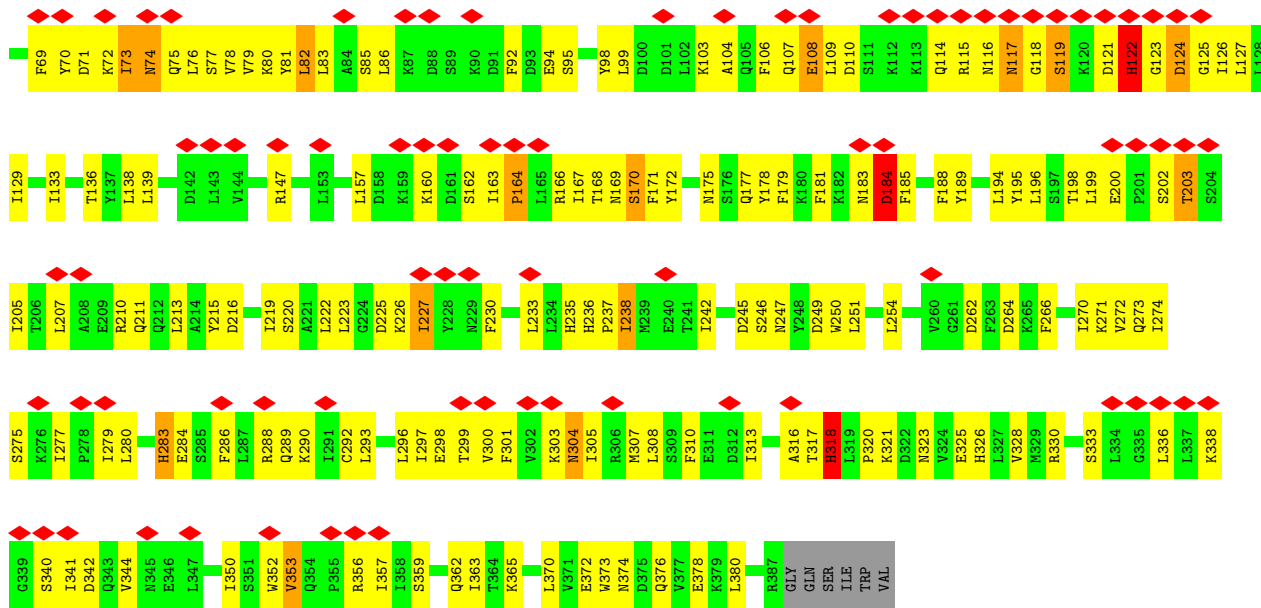
• Molecule 21: 26S PROTEASOME REGULATORY SUBUNIT RPN2



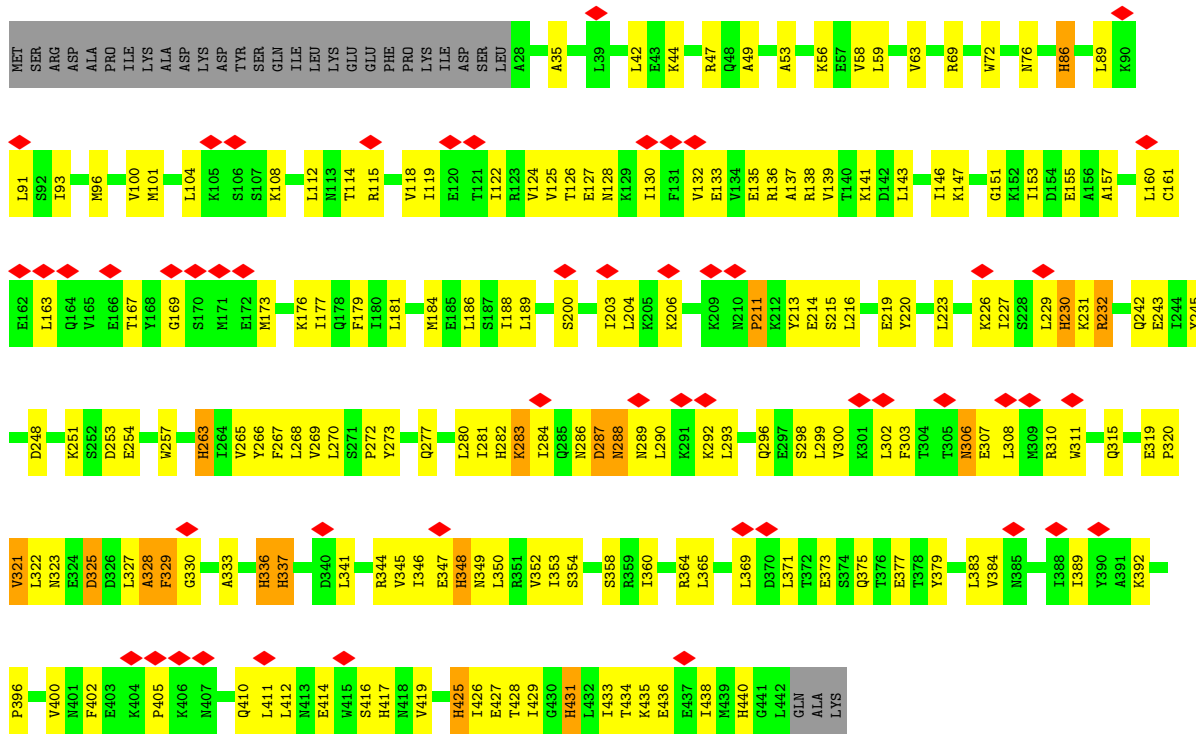


• Molecule 22: 26S PROTEASOME REGULATORY SUBUNIT RPN9



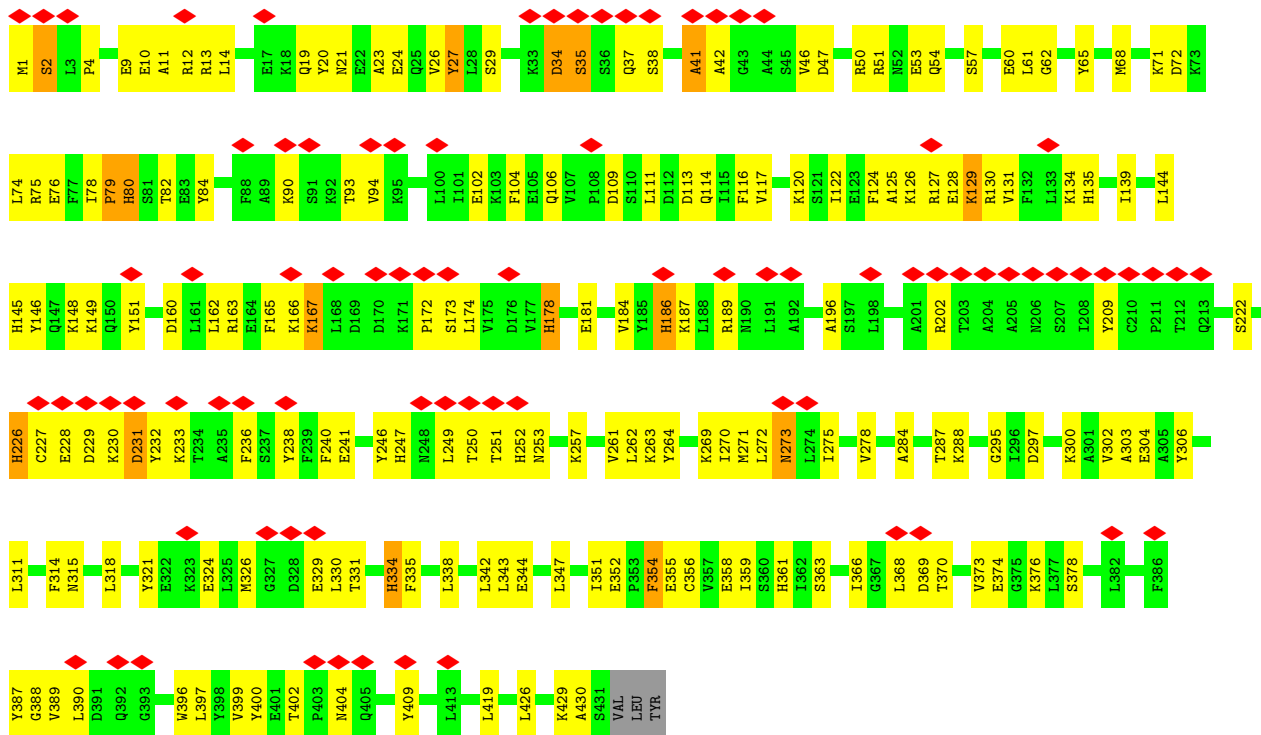


• Molecule 23: 26S PROTEASOME REGULATORY SUBUNIT RPN5

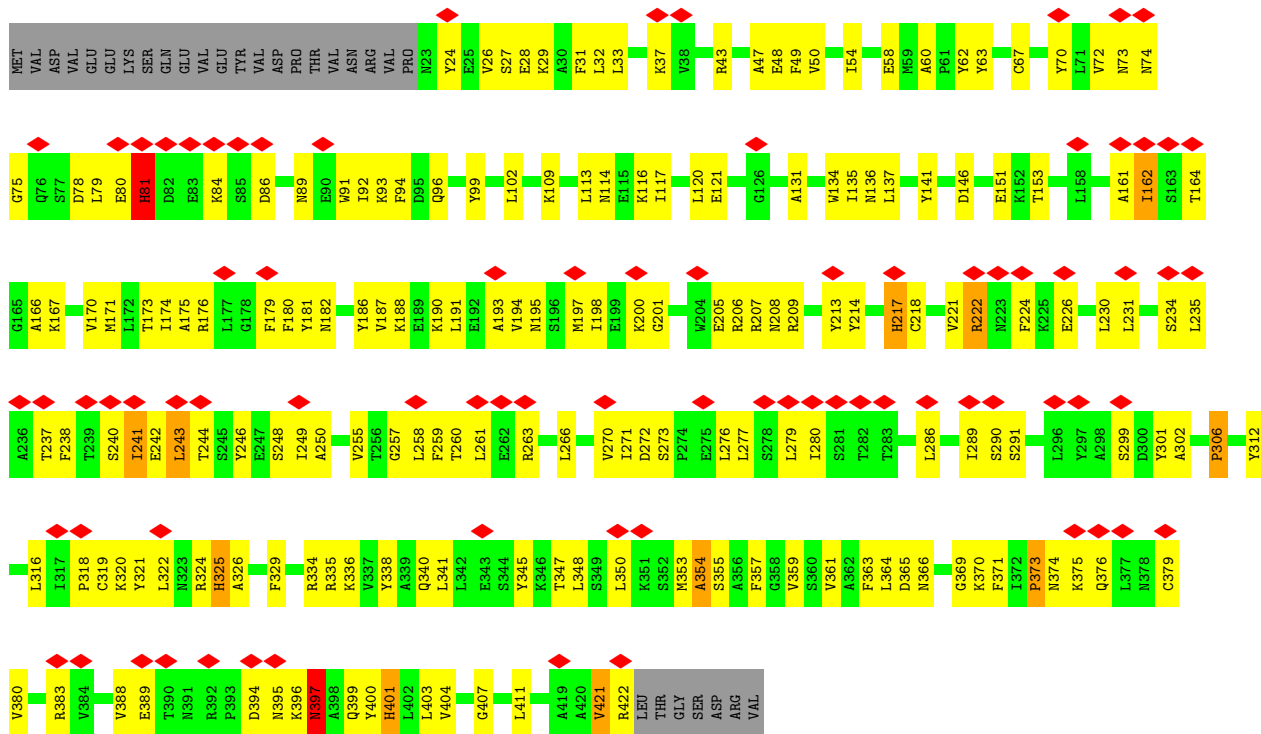


• Molecule 24: 26S PROTEASOME REGULATORY SUBUNIT RPN6



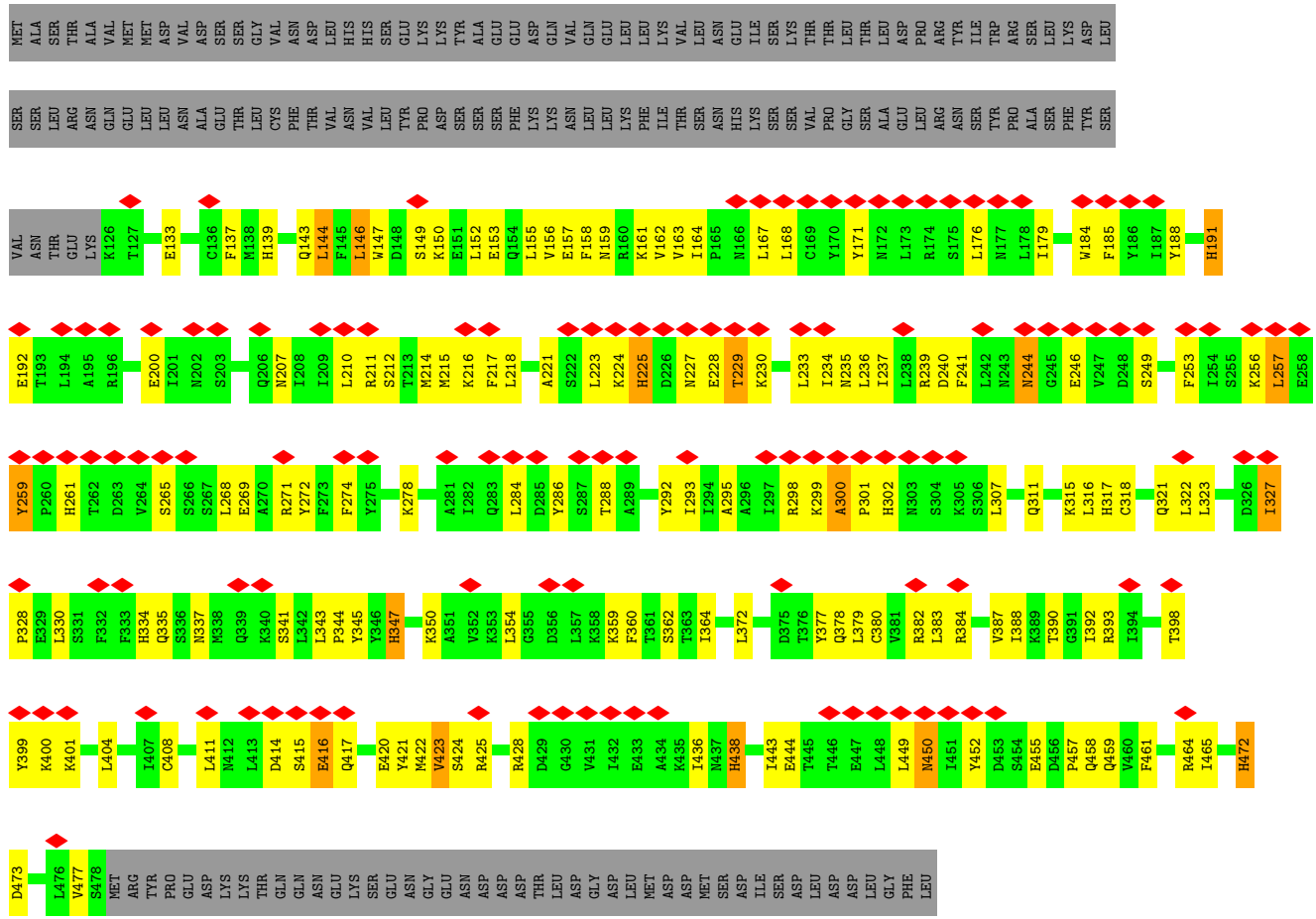


• Molecule 25: 26S PROTEASOME REGULATORY SUBUNIT RPN7

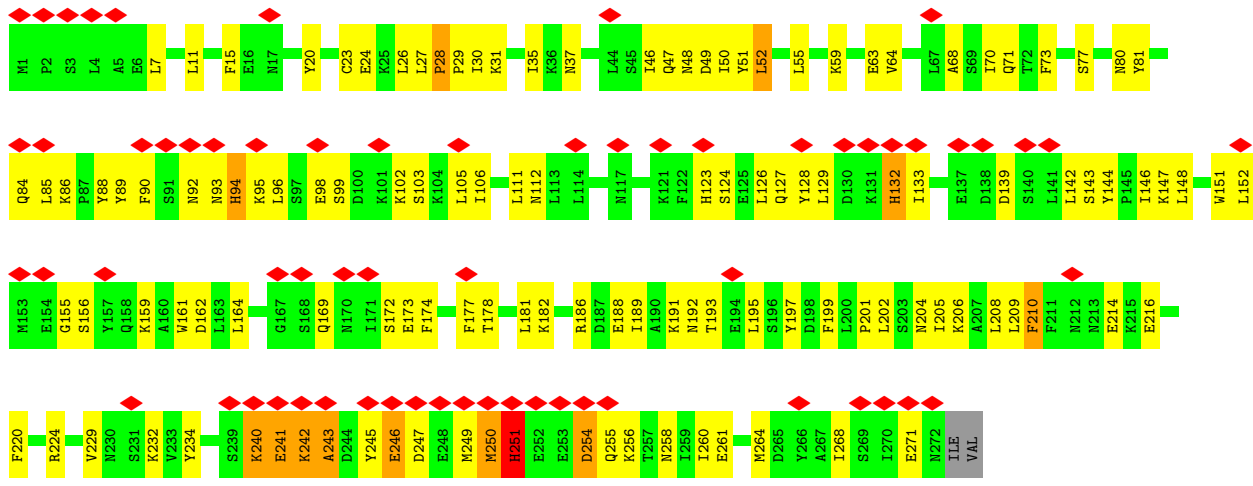


• Molecule 26: 26S PROTEASOME REGULATORY SUBUNIT RPN3



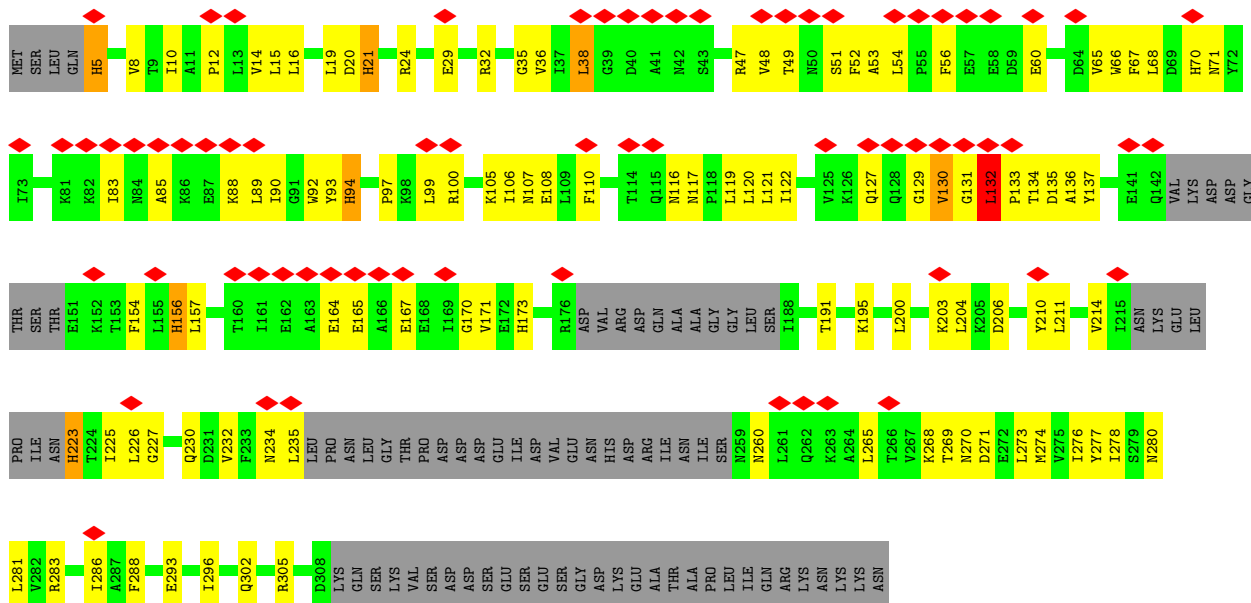


• Molecule 27: 26S PROTEASOME REGULATORY SUBUNIT RPN12

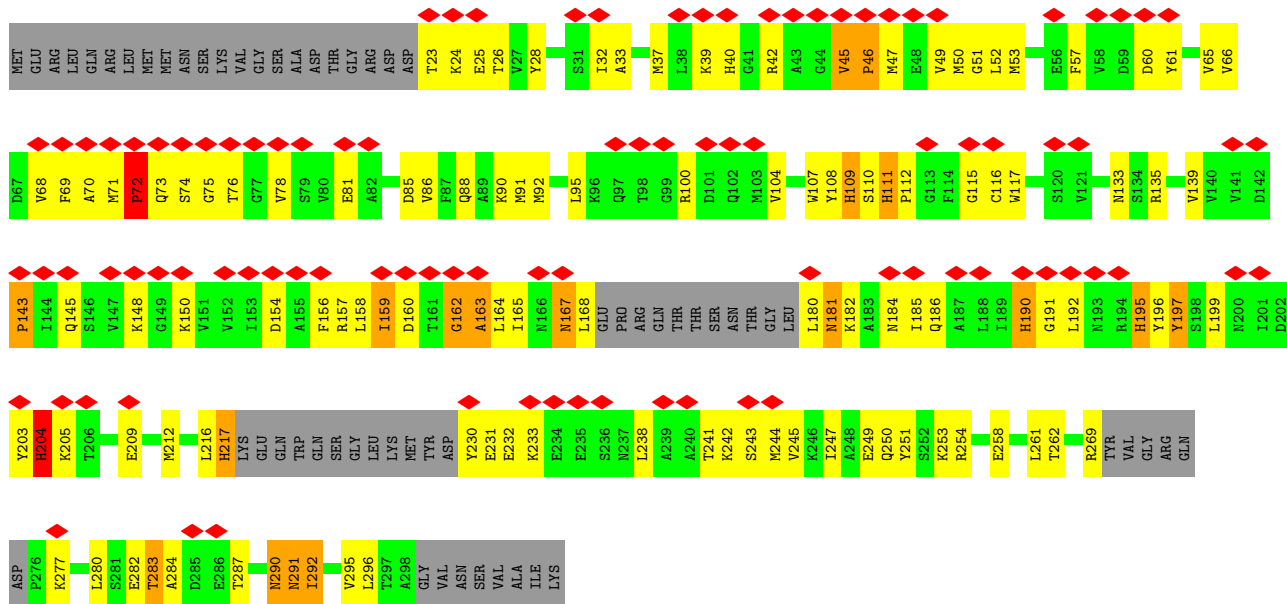


• Molecule 28: 26S PROTEASOME REGULATORY SUBUNIT RPN8

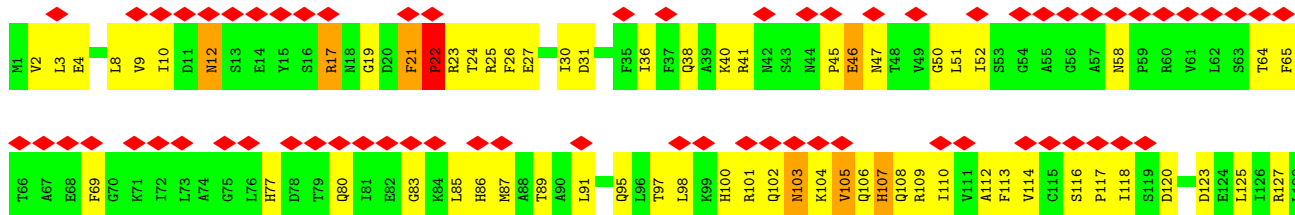


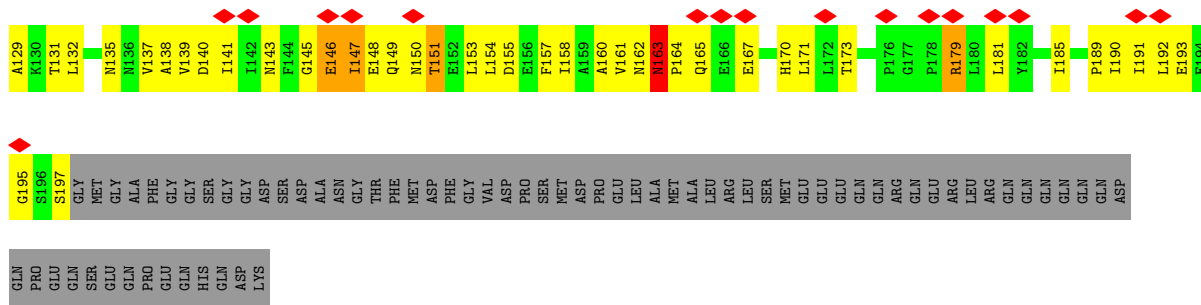


• Molecule 29: 26S PROTEASOME REGULATORY SUBUNIT RPN11

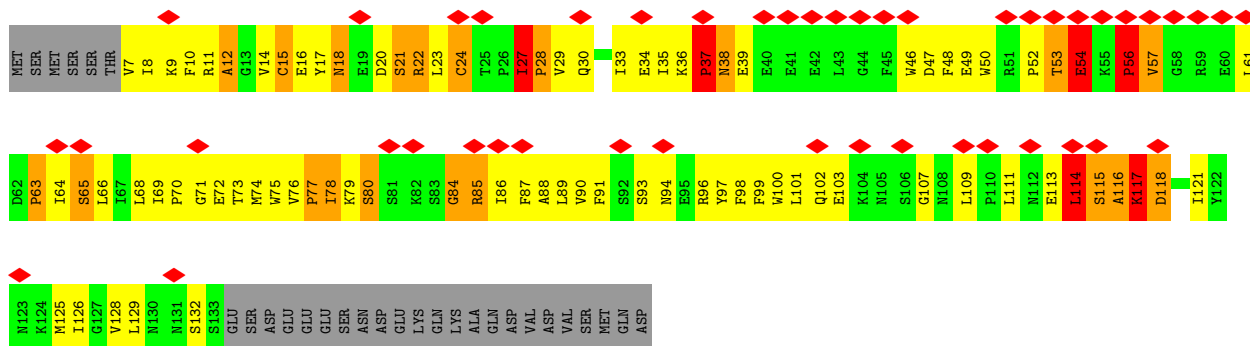
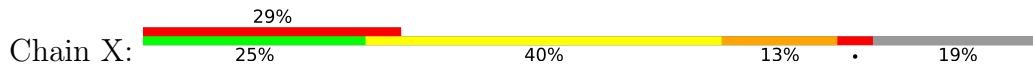


• Molecule 30: 26S PROTEASOME REGULATORY SUBUNIT RPN10

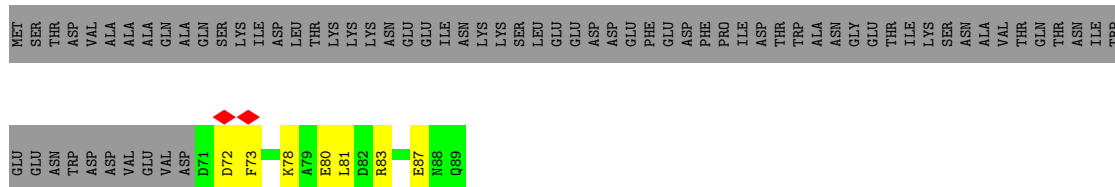




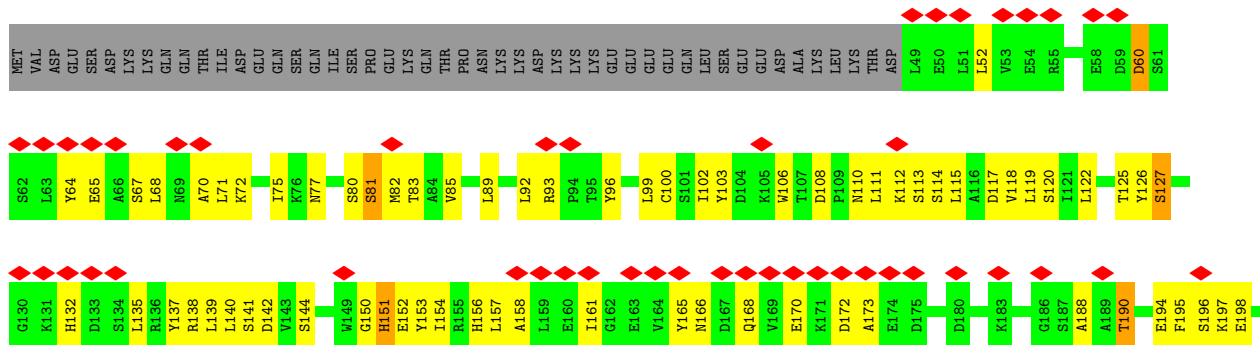
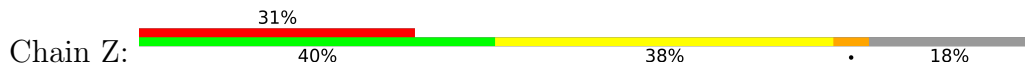
• Molecule 31: 26S PROTEASOME REGULATORY SUBUNIT RPN13

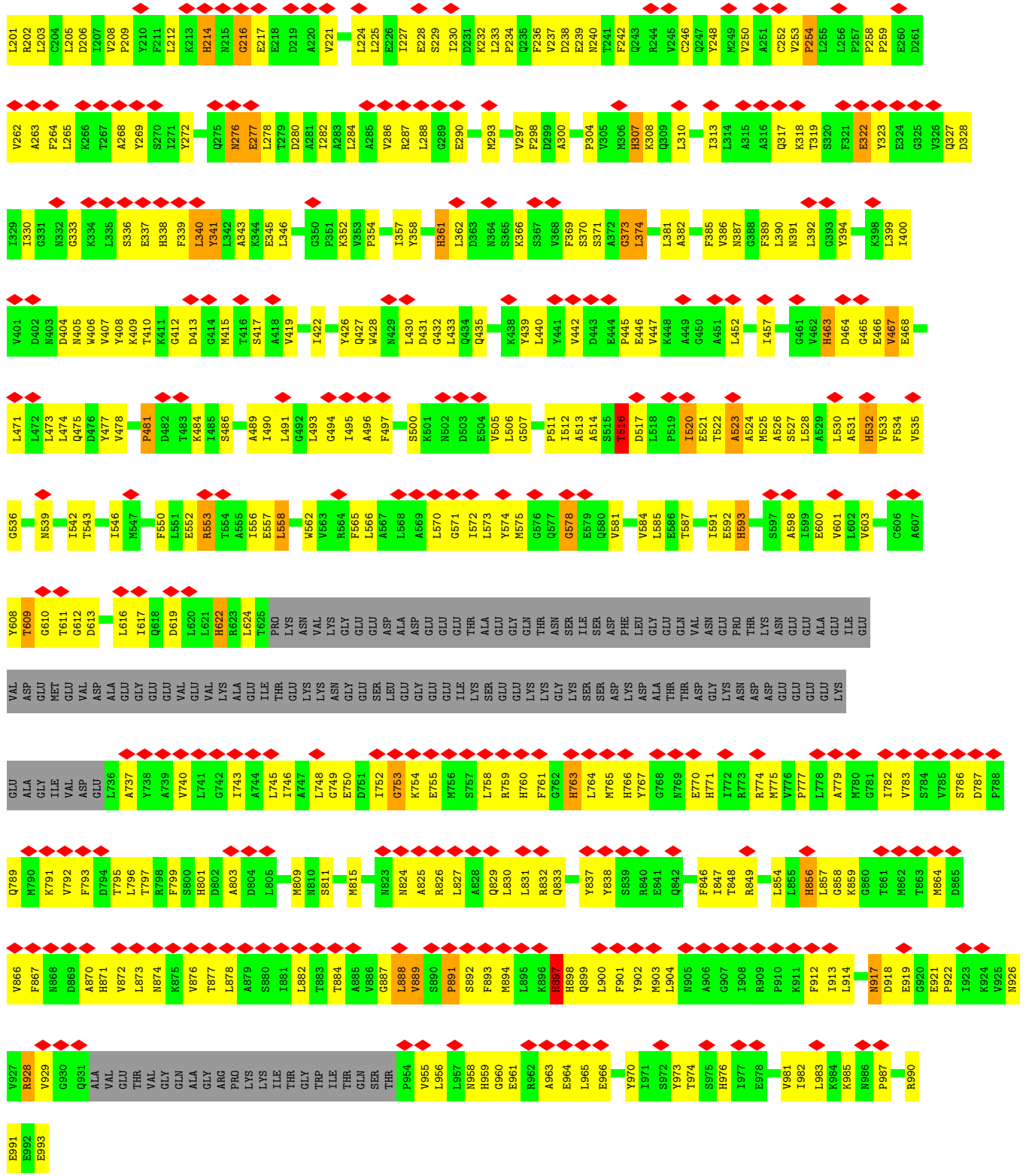


• Molecule 32: 26S PROTEASOME COMPLEX SUBUNIT SEM1



• Molecule 33: 26S PROTEASOME REGULATORY SUBUNIT RPN1







## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	560000	Depositor
Resolution determination method	Not provided	
CTF correction method	MICROGRAPH	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	25	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	Not provided	
Image detector	TVIPS TEMCAM-F816 (8k x 8k)	Depositor
Maximum map value	5.177	Depositor
Minimum map value	-3.208	Depositor
Average map value	0.012	Depositor
Map value standard deviation	0.149	Depositor
Recommended contour level	0.81	Depositor
Map size ( $\text{\AA}$ )	557.2, 557.2, 557.2	wwPDB
Map dimensions	280, 280, 280	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.99, 1.99, 1.99	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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	1	1.19	7/1605 (0.4%)	1.21	4/2171 (0.2%)
2	2	1.21	11/1723 (0.6%)	1.21	3/2337 (0.1%)
3	3	1.13	6/1611 (0.4%)	1.18	3/2174 (0.1%)
4	4	1.14	8/1613 (0.5%)	1.15	0/2173
5	5	1.19	8/1683 (0.5%)	1.23	4/2277 (0.2%)
6	6	1.17	11/1795 (0.6%)	1.22	3/2420 (0.1%)
7	7	1.09	3/1855 (0.2%)	1.19	5/2514 (0.2%)
8	A	1.16	11/1959 (0.6%)	1.16	5/2652 (0.2%)
9	B	1.16	5/1952 (0.3%)	1.21	3/2642 (0.1%)
10	C	1.16	8/1943 (0.4%)	1.11	1/2629 (0.0%)
11	D	1.13	6/1928 (0.3%)	1.18	3/2610 (0.1%)
12	E	1.22	13/1892 (0.7%)	1.22	2/2549 (0.1%)
13	F	1.22	9/1823 (0.5%)	1.20	1/2463 (0.0%)
14	G	1.29	16/1940 (0.8%)	1.16	2/2619 (0.1%)
15	H	1.19	8/2830 (0.3%)	1.35	17/3805 (0.4%)
16	I	1.20	12/2859 (0.4%)	1.23	10/3853 (0.3%)
17	J	1.21	12/2964 (0.4%)	1.20	6/3981 (0.2%)
18	K	1.13	10/3061 (0.3%)	1.21	10/4129 (0.2%)
19	L	1.15	8/2895 (0.3%)	1.20	11/3892 (0.3%)
20	M	1.18	14/2903 (0.5%)	1.18	5/3909 (0.1%)
21	N	1.14	27/6670 (0.4%)	1.15	6/9023 (0.1%)
22	O	1.05	9/3243 (0.3%)	1.09	6/4374 (0.1%)
23	P	1.13	14/3452 (0.4%)	1.16	8/4657 (0.2%)
24	Q	1.08	12/3527 (0.3%)	1.11	5/4748 (0.1%)
25	R	1.09	9/3272 (0.3%)	1.09	3/4412 (0.1%)
26	S	1.22	14/2945 (0.5%)	1.12	5/3976 (0.1%)
27	T	1.08	7/2279 (0.3%)	1.10	1/3077 (0.0%)
28	U	1.09	12/2087 (0.6%)	1.14	2/2811 (0.1%)
29	V	1.32	13/1969 (0.7%)	1.29	8/2652 (0.3%)
30	W	1.02	8/1557 (0.5%)	1.13	6/2111 (0.3%)
31	X	1.03	4/1058 (0.4%)	1.32	6/1432 (0.4%)
32	Y	1.13	0/169	0.93	0/223
33	Z	1.13	32/6403 (0.5%)	1.14	7/8686 (0.1%)
All	All	1.15	347/81465 (0.4%)	1.17	161/109981 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	1	0	1
2	2	0	1
9	B	0	1
14	G	0	1
15	H	0	7
16	I	0	1
17	J	0	4
18	K	0	2
19	L	0	4
20	M	0	2
21	N	0	1
22	O	0	2
23	P	0	2
24	Q	0	1
25	R	0	2
26	S	0	1
27	T	0	1
28	U	0	1
29	V	0	1
30	W	0	6
31	X	0	4
33	Z	0	7
All	All	0	53

All (347) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	H	285	GLY	C-N	27.78	1.98	1.34
26	S	257	LEU	CA-C	22.13	2.10	1.52
29	V	290	ASN	C-N	21.67	1.83	1.34
26	S	257	LEU	N-CA	-20.09	1.06	1.46
20	M	257	GLY	C-N	15.26	1.69	1.34
29	V	282	GLU	C-N	-13.12	1.03	1.34
29	V	283	THR	C-N	9.64	1.56	1.34
12	E	160	PRO	N-CD	9.33	1.60	1.47
8	A	60	PRO	N-CD	9.04	1.60	1.47
31	X	56	PRO	N-CD	8.38	1.59	1.47
21	N	294	PRO	N-CD	8.33	1.59	1.47
25	R	318	PRO	N-CD	8.18	1.59	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	N	693	GLY	CA-C	-8.18	1.38	1.51
16	I	123	PRO	N-CD	8.17	1.59	1.47
3	3	151	PRO	N-CD	8.09	1.59	1.47
19	L	350	PRO	N-CD	8.04	1.59	1.47
27	T	28	PRO	N-CD	8.00	1.59	1.47
30	W	189	PRO	N-CD	7.95	1.58	1.47
29	V	143	PRO	N-CD	7.92	1.58	1.47
1	1	190	PRO	N-CD	7.70	1.58	1.47
33	Z	891	PRO	N-CD	7.70	1.58	1.47
10	C	232	PRO	N-CD	7.66	1.58	1.47
14	G	152	PRO	N-CD	7.64	1.58	1.47
25	R	373	PRO	N-CD	7.60	1.58	1.47
7	7	-5	PRO	N-CD	7.60	1.58	1.47
16	I	216	PRO	N-CD	7.56	1.58	1.47
21	N	643	PRO	N-CD	7.54	1.58	1.47
20	M	137	PRO	N-CD	7.52	1.58	1.47
33	Z	481	PRO	N-CD	7.51	1.58	1.47
33	Z	354	PRO	N-CD	7.47	1.58	1.47
4	4	172	PRO	N-CD	7.45	1.58	1.47
25	R	306	PRO	N-CD	7.43	1.58	1.47
30	W	117	PRO	N-CD	7.35	1.58	1.47
29	V	46	PRO	N-CD	7.20	1.57	1.47
8	A	88	PRO	N-CD	7.18	1.57	1.47
26	S	301	PRO	N-CD	7.17	1.57	1.47
12	E	137	PRO	N-CD	7.13	1.57	1.47
23	P	151	GLY	CA-C	-7.12	1.40	1.51
15	H	358	PRO	N-CD	7.00	1.57	1.47
8	A	86	PRO	N-CD	7.00	1.57	1.47
14	G	7	TYR	N-CA	-6.96	1.32	1.46
21	N	648	PRO	N-CD	6.96	1.57	1.47
18	K	331	PRO	N-CD	6.86	1.57	1.47
16	I	126	PRO	N-CD	6.80	1.57	1.47
26	S	328	PRO	N-CD	6.79	1.57	1.47
14	G	4	GLY	N-CA	6.76	1.56	1.46
31	X	63	PRO	N-CD	6.73	1.57	1.47
19	L	192	GLU	CD-OE2	6.69	1.33	1.25
11	D	184	PRO	N-CD	6.66	1.57	1.47
17	J	68	PRO	N-CD	6.65	1.57	1.47
10	C	130	PRO	N-CD	6.51	1.56	1.47
16	I	103	PRO	N-CD	6.47	1.56	1.47
21	N	913	PRO	N-CD	6.46	1.56	1.47
21	N	44	PRO	N-CD	6.46	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	F	124	GLY	N-CA	-6.45	1.36	1.46
6	6	162	PRO	N-CD	6.42	1.56	1.47
15	H	412	PRO	N-CD	6.41	1.56	1.47
15	H	243	PRO	N-CD	6.32	1.56	1.47
29	V	112	PRO	N-CD	6.28	1.56	1.47
14	G	248	GLY	CA-C	6.27	1.61	1.51
13	F	186	PRO	N-CD	6.25	1.56	1.47
8	A	136	PRO	N-CD	6.23	1.56	1.47
31	X	107	GLY	CA-C	-6.16	1.42	1.51
20	M	200	PRO	N-CD	6.16	1.56	1.47
21	N	8	PRO	N-CD	6.13	1.56	1.47
6	6	8	GLY	CA-C	-6.11	1.42	1.51
33	Z	338	HIS	CG-CD2	6.10	1.46	1.35
9	B	139	HIS	CG-CD2	6.10	1.46	1.35
17	J	331	HIS	CG-CD2	6.10	1.46	1.35
18	K	142	HIS	CG-CD2	6.10	1.46	1.35
33	Z	132	HIS	CG-CD2	6.10	1.46	1.35
2	2	66	HIS	CG-CD2	6.10	1.46	1.35
33	Z	760	HIS	CG-CD2	6.10	1.46	1.35
11	D	16	HIS	CG-CD2	6.09	1.46	1.35
16	I	151	HIS	CG-CD2	6.09	1.46	1.35
27	T	132	HIS	CG-CD2	6.09	1.46	1.35
11	D	96	HIS	CG-CD2	6.09	1.46	1.35
16	I	117	HIS	CG-CD2	6.09	1.46	1.35
19	L	67	HIS	CG-CD2	6.09	1.46	1.35
18	K	74	HIS	CG-CD2	6.09	1.46	1.35
14	G	86	HIS	CG-CD2	6.09	1.46	1.35
21	N	573	HIS	CG-CD2	6.09	1.46	1.35
30	W	86	HIS	CG-CD2	6.08	1.46	1.35
33	Z	361	HIS	CG-CD2	6.08	1.46	1.35
6	6	67	HIS	CG-CD2	6.08	1.46	1.35
12	E	99	HIS	CG-CD2	6.08	1.46	1.35
29	V	40	HIS	CG-CD2	6.08	1.46	1.35
33	Z	976	HIS	CG-CD2	6.08	1.46	1.35
2	2	109	HIS	CG-CD2	6.08	1.46	1.35
6	6	70	HIS	CG-CD2	6.08	1.46	1.35
10	C	31	HIS	CG-CD2	6.08	1.46	1.35
21	N	340	HIS	CG-CD2	6.08	1.46	1.35
23	P	425	HIS	CG-CD2	6.08	1.46	1.35
24	Q	135	HIS	CG-CD2	6.08	1.46	1.35
24	Q	145	HIS	CG-CD2	6.08	1.46	1.35
6	6	186	HIS	CG-CD2	6.08	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	120	HIS	CG-CD2	6.08	1.46	1.35
16	I	150	HIS	CG-CD2	6.08	1.46	1.35
21	N	690	HIS	CG-CD2	6.08	1.46	1.35
25	R	401	HIS	CG-CD2	6.08	1.46	1.35
26	S	139	HIS	CG-CD2	6.08	1.46	1.35
27	T	123	HIS	CG-CD2	6.08	1.46	1.35
30	W	170	HIS	CG-CD2	6.08	1.46	1.35
23	P	86	HIS	CG-CD2	6.08	1.46	1.35
23	P	348	HIS	CG-CD2	6.08	1.46	1.35
24	Q	252	HIS	CG-CD2	6.08	1.46	1.35
28	U	223	HIS	CG-CD2	6.08	1.46	1.35
30	W	107	HIS	CG-CD2	6.08	1.46	1.35
12	E	91	HIS	CG-CD2	6.07	1.46	1.35
24	Q	172	PRO	N-CA	-6.07	1.36	1.47
30	W	77	HIS	CG-CD2	6.07	1.46	1.35
1	1	38	HIS	CG-CD2	6.07	1.46	1.35
12	E	157	HIS	CG-CD2	6.07	1.46	1.35
17	J	123	HIS	CG-CD2	6.07	1.46	1.35
2	2	35	HIS	CG-CD2	6.07	1.46	1.35
2	2	114	HIS	CG-CD2	6.07	1.46	1.35
4	4	132	HIS	CG-CD2	6.07	1.46	1.35
25	R	81	HIS	CG-CD2	6.07	1.46	1.35
25	R	217	HIS	CG-CD2	6.07	1.46	1.35
3	3	39	HIS	CG-CD2	6.07	1.46	1.35
10	C	94	HIS	CG-CD2	6.07	1.46	1.35
13	F	69	HIS	CG-CD2	6.07	1.46	1.35
13	F	110	HIS	CG-CD2	6.07	1.46	1.35
17	J	204	HIS	CG-CD2	6.07	1.46	1.35
28	U	5	HIS	CG-CD2	6.07	1.46	1.35
33	Z	214	HIS	CG-CD2	6.07	1.46	1.35
5	5	166	HIS	CG-CD2	6.07	1.46	1.35
22	O	236	HIS	CG-CD2	6.07	1.46	1.35
27	T	94	HIS	CG-CD2	6.07	1.46	1.35
33	Z	856	HIS	CG-CD2	6.07	1.46	1.35
12	E	73	HIS	CG-CD2	6.06	1.46	1.35
15	H	392	HIS	CG-CD2	6.06	1.46	1.35
22	O	326	HIS	CG-CD2	6.06	1.46	1.35
33	Z	156	HIS	CG-CD2	6.06	1.46	1.35
8	A	185	HIS	CG-CD2	6.06	1.46	1.35
18	K	140	HIS	CG-CD2	6.06	1.46	1.35
22	O	318	HIS	CG-CD2	6.06	1.46	1.35
24	Q	361	HIS	CG-CD2	6.06	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S	472	HIS	CG-CD2	6.06	1.46	1.35
33	Z	801	HIS	CG-CD2	6.06	1.46	1.35
14	G	146	HIS	CG-CD2	6.06	1.46	1.35
14	G	181	HIS	CG-CD2	6.06	1.46	1.35
2	2	141	HIS	CG-CD2	6.06	1.46	1.35
7	7	141	HIS	CG-CD2	6.06	1.46	1.35
9	B	94	HIS	CG-CD2	6.06	1.46	1.35
13	F	143	HIS	CG-CD2	6.06	1.46	1.35
19	L	364	HIS	CG-CD2	6.06	1.46	1.35
19	L	409	HIS	CG-CD2	6.06	1.46	1.35
23	P	282	HIS	CG-CD2	6.06	1.46	1.35
24	Q	334	HIS	CG-CD2	6.06	1.46	1.35
28	U	94	HIS	CG-CD2	6.06	1.46	1.35
33	Z	307	HIS	CG-CD2	6.06	1.46	1.35
15	H	95	HIS	CG-CD2	6.06	1.46	1.35
16	I	204	HIS	CG-CD2	6.06	1.46	1.35
17	J	376	HIS	CG-CD2	6.06	1.46	1.35
23	P	431	HIS	CG-CD2	6.06	1.46	1.35
29	V	109	HIS	CG-CD2	6.06	1.46	1.35
30	W	100	HIS	CG-CD2	6.06	1.46	1.35
33	Z	622	HIS	CG-CD2	6.06	1.46	1.35
21	N	616	HIS	CG-CD2	6.06	1.46	1.35
26	S	438	HIS	CG-CD2	6.06	1.46	1.35
11	D	115	GLY	N-CA	6.05	1.55	1.46
17	J	205	HIS	CG-CD2	6.05	1.46	1.35
21	N	329	HIS	CG-CD2	6.05	1.46	1.35
21	N	747	HIS	CG-CD2	6.05	1.46	1.35
24	Q	80	HIS	CG-CD2	6.05	1.46	1.35
24	Q	226	HIS	CG-CD2	6.05	1.46	1.35
28	U	21	HIS	CG-CD2	6.05	1.46	1.35
29	V	195	HIS	CG-CD2	6.05	1.46	1.35
1	1	62	HIS	CG-CD2	6.05	1.46	1.35
2	2	93	HIS	CG-CD2	6.05	1.46	1.35
14	G	122	HIS	CG-CD2	6.05	1.46	1.35
21	N	375	HIS	CG-CD2	6.05	1.46	1.35
26	S	191	HIS	CG-CD2	6.05	1.46	1.35
8	A	209	HIS	CG-CD2	6.05	1.46	1.35
23	P	417	HIS	CG-CD2	6.05	1.46	1.35
33	Z	771	HIS	CG-CD2	6.05	1.46	1.35
14	G	72	HIS	CG-CD2	6.05	1.46	1.35
22	O	235	HIS	CG-CD2	6.05	1.46	1.35
26	S	261	HIS	CG-CD2	6.05	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	U	173	HIS	CG-CD2	6.05	1.46	1.35
33	Z	897	HIS	CG-CD2	6.05	1.46	1.35
33	Z	959	HIS	CG-CD2	6.05	1.46	1.35
23	P	263	HIS	CG-CD2	6.05	1.46	1.35
29	V	217	HIS	CG-CD2	6.05	1.46	1.35
26	S	225	HIS	CG-CD2	6.05	1.46	1.35
20	M	53	HIS	CG-CD2	6.04	1.46	1.35
24	Q	186	HIS	CG-CD2	6.04	1.46	1.35
24	Q	247	HIS	CG-CD2	6.04	1.46	1.35
33	Z	898	HIS	CG-CD2	6.04	1.46	1.35
5	5	191	HIS	CG-CD2	6.04	1.46	1.35
6	6	86	HIS	CG-CD2	6.04	1.46	1.35
11	D	70	HIS	CG-CD2	6.04	1.46	1.35
13	F	43	HIS	CG-CD2	6.04	1.46	1.35
1	1	157	HIS	CG-CD2	6.04	1.46	1.35
4	4	40	HIS	CG-CD2	6.04	1.46	1.35
20	M	251	LEU	C-N	-6.04	1.20	1.34
20	M	364	HIS	CG-CD2	6.04	1.46	1.35
21	N	510	HIS	CG-CD2	6.04	1.46	1.35
26	S	317	HIS	CG-CD2	6.04	1.46	1.35
33	Z	763	HIS	CG-CD2	6.04	1.46	1.35
5	5	188	HIS	CG-CD2	6.04	1.46	1.35
17	J	170	HIS	CG-CD2	6.04	1.46	1.35
7	7	54	HIS	CG-CD2	6.04	1.46	1.35
14	G	227	HIS	CG-CD2	6.04	1.46	1.35
26	S	334	HIS	CG-CD2	6.04	1.46	1.35
28	U	70	HIS	CG-CD2	6.04	1.46	1.35
3	3	36	HIS	CG-CD2	6.04	1.46	1.35
22	O	283	HIS	CG-CD2	6.04	1.46	1.35
33	Z	593	HIS	CG-CD2	6.04	1.46	1.35
9	B	190	HIS	CG-CD2	6.04	1.46	1.35
23	P	230	HIS	CG-CD2	6.04	1.46	1.35
2	2	116	HIS	CG-CD2	6.03	1.46	1.35
22	O	23	HIS	CG-CD2	6.03	1.46	1.35
23	P	440	HIS	CG-CD2	6.03	1.46	1.35
29	V	190	HIS	CG-CD2	6.03	1.46	1.35
33	Z	871	HIS	CG-CD2	6.03	1.46	1.35
6	6	99	HIS	CG-CD2	6.03	1.46	1.35
33	Z	532	HIS	CG-CD2	6.03	1.46	1.35
5	5	66	HIS	CG-CD2	6.03	1.46	1.35
8	A	15	HIS	CG-CD2	6.03	1.46	1.35
21	N	613	HIS	CG-CD2	6.03	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S	347	HIS	CG-CD2	6.03	1.46	1.35
27	T	251	HIS	CG-CD2	6.03	1.46	1.35
33	Z	151	HIS	CG-CD2	6.03	1.46	1.35
19	L	273	HIS	CG-CD2	6.03	1.46	1.35
22	O	122	HIS	CG-CD2	6.03	1.46	1.35
23	P	337	HIS	CG-CD2	6.03	1.46	1.35
5	5	179	HIS	CG-CD2	6.03	1.46	1.35
10	C	125	HIS	CG-CD2	6.03	1.46	1.35
18	K	244	HIS	CG-CD2	6.03	1.46	1.35
21	N	499	HIS	CG-CD2	6.03	1.46	1.35
33	Z	766	HIS	CG-CD2	6.03	1.46	1.35
4	4	146	HIS	CG-CD2	6.02	1.46	1.35
33	Z	463	HIS	CG-CD2	6.02	1.46	1.35
21	N	444	HIS	CG-CD2	6.02	1.46	1.35
26	S	302	HIS	CG-CD2	6.02	1.46	1.35
28	U	156	HIS	CG-CD2	6.02	1.46	1.35
8	A	193	HIS	CG-CD2	6.02	1.46	1.35
17	J	240	HIS	CG-CD2	6.02	1.46	1.35
24	Q	178	HIS	CG-CD2	6.02	1.46	1.35
14	G	182	HIS	CG-CD2	6.02	1.46	1.35
16	I	365	HIS	CG-CD2	6.02	1.46	1.35
22	O	5	HIS	CG-CD2	6.02	1.46	1.35
25	R	325	HIS	CG-CD2	6.02	1.46	1.35
12	E	188	HIS	CG-CD2	6.02	1.46	1.35
29	V	204	HIS	CG-CD2	6.02	1.46	1.35
12	E	147	HIS	CG-CD2	6.01	1.46	1.35
2	2	86	HIS	CG-CD2	6.00	1.46	1.35
20	M	412	HIS	CG-CD2	6.00	1.46	1.35
4	4	145	HIS	CG-CD2	6.00	1.46	1.35
20	M	350	PRO	N-CD	6.00	1.56	1.47
14	G	203	HIS	CG-CD2	6.00	1.46	1.35
29	V	111	HIS	CG-CD2	6.00	1.46	1.35
23	P	336	HIS	CG-CD2	6.00	1.46	1.35
4	4	156	GLY	CA-C	-5.93	1.42	1.51
20	M	352	PRO	N-CD	5.93	1.56	1.47
18	K	341	PRO	N-CD	5.90	1.56	1.47
3	3	75	PRO	N-CD	5.88	1.56	1.47
31	X	37	PRO	N-CD	5.88	1.56	1.47
11	D	13	PRO	N-CD	5.86	1.56	1.47
13	F	217	GLY	CA-C	-5.84	1.42	1.51
18	K	152	PRO	N-CD	5.84	1.56	1.47
33	Z	507	GLY	CA-C	-5.83	1.42	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	M	130	PRO	N-CD	5.81	1.55	1.47
14	G	183	PRO	N-CD	5.81	1.55	1.47
6	6	104	GLY	CA-C	-5.79	1.42	1.51
28	U	97	PRO	N-CD	5.76	1.55	1.47
1	1	123	PRO	N-CD	5.75	1.55	1.47
33	Z	259	PRO	N-CD	5.75	1.55	1.47
8	A	152	PRO	N-CD	5.74	1.55	1.47
14	G	116	GLY	N-CA	-5.73	1.37	1.46
9	B	69	PRO	N-CD	5.69	1.55	1.47
6	6	118	PRO	N-CD	5.68	1.55	1.47
16	I	215	PRO	N-CD	5.68	1.55	1.47
15	H	251	PRO	N-CD	5.67	1.55	1.47
13	F	150	SER	C-N	5.65	1.43	1.33
9	B	138	GLY	N-CA	-5.65	1.37	1.46
16	I	319	ARG	C-N	5.64	1.43	1.33
12	E	80	GLY	N-CA	-5.64	1.37	1.46
21	N	486	GLY	N-CA	-5.63	1.37	1.46
33	Z	922	PRO	N-CD	5.63	1.55	1.47
19	L	330	PRO	N-CD	5.63	1.55	1.47
20	M	425	ARG	C-N	5.62	1.47	1.34
10	C	140	TYR	CA-C	-5.62	1.38	1.52
23	P	405	PRO	N-CD	5.60	1.55	1.47
28	U	12	PRO	N-CD	5.58	1.55	1.47
21	N	730	VAL	C-N	5.57	1.46	1.34
25	R	200	LYS	C-N	5.57	1.43	1.33
14	G	64	VAL	N-CA	-5.53	1.35	1.46
21	N	647	ASP	C-N	5.51	1.44	1.34
18	K	93	PRO	N-CD	5.51	1.55	1.47
17	J	182	PRO	N-CD	5.47	1.55	1.47
6	6	32	PRO	N-CD	5.47	1.55	1.47
24	Q	79	PRO	N-CD	5.47	1.55	1.47
17	J	48	ARG	CD-NE	5.47	1.55	1.46
14	G	41	CYS	N-CA	-5.46	1.35	1.46
4	4	115	LEU	N-CA	-5.46	1.35	1.46
33	Z	252	CYS	N-CA	5.46	1.57	1.46
17	J	262	GLY	CA-C	-5.42	1.43	1.51
2	2	24	PRO	N-CD	5.42	1.55	1.47
21	N	104	LYS	N-CA	-5.42	1.35	1.46
27	T	37	ASN	CA-C	-5.41	1.38	1.52
13	F	37	GLY	CA-C	-5.38	1.43	1.51
12	E	72	ARG	N-CA	5.36	1.57	1.46
12	E	162	GLY	CA-C	-5.33	1.43	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	H	232	PRO	N-CD	5.31	1.55	1.47
1	1	22	THR	C-N	5.31	1.42	1.33
4	4	50	GLY	CA-C	-5.31	1.43	1.51
21	N	391	PRO	N-CD	5.29	1.55	1.47
2	2	193	PRO	N-CD	5.29	1.55	1.47
3	3	169	ASP	N-CA	-5.28	1.35	1.46
20	M	224	PRO	N-CD	5.28	1.55	1.47
10	C	153	PRO	CA-C	-5.28	1.42	1.52
18	K	266	PRO	N-CD	5.27	1.55	1.47
21	N	359	ALA	CA-C	-5.26	1.39	1.52
8	A	41	ASN	N-CA	-5.20	1.35	1.46
6	6	15	ALA	C-N	5.19	1.42	1.33
12	E	152	GLY	CA-C	-5.19	1.43	1.51
30	W	143	ASN	CA-CB	5.19	1.66	1.53
8	A	113	PRO	N-CD	5.19	1.55	1.47
18	K	213	GLY	N-CA	-5.18	1.38	1.46
20	M	286	ILE	C-N	5.18	1.42	1.33
19	L	165	PRO	N-CD	5.17	1.55	1.47
33	Z	536	GLY	CA-C	-5.17	1.43	1.51
5	5	138	GLY	N-CA	-5.16	1.38	1.46
28	U	105	LYS	N-CA	-5.16	1.36	1.46
16	I	336	PRO	N-CD	5.16	1.55	1.47
22	O	170	SER	N-CA	-5.16	1.36	1.46
5	5	147	ASP	CA-C	-5.15	1.39	1.52
25	R	354	ALA	N-CA	-5.13	1.36	1.46
2	2	166	ASP	C-N	5.12	1.45	1.34
20	M	41	ILE	N-CA	5.11	1.56	1.46
17	J	317	PRO	N-CD	5.11	1.54	1.47
33	Z	93	ARG	C-N	5.09	1.44	1.34
23	P	211	PRO	N-CD	5.09	1.54	1.47
27	T	52	LEU	CA-C	-5.09	1.39	1.52
28	U	170	GLY	CA-C	-5.09	1.43	1.51
10	C	139	GLY	N-CA	-5.08	1.38	1.46
3	3	150	GLU	N-CA	-5.07	1.36	1.46
33	Z	753	GLY	CA-C	5.07	1.59	1.51
12	E	178	GLY	CA-C	-5.06	1.43	1.51
5	5	59	LEU	C-N	5.04	1.42	1.33
21	N	611	LYS	CA-CB	5.02	1.65	1.53
28	U	38	LEU	N-CA	-5.01	1.36	1.46
21	N	127	ASP	N-CA	-5.01	1.36	1.46
21	N	416	GLY	CA-C	-5.01	1.43	1.51

All (161) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	H	187	LEU	C-N-CD	-30.74	52.98	120.60
31	X	27	ILE	C-N-CD	-23.01	69.98	120.60
29	V	291	ASN	O-C-N	16.75	149.51	122.70
15	H	285	GLY	C-N-CA	-13.58	87.74	121.70
15	H	162	ARG	NE-CZ-NH2	12.91	126.76	120.30
16	I	256	TYR	CB-CG-CD2	-12.46	113.53	121.00
28	U	132	LEU	C-N-CD	-12.41	93.29	120.60
19	L	194	ARG	NE-CZ-NH1	12.18	126.39	120.30
15	H	285	GLY	O-C-N	11.22	140.66	122.70
29	V	291	ASN	CA-C-N	-10.86	93.31	117.20
15	H	285	GLY	CA-C-N	-10.66	93.75	117.20
19	L	194	ARG	NE-CZ-NH2	-9.75	115.42	120.30
19	L	191	ARG	NE-CZ-NH1	9.35	124.97	120.30
18	K	246	TYR	CB-CG-CD2	-9.21	115.47	121.00
29	V	291	ASN	C-N-CA	-8.88	99.51	121.70
19	L	192	GLU	CB-CA-C	7.92	126.24	110.40
15	H	162	ARG	CD-NE-CZ	7.66	134.32	123.60
16	I	170	VAL	N-CA-C	-7.23	91.47	111.00
6	6	22	THR	N-CA-C	-7.12	91.79	111.00
17	J	48	ARG	NE-CZ-NH1	7.11	123.86	120.30
20	M	251	LEU	C-N-CA	6.93	139.03	121.70
30	W	25	ARG	NE-CZ-NH1	6.81	123.71	120.30
5	5	210	VAL	N-CA-C	-6.77	92.73	111.00
15	H	150	LYS	N-CA-C	-6.61	93.16	111.00
18	K	247	LEU	CB-CA-C	6.53	122.61	110.20
23	P	257	TRP	CD1-NE1-CE2	-6.50	103.15	109.00
15	H	164	SER	CB-CA-C	-6.48	97.79	110.10
18	K	246	TYR	CB-CG-CD1	6.37	124.82	121.00
31	X	63	PRO	C-N-CA	6.34	137.56	121.70
17	J	309	ARG	N-CA-C	-6.33	93.91	111.00
8	A	12	TYR	N-CA-C	-6.29	94.03	111.00
9	B	36	GLY	N-CA-C	-6.27	97.43	113.10
11	D	35	GLY	N-CA-C	-6.21	97.58	113.10
14	G	103	LYS	O-C-N	-6.19	112.80	122.70
24	Q	27	TYR	O-C-N	6.19	132.60	122.70
33	Z	826	ARG	C-N-CA	6.18	137.16	121.70
21	N	608	LEU	CB-CG-CD1	-6.18	100.50	111.00
30	W	24	THR	CA-CB-OG1	6.12	121.85	109.00
33	Z	313	ILE	O-C-N	-6.11	112.92	122.70
15	H	145	TYR	CB-CA-C	5.96	122.32	110.40
17	J	291	ILE	N-CA-C	-5.95	94.93	111.00
20	M	376	TRP	O-C-N	5.93	132.19	122.70
26	S	335	GLN	O-C-N	-5.93	113.21	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	P	248	ASP	CB-CG-OD1	5.91	123.61	118.30
23	P	132	VAL	N-CA-C	-5.88	95.12	111.00
15	H	149	LEU	N-CA-C	-5.82	95.30	111.00
11	D	60	THR	CA-C-O	-5.81	107.89	120.10
24	Q	329	GLU	C-N-CA	5.78	136.16	121.70
23	P	243	GLU	N-CA-CB	5.77	120.99	110.60
17	J	136	LEU	O-C-N	5.77	131.93	122.70
3	3	36	HIS	C-N-CA	5.72	136.01	121.70
7	7	119	LEU	N-CA-C	-5.72	95.56	111.00
18	K	212	TYR	N-CA-C	-5.71	95.58	111.00
8	A	72	ILE	N-CA-C	-5.70	95.61	111.00
29	V	284	ALA	N-CA-CB	5.69	118.07	110.10
21	N	867	LYS	O-C-N	-5.67	113.63	122.70
31	X	22	ARG	N-CA-C	-5.66	95.73	111.00
5	5	112	ILE	N-CA-C	-5.66	95.73	111.00
20	M	322	LYS	N-CA-C	-5.64	95.76	111.00
33	Z	922	PRO	O-C-N	5.64	131.73	122.70
20	M	194	VAL	O-C-N	-5.62	113.71	122.70
1	1	166	ASP	O-C-N	-5.59	113.69	123.20
3	3	95	PHE	N-CA-C	-5.59	95.91	111.00
19	L	195	GLU	O-C-N	-5.58	113.78	122.70
11	D	53	LYS	N-CA-C	-5.56	96.00	111.00
29	V	72	PRO	N-CA-C	5.54	126.52	112.10
30	W	25	ARG	CG-CD-NE	-5.54	100.17	111.80
3	3	189	ARG	O-C-N	5.54	131.56	122.70
17	J	224	GLY	O-C-N	-5.54	113.84	122.70
6	6	140	PHE	C-N-CA	5.52	135.51	121.70
7	7	68	TYR	C-N-CA	5.52	135.50	121.70
10	C	52	VAL	N-CA-C	-5.51	96.11	111.00
5	5	78	ALA	O-C-N	-5.51	113.88	122.70
25	R	243	LEU	C-N-CA	5.51	135.47	121.70
2	2	47	GLY	N-CA-C	-5.50	99.35	113.10
30	W	22	PRO	N-CA-C	5.50	126.39	112.10
24	Q	326	MET	CA-C-N	5.49	127.19	116.20
19	L	188	GLU	N-CA-CB	-5.49	100.72	110.60
19	L	191	ARG	N-CA-CB	5.47	120.44	110.60
22	O	164	PRO	C-N-CA	5.46	135.36	121.70
9	B	61	LEU	O-C-N	5.45	131.41	122.70
31	X	27	ILE	CA-C-N	5.43	132.32	117.10
29	V	283	THR	O-C-N	-5.43	114.01	122.70
19	L	322	LYS	N-CA-C	-5.43	96.35	111.00
1	1	34	LEU	N-CA-C	-5.42	96.38	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	H	315	GLY	C-N-CA	5.39	133.62	122.30
8	A	140	ILE	N-CA-C	-5.38	96.46	111.00
12	E	218	GLN	N-CA-C	-5.37	96.50	111.00
15	H	316	GLY	N-CA-C	-5.36	99.69	113.10
21	N	160	GLY	CA-C-O	-5.35	110.96	120.60
15	H	326	ASP	C-N-CA	5.34	135.05	121.70
33	Z	216	GLY	O-C-N	5.34	131.24	122.70
24	Q	430	ALA	O-C-N	-5.34	114.16	122.70
22	O	184	ASP	N-CA-C	-5.33	96.59	111.00
16	I	198	VAL	C-N-CA	5.32	135.01	121.70
21	N	654	GLN	O-C-N	5.29	131.16	122.70
16	I	256	TYR	CG-CD2-CE2	-5.29	117.07	121.30
26	S	362	SER	O-C-N	-5.28	114.25	122.70
33	Z	343	ALA	C-N-CA	5.27	134.88	121.70
23	P	169	GLY	N-CA-C	-5.26	99.94	113.10
30	W	179	ARG	NE-CZ-NH2	-5.26	117.67	120.30
33	Z	254	PRO	O-C-N	5.26	131.12	122.70
31	X	54	GLU	N-CA-C	-5.26	96.80	111.00
18	K	385	ALA	O-C-N	5.26	131.11	122.70
29	V	283	THR	C-N-CA	5.25	134.84	121.70
5	5	26	VAL	C-N-CA	5.25	134.82	121.70
33	Z	339	PHE	C-N-CA	5.25	134.81	121.70
1	1	7	THR	O-C-N	-5.24	114.31	122.70
15	H	145	TYR	CB-CG-CD2	-5.24	117.86	121.00
16	I	240	THR	C-N-CA	5.23	134.78	121.70
19	L	387	ASN	N-CA-C	-5.23	96.88	111.00
13	F	213	ILE	N-CA-C	-5.23	96.89	111.00
7	7	205	GLN	N-CA-C	-5.22	96.90	111.00
20	M	409	SER	N-CA-C	-5.22	96.91	111.00
26	S	423	VAL	O-C-N	-5.22	114.35	122.70
7	7	3	VAL	N-CA-C	-5.21	96.92	111.00
24	Q	388	GLY	N-CA-C	-5.21	100.06	113.10
22	O	19	ASP	N-CA-C	5.21	125.07	111.00
16	I	275	ALA	O-C-N	-5.20	111.21	121.10
6	6	79	SER	C-N-CA	5.20	134.70	121.70
15	H	145	TYR	O-C-N	-5.20	114.38	122.70
15	H	162	ARG	NE-CZ-NH1	-5.20	117.70	120.30
7	7	-1	GLY	N-CA-C	-5.20	100.11	113.10
1	1	22	THR	N-CA-C	-5.17	97.03	111.00
16	I	431	ASN	N-CA-C	-5.16	97.07	111.00
21	N	29	ASN	O-C-N	5.16	130.95	122.70
16	I	348	ILE	N-CA-C	-5.16	97.08	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	G	114	ARG	O-C-N	-5.15	114.45	122.70
15	H	323	ALA	O-C-N	-5.15	114.44	123.20
22	O	41	LEU	C-N-CA	5.13	134.52	121.70
2	2	126	SER	C-N-CA	5.12	134.51	121.70
18	K	279	THR	N-CA-C	-5.12	97.16	111.00
21	N	742	TRP	N-CA-C	-5.12	97.17	111.00
25	R	273	SER	N-CA-C	-5.11	97.20	111.00
12	E	51	GLU	C-N-CA	5.11	134.48	121.70
27	T	155	GLY	C-N-CA	5.11	134.48	121.70
29	V	292	ILE	CA-CB-CG2	5.11	121.12	110.90
8	A	151	GLY	N-CA-C	-5.11	100.33	113.10
19	L	199	LEU	CA-C-O	-5.10	109.38	120.10
30	W	50	GLY	N-CA-C	-5.10	100.36	113.10
23	P	257	TRP	CE2-CD2-CE3	5.09	124.81	118.70
22	O	200	GLU	CA-C-N	5.09	131.35	117.10
9	B	192	ALA	O-C-N	-5.09	114.56	122.70
19	L	191	ARG	NH1-CZ-NH2	-5.08	113.81	119.40
31	X	53	THR	N-CA-C	-5.08	97.27	111.00
17	J	382	PHE	O-C-N	-5.08	114.57	122.70
16	I	256	TYR	CD1-CE1-CZ	-5.08	115.23	119.80
2	2	143	LYS	N-CA-C	-5.07	97.30	111.00
18	K	337	LYS	N-CA-C	-5.07	97.32	111.00
22	O	42	SER	N-CA-C	5.06	124.67	111.00
26	S	257	LEU	N-CA-C	-5.06	97.34	111.00
8	A	81	MET	N-CA-C	-5.04	97.38	111.00
26	S	229	THR	C-N-CA	5.04	134.31	121.70
18	K	143	SER	O-C-N	5.03	130.75	122.70
16	I	333	THR	O-C-N	5.03	130.75	122.70
28	U	32	ARG	N-CA-C	-5.03	97.42	111.00
18	K	333	ARG	N-CA-C	-5.03	97.42	111.00
23	P	290	LEU	N-CA-C	-5.02	97.45	111.00
25	R	250	ALA	O-C-N	-5.01	114.68	122.70
18	K	71	GLU	O-C-N	-5.00	114.69	122.70
23	P	56	LYS	C-N-CA	5.00	134.21	121.70

There are no chirality outliers.

All (53) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	-2	LEU	Peptide
2	2	202	SER	Peptide
9	B	9	LEU	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
14	G	246	ILE	Peptide
15	H	101	ARG	Peptide
15	H	107	LYS	Peptide
15	H	145	TYR	Sidechain
15	H	161	GLU	Peptide
15	H	166	THR	Peptide
15	H	167	ASP	Peptide
15	H	192	ASP	Peptide
16	I	256	TYR	Sidechain
17	J	189	GLY	Peptide
17	J	222	TYR	Sidechain
17	J	225	GLU	Peptide
17	J	48	ARG	Sidechain
18	K	246	TYR	Sidechain
18	K	248	GLY	Peptide
19	L	191	ARG	Sidechain
19	L	194	ARG	Sidechain
19	L	274	GLU	Peptide
19	L	339	ARG	Peptide
20	M	159	LEU	Peptide
20	M	320	ARG	Peptide
21	N	904	VAL	Peptide
22	O	124	ASP	Peptide
22	O	19	ASP	Peptide
23	P	242	GLN	Peptide
23	P	245	TYR	Sidechain
24	Q	352	GLU	Peptide
25	R	355	SER	Peptide
25	R	397	ASN	Peptide
26	S	256	LYS	Peptide
27	T	247	ASP	Peptide
28	U	117	ASN	Peptide
29	V	45	VAL	Peptide
30	W	145	GLY	Peptide
30	W	146	GLU	Peptide
30	W	163	ASN	Peptide
30	W	17	ARG	Peptide
30	W	179	ARG	Sidechain
30	W	21	PHE	Peptide
31	X	114	LEU	Peptide
31	X	117	LYS	Peptide
31	X	118	ASP	Peptide

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Mol	Chain	Res	Type	Group
31	X	27	ILE	Peptide
33	Z	242	PHE	Peptide
33	Z	258	PRO	Peptide
33	Z	322	GLU	Peptide
33	Z	374	LEU	Peptide
33	Z	516	THR	Peptide
33	Z	752	ILE	Peptide
33	Z	912	PHE	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	1576	0	1554	146	0
2	2	1692	0	1698	94	0
3	3	1581	0	1573	103	0
4	4	1585	0	1590	82	0
5	5	1646	0	1595	137	0
6	6	1757	0	1711	129	0
7	7	1824	0	1832	150	0
8	A	1921	0	1910	220	0
9	B	1915	0	1929	136	0
10	C	1913	0	1914	148	0
11	D	1899	0	1908	131	0
12	E	1867	0	1841	164	0
13	F	1795	0	1796	204	0
14	G	1900	0	1889	216	0
15	H	2792	0	2875	265	0
16	I	2822	0	2869	277	0
17	J	2928	0	3056	275	0
18	K	3019	0	3082	327	0
19	L	2853	0	2925	329	0
20	M	2866	0	2937	301	0
21	N	6562	0	6624	555	0
22	O	3182	0	3207	543	0
23	P	3401	0	3483	346	0
24	Q	3471	0	3491	306	0
25	R	3218	0	3216	385	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	S	2893	0	2937	262	0
27	T	2235	0	2207	202	0
28	U	2061	0	2114	267	0
29	V	1942	0	1948	258	0
30	W	1534	0	1542	141	0
31	X	1032	0	1015	249	0
32	Y	168	0	153	6	0
33	Z	6289	0	6232	673	0
All	All	80139	0	80653	7035	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 44.

All (7035) 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)
23:P:427:GLU:HA	29:V:230:TYR:CE1	1.27	1.67
22:O:185:PHE:CE2	22:O:223:LEU:HD13	1.30	1.66
22:O:310:PHE:HZ	22:O:341:ILE:CG2	1.04	1.62
12:E:12:VAL:HG12	12:E:123:PHE:CE2	1.37	1.60
33:Z:233:LEU:HD22	33:Z:268:ALA:CB	1.32	1.59
33:Z:120:SER:HB2	33:Z:153:TYR:CZ	1.28	1.58
22:O:310:PHE:CZ	22:O:341:ILE:CG2	1.80	1.58
21:N:514:THR:CB	21:N:546:LEU:HD13	1.28	1.57
25:R:396:LYS:HA	26:S:452:TYR:CE1	1.39	1.55
17:J:259:GLU:CB	18:K:280:LYS:HE2	1.26	1.55
20:M:221:TYR:CZ	20:M:348:GLU:HB3	1.40	1.54
29:V:197:TYR:CE1	29:V:199:LEU:HD21	1.40	1.53
19:L:252:VAL:CG1	20:M:256:ILE:HD12	1.32	1.53
21:N:759:ILE:CG2	21:N:903:VAL:HG11	1.34	1.52
21:N:144:CYS:SG	21:N:152:LEU:HD22	1.50	1.52
21:N:761:ILE:HG21	21:N:904:VAL:CA	1.39	1.52
31:X:85:ARG:NH1	31:X:87:PHE:CE2	1.76	1.51
33:Z:233:LEU:CD2	33:Z:268:ALA:HB2	1.41	1.50
22:O:26:PHE:CZ	22:O:43:GLU:CG	1.95	1.50
22:O:26:PHE:CZ	22:O:43:GLU:HG3	1.48	1.49
22:O:59:LEU:O	22:O:62:TYR:CE1	1.64	1.49
7:7:129:TYR:CE1	7:7:134:LEU:HD22	1.46	1.48
33:Z:298:PHE:CZ	33:Z:341:TYR:OH	1.64	1.48
22:O:26:PHE:CE1	22:O:58:ARG:NH1	1.82	1.47
33:Z:233:LEU:CD2	33:Z:268:ALA:CB	1.92	1.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:514:THR:HB	21:N:546:LEU:CD1	1.45	1.46
22:O:72:LYS:NZ	22:O:73:ILE:CD1	1.78	1.46
21:N:329:HIS:CD2	21:N:355:TRP:CD1	2.04	1.45
3:3:54:LEU:HD11	3:3:94:TYR:CE1	1.51	1.44
20:M:257:GLY:C	20:M:258:GLU:N	1.69	1.44
31:X:28:PRO:HB3	31:X:57:VAL:CG2	0.98	1.44
31:X:28:PRO:CB	31:X:57:VAL:CG2	1.93	1.44
18:K:291:GLU:HG3	18:K:294:ARG:NH2	1.14	1.43
12:E:157:HIS:HB3	12:E:167:TYR:CE2	1.53	1.43
31:X:17:TYR:O	31:X:98:PHE:CD1	1.68	1.42
25:R:62:TYR:CG	25:R:180:PHE:CZ	2.04	1.42
7:7:129:TYR:HE1	7:7:134:LEU:CD2	1.30	1.41
22:O:30:GLU:CA	22:O:40:GLN:HE22	1.32	1.41
12:E:12:VAL:CG1	12:E:123:PHE:CE2	2.01	1.40
21:N:329:HIS:CD2	21:N:355:TRP:NE1	1.88	1.40
28:U:19:LEU:HD11	29:V:212:MET:SD	1.60	1.40
21:N:761:ILE:CG2	21:N:904:VAL:HA	1.53	1.39
33:Z:120:SER:HB2	33:Z:153:TYR:CE2	1.54	1.39
16:I:82:LEU:HD13	33:Z:622:HIS:NE2	1.37	1.39
17:J:259:GLU:HB2	18:K:280:LYS:CE	1.49	1.39
25:R:335:ARG:NH2	25:R:371:PHE:HA	1.36	1.39
25:R:396:LYS:HA	26:S:452:TYR:CD1	1.58	1.39
14:G:108:ILE:HG22	14:G:148:TYR:CE2	1.56	1.38
23:P:346:ILE:HD13	23:P:379:TYR:CE2	1.56	1.38
22:O:189:TYR:HE2	22:O:227:ILE:CB	1.36	1.38
22:O:72:LYS:HZ3	22:O:73:ILE:CD1	1.33	1.37
17:J:273:LEU:HB3	17:J:309:ARG:NH2	1.38	1.37
21:N:514:THR:CG2	21:N:546:LEU:CD1	2.02	1.37
28:U:19:LEU:HD12	29:V:209:GLU:OE1	1.20	1.37
8:A:95:LEU:CD2	14:G:117:GLN:HG3	1.55	1.36
29:V:47:MET:CE	29:V:74:SER:O	1.69	1.36
18:K:242:PHE:N	18:K:243:VAL:N	1.67	1.36
14:G:108:ILE:CG2	14:G:148:TYR:CE2	2.07	1.36
22:O:254:LEU:HD21	22:O:266:PHE:CZ	1.61	1.35
31:X:27:ILE:CG2	31:X:61:LEU:HD21	1.55	1.35
8:A:220:LYS:HD2	8:A:238:ALA:O	1.26	1.35
11:D:159:TRP:NE1	11:D:161:ALA:O	1.57	1.35
31:X:87:PHE:O	31:X:99:PHE:HD1	1.02	1.35
22:O:189:TYR:CE2	22:O:227:ILE:HG21	1.59	1.35
25:R:396:LYS:CA	26:S:452:TYR:CE1	2.10	1.34
33:Z:570:LEU:O	33:Z:574:TYR:CD2	1.78	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:970:TYR:CE1	33:Z:985:LYS:HD3	1.63	1.34
25:R:400:TYR:O	25:R:404:VAL:HG23	1.23	1.34
21:N:514:THR:CB	21:N:546:LEU:CD1	1.99	1.34
4:4:66:TYR:CE1	10:C:102:TYR:OH	1.79	1.34
30:W:118:ILE:HG13	30:W:154:LEU:CD1	1.59	1.33
17:J:190:PRO:HD2	17:J:316:PHE:CD2	1.64	1.33
24:Q:227:CYS:CB	24:Q:334:HIS:CE1	2.10	1.32
13:F:30:LYS:HZ1	13:F:164:ARG:N	1.24	1.32
29:V:261:LEU:HB3	29:V:280:LEU:CD2	1.58	1.32
29:V:158:LEU:HD12	29:V:195:HIS:O	1.24	1.32
31:X:78:ILE:CG2	31:X:114:LEU:O	1.78	1.32
10:C:122:TYR:HE2	10:C:131:PHE:CZ	1.48	1.31
33:Z:578:GLY:O	33:Z:581:VAL:HG22	1.22	1.31
6:6:-8:PHE:CE2	6:6:-6:PRO:HB3	1.64	1.31
22:O:59:LEU:O	22:O:62:TYR:CD1	1.81	1.31
31:X:87:PHE:O	31:X:99:PHE:CD1	1.81	1.31
11:D:85:LEU:HD21	11:D:117:GLN:NE2	1.44	1.30
25:R:421:VAL:CG1	25:R:422:ARG:H	1.37	1.30
33:Z:120:SER:CB	33:Z:153:TYR:CZ	2.12	1.30
18:K:349:ARG:NH2	18:K:378:LEU:H	1.24	1.30
19:L:125:PRO:HD2	19:L:127:TYR:OH	1.25	1.30
31:X:72:GLU:HB2	31:X:91:PHE:CE2	1.66	1.30
9:B:218:ASN:HB2	9:B:236:ARG:CZ	1.60	1.30
22:O:33:TYR:CZ	22:O:40:GLN:CB	2.14	1.30
28:U:19:LEU:CD1	29:V:209:GLU:OE1	1.78	1.30
23:P:329:PHE:HE2	23:P:337:HIS:CD2	1.49	1.29
23:P:329:PHE:CE2	23:P:337:HIS:CD2	2.20	1.29
24:Q:264:TYR:OH	24:Q:330:LEU:HB2	1.26	1.29
29:V:290:ASN:C	29:V:291:ASN:N	1.83	1.29
33:Z:574:TYR:CE2	33:Z:584:VAL:HG11	1.66	1.29
18:K:244:HIS:CE1	18:K:251:PRO:HD3	1.67	1.29
20:M:221:TYR:CZ	20:M:348:GLU:CB	2.12	1.29
28:U:66:TRP:CZ3	28:U:68:LEU:HB3	1.66	1.29
5:5:7:ARG:NH2	5:5:125:ASP:OD1	1.63	1.28
19:L:221:TYR:OH	19:L:348:GLU:CB	1.80	1.28
24:Q:249:LEU:O	24:Q:250:THR:HG22	1.33	1.28
21:N:759:ILE:HG22	21:N:903:VAL:CG1	1.62	1.28
33:Z:426:TYR:OH	33:Z:435:GLN:CB	1.82	1.28
33:Z:970:TYR:CE1	33:Z:985:LYS:CD	2.16	1.28
23:P:115:ARG:NH1	23:P:146:ILE:HG13	1.46	1.27
25:R:62:TYR:CD2	25:R:180:PHE:CZ	2.22	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:335:ARG:NH1	25:R:371:PHE:HB3	1.49	1.27
7:7:101:PRO:CB	7:7:124:LEU:HD11	1.63	1.27
21:N:144:CYS:SG	21:N:152:LEU:CD2	2.22	1.27
33:Z:68:LEU:HD11	33:Z:115:LEU:CD1	1.64	1.27
22:O:26:PHE:CZ	22:O:58:ARG:NH1	2.02	1.27
18:K:349:ARG:HH22	18:K:378:LEU:N	1.28	1.26
31:X:77:PRO:O	31:X:78:ILE:CG1	1.83	1.26
22:O:310:PHE:CZ	22:O:341:ILE:HG21	1.51	1.26
33:Z:516:THR:O	33:Z:556:ILE:HG22	1.34	1.26
19:L:290:ARG:NH2	19:L:293:GLU:HB3	1.48	1.26
33:Z:336:SER:O	33:Z:340:LEU:HD23	1.29	1.26
16:I:398:GLU:HA	17:J:312:ARG:NH1	1.50	1.25
25:R:401:HIS:HB2	26:S:452:TYR:OH	1.29	1.25
23:P:431:HIS:ND1	28:U:156:HIS:HB2	1.50	1.25
21:N:383:LYS:HB2	21:N:412:TYR:OH	1.37	1.24
7:7:64:THR:HG22	7:7:68:TYR:CE2	1.71	1.24
15:H:382:LEU:HD23	15:H:385:ARG:NH2	1.47	1.24
22:O:189:TYR:CD2	22:O:227:ILE:HG13	1.73	1.24
25:R:335:ARG:HH22	25:R:371:PHE:CA	1.46	1.24
15:H:107:LYS:HB2	15:H:143:ALA:CB	1.64	1.24
1:1:190:PRO:HA	1:1:193:TYR:CE1	1.71	1.24
21:N:294:PRO:HG3	21:N:921:ARG:NH2	1.51	1.24
18:K:241:GLU:C	18:K:243:VAL:N	1.90	1.24
24:Q:174:LEU:CD1	24:Q:178:HIS:HE1	1.51	1.24
10:C:122:TYR:CE2	10:C:131:PHE:CZ	2.25	1.23
22:O:33:TYR:O	22:O:34:GLU:HG3	1.35	1.23
18:K:347:ARG:HD2	24:Q:238:TYR:CE1	1.72	1.23
21:N:633:GLY:O	21:N:634:LEU:HD23	1.35	1.23
25:R:266:LEU:CD2	25:R:270:VAL:HG21	1.68	1.23
28:U:19:LEU:HB2	29:V:209:GLU:OE2	1.36	1.23
16:I:215:PRO:CD	16:I:319:ARG:HH11	1.50	1.22
22:O:185:PHE:CE2	22:O:223:LEU:CD1	2.21	1.22
22:O:189:TYR:CE2	22:O:227:ILE:CG2	2.22	1.22
1:1:75:THR:HG22	1:1:111:TYR:CD1	1.74	1.22
20:M:221:TYR:OH	20:M:348:GLU:HB3	1.10	1.22
22:O:189:TYR:HE2	22:O:227:ILE:CG2	1.51	1.22
31:X:17:TYR:O	31:X:98:PHE:CG	1.92	1.22
21:N:761:ILE:CG1	21:N:904:VAL:H	1.53	1.22
22:O:76:LEU:O	22:O:79:VAL:HG12	1.34	1.22
23:P:427:GLU:CA	29:V:230:TYR:CE1	2.22	1.22
31:X:85:ARG:HH21	31:X:101:LEU:CD1	1.50	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:66:VAL:HG11	22:O:106:PHE:CE1	1.72	1.22
22:O:70:TYR:OH	22:O:75:GLN:NE2	1.71	1.22
26:S:472:HIS:ND1	28:U:288:PHE:HE1	1.35	1.22
22:O:33:TYR:CE2	22:O:40:GLN:HB3	1.73	1.22
22:O:72:LYS:HD3	22:O:73:ILE:CG1	1.68	1.22
24:Q:227:CYS:HB3	24:Q:334:HIS:CE1	1.71	1.22
7:7:102:LEU:O	7:7:124:LEU:CD1	1.87	1.21
14:G:108:ILE:CG2	14:G:148:TYR:CD2	2.23	1.21
15:H:173:ARG:HH21	16:I:128:TYR:CA	1.51	1.21
22:O:299:THR:HA	22:O:365:LYS:NZ	1.54	1.21
9:B:218:ASN:HB2	9:B:236:ARG:NH1	1.54	1.21
20:M:319:ASP:HB2	20:M:322:LYS:NZ	1.54	1.21
22:O:15:ARG:O	22:O:16:MET:HG3	1.36	1.21
18:K:242:PHE:C	18:K:243:VAL:HA	1.61	1.21
22:O:16:MET:HB3	22:O:19:ASP:OD1	1.05	1.21
15:H:312:ASP:O	16:I:300:ARG:NH2	1.72	1.21
17:J:392:LYS:HG2	18:K:337:LYS:NZ	1.55	1.21
22:O:30:GLU:HA	22:O:40:GLN:NE2	1.55	1.21
19:L:252:VAL:CG1	20:M:256:ILE:CD1	2.18	1.20
19:L:365:THR:OG1	19:L:376:PHE:HE1	1.23	1.20
33:Z:68:LEU:CD1	33:Z:115:LEU:HD13	1.69	1.20
33:Z:426:TYR:OH	33:Z:435:GLN:CG	1.88	1.20
13:F:179:PHE:CZ	13:F:192:ALA:CB	2.25	1.20
15:H:425:GLU:HG3	15:H:429:PHE:CE2	1.75	1.20
21:N:874:ILE:CG2	21:N:875:LEU:H	1.54	1.20
16:I:215:PRO:HD3	16:I:319:ARG:NH1	1.57	1.20
21:N:514:THR:HG22	21:N:546:LEU:CB	1.71	1.20
25:R:396:LYS:CA	26:S:452:TYR:HE1	1.50	1.20
7:7:129:TYR:CE1	7:7:134:LEU:CD2	2.13	1.20
19:L:132:ARG:NH1	19:L:156:MET:SD	2.14	1.20
26:S:257:LEU:CA	26:S:257:LEU:C	2.10	1.20
28:U:94:HIS:NE2	28:U:120:LEU:HD21	1.56	1.20
33:Z:394:TYR:CE2	33:Z:858:GLY:HA2	1.76	1.20
33:Z:867:PHE:CD1	33:Z:873:LEU:HD23	1.76	1.20
8:A:19:PHE:CE1	9:B:128:ARG:NH1	2.09	1.19
12:E:157:HIS:CB	12:E:167:TYR:CE2	2.26	1.19
33:Z:120:SER:CB	33:Z:153:TYR:CE2	2.26	1.19
19:L:164:ASP:HB2	19:L:261:ARG:NH1	1.56	1.19
19:L:252:VAL:HG12	20:M:256:ILE:CD1	1.70	1.19
31:X:28:PRO:HB3	31:X:57:VAL:CB	1.71	1.19
33:Z:474:LEU:HG	33:Z:493:LEU:CD1	1.72	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:140:HIS:CD2	18:K:147:VAL:HG21	1.76	1.19
22:O:72:LYS:NZ	22:O:73:ILE:HD11	0.86	1.18
30:W:118:ILE:CG1	30:W:154:LEU:HD11	1.73	1.18
26:S:286:TYR:CE2	26:S:323:LEU:HB3	1.76	1.18
33:Z:307:HIS:NE2	33:Z:341:TYR:CD1	2.11	1.18
22:O:26:PHE:CZ	22:O:43:GLU:HG2	1.69	1.18
15:H:285:GLY:C	15:H:286:GLU:N	1.97	1.18
9:B:172:LYS:HE3	10:C:56:LEU:HD13	1.26	1.17
13:F:30:LYS:NZ	13:F:164:ARG:H	1.41	1.17
16:I:217:LYS:CE	16:I:343:ARG:HD2	1.73	1.17
21:N:329:HIS:NE2	21:N:355:TRP:CD1	2.10	1.17
25:R:421:VAL:HG12	25:R:422:ARG:N	1.36	1.17
28:U:129:GLY:O	28:U:130:VAL:CG1	1.91	1.17
18:K:291:GLU:CG	18:K:294:ARG:NH2	2.05	1.17
25:R:117:ILE:HD13	25:R:134:TRP:CH2	1.80	1.17
19:L:290:ARG:CZ	19:L:293:GLU:HA	1.75	1.17
22:O:310:PHE:CZ	22:O:341:ILE:HG23	1.71	1.17
28:U:280:ASN:ND2	29:V:291:ASN:OD1	1.77	1.17
23:P:431:HIS:CE1	28:U:156:HIS:HB2	1.80	1.17
26:S:163:VAL:HG22	26:S:184:TRP:HZ2	1.07	1.17
28:U:122:ILE:HD12	28:U:137:TYR:CE1	1.80	1.17
30:W:4:GLU:OE2	30:W:40:LYS:NZ	1.75	1.17
31:X:53:THR:O	31:X:54:GLU:HG2	1.44	1.17
6:6:-8:PHE:CZ	6:6:-6:PRO:HA	1.79	1.16
24:Q:20:TYR:CE2	24:Q:68:MET:HG3	1.80	1.16
25:R:266:LEU:HA	25:R:270:VAL:CG2	1.75	1.16
28:U:129:GLY:O	28:U:130:VAL:HG13	1.02	1.16
15:H:312:ASP:CA	16:I:300:ARG:HH22	1.58	1.16
19:L:132:ARG:NH1	19:L:156:MET:CE	2.08	1.16
22:O:16:MET:CB	22:O:19:ASP:OD1	1.92	1.16
31:X:28:PRO:HB3	31:X:57:VAL:HG21	1.22	1.16
5:5:8:PHE:CE1	5:5:13:ILE:HG12	1.81	1.16
13:F:13:PHE:CE1	14:G:130:PRO:HD2	1.79	1.16
19:L:252:VAL:HB	20:M:256:ILE:HG23	1.23	1.16
22:O:189:TYR:CE2	22:O:227:ILE:CB	2.27	1.16
22:O:72:LYS:CD	22:O:73:ILE:HG13	1.76	1.16
25:R:214:TYR:CD2	25:R:230:LEU:HG	1.80	1.16
22:O:70:TYR:CE1	22:O:75:GLN:HB2	1.81	1.15
22:O:299:THR:CA	22:O:365:LYS:HZ3	1.59	1.15
24:Q:10:GLU:O	24:Q:14:LEU:HD23	1.41	1.15
17:J:273:LEU:HB3	17:J:309:ARG:CZ	1.72	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:114:GLU:O	19:L:137:ARG:NH2	1.78	1.15
27:T:51:TYR:HA	27:T:55:LEU:HD13	1.26	1.15
31:X:29:VAL:HG11	31:X:61:LEU:HB2	1.28	1.15
33:Z:478:VAL:HG23	33:Z:489:ALA:HB1	1.28	1.15
6:6:-8:PHE:CE2	6:6:-6:PRO:CB	2.30	1.15
13:F:179:PHE:HZ	13:F:192:ALA:CB	1.60	1.15
18:K:291:GLU:CG	18:K:294:ARG:HH22	1.58	1.15
22:O:359:SER:OG	28:U:223:HIS:NE2	1.76	1.15
13:F:105:VAL:HG22	13:F:145:LEU:CD2	1.75	1.15
20:M:220:MET:CE	20:M:324:LEU:HD11	1.76	1.15
13:F:30:LYS:NZ	13:F:164:ARG:N	1.92	1.15
15:H:173:ARG:HH21	16:I:128:TYR:C	1.50	1.15
33:Z:574:TYR:CZ	33:Z:584:VAL:HG11	1.80	1.15
33:Z:970:TYR:HE1	33:Z:985:LYS:NZ	1.45	1.15
5:5:70:GLU:HA	11:D:111:ARG:HH12	1.01	1.14
12:E:12:VAL:CG1	12:E:123:PHE:HE2	1.46	1.14
17:J:278:GLN:NE2	17:J:283:GLU:OE2	1.80	1.14
31:X:28:PRO:HG3	31:X:57:VAL:HB	1.26	1.14
12:E:119:LEU:CD2	12:E:122:ARG:HH21	1.60	1.14
31:X:35:ILE:HG21	31:X:128:VAL:HG22	1.28	1.14
12:E:165:TYR:HB2	12:E:167:TYR:CZ	1.80	1.14
15:H:219:GLU:OE2	15:H:222:ARG:NH2	1.78	1.14
15:H:429:PHE:CD1	15:H:432:ARG:NH2	2.14	1.14
20:M:192:GLU:HB3	20:M:347:ILE:HD12	1.16	1.14
21:N:245:LEU:HD13	21:N:253:LEU:HD22	1.22	1.14
22:O:188:PHE:HD2	22:O:220:SER:HB3	1.08	1.14
29:V:261:LEU:CB	29:V:280:LEU:CD2	2.25	1.14
25:R:62:TYR:CD2	25:R:180:PHE:CE1	2.36	1.14
26:S:234:ILE:HG13	26:S:257:LEU:CD2	1.77	1.14
26:S:392:ILE:HD11	26:S:411:LEU:HD21	1.24	1.14
33:Z:381:LEU:HD11	33:Z:385:PHE:CZ	1.82	1.14
33:Z:571:GLY:HA2	33:Z:574:TYR:CE2	1.83	1.14
8:A:95:LEU:HD22	14:G:117:GLN:HG3	1.19	1.14
26:S:343:LEU:CG	26:S:347:HIS:HE1	1.60	1.14
29:V:261:LEU:CB	29:V:280:LEU:HD21	1.77	1.14
33:Z:426:TYR:OH	33:Z:435:GLN:HG3	1.40	1.14
31:X:27:ILE:O	31:X:27:ILE:HG22	1.31	1.13
12:E:119:LEU:HD22	12:E:122:ARG:HH21	1.06	1.13
22:O:44:SER:OG	22:O:72:LYS:HE3	1.49	1.13
26:S:163:VAL:HG22	26:S:184:TRP:CZ2	1.82	1.13
6:6:175:VAL:HG13	6:6:179:PHE:HE2	1.03	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:291:ARG:HG3	16:I:292:TYR:H	1.03	1.13
24:Q:227:CYS:HB2	24:Q:334:HIS:CE1	1.74	1.13
21:N:666:GLN:OE1	21:N:873:ARG:HG2	1.49	1.13
18:K:249:GLU:OE2	18:K:252:ARG:NH2	1.82	1.13
22:O:79:VAL:HG11	22:O:123:GLY:O	1.47	1.13
23:P:431:HIS:ND1	28:U:156:HIS:CB	2.12	1.13
29:V:168:LEU:HD21	29:V:184:ASN:HB2	1.19	1.12
29:V:203:TYR:O	29:V:204:HIS:CD2	2.01	1.13
3:3:18:LEU:HD11	3:3:177:VAL:HG13	1.21	1.12
11:D:159:TRP:CD1	11:D:161:ALA:O	2.02	1.12
14:G:215:ILE:HG23	14:G:230:VAL:HB	1.16	1.12
19:L:290:ARG:NH1	19:L:299:ARG:HH22	1.44	1.12
26:S:472:HIS:HB2	28:U:288:PHE:CZ	1.84	1.12
15:H:173:ARG:NH2	16:I:129:TYR:N	1.97	1.12
19:L:286:ILE:HB	19:L:304:THR:HG21	1.31	1.12
28:U:19:LEU:CD1	29:V:212:MET:SD	2.37	1.12
5:5:55:TRP:HZ2	5:5:90:TYR:CE2	1.66	1.12
23:P:181:LEU:HG	23:P:223:LEU:HD21	1.21	1.12
26:S:428:ARG:HD2	27:T:192:ASN:OD1	1.49	1.12
31:X:28:PRO:CB	31:X:57:VAL:HG23	1.67	1.12
33:Z:161:ILE:HG13	33:Z:203:LEU:HD13	1.25	1.12
33:Z:233:LEU:CD2	33:Z:268:ALA:HB1	1.76	1.12
11:D:118:GLN:HE22	12:E:86:ARG:HD2	1.06	1.12
20:M:221:TYR:OH	20:M:348:GLU:CB	1.94	1.12
22:O:33:TYR:CD2	22:O:40:GLN:HB3	1.83	1.12
25:R:70:TYR:HE2	25:R:75:GLY:N	1.47	1.12
30:W:125:LEU:HD11	30:W:157:PHE:HB2	1.15	1.12
31:X:28:PRO:CG	31:X:57:VAL:HB	1.79	1.12
22:O:116:ASN:HB3	22:O:127:LEU:CD2	1.79	1.11
25:R:24:TYR:OH	25:R:248:SER:HB2	1.45	1.11
27:T:106:ILE:HG23	27:T:142:LEU:HD21	1.32	1.11
31:X:24:CYS:SG	31:X:86:ILE:HG12	1.89	1.11
8:A:135:ARG:NH2	14:G:14:PHE:HD1	1.45	1.11
24:Q:202:ARG:NH2	24:Q:222:SER:OG	1.80	1.11
31:X:75:TRP:HH2	31:X:125:MET:HE2	1.16	1.11
17:J:170:HIS:CE1	17:J:173:LEU:HG	1.85	1.11
19:L:221:TYR:OH	19:L:348:GLU:HB3	0.94	1.11
26:S:153:GLU:HB2	26:S:191:HIS:CE1	1.86	1.11
26:S:343:LEU:HG	26:S:347:HIS:CE1	1.83	1.11
28:U:19:LEU:HD21	29:V:212:MET:SD	1.90	1.11
28:U:66:TRP:CZ3	28:U:68:LEU:CB	2.33	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:87:PHE:HB2	31:X:99:PHE:HB2	1.22	1.11
33:Z:307:HIS:CE1	33:Z:341:TYR:CE1	2.38	1.11
22:O:122:HIS:CE1	22:O:163:ILE:H	1.69	1.11
33:Z:531:ALA:O	33:Z:573:LEU:HD23	1.49	1.11
19:L:290:ARG:HH12	19:L:299:ARG:NH2	1.49	1.10
23:P:427:GLU:HG3	29:V:230:TYR:CZ	1.86	1.10
28:U:122:ILE:HD12	28:U:137:TYR:CD1	1.86	1.10
31:X:85:ARG:NH2	31:X:101:LEU:CD1	2.13	1.10
5:5:55:TRP:HZ2	5:5:90:TYR:CD2	1.68	1.10
7:7:101:PRO:HB2	7:7:124:LEU:HD11	1.23	1.10
15:H:173:ARG:HH21	16:I:129:TYR:N	1.50	1.10
16:I:418:GLN:HB3	16:I:422:ARG:HH12	1.12	1.10
18:K:140:HIS:CD2	18:K:147:VAL:CG2	2.35	1.10
21:N:114:SER:HA	21:N:161:TYR:CE2	1.84	1.10
21:N:711:ARG:O	21:N:873:ARG:HD2	1.49	1.10
31:X:73:THR:HG21	31:X:129:LEU:HD22	1.33	1.10
1:1:75:THR:CG2	1:1:111:TYR:CD1	2.34	1.10
21:N:514:THR:HG21	21:N:546:LEU:HD12	1.11	1.10
21:N:890:PHE:HB3	21:N:905:LEU:HD23	1.20	1.10
29:V:158:LEU:CD1	29:V:195:HIS:O	1.99	1.10
31:X:87:PHE:HB2	31:X:99:PHE:CB	1.80	1.10
13:F:49:LEU:O	20:M:433:TYR:OH	1.65	1.10
18:K:140:HIS:CE1	18:K:147:VAL:HG22	1.86	1.10
23:P:133:GLU:HG3	23:P:167:THR:HG23	1.33	1.10
26:S:286:TYR:CZ	26:S:323:LEU:HB3	1.86	1.10
31:X:78:ILE:HB	31:X:113:GLU:O	1.52	1.10
12:E:109:VAL:HG11	12:E:156:PHE:CE1	1.87	1.10
19:L:164:ASP:CB	19:L:261:ARG:HH12	1.63	1.10
22:O:254:LEU:CD2	22:O:266:PHE:CZ	2.35	1.10
31:X:46:TRP:HB2	31:X:68:LEU:HD23	1.12	1.10
19:L:290:ARG:NH2	19:L:293:GLU:CB	2.14	1.09
23:P:429:ILE:HD12	28:U:203:LYS:HE3	1.11	1.09
31:X:85:ARG:NH1	31:X:87:PHE:CZ	2.19	1.09
13:F:33:SER:HB3	20:M:433:TYR:CD2	1.86	1.09
17:J:99:ALA:HB3	17:J:102:ILE:HG12	1.28	1.09
22:O:70:TYR:HE1	22:O:75:GLN:CB	1.65	1.09
24:Q:160:ASP:OD1	24:Q:163:ARG:NH2	1.85	1.09
25:R:335:ARG:NH2	25:R:371:PHE:CD1	2.19	1.09
31:X:78:ILE:HG13	31:X:115:SER:HB3	1.29	1.09
31:X:85:ARG:HH21	31:X:101:LEU:HD12	0.97	1.09
7:7:102:LEU:O	7:7:124:LEU:HD13	0.92	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:143:HIS:ND1	13:F:155:GLU:OE2	1.85	1.09
14:G:98:PHE:HB2	14:G:114:ARG:HH12	0.95	1.09
19:L:132:ARG:HH12	19:L:156:MET:HE3	1.18	1.09
21:N:588:VAL:HG11	21:N:621:THR:HG22	1.34	1.09
21:N:759:ILE:CG2	21:N:903:VAL:CG1	2.26	1.09
22:O:33:TYR:CZ	22:O:40:GLN:HB2	1.79	1.09
33:Z:139:LEU:HD21	33:Z:161:ILE:CD1	1.82	1.09
6:6:147:PHE:CD2	6:6:163:LEU:HA	1.86	1.09
11:D:88:LYS:HB3	11:D:112:TYR:HE2	1.10	1.09
18:K:242:PHE:C	18:K:244:HIS:H	1.53	1.09
21:N:114:SER:HA	21:N:161:TYR:HE2	1.06	1.09
26:S:234:ILE:HG13	26:S:257:LEU:HD22	1.14	1.09
31:X:77:PRO:O	31:X:78:ILE:HG12	0.93	1.09
33:Z:99:LEU:HD11	33:Z:115:LEU:HD11	1.32	1.09
22:O:15:ARG:O	22:O:16:MET:CG	2.01	1.08
25:R:266:LEU:HA	25:R:270:VAL:HG22	1.15	1.08
6:6:-8:PHE:HE2	6:6:-6:PRO:CB	1.66	1.08
17:J:259:GLU:HB3	18:K:280:LYS:HE2	1.34	1.08
19:L:290:ARG:NH1	19:L:299:ARG:NH2	2.01	1.08
23:P:429:ILE:CD1	28:U:203:LYS:HE3	1.81	1.08
24:Q:227:CYS:HB2	24:Q:334:HIS:HE1	1.00	1.08
33:Z:473:LEU:HG	33:Z:477:TYR:CE2	1.86	1.08
11:D:96:HIS:CE1	11:D:100:LEU:HD12	1.87	1.08
16:I:398:GLU:CA	17:J:312:ARG:NH1	2.15	1.08
22:O:77:SER:HA	22:O:80:LYS:CG	1.83	1.08
24:Q:264:TYR:OH	24:Q:330:LEU:CB	2.00	1.08
33:Z:493:LEU:HG	33:Z:497:PHE:CZ	1.88	1.08
14:G:108:ILE:HG21	14:G:148:TYR:CE2	1.86	1.08
22:O:77:SER:HA	22:O:80:LYS:HG3	1.33	1.08
26:S:215:MET:HA	26:S:218:LEU:HD12	1.35	1.08
1:1:59:VAL:HG11	1:1:82:PHE:CZ	1.88	1.08
17:J:258:VAL:HB	18:K:297:ILE:HD11	1.12	1.08
17:J:326:GLU:OE2	17:J:329:ARG:NH2	1.84	1.08
17:J:392:LYS:HG2	18:K:337:LYS:HZ2	0.96	1.08
22:O:33:TYR:CZ	22:O:40:GLN:HB3	1.80	1.08
33:Z:958:ASN:HB2	33:Z:961:GLU:OE2	1.54	1.08
3:3:54:LEU:CD1	3:3:94:TYR:HE1	1.67	1.07
15:H:285:GLY:C	15:H:287:GLY:N	2.07	1.07
24:Q:174:LEU:HD11	24:Q:178:HIS:HE1	1.04	1.07
31:X:75:TRP:CH2	31:X:125:MET:HE2	1.88	1.07
33:Z:474:LEU:HG	33:Z:493:LEU:HD11	1.35	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:119:LEU:HD22	12:E:122:ARG:NH2	1.67	1.07
24:Q:186:HIS:HE1	24:Q:228:GLU:OE1	1.34	1.07
33:Z:233:LEU:HD21	33:Z:268:ALA:HB1	1.35	1.07
33:Z:426:TYR:CE2	33:Z:435:GLN:HB2	1.88	1.07
33:Z:534:PHE:HB2	33:Z:573:LEU:HD22	1.09	1.07
4:4:66:TYR:CZ	10:C:102:TYR:OH	2.07	1.07
19:L:252:VAL:HG12	20:M:256:ILE:HD12	1.17	1.07
29:V:47:MET:HE3	29:V:74:SER:O	0.91	1.07
8:A:69:VAL:HA	14:G:157:TRP:CZ3	1.90	1.07
12:E:109:VAL:HG11	12:E:156:PHE:CD1	1.90	1.07
18:K:242:PHE:C	18:K:243:VAL:CA	2.21	1.07
23:P:354:SER:HB3	23:P:402:PHE:CE1	1.88	1.07
24:Q:61:LEU:CD1	24:Q:65:TYR:CE1	2.37	1.07
24:Q:275:ILE:HG23	24:Q:303:ALA:HB1	1.36	1.07
25:R:301:TYR:CE2	25:R:359:VAL:HG11	1.88	1.07
26:S:286:TYR:CE1	26:S:323:LEU:HD13	1.89	1.07
5:5:55:TRP:CZ2	5:5:90:TYR:CE2	2.41	1.07
16:I:222:TYR:CE1	16:I:329:ASN:HA	1.89	1.07
22:O:30:GLU:CA	22:O:40:GLN:NE2	2.15	1.07
29:V:261:LEU:HD13	29:V:280:LEU:HD23	1.37	1.07
33:Z:578:GLY:O	33:Z:581:VAL:CG2	2.02	1.07
11:D:179:TYR:HE1	11:D:185:PRO:HD2	1.16	1.06
12:E:59:LEU:HD21	12:E:64:ILE:HD11	1.37	1.06
13:F:12:THR:HB	14:G:22:GLN:NE2	1.70	1.06
31:X:78:ILE:HG21	31:X:114:LEU:O	0.90	1.06
31:X:78:ILE:HG21	31:X:114:LEU:C	1.72	1.06
31:X:85:ARG:NH2	31:X:101:LEU:HD12	1.70	1.06
33:Z:394:TYR:HE2	33:Z:858:GLY:HA2	1.07	1.06
11:D:205:THR:HG21	11:D:209:ASN:HB2	1.31	1.06
15:H:97:LEU:HD21	16:I:129:TYR:HB2	1.37	1.06
21:N:633:GLY:O	21:N:634:LEU:CD2	2.01	1.06
21:N:759:ILE:HG23	21:N:903:VAL:HG11	1.30	1.06
26:S:234:ILE:CG1	26:S:257:LEU:HD22	1.84	1.06
29:V:197:TYR:CE1	29:V:199:LEU:CD2	2.37	1.06
31:X:16:GLU:O	31:X:98:PHE:HB2	1.53	1.06
1:1:75:THR:CG2	1:1:111:TYR:HD1	1.67	1.06
22:O:188:PHE:CD2	22:O:220:SER:HB3	1.89	1.06
23:P:270:LEU:HD13	23:P:329:PHE:CE1	1.90	1.06
25:R:266:LEU:HD23	25:R:270:VAL:CG2	1.84	1.06
31:X:93:SER:HB3	31:X:96:ARG:HH21	1.19	1.06
16:I:214:LYS:HA	16:I:319:ARG:NH1	1.70	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:247:ILE:HD11	16:I:281:ILE:HG12	1.33	1.06
21:N:208:ARG:NH2	21:N:234:ASP:OD2	1.86	1.06
21:N:434:SER:HB3	21:N:439:VAL:HG11	1.32	1.06
21:N:874:ILE:HG22	21:N:875:LEU:N	1.61	1.06
22:O:33:TYR:CE1	22:O:40:GLN:CB	2.38	1.06
26:S:163:VAL:CG2	26:S:184:TRP:CZ2	2.37	1.06
33:Z:68:LEU:HD13	33:Z:115:LEU:HA	1.26	1.06
4:4:66:TYR:CD1	10:C:102:TYR:OH	2.00	1.06
11:D:179:TYR:CE1	11:D:185:PRO:HD2	1.91	1.06
21:N:890:PHE:HB3	21:N:905:LEU:CD2	1.85	1.06
22:O:299:THR:HA	22:O:365:LYS:HZ3	0.99	1.06
23:P:283:LYS:HG3	23:P:286:ASN:HB2	1.38	1.06
29:V:261:LEU:HB3	29:V:280:LEU:HD21	1.24	1.06
33:Z:151:HIS:CE1	33:Z:152:GLU:CB	2.39	1.06
16:I:215:PRO:CD	16:I:319:ARG:NH1	2.11	1.05
17:J:224:GLY:O	17:J:227:SER:HB2	1.56	1.05
19:L:336:ALA:O	19:L:342:ARG:HD3	1.54	1.05
21:N:514:THR:HG22	21:N:546:LEU:HB3	1.31	1.05
21:N:514:THR:HG21	21:N:546:LEU:CD1	1.76	1.05
22:O:189:TYR:CE2	22:O:227:ILE:HG13	1.90	1.05
12:E:12:VAL:HG12	12:E:123:PHE:CZ	1.91	1.05
21:N:761:ILE:HG13	21:N:904:VAL:H	0.94	1.05
22:O:33:TYR:CE2	22:O:40:GLN:CB	2.35	1.05
23:P:270:LEU:CD1	23:P:329:PHE:CE1	2.38	1.05
25:R:263:ARG:HH11	25:R:340:GLN:HG3	1.18	1.05
26:S:343:LEU:HG	26:S:347:HIS:HE1	1.14	1.05
31:X:27:ILE:HG21	31:X:61:LEU:CD2	1.86	1.05
19:L:251:ILE:C	19:L:252:VAL:N	2.09	1.05
23:P:153:ILE:HG21	23:P:189:LEU:HB3	1.32	1.05
28:U:92:TRP:CZ2	28:U:120:LEU:CD1	2.40	1.05
33:Z:827:LEU:HG	33:Z:831:LEU:HG	1.39	1.05
2:2:222:ASP:OD2	3:3:36:HIS:HE1	1.38	1.05
11:D:85:LEU:HD21	11:D:117:GLN:HE21	0.91	1.05
22:O:189:TYR:CZ	22:O:227:ILE:HG21	1.92	1.05
24:Q:126:LYS:HG2	24:Q:134:LYS:HZ2	0.95	1.05
31:X:85:ARG:HE	31:X:101:LEU:HB2	1.17	1.05
15:H:285:GLY:C	15:H:286:GLU:C	2.15	1.05
17:J:183:LYS:HE3	17:J:286:LYS:HB3	1.34	1.05
22:O:303:LYS:O	22:O:304:ASN:CG	1.95	1.05
26:S:343:LEU:CD1	26:S:347:HIS:HE1	1.68	1.05
27:T:111:LEU:HD13	27:T:174:PHE:CD1	1.92	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:354:GLU:OE1	19:L:357:ARG:NH2	1.89	1.04
24:Q:174:LEU:CD1	24:Q:178:HIS:CE1	2.40	1.04
33:Z:867:PHE:HD1	33:Z:873:LEU:HD23	1.09	1.04
16:I:217:LYS:HE2	16:I:343:ARG:CD	1.87	1.04
19:L:98:LEU:HD23	20:M:154:LEU:CD2	1.86	1.04
21:N:514:THR:CG2	21:N:546:LEU:HD13	1.73	1.04
21:N:245:LEU:CD1	21:N:253:LEU:HD22	1.88	1.04
22:O:33:TYR:CE1	22:O:40:GLN:CG	2.40	1.04
33:Z:68:LEU:HD13	33:Z:115:LEU:CA	1.87	1.04
33:Z:138:ARG:HB2	33:Z:157:LEU:HD13	1.39	1.04
17:J:163:VAL:HG13	17:J:164:ILE:HG13	1.33	1.04
18:K:140:HIS:NE2	18:K:147:VAL:HG22	1.72	1.04
25:R:206:ARG:HH21	25:R:209:ARG:NE	1.56	1.04
33:Z:553:ARG:HA	33:Z:557:GLU:OE1	1.57	1.04
21:N:664:LEU:O	21:N:668:THR:HG23	1.59	1.03
22:O:310:PHE:HZ	22:O:341:ILE:HG22	1.22	1.03
23:P:115:ARG:HH12	23:P:146:ILE:CG1	1.69	1.03
24:Q:174:LEU:HD11	24:Q:178:HIS:CE1	1.93	1.03
25:R:70:TYR:CE2	25:R:75:GLY:N	2.26	1.03
31:X:46:TRP:HB2	31:X:68:LEU:CD2	1.88	1.03
33:Z:139:LEU:HD21	33:Z:161:ILE:HD11	1.37	1.03
21:N:424:LYS:NZ	21:N:461:GLU:HB3	1.73	1.03
22:O:44:SER:HB3	22:O:72:LYS:HZ1	1.19	1.03
22:O:58:ARG:HG2	22:O:61:LEU:HD12	1.04	1.03
22:O:185:PHE:CZ	22:O:223:LEU:HD13	1.93	1.03
27:T:51:TYR:CA	27:T:55:LEU:HD13	1.87	1.03
1:I:61:TYR:OH	8:A:103:GLU:CG	2.06	1.03
4:4:3:ILE:HG22	4:4:102:LEU:HD12	1.36	1.03
13:F:179:PHE:HZ	13:F:192:ALA:HB2	1.23	1.03
25:R:353:MET:HG3	25:R:357:PHE:CD2	1.93	1.03
33:Z:827:LEU:CD2	33:Z:831:LEU:HD21	1.87	1.03
8:A:220:LYS:HD3	8:A:242:GLU:HB2	1.35	1.03
13:F:13:PHE:CZ	14:G:130:PRO:HD2	1.93	1.03
17:J:190:PRO:CD	17:J:316:PHE:HD2	1.72	1.03
19:L:196:VAL:HG13	19:L:197:ILE:HG13	1.40	1.03
21:N:514:THR:CG2	21:N:546:LEU:HD12	1.74	1.03
26:S:428:ARG:CD	27:T:192:ASN:OD1	2.06	1.03
7:7:103:TRP:HA	7:7:124:LEU:HD22	1.33	1.03
21:N:761:ILE:HG13	21:N:904:VAL:N	1.73	1.03
22:O:33:TYR:O	22:O:34:GLU:CG	2.07	1.03
22:O:44:SER:HB3	22:O:72:LYS:NZ	1.71	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:419:VAL:HG21	29:V:241:THR:OG1	1.59	1.03
31:X:27:ILE:CG2	31:X:27:ILE:O	2.04	1.03
2:2:222:ASP:OD2	3:3:36:HIS:CE1	2.12	1.02
5:5:121:ARG:NH2	11:D:101:GLU:OE1	1.92	1.02
10:C:136:ILE:HD11	10:C:165:VAL:HG22	1.38	1.02
15:H:107:LYS:HB2	15:H:143:ALA:HB3	1.02	1.02
17:J:82:LYS:O	17:J:98:VAL:HG22	1.59	1.02
5:5:104:TYR:CE1	5:5:110:PRO:HD3	1.95	1.02
6:6:96:TYR:CE2	6:6:98:VAL:HG22	1.93	1.02
7:7:17:ASP:O	7:7:33:ARG:HD3	1.59	1.02
21:N:383:LYS:CB	21:N:412:TYR:OH	2.06	1.02
33:Z:298:PHE:CE2	33:Z:341:TYR:OH	2.11	1.02
33:Z:763:HIS:NE2	33:Z:767:TYR:OH	1.92	1.02
22:O:185:PHE:CD2	22:O:223:LEU:HD13	1.94	1.02
24:Q:126:LYS:HG2	24:Q:134:LYS:NZ	1.74	1.02
28:U:94:HIS:CD2	28:U:120:LEU:HD21	1.93	1.02
33:Z:740:VAL:HG13	33:Z:761:PHE:CE1	1.94	1.02
14:G:108:ILE:HG22	14:G:148:TYR:CD2	1.91	1.02
22:O:169:ASN:HB2	22:O:198:THR:HG21	1.40	1.02
30:W:9:VAL:HG22	30:W:52:ILE:HD11	1.36	1.02
31:X:29:VAL:HG11	31:X:61:LEU:CB	1.88	1.02
33:Z:394:TYR:CE1	33:Z:859:LYS:CG	2.42	1.02
11:D:6:ARG:HH22	12:E:11:GLY:HA2	1.23	1.02
18:K:372:ILE:HG21	24:Q:240:PHE:CE2	1.94	1.02
21:N:190:LEU:HD13	21:N:224:THR:HG23	1.41	1.02
21:N:362:TRP:CH2	21:N:742:TRP:CZ2	2.48	1.02
22:O:185:PHE:CZ	22:O:223:LEU:CD1	2.43	1.02
23:P:346:ILE:CD1	23:P:379:TYR:CE2	2.42	1.02
31:X:28:PRO:CB	31:X:57:VAL:CB	2.32	1.02
12:E:165:TYR:HB2	12:E:167:TYR:OH	1.56	1.01
18:K:273:GLU:HB2	19:L:306:MET:HE1	1.42	1.01
33:Z:138:ARG:CB	33:Z:157:LEU:HD13	1.90	1.01
8:A:135:ARG:HD3	14:G:124:LEU:HD23	1.43	1.01
16:I:418:GLN:HB3	16:I:422:ARG:NH1	1.72	1.01
20:M:246:LEU:HD21	20:M:251:LEU:HD11	1.39	1.01
22:O:72:LYS:CE	22:O:73:ILE:HD11	1.90	1.01
22:O:328:VAL:HG12	22:O:341:ILE:HD11	1.37	1.01
23:P:157:ALA:HA	23:P:186:LEU:CD1	1.90	1.01
28:U:66:TRP:HZ3	28:U:68:LEU:CB	1.70	1.01
31:X:75:TRP:CH2	31:X:125:MET:CE	2.42	1.01
1:1:61:TYR:OH	8:A:103:GLU:HG2	1.60	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:94:TYR:CE1	3:3:96:VAL:HG11	1.94	1.01
19:L:111:GLU:HG3	19:L:117:TYR:CD2	1.96	1.01
22:O:58:ARG:HG2	22:O:61:LEU:CD1	1.90	1.01
33:Z:570:LEU:O	33:Z:574:TYR:CE2	2.14	1.01
18:K:164:ASN:ND2	19:L:315:PHE:CE2	2.27	1.01
20:M:221:TYR:CE1	20:M:348:GLU:CB	2.42	1.01
21:N:89:PHE:CZ	21:N:136:ILE:HG21	1.94	1.01
21:N:501:MET:CB	21:N:521:LEU:HD21	1.91	1.01
21:N:666:GLN:CD	21:N:873:ARG:HG2	1.78	1.01
23:P:329:PHE:CE2	23:P:337:HIS:HD2	1.69	1.01
6:6:175:VAL:HG13	6:6:179:PHE:CE2	1.95	1.01
8:A:220:LYS:CD	8:A:242:GLU:HB2	1.90	1.01
17:J:259:GLU:CB	18:K:280:LYS:CE	2.23	1.01
33:Z:151:HIS:CE1	33:Z:152:GLU:HB3	1.96	1.01
16:I:398:GLU:CA	17:J:312:ARG:HH11	1.71	1.00
17:J:76:ILE:HB	17:J:85:LEU:HD22	1.43	1.00
20:M:183:VAL:HG11	20:M:186:LEU:HD11	1.40	1.00
33:Z:297:VAL:HG12	33:Z:310:LEU:HD22	1.41	1.00
10:C:147:GLN:HB3	10:C:149:TYR:HE1	1.22	1.00
19:L:252:VAL:HG11	20:M:256:ILE:HD12	1.04	1.00
21:N:89:PHE:CZ	21:N:136:ILE:CG2	2.44	1.00
21:N:669:GLU:HG2	21:N:784:TYR:H	1.25	1.00
22:O:250:TRP:O	22:O:254:LEU:HG	1.62	1.00
23:P:157:ALA:CA	23:P:186:LEU:HD13	1.90	1.00
33:Z:758:LEU:HD22	33:Z:787:ASP:OD1	1.62	1.00
8:A:220:LYS:HD3	8:A:242:GLU:CB	1.90	1.00
12:E:109:VAL:CG1	12:E:156:PHE:CD1	2.44	1.00
22:O:44:SER:O	22:O:47:LYS:HG2	1.59	1.00
25:R:117:ILE:HD13	25:R:134:TRP:CZ2	1.95	1.00
26:S:269:GLU:OE1	26:S:299:LYS:NZ	1.93	1.00
28:U:165:GLU:HB3	29:V:42:ARG:NH1	1.77	1.00
31:X:28:PRO:CB	31:X:57:VAL:HB	1.89	1.00
21:N:114:SER:CA	21:N:161:TYR:HE2	1.74	1.00
22:O:26:PHE:CE2	22:O:43:GLU:HG3	1.97	1.00
22:O:95:SER:O	22:O:98:TYR:CE2	2.14	1.00
10:C:62:SER:HB2	10:C:212:GLU:HG2	1.40	1.00
20:M:221:TYR:CE1	20:M:348:GLU:HB2	1.95	1.00
31:X:14:VAL:HG23	31:X:50:TRP:CD1	1.97	1.00
31:X:75:TRP:CZ3	31:X:125:MET:HE3	1.96	1.00
12:E:119:LEU:HB3	12:E:122:ARG:NH2	1.75	1.00
17:J:190:PRO:HD2	17:J:316:PHE:HD2	0.84	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:192:GLU:OE1	26:S:239:ARG:NH1	1.95	1.00
24:Q:306:TYR:HE1	24:Q:342:LEU:CD2	1.75	1.00
31:X:22:ARG:HH12	31:X:88:ALA:HB2	1.27	1.00
5:5:7:ARG:CZ	5:5:125:ASP:OD1	2.10	0.99
12:E:109:VAL:CG1	12:E:156:PHE:CE1	2.44	0.99
16:I:214:LYS:HA	16:I:319:ARG:HH12	0.85	0.99
19:L:185:GLY:HA3	19:L:360:ILE:HG13	1.42	0.99
31:X:10:PHE:O	31:X:33:ILE:HG22	1.62	0.99
33:Z:426:TYR:CZ	33:Z:435:GLN:HB2	1.96	0.99
1:1:91:ASP:O	1:1:92:ASN:OD1	1.80	0.99
7:7:119:LEU:HG	7:7:134:LEU:HD12	1.44	0.99
16:I:398:GLU:HA	17:J:312:ARG:HH11	0.85	0.99
22:O:116:ASN:HB3	22:O:127:LEU:CB	1.90	0.99
24:Q:50:ARG:HG3	24:Q:54:GLN:HE21	1.23	0.99
25:R:62:TYR:CE2	25:R:180:PHE:CE1	2.49	0.99
7:7:66:ASN:HD22	7:7:79:LEU:HD23	1.25	0.99
21:N:302:PHE:CE2	21:N:712:ASN:HB3	1.96	0.99
8:A:95:LEU:CD2	14:G:117:GLN:CG	2.39	0.99
23:P:431:HIS:CE1	28:U:156:HIS:CB	2.46	0.99
33:Z:571:GLY:HA2	33:Z:574:TYR:CZ	1.97	0.99
5:5:81:LYS:HZ2	5:5:85:ASN:HD21	1.04	0.99
13:F:105:VAL:HG22	13:F:145:LEU:HD22	1.02	0.99
21:N:352:ASN:HB3	21:N:355:TRP:HB2	1.39	0.99
21:N:434:SER:HB3	21:N:439:VAL:CG1	1.92	0.99
23:P:283:LYS:CB	23:P:286:ASN:HB2	1.93	0.99
25:R:78:ASP:OD1	25:R:94:PHE:CD1	2.16	0.99
27:T:111:LEU:HD13	27:T:174:PHE:HD1	1.25	0.99
28:U:19:LEU:CB	29:V:209:GLU:OE2	2.11	0.99
12:E:157:HIS:CE1	12:E:170:LYS:HZ3	1.80	0.99
15:H:107:LYS:CB	15:H:143:ALA:HB3	1.92	0.99
22:O:44:SER:CB	22:O:72:LYS:NZ	2.26	0.99
25:R:325:HIS:HD1	25:R:329:PHE:HB2	1.23	0.99
1:1:190:PRO:HA	1:1:193:TYR:HE1	1.03	0.99
16:I:401:LEU:HD12	17:J:312:ARG:HD3	1.42	0.99
26:S:343:LEU:O	26:S:347:HIS:ND1	1.95	0.99
33:Z:151:HIS:ND1	33:Z:152:GLU:N	2.10	0.99
14:G:98:PHE:HB2	14:G:114:ARG:NH1	1.78	0.99
25:R:276:LEU:HB3	25:R:289:ILE:CD1	1.92	0.99
8:A:91:ARG:HH12	8:A:95:LEU:HB2	1.23	0.99
8:A:220:LYS:HD3	8:A:242:GLU:CA	1.93	0.99
10:C:118:ILE:CG2	10:C:122:TYR:CE1	2.46	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:252:VAL:CB	20:M:256:ILE:HG23	1.93	0.99
33:Z:534:PHE:CB	33:Z:573:LEU:HD22	1.92	0.99
16:I:214:LYS:CA	16:I:319:ARG:HH12	1.76	0.99
33:Z:151:HIS:CG	33:Z:152:GLU:H	1.80	0.99
2:2:8:PHE:HD1	2:2:10:ASN:H	0.99	0.98
10:C:147:GLN:HB3	10:C:149:TYR:CE1	1.97	0.98
18:K:244:HIS:HB3	19:L:256:ILE:HD13	1.45	0.98
1:1:61:TYR:HE1	8:A:103:GLU:HA	1.28	0.98
16:I:362:LEU:HD21	16:I:384:LYS:NZ	1.79	0.98
21:N:490:LEU:HD21	21:N:727:THR:HG21	1.42	0.98
22:O:30:GLU:HA	22:O:40:GLN:HE22	0.83	0.98
22:O:116:ASN:HB3	22:O:127:LEU:HD22	1.43	0.98
24:Q:306:TYR:CE1	24:Q:342:LEU:CD2	2.46	0.98
24:Q:378:SER:OG	25:R:345:TYR:OH	1.79	0.98
33:Z:394:TYR:HE2	33:Z:858:GLY:CA	1.75	0.98
6:6:-8:PHE:CE2	6:6:-6:PRO:CA	2.45	0.98
13:F:51:ARG:HH11	20:M:430:VAL:HG11	1.28	0.98
14:G:108:ILE:HG21	14:G:148:TYR:CD2	1.96	0.98
20:M:319:ASP:HB2	20:M:322:LYS:HZ3	1.18	0.98
23:P:283:LYS:CG	23:P:286:ASN:HB2	1.92	0.98
2:2:222:ASP:CG	3:3:36:HIS:CE1	2.37	0.98
8:A:27:GLN:HE21	14:G:13:VAL:HA	1.26	0.98
19:L:252:VAL:HG12	20:M:256:ILE:CG1	1.93	0.98
27:T:27:LEU:HD13	27:T:81:TYR:OH	1.62	0.98
29:V:261:LEU:CD1	29:V:280:LEU:HD23	1.92	0.98
26:S:153:GLU:HB2	26:S:191:HIS:HE1	1.26	0.98
29:V:157:ARG:HB3	29:V:197:TYR:CE1	1.99	0.98
8:A:220:LYS:CE	8:A:242:GLU:HB2	1.93	0.98
21:N:424:LYS:HZ1	21:N:461:GLU:HB3	1.26	0.98
1:1:-7:LYS:O	2:2:116:HIS:NE2	1.94	0.98
25:R:62:TYR:CG	25:R:180:PHE:HZ	1.71	0.98
15:H:405:GLU:OE2	15:H:409:ARG:NH2	1.96	0.98
22:O:66:VAL:CG1	22:O:106:PHE:CE1	2.45	0.98
25:R:335:ARG:NH1	25:R:371:PHE:CB	2.26	0.98
7:7:102:LEU:C	7:7:124:LEU:HD13	1.84	0.98
21:N:514:THR:CG2	21:N:546:LEU:CB	2.40	0.98
22:O:44:SER:OG	22:O:72:LYS:CE	2.12	0.97
19:L:114:GLU:C	19:L:137:ARG:HH21	1.66	0.97
21:N:89:PHE:HZ	21:N:136:ILE:HG21	1.25	0.97
33:Z:60:ASP:O	33:Z:64:TYR:HD1	1.47	0.97
33:Z:763:HIS:CD2	33:Z:767:TYR:OH	2.17	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:88:LYS:HB3	11:D:112:TYR:CE2	1.97	0.97
29:V:47:MET:CE	29:V:74:SER:C	2.31	0.97
33:Z:897:HIS:CE1	33:Z:899:GLN:NE2	2.31	0.97
8:A:135:ARG:NH2	14:G:14:PHE:CD1	2.31	0.97
15:H:248:LEU:HD13	15:H:352:MET:HG3	1.46	0.97
18:K:347:ARG:HD2	24:Q:238:TYR:HE1	1.19	0.97
19:L:132:ARG:HH12	19:L:156:MET:CE	1.73	0.97
21:N:318:LYS:NZ	21:N:348:PHE:CD1	2.33	0.97
22:O:359:SER:OG	28:U:223:HIS:CD2	2.16	0.97
29:V:47:MET:HE3	29:V:74:SER:C	1.84	0.97
33:Z:68:LEU:CD1	33:Z:115:LEU:CD1	2.31	0.97
2:2:36:ARG:HB2	2:2:42:TRP:CZ3	2.00	0.97
19:L:98:LEU:HD23	20:M:154:LEU:HD21	1.42	0.97
26:S:343:LEU:CD1	26:S:347:HIS:CE1	2.46	0.97
31:X:29:VAL:CG1	31:X:61:LEU:HB2	1.94	0.97
22:O:117:ASN:H	22:O:127:LEU:HB3	1.29	0.97
22:O:189:TYR:CE2	22:O:227:ILE:CG1	2.47	0.97
25:R:400:TYR:O	25:R:404:VAL:CG2	2.11	0.97
26:S:286:TYR:OH	26:S:323:LEU:HD22	1.64	0.97
33:Z:233:LEU:HD21	33:Z:268:ALA:CB	1.86	0.97
33:Z:322:GLU:HG3	33:Z:323:TYR:HB3	1.43	0.97
11:D:48:ARG:NH2	11:D:57:THR:HG22	1.79	0.97
15:H:173:ARG:NH2	16:I:128:TYR:CA	2.26	0.97
18:K:67:TYR:CE1	21:N:572:LEU:HD22	1.99	0.97
23:P:429:ILE:HG23	28:U:203:LYS:HE2	1.45	0.97
8:A:220:LYS:CD	8:A:238:ALA:O	2.12	0.97
22:O:71:ASP:OD1	30:W:23:ARG:HB2	1.65	0.97
25:R:209:ARG:HH22	25:R:240:SER:CB	1.76	0.97
30:W:118:ILE:HG13	30:W:154:LEU:HD11	0.97	0.97
13:F:51:ARG:HD3	20:M:430:VAL:HG11	1.43	0.96
20:M:200:PRO:HA	20:M:207:PHE:HE2	1.28	0.96
21:N:501:MET:HB2	21:N:521:LEU:HD21	1.45	0.96
29:V:180:LEU:O	29:V:181:ASN:ND2	1.97	0.96
19:L:164:ASP:HB2	19:L:261:ARG:HH12	0.82	0.96
21:N:329:HIS:HD2	21:N:355:TRP:CD1	1.79	0.96
14:G:215:ILE:HG23	14:G:230:VAL:CB	1.94	0.96
8:A:19:PHE:HE1	9:B:128:ARG:NH1	1.52	0.96
23:P:346:ILE:HD13	23:P:379:TYR:CZ	2.00	0.96
28:U:195:LYS:HD3	29:V:233:LYS:HB2	1.47	0.96
8:A:91:ARG:NH1	8:A:95:LEU:HB2	1.80	0.96
22:O:33:TYR:CE1	22:O:40:GLN:HB3	1.97	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:303:LYS:O	22:O:304:ASN:OD1	1.84	0.96
31:X:28:PRO:HG3	31:X:57:VAL:CB	1.95	0.96
33:Z:970:TYR:HE1	33:Z:985:LYS:CE	1.78	0.96
13:F:105:VAL:CG2	13:F:145:LEU:HD22	1.95	0.96
21:N:34:GLN:HA	26:S:215:MET:HG2	1.47	0.96
21:N:245:LEU:HD13	21:N:253:LEU:CD2	1.94	0.96
21:N:348:PHE:HZ	21:N:355:TRP:CD1	1.83	0.96
22:O:69:PHE:CE2	22:O:74:ASN:O	2.19	0.96
6:6:175:VAL:CG1	6:6:179:PHE:HE2	1.79	0.96
8:A:220:LYS:HD3	8:A:242:GLU:N	1.81	0.96
19:L:114:GLU:HB3	19:L:137:ARG:NH2	1.81	0.96
21:N:874:ILE:HG22	21:N:875:LEU:H	0.81	0.96
24:Q:249:LEU:O	24:Q:250:THR:CG2	2.12	0.96
6:6:30:TYR:OH	7:7:153:ARG:HB2	1.65	0.96
8:A:95:LEU:HD22	14:G:117:GLN:CG	1.95	0.96
9:B:139:HIS:CE1	9:B:145:PHE:CE2	2.54	0.96
24:Q:146:TYR:CE1	24:Q:151:TYR:HE1	1.83	0.96
26:S:461:PHE:HE2	28:U:274:MET:CB	1.78	0.96
18:K:242:PHE:C	18:K:244:HIS:N	2.20	0.96
22:O:147:ARG:HB2	22:O:178:TYR:OH	1.66	0.96
25:R:263:ARG:NH1	25:R:340:GLN:HG3	1.79	0.96
33:Z:827:LEU:HD23	33:Z:831:LEU:HD21	1.47	0.96
17:J:99:ALA:HB3	17:J:102:ILE:CG1	1.95	0.96
22:O:72:LYS:HZ2	22:O:73:ILE:HD11	1.16	0.96
28:U:165:GLU:HB3	29:V:42:ARG:HH12	1.30	0.96
31:X:27:ILE:CG2	31:X:61:LEU:CD2	2.42	0.96
31:X:28:PRO:HB2	31:X:56:PRO:O	1.66	0.96
12:E:119:LEU:CG	12:E:122:ARG:HH21	1.78	0.95
31:X:85:ARG:NH2	31:X:101:LEU:HD13	1.81	0.95
33:Z:394:TYR:CE2	33:Z:858:GLY:CA	2.46	0.95
16:I:310:LEU:HD13	16:I:338:LEU:HB2	1.45	0.95
1:1:61:TYR:CE1	8:A:103:GLU:HA	2.01	0.95
11:D:138:PHE:HE1	11:D:215:VAL:HG12	1.31	0.95
24:Q:409:TYR:HB2	25:R:399:GLN:HG3	1.48	0.95
28:U:164:GLU:OE1	29:V:39:LYS:HA	1.63	0.95
33:Z:970:TYR:OH	33:Z:991:GLU:OE2	1.82	0.95
11:D:6:ARG:NH2	12:E:11:GLY:HA2	1.81	0.95
13:F:13:PHE:CE1	14:G:130:PRO:CD	2.50	0.95
15:H:208:TYR:CE2	15:H:391:ILE:HD11	2.00	0.95
15:H:425:GLU:HG3	15:H:429:PHE:HE2	1.15	0.95
19:L:254:LYS:HE3	20:M:256:ILE:HG12	1.46	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:370:LYS:HG2	19:L:410:ILE:HB	1.46	0.95
21:N:122:GLN:O	21:N:125:THR:OG1	1.84	0.95
21:N:759:ILE:HG22	21:N:903:VAL:HG11	0.95	0.95
1:1:59:VAL:HG21	1:1:82:PHE:CD1	2.00	0.95
9:B:222:LEU:HD13	9:B:233:PRO:HD2	1.49	0.95
14:G:31:GLU:HG2	14:G:168:ARG:NH2	1.79	0.95
19:L:98:LEU:HD22	20:M:156:LEU:HD23	1.46	0.95
19:L:221:TYR:CZ	19:L:348:GLU:CB	2.49	0.95
22:O:33:TYR:CD1	22:O:40:GLN:CD	2.40	0.95
22:O:33:TYR:CG	22:O:40:GLN:HB3	2.01	0.95
23:P:137:ALA:HB1	23:P:179:PHE:CZ	2.01	0.95
28:U:302:GLN:NE2	28:U:305:ARG:HH21	1.63	0.95
31:X:27:ILE:HG21	31:X:61:LEU:HD21	0.98	0.95
15:H:412:PRO:HD2	15:H:451:ILE:HD13	1.49	0.95
19:L:221:TYR:CZ	19:L:348:GLU:HB3	1.99	0.95
23:P:283:LYS:HB2	23:P:286:ASN:HB3	1.49	0.95
33:Z:407:VAL:HG11	33:Z:439:TYR:CZ	2.01	0.95
16:I:82:LEU:CD1	33:Z:622:HIS:NE2	2.29	0.95
22:O:127:LEU:HD21	22:O:167:ILE:HG13	1.46	0.95
22:O:245:ASP:HB2	22:O:249:ASP:OD1	1.67	0.95
25:R:325:HIS:ND1	25:R:329:PHE:HB2	1.81	0.95
6:6:55:LEU:HD22	6:6:96:TYR:OH	1.64	0.95
6:6:147:PHE:HE2	6:6:164:LYS:H	1.15	0.95
7:7:170:VAL:HG12	7:7:174:ARG:NH2	1.81	0.95
27:T:127:GLN:HA	27:T:132:HIS:CE1	2.02	0.95
28:U:92:TRP:HZ2	28:U:120:LEU:HD12	1.31	0.95
33:Z:138:ARG:HB2	33:Z:157:LEU:CD1	1.96	0.95
3:3:54:LEU:CD1	3:3:94:TYR:CE1	2.45	0.95
15:H:312:ASP:C	16:I:300:ARG:NH2	2.20	0.95
22:O:328:VAL:CG1	22:O:341:ILE:HD11	1.95	0.95
33:Z:151:HIS:CE1	33:Z:152:GLU:HB2	2.00	0.95
8:A:220:LYS:HG2	8:A:241:ILE:HG22	1.48	0.95
13:F:49:LEU:O	20:M:433:TYR:CZ	2.20	0.95
15:H:312:ASP:CA	16:I:300:ARG:NH2	2.28	0.95
22:O:172:TYR:OH	22:O:194:LEU:HD13	1.67	0.95
25:R:299:SER:HB3	25:R:341:LEU:HD21	1.49	0.95
27:T:106:ILE:CG2	27:T:142:LEU:HD21	1.97	0.95
15:H:62:ARG:NH2	16:I:100:ARG:HA	1.82	0.94
26:S:472:HIS:HB2	28:U:288:PHE:HZ	1.30	0.94
33:Z:307:HIS:CD2	33:Z:345:GLU:OE1	2.19	0.94
33:Z:473:LEU:HD11	33:Z:477:TYR:CZ	2.01	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:534:PHE:HB2	33:Z:573:LEU:CD2	1.97	0.94
6:6:-5:TYR:HE2	6:6:51:ASP:OD1	1.49	0.94
21:N:778:LYS:HE3	21:N:780:ASP:OD2	1.67	0.94
23:P:329:PHE:HE2	23:P:337:HIS:HD2	0.95	0.94
31:X:46:TRP:CB	31:X:68:LEU:HD23	1.97	0.94
8:A:36:ASN:O	8:A:37:GLN:HG3	1.67	0.94
15:H:208:TYR:HE2	15:H:391:ILE:HD11	1.28	0.94
23:P:299:LEU:HD11	23:P:311:TRP:CZ3	2.00	0.94
23:P:286:ASN:O	23:P:287:ASP:HB2	1.64	0.94
1:1:83:LYS:HE2	1:1:118:SER:HA	1.50	0.94
23:P:181:LEU:HG	23:P:223:LEU:CD2	1.97	0.94
29:V:261:LEU:CB	29:V:280:LEU:HD23	1.96	0.94
11:D:85:LEU:CD2	11:D:117:GLN:HE21	1.79	0.94
21:N:89:PHE:HZ	21:N:136:ILE:CG2	1.79	0.94
23:P:396:PRO:HB2	24:Q:396:TRP:CZ3	2.02	0.94
24:Q:306:TYR:CE1	24:Q:342:LEU:HD21	2.02	0.94
26:S:472:HIS:ND1	28:U:288:PHE:CE1	2.26	0.94
33:Z:229:SER:O	33:Z:264:PHE:HE1	1.49	0.94
2:2:84:LYS:NZ	2:2:117:GLY:O	2.00	0.94
31:X:18:ASN:O	31:X:98:PHE:CZ	2.21	0.94
33:Z:113:SER:HB3	33:Z:142:ASP:OD1	1.67	0.94
33:Z:748:LEU:HD23	33:Z:754:LYS:HE2	1.48	0.94
33:Z:867:PHE:CD1	33:Z:873:LEU:CD2	2.50	0.94
7:7:64:THR:CG2	7:7:68:TYR:CE2	2.50	0.94
12:E:12:VAL:CG1	12:E:123:PHE:CZ	2.50	0.94
21:N:321:LEU:HG	21:N:323:GLY:H	1.31	0.94
21:N:348:PHE:CZ	21:N:355:TRP:CD1	2.56	0.94
21:N:669:GLU:OE1	21:N:785:PRO:HA	1.68	0.94
23:P:270:LEU:HD13	23:P:329:PHE:CZ	2.01	0.94
25:R:396:LYS:CB	26:S:452:TYR:HE1	1.81	0.94
29:V:45:VAL:HG13	29:V:46:PRO:HA	1.46	0.94
33:Z:336:SER:O	33:Z:340:LEU:CD2	2.15	0.94
33:Z:516:THR:O	33:Z:556:ILE:CG2	2.16	0.94
3:3:18:LEU:HD11	3:3:177:VAL:CG1	1.96	0.94
16:I:222:TYR:HE1	16:I:329:ASN:HA	1.24	0.94
22:O:26:PHE:CE1	22:O:43:GLU:CG	2.51	0.94
26:S:461:PHE:HE2	28:U:274:MET:HB3	1.32	0.94
31:X:17:TYR:O	31:X:98:PHE:CE1	2.21	0.94
8:A:71:TYR:CE1	8:A:87:ILE:HD11	2.02	0.94
23:P:137:ALA:CB	23:P:179:PHE:CZ	2.50	0.94
1:1:33:LYS:HA	1:1:45:ARG:NH2	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:188:PHE:HD2	22:O:220:SER:CB	1.82	0.93
22:O:299:THR:CA	22:O:365:LYS:NZ	2.23	0.93
33:Z:297:VAL:CG1	33:Z:310:LEU:HD22	1.98	0.93
15:H:429:PHE:CG	15:H:432:ARG:NH2	2.36	0.93
16:I:215:PRO:HD3	16:I:319:ARG:HH11	0.76	0.93
22:O:210:ARG:NH2	22:O:238:ILE:HG22	1.82	0.93
24:Q:20:TYR:CE2	24:Q:68:MET:CG	2.51	0.93
33:Z:452:LEU:HD22	33:Z:474:LEU:HD12	1.50	0.93
21:N:9:LEU:CD2	21:N:27:SER:HB3	1.98	0.93
22:O:58:ARG:CG	22:O:61:LEU:HD12	1.97	0.93
22:O:115:ARG:HB2	22:O:124:ASP:OD2	1.68	0.93
25:R:214:TYR:HD2	25:R:230:LEU:HG	1.30	0.93
8:A:242:GLU:O	8:A:246:VAL:HG23	1.69	0.93
30:W:118:ILE:HG13	30:W:154:LEU:CG	1.98	0.93
7:7:101:PRO:CB	7:7:124:LEU:CD1	2.47	0.93
15:H:382:LEU:HD23	15:H:385:ARG:HH22	1.27	0.93
18:K:212:TYR:CZ	18:K:321:ALA:HB2	2.02	0.93
19:L:336:ALA:C	19:L:342:ARG:HH11	1.70	0.93
21:N:736:PHE:CE1	21:N:749:LEU:HD11	2.04	0.93
28:U:66:TRP:HZ3	28:U:68:LEU:HB3	1.14	0.93
16:I:362:LEU:HD21	16:I:384:LYS:HZ2	1.31	0.93
29:V:51:GLY:HA3	29:V:108:TYR:CZ	2.02	0.93
19:L:290:ARG:HH21	19:L:293:GLU:CB	1.76	0.93
24:Q:390:LEU:HD23	24:Q:397:LEU:CD1	1.99	0.93
5:5:3:THR:HG23	5:5:16:VAL:HG12	1.51	0.93
24:Q:378:SER:OG	25:R:345:TYR:CZ	2.18	0.93
25:R:206:ARG:HH21	25:R:209:ARG:HE	1.07	0.93
31:X:121:ILE:O	31:X:125:MET:HG2	1.68	0.93
11:D:70:HIS:CE1	11:D:97:ARG:HH22	1.87	0.93
30:W:38:GLN:HE22	30:W:41:ARG:NH2	1.66	0.93
4:4:43:MET:HG2	4:4:103:ILE:HG12	1.48	0.92
5:5:178:TYR:CE2	5:5:187:TYR:CD1	2.57	0.92
25:R:179:PHE:CZ	25:R:213:TYR:CE1	2.56	0.92
28:U:92:TRP:CZ2	28:U:120:LEU:HD12	2.04	0.92
29:V:261:LEU:HB3	29:V:280:LEU:HD23	1.49	0.92
33:Z:570:LEU:C	33:Z:574:TYR:CE2	2.42	0.92
17:J:224:GLY:O	17:J:227:SER:CB	2.17	0.92
25:R:301:TYR:CE1	25:R:338:TYR:OH	2.23	0.92
6:6:-8:PHE:HE2	6:6:-6:PRO:HB3	0.79	0.92
10:C:118:ILE:HG23	10:C:122:TYR:CE1	2.03	0.92
17:J:71:TYR:HE2	17:J:117:SER:CB	1.81	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:286:ILE:HB	19:L:304:THR:CG2	1.98	0.92
23:P:283:LYS:HB2	23:P:286:ASN:CB	1.98	0.92
25:R:354:ALA:HB2	25:R:364:LEU:HD23	1.51	0.92
31:X:85:ARG:NH1	31:X:87:PHE:HE2	1.66	0.92
4:4:13:ILE:HD11	4:4:153:THR:HG23	1.51	0.92
13:F:179:PHE:CZ	13:F:192:ALA:HB1	2.04	0.92
15:H:425:GLU:CG	15:H:429:PHE:HE2	1.81	0.92
17:J:71:TYR:HE2	17:J:117:SER:HB2	1.35	0.92
24:Q:72:ASP:CG	24:Q:75:ARG:HH21	1.72	0.92
31:X:53:THR:O	31:X:54:GLU:CG	2.16	0.92
15:H:244:LYS:HD3	15:H:346:ARG:HE	1.33	0.92
5:5:70:GLU:HA	11:D:111:ARG:NH1	1.83	0.92
33:Z:103:TYR:OH	33:Z:140:LEU:HD12	1.67	0.92
17:J:84:VAL:HG11	17:J:122:LEU:HD11	1.49	0.92
22:O:189:TYR:HE2	22:O:227:ILE:HB	1.33	0.92
16:I:401:LEU:CD1	17:J:312:ARG:HD3	1.97	0.92
22:O:70:TYR:HE1	22:O:75:GLN:HB2	1.15	0.92
29:V:45:VAL:CG1	29:V:46:PRO:HA	1.98	0.92
33:Z:298:PHE:HZ	33:Z:341:TYR:OH	1.37	0.92
14:G:108:ILE:CG2	14:G:148:TYR:HE2	1.72	0.92
15:H:382:LEU:CD2	15:H:385:ARG:NH2	2.32	0.92
19:L:111:GLU:HG3	19:L:117:TYR:CE2	2.03	0.92
33:Z:60:ASP:O	33:Z:64:TYR:CD1	2.22	0.92
9:B:6:SER:OG	11:D:4:TYR:HD2	1.52	0.92
16:I:398:GLU:HG3	17:J:312:ARG:NH1	1.84	0.92
24:Q:61:LEU:HD11	24:Q:65:TYR:CE1	2.03	0.92
33:Z:887:GLY:O	33:Z:889:VAL:HG13	1.70	0.92
16:I:291:ARG:HG3	16:I:292:TYR:N	1.84	0.91
18:K:48:TYR:CE2	21:N:152:LEU:HG	2.03	0.91
22:O:66:VAL:HG11	22:O:106:PHE:HE1	1.33	0.91
30:W:38:GLN:OE1	30:W:41:ARG:NH2	2.03	0.91
6:6:147:PHE:CE2	6:6:164:LYS:N	2.38	0.91
25:R:335:ARG:HH12	25:R:371:PHE:HB3	1.23	0.91
9:B:139:HIS:CE1	9:B:145:PHE:CZ	2.58	0.91
17:J:273:LEU:CB	17:J:309:ARG:CZ	2.41	0.91
10:C:50:ARG:HH12	10:C:53:THR:HA	1.31	0.91
12:E:35:SER:HA	12:E:53:ARG:NH2	1.85	0.91
16:I:217:LYS:HE2	16:I:343:ARG:HD2	0.94	0.91
17:J:250:ILE:HG21	17:J:292:MET:HE3	1.51	0.91
33:Z:307:HIS:CE1	33:Z:341:TYR:CD1	2.58	0.91
6:6:-8:PHE:CZ	6:6:-6:PRO:CA	2.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:26:PHE:CE1	22:O:58:ARG:CZ	2.53	0.91
22:O:189:TYR:HD2	22:O:227:ILE:HG13	1.31	0.91
25:R:266:LEU:HD23	25:R:270:VAL:HG21	0.92	0.91
28:U:165:GLU:CB	29:V:42:ARG:HH12	1.81	0.91
28:U:302:GLN:HE22	28:U:305:ARG:HH21	0.91	0.91
29:V:145:GLN:HB3	29:V:150:LYS:HE3	1.52	0.91
33:Z:474:LEU:CG	33:Z:493:LEU:HD12	2.00	0.91
33:Z:571:GLY:CA	33:Z:574:TYR:CE2	2.53	0.91
10:C:115:LEU:HD13	10:C:137:TYR:OH	1.71	0.91
11:D:70:HIS:HE1	11:D:97:ARG:HH22	1.10	0.91
17:J:134:VAL:HG12	18:K:255:ARG:NH2	1.86	0.91
21:N:318:LYS:HZ2	21:N:348:PHE:HD1	1.05	0.91
25:R:321:TYR:CE1	25:R:324:ARG:NH1	2.38	0.91
5:5:178:TYR:CE2	5:5:187:TYR:HD1	1.89	0.91
21:N:509:GLN:O	21:N:510:HIS:ND1	2.03	0.91
22:O:26:PHE:HZ	22:O:43:GLU:HG2	1.12	0.91
25:R:63:TYR:HE2	25:R:94:PHE:CD1	1.89	0.91
25:R:241:ILE:HG22	25:R:242:GLU:HG2	1.51	0.91
31:X:72:GLU:HB2	31:X:91:PHE:CZ	2.05	0.91
13:F:105:VAL:HG21	13:F:145:LEU:HB2	1.53	0.91
18:K:249:GLU:CD	18:K:252:ARG:HH21	1.73	0.91
22:O:33:TYR:CD1	22:O:40:GLN:HB3	2.06	0.91
22:O:62:TYR:HA	22:O:65:PHE:HD2	1.36	0.91
23:P:412:LEU:HD22	29:V:245:VAL:CG2	2.01	0.91
33:Z:237:VAL:HG11	33:Z:272:TYR:HE1	1.33	0.91
22:O:266:PHE:CE1	22:O:270:ILE:HG21	2.05	0.91
22:O:284:GLU:OE2	22:O:288:ARG:NH2	2.04	0.91
33:Z:919:GLU:HG3	33:Z:921:GLU:HG2	1.53	0.91
31:X:35:ILE:HB	31:X:128:VAL:HG21	1.52	0.91
33:Z:151:HIS:ND1	33:Z:152:GLU:CB	2.34	0.91
33:Z:394:TYR:CE1	33:Z:859:LYS:HG3	2.04	0.91
25:R:206:ARG:NH2	25:R:209:ARG:HE	1.69	0.90
25:R:401:HIS:CB	26:S:452:TYR:OH	2.18	0.90
28:U:19:LEU:CG	29:V:212:MET:SD	2.58	0.90
31:X:14:VAL:HG11	31:X:61:LEU:O	1.69	0.90
31:X:22:ARG:HH12	31:X:88:ALA:CB	1.83	0.90
26:S:137:PHE:CD1	26:S:162:VAL:HG13	2.06	0.90
28:U:19:LEU:CD2	29:V:212:MET:SD	2.59	0.90
31:X:76:VAL:HG21	31:X:90:VAL:HG21	1.53	0.90
33:Z:319:THR:O	33:Z:322:GLU:HG2	1.70	0.90
33:Z:474:LEU:CG	33:Z:493:LEU:CD1	2.49	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:76:VAL:HG12	5:5:113:TYR:CD2	2.05	0.90
5:5:104:TYR:HE1	5:5:109:GLY:HA2	1.35	0.90
18:K:140:HIS:NE2	18:K:147:VAL:CG2	2.33	0.90
18:K:240:SER:C	18:K:243:VAL:HG23	1.90	0.90
22:O:59:LEU:O	22:O:62:TYR:HE1	1.36	0.90
5:5:76:VAL:HG12	5:5:113:TYR:CE2	2.05	0.90
16:I:246:ARG:HH12	17:J:277:ASN:HD22	1.15	0.90
20:M:183:VAL:HG11	20:M:186:LEU:CD1	2.02	0.90
22:O:127:LEU:CD2	22:O:167:ILE:HG13	2.01	0.90
33:Z:452:LEU:HD21	33:Z:477:TYR:CB	2.02	0.90
23:P:308:LEU:HD23	23:P:369:LEU:HG	1.53	0.90
30:W:118:ILE:HG21	30:W:154:LEU:HG	1.54	0.90
33:Z:358:TYR:OH	33:Z:914:LEU:HB2	1.71	0.90
31:X:35:ILE:HG21	31:X:128:VAL:CG2	2.01	0.90
33:Z:758:LEU:HD11	33:Z:789:GLN:HB2	1.50	0.90
21:N:352:ASN:HB3	21:N:355:TRP:CB	2.02	0.90
23:P:299:LEU:HD11	23:P:311:TRP:HZ3	1.37	0.90
33:Z:151:HIS:ND1	33:Z:152:GLU:HB3	1.85	0.90
33:Z:426:TYR:OH	33:Z:435:GLN:HB3	1.71	0.90
5:5:15:ALA:HB1	5:5:161:ILE:HD11	1.52	0.90
8:A:95:LEU:HD21	14:G:117:GLN:HG3	1.51	0.90
12:E:157:HIS:CB	12:E:167:TYR:HE2	1.75	0.90
15:H:425:GLU:CG	15:H:429:PHE:CE2	2.53	0.90
16:I:418:GLN:CB	16:I:422:ARG:HH12	1.84	0.90
29:V:197:TYR:HE1	29:V:199:LEU:HD21	1.15	0.90
3:3:52:THR:HG21	4:4:84:ARG:HE	1.37	0.90
9:B:50:LYS:NZ	9:B:203:GLU:OE2	2.04	0.90
15:H:306:ILE:HG21	15:H:308:PHE:CZ	2.07	0.90
26:S:274:PHE:CE2	26:S:278:LYS:HE3	2.06	0.90
27:T:99:SER:H	27:T:102:LYS:HD3	1.34	0.90
33:Z:531:ALA:HA	33:Z:573:LEU:CD2	2.02	0.90
16:I:250:SER:O	16:I:253:ILE:HG22	1.72	0.90
22:O:254:LEU:CD2	22:O:266:PHE:CE1	2.55	0.90
23:P:115:ARG:NH1	23:P:146:ILE:CG1	2.32	0.90
25:R:62:TYR:CB	25:R:180:PHE:CZ	2.54	0.90
26:S:436:ILE:CG2	26:S:438:HIS:CE1	2.55	0.89
29:V:70:ALA:HA	29:V:108:TYR:OH	1.70	0.89
31:X:75:TRP:CZ3	31:X:125:MET:CE	2.55	0.89
20:M:200:PRO:HA	20:M:207:PHE:CE2	2.07	0.89
31:X:8:ILE:HG22	31:X:10:PHE:CE2	2.07	0.89
6:6:3:ILE:CD1	6:6:101:ILE:HD12	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:173:ARG:NH2	16:I:129:TYR:H	1.65	0.89
33:Z:161:ILE:HG13	33:Z:203:LEU:CD1	2.01	0.89
33:Z:474:LEU:HG	33:Z:493:LEU:HD12	1.54	0.89
8:A:69:VAL:HA	14:G:157:TRP:CE3	2.06	0.89
18:K:212:TYR:CE1	18:K:321:ALA:HB2	2.07	0.89
18:K:244:HIS:HB3	19:L:256:ILE:CD1	2.02	0.89
22:O:72:LYS:CD	22:O:73:ILE:CD1	2.50	0.89
24:Q:75:ARG:HD3	24:Q:113:ASP:HB3	1.54	0.89
6:6:147:PHE:HD2	6:6:163:LEU:HA	1.32	0.89
13:F:33:SER:HB3	20:M:433:TYR:CE2	2.05	0.89
19:L:290:ARG:HH21	19:L:293:GLU:HB3	1.05	0.89
22:O:310:PHE:CE1	22:O:341:ILE:HG21	2.07	0.89
26:S:436:ILE:HG21	26:S:438:HIS:NE2	1.88	0.89
28:U:14:VAL:HG21	28:U:48:VAL:HG12	1.53	0.89
29:V:159:ILE:HG22	29:V:160:ASP:N	1.88	0.89
14:G:216:SER:HA	14:G:230:VAL:HG23	1.53	0.89
15:H:312:ASP:CB	16:I:300:ARG:HH22	1.84	0.89
19:L:221:TYR:HH	19:L:348:GLU:HB3	1.09	0.89
21:N:9:LEU:HD22	21:N:27:SER:HB3	1.52	0.89
22:O:33:TYR:CE1	22:O:40:GLN:HG3	2.06	0.89
9:B:172:LYS:CE	10:C:56:LEU:HD13	2.02	0.89
17:J:133:LEU:HD23	17:J:228:ARG:HH22	1.38	0.89
25:R:301:TYR:CZ	25:R:338:TYR:OH	2.26	0.89
28:U:19:LEU:HD13	29:V:209:GLU:OE1	1.73	0.89
9:B:122:THR:OG1	9:B:129:PRO:HG3	1.71	0.89
23:P:115:ARG:HH12	23:P:146:ILE:HG13	1.10	0.89
23:P:431:HIS:CE1	28:U:156:HIS:H	1.89	0.89
24:Q:409:TYR:CA	25:R:399:GLN:HG3	2.02	0.89
19:L:221:TYR:CZ	19:L:348:GLU:HA	2.07	0.89
8:A:19:PHE:CZ	9:B:128:ARG:HD2	2.08	0.89
17:J:392:LYS:CG	18:K:337:LYS:HZ2	1.85	0.89
21:N:329:HIS:NE2	21:N:355:TRP:HD1	1.69	0.89
22:O:116:ASN:HD21	22:O:160:LYS:HB3	1.38	0.89
29:V:52:LEU:HD11	29:V:107:TRP:CZ3	2.08	0.89
17:J:350:MET:HE2	17:J:361:VAL:HG21	1.54	0.88
19:L:301:ILE:HD11	20:M:299:ARG:HH21	1.36	0.88
21:N:514:THR:CG2	21:N:546:LEU:HB2	2.03	0.88
28:U:280:ASN:HD21	29:V:291:ASN:CG	1.76	0.88
12:E:12:VAL:HG11	12:E:123:PHE:CE2	2.08	0.88
19:L:290:ARG:HH12	19:L:299:ARG:HH22	0.91	0.88
22:O:116:ASN:CB	22:O:127:LEU:HB2	2.04	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:310:PHE:HZ	22:O:341:ILE:HG21	0.83	0.88
25:R:62:TYR:CB	25:R:180:PHE:HZ	1.85	0.88
25:R:208:ASN:ND2	25:R:235:LEU:HD12	1.89	0.88
25:R:335:ARG:NH2	25:R:371:PHE:HD1	1.64	0.88
30:W:147:ILE:HG22	30:W:148:GLU:H	1.36	0.88
30:W:95:GLN:CD	30:W:132:LEU:HD23	1.93	0.88
33:Z:574:TYR:CD2	33:Z:584:VAL:HG21	2.09	0.88
33:Z:970:TYR:CE1	33:Z:985:LYS:NZ	2.27	0.88
1:1:61:TYR:HE1	8:A:103:GLU:CA	1.86	0.88
5:5:81:LYS:NZ	5:5:85:ASN:HD21	1.71	0.88
14:G:240:ASP:HA	14:G:243:GLN:HE21	1.35	0.88
15:H:312:ASP:HA	16:I:300:ARG:HH22	1.38	0.88
19:L:290:ARG:CZ	19:L:293:GLU:CA	2.52	0.88
25:R:276:LEU:HB3	25:R:289:ILE:HD13	1.55	0.88
7:7:200:PHE:HE2	7:7:202:LYS:HE2	1.37	0.88
11:D:70:HIS:HE1	11:D:97:ARG:NH2	1.71	0.88
23:P:263:HIS:O	23:P:267:PHE:CD2	2.27	0.88
2:2:9:ASN:HD21	2:2:145:ASP:HA	1.36	0.88
15:H:285:GLY:C	15:H:286:GLU:CA	2.41	0.88
22:O:48:PHE:CD1	22:O:81:TYR:CD1	2.62	0.88
24:Q:263:LYS:NZ	24:Q:324:GLU:OE2	2.07	0.88
30:W:147:ILE:HG22	30:W:148:GLU:N	1.89	0.88
13:F:105:VAL:HG21	13:F:145:LEU:CB	2.04	0.88
22:O:82:LEU:H	22:O:85:SER:HB2	1.38	0.88
7:7:64:THR:CG2	7:7:68:TYR:CZ	2.56	0.88
17:J:210:PHE:HE2	17:J:212:ARG:HD3	1.37	0.88
28:U:94:HIS:HE2	28:U:120:LEU:HD21	1.28	0.88
31:X:77:PRO:C	31:X:78:ILE:HG12	1.93	0.88
17:J:321:VAL:HG22	17:J:324:ARG:NH2	1.88	0.88
1:1:112:THR:HG21	7:7:27:ARG:HH21	1.37	0.88
6:6:112:ALA:HB1	6:6:114:TYR:CE1	2.09	0.88
15:H:306:ILE:CG2	15:H:308:PHE:CZ	2.58	0.88
18:K:60:LEU:HD13	21:N:601:THR:OG1	1.73	0.88
22:O:26:PHE:HZ	22:O:43:GLU:CG	1.64	0.88
23:P:427:GLU:HA	29:V:230:TYR:HE1	1.05	0.88
2:2:7:LYS:O	2:2:146:LEU:HD23	1.73	0.87
6:6:34:VAL:HG22	6:6:44:SER:HB2	1.55	0.87
21:N:884:PHE:CB	21:N:905:LEU:HD13	2.04	0.87
25:R:179:PHE:CZ	25:R:213:TYR:HE1	1.90	0.87
24:Q:390:LEU:HD23	24:Q:397:LEU:HD13	1.56	0.87
6:6:176:ARG:NH1	6:6:208:TYR:HB3	1.89	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:150:HIS:ND1	16:I:151:HIS:N	2.21	0.87
25:R:117:ILE:CD1	25:R:134:TRP:CH2	2.57	0.87
25:R:263:ARG:HH11	25:R:340:GLN:CG	1.87	0.87
25:R:380:VAL:HA	26:S:398:THR:HG21	1.56	0.87
28:U:92:TRP:HZ2	28:U:120:LEU:CD1	1.83	0.87
7:7:129:TYR:HE1	7:7:134:LEU:HD23	1.37	0.87
13:F:156:LEU:CD2	14:G:58:LEU:HD23	2.03	0.87
21:N:761:ILE:HG21	21:N:904:VAL:C	1.93	0.87
22:O:92:PHE:CE1	22:O:136:THR:HB	2.08	0.87
23:P:412:LEU:CD2	29:V:245:VAL:HA	2.04	0.87
33:Z:797:THR:HG23	33:Z:833:GLN:NE2	1.90	0.87
13:F:13:PHE:HE1	14:G:130:PRO:CD	1.87	0.87
23:P:431:HIS:HD1	28:U:156:HIS:HB2	1.37	0.87
24:Q:250:THR:HG23	24:Q:251:THR:N	1.89	0.87
25:R:209:ARG:HH22	25:R:240:SER:HB2	1.38	0.87
33:Z:357:ILE:O	33:Z:361:HIS:ND1	2.06	0.87
33:Z:874:ASN:HD21	33:Z:876:VAL:HB	1.39	0.87
18:K:244:HIS:HE1	18:K:251:PRO:HD3	1.12	0.87
19:L:337:LEU:N	19:L:342:ARG:NH1	2.21	0.87
19:L:365:THR:OG1	19:L:376:PHE:CE1	2.06	0.87
20:M:319:ASP:HB2	20:M:322:LYS:HZ1	1.36	0.87
22:O:223:LEU:HD22	22:O:277:ILE:HG21	1.57	0.87
24:Q:74:LEU:CD2	24:Q:104:PHE:HZ	1.87	0.87
25:R:179:PHE:HZ	25:R:213:TYR:HE1	1.21	0.87
5:5:59:LEU:HD11	5:5:83:LEU:HD13	1.56	0.87
26:S:372:LEU:HD13	27:T:133:ILE:HD12	1.56	0.87
33:Z:493:LEU:HG	33:Z:497:PHE:CE1	2.08	0.87
33:Z:970:TYR:CZ	33:Z:985:LYS:HD3	2.10	0.87
1:1:-6:GLY:C	2:2:116:HIS:CE1	2.48	0.87
8:A:46:ARG:HG3	8:A:154:ILE:CD1	2.05	0.87
15:H:173:ARG:CZ	16:I:129:TYR:H	1.86	0.87
19:L:290:ARG:NH2	19:L:293:GLU:CA	2.36	0.87
23:P:153:ILE:HG21	23:P:189:LEU:CB	2.03	0.87
23:P:157:ALA:HA	23:P:186:LEU:HD13	0.95	0.87
26:S:461:PHE:CE2	28:U:274:MET:HB3	2.09	0.87
29:V:116:CYS:O	29:V:117:TRP:HD1	1.57	0.87
18:K:240:SER:CA	18:K:243:VAL:HG23	2.05	0.86
21:N:902:VAL:O	21:N:903:VAL:HG22	1.75	0.86
22:O:80:LYS:NZ	22:O:121:ASP:CG	2.27	0.86
22:O:106:PHE:HD2	22:O:109:LEU:H	0.92	0.86
22:O:116:ASN:HB3	22:O:127:LEU:HB2	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:268:LEU:CD1	23:P:280:LEU:HD12	2.04	0.86
25:R:397:ASN:ND2	25:R:400:TYR:CD2	2.43	0.86
8:A:91:ARG:HB3	14:G:120:GLN:HE22	1.39	0.86
20:M:362:GLN:HG3	20:M:376:TRP:CZ2	2.10	0.86
22:O:189:TYR:CE2	22:O:227:ILE:HB	2.03	0.86
25:R:301:TYR:HE2	25:R:359:VAL:HG21	1.40	0.86
17:J:250:ILE:HG21	17:J:292:MET:CE	2.04	0.86
17:J:269:GLN:O	17:J:273:LEU:HG	1.75	0.86
19:L:252:VAL:HB	20:M:256:ILE:CG2	2.03	0.86
24:Q:409:TYR:CB	25:R:399:GLN:HG3	2.05	0.86
33:Z:68:LEU:CD1	33:Z:115:LEU:HB2	2.06	0.86
33:Z:970:TYR:HE1	33:Z:985:LYS:CD	1.70	0.86
21:N:348:PHE:HZ	21:N:355:TRP:NE1	1.72	0.86
22:O:188:PHE:HZ	22:O:216:ASP:HB3	1.39	0.86
23:P:427:GLU:HA	29:V:230:TYR:CZ	2.10	0.86
24:Q:75:ARG:CD	24:Q:113:ASP:HB3	2.03	0.86
26:S:416:GLU:CD	26:S:417:GLN:HE21	1.78	0.86
27:T:178:THR:CG2	27:T:182:LYS:HE3	2.05	0.86
33:Z:307:HIS:HE1	33:Z:341:TYR:CE1	1.92	0.86
8:A:117:LEU:HD23	8:A:143:PHE:CE2	2.11	0.86
10:C:115:LEU:CD1	10:C:137:TYR:OH	2.23	0.86
15:H:284:VAL:C	15:H:286:GLU:N	2.29	0.86
21:N:294:PRO:HG3	21:N:921:ARG:HH21	1.38	0.86
23:P:268:LEU:HD11	23:P:280:LEU:CD1	2.04	0.86
25:R:396:LYS:C	26:S:452:TYR:CE1	2.49	0.86
15:H:157:VAL:HB	15:H:183:ILE:HD11	1.54	0.86
17:J:273:LEU:CD2	17:J:309:ARG:HD3	2.05	0.86
18:K:238:ASN:HB2	18:K:241:GLU:CG	2.05	0.86
21:N:669:GLU:HG2	21:N:784:TYR:N	1.90	0.86
9:B:30:GLN:HB3	18:K:426:PHE:CE2	2.10	0.86
12:E:157:HIS:ND1	12:E:159:GLU:OE2	2.08	0.86
19:L:201:LEU:HD12	19:L:239:ILE:HD13	1.57	0.86
22:O:80:LYS:HB3	22:O:81:TYR:CD1	2.10	0.86
25:R:78:ASP:OD1	25:R:94:PHE:HD1	1.56	0.86
28:U:24:ARG:CZ	29:V:100:ARG:HH12	1.88	0.86
33:Z:250:VAL:HA	33:Z:265:LEU:HD21	1.56	0.86
8:A:135:ARG:HH22	14:G:14:PHE:HD1	1.18	0.86
11:D:179:TYR:HE1	11:D:185:PRO:CD	1.88	0.86
20:M:362:GLN:HG3	20:M:376:TRP:CH2	2.11	0.86
22:O:223:LEU:CD2	22:O:277:ILE:HG21	2.06	0.86
33:Z:793:PHE:CZ	33:Z:830:LEU:HD22	2.11	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:7:PHE:CE2	10:C:7:ASP:HB3	2.11	0.85
20:M:220:MET:CE	20:M:324:LEU:CD1	2.53	0.85
21:N:207:LEU:HB3	21:N:228:VAL:HG13	1.57	0.85
30:W:109:ARG:NH1	30:W:140:ASP:OD2	2.08	0.85
33:Z:440:LEU:HD21	33:Z:477:TYR:CZ	2.10	0.85
3:3:54:LEU:HD11	3:3:94:TYR:HE1	0.86	0.85
8:A:119:LYS:NZ	9:B:83:ARG:HB3	1.91	0.85
21:N:779:GLU:O	21:N:780:ASP:OD1	1.93	0.85
23:P:268:LEU:HD11	23:P:280:LEU:HD12	1.58	0.85
8:A:71:TYR:HE1	8:A:87:ILE:HD11	1.41	0.85
9:B:69:PRO:HD2	9:B:104:TYR:CE1	2.11	0.85
13:F:179:PHE:CZ	13:F:192:ALA:HB2	2.01	0.85
16:I:184:ILE:HG21	16:I:231:LEU:HD22	1.57	0.85
24:Q:186:HIS:CE1	24:Q:228:GLU:OE1	2.26	0.85
16:I:246:ARG:HH12	17:J:277:ASN:ND2	1.75	0.85
17:J:156:GLN:HE21	17:J:160:ILE:HG13	1.41	0.85
20:M:313:ASP:HB2	20:M:342:ARG:HE	1.40	0.85
23:P:396:PRO:HB2	24:Q:396:TRP:CH2	2.11	0.85
31:X:87:PHE:CB	31:X:99:PHE:HB2	2.04	0.85
5:5:55:TRP:CH2	5:5:90:TYR:CZ	2.63	0.85
15:H:107:LYS:CB	15:H:143:ALA:CB	2.50	0.85
17:J:392:LYS:CG	18:K:337:LYS:NZ	2.40	0.85
25:R:335:ARG:HH12	25:R:371:PHE:CB	1.89	0.85
26:S:436:ILE:HG21	26:S:438:HIS:CE1	2.12	0.85
29:V:24:LYS:HD2	29:V:167:ASN:HD21	1.40	0.85
8:A:24:ARG:HH11	18:K:424:PHE:H	1.24	0.85
21:N:113:ALA:O	21:N:161:TYR:CD2	2.30	0.85
22:O:117:ASN:N	22:O:127:LEU:HB3	1.91	0.85
22:O:188:PHE:CZ	22:O:216:ASP:HB3	2.12	0.85
23:P:270:LEU:CD1	23:P:329:PHE:CZ	2.58	0.85
24:Q:227:CYS:C	24:Q:334:HIS:NE2	2.30	0.85
31:X:28:PRO:HB3	31:X:57:VAL:HG23	0.87	0.85
22:O:30:GLU:N	22:O:40:GLN:NE2	2.25	0.85
22:O:359:SER:HG	28:U:223:HIS:CD2	1.90	0.85
29:V:159:ILE:HG22	29:V:160:ASP:H	1.42	0.85
31:X:29:VAL:CG1	31:X:61:LEU:HD22	2.05	0.85
8:A:117:LEU:CD2	8:A:143:PHE:CE2	2.59	0.85
16:I:126:PRO:HG2	16:I:128:TYR:HE1	1.41	0.85
18:K:244:HIS:O	18:K:291:GLU:HG2	1.76	0.85
22:O:359:SER:CB	28:U:223:HIS:CD2	2.59	0.85
23:P:412:LEU:HD22	29:V:245:VAL:HG22	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:378:SER:CB	25:R:345:TYR:OH	2.25	0.85
25:R:380:VAL:HA	26:S:398:THR:CG2	2.07	0.85
13:F:50:LYS:HA	20:M:433:TYR:CE1	2.12	0.85
17:J:71:TYR:CE2	17:J:117:SER:CB	2.60	0.85
19:L:371:THR:HG23	19:L:409:HIS:HD2	1.40	0.85
22:O:352:TRP:CB	28:U:235:LEU:HD21	2.06	0.85
24:Q:10:GLU:O	24:Q:14:LEU:CD2	2.24	0.85
27:T:51:TYR:HA	27:T:55:LEU:CD1	2.05	0.85
29:V:109:HIS:HB3	29:V:111:HIS:NE2	1.91	0.85
7:7:57:ARG:HD2	14:G:100:LYS:HG3	1.56	0.85
9:B:66:LEU:HD21	9:B:235:PHE:CE1	2.12	0.85
11:D:70:HIS:CE1	11:D:97:ARG:NH2	2.45	0.85
16:I:290:LYS:HZ3	16:I:333:THR:C	1.79	0.85
22:O:80:LYS:HZ3	22:O:121:ASP:CG	1.80	0.85
24:Q:65:TYR:HD2	24:Q:74:LEU:HD22	1.42	0.85
28:U:71:ASN:ND2	30:W:64:THR:HG23	1.90	0.85
30:W:4:GLU:OE2	30:W:40:LYS:CE	2.25	0.85
3:3:28:SER:HB2	4:4:127:LEU:HD21	1.59	0.84
14:G:182:HIS:CG	14:G:186:LEU:HG	2.12	0.84
21:N:329:HIS:CD2	21:N:355:TRP:HE1	1.94	0.84
31:X:35:ILE:CG2	31:X:128:VAL:HG22	2.07	0.84
11:D:118:GLN:NE2	12:E:86:ARG:HD2	1.91	0.84
15:H:75:GLY:O	15:H:105:ILE:HG12	1.77	0.84
19:L:336:ALA:C	19:L:342:ARG:NH1	2.30	0.84
22:O:15:ARG:O	22:O:16:MET:CB	2.25	0.84
23:P:425:HIS:HD2	28:U:232:VAL:HG12	1.41	0.84
30:W:38:GLN:NE2	30:W:41:ARG:NH2	2.24	0.84
21:N:761:ILE:CG2	21:N:904:VAL:CA	2.28	0.84
27:T:48:ASN:O	27:T:49:ASP:OD1	1.95	0.84
30:W:125:LEU:HD11	30:W:157:PHE:CB	2.06	0.84
5:5:55:TRP:CZ2	5:5:90:TYR:CD2	2.61	0.84
8:A:205:PHE:CZ	8:A:209:HIS:CE1	2.65	0.84
9:B:90:ARG:O	9:B:94:HIS:ND1	2.08	0.84
23:P:181:LEU:CG	23:P:223:LEU:HD21	2.05	0.84
7:7:101:PRO:HB2	7:7:124:LEU:CD1	2.08	0.84
9:B:118:MET:CE	9:B:152:PRO:HA	2.07	0.84
19:L:252:VAL:CB	20:M:256:ILE:CG2	2.56	0.84
20:M:319:ASP:O	20:M:322:LYS:HE2	1.77	0.84
22:O:359:SER:OG	28:U:223:HIS:CE1	2.30	0.84
23:P:431:HIS:CE1	28:U:156:HIS:N	2.46	0.84
33:Z:763:HIS:CD2	33:Z:767:TYR:CZ	2.66	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:574:TYR:CE2	33:Z:584:VAL:CG1	2.56	0.84
13:F:51:ARG:HH11	20:M:430:VAL:CG1	1.91	0.84
17:J:141:LYS:HE2	17:J:209:LYS:HE2	1.58	0.84
19:L:105:ILE:HD11	20:M:128:PHE:HB2	1.60	0.84
22:O:72:LYS:CD	22:O:73:ILE:CG1	2.46	0.84
23:P:429:ILE:HG23	28:U:203:LYS:CE	2.07	0.84
24:Q:20:TYR:CE2	24:Q:68:MET:SD	2.71	0.84
25:R:395:ASN:O	26:S:452:TYR:HD1	1.60	0.84
27:T:89:TYR:CE1	27:T:90:PHE:HE1	1.95	0.84
18:K:60:LEU:HD11	21:N:598:ASP:HB3	1.58	0.84
18:K:273:GLU:HB2	19:L:306:MET:CE	2.08	0.84
23:P:329:PHE:CD2	23:P:337:HIS:CD2	2.65	0.84
26:S:253:PHE:O	26:S:257:LEU:HB2	1.76	0.84
16:I:126:PRO:HG2	16:I:128:TYR:CE1	2.12	0.84
17:J:350:MET:CE	17:J:361:VAL:HG21	2.07	0.84
19:L:125:PRO:HD2	19:L:127:TYR:CZ	2.13	0.84
21:N:890:PHE:CB	21:N:905:LEU:HD23	2.07	0.84
22:O:299:THR:N	22:O:365:LYS:HZ3	1.76	0.84
23:P:176:LYS:HD3	23:P:206:LYS:HZ1	1.43	0.84
25:R:179:PHE:HE2	25:R:213:TYR:HH	0.86	0.84
33:Z:68:LEU:HD13	33:Z:115:LEU:CB	2.06	0.84
33:Z:782:ILE:HG23	33:Z:864:MET:HG2	1.58	0.84
15:H:173:ARG:HH21	16:I:128:TYR:HA	1.40	0.84
17:J:273:LEU:HB3	17:J:309:ARG:HH22	1.39	0.84
17:J:276:LEU:HD21	17:J:290:ILE:HD12	1.60	0.84
21:N:92:ASP:OD1	21:N:139:ARG:NH2	2.10	0.84
21:N:381:GLU:HG3	21:N:384:LYS:HD2	1.57	0.84
22:O:95:SER:O	22:O:98:TYR:CD2	2.31	0.84
1:1:112:THR:CG2	7:7:27:ARG:HH21	1.90	0.83
13:F:157:TYR:OH	14:G:59:VAL:HG23	1.76	0.83
15:H:107:LYS:HD2	15:H:143:ALA:HB1	1.59	0.83
17:J:369:ALA:HB2	17:J:377:VAL:HG22	1.58	0.83
31:X:28:PRO:CB	31:X:57:VAL:HG21	1.83	0.83
33:Z:89:LEU:HD12	33:Z:125:THR:HG21	1.58	0.83
33:Z:120:SER:HB2	33:Z:153:TYR:CE1	2.12	0.83
13:F:6:TYR:CE1	13:F:13:PHE:O	2.30	0.83
20:M:384:ASP:N	20:M:386:PHE:CD1	2.46	0.83
25:R:312:TYR:HA	25:R:316:LEU:HD12	1.57	0.83
33:Z:307:HIS:HE1	33:Z:341:TYR:CZ	1.95	0.83
11:D:48:ARG:HH22	11:D:57:THR:HG22	1.41	0.83
17:J:326:GLU:CD	17:J:329:ARG:HH21	1.81	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:252:VAL:HG11	20:M:256:ILE:CD1	1.90	0.83
22:O:189:TYR:HE2	22:O:227:ILE:CG1	1.87	0.83
33:Z:68:LEU:CD1	33:Z:115:LEU:CB	2.57	0.83
1:1:-4:VAL:HG23	1:1:49:ALA:H	1.43	0.83
2:2:8:PHE:HD1	2:2:10:ASN:N	1.77	0.83
10:C:174:THR:HA	10:C:177:GLN:HE21	1.42	0.83
18:K:159:SER:OG	18:K:242:PHE:HE1	1.61	0.83
29:V:180:LEU:O	29:V:181:ASN:CG	2.17	0.83
31:X:15:CYS:HB3	31:X:100:TRP:HB2	1.57	0.83
33:Z:797:THR:HG23	33:Z:833:GLN:HE22	1.44	0.83
3:3:65:TYR:O	3:3:69:GLU:HG2	1.78	0.83
6:6:58:ARG:NH1	6:6:91:LYS:NZ	2.26	0.83
8:A:19:PHE:CZ	9:B:128:ARG:NH1	2.38	0.83
8:A:56:GLN:HE21	8:A:214:LEU:HD13	1.41	0.83
9:B:218:ASN:CB	9:B:236:ARG:CZ	2.52	0.83
14:G:64:VAL:HG23	14:G:67:GLN:NE2	1.92	0.83
17:J:99:ALA:CB	17:J:102:ILE:HG12	2.07	0.83
18:K:85:GLU:OE1	18:K:88:ARG:NH2	2.12	0.83
23:P:435:LYS:HG3	28:U:154:PHE:CZ	2.13	0.83
29:V:197:TYR:O	29:V:197:TYR:CD1	2.31	0.83
16:I:310:LEU:HD13	16:I:338:LEU:CB	2.08	0.83
25:R:396:LYS:O	26:S:452:TYR:CE1	2.32	0.83
28:U:283:ARG:NH2	29:V:254:ARG:HB3	1.93	0.83
20:M:119:VAL:HG11	20:M:155:ILE:HD11	1.59	0.83
22:O:81:TYR:O	22:O:82:LEU:HB2	1.77	0.83
22:O:116:ASN:ND2	22:O:160:LYS:HB3	1.94	0.83
22:O:222:LEU:HA	22:O:230:PHE:CZ	2.13	0.83
24:Q:35:SER:HB3	24:Q:46:VAL:O	1.78	0.83
26:S:236:LEU:HD11	26:S:239:ARG:HH21	1.44	0.83
33:Z:99:LEU:O	33:Z:102:ILE:HG22	1.78	0.83
1:1:83:LYS:CE	1:1:118:SER:HA	2.08	0.83
4:4:181:LYS:HZ2	4:4:190:GLN:HB2	1.42	0.83
15:H:66:LYS:HE2	15:H:70:LYS:NZ	1.94	0.83
24:Q:167:LYS:HG3	24:Q:167:LYS:O	1.77	0.83
33:Z:426:TYR:CZ	33:Z:435:GLN:CB	2.58	0.83
33:Z:795:THR:CG2	33:Z:799:PHE:CE2	2.62	0.83
10:C:12:ILE:HB	11:D:19:GLN:HE22	1.43	0.83
10:C:136:ILE:CD1	10:C:165:VAL:HG22	2.09	0.83
13:F:201:LEU:HD22	13:F:204:GLU:HB2	1.61	0.83
18:K:347:ARG:HD2	24:Q:238:TYR:CD1	2.13	0.83
21:N:70:TYR:CE1	21:N:75:TYR:HE1	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:283:LYS:CB	23:P:286:ASN:CB	2.55	0.83
24:Q:20:TYR:CD2	24:Q:68:MET:SD	2.71	0.83
25:R:179:PHE:HE2	25:R:213:TYR:OH	1.61	0.83
29:V:203:TYR:O	29:V:204:HIS:CG	2.31	0.83
33:Z:120:SER:CB	33:Z:153:TYR:OH	2.26	0.83
33:Z:570:LEU:O	33:Z:574:TYR:HD2	1.27	0.83
33:Z:888:LEU:HD22	33:Z:904:LEU:HD11	1.61	0.83
11:D:159:TRP:CD1	11:D:162:GLN:HB3	2.14	0.83
17:J:99:ALA:H	17:J:102:ILE:HD11	1.44	0.83
17:J:249:GLU:HG2	18:K:297:ILE:HG13	1.61	0.83
20:M:220:MET:SD	20:M:324:LEU:HD11	2.18	0.83
12:E:157:HIS:CD2	12:E:170:LYS:HD3	2.13	0.82
23:P:176:LYS:HD3	23:P:206:LYS:NZ	1.93	0.82
33:Z:737:ALA:HB1	33:Z:775:MET:SD	2.19	0.82
15:H:455:LYS:HB2	16:I:331:ILE:HD11	1.60	0.82
28:U:302:GLN:HE22	28:U:305:ARG:NH2	1.75	0.82
33:Z:809:MET:HA	33:Z:847:ILE:HD13	1.61	0.82
33:Z:824:ASN:OD1	33:Z:825:ALA:N	2.09	0.82
5:5:124:GLY:HA3	5:5:127:PHE:CZ	2.14	0.82
6:6:-5:TYR:CE2	6:6:51:ASP:OD1	2.32	0.82
6:6:175:VAL:CG1	6:6:179:PHE:CE2	2.59	0.82
12:E:157:HIS:HB3	12:E:167:TYR:HE2	1.01	0.82
13:F:164:ARG:HH21	13:F:201:LEU:HD23	1.45	0.82
19:L:221:TYR:CZ	19:L:348:GLU:CA	2.62	0.82
7:7:1:THR:H	7:7:33:ARG:HH12	1.25	0.82
22:O:116:ASN:CB	22:O:127:LEU:HD22	2.09	0.82
28:U:132:LEU:HD12	29:V:231:GLU:OE2	1.78	0.82
6:6:3:ILE:HD11	6:6:101:ILE:HD12	1.61	0.82
21:N:358:LYS:HD3	29:V:181:ASN:HD22	1.43	0.82
23:P:396:PRO:CB	24:Q:396:TRP:CH2	2.63	0.82
24:Q:146:TYR:CD1	24:Q:151:TYR:HE1	1.96	0.82
31:X:14:VAL:O	31:X:29:VAL:HG23	1.79	0.82
33:Z:358:TYR:O	33:Z:362:LEU:HG	1.79	0.82
3:3:94:TYR:CE1	3:3:96:VAL:CG1	2.63	0.82
15:H:156:VAL:HG22	15:H:181:TYR:CD1	2.13	0.82
17:J:71:TYR:CE2	17:J:117:SER:HB3	2.14	0.82
23:P:157:ALA:CB	23:P:186:LEU:HB3	2.10	0.82
25:R:117:ILE:CD1	25:R:134:TRP:CZ3	2.62	0.82
20:M:246:LEU:HD11	20:M:251:LEU:HD21	1.61	0.82
23:P:96:MET:O	23:P:100:VAL:HG23	1.79	0.82
24:Q:409:TYR:HB2	25:R:399:GLN:CG	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:218:ASN:HD22	9:B:236:ARG:NH2	1.78	0.82
26:S:392:ILE:CD1	26:S:411:LEU:HD21	2.08	0.82
3:3:179:TYR:CZ	3:3:188:LYS:HG3	2.14	0.82
21:N:214:LEU:HB3	21:N:225:LEU:HD21	1.62	0.82
25:R:63:TYR:CE2	25:R:94:PHE:CE1	2.68	0.82
25:R:84:LYS:HE2	25:R:86:ASP:HB2	1.61	0.82
13:F:13:PHE:CE1	14:G:130:PRO:CG	2.63	0.82
13:F:65:LYS:HE3	13:F:222:PHE:HB3	1.60	0.82
16:I:281:ILE:CG2	16:I:284:ILE:HD11	2.08	0.82
14:G:182:HIS:CD2	14:G:186:LEU:HD11	2.14	0.81
17:J:133:LEU:CD2	17:J:228:ARG:HH22	1.92	0.81
19:L:98:LEU:CD2	20:M:154:LEU:CD2	2.58	0.81
21:N:190:LEU:HD13	21:N:224:THR:CG2	2.10	0.81
23:P:138:ARG:CB	23:P:141:LYS:NZ	2.42	0.81
26:S:236:LEU:CD1	26:S:239:ARG:HH21	1.93	0.81
33:Z:407:VAL:HB	33:Z:439:TYR:OH	1.79	0.81
8:A:69:VAL:HA	14:G:157:TRP:HZ3	1.43	0.81
21:N:585:ARG:HH21	21:N:616:HIS:HA	1.44	0.81
22:O:72:LYS:HD3	22:O:73:ILE:HG13	0.84	0.81
33:Z:570:LEU:C	33:Z:574:TYR:HE2	1.81	0.81
11:D:138:PHE:CE1	11:D:215:VAL:HG12	2.15	0.81
12:E:55:THR:OG1	12:E:59:LEU:HD22	1.80	0.81
16:I:124:THR:O	16:I:125:MET:HG3	1.81	0.81
16:I:136:VAL:HG21	16:I:141:LEU:HD21	1.61	0.81
21:N:276:GLU:O	21:N:280:GLN:HG2	1.80	0.81
22:O:30:GLU:N	22:O:40:GLN:HE22	1.78	0.81
25:R:62:TYR:CD1	25:R:180:PHE:CZ	2.69	0.81
30:W:132:LEU:HD11	30:W:157:PHE:HZ	1.45	0.81
33:Z:282:ILE:CD1	33:Z:974:THR:HG23	2.10	0.81
33:Z:394:TYR:CE1	33:Z:859:LYS:HG2	2.13	0.81
13:F:13:PHE:CE1	14:G:130:PRO:HG2	2.15	0.81
17:J:273:LEU:HD23	17:J:309:ARG:HD3	1.61	0.81
18:K:159:SER:HA	19:L:256:ILE:HG13	1.61	0.81
21:N:666:GLN:OE1	21:N:873:ARG:CG	2.28	0.81
22:O:254:LEU:HD23	22:O:266:PHE:CE1	2.15	0.81
24:Q:34:ASP:O	24:Q:35:SER:CB	2.28	0.81
24:Q:264:TYR:HH	24:Q:330:LEU:HB2	1.40	0.81
30:W:132:LEU:HD11	30:W:157:PHE:CZ	2.15	0.81
31:X:30:GLN:O	31:X:50:TRP:HZ2	1.63	0.81
31:X:72:GLU:CB	31:X:91:PHE:CE2	2.60	0.81
33:Z:524:ALA:HA	33:Z:562:TRP:CZ3	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:24:ARG:HH11	18:K:424:PHE:N	1.78	0.81
8:A:174:LYS:HD2	8:A:214:LEU:HD22	1.61	0.81
10:C:4:ARG:CZ	10:C:5:ARG:HH12	1.91	0.81
13:F:202:ARG:HH12	20:M:416:VAL:HG12	1.44	0.81
33:Z:150:GLY:HA3	33:Z:154:ILE:HD12	1.61	0.81
33:Z:531:ALA:HA	33:Z:573:LEU:HD21	1.60	0.81
33:Z:601:VAL:HB	33:Z:616:LEU:HD22	1.62	0.81
11:D:37:LYS:HD2	11:D:147:LEU:HB3	1.63	0.81
16:I:398:GLU:CG	17:J:312:ARG:NH1	2.43	0.81
20:M:354:GLU:HG2	20:M:357:ARG:NH2	1.94	0.81
33:Z:413:ASP:OD2	33:Z:897:HIS:HB2	1.81	0.81
33:Z:99:LEU:HD11	33:Z:115:LEU:CD1	2.11	0.81
33:Z:284:LEU:HD13	33:Z:293:MET:CE	2.10	0.81
8:A:83:VAL:HG22	8:A:141:LEU:CD2	2.10	0.81
21:N:490:LEU:HD21	21:N:727:THR:CG2	2.11	0.81
24:Q:50:ARG:O	24:Q:54:GLN:HG3	1.81	0.81
26:S:171:TYR:CZ	26:S:176:LEU:HD12	2.16	0.81
33:Z:161:ILE:CG1	33:Z:203:LEU:HD13	2.09	0.81
33:Z:531:ALA:O	33:Z:573:LEU:CD2	2.29	0.81
16:I:426:ASN:HB3	17:J:313:LYS:NZ	1.94	0.81
23:P:286:ASN:O	23:P:287:ASP:CB	2.28	0.81
25:R:24:TYR:OH	25:R:248:SER:CB	2.27	0.81
26:S:235:ASN:OD1	26:S:272:TYR:HD1	1.61	0.81
15:H:210:ASP:HB2	15:H:258:LEU:CD1	2.11	0.81
18:K:164:ASN:ND2	19:L:315:PHE:CZ	2.47	0.81
22:O:233:LEU:HD23	22:O:251:LEU:CD2	2.11	0.81
30:W:45:PRO:O	30:W:46:GLU:HB3	1.80	0.81
31:X:27:ILE:HG22	31:X:61:LEU:HD21	1.57	0.81
21:N:59:GLU:HG2	21:N:85:ALA:O	1.80	0.80
21:N:408:LEU:HD11	21:N:412:TYR:CE1	2.16	0.80
22:O:95:SER:HA	22:O:98:TYR:CE2	2.15	0.80
25:R:63:TYR:CD2	25:R:94:PHE:CZ	2.69	0.80
25:R:335:ARG:NH2	25:R:371:PHE:CA	2.21	0.80
27:T:151:TRP:CZ3	27:T:159:LYS:HD2	2.15	0.80
30:W:23:ARG:HE	30:W:27:GLU:HG3	1.46	0.80
33:Z:288:LEU:HB3	33:Z:290:GLU:HG3	1.61	0.80
5:5:7:ARG:NE	5:5:125:ASP:OD1	2.14	0.80
22:O:40:GLN:O	22:O:41:LEU:CB	2.29	0.80
25:R:271:ILE:O	25:R:272:ASP:OD1	1.98	0.80
26:S:184:TRP:O	26:S:188:TYR:CD2	2.34	0.80
29:V:261:LEU:HB2	29:V:280:LEU:HD21	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:242:GLU:HB3	9:B:246:ARG:HH12	1.45	0.80
24:Q:390:LEU:CD2	24:Q:397:LEU:HD13	2.10	0.80
1:1:-5:GLU:N	2:2:116:HIS:HE1	1.80	0.80
7:7:5:SER:OG	7:7:119:LEU:HD11	1.80	0.80
18:K:99:PHE:CD2	18:K:133:PRO:O	2.34	0.80
27:T:86:LYS:HE2	27:T:128:TYR:CE1	2.15	0.80
33:Z:748:LEU:HD11	33:Z:866:VAL:HG23	1.62	0.80
2:2:36:ARG:CZ	9:B:222:LEU:O	2.30	0.80
18:K:240:SER:O	18:K:243:VAL:HG23	1.80	0.80
21:N:124:TYR:HB2	21:N:162:ARG:NH1	1.96	0.80
24:Q:246:TYR:HE2	24:Q:261:VAL:HG21	1.47	0.80
30:W:9:VAL:HG22	30:W:52:ILE:CD1	2.11	0.80
33:Z:119:LEU:HD13	33:Z:137:TYR:CE1	2.16	0.80
5:5:32:LYS:HE2	5:5:35:ILE:HG12	1.63	0.80
10:C:137:TYR:O	10:C:148:LEU:HD12	1.81	0.80
13:F:110:HIS:CB	14:G:85:ARG:NH1	2.45	0.80
19:L:114:GLU:CB	19:L:137:ARG:NH2	2.44	0.80
21:N:761:ILE:HG21	21:N:904:VAL:HA	0.82	0.80
30:W:123:ASP:HB3	30:W:127:ARG:HH12	1.47	0.80
21:N:329:HIS:HE2	21:N:355:TRP:HD1	1.24	0.80
22:O:363:ILE:HD13	28:U:211:LEU:HD13	1.61	0.80
29:V:197:TYR:CD1	29:V:199:LEU:HD21	2.14	0.80
9:B:218:ASN:CB	9:B:236:ARG:NH1	2.43	0.80
20:M:192:GLU:HB3	20:M:347:ILE:CD1	2.06	0.80
25:R:301:TYR:OH	25:R:363:PHE:CE2	2.34	0.80
27:T:148:LEU:CD1	27:T:164:LEU:HD21	2.11	0.80
5:5:178:TYR:CZ	5:5:187:TYR:CD1	2.70	0.80
12:E:157:HIS:CG	12:E:170:LYS:HZ3	1.99	0.80
16:I:291:ARG:CG	16:I:292:TYR:H	1.85	0.80
17:J:24:GLU:OE1	18:K:48:TYR:OH	1.98	0.80
18:K:164:ASN:ND2	19:L:315:PHE:CD2	2.50	0.80
19:L:198:GLU:HG3	19:L:202:LYS:NZ	1.97	0.80
21:N:434:SER:CB	21:N:439:VAL:HG11	2.10	0.80
21:N:736:PHE:CD1	21:N:749:LEU:HD11	2.16	0.80
25:R:62:TYR:CG	25:R:180:PHE:CE2	2.68	0.80
33:Z:970:TYR:CE1	33:Z:985:LYS:HD2	2.17	0.80
2:2:6:VAL:HG21	2:2:154:LEU:HD23	1.64	0.80
7:7:64:THR:HG22	7:7:68:TYR:CZ	2.15	0.80
16:I:184:ILE:HD12	16:I:187:LEU:HD12	1.63	0.80
17:J:273:LEU:CD2	17:J:309:ARG:CD	2.59	0.80
19:L:290:ARG:CZ	19:L:299:ARG:HH22	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:40:GLN:O	22:O:41:LEU:HB2	1.80	0.80
30:W:3:LEU:HA	30:W:47:ASN:HD21	1.46	0.80
33:Z:286:VAL:HA	33:Z:317:GLN:HE22	1.45	0.80
2:2:190:TYR:CD2	2:2:191:LEU:HG	2.17	0.79
16:I:222:TYR:HE1	16:I:329:ASN:CA	1.95	0.79
17:J:264:GLY:O	17:J:265:ASP:OD1	2.00	0.79
19:L:180:PHE:CD2	19:L:238:THR:HB	2.17	0.79
25:R:179:PHE:HZ	25:R:213:TYR:CE1	1.98	0.79
26:S:153:GLU:CB	26:S:191:HIS:CE1	2.64	0.79
33:Z:278:LEU:HD12	33:Z:297:VAL:HA	1.64	0.79
1:1:122:LEU:HD11	7:7:28:PHE:CE1	2.17	0.79
10:C:118:ILE:HG23	10:C:122:TYR:HE1	1.44	0.79
14:G:31:GLU:HG2	14:G:168:ARG:CZ	2.12	0.79
21:N:711:ARG:C	21:N:873:ARG:HD2	2.03	0.79
25:R:335:ARG:CZ	25:R:371:PHE:CB	2.61	0.79
27:T:50:ILE:HG13	27:T:51:TYR:CD2	2.17	0.79
33:Z:282:ILE:HD13	33:Z:974:THR:CG2	2.12	0.79
18:K:60:LEU:CD1	21:N:598:ASP:HB3	2.13	0.79
19:L:336:ALA:CB	19:L:342:ARG:NH1	2.45	0.79
20:M:383:THR:HB	20:M:386:PHE:CD1	2.16	0.79
21:N:70:TYR:CE1	21:N:75:TYR:CE1	2.70	0.79
22:O:16:MET:HE3	22:O:72:LYS:HG3	1.65	0.79
33:Z:318:LYS:HD2	33:Z:874:ASN:OD1	1.81	0.79
11:D:187:THR:HG22	11:D:189:GLU:H	1.46	0.79
13:F:6:TYR:HE1	14:G:22:GLN:HE22	1.31	0.79
15:H:173:ARG:NH2	16:I:128:TYR:HB3	1.98	0.79
19:L:374:PHE:CE2	19:L:415:LEU:HD22	2.17	0.79
21:N:666:GLN:CD	21:N:873:ARG:CG	2.50	0.79
22:O:310:PHE:CZ	22:O:341:ILE:HG22	2.01	0.79
23:P:371:LEU:HD13	23:P:375:GLN:NE2	1.98	0.79
24:Q:74:LEU:HD23	24:Q:104:PHE:CZ	2.17	0.79
24:Q:166:LYS:O	24:Q:167:LYS:HB2	1.83	0.79
24:Q:306:TYR:CE1	24:Q:342:LEU:HD22	2.16	0.79
29:V:52:LEU:CD1	29:V:107:TRP:CZ3	2.66	0.79
31:X:28:PRO:CG	31:X:57:VAL:CB	2.49	0.79
1:1:66:TYR:HE2	1:1:73:PRO:HA	1.47	0.79
1:1:112:THR:HG21	7:7:27:ARG:NH2	1.97	0.79
2:2:222:ASP:OD1	3:3:36:HIS:CE1	2.36	0.79
14:G:192:VAL:HG13	14:G:215:ILE:HD13	1.65	0.79
21:N:207:LEU:HB3	21:N:228:VAL:CG1	2.12	0.79
33:Z:392:LEU:CD2	33:Z:857:LEU:HD21	2.13	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:761:ILE:CG1	21:N:904:VAL:N	2.39	0.79
33:Z:452:LEU:HD21	33:Z:477:TYR:HB3	1.62	0.79
33:Z:473:LEU:CG	33:Z:477:TYR:CE2	2.64	0.79
33:Z:761:PHE:HD1	33:Z:764:LEU:HD12	1.46	0.79
33:Z:888:LEU:CD2	33:Z:904:LEU:HD11	2.13	0.79
9:B:82:TYR:O	9:B:86:VAL:HG23	1.82	0.79
12:E:59:LEU:HD21	12:E:64:ILE:CD1	2.12	0.79
21:N:919:THR:HG23	21:N:921:ARG:H	1.47	0.79
25:R:151:GLU:HG2	25:R:190:LYS:NZ	1.98	0.79
10:C:51:LYS:HG2	10:C:52:VAL:HG23	1.65	0.79
12:E:165:TYR:HB2	12:E:167:TYR:HH	1.46	0.79
18:K:372:ILE:HG21	24:Q:240:PHE:CZ	2.17	0.79
21:N:50:TYR:CD1	21:N:62:ALA:HB2	2.17	0.79
21:N:270:LEU:HD11	21:N:290:LEU:HD22	1.64	0.79
23:P:308:LEU:HD13	23:P:345:VAL:HG12	1.65	0.79
26:S:343:LEU:CG	26:S:347:HIS:CE1	2.49	0.79
27:T:245:TYR:O	27:T:246:GLU:HB2	1.80	0.79
14:G:146:HIS:HB3	14:G:148:TYR:CE2	2.18	0.79
16:I:132:ILE:HD12	16:I:138:LYS:HZ3	1.47	0.79
23:P:431:HIS:ND1	28:U:156:HIS:HB3	1.97	0.79
26:S:461:PHE:CE2	28:U:274:MET:CB	2.64	0.79
9:B:217:GLU:OE2	9:B:219:PRO:HD3	1.83	0.79
17:J:258:VAL:O	18:K:280:LYS:HD2	1.83	0.79
22:O:169:ASN:OD1	22:O:195:TYR:CE2	2.35	0.79
27:T:249:MET:HG2	27:T:250:MET:HG3	1.65	0.79
29:V:86:VAL:CG1	29:V:90:LYS:HE3	2.12	0.79
1:1:1:THR:HG22	1:1:129:SER:H	1.47	0.78
5:5:8:PHE:CZ	5:5:13:ILE:HD11	2.17	0.78
5:5:104:TYR:CE1	5:5:109:GLY:HA2	2.18	0.78
7:7:192:ILE:HG12	7:7:198:LEU:HD12	1.64	0.78
8:A:56:GLN:NE2	8:A:214:LEU:HD13	1.98	0.78
11:D:179:TYR:CE1	11:D:185:PRO:CD	2.63	0.78
14:G:31:GLU:HG2	14:G:168:ARG:HH22	1.46	0.78
22:O:72:LYS:HZ2	22:O:73:ILE:CD1	1.68	0.78
23:P:329:PHE:CD2	23:P:337:HIS:NE2	2.50	0.78
28:U:106:ILE:CG2	28:U:110:PHE:HE2	1.95	0.78
31:X:50:TRP:CH2	31:X:52:PRO:HB3	2.18	0.78
33:Z:407:VAL:CB	33:Z:439:TYR:OH	2.32	0.78
8:A:153:SER:HB3	8:A:155:TYR:CE1	2.18	0.78
18:K:99:PHE:CZ	18:K:101:GLU:C	2.56	0.78
20:M:357:ARG:NE	20:M:383:THR:OG1	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:472:HIS:HD1	28:U:288:PHE:HE1	0.80	0.78
8:A:87:ILE:HG13	14:G:157:TRP:HZ2	1.47	0.78
16:I:202:LEU:HD23	16:I:240:THR:HB	1.66	0.78
23:P:425:HIS:CD2	28:U:232:VAL:HG12	2.17	0.78
29:V:47:MET:HE1	29:V:74:SER:C	2.03	0.78
15:H:75:GLY:C	15:H:105:ILE:HG12	2.03	0.78
15:H:173:ARG:NH2	16:I:128:TYR:HA	1.95	0.78
15:H:173:ARG:NH2	16:I:128:TYR:C	2.29	0.78
15:H:312:ASP:HA	16:I:300:ARG:NH2	1.95	0.78
19:L:125:PRO:CD	19:L:127:TYR:OH	2.21	0.78
24:Q:61:LEU:HD11	24:Q:65:TYR:HE1	1.48	0.78
26:S:461:PHE:CE1	28:U:278:ILE:HG13	2.18	0.78
33:Z:229:SER:C	33:Z:264:PHE:HE1	1.87	0.78
12:E:179:ALA:O	12:E:183:LEU:HG	1.84	0.78
15:H:382:LEU:CD2	15:H:385:ARG:HH22	1.96	0.78
17:J:258:VAL:CB	18:K:297:ILE:HD11	2.06	0.78
25:R:209:ARG:NH2	25:R:240:SER:CB	2.47	0.78
26:S:464:ARG:CZ	28:U:281:LEU:HD13	2.14	0.78
33:Z:139:LEU:HD21	33:Z:161:ILE:HD12	1.64	0.78
33:Z:513:ALA:O	33:Z:516:THR:OG1	2.01	0.78
12:E:17:PRO:HA	13:F:24:TYR:CD1	2.19	0.78
15:H:62:ARG:NH1	16:I:99:ILE:HG22	1.98	0.78
16:I:82:LEU:HB2	33:Z:622:HIS:CE1	2.19	0.78
17:J:224:GLY:O	17:J:227:SER:N	2.17	0.78
20:M:264:ARG:HG2	20:M:311:GLN:NE2	1.97	0.78
1:1:61:TYR:OH	8:A:103:GLU:HG3	1.81	0.78
11:D:37:LYS:O	11:D:179:TYR:OH	2.00	0.78
11:D:47:GLU:OE2	11:D:166:ARG:NH2	2.17	0.78
13:F:13:PHE:CZ	14:G:130:PRO:CD	2.66	0.78
21:N:903:VAL:O	21:N:904:VAL:HG23	1.83	0.78
22:O:29:PHE:O	22:O:33:TYR:HD1	1.67	0.78
25:R:396:LYS:CA	26:S:452:TYR:CD1	2.51	0.78
30:W:38:GLN:CD	30:W:41:ARG:HH21	1.87	0.78
2:2:59:ILE:HG13	2:2:83:LEU:HD23	1.66	0.78
10:C:181:LYS:HE3	10:C:184:MET:HA	1.65	0.78
17:J:141:LYS:HE2	17:J:209:LYS:CE	2.13	0.78
19:L:358:LEU:CD1	19:L:380:VAL:HG21	2.13	0.78
25:R:246:TYR:CE2	25:R:279:LEU:HD13	2.19	0.78
26:S:234:ILE:CG1	26:S:257:LEU:CD2	2.54	0.78
1:1:75:THR:HG21	1:1:111:TYR:HD1	1.47	0.78
20:M:221:TYR:OH	20:M:348:GLU:OE1	2.01	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:44:SER:CB	22:O:72:LYS:HZ2	1.95	0.78
5:5:126:ILE:HD11	5:5:144:TYR:CE1	2.18	0.78
18:K:177:LEU:O	18:K:181:LYS:HG3	1.84	0.78
18:K:308:GLN:HE21	18:K:333:ARG:NH1	1.82	0.78
28:U:283:ARG:HH21	29:V:254:ARG:HB3	1.49	0.78
16:I:428:VAL:HG12	16:I:428:VAL:O	1.82	0.77
17:J:170:HIS:CE1	17:J:173:LEU:CG	2.66	0.77
23:P:427:GLU:HG3	29:V:230:TYR:OH	1.84	0.77
33:Z:574:TYR:HE2	33:Z:584:VAL:HG11	1.48	0.77
10:C:122:TYR:CE2	10:C:131:PHE:CE2	2.72	0.77
13:F:50:LYS:HA	20:M:433:TYR:HE1	1.50	0.77
13:F:105:VAL:CG2	13:F:145:LEU:CD2	2.56	0.77
15:H:157:VAL:CG1	15:H:183:ILE:HD11	2.13	0.77
19:L:360:ILE:CG2	19:L:364:HIS:CE1	2.67	0.77
21:N:617:VAL:O	21:N:621:THR:HG23	1.84	0.77
25:R:276:LEU:HB3	25:R:289:ILE:HD12	1.65	0.77
10:C:207:THR:OG1	10:C:210:ARG:NH1	2.17	0.77
14:G:216:SER:CA	14:G:230:VAL:HG23	2.14	0.77
22:O:59:LEU:C	22:O:62:TYR:CD1	2.58	0.77
23:P:429:ILE:HD12	28:U:203:LYS:CE	2.05	0.77
27:T:182:LYS:HB3	27:T:186:ARG:HH12	1.50	0.77
33:Z:278:LEU:CD1	33:Z:297:VAL:HA	2.15	0.77
33:Z:531:ALA:HA	33:Z:573:LEU:CG	2.14	0.77
33:Z:624:LEU:HD22	33:Z:740:VAL:HG22	1.64	0.77
33:Z:897:HIS:CD2	33:Z:899:GLN:HG2	2.19	0.77
1:1:190:PRO:CA	1:1:193:TYR:CE1	2.64	0.77
10:C:122:TYR:CE2	10:C:131:PHE:HZ	2.02	0.77
13:F:113:CYS:CB	14:G:85:ARG:HD2	2.13	0.77
21:N:302:PHE:HE2	21:N:712:ASN:HB3	1.47	0.77
24:Q:65:TYR:CD2	24:Q:74:LEU:HD22	2.20	0.77
2:2:17:ASP:OD1	2:2:173:VAL:HG22	1.84	0.77
5:5:181:THR:OG1	5:5:184:GLY:O	2.02	0.77
12:E:119:LEU:HB3	12:E:122:ARG:CZ	2.14	0.77
12:E:119:LEU:CB	12:E:122:ARG:NH2	2.48	0.77
12:E:143:LEU:HG	12:E:155:LEU:HD11	1.67	0.77
15:H:393:SER:HG	15:H:404:TRP:HZ2	1.31	0.77
23:P:263:HIS:CE1	23:P:328:ALA:CB	2.68	0.77
24:Q:390:LEU:HD12	25:R:345:TYR:CE1	2.19	0.77
26:S:234:ILE:CB	26:S:257:LEU:HD22	2.14	0.77
1:1:18:SER:HB2	1:1:31:THR:OG1	1.85	0.77
8:A:162:TYR:CE1	18:K:428:LYS:HB3	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:118:ILE:HG22	10:C:122:TYR:CE1	2.20	0.77
17:J:141:LYS:HG2	17:J:209:LYS:HE3	1.66	0.77
21:N:889:ARG:HD3	21:N:913:PRO:O	1.84	0.77
27:T:99:SER:H	27:T:102:LYS:CD	1.97	0.77
31:X:8:ILE:HG22	31:X:10:PHE:CZ	2.19	0.77
6:6:65:TRP:CH2	13:F:90:GLN:HA	2.19	0.77
9:B:50:LYS:HE3	9:B:203:GLU:OE1	1.84	0.77
10:C:228:LYS:HE2	10:C:230:PHE:CZ	2.20	0.77
12:E:88:MET:CE	12:E:142:LEU:HD13	2.15	0.77
17:J:183:LYS:HE3	17:J:286:LYS:CB	2.15	0.77
18:K:74:HIS:CE1	18:K:77:ARG:NH2	2.53	0.77
21:N:413:ALA:HB2	21:N:452:LEU:HG	1.66	0.77
24:Q:227:CYS:HA	24:Q:232:TYR:CE1	2.19	0.77
25:R:266:LEU:CA	25:R:270:VAL:CG2	2.59	0.77
31:X:35:ILE:CG2	31:X:128:VAL:CG2	2.62	0.77
6:6:65:TRP:CZ2	13:F:90:GLN:HA	2.20	0.77
8:A:24:ARG:NH1	18:K:424:PHE:N	2.32	0.77
10:C:194:LEU:HD12	10:C:242:THR:HG21	1.67	0.77
15:H:390:ARG:HA	15:H:404:TRP:NE1	2.00	0.77
16:I:215:PRO:HD2	16:I:319:ARG:NH1	1.99	0.77
20:M:43:ILE:HD11	30:W:23:ARG:NH1	2.00	0.77
20:M:221:TYR:HE2	20:M:346:LYS:HG2	1.48	0.77
23:P:147:LYS:HD3	23:P:155:GLU:OE1	1.83	0.77
28:U:56:PHE:HD1	28:U:68:LEU:HD13	1.50	0.77
33:Z:926:ASN:HB2	33:Z:993:GLU:HG3	1.65	0.77
20:M:135:VAL:HG12	20:M:158:THR:HG23	1.67	0.77
21:N:70:TYR:CD1	21:N:75:TYR:CE1	2.73	0.77
21:N:383:LYS:HB2	21:N:412:TYR:CZ	2.20	0.77
28:U:273:LEU:HD22	29:V:295:VAL:HG13	1.67	0.77
29:V:51:GLY:CA	29:V:108:TYR:CE1	2.68	0.77
29:V:51:GLY:CA	29:V:108:TYR:CZ	2.67	0.77
33:Z:473:LEU:HD21	33:Z:477:TYR:OH	1.83	0.77
15:H:157:VAL:CB	15:H:183:ILE:HD11	2.14	0.77
16:I:340:ARG:HD3	16:I:343:ARG:HG3	1.67	0.77
17:J:327:ILE:HG22	17:J:358:VAL:HG11	1.66	0.77
18:K:242:PHE:CA	18:K:243:VAL:N	2.48	0.77
21:N:361:ASN:OD1	21:N:399:PHE:CE2	2.38	0.77
21:N:540:LEU:CD2	21:N:574:VAL:HG21	2.14	0.77
22:O:80:LYS:NZ	22:O:121:ASP:OD1	2.18	0.77
22:O:106:PHE:HD2	22:O:108:GLU:H	1.31	0.77
24:Q:35:SER:CB	24:Q:46:VAL:O	2.33	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:929:VAL:HG13	33:Z:956:LEU:CD1	2.15	0.77
2:2:86:HIS:CE1	2:2:90:TYR:HE2	2.03	0.76
5:5:199:LYS:NZ	5:5:203:GLU:OE1	2.17	0.76
19:L:248:ALA:HB3	20:M:303:ARG:NH2	1.99	0.76
25:R:266:LEU:CD2	25:R:270:VAL:CG2	2.52	0.76
28:U:36:VAL:HG23	28:U:54:LEU:HD11	1.67	0.76
5:5:55:TRP:HH2	5:5:90:TYR:CZ	2.02	0.76
11:D:86:ILE:HG22	11:D:90:ARG:NH1	2.00	0.76
12:E:12:VAL:HG12	12:E:123:PHE:HE2	0.77	0.76
18:K:95:VAL:HG13	18:K:141:ARG:HG2	1.67	0.76
18:K:99:PHE:HZ	18:K:102:PRO:N	1.83	0.76
22:O:59:LEU:HD12	22:O:62:TYR:CE1	2.20	0.76
22:O:202:SER:O	22:O:203:THR:OG1	2.02	0.76
33:Z:138:ARG:HH21	33:Z:141:SER:CB	1.97	0.76
33:Z:473:LEU:HD11	33:Z:477:TYR:OH	1.85	0.76
6:6:48:PHE:CE2	6:6:50:ALA:HB3	2.21	0.76
14:G:14:PHE:CZ	14:G:18:GLY:HA2	2.19	0.76
14:G:98:PHE:CB	14:G:114:ARG:HH12	1.89	0.76
18:K:415:VAL:HG23	18:K:416:LYS:HG3	1.68	0.76
23:P:72:TRP:CD2	23:P:104:LEU:HD21	2.20	0.76
31:X:9:LYS:HG2	31:X:34:GLU:HG2	1.65	0.76
33:Z:809:MET:HG2	33:Z:847:ILE:HD11	1.67	0.76
1:1:-7:LYS:O	2:2:116:HIS:CD2	2.38	0.76
8:A:91:ARG:HH12	8:A:95:LEU:CB	1.97	0.76
10:C:36:ILE:HD12	10:C:197:LEU:HD21	1.66	0.76
18:K:52:LYS:HZ1	21:N:159:GLU:CG	1.99	0.76
24:Q:74:LEU:HD23	24:Q:104:PHE:HZ	1.48	0.76
33:Z:237:VAL:HG11	33:Z:272:TYR:CE1	2.20	0.76
33:Z:795:THR:HG22	33:Z:799:PHE:CE2	2.19	0.76
1:1:37:VAL:HG11	1:1:82:PHE:HZ	1.49	0.76
1:1:59:VAL:HG11	1:1:82:PHE:CE1	2.20	0.76
9:B:6:SER:HG	11:D:4:TYR:HD2	0.78	0.76
12:E:169:ALA:HB3	13:F:56:LEU:HD13	1.68	0.76
22:O:44:SER:OG	22:O:72:LYS:NZ	2.18	0.76
26:S:428:ARG:NH1	27:T:188:GLU:O	2.18	0.76
31:X:35:ILE:CB	31:X:128:VAL:HG21	2.14	0.76
31:X:79:LYS:O	31:X:80:SER:HB2	1.86	0.76
33:Z:763:HIS:NE2	33:Z:767:TYR:CZ	2.54	0.76
4:4:3:ILE:HG22	4:4:102:LEU:CD1	2.14	0.76
14:G:200:TYR:CE2	14:G:246:ILE:HB	2.21	0.76
21:N:9:LEU:HD22	21:N:27:SER:CB	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:433:THR:O	21:N:434:SER:OG	2.03	0.76
25:R:151:GLU:HG2	25:R:190:LYS:HZ2	1.49	0.76
26:S:269:GLU:HB3	26:S:299:LYS:HZ2	1.50	0.76
30:W:118:ILE:O	30:W:118:ILE:HG22	1.84	0.76
33:Z:758:LEU:CD2	33:Z:787:ASP:OD1	2.34	0.76
33:Z:827:LEU:HD21	33:Z:831:LEU:HD21	1.66	0.76
2:2:59:ILE:O	2:2:63:ILE:HG12	1.85	0.76
8:A:46:ARG:HG3	8:A:154:ILE:HD11	1.67	0.76
15:H:248:LEU:CD1	15:H:352:MET:HG3	2.16	0.76
18:K:113:THR:HG21	19:L:126:ARG:HD2	1.67	0.76
23:P:303:PHE:O	23:P:348:HIS:CD2	2.38	0.76
27:T:106:ILE:HG23	27:T:142:LEU:CD2	2.14	0.76
31:X:28:PRO:O	31:X:29:VAL:HG22	1.85	0.76
6:6:175:VAL:O	6:6:179:PHE:HD2	1.68	0.76
20:M:384:ASP:N	20:M:386:PHE:CE1	2.53	0.76
22:O:66:VAL:CG1	22:O:106:PHE:CZ	2.69	0.76
23:P:299:LEU:HD22	23:P:322:LEU:HD22	1.68	0.76
29:V:51:GLY:HA3	29:V:108:TYR:CE1	2.21	0.76
30:W:155:ASP:OD1	30:W:171:LEU:HD21	1.86	0.76
5:5:104:TYR:CE1	5:5:110:PRO:CD	2.69	0.76
8:A:234:PHE:HE2	8:A:236:LEU:HD21	1.51	0.76
20:M:74:GLN:O	20:M:77:TYR:CZ	2.39	0.76
21:N:192:LEU:HD12	21:N:196:THR:HG21	1.68	0.76
23:P:229:LEU:HD22	23:P:330:GLY:HA2	1.68	0.76
27:T:260:ILE:HG21	28:U:277:TYR:OH	1.85	0.76
5:5:62:GLN:HG2	5:5:82:ILE:HD13	1.68	0.75
18:K:240:SER:O	19:L:303:ARG:HD3	1.87	0.75
18:K:243:VAL:HB	19:L:303:ARG:HH11	1.49	0.75
23:P:137:ALA:CB	23:P:179:PHE:CE2	2.68	0.75
30:W:101:ARG:NH1	30:W:108:GLN:HE21	1.84	0.75
31:X:12:ALA:HB3	31:X:33:ILE:CG2	2.15	0.75
33:Z:475:GLN:O	33:Z:478:VAL:HG12	1.86	0.75
3:3:179:TYR:CE2	3:3:188:LYS:HD2	2.21	0.75
7:7:171:ASN:HA	7:7:174:ARG:NH1	2.00	0.75
13:F:30:LYS:HE3	13:F:163:ALA:HA	1.69	0.75
19:L:290:ARG:HD2	19:L:298:ASP:HB3	1.69	0.75
22:O:16:MET:HE1	22:O:19:ASP:CG	2.05	0.75
25:R:24:TYR:CZ	25:R:248:SER:HB2	2.21	0.75
25:R:70:TYR:OH	25:R:74:ASN:HB2	1.86	0.75
13:F:110:HIS:HB2	14:G:85:ARG:NH1	2.01	0.75
13:F:222:PHE:HE1	13:F:224:ILE:HG13	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:198:GLU:HG3	19:L:202:LYS:HZ2	1.48	0.75
20:M:220:MET:HE3	20:M:324:LEU:HD11	1.68	0.75
22:O:76:LEU:O	22:O:79:VAL:CG1	2.27	0.75
22:O:189:TYR:CD2	22:O:227:ILE:CG1	2.61	0.75
25:R:70:TYR:HE2	25:R:75:GLY:CA	2.00	0.75
4:4:36:GLN:NE2	4:4:188:ILE:HD12	2.01	0.75
12:E:119:LEU:CB	12:E:122:ARG:HH21	1.99	0.75
15:H:248:LEU:HD13	15:H:352:MET:CG	2.14	0.75
23:P:427:GLU:CG	29:V:230:TYR:CZ	2.67	0.75
25:R:137:LEU:HD11	25:R:141:TYR:CZ	2.22	0.75
25:R:255:VAL:HG11	25:R:322:LEU:HD22	1.67	0.75
25:R:347:THR:HG23	25:R:389:GLU:OE2	1.86	0.75
25:R:397:ASN:HB2	25:R:400:TYR:H	1.52	0.75
33:Z:422:ILE:CD1	33:Z:439:TYR:CE2	2.70	0.75
21:N:408:LEU:CD1	21:N:412:TYR:CE1	2.69	0.75
23:P:308:LEU:HD13	23:P:345:VAL:CG1	2.17	0.75
24:Q:202:ARG:HH21	24:Q:222:SER:HG	1.35	0.75
25:R:258:LEU:HA	25:R:266:LEU:HD21	1.68	0.75
25:R:380:VAL:HG13	26:S:398:THR:HG22	1.66	0.75
28:U:92:TRP:CZ2	28:U:120:LEU:HD11	2.18	0.75
29:V:24:LYS:HD2	29:V:167:ASN:ND2	2.00	0.75
15:H:431:ILE:HD13	16:I:207:LEU:HB3	1.67	0.75
22:O:29:PHE:O	22:O:33:TYR:CD1	2.40	0.75
24:Q:146:TYR:CD1	24:Q:151:TYR:CE1	2.74	0.75
25:R:280:ILE:HD13	25:R:286:LEU:HB2	1.68	0.75
2:2:182:LYS:NZ	2:2:185:GLU:OE2	2.18	0.75
14:G:31:GLU:CG	14:G:168:ARG:HH22	2.00	0.75
15:H:168:ILE:HD11	15:H:183:ILE:HG23	1.68	0.75
15:H:244:LYS:HD3	15:H:346:ARG:NE	2.00	0.75
19:L:306:MET:O	19:L:310:THR:HG23	1.87	0.75
21:N:536:ILE:HD13	21:N:555:ILE:HG12	1.68	0.75
22:O:33:TYR:O	22:O:34:GLU:CB	2.35	0.75
22:O:41:LEU:HD23	22:O:41:LEU:O	1.86	0.75
27:T:89:TYR:CZ	27:T:90:PHE:HE1	2.05	0.75
31:X:85:ARG:CZ	31:X:101:LEU:HD13	2.17	0.75
3:3:52:THR:HG21	4:4:84:ARG:NE	2.00	0.75
12:E:109:VAL:HG12	12:E:156:PHE:CD1	2.21	0.75
13:F:49:LEU:C	20:M:433:TYR:OH	2.25	0.75
33:Z:913:ILE:HG12	33:Z:964:GLU:HA	1.67	0.75
5:5:7:ARG:HH21	5:5:125:ASP:CG	1.90	0.75
13:F:145:LEU:HD11	13:F:153:VAL:CG1	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:78:ILE:O	31:X:78:ILE:HG22	1.87	0.75
33:Z:120:SER:HB3	33:Z:153:TYR:OH	1.87	0.75
8:A:42:SER:HB2	8:A:171:THR:CG2	2.17	0.74
8:A:163:TYR:O	8:A:164:VAL:HG23	1.87	0.74
15:H:107:LYS:HB2	15:H:143:ALA:HB1	1.66	0.74
20:M:220:MET:HE2	20:M:324:LEU:HD11	1.65	0.74
22:O:95:SER:HA	22:O:98:TYR:HE2	1.52	0.74
23:P:138:ARG:HG2	23:P:141:LYS:HZ2	1.50	0.74
28:U:195:LYS:HD3	29:V:233:LYS:CB	2.16	0.74
29:V:116:CYS:O	29:V:117:TRP:CD1	2.40	0.74
33:Z:574:TYR:OH	33:Z:584:VAL:HG11	1.86	0.74
1:1:-5:GLU:N	2:2:116:HIS:CE1	2.55	0.74
8:A:135:ARG:HD3	14:G:124:LEU:CD2	2.16	0.74
15:H:447:VAL:HG13	15:H:451:ILE:HD12	1.68	0.74
23:P:157:ALA:HB2	23:P:186:LEU:HB3	1.69	0.74
26:S:343:LEU:HD11	26:S:347:HIS:CE1	2.22	0.74
30:W:147:ILE:CG2	30:W:148:GLU:H	1.99	0.74
33:Z:473:LEU:CD1	33:Z:477:TYR:CZ	2.70	0.74
33:Z:792:VAL:O	33:Z:796:LEU:HG	1.87	0.74
2:2:36:ARG:HD2	2:2:42:TRP:CH2	2.21	0.74
8:A:225:VAL:HG11	8:A:236:LEU:HD12	1.69	0.74
9:B:98:LYS:HE2	9:B:104:TYR:CD1	2.22	0.74
13:F:65:LYS:HG3	13:F:222:PHE:CD2	2.23	0.74
18:K:238:ASN:HB2	18:K:241:GLU:HG3	1.68	0.74
22:O:225:ASP:OD1	22:O:226:LYS:HG3	1.86	0.74
26:S:234:ILE:HG21	26:S:257:LEU:HD22	1.67	0.74
31:X:20:ASP:O	31:X:21:SER:HB2	1.85	0.74
33:Z:337:GLU:HA	33:Z:340:LEU:HD21	1.67	0.74
8:A:153:SER:HB3	8:A:155:TYR:HE1	1.50	0.74
17:J:190:PRO:CD	17:J:316:PHE:CD2	2.55	0.74
19:L:301:ILE:CD1	20:M:299:ARG:HH21	1.99	0.74
21:N:238:ALA:CB	21:N:273:LEU:HD22	2.17	0.74
22:O:359:SER:HG	28:U:223:HIS:CE1	2.02	0.74
24:Q:318:LEU:HD13	24:Q:335:PHE:CE2	2.22	0.74
25:R:379:CYS:SG	25:R:388:VAL:HG11	2.27	0.74
33:Z:150:GLY:HA3	33:Z:154:ILE:CD1	2.16	0.74
33:Z:239:GLU:O	33:Z:240:ASN:HB2	1.84	0.74
5:5:55:TRP:CZ2	5:5:90:TYR:CZ	2.75	0.74
7:7:187:PHE:CE2	7:7:204:LEU:HB2	2.22	0.74
18:K:350:ARG:HH21	24:Q:236:PHE:HE2	1.34	0.74
25:R:421:VAL:CG1	25:R:422:ARG:N	2.11	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:101:PRO:HB3	7:7:124:LEU:CD1	2.14	0.74
10:C:50:ARG:NH1	10:C:53:THR:HA	2.01	0.74
13:F:179:PHE:CE2	13:F:192:ALA:HB1	2.23	0.74
15:H:284:VAL:O	15:H:286:GLU:N	2.20	0.74
21:N:329:HIS:HD2	21:N:355:TRP:NE1	1.69	0.74
25:R:353:MET:HG3	25:R:357:PHE:HD2	1.48	0.74
3:3:18:LEU:CD1	3:3:177:VAL:HG13	2.10	0.74
12:E:12:VAL:CB	12:E:123:PHE:HE2	2.01	0.74
13:F:110:HIS:HA	14:G:85:ARG:NH1	2.02	0.74
15:H:407:ILE:CD1	15:H:443:PHE:HB3	2.18	0.74
18:K:372:ILE:CG2	24:Q:240:PHE:CZ	2.71	0.74
19:L:286:ILE:CB	19:L:304:THR:HG21	2.15	0.74
23:P:229:LEU:HD22	23:P:330:GLY:CA	2.18	0.74
24:Q:94:VAL:HG22	24:Q:130:ARG:HD2	1.70	0.74
24:Q:226:HIS:HA	24:Q:229:ASP:OD1	1.87	0.74
26:S:163:VAL:HG21	26:S:184:TRP:CZ2	2.22	0.74
26:S:241:PHE:CZ	26:S:249:SER:OG	2.41	0.74
28:U:122:ILE:CD1	28:U:137:TYR:CD1	2.68	0.74
31:X:7:VAL:HG11	31:X:36:LYS:HB3	1.70	0.74
31:X:48:PHE:CZ	31:X:68:LEU:HD13	2.22	0.74
1:1:83:LYS:HD2	1:1:119:VAL:HG23	1.70	0.74
5:5:150:VAL:CG1	5:5:179:HIS:HE1	2.00	0.74
7:7:101:PRO:HB3	7:7:124:LEU:HD11	1.63	0.74
8:A:81:MET:SD	8:A:143:PHE:CZ	2.81	0.74
10:C:181:LYS:HE3	10:C:184:MET:CA	2.18	0.74
13:F:13:PHE:HE1	14:G:130:PRO:HD2	1.36	0.74
18:K:288:SER:O	18:K:289:ASP:OD1	2.06	0.74
20:M:170:MET:HG2	20:M:246:LEU:HD13	1.70	0.74
22:O:44:SER:CB	22:O:72:LYS:HZ1	1.91	0.74
22:O:299:THR:HA	22:O:365:LYS:CE	2.17	0.74
26:S:428:ARG:HD3	27:T:192:ASN:OD1	1.87	0.74
17:J:276:LEU:HD21	17:J:290:ILE:CD1	2.18	0.74
17:J:345:LYS:HD3	17:J:379:GLN:HE22	1.51	0.74
20:M:312:LEU:HD21	20:M:323:VAL:HG21	1.69	0.74
21:N:238:ALA:HB1	21:N:273:LEU:HD22	1.69	0.74
23:P:263:HIS:CE1	23:P:328:ALA:HB1	2.22	0.74
33:Z:229:SER:O	33:Z:264:PHE:CE1	2.38	0.74
33:Z:322:GLU:HG3	33:Z:323:TYR:CB	2.18	0.74
33:Z:985:LYS:HG2	33:Z:991:GLU:HG2	1.70	0.74
1:1:53:GLN:HG3	2:2:84:LYS:HE2	1.69	0.74
9:B:69:PRO:HD2	9:B:104:TYR:HE1	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:181:GLN:HG2	17:J:286:LYS:HD2	1.67	0.74
19:L:371:THR:CG2	19:L:409:HIS:HD2	2.01	0.74
21:N:642:ASP:HB2	21:N:643:PRO:HD3	1.70	0.74
21:N:717:LEU:O	21:N:718:GLU:HB3	1.88	0.74
23:P:292:LYS:HE2	23:P:320:PRO:O	1.87	0.74
23:P:325:ASP:O	23:P:337:HIS:CE1	2.41	0.74
25:R:208:ASN:HD21	25:R:235:LEU:HD12	1.49	0.74
31:X:24:CYS:HB3	31:X:86:ILE:HG21	1.70	0.74
33:Z:237:VAL:HG21	33:Z:272:TYR:OH	1.87	0.74
12:E:12:VAL:CB	12:E:123:PHE:CE2	2.70	0.73
16:I:310:LEU:CD1	16:I:338:LEU:HA	2.18	0.73
22:O:147:ARG:HB2	22:O:178:TYR:CZ	2.23	0.73
23:P:137:ALA:HB1	23:P:179:PHE:CE2	2.23	0.73
24:Q:75:ARG:CA	24:Q:117:VAL:HG22	2.18	0.73
24:Q:146:TYR:CE1	24:Q:151:TYR:CE1	2.73	0.73
33:Z:250:VAL:HA	33:Z:265:LEU:CD2	2.18	0.73
33:Z:412:GLY:HA2	33:Z:446:GLU:OE2	1.88	0.73
11:D:85:LEU:CD2	11:D:117:GLN:NE2	2.39	0.73
12:E:28:LEU:HA	12:E:31:ILE:HD12	1.71	0.73
17:J:76:ILE:CB	17:J:85:LEU:HD22	2.19	0.73
24:Q:12:ARG:HE	24:Q:60:GLU:CD	1.90	0.73
24:Q:227:CYS:O	24:Q:334:HIS:NE2	2.21	0.73
24:Q:275:ILE:HD11	24:Q:306:TYR:CD2	2.23	0.73
17:J:174:PHE:CD2	17:J:179:ILE:HD11	2.22	0.73
17:J:297:LEU:HD13	17:J:305:LEU:HD11	1.70	0.73
20:M:183:VAL:CG1	20:M:186:LEU:CD1	2.66	0.73
23:P:427:GLU:HA	29:V:230:TYR:CD1	2.16	0.73
25:R:399:GLN:NE2	25:R:403:LEU:HD22	2.03	0.73
27:T:241:GLU:O	27:T:242:LYS:CB	2.36	0.73
31:X:75:TRP:CH2	31:X:125:MET:HE3	2.19	0.73
33:Z:574:TYR:CZ	33:Z:584:VAL:CG1	2.67	0.73
33:Z:774:ARG:O	33:Z:777:PRO:HD2	1.88	0.73
1:1:66:TYR:CZ	1:1:77:THR:HG21	2.23	0.73
15:H:285:GLY:O	15:H:286:GLU:C	2.25	0.73
22:O:233:LEU:HD23	22:O:251:LEU:HD22	1.69	0.73
25:R:266:LEU:CA	25:R:270:VAL:HG22	2.07	0.73
29:V:70:ALA:HA	29:V:108:TYR:HH	1.51	0.73
7:7:200:PHE:CE2	7:7:202:LYS:HE2	2.21	0.73
15:H:244:LYS:CD	15:H:346:ARG:HE	2.02	0.73
18:K:74:HIS:CE1	18:K:77:ARG:HH21	2.05	0.73
20:M:220:MET:HE3	20:M:324:LEU:CD1	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:246:LEU:CD2	20:M:251:LEU:HD11	2.16	0.73
20:M:379:LEU:HG	20:M:412:HIS:CE1	2.23	0.73
21:N:761:ILE:CG2	21:N:905:LEU:H	2.02	0.73
22:O:69:PHE:CZ	22:O:77:SER:HB2	2.23	0.73
23:P:333:ALA:HB3	23:P:336:HIS:HD2	1.53	0.73
24:Q:20:TYR:HE2	24:Q:68:MET:HE3	1.53	0.73
28:U:56:PHE:CD1	28:U:68:LEU:HD13	2.22	0.73
30:W:110:ILE:HD12	30:W:139:VAL:HG22	1.69	0.73
1:1:8:PHE:CE1	1:1:12:VAL:N	2.56	0.73
2:2:124:TYR:CZ	2:2:139:GLU:HA	2.23	0.73
21:N:540:LEU:HD22	21:N:574:VAL:CG2	2.18	0.73
22:O:42:SER:O	22:O:43:GLU:HB2	1.88	0.73
27:T:98:GLU:HG2	27:T:102:LYS:HZ3	1.53	0.73
28:U:15:LEU:HB3	29:V:212:MET:CE	2.18	0.73
29:V:168:LEU:CD2	29:V:184:ASN:HB2	2.09	0.73
31:X:29:VAL:HG11	31:X:61:LEU:HD22	1.70	0.73
1:1:75:THR:HG22	1:1:111:TYR:HD1	1.26	0.73
1:1:148:LYS:O	1:1:152:VAL:HG23	1.89	0.73
14:G:149:MET:HB3	14:G:159:TYR:CE1	2.22	0.73
15:H:173:ARG:NH2	16:I:128:TYR:CB	2.51	0.73
22:O:380:LEU:HD22	27:T:258:ASN:HD21	1.52	0.73
23:P:411:LEU:HD11	28:U:269:THR:OG1	1.88	0.73
28:U:21:HIS:CD2	28:U:53:ALA:HB2	2.23	0.73
30:W:95:GLN:NE2	30:W:132:LEU:CD2	2.51	0.73
33:Z:426:TYR:HH	33:Z:435:GLN:HG3	1.51	0.73
13:F:13:PHE:HD1	14:G:22:GLN:HB3	1.54	0.73
21:N:669:GLU:OE1	21:N:785:PRO:CA	2.37	0.73
22:O:116:ASN:CB	22:O:127:LEU:CB	2.61	0.73
23:P:412:LEU:HD22	29:V:245:VAL:HA	1.68	0.73
31:X:85:ARG:HH12	31:X:87:PHE:HE2	1.24	0.73
33:Z:89:LEU:HB3	33:Z:122:LEU:HG	1.69	0.73
2:2:55:VAL:HG21	2:2:94:ILE:HG21	1.70	0.73
8:A:117:LEU:CD2	8:A:143:PHE:HE2	2.00	0.73
13:F:145:LEU:HD11	13:F:153:VAL:HG12	1.71	0.73
13:F:179:PHE:CE2	13:F:192:ALA:CB	2.71	0.73
14:G:98:PHE:CE1	14:G:104:THR:HG23	2.24	0.73
21:N:70:TYR:CD1	21:N:75:TYR:HE1	2.06	0.73
21:N:514:THR:HB	21:N:546:LEU:HD13	0.73	0.73
24:Q:75:ARG:HA	24:Q:117:VAL:HG22	1.70	0.73
25:R:70:TYR:CE2	25:R:75:GLY:CA	2.72	0.73
27:T:23:CYS:O	27:T:27:LEU:HG	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:4:3:ILE:CG2	4:4:102:LEU:HD12	2.15	0.73
6:6:176:ARG:NH1	6:6:208:TYR:CB	2.52	0.73
16:I:188:GLU:HA	16:I:191:ILE:HD12	1.71	0.73
16:I:252:LEU:O	16:I:254:GLN:HB2	1.89	0.73
17:J:259:GLU:HB2	18:K:280:LYS:HE2	0.73	0.73
21:N:294:PRO:CG	21:N:921:ARG:NH2	2.44	0.73
21:N:540:LEU:HD22	21:N:574:VAL:HG21	1.68	0.73
27:T:129:LEU:O	27:T:132:HIS:CD2	2.41	0.73
31:X:14:VAL:O	31:X:29:VAL:CG2	2.37	0.73
1:1:190:PRO:CA	1:1:193:TYR:HE1	1.93	0.72
7:7:103:TRP:CA	7:7:124:LEU:HD22	2.16	0.72
7:7:200:PHE:CE2	7:7:202:LYS:HG2	2.24	0.72
17:J:148:ASP:O	17:J:330:ILE:HD13	1.89	0.72
19:L:92:GLU:HB2	20:M:65:ASN:HD21	1.54	0.72
21:N:761:ILE:HG21	21:N:905:LEU:N	2.03	0.72
26:S:465:ILE:HG13	28:U:281:LEU:HD21	1.70	0.72
27:T:51:TYR:N	27:T:55:LEU:HD13	2.04	0.72
27:T:193:THR:HG21	27:T:205:ILE:HD13	1.71	0.72
31:X:79:LYS:O	31:X:80:SER:CB	2.34	0.72
33:Z:246:CYS:SG	33:Z:272:TYR:CZ	2.78	0.72
33:Z:390:LEU:HD12	33:Z:856:HIS:O	1.89	0.72
8:A:19:PHE:CE1	9:B:128:ARG:HD2	2.24	0.72
19:L:150:ILE:HG23	19:L:151:THR:HG23	1.71	0.72
21:N:95:SER:OG	21:N:98:VAL:HG23	1.89	0.72
22:O:26:PHE:CE1	22:O:43:GLU:HG2	2.20	0.72
23:P:137:ALA:HB3	23:P:179:PHE:CZ	2.23	0.72
26:S:157:GLU:HG2	26:S:161:LYS:HE3	1.71	0.72
29:V:197:TYR:O	29:V:197:TYR:HD1	1.69	0.72
30:W:38:GLN:CD	30:W:41:ARG:NH2	2.42	0.72
6:6:112:ALA:HB1	6:6:114:TYR:HE1	1.52	0.72
7:7:119:LEU:HG	7:7:134:LEU:CD1	2.17	0.72
8:A:119:LYS:HZ2	9:B:83:ARG:HB3	1.50	0.72
15:H:393:SER:OG	15:H:404:TRP:HZ2	1.72	0.72
19:L:201:LEU:CD1	19:L:239:ILE:HD13	2.19	0.72
20:M:384:ASP:H	20:M:386:PHE:HD1	1.35	0.72
21:N:619:CYS:SG	21:N:651:PHE:CD2	2.82	0.72
22:O:77:SER:O	22:O:80:LYS:HB2	1.88	0.72
25:R:179:PHE:CE2	25:R:213:TYR:CE1	2.77	0.72
25:R:206:ARG:NH2	25:R:209:ARG:NE	2.32	0.72
29:V:47:MET:HE2	29:V:73:GLN:HB3	1.70	0.72
7:7:170:VAL:CG1	7:7:174:ARG:NH2	2.51	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:189:GLU:HG2	11:D:193:LYS:HE3	1.70	0.72
13:F:156:LEU:HD23	14:G:58:LEU:HD23	1.71	0.72
17:J:273:LEU:CB	17:J:309:ARG:NH2	2.34	0.72
18:K:240:SER:HA	18:K:243:VAL:HG23	1.70	0.72
19:L:336:ALA:HB3	19:L:342:ARG:NH1	2.03	0.72
22:O:26:PHE:HE1	22:O:58:ARG:NH1	1.81	0.72
29:V:57:PHE:CZ	29:V:135:ARG:HG3	2.25	0.72
29:V:159:ILE:CG2	29:V:160:ASP:H	2.03	0.72
30:W:9:VAL:CG2	30:W:52:ILE:HD11	2.17	0.72
33:Z:394:TYR:CE2	33:Z:858:GLY:C	2.61	0.72
33:Z:574:TYR:CE2	33:Z:584:VAL:HG21	2.25	0.72
6:6:127:CYS:SG	6:6:146:ASN:ND2	2.63	0.72
13:F:137:TYR:OH	13:F:218:LYS:HB2	1.90	0.72
17:J:188:TYR:CD1	17:J:295:ASN:HA	2.23	0.72
25:R:208:ASN:HD21	25:R:235:LEU:CD1	2.02	0.72
16:I:414:GLU:HG3	16:I:418:GLN:HE21	1.54	0.72
21:N:207:LEU:HD22	21:N:228:VAL:HG22	1.70	0.72
22:O:69:PHE:CE2	22:O:77:SER:HB2	2.25	0.72
22:O:106:PHE:CD2	22:O:109:LEU:N	2.56	0.72
26:S:421:TYR:OH	27:T:208:LEU:HA	1.90	0.72
31:X:93:SER:HB3	31:X:96:ARG:NH2	2.00	0.72
33:Z:60:ASP:H	33:Z:64:TYR:HE1	1.35	0.72
8:A:117:LEU:HD21	8:A:143:PHE:HE2	1.54	0.72
15:H:66:LYS:HE2	15:H:70:LYS:HZ1	1.54	0.72
19:L:408:ASP:OD1	19:L:409:HIS:ND1	2.19	0.72
22:O:80:LYS:NZ	22:O:121:ASP:OD2	2.22	0.72
26:S:401:LYS:HG2	26:S:444:GLU:HG2	1.71	0.72
28:U:19:LEU:HB2	29:V:209:GLU:CD	2.09	0.72
31:X:28:PRO:HB2	31:X:56:PRO:C	2.09	0.72
31:X:85:ARG:HE	31:X:101:LEU:CB	2.01	0.72
21:N:6:ALA:HB2	21:N:35:LEU:HD13	1.70	0.72
21:N:768:ILE:HG13	21:N:919:THR:N	2.04	0.72
22:O:199:LEU:O	22:O:199:LEU:HD23	1.90	0.72
22:O:304:ASN:HB2	28:U:234:ASN:O	1.89	0.72
23:P:138:ARG:HA	23:P:141:LYS:HZ2	1.53	0.72
23:P:138:ARG:CA	23:P:141:LYS:NZ	2.53	0.72
23:P:350:LEU:HD12	23:P:383:LEU:CD1	2.20	0.72
26:S:428:ARG:HH12	27:T:188:GLU:CA	2.01	0.72
28:U:71:ASN:HD22	30:W:64:THR:HG23	1.52	0.72
33:Z:392:LEU:HD23	33:Z:857:LEU:HD21	1.70	0.72
33:Z:531:ALA:HA	33:Z:573:LEU:HG	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:531:ALA:CA	33:Z:573:LEU:HD21	2.20	0.72
2:2:220:ILE:HG22	3:3:186:VAL:HG23	1.71	0.72
11:D:86:ILE:CG2	11:D:90:ARG:HH12	2.03	0.72
22:O:202:SER:O	22:O:203:THR:CB	2.37	0.72
27:T:24:GLU:HA	27:T:27:LEU:HD12	1.71	0.72
6:6:96:TYR:CE2	6:6:98:VAL:CG2	2.69	0.72
7:7:129:TYR:CD1	7:7:134:LEU:CD2	2.72	0.72
12:E:157:HIS:CD2	12:E:170:LYS:HZ3	2.07	0.72
19:L:125:PRO:HD2	19:L:127:TYR:HH	1.54	0.72
22:O:106:PHE:CD2	22:O:109:LEU:CB	2.73	0.72
25:R:62:TYR:CD1	25:R:180:PHE:CE2	2.78	0.72
25:R:301:TYR:OH	25:R:363:PHE:HE2	1.72	0.72
27:T:164:LEU:HD22	27:T:174:PHE:CZ	2.24	0.72
33:Z:422:ILE:CG2	33:Z:426:TYR:CE2	2.72	0.72
33:Z:452:LEU:CD2	33:Z:474:LEU:HD12	2.19	0.72
15:H:312:ASP:HB3	16:I:300:ARG:HH22	1.54	0.71
16:I:383:THR:OG1	16:I:420:LYS:NZ	2.23	0.71
18:K:99:PHE:CE2	18:K:102:PRO:HD3	2.25	0.71
21:N:222:TYR:CE1	21:N:253:LEU:HG	2.24	0.71
23:P:93:ILE:HG22	23:P:124:VAL:HG21	1.70	0.71
23:P:412:LEU:HD22	29:V:245:VAL:CA	2.20	0.71
25:R:29:LYS:HA	25:R:32:LEU:HD12	1.71	0.71
33:Z:474:LEU:CD2	33:Z:493:LEU:HD12	2.20	0.71
33:Z:572:ILE:HG12	33:Z:882:LEU:HD23	1.71	0.71
2:2:114:HIS:CE1	2:2:120:ASP:OD2	2.43	0.71
18:K:347:ARG:CD	24:Q:238:TYR:CE1	2.66	0.71
22:O:16:MET:CE	22:O:19:ASP:CG	2.58	0.71
22:O:116:ASN:HB3	22:O:127:LEU:CG	2.19	0.71
22:O:116:ASN:OD1	22:O:127:LEU:HB2	1.90	0.71
24:Q:166:LYS:O	24:Q:167:LYS:CB	2.39	0.71
24:Q:429:LYS:HE2	28:U:296:ILE:CG2	2.20	0.71
25:R:47:ALA:HB2	25:R:89:ASN:HD21	1.54	0.71
25:R:63:TYR:HE2	25:R:94:PHE:CE1	2.04	0.71
27:T:178:THR:HG22	27:T:182:LYS:HE3	1.72	0.71
27:T:241:GLU:O	27:T:242:LYS:HB2	1.89	0.71
33:Z:138:ARG:NH2	33:Z:141:SER:OG	2.17	0.71
5:5:8:PHE:CZ	5:5:13:ILE:CD1	2.73	0.71
10:C:173:GLN:NE2	11:D:54:LEU:HD23	2.05	0.71
12:E:20:ARG:NE	12:E:25:GLU:OE2	2.23	0.71
18:K:99:PHE:CZ	18:K:102:PRO:N	2.58	0.71
21:N:501:MET:HB3	21:N:521:LEU:HD21	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:72:ASP:OD1	24:Q:75:ARG:NH2	2.21	0.71
24:Q:174:LEU:HD12	24:Q:178:HIS:CE1	2.24	0.71
8:A:27:GLN:NE2	14:G:13:VAL:HA	2.02	0.71
13:F:6:TYR:HD1	13:F:12:THR:HG1	1.39	0.71
13:F:164:ARG:HD3	20:M:428:LYS:HD3	1.70	0.71
16:I:398:GLU:O	17:J:312:ARG:NH1	2.21	0.71
22:O:59:LEU:O	22:O:62:TYR:HD1	1.68	0.71
33:Z:370:SER:H	33:Z:390:LEU:CD2	2.03	0.71
33:Z:381:LEU:HD11	33:Z:385:PHE:CE2	2.24	0.71
33:Z:973:TYR:CD1	33:Z:982:ILE:HG22	2.25	0.71
8:A:70:SER:H	14:G:157:TRP:HZ3	1.37	0.71
8:A:117:LEU:HD23	8:A:143:PHE:CD2	2.26	0.71
10:C:118:ILE:CG2	10:C:122:TYR:CZ	2.73	0.71
15:H:285:GLY:N	15:H:286:GLU:N	2.38	0.71
20:M:195:GLU:HA	20:M:199:LEU:HD12	1.72	0.71
20:M:200:PRO:CA	20:M:207:PHE:HE2	2.01	0.71
21:N:761:ILE:CD1	21:N:904:VAL:H	2.02	0.71
22:O:70:TYR:CE1	22:O:75:GLN:CB	2.53	0.71
25:R:301:TYR:CE2	25:R:359:VAL:CG1	2.69	0.71
28:U:19:LEU:HD13	29:V:209:GLU:HA	1.71	0.71
31:X:16:GLU:O	31:X:98:PHE:CB	2.35	0.71
33:Z:297:VAL:CG1	33:Z:310:LEU:CD2	2.68	0.71
33:Z:426:TYR:CZ	33:Z:435:GLN:HG3	2.25	0.71
5:5:81:LYS:HZ2	5:5:85:ASN:ND2	1.84	0.71
11:D:96:HIS:HE1	11:D:100:LEU:HD12	1.55	0.71
11:D:205:THR:CG2	11:D:209:ASN:HB2	2.14	0.71
20:M:379:LEU:HD13	20:M:415:PHE:HB3	1.71	0.71
21:N:214:LEU:CB	21:N:225:LEU:HD21	2.20	0.71
21:N:329:HIS:CD2	21:N:355:TRP:CE2	2.77	0.71
21:N:514:THR:CG2	21:N:546:LEU:CG	2.69	0.71
22:O:169:ASN:HB2	22:O:198:THR:CG2	2.19	0.71
28:U:167:GLU:OE2	29:V:39:LYS:HB2	1.91	0.71
33:Z:233:LEU:HD13	33:Z:264:PHE:O	1.90	0.71
23:P:143:LEU:HG	23:P:147:LYS:HE3	1.71	0.71
26:S:215:MET:HA	26:S:218:LEU:CD1	2.17	0.71
29:V:261:LEU:HB2	29:V:280:LEU:CD2	2.20	0.71
33:Z:506:LEU:HD11	33:Z:542:ILE:HD13	1.73	0.71
3:3:83:SER:OG	3:3:121:ILE:HD11	1.90	0.71
5:5:17:ASP:O	5:5:33:ARG:HG3	1.90	0.71
21:N:208:ARG:HG2	21:N:237:LEU:HD11	1.72	0.71
25:R:276:LEU:HD13	25:R:289:ILE:HG21	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:65:TYR:CZ	3:3:69:GLU:OE1	2.43	0.71
14:G:182:HIS:CD2	14:G:186:LEU:CD1	2.73	0.71
16:I:314:ASP:OD1	16:I:340:ARG:HD2	1.90	0.71
19:L:336:ALA:CB	19:L:342:ARG:HH11	2.04	0.71
22:O:41:LEU:HD11	22:O:82:LEU:HD23	1.73	0.71
23:P:344:ARG:HH12	23:P:348:HIS:HB2	1.55	0.71
25:R:335:ARG:CZ	25:R:371:PHE:CG	2.74	0.71
28:U:15:LEU:HB3	29:V:212:MET:HE2	1.71	0.71
28:U:130:VAL:HG23	28:U:131:GLY:N	2.06	0.71
31:X:113:GLU:O	31:X:114:LEU:HB2	1.90	0.71
5:5:201:LYS:HE3	5:5:212:GLY:O	1.91	0.71
8:A:63:LEU:HD11	14:G:172:LYS:HD2	1.73	0.71
9:B:69:PRO:HG2	9:B:104:TYR:OH	1.91	0.71
19:L:248:ALA:HB3	20:M:303:ARG:HH21	1.52	0.71
24:Q:387:TYR:CD2	24:Q:402:THR:OG1	2.43	0.71
33:Z:357:ILE:HG23	33:Z:361:HIS:HE1	1.56	0.71
33:Z:382:ALA:O	33:Z:386:VAL:HG23	1.90	0.71
17:J:146:THR:HG23	17:J:149:MET:HG3	1.73	0.70
19:L:140:LEU:HD21	19:L:158:ILE:HG12	1.72	0.70
19:L:167:VAL:O	19:L:168:TYR:CD1	2.43	0.70
21:N:633:GLY:C	21:N:634:LEU:CD2	2.58	0.70
23:P:427:GLU:HG3	29:V:230:TYR:CE2	2.24	0.70
25:R:175:ALA:HB1	25:R:213:TYR:OH	1.91	0.70
30:W:23:ARG:NE	30:W:27:GLU:HG3	2.06	0.70
33:Z:68:LEU:HD11	33:Z:115:LEU:HD13	0.80	0.70
33:Z:357:ILE:HG23	33:Z:361:HIS:CE1	2.25	0.70
33:Z:524:ALA:HA	33:Z:562:TRP:HZ3	1.55	0.70
10:C:208:TYR:CE1	10:C:232:PRO:HB3	2.26	0.70
17:J:62:LEU:HD11	18:K:89:ILE:HD12	1.73	0.70
18:K:242:PHE:H	18:K:243:VAL:N	1.85	0.70
21:N:466:LEU:HD22	21:N:481:ALA:HA	1.72	0.70
26:S:234:ILE:HG13	26:S:257:LEU:CD1	2.21	0.70
33:Z:530:LEU:O	33:Z:573:LEU:HD21	1.91	0.70
1:1:1:THR:HG22	1:1:1:THR:O	1.92	0.70
10:C:62:SER:CB	10:C:212:GLU:HG2	2.20	0.70
10:C:174:THR:O	10:C:177:GLN:HG2	1.91	0.70
19:L:283:VAL:O	19:L:284:ASP:OD1	2.08	0.70
23:P:138:ARG:O	23:P:141:LYS:HG2	1.92	0.70
25:R:62:TYR:CD2	25:R:180:PHE:HZ	1.93	0.70
25:R:325:HIS:CE1	25:R:329:PHE:HB2	2.25	0.70
33:Z:553:ARG:HA	33:Z:557:GLU:CD	2.11	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:874:ASN:ND2	33:Z:876:VAL:HB	2.06	0.70
10:C:122:TYR:HE2	10:C:131:PHE:HZ	1.31	0.70
15:H:217:GLN:NE2	15:H:377:PHE:HA	2.07	0.70
21:N:657:MET:HG2	21:N:682:PHE:HE1	1.57	0.70
25:R:63:TYR:OH	25:R:92:ILE:C	2.29	0.70
26:S:234:ILE:CG2	26:S:257:LEU:HD22	2.22	0.70
28:U:66:TRP:CH2	28:U:68:LEU:HB3	2.24	0.70
29:V:52:LEU:HD11	29:V:107:TRP:HZ3	1.55	0.70
33:Z:298:PHE:CE1	33:Z:310:LEU:HD23	2.26	0.70
9:B:30:GLN:HB3	18:K:426:PHE:CD2	2.25	0.70
10:C:91:ALA:HB2	10:C:115:LEU:HD21	1.72	0.70
14:G:70:ASP:OD1	14:G:99:LYS:HE3	1.91	0.70
15:H:280:VAL:HG21	16:I:304:ARG:HE	1.57	0.70
17:J:259:GLU:HG2	17:J:259:GLU:O	1.90	0.70
18:K:92:VAL:CG2	18:K:93:PRO:HA	2.22	0.70
20:M:220:MET:HB3	20:M:349:PHE:HE2	1.55	0.70
21:N:348:PHE:CZ	21:N:355:TRP:NE1	2.59	0.70
21:N:362:TRP:CH2	21:N:742:TRP:HZ2	2.04	0.70
23:P:63:VAL:HG21	23:P:96:MET:SD	2.31	0.70
23:P:211:PRO:HB2	23:P:213:TYR:CE1	2.25	0.70
27:T:148:LEU:HD11	27:T:164:LEU:CD2	2.21	0.70
28:U:164:GLU:OE2	29:V:39:LYS:HG3	1.91	0.70
30:W:45:PRO:O	30:W:46:GLU:CB	2.38	0.70
31:X:78:ILE:HG13	31:X:115:SER:CB	2.15	0.70
2:2:72:ARG:NH2	8:A:115:ASP:HB3	2.07	0.70
5:5:150:VAL:CG1	5:5:179:HIS:CE1	2.75	0.70
8:A:19:PHE:HE2	9:B:129:PRO:HD2	1.57	0.70
16:I:246:ARG:HG3	16:I:280:PHE:HD2	1.55	0.70
16:I:310:LEU:HD11	16:I:337:ALA:O	1.91	0.70
21:N:294:PRO:HG3	21:N:921:ARG:CZ	2.20	0.70
25:R:63:TYR:HD2	25:R:94:PHE:CZ	2.07	0.70
31:X:14:VAL:HB	31:X:29:VAL:HB	1.73	0.70
4:4:-1:MET:CE	4:4:133:GLY:HA3	2.21	0.70
5:5:121:ARG:CZ	11:D:101:GLU:OE1	2.40	0.70
7:7:200:PHE:HE2	7:7:202:LYS:CE	2.04	0.70
8:A:24:ARG:NH1	18:K:424:PHE:CA	2.54	0.70
16:I:246:ARG:NH1	17:J:277:ASN:HD22	1.88	0.70
19:L:361:PHE:CE2	19:L:376:PHE:HD1	2.09	0.70
20:M:192:GLU:CB	20:M:347:ILE:HD12	2.09	0.70
21:N:192:LEU:HD12	21:N:196:THR:CG2	2.22	0.70
22:O:72:LYS:CE	22:O:73:ILE:CD1	2.58	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:346:ILE:HG21	23:P:379:TYR:CD2	2.26	0.70
25:R:117:ILE:HD13	25:R:134:TRP:CZ3	2.24	0.70
25:R:397:ASN:ND2	25:R:400:TYR:CE2	2.59	0.70
29:V:51:GLY:C	29:V:108:TYR:CE1	2.65	0.70
31:X:17:TYR:CZ	31:X:66:LEU:HD22	2.26	0.70
31:X:76:VAL:CG2	31:X:90:VAL:HG21	2.21	0.70
18:K:389:GLU:OE2	18:K:393:ARG:NH2	2.24	0.70
2:2:59:ILE:HG13	2:2:83:LEU:CD2	2.22	0.70
4:4:40:HIS:HE1	4:4:185:LYS:O	1.74	0.70
15:H:62:ARG:CZ	16:I:100:ARG:HA	2.22	0.70
19:L:98:LEU:CD2	20:M:154:LEU:HD22	2.22	0.70
19:L:196:VAL:CG1	19:L:197:ILE:HG13	2.21	0.70
20:M:270:ALA:HB1	20:M:276:THR:HG21	1.74	0.70
21:N:514:THR:CB	21:N:546:LEU:HD12	2.04	0.70
22:O:82:LEU:H	22:O:85:SER:CB	2.04	0.70
22:O:293:LEU:O	22:O:297:ILE:HG13	1.91	0.70
23:P:371:LEU:HD13	23:P:375:GLN:HE22	1.55	0.70
24:Q:250:THR:HG23	24:Q:251:THR:H	1.55	0.70
33:Z:297:VAL:HG12	33:Z:310:LEU:CD2	2.21	0.70
5:5:32:LYS:CE	5:5:35:ILE:HG12	2.20	0.70
9:B:172:LYS:HE3	10:C:56:LEU:CD1	2.16	0.70
15:H:285:GLY:C	15:H:287:GLY:H	1.93	0.70
20:M:73:ARG:HA	20:M:77:TYR:OH	1.92	0.70
21:N:324:LYS:HE2	21:N:691:GLN:O	1.92	0.70
22:O:62:TYR:O	22:O:65:PHE:HB2	1.92	0.70
22:O:63:ASP:HA	22:O:66:VAL:HG23	1.73	0.70
25:R:271:ILE:O	25:R:272:ASP:CG	2.30	0.70
25:R:396:LYS:O	26:S:452:TYR:CZ	2.45	0.70
33:Z:230:ILE:HA	33:Z:264:PHE:CE1	2.26	0.70
33:Z:929:VAL:HG13	33:Z:956:LEU:HD12	1.73	0.70
6:6:147:PHE:CZ	6:6:164:LYS:HB2	2.27	0.69
19:L:294:GLY:O	19:L:299:ARG:NH1	2.24	0.69
21:N:258:ALA:HB3	21:N:289:ILE:HD13	1.74	0.69
22:O:70:TYR:HE1	22:O:75:GLN:CG	2.04	0.69
23:P:203:ILE:HG23	23:P:220:TYR:CD1	2.27	0.69
23:P:280:LEU:O	23:P:283:LYS:HE2	1.91	0.69
24:Q:20:TYR:HE2	24:Q:68:MET:CE	2.05	0.69
24:Q:275:ILE:CG2	24:Q:303:ALA:HB1	2.20	0.69
26:S:472:HIS:CG	28:U:288:PHE:HE1	2.07	0.69
19:L:218:VAL:CG2	19:L:324:ILE:HG12	2.22	0.69
22:O:62:TYR:HA	22:O:65:PHE:CD2	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:159:ILE:CG2	29:V:160:ASP:N	2.55	0.69
33:Z:516:THR:O	33:Z:516:THR:HG22	1.92	0.69
33:Z:827:LEU:CD2	33:Z:831:LEU:CD2	2.68	0.69
1:1:8:PHE:HE1	1:1:12:VAL:N	1.90	0.69
10:C:208:TYR:CD1	10:C:232:PRO:O	2.45	0.69
18:K:332:GLY:O	18:K:333:ARG:HG2	1.93	0.69
20:M:308:LEU:O	20:M:312:LEU:HG	1.92	0.69
21:N:318:LYS:NZ	21:N:348:PHE:HD1	1.81	0.69
23:P:311:TRP:CH2	23:P:315:GLN:NE2	2.60	0.69
23:P:396:PRO:HB3	24:Q:396:TRP:CZ2	2.26	0.69
24:Q:358:GLU:HG3	24:Q:396:TRP:CD1	2.27	0.69
25:R:369:GLY:HA3	25:R:383:ARG:NH2	2.08	0.69
29:V:109:HIS:CB	29:V:111:HIS:NE2	2.54	0.69
30:W:98:LEU:HD13	30:W:108:GLN:HB3	1.75	0.69
10:C:181:LYS:HD2	10:C:183:ASP:OD1	1.92	0.69
15:H:315:GLY:HA2	16:I:300:ARG:HH21	1.56	0.69
16:I:82:LEU:HD13	33:Z:622:HIS:CE1	2.25	0.69
18:K:285:GLN:O	18:K:286:THR:HG22	1.92	0.69
21:N:174:LEU:HA	21:N:182:ASN:ND2	2.08	0.69
21:N:884:PHE:HB3	21:N:905:LEU:HD13	1.72	0.69
22:O:254:LEU:HD21	22:O:266:PHE:CE2	2.25	0.69
25:R:80:GLU:OE1	25:R:99:TYR:OH	2.10	0.69
27:T:148:LEU:HD11	27:T:164:LEU:HD21	1.74	0.69
1:1:124:TYR:HB3	1:1:142:PHE:CE1	2.28	0.69
3:3:36:HIS:HB3	3:3:41:PHE:CD2	2.27	0.69
11:D:88:LYS:HD2	11:D:112:TYR:OH	1.92	0.69
15:H:390:ARG:HB2	15:H:404:TRP:CD1	2.27	0.69
17:J:89:GLN:HB3	17:J:90:PRO:HD3	1.73	0.69
19:L:95:ILE:HD11	20:M:65:ASN:O	1.91	0.69
21:N:490:LEU:CD2	21:N:727:THR:HG21	2.19	0.69
23:P:133:GLU:CG	23:P:167:THR:HG23	2.19	0.69
23:P:425:HIS:CE1	23:P:429:ILE:HG13	2.27	0.69
24:Q:311:LEU:HD22	24:Q:343:LEU:CD1	2.22	0.69
26:S:274:PHE:CE2	26:S:278:LYS:CE	2.75	0.69
29:V:53:MET:SD	29:V:139:VAL:HG21	2.31	0.69
5:5:66:HIS:CE1	5:5:70:GLU:OE1	2.44	0.69
5:5:81:LYS:NZ	5:5:85:ASN:ND2	2.39	0.69
10:C:4:ARG:NH2	10:C:5:ARG:HH12	1.90	0.69
13:F:110:HIS:CG	14:G:85:ARG:HH11	2.11	0.69
14:G:51:LYS:HG3	14:G:65:LYS:HE3	1.74	0.69
18:K:241:GLU:CA	18:K:243:VAL:N	2.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:373:VAL:HG22	21:N:750:SER:OG	1.93	0.69
22:O:106:PHE:HD2	22:O:109:LEU:N	1.77	0.69
23:P:138:ARG:HA	23:P:141:LYS:NZ	2.07	0.69
23:P:263:HIS:O	23:P:267:PHE:HD2	1.73	0.69
27:T:216:GLU:O	27:T:220:PHE:HD2	1.75	0.69
33:Z:386:VAL:HG21	33:Z:849:ARG:HG3	1.74	0.69
1:1:59:VAL:HG21	1:1:82:PHE:CE1	2.26	0.69
2:2:72:ARG:NH2	8:A:115:ASP:CB	2.55	0.69
5:5:179:HIS:HB3	5:5:188:HIS:NE2	2.08	0.69
13:F:12:THR:CB	14:G:22:GLN:NE2	2.54	0.69
16:I:398:GLU:C	17:J:312:ARG:HH12	1.95	0.69
18:K:60:LEU:CD1	21:N:601:THR:OG1	2.39	0.69
21:N:353:LEU:H	21:N:354:PRO:CD	2.05	0.69
23:P:431:HIS:CG	28:U:156:HIS:HB3	2.27	0.69
33:Z:407:VAL:CG1	33:Z:439:TYR:CZ	2.75	0.69
33:Z:958:ASN:HB2	33:Z:961:GLU:CD	2.13	0.69
3:3:133:ALA:O	3:3:137:LEU:HG	1.93	0.69
6:6:29:ARG:HH21	7:7:148:ARG:HH21	1.40	0.69
14:G:111:PHE:CE2	14:G:115:LEU:HD11	2.28	0.69
17:J:71:TYR:CE2	17:J:117:SER:HB2	2.23	0.69
17:J:170:HIS:CD2	17:J:172:GLU:HB3	2.28	0.69
17:J:186:ILE:CD1	17:J:305:LEU:HD21	2.23	0.69
20:M:151:ASP:O	29:V:46:PRO:HG2	1.92	0.69
20:M:264:ARG:HG2	20:M:311:GLN:HE22	1.54	0.69
21:N:459:ASN:ND2	21:N:462:VAL:HG23	2.08	0.69
24:Q:227:CYS:HA	24:Q:232:TYR:HE1	1.56	0.69
25:R:396:LYS:HZ2	26:S:449:LEU:HB3	1.57	0.69
27:T:151:TRP:CZ3	27:T:159:LYS:CD	2.75	0.69
27:T:260:ILE:CG2	28:U:277:TYR:OH	2.40	0.69
31:X:22:ARG:NH1	31:X:88:ALA:HB2	2.04	0.69
33:Z:89:LEU:CD1	33:Z:125:THR:CB	2.71	0.69
33:Z:542:ILE:HG13	33:Z:546:ILE:HD12	1.75	0.69
33:Z:897:HIS:CE1	33:Z:899:GLN:HE21	2.08	0.69
4:4:31:ASP:OD2	4:4:33:LYS:HE2	1.93	0.69
7:7:13:ILE:CG2	7:7:169:ILE:HG13	2.22	0.69
13:F:151:GLY:HA3	14:G:82:PRO:HG3	1.75	0.69
15:H:285:GLY:CA	15:H:286:GLU:N	2.56	0.69
19:L:301:ILE:HD11	20:M:299:ARG:NH2	2.07	0.69
21:N:602:VAL:HG12	21:N:625:LEU:HD13	1.75	0.69
30:W:150:ASN:O	30:W:151:THR:HB	1.93	0.69
12:E:157:HIS:HB2	12:E:167:TYR:CE2	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:290:LYS:NZ	16:I:333:THR:C	2.46	0.69
16:I:312:GLN:O	16:I:316:PHE:HD2	1.76	0.69
21:N:299:TYR:CE2	21:N:303:LEU:HD11	2.28	0.69
21:N:424:LYS:HZ2	21:N:461:GLU:HB3	1.58	0.69
21:N:654:GLN:NE2	21:N:697:PHE:HD2	1.91	0.69
24:Q:390:LEU:HD23	24:Q:397:LEU:HD12	1.75	0.69
28:U:24:ARG:NH2	29:V:66:VAL:HG13	2.08	0.69
33:Z:253:VAL:HB	33:Z:254:PRO:HD3	1.74	0.69
13:F:215:ILE:HG23	13:F:220:THR:HG21	1.73	0.68
19:L:358:LEU:HD13	19:L:380:VAL:HG21	1.75	0.68
23:P:333:ALA:HB3	23:P:336:HIS:CD2	2.28	0.68
25:R:301:TYR:CZ	25:R:359:VAL:HG11	2.29	0.68
13:F:202:ARG:HH12	20:M:416:VAL:CG1	2.05	0.68
21:N:353:LEU:H	21:N:354:PRO:HD2	1.57	0.68
21:N:575:ALA:O	21:N:584:ARG:HG2	1.93	0.68
22:O:95:SER:CA	22:O:98:TYR:HE2	2.05	0.68
30:W:103:ASN:HB3	30:W:106:GLN:HE22	1.58	0.68
33:Z:474:LEU:HD23	33:Z:497:PHE:HE1	1.59	0.68
15:H:429:PHE:CE1	15:H:432:ARG:NH2	2.57	0.68
16:I:395:MET:SD	16:I:420:LYS:HB2	2.34	0.68
17:J:192:GLY:HA3	18:K:330:ARG:CZ	2.23	0.68
18:K:245:LYS:HE3	18:K:288:SER:HA	1.75	0.68
19:L:384:ASP:H	19:L:386:PHE:HE1	1.40	0.68
19:L:410:ILE:HD11	20:M:210:MET:SD	2.32	0.68
25:R:279:LEU:HD23	25:R:286:LEU:HD11	1.74	0.68
25:R:411:LEU:HD11	26:S:464:ARG:HE	1.59	0.68
26:S:234:ILE:HG21	26:S:257:LEU:CD2	2.22	0.68
29:V:261:LEU:CG	29:V:280:LEU:HD23	2.22	0.68
30:W:132:LEU:CD1	30:W:157:PHE:CZ	2.76	0.68
33:Z:307:HIS:HD2	33:Z:345:GLU:CD	1.97	0.68
33:Z:381:LEU:CD1	33:Z:385:PHE:CZ	2.71	0.68
4:4:181:LYS:NZ	4:4:190:GLN:HB2	2.07	0.68
5:5:32:LYS:O	5:5:33:ARG:HG2	1.93	0.68
8:A:19:PHE:HZ	9:B:128:ARG:HH11	1.34	0.68
8:A:24:ARG:NH1	18:K:424:PHE:H	1.91	0.68
14:G:183:PRO:HD2	14:G:186:LEU:HD23	1.76	0.68
18:K:242:PHE:C	18:K:243:VAL:N	2.46	0.68
19:L:98:LEU:HD23	20:M:154:LEU:HD22	1.72	0.68
21:N:89:PHE:CZ	21:N:136:ILE:HG23	2.29	0.68
21:N:192:LEU:CD1	21:N:196:THR:HG21	2.22	0.68
25:R:348:LEU:HD11	25:R:353:MET:HE3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:229:VAL:CG2	27:T:232:LYS:HB2	2.22	0.68
8:A:220:LYS:HG2	8:A:241:ILE:CG2	2.23	0.68
12:E:122:ARG:HA	12:E:132:ARG:HG2	1.76	0.68
12:E:157:HIS:CG	12:E:170:LYS:NZ	2.61	0.68
13:F:98:VAL:HG12	13:F:99:PHE:CD1	2.28	0.68
20:M:283:LEU:CD1	20:M:286:ILE:HD11	2.23	0.68
23:P:396:PRO:HB3	24:Q:396:TRP:CH2	2.29	0.68
33:Z:282:ILE:HD13	33:Z:974:THR:HG23	1.73	0.68
33:Z:307:HIS:HD2	33:Z:345:GLU:OE2	1.76	0.68
3:3:111:PHE:HA	3:3:125:LYS:NZ	2.07	0.68
13:F:110:HIS:HB2	14:G:85:ARG:HH12	1.58	0.68
16:I:202:LEU:CD2	16:I:240:THR:HB	2.23	0.68
18:K:52:LYS:NZ	21:N:159:GLU:CG	2.56	0.68
21:N:640:VAL:O	21:N:643:PRO:HD2	1.94	0.68
22:O:222:LEU:HA	22:O:230:PHE:HZ	1.55	0.68
23:P:138:ARG:HB3	23:P:141:LYS:NZ	2.08	0.68
24:Q:343:LEU:HB3	24:Q:376:LYS:NZ	2.09	0.68
25:R:396:LYS:HA	26:S:452:TYR:HD1	1.46	0.68
26:S:234:ILE:HD12	26:S:253:PHE:HB3	1.75	0.68
26:S:390:THR:HG23	26:S:393:ARG:NH2	2.09	0.68
26:S:428:ARG:HH12	27:T:188:GLU:HA	1.58	0.68
27:T:245:TYR:O	27:T:246:GLU:CB	2.41	0.68
28:U:21:HIS:CE1	28:U:53:ALA:HB2	2.29	0.68
28:U:66:TRP:CZ3	28:U:68:LEU:HB2	2.29	0.68
29:V:51:GLY:HA3	29:V:108:TYR:OH	1.93	0.68
15:H:306:ILE:CG2	15:H:308:PHE:CE1	2.76	0.68
22:O:11:LEU:HD13	22:O:15:ARG:HH21	1.58	0.68
31:X:121:ILE:O	31:X:125:MET:CG	2.41	0.68
1:1:33:LYS:HD3	1:1:45:ARG:HH22	1.59	0.68
13:F:137:TYR:CZ	13:F:218:LYS:HB2	2.29	0.68
21:N:768:ILE:HG13	21:N:919:THR:HB	1.75	0.68
23:P:346:ILE:CD1	23:P:379:TYR:CZ	2.73	0.68
27:T:11:LEU:HD22	27:T:30:ILE:CD1	2.24	0.68
28:U:129:GLY:C	28:U:130:VAL:HG13	2.06	0.68
33:Z:139:LEU:CD2	33:Z:161:ILE:CD1	2.68	0.68
1:1:61:TYR:HB2	8:A:106:TYR:CD1	2.28	0.68
8:A:83:VAL:HG11	8:A:90:ALA:HA	1.76	0.68
10:C:136:ILE:HD11	10:C:165:VAL:CG2	2.18	0.68
15:H:425:GLU:HG3	15:H:429:PHE:CD2	2.28	0.68
21:N:113:ALA:C	21:N:161:TYR:CD2	2.67	0.68
21:N:539:MET:HE3	21:N:551:GLY:HA2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:668:THR:O	21:N:669:GLU:HB3	1.91	0.68
23:P:138:ARG:CB	23:P:141:LYS:HZ2	2.06	0.68
23:P:438:ILE:HD13	28:U:99:LEU:HB2	1.76	0.68
24:Q:34:ASP:O	24:Q:35:SER:OG	2.10	0.68
26:S:234:ILE:HG13	26:S:257:LEU:HD13	1.76	0.68
28:U:283:ARG:NE	29:V:287:THR:OG1	2.26	0.68
30:W:91:LEU:HD21	30:W:157:PHE:CZ	2.29	0.68
33:Z:230:ILE:HA	33:Z:264:PHE:CD1	2.28	0.68
33:Z:282:ILE:CD1	33:Z:974:THR:CG2	2.72	0.68
33:Z:286:VAL:O	33:Z:287:ARG:HB2	1.93	0.68
9:B:50:LYS:HE3	9:B:203:GLU:CD	2.14	0.68
14:G:182:HIS:CE1	14:G:186:LEU:HD12	2.29	0.68
19:L:157:ARG:HH22	20:M:113:VAL:HG23	1.57	0.68
33:Z:624:LEU:CD2	33:Z:740:VAL:HG22	2.23	0.68
6:6:65:TRP:HH2	13:F:90:GLN:N	1.91	0.67
12:E:119:LEU:CG	12:E:122:ARG:NH2	2.56	0.67
15:H:365:LEU:O	15:H:371:ILE:HD12	1.94	0.67
19:L:111:GLU:CG	19:L:117:TYR:CE2	2.77	0.67
20:M:407:GLN:HE22	20:M:411:LYS:NZ	1.92	0.67
21:N:641:LEU:HB2	21:N:660:LEU:HD21	1.76	0.67
21:N:768:ILE:HD11	21:N:919:THR:CG2	2.24	0.67
22:O:92:PHE:HE1	22:O:136:THR:CA	2.07	0.67
24:Q:409:TYR:N	25:R:399:GLN:HG3	2.09	0.67
27:T:182:LYS:HB3	27:T:186:ARG:NH1	2.08	0.67
33:Z:68:LEU:HD13	33:Z:115:LEU:CD1	2.22	0.67
33:Z:929:VAL:CG1	33:Z:956:LEU:HD12	2.23	0.67
8:A:19:PHE:CE2	9:B:128:ARG:HB2	2.30	0.67
17:J:249:GLU:HG3	18:K:297:ILE:HG21	1.76	0.67
19:L:140:LEU:HD11	19:L:155:ILE:HD13	1.76	0.67
20:M:384:ASP:N	20:M:386:PHE:HD1	1.90	0.67
21:N:361:ASN:CG	21:N:399:PHE:CZ	2.67	0.67
23:P:287:ASP:H	23:P:293:LEU:HD21	1.59	0.67
26:S:163:VAL:HG21	26:S:184:TRP:CE2	2.30	0.67
26:S:234:ILE:CB	26:S:257:LEU:CD2	2.71	0.67
26:S:360:PHE:CZ	26:S:364:ILE:HD11	2.29	0.67
27:T:89:TYR:O	27:T:90:PHE:CD1	2.47	0.67
33:Z:170:GLU:HG3	33:Z:228:GLU:OE1	1.94	0.67
33:Z:973:TYR:CE1	33:Z:982:ILE:HG22	2.29	0.67
2:2:38:SER:HB2	2:2:39:PRO:HD2	1.76	0.67
6:6:58:ARG:NH1	6:6:91:LYS:HZ1	1.91	0.67
8:A:199:TRP:O	8:A:203:VAL:HG23	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:13:PHE:HE1	14:G:130:PRO:CG	2.04	0.67
21:N:874:ILE:HG22	21:N:875:LEU:O	1.93	0.67
22:O:79:VAL:HG22	22:O:118:GLY:HA3	1.76	0.67
25:R:206:ARG:HH21	25:R:209:ARG:CD	2.06	0.67
25:R:334:ARG:NH1	25:R:338:TYR:HE2	1.92	0.67
32:Y:83:ARG:NH1	32:Y:87:GLU:OE2	2.27	0.67
16:I:358:LYS:HD3	16:I:384:LYS:HD2	1.75	0.67
17:J:133:LEU:CD2	17:J:228:ARG:NH2	2.58	0.67
23:P:138:ARG:HG2	23:P:141:LYS:NZ	2.09	0.67
23:P:283:LYS:HG3	23:P:286:ASN:CB	2.21	0.67
26:S:163:VAL:HG13	26:S:184:TRP:CH2	2.29	0.67
27:T:129:LEU:O	27:T:132:HIS:HD2	1.75	0.67
29:V:85:ASP:O	29:V:88:GLN:HG3	1.94	0.67
7:7:187:PHE:CZ	7:7:204:LEU:HB3	2.29	0.67
8:A:24:ARG:NH1	18:K:424:PHE:HA	2.09	0.67
10:C:4:ARG:NE	10:C:5:ARG:HH12	1.92	0.67
15:H:210:ASP:HB2	15:H:258:LEU:HD12	1.75	0.67
20:M:220:MET:HE3	20:M:324:LEU:CD2	2.24	0.67
21:N:302:PHE:CD1	21:N:306:ASN:ND2	2.62	0.67
21:N:358:LYS:HD3	29:V:181:ASN:ND2	2.10	0.67
21:N:717:LEU:HD22	21:N:733:LEU:HD12	1.75	0.67
21:N:902:VAL:O	21:N:903:VAL:CG2	2.42	0.67
24:Q:76:GLU:HG2	24:Q:80:HIS:CD2	2.30	0.67
27:T:148:LEU:HD13	27:T:164:LEU:HD21	1.75	0.67
1:1:75:THR:HG21	1:1:111:TYR:CD1	2.22	0.67
1:1:124:TYR:CD1	1:1:142:PHE:CZ	2.82	0.67
4:4:14:LEU:HD11	4:4:104:GLY:HA3	1.77	0.67
4:4:36:GLN:CD	4:4:188:ILE:HD12	2.14	0.67
5:5:12:ILE:O	5:5:179:HIS:HD2	1.76	0.67
8:A:220:LYS:NZ	8:A:242:GLU:HB2	2.08	0.67
13:F:110:HIS:CA	14:G:85:ARG:NH1	2.58	0.67
19:L:198:GLU:CG	19:L:202:LYS:NZ	2.58	0.67
23:P:138:ARG:CG	23:P:141:LYS:HZ2	2.07	0.67
23:P:350:LEU:CD1	23:P:383:LEU:HD12	2.24	0.67
25:R:137:LEU:HG	25:R:141:TYR:CE2	2.29	0.67
31:X:29:VAL:HG13	31:X:61:LEU:HD22	1.77	0.67
33:Z:278:LEU:HD11	33:Z:297:VAL:HG13	1.77	0.67
33:Z:394:TYR:CZ	33:Z:859:LYS:HG2	2.29	0.67
33:Z:452:LEU:HD21	33:Z:477:TYR:HB2	1.76	0.67
33:Z:745:LEU:HD22	33:Z:878:LEU:HG	1.77	0.67
3:3:155:PHE:CE1	3:3:189:ARG:HD2	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:80:SER:CB	5:5:121:ARG:HD2	2.25	0.67
10:C:158:THR:HG1	10:C:160:TRP:HE1	0.72	0.67
16:I:426:ASN:HB3	17:J:313:LYS:HZ3	1.59	0.67
21:N:889:ARG:HG2	21:N:912:GLU:HB2	1.76	0.67
26:S:159:ASN:O	26:S:163:VAL:HG23	1.93	0.67
27:T:143:SER:O	27:T:146:ILE:HG22	1.94	0.67
33:Z:779:ALA:O	33:Z:783:VAL:HG23	1.94	0.67
3:3:98:PRO:HG2	3:3:115:PHE:HB2	1.76	0.67
4:4:38:SER:OG	4:4:41:THR:HB	1.95	0.67
7:7:129:TYR:CE1	7:7:134:LEU:HD23	2.19	0.67
8:A:24:ARG:HD2	8:A:32:PHE:HE2	1.59	0.67
18:K:159:SER:OG	18:K:242:PHE:CE1	2.45	0.67
18:K:211:LEU:HD23	18:K:338:ILE:HB	1.76	0.67
25:R:28:GLU:O	25:R:32:LEU:HG	1.95	0.67
31:X:87:PHE:CZ	31:X:121:ILE:HG21	2.30	0.67
2:2:36:ARG:NH2	9:B:222:LEU:O	2.28	0.67
6:6:175:VAL:O	6:6:179:PHE:CD2	2.48	0.67
15:H:173:ARG:NE	16:I:129:TYR:H	1.93	0.67
17:J:150:VAL:HB	17:J:153:LEU:HD12	1.76	0.67
18:K:99:PHE:CZ	18:K:102:PRO:HD3	2.30	0.67
19:L:252:VAL:HG12	20:M:256:ILE:HG13	1.74	0.67
20:M:220:MET:HE3	20:M:324:LEU:HD21	1.76	0.67
22:O:17:GLU:O	22:O:18:ALA:CB	2.42	0.67
22:O:277:ILE:HG22	22:O:279:ILE:H	1.59	0.67
24:Q:387:TYR:CZ	24:Q:402:THR:HG23	2.30	0.67
25:R:379:CYS:SG	25:R:388:VAL:CG1	2.83	0.67
31:X:85:ARG:NE	31:X:101:LEU:HB2	2.01	0.67
31:X:85:ARG:HG3	31:X:87:PHE:CE1	2.29	0.67
33:Z:89:LEU:CD1	33:Z:125:THR:HB	2.24	0.67
8:A:14:ARG:HD2	14:G:5:THR:O	1.95	0.67
13:F:98:VAL:CG1	13:F:99:PHE:CE1	2.78	0.67
13:F:112:LEU:HB3	13:F:147:PHE:CZ	2.30	0.67
16:I:398:GLU:HG3	17:J:312:ARG:CZ	2.24	0.67
20:M:43:ILE:HD11	30:W:23:ARG:HH12	1.60	0.67
20:M:78:LEU:HG	20:M:150:LYS:HE2	1.77	0.67
23:P:263:HIS:HB3	23:P:267:PHE:HE2	1.58	0.67
23:P:427:GLU:CG	29:V:230:TYR:OH	2.42	0.67
24:Q:78:ILE:HB	24:Q:79:PRO:HD3	1.77	0.67
25:R:47:ALA:CB	25:R:89:ASN:HD21	2.07	0.67
26:S:392:ILE:HD11	26:S:411:LEU:CD2	2.15	0.67
29:V:25:GLU:OE2	29:V:163:ALA:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:221:VAL:O	33:Z:225:LEU:HG	1.95	0.67
4:4:37:LEU:HD23	4:4:41:THR:HG21	1.77	0.66
10:C:118:ILE:HG22	10:C:122:TYR:CZ	2.28	0.66
11:D:86:ILE:CG2	11:D:90:ARG:NH1	2.57	0.66
14:G:98:PHE:HE1	14:G:104:THR:HG23	1.60	0.66
19:L:290:ARG:NE	19:L:293:GLU:HA	2.10	0.66
21:N:884:PHE:HB2	21:N:905:LEU:HD13	1.77	0.66
22:O:310:PHE:CE1	22:O:341:ILE:CG2	2.68	0.66
23:P:308:LEU:CD2	23:P:369:LEU:HG	2.24	0.66
23:P:435:LYS:HG3	28:U:154:PHE:HZ	1.58	0.66
24:Q:61:LEU:HD11	24:Q:65:TYR:CZ	2.26	0.66
26:S:179:ILE:HG23	26:S:229:THR:HG21	1.77	0.66
30:W:125:LEU:HD21	30:W:153:LEU:O	1.95	0.66
33:Z:496:ALA:HB3	33:Z:497:PHE:HD1	1.59	0.66
33:Z:765:MET:CE	33:Z:777:PRO:HG3	2.24	0.66
3:3:40:VAL:HG22	3:3:75:PRO:HG3	1.76	0.66
5:5:150:VAL:HG12	5:5:179:HIS:CE1	2.29	0.66
7:7:56:GLU:HG2	7:7:60:LYS:HE3	1.77	0.66
9:B:118:MET:HE2	9:B:152:PRO:HA	1.76	0.66
14:G:108:ILE:CG2	14:G:148:TYR:HD2	2.03	0.66
16:I:246:ARG:HG3	16:I:280:PHE:CD2	2.30	0.66
18:K:349:ARG:HH12	18:K:378:LEU:HB2	1.59	0.66
20:M:375:ASN:OD1	20:M:377:GLN:HG2	1.94	0.66
24:Q:20:TYR:HE2	24:Q:68:MET:HG3	1.53	0.66
31:X:28:PRO:CG	31:X:57:VAL:CG2	2.73	0.66
33:Z:212:LEU:HA	33:Z:236:PHE:CE2	2.30	0.66
3:3:1:GLY:HA3	3:3:33:LYS:NZ	2.09	0.66
5:5:8:PHE:CE1	5:5:13:ILE:CG1	2.68	0.66
7:7:129:TYR:CD1	7:7:134:LEU:HD22	2.23	0.66
15:H:389:PHE:CE1	15:H:419:LEU:HD22	2.30	0.66
17:J:186:ILE:HD12	17:J:305:LEU:HD21	1.77	0.66
18:K:159:SER:HA	19:L:256:ILE:CG1	2.24	0.66
18:K:227:ALA:HB2	18:K:268:ILE:HD12	1.77	0.66
21:N:903:VAL:O	21:N:904:VAL:CG2	2.44	0.66
25:R:246:TYR:OH	25:R:279:LEU:HB2	1.95	0.66
26:S:295:ALA:HA	26:S:298:ARG:HH21	1.60	0.66
27:T:90:PHE:O	27:T:128:TYR:OH	2.07	0.66
33:Z:68:LEU:HD12	33:Z:115:LEU:HB2	1.77	0.66
7:7:192:ILE:HG12	7:7:198:LEU:CD1	2.26	0.66
7:7:193:ASP:HB3	7:7:196:THR:OG1	1.95	0.66
9:B:211:LEU:HD22	9:B:238:LEU:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:94:HIS:HB3	10:C:114:ARG:HH11	1.59	0.66
14:G:19:ARG:NH2	14:G:24:GLU:HG3	2.10	0.66
15:H:107:LYS:HD2	15:H:143:ALA:CB	2.23	0.66
17:J:188:TYR:CE1	17:J:295:ASN:HA	2.30	0.66
21:N:12:LEU:HD23	21:N:15:GLU:OE1	1.96	0.66
22:O:117:ASN:CG	22:O:118:GLY:H	1.99	0.66
23:P:265:VAL:HG11	23:P:296:GLN:HG3	1.78	0.66
26:S:472:HIS:HB2	28:U:288:PHE:CE1	2.28	0.66
30:W:36:ILE:HD11	30:W:113:PHE:HZ	1.61	0.66
33:Z:926:ASN:HB2	33:Z:993:GLU:CG	2.25	0.66
1:1:190:PRO:HA	1:1:193:TYR:CD1	2.28	0.66
7:7:70:ASN:ND2	13:F:107:ARG:HG3	2.11	0.66
8:A:24:ARG:NH1	18:K:424:PHE:CD1	2.63	0.66
21:N:890:PHE:CB	21:N:905:LEU:CD2	2.69	0.66
23:P:122:ILE:HG22	23:P:124:VAL:HG22	1.78	0.66
23:P:177:ILE:HB	23:P:203:ILE:HD11	1.77	0.66
25:R:335:ARG:CZ	25:R:371:PHE:CD1	2.78	0.66
4:4:26:VAL:CG1	4:4:29:ASP:HB2	2.25	0.66
8:A:81:MET:SD	8:A:143:PHE:CE2	2.88	0.66
12:E:44:GLU:OE2	12:E:190:SER:HB2	1.96	0.66
15:H:261:ARG:NH2	15:H:273:ARG:HH11	1.94	0.66
15:H:392:HIS:CE1	15:H:420:ARG:HG2	2.30	0.66
23:P:138:ARG:CA	23:P:141:LYS:HZ2	2.07	0.66
26:S:286:TYR:CE2	26:S:323:LEU:CB	2.69	0.66
33:Z:212:LEU:HD21	33:Z:239:GLU:HG2	1.77	0.66
33:Z:426:TYR:CZ	33:Z:435:GLN:CG	2.79	0.66
33:Z:740:VAL:HG13	33:Z:761:PHE:CD1	2.31	0.66
1:1:61:TYR:HH	8:A:103:GLU:HG2	1.58	0.66
16:I:150:HIS:CG	16:I:151:HIS:H	2.11	0.66
18:K:351:LEU:HD22	24:Q:233:LYS:NZ	2.11	0.66
21:N:10:LEU:HD22	21:N:42:GLU:HG3	1.78	0.66
21:N:665:ILE:CD1	21:N:715:ILE:HG12	2.25	0.66
22:O:38:TRP:HE3	22:O:54:SER:HB3	1.61	0.66
22:O:223:LEU:O	22:O:283:HIS:ND1	2.28	0.66
23:P:229:LEU:O	23:P:232:ARG:NH1	2.25	0.66
23:P:412:LEU:HD21	29:V:245:VAL:HA	1.76	0.66
24:Q:343:LEU:HD23	24:Q:376:LYS:NZ	2.10	0.66
33:Z:138:ARG:HB3	33:Z:157:LEU:HD13	1.74	0.66
33:Z:352:LYS:HB3	33:Z:466:GLU:OE1	1.96	0.66
33:Z:591:ILE:HG22	33:Z:593:HIS:NE2	2.11	0.66
11:D:83:ARG:HH12	11:D:87:GLU:HB2	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:72:HIS:NE2	14:G:105:PRO:HB3	2.10	0.66
19:L:360:ILE:HG23	19:L:364:HIS:CE1	2.29	0.66
21:N:190:LEU:HD23	21:N:190:LEU:C	2.16	0.66
22:O:116:ASN:CB	22:O:127:LEU:CD2	2.65	0.66
22:O:317:THR:O	22:O:318:HIS:HB2	1.94	0.66
23:P:327:LEU:O	23:P:328:ALA:CB	2.44	0.66
25:R:214:TYR:CD2	25:R:230:LEU:CG	2.69	0.66
28:U:36:VAL:CG2	28:U:54:LEU:HD11	2.25	0.66
33:Z:307:HIS:HD2	33:Z:345:GLU:OE1	1.77	0.66
7:7:144:ASN:ND2	7:7:148:ARG:HD2	2.11	0.66
7:7:170:VAL:HG12	7:7:174:ARG:HH22	1.57	0.66
15:H:208:TYR:CE2	15:H:391:ILE:CD1	2.78	0.66
17:J:191:PRO:HG2	18:K:330:ARG:HH22	1.61	0.66
17:J:210:PHE:CE2	17:J:212:ARG:CG	2.79	0.66
21:N:761:ILE:HG23	21:N:904:VAL:HA	1.69	0.66
22:O:7:ILE:HG23	22:O:11:LEU:HD12	1.77	0.66
22:O:183:ASN:O	22:O:184:ASP:CB	2.44	0.66
25:R:70:TYR:CE2	25:R:75:GLY:HA3	2.30	0.66
25:R:259:PHE:O	25:R:259:PHE:CD1	2.48	0.66
28:U:35:GLY:HA3	28:U:93:TYR:CZ	2.31	0.66
33:Z:194:GLU:O	33:Z:195:PHE:CD1	2.49	0.66
33:Z:361:HIS:HD2	33:Z:961:GLU:HG2	1.60	0.66
33:Z:422:ILE:CD1	33:Z:439:TYR:HE2	2.08	0.66
5:5:8:PHE:HZ	5:5:179:HIS:NE2	1.94	0.66
6:6:30:TYR:OH	7:7:153:ARG:CB	2.44	0.66
6:6:30:TYR:CE2	7:7:153:ARG:HA	2.30	0.66
9:B:66:LEU:HD21	9:B:235:PHE:CD1	2.30	0.66
11:D:92:GLU:OE2	11:D:108:TYR:CE2	2.49	0.66
11:D:228:GLU:O	11:D:231:GLN:HG2	1.96	0.66
13:F:13:PHE:HE1	14:G:130:PRO:HG2	1.61	0.66
16:I:253:ILE:HG23	16:I:253:ILE:O	1.95	0.66
19:L:180:PHE:CE2	19:L:238:THR:OG1	2.49	0.66
22:O:59:LEU:C	22:O:62:TYR:HD1	1.98	0.66
22:O:162:SER:OG	22:O:164:PRO:HD2	1.96	0.66
23:P:265:VAL:HG12	23:P:296:GLN:NE2	2.11	0.66
24:Q:174:LEU:HD12	24:Q:178:HIS:HE1	1.53	0.66
25:R:335:ARG:HH12	25:R:371:PHE:CA	2.09	0.66
25:R:354:ALA:CB	25:R:364:LEU:HD23	2.25	0.66
25:R:397:ASN:CG	25:R:400:TYR:CD2	2.69	0.66
26:S:286:TYR:CZ	26:S:323:LEU:CB	2.74	0.66
29:V:243:SER:O	29:V:247:ILE:HG23	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:29:VAL:HG11	31:X:61:LEU:CD2	2.25	0.66
33:Z:511:PRO:O	33:Z:514:ALA:HB3	1.94	0.66
3:3:179:TYR:CE2	3:3:188:LYS:CD	2.79	0.65
5:5:80:SER:HB3	5:5:121:ARG:HD2	1.78	0.65
10:C:173:GLN:HE22	11:D:54:LEU:HD23	1.60	0.65
13:F:222:PHE:C	13:F:222:PHE:HD1	1.99	0.65
15:H:357:ARG:HH21	16:I:290:LYS:C	2.00	0.65
17:J:62:LEU:HD11	18:K:89:ILE:CD1	2.26	0.65
19:L:370:LYS:HE2	19:L:410:ILE:HG21	1.76	0.65
21:N:309:ILE:HD11	21:N:343:THR:HG21	1.76	0.65
25:R:80:GLU:O	25:R:81:HIS:CG	2.49	0.65
33:Z:889:VAL:HA	33:Z:892:SER:OG	1.96	0.65
12:E:119:LEU:HD13	12:E:122:ARG:NH2	2.10	0.65
12:E:165:TYR:CB	12:E:167:TYR:CZ	2.69	0.65
18:K:52:LYS:HZ3	21:N:159:GLU:CD	1.99	0.65
22:O:38:TRP:HZ3	22:O:54:SER:H	1.42	0.65
23:P:354:SER:CB	23:P:402:PHE:CE1	2.75	0.65
23:P:411:LEU:HA	28:U:265:LEU:HD22	1.78	0.65
24:Q:306:TYR:HE1	24:Q:342:LEU:HD21	1.45	0.65
26:S:257:LEU:C	26:S:257:LEU:N	2.47	0.65
27:T:89:TYR:CE1	27:T:90:PHE:CE1	2.81	0.65
28:U:165:GLU:H	29:V:42:ARG:HH12	1.44	0.65
30:W:4:GLU:H	30:W:47:ASN:ND2	1.94	0.65
3:3:179:TYR:CE2	3:3:188:LYS:HG3	2.31	0.65
5:5:104:TYR:CD1	5:5:109:GLY:C	2.70	0.65
6:6:96:TYR:OH	6:6:98:VAL:HG21	1.97	0.65
7:7:112:GLN:HG2	7:7:114:ASN:H	1.60	0.65
10:C:27:GLU:O	10:C:31:HIS:CD2	2.49	0.65
13:F:110:HIS:ND1	14:G:85:ARG:NH1	2.44	0.65
16:I:184:ILE:CG2	16:I:231:LEU:HD22	2.25	0.65
17:J:62:LEU:CD1	18:K:89:ILE:HD12	2.25	0.65
20:M:379:LEU:HG	20:M:412:HIS:HE1	1.58	0.65
21:N:501:MET:HB2	21:N:521:LEU:CD2	2.25	0.65
22:O:106:PHE:CD2	22:O:109:LEU:HB3	2.30	0.65
22:O:362:GLN:HE21	28:U:230:GLN:HG2	1.62	0.65
25:R:78:ASP:OD2	25:R:94:PHE:CE1	2.48	0.65
25:R:161:ALA:O	25:R:162:ILE:HG23	1.96	0.65
6:6:147:PHE:HE2	6:6:164:LYS:N	1.87	0.65
13:F:222:PHE:C	13:F:222:PHE:CD1	2.69	0.65
15:H:96:PRO:HG2	16:I:113:ILE:HD11	1.78	0.65
21:N:768:ILE:O	21:N:768:ILE:HG22	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:301:TYR:CE2	25:R:359:VAL:HG21	2.27	0.65
30:W:105:VAL:O	30:W:105:VAL:HG12	1.97	0.65
33:Z:112:LYS:HE3	33:Z:140:LEU:O	1.96	0.65
33:Z:392:LEU:O	33:Z:394:TYR:CD2	2.50	0.65
3:3:65:TYR:CD2	3:3:69:GLU:OE2	2.50	0.65
11:D:37:LYS:HE2	11:D:145:PRO:HG2	1.78	0.65
13:F:51:ARG:NH1	20:M:430:VAL:HG21	2.12	0.65
16:I:132:ILE:HD12	16:I:138:LYS:NZ	2.11	0.65
20:M:167:VAL:HG21	20:M:265:ASP:OD2	1.96	0.65
24:Q:50:ARG:HG3	24:Q:54:GLN:NE2	2.06	0.65
24:Q:162:LEU:O	24:Q:166:LYS:HG3	1.96	0.65
33:Z:361:HIS:CD2	33:Z:961:GLU:HG2	2.32	0.65
33:Z:506:LEU:HD11	33:Z:542:ILE:CD1	2.27	0.65
5:5:20:ALA:HB3	5:5:28:SER:OG	1.96	0.65
5:5:76:VAL:HG12	5:5:113:TYR:HD2	1.61	0.65
15:H:382:LEU:HD23	15:H:385:ARG:HH21	1.53	0.65
19:L:114:GLU:O	19:L:137:ARG:CZ	2.43	0.65
22:O:33:TYR:CE2	22:O:40:GLN:HB2	2.18	0.65
27:T:55:LEU:C	27:T:55:LEU:HD23	2.17	0.65
28:U:20:ASP:OD2	29:V:100:ARG:NH2	2.29	0.65
31:X:14:VAL:HG23	31:X:50:TRP:CG	2.31	0.65
31:X:30:GLN:HB3	31:X:54:GLU:HB3	1.79	0.65
33:Z:478:VAL:HG21	33:Z:493:LEU:HD22	1.78	0.65
33:Z:496:ALA:HB3	33:Z:497:PHE:CD1	2.31	0.65
2:2:36:ARG:NH1	9:B:224:TYR:CE2	2.64	0.65
5:5:179:HIS:CB	5:5:188:HIS:NE2	2.60	0.65
12:E:165:TYR:CB	12:E:167:TYR:HH	2.10	0.65
18:K:238:ASN:HB2	18:K:241:GLU:HG2	1.79	0.65
20:M:78:LEU:HG	20:M:150:LYS:HG2	1.79	0.65
24:Q:297:ASP:HB2	24:Q:321:TYR:CE1	2.31	0.65
24:Q:306:TYR:CD1	24:Q:342:LEU:HD22	2.31	0.65
25:R:116:LYS:NZ	25:R:136:ASN:ND2	2.44	0.65
30:W:104:LYS:O	30:W:105:VAL:HB	1.97	0.65
2:2:8:PHE:CD1	2:2:10:ASN:N	2.58	0.65
4:4:66:TYR:CE2	10:C:102:TYR:OH	2.49	0.65
5:5:104:TYR:CZ	5:5:110:PRO:HD3	2.31	0.65
8:A:163:TYR:O	8:A:164:VAL:CG2	2.45	0.65
11:D:118:GLN:HG2	12:E:83:ALA:HB1	1.79	0.65
17:J:183:LYS:CE	17:J:286:LYS:HB3	2.19	0.65
18:K:60:LEU:HD11	21:N:598:ASP:CB	2.25	0.65
18:K:93:PRO:HG2	18:K:141:ARG:CZ	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:302:PHE:CZ	21:N:712:ASN:HB3	2.32	0.65
24:Q:75:ARG:HD2	24:Q:113:ASP:O	1.96	0.65
25:R:63:TYR:OH	25:R:93:LYS:C	2.34	0.65
25:R:421:VAL:HG12	25:R:422:ARG:H	0.56	0.65
26:S:472:HIS:CB	28:U:288:PHE:CZ	2.72	0.65
33:Z:829:GLN:HG2	33:Z:832:ARG:HH22	1.61	0.65
8:A:16:ILE:HD11	8:A:18:ILE:HD13	1.78	0.65
8:A:24:ARG:HH11	18:K:424:PHE:CA	2.10	0.65
9:B:6:SER:CB	11:D:4:TYR:HD2	2.10	0.65
9:B:7:PHE:HE2	10:C:7:ASP:HB3	1.61	0.65
19:L:107:GLU:O	19:L:119:VAL:HG13	1.97	0.65
19:L:277:ILE:CG2	19:L:324:ILE:HD12	2.27	0.65
22:O:12:SER:CB	22:O:19:ASP:OD2	2.44	0.65
23:P:181:LEU:CB	23:P:223:LEU:HD11	2.26	0.65
24:Q:139:ILE:HD11	24:Q:165:PHE:HE2	1.62	0.65
24:Q:146:TYR:HE1	24:Q:184:VAL:HA	1.62	0.65
25:R:241:ILE:CG2	25:R:242:GLU:HG2	2.25	0.65
26:S:235:ASN:OD1	26:S:272:TYR:CD1	2.47	0.65
27:T:86:LYS:HE2	27:T:128:TYR:CD1	2.32	0.65
33:Z:202:ARG:HD3	33:Z:205:LEU:HD12	1.78	0.65
2:2:222:ASP:OD1	3:3:36:HIS:NE2	2.30	0.65
6:6:65:TRP:HH2	13:F:90:GLN:CA	2.10	0.65
7:7:13:ILE:HG12	7:7:191:ILE:HG12	1.77	0.65
8:A:134:MET:HE1	14:G:125:TYR:CZ	2.32	0.65
14:G:89:ASN:ND2	14:G:90:ARG:NH2	2.44	0.65
16:I:227:THR:HG21	17:J:306:ARG:CZ	2.27	0.65
17:J:99:ALA:HB3	17:J:102:ILE:CD1	2.26	0.65
19:L:290:ARG:HE	19:L:293:GLU:HG2	1.62	0.65
21:N:63:LEU:HB2	21:N:88:ARG:HD2	1.79	0.65
21:N:761:ILE:CG2	21:N:905:LEU:N	2.59	0.65
25:R:63:TYR:HD2	25:R:94:PHE:CE2	2.14	0.65
25:R:335:ARG:NH2	25:R:371:PHE:CB	2.60	0.65
25:R:335:ARG:NH2	25:R:371:PHE:CG	2.63	0.65
26:S:327:ILE:O	26:S:327:ILE:HG13	1.96	0.65
27:T:26:LEU:O	27:T:29:PRO:HD2	1.96	0.65
4:4:152:THR:HG22	4:4:153:THR:N	2.10	0.64
8:A:135:ARG:CD	14:G:124:LEU:HD23	2.24	0.64
15:H:178:ARG:HG2	15:H:284:VAL:O	1.97	0.64
15:H:246:ILE:HD11	15:H:375:VAL:HG21	1.77	0.64
16:I:398:GLU:OE2	16:I:422:ARG:HD2	1.96	0.64
17:J:141:LYS:HG2	17:J:209:LYS:HG3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:243:VAL:HB	19:L:303:ARG:NH1	2.12	0.64
22:O:95:SER:CA	22:O:98:TYR:CE2	2.79	0.64
25:R:263:ARG:NH1	25:R:340:GLN:CG	2.53	0.64
26:S:343:LEU:C	26:S:347:HIS:HD1	1.96	0.64
28:U:19:LEU:CB	29:V:209:GLU:CD	2.64	0.64
31:X:27:ILE:HG22	31:X:61:LEU:CD2	2.19	0.64
2:2:8:PHE:CE2	2:2:11:GLY:C	2.71	0.64
4:4:45:PHE:CD2	4:4:101:VAL:HG12	2.33	0.64
5:5:150:VAL:HG11	5:5:179:HIS:HE1	1.61	0.64
14:G:66:ILE:HG12	14:G:76:VAL:HB	1.79	0.64
19:L:140:LEU:CD1	19:L:155:ILE:HD13	2.26	0.64
20:M:220:MET:HB3	20:M:349:PHE:CE2	2.31	0.64
21:N:50:TYR:OH	21:N:84:ALA:HB3	1.97	0.64
23:P:427:GLU:CA	29:V:230:TYR:HE1	1.86	0.64
26:S:472:HIS:NE2	27:T:271:GLU:HA	2.11	0.64
28:U:24:ARG:CZ	29:V:100:ARG:NH1	2.60	0.64
33:Z:422:ILE:HG22	33:Z:426:TYR:CE2	2.32	0.64
12:E:128:SER:HB3	13:F:119:ASN:HD21	1.63	0.64
18:K:423:LYS:O	18:K:428:LYS:NZ	2.29	0.64
19:L:254:LYS:HG3	20:M:256:ILE:CG1	2.28	0.64
25:R:70:TYR:HE2	25:R:74:ASN:C	1.99	0.64
26:S:244:ASN:ND2	27:T:92:ASN:HB2	2.13	0.64
29:V:145:GLN:HB3	29:V:150:LYS:CE	2.26	0.64
30:W:38:GLN:HE22	30:W:41:ARG:CZ	2.09	0.64
33:Z:322:GLU:HG2	33:Z:323:TYR:HD1	1.63	0.64
3:3:54:LEU:O	3:3:58:PHE:HD2	1.79	0.64
4:4:-1:MET:HE1	4:4:133:GLY:HA3	1.80	0.64
6:6:96:TYR:CZ	6:6:98:VAL:HG22	2.33	0.64
6:6:147:PHE:CD2	6:6:163:LEU:CA	2.74	0.64
7:7:6:MET:SD	7:7:147:LEU:HD22	2.37	0.64
9:B:32:VAL:HG21	9:B:63:LYS:HE2	1.80	0.64
9:B:92:VAL:HG11	9:B:113:GLU:HG2	1.78	0.64
13:F:98:VAL:HG11	13:F:99:PHE:CE1	2.32	0.64
16:I:310:LEU:CD1	16:I:338:LEU:CA	2.75	0.64
17:J:258:VAL:C	18:K:280:LYS:HD2	2.17	0.64
18:K:356:ILE:HG21	18:K:387:MET:HB3	1.79	0.64
19:L:111:GLU:CD	19:L:117:TYR:HE2	2.01	0.64
19:L:336:ALA:HB3	19:L:342:ARG:HH12	1.60	0.64
21:N:113:ALA:O	21:N:161:TYR:HD2	1.77	0.64
21:N:619:CYS:HG	21:N:651:PHE:HD2	1.44	0.64
28:U:271:ASP:HA	28:U:274:MET:CE	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:280:ASN:ND2	29:V:291:ASN:CG	2.43	0.64
33:Z:991:GLU:HG3	33:Z:993:GLU:O	1.97	0.64
8:A:36:ASN:O	8:A:37:GLN:CG	2.43	0.64
11:D:118:GLN:HG3	11:D:154:GLY:HA3	1.80	0.64
13:F:50:LYS:NZ	13:F:61:LYS:HA	2.11	0.64
18:K:424:PHE:O	18:K:427:TYR:CE2	2.50	0.64
19:L:402:ALA:HB2	19:L:414:ASP:OD2	1.97	0.64
20:M:55:ASN:O	20:M:59:LEU:HG	1.97	0.64
23:P:270:LEU:HD11	23:P:329:PHE:CE1	2.31	0.64
18:K:211:LEU:HB3	18:K:219:LYS:HE3	1.78	0.64
20:M:74:GLN:N	20:M:77:TYR:OH	2.31	0.64
21:N:761:ILE:HG21	21:N:904:VAL:N	2.11	0.64
24:Q:250:THR:CG2	24:Q:251:THR:H	2.10	0.64
25:R:209:ARG:HH12	25:R:243:LEU:HB2	1.62	0.64
25:R:221:VAL:O	25:R:222:ARG:HB2	1.97	0.64
2:2:19:ARG:NH2	2:2:26:VAL:HG22	2.12	0.64
6:6:20:ASN:HD22	6:6:31:GLU:HB3	1.61	0.64
7:7:57:ARG:HD2	14:G:100:LYS:CG	2.27	0.64
18:K:347:ARG:CD	24:Q:238:TYR:HE1	2.05	0.64
18:K:351:LEU:HD22	24:Q:233:LYS:HZ2	1.63	0.64
19:L:371:THR:CG2	19:L:409:HIS:CD2	2.80	0.64
21:N:190:LEU:HD11	21:N:228:VAL:CG2	2.28	0.64
22:O:80:LYS:HB3	22:O:81:TYR:HD1	1.57	0.64
28:U:19:LEU:CD1	29:V:209:GLU:CD	2.66	0.64
31:X:76:VAL:HG21	31:X:90:VAL:CG2	2.24	0.64
4:4:142:LEU:HD11	4:4:166:GLU:HG3	1.79	0.64
7:7:17:ASP:O	7:7:33:ARG:CD	2.43	0.64
9:B:139:HIS:NE2	9:B:145:PHE:CZ	2.65	0.64
21:N:669:GLU:O	21:N:669:GLU:HG3	1.97	0.64
28:U:71:ASN:HD22	30:W:64:THR:CG2	2.09	0.64
33:Z:286:VAL:HA	33:Z:317:GLN:NE2	2.13	0.64
1:1:75:THR:HB	1:1:111:TYR:CE1	2.32	0.64
4:4:36:GLN:HG3	4:4:188:ILE:CD1	2.28	0.64
6:6:30:TYR:HE2	7:7:153:ARG:HA	1.62	0.64
11:D:82:SER:OG	11:D:131:VAL:HG11	1.98	0.64
17:J:369:ALA:CB	17:J:377:VAL:HG22	2.28	0.64
19:L:152:THR:HG22	19:L:154:THR:HG23	1.79	0.64
21:N:190:LEU:HD11	21:N:228:VAL:HG23	1.80	0.64
22:O:117:ASN:OD1	22:O:118:GLY:N	2.27	0.64
22:O:362:GLN:OE1	28:U:226:LEU:HB3	1.98	0.64
24:Q:20:TYR:CZ	24:Q:68:MET:HG3	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:306:TYR:CD1	24:Q:342:LEU:CD2	2.80	0.64
26:S:153:GLU:CB	26:S:191:HIS:HE1	2.03	0.64
26:S:171:TYR:CZ	26:S:176:LEU:CD1	2.81	0.64
27:T:77:SER:O	27:T:81:TYR:HD1	1.81	0.64
33:Z:72:LYS:HE2	33:Z:117:ASP:HB3	1.79	0.64
33:Z:120:SER:HB3	33:Z:153:TYR:CZ	2.26	0.64
33:Z:151:HIS:HE1	33:Z:152:GLU:CB	2.08	0.64
33:Z:341:TYR:HA	33:Z:345:GLU:OE1	1.96	0.64
33:Z:495:ILE:HD11	33:Z:903:MET:HA	1.80	0.64
33:Z:506:LEU:CD1	33:Z:542:ILE:HD13	2.28	0.64
14:G:94:GLU:OE1	14:G:114:ARG:HD3	1.98	0.64
15:H:285:GLY:O	15:H:287:GLY:N	2.31	0.64
15:H:298:ALA:HB2	15:H:306:ILE:HD11	1.80	0.64
16:I:358:LYS:HD3	16:I:384:LYS:CD	2.27	0.64
19:L:132:ARG:HH11	19:L:156:MET:CE	1.89	0.64
20:M:53:HIS:NE2	30:W:69:PHE:HD2	1.96	0.64
21:N:903:VAL:O	21:N:904:VAL:CB	2.45	0.64
22:O:12:SER:HB2	22:O:19:ASP:OD2	1.98	0.64
23:P:299:LEU:CD1	23:P:311:TRP:HZ3	2.08	0.64
28:U:135:ASP:HB3	28:U:137:TYR:CE1	2.33	0.64
30:W:147:ILE:CG2	30:W:148:GLU:N	2.57	0.64
31:X:23:LEU:O	31:X:24:CYS:HB3	1.98	0.64
31:X:30:GLN:O	31:X:50:TRP:CZ2	2.49	0.64
31:X:46:TRP:O	31:X:68:LEU:CB	2.46	0.64
33:Z:233:LEU:HD13	33:Z:264:PHE:C	2.18	0.64
13:F:49:LEU:C	20:M:433:TYR:HH	1.97	0.63
13:F:60:GLN:HG3	13:F:62:LYS:HE2	1.80	0.63
17:J:174:PHE:HD2	17:J:179:ILE:HD11	1.60	0.63
21:N:498:ILE:HG23	21:N:535:LEU:HD13	1.80	0.63
22:O:330:ARG:O	22:O:333:SER:HB2	1.97	0.63
3:3:54:LEU:HD11	3:3:94:TYR:CZ	2.24	0.63
5:5:80:SER:HB3	5:5:121:ARG:CD	2.28	0.63
8:A:24:ARG:NH2	18:K:424:PHE:CE1	2.66	0.63
13:F:30:LYS:HZ2	13:F:164:ARG:N	1.95	0.63
15:H:210:ASP:OD2	15:H:258:LEU:HD11	1.99	0.63
16:I:167:MET:CE	16:I:270:VAL:HG22	2.27	0.63
17:J:26:LYS:HG2	21:N:107:GLU:OE1	1.96	0.63
17:J:273:LEU:HD22	17:J:309:ARG:CD	2.09	0.63
18:K:390:ALA:CB	18:K:407:LEU:HD23	2.28	0.63
23:P:76:ASN:OD1	23:P:118:VAL:HA	1.98	0.63
24:Q:12:ARG:NE	24:Q:60:GLU:OE2	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:216:GLU:O	27:T:220:PHE:CD2	2.52	0.63
28:U:293:GLU:HG2	29:V:277:LYS:NZ	2.13	0.63
30:W:123:ASP:HB3	30:W:127:ARG:NH1	2.11	0.63
33:Z:394:TYR:CD1	33:Z:859:LYS:HG3	2.33	0.63
2:2:7:LYS:O	2:2:146:LEU:CD2	2.46	0.63
11:D:120:TYR:CD2	11:D:126:VAL:HG11	2.34	0.63
19:L:256:ILE:HG23	19:L:256:ILE:O	1.98	0.63
22:O:48:PHE:CZ	22:O:77:SER:HB3	2.33	0.63
23:P:329:PHE:HD2	23:P:337:HIS:NE2	1.95	0.63
25:R:47:ALA:HB2	25:R:89:ASN:ND2	2.13	0.63
25:R:334:ARG:CZ	25:R:338:TYR:HE2	2.11	0.63
25:R:335:ARG:HH12	25:R:371:PHE:C	2.02	0.63
26:S:461:PHE:CE2	28:U:274:MET:CA	2.81	0.63
33:Z:474:LEU:HD21	33:Z:493:LEU:HD12	1.80	0.63
33:Z:550:PHE:CD1	33:Z:587:THR:HG23	2.34	0.63
5:5:124:GLY:CA	5:5:127:PHE:CZ	2.82	0.63
7:7:121:TYR:CD2	7:7:129:TYR:CE2	2.87	0.63
13:F:113:CYS:HB2	14:G:85:ARG:HD2	1.80	0.63
14:G:64:VAL:HG23	14:G:67:GLN:HE22	1.60	0.63
15:H:285:GLY:O	15:H:288:ALA:N	2.31	0.63
19:L:371:THR:HG23	19:L:409:HIS:CD2	2.29	0.63
20:M:166:ARG:HH11	20:M:172:VAL:HG21	1.63	0.63
21:N:294:PRO:CG	21:N:921:ARG:HH21	2.10	0.63
21:N:514:THR:HG21	21:N:546:LEU:HB2	1.78	0.63
22:O:92:PHE:CE1	22:O:136:THR:CB	2.80	0.63
23:P:211:PRO:HB2	23:P:213:TYR:HE1	1.64	0.63
26:S:286:TYR:CZ	26:S:323:LEU:HD13	2.33	0.63
33:Z:202:ARG:HA	33:Z:205:LEU:HD12	1.80	0.63
33:Z:571:GLY:N	33:Z:574:TYR:CE2	2.67	0.63
33:Z:970:TYR:CE1	33:Z:985:LYS:CE	2.62	0.63
1:1:55:ILE:HD11	1:1:93:LEU:HD13	1.81	0.63
1:1:59:VAL:HG11	1:1:82:PHE:CE2	2.31	0.63
7:7:65:GLU:HA	7:7:68:TYR:CD2	2.33	0.63
10:C:12:ILE:HB	11:D:19:GLN:NE2	2.13	0.63
11:D:86:ILE:HG22	11:D:90:ARG:HH12	1.60	0.63
18:K:244:HIS:CE1	18:K:251:PRO:CD	2.63	0.63
20:M:334:ASP:OD1	20:M:335:PRO:HD2	1.99	0.63
21:N:238:ALA:CB	21:N:273:LEU:CD2	2.76	0.63
21:N:494:LYS:HG3	21:N:497:ALA:H	1.63	0.63
22:O:121:ASP:O	22:O:122:HIS:CB	2.47	0.63
24:Q:311:LEU:CD1	24:Q:343:LEU:HD13	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:429:LYS:HE2	28:U:296:ILE:HG21	1.78	0.63
25:R:335:ARG:CZ	25:R:371:PHE:HB3	2.22	0.63
26:S:416:GLU:OE2	26:S:417:GLN:NE2	2.21	0.63
26:S:436:ILE:CG2	26:S:438:HIS:NE2	2.59	0.63
3:3:134:SER:O	3:3:138:PHE:CD2	2.51	0.63
11:D:171:VAL:HG13	11:D:198:SER:OG	1.98	0.63
15:H:261:ARG:HH22	15:H:273:ARG:HH11	1.45	0.63
22:O:169:ASN:CG	22:O:195:TYR:CE2	2.71	0.63
24:Q:75:ARG:HA	24:Q:117:VAL:CG2	2.27	0.63
24:Q:227:CYS:HB3	24:Q:334:HIS:ND1	2.10	0.63
25:R:78:ASP:CG	25:R:94:PHE:CD1	2.71	0.63
26:S:472:HIS:CB	28:U:288:PHE:CE1	2.82	0.63
28:U:106:ILE:CG2	28:U:110:PHE:CE2	2.80	0.63
1:1:75:THR:CG2	1:1:111:TYR:CE1	2.81	0.63
5:5:76:VAL:HG12	5:5:113:TYR:HE2	1.62	0.63
12:E:17:PRO:HA	13:F:24:TYR:CE1	2.34	0.63
12:E:38:ILE:HD12	12:E:204:LEU:HD23	1.79	0.63
13:F:33:SER:CB	20:M:433:TYR:CD2	2.74	0.63
14:G:108:ILE:HG21	14:G:148:TYR:HD2	1.61	0.63
18:K:93:PRO:HG2	18:K:141:ARG:NH1	2.13	0.63
21:N:383:LYS:HB2	21:N:412:TYR:HH	1.61	0.63
21:N:778:LYS:CE	21:N:780:ASP:OD2	2.46	0.63
22:O:296:LEU:O	22:O:300:VAL:HG23	1.99	0.63
25:R:62:TYR:HB3	25:R:180:PHE:HZ	1.63	0.63
28:U:21:HIS:NE2	28:U:53:ALA:HB2	2.14	0.63
30:W:150:ASN:O	30:W:151:THR:CB	2.46	0.63
1:1:61:TYR:HE1	8:A:103:GLU:N	1.96	0.63
1:1:61:TYR:CZ	8:A:103:GLU:HG2	2.34	0.63
1:1:91:ASP:O	1:1:92:ASN:CG	2.37	0.63
3:3:59:ARG:NH2	10:C:100:LYS:HA	2.14	0.63
4:4:37:LEU:CD1	4:4:60:GLN:HA	2.28	0.63
8:A:128:TYR:HE1	8:A:131:ARG:HH11	1.44	0.63
12:E:20:ARG:NH2	12:E:25:GLU:OE2	2.31	0.63
13:F:51:ARG:NH1	20:M:430:VAL:HG11	2.10	0.63
15:H:244:LYS:HB3	15:H:346:ARG:HD2	1.81	0.63
16:I:167:MET:HE3	16:I:270:VAL:HG22	1.81	0.63
17:J:135:SER:O	17:J:136:LEU:HB2	1.99	0.63
21:N:255:ALA:HB1	21:N:259:PHE:CE2	2.34	0.63
21:N:619:CYS:SG	21:N:651:PHE:HD2	2.21	0.63
21:N:627:ILE:HG12	21:N:733:LEU:HD13	1.80	0.63
24:Q:311:LEU:CD2	24:Q:343:LEU:CD1	2.77	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:167:LYS:HE3	25:R:195:ASN:HA	1.81	0.63
25:R:354:ALA:HB1	25:R:361:VAL:HA	1.80	0.63
30:W:125:LEU:HD22	30:W:153:LEU:HB3	1.79	0.63
33:Z:196:SER:OG	33:Z:201:LEU:HD21	1.97	0.63
3:3:1:GLY:HA2	3:3:17:ASP:OD2	1.99	0.63
8:A:133:TYR:OH	9:B:5:TYR:N	2.30	0.63
12:E:20:ARG:NE	12:E:25:GLU:CG	2.62	0.63
21:N:217:MET:SD	21:N:248:GLU:HG3	2.39	0.63
22:O:69:PHE:HE2	22:O:74:ASN:O	1.74	0.63
23:P:181:LEU:CG	23:P:223:LEU:HD11	2.29	0.63
23:P:298:SER:O	23:P:302:LEU:HG	1.98	0.63
24:Q:61:LEU:HD12	24:Q:65:TYR:CE1	2.31	0.63
26:S:163:VAL:CG2	26:S:184:TRP:CE2	2.82	0.63
2:2:190:TYR:HD2	2:2:191:LEU:HG	1.64	0.62
3:3:42:LEU:HD22	3:3:78:PHE:HZ	1.64	0.62
8:A:83:VAL:HG22	8:A:141:LEU:HD22	1.81	0.62
9:B:132:VAL:O	9:B:152:PRO:HG3	1.99	0.62
9:B:139:HIS:CE1	9:B:145:PHE:CD2	2.87	0.62
17:J:210:PHE:CE2	17:J:212:ARG:HD3	2.28	0.62
18:K:240:SER:O	18:K:243:VAL:CG2	2.47	0.62
23:P:435:LYS:HG3	28:U:154:PHE:CE2	2.33	0.62
24:Q:126:LYS:CG	24:Q:134:LYS:HZ2	1.90	0.62
29:V:110:SER:O	29:V:111:HIS:CG	2.52	0.62
31:X:85:ARG:HD2	31:X:85:ARG:O	1.99	0.62
6:6:71:ASN:HD21	12:E:110:GLU:HB3	1.63	0.62
7:7:56:GLU:O	7:7:60:LYS:HG3	1.99	0.62
14:G:108:ILE:HG21	14:G:148:TYR:HE2	1.43	0.62
15:H:210:ASP:HB2	15:H:258:LEU:HD13	1.79	0.62
18:K:389:GLU:HG2	18:K:393:ARG:HE	1.64	0.62
22:O:16:MET:CE	22:O:72:LYS:HG3	2.29	0.62
22:O:66:VAL:CG1	22:O:106:PHE:HE1	1.98	0.62
26:S:214:MET:O	26:S:218:LEU:HG	1.99	0.62
26:S:472:HIS:CG	28:U:288:PHE:CE1	2.85	0.62
5:5:126:ILE:HD11	5:5:144:TYR:CZ	2.35	0.62
19:L:410:ILE:HG13	20:M:212:ILE:HD11	1.81	0.62
21:N:11:ALA:O	21:N:15:GLU:HG3	2.00	0.62
21:N:509:GLN:O	21:N:510:HIS:CG	2.51	0.62
22:O:33:TYR:CD1	22:O:40:GLN:CG	2.78	0.62
25:R:137:LEU:HD11	25:R:141:TYR:OH	2.00	0.62
25:R:166:ALA:O	25:R:170:VAL:HG23	1.98	0.62
33:Z:82:MET:HG3	33:Z:85:VAL:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:394:TYR:CD1	33:Z:859:LYS:CG	2.82	0.62
33:Z:422:ILE:HD11	33:Z:439:TYR:CE2	2.33	0.62
2:2:19:ARG:HH21	2:2:26:VAL:HG22	1.64	0.62
8:A:36:ASN:ND2	8:A:173:PRO:HD3	2.13	0.62
11:D:97:ARG:NH1	11:D:103:PRO:HA	2.14	0.62
11:D:188:VAL:HG21	11:D:216:LYS:HE2	1.80	0.62
12:E:123:PHE:CD1	12:E:136:ARG:N	2.66	0.62
15:H:107:LYS:HD3	29:V:81:GLU:OE2	1.99	0.62
18:K:188:VAL:O	18:K:313:LYS:NZ	2.32	0.62
22:O:172:TYR:HH	22:O:194:LEU:HD13	1.62	0.62
22:O:233:LEU:HD23	22:O:251:LEU:HD21	1.80	0.62
23:P:72:TRP:CD2	23:P:104:LEU:CD2	2.82	0.62
24:Q:429:LYS:HG2	28:U:296:ILE:HG21	1.81	0.62
26:S:221:ALA:HB1	26:S:230:LYS:HD2	1.80	0.62
27:T:240:LYS:O	27:T:240:LYS:HG3	1.99	0.62
31:X:50:TRP:HH2	31:X:52:PRO:HB3	1.61	0.62
2:2:171:SER:OG	2:2:172:ASN:N	2.30	0.62
6:6:58:ARG:NH1	6:6:91:LYS:HZ2	1.96	0.62
6:6:176:ARG:CZ	6:6:208:TYR:HB3	2.29	0.62
7:7:93:TYR:OH	7:7:128:THR:HG21	1.99	0.62
16:I:185:GLY:HA2	16:I:364:ILE:HD12	1.81	0.62
17:J:98:VAL:HG12	17:J:122:LEU:HD12	1.81	0.62
18:K:99:PHE:CZ	18:K:102:PRO:CD	2.83	0.62
18:K:183:GLU:CG	18:K:338:ILE:HG12	2.28	0.62
18:K:320:ARG:NH1	19:L:293:GLU:O	2.33	0.62
19:L:192:GLU:HB3	19:L:345:ARG:NH2	2.15	0.62
22:O:250:TRP:HZ2	22:O:271:LYS:HB2	1.65	0.62
22:O:254:LEU:CD2	22:O:266:PHE:CE2	2.82	0.62
33:Z:407:VAL:CG1	33:Z:439:TYR:OH	2.47	0.62
33:Z:789:GLN:HE22	33:Z:791:LYS:HB2	1.64	0.62
7:7:187:PHE:CZ	7:7:204:LEU:CB	2.82	0.62
18:K:244:HIS:HE1	18:K:251:PRO:CD	2.02	0.62
18:K:277:ILE:HD12	18:K:295:ILE:HG22	1.79	0.62
21:N:871:MET:O	21:N:872:THR:OG1	2.11	0.62
23:P:307:GLU:HG3	23:P:310:ARG:NH1	2.14	0.62
24:Q:34:ASP:O	24:Q:35:SER:HB2	1.98	0.62
27:T:199:PHE:HD2	27:T:234:TYR:CD1	2.17	0.62
31:X:28:PRO:O	31:X:29:VAL:CG2	2.48	0.62
31:X:53:THR:O	31:X:54:GLU:CB	2.47	0.62
18:K:74:HIS:HE1	18:K:77:ARG:NH2	1.97	0.62
19:L:358:LEU:HD12	19:L:380:VAL:HG21	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:109:LEU:HG	22:O:125:GLY:HA3	1.81	0.62
22:O:286:PHE:O	22:O:290:LYS:HG3	1.98	0.62
24:Q:253:ASN:OD1	24:Q:257:LYS:HD3	1.99	0.62
24:Q:343:LEU:HD23	24:Q:376:LYS:HZ2	1.63	0.62
27:T:89:TYR:HD1	27:T:102:LYS:HE2	1.65	0.62
33:Z:531:ALA:HB1	33:Z:572:ILE:HB	1.82	0.62
1:1:66:TYR:HE2	1:1:73:PRO:CA	2.12	0.62
3:3:54:LEU:O	3:3:58:PHE:CD2	2.53	0.62
8:A:164:VAL:HG12	8:A:165:GLY:N	2.15	0.62
10:C:208:TYR:HE1	10:C:232:PRO:CB	2.12	0.62
17:J:258:VAL:HA	18:K:280:LYS:HD2	1.80	0.62
17:J:378:THR:O	17:J:382:PHE:CD2	2.53	0.62
20:M:143:ASN:OD1	20:M:164:ASP:HB3	2.00	0.62
21:N:410:LEU:HA	21:N:452:LEU:CD2	2.30	0.62
22:O:115:ARG:HB2	22:O:124:ASP:CG	2.19	0.62
22:O:183:ASN:O	22:O:184:ASP:CG	2.38	0.62
22:O:359:SER:HB3	28:U:223:HIS:CD2	2.34	0.62
23:P:436:GLU:OE1	28:U:206:ASP:HB3	1.99	0.62
25:R:353:MET:HA	25:R:357:PHE:CG	2.35	0.62
26:S:274:PHE:HE2	26:S:278:LYS:HZ1	1.47	0.62
26:S:457:PRO:HG2	28:U:274:MET:SD	2.40	0.62
28:U:121:LEU:HD11	28:U:134:THR:CG2	2.30	0.62
30:W:162:ASN:HD21	30:W:165:GLN:HG2	1.64	0.62
31:X:78:ILE:CG2	31:X:114:LEU:HB2	2.30	0.62
31:X:111:LEU:HD23	31:X:114:LEU:HD21	1.81	0.62
5:5:55:TRP:O	5:5:59:LEU:HG	2.00	0.62
5:5:104:TYR:CD1	5:5:110:PRO:N	2.67	0.62
7:7:200:PHE:CE2	7:7:202:LYS:CE	2.82	0.62
14:G:70:ASP:HA	14:G:99:LYS:HZ2	1.65	0.62
20:M:221:TYR:CZ	20:M:348:GLU:CA	2.82	0.62
22:O:122:HIS:CE1	22:O:163:ILE:N	2.54	0.62
25:R:113:LEU:HD22	25:R:137:LEU:HD13	1.80	0.62
31:X:96:ARG:HB3	31:X:98:PHE:HE1	1.65	0.62
33:Z:233:LEU:HD23	33:Z:233:LEU:C	2.20	0.62
33:Z:392:LEU:O	33:Z:394:TYR:CE2	2.52	0.62
33:Z:888:LEU:HD12	33:Z:901:PHE:CE1	2.34	0.62
8:A:162:TYR:CZ	18:K:428:LYS:HB3	2.35	0.62
8:A:174:LYS:CD	8:A:214:LEU:HD22	2.30	0.62
13:F:48:ALA:HB3	13:F:63:ILE:HD11	1.81	0.62
15:H:407:ILE:CD1	15:H:443:PHE:CB	2.78	0.62
15:H:407:ILE:HD11	15:H:443:PHE:HB2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:250:SER:O	16:I:253:ILE:CG2	2.38	0.62
22:O:177:GLN:O	22:O:181:PHE:CD2	2.53	0.62
25:R:179:PHE:HE2	25:R:213:TYR:CZ	2.17	0.62
31:X:28:PRO:HG3	31:X:57:VAL:CG1	2.30	0.62
33:Z:85:VAL:O	33:Z:85:VAL:HG12	1.99	0.62
10:C:36:ILE:HD12	10:C:197:LEU:CD2	2.30	0.61
12:E:153:TYR:OH	12:E:224:LYS:N	2.33	0.61
13:F:6:TYR:HE1	13:F:13:PHE:O	1.82	0.61
14:G:203:HIS:CD2	14:G:211:PHE:HD1	2.16	0.61
17:J:321:VAL:HG22	17:J:324:ARG:HH22	1.65	0.61
21:N:654:GLN:NE2	21:N:697:PHE:CD2	2.68	0.61
22:O:82:LEU:O	22:O:86:LEU:HG	2.00	0.61
27:T:161:TRP:CE3	27:T:162:ASP:OD1	2.53	0.61
27:T:241:GLU:O	27:T:242:LYS:HG3	1.99	0.61
30:W:46:GLU:O	30:W:46:GLU:HG2	2.00	0.61
33:Z:284:LEU:HD13	33:Z:293:MET:HE1	1.80	0.61
8:A:63:LEU:HD11	14:G:172:LYS:CD	2.30	0.61
8:A:220:LYS:HD3	8:A:242:GLU:H	1.60	0.61
11:D:151:GLU:HB3	11:D:152:PRO:HD2	1.82	0.61
20:M:283:LEU:HD12	20:M:286:ILE:HD11	1.81	0.61
21:N:888:ASP:OD1	21:N:890:PHE:N	2.28	0.61
21:N:909:GLU:HB3	21:N:912:GLU:CD	2.21	0.61
22:O:69:PHE:HZ	22:O:77:SER:CB	2.13	0.61
24:Q:232:TYR:CZ	24:Q:271:MET:SD	2.92	0.61
26:S:379:LEU:HB3	26:S:383:LEU:HD12	1.83	0.61
28:U:66:TRP:HZ3	28:U:68:LEU:N	1.98	0.61
29:V:197:TYR:HE1	29:V:199:LEU:CD2	1.96	0.61
31:X:76:VAL:CG2	31:X:90:VAL:CG2	2.77	0.61
33:Z:571:GLY:N	33:Z:574:TYR:HE2	1.97	0.61
4:4:19:ALA:HB3	4:4:176:LYS:HB2	1.83	0.61
11:D:187:THR:HG22	11:D:189:GLU:N	2.13	0.61
17:J:191:PRO:HG2	18:K:330:ARG:NH2	2.15	0.61
19:L:221:TYR:CE1	19:L:348:GLU:HA	2.34	0.61
19:L:290:ARG:CZ	19:L:299:ARG:NH2	2.60	0.61
19:L:290:ARG:HH12	19:L:299:ARG:CZ	2.13	0.61
21:N:711:ARG:NH1	21:N:785:PRO:O	2.34	0.61
22:O:338:LYS:HD2	22:O:353:VAL:HB	1.81	0.61
24:Q:125:ALA:HB2	24:Q:130:ARG:NH2	2.15	0.61
25:R:373:PRO:O	25:R:375:LYS:HG3	1.99	0.61
30:W:95:GLN:NE2	30:W:132:LEU:HD21	2.15	0.61
31:X:57:VAL:O	31:X:57:VAL:HG12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:298:PHE:HE1	33:Z:310:LEU:HD23	1.65	0.61
14:G:98:PHE:CE1	14:G:104:THR:O	2.54	0.61
19:L:103:GLN:OE1	19:L:149:ASP:HA	1.99	0.61
21:N:204:SER:HB3	21:N:208:ARG:HH12	1.63	0.61
23:P:160:LEU:HD23	23:P:186:LEU:HD12	1.82	0.61
24:Q:35:SER:CB	24:Q:47:ASP:HB3	2.31	0.61
28:U:165:GLU:N	29:V:42:ARG:HH12	1.98	0.61
31:X:8:ILE:CG2	31:X:10:PHE:CZ	2.83	0.61
33:Z:89:LEU:HD13	33:Z:125:THR:HB	1.82	0.61
6:6:193:LEU:HB2	6:6:210:LEU:HD11	1.81	0.61
13:F:12:THR:HB	14:G:22:GLN:HE22	1.61	0.61
17:J:193:THR:HG21	17:J:316:PHE:CZ	2.36	0.61
17:J:278:GLN:HE22	17:J:283:GLU:CD	1.95	0.61
19:L:301:ILE:CG1	20:M:299:ARG:HH21	2.13	0.61
22:O:16:MET:SD	22:O:72:LYS:HG2	2.40	0.61
22:O:77:SER:CA	22:O:80:LYS:CG	2.72	0.61
23:P:392:LYS:HG3	24:Q:354:PHE:CB	2.30	0.61
24:Q:369:ASP:O	24:Q:373:VAL:HG23	1.99	0.61
31:X:30:GLN:HB3	31:X:54:GLU:CB	2.30	0.61
31:X:72:GLU:CB	31:X:91:PHE:CZ	2.83	0.61
33:Z:763:HIS:NE2	33:Z:767:TYR:CE1	2.69	0.61
33:Z:981:VAL:HG11	33:Z:983:LEU:HD21	1.83	0.61
3:3:134:SER:HA	3:3:137:LEU:HD12	1.82	0.61
4:4:63:ILE:HG23	4:4:74:LEU:HD12	1.82	0.61
11:D:134:LEU:HD22	11:D:162:GLN:NE2	2.16	0.61
13:F:110:HIS:CB	14:G:85:ARG:HH11	2.13	0.61
17:J:69:GLY:HA3	18:K:144:ASN:HD22	1.66	0.61
18:K:423:LYS:N	18:K:428:LYS:NZ	2.47	0.61
20:M:170:MET:SD	20:M:266:ALA:HB2	2.39	0.61
22:O:169:ASN:ND2	22:O:195:TYR:CD2	2.68	0.61
22:O:352:TRP:HB2	28:U:235:LEU:HD21	1.80	0.61
24:Q:311:LEU:CD2	24:Q:343:LEU:HD13	2.30	0.61
27:T:98:GLU:HG2	27:T:102:LYS:NZ	2.15	0.61
30:W:2:VAL:HG11	30:W:4:GLU:OE1	2.00	0.61
33:Z:486:SER:O	33:Z:490:ILE:HG13	2.00	0.61
3:3:177:VAL:HG12	3:3:190:TYR:CD1	2.35	0.61
12:E:87:SER:HB2	12:E:138:PHE:CZ	2.36	0.61
15:H:407:ILE:HD12	15:H:443:PHE:HB3	1.81	0.61
16:I:184:ILE:HD12	16:I:187:LEU:CD1	2.30	0.61
17:J:210:PHE:HE2	17:J:212:ARG:CD	2.12	0.61
18:K:141:ARG:NH1	19:L:153:LEU:HD12	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:113:ALA:C	21:N:161:TYR:HD2	2.03	0.61
21:N:114:SER:N	21:N:161:TYR:HE2	1.97	0.61
21:N:668:THR:O	21:N:669:GLU:CB	2.48	0.61
23:P:268:LEU:CD1	23:P:280:LEU:CD1	2.72	0.61
25:R:179:PHE:CE2	25:R:213:TYR:CZ	2.89	0.61
26:S:234:ILE:HG13	26:S:257:LEU:CG	2.29	0.61
27:T:250:MET:O	27:T:251:HIS:HB2	2.01	0.61
28:U:66:TRP:HZ3	28:U:68:LEU:CA	2.14	0.61
29:V:60:ASP:O	29:V:61:TYR:CD2	2.53	0.61
29:V:250:GLN:HB3	29:V:254:ARG:NH1	2.15	0.61
30:W:151:THR:HG22	30:W:151:THR:O	2.00	0.61
31:X:7:VAL:HG21	31:X:34:GLU:HB3	1.81	0.61
33:Z:126:TYR:O	33:Z:127:SER:CB	2.49	0.61
33:Z:426:TYR:HE2	33:Z:435:GLN:HB2	1.57	0.61
6:6:20:ASN:ND2	6:6:31:GLU:HB3	2.14	0.61
7:7:189:LEU:HB3	7:7:204:LEU:HD12	1.83	0.61
10:C:235:ILE:O	10:C:239:LEU:HG	2.01	0.61
11:D:218:ASP:O	11:D:219:SER:HB2	1.99	0.61
18:K:240:SER:O	18:K:243:VAL:N	2.34	0.61
18:K:310:THR:HB	18:K:313:LYS:HE3	1.82	0.61
18:K:349:ARG:NH1	18:K:383:ILE:HD11	2.15	0.61
20:M:135:VAL:HG11	20:M:155:ILE:CG2	2.31	0.61
22:O:69:PHE:CD2	22:O:74:ASN:O	2.53	0.61
22:O:172:TYR:CE2	22:O:194:LEU:HB3	2.36	0.61
23:P:137:ALA:HB3	23:P:179:PHE:CE2	2.34	0.61
23:P:360:ILE:HG13	23:P:364:ARG:HG2	1.82	0.61
27:T:27:LEU:CD1	27:T:81:TYR:OH	2.44	0.61
33:Z:282:ILE:HD11	33:Z:974:THR:HG23	1.82	0.61
15:H:62:ARG:HH11	16:I:99:ILE:HG22	1.64	0.61
17:J:186:ILE:HG23	17:J:313:LYS:HG3	1.83	0.61
17:J:197:LEU:O	17:J:197:LEU:HD23	2.01	0.61
21:N:633:GLY:O	21:N:634:LEU:HB2	2.00	0.61
21:N:761:ILE:HB	21:N:905:LEU:H	1.65	0.61
22:O:69:PHE:CD2	22:O:78:VAL:HG23	2.36	0.61
23:P:184:MET:CE	23:P:200:SER:HB3	2.31	0.61
25:R:63:TYR:CE2	25:R:94:PHE:CD1	2.80	0.61
25:R:397:ASN:HD22	25:R:397:ASN:N	1.99	0.61
26:S:274:PHE:HE2	26:S:278:LYS:NZ	1.98	0.61
33:Z:138:ARG:CB	33:Z:157:LEU:CD1	2.68	0.61
33:Z:392:LEU:HD22	33:Z:857:LEU:HD21	1.83	0.61
33:Z:471:LEU:HD23	33:Z:471:LEU:C	2.21	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:34:VAL:HG22	6:6:44:SER:CB	2.29	0.61
17:J:170:HIS:ND1	17:J:173:LEU:HG	2.14	0.61
18:K:281:ARG:HD3	18:K:293:GLN:NE2	2.16	0.61
23:P:270:LEU:HD11	23:P:329:PHE:CZ	2.35	0.61
25:R:113:LEU:HD12	25:R:114:ASN:N	2.15	0.61
25:R:176:ARG:HG2	25:R:243:LEU:HD21	1.82	0.61
27:T:189:ILE:CG2	27:T:209:LEU:HD23	2.31	0.61
27:T:209:LEU:O	27:T:210:PHE:HB2	2.00	0.61
29:V:47:MET:SD	29:V:75:GLY:HA2	2.40	0.61
29:V:250:GLN:HB3	29:V:254:ARG:HH12	1.66	0.61
4:4:40:HIS:CE1	4:4:185:LYS:O	2.52	0.60
6:6:65:TRP:CH2	13:F:90:GLN:CA	2.84	0.60
9:B:119:GLN:HG3	10:C:82:ALA:HB1	1.83	0.60
11:D:13:PRO:HB3	12:E:26:TYR:CE1	2.36	0.60
12:E:38:ILE:HD12	12:E:204:LEU:CD2	2.30	0.60
16:I:313:LEU:HD23	16:I:338:LEU:HD12	1.82	0.60
19:L:374:PHE:HE1	19:L:376:PHE:CD1	2.19	0.60
23:P:427:GLU:CA	29:V:230:TYR:CZ	2.79	0.60
26:S:158:PHE:O	26:S:162:VAL:HG23	2.00	0.60
29:V:196:TYR:O	29:V:197:TYR:HB3	2.00	0.60
30:W:95:GLN:NE2	30:W:132:LEU:HD23	2.16	0.60
33:Z:474:LEU:CG	33:Z:493:LEU:HD11	2.18	0.60
33:Z:598:ALA:O	33:Z:601:VAL:HG22	1.99	0.60
17:J:392:LYS:HG2	18:K:337:LYS:CE	2.31	0.60
21:N:633:GLY:C	21:N:634:LEU:HD22	2.20	0.60
22:O:79:VAL:HG21	22:O:124:ASP:HA	1.82	0.60
24:Q:20:TYR:CE2	24:Q:68:MET:CE	2.83	0.60
24:Q:284:ALA:HB3	24:Q:287:THR:OG1	2.01	0.60
25:R:63:TYR:CD2	25:R:94:PHE:CE2	2.89	0.60
25:R:396:LYS:HB3	26:S:452:TYR:HE1	1.64	0.60
27:T:229:VAL:CG1	27:T:234:TYR:CE2	2.84	0.60
28:U:127:GLN:NE2	29:V:212:MET:HA	2.16	0.60
30:W:26:PHE:CE2	30:W:30:ILE:HD11	2.36	0.60
31:X:29:VAL:HG11	31:X:61:LEU:CG	2.31	0.60
4:4:79:VAL:O	4:4:83:VAL:HG23	2.02	0.60
7:7:66:ASN:HD22	7:7:79:LEU:CD2	2.06	0.60
18:K:209:VAL:HG12	18:K:336:ARG:HB2	1.83	0.60
19:L:212:ILE:HG13	19:L:213:LYS:N	2.16	0.60
19:L:254:LYS:CE	20:M:256:ILE:HG12	2.24	0.60
21:N:329:HIS:HD2	21:N:355:TRP:CE2	2.17	0.60
21:N:514:THR:HG22	21:N:546:LEU:CG	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:79:VAL:HG21	22:O:124:ASP:CA	2.31	0.60
22:O:117:ASN:ND2	22:O:166:ARG:HG3	2.17	0.60
22:O:254:LEU:HD23	22:O:266:PHE:CD1	2.36	0.60
23:P:425:HIS:CD2	28:U:232:VAL:CG1	2.84	0.60
25:R:301:TYR:OH	25:R:363:PHE:CD2	2.54	0.60
26:S:311:GLN:HE22	26:S:337:ASN:HA	1.66	0.60
26:S:415:SER:HB2	27:T:159:LYS:NZ	2.15	0.60
33:Z:89:LEU:HD12	33:Z:125:THR:CG2	2.32	0.60
33:Z:827:LEU:HG	33:Z:831:LEU:CG	2.24	0.60
33:Z:829:GLN:HG2	33:Z:832:ARG:NH2	2.16	0.60
1:1:122:LEU:HD11	7:7:28:PHE:CD1	2.35	0.60
3:3:179:TYR:CE2	3:3:188:LYS:CG	2.84	0.60
12:E:154:GLN:CD	12:E:166:ARG:HH21	2.05	0.60
17:J:253:ILE:HG22	17:J:295:ASN:ND2	2.16	0.60
18:K:97:GLY:HA2	18:K:113:THR:HG23	1.82	0.60
19:L:132:ARG:NH1	19:L:156:MET:HE1	2.15	0.60
20:M:200:PRO:CA	20:M:207:PHE:CE2	2.81	0.60
24:Q:151:TYR:OH	24:Q:187:LYS:HG3	2.00	0.60
33:Z:150:GLY:CA	33:Z:154:ILE:HD12	2.31	0.60
33:Z:407:VAL:HG11	33:Z:439:TYR:OH	2.00	0.60
6:6:58:ARG:CZ	6:6:91:LYS:HZ1	2.15	0.60
14:G:42:ASN:HD21	14:G:183:PRO:HB2	1.67	0.60
18:K:52:LYS:HZ1	21:N:159:GLU:HG3	1.65	0.60
19:L:403:ILE:HG23	20:M:203:ARG:HH11	1.64	0.60
20:M:212:ILE:HG22	20:M:213:ARG:O	2.02	0.60
21:N:318:LYS:HD2	21:N:348:PHE:CE1	2.36	0.60
21:N:362:TRP:HH2	21:N:742:TRP:CZ2	2.16	0.60
22:O:30:GLU:HA	22:O:40:GLN:CD	2.21	0.60
23:P:266:TYR:CE2	23:P:270:LEU:HD11	2.37	0.60
23:P:392:LYS:NZ	24:Q:399:VAL:HG11	2.16	0.60
27:T:89:TYR:CZ	27:T:90:PHE:CE1	2.87	0.60
2:2:124:TYR:OH	2:2:139:GLU:HB2	2.02	0.60
9:B:177:LYS:HE2	24:Q:209:TYR:O	2.01	0.60
13:F:30:LYS:CE	13:F:163:ALA:HA	2.30	0.60
14:G:70:ASP:OD1	14:G:95:ALA:HB1	2.02	0.60
18:K:242:PHE:C	18:K:243:VAL:C	2.60	0.60
19:L:180:PHE:HD2	19:L:238:THR:HB	1.66	0.60
19:L:294:GLY:C	19:L:299:ARG:HH12	2.05	0.60
19:L:354:GLU:OE2	19:L:380:VAL:HG12	2.01	0.60
21:N:596:LEU:CG	21:N:718:GLU:HB2	2.32	0.60
21:N:768:ILE:CD1	21:N:919:THR:HB	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:777:ALA:O	21:N:866:TYR:CE1	2.54	0.60
23:P:72:TRP:CE3	23:P:104:LEU:HD21	2.36	0.60
23:P:181:LEU:HG	23:P:223:LEU:CG	2.30	0.60
24:Q:37:GLN:O	24:Q:46:VAL:HG12	2.01	0.60
31:X:28:PRO:CB	31:X:56:PRO:O	2.46	0.60
31:X:78:ILE:HG22	31:X:114:LEU:HB2	1.84	0.60
33:Z:473:LEU:CG	33:Z:477:TYR:CZ	2.84	0.60
1:1:53:GLN:CG	2:2:84:LYS:HE2	2.31	0.60
13:F:105:VAL:CG2	13:F:145:LEU:CB	2.80	0.60
14:G:31:GLU:HG2	14:G:168:ARG:NH1	2.16	0.60
14:G:40:LYS:HE2	14:G:184:GLU:OE2	2.02	0.60
15:H:178:ARG:NH1	15:H:289:ARG:HD2	2.16	0.60
18:K:349:ARG:NH2	18:K:378:LEU:N	2.08	0.60
21:N:194:ILE:HG12	21:N:203:ARG:HD2	1.82	0.60
23:P:181:LEU:HG	23:P:223:LEU:HD11	1.83	0.60
27:T:241:GLU:O	27:T:242:LYS:CG	2.50	0.60
28:U:277:TYR:O	28:U:281:LEU:HG	2.02	0.60
30:W:8:LEU:HD11	30:W:113:PHE:HE2	1.65	0.60
33:Z:297:VAL:HG11	33:Z:310:LEU:HD13	1.84	0.60
1:1:8:PHE:CD2	1:1:9:LYS:N	2.69	0.60
2:2:85:GLN:O	2:2:89:LYS:HG3	2.02	0.60
9:B:30:GLN:CB	18:K:426:PHE:CD2	2.85	0.60
14:G:215:ILE:HG23	14:G:230:VAL:CG1	2.32	0.60
15:H:160:GLY:O	15:H:182:ASN:ND2	2.35	0.60
15:H:306:ILE:HG22	15:H:308:PHE:CZ	2.36	0.60
18:K:277:ILE:HD12	18:K:295:ILE:CG2	2.31	0.60
21:N:144:CYS:SG	21:N:152:LEU:HD21	2.35	0.60
21:N:233:ASN:OD1	21:N:269:LEU:HD22	2.01	0.60
21:N:602:VAL:HG12	21:N:625:LEU:CD1	2.31	0.60
23:P:203:ILE:HG23	23:P:220:TYR:HD1	1.67	0.60
23:P:303:PHE:O	23:P:348:HIS:NE2	2.34	0.60
24:Q:409:TYR:HB2	25:R:399:GLN:HB2	1.83	0.60
24:Q:426:LEU:HD23	29:V:269:ARG:NH2	2.17	0.60
25:R:24:TYR:HH	25:R:248:SER:CB	2.15	0.60
26:S:472:HIS:CD2	27:T:271:GLU:HA	2.37	0.60
11:D:96:HIS:CE1	11:D:100:LEU:CD1	2.77	0.60
18:K:241:GLU:OE1	19:L:303:ARG:HD2	2.01	0.60
18:K:423:LYS:N	18:K:428:LYS:HZ1	1.99	0.60
19:L:277:ILE:HG23	19:L:324:ILE:HD12	1.83	0.60
21:N:761:ILE:CD1	21:N:904:VAL:N	2.63	0.60
22:O:199:LEU:HD11	22:O:205:ILE:HD13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:350:LEU:HD12	23:P:383:LEU:HD11	1.84	0.60
23:P:396:PRO:CB	24:Q:396:TRP:CZ3	2.80	0.60
25:R:63:TYR:CE2	25:R:94:PHE:CZ	2.90	0.60
26:S:455:GLU:HG2	27:T:256:LYS:NZ	2.16	0.60
27:T:181:LEU:HD23	27:T:181:LEU:C	2.22	0.60
28:U:65:VAL:HG22	30:W:89:THR:HG23	1.84	0.60
29:V:33:ALA:HA	29:V:68:VAL:HG12	1.82	0.60
29:V:261:LEU:HD13	29:V:280:LEU:HA	1.83	0.60
6:6:-8:PHE:CD2	6:6:-6:PRO:HD3	2.37	0.60
7:7:101:PRO:CA	7:7:124:LEU:HD11	2.31	0.60
12:E:157:HIS:CD2	12:E:170:LYS:CD	2.85	0.60
12:E:157:HIS:CD2	12:E:170:LYS:CE	2.84	0.60
16:I:82:LEU:HB2	33:Z:622:HIS:HE1	1.65	0.60
17:J:395:GLU:HG2	17:J:396:THR:HG23	1.83	0.60
19:L:370:LYS:HD3	19:L:374:PHE:CD2	2.37	0.60
21:N:530:GLU:HA	21:N:533:ASP:OD2	2.01	0.60
21:N:903:VAL:O	21:N:904:VAL:HB	2.02	0.60
22:O:116:ASN:CG	22:O:127:LEU:HB2	2.23	0.60
22:O:189:TYR:OH	22:O:227:ILE:HG21	2.02	0.60
23:P:299:LEU:CD1	23:P:311:TRP:CZ3	2.80	0.60
31:X:12:ALA:HB3	31:X:33:ILE:HB	1.84	0.60
33:Z:52:LEU:HB3	33:Z:67:SER:OG	2.02	0.60
33:Z:574:TYR:OH	33:Z:584:VAL:CG1	2.50	0.60
14:G:31:GLU:CD	14:G:168:ARG:HH12	2.05	0.59
15:H:107:LYS:CD	15:H:143:ALA:HB1	2.31	0.59
19:L:383:SER:HA	19:L:386:PHE:CE1	2.37	0.59
20:M:119:VAL:CG1	20:M:155:ILE:HD11	2.31	0.59
20:M:384:ASP:H	20:M:386:PHE:HE1	1.40	0.59
21:N:413:ALA:CB	21:N:452:LEU:HG	2.30	0.59
22:O:63:ASP:HA	22:O:66:VAL:CG2	2.31	0.59
22:O:373:TRP:HB3	28:U:200:LEU:HD13	1.83	0.59
23:P:93:ILE:CG2	23:P:124:VAL:HG21	2.31	0.59
23:P:101:MET:HE3	23:P:115:ARG:HE	1.66	0.59
23:P:333:ALA:CB	23:P:336:HIS:HD2	2.15	0.59
23:P:412:LEU:CD2	29:V:245:VAL:CA	2.76	0.59
25:R:175:ALA:HB2	25:R:213:TYR:HE2	1.67	0.59
25:R:209:ARG:HH12	25:R:243:LEU:CB	2.15	0.59
25:R:369:GLY:HA3	25:R:383:ARG:HH21	1.66	0.59
26:S:315:LYS:HE2	26:S:345:TYR:OH	2.02	0.59
31:X:12:ALA:HB3	31:X:33:ILE:HG21	1.82	0.59
1:1:38:HIS:CD2	1:1:67:THR:HG1	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:144:ASN:O	7:7:148:ARG:HG3	2.02	0.59
8:A:57:LYS:HE2	8:A:223:LEU:O	2.03	0.59
8:A:135:ARG:NH1	8:A:137:LEU:HD23	2.17	0.59
8:A:135:ARG:CG	14:G:124:LEU:HD22	2.32	0.59
9:B:162:THR:HA	9:B:172:LYS:NZ	2.17	0.59
12:E:85:ALA:HB2	12:E:140:VAL:HG21	1.84	0.59
13:F:224:ILE:HG22	13:F:226:ASP:OD2	2.01	0.59
19:L:290:ARG:HH11	19:L:298:ASP:HB3	1.67	0.59
19:L:358:LEU:HD11	19:L:362:LYS:HE3	1.84	0.59
22:O:226:LYS:O	22:O:227:ILE:HB	2.02	0.59
25:R:214:TYR:HD2	25:R:230:LEU:CG	2.08	0.59
26:S:223:LEU:O	26:S:259:TYR:CE1	2.55	0.59
26:S:425:ARG:NH1	27:T:152:LEU:O	2.32	0.59
29:V:238:LEU:HD11	29:V:242:LYS:HE3	1.83	0.59
33:Z:307:HIS:NE2	33:Z:341:TYR:CG	2.58	0.59
33:Z:307:HIS:CD2	33:Z:345:GLU:CD	2.73	0.59
33:Z:531:ALA:CA	33:Z:573:LEU:CD2	2.75	0.59
33:Z:611:THR:HG23	33:Z:749:GLY:HA3	1.84	0.59
1:1:61:TYR:CD1	8:A:106:TYR:HB2	2.37	0.59
21:N:204:SER:HB3	21:N:208:ARG:NH1	2.17	0.59
21:N:627:ILE:HG23	21:N:717:LEU:CD2	2.32	0.59
22:O:21:SER:HA	22:O:43:GLU:OE1	2.01	0.59
22:O:33:TYR:CD1	22:O:40:GLN:CB	2.77	0.59
23:P:308:LEU:HD23	23:P:369:LEU:CG	2.31	0.59
24:Q:4:PRO:O	24:Q:50:ARG:NH1	2.35	0.59
24:Q:9:GLU:CG	24:Q:13:ARG:HE	2.15	0.59
25:R:63:TYR:HH	25:R:92:ILE:C	2.03	0.59
25:R:167:LYS:HG3	25:R:194:VAL:HG22	1.83	0.59
27:T:11:LEU:HD22	27:T:30:ILE:HD13	1.84	0.59
29:V:251:TYR:HD1	29:V:254:ARG:NH2	2.00	0.59
33:Z:793:PHE:CE2	33:Z:830:LEU:HD22	2.37	0.59
5:5:15:ALA:CB	5:5:161:ILE:HD11	2.30	0.59
7:7:1:THR:N	7:7:33:ARG:HH12	1.99	0.59
11:D:184:PRO:HB2	11:D:185:PRO:HD2	1.83	0.59
16:I:361:ILE:O	16:I:365:HIS:ND1	2.22	0.59
22:O:15:ARG:C	22:O:16:MET:HG3	2.19	0.59
22:O:301:PHE:CD2	22:O:305:ILE:O	2.56	0.59
27:T:31:LYS:NZ	27:T:84:GLN:OE1	2.33	0.59
31:X:17:TYR:CE1	31:X:66:LEU:HD22	2.37	0.59
33:Z:246:CYS:O	33:Z:250:VAL:HG23	2.00	0.59
33:Z:748:LEU:HD13	33:Z:867:PHE:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:97:TYR:CZ	2:2:115:ALA:HB3	2.37	0.59
10:C:208:TYR:CE1	10:C:232:PRO:CB	2.85	0.59
12:E:209:GLU:HG3	15:H:406:LEU:HD22	1.83	0.59
18:K:123:LEU:H	18:K:146:LEU:HD23	1.67	0.59
22:O:1:MET:HG3	22:O:37:LEU:CD1	2.33	0.59
22:O:69:PHE:CZ	22:O:77:SER:CB	2.85	0.59
23:P:138:ARG:CG	23:P:141:LYS:NZ	2.65	0.59
25:R:403:LEU:HD21	28:U:278:ILE:HG21	1.84	0.59
26:S:341:SER:HB2	26:S:345:TYR:CE2	2.36	0.59
29:V:186:GLN:O	29:V:190:HIS:CD2	2.56	0.59
29:V:261:LEU:HD11	29:V:283:THR:HG21	1.83	0.59
30:W:8:LEU:HD11	30:W:113:PHE:CE2	2.37	0.59
30:W:65:PHE:CZ	30:W:98:LEU:HD23	2.37	0.59
30:W:103:ASN:HB3	30:W:106:GLN:NE2	2.17	0.59
30:W:146:GLU:O	30:W:147:ILE:HB	2.02	0.59
31:X:9:LYS:HE2	31:X:34:GLU:OE2	2.03	0.59
33:Z:103:TYR:HH	33:Z:140:LEU:HD12	1.68	0.59
33:Z:139:LEU:CD2	33:Z:161:ILE:HD12	2.31	0.59
4:4:3:ILE:HB	4:4:132:HIS:CD2	2.37	0.59
15:H:107:LYS:HD3	29:V:81:GLU:CD	2.23	0.59
22:O:290:LYS:HD2	22:O:336:LEU:HD21	1.84	0.59
24:Q:14:LEU:HG	24:Q:26:VAL:HG21	1.84	0.59
24:Q:275:ILE:CD1	24:Q:306:TYR:HD2	2.16	0.59
26:S:416:GLU:OE2	26:S:417:GLN:HG2	2.02	0.59
26:S:461:PHE:HE2	28:U:274:MET:CG	2.16	0.59
28:U:24:ARG:HH22	29:V:66:VAL:HG13	1.67	0.59
28:U:129:GLY:O	28:U:130:VAL:CB	2.51	0.59
31:X:75:TRP:NE1	31:X:77:PRO:HB3	2.16	0.59
3:3:111:PHE:HA	3:3:125:LYS:HZ3	1.68	0.59
12:E:121:LEU:HD21	13:F:126:ARG:NH2	2.18	0.59
16:I:132:ILE:HB	16:I:138:LYS:NZ	2.17	0.59
17:J:234:PHE:CZ	17:J:238:ARG:HD2	2.37	0.59
20:M:337:LEU:O	20:M:338:LEU:HD23	2.02	0.59
21:N:633:GLY:O	21:N:634:LEU:CB	2.50	0.59
25:R:335:ARG:CZ	25:R:371:PHE:CA	2.79	0.59
26:S:343:LEU:HB3	26:S:344:PRO:HD3	1.84	0.59
16:I:398:GLU:C	17:J:312:ARG:NH1	2.56	0.59
21:N:365:PHE:HZ	21:N:406:TYR:HB2	1.68	0.59
22:O:38:TRP:CE3	22:O:54:SER:CB	2.85	0.59
22:O:71:ASP:OD1	30:W:23:ARG:CB	2.47	0.59
22:O:117:ASN:ND2	22:O:170:SER:HB2	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:157:LEU:HD22	22:O:171:PHE:CD1	2.37	0.59
23:P:263:HIS:CE1	23:P:328:ALA:HB2	2.38	0.59
25:R:335:ARG:CZ	25:R:371:PHE:HA	2.27	0.59
28:U:90:ILE:HA	28:U:116:ASN:HD21	1.68	0.59
31:X:85:ARG:HD2	31:X:85:ARG:C	2.23	0.59
33:Z:740:VAL:CG1	33:Z:761:PHE:CE1	2.79	0.59
33:Z:745:LEU:CD2	33:Z:878:LEU:HG	2.32	0.59
3:3:79:THR:HG23	3:3:115:PHE:HZ	1.67	0.59
6:6:147:PHE:HD2	6:6:163:LEU:HD12	1.66	0.59
8:A:14:ARG:HG3	8:A:15:HIS:CD2	2.37	0.59
9:B:10:THR:HG23	9:B:20:GLN:OE1	2.03	0.59
17:J:137:MET:SD	17:J:229:MET:HE3	2.43	0.59
18:K:67:TYR:CZ	21:N:572:LEU:HD22	2.38	0.59
18:K:248:GLY:O	18:K:251:PRO:HD2	2.02	0.59
22:O:33:TYR:CE1	22:O:40:GLN:CD	2.75	0.59
22:O:199:LEU:HA	22:O:203:THR:CB	2.33	0.59
25:R:399:GLN:NE2	25:R:403:LEU:CD2	2.65	0.59
25:R:403:LEU:HD23	28:U:278:ILE:HD13	1.84	0.59
26:S:377:TYR:CD1	27:T:133:ILE:HD11	2.38	0.59
33:Z:457:ILE:HD11	33:Z:902:TYR:HB3	1.84	0.59
12:E:109:VAL:HG12	12:E:156:PHE:CE1	2.35	0.59
12:E:143:LEU:CG	12:E:155:LEU:HD11	2.32	0.59
14:G:89:ASN:ND2	14:G:90:ARG:HH22	2.00	0.59
17:J:192:GLY:HA3	18:K:330:ARG:NH1	2.18	0.59
17:J:258:VAL:CA	18:K:280:LYS:HD2	2.32	0.59
19:L:86:LYS:O	19:L:90:LYS:HG3	2.03	0.59
21:N:641:LEU:CB	21:N:660:LEU:HD21	2.33	0.59
21:N:738:GLN:HG2	21:N:741:TYR:HD2	1.65	0.59
24:Q:74:LEU:HD21	24:Q:104:PHE:HZ	1.66	0.59
25:R:176:ARG:CG	25:R:243:LEU:HD21	2.32	0.59
26:S:269:GLU:HB3	26:S:299:LYS:NZ	2.18	0.59
5:5:7:ARG:NH2	5:5:125:ASP:CG	2.53	0.58
7:7:70:ASN:HD21	13:F:107:ARG:HG3	1.68	0.58
12:E:17:PRO:HA	13:F:24:TYR:CG	2.38	0.58
14:G:201:LEU:HD12	14:G:204:GLU:OE1	2.03	0.58
17:J:141:LYS:CG	17:J:209:LYS:HE3	2.33	0.58
18:K:140:HIS:CG	18:K:147:VAL:CG2	2.86	0.58
19:L:370:LYS:HE2	19:L:410:ILE:CG2	2.33	0.58
20:M:371:ASP:OD1	20:M:373:ASP:HB2	2.03	0.58
24:Q:104:PHE:HB3	24:Q:114:GLN:HE22	1.68	0.58
24:Q:236:PHE:CZ	24:Q:269:LYS:HD3	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:33:LEU:HD23	25:R:33:LEU:C	2.23	0.58
29:V:86:VAL:HG13	29:V:90:LYS:HE3	1.83	0.58
33:Z:138:ARG:HG2	33:Z:157:LEU:CB	2.33	0.58
33:Z:433:LEU:HD13	33:Z:473:LEU:CD2	2.32	0.58
7:7:200:PHE:CE2	7:7:202:LYS:CG	2.85	0.58
9:B:212:ALA:HB2	9:B:237:LYS:HG3	1.84	0.58
11:D:215:VAL:HG22	11:D:221:ILE:HG12	1.85	0.58
15:H:429:PHE:CE2	15:H:446:ALA:HA	2.38	0.58
17:J:170:HIS:NE2	17:J:172:GLU:HB3	2.17	0.58
19:L:263:ILE:HD12	19:L:307:GLU:OE1	2.02	0.58
21:N:110:VAL:HG13	21:N:159:GLU:HB3	1.85	0.58
22:O:40:GLN:HE21	22:O:58:ARG:NH2	2.01	0.58
22:O:169:ASN:ND2	22:O:195:TYR:CE2	2.71	0.58
24:Q:387:TYR:CE1	24:Q:402:THR:HG23	2.38	0.58
25:R:60:ALA:HB2	25:R:102:LEU:CD1	2.33	0.58
25:R:175:ALA:CB	25:R:213:TYR:CE2	2.86	0.58
29:V:91:MET:O	29:V:95:LEU:HG	2.03	0.58
31:X:64:ILE:O	31:X:65:SER:OG	2.18	0.58
33:Z:824:ASN:CG	33:Z:825:ALA:H	2.05	0.58
5:5:111:THR:CG2	5:5:113:TYR:CE2	2.87	0.58
6:6:146:ASN:O	6:6:163:LEU:HD13	2.02	0.58
7:7:7:LYS:HE2	7:7:132:PRO:HA	1.85	0.58
8:A:220:LYS:CD	8:A:242:GLU:N	2.62	0.58
9:B:162:THR:HA	9:B:172:LYS:HZ2	1.67	0.58
15:H:277:SER:O	15:H:280:VAL:N	2.36	0.58
15:H:390:ARG:HA	15:H:404:TRP:HE1	1.65	0.58
18:K:223:VAL:HG11	18:K:270:PHE:CE1	2.38	0.58
19:L:393:ASN:O	19:L:397:GLU:HG2	2.03	0.58
21:N:253:LEU:HD23	21:N:257:ILE:HD12	1.84	0.58
21:N:890:PHE:CE2	21:N:914:VAL:HG22	2.38	0.58
22:O:41:LEU:O	22:O:41:LEU:CD2	2.49	0.58
22:O:372:GLU:HG3	22:O:376:GLN:NE2	2.18	0.58
23:P:307:GLU:HG3	23:P:310:ARG:HH12	1.67	0.58
28:U:94:HIS:HE2	28:U:120:LEU:CD2	2.09	0.58
30:W:65:PHE:HZ	30:W:98:LEU:HD23	1.67	0.58
31:X:126:ILE:O	31:X:129:LEU:HB2	2.02	0.58
33:Z:815:MET:CE	33:Z:833:GLN:HG2	2.33	0.58
1:1:38:HIS:CD2	1:1:67:THR:OG1	2.56	0.58
2:2:8:PHE:CE2	2:2:12:VAL:N	2.71	0.58
3:3:87:TYR:CD1	3:3:90:ARG:CZ	2.86	0.58
8:A:220:LYS:NZ	8:A:242:GLU:CG	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:147:HIS:ND1	12:E:153:TYR:CG	2.68	0.58
17:J:253:ILE:HG22	17:J:295:ASN:HD21	1.69	0.58
19:L:164:ASP:OD2	19:L:261:ARG:NH2	2.33	0.58
24:Q:74:LEU:CD2	24:Q:104:PHE:CZ	2.74	0.58
24:Q:249:LEU:C	24:Q:250:THR:HG22	2.19	0.58
25:R:79:LEU:HD22	25:R:93:LYS:HE2	1.83	0.58
26:S:152:LEU:O	26:S:156:VAL:HG23	2.04	0.58
26:S:153:GLU:CA	26:S:191:HIS:CE1	2.86	0.58
31:X:75:TRP:HE1	31:X:77:PRO:HB3	1.69	0.58
33:Z:410:THR:O	33:Z:415:MET:HE1	2.04	0.58
33:Z:793:PHE:CD2	33:Z:830:LEU:HB2	2.39	0.58
10:C:228:LYS:CE	10:C:230:PHE:CZ	2.86	0.58
16:I:289:THR:HG22	16:I:290:LYS:N	2.18	0.58
16:I:398:GLU:CB	17:J:312:ARG:NH1	2.67	0.58
17:J:116:ARG:HE	17:J:119:SER:HB2	1.68	0.58
21:N:726:ASP:OD2	21:N:728:LYS:HB2	2.04	0.58
30:W:4:GLU:OE2	30:W:40:LYS:HE2	2.01	0.58
16:I:310:LEU:HD11	16:I:337:ALA:C	2.22	0.58
19:L:157:ARG:HH22	20:M:113:VAL:CG2	2.17	0.58
22:O:266:PHE:CE1	22:O:270:ILE:CG2	2.82	0.58
22:O:380:LEU:CD2	27:T:258:ASN:HD21	2.17	0.58
23:P:303:PHE:CE1	23:P:345:VAL:HG22	2.38	0.58
28:U:302:GLN:NE2	28:U:305:ARG:NH2	2.42	0.58
29:V:157:ARG:NH1	29:V:197:TYR:CE2	2.70	0.58
30:W:26:PHE:CZ	30:W:30:ILE:HD11	2.38	0.58
31:X:125:MET:O	31:X:128:VAL:HG12	2.04	0.58
32:Y:83:ARG:O	32:Y:87:GLU:HG3	2.03	0.58
33:Z:888:LEU:HD12	33:Z:901:PHE:CD1	2.39	0.58
7:7:189:LEU:CB	7:7:204:LEU:HD12	2.34	0.58
13:F:165:SER:HB3	13:F:169:LYS:HE3	1.84	0.58
16:I:414:GLU:HG3	16:I:418:GLN:NE2	2.19	0.58
17:J:285:SER:HB3	17:J:288:ILE:HD12	1.85	0.58
18:K:310:THR:HB	18:K:313:LYS:CE	2.33	0.58
19:L:254:LYS:HG3	20:M:256:ILE:HG12	1.86	0.58
21:N:321:LEU:HG	21:N:323:GLY:N	2.12	0.58
22:O:80:LYS:HZ1	22:O:121:ASP:CG	2.01	0.58
27:T:169:GLN:HG3	27:T:174:PHE:HB2	1.86	0.58
33:Z:827:LEU:CG	33:Z:831:LEU:HG	2.26	0.58
13:F:98:VAL:CG1	13:F:99:PHE:CD1	2.87	0.58
17:J:134:VAL:HG12	18:K:255:ARG:HH22	1.68	0.58
20:M:135:VAL:HG11	20:M:155:ILE:HG22	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:361:ASN:OD1	21:N:399:PHE:CZ	2.56	0.58
21:N:913:PRO:O	21:N:914:VAL:HB	2.04	0.58
24:Q:35:SER:OG	24:Q:47:ASP:HB3	2.03	0.58
24:Q:409:TYR:HB2	25:R:399:GLN:CB	2.34	0.58
25:R:175:ALA:HB1	25:R:213:TYR:CE2	2.39	0.58
26:S:293:ILE:HD13	26:S:316:LEU:HG	1.84	0.58
29:V:60:ASP:O	29:V:61:TYR:HD2	1.86	0.58
5:5:111:THR:HG21	5:5:113:TYR:CZ	2.39	0.58
6:6:96:TYR:CZ	6:6:98:VAL:CG2	2.87	0.58
7:7:13:ILE:HG22	7:7:169:ILE:HG13	1.85	0.58
7:7:187:PHE:HE1	7:7:205:GLN:C	2.07	0.58
10:C:4:ARG:HH22	13:F:8:GLY:HA3	1.67	0.58
15:H:357:ARG:NH2	16:I:290:LYS:O	2.32	0.58
16:I:222:TYR:CD1	16:I:329:ASN:HA	2.38	0.58
19:L:95:ILE:HD13	20:M:68:LYS:HB2	1.85	0.58
21:N:270:LEU:CD1	21:N:290:LEU:HD22	2.33	0.58
21:N:410:LEU:HA	21:N:452:LEU:HD21	1.86	0.58
22:O:26:PHE:CE1	22:O:43:GLU:CD	2.77	0.58
22:O:338:LYS:HE3	22:O:353:VAL:HG21	1.86	0.58
23:P:112:LEU:HD22	23:P:146:ILE:HG21	1.86	0.58
23:P:311:TRP:NE1	23:P:315:GLN:HG3	2.19	0.58
30:W:17:ARG:HG2	30:W:17:ARG:O	2.04	0.58
30:W:163:ASN:HB3	30:W:164:PRO:HD2	1.85	0.58
33:Z:89:LEU:CD1	33:Z:125:THR:HG21	2.30	0.58
33:Z:138:ARG:HG2	33:Z:157:LEU:HB3	1.86	0.58
2:2:9:ASN:ND2	2:2:146:LEU:H	2.00	0.58
4:4:26:VAL:HG11	4:4:29:ASP:HB2	1.85	0.58
5:5:12:ILE:HG13	5:5:110:PRO:HB3	1.86	0.58
12:E:51:GLU:HG3	12:E:216:ASN:O	2.04	0.58
20:M:221:TYR:HE1	20:M:348:GLU:HB2	1.65	0.58
21:N:768:ILE:CG2	21:N:917:ILE:O	2.51	0.58
23:P:115:ARG:HH11	23:P:146:ILE:HG13	1.58	0.58
24:Q:275:ILE:HD11	24:Q:306:TYR:HD2	1.69	0.58
24:Q:318:LEU:HD13	24:Q:335:PHE:CZ	2.38	0.58
25:R:70:TYR:HA	25:R:73:ASN:ND2	2.19	0.58
25:R:209:ARG:NH2	25:R:240:SER:HB3	2.18	0.58
26:S:378:GLN:HB3	26:S:382:ARG:HH12	1.68	0.58
27:T:24:GLU:HA	27:T:27:LEU:CD1	2.34	0.58
33:Z:117:ASP:O	33:Z:120:SER:OG	2.20	0.58
33:Z:151:HIS:ND1	33:Z:152:GLU:CA	2.65	0.58
2:2:8:PHE:CZ	2:2:11:GLY:C	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:101:ILE:HD11	6:6:130:GLY:HA3	1.85	0.57
9:B:6:SER:CB	11:D:4:TYR:CD2	2.86	0.57
15:H:390:ARG:CA	15:H:404:TRP:NE1	2.67	0.57
17:J:250:ILE:HG21	17:J:292:MET:HE1	1.86	0.57
18:K:157:SER:H	19:L:120:LYS:NZ	2.02	0.57
18:K:191:PRO:HG3	18:K:198:TYR:OH	2.04	0.57
22:O:48:PHE:CE1	22:O:81:TYR:CD1	2.92	0.57
26:S:241:PHE:CE2	26:S:249:SER:OG	2.57	0.57
28:U:38:LEU:HD23	28:U:89:LEU:HA	1.84	0.57
28:U:167:GLU:O	28:U:171:VAL:HG23	2.04	0.57
29:V:57:PHE:CE1	29:V:135:ARG:HG3	2.38	0.57
30:W:2:VAL:CG1	30:W:4:GLU:OE1	2.51	0.57
31:X:66:LEU:HD11	31:X:97:TYR:CE1	2.39	0.57
1:1:-4:VAL:HG23	1:1:49:ALA:N	2.18	0.57
8:A:225:VAL:CG1	8:A:236:LEU:HD12	2.34	0.57
9:B:122:THR:HG1	9:B:129:PRO:HG3	1.69	0.57
10:C:147:GLN:CB	10:C:149:TYR:HE1	2.08	0.57
21:N:408:LEU:CD1	21:N:412:TYR:HE1	2.13	0.57
23:P:371:LEU:HB3	23:P:375:GLN:CD	2.24	0.57
25:R:78:ASP:OD2	25:R:94:PHE:HE1	1.87	0.57
26:S:428:ARG:NH2	27:T:191:LYS:HD2	2.19	0.57
28:U:66:TRP:CZ3	28:U:68:LEU:N	2.72	0.57
33:Z:89:LEU:HD13	33:Z:122:LEU:HA	1.86	0.57
33:Z:795:THR:HG22	33:Z:799:PHE:CD2	2.39	0.57
5:5:75:SER:HB2	5:5:108:GLU:OE2	2.04	0.57
7:7:68:TYR:HB3	14:G:92:ARG:CZ	2.33	0.57
9:B:75:TYR:CD1	9:B:82:TYR:CZ	2.92	0.57
11:D:118:GLN:NE2	12:E:83:ALA:HB1	2.19	0.57
13:F:51:ARG:HD3	20:M:430:VAL:CG1	2.26	0.57
14:G:91:GLY:HA2	14:G:115:LEU:HD21	1.86	0.57
14:G:98:PHE:CE1	14:G:106:ILE:HA	2.39	0.57
16:I:172:LYS:NZ	17:J:278:GLN:HA	2.19	0.57
21:N:110:VAL:CG1	21:N:159:GLU:HB3	2.34	0.57
22:O:199:LEU:HD23	22:O:199:LEU:C	2.24	0.57
22:O:270:ILE:HB	22:O:274:ILE:HG21	1.86	0.57
23:P:322:LEU:O	23:P:341:LEU:HD11	2.04	0.57
25:R:113:LEU:CD2	25:R:137:LEU:HD13	2.35	0.57
25:R:161:ALA:O	25:R:162:ILE:CG2	2.52	0.57
28:U:276:ILE:HG21	29:V:295:VAL:CG2	2.34	0.57
29:V:203:TYR:O	29:V:204:HIS:HD2	1.82	0.57
31:X:10:PHE:O	31:X:33:ILE:CG2	2.47	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:72:LYS:HE2	33:Z:117:ASP:OD2	2.05	0.57
6:6:147:PHE:CE2	6:6:164:LYS:HB2	2.39	0.57
17:J:372:GLU:OE1	24:Q:196:ALA:HB1	2.04	0.57
18:K:212:TYR:CZ	18:K:321:ALA:CB	2.82	0.57
21:N:83:LEU:HD22	21:N:132:LYS:HB3	1.85	0.57
22:O:55:THR:OG1	22:O:94:GLU:HG3	2.04	0.57
22:O:114:GLN:O	22:O:116:ASN:ND2	2.36	0.57
24:Q:131:VAL:HG12	24:Q:134:LYS:NZ	2.19	0.57
25:R:175:ALA:HB1	25:R:213:TYR:CZ	2.38	0.57
26:S:378:GLN:HB3	26:S:382:ARG:NH1	2.19	0.57
31:X:93:SER:CA	31:X:96:ARG:HE	2.16	0.57
18:K:242:PHE:HB2	18:K:295:ILE:HD11	1.85	0.57
18:K:268:ILE:HG23	18:K:315:ILE:HD12	1.86	0.57
21:N:256:GLN:OE1	21:N:904:VAL:HG11	2.05	0.57
21:N:408:LEU:HD12	21:N:412:TYR:CE1	2.40	0.57
21:N:514:THR:HG22	21:N:546:LEU:CD1	2.16	0.57
21:N:768:ILE:HB	21:N:917:ILE:O	2.04	0.57
22:O:23:HIS:ND1	22:O:24:PRO:HD2	2.20	0.57
23:P:127:GLU:C	23:P:136:ARG:NH1	2.58	0.57
23:P:203:ILE:CG2	23:P:220:TYR:HD1	2.17	0.57
25:R:335:ARG:NH1	25:R:371:PHE:CA	2.66	0.57
9:B:96:SER:HA	9:B:100:ILE:HD12	1.86	0.57
16:I:252:LEU:N	16:I:253:ILE:N	2.53	0.57
21:N:669:GLU:CG	21:N:784:TYR:N	2.65	0.57
22:O:72:LYS:HD2	22:O:73:ILE:HD12	1.85	0.57
24:Q:23:ALA:HB1	24:Q:27:TYR:CE2	2.40	0.57
25:R:134:TRP:HZ3	25:R:137:LEU:HD22	1.69	0.57
25:R:276:LEU:HD13	25:R:289:ILE:CG2	2.34	0.57
33:Z:337:GLU:HA	33:Z:340:LEU:CD2	2.33	0.57
33:Z:758:LEU:HD22	33:Z:787:ASP:CG	2.23	0.57
9:B:148:TYR:CE1	9:B:158:PRO:HB3	2.39	0.57
10:C:115:LEU:HD12	10:C:137:TYR:OH	2.04	0.57
16:I:252:LEU:O	16:I:254:GLN:CB	2.53	0.57
17:J:324:ARG:HE	17:J:350:MET:HB2	1.68	0.57
18:K:142:HIS:HB3	29:V:145:GLN:HE21	1.70	0.57
20:M:174:GLU:OE2	20:M:175:LYS:HG3	2.03	0.57
20:M:246:LEU:HD11	20:M:251:LEU:CD2	2.35	0.57
21:N:761:ILE:CB	21:N:905:LEU:H	2.18	0.57
33:Z:72:LYS:HZ1	33:Z:114:SER:HA	1.69	0.57
33:Z:394:TYR:CZ	33:Z:859:LYS:CG	2.88	0.57
10:C:120:GLN:HE22	11:D:127:ARG:HH22	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:407:ILE:HD11	15:H:443:PHE:CB	2.35	0.57
16:I:414:GLU:CG	16:I:418:GLN:HE21	2.17	0.57
21:N:129:ILE:CG2	21:N:133:LEU:HD23	2.35	0.57
21:N:540:LEU:HD21	21:N:574:VAL:HG21	1.86	0.57
27:T:28:PRO:HB2	27:T:29:PRO:HD3	1.87	0.57
28:U:271:ASP:HA	28:U:274:MET:HE3	1.85	0.57
33:Z:319:THR:O	33:Z:323:TYR:HD1	1.88	0.57
33:Z:422:ILE:HD11	33:Z:439:TYR:HE2	1.69	0.57
4:4:102:LEU:HG	4:4:132:HIS:NE2	2.20	0.57
6:6:172:ILE:HD11	6:6:197:ILE:HD11	1.87	0.57
10:C:42:ASP:OD1	10:C:218:LYS:HD2	2.04	0.57
16:I:353:PRO:HD2	16:I:387:LEU:O	2.04	0.57
16:I:426:ASN:HB3	17:J:313:LYS:HZ2	1.70	0.57
18:K:55:GLU:O	18:K:59:GLU:HG3	2.05	0.57
19:L:198:GLU:CD	19:L:202:LYS:HZ3	2.07	0.57
19:L:309:LEU:CD1	19:L:342:ARG:HD2	2.35	0.57
21:N:50:TYR:OH	21:N:84:ALA:CB	2.53	0.57
21:N:365:PHE:CZ	21:N:406:TYR:HB2	2.40	0.57
22:O:95:SER:C	22:O:98:TYR:CE2	2.78	0.57
22:O:185:PHE:CD2	22:O:223:LEU:CD1	2.69	0.57
22:O:210:ARG:NH2	22:O:237:PRO:O	2.38	0.57
24:Q:9:GLU:HG2	24:Q:13:ARG:HE	1.70	0.57
27:T:89:TYR:CD2	27:T:90:PHE:HD1	2.22	0.57
31:X:87:PHE:HB2	31:X:99:PHE:HB3	1.81	0.57
6:6:105:LEU:HD23	6:6:111:GLY:HA2	1.86	0.57
10:C:174:THR:HA	10:C:177:GLN:NE2	2.17	0.57
13:F:88:LEU:HD21	13:F:112:LEU:HD21	1.87	0.57
13:F:164:ARG:HD3	20:M:428:LYS:CD	2.35	0.57
15:H:392:HIS:CE1	15:H:420:ARG:CG	2.87	0.57
15:H:431:ILE:CD1	16:I:207:LEU:HB3	2.34	0.57
16:I:118:ALA:O	16:I:130:VAL:HG22	2.05	0.57
21:N:433:THR:O	21:N:434:SER:CB	2.53	0.57
22:O:77:SER:HA	22:O:80:LYS:HG2	1.78	0.57
27:T:169:GLN:NE2	27:T:173:GLU:H	2.02	0.57
28:U:106:ILE:HG22	28:U:110:PHE:HE2	1.68	0.57
30:W:91:LEU:HD21	30:W:157:PHE:HZ	1.69	0.57
33:Z:888:LEU:CD1	33:Z:901:PHE:CD1	2.88	0.57
4:4:43:MET:O	4:4:45:PHE:CE1	2.58	0.56
14:G:39:ILE:HD12	14:G:195:ALA:HB2	1.87	0.56
14:G:217:TRP:CH2	14:G:234:LEU:HD13	2.41	0.56
16:I:362:LEU:HD21	16:I:384:LYS:HZ1	1.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:270:LEU:O	21:N:274:VAL:HG23	2.04	0.56
21:N:299:TYR:CZ	21:N:303:LEU:HD11	2.40	0.56
22:O:196:LEU:CD1	22:O:210:ARG:HH12	2.18	0.56
25:R:80:GLU:CD	25:R:99:TYR:HH	2.08	0.56
26:S:184:TRP:O	26:S:188:TYR:HD2	1.84	0.56
26:S:452:TYR:O	28:U:274:MET:HE1	2.05	0.56
28:U:15:LEU:O	28:U:19:LEU:HG	2.04	0.56
29:V:53:MET:HE2	29:V:65:VAL:HG11	1.87	0.56
33:Z:72:LYS:NZ	33:Z:114:SER:HA	2.19	0.56
33:Z:793:PHE:CE1	33:Z:830:LEU:HD22	2.38	0.56
12:E:114:GLN:NE2	12:E:118:ASP:OD1	2.38	0.56
18:K:253:MET:O	18:K:257:VAL:HG23	2.05	0.56
21:N:174:LEU:HA	21:N:182:ASN:HD22	1.68	0.56
25:R:205:GLU:HG2	25:R:206:ARG:NH2	2.20	0.56
26:S:163:VAL:CG1	26:S:184:TRP:CH2	2.88	0.56
31:X:14:VAL:HG12	31:X:15:CYS:N	2.20	0.56
33:Z:740:VAL:HG13	33:Z:761:PHE:HE1	1.61	0.56
1:1:80:SER:OG	14:G:102:TYR:HA	2.04	0.56
7:7:8:TYR:CZ	7:7:11:GLY:HA3	2.40	0.56
10:C:156:ASN:HD21	11:D:78:LEU:HD12	1.70	0.56
11:D:159:TRP:CD1	11:D:161:ALA:C	2.77	0.56
11:D:205:THR:HG21	11:D:209:ASN:CB	2.21	0.56
12:E:157:HIS:CD2	12:E:170:LYS:NZ	2.73	0.56
13:F:84:LEU:O	13:F:88:LEU:HG	2.04	0.56
15:H:340:LEU:HD23	15:H:370:ARG:NH1	2.20	0.56
15:H:425:GLU:O	15:H:429:PHE:CD2	2.59	0.56
17:J:258:VAL:O	17:J:259:GLU:HB3	2.04	0.56
18:K:349:ARG:HH11	18:K:383:ILE:HD11	1.70	0.56
18:K:420:THR:HG22	18:K:423:LYS:HD3	1.87	0.56
19:L:249:SER:O	19:L:252:VAL:N	2.38	0.56
19:L:361:PHE:HE2	19:L:376:PHE:HD1	1.54	0.56
23:P:319:GLU:HG3	23:P:319:GLU:O	2.05	0.56
24:Q:139:ILE:HD11	24:Q:165:PHE:CE2	2.38	0.56
25:R:369:GLY:CA	25:R:383:ARG:HH21	2.19	0.56
26:S:163:VAL:CG1	26:S:184:TRP:CZ2	2.89	0.56
26:S:212:SER:O	26:S:216:LYS:HG3	2.04	0.56
26:S:322:LEU:HA	26:S:327:ILE:CG2	2.36	0.56
27:T:169:GLN:HE21	27:T:173:GLU:H	1.52	0.56
29:V:45:VAL:HG12	29:V:46:PRO:HA	1.84	0.56
30:W:87:MET:HE1	30:W:112:ALA:HB1	1.85	0.56
31:X:46:TRP:O	31:X:68:LEU:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:357:ILE:CG2	33:Z:361:HIS:CE1	2.88	0.56
33:Z:789:GLN:NE2	33:Z:791:LYS:HB2	2.21	0.56
1:1:109:GLU:HB3	1:1:111:TYR:CE1	2.40	0.56
11:D:67:ILE:HD11	11:D:73:LEU:HB2	1.87	0.56
18:K:244:HIS:CB	19:L:256:ILE:HD13	2.28	0.56
19:L:389:ALA:HB2	20:M:339:ARG:HH11	1.71	0.56
21:N:666:GLN:HE22	21:N:784:TYR:HB2	1.69	0.56
22:O:48:PHE:HZ	22:O:77:SER:HB3	1.69	0.56
22:O:226:LYS:O	22:O:227:ILE:CB	2.53	0.56
22:O:352:TRP:HB3	28:U:235:LEU:HD21	1.88	0.56
26:S:144:LEU:HD22	26:S:155:LEU:HD13	1.88	0.56
26:S:274:PHE:CE2	26:S:278:LYS:NZ	2.73	0.56
28:U:165:GLU:H	29:V:42:ARG:NH1	2.03	0.56
31:X:73:THR:CG2	31:X:129:LEU:HD22	2.22	0.56
33:Z:740:VAL:O	33:Z:761:PHE:CZ	2.59	0.56
6:6:-8:PHE:CE2	6:6:-6:PRO:N	2.73	0.56
9:B:139:HIS:ND1	9:B:145:PHE:CD1	2.73	0.56
10:C:4:ARG:NH2	13:F:8:GLY:HA3	2.19	0.56
13:F:207:THR:HG21	13:F:210:ASN:HB2	1.87	0.56
15:H:280:VAL:HB	16:I:304:ARG:HH21	1.69	0.56
16:I:312:GLN:O	16:I:316:PHE:CD2	2.58	0.56
17:J:364:GLU:OE2	18:K:335:ASP:HB3	2.05	0.56
18:K:99:PHE:HZ	18:K:102:PRO:CD	2.17	0.56
19:L:252:VAL:HG12	19:L:252:VAL:O	2.05	0.56
20:M:309:LEU:HD13	20:M:336:ALA:HB1	1.87	0.56
21:N:510:HIS:HB2	21:N:513:ILE:HD12	1.87	0.56
21:N:585:ARG:NH2	21:N:616:HIS:CD2	2.74	0.56
22:O:86:LEU:HD13	22:O:98:TYR:CD2	2.39	0.56
22:O:299:THR:N	22:O:365:LYS:NZ	2.50	0.56
22:O:352:TRP:CG	28:U:235:LEU:HD21	2.40	0.56
24:Q:71:LYS:HE2	24:Q:75:ARG:HD3	1.87	0.56
33:Z:572:ILE:CG1	33:Z:882:LEU:HD23	2.35	0.56
8:A:70:SER:N	14:G:157:TRP:HZ3	2.03	0.56
12:E:51:GLU:OE2	12:E:208:MET:SD	2.64	0.56
16:I:278:ILE:HG21	16:I:325:ILE:HD12	1.88	0.56
16:I:385:ASP:O	16:I:386:ASP:HB2	2.04	0.56
17:J:258:VAL:O	18:K:280:LYS:CD	2.54	0.56
19:L:198:GLU:OE2	19:L:202:LYS:NZ	2.31	0.56
22:O:79:VAL:CG2	22:O:124:ASP:HA	2.34	0.56
22:O:172:TYR:CZ	22:O:194:LEU:HD13	2.41	0.56
22:O:189:TYR:OH	22:O:227:ILE:CG2	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:227:CYS:O	24:Q:334:HIS:CD2	2.59	0.56
24:Q:230:LYS:O	24:Q:231:ASP:HB2	2.06	0.56
29:V:258:GLU:O	29:V:262:THR:HG23	2.06	0.56
33:Z:197:LYS:O	33:Z:201:LEU:HG	2.05	0.56
33:Z:552:GLU:O	33:Z:553:ARG:CB	2.53	0.56
1:1:-4:VAL:HG21	1:1:49:ALA:HB3	1.87	0.56
6:6:89:TYR:CD1	6:6:92:ARG:HD3	2.40	0.56
17:J:254:GLY:O	18:K:330:ARG:HD2	2.06	0.56
18:K:332:GLY:O	18:K:333:ARG:NH1	2.34	0.56
25:R:50:VAL:O	25:R:54:ILE:HG23	2.06	0.56
33:Z:532:HIS:O	33:Z:535:VAL:HG23	2.05	0.56
2:2:36:ARG:NH1	9:B:222:LEU:O	2.38	0.56
2:2:220:ILE:HG22	3:3:186:VAL:CG2	2.36	0.56
5:5:8:PHE:CZ	5:5:179:HIS:NE2	2.74	0.56
12:E:20:ARG:NE	12:E:25:GLU:HG2	2.20	0.56
13:F:51:ARG:NH1	20:M:430:VAL:CG2	2.68	0.56
13:F:113:CYS:HB2	14:G:85:ARG:CD	2.36	0.56
13:F:173:GLU:HG3	14:G:57:LEU:HD11	1.87	0.56
15:H:142:ASP:O	15:H:143:ALA:HB3	2.05	0.56
15:H:202:GLU:HG2	15:H:203:LYS:HG3	1.87	0.56
15:H:449:LYS:NZ	16:I:346:ARG:NH1	2.53	0.56
18:K:100:LEU:HB2	18:K:109:ILE:HG23	1.88	0.56
19:L:361:PHE:CZ	19:L:365:THR:HG21	2.41	0.56
19:L:364:HIS:ND1	19:L:391:ILE:CG2	2.69	0.56
21:N:190:LEU:CD1	21:N:224:THR:HG23	2.28	0.56
22:O:106:PHE:CE2	22:O:109:LEU:HB2	2.40	0.56
23:P:119:ILE:O	23:P:126:THR:CG2	2.54	0.56
23:P:306:ASN:ND2	23:P:349:ASN:HB2	2.20	0.56
25:R:218:CYS:SG	25:R:226:GLU:HG3	2.45	0.56
25:R:363:PHE:HD1	32:Y:78:LYS:HD3	1.70	0.56
26:S:380:CYS:O	26:S:384:ARG:HG3	2.06	0.56
27:T:261:GLU:OE2	29:V:296:LEU:O	2.24	0.56
28:U:24:ARG:NE	29:V:100:ARG:HH12	2.02	0.56
28:U:283:ARG:NH1	29:V:258:GLU:HG3	2.21	0.56
29:V:51:GLY:N	29:V:108:TYR:CZ	2.74	0.56
31:X:28:PRO:CA	31:X:57:VAL:HG21	2.35	0.56
33:Z:297:VAL:HG11	33:Z:310:LEU:CD1	2.35	0.56
33:Z:797:THR:HG23	33:Z:833:GLN:CD	2.27	0.56
2:2:103:VAL:HG11	2:2:180:ILE:HA	1.88	0.56
5:5:76:VAL:CG1	5:5:113:TYR:CD2	2.84	0.56
8:A:133:TYR:CD1	9:B:2:THR:HA	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:27:GLU:O	10:C:31:HIS:HD2	1.88	0.56
13:F:51:ARG:CD	20:M:430:VAL:HG11	2.28	0.56
14:G:203:HIS:CD2	14:G:211:PHE:CD1	2.94	0.56
15:H:282:LYS:HG3	16:I:262:ARG:HE	1.71	0.56
17:J:255:SER:HA	18:K:304:ASP:OD2	2.06	0.56
18:K:106:ASN:O	18:K:121:ARG:HG3	2.06	0.56
20:M:220:MET:HE2	20:M:324:LEU:CD1	2.31	0.56
22:O:30:GLU:CB	22:O:40:GLN:HE22	2.13	0.56
22:O:70:TYR:CE1	22:O:75:GLN:CG	2.87	0.56
22:O:72:LYS:HD2	22:O:73:ILE:CD1	2.36	0.56
24:Q:20:TYR:HE2	24:Q:68:MET:CG	2.12	0.56
24:Q:75:ARG:NE	24:Q:113:ASP:HB3	2.19	0.56
24:Q:297:ASP:CB	24:Q:321:TYR:CE1	2.89	0.56
27:T:89:TYR:O	27:T:90:PHE:CG	2.58	0.56
27:T:229:VAL:HG11	27:T:234:TYR:CE2	2.40	0.56
28:U:92:TRP:CZ2	28:U:120:LEU:CG	2.89	0.56
28:U:130:VAL:HG23	28:U:131:GLY:H	1.69	0.56
31:X:93:SER:HA	31:X:96:ARG:HE	1.71	0.56
1:1:156:LYS:HE2	1:1:188:PHE:CE1	2.41	0.56
9:B:118:MET:HE1	9:B:152:PRO:HA	1.86	0.56
15:H:145:TYR:O	15:H:168:ILE:HG22	2.06	0.56
15:H:340:LEU:HB3	15:H:370:ARG:HH12	1.70	0.56
19:L:140:LEU:HD21	19:L:158:ILE:CD1	2.36	0.56
19:L:174:GLU:HG2	19:L:175:GLN:NE2	2.21	0.56
20:M:379:LEU:HD11	20:M:415:PHE:HB2	1.87	0.56
21:N:70:TYR:CD1	21:N:75:TYR:CD1	2.93	0.56
21:N:380:LEU:O	21:N:384:LYS:HG3	2.05	0.56
23:P:163:LEU:C	23:P:163:LEU:HD13	2.26	0.56
23:P:411:LEU:C	23:P:411:LEU:HD23	2.26	0.56
24:Q:61:LEU:CG	24:Q:65:TYR:CE1	2.57	0.56
25:R:70:TYR:CD2	25:R:75:GLY:HA3	2.41	0.56
25:R:78:ASP:CG	25:R:94:PHE:HD1	2.06	0.56
25:R:193:ALA:O	25:R:197:MET:HG2	2.06	0.56
31:X:35:ILE:HD12	31:X:48:PHE:CE1	2.41	0.56
31:X:53:THR:C	31:X:54:GLU:HG2	2.25	0.56
33:Z:297:VAL:HG11	33:Z:310:LEU:CD2	2.36	0.56
1:1:13:ILE:HG22	1:1:155:ILE:CD1	2.36	0.55
7:7:6:MET:HE1	7:7:150:VAL:HG11	1.86	0.55
7:7:6:MET:HG2	7:7:169:ILE:HD11	1.88	0.55
10:C:120:GLN:NE2	11:D:127:ARG:NH2	2.54	0.55
13:F:105:VAL:HG21	13:F:145:LEU:HB3	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:180:LYS:HD3	15:H:185:LEU:HD21	1.87	0.55
22:O:196:LEU:HD13	22:O:210:ARG:HH12	1.71	0.55
22:O:362:GLN:HG3	28:U:230:GLN:OE1	2.06	0.55
23:P:350:LEU:HD12	23:P:383:LEU:HD12	1.85	0.55
26:S:415:SER:CB	27:T:159:LYS:NZ	2.69	0.55
33:Z:389:PHE:O	33:Z:857:LEU:HG	2.06	0.55
8:A:42:SER:HB2	8:A:171:THR:HG21	1.88	0.55
13:F:13:PHE:HZ	14:G:130:PRO:HD2	1.65	0.55
13:F:222:PHE:CE1	13:F:224:ILE:HG13	2.37	0.55
14:G:217:TRP:HE1	14:G:228:LYS:HB2	1.70	0.55
18:K:154:SER:OG	18:K:260:LEU:HD22	2.06	0.55
19:L:345:ARG:NH1	19:L:347:VAL:HG22	2.20	0.55
20:M:45:ARG:NH2	30:W:31:ASP:OD1	2.40	0.55
20:M:362:GLN:CG	20:M:376:TRP:CH2	2.87	0.55
21:N:619:CYS:SG	21:N:652:VAL:HG22	2.46	0.55
21:N:740:TRP:H	21:N:740:TRP:HD1	1.53	0.55
21:N:874:ILE:CG2	21:N:875:LEU:N	2.31	0.55
23:P:119:ILE:HD11	23:P:139:VAL:CG1	2.37	0.55
23:P:433:ILE:HG23	28:U:206:ASP:OD2	2.06	0.55
24:Q:429:LYS:HE2	28:U:296:ILE:HG22	1.88	0.55
27:T:201:PRO:HD2	27:T:204:ASN:HD22	1.70	0.55
27:T:246:GLU:OE1	27:T:246:GLU:O	2.25	0.55
30:W:23:ARG:HE	30:W:27:GLU:CG	2.17	0.55
3:3:28:SER:HB2	4:4:127:LEU:CD2	2.35	0.55
4:4:43:MET:CG	4:4:103:ILE:HG12	2.28	0.55
5:5:178:TYR:CZ	5:5:187:TYR:HD1	2.15	0.55
15:H:176:VAL:HG21	15:H:183:ILE:HB	1.88	0.55
18:K:242:PHE:CD1	19:L:256:ILE:HD11	2.41	0.55
19:L:361:PHE:HD1	19:L:391:ILE:HD12	1.70	0.55
21:N:300:ASN:O	21:N:304:LEU:HG	2.07	0.55
22:O:122:HIS:CG	22:O:164:PRO:HD3	2.41	0.55
22:O:297:ILE:CG1	22:O:308:LEU:HD11	2.37	0.55
25:R:399:GLN:HE21	25:R:403:LEU:HD22	1.70	0.55
26:S:343:LEU:HD12	26:S:347:HIS:CE1	2.39	0.55
29:V:92:MET:HA	29:V:95:LEU:HD12	1.86	0.55
29:V:230:TYR:N	29:V:231:GLU:OE1	2.39	0.55
5:5:50:ALA:HB2	6:6:119:VAL:HG23	1.89	0.55
6:6:3:ILE:HD11	6:6:101:ILE:CD1	2.36	0.55
8:A:14:ARG:NE	8:A:15:HIS:NE2	2.54	0.55
13:F:65:LYS:HB2	13:F:222:PHE:CZ	2.41	0.55
14:G:219:SER:O	14:G:223:THR:OG1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:281:ILE:HG22	16:I:284:ILE:HD11	1.84	0.55
16:I:397:THR:O	16:I:401:LEU:HG	2.05	0.55
17:J:160:ILE:HG21	17:J:202:VAL:HG21	1.89	0.55
18:K:268:ILE:CG2	18:K:315:ILE:HD12	2.36	0.55
22:O:16:MET:CE	22:O:19:ASP:OD1	2.55	0.55
25:R:27:SER:OG	25:R:180:PHE:HA	2.06	0.55
26:S:438:HIS:CD2	27:T:197:TYR:HE1	2.24	0.55
26:S:461:PHE:CE2	28:U:274:MET:HA	2.42	0.55
27:T:50:ILE:C	27:T:55:LEU:HD13	2.27	0.55
29:V:157:ARG:N	29:V:197:TYR:CD1	2.75	0.55
30:W:4:GLU:H	30:W:47:ASN:HD22	1.53	0.55
31:X:113:GLU:O	31:X:114:LEU:CB	2.55	0.55
1:1:61:TYR:HD1	8:A:106:TYR:HB2	1.70	0.55
7:7:49:ILE:O	7:7:53:GLN:HG2	2.07	0.55
12:E:119:LEU:HA	12:E:122:ARG:HE	1.71	0.55
12:E:209:GLU:HG3	15:H:406:LEU:HB3	1.89	0.55
15:H:168:ILE:H	15:H:174:VAL:HG13	1.72	0.55
18:K:157:SER:H	19:L:120:LYS:HZ2	1.53	0.55
21:N:70:TYR:OH	21:N:100:THR:HG21	2.07	0.55
21:N:360:GLN:O	21:N:364:LYS:HG3	2.06	0.55
22:O:185:PHE:CZ	22:O:223:LEU:HD12	2.39	0.55
23:P:354:SER:HB3	23:P:402:PHE:CD1	2.38	0.55
26:S:215:MET:SD	26:S:218:LEU:HD12	2.47	0.55
26:S:354:LEU:HD12	26:S:359:LYS:HE3	1.88	0.55
28:U:15:LEU:CD1	29:V:216:LEU:HD21	2.36	0.55
28:U:85:ALA:O	28:U:88:LYS:HE3	2.06	0.55
28:U:191:THR:HG21	29:V:232:GLU:OE1	2.07	0.55
33:Z:327:GLN:NE2	33:Z:346:LEU:CD1	2.69	0.55
33:Z:361:HIS:CG	33:Z:960:GLY:O	2.59	0.55
33:Z:433:LEU:HD13	33:Z:473:LEU:HD23	1.89	0.55
1:1:83:LYS:CD	1:1:119:VAL:HG23	2.36	0.55
9:B:159:TRP:CE2	10:C:57:LEU:HD23	2.40	0.55
14:G:203:HIS:CG	14:G:211:PHE:CD1	2.94	0.55
15:H:62:ARG:NH1	16:I:99:ILE:O	2.31	0.55
17:J:264:GLY:HA3	18:K:281:ARG:NH1	2.22	0.55
18:K:92:VAL:HG22	18:K:93:PRO:HA	1.87	0.55
20:M:149:ASN:HD21	29:V:76:THR:CG2	2.20	0.55
22:O:15:ARG:O	22:O:15:ARG:HG3	2.07	0.55
23:P:265:VAL:HG12	23:P:296:GLN:HE21	1.71	0.55
23:P:311:TRP:HZ2	23:P:341:LEU:HB3	1.71	0.55
23:P:392:LYS:HG3	24:Q:354:PHE:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:103:SER:O	27:T:106:ILE:HG22	2.06	0.55
29:V:230:TYR:HB2	29:V:231:GLU:OE1	2.07	0.55
33:Z:913:ILE:CG1	33:Z:965:LEU:H	2.20	0.55
1:1:20:THR:HB	1:1:28:ASN:HD22	1.71	0.55
2:2:4:VAL:HG22	2:2:159:ILE:HD11	1.89	0.55
4:4:31:ASP:OD2	4:4:33:LYS:CE	2.54	0.55
5:5:6:PHE:CE1	5:5:13:ILE:HB	2.42	0.55
8:A:24:ARG:HD2	8:A:32:PHE:CE2	2.41	0.55
9:B:118:MET:CE	9:B:151:ASP:O	2.54	0.55
15:H:315:GLY:HA2	16:I:300:ARG:NH2	2.21	0.55
15:H:319:PHE:HD2	20:M:254:MET:HG2	1.70	0.55
16:I:184:ILE:CD1	16:I:187:LEU:HD12	2.35	0.55
17:J:26:LYS:CG	21:N:107:GLU:OE1	2.55	0.55
17:J:162:GLU:OE1	17:J:166:LEU:HD22	2.07	0.55
18:K:319:ASN:OD1	18:K:320:ARG:N	2.40	0.55
21:N:348:PHE:HZ	21:N:355:TRP:CE2	2.24	0.55
22:O:44:SER:HB3	22:O:72:LYS:HZ2	1.61	0.55
22:O:66:VAL:HG13	22:O:106:PHE:CZ	2.41	0.55
22:O:139:LEU:HD23	22:O:181:PHE:CZ	2.41	0.55
33:Z:562:TRP:CZ2	33:Z:566:LEU:HD11	2.41	0.55
7:7:69:ASP:CB	13:F:107:ARG:HG2	2.37	0.55
12:E:14:THR:HG22	12:E:22:PHE:HE2	1.71	0.55
20:M:423:GLN:O	20:M:424:ALA:HB3	2.07	0.55
21:N:355:TRP:O	21:N:358:LYS:HB2	2.06	0.55
21:N:596:LEU:HD11	21:N:718:GLU:HB2	1.88	0.55
22:O:12:SER:HB3	22:O:19:ASP:OD2	2.06	0.55
23:P:308:LEU:HD23	23:P:369:LEU:HA	1.89	0.55
25:R:396:LYS:NZ	26:S:449:LEU:HB3	2.20	0.55
27:T:50:ILE:HG13	27:T:51:TYR:HD2	1.67	0.55
27:T:127:GLN:HA	27:T:132:HIS:HE1	1.64	0.55
28:U:165:GLU:N	29:V:42:ARG:NH1	2.55	0.55
29:V:117:TRP:HA	29:V:196:TYR:CE1	2.42	0.55
31:X:20:ASP:O	31:X:21:SER:CB	2.53	0.55
1:1:4:MET:HE3	1:1:159:LEU:HD21	1.88	0.55
3:3:87:TYR:HD1	3:3:90:ARG:HD3	1.71	0.55
13:F:65:LYS:HA	13:F:222:PHE:CE2	2.41	0.55
16:I:268:PHE:CE2	16:I:312:GLN:HB2	2.42	0.55
19:L:252:VAL:HG12	20:M:256:ILE:CG2	2.36	0.55
20:M:433:TYR:HD1	20:M:434:ALA:N	2.05	0.55
21:N:768:ILE:CG1	21:N:919:THR:HB	2.37	0.55
22:O:362:GLN:NE2	28:U:230:GLN:HB2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:92:TRP:CH2	28:U:94:HIS:CD2	2.95	0.55
29:V:52:LEU:HG	29:V:107:TRP:CZ3	2.42	0.55
31:X:18:ASN:O	31:X:98:PHE:CE1	2.59	0.55
31:X:46:TRP:HZ2	31:X:132:SER:HA	1.72	0.55
1:1:124:TYR:CB	1:1:142:PHE:CE1	2.90	0.55
5:5:32:LYS:HB3	6:6:123:GLU:OE2	2.07	0.55
7:7:101:PRO:C	7:7:124:LEU:HD11	2.28	0.55
9:B:75:TYR:CE1	9:B:82:TYR:CD2	2.95	0.55
12:E:134:MET:HE1	12:E:136:ARG:O	2.07	0.55
12:E:157:HIS:HB3	12:E:167:TYR:CZ	2.29	0.55
15:H:173:ARG:HH22	16:I:128:TYR:HB3	1.70	0.55
15:H:389:PHE:CZ	15:H:419:LEU:HD22	2.42	0.55
16:I:137:ASP:O	16:I:141:LEU:HG	2.05	0.55
16:I:281:ILE:HG22	16:I:284:ILE:CG1	2.37	0.55
16:I:290:LYS:NZ	16:I:333:THR:CA	2.70	0.55
19:L:290:ARG:NH2	19:L:299:ARG:HH22	2.05	0.55
19:L:364:HIS:ND1	19:L:391:ILE:HG21	2.22	0.55
21:N:903:VAL:C	21:N:904:VAL:HG23	2.27	0.55
22:O:106:PHE:N	22:O:110:ASP:OD1	2.40	0.55
25:R:70:TYR:HA	25:R:73:ASN:HD22	1.72	0.55
25:R:397:ASN:CB	25:R:400:TYR:H	2.19	0.55
27:T:206:LYS:HD3	27:T:214:GLU:HA	1.89	0.55
28:U:16:LEU:O	29:V:209:GLU:OE2	2.25	0.55
31:X:46:TRP:O	31:X:68:LEU:HB2	2.07	0.55
31:X:102:GLN:OE1	31:X:103:GLU:HG2	2.06	0.55
33:Z:138:ARG:NH2	33:Z:141:SER:CB	2.69	0.55
5:5:83:LEU:O	5:5:87:VAL:HG23	2.07	0.54
7:7:66:ASN:ND2	7:7:79:LEU:HD23	2.09	0.54
9:B:43:VAL:HG11	9:B:137:ALA:HB1	1.90	0.54
9:B:218:ASN:ND2	9:B:236:ARG:NH2	2.51	0.54
13:F:30:LYS:HZ1	13:F:164:ARG:H	0.60	0.54
15:H:306:ILE:HG22	15:H:308:PHE:CE1	2.42	0.54
16:I:249:GLY:HA3	16:I:284:ILE:HD13	1.89	0.54
19:L:92:GLU:HB2	20:M:65:ASN:ND2	2.21	0.54
20:M:76:PRO:HG2	20:M:150:LYS:HZ1	1.70	0.54
21:N:190:LEU:HD23	21:N:190:LEU:O	2.07	0.54
22:O:121:ASP:O	22:O:122:HIS:HB3	2.06	0.54
22:O:185:PHE:CD2	22:O:223:LEU:HB3	2.42	0.54
22:O:207:LEU:O	22:O:211:GLN:HG3	2.07	0.54
23:P:181:LEU:HD23	23:P:181:LEU:O	2.07	0.54
23:P:203:ILE:CG2	23:P:220:TYR:CD1	2.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:62:TYR:CE2	25:R:180:PHE:HE1	2.20	0.54
27:T:161:TRP:HE3	27:T:162:ASP:OD1	1.90	0.54
29:V:251:TYR:CD1	29:V:254:ARG:NH2	2.75	0.54
31:X:17:TYR:C	31:X:98:PHE:CG	2.77	0.54
33:Z:897:HIS:NE2	33:Z:899:GLN:CG	2.70	0.54
1:1:138:CYS:O	1:1:142:PHE:HB2	2.08	0.54
9:B:69:PRO:CD	9:B:104:TYR:HE1	2.19	0.54
9:B:139:HIS:CE1	9:B:145:PHE:CE1	2.94	0.54
16:I:150:HIS:CG	16:I:151:HIS:N	2.68	0.54
19:L:140:LEU:HD21	19:L:158:ILE:CG1	2.36	0.54
21:N:362:TRP:HH2	21:N:742:TRP:HZ2	1.49	0.54
21:N:736:PHE:CG	21:N:749:LEU:HD21	2.43	0.54
22:O:116:ASN:HB3	22:O:127:LEU:HB3	1.87	0.54
22:O:266:PHE:O	22:O:270:ILE:HG12	2.06	0.54
24:Q:236:PHE:CE2	24:Q:269:LYS:HD3	2.41	0.54
25:R:334:ARG:CZ	25:R:338:TYR:CE2	2.90	0.54
27:T:27:LEU:HD22	27:T:81:TYR:OH	2.08	0.54
28:U:14:VAL:HG21	28:U:48:VAL:CG1	2.31	0.54
29:V:49:VAL:HG12	29:V:73:GLN:HG2	1.88	0.54
30:W:125:LEU:CD1	30:W:157:PHE:HB2	2.10	0.54
33:Z:126:TYR:O	33:Z:127:SER:HB3	2.06	0.54
33:Z:827:LEU:HD23	33:Z:831:LEU:CD2	2.31	0.54
6:6:58:ARG:CZ	6:6:91:LYS:NZ	2.70	0.54
6:6:164:LYS:HZ3	6:6:170:GLU:HB3	1.72	0.54
10:C:156:ASN:OD1	11:D:79:ASN:HB3	2.07	0.54
10:C:158:THR:OG1	10:C:160:TRP:NE1	2.07	0.54
17:J:378:THR:O	17:J:382:PHE:HD2	1.88	0.54
18:K:372:ILE:CG2	24:Q:240:PHE:CE2	2.81	0.54
19:L:327:THR:HG21	19:L:333:LEU:HD11	1.90	0.54
21:N:253:LEU:HD23	21:N:253:LEU:C	2.28	0.54
22:O:122:HIS:HB3	22:O:164:PRO:CG	2.37	0.54
23:P:311:TRP:CZ2	23:P:315:GLN:NE2	2.76	0.54
24:Q:41:ALA:O	24:Q:51:ARG:HD3	2.07	0.54
24:Q:400:TYR:OH	24:Q:404:ASN:ND2	2.40	0.54
25:R:80:GLU:HG2	25:R:81:HIS:CD2	2.43	0.54
26:S:234:ILE:HB	26:S:257:LEU:HD21	1.90	0.54
27:T:7:LEU:HB3	27:T:30:ILE:HG12	1.89	0.54
33:Z:389:PHE:CZ	33:Z:854:LEU:HD21	2.42	0.54
33:Z:390:LEU:CD1	33:Z:856:HIS:O	2.55	0.54
33:Z:427:GLN:HG2	33:Z:428:TRP:CD1	2.41	0.54
9:B:75:TYR:CD1	9:B:82:TYR:CE1	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:118:GLN:NE2	12:E:83:ALA:CB	2.71	0.54
14:G:182:HIS:NE2	14:G:186:LEU:CD1	2.70	0.54
17:J:35:ARG:NH1	17:J:39:GLU:OE2	2.40	0.54
17:J:181:GLN:CG	17:J:286:LYS:HD2	2.35	0.54
18:K:242:PHE:CD1	18:K:250:GLY:CA	2.91	0.54
21:N:383:LYS:N	21:N:412:TYR:OH	2.40	0.54
22:O:72:LYS:CD	22:O:73:ILE:HD12	2.36	0.54
22:O:122:HIS:HB3	22:O:164:PRO:HG2	1.88	0.54
27:T:143:SER:HA	27:T:146:ILE:HG22	1.89	0.54
27:T:249:MET:O	27:T:250:MET:HB2	2.08	0.54
28:U:92:TRP:CZ2	28:U:120:LEU:HG	2.42	0.54
29:V:261:LEU:HB3	29:V:280:LEU:CG	2.35	0.54
30:W:12:ASN:ND2	30:W:80:GLN:O	2.41	0.54
31:X:12:ALA:HB3	31:X:33:ILE:CB	2.37	0.54
33:Z:212:LEU:HD13	33:Z:236:PHE:O	2.06	0.54
33:Z:217:GLU:OE2	33:Z:248:TYR:HD2	1.91	0.54
3:3:79:THR:HG1	3:3:111:PHE:HZ	1.54	0.54
5:5:111:THR:HG22	5:5:113:TYR:CE2	2.43	0.54
8:A:220:LYS:NZ	8:A:242:GLU:CB	2.71	0.54
10:C:50:ARG:HH22	10:C:57:LEU:HD13	1.72	0.54
16:I:132:ILE:HD12	16:I:138:LYS:CE	2.37	0.54
16:I:401:LEU:HD12	17:J:312:ARG:CD	2.27	0.54
20:M:283:LEU:HB3	20:M:327:THR:HG22	1.89	0.54
21:N:106:ILE:O	21:N:110:VAL:HG23	2.08	0.54
21:N:239:LEU:HD21	21:N:276:GLU:OE1	2.07	0.54
23:P:346:ILE:HD13	23:P:379:TYR:CD2	2.33	0.54
25:R:353:MET:HA	25:R:357:PHE:CD1	2.43	0.54
25:R:396:LYS:NZ	26:S:449:LEU:HD13	2.21	0.54
31:X:29:VAL:HG23	31:X:29:VAL:O	2.07	0.54
33:Z:330:ILE:HG23	33:Z:341:TYR:CE2	2.43	0.54
33:Z:617:ILE:CD1	33:Z:746:ILE:HG21	2.38	0.54
33:Z:743:ILE:HB	33:Z:761:PHE:HZ	1.72	0.54
1:1:-9:LEU:O	2:2:93:HIS:HD2	1.90	0.54
1:1:58:ILE:HG12	8:A:106:TYR:OH	2.07	0.54
5:5:158:LYS:HG2	5:5:196:LEU:HD21	1.89	0.54
6:6:114:TYR:CE2	6:6:124:ARG:HB2	2.42	0.54
8:A:204:GLU:HB2	8:A:244:ARG:NH1	2.22	0.54
9:B:139:HIS:CG	9:B:145:PHE:CE1	2.96	0.54
16:I:170:VAL:O	16:I:247:ILE:HG22	2.07	0.54
19:L:109:MET:CE	19:L:120:LYS:HB2	2.38	0.54
19:L:252:VAL:CG1	20:M:256:ILE:HG23	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:189:GLN:HE21	20:M:350:PRO:HD2	1.71	0.54
21:N:321:LEU:HD13	21:N:689:LYS:HD2	1.89	0.54
21:N:768:ILE:HG13	21:N:919:THR:CB	2.37	0.54
24:Q:124:PHE:CD1	24:Q:127:ARG:NH2	2.75	0.54
25:R:201:GLY:HA3	25:R:207:ARG:NH2	2.23	0.54
29:V:159:ILE:O	29:V:160:ASP:HB2	2.06	0.54
33:Z:389:PHE:CE2	33:Z:854:LEU:HD21	2.42	0.54
12:E:12:VAL:HG11	12:E:123:PHE:CZ	2.30	0.54
12:E:20:ARG:HE	12:E:25:GLU:CG	2.20	0.54
12:E:52:LYS:HA	12:E:66:LYS:HG3	1.88	0.54
12:E:127:ALA:N	12:E:132:ARG:NH2	2.56	0.54
18:K:99:PHE:CE1	18:K:101:GLU:O	2.60	0.54
18:K:286:THR:HG23	18:K:287:GLY:N	2.23	0.54
18:K:395:VAL:HG22	19:L:210:VAL:HG21	1.89	0.54
18:K:423:LYS:H	18:K:428:LYS:HZ1	1.54	0.54
19:L:248:ALA:HA	19:L:251:ILE:HD12	1.89	0.54
21:N:50:TYR:CE1	21:N:62:ALA:HB2	2.43	0.54
22:O:20:PRO:C	22:O:43:GLU:OE1	2.46	0.54
23:P:350:LEU:HD13	23:P:383:LEU:HD12	1.89	0.54
25:R:241:ILE:HG22	25:R:242:GLU:CG	2.30	0.54
27:T:199:PHE:CD2	27:T:234:TYR:CD1	2.96	0.54
33:Z:408:TYR:O	33:Z:415:MET:HE1	2.07	0.54
1:1:1:THR:CG2	1:1:129:SER:H	2.18	0.54
5:5:55:TRP:CH2	5:5:90:TYR:CE1	2.95	0.54
7:7:132:PRO:CB	7:7:151:VAL:HG22	2.38	0.54
19:L:217:GLY:HA3	19:L:343:LEU:HD23	1.89	0.54
21:N:509:GLN:O	21:N:510:HIS:CE1	2.61	0.54
22:O:95:SER:HA	22:O:98:TYR:CD2	2.42	0.54
22:O:116:ASN:CA	22:O:127:LEU:HB3	2.38	0.54
22:O:289:GLN:NE2	22:O:328:VAL:HG22	2.23	0.54
23:P:188:ILE:HD13	23:P:226:LYS:HB3	1.89	0.54
24:Q:11:ALA:HA	24:Q:26:VAL:HG11	1.90	0.54
26:S:184:TRP:HB3	26:S:188:TYR:HE2	1.73	0.54
1:1:4:MET:CE	1:1:159:LEU:CD2	2.85	0.54
7:7:144:ASN:HD21	7:7:148:ARG:HD2	1.72	0.54
9:B:218:ASN:N	9:B:236:ARG:HD2	2.22	0.54
13:F:203:ASP:OD1	13:F:204:GLU:HG3	2.07	0.54
16:I:281:ILE:CG2	16:I:284:ILE:CD1	2.85	0.54
17:J:163:VAL:CG1	17:J:164:ILE:HG13	2.23	0.54
21:N:43:LEU:O	21:N:47:GLU:HG2	2.06	0.54
25:R:80:GLU:O	25:R:80:GLU:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:175:ALA:CB	25:R:213:TYR:HE2	2.21	0.54
30:W:104:LYS:O	30:W:105:VAL:CB	2.56	0.54
33:Z:99:LEU:CD1	33:Z:115:LEU:HD11	2.22	0.54
33:Z:608:TYR:C	33:Z:609:THR:HG23	2.28	0.54
4:4:147:TYR:HE1	4:4:151:MET:HB2	1.73	0.54
4:4:152:THR:CG2	4:4:153:THR:N	2.71	0.54
8:A:128:TYR:HD1	8:A:131:ARG:HD3	1.73	0.54
12:E:35:SER:HA	12:E:53:ARG:CZ	2.38	0.54
14:G:98:PHE:HE1	14:G:104:THR:O	1.90	0.54
18:K:332:GLY:O	18:K:333:ARG:CG	2.55	0.54
19:L:111:GLU:CD	19:L:117:TYR:CE2	2.81	0.54
19:L:248:ALA:H	20:M:303:ARG:NH2	2.06	0.54
20:M:283:LEU:HD12	20:M:286:ILE:CG1	2.38	0.54
20:M:319:ASP:CB	20:M:322:LYS:HZ3	2.07	0.54
21:N:318:LYS:NZ	21:N:348:PHE:HA	2.23	0.54
22:O:81:TYR:O	22:O:82:LEU:CB	2.47	0.54
22:O:223:LEU:HD21	22:O:277:ILE:HG21	1.85	0.54
22:O:372:GLU:O	22:O:376:GLN:HG3	2.08	0.54
25:R:113:LEU:HD12	25:R:113:LEU:C	2.29	0.54
25:R:263:ARG:HD2	25:R:336:LYS:HE3	1.90	0.54
25:R:350:LEU:HD21	25:R:365:ASP:OD1	2.08	0.54
26:S:234:ILE:CG1	26:S:257:LEU:HD13	2.36	0.54
27:T:112:ASN:OD1	27:T:177:PHE:HE1	1.90	0.54
28:U:92:TRP:CE2	28:U:120:LEU:HG	2.43	0.54
30:W:87:MET:CE	30:W:112:ALA:HB1	2.38	0.54
31:X:15:CYS:CB	31:X:100:TRP:HB2	2.33	0.54
33:Z:284:LEU:HD13	33:Z:293:MET:HE3	1.86	0.54
33:Z:520:ILE:HG22	33:Z:521:GLU:N	2.23	0.54
3:3:29:ASN:OD1	3:3:30:LYS:HG3	2.09	0.53
4:4:43:MET:O	4:4:45:PHE:HE1	1.91	0.53
12:E:157:HIS:HB2	12:E:167:TYR:CD2	2.42	0.53
13:F:194:VAL:O	13:F:197:ILE:HG22	2.08	0.53
15:H:210:ASP:OD2	15:H:258:LEU:CD1	2.56	0.53
15:H:312:ASP:HB3	16:I:300:ARG:NH2	2.22	0.53
19:L:255:TYR:HD2	19:L:258:GLU:HG2	1.73	0.53
21:N:239:LEU:O	21:N:243:LYS:HG3	2.09	0.53
23:P:133:GLU:OE2	23:P:167:THR:HA	2.08	0.53
24:Q:409:TYR:CA	25:R:399:GLN:CG	2.84	0.53
28:U:16:LEU:HA	28:U:19:LEU:HD12	1.90	0.53
29:V:157:ARG:HD3	29:V:160:ASP:HB2	1.90	0.53
33:Z:981:VAL:CG1	33:Z:983:LEU:CD2	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:981:VAL:HG12	33:Z:983:LEU:CD2	2.38	0.53
6:6:19:ARG:HB2	6:6:191:ASP:OD2	2.08	0.53
6:6:29:ARG:HH21	7:7:148:ARG:NH2	2.06	0.53
8:A:69:VAL:CA	14:G:157:TRP:CZ3	2.79	0.53
10:C:87:LEU:CD1	10:C:119:LYS:HE2	2.38	0.53
13:F:179:PHE:CZ	13:F:192:ALA:HB3	2.36	0.53
14:G:59:VAL:CG1	14:G:62:LYS:HB2	2.38	0.53
15:H:157:VAL:O	15:H:157:VAL:HG12	2.07	0.53
17:J:43:ARG:HD3	26:S:477:VAL:O	2.08	0.53
18:K:350:ARG:NH2	24:Q:236:PHE:HE2	2.03	0.53
19:L:254:LYS:HG3	20:M:256:ILE:HG13	1.90	0.53
19:L:387:ASN:HD21	20:M:335:PRO:HB3	1.72	0.53
21:N:113:ALA:C	21:N:161:TYR:CE2	2.82	0.53
21:N:297:ASP:OD2	21:N:921:ARG:HG3	2.08	0.53
22:O:16:MET:HE2	22:O:19:ASP:OD1	2.08	0.53
22:O:40:GLN:NE2	22:O:58:ARG:NH2	2.56	0.53
23:P:349:ASN:O	23:P:352:VAL:HG22	2.08	0.53
24:Q:359:ILE:HG21	24:Q:374:GLU:HG2	1.89	0.53
26:S:416:GLU:OE1	26:S:417:GLN:NE2	2.41	0.53
29:V:109:HIS:CB	29:V:111:HIS:CD2	2.91	0.53
29:V:168:LEU:HD21	29:V:184:ASN:CB	2.14	0.53
31:X:11:ARG:O	31:X:12:ALA:HB2	2.08	0.53
33:Z:135:LEU:HA	33:Z:157:LEU:HD22	1.89	0.53
33:Z:394:TYR:CD1	33:Z:859:LYS:HG2	2.42	0.53
1:1:123:PRO:HG2	1:1:124:TYR:CD1	2.43	0.53
2:2:99:ILE:HG13	2:2:127:LEU:HD12	1.90	0.53
3:3:48:ALA:HB3	4:4:123:THR:HG23	1.90	0.53
7:7:129:TYR:HE1	7:7:134:LEU:HD22	0.80	0.53
11:D:37:LYS:HD2	11:D:147:LEU:CB	2.35	0.53
12:E:157:HIS:CE1	12:E:170:LYS:NZ	2.66	0.53
18:K:291:GLU:HA	18:K:294:ARG:CZ	2.39	0.53
21:N:23:TYR:CG	27:T:35:ILE:HG21	2.44	0.53
21:N:717:LEU:HD22	21:N:733:LEU:CD1	2.38	0.53
22:O:117:ASN:CG	22:O:118:GLY:N	2.62	0.53
23:P:204:LEU:HD13	23:P:220:TYR:CD2	2.44	0.53
24:Q:23:ALA:HB1	24:Q:27:TYR:HE2	1.74	0.53
24:Q:109:ASP:OD2	24:Q:114:GLN:NE2	2.37	0.53
30:W:125:LEU:HD12	30:W:157:PHE:CD1	2.42	0.53
31:X:48:PHE:HZ	31:X:68:LEU:HD13	1.71	0.53
33:Z:430:LEU:C	33:Z:430:LEU:HD23	2.29	0.53
33:Z:562:TRP:CE2	33:Z:566:LEU:HD11	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:58:ILE:HG22	1:1:85:LEU:HD11	1.90	0.53
3:3:76:GLU:HB2	3:3:106:LYS:NZ	2.24	0.53
4:4:26:VAL:HG12	4:4:29:ASP:HB2	1.89	0.53
12:E:20:ARG:HE	12:E:25:GLU:CD	2.09	0.53
13:F:51:ARG:NH1	20:M:430:VAL:CG1	2.66	0.53
15:H:428:MET:O	15:H:432:ARG:HG3	2.09	0.53
19:L:337:LEU:HG	19:L:343:LEU:HD12	1.91	0.53
20:M:276:THR:CG2	20:M:321:VAL:HG12	2.38	0.53
20:M:407:GLN:NE2	20:M:411:LYS:NZ	2.57	0.53
21:N:258:ALA:HB2	21:N:286:LEU:CD2	2.39	0.53
22:O:292:CYS:O	22:O:296:LEU:HG	2.09	0.53
24:Q:41:ALA:HB3	24:Q:47:ASP:OD1	2.09	0.53
25:R:167:LYS:O	25:R:171:MET:HG3	2.08	0.53
30:W:102:GLN:O	30:W:103:ASN:HB2	2.09	0.53
31:X:28:PRO:CG	31:X:57:VAL:HG21	2.36	0.53
1:1:58:ILE:HA	8:A:106:TYR:CE1	2.44	0.53
5:5:55:TRP:HH2	5:5:90:TYR:CE1	2.26	0.53
8:A:87:ILE:HG13	14:G:157:TRP:CZ2	2.36	0.53
10:C:161:LYS:HD2	10:C:180:TYR:OH	2.08	0.53
21:N:641:LEU:HD12	21:N:660:LEU:HD23	1.89	0.53
21:N:717:LEU:O	21:N:718:GLU:CB	2.53	0.53
21:N:768:ILE:HD11	21:N:919:THR:HG21	1.90	0.53
22:O:321:LYS:HE2	22:O:325:GLU:OE2	2.07	0.53
25:R:209:ARG:NH1	25:R:243:LEU:CD1	2.71	0.53
25:R:240:SER:OG	25:R:243:LEU:HB2	2.08	0.53
27:T:206:LYS:NZ	27:T:214:GLU:HG3	2.22	0.53
3:3:42:LEU:HD21	3:3:44:ILE:HD11	1.91	0.53
3:3:183:LYS:O	3:3:183:LYS:HG2	2.08	0.53
7:7:-3:VAL:HG12	7:7:49:ILE:HB	1.89	0.53
8:A:220:LYS:HZ1	8:A:242:GLU:CD	2.12	0.53
9:B:2:THR:O	9:B:3:ASP:HB2	2.08	0.53
12:E:157:HIS:CB	12:E:167:TYR:CD2	2.88	0.53
17:J:278:GLN:NE2	17:J:283:GLU:CD	2.58	0.53
17:J:297:LEU:HD13	17:J:305:LEU:CD1	2.37	0.53
18:K:84:GLU:HB3	18:K:88:ARG:NH1	2.24	0.53
18:K:191:PRO:HG3	18:K:198:TYR:CZ	2.43	0.53
21:N:767:ALA:O	21:N:768:ILE:HB	2.09	0.53
22:O:17:GLU:O	22:O:18:ALA:HB2	2.07	0.53
22:O:26:PHE:CD1	22:O:58:ARG:CZ	2.91	0.53
22:O:42:SER:O	22:O:43:GLU:CB	2.57	0.53
22:O:183:ASN:O	22:O:184:ASP:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:184:MET:CE	23:P:227:ILE:HD11	2.39	0.53
26:S:234:ILE:CG2	26:S:257:LEU:CD2	2.86	0.53
26:S:461:PHE:CE1	28:U:278:ILE:CG1	2.90	0.53
27:T:50:ILE:C	27:T:55:LEU:CD1	2.76	0.53
27:T:139:ASP:HB3	27:T:142:LEU:HD12	1.91	0.53
29:V:33:ALA:HA	29:V:68:VAL:CG1	2.38	0.53
30:W:110:ILE:HD12	30:W:139:VAL:CG2	2.37	0.53
33:Z:531:ALA:C	33:Z:573:LEU:CD2	2.76	0.53
1:1:9:LYS:HG3	1:1:145:ASN:OD1	2.09	0.53
3:3:-2:ASN:HD21	3:3:48:ALA:N	2.05	0.53
3:3:65:TYR:CE2	3:3:69:GLU:OE2	2.62	0.53
12:E:119:LEU:CD1	12:E:122:ARG:NH2	2.72	0.53
15:H:357:ARG:HH21	16:I:290:LYS:CA	2.21	0.53
17:J:197:LEU:HD23	17:J:197:LEU:C	2.28	0.53
19:L:198:GLU:CG	19:L:202:LYS:HZ2	2.17	0.53
20:M:379:LEU:CD1	20:M:415:PHE:CB	2.86	0.53
21:N:216:ASN:O	21:N:217:MET:HB2	2.09	0.53
21:N:768:ILE:CG2	21:N:770:LYS:HE3	2.39	0.53
22:O:15:ARG:O	22:O:16:MET:HB2	2.05	0.53
22:O:66:VAL:HG13	22:O:106:PHE:CE1	2.43	0.53
22:O:69:PHE:HZ	22:O:77:SER:HB3	1.72	0.53
23:P:311:TRP:CZ2	23:P:315:GLN:CD	2.82	0.53
24:Q:82:THR:HG23	24:Q:93:THR:CG2	2.37	0.53
25:R:63:TYR:OH	25:R:92:ILE:O	2.24	0.53
28:U:165:GLU:CA	29:V:42:ARG:HH12	2.22	0.53
30:W:65:PHE:HZ	30:W:98:LEU:CD2	2.22	0.53
32:Y:80:GLU:OE2	32:Y:83:ARG:NH2	2.41	0.53
33:Z:276:ASN:O	33:Z:277:GLU:HB3	2.09	0.53
33:Z:617:ILE:HD11	33:Z:746:ILE:HG22	1.89	0.53
2:2:114:HIS:ND1	2:2:120:ASP:OD2	2.42	0.53
15:H:217:GLN:HE22	15:H:377:PHE:HA	1.72	0.53
15:H:312:ASP:HB3	16:I:300:ARG:HH12	1.74	0.53
22:O:33:TYR:C	22:O:34:GLU:HG3	2.23	0.53
22:O:119:SER:HB2	22:O:166:ARG:NE	2.24	0.53
23:P:135:GLU:O	23:P:139:VAL:HG23	2.08	0.53
24:Q:131:VAL:HG12	24:Q:134:LYS:HZ1	1.73	0.53
24:Q:264:TYR:OH	24:Q:330:LEU:HB3	2.03	0.53
25:R:188:LYS:HB2	25:R:217:HIS:CE1	2.44	0.53
28:U:210:TYR:O	28:U:214:VAL:HG23	2.08	0.53
33:Z:68:LEU:CD1	33:Z:115:LEU:HD12	2.34	0.53
33:Z:203:LEU:HD23	33:Z:203:LEU:C	2.28	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:374:LEU:HD11	33:Z:849:ARG:NH2	2.23	0.53
33:Z:765:MET:HE2	33:Z:777:PRO:HG3	1.90	0.53
6:6:43:MET:HG3	6:6:102:ILE:HG22	1.90	0.53
11:D:6:ARG:HH21	12:E:12:VAL:N	2.07	0.53
12:E:201:LEU:HD11	12:E:219:LEU:HD11	1.89	0.53
15:H:162:ARG:HH21	20:M:75:LEU:HD11	1.74	0.53
17:J:141:LYS:CD	17:J:209:LYS:HE3	2.39	0.53
17:J:259:GLU:HB2	18:K:280:LYS:NZ	2.18	0.53
18:K:183:GLU:HG3	18:K:338:ILE:HG12	1.90	0.53
18:K:341:PRO:HG2	18:K:344:ARG:NH1	2.24	0.53
19:L:252:VAL:CG1	20:M:256:ILE:CG2	2.87	0.53
20:M:183:VAL:CG1	20:M:186:LEU:HD12	2.38	0.53
22:O:38:TRP:HZ3	22:O:54:SER:N	2.04	0.53
22:O:222:LEU:HD23	22:O:230:PHE:CZ	2.43	0.53
23:P:124:VAL:HG23	23:P:125:VAL:HG13	1.91	0.53
24:Q:35:SER:HB2	24:Q:46:VAL:O	2.07	0.53
28:U:94:HIS:CD2	28:U:120:LEU:CD2	2.80	0.53
31:X:17:TYR:O	31:X:98:PHE:CD2	2.57	0.53
33:Z:357:ILE:CG2	33:Z:960:GLY:HA3	2.39	0.53
33:Z:392:LEU:HD23	33:Z:857:LEU:CD2	2.38	0.53
33:Z:413:ASP:OD2	33:Z:897:HIS:CB	2.57	0.53
33:Z:955:VAL:HG23	33:Z:956:LEU:O	2.09	0.53
5:5:104:TYR:CE1	5:5:109:GLY:CA	2.90	0.53
9:B:178:ARG:HH11	9:B:194:LEU:HD23	1.74	0.53
16:I:230:THR:CG2	16:I:234:LYS:HE3	2.39	0.53
17:J:119:SER:O	17:J:121:MET:HG3	2.09	0.53
17:J:350:MET:HG2	17:J:386:VAL:HG13	1.91	0.53
19:L:167:VAL:O	19:L:168:TYR:CG	2.62	0.53
19:L:283:VAL:HG21	19:L:325:MET:SD	2.49	0.53
22:O:80:LYS:CE	22:O:121:ASP:OD1	2.57	0.53
23:P:127:GLU:CA	23:P:136:ARG:NH2	2.72	0.53
23:P:128:ASN:N	23:P:136:ARG:HH12	2.07	0.53
26:S:157:GLU:O	26:S:161:LYS:HG3	2.09	0.53
26:S:377:TYR:CZ	27:T:133:ILE:HG12	2.44	0.53
26:S:379:LEU:HB3	26:S:383:LEU:CD1	2.39	0.53
27:T:164:LEU:HD22	27:T:174:PHE:CE2	2.44	0.53
33:Z:833:GLN:O	33:Z:837:TYR:HD1	1.92	0.53
7:7:146:LEU:CD1	7:7:175:VAL:HG21	2.38	0.52
8:A:24:ARG:HE	8:A:29:GLU:HG2	1.73	0.52
8:A:55:SER:HB3	8:A:72:ILE:HD11	1.91	0.52
16:I:372:SER:CB	16:I:410:GLN:HE21	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:102:GLY:C	19:L:103:GLN:HG2	2.30	0.52
21:N:92:ASP:CG	21:N:139:ARG:NH2	2.62	0.52
22:O:44:SER:O	22:O:47:LYS:CG	2.45	0.52
28:U:210:TYR:CZ	28:U:225:ILE:HB	2.44	0.52
31:X:46:TRP:CG	31:X:68:LEU:HD23	2.44	0.52
31:X:85:ARG:CG	31:X:87:PHE:CE1	2.93	0.52
31:X:89:LEU:HB2	31:X:99:PHE:HE1	1.75	0.52
33:Z:743:ILE:HB	33:Z:761:PHE:CZ	2.44	0.52
33:Z:926:ASN:HB2	33:Z:993:GLU:CD	2.29	0.52
2:2:84:LYS:HD2	2:2:119:THR:HG23	1.91	0.52
5:5:15:ALA:HB1	5:5:161:ILE:CD1	2.33	0.52
8:A:56:GLN:HE21	8:A:214:LEU:CD1	2.19	0.52
9:B:50:LYS:CE	9:B:203:GLU:OE2	2.56	0.52
9:B:139:HIS:HE1	9:B:145:PHE:CE2	2.24	0.52
11:D:68:ASP:OD2	11:D:97:ARG:NH2	2.35	0.52
15:H:142:ASP:HA	20:M:74:GLN:HG3	1.91	0.52
17:J:109:ALA:O	17:J:110:SER:OG	2.24	0.52
17:J:156:GLN:HE21	17:J:160:ILE:CG1	2.18	0.52
18:K:220:THR:HG22	18:K:224:LYS:HE2	1.89	0.52
18:K:238:ASN:CB	18:K:241:GLU:HG2	2.39	0.52
19:L:260:ALA:HA	19:L:307:GLU:OE1	2.09	0.52
20:M:292:ASP:OD1	20:M:294:GLU:N	2.34	0.52
21:N:142:GLU:O	21:N:146:LYS:HG3	2.10	0.52
22:O:11:LEU:HD13	22:O:15:ARG:NH2	2.24	0.52
23:P:344:ARG:NH1	23:P:348:HIS:HB2	2.23	0.52
24:Q:11:ALA:HB2	24:Q:26:VAL:HG12	1.92	0.52
25:R:206:ARG:HE	25:R:209:ARG:HD2	1.74	0.52
26:S:211:ARG:HH21	26:S:240:ASP:HB3	1.73	0.52
29:V:196:TYR:O	29:V:197:TYR:CB	2.58	0.52
29:V:247:ILE:HD12	29:V:251:TYR:OH	2.08	0.52
33:Z:617:ILE:HD11	33:Z:746:ILE:CG2	2.39	0.52
33:Z:764:LEU:HD23	33:Z:767:TYR:CE2	2.45	0.52
5:5:32:LYS:HD2	6:6:123:GLU:OE2	2.09	0.52
10:C:4:ARG:NE	10:C:5:ARG:NH1	2.56	0.52
10:C:208:TYR:HE1	10:C:232:PRO:HB3	1.67	0.52
11:D:146:LYS:HB3	11:D:148:TYR:CE2	2.44	0.52
16:I:223:GLY:O	16:I:229:LYS:HE2	2.08	0.52
17:J:251:ASP:OD1	17:J:293:ALA:O	2.27	0.52
21:N:114:SER:CA	21:N:161:TYR:CE2	2.64	0.52
21:N:361:ASN:ND2	21:N:399:PHE:CZ	2.78	0.52
22:O:82:LEU:N	22:O:85:SER:HB2	2.15	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:167:ILE:HG23	22:O:168:THR:N	2.25	0.52
23:P:434:THR:HG21	28:U:137:TYR:OH	2.09	0.52
25:R:70:TYR:CE2	25:R:74:ASN:C	2.80	0.52
25:R:380:VAL:HA	26:S:398:THR:HG22	1.89	0.52
33:Z:319:THR:O	33:Z:323:TYR:CD1	2.63	0.52
33:Z:381:LEU:CD1	33:Z:385:PHE:CE2	2.91	0.52
2:2:36:ARG:HB2	2:2:42:TRP:CH2	2.44	0.52
2:2:124:TYR:OH	2:2:139:GLU:CB	2.57	0.52
6:6:96:TYR:C	6:6:97:TYR:CD1	2.83	0.52
10:C:108:VAL:O	10:C:112:VAL:HG23	2.10	0.52
16:I:216:PRO:HG3	16:I:345:ASP:HB2	1.91	0.52
17:J:135:SER:O	17:J:136:LEU:CB	2.56	0.52
17:J:265:ASP:O	17:J:269:GLN:HG2	2.10	0.52
18:K:395:VAL:HG13	19:L:206:ILE:HG22	1.92	0.52
19:L:254:LYS:HE3	20:M:256:ILE:CG1	2.32	0.52
20:M:149:ASN:HD21	29:V:76:THR:HG22	1.74	0.52
21:N:114:SER:N	21:N:161:TYR:CE2	2.78	0.52
21:N:134:THR:O	21:N:138:GLU:HG3	2.10	0.52
22:O:199:LEU:HA	22:O:203:THR:HB	1.91	0.52
22:O:271:LYS:O	22:O:274:ILE:HG22	2.10	0.52
22:O:362:GLN:NE2	28:U:230:GLN:CB	2.73	0.52
26:S:192:GLU:OE1	26:S:239:ARG:CZ	2.58	0.52
27:T:50:ILE:O	27:T:55:LEU:CD1	2.57	0.52
28:U:49:THR:HB	29:V:39:LYS:HE3	1.92	0.52
33:Z:278:LEU:HD13	33:Z:300:ALA:HB3	1.91	0.52
33:Z:297:VAL:HG11	33:Z:310:LEU:HD22	1.85	0.52
33:Z:782:ILE:HG23	33:Z:864:MET:CG	2.33	0.52
33:Z:897:HIS:NE2	33:Z:899:GLN:HG2	2.23	0.52
1:1:120:HIS:CB	7:7:28:PHE:CE1	2.93	0.52
8:A:92:ASN:OD1	8:A:137:LEU:HD11	2.08	0.52
15:H:149:LEU:HD21	15:H:179:SER:HB3	1.91	0.52
18:K:141:ARG:HH11	19:L:153:LEU:HD12	1.74	0.52
19:L:358:LEU:CD1	19:L:362:LYS:HE3	2.39	0.52
21:N:760:GLY:O	21:N:761:ILE:HB	2.08	0.52
23:P:181:LEU:HD23	23:P:181:LEU:C	2.30	0.52
24:Q:62:GLY:HA2	24:Q:65:TYR:CD2	2.45	0.52
27:T:15:PHE:CG	27:T:64:VAL:HG13	2.45	0.52
28:U:274:MET:HA	28:U:277:TYR:HD2	1.73	0.52
33:Z:65:GLU:OE2	33:Z:111:LEU:HA	2.10	0.52
33:Z:439:TYR:O	33:Z:447:VAL:HG12	2.10	0.52
33:Z:463:HIS:CD2	33:Z:464:ASP:HB3	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:158:ILE:HG23	3:3:159:SER:N	2.24	0.52
7:7:65:GLU:HA	7:7:68:TYR:HD2	1.73	0.52
7:7:187:PHE:CE2	7:7:204:LEU:CB	2.93	0.52
12:E:220:SER:HA	12:E:231:TYR:H	1.74	0.52
15:H:238:LEU:HD23	20:M:408:SER:C	2.30	0.52
15:H:335:GLU:HG3	15:H:339:GLN:NE2	2.24	0.52
17:J:224:GLY:O	17:J:227:SER:CA	2.58	0.52
20:M:166:ARG:NH1	20:M:172:VAL:HG21	2.24	0.52
21:N:525:ASN:CB	21:N:528:ARG:HD3	2.39	0.52
24:Q:300:LYS:O	24:Q:304:GLU:HG3	2.09	0.52
24:Q:370:THR:O	24:Q:374:GLU:HG3	2.09	0.52
25:R:237:THR:O	25:R:237:THR:HG22	2.10	0.52
27:T:55:LEU:HD23	27:T:55:LEU:O	2.10	0.52
29:V:49:VAL:CG1	29:V:73:GLN:HE21	2.23	0.52
31:X:75:TRP:CE3	31:X:129:LEU:HD11	2.43	0.52
31:X:85:ARG:NH1	31:X:87:PHE:CD2	2.64	0.52
33:Z:80:SER:O	33:Z:81:SER:HB2	2.09	0.52
33:Z:426:TYR:CD2	33:Z:432:GLY:O	2.62	0.52
33:Z:440:LEU:HD21	33:Z:477:TYR:CE1	2.45	0.52
33:Z:917:ASN:ND2	33:Z:918:ASP:H	2.07	0.52
2:2:109:HIS:HB3	2:2:111:PHE:HE2	1.75	0.52
3:3:179:TYR:HE2	3:3:188:LYS:HD2	1.68	0.52
4:4:3:ILE:HB	4:4:132:HIS:HD2	1.75	0.52
5:5:162:LEU:HD23	5:5:200:VAL:HG11	1.92	0.52
7:7:12:VAL:HG22	7:7:111:VAL:HG23	1.90	0.52
8:A:132:ALA:O	9:B:5:TYR:CE2	2.62	0.52
10:C:181:LYS:HE3	10:C:184:MET:CB	2.39	0.52
12:E:81:LEU:HD12	12:E:84:ASP:OD2	2.10	0.52
12:E:154:GLN:NE2	12:E:166:ARG:HH21	2.08	0.52
18:K:92:VAL:HG23	18:K:93:PRO:HA	1.90	0.52
18:K:140:HIS:CD2	18:K:147:VAL:HG22	2.17	0.52
18:K:141:ARG:HB2	29:V:148:LYS:HZ3	1.75	0.52
18:K:308:GLN:HE21	18:K:333:ARG:HH12	1.55	0.52
20:M:364:HIS:CE1	20:M:392:LYS:HB2	2.45	0.52
21:N:75:TYR:O	21:N:79:VAL:HG23	2.10	0.52
21:N:112:GLU:O	21:N:116:GLN:HG2	2.10	0.52
21:N:776:TYR:HE2	21:N:860:LYS:HB2	1.75	0.52
22:O:175:ASN:ND2	22:O:179:PHE:HE2	2.07	0.52
22:O:299:THR:CB	22:O:365:LYS:HZ1	2.22	0.52
33:Z:229:SER:C	33:Z:264:PHE:CE1	2.76	0.52
33:Z:445:PRO:HB2	33:Z:484:LYS:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:884:THR:HG22	33:Z:903:MET:CB	2.39	0.52
9:B:135:LEU:HD23	9:B:149:GLN:HA	1.92	0.52
10:C:122:TYR:HE2	10:C:131:PHE:CE1	2.17	0.52
15:H:50:LYS:CE	33:Z:770:GLU:OE1	2.58	0.52
15:H:174:VAL:HB	15:H:187:LEU:HD12	1.90	0.52
17:J:327:ILE:HG22	17:J:358:VAL:CG1	2.35	0.52
18:K:243:VAL:O	18:K:243:VAL:HG12	2.09	0.52
21:N:902:VAL:C	21:N:903:VAL:HG22	2.30	0.52
22:O:40:GLN:HE21	22:O:58:ARG:HH21	1.58	0.52
23:P:200:SER:O	23:P:220:TYR:HE1	1.93	0.52
24:Q:131:VAL:HA	24:Q:134:LYS:HE2	1.91	0.52
26:S:293:ILE:CD1	26:S:316:LEU:HG	2.39	0.52
27:T:229:VAL:HG13	27:T:234:TYR:CE2	2.45	0.52
28:U:16:LEU:O	29:V:32:ILE:HD11	2.10	0.52
33:Z:89:LEU:CD1	33:Z:125:THR:CG2	2.88	0.52
33:Z:440:LEU:HD21	33:Z:477:TYR:CE2	2.45	0.52
33:Z:601:VAL:CB	33:Z:616:LEU:HD22	2.35	0.52
1:1:4:MET:HE1	1:1:159:LEU:CD2	2.40	0.52
5:5:81:LYS:HZ3	5:5:85:ASN:CG	2.12	0.52
8:A:57:LYS:HD3	8:A:224:GLU:HB2	1.92	0.52
17:J:146:THR:CG2	17:J:149:MET:HG3	2.40	0.52
17:J:188:TYR:HE1	17:J:295:ASN:O	1.92	0.52
21:N:362:TRP:CH2	21:N:742:TRP:CH2	2.96	0.52
23:P:137:ALA:HB1	23:P:179:PHE:CE1	2.44	0.52
23:P:311:TRP:CE2	23:P:315:GLN:CG	2.93	0.52
25:R:399:GLN:HE22	25:R:403:LEU:CD2	2.23	0.52
27:T:98:GLU:HA	27:T:102:LYS:NZ	2.25	0.52
31:X:101:LEU:HD11	31:X:103:GLU:O	2.09	0.52
33:Z:298:PHE:CZ	33:Z:341:TYR:CZ	2.86	0.52
33:Z:878:LEU:C	33:Z:878:LEU:HD23	2.29	0.52
4:4:66:TYR:HB2	4:4:74:LEU:HD11	1.91	0.52
4:4:152:THR:HG22	4:4:153:THR:H	1.74	0.52
7:7:41:THR:HG21	7:7:84:ILE:HD12	1.91	0.52
13:F:168:ALA:O	13:F:172:LEU:HG	2.09	0.52
15:H:195:VAL:CG1	15:H:289:ARG:HG2	2.40	0.52
15:H:447:VAL:CG1	15:H:451:ILE:HD12	2.40	0.52
15:H:454:TYR:CZ	15:H:456:LYS:HG3	2.44	0.52
16:I:284:ILE:HG22	16:I:288:GLY:HA3	1.92	0.52
17:J:26:LYS:CD	21:N:107:GLU:OE1	2.58	0.52
17:J:71:TYR:CD2	17:J:117:SER:HB3	2.44	0.52
19:L:67:HIS:HD2	19:L:68:ARG:HG3	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:107:GLU:OE2	19:L:163:THR:HG22	2.10	0.52
19:L:192:GLU:C	19:L:345:ARG:HH21	2.13	0.52
21:N:87:ASP:OD1	21:N:88:ARG:HG2	2.10	0.52
21:N:258:ALA:CB	21:N:289:ILE:HG21	2.40	0.52
23:P:327:LEU:O	23:P:328:ALA:HB3	2.08	0.52
27:T:127:GLN:HA	27:T:132:HIS:NE2	2.23	0.52
31:X:14:VAL:CG2	31:X:50:TRP:CG	2.93	0.52
1:1:109:GLU:HB3	1:1:111:TYR:HE1	1.74	0.51
7:7:157:ILE:HB	7:7:158:PRO:HD3	1.92	0.51
8:A:220:LYS:HZ2	8:A:242:GLU:HG3	1.75	0.51
9:B:49:LYS:HD3	9:B:210:GLU:HB2	1.91	0.51
10:C:109:GLU:O	10:C:113:ARG:HG3	2.10	0.51
12:E:134:MET:CE	12:E:136:ARG:O	2.58	0.51
16:I:362:LEU:CD2	16:I:384:LYS:HZ2	2.14	0.51
16:I:418:GLN:CB	16:I:422:ARG:NH1	2.54	0.51
18:K:369:ASP:O	18:K:372:ILE:HG22	2.10	0.51
21:N:89:PHE:CE1	21:N:136:ILE:HG23	2.45	0.51
21:N:222:TYR:HE1	21:N:253:LEU:HG	1.72	0.51
25:R:63:TYR:HE2	25:R:94:PHE:CG	2.27	0.51
25:R:146:ASP:C	25:R:181:TYR:OH	2.49	0.51
26:S:473:ASP:O	26:S:477:VAL:HG23	2.11	0.51
29:V:109:HIS:HB2	29:V:111:HIS:CD2	2.44	0.51
33:Z:77:ASN:OD1	33:Z:151:HIS:HB2	2.10	0.51
33:Z:89:LEU:HD11	33:Z:125:THR:OG1	2.10	0.51
33:Z:405:ASN:O	33:Z:409:LYS:HG3	2.09	0.51
33:Z:474:LEU:CD1	33:Z:493:LEU:CD1	2.88	0.51
33:Z:512:ILE:HG22	33:Z:523:ALA:CB	2.40	0.51
33:Z:928:ARG:HA	33:Z:956:LEU:HG	1.91	0.51
5:5:80:SER:HB2	5:5:121:ARG:HD2	1.91	0.51
15:H:318:ARG:HH21	15:H:326:ASP:HB3	1.75	0.51
15:H:340:LEU:HD23	15:H:370:ARG:CZ	2.40	0.51
16:I:194:ILE:HG12	16:I:236:VAL:HG21	1.91	0.51
19:L:98:LEU:CD2	20:M:156:LEU:HD23	2.32	0.51
19:L:218:VAL:HG22	19:L:324:ILE:HG12	1.92	0.51
20:M:221:TYR:CE2	20:M:346:LYS:HE2	2.46	0.51
21:N:430:ASN:HB2	21:N:443:LEU:HD13	1.92	0.51
22:O:82:LEU:N	22:O:85:SER:CB	2.72	0.51
22:O:139:LEU:HD23	22:O:181:PHE:HZ	1.74	0.51
24:Q:20:TYR:HD2	24:Q:68:MET:SD	2.26	0.51
25:R:137:LEU:HB3	25:R:153:THR:HG21	1.91	0.51
26:S:383:LEU:O	26:S:387:VAL:HG23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:307:HIS:CE1	33:Z:341:TYR:CZ	2.79	0.51
33:Z:558:LEU:C	33:Z:558:LEU:HD12	2.30	0.51
33:Z:761:PHE:CD1	33:Z:764:LEU:HD12	2.37	0.51
1:1:66:TYR:CE2	1:1:73:PRO:HA	2.37	0.51
2:2:72:ARG:NH2	8:A:150:LEU:HD11	2.26	0.51
11:D:120:TYR:CG	11:D:126:VAL:HG11	2.46	0.51
11:D:232:TYR:O	11:D:236:ILE:HG13	2.10	0.51
12:E:12:VAL:HB	12:E:123:PHE:CE2	2.45	0.51
13:F:39:ARG:HD3	13:F:144:LEU:CB	2.40	0.51
13:F:98:VAL:HG12	13:F:99:PHE:CE1	2.43	0.51
20:M:331:ASP:OD1	20:M:332:VAL:HG13	2.10	0.51
21:N:141:ILE:HG13	21:N:165:ILE:HD13	1.92	0.51
22:O:26:PHE:HE1	22:O:58:ARG:HH11	1.47	0.51
2:2:36:ARG:HH12	9:B:224:TYR:HE2	1.58	0.51
3:3:107:SER:O	3:3:109:LYS:HG3	2.09	0.51
9:B:37:ILE:CD1	9:B:175:LEU:HD11	2.41	0.51
12:E:240:ILE:O	12:E:243:LEU:HB3	2.11	0.51
14:G:203:HIS:CE1	14:G:211:PHE:HD1	2.28	0.51
18:K:293:GLN:O	18:K:297:ILE:HG12	2.11	0.51
18:K:344:ARG:HD2	18:K:348:GLU:HB3	1.92	0.51
21:N:253:LEU:CD2	21:N:257:ILE:HD12	2.40	0.51
21:N:641:LEU:CD1	21:N:660:LEU:HD23	2.40	0.51
22:O:172:TYR:CZ	22:O:194:LEU:HB3	2.46	0.51
22:O:298:GLU:C	22:O:365:LYS:HZ3	2.14	0.51
23:P:136:ARG:HG2	23:P:163:LEU:HD21	1.93	0.51
24:Q:302:VAL:HG13	24:Q:314:PHE:HE1	1.76	0.51
29:V:52:LEU:HB2	29:V:69:PHE:CZ	2.45	0.51
33:Z:374:LEU:HD11	33:Z:849:ARG:HH22	1.75	0.51
33:Z:550:PHE:HB2	33:Z:566:LEU:HD13	1.92	0.51
5:5:53:GLN:HG3	6:6:85:GLN:HE22	1.75	0.51
8:A:140:ILE:HG12	8:A:159:PRO:HD3	1.91	0.51
9:B:75:TYR:CE1	9:B:82:TYR:CE2	2.99	0.51
11:D:6:ARG:NH2	12:E:11:GLY:CA	2.65	0.51
17:J:258:VAL:C	18:K:280:LYS:CE	2.79	0.51
18:K:389:GLU:CG	18:K:393:ARG:HE	2.24	0.51
21:N:875:LEU:CD2	21:N:877:GLN:HB2	2.41	0.51
25:R:62:TYR:CD2	25:R:180:PHE:HE1	2.17	0.51
25:R:279:LEU:CD2	25:R:286:LEU:HD11	2.39	0.51
25:R:290:SER:OG	25:R:291:SER:N	2.42	0.51
26:S:218:LEU:HD11	26:S:237:ILE:HD11	1.91	0.51
28:U:135:ASP:CB	28:U:137:TYR:HE1	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:52:LEU:CG	29:V:107:TRP:CZ3	2.93	0.51
33:Z:233:LEU:HB3	33:Z:234:PRO:CD	2.40	0.51
33:Z:369:PHE:HA	33:Z:390:LEU:HD21	1.91	0.51
2:2:72:ARG:HH22	8:A:115:ASP:CB	2.23	0.51
5:5:150:VAL:HG12	5:5:179:HIS:HE1	1.71	0.51
6:6:120:GLY:O	6:6:121:SER:OG	2.23	0.51
10:C:119:LYS:HG2	10:C:131:PHE:CD2	2.45	0.51
13:F:50:LYS:HB2	13:F:210:ASN:O	2.10	0.51
15:H:69:VAL:HG21	16:I:131:SER:HB2	1.91	0.51
17:J:188:TYR:CE1	17:J:295:ASN:O	2.64	0.51
21:N:761:ILE:HD12	21:N:904:VAL:N	2.25	0.51
21:N:884:PHE:HB3	21:N:905:LEU:HD22	1.92	0.51
22:O:59:LEU:HA	22:O:62:TYR:CD1	2.45	0.51
22:O:92:PHE:HE1	22:O:136:THR:HA	1.73	0.51
22:O:106:PHE:CD2	22:O:109:LEU:HB2	2.45	0.51
22:O:317:THR:O	22:O:318:HIS:CB	2.59	0.51
23:P:127:GLU:HA	23:P:136:ARG:HH22	1.75	0.51
24:Q:146:TYR:CE1	24:Q:184:VAL:HA	2.43	0.51
25:R:116:LYS:HZ3	25:R:136:ASN:ND2	2.08	0.51
25:R:246:TYR:CZ	25:R:279:LEU:HD13	2.46	0.51
25:R:259:PHE:CD1	25:R:259:PHE:C	2.82	0.51
28:U:164:GLU:CD	29:V:39:LYS:HG3	2.31	0.51
29:V:47:MET:CE	29:V:74:SER:N	2.73	0.51
3:3:87:TYR:HA	3:3:90:ARG:NE	2.24	0.51
9:B:30:GLN:HB3	18:K:426:PHE:HE2	1.72	0.51
11:D:83:ARG:NH1	11:D:87:GLU:HB2	2.25	0.51
14:G:151:GLU:HB3	14:G:152:PRO:HD2	1.93	0.51
15:H:182:ASN:CG	15:H:183:ILE:H	2.14	0.51
15:H:393:SER:OG	15:H:404:TRP:CZ2	2.51	0.51
17:J:143:PRO:O	17:J:204:HIS:ND1	2.44	0.51
17:J:150:VAL:HB	17:J:153:LEU:CD1	2.40	0.51
18:K:240:SER:O	18:K:243:VAL:CB	2.57	0.51
21:N:259:PHE:HE1	21:N:289:ILE:HG12	1.75	0.51
22:O:41:LEU:HD23	22:O:41:LEU:C	2.29	0.51
24:Q:102:GLU:O	24:Q:106:GLN:HG3	2.11	0.51
24:Q:409:TYR:HA	25:R:399:GLN:HG3	1.91	0.51
30:W:23:ARG:NH2	30:W:27:GLU:OE2	2.43	0.51
31:X:17:TYR:O	31:X:18:ASN:HB2	2.11	0.51
31:X:28:PRO:C	31:X:29:VAL:HG22	2.31	0.51
1:1:36:ARG:HD3	1:1:42:TRP:CZ2	2.46	0.51
7:7:103:TRP:CE3	7:7:124:LEU:HD23	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:218:ASP:O	11:D:219:SER:CB	2.59	0.51
17:J:255:SER:O	17:J:256:THR:HG23	2.11	0.51
21:N:381:GLU:HA	21:N:384:LYS:HD2	1.93	0.51
22:O:250:TRP:O	22:O:254:LEU:CG	2.48	0.51
22:O:303:LYS:HB3	28:U:260:ASN:ND2	2.26	0.51
23:P:181:LEU:HG	23:P:223:LEU:CD1	2.41	0.51
23:P:416:SER:HA	29:V:241:THR:HG21	1.91	0.51
24:Q:61:LEU:CD1	24:Q:65:TYR:HE1	2.03	0.51
24:Q:122:ILE:HG22	24:Q:126:LYS:HE3	1.92	0.51
26:S:318:CYS:SG	26:S:330:LEU:HD22	2.50	0.51
28:U:271:ASP:HA	28:U:274:MET:HE2	1.92	0.51
31:X:78:ILE:HD11	31:X:85:ARG:HA	1.92	0.51
33:Z:298:PHE:CE1	33:Z:310:LEU:CD2	2.93	0.51
33:Z:371:SER:HB3	33:Z:399:LEU:HD11	1.93	0.51
6:6:55:LEU:CD2	6:6:96:TYR:OH	2.50	0.51
9:B:69:PRO:CD	9:B:104:TYR:CE1	2.90	0.51
12:E:88:MET:HE1	12:E:142:LEU:HD13	1.93	0.51
12:E:159:GLU:HB2	12:E:163:THR:OG1	2.10	0.51
13:F:171:TYR:HA	13:F:174:ARG:HE	1.76	0.51
14:G:51:LYS:NZ	14:G:63:ASN:O	2.42	0.51
18:K:184:ILE:CG2	18:K:226:VAL:HG21	2.41	0.51
19:L:212:ILE:HG13	19:L:213:LYS:H	1.75	0.51
21:N:338:PHE:HZ	21:N:749:LEU:HD12	1.76	0.51
21:N:761:ILE:CG2	21:N:904:VAL:N	2.70	0.51
23:P:265:VAL:CG1	23:P:296:GLN:HG3	2.41	0.51
23:P:411:LEU:CD1	28:U:265:LEU:O	2.59	0.51
24:Q:61:LEU:HG	24:Q:65:TYR:CE2	1.79	0.51
24:Q:72:ASP:CG	24:Q:75:ARG:NH2	2.54	0.51
24:Q:232:TYR:OH	24:Q:271:MET:SD	2.62	0.51
25:R:72:VAL:O	25:R:72:VAL:HG12	2.11	0.51
26:S:163:VAL:HG13	26:S:184:TRP:CZ2	2.46	0.51
28:U:106:ILE:HG22	28:U:110:PHE:CE2	2.44	0.51
28:U:106:ILE:HG23	28:U:110:PHE:CE2	2.46	0.51
29:V:23:THR:OG1	29:V:164:LEU:HD23	2.11	0.51
30:W:85:LEU:HD23	30:W:85:LEU:C	2.30	0.51
30:W:140:ASP:HB3	30:W:190:ILE:HG12	1.92	0.51
33:Z:370:SER:N	33:Z:390:LEU:CD2	2.74	0.51
1:1:120:HIS:HB2	7:7:28:PHE:CE1	2.46	0.51
3:3:136:GLN:NE2	3:3:168:ARG:HD3	2.26	0.51
5:5:124:GLY:CA	5:5:127:PHE:CE2	2.94	0.51
17:J:87:LYS:HG3	17:J:93:LYS:HG2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:204:PRO:HG3	19:L:320:GLN:NE2	2.26	0.51
19:L:303:ARG:O	19:L:307:GLU:HG3	2.10	0.51
20:M:357:ARG:CD	20:M:383:THR:OG1	2.59	0.51
21:N:15:GLU:HG2	27:T:80:ASN:ND2	2.26	0.51
24:Q:94:VAL:CG2	24:Q:130:ARG:HD2	2.40	0.51
24:Q:111:LEU:HD23	24:Q:144:LEU:HD22	1.93	0.51
24:Q:146:TYR:CD1	24:Q:184:VAL:HG22	2.46	0.51
28:U:165:GLU:HB3	29:V:42:ARG:CZ	2.41	0.51
33:Z:440:LEU:CD2	33:Z:477:TYR:CZ	2.89	0.51
4:4:125:VAL:HG22	4:4:127:LEU:HG	1.93	0.50
4:4:152:THR:CG2	4:4:153:THR:H	2.24	0.50
5:5:111:THR:HG21	5:5:113:TYR:CE2	2.45	0.50
5:5:158:LYS:HE3	5:5:196:LEU:HD11	1.94	0.50
6:6:-8:PHE:H	7:7:-8:THR:HG21	1.76	0.50
8:A:134:MET:HE1	14:G:125:TYR:CE2	2.47	0.50
15:H:261:ARG:HH22	15:H:273:ARG:NH1	2.08	0.50
16:I:105:SER:HA	17:J:94:TYR:CD2	2.46	0.50
16:I:257:LEU:H	16:I:257:LEU:HD22	1.74	0.50
18:K:329:LEU:HA	18:K:334:LEU:HD23	1.91	0.50
21:N:585:ARG:HH12	21:N:740:TRP:HZ2	1.59	0.50
22:O:266:PHE:CZ	22:O:270:ILE:HG21	2.44	0.50
23:P:280:LEU:O	23:P:283:LYS:HG2	2.12	0.50
23:P:429:ILE:HD13	28:U:203:LYS:HE3	1.87	0.50
24:Q:227:CYS:C	24:Q:334:HIS:CE1	2.85	0.50
24:Q:347:LEU:O	24:Q:351:ILE:HG23	2.11	0.50
25:R:31:PHE:CE2	25:R:319:CYS:O	2.64	0.50
25:R:218:CYS:SG	25:R:226:GLU:CG	2.99	0.50
25:R:334:ARG:HG2	25:R:338:TYR:CE2	2.46	0.50
33:Z:230:ILE:HD12	33:Z:263:ALA:HB1	1.92	0.50
33:Z:929:VAL:CG1	33:Z:956:LEU:CD1	2.85	0.50
33:Z:981:VAL:HG12	33:Z:983:LEU:HD23	1.92	0.50
6:6:82:ARG:HH21	12:E:101:LEU:HD11	1.75	0.50
11:D:96:HIS:ND1	11:D:100:LEU:HD12	2.22	0.50
12:E:157:HIS:CG	12:E:170:LYS:HD3	2.46	0.50
15:H:97:LEU:HD21	16:I:129:TYR:CB	2.27	0.50
17:J:186:ILE:CD1	17:J:305:LEU:CD2	2.90	0.50
18:K:242:PHE:O	18:K:244:HIS:ND1	2.45	0.50
19:L:198:GLU:HA	19:L:239:ILE:HD11	1.92	0.50
19:L:360:ILE:HG22	19:L:364:HIS:CE1	2.45	0.50
20:M:70:LYS:HG2	20:M:73:ARG:HH21	1.76	0.50
20:M:292:ASP:OD2	20:M:294:GLU:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:379:LEU:HD13	20:M:415:PHE:CB	2.40	0.50
21:N:318:LYS:HZ3	21:N:348:PHE:HA	1.77	0.50
21:N:356:LEU:O	21:N:364:LYS:HE2	2.12	0.50
21:N:641:LEU:O	21:N:645:THR:HG23	2.11	0.50
22:O:122:HIS:HE1	22:O:163:ILE:H	1.49	0.50
23:P:59:LEU:O	23:P:63:VAL:HG23	2.10	0.50
23:P:127:GLU:N	23:P:136:ARG:NH2	2.58	0.50
23:P:184:MET:HE3	23:P:200:SER:HB3	1.93	0.50
23:P:431:HIS:HD1	28:U:156:HIS:CB	2.07	0.50
26:S:215:MET:O	26:S:218:LEU:HB2	2.11	0.50
26:S:428:ARG:HH22	27:T:191:LYS:HD2	1.74	0.50
29:V:71:MET:HB3	29:V:72:PRO:HD2	1.92	0.50
5:5:8:PHE:CZ	5:5:13:ILE:HG12	2.43	0.50
5:5:69:ARG:HA	12:E:93:ARG:NH1	2.26	0.50
7:7:112:GLN:HG2	7:7:115:GLY:N	2.25	0.50
13:F:13:PHE:CD1	14:G:22:GLN:HB3	2.42	0.50
13:F:30:LYS:NZ	13:F:163:ALA:C	2.64	0.50
14:G:59:VAL:HG11	14:G:62:LYS:HB2	1.92	0.50
16:I:247:ILE:CD1	16:I:267:ILE:HD13	2.41	0.50
19:L:402:ALA:CB	19:L:414:ASP:OD2	2.59	0.50
19:L:410:ILE:CD1	20:M:212:ILE:HD11	2.42	0.50
19:L:410:ILE:CG1	20:M:212:ILE:HD11	2.41	0.50
19:L:411:ASN:HB2	19:L:412:PRO:HD2	1.94	0.50
22:O:59:LEU:CA	22:O:62:TYR:HD1	2.25	0.50
22:O:125:GLY:O	22:O:129:ILE:HG12	2.11	0.50
22:O:289:GLN:HG2	22:O:293:LEU:HD22	1.94	0.50
24:Q:75:ARG:O	24:Q:117:VAL:HG22	2.11	0.50
24:Q:128:GLU:HG3	24:Q:129:LYS:HG2	1.94	0.50
25:R:134:TRP:CZ3	25:R:137:LEU:HD22	2.46	0.50
25:R:353:MET:HA	25:R:357:PHE:CD2	2.47	0.50
27:T:126:LEU:O	27:T:132:HIS:NE2	2.44	0.50
30:W:123:ASP:O	30:W:127:ARG:HG3	2.11	0.50
33:Z:250:VAL:HG21	33:Z:280:ASP:OD1	2.12	0.50
8:A:134:MET:CE	14:G:125:TYR:CZ	2.94	0.50
12:E:154:GLN:HB3	12:E:156:PHE:CE1	2.46	0.50
17:J:296:ARG:O	17:J:300:LEU:HD12	2.11	0.50
17:J:377:VAL:HG12	17:J:382:PHE:CE2	2.46	0.50
18:K:379:SER:OG	18:K:382:VAL:HG23	2.12	0.50
19:L:219:LEU:HD13	19:L:325:MET:HB2	1.94	0.50
21:N:22:THR:HG23	21:N:57:ASP:OD2	2.11	0.50
21:N:359:ALA:O	21:N:364:LYS:HE3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:272:PRO:HB2	23:P:347:GLU:OE1	2.11	0.50
23:P:431:HIS:CE1	28:U:156:HIS:CA	2.94	0.50
25:R:257:GLY:O	25:R:261:LEU:HD12	2.11	0.50
27:T:89:TYR:HA	27:T:102:LYS:HE3	1.92	0.50
30:W:118:ILE:CG2	30:W:154:LEU:HG	2.33	0.50
6:6:3:ILE:CG1	6:6:101:ILE:HD12	2.41	0.50
6:6:59:PHE:O	6:6:63:VAL:HG23	2.12	0.50
15:H:50:LYS:HE3	33:Z:770:GLU:OE1	2.11	0.50
17:J:321:VAL:HG11	17:J:348:GLU:HG2	1.92	0.50
17:J:347:ALA:O	17:J:350:MET:HB2	2.12	0.50
19:L:281:ASP:OD1	19:L:282:GLU:HG2	2.12	0.50
20:M:384:ASP:N	20:M:386:PHE:HE1	2.04	0.50
20:M:402:ALA:HB2	20:M:414:ASP:OD2	2.11	0.50
21:N:362:TRP:CZ2	21:N:742:TRP:CH2	3.00	0.50
22:O:36:LYS:O	22:O:37:LEU:HB2	2.10	0.50
22:O:188:PHE:HE2	22:O:216:ASP:O	1.94	0.50
33:Z:838:TYR:HA	33:Z:848:THR:HG21	1.94	0.50
33:Z:981:VAL:CG1	33:Z:983:LEU:HD21	2.41	0.50
2:2:19:ARG:NH2	2:2:26:VAL:CG2	2.74	0.50
5:5:124:GLY:N	5:5:127:PHE:CZ	2.79	0.50
8:A:204:GLU:HB2	8:A:244:ARG:HH11	1.76	0.50
19:L:74:LEU:HD12	20:M:51:LEU:HD12	1.92	0.50
19:L:95:ILE:HG21	20:M:68:LYS:HD3	1.92	0.50
19:L:113:SER:OG	19:L:116:LYS:N	2.43	0.50
19:L:275:PRO:O	19:L:276:CYS:SG	2.69	0.50
19:L:277:ILE:HG23	19:L:324:ILE:CD1	2.42	0.50
20:M:79:VAL:HG11	20:M:145:LEU:HD22	1.93	0.50
20:M:248:ALA:HB3	20:M:249:PRO:HD3	1.92	0.50
20:M:379:LEU:CD1	20:M:415:PHE:HB3	2.38	0.50
21:N:365:PHE:CZ	21:N:406:TYR:CB	2.94	0.50
21:N:634:LEU:O	21:N:637:ALA:HB3	2.12	0.50
24:Q:189:ARG:HH21	25:R:277:LEU:HD22	1.76	0.50
29:V:249:GLU:O	29:V:253:LYS:HG3	2.11	0.50
31:X:16:GLU:HG3	31:X:17:TYR:N	2.25	0.50
3:3:61:LYS:HD2	3:3:81:LEU:HD11	1.94	0.50
4:4:69:ARG:NH2	4:4:70:GLU:OE2	2.45	0.50
6:6:129:ALA:H	6:6:138:MET:HE1	1.76	0.50
12:E:69:GLU:OE2	12:E:72:ARG:HD2	2.11	0.50
12:E:154:GLN:CB	12:E:156:PHE:HE1	2.25	0.50
14:G:217:TRP:CH2	14:G:234:LEU:CD1	2.95	0.50
15:H:240:ILE:HG23	20:M:368:MET:SD	2.52	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:372:SER:HB3	16:I:410:GLN:HE21	1.77	0.50
19:L:81:ILE:HG23	20:M:58:MET:CE	2.42	0.50
20:M:73:ARG:CA	20:M:77:TYR:OH	2.60	0.50
20:M:135:VAL:CG1	20:M:155:ILE:HG22	2.41	0.50
21:N:158:LEU:HD12	21:N:202:PHE:CE2	2.47	0.50
21:N:352:ASN:HB3	21:N:355:TRP:HB3	1.91	0.50
22:O:44:SER:H	22:O:47:LYS:HE2	1.77	0.50
22:O:227:ILE:O	22:O:227:ILE:HG22	2.11	0.50
23:P:181:LEU:HB2	23:P:223:LEU:HD11	1.94	0.50
24:Q:146:TYR:HD1	24:Q:184:VAL:HG22	1.76	0.50
24:Q:271:MET:HG2	24:Q:338:LEU:HD13	1.93	0.50
25:R:395:ASN:O	26:S:452:TYR:CD1	2.52	0.50
27:T:27:LEU:HD13	27:T:81:TYR:CZ	2.44	0.50
27:T:229:VAL:HG21	27:T:234:TYR:OH	2.12	0.50
31:X:39:GLU:HG2	31:X:47:ASP:OD2	2.12	0.50
33:Z:224:LEU:HD11	33:Z:232:LYS:HB2	1.93	0.50
33:Z:755:GLU:HG2	33:Z:759:ARG:HH12	1.75	0.50
1:1:48:SER:O	1:1:52:THR:HG23	2.11	0.50
5:5:179:HIS:HB2	5:5:188:HIS:NE2	2.26	0.50
8:A:24:ARG:CZ	18:K:424:PHE:CD1	2.95	0.50
8:A:220:LYS:HA	8:A:241:ILE:HG21	1.93	0.50
10:C:87:LEU:HD11	10:C:131:PHE:CE2	2.47	0.50
11:D:118:GLN:HE22	12:E:86:ARG:CD	1.99	0.50
13:F:30:LYS:HZ1	13:F:164:ARG:CA	2.16	0.50
13:F:164:ARG:NH2	13:F:201:LEU:HD23	2.20	0.50
14:G:217:TRP:O	14:G:217:TRP:HD1	1.93	0.50
16:I:278:ILE:CG2	16:I:325:ILE:HD12	2.41	0.50
19:L:109:MET:HE2	19:L:120:LYS:HB2	1.93	0.50
19:L:202:LYS:HZ1	19:L:239:ILE:HA	1.76	0.50
21:N:302:PHE:CE2	21:N:712:ASN:CB	2.85	0.50
21:N:662:MET:HB3	21:N:715:ILE:HG21	1.94	0.50
23:P:214:GLU:HG2	23:P:251:LYS:HG2	1.93	0.50
24:Q:1:MET:O	24:Q:2:SER:CB	2.58	0.50
24:Q:232:TYR:CZ	24:Q:271:MET:CE	2.95	0.50
25:R:62:TYR:CB	25:R:180:PHE:CE2	2.95	0.50
25:R:353:MET:CG	25:R:357:PHE:CD2	2.82	0.50
27:T:27:LEU:HD13	27:T:81:TYR:HH	1.74	0.50
28:U:36:VAL:HG23	28:U:54:LEU:CD1	2.39	0.50
28:U:283:ARG:HE	29:V:287:THR:CB	2.23	0.50
29:V:104:VAL:HG12	29:V:133:ASN:HD21	1.77	0.50
31:X:75:TRP:CD1	31:X:126:ILE:HD11	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:913:ILE:CG1	33:Z:965:LEU:N	2.74	0.50
3:3:2:ILE:HD11	3:3:162:LEU:HD11	1.94	0.50
5:5:104:TYR:HD1	5:5:109:GLY:C	2.16	0.50
7:7:171:ASN:HA	7:7:174:ARG:HH12	1.75	0.50
10:C:208:TYR:CD1	10:C:232:PRO:C	2.85	0.50
11:D:199:LEU:O	11:D:203:VAL:HG13	2.11	0.50
12:E:88:MET:HE2	12:E:142:LEU:HD13	1.93	0.50
14:G:90:ARG:HH21	14:G:93:GLU:CD	2.15	0.50
15:H:331:ARG:HH12	15:H:335:GLU:HB2	1.77	0.50
16:I:138:LYS:HD3	16:I:141:LEU:HD12	1.94	0.50
17:J:164:ILE:O	17:J:167:PRO:HD2	2.12	0.50
17:J:276:LEU:HD13	17:J:309:ARG:HG2	1.92	0.50
18:K:308:GLN:NE2	18:K:333:ARG:NH1	2.57	0.50
19:L:248:ALA:CB	20:M:303:ARG:NH2	2.73	0.50
20:M:221:TYR:HE2	20:M:346:LYS:CG	2.23	0.50
21:N:540:LEU:HD22	21:N:574:VAL:HG22	1.93	0.50
21:N:568:VAL:HG13	21:N:591:LEU:HD22	1.94	0.50
22:O:44:SER:HA	22:O:47:LYS:HE2	1.93	0.50
23:P:42:LEU:HD12	23:P:58:VAL:HG12	1.93	0.50
23:P:311:TRP:CE2	23:P:345:VAL:HG21	2.47	0.50
24:Q:111:LEU:CD2	24:Q:144:LEU:HD22	2.42	0.50
27:T:59:LYS:NZ	27:T:63:GLU:OE2	2.45	0.50
30:W:167:GLU:OE1	30:W:197:SER:OG	2.20	0.50
33:Z:284:LEU:CD1	33:Z:293:MET:CE	2.88	0.50
33:Z:387:ASN:O	33:Z:391:ASN:HB2	2.12	0.50
3:3:86:LEU:HD22	3:3:94:TYR:CE2	2.47	0.49
4:4:59:ILE:O	4:4:63:ILE:HG12	2.12	0.49
15:H:66:LYS:HE2	15:H:70:LYS:HZ2	1.74	0.49
16:I:164:ALA:HB2	17:J:77:LYS:NZ	2.26	0.49
17:J:249:GLU:CG	18:K:297:ILE:HG21	2.42	0.49
18:K:281:ARG:HH11	18:K:290:ARG:HG2	1.77	0.49
20:M:221:TYR:CE1	20:M:348:GLU:HA	2.47	0.49
21:N:666:GLN:NE2	21:N:873:ARG:HG2	2.26	0.49
23:P:411:LEU:HD12	28:U:268:LYS:HB2	1.94	0.49
24:Q:116:PHE:CZ	24:Q:120:LYS:HE3	2.47	0.49
26:S:390:THR:HG23	26:S:393:ARG:HH22	1.77	0.49
28:U:19:LEU:HG	29:V:212:MET:SD	2.48	0.49
29:V:180:LEU:O	29:V:181:ASN:CB	2.60	0.49
30:W:118:ILE:CG1	30:W:154:LEU:CD1	2.51	0.49
31:X:75:TRP:HZ3	31:X:125:MET:HE3	1.69	0.49
33:Z:486:SER:O	33:Z:490:ILE:CG1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:65:TYR:O	3:3:69:GLU:CG	2.56	0.49
7:7:64:THR:CG2	7:7:68:TYR:OH	2.60	0.49
8:A:128:TYR:CE1	8:A:131:ARG:NH1	2.77	0.49
8:A:220:LYS:HZ2	8:A:242:GLU:CG	2.25	0.49
12:E:55:THR:H	12:E:59:LEU:HD23	1.76	0.49
17:J:186:ILE:HD13	17:J:305:LEU:CD2	2.43	0.49
18:K:392:LEU:O	18:K:396:ARG:HG3	2.12	0.49
22:O:280:LEU:HD23	22:O:280:LEU:C	2.32	0.49
23:P:119:ILE:O	23:P:126:THR:HG21	2.12	0.49
23:P:138:ARG:CA	23:P:141:LYS:HZ3	2.23	0.49
24:Q:122:ILE:O	24:Q:126:LYS:HG3	2.12	0.49
24:Q:189:ARG:NH2	25:R:277:LEU:HD22	2.28	0.49
26:S:185:PHE:CE2	26:S:271:ARG:NH2	2.81	0.49
26:S:217:PHE:CD2	26:S:233:LEU:HD22	2.47	0.49
27:T:95:LYS:HG3	27:T:95:LYS:O	2.13	0.49
27:T:229:VAL:HG21	27:T:234:TYR:CZ	2.47	0.49
28:U:195:LYS:HZ2	29:V:230:TYR:N	2.07	0.49
31:X:22:ARG:NH1	31:X:88:ALA:CB	2.64	0.49
33:Z:52:LEU:CD1	33:Z:70:ALA:HB3	2.42	0.49
3:3:16:CYS:SG	3:3:34:ILE:CD1	3.00	0.49
6:6:175:VAL:HG12	6:6:179:PHE:CE2	2.44	0.49
8:A:91:ARG:CB	14:G:120:GLN:HE22	2.18	0.49
9:B:119:GLN:CG	10:C:82:ALA:HB1	2.41	0.49
9:B:157:PHE:HB2	9:B:159:TRP:HE1	1.78	0.49
10:C:4:ARG:CZ	10:C:5:ARG:NH1	2.71	0.49
10:C:106:ILE:HD13	10:C:111:LEU:HD13	1.94	0.49
10:C:118:ILE:O	10:C:122:TYR:CD1	2.65	0.49
12:E:147:HIS:ND1	12:E:153:TYR:CD1	2.80	0.49
23:P:384:VAL:HG23	23:P:389:ILE:HD11	1.95	0.49
25:R:117:ILE:HD11	25:R:134:TRP:CE3	2.47	0.49
28:U:35:GLY:HA2	28:U:54:LEU:HG	1.94	0.49
33:Z:89:LEU:HD22	33:Z:122:LEU:HA	1.93	0.49
33:Z:358:TYR:CE1	33:Z:914:LEU:HD13	2.47	0.49
3:3:147:PRO:O	3:3:148:ASN:HB2	2.12	0.49
5:5:111:THR:CG2	5:5:113:TYR:CZ	2.96	0.49
5:5:124:GLY:N	5:5:127:PHE:CE2	2.80	0.49
6:6:147:PHE:CE2	6:6:164:LYS:CB	2.95	0.49
7:7:68:TYR:CD1	14:G:92:ARG:NE	2.80	0.49
8:A:220:LYS:HG3	8:A:245:LEU:HD12	1.93	0.49
10:C:131:PHE:HB3	10:C:133:VAL:HG12	1.94	0.49
13:F:180:ILE:HG13	13:F:181:LYS:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:335:GLU:HG3	15:H:339:GLN:HE21	1.77	0.49
15:H:449:LYS:HZ3	16:I:346:ARG:NH1	2.09	0.49
16:I:194:ILE:CG1	16:I:236:VAL:HG21	2.42	0.49
18:K:74:HIS:HE1	18:K:77:ARG:HH21	1.55	0.49
19:L:345:ARG:CZ	19:L:347:VAL:HG22	2.42	0.49
21:N:12:LEU:HD23	21:N:15:GLU:CD	2.33	0.49
21:N:113:ALA:O	21:N:161:TYR:CE2	2.65	0.49
21:N:125:THR:OG1	21:N:126:LYS:HG3	2.12	0.49
21:N:299:TYR:CE1	21:N:713:VAL:HG11	2.47	0.49
21:N:642:ASP:HB2	21:N:643:PRO:CD	2.39	0.49
25:R:208:ASN:ND2	25:R:235:LEU:CD1	2.64	0.49
30:W:118:ILE:HD12	30:W:154:LEU:HD21	1.94	0.49
33:Z:475:GLN:HE21	33:Z:505:VAL:HB	1.78	0.49
33:Z:888:LEU:HD22	33:Z:904:LEU:CD1	2.39	0.49
33:Z:888:LEU:C	33:Z:889:VAL:HG13	2.32	0.49
1:1:8:PHE:HD2	1:1:9:LYS:H	1.55	0.49
4:4:12:VAL:HG23	4:4:113:PRO:HB2	1.94	0.49
6:6:146:ASN:HA	6:6:163:LEU:CD1	2.43	0.49
8:A:128:TYR:HE1	8:A:131:ARG:NH1	2.10	0.49
10:C:228:LYS:HE2	10:C:230:PHE:CE2	2.47	0.49
13:F:135:ILE:HG22	13:F:144:LEU:HD13	1.95	0.49
18:K:227:ALA:CB	18:K:268:ILE:HD12	2.43	0.49
19:L:267:PHE:HE1	19:L:318:LEU:HD23	1.76	0.49
23:P:114:THR:O	23:P:114:THR:HG22	2.12	0.49
24:Q:227:CYS:CA	24:Q:232:TYR:HE1	2.25	0.49
24:Q:378:SER:CB	25:R:345:TYR:HH	2.17	0.49
25:R:164:THR:HG22	25:R:198:ILE:HD13	1.94	0.49
25:R:238:PHE:HB3	25:R:249:ILE:HD13	1.94	0.49
26:S:200:GLU:O	27:T:96:LEU:HD11	2.12	0.49
26:S:428:ARG:HG3	27:T:195:LEU:HD12	1.94	0.49
26:S:457:PRO:CG	28:U:274:MET:SD	3.00	0.49
26:S:464:ARG:CZ	28:U:281:LEU:CD1	2.89	0.49
28:U:127:GLN:NE2	29:V:212:MET:CA	2.75	0.49
29:V:116:CYS:C	29:V:117:TRP:CD1	2.85	0.49
30:W:9:VAL:HG22	30:W:52:ILE:CG1	2.42	0.49
31:X:77:PRO:O	31:X:78:ILE:CD1	2.56	0.49
33:Z:122:LEU:HD23	33:Z:122:LEU:O	2.13	0.49
33:Z:224:LEU:HG	33:Z:232:LYS:HD2	1.95	0.49
33:Z:419:VAL:HG22	33:Z:439:TYR:CD1	2.48	0.49
33:Z:493:LEU:HA	33:Z:497:PHE:CE1	2.48	0.49
33:Z:528:LEU:HD11	33:Z:565:PHE:HE1	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:575:MET:CE	33:Z:878:LEU:HD22	2.42	0.49
33:Z:891:PRO:HD3	33:Z:901:PHE:HZ	1.77	0.49
33:Z:987:PRO:HA	33:Z:990:ARG:HB3	1.95	0.49
33:Z:991:GLU:CD	33:Z:993:GLU:HB3	2.32	0.49
2:2:124:TYR:O	2:2:125:LEU:HD23	2.12	0.49
5:5:146:TRP:CZ3	5:5:147:ASP:HB2	2.47	0.49
9:B:98:LYS:HE2	9:B:104:TYR:HD1	1.73	0.49
16:I:362:LEU:HB3	16:I:377:LEU:CD2	2.43	0.49
18:K:48:TYR:CZ	21:N:152:LEU:HD12	2.46	0.49
19:L:150:ILE:HG23	19:L:151:THR:N	2.28	0.49
19:L:198:GLU:CG	19:L:202:LYS:HZ3	2.22	0.49
21:N:222:TYR:CZ	21:N:253:LEU:HG	2.47	0.49
22:O:215:TYR:O	22:O:219:ILE:HG12	2.11	0.49
23:P:272:PRO:O	23:P:344:ARG:HD2	2.13	0.49
25:R:60:ALA:HB2	25:R:102:LEU:HD12	1.95	0.49
25:R:396:LYS:HD3	26:S:450:ASN:O	2.11	0.49
28:U:135:ASP:HB3	28:U:137:TYR:HE1	1.78	0.49
29:V:53:MET:CE	29:V:65:VAL:HG11	2.43	0.49
31:X:64:ILE:O	31:X:65:SER:CB	2.60	0.49
1:1:79:ALA:HB1	1:1:113:ILE:HD11	1.93	0.49
3:3:11:CYS:HA	3:3:103:ILE:HD11	1.93	0.49
3:3:61:LYS:NZ	3:3:85:SER:HB3	2.27	0.49
7:7:7:LYS:HG3	7:7:119:LEU:HD22	1.94	0.49
12:E:157:HIS:ND1	12:E:170:LYS:NZ	2.55	0.49
16:I:190:GLN:NE2	16:I:350:PHE:HA	2.27	0.49
21:N:215:MET:O	21:N:217:MET:HG3	2.12	0.49
21:N:665:ILE:HD12	21:N:715:ILE:HG12	1.95	0.49
22:O:77:SER:CA	22:O:80:LYS:HG2	2.41	0.49
22:O:177:GLN:O	22:O:181:PHE:HD2	1.96	0.49
23:P:265:VAL:O	23:P:269:VAL:HG23	2.13	0.49
23:P:308:LEU:O	23:P:308:LEU:HG	2.12	0.49
23:P:411:LEU:HD12	28:U:265:LEU:O	2.13	0.49
25:R:58:GLU:HB2	25:R:102:LEU:HG	1.94	0.49
25:R:374:ASN:O	25:R:375:LYS:HB2	2.13	0.49
26:S:236:LEU:HD12	26:S:239:ARG:HH21	1.76	0.49
28:U:5:HIS:HE1	28:U:157:LEU:HG	1.76	0.49
33:Z:82:MET:SD	33:Z:85:VAL:HG22	2.52	0.49
33:Z:357:ILE:HG22	33:Z:960:GLY:HA3	1.94	0.49
33:Z:887:GLY:HA2	33:Z:900:LEU:HD13	1.95	0.49
3:3:93:PRO:O	3:3:94:TYR:HB2	2.13	0.49
3:3:136:GLN:HE22	3:3:168:ARG:HD3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:65:TRP:HZ2	13:F:90:GLN:HA	1.74	0.49
9:B:159:TRP:CZ2	10:C:57:LEU:HD21	2.48	0.49
9:B:242:GLU:HB3	9:B:246:ARG:NH1	2.21	0.49
10:C:50:ARG:NH1	10:C:53:THR:CA	2.73	0.49
21:N:190:LEU:CD1	21:N:224:THR:CG2	2.88	0.49
22:O:119:SER:HB2	22:O:166:ARG:CZ	2.42	0.49
22:O:362:GLN:HE21	28:U:230:GLN:CG	2.24	0.49
25:R:174:ILE:O	25:R:187:VAL:HG22	2.12	0.49
5:5:76:VAL:CG1	5:5:113:TYR:CE2	2.87	0.49
13:F:222:PHE:HE1	13:F:224:ILE:CG1	2.23	0.49
14:G:166:LYS:HZ2	14:G:206:ASN:ND2	2.11	0.49
17:J:188:TYR:HE1	17:J:295:ASN:C	2.16	0.49
17:J:392:LYS:HE2	18:K:337:LYS:HE3	1.95	0.49
19:L:361:PHE:CE2	19:L:376:PHE:CD1	2.96	0.49
20:M:76:PRO:HG2	20:M:150:LYS:NZ	2.27	0.49
21:N:352:ASN:CB	21:N:355:TRP:HB2	2.27	0.49
22:O:284:GLU:CD	22:O:288:ARG:HH22	2.13	0.49
24:Q:246:TYR:CE2	24:Q:261:VAL:HG21	2.36	0.49
31:X:24:CYS:SG	31:X:86:ILE:CG1	2.81	0.49
33:Z:89:LEU:HD11	33:Z:125:THR:CB	2.42	0.49
33:Z:358:TYR:HE1	33:Z:960:GLY:HA2	1.78	0.49
1:1:19:ARG:HD2	1:1:170:GLY:HA3	1.94	0.49
7:7:187:PHE:CZ	7:7:204:LEU:HB2	2.48	0.49
8:A:69:VAL:CA	14:G:157:TRP:HZ3	2.18	0.49
8:A:69:VAL:HG13	14:G:157:TRP:CZ3	2.47	0.49
10:C:209:ASP:OD1	10:C:210:ARG:HG3	2.13	0.49
12:E:34:GLY:O	12:E:53:ARG:NH2	2.46	0.49
17:J:99:ALA:N	17:J:102:ILE:HD11	2.19	0.49
23:P:157:ALA:HB1	23:P:186:LEU:HB3	1.88	0.49
24:Q:419:LEU:HD21	28:U:286:ILE:HD11	1.94	0.49
26:S:299:LYS:O	26:S:300:ALA:HB3	2.13	0.49
27:T:126:LEU:O	27:T:132:HIS:CD2	2.66	0.49
29:V:26:THR:OG1	29:V:28:TYR:CE1	2.64	0.49
30:W:2:VAL:HG11	30:W:4:GLU:CD	2.33	0.49
30:W:167:GLU:OE1	30:W:197:SER:CB	2.61	0.49
3:3:117:LEU:C	3:3:117:LEU:HD12	2.34	0.48
5:5:64:ARG:O	5:5:68:LEU:HG	2.13	0.48
5:5:207:PHE:O	5:5:208:ASN:OD1	2.31	0.48
8:A:126:GLN:O	8:A:129:THR:OG1	2.28	0.48
12:E:119:LEU:CD1	12:E:122:ARG:HH21	2.24	0.48
13:F:13:PHE:CZ	14:G:130:PRO:HB2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:295:PHE:CD1	15:H:339:GLN:OE1	2.67	0.48
16:I:428:VAL:O	16:I:428:VAL:CG1	2.52	0.48
21:N:9:LEU:HD21	21:N:27:SER:HB3	1.88	0.48
21:N:510:HIS:ND1	21:N:513:ILE:HD12	2.29	0.48
21:N:588:VAL:HG11	21:N:621:THR:CG2	2.24	0.48
21:N:656:ALA:O	21:N:660:LEU:HG	2.13	0.48
21:N:663:ILE:HG22	21:N:664:LEU:HD23	1.95	0.48
21:N:894:ARG:O	21:N:895:LYS:HB2	2.13	0.48
21:N:914:VAL:HG13	21:N:914:VAL:O	2.13	0.48
22:O:299:THR:CA	22:O:365:LYS:HZ1	2.18	0.48
23:P:115:ARG:HH12	23:P:146:ILE:HG12	1.70	0.48
24:Q:4:PRO:HB2	24:Q:53:GLU:OE1	2.12	0.48
25:R:176:ARG:HG2	25:R:243:LEU:CD2	2.42	0.48
25:R:312:TYR:CA	25:R:316:LEU:HD12	2.38	0.48
26:S:184:TRP:HB3	26:S:188:TYR:CE2	2.47	0.48
26:S:458:GLN:NE2	28:U:270:ASN:HB3	2.28	0.48
27:T:15:PHE:CD1	27:T:64:VAL:HG13	2.48	0.48
27:T:85:LEU:CD2	27:T:105:LEU:CD1	2.91	0.48
27:T:89:TYR:C	27:T:90:PHE:CD1	2.86	0.48
29:V:50:MET:HG2	29:V:78:VAL:HG11	1.95	0.48
33:Z:154:ILE:O	33:Z:158:ALA:CB	2.60	0.48
33:Z:233:LEU:HB3	33:Z:234:PRO:HD3	1.93	0.48
2:2:109:HIS:HB3	2:2:111:PHE:CE2	2.48	0.48
3:3:61:LYS:HZ3	3:3:85:SER:HB3	1.78	0.48
5:5:66:HIS:HE1	5:5:70:GLU:OE1	1.93	0.48
8:A:164:VAL:HG12	8:A:165:GLY:H	1.77	0.48
9:B:107:THR:O	9:B:111:VAL:HG23	2.13	0.48
15:H:157:VAL:HG11	15:H:183:ILE:HD11	1.93	0.48
15:H:418:GLU:O	15:H:421:SER:OG	2.26	0.48
15:H:425:GLU:O	15:H:429:PHE:HD2	1.94	0.48
16:I:132:ILE:CD1	16:I:138:LYS:HZ3	2.23	0.48
16:I:230:THR:HG23	16:I:234:LYS:HE3	1.95	0.48
17:J:197:LEU:HD13	17:J:359:LYS:NZ	2.27	0.48
18:K:240:SER:C	18:K:243:VAL:N	2.67	0.48
19:L:270:ALA:HB3	19:L:321:THR:OG1	2.13	0.48
21:N:229:VAL:HG22	21:N:237:LEU:HB3	1.95	0.48
22:O:33:TYR:CD1	22:O:40:GLN:NE2	2.82	0.48
25:R:403:LEU:CD2	28:U:278:ILE:HD13	2.44	0.48
27:T:250:MET:O	27:T:251:HIS:CB	2.61	0.48
28:U:92:TRP:CH2	28:U:94:HIS:HD2	2.31	0.48
28:U:274:MET:HA	28:U:277:TYR:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:307:HIS:NE2	33:Z:345:GLU:OE1	2.46	0.48
1:1:-9:LEU:O	2:2:93:HIS:CD2	2.66	0.48
2:2:66:HIS:CE1	8:A:108:TYR:CE1	3.01	0.48
6:6:136:LEU:HD22	6:6:186:HIS:NE2	2.28	0.48
9:B:218:ASN:OD1	9:B:220:ASP:HB2	2.13	0.48
14:G:91:GLY:CA	14:G:115:LEU:HD21	2.42	0.48
14:G:94:GLU:HB3	14:G:114:ARG:HD3	1.94	0.48
20:M:364:HIS:CE1	20:M:392:LYS:CA	2.96	0.48
21:N:98:VAL:O	21:N:102:VAL:HG23	2.13	0.48
21:N:259:PHE:CE1	21:N:289:ILE:HG12	2.47	0.48
22:O:38:TRP:CE3	22:O:54:SER:HB2	2.47	0.48
22:O:92:PHE:HE1	22:O:136:THR:HB	1.71	0.48
22:O:116:ASN:HB3	22:O:127:LEU:HD23	1.84	0.48
7:7:170:VAL:CG1	7:7:174:ARG:HH22	2.22	0.48
8:A:164:VAL:CG1	8:A:165:GLY:N	2.76	0.48
16:I:197:SER:OG	16:I:198:VAL:HG23	2.13	0.48
17:J:210:PHE:CE2	17:J:212:ARG:CD	2.93	0.48
19:L:201:LEU:HD12	19:L:239:ILE:CD1	2.35	0.48
20:M:283:LEU:HD12	20:M:286:ILE:CD1	2.44	0.48
21:N:657:MET:HG2	21:N:682:PHE:CE1	2.45	0.48
22:O:11:LEU:HB3	22:O:15:ARG:NH2	2.28	0.48
22:O:55:THR:HG23	22:O:55:THR:O	2.13	0.48
22:O:99:LEU:HD21	22:O:133:ILE:HG12	1.94	0.48
22:O:103:LYS:O	22:O:104:ALA:HB3	2.13	0.48
22:O:189:TYR:CZ	22:O:227:ILE:CG2	2.72	0.48
23:P:371:LEU:HB3	23:P:375:GLN:NE2	2.28	0.48
23:P:373:GLU:O	23:P:377:GLU:HG3	2.13	0.48
28:U:293:GLU:HG2	29:V:277:LYS:HZ2	1.77	0.48
29:V:92:MET:O	29:V:95:LEU:HB2	2.13	0.48
31:X:14:VAL:CG1	31:X:15:CYS:N	2.76	0.48
32:Y:72:ASP:OD1	32:Y:73:PHE:N	2.46	0.48
33:Z:463:HIS:HB2	33:Z:500:SER:OG	2.12	0.48
33:Z:857:LEU:HD23	33:Z:858:GLY:N	2.28	0.48
7:7:74:ASP:HA	7:7:78:ALA:HB3	1.94	0.48
8:A:174:LYS:CD	8:A:214:LEU:CD2	2.91	0.48
12:E:127:ALA:C	12:E:132:ARG:HH22	2.16	0.48
14:G:137:PHE:CZ	14:G:148:TYR:HB2	2.49	0.48
15:H:107:LYS:CB	15:H:143:ALA:HB1	2.36	0.48
15:H:404:TRP:HA	15:H:404:TRP:CE3	2.49	0.48
16:I:290:LYS:HZ3	16:I:333:THR:CA	2.25	0.48
18:K:52:LYS:NZ	21:N:159:GLU:CD	2.65	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:279:PHE:HD1	20:M:324:LEU:HD23	1.79	0.48
21:N:16:ASN:O	21:N:17:GLN:HB2	2.14	0.48
21:N:761:ILE:HG22	21:N:762:ARG:N	2.28	0.48
22:O:92:PHE:CE1	22:O:136:THR:CA	2.94	0.48
22:O:92:PHE:HE1	22:O:136:THR:CB	2.22	0.48
22:O:147:ARG:HB2	22:O:178:TYR:CE1	2.49	0.48
22:O:266:PHE:CE2	22:O:270:ILE:HD13	2.48	0.48
23:P:200:SER:O	23:P:220:TYR:CE1	2.67	0.48
23:P:392:LYS:CE	24:Q:399:VAL:HG11	2.42	0.48
24:Q:315:ASN:ND2	24:Q:368:LEU:HD13	2.28	0.48
27:T:151:TRP:CH2	27:T:159:LYS:HD3	2.48	0.48
28:U:38:LEU:CD2	28:U:89:LEU:HA	2.43	0.48
31:X:75:TRP:HZ3	31:X:125:MET:CE	2.19	0.48
33:Z:208:VAL:HB	33:Z:209:PRO:HD3	1.95	0.48
33:Z:407:VAL:CG1	33:Z:439:TYR:CE1	2.97	0.48
1:1:124:TYR:CG	1:1:142:PHE:CE1	3.02	0.48
4:4:136:GLY:O	4:4:140:PHE:HB2	2.13	0.48
5:5:178:TYR:CD2	5:5:187:TYR:HA	2.48	0.48
6:6:3:ILE:HG23	6:6:46:ASN:ND2	2.29	0.48
8:A:19:PHE:HA	8:A:25:LEU:HD21	1.94	0.48
8:A:135:ARG:CG	14:G:124:LEU:CD2	2.91	0.48
10:C:60:ASP:HA	10:C:232:PRO:HG2	1.95	0.48
10:C:195:LYS:O	10:C:199:LYS:HG2	2.12	0.48
11:D:71:VAL:HG22	11:D:106:VAL:HG22	1.96	0.48
13:F:13:PHE:CZ	14:G:129:ARG:HG3	2.48	0.48
14:G:129:ARG:HG2	14:G:130:PRO:O	2.13	0.48
16:I:258:GLY:O	16:I:261:PRO:HD2	2.13	0.48
17:J:259:GLU:HB3	18:K:280:LYS:CE	2.21	0.48
19:L:361:PHE:O	19:L:365:THR:HG23	2.13	0.48
19:L:375:ASP:OD1	19:L:377:GLU:HB3	2.13	0.48
21:N:627:ILE:HG23	21:N:717:LEU:HD23	1.94	0.48
21:N:776:TYR:HB3	21:N:862:SER:H	1.78	0.48
22:O:44:SER:CA	22:O:47:LYS:HE2	2.44	0.48
22:O:293:LEU:HD11	22:O:313:ILE:HG23	1.94	0.48
23:P:153:ILE:CG2	23:P:189:LEU:CB	2.83	0.48
23:P:427:GLU:O	29:V:230:TYR:OH	2.27	0.48
25:R:62:TYR:HB2	25:R:180:PHE:CE2	2.49	0.48
26:S:360:PHE:CE2	26:S:364:ILE:HD11	2.49	0.48
26:S:401:LYS:HE2	26:S:444:GLU:OE2	2.12	0.48
27:T:15:PHE:CE1	27:T:20:TYR:CE1	3.01	0.48
33:Z:224:LEU:HD23	33:Z:224:LEU:C	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:286:VAL:O	33:Z:287:ARG:CB	2.61	0.48
33:Z:592:GLU:O	33:Z:593:HIS:CG	2.67	0.48
8:A:234:PHE:HE2	8:A:236:LEU:CD2	2.23	0.48
9:B:50:LYS:CE	9:B:203:GLU:CD	2.82	0.48
11:D:184:PRO:CB	11:D:185:PRO:HD2	2.44	0.48
14:G:31:GLU:OE2	14:G:168:ARG:NH1	2.35	0.48
15:H:291:VAL:O	15:H:295:PHE:HD1	1.96	0.48
19:L:315:PHE:CE1	19:L:316:ASP:OD1	2.66	0.48
20:M:57:VAL:HG12	20:M:61:LYS:HE3	1.95	0.48
21:N:434:SER:HB3	21:N:439:VAL:HG12	1.89	0.48
23:P:127:GLU:HA	23:P:136:ARG:NH2	2.29	0.48
23:P:263:HIS:HB3	23:P:267:PHE:CE2	2.45	0.48
23:P:280:LEU:O	23:P:283:LYS:CE	2.60	0.48
25:R:80:GLU:OE1	25:R:99:TYR:CE2	2.66	0.48
25:R:117:ILE:HD13	25:R:134:TRP:CE2	2.45	0.48
25:R:396:LYS:NZ	26:S:449:LEU:CB	2.77	0.48
26:S:234:ILE:HB	26:S:257:LEU:CD2	2.44	0.48
26:S:321:GLN:O	26:S:327:ILE:CG2	2.61	0.48
26:S:399:TYR:CG	26:S:400:LYS:N	2.81	0.48
27:T:261:GLU:O	27:T:264:MET:HB2	2.13	0.48
30:W:114:VAL:HG12	30:W:116:SER:H	1.78	0.48
30:W:141:ILE:HD13	30:W:154:LEU:HD22	1.95	0.48
33:Z:72:LYS:CE	33:Z:117:ASP:HB3	2.43	0.48
4:4:27:LEU:HD13	5:5:133:GLN:HE22	1.78	0.48
8:A:196:GLU:HG3	8:A:197:GLU:N	2.29	0.48
9:B:21:ILE:O	9:B:25:LEU:HG	2.14	0.48
10:C:46:LEU:HD11	10:C:138:ALA:HB2	1.95	0.48
12:E:20:ARG:CZ	12:E:25:GLU:OE2	2.62	0.48
13:F:105:VAL:CG2	13:F:145:LEU:HB2	2.34	0.48
15:H:430:ALA:HA	15:H:442:ASP:OD2	2.13	0.48
18:K:350:ARG:HA	18:K:372:ILE:HD13	1.96	0.48
19:L:132:ARG:HG2	19:L:133:ASN:N	2.29	0.48
19:L:329:ARG:CG	19:L:330:PRO:HD2	2.44	0.48
21:N:627:ILE:CG2	21:N:717:LEU:HD23	2.43	0.48
22:O:23:HIS:CE1	22:O:24:PRO:HD2	2.48	0.48
22:O:289:GLN:HE21	22:O:293:LEU:CD2	2.27	0.48
24:Q:75:ARG:CA	24:Q:117:VAL:CG2	2.89	0.48
26:S:461:PHE:HE1	28:U:278:ILE:CG1	2.26	0.48
29:V:47:MET:CE	29:V:75:GLY:HA2	2.43	0.48
33:Z:298:PHE:CD1	33:Z:310:LEU:HD23	2.49	0.48
33:Z:382:ALA:HB2	33:Z:846:PHE:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:527:SER:OG	33:Z:565:PHE:HB3	2.14	0.48
33:Z:608:TYR:O	33:Z:609:THR:HG23	2.14	0.48
4:4:66:TYR:CB	4:4:74:LEU:HD11	2.44	0.48
8:A:79:ILE:HD13	8:A:145:SER:HB3	1.96	0.48
9:B:31:GLY:HA3	9:B:76:SER:OG	2.14	0.48
10:C:106:ILE:HD13	10:C:111:LEU:HB2	1.96	0.48
11:D:67:ILE:CD1	11:D:73:LEU:HB2	2.44	0.48
12:E:222:ILE:HG12	12:E:228:PHE:HD1	1.78	0.48
13:F:187:ASP:OD1	13:F:233:TYR:OH	2.08	0.48
14:G:11:ASN:OD1	14:G:20:ASN:ND2	2.47	0.48
22:O:14:LEU:O	22:O:15:ARG:HB3	2.13	0.48
22:O:86:LEU:HD13	22:O:98:TYR:CE2	2.49	0.48
22:O:106:PHE:CG	22:O:107:GLN:N	2.81	0.48
22:O:138:LEU:HD23	22:O:138:LEU:C	2.34	0.48
22:O:175:ASN:ND2	22:O:179:PHE:CE2	2.82	0.48
24:Q:35:SER:OG	24:Q:47:ASP:CB	2.61	0.48
25:R:113:LEU:HD22	25:R:137:LEU:CD1	2.44	0.48
25:R:321:TYR:CD1	25:R:324:ARG:NH1	2.80	0.48
26:S:404:LEU:HD13	26:S:443:ILE:HG13	1.96	0.48
29:V:49:VAL:HG11	29:V:73:GLN:HE21	1.77	0.48
31:X:97:TYR:C	31:X:98:PHE:HD1	2.17	0.48
33:Z:745:LEU:HD22	33:Z:878:LEU:CG	2.43	0.48
2:2:72:ARG:HH21	8:A:150:LEU:HD11	1.79	0.48
5:5:12:ILE:HG23	5:5:112:ILE:HD11	1.95	0.48
5:5:32:LYS:O	5:5:33:ARG:CG	2.59	0.48
5:5:185:TRP:HZ3	5:5:187:TYR:HB2	1.79	0.48
18:K:389:GLU:O	18:K:393:ARG:HG3	2.13	0.48
19:L:74:LEU:CD1	20:M:51:LEU:HD12	2.44	0.48
19:L:136:ASP:HB2	19:L:158:ILE:HD12	1.95	0.48
20:M:433:TYR:CD1	20:M:434:ALA:N	2.82	0.48
21:N:593:PHE:CD1	21:N:730:VAL:HG13	2.49	0.48
21:N:596:LEU:CD1	21:N:718:GLU:HB2	2.44	0.48
21:N:596:LEU:HD21	21:N:718:GLU:HB2	1.95	0.48
21:N:602:VAL:CG1	21:N:625:LEU:CD1	2.92	0.48
22:O:21:SER:N	22:O:43:GLU:OE1	2.46	0.48
25:R:60:ALA:CB	25:R:102:LEU:CD1	2.92	0.48
27:T:111:LEU:HD22	27:T:174:PHE:HE1	1.79	0.48
28:U:24:ARG:NE	29:V:100:ARG:NH1	2.62	0.48
30:W:95:GLN:CD	30:W:132:LEU:CD2	2.70	0.48
33:Z:809:MET:HG2	33:Z:847:ILE:CD1	2.41	0.48
11:D:118:GLN:CG	12:E:83:ALA:HB1	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:109:GLY:O	13:F:112:LEU:HB2	2.14	0.47
16:I:130:VAL:HG12	16:I:153:THR:HG23	1.96	0.47
18:K:174:VAL:HG23	18:K:221:MET:SD	2.53	0.47
18:K:420:THR:CG2	18:K:423:LYS:HD3	2.44	0.47
19:L:185:GLY:HA3	19:L:360:ILE:CG1	2.30	0.47
20:M:362:GLN:NE2	20:M:376:TRP:CH2	2.82	0.47
22:O:62:TYR:O	22:O:66:VAL:HG23	2.14	0.47
22:O:233:LEU:CD2	22:O:251:LEU:HD21	2.43	0.47
24:Q:165:PHE:CZ	24:Q:173:SER:HB2	2.49	0.47
25:R:116:LYS:HZ2	25:R:136:ASN:ND2	2.10	0.47
33:Z:517:ASP:HB2	33:Z:556:ILE:HG21	1.96	0.47
33:Z:522:THR:O	33:Z:525:MET:HG2	2.14	0.47
4:4:181:LYS:HZ3	4:4:190:GLN:CD	2.17	0.47
5:5:6:PHE:CZ	5:5:13:ILE:HG13	2.48	0.47
5:5:13:ILE:HD13	5:5:179:HIS:CD2	2.49	0.47
8:A:63:LEU:HD11	14:G:172:LYS:HG3	1.96	0.47
12:E:119:LEU:HD13	12:E:122:ARG:HH22	1.79	0.47
14:G:120:GLN:O	14:G:123:THR:OG1	2.30	0.47
15:H:178:ARG:HH22	15:H:192:ASP:HB2	1.79	0.47
15:H:261:ARG:NH2	15:H:273:ARG:NH1	2.60	0.47
16:I:310:LEU:HD11	16:I:338:LEU:CA	2.44	0.47
16:I:375:VAL:HG22	16:I:413:ALA:N	2.30	0.47
18:K:281:ARG:HD3	18:K:293:GLN:HE22	1.79	0.47
18:K:372:ILE:HG23	24:Q:240:PHE:CZ	2.48	0.47
19:L:114:GLU:O	19:L:137:ARG:NE	2.47	0.47
20:M:267:PHE:O	20:M:270:ALA:HB3	2.15	0.47
21:N:711:ARG:NH1	21:N:784:TYR:CE2	2.82	0.47
21:N:897:LYS:HE2	21:N:899:ASN:HD22	1.78	0.47
22:O:106:PHE:CG	22:O:109:LEU:HB3	2.49	0.47
23:P:204:LEU:HB2	23:P:220:TYR:CE1	2.48	0.47
24:Q:162:LEU:HD11	24:Q:181:GLU:OE1	2.14	0.47
26:S:350:LYS:HG2	26:S:359:LYS:HE3	1.96	0.47
31:X:28:PRO:CA	31:X:57:VAL:CG2	2.82	0.47
33:Z:308:LYS:HG2	33:Z:345:GLU:HG2	1.96	0.47
33:Z:571:GLY:HA2	33:Z:574:TYR:OH	2.13	0.47
4:4:55:PHE:CZ	4:4:59:ILE:HG13	2.48	0.47
7:7:64:THR:HG21	7:7:68:TYR:OH	2.13	0.47
8:A:19:PHE:CZ	9:B:128:ARG:CD	2.89	0.47
10:C:50:ARG:NH2	10:C:57:LEU:HD13	2.29	0.47
10:C:119:LYS:HG2	10:C:131:PHE:HD2	1.79	0.47
10:C:156:ASN:HD21	11:D:78:LEU:CD1	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:138:PHE:HE1	11:D:215:VAL:CG1	2.15	0.47
12:E:41:ALA:HA	12:E:46:VAL:HG22	1.96	0.47
12:E:141:ALA:C	12:E:142:LEU:HD12	2.34	0.47
15:H:152:ILE:O	15:H:153:ALA:HB3	2.14	0.47
15:H:447:VAL:HG13	15:H:451:ILE:CD1	2.41	0.47
18:K:183:GLU:HG2	18:K:338:ILE:HG12	1.96	0.47
18:K:277:ILE:CD1	18:K:295:ILE:HG21	2.44	0.47
19:L:74:LEU:HD12	20:M:51:LEU:CD1	2.44	0.47
19:L:192:GLU:HB3	19:L:345:ARG:HH22	1.78	0.47
21:N:381:GLU:HA	21:N:384:LYS:HB2	1.95	0.47
21:N:510:HIS:CG	21:N:513:ILE:HD12	2.49	0.47
22:O:33:TYR:OH	22:O:40:GLN:HB2	2.10	0.47
25:R:116:LYS:O	25:R:120:LEU:HG	2.14	0.47
25:R:316:LEU:HD23	25:R:322:LEU:HD13	1.96	0.47
26:S:217:PHE:HD2	26:S:233:LEU:HD22	1.79	0.47
28:U:36:VAL:HG23	28:U:54:LEU:HD21	1.96	0.47
30:W:36:ILE:HD11	30:W:113:PHE:CZ	2.46	0.47
33:Z:750:GLU:HG3	33:Z:753:GLY:H	1.78	0.47
6:6:-9:GLN:HB3	7:7:-8:THR:HG23	1.95	0.47
6:6:-8:PHE:HZ	6:6:-6:PRO:HA	1.60	0.47
9:B:139:HIS:ND1	9:B:145:PHE:CE1	2.82	0.47
13:F:46:LEU:HD21	13:F:135:ILE:HG23	1.95	0.47
15:H:351:VAL:HG12	15:H:353:PHE:CE1	2.49	0.47
17:J:154:THR:HA	17:J:157:ILE:HD12	1.95	0.47
19:L:309:LEU:HD11	19:L:339:ARG:HH22	1.79	0.47
21:N:672:ASN:O	21:N:675:VAL:HG22	2.14	0.47
23:P:204:LEU:HD13	23:P:220:TYR:CE2	2.50	0.47
23:P:267:PHE:CZ	23:P:328:ALA:O	2.68	0.47
23:P:311:TRP:CE2	23:P:315:GLN:HG3	2.49	0.47
25:R:161:ALA:C	25:R:162:ILE:HG23	2.35	0.47
25:R:335:ARG:HH22	25:R:371:PHE:HA	0.53	0.47
26:S:143:GLN:HG2	26:S:147:TRP:O	2.14	0.47
26:S:188:TYR:CZ	26:S:210:LEU:HD13	2.49	0.47
27:T:99:SER:N	27:T:102:LYS:HD3	2.16	0.47
27:T:181:LEU:HD23	27:T:181:LEU:O	2.14	0.47
33:Z:120:SER:OG	33:Z:153:TYR:CE2	2.65	0.47
2:2:36:ARG:NH1	9:B:224:TYR:CZ	2.82	0.47
2:2:43:CYS:SG	2:2:100:VAL:HG22	2.54	0.47
5:5:35:ILE:HD11	5:5:45:MET:CE	2.44	0.47
11:D:193:LYS:HB3	11:D:197:ARG:NH1	2.30	0.47
12:E:226:ASP:O	12:E:226:ASP:OD1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:110:HIS:CG	14:G:85:ARG:NH1	2.78	0.47
13:F:110:HIS:ND1	14:G:85:ARG:HG2	2.30	0.47
14:G:31:GLU:HG3	14:G:168:ARG:HH22	1.78	0.47
16:I:222:TYR:CE1	16:I:329:ASN:CA	2.75	0.47
16:I:289:THR:CG2	16:I:290:LYS:N	2.77	0.47
18:K:390:ALA:HB1	18:K:407:LEU:HD23	1.96	0.47
19:L:336:ALA:HB1	19:L:342:ARG:HH11	1.79	0.47
19:L:370:LYS:CG	19:L:410:ILE:HB	2.32	0.47
20:M:153:TYR:HE2	29:V:46:PRO:HG3	1.80	0.47
20:M:259:GLY:O	20:M:263:VAL:HG23	2.14	0.47
21:N:294:PRO:HA	21:N:921:ARG:NE	2.30	0.47
21:N:330:THR:O	21:N:334:VAL:HG23	2.14	0.47
22:O:7:ILE:HG21	22:O:46:THR:HG23	1.95	0.47
22:O:303:LYS:O	22:O:304:ASN:CB	2.61	0.47
23:P:157:ALA:O	23:P:161:CYS:SG	2.67	0.47
24:Q:250:THR:OG1	24:Q:251:THR:N	2.46	0.47
25:R:354:ALA:CA	25:R:364:LEU:HD23	2.45	0.47
31:X:28:PRO:CD	31:X:57:VAL:HG21	2.44	0.47
33:Z:138:ARG:HB2	33:Z:157:LEU:HD12	1.86	0.47
33:Z:412:GLY:HA2	33:Z:446:GLU:CD	2.34	0.47
7:7:1:THR:N	7:7:33:ARG:HH22	2.13	0.47
15:H:211:VAL:HG12	15:H:211:VAL:O	2.13	0.47
15:H:244:LYS:CE	15:H:346:ARG:HH21	2.27	0.47
16:I:355:LEU:HD22	16:I:381:VAL:CG1	2.44	0.47
20:M:279:PHE:CD1	20:M:324:LEU:HD23	2.50	0.47
21:N:771:PHE:CD2	21:N:772:GLN:O	2.67	0.47
22:O:7:ILE:CG2	22:O:11:LEU:HD12	2.41	0.47
22:O:21:SER:HB3	22:O:43:GLU:HB3	1.96	0.47
23:P:184:MET:HE3	23:P:227:ILE:HD11	1.96	0.47
26:S:416:GLU:CD	26:S:417:GLN:NE2	2.59	0.47
26:S:428:ARG:NH2	27:T:191:LYS:CD	2.78	0.47
27:T:189:ILE:HG21	27:T:209:LEU:HD23	1.96	0.47
27:T:209:LEU:O	27:T:210:PHE:CB	2.62	0.47
30:W:101:ARG:NH1	30:W:108:GLN:NE2	2.59	0.47
30:W:118:ILE:HG13	30:W:154:LEU:HG	1.88	0.47
1:1:37:VAL:HG11	1:1:82:PHE:CZ	2.40	0.47
1:1:61:TYR:CZ	8:A:103:GLU:CG	2.95	0.47
3:3:1:GLY:HA3	3:3:33:LYS:HZ3	1.78	0.47
4:4:36:GLN:CG	4:4:188:ILE:HD12	2.45	0.47
5:5:8:PHE:HE1	5:5:12:ILE:C	2.18	0.47
6:6:84:ILE:O	6:6:88:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:70:ASN:HD22	13:F:107:ARG:HE	1.62	0.47
7:7:81:PRO:HB2	7:7:118:PHE:CG	2.49	0.47
8:A:46:ARG:HD3	8:A:154:ILE:HG13	1.95	0.47
8:A:83:VAL:HG22	8:A:141:LEU:HD23	1.95	0.47
9:B:177:LYS:HD3	24:Q:209:TYR:HB3	1.96	0.47
10:C:201:THR:CG2	10:C:206:LEU:HD21	2.43	0.47
11:D:106:VAL:HG23	11:D:139:ASP:OD1	2.15	0.47
11:D:116:VAL:HG13	11:D:119:ARG:NH2	2.29	0.47
11:D:188:VAL:HG11	11:D:216:LYS:CE	2.45	0.47
12:E:69:GLU:HG3	12:E:71:ASP:O	2.15	0.47
14:G:182:HIS:NE2	14:G:186:LEU:HD12	2.29	0.47
15:H:66:LYS:HG3	16:I:152:LYS:NZ	2.30	0.47
15:H:155:PHE:HE1	20:M:78:LEU:CD2	2.27	0.47
15:H:280:VAL:O	15:H:280:VAL:HG12	2.14	0.47
16:I:132:ILE:HB	16:I:138:LYS:HZ3	1.79	0.47
16:I:247:ILE:CD1	16:I:281:ILE:HG12	2.24	0.47
18:K:158:ILE:HG23	19:L:256:ILE:CG2	2.43	0.47
18:K:223:VAL:HG11	18:K:270:PHE:CD1	2.49	0.47
18:K:242:PHE:CA	18:K:244:HIS:H	2.24	0.47
19:L:125:PRO:CD	19:L:127:TYR:CZ	2.94	0.47
19:L:410:ILE:HD11	20:M:212:ILE:CD1	2.44	0.47
21:N:123:PHE:CD1	21:N:124:TYR:N	2.82	0.47
21:N:494:LYS:HE2	21:N:497:ALA:HB2	1.97	0.47
21:N:596:LEU:HG	21:N:718:GLU:HB2	1.97	0.47
21:N:602:VAL:HG11	21:N:625:LEU:HD12	1.97	0.47
21:N:669:GLU:CB	21:N:784:TYR:N	2.78	0.47
21:N:884:PHE:HB3	21:N:905:LEU:CD1	2.41	0.47
21:N:909:GLU:HB3	21:N:912:GLU:OE1	2.14	0.47
21:N:909:GLU:HB3	21:N:912:GLU:OE2	2.15	0.47
22:O:29:PHE:C	22:O:40:GLN:NE2	2.68	0.47
22:O:38:TRP:HE3	22:O:54:SER:CB	2.22	0.47
23:P:306:ASN:HD21	23:P:349:ASN:HB2	1.79	0.47
24:Q:262:LEU:HD21	24:Q:288:LYS:HG3	1.96	0.47
24:Q:344:GLU:HG3	24:Q:376:LYS:HE2	1.97	0.47
25:R:117:ILE:HD11	25:R:134:TRP:CZ3	2.45	0.47
25:R:221:VAL:O	25:R:222:ARG:CB	2.63	0.47
26:S:237:ILE:HG21	26:S:253:PHE:CE2	2.49	0.47
27:T:20:TYR:CD1	27:T:68:ALA:HA	2.49	0.47
27:T:111:LEU:HD13	27:T:174:PHE:CE1	2.47	0.47
27:T:246:GLU:O	27:T:246:GLU:CD	2.53	0.47
27:T:255:GLN:OE1	27:T:255:GLN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:107:HIS:CE1	30:W:108:GLN:O	2.66	0.47
31:X:36:LYS:HD3	31:X:49:GLU:OE1	2.15	0.47
33:Z:230:ILE:CD1	33:Z:263:ALA:HB1	2.45	0.47
33:Z:237:VAL:CG1	33:Z:272:TYR:HE1	2.17	0.47
33:Z:617:ILE:CD1	33:Z:746:ILE:CG2	2.93	0.47
33:Z:617:ILE:HD13	33:Z:746:ILE:HG21	1.96	0.47
33:Z:827:LEU:HD21	33:Z:831:LEU:CD2	2.40	0.47
1:1:75:THR:HB	1:1:111:TYR:HE1	1.75	0.47
2:2:220:ILE:CG2	3:3:186:VAL:HG23	2.40	0.47
8:A:24:ARG:HH11	18:K:424:PHE:HA	1.74	0.47
8:A:30:TYR:CE1	14:G:16:PRO:HB3	2.49	0.47
8:A:53:VAL:HG11	8:A:82:VAL:HG21	1.97	0.47
13:F:48:ALA:O	13:F:211:LEU:HD12	2.15	0.47
13:F:164:ARG:HH11	20:M:428:LYS:CD	2.28	0.47
13:F:164:ARG:HH11	20:M:428:LYS:CG	2.28	0.47
16:I:281:ILE:HG22	16:I:284:ILE:CD1	2.45	0.47
16:I:418:GLN:HB3	16:I:422:ARG:CZ	2.39	0.47
19:L:98:LEU:HD22	20:M:154:LEU:HD22	1.96	0.47
19:L:102:GLY:O	19:L:103:GLN:HG2	2.14	0.47
21:N:685:VAL:HG12	21:N:696:LYS:HG2	1.95	0.47
21:N:872:THR:OG1	21:N:874:ILE:HG12	2.14	0.47
21:N:890:PHE:CE2	21:N:914:VAL:CG2	2.97	0.47
22:O:79:VAL:CG1	22:O:123:GLY:O	2.39	0.47
22:O:210:ARG:HH21	22:O:238:ILE:HA	1.80	0.47
22:O:250:TRP:CD1	22:O:270:ILE:HG22	2.50	0.47
25:R:116:LYS:NZ	25:R:136:ASN:HD22	2.12	0.47
25:R:117:ILE:O	25:R:121:GLU:HG3	2.14	0.47
25:R:194:VAL:HA	25:R:197:MET:CG	2.45	0.47
28:U:8:VAL:HG12	28:U:10:ILE:HG13	1.96	0.47
28:U:108:GLU:HB2	30:W:58:ASN:HD21	1.80	0.47
33:Z:491:LEU:HD11	33:Z:900:LEU:HD23	1.97	0.47
33:Z:494:GLY:O	33:Z:532:HIS:HD2	1.98	0.47
33:Z:542:ILE:HG23	33:Z:543:THR:N	2.30	0.47
1:1:-6:GLY:CA	2:2:116:HIS:CE1	2.98	0.47
8:A:135:ARG:CD	14:G:124:LEU:CD2	2.89	0.47
14:G:89:ASN:HD22	14:G:90:ARG:NH2	2.12	0.47
16:I:124:THR:O	16:I:125:MET:CG	2.57	0.47
19:L:374:PHE:CE1	19:L:376:PHE:CD1	3.02	0.47
22:O:44:SER:N	22:O:47:LYS:HE2	2.30	0.47
22:O:250:TRP:CH2	22:O:274:ILE:HB	2.50	0.47
23:P:426:ILE:HD11	29:V:233:LYS:HE2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:297:ASP:HB3	24:Q:321:TYR:CZ	2.50	0.47
24:Q:363:SER:O	24:Q:366:ILE:HG22	2.15	0.47
25:R:48:GLU:HB2	25:R:91:TRP:CZ3	2.50	0.47
26:S:211:ARG:NH2	26:S:240:ASP:HB3	2.30	0.47
27:T:111:LEU:HD22	27:T:174:PHE:CE1	2.50	0.47
28:U:15:LEU:HB3	29:V:212:MET:HE1	1.92	0.47
28:U:47:ARG:HG2	28:U:49:THR:CG2	2.44	0.47
28:U:293:GLU:HG2	29:V:277:LYS:HZ1	1.79	0.47
33:Z:68:LEU:CD1	33:Z:115:LEU:CG	2.91	0.47
1:1:146:MET:HG3	1:1:150:GLU:OE1	2.15	0.47
5:5:69:ARG:HG3	12:E:93:ARG:NH1	2.30	0.47
10:C:190:ILE:O	10:C:194:LEU:HG	2.15	0.47
12:E:154:GLN:HB2	12:E:156:PHE:HE1	1.80	0.47
13:F:33:SER:CB	20:M:433:TYR:CE2	2.91	0.47
14:G:111:PHE:CE2	14:G:115:LEU:CD1	2.96	0.47
14:G:218:CYS:HB2	14:G:227:HIS:ND1	2.30	0.47
16:I:306:MET:SD	16:I:335:ASP:OD2	2.73	0.47
17:J:305:LEU:HD23	17:J:310:ILE:HD12	1.97	0.47
18:K:242:PHE:CD1	18:K:250:GLY:HA2	2.50	0.47
19:L:354:GLU:OE2	19:L:380:VAL:CG1	2.63	0.47
22:O:59:LEU:CA	22:O:62:TYR:CD1	2.98	0.47
22:O:110:ASP:HA	22:O:126:ILE:HD13	1.96	0.47
25:R:26:VAL:HG11	25:R:180:PHE:HE1	1.80	0.47
25:R:366:ASN:O	25:R:370:LYS:HG3	2.14	0.47
28:U:283:ARG:CD	29:V:287:THR:OG1	2.63	0.47
30:W:107:HIS:HE1	30:W:138:ALA:HB2	1.80	0.47
30:W:118:ILE:HG21	30:W:154:LEU:CG	2.35	0.47
30:W:141:ILE:CG1	30:W:158:ILE:HD11	2.45	0.47
30:W:141:ILE:HG13	30:W:158:ILE:HD11	1.97	0.47
33:Z:340:LEU:O	33:Z:341:TYR:HB2	2.15	0.47
33:Z:431:ASP:OD1	33:Z:433:LEU:N	2.47	0.47
6:6:4:LEU:HD11	6:6:141:LEU:HD22	1.97	0.46
8:A:127:ILE:O	8:A:131:ARG:HG3	2.15	0.46
9:B:35:LEU:C	9:B:35:LEU:HD12	2.36	0.46
10:C:18:ARG:HH21	10:C:23:GLU:HG2	1.80	0.46
12:E:165:TYR:O	12:E:167:TYR:CE2	2.68	0.46
14:G:215:ILE:CG2	14:G:230:VAL:CG1	2.93	0.46
17:J:150:VAL:CB	17:J:153:LEU:HD12	2.44	0.46
17:J:321:VAL:HG13	17:J:348:GLU:HA	1.97	0.46
19:L:74:LEU:CD2	20:M:44:PHE:HD1	2.28	0.46
19:L:273:HIS:CG	19:L:273:HIS:O	2.66	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:403:ILE:CG2	20:M:203:ARG:HH11	2.28	0.46
21:N:862:SER:O	21:N:863:SER:CB	2.63	0.46
22:O:72:LYS:C	22:O:73:ILE:HG13	2.35	0.46
23:P:277:GLN:HG2	23:P:281:ILE:HD11	1.97	0.46
23:P:311:TRP:CZ3	23:P:315:GLN:NE2	2.83	0.46
24:Q:90:LYS:HZ2	24:Q:129:LYS:HE3	1.80	0.46
25:R:93:LYS:HG2	25:R:94:PHE:O	2.15	0.46
27:T:126:LEU:O	27:T:132:HIS:CE1	2.68	0.46
31:X:113:GLU:HB2	31:X:115:SER:OG	2.15	0.46
33:Z:493:LEU:O	33:Z:497:PHE:CD1	2.68	0.46
8:A:11:GLY:O	8:A:12:TYR:CG	2.68	0.46
8:A:220:LYS:HZ2	8:A:242:GLU:CB	2.27	0.46
10:C:47:ALA:HB1	10:C:197:LEU:HD11	1.97	0.46
11:D:67:ILE:HD11	11:D:73:LEU:HD12	1.97	0.46
13:F:50:LYS:HZ1	13:F:61:LYS:HA	1.78	0.46
15:H:331:ARG:NH1	15:H:335:GLU:HB2	2.29	0.46
16:I:310:LEU:HD13	16:I:338:LEU:CA	2.40	0.46
21:N:329:HIS:CG	21:N:355:TRP:NE1	2.71	0.46
21:N:585:ARG:NH1	21:N:740:TRP:HZ2	2.13	0.46
22:O:80:LYS:HB3	22:O:81:TYR:CE1	2.50	0.46
22:O:284:GLU:HG2	22:O:288:ARG:NH2	2.30	0.46
23:P:42:LEU:HD23	23:P:42:LEU:C	2.35	0.46
23:P:204:LEU:HB2	23:P:220:TYR:CZ	2.50	0.46
24:Q:232:TYR:CE2	24:Q:271:MET:HB3	2.50	0.46
24:Q:389:VAL:O	24:Q:397:LEU:HD12	2.15	0.46
28:U:127:GLN:HE22	29:V:212:MET:N	2.13	0.46
29:V:157:ARG:HB3	29:V:197:TYR:CD1	2.46	0.46
33:Z:278:LEU:HD13	33:Z:297:VAL:O	2.15	0.46
33:Z:430:LEU:HD21	33:Z:468:GLU:HB2	1.97	0.46
33:Z:600:GLU:O	33:Z:603:VAL:HG22	2.15	0.46
3:3:44:ILE:HG12	3:3:98:PRO:HB3	1.97	0.46
6:6:-8:PHE:CD2	6:6:-6:PRO:CD	2.99	0.46
7:7:72:LEU:HD11	14:G:64:VAL:HG13	1.97	0.46
7:7:156:ASP:O	7:7:160:THR:HG23	2.15	0.46
13:F:50:LYS:HA	20:M:433:TYR:CZ	2.50	0.46
15:H:155:PHE:HB3	20:M:76:PRO:HG3	1.96	0.46
15:H:249:TYR:HE1	15:H:374:LYS:HG2	1.80	0.46
16:I:362:LEU:CB	16:I:377:LEU:HD22	2.46	0.46
17:J:33:LYS:HZ2	26:S:224:LYS:HZ2	1.64	0.46
18:K:291:GLU:HG3	18:K:294:ARG:HH22	0.66	0.46
19:L:337:LEU:HA	19:L:342:ARG:CZ	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:220:MET:CB	20:M:349:PHE:HE2	2.23	0.46
22:O:26:PHE:O	22:O:58:ARG:NH2	2.48	0.46
22:O:33:TYR:CD1	22:O:40:GLN:OE1	2.67	0.46
22:O:175:ASN:HD21	22:O:179:PHE:HE2	1.64	0.46
22:O:374:ASN:O	22:O:378:GLU:HG3	2.15	0.46
24:Q:232:TYR:CE1	24:Q:271:MET:CE	2.98	0.46
27:T:46:ILE:O	27:T:47:GLN:NE2	2.48	0.46
31:X:78:ILE:CG2	31:X:78:ILE:O	2.58	0.46
31:X:85:ARG:NE	31:X:101:LEU:HD13	2.30	0.46
33:Z:532:HIS:HA	33:Z:535:VAL:CG2	2.45	0.46
33:Z:585:LEU:HD21	33:Z:603:VAL:HG21	1.97	0.46
1:1:124:TYR:CD1	1:1:142:PHE:CE2	3.04	0.46
6:6:197:ILE:HG22	6:6:199:THR:HG23	1.96	0.46
8:A:89:ASP:OD1	8:A:137:LEU:HD22	2.15	0.46
9:B:7:PHE:CE2	10:C:7:ASP:CB	2.91	0.46
10:C:50:ARG:NH1	10:C:52:VAL:O	2.48	0.46
12:E:147:HIS:CE1	12:E:153:TYR:CD2	3.04	0.46
14:G:15:SER:OG	14:G:19:ARG:N	2.47	0.46
14:G:217:TRP:O	14:G:217:TRP:CD1	2.69	0.46
15:H:224:VAL:HG13	15:H:243:PRO:HD2	1.97	0.46
15:H:255:GLY:O	15:H:259:CYS:SG	2.68	0.46
17:J:99:ALA:CA	17:J:102:ILE:HG12	2.45	0.46
17:J:273:LEU:HD13	17:J:309:ARG:HH12	0.96	0.46
19:L:97:ALA:O	20:M:154:LEU:HD11	2.16	0.46
21:N:781:ALA:HB2	21:N:874:ILE:H	1.80	0.46
22:O:362:GLN:HE22	28:U:227:GLY:HA2	1.81	0.46
26:S:350:LYS:HG2	26:S:359:LYS:NZ	2.31	0.46
27:T:148:LEU:HD11	27:T:164:LEU:HD23	1.94	0.46
33:Z:212:LEU:HD21	33:Z:239:GLU:CG	2.44	0.46
9:B:49:LYS:HA	9:B:63:LYS:NZ	2.31	0.46
10:C:230:PHE:HA	10:C:234:GLU:OE1	2.15	0.46
14:G:182:HIS:CB	14:G:186:LEU:HG	2.45	0.46
16:I:142:GLU:O	16:I:145:CYS:SG	2.73	0.46
16:I:142:GLU:HB2	16:I:145:CYS:SG	2.55	0.46
16:I:172:LYS:HE3	17:J:278:GLN:HA	1.98	0.46
16:I:227:THR:HG21	17:J:306:ARG:NH1	2.30	0.46
17:J:342:ASN:HB3	17:J:345:LYS:HD3	1.98	0.46
18:K:423:LYS:HG3	18:K:424:PHE:CD2	2.50	0.46
21:N:387:ALA:HB3	21:N:388:PRO:HD3	1.97	0.46
21:N:517:LEU:O	21:N:521:LEU:HG	2.15	0.46
24:Q:41:ALA:HA	24:Q:84:TYR:CG	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:325:HIS:CE1	25:R:329:PHE:CB	2.98	0.46
29:V:57:PHE:CZ	29:V:135:ARG:CG	2.98	0.46
30:W:125:LEU:HD22	30:W:153:LEU:HD22	1.98	0.46
33:Z:307:HIS:HE2	33:Z:341:TYR:CA	2.29	0.46
33:Z:358:TYR:CE1	33:Z:960:GLY:HA2	2.50	0.46
5:5:197:PHE:CZ	5:5:201:LYS:HD2	2.50	0.46
9:B:37:ILE:HG12	9:B:175:LEU:HD21	1.98	0.46
10:C:207:THR:HG1	10:C:210:ARG:HH11	1.54	0.46
16:I:217:LYS:NZ	16:I:343:ARG:HD2	2.25	0.46
18:K:99:PHE:CE2	18:K:133:PRO:HA	2.51	0.46
18:K:159:SER:CB	19:L:256:ILE:HG12	2.46	0.46
18:K:426:PHE:CE1	18:K:427:TYR:CE2	3.04	0.46
20:M:364:HIS:CE1	20:M:392:LYS:HA	2.51	0.46
21:N:95:SER:OG	21:N:98:VAL:CG2	2.63	0.46
23:P:143:LEU:CG	23:P:147:LYS:HE3	2.42	0.46
23:P:425:HIS:CE1	23:P:429:ILE:CG1	2.99	0.46
24:Q:90:LYS:HZ2	24:Q:129:LYS:HG3	1.80	0.46
24:Q:409:TYR:HA	25:R:399:GLN:CG	2.45	0.46
29:V:158:LEU:O	29:V:159:ILE:HB	2.15	0.46
31:X:38:ASN:CG	31:X:39:GLU:H	2.18	0.46
3:3:87:TYR:OH	3:3:119:GLY:O	2.22	0.46
5:5:6:PHE:CZ	5:5:13:ILE:HB	2.51	0.46
15:H:231:SER:OG	15:H:234:ARG:HG3	2.16	0.46
16:I:105:SER:HB3	17:J:94:TYR:CE2	2.51	0.46
22:O:59:LEU:HA	22:O:62:TYR:HD1	1.80	0.46
24:Q:270:ILE:HG13	24:Q:278:VAL:HG21	1.97	0.46
25:R:80:GLU:HG2	25:R:81:HIS:NE2	2.29	0.46
31:X:37:PRO:O	31:X:38:ASN:CB	2.63	0.46
31:X:125:MET:O	31:X:129:LEU:HG	2.16	0.46
1:1:30:VAL:HG21	2:2:123:TYR:CE2	2.51	0.46
1:1:70:TYR:CD1	14:G:110:ALA:HB1	2.51	0.46
1:1:78:ALA:O	1:1:82:PHE:CD2	2.69	0.46
6:6:147:PHE:HZ	6:6:164:LYS:HB2	1.78	0.46
8:A:220:LYS:CG	8:A:245:LEU:HD12	2.46	0.46
12:E:123:PHE:HD1	12:E:136:ARG:N	2.11	0.46
12:E:127:ALA:CA	12:E:132:ARG:NH2	2.79	0.46
16:I:136:VAL:HG11	16:I:159:VAL:HG11	1.98	0.46
19:L:180:PHE:CD2	19:L:238:THR:CB	2.96	0.46
20:M:379:LEU:HD11	20:M:415:PHE:CB	2.46	0.46
21:N:23:TYR:CD2	27:T:35:ILE:HD13	2.50	0.46
21:N:137:PHE:CE1	21:N:162:ARG:HD3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:602:VAL:CG1	21:N:625:LEU:HD12	2.46	0.46
21:N:870:ASN:OD1	21:N:871:MET:HG3	2.16	0.46
23:P:281:ILE:HG21	23:P:300:VAL:HG11	1.98	0.46
23:P:360:ILE:HD11	23:P:364:ARG:HG3	1.98	0.46
26:S:234:ILE:CG1	26:S:257:LEU:CD1	2.93	0.46
26:S:415:SER:CB	27:T:159:LYS:HZ2	2.29	0.46
27:T:202:LEU:O	27:T:205:ILE:HG22	2.15	0.46
29:V:109:HIS:HB3	29:V:111:HIS:CD2	2.47	0.46
33:Z:815:MET:HE2	33:Z:833:GLN:HG2	1.97	0.46
1:1:8:PHE:CE1	1:1:11:GLY:C	2.89	0.46
1:1:75:THR:CB	1:1:111:TYR:CE1	2.97	0.46
8:A:141:LEU:HB3	8:A:143:PHE:CE1	2.51	0.46
10:C:18:ARG:NH2	10:C:26:LEU:HD12	2.30	0.46
13:F:215:ILE:CG2	13:F:220:THR:HG21	2.45	0.46
15:H:337:ILE:HA	15:H:370:ARG:NH2	2.30	0.46
17:J:186:ILE:HD13	17:J:305:LEU:HD21	1.98	0.46
18:K:349:ARG:NH2	18:K:378:LEU:O	2.49	0.46
19:L:149:ASP:CB	19:L:152:THR:HB	2.46	0.46
21:N:597:ARG:HH21	21:N:725:LEU:HD11	1.81	0.46
21:N:916:LEU:C	21:N:917:ILE:HG13	2.36	0.46
22:O:250:TRP:CZ3	22:O:274:ILE:HB	2.51	0.46
22:O:297:ILE:CG2	22:O:356:ARG:NH2	2.79	0.46
23:P:216:LEU:HD23	23:P:219:GLU:OE1	2.16	0.46
24:Q:275:ILE:CD1	24:Q:306:TYR:CD2	2.92	0.46
25:R:137:LEU:CD1	25:R:141:TYR:CZ	2.95	0.46
26:S:286:TYR:CE1	26:S:323:LEU:CD1	2.80	0.46
27:T:85:LEU:HD23	27:T:105:LEU:HD13	1.98	0.46
28:U:129:GLY:C	28:U:130:VAL:HG22	2.36	0.46
33:Z:227:ILE:HG21	33:Z:232:LYS:NZ	2.31	0.46
33:Z:870:ALA:O	33:Z:872:VAL:HG13	2.16	0.46
1:1:14:LEU:HD11	1:1:44:CYS:SG	2.57	0.46
8:A:164:VAL:CG1	8:A:165:GLY:H	2.29	0.46
8:A:220:LYS:NZ	8:A:242:GLU:HG3	2.30	0.46
9:B:75:TYR:CD1	9:B:82:TYR:CE2	3.04	0.46
13:F:13:PHE:HZ	14:G:130:PRO:CD	2.21	0.46
17:J:150:VAL:CG2	17:J:153:LEU:HD12	2.45	0.46
18:K:242:PHE:HD1	18:K:250:GLY:HA3	1.81	0.46
19:L:245:PHE:CE1	19:L:281:ASP:HB2	2.51	0.46
21:N:124:TYR:CE1	21:N:125:THR:HG23	2.50	0.46
21:N:158:LEU:CD1	21:N:202:PHE:CE2	2.99	0.46
21:N:222:TYR:OH	21:N:253:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:459:ASN:CG	21:N:462:VAL:HG23	2.35	0.46
23:P:211:PRO:O	23:P:213:TYR:CD1	2.69	0.46
24:Q:311:LEU:HD13	24:Q:343:LEU:HD13	1.97	0.46
25:R:50:VAL:O	25:R:54:ILE:HG12	2.16	0.46
29:V:50:MET:HB3	29:V:78:VAL:HG21	1.98	0.46
31:X:7:VAL:HB	31:X:35:ILE:O	2.16	0.46
31:X:37:PRO:O	31:X:38:ASN:HB3	2.15	0.46
4:4:45:PHE:HD2	4:4:99:VAL:HG11	1.80	0.45
5:5:32:LYS:C	5:5:33:ARG:HG2	2.37	0.45
16:I:172:LYS:CE	17:J:278:GLN:HA	2.45	0.45
16:I:418:GLN:O	16:I:422:ARG:HG3	2.15	0.45
16:I:418:GLN:C	16:I:422:ARG:NH1	2.70	0.45
17:J:33:LYS:NZ	26:S:224:LYS:NZ	2.64	0.45
18:K:123:LEU:HG	18:K:146:LEU:HG	1.98	0.45
19:L:361:PHE:HE2	19:L:376:PHE:CD1	2.33	0.45
19:L:392:ARG:NE	20:M:339:ARG:NH2	2.64	0.45
20:M:129:LEU:C	20:M:129:LEU:HD12	2.36	0.45
20:M:283:LEU:O	20:M:283:LEU:HG	2.16	0.45
21:N:331:ALA:HB2	21:N:697:PHE:CD1	2.52	0.45
21:N:721:ASP:HB2	21:N:754:THR:HG21	1.97	0.45
22:O:38:TRP:CZ3	22:O:54:SER:N	2.79	0.45
23:P:303:PHE:CE1	23:P:311:TRP:CZ3	3.04	0.45
29:V:154:ASP:OD2	29:V:156:PHE:CZ	2.69	0.45
31:X:38:ASN:HA	31:X:47:ASP:OD2	2.16	0.45
31:X:78:ILE:CG2	31:X:114:LEU:CB	2.93	0.45
33:Z:888:LEU:HD21	33:Z:904:LEU:HD11	1.95	0.45
5:5:76:VAL:CG1	5:5:113:TYR:HD2	2.25	0.45
8:A:135:ARG:HG3	14:G:124:LEU:HD22	1.98	0.45
8:A:156:LYS:HB3	8:A:166:TYR:CE2	2.52	0.45
9:B:75:TYR:CG	9:B:82:TYR:CD1	3.05	0.45
11:D:193:LYS:O	11:D:197:ARG:HG3	2.16	0.45
14:G:187:SER:OG	14:G:190:GLU:HG3	2.17	0.45
14:G:219:SER:OG	14:G:222:GLU:HB2	2.15	0.45
17:J:193:THR:HG22	17:J:354:SER:HB2	1.98	0.45
18:K:198:TYR:CD1	18:K:203:ILE:CD1	2.99	0.45
18:K:372:ILE:HG21	24:Q:240:PHE:HE2	1.68	0.45
19:L:167:VAL:HG23	19:L:168:TYR:CD2	2.51	0.45
19:L:411:ASN:OD1	19:L:413:ASP:HB2	2.15	0.45
20:M:192:GLU:OE1	20:M:347:ILE:HG23	2.17	0.45
21:N:893:VAL:HG23	21:N:894:ARG:HG3	1.98	0.45
22:O:63:ASP:CA	22:O:66:VAL:HG23	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:133:GLU:CD	23:P:167:THR:HA	2.36	0.45
23:P:283:LYS:CG	23:P:286:ASN:CB	2.77	0.45
24:Q:35:SER:HB3	24:Q:47:ASP:HA	1.97	0.45
24:Q:228:GLU:N	24:Q:334:HIS:NE2	2.65	0.45
26:S:207:ASN:O	26:S:211:ARG:HG3	2.16	0.45
26:S:274:PHE:CZ	26:S:278:LYS:HE3	2.50	0.45
31:X:98:PHE:CD1	31:X:98:PHE:N	2.83	0.45
1:1:60:GLN:O	1:1:64:GLU:HG2	2.16	0.45
2:2:3:ILE:HD11	2:2:127:LEU:HB2	1.98	0.45
4:4:66:TYR:CD2	10:C:102:TYR:HE1	2.35	0.45
6:6:149:ASN:HA	6:6:151:TYR:HE1	1.81	0.45
7:7:171:ASN:OD1	7:7:174:ARG:NH1	2.40	0.45
9:B:159:TRP:CZ2	10:C:57:LEU:CD2	3.00	0.45
10:C:106:ILE:HG23	10:C:106:ILE:O	2.16	0.45
10:C:179:ASP:OD2	10:C:192:LEU:HD22	2.17	0.45
11:D:174:PHE:CD2	11:D:198:SER:HB2	2.51	0.45
13:F:105:VAL:HG13	13:F:106:GLU:N	2.30	0.45
14:G:182:HIS:CG	14:G:186:LEU:CG	2.94	0.45
18:K:192:LEU:HD22	18:K:266:PRO:HB3	1.98	0.45
19:L:149:ASP:HB3	19:L:152:THR:HB	1.98	0.45
21:N:123:PHE:CG	21:N:124:TYR:N	2.85	0.45
24:Q:65:TYR:HD2	24:Q:74:LEU:CD2	2.22	0.45
24:Q:263:LYS:HE2	24:Q:295:GLY:HA3	1.99	0.45
30:W:129:ALA:HB1	30:W:160:ALA:HB1	1.98	0.45
31:X:29:VAL:HG12	31:X:61:LEU:HB2	1.93	0.45
33:Z:82:MET:O	33:Z:83:THR:HG23	2.15	0.45
33:Z:322:GLU:CG	33:Z:323:TYR:HB3	2.31	0.45
1:1:33:LYS:HD3	1:1:45:ARG:NH2	2.29	0.45
1:1:90:LYS:HD3	7:7:-7:GLN:OE1	2.17	0.45
7:7:81:PRO:HB2	7:7:118:PHE:CD1	2.52	0.45
8:A:11:GLY:C	8:A:12:TYR:CD1	2.90	0.45
17:J:141:LYS:HE2	17:J:209:LYS:HE3	1.95	0.45
17:J:210:PHE:CE2	17:J:212:ARG:HG2	2.52	0.45
17:J:327:ILE:CG2	17:J:358:VAL:HG11	2.40	0.45
18:K:99:PHE:HB2	18:K:137:VAL:HG11	1.98	0.45
19:L:105:ILE:HB	20:M:126:THR:OG1	2.17	0.45
19:L:410:ILE:CD1	20:M:210:MET:SD	3.04	0.45
20:M:153:TYR:CE2	29:V:46:PRO:HG3	2.52	0.45
20:M:379:LEU:HD21	20:M:416:VAL:CG2	2.47	0.45
21:N:329:HIS:CG	21:N:355:TRP:HE1	2.34	0.45
21:N:525:ASN:HB3	21:N:528:ARG:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:597:ARG:NH2	21:N:725:LEU:HD11	2.31	0.45
22:O:116:ASN:CA	22:O:127:LEU:CB	2.94	0.45
22:O:274:ILE:HG23	22:O:275:SER:N	2.31	0.45
23:P:136:ARG:HE	23:P:163:LEU:CD2	2.29	0.45
23:P:173:MET:O	23:P:177:ILE:HG23	2.15	0.45
25:R:24:TYR:CZ	25:R:248:SER:CB	2.96	0.45
28:U:51:SER:O	28:U:52:PHE:CD1	2.70	0.45
30:W:101:ARG:HH12	30:W:108:GLN:HE21	1.63	0.45
30:W:149:GLN:O	30:W:173:THR:HG21	2.16	0.45
31:X:87:PHE:CA	31:X:99:PHE:HB2	2.46	0.45
33:Z:613:ASP:O	33:Z:613:ASP:OD1	2.35	0.45
2:2:223:ILE:HD11	3:3:36:HIS:CD2	2.52	0.45
9:B:50:LYS:CE	9:B:203:GLU:OE1	2.59	0.45
16:I:117:HIS:CD2	16:I:129:TYR:OH	2.70	0.45
18:K:242:PHE:HD1	18:K:250:GLY:CA	2.29	0.45
18:K:372:ILE:HG23	24:Q:240:PHE:HZ	1.80	0.45
19:L:290:ARG:NH2	19:L:293:GLU:O	2.50	0.45
21:N:459:ASN:OD1	21:N:461:GLU:HB2	2.17	0.45
24:Q:90:LYS:NZ	24:Q:129:LYS:HG3	2.31	0.45
25:R:241:ILE:HG22	25:R:242:GLU:N	2.31	0.45
26:S:465:ILE:CG1	28:U:281:LEU:HD21	2.44	0.45
27:T:144:TYR:O	27:T:148:LEU:HG	2.16	0.45
29:V:45:VAL:HG21	29:V:143:PRO:HG3	1.99	0.45
33:Z:89:LEU:HD22	33:Z:122:LEU:CB	2.47	0.45
4:4:1:MET:HE3	4:4:133:GLY:HA3	1.98	0.45
5:5:8:PHE:CZ	5:5:13:ILE:CG1	2.98	0.45
7:7:-3:VAL:CG1	7:7:49:ILE:HB	2.46	0.45
9:B:247:LEU:HD12	9:B:250:LEU:HD22	1.98	0.45
10:C:120:GLN:HE22	11:D:127:ARG:NH2	2.14	0.45
11:D:237:GLU:O	11:D:241:GLN:HG3	2.17	0.45
13:F:201:LEU:CD2	13:F:204:GLU:HB2	2.41	0.45
15:H:107:LYS:CG	15:H:143:ALA:HB1	2.46	0.45
15:H:274:VAL:HB	15:H:308:PHE:CD1	2.52	0.45
15:H:337:ILE:HD13	15:H:364:ALA:CB	2.47	0.45
16:I:268:PHE:CD1	16:I:316:PHE:CE2	3.05	0.45
17:J:128:ASN:O	17:J:129:LYS:HB3	2.16	0.45
18:K:190:LEU:HB3	18:K:191:PRO:HD3	1.99	0.45
21:N:778:LYS:O	21:N:866:TYR:OH	2.20	0.45
22:O:15:ARG:HB2	30:W:19:GLY:O	2.16	0.45
22:O:16:MET:HE1	22:O:19:ASP:CB	2.46	0.45
22:O:222:LEU:HA	22:O:230:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:186:TYR:O	25:R:190:LYS:HG3	2.17	0.45
25:R:231:LEU:O	25:R:234:SER:HB2	2.17	0.45
25:R:335:ARG:HD3	25:R:376:GLN:HB2	1.98	0.45
26:S:388:ILE:HG23	26:S:414:ASP:OD2	2.17	0.45
29:V:33:ALA:O	29:V:37:MET:HG3	2.17	0.45
31:X:23:LEU:O	31:X:24:CYS:CB	2.63	0.45
31:X:24:CYS:CB	31:X:86:ILE:HG12	2.47	0.45
33:Z:173:ALA:HB3	33:Z:228:GLU:OE2	2.17	0.45
3:3:87:TYR:HD1	3:3:90:ARG:CD	2.29	0.45
5:5:121:ARG:NH1	11:D:101:GLU:OE1	2.49	0.45
8:A:46:ARG:HG3	8:A:154:ILE:HD12	1.95	0.45
9:B:211:LEU:HD22	9:B:238:LEU:CD1	2.46	0.45
10:C:50:ARG:NH1	10:C:53:THR:OG1	2.41	0.45
12:E:157:HIS:CA	12:E:167:TYR:HE2	2.30	0.45
16:I:362:LEU:O	16:I:366:THR:HG23	2.17	0.45
18:K:244:HIS:HB3	19:L:256:ILE:HD12	1.92	0.45
20:M:433:TYR:HD1	20:M:433:TYR:C	2.20	0.45
21:N:50:TYR:HD1	21:N:62:ALA:HB2	1.76	0.45
22:O:48:PHE:CE1	22:O:81:TYR:HD1	2.33	0.45
23:P:273:TYR:HB3	23:P:347:GLU:OE1	2.16	0.45
24:Q:71:LYS:HB3	24:Q:71:LYS:NZ	2.32	0.45
24:Q:75:ARG:CB	24:Q:117:VAL:CG2	2.95	0.45
30:W:95:GLN:OE1	30:W:131:THR:HG22	2.17	0.45
33:Z:774:ARG:HD2	33:Z:892:SER:HB2	1.98	0.45
6:6:147:PHE:HE2	6:6:164:LYS:CB	2.30	0.45
8:A:91:ARG:HB3	14:G:120:GLN:NE2	2.19	0.45
15:H:62:ARG:HH22	16:I:100:ARG:HA	1.75	0.45
16:I:124:THR:HG21	17:J:94:TYR:OH	2.16	0.45
16:I:206:GLU:HG3	33:Z:824:ASN:ND2	2.32	0.45
16:I:266:GLN:O	16:I:270:VAL:HG23	2.17	0.45
16:I:398:GLU:CG	17:J:312:ARG:HH12	2.29	0.45
18:K:285:GLN:O	18:K:286:THR:CG2	2.62	0.45
18:K:350:ARG:CA	18:K:372:ILE:HD13	2.47	0.45
21:N:309:ILE:HG23	21:N:339:MET:HB3	1.98	0.45
21:N:361:ASN:CG	21:N:399:PHE:CE1	2.90	0.45
21:N:740:TRP:CD1	21:N:740:TRP:N	2.84	0.45
21:N:889:ARG:HB2	21:N:914:VAL:HG11	1.97	0.45
22:O:16:MET:SD	22:O:72:LYS:CG	3.05	0.45
23:P:322:LEU:O	23:P:341:LEU:CD1	2.65	0.45
25:R:396:LYS:CB	26:S:452:TYR:CE1	2.73	0.45
26:S:253:PHE:O	26:S:257:LEU:CB	2.58	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:191:GLY:O	29:V:192:LEU:HB2	2.17	0.45
31:X:64:ILE:O	31:X:64:ILE:HG22	2.16	0.45
33:Z:269:TYR:CD2	33:Z:293:MET:HE2	2.52	0.45
33:Z:474:LEU:CD1	33:Z:493:LEU:HD12	2.47	0.45
1:1:4:MET:HE1	1:1:159:LEU:HD23	1.98	0.45
2:2:122:GLY:HA3	2:2:125:LEU:HD21	1.99	0.45
2:2:124:TYR:CZ	2:2:139:GLU:CA	2.99	0.45
3:3:54:LEU:HB3	3:3:58:PHE:HE2	1.81	0.45
6:6:3:ILE:HG13	6:6:101:ILE:HD12	1.99	0.45
6:6:89:TYR:CE1	6:6:92:ARG:HD3	2.51	0.45
13:F:173:GLU:HG2	14:G:57:LEU:HG	1.99	0.45
14:G:240:ASP:HA	14:G:243:GLN:NE2	2.17	0.45
15:H:62:ARG:HG3	16:I:133:LEU:HB3	1.99	0.45
15:H:176:VAL:O	15:H:176:VAL:HG22	2.17	0.45
17:J:276:LEU:HD13	17:J:309:ARG:CB	2.47	0.45
19:L:336:ALA:HB1	19:L:342:ARG:NH1	2.32	0.45
19:L:396:THR:HA	20:M:212:ILE:HG21	1.99	0.45
20:M:221:TYR:CE2	20:M:346:LYS:HG2	2.39	0.45
21:N:539:MET:CE	21:N:551:GLY:HA2	2.45	0.45
22:O:59:LEU:CD1	22:O:62:TYR:CE1	2.98	0.45
24:Q:419:LEU:HD21	28:U:286:ILE:CD1	2.47	0.45
4:4:66:TYR:CD2	10:C:102:TYR:CE1	3.05	0.45
5:5:161:ILE:HG21	5:5:175:VAL:HG22	1.99	0.45
8:A:163:TYR:C	8:A:164:VAL:HG23	2.36	0.45
10:C:70:ASN:HD22	10:C:73:ILE:HB	1.82	0.45
14:G:49:VAL:HB	14:G:76:VAL:HG21	1.99	0.45
15:H:62:ARG:NH1	16:I:99:ILE:CG2	2.76	0.45
15:H:274:VAL:HB	15:H:308:PHE:HD1	1.81	0.45
16:I:214:LYS:HG2	16:I:319:ARG:HH22	1.81	0.45
16:I:304:ARG:HH12	16:I:308:GLU:HB2	1.83	0.45
18:K:258:PHE:CE2	18:K:262:ARG:HD2	2.52	0.45
18:K:286:THR:C	18:K:290:ARG:HE	2.20	0.45
21:N:409:GLY:C	21:N:452:LEU:HD23	2.38	0.45
21:N:525:ASN:HA	21:N:528:ARG:HD2	1.99	0.45
22:O:44:SER:H	22:O:47:LYS:CE	2.29	0.45
22:O:226:LYS:O	22:O:227:ILE:HG12	2.17	0.45
23:P:72:TRP:CG	23:P:104:LEU:HD21	2.50	0.45
23:P:346:ILE:HG21	23:P:379:TYR:CG	2.52	0.45
27:T:88:TYR:HA	27:T:94:HIS:CE1	2.52	0.45
30:W:118:ILE:CD1	30:W:154:LEU:HD21	2.47	0.45
6:6:29:ARG:HE	7:7:148:ARG:HH22	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:87:ILE:CG1	14:G:157:TRP:HZ2	2.24	0.44
8:A:141:LEU:HB2	8:A:157:THR:OG1	2.16	0.44
15:H:66:LYS:HG2	15:H:70:LYS:HE3	1.99	0.44
15:H:224:VAL:HG13	15:H:243:PRO:HG2	1.98	0.44
15:H:357:ARG:NH2	16:I:290:LYS:CA	2.81	0.44
16:I:172:LYS:HZ1	17:J:278:GLN:HA	1.80	0.44
17:J:33:LYS:HZ1	26:S:224:LYS:HZ3	1.65	0.44
17:J:41:VAL:HG11	18:K:65:GLU:HG2	1.99	0.44
17:J:225:GLU:O	17:J:228:ARG:HB3	2.16	0.44
17:J:297:LEU:CD1	17:J:305:LEU:HD11	2.43	0.44
18:K:426:PHE:CZ	18:K:427:TYR:CD2	3.06	0.44
19:L:98:LEU:HA	20:M:154:LEU:CD1	2.47	0.44
20:M:221:TYR:CZ	20:M:348:GLU:HA	2.52	0.44
21:N:889:ARG:HG3	21:N:909:GLU:HB2	1.98	0.44
22:O:293:LEU:O	22:O:297:ILE:CG1	2.64	0.44
23:P:429:ILE:CD1	28:U:203:LYS:CE	2.74	0.44
25:R:266:LEU:HD22	25:R:270:VAL:CG2	2.45	0.44
26:S:323:LEU:HD21	26:S:382:ARG:HE	1.82	0.44
26:S:464:ARG:NE	28:U:281:LEU:HD13	2.31	0.44
31:X:109:LEU:HD12	31:X:118:ASP:OD2	2.17	0.44
2:2:8:PHE:CD1	2:2:10:ASN:CA	2.99	0.44
2:2:200:GLN:O	2:2:201:LYS:HB2	2.16	0.44
5:5:8:PHE:CD1	5:5:13:ILE:HG12	2.45	0.44
6:6:58:ARG:HD3	6:6:91:LYS:HZ1	1.82	0.44
6:6:65:TRP:CH2	13:F:90:GLN:N	2.79	0.44
7:7:17:ASP:C	7:7:17:ASP:OD1	2.54	0.44
14:G:31:GLU:CG	14:G:168:ARG:HH12	2.29	0.44
16:I:291:ARG:CG	16:I:292:TYR:N	2.55	0.44
18:K:99:PHE:HE2	18:K:102:PRO:HD3	1.79	0.44
18:K:191:PRO:HG3	18:K:198:TYR:CE2	2.52	0.44
19:L:114:GLU:CB	19:L:137:ARG:HH21	2.18	0.44
19:L:365:THR:CB	19:L:376:PHE:HE1	2.24	0.44
21:N:92:ASP:OD2	21:N:139:ARG:NH2	2.51	0.44
22:O:16:MET:CG	22:O:72:LYS:HG2	2.47	0.44
22:O:21:SER:HA	22:O:43:GLU:CG	2.47	0.44
23:P:308:LEU:HD13	23:P:345:VAL:HG11	1.95	0.44
23:P:428:THR:HG21	28:U:232:VAL:HG21	1.97	0.44
25:R:84:LYS:HE2	25:R:86:ASP:CB	2.42	0.44
25:R:312:TYR:HA	25:R:316:LEU:CD1	2.40	0.44
26:S:321:GLN:O	26:S:327:ILE:HG23	2.16	0.44
31:X:35:ILE:HD12	31:X:48:PHE:HE1	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:106:TRP:HA	33:Z:112:LYS:HD3	1.99	0.44
33:Z:269:TYR:CG	33:Z:293:MET:HE1	2.53	0.44
1:1:17:ASP:OD1	1:1:17:ASP:O	2.35	0.44
5:5:38:ASN:HB2	5:5:39:PRO:HD2	1.99	0.44
11:D:51:THR:O	11:D:53:LYS:HG3	2.18	0.44
15:H:246:ILE:HD11	15:H:375:VAL:CG2	2.45	0.44
15:H:277:SER:OG	16:I:311:ASN:ND2	2.51	0.44
15:H:394:LYS:HA	15:H:400:ARG:HH22	1.82	0.44
18:K:67:TYR:CD1	21:N:572:LEU:HD22	2.49	0.44
18:K:360:MET:SD	18:K:402:ILE:CD1	3.06	0.44
19:L:221:TYR:CE1	19:L:348:GLU:CB	2.98	0.44
19:L:270:ALA:CB	19:L:321:THR:OG1	2.65	0.44
20:M:193:LEU:HD22	20:M:220:MET:HE1	1.99	0.44
21:N:117:TYR:CZ	21:N:121:GLU:OE2	2.70	0.44
21:N:299:TYR:CE2	21:N:303:LEU:CD1	2.98	0.44
22:O:21:SER:CB	22:O:43:GLU:HB3	2.47	0.44
22:O:370:LEU:HD13	28:U:204:LEU:HA	1.98	0.44
27:T:229:VAL:HG23	27:T:232:LYS:HB2	1.97	0.44
33:Z:970:TYR:CD1	33:Z:985:LYS:HD2	2.50	0.44
5:5:8:PHE:HZ	5:5:179:HIS:CD2	2.35	0.44
7:7:68:TYR:CZ	14:G:92:ARG:HG2	2.52	0.44
7:7:205:GLN:O	7:7:207:GLU:HG2	2.16	0.44
8:A:84:ASN:ND2	8:A:171:THR:HG21	2.32	0.44
13:F:51:ARG:HH11	20:M:430:VAL:HG21	1.82	0.44
14:G:22:GLN:OE1	14:G:22:GLN:HA	2.17	0.44
14:G:182:HIS:HB3	14:G:186:LEU:HG	2.00	0.44
15:H:246:ILE:HG12	15:H:248:LEU:CD1	2.47	0.44
15:H:302:LYS:O	15:H:303:ALA:HB3	2.16	0.44
16:I:398:GLU:CA	17:J:312:ARG:HH12	2.06	0.44
17:J:276:LEU:CD1	17:J:309:ARG:HG2	2.48	0.44
18:K:183:GLU:HG2	18:K:338:ILE:HG23	1.99	0.44
18:K:205:PRO:HG2	18:K:310:THR:HG23	1.99	0.44
19:L:91:THR:O	19:L:94:ASP:HB2	2.18	0.44
21:N:717:LEU:HD13	21:N:729:SER:HB3	1.98	0.44
21:N:890:PHE:HB3	21:N:905:LEU:HD21	1.90	0.44
23:P:288:ASN:H	23:P:293:LEU:CD2	2.30	0.44
24:Q:24:GLU:HA	24:Q:27:TYR:HD2	1.80	0.44
25:R:206:ARG:HH21	25:R:209:ARG:HD2	1.79	0.44
25:R:357:PHE:CD1	25:R:357:PHE:N	2.85	0.44
26:S:265:SER:OG	26:S:268:LEU:HG	2.18	0.44
33:Z:89:LEU:HD22	33:Z:122:LEU:CA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:417:SER:O	33:Z:902:TYR:OH	2.27	0.44
33:Z:542:ILE:HD11	33:Z:546:ILE:HD11	2.00	0.44
1:1:112:THR:CG2	7:7:27:ARG:NH2	2.65	0.44
5:5:146:TRP:CH2	5:5:147:ASP:HB2	2.53	0.44
8:A:46:ARG:CG	8:A:154:ILE:HG13	2.48	0.44
11:D:188:VAL:HG11	11:D:216:LYS:HE2	1.99	0.44
13:F:65:LYS:HE3	13:F:222:PHE:CB	2.41	0.44
14:G:119:VAL:HG21	14:G:150:LEU:HD21	2.00	0.44
15:H:280:VAL:CB	16:I:304:ARG:HH21	2.30	0.44
15:H:289:ARG:NH2	15:H:293:GLU:HG2	2.33	0.44
18:K:99:PHE:CE1	18:K:101:GLU:C	2.90	0.44
18:K:347:ARG:HD3	24:Q:241:GLU:OE1	2.17	0.44
19:L:114:GLU:CA	19:L:137:ARG:HH21	2.27	0.44
22:O:122:HIS:ND1	22:O:122:HIS:O	2.51	0.44
22:O:262:ASP:OD1	22:O:264:ASP:N	2.47	0.44
23:P:215:SER:O	23:P:219:GLU:HG3	2.18	0.44
24:Q:11:ALA:HB2	24:Q:26:VAL:CG1	2.47	0.44
24:Q:131:VAL:HA	24:Q:134:LYS:CE	2.47	0.44
25:R:396:LYS:HZ2	26:S:449:LEU:CB	2.27	0.44
26:S:438:HIS:CD2	27:T:197:TYR:CE1	3.06	0.44
27:T:146:ILE:HG23	27:T:147:LYS:N	2.32	0.44
33:Z:165:TYR:HE1	33:Z:201:LEU:HD23	1.83	0.44
1:1:34:LEU:HD23	1:1:176:VAL:HG23	2.00	0.44
3:3:20:LEU:CD1	4:4:125:VAL:HB	2.47	0.44
10:C:230:PHE:CD2	10:C:234:GLU:HB3	2.52	0.44
17:J:145:SER:OG	17:J:201:ALA:N	2.51	0.44
17:J:258:VAL:C	18:K:280:LYS:CD	2.86	0.44
17:J:321:VAL:CG2	17:J:324:ARG:NH2	2.72	0.44
18:K:281:ARG:NH1	18:K:290:ARG:HG2	2.33	0.44
20:M:334:ASP:OD1	20:M:335:PRO:CD	2.65	0.44
21:N:158:LEU:HD12	21:N:202:PHE:CZ	2.53	0.44
23:P:280:LEU:O	23:P:283:LYS:CD	2.66	0.44
25:R:29:LYS:HD3	25:R:49:PHE:CB	2.48	0.44
25:R:47:ALA:CB	25:R:89:ASN:ND2	2.75	0.44
25:R:173:THR:OG1	25:R:176:ARG:NH2	2.50	0.44
28:U:29:GLU:O	28:U:100:ARG:NH2	2.49	0.44
31:X:69:ILE:HA	31:X:70:PRO:HD3	1.44	0.44
33:Z:188:ALA:HB3	33:Z:190:THR:HG22	2.00	0.44
33:Z:478:VAL:CG2	33:Z:493:LEU:HD22	2.46	0.44
33:Z:774:ARG:CD	33:Z:892:SER:HB2	2.47	0.44
1:1:29:ARG:CZ	1:1:30:VAL:HG13	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:111:PHE:HA	3:3:125:LYS:HZ2	1.78	0.44
6:6:34:VAL:CG1	6:6:196:LEU:HD12	2.48	0.44
7:7:126:GLY:O	7:7:128:THR:HG23	2.17	0.44
9:B:178:ARG:CZ	9:B:191:ILE:HG23	2.47	0.44
13:F:51:ARG:HH11	20:M:430:VAL:CG2	2.31	0.44
13:F:164:ARG:HH11	20:M:428:LYS:HG2	1.83	0.44
22:O:245:ASP:HB2	22:O:249:ASP:CG	2.36	0.44
23:P:265:VAL:CG1	23:P:296:GLN:CG	2.96	0.44
25:R:70:TYR:CD2	25:R:70:TYR:O	2.71	0.44
25:R:117:ILE:CD1	25:R:134:TRP:CE3	3.01	0.44
27:T:89:TYR:HA	27:T:102:LYS:CE	2.48	0.44
27:T:268:ILE:HD11	29:V:292:ILE:HG21	2.00	0.44
28:U:19:LEU:HB3	29:V:209:GLU:OE2	2.11	0.44
28:U:21:HIS:CG	28:U:53:ALA:HB2	2.52	0.44
30:W:101:ARG:HH12	30:W:108:GLN:NE2	2.15	0.44
31:X:100:TRP:CG	31:X:101:LEU:N	2.86	0.44
33:Z:168:GLN:HE21	33:Z:172:ASP:CG	2.19	0.44
33:Z:466:GLU:O	33:Z:467:VAL:CG2	2.66	0.44
1:1:30:VAL:HG21	2:2:123:TYR:HE2	1.83	0.44
1:1:173:ILE:HD12	1:1:193:TYR:CB	2.48	0.44
3:3:2:ILE:CD1	3:3:162:LEU:HD11	2.47	0.44
8:A:58:LYS:NZ	8:A:60:PRO:HB3	2.33	0.44
13:F:65:LYS:HG3	13:F:222:PHE:CE2	2.52	0.44
13:F:171:TYR:CZ	13:F:175:THR:HG21	2.53	0.44
15:H:238:LEU:HD21	20:M:408:SER:HA	2.00	0.44
15:H:244:LYS:NZ	15:H:346:ARG:HH21	2.15	0.44
16:I:310:LEU:HD13	16:I:338:LEU:HD13	2.00	0.44
18:K:60:LEU:HD11	21:N:598:ASP:CG	2.38	0.44
18:K:242:PHE:CD1	18:K:250:GLY:HA3	2.52	0.44
18:K:277:ILE:CD1	18:K:295:ILE:CG2	2.94	0.44
20:M:354:GLU:HG2	20:M:357:ARG:HH21	1.78	0.44
20:M:433:TYR:CD1	20:M:433:TYR:C	2.90	0.44
21:N:313:LEU:O	21:N:316:LYS:HB3	2.18	0.44
21:N:601:THR:O	21:N:601:THR:HG22	2.17	0.44
22:O:16:MET:HG2	22:O:72:LYS:HG2	1.99	0.44
22:O:92:PHE:CE1	22:O:136:THR:HA	2.52	0.44
22:O:106:PHE:CD2	22:O:107:GLN:N	2.86	0.44
23:P:91:LEU:HG	23:P:130:ILE:HD13	2.00	0.44
24:Q:71:LYS:HG2	24:Q:75:ARG:HG3	2.00	0.44
24:Q:174:LEU:CG	24:Q:178:HIS:CE1	3.00	0.44
25:R:194:VAL:HA	25:R:197:MET:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:259:PHE:O	25:R:259:PHE:HD1	1.97	0.44
27:T:148:LEU:CD1	27:T:164:LEU:CD2	2.86	0.44
29:V:45:VAL:CG1	29:V:46:PRO:CA	2.85	0.44
30:W:181:LEU:O	30:W:185:ILE:HG23	2.18	0.44
31:X:84:GLY:O	31:X:86:ILE:HD12	2.17	0.44
33:Z:203:LEU:HD23	33:Z:203:LEU:O	2.18	0.44
33:Z:250:VAL:CG2	33:Z:280:ASP:OD1	2.66	0.44
33:Z:471:LEU:HD23	33:Z:471:LEU:O	2.18	0.44
33:Z:624:LEU:CD2	33:Z:740:VAL:CG2	2.93	0.44
33:Z:884:THR:HG22	33:Z:903:MET:HB2	2.00	0.44
3:3:16:CYS:SG	3:3:34:ILE:HD11	2.58	0.44
3:3:79:THR:HG23	3:3:115:PHE:CZ	2.49	0.44
4:4:38:SER:OG	4:4:41:THR:CB	2.65	0.44
8:A:36:ASN:C	8:A:37:GLN:HG3	2.36	0.44
10:C:34:THR:HG22	10:C:167:ALA:O	2.18	0.44
11:D:213:THR:HA	11:D:223:ALA:HA	2.00	0.44
12:E:119:LEU:CD2	12:E:122:ARG:NH2	2.41	0.44
14:G:53:ILE:HB	14:G:210:ASP:HB2	1.99	0.44
14:G:53:ILE:HD11	14:G:212:GLU:HB2	1.99	0.44
15:H:149:LEU:CB	15:H:177:ASP:OD2	2.66	0.44
15:H:210:ASP:CB	15:H:258:LEU:CD1	2.91	0.44
15:H:222:ARG:O	15:H:226:GLU:HB3	2.18	0.44
15:H:289:ARG:HH12	15:H:293:GLU:CG	2.30	0.44
15:H:289:ARG:NH1	15:H:293:GLU:CG	2.80	0.44
15:H:294:LEU:HD21	15:H:308:PHE:CE1	2.53	0.44
16:I:377:LEU:O	16:I:381:VAL:HG23	2.18	0.44
17:J:166:LEU:HG	17:J:174:PHE:HE1	1.82	0.44
17:J:304:LEU:HG	17:J:310:ILE:CD1	2.48	0.44
27:T:70:ILE:HG23	27:T:71:GLN:N	2.33	0.44
28:U:276:ILE:HG21	29:V:295:VAL:HG23	1.98	0.44
30:W:110:ILE:HB	30:W:139:VAL:HG22	2.00	0.44
33:Z:75:ILE:HG12	33:Z:89:LEU:HG	2.00	0.44
1:1:30:VAL:HB	1:1:174:ARG:NH2	2.33	0.43
1:1:112:THR:HG22	7:7:27:ARG:HH21	1.79	0.43
5:5:178:TYR:CZ	5:5:187:TYR:CE1	3.06	0.43
6:6:19:ARG:CB	6:6:191:ASP:OD2	2.66	0.43
9:B:75:TYR:HB3	9:B:82:TYR:CE1	2.53	0.43
10:C:18:ARG:NH2	10:C:26:LEU:CD1	2.81	0.43
10:C:71:ASP:C	10:C:227:GLN:NE2	2.71	0.43
13:F:6:TYR:HB3	13:F:19:LEU:HD22	1.98	0.43
13:F:30:LYS:HZ2	13:F:163:ALA:C	2.20	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:137:TYR:CD2	13:F:217:GLY:HA2	2.52	0.43
13:F:148:GLN:OE1	13:F:152:ASN:HB3	2.18	0.43
15:H:62:ARG:HH11	16:I:99:ILE:CG2	2.31	0.43
16:I:203:THR:HB	16:I:204:HIS:CE1	2.53	0.43
16:I:406:GLU:HB3	16:I:408:ARG:CZ	2.48	0.43
17:J:257:ARG:HH12	17:J:296:ARG:HH12	1.65	0.43
17:J:258:VAL:HA	18:K:280:LYS:CD	2.45	0.43
18:K:92:VAL:HG22	18:K:93:PRO:CA	2.47	0.43
18:K:423:LYS:H	18:K:428:LYS:NZ	2.12	0.43
19:L:410:ILE:HD11	20:M:212:ILE:HD11	1.99	0.43
20:M:49:GLN:HG3	20:M:53:HIS:CD2	2.53	0.43
21:N:258:ALA:HB3	21:N:289:ILE:CD1	2.45	0.43
21:N:406:TYR:HE2	21:N:747:HIS:CG	2.36	0.43
21:N:536:ILE:CD1	21:N:555:ILE:HG12	2.42	0.43
21:N:644:LEU:HA	21:N:647:ASP:HB2	2.00	0.43
23:P:176:LYS:HD3	23:P:206:LYS:HZ2	1.76	0.43
26:S:311:GLN:O	26:S:315:LYS:HG3	2.18	0.43
33:Z:151:HIS:CG	33:Z:152:GLU:N	2.53	0.43
1:1:9:LYS:HA	1:1:145:ASN:HA	1.99	0.43
8:A:79:ILE:HD12	8:A:114:CYS:SG	2.58	0.43
16:I:356:SER:O	16:I:359:LYS:HB3	2.18	0.43
19:L:180:PHE:CE2	19:L:238:THR:CB	3.00	0.43
19:L:201:LEU:HD22	19:L:275:PRO:HB3	1.99	0.43
19:L:204:PRO:HG3	19:L:320:GLN:HE22	1.81	0.43
20:M:282:GLU:OE1	20:M:328:ASN:ND2	2.50	0.43
21:N:383:LYS:CA	21:N:412:TYR:OH	2.65	0.43
21:N:774:ASN:HA	21:N:869:ASP:OD2	2.17	0.43
22:O:310:PHE:CE2	22:O:341:ILE:CG2	2.77	0.43
23:P:268:LEU:HD13	23:P:280:LEU:HD12	1.95	0.43
23:P:346:ILE:CG2	23:P:379:TYR:CD2	3.00	0.43
24:Q:343:LEU:CG	24:Q:376:LYS:HZ3	2.31	0.43
25:R:209:ARG:NH1	25:R:243:LEU:HD12	2.32	0.43
33:Z:795:THR:HG21	33:Z:799:PHE:CE2	2.49	0.43
33:Z:867:PHE:CD1	33:Z:873:LEU:HD21	2.46	0.43
1:1:58:ILE:CG2	1:1:85:LEU:HD11	2.48	0.43
3:3:158:ILE:CG2	3:3:159:SER:N	2.81	0.43
4:4:27:LEU:HD13	5:5:133:GLN:NE2	2.33	0.43
11:D:167:ASN:HD22	11:D:202:VAL:HB	1.84	0.43
14:G:146:HIS:CB	14:G:148:TYR:CE2	2.95	0.43
15:H:56:LEU:O	15:H:60:GLU:HG3	2.17	0.43
15:H:149:LEU:CD2	15:H:179:SER:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:253:GLY:H	15:H:256:LYS:HB3	1.83	0.43
15:H:398:VAL:HG12	15:H:438:ALA:HB3	2.00	0.43
17:J:324:ARG:HD2	17:J:350:MET:SD	2.56	0.43
20:M:382:SER:O	20:M:425:ARG:NH1	2.51	0.43
21:N:238:ALA:HB2	21:N:273:LEU:CD2	2.47	0.43
22:O:122:HIS:ND1	22:O:164:PRO:CD	2.81	0.43
22:O:185:PHE:CD2	22:O:223:LEU:CB	3.01	0.43
23:P:173:MET:HG2	23:P:206:LYS:HE3	1.99	0.43
25:R:191:LEU:O	25:R:194:VAL:HG12	2.17	0.43
26:S:295:ALA:CA	26:S:298:ARG:HH21	2.30	0.43
30:W:2:VAL:CG1	30:W:4:GLU:CD	2.86	0.43
30:W:36:ILE:CD1	30:W:113:PHE:HZ	2.30	0.43
31:X:87:PHE:CE2	31:X:121:ILE:HG21	2.53	0.43
33:Z:497:PHE:HB2	33:Z:533:VAL:HG22	2.01	0.43
33:Z:913:ILE:HG13	33:Z:966:GLU:H	1.84	0.43
6:6:8:GLY:HA2	6:6:166:LEU:CD1	2.49	0.43
6:6:63:VAL:O	6:6:67:HIS:CD2	2.72	0.43
6:6:190:GLY:O	6:6:191:ASP:HB2	2.18	0.43
8:A:153:SER:CB	8:A:155:TYR:HE1	2.27	0.43
12:E:72:ARG:O	12:E:73:HIS:CG	2.71	0.43
15:H:69:VAL:CG2	16:I:131:SER:HB2	2.49	0.43
16:I:197:SER:HB3	16:I:346:ARG:HG3	2.01	0.43
18:K:211:LEU:CD2	18:K:338:ILE:HB	2.45	0.43
18:K:241:GLU:N	18:K:243:VAL:N	2.66	0.43
18:K:286:THR:O	18:K:290:ARG:HG3	2.17	0.43
18:K:351:LEU:CD2	24:Q:233:LYS:NZ	2.81	0.43
20:M:57:VAL:O	20:M:61:LYS:HG3	2.18	0.43
20:M:193:LEU:HD22	20:M:220:MET:CE	2.47	0.43
20:M:276:THR:HG22	20:M:321:VAL:HG12	2.01	0.43
21:N:152:LEU:HD23	21:N:152:LEU:C	2.38	0.43
21:N:368:THR:O	21:N:371:LEU:HB2	2.19	0.43
23:P:136:ARG:NE	23:P:163:LEU:HD21	2.33	0.43
23:P:306:ASN:OD1	23:P:308:LEU:N	2.52	0.43
23:P:307:GLU:O	23:P:308:LEU:HB3	2.19	0.43
25:R:301:TYR:HE2	25:R:359:VAL:CG2	2.19	0.43
26:S:404:LEU:HG	26:S:408:CYS:SG	2.58	0.43
26:S:415:SER:HB2	27:T:159:LYS:HZ1	1.83	0.43
27:T:89:TYR:CD2	27:T:90:PHE:CD1	3.06	0.43
27:T:254:ASP:OD1	27:T:255:GLN:OE1	2.36	0.43
27:T:261:GLU:HA	27:T:264:MET:CE	2.49	0.43
30:W:4:GLU:OE1	30:W:109:ARG:NE	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:8:ILE:HD12	31:X:128:VAL:HG23	2.00	0.43
33:Z:75:ILE:O	33:Z:75:ILE:HG23	2.19	0.43
33:Z:166:ASN:CG	33:Z:227:ILE:HA	2.39	0.43
33:Z:464:ASP:OD1	33:Z:465:GLY:O	2.36	0.43
33:Z:512:ILE:HG22	33:Z:523:ALA:HB2	2.00	0.43
3:3:6:MET:CE	3:3:158:ILE:HA	2.49	0.43
3:3:6:MET:HE1	3:3:158:ILE:HA	2.00	0.43
6:6:95:PRO:HB2	6:6:97:TYR:HE1	1.83	0.43
8:A:30:TYR:CZ	14:G:16:PRO:HB3	2.53	0.43
10:C:87:LEU:HD11	10:C:131:PHE:CD2	2.53	0.43
11:D:159:TRP:CG	11:D:162:GLN:HB3	2.53	0.43
15:H:107:LYS:CD	15:H:143:ALA:CB	2.94	0.43
15:H:176:VAL:CG2	15:H:183:ILE:HB	2.48	0.43
16:I:167:MET:HE2	16:I:270:VAL:HG22	2.01	0.43
17:J:28:GLN:O	17:J:32:LEU:HG	2.19	0.43
17:J:392:LYS:CB	18:K:337:LYS:NZ	2.82	0.43
18:K:103:ILE:HD12	18:K:107:THR:HG22	2.00	0.43
18:K:372:ILE:HG12	24:Q:240:PHE:CZ	2.54	0.43
20:M:129:LEU:HD11	20:M:155:ILE:HD12	2.00	0.43
21:N:29:ASN:O	21:N:32:VAL:HG23	2.18	0.43
21:N:329:HIS:HD2	21:N:355:TRP:CG	2.30	0.43
23:P:47:ARG:HB2	23:P:49:ALA:O	2.18	0.43
25:R:117:ILE:HG21	25:R:134:TRP:CZ2	2.53	0.43
25:R:131:ALA:O	25:R:135:ILE:HG12	2.19	0.43
25:R:224:PHE:HB3	25:R:260:THR:HG21	2.00	0.43
25:R:396:LYS:HZ2	26:S:449:LEU:HD13	1.82	0.43
27:T:95:LYS:HD2	27:T:98:GLU:OE2	2.19	0.43
30:W:132:LEU:HD13	30:W:161:VAL:HG21	2.00	0.43
31:X:29:VAL:CG1	31:X:61:LEU:HD13	2.48	0.43
31:X:78:ILE:HG22	31:X:114:LEU:CB	2.48	0.43
31:X:116:ALA:O	31:X:117:LYS:HB2	2.18	0.43
1:1:87:TYR:CE1	7:7:51:ASP:OD1	2.72	0.43
6:6:187:ILE:HG13	6:6:188:GLN:NE2	2.32	0.43
12:E:187:TRP:O	12:E:188:HIS:CG	2.71	0.43
17:J:255:SER:O	17:J:256:THR:CG2	2.67	0.43
18:K:240:SER:O	18:K:243:VAL:HB	2.18	0.43
20:M:253:GLN:HG3	20:M:258:GLU:HG2	2.01	0.43
20:M:331:ASP:OD1	20:M:332:VAL:N	2.52	0.43
21:N:15:GLU:HG2	27:T:80:ASN:HD22	1.83	0.43
22:O:59:LEU:HD11	22:O:86:LEU:HD11	2.00	0.43
22:O:185:PHE:CE1	22:O:223:LEU:HD12	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:289:GLN:HG3	22:O:293:LEU:HD13	2.00	0.43
23:P:306:ASN:OD1	23:P:307:GLU:N	2.52	0.43
24:Q:20:TYR:HE2	24:Q:68:MET:SD	2.26	0.43
25:R:379:CYS:SG	25:R:388:VAL:HG13	2.58	0.43
25:R:396:LYS:NZ	26:S:449:LEU:CD1	2.81	0.43
26:S:452:TYR:O	28:U:274:MET:CE	2.66	0.43
27:T:52:LEU:C	27:T:52:LEU:HD12	2.39	0.43
29:V:164:LEU:O	29:V:185:ILE:HD13	2.18	0.43
33:Z:304:PRO:O	33:Z:308:LYS:HG3	2.17	0.43
2:2:8:PHE:HA	2:2:146:LEU:HD23	2.00	0.43
3:3:53:THR:O	3:3:57:MET:HG2	2.18	0.43
6:6:106:ASP:C	6:6:106:ASP:OD1	2.57	0.43
8:A:84:ASN:HD21	8:A:171:THR:HG21	1.83	0.43
9:B:69:PRO:HG2	9:B:104:TYR:CZ	2.54	0.43
10:C:214:ALA:HB1	10:C:229:ILE:HD13	2.00	0.43
12:E:87:SER:CB	12:E:138:PHE:CZ	3.02	0.43
13:F:170:THR:O	13:F:174:ARG:HG3	2.19	0.43
14:G:203:HIS:NE2	14:G:211:PHE:HD1	2.17	0.43
15:H:170:GLU:HB3	15:H:171:GLY:H	1.67	0.43
16:I:82:LEU:CB	33:Z:622:HIS:CE1	2.97	0.43
17:J:392:LYS:CG	18:K:337:LYS:HZ1	2.26	0.43
19:L:157:ARG:NH2	20:M:113:VAL:HG23	2.29	0.43
20:M:135:VAL:HG11	20:M:155:ILE:HG21	2.00	0.43
20:M:220:MET:CG	20:M:324:LEU:HD11	2.48	0.43
22:O:195:TYR:CE1	22:O:213:LEU:HD13	2.54	0.43
24:Q:76:GLU:HG2	24:Q:80:HIS:HD2	1.76	0.43
24:Q:355:GLU:HB2	24:Q:399:VAL:HG12	2.00	0.43
26:S:455:GLU:O	26:S:458:GLN:HB2	2.18	0.43
27:T:86:LYS:CE	27:T:128:TYR:CD1	3.02	0.43
31:X:29:VAL:CG1	31:X:61:LEU:CD2	2.83	0.43
33:Z:106:TRP:HH2	33:Z:198:GLU:CB	2.32	0.43
33:Z:233:LEU:HD22	33:Z:268:ALA:HB2	0.50	0.43
33:Z:394:TYR:CE1	33:Z:859:LYS:CB	3.00	0.43
4:4:45:PHE:HD2	4:4:99:VAL:CG1	2.32	0.43
6:6:41:ILE:HD13	6:6:80:ALA:HB2	2.00	0.43
12:E:157:HIS:NE2	12:E:172:ILE:HG21	2.33	0.43
13:F:60:GLN:CG	13:F:62:LYS:HE2	2.47	0.43
13:F:87:TYR:HB2	13:F:115:LYS:NZ	2.33	0.43
14:G:182:HIS:NE2	14:G:186:LEU:HD11	2.31	0.43
14:G:203:HIS:CG	14:G:211:PHE:HD1	2.36	0.43
15:H:173:ARG:CZ	16:I:128:TYR:HA	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:214:CYS:HB2	15:H:218:ILE:HD11	2.00	0.43
16:I:281:ILE:CG2	16:I:284:ILE:CG1	2.97	0.43
18:K:362:LEU:HD12	18:K:362:LEU:C	2.39	0.43
19:L:384:ASP:N	19:L:386:PHE:CE1	2.79	0.43
21:N:259:PHE:CD1	21:N:289:ILE:HG23	2.53	0.43
22:O:122:HIS:CE1	22:O:162:SER:HA	2.54	0.43
23:P:299:LEU:HD11	23:P:311:TRP:CH2	2.50	0.43
24:Q:148:LYS:O	24:Q:149:LYS:HB2	2.18	0.43
24:Q:236:PHE:CE1	24:Q:269:LYS:HD3	2.54	0.43
25:R:102:LEU:HD23	25:R:102:LEU:C	2.39	0.43
25:R:302:ALA:O	25:R:306:PRO:HG2	2.19	0.43
27:T:15:PHE:CD2	27:T:64:VAL:HG13	2.53	0.43
27:T:206:LYS:HZ2	27:T:214:GLU:HG3	1.83	0.43
28:U:60:GLU:HG3	28:U:100:ARG:NH1	2.34	0.43
29:V:186:GLN:O	29:V:190:HIS:HD2	2.01	0.43
31:X:12:ALA:CB	31:X:33:ILE:HG21	2.49	0.43
31:X:14:VAL:O	31:X:15:CYS:HB2	2.19	0.43
31:X:98:PHE:HD1	31:X:98:PHE:N	2.15	0.43
33:Z:473:LEU:HD11	33:Z:477:TYR:CE1	2.52	0.43
9:B:48:GLU:O	9:B:63:LYS:HD2	2.18	0.43
12:E:20:ARG:CZ	12:E:25:GLU:HG2	2.49	0.43
13:F:87:TYR:HB2	13:F:115:LYS:HZ1	1.83	0.43
14:G:31:GLU:CG	14:G:168:ARG:NH1	2.82	0.43
15:H:219:GLU:OE2	15:H:222:ARG:CZ	2.57	0.43
15:H:319:PHE:CZ	16:I:295:ASN:HB3	2.54	0.43
18:K:66:ASP:HA	18:K:69:LYS:NZ	2.34	0.43
18:K:395:VAL:HG13	19:L:206:ILE:CG2	2.48	0.43
21:N:514:THR:HG22	21:N:546:LEU:HD13	1.82	0.43
21:N:768:ILE:CB	21:N:917:ILE:O	2.67	0.43
22:O:122:HIS:HE1	22:O:162:SER:HA	1.84	0.43
24:Q:23:ALA:O	24:Q:27:TYR:CD2	2.72	0.43
30:W:163:ASN:HB3	30:W:164:PRO:CD	2.49	0.43
33:Z:446:GLU:OE2	33:Z:484:LYS:NZ	2.34	0.43
1:1:83:LYS:HE2	1:1:117:GLY:O	2.18	0.43
6:6:152:GLU:HA	6:6:161:LYS:HE3	2.01	0.43
7:7:13:ILE:HG21	7:7:169:ILE:HG13	1.99	0.43
7:7:17:ASP:HB2	7:7:184:SER:OG	2.19	0.43
7:7:132:PRO:HB2	7:7:151:VAL:HG22	2.00	0.43
10:C:181:LYS:HE3	10:C:184:MET:HB3	2.01	0.43
10:C:208:TYR:CD1	10:C:232:PRO:HB3	2.54	0.43
11:D:153:SER:OG	11:D:155:ILE:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:23:GLN:OE1	12:E:123:PHE:CZ	2.72	0.43
12:E:121:LEU:HD21	13:F:126:ARG:HH22	1.84	0.43
13:F:65:LYS:HD2	13:F:222:PHE:CD1	2.53	0.43
14:G:122:HIS:CD2	14:G:131:PHE:CE2	3.07	0.43
17:J:324:ARG:NE	17:J:350:MET:HB2	2.33	0.43
19:L:140:LEU:CD1	19:L:155:ILE:CD1	2.94	0.43
23:P:263:HIS:ND1	23:P:328:ALA:HB1	2.32	0.43
24:Q:12:ARG:HA	24:Q:27:TYR:OH	2.18	0.43
24:Q:26:VAL:O	24:Q:29:SER:HB2	2.18	0.43
24:Q:409:TYR:CB	25:R:399:GLN:CG	2.80	0.43
25:R:62:TYR:CZ	25:R:180:PHE:CE1	3.05	0.43
26:S:246:GLU:HG3	27:T:124:SER:HB3	1.99	0.43
29:V:32:ILE:CD1	29:V:205:LYS:HE2	2.49	0.43
29:V:157:ARG:CA	29:V:197:TYR:CD1	3.02	0.43
29:V:244:MET:O	29:V:247:ILE:HG12	2.19	0.43
31:X:76:VAL:HG23	31:X:90:VAL:CG2	2.48	0.43
32:Y:78:LYS:O	32:Y:81:LEU:HB3	2.19	0.43
33:Z:106:TRP:CH2	33:Z:198:GLU:HB3	2.54	0.43
33:Z:888:LEU:O	33:Z:889:VAL:HG13	2.19	0.43
3:3:60:TYR:CD1	10:C:96:GLN:HB3	2.54	0.42
5:5:128:CYS:HB2	5:5:133:GLN:HE21	1.84	0.42
7:7:-8:THR:HA	7:7:100:ASN:OD1	2.19	0.42
8:A:63:LEU:HD11	14:G:172:LYS:CG	2.49	0.42
8:A:220:LYS:HZ1	8:A:242:GLU:CG	2.32	0.42
10:C:42:ASP:HA	10:C:218:LYS:HZ3	1.83	0.42
19:L:387:ASN:ND2	20:M:335:PRO:HB3	2.33	0.42
21:N:239:LEU:HD21	21:N:276:GLU:HB3	2.00	0.42
21:N:767:ALA:O	21:N:768:ILE:CB	2.66	0.42
24:Q:390:LEU:HD12	25:R:345:TYR:HE1	1.78	0.42
27:T:15:PHE:CE1	27:T:20:TYR:HE1	2.35	0.42
29:V:53:MET:HE2	29:V:65:VAL:HG21	2.00	0.42
33:Z:206:ASP:O	33:Z:209:PRO:HD2	2.19	0.42
33:Z:575:MET:HE2	33:Z:878:LEU:HD22	2.01	0.42
33:Z:893:PHE:O	33:Z:894:MET:HB2	2.18	0.42
1:1:58:ILE:CG1	8:A:106:TYR:OH	2.66	0.42
4:4:36:GLN:HG3	4:4:188:ILE:HD12	1.97	0.42
4:4:40:HIS:HE1	4:4:185:LYS:C	2.22	0.42
4:4:191:VAL:HG12	4:4:193:ASP:O	2.19	0.42
10:C:81:THR:O	10:C:85:GLU:HG3	2.18	0.42
10:C:208:TYR:HD1	10:C:232:PRO:O	2.00	0.42
11:D:118:GLN:HE21	12:E:83:ALA:CB	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:135:ILE:HD12	13:F:216:VAL:HG12	2.01	0.42
19:L:132:ARG:HG2	19:L:133:ASN:H	1.84	0.42
19:L:132:ARG:CZ	19:L:156:MET:HA	2.49	0.42
21:N:258:ALA:HB2	21:N:286:LEU:HD22	2.00	0.42
21:N:353:LEU:N	21:N:354:PRO:CD	2.75	0.42
21:N:669:GLU:O	21:N:670:LYS:HB2	2.19	0.42
23:P:136:ARG:HE	23:P:163:LEU:HD21	1.83	0.42
23:P:176:LYS:CD	23:P:206:LYS:NZ	2.75	0.42
25:R:96:GLN:HA	25:R:99:TYR:HD2	1.85	0.42
27:T:220:PHE:O	27:T:224:ARG:HG2	2.19	0.42
27:T:242:LYS:O	27:T:243:ALA:HB3	2.19	0.42
31:X:14:VAL:HG11	31:X:61:LEU:HB3	2.00	0.42
31:X:101:LEU:CD1	31:X:103:GLU:O	2.67	0.42
2:2:14:ILE:HD12	2:2:34:LEU:HD22	2.02	0.42
3:3:-2:ASN:HD21	3:3:48:ALA:H	1.67	0.42
4:4:36:GLN:HE21	4:4:39:PRO:HA	1.83	0.42
5:5:30:THR:O	5:5:31:VAL:HB	2.19	0.42
6:6:39:ASP:OD2	6:6:67:HIS:NE2	2.53	0.42
9:B:47:THR:HG21	9:B:63:LYS:HB2	2.00	0.42
11:D:120:TYR:CE2	11:D:126:VAL:HG11	2.54	0.42
13:F:83:VAL:O	13:F:86:ASN:HB3	2.19	0.42
15:H:434:ARG:O	15:H:435:ARG:NH1	2.45	0.42
18:K:275:ASP:OD2	18:K:320:ARG:HB2	2.19	0.42
19:L:219:LEU:CD1	19:L:325:MET:HB2	2.49	0.42
21:N:12:LEU:CD2	21:N:15:GLU:OE1	2.66	0.42
21:N:23:TYR:CD2	27:T:35:ILE:HG21	2.55	0.42
21:N:137:PHE:CE2	21:N:156:ILE:HG22	2.54	0.42
21:N:514:THR:HB	21:N:546:LEU:HD11	1.73	0.42
21:N:768:ILE:HG13	21:N:919:THR:H	1.82	0.42
23:P:267:PHE:HZ	23:P:328:ALA:O	2.01	0.42
24:Q:54:GLN:HA	24:Q:57:SER:OG	2.19	0.42
24:Q:71:LYS:HE2	24:Q:113:ASP:HB3	2.01	0.42
24:Q:378:SER:HB2	25:R:345:TYR:OH	2.13	0.42
28:U:83:ILE:HG12	29:V:72:PRO:HA	2.02	0.42
29:V:158:LEU:HD23	29:V:159:ILE:HG12	2.00	0.42
29:V:261:LEU:HD11	29:V:283:THR:CG2	2.48	0.42
33:Z:138:ARG:HG2	33:Z:157:LEU:HB2	2.01	0.42
33:Z:491:LEU:HD12	33:Z:899:GLN:OE1	2.19	0.42
4:4:14:LEU:HD21	4:4:115:LEU:HD13	2.01	0.42
6:6:34:VAL:HG12	6:6:196:LEU:HD11	2.02	0.42
8:A:50:CYS:SG	8:A:202:VAL:HG21	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:19:LEU:HD21	11:D:127:ARG:NE	2.33	0.42
15:H:357:ARG:NH2	16:I:290:LYS:HA	2.34	0.42
15:H:381:ASP:C	15:H:381:ASP:OD1	2.58	0.42
16:I:172:LYS:HZ2	17:J:278:GLN:N	2.17	0.42
17:J:188:TYR:CE1	17:J:295:ASN:CA	3.01	0.42
18:K:52:LYS:NZ	21:N:159:GLU:HG2	2.32	0.42
19:L:114:GLU:C	19:L:137:ARG:NH2	2.51	0.42
19:L:121:ALA:HB2	19:L:127:TYR:CE2	2.54	0.42
19:L:164:ASP:CA	19:L:261:ARG:HH12	2.28	0.42
19:L:400:PHE:HE2	20:M:345:ARG:HD3	1.84	0.42
20:M:221:TYR:OH	20:M:348:GLU:CG	2.63	0.42
22:O:189:TYR:HD2	22:O:227:ILE:CG1	2.15	0.42
22:O:270:ILE:HD12	22:O:274:ILE:HG23	2.00	0.42
23:P:128:ASN:N	23:P:136:ARG:NH1	2.68	0.42
23:P:414:GLU:HB2	28:U:265:LEU:HD11	2.01	0.42
24:Q:202:ARG:NH2	24:Q:222:SER:CB	2.79	0.42
24:Q:272:LEU:O	24:Q:273:ASN:HB2	2.19	0.42
26:S:455:GLU:OE2	26:S:459:GLN:NE2	2.47	0.42
29:V:238:LEU:CD1	29:V:242:LYS:HE3	2.47	0.42
2:2:19:ARG:CZ	2:2:26:VAL:HG22	2.50	0.42
3:3:42:LEU:CD2	3:3:44:ILE:HD11	2.49	0.42
4:4:181:LYS:HZ3	4:4:190:GLN:CG	2.32	0.42
6:6:171:VAL:O	6:6:175:VAL:HG23	2.19	0.42
8:A:36:ASN:HD21	8:A:40:ILE:H	1.66	0.42
8:A:220:LYS:HE3	8:A:242:GLU:HB2	1.92	0.42
10:C:191:GLU:HG2	10:C:242:THR:HG22	2.00	0.42
10:C:202:ASP:O	17:J:351:ASN:ND2	2.52	0.42
12:E:209:GLU:HG3	15:H:406:LEU:CD2	2.50	0.42
13:F:30:LYS:NZ	13:F:165:SER:H	2.16	0.42
15:H:155:PHE:HE1	20:M:78:LEU:HD23	1.85	0.42
15:H:195:VAL:HG11	15:H:289:ARG:HG2	2.00	0.42
16:I:253:ILE:HD12	16:I:286:ALA:HB1	2.01	0.42
18:K:424:PHE:HB3	18:K:427:TYR:HE2	1.84	0.42
20:M:189:GLN:NE2	20:M:350:PRO:HD2	2.33	0.42
20:M:221:TYR:CE1	20:M:348:GLU:CA	2.99	0.42
21:N:294:PRO:CD	21:N:921:ARG:HH21	2.33	0.42
21:N:318:LYS:CD	21:N:348:PHE:CD1	3.02	0.42
22:O:3:ASN:O	22:O:7:ILE:HG12	2.18	0.42
23:P:311:TRP:CZ2	23:P:341:LEU:HB3	2.54	0.42
25:R:80:GLU:OE1	25:R:99:TYR:CZ	2.73	0.42
30:W:135:ASN:CB	30:W:137:VAL:HG23	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:542:ILE:HG13	33:Z:546:ILE:CD1	2.48	0.42
33:Z:765:MET:HE1	33:Z:777:PRO:HG3	1.98	0.42
33:Z:884:THR:HG21	33:Z:904:LEU:HA	2.02	0.42
8:A:47:GLY:HA3	8:A:50:CYS:SG	2.60	0.42
8:A:54:ILE:HD13	8:A:207:ILE:HG13	2.02	0.42
8:A:159:PRO:O	8:A:160:ALA:HB2	2.20	0.42
11:D:216:LYS:HB3	11:D:217:PRO:CD	2.50	0.42
12:E:209:GLU:HA	15:H:406:LEU:HD22	2.01	0.42
14:G:137:PHE:CE2	14:G:148:TYR:HB2	2.54	0.42
16:I:172:LYS:NZ	17:J:278:GLN:CA	2.83	0.42
16:I:232:LEU:O	16:I:236:VAL:HG23	2.20	0.42
17:J:141:LYS:HG2	17:J:209:LYS:CE	2.43	0.42
19:L:152:THR:HG22	19:L:154:THR:CG2	2.45	0.42
19:L:374:PHE:CZ	19:L:415:LEU:HD22	2.55	0.42
21:N:28:ILE:HG22	21:N:32:VAL:HG22	2.02	0.42
21:N:311:ILE:HG22	21:N:340:HIS:HE1	1.85	0.42
21:N:349:ILE:HD12	21:N:371:LEU:HD21	2.01	0.42
21:N:665:ILE:HD11	21:N:715:ILE:HG12	1.98	0.42
22:O:226:LYS:C	22:O:227:ILE:HG12	2.40	0.42
22:O:289:GLN:O	22:O:293:LEU:HD13	2.20	0.42
23:P:126:THR:C	23:P:136:ARG:NH2	2.73	0.42
24:Q:19:GLN:NE2	24:Q:21:ASN:HB3	2.35	0.42
25:R:299:SER:CB	25:R:341:LEU:HD21	2.35	0.42
27:T:151:TRP:CE3	27:T:159:LYS:HD2	2.53	0.42
27:T:242:LYS:O	27:T:243:ALA:CB	2.67	0.42
30:W:125:LEU:CD1	30:W:157:PHE:CD1	3.02	0.42
31:X:14:VAL:O	31:X:29:VAL:HG21	2.17	0.42
31:X:38:ASN:OD1	31:X:39:GLU:N	2.49	0.42
31:X:71:GLY:C	31:X:72:GLU:HG2	2.40	0.42
33:Z:888:LEU:HD13	33:Z:901:PHE:HA	2.00	0.42
1:1:34:LEU:HD22	1:1:174:ARG:HB3	2.01	0.42
2:2:223:ILE:HG13	3:3:38:GLY:H	1.83	0.42
3:3:48:ALA:CB	4:4:123:THR:HG23	2.49	0.42
3:3:176:ALA:CB	3:3:193:MET:SD	3.08	0.42
5:5:90:TYR:N	5:5:90:TYR:CD1	2.87	0.42
6:6:176:ARG:NH1	6:6:208:TYR:HB2	2.32	0.42
9:B:6:SER:HB2	11:D:4:TYR:CD2	2.55	0.42
10:C:75:VAL:HG12	10:C:137:TYR:CD2	2.54	0.42
11:D:122:GLN:HG2	12:E:136:ARG:NH2	2.35	0.42
12:E:114:GLN:NE2	13:F:82:ARG:HE	2.17	0.42
14:G:80:LEU:HD13	14:G:129:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:182:HIS:HE1	14:G:194:GLN:NE2	2.17	0.42
15:H:50:LYS:NZ	33:Z:770:GLU:OE1	2.53	0.42
16:I:252:LEU:C	16:I:254:GLN:H	2.23	0.42
18:K:345:ASP:N	18:K:348:GLU:OE1	2.43	0.42
18:K:393:ARG:NH2	18:K:413:THR:HG21	2.34	0.42
21:N:359:ALA:O	29:V:182:LYS:HE3	2.19	0.42
21:N:596:LEU:CD2	21:N:718:GLU:HB2	2.50	0.42
22:O:16:MET:CE	22:O:72:LYS:CG	2.97	0.42
22:O:254:LEU:HD23	22:O:266:PHE:CZ	2.34	0.42
25:R:321:TYR:HA	25:R:324:ARG:HD2	2.00	0.42
26:S:323:LEU:CD2	26:S:382:ARG:HE	2.32	0.42
33:Z:108:ASP:HB2	33:Z:112:LYS:HB2	2.01	0.42
33:Z:381:LEU:HG	33:Z:385:PHE:CE2	2.55	0.42
1:1:4:MET:HE3	1:1:159:LEU:CD2	2.46	0.42
1:1:109:GLU:OE1	1:1:121:LYS:NZ	2.53	0.42
1:1:189:TYR:O	1:1:193:TYR:HD1	2.02	0.42
3:3:59:ARG:HH22	10:C:100:LYS:HA	1.85	0.42
4:4:27:LEU:CD1	5:5:133:GLN:NE2	2.83	0.42
6:6:7:ALA:HB2	6:6:113:VAL:HG23	2.01	0.42
7:7:187:PHE:CE1	7:7:205:GLN:N	2.88	0.42
11:D:188:VAL:CG2	11:D:216:LYS:HE2	2.49	0.42
12:E:162:GLY:O	13:F:79:PRO:HG3	2.19	0.42
16:I:105:SER:HA	17:J:94:TYR:HD2	1.82	0.42
19:L:256:ILE:O	19:L:256:ILE:CG2	2.66	0.42
20:M:232:ALA:CB	20:M:279:PHE:CE1	3.02	0.42
22:O:62:TYR:CG	22:O:63:ASP:N	2.88	0.42
22:O:301:PHE:HD2	22:O:305:ILE:O	2.01	0.42
23:P:203:ILE:HG23	23:P:204:LEU:N	2.35	0.42
24:Q:160:ASP:HA	24:Q:163:ARG:NH2	2.34	0.42
24:Q:250:THR:CG2	24:Q:251:THR:N	2.55	0.42
26:S:137:PHE:CE1	26:S:162:VAL:HG13	2.54	0.42
26:S:146:LEU:HA	26:S:149:SER:OG	2.19	0.42
31:X:87:PHE:HB2	31:X:99:PHE:CG	2.51	0.42
33:Z:214:HIS:CD2	33:Z:216:GLY:HA3	2.55	0.42
33:Z:327:GLN:O	33:Z:328:ASP:HB2	2.20	0.42
33:Z:327:GLN:HE21	33:Z:346:LEU:CD1	2.32	0.42
33:Z:358:TYR:HE1	33:Z:914:LEU:HD13	1.83	0.42
33:Z:750:GLU:HG3	33:Z:753:GLY:N	2.34	0.42
1:1:72:THR:HG23	1:1:73:PRO:HD2	2.01	0.42
1:1:119:VAL:CG2	14:G:103:LYS:HE2	2.49	0.42
3:3:-2:ASN:ND2	3:3:48:ALA:H	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:36:HIS:CB	3:3:41:PHE:CD2	3.01	0.42
4:4:56:ALA:O	4:4:60:GLN:HG3	2.20	0.42
7:7:69:ASP:HB3	13:F:107:ARG:HG2	2.01	0.42
9:B:49:LYS:HA	9:B:63:LYS:HZ2	1.83	0.42
10:C:46:LEU:HD11	10:C:138:ALA:CB	2.50	0.42
11:D:120:TYR:CG	11:D:126:VAL:CG1	3.03	0.42
12:E:143:LEU:HD12	12:E:156:PHE:O	2.20	0.42
13:F:74:LEU:C	13:F:74:LEU:HD12	2.40	0.42
13:F:113:CYS:SG	14:G:85:ARG:NE	2.93	0.42
13:F:197:ILE:O	13:F:200:SER:HB2	2.20	0.42
15:H:142:ASP:O	15:H:143:ALA:CB	2.66	0.42
15:H:295:PHE:CE1	15:H:336:LEU:HD12	2.54	0.42
15:H:319:PHE:N	15:H:319:PHE:CD1	2.88	0.42
16:I:83:LYS:HG2	16:I:87:LYS:HE3	2.02	0.42
16:I:268:PHE:HB3	16:I:316:PHE:CE2	2.55	0.42
17:J:33:LYS:NZ	26:S:224:LYS:HZ3	2.18	0.42
18:K:164:ASN:ND2	19:L:315:PHE:CE1	2.86	0.42
18:K:332:GLY:C	18:K:333:ARG:HG2	2.40	0.42
20:M:200:PRO:CB	20:M:207:PHE:CE2	3.02	0.42
21:N:549:TYR:CE2	21:N:586:ALA:HB2	2.55	0.42
22:O:21:SER:HA	22:O:43:GLU:HG3	2.02	0.42
22:O:41:LEU:HD12	22:O:56:PRO:HB3	2.01	0.42
22:O:320:PRO:HG2	22:O:323:ASN:ND2	2.35	0.42
26:S:415:SER:CB	27:T:159:LYS:HZ1	2.32	0.42
29:V:230:TYR:CA	29:V:231:GLU:OE1	2.68	0.42
30:W:146:GLU:O	30:W:147:ILE:CB	2.66	0.42
31:X:89:LEU:HB2	31:X:99:PHE:CE1	2.54	0.42
33:Z:144:SER:N	33:Z:206:ASP:OD1	2.53	0.42
33:Z:394:TYR:CZ	33:Z:859:LYS:HB2	2.55	0.42
33:Z:585:LEU:CD2	33:Z:603:VAL:HG21	2.50	0.42
33:Z:897:HIS:CE1	33:Z:899:GLN:CD	2.93	0.42
6:6:39:ASP:OD2	6:6:67:HIS:CE1	2.73	0.42
7:7:9:ASP:OD1	7:7:158:PRO:HA	2.20	0.42
8:A:15:HIS:O	8:A:16:ILE:HG23	2.20	0.42
10:C:70:ASN:HB2	10:C:73:ILE:HB	2.02	0.42
11:D:96:HIS:HE1	11:D:100:LEU:CD1	2.24	0.42
12:E:67:ILE:HD13	12:E:220:SER:HB3	2.02	0.42
13:F:65:LYS:CE	13:F:222:PHE:HB3	2.41	0.42
14:G:182:HIS:CE1	14:G:186:LEU:CD1	3.00	0.42
16:I:75:PHE:N	33:Z:619:ASP:OD1	2.53	0.42
16:I:252:LEU:HD12	16:I:287:ILE:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:177:LEU:HD22	18:K:180:GLN:OE1	2.19	0.42
20:M:73:ARG:O	20:M:74:GLN:HB2	2.20	0.42
20:M:354:GLU:CG	20:M:357:ARG:NH2	2.76	0.42
21:N:190:LEU:C	21:N:190:LEU:CD2	2.84	0.42
21:N:600:THR:O	21:N:603:PRO:HD2	2.20	0.42
22:O:38:TRP:CE3	22:O:54:SER:HB3	2.42	0.42
22:O:122:HIS:ND1	22:O:164:PRO:HD2	2.34	0.42
25:R:63:TYR:OH	25:R:93:LYS:N	2.53	0.42
25:R:70:TYR:CD2	25:R:75:GLY:CA	3.00	0.42
25:R:146:ASP:N	25:R:181:TYR:OH	2.53	0.42
29:V:51:GLY:N	29:V:108:TYR:CE2	2.87	0.42
29:V:162:GLY:O	29:V:163:ALA:HB2	2.20	0.42
33:Z:122:LEU:HD23	33:Z:122:LEU:C	2.41	0.42
33:Z:574:TYR:CE2	33:Z:584:VAL:CG2	2.97	0.42
2:2:114:HIS:HE1	2:2:120:ASP:OD2	1.98	0.41
2:2:185:GLU:HG2	9:B:225:THR:HB	2.01	0.41
7:7:8:TYR:CZ	7:7:11:GLY:CA	3.03	0.41
7:7:12:VAL:HG22	7:7:111:VAL:CG2	2.49	0.41
9:B:218:ASN:HB2	9:B:236:ARG:NE	2.23	0.41
11:D:47:GLU:O	11:D:63:LYS:HE2	2.20	0.41
11:D:240:LYS:O	11:D:244:GLN:HG3	2.20	0.41
13:F:110:HIS:HA	14:G:85:ARG:HH11	1.78	0.41
16:I:401:LEU:CD1	17:J:312:ARG:CD	2.83	0.41
18:K:60:LEU:HD13	21:N:598:ASP:HB3	1.97	0.41
19:L:329:ARG:HG3	19:L:330:PRO:HD2	2.02	0.41
19:L:400:PHE:CE2	20:M:345:ARG:HD3	2.55	0.41
20:M:289:LYS:HB2	20:M:302:GLN:HG3	2.01	0.41
21:N:215:MET:HG3	21:N:244:LYS:HD3	2.01	0.41
22:O:69:PHE:HE2	22:O:77:SER:HB2	1.79	0.41
22:O:147:ARG:N	22:O:178:TYR:CE1	2.88	0.41
22:O:299:THR:HA	22:O:365:LYS:HE2	2.01	0.41
22:O:299:THR:CB	22:O:365:LYS:NZ	2.80	0.41
24:Q:315:ASN:HD22	24:Q:368:LEU:HD13	1.85	0.41
25:R:407:GLY:O	25:R:411:LEU:HG	2.20	0.41
27:T:151:TRP:HE3	27:T:156:SER:CB	2.32	0.41
28:U:60:GLU:OE2	28:U:100:ARG:HD3	2.20	0.41
30:W:107:HIS:HE1	30:W:138:ALA:CB	2.33	0.41
4:4:129:TYR:CD2	4:4:143:LEU:HD13	2.55	0.41
5:5:12:ILE:CG1	5:5:110:PRO:HB3	2.50	0.41
5:5:124:GLY:HA3	5:5:127:PHE:CE2	2.55	0.41
7:7:111:VAL:HG13	7:7:117:GLN:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:54:ILE:HD12	8:A:206:ALA:CB	2.51	0.41
9:B:75:TYR:CD1	9:B:82:TYR:CD1	3.08	0.41
13:F:108:ALA:O	13:F:111:LEU:HB3	2.20	0.41
13:F:151:GLY:O	14:G:81:ILE:HG21	2.19	0.41
13:F:179:PHE:HB3	13:F:189:LEU:HD21	2.02	0.41
16:I:258:GLY:C	16:I:261:PRO:HD2	2.40	0.41
16:I:358:LYS:HD3	16:I:384:LYS:HD3	1.99	0.41
17:J:166:LEU:HD23	17:J:174:PHE:CZ	2.55	0.41
17:J:276:LEU:HD13	17:J:309:ARG:CG	2.51	0.41
20:M:49:GLN:HE21	20:M:53:HIS:CE1	2.38	0.41
20:M:243:PHE:CE2	20:M:245:LYS:HB2	2.55	0.41
21:N:891:VAL:C	21:N:905:LEU:HD11	2.40	0.41
22:O:59:LEU:CD1	22:O:86:LEU:HD11	2.51	0.41
22:O:308:LEU:HB2	22:O:350:ILE:HD11	2.02	0.41
25:R:316:LEU:HD22	25:R:322:LEU:HB3	2.02	0.41
26:S:288:THR:HG22	26:S:292:TYR:CE2	2.54	0.41
27:T:85:LEU:O	27:T:88:TYR:HB2	2.20	0.41
30:W:132:LEU:HB2	30:W:161:VAL:HG22	2.02	0.41
33:Z:322:GLU:HG3	33:Z:323:TYR:N	2.34	0.41
33:Z:570:LEU:HB3	33:Z:584:VAL:HG13	2.02	0.41
33:Z:926:ASN:CB	33:Z:993:GLU:HG3	2.41	0.41
1:1:61:TYR:CE1	8:A:103:GLU:N	2.83	0.41
3:3:63:ASN:HD22	10:C:96:GLN:HE22	1.68	0.41
8:A:24:ARG:NH2	18:K:424:PHE:CD1	2.88	0.41
8:A:119:LYS:HZ1	9:B:83:ARG:HB3	1.77	0.41
10:C:181:LYS:CE	10:C:184:MET:HB3	2.50	0.41
10:C:230:PHE:HD2	10:C:234:GLU:HB3	1.85	0.41
11:D:179:TYR:CZ	11:D:184:PRO:HB3	2.55	0.41
13:F:179:PHE:HZ	13:F:192:ALA:HB1	1.48	0.41
15:H:61:ALA:O	15:H:65:GLU:HG3	2.20	0.41
15:H:224:VAL:HG13	15:H:243:PRO:CG	2.50	0.41
15:H:246:ILE:HG12	15:H:248:LEU:HD11	2.01	0.41
15:H:288:ALA:HB2	15:H:331:ARG:CZ	2.50	0.41
15:H:312:ASP:O	16:I:300:ARG:CZ	2.59	0.41
16:I:203:THR:CB	16:I:204:HIS:ND1	2.83	0.41
17:J:81:ASP:O	17:J:82:LYS:HB2	2.21	0.41
17:J:195:LYS:CB	17:J:253:ILE:HD12	2.50	0.41
17:J:327:ILE:O	17:J:331:HIS:CD2	2.73	0.41
22:O:40:GLN:CG	22:O:58:ARG:NE	2.83	0.41
22:O:362:GLN:OE1	28:U:226:LEU:CB	2.68	0.41
23:P:411:LEU:CD1	28:U:269:THR:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:426:ILE:CD1	29:V:233:LYS:HD3	2.51	0.41
24:Q:378:SER:HA	24:Q:390:LEU:HD11	2.02	0.41
26:S:133:GLU:HG2	26:S:137:PHE:CE2	2.55	0.41
26:S:318:CYS:SG	26:S:330:LEU:CD2	3.08	0.41
26:S:420:GLU:O	26:S:423:VAL:HG12	2.20	0.41
26:S:423:VAL:HG13	26:S:424:SER:N	2.36	0.41
29:V:50:MET:SD	29:V:78:VAL:HB	2.60	0.41
30:W:132:LEU:HD22	30:W:139:VAL:HG21	2.02	0.41
30:W:191:ILE:O	30:W:192:LEU:HB2	2.21	0.41
1:1:8:PHE:HZ	1:1:179:THR:HG22	1.85	0.41
2:2:19:ARG:HH21	2:2:26:VAL:CG2	2.29	0.41
4:4:7:ARG:NH2	4:4:113:PRO:O	2.50	0.41
6:6:20:ASN:ND2	6:6:31:GLU:O	2.53	0.41
10:C:107:PRO:HB3	10:C:141:ASP:OD2	2.21	0.41
13:F:13:PHE:H	14:G:22:GLN:CD	2.24	0.41
14:G:64:VAL:CG2	14:G:67:GLN:HE22	2.31	0.41
14:G:111:PHE:CZ	14:G:115:LEU:HD11	2.56	0.41
15:H:187:LEU:O	15:H:188:PRO:CB	2.68	0.41
16:I:362:LEU:HB2	16:I:377:LEU:HD22	2.03	0.41
17:J:98:VAL:HG12	17:J:122:LEU:CD1	2.48	0.41
18:K:275:ASP:HB2	18:K:323:THR:OG1	2.20	0.41
21:N:258:ALA:HB1	21:N:289:ILE:HG21	2.02	0.41
21:N:408:LEU:CD1	21:N:412:TYR:CD1	3.03	0.41
21:N:668:THR:OG1	21:N:785:PRO:HD3	2.21	0.41
22:O:188:PHE:CE2	22:O:216:ASP:HB3	2.54	0.41
23:P:411:LEU:HD23	23:P:411:LEU:O	2.20	0.41
33:Z:531:ALA:C	33:Z:573:LEU:HD21	2.39	0.41
1:1:4:MET:O	1:1:14:LEU:HD12	2.21	0.41
5:5:51:ASP:CG	5:5:95:LEU:HD12	2.40	0.41
7:7:132:PRO:HB2	7:7:151:VAL:CG2	2.50	0.41
8:A:134:MET:HE3	14:G:125:TYR:OH	2.21	0.41
12:E:44:GLU:OE1	12:E:191:LEU:C	2.58	0.41
13:F:179:PHE:CG	13:F:189:LEU:HD23	2.55	0.41
15:H:280:VAL:HG21	16:I:304:ARG:NE	2.29	0.41
16:I:310:LEU:HD13	16:I:338:LEU:CD1	2.50	0.41
17:J:26:LYS:HD2	21:N:107:GLU:OE1	2.19	0.41
17:J:344:ARG:O	17:J:348:GLU:HG3	2.20	0.41
19:L:301:ILE:CD1	20:M:299:ARG:NH2	2.76	0.41
20:M:74:GLN:O	20:M:77:TYR:CE1	2.74	0.41
21:N:317:SER:HA	21:N:686:ILE:HG21	2.02	0.41
22:O:72:LYS:O	22:O:73:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:188:PHE:CD2	22:O:220:SER:CB	2.72	0.41
23:P:181:LEU:CD2	23:P:223:LEU:HD21	2.49	0.41
23:P:429:ILE:HA	28:U:203:LYS:NZ	2.36	0.41
24:Q:75:ARG:C	24:Q:117:VAL:HG22	2.40	0.41
27:T:229:VAL:CG2	27:T:234:TYR:CZ	3.04	0.41
28:U:67:PHE:HE1	30:W:97:THR:HG1	1.66	0.41
30:W:102:GLN:O	30:W:103:ASN:CB	2.68	0.41
30:W:141:ILE:HD11	30:W:157:PHE:HD2	1.85	0.41
31:X:74:MET:HB2	31:X:90:VAL:HB	2.03	0.41
33:Z:71:LEU:CD1	33:Z:92:LEU:HD13	2.51	0.41
1:1:30:VAL:HB	1:1:174:ARG:HH21	1.84	0.41
2:2:144:GLN:O	2:2:145:ASP:HB2	2.20	0.41
2:2:179:GLU:HB2	2:2:182:LYS:HB2	2.03	0.41
6:6:164:LYS:HZ1	6:6:170:GLU:HG3	1.85	0.41
8:A:19:PHE:HZ	9:B:129:PRO:O	2.03	0.41
8:A:77:ARG:NH2	8:A:105:ARG:HE	2.19	0.41
9:B:10:THR:HG21	9:B:122:THR:HG23	2.03	0.41
11:D:97:ARG:HH12	11:D:103:PRO:HB3	1.86	0.41
14:G:19:ARG:CZ	14:G:24:GLU:HG3	2.50	0.41
15:H:149:LEU:HB3	15:H:177:ASP:OD2	2.20	0.41
15:H:221:LEU:HB3	15:H:263:VAL:HG21	2.02	0.41
16:I:104:LEU:CD2	16:I:150:HIS:HA	2.51	0.41
16:I:247:ILE:HD13	16:I:267:ILE:HD13	2.01	0.41
20:M:212:ILE:HG22	20:M:213:ARG:N	2.36	0.41
21:N:47:GLU:HA	21:N:47:GLU:OE1	2.20	0.41
21:N:246:LYS:NZ	21:N:281:GLY:O	2.41	0.41
21:N:293:LEU:HB3	21:N:294:PRO:HD3	2.02	0.41
21:N:530:GLU:HA	21:N:533:ASP:CG	2.41	0.41
23:P:44:LYS:O	23:P:47:ARG:HG3	2.21	0.41
23:P:365:LEU:HD12	23:P:400:VAL:HG21	2.03	0.41
23:P:412:LEU:CD2	29:V:245:VAL:N	2.83	0.41
24:Q:355:GLU:O	24:Q:356:CYS:HB2	2.21	0.41
25:R:31:PHE:CZ	25:R:320:LYS:HA	2.56	0.41
25:R:399:GLN:OE1	25:R:400:TYR:CD1	2.74	0.41
29:V:164:LEU:HD11	29:V:197:TYR:HE2	1.86	0.41
31:X:35:ILE:CD1	31:X:48:PHE:CE1	3.03	0.41
33:Z:161:ILE:CB	33:Z:203:LEU:HD13	2.50	0.41
33:Z:307:HIS:HE2	33:Z:341:TYR:HA	1.85	0.41
33:Z:412:GLY:O	33:Z:446:GLU:CD	2.59	0.41
33:Z:570:LEU:HB3	33:Z:584:VAL:HG22	2.02	0.41
33:Z:913:ILE:HG12	33:Z:965:LEU:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:29:ARG:HE	7:7:148:ARG:NH2	2.18	0.41
7:7:103:TRP:O	7:7:103:TRP:CD1	2.74	0.41
10:C:136:ILE:CD1	10:C:165:VAL:CG2	2.89	0.41
13:F:13:PHE:CZ	14:G:130:PRO:CB	3.04	0.41
16:I:203:THR:OG1	16:I:204:HIS:ND1	2.41	0.41
17:J:210:PHE:CE2	17:J:212:ARG:HG3	2.56	0.41
17:J:234:PHE:CE1	17:J:279:LEU:HD21	2.56	0.41
18:K:240:SER:HA	18:K:243:VAL:CG2	2.45	0.41
18:K:423:LYS:C	18:K:428:LYS:HZ1	2.19	0.41
20:M:362:GLN:NE2	20:M:376:TRP:CZ3	2.89	0.41
20:M:407:GLN:OE1	20:M:411:LYS:NZ	2.53	0.41
21:N:250:ASP:CG	21:N:906:ARG:HH21	2.23	0.41
21:N:408:LEU:HD12	21:N:412:TYR:HE1	1.80	0.41
21:N:525:ASN:HA	21:N:528:ARG:CD	2.51	0.41
22:O:33:TYR:O	22:O:34:GLU:HB2	2.18	0.41
22:O:342:ASP:HB2	23:P:358:SER:HB3	2.02	0.41
23:P:133:GLU:HG3	23:P:167:THR:CG2	2.25	0.41
24:Q:23:ALA:O	24:Q:26:VAL:HB	2.21	0.41
24:Q:71:LYS:HE3	24:Q:109:ASP:OD2	2.21	0.41
25:R:33:LEU:HG	25:R:43:ARG:HG3	2.02	0.41
25:R:301:TYR:CE2	25:R:359:VAL:CG2	2.98	0.41
27:T:260:ILE:HG23	28:U:277:TYR:OH	2.18	0.41
28:U:60:GLU:OE1	28:U:60:GLU:HA	2.19	0.41
28:U:66:TRP:HE3	28:U:67:PHE:N	2.19	0.41
31:X:46:TRP:H	31:X:68:LEU:HB3	1.84	0.41
33:Z:114:SER:O	33:Z:118:VAL:HG23	2.20	0.41
33:Z:373:GLY:HA3	33:Z:406:TRP:CZ3	2.56	0.41
4:4:117:GLN:HB3	4:4:125:VAL:CG1	2.51	0.41
10:C:188:ASP:O	10:C:192:LEU:HG	2.21	0.41
17:J:106:ASP:C	17:J:106:ASP:OD1	2.59	0.41
19:L:74:LEU:HD22	20:M:44:PHE:HD1	1.85	0.41
21:N:60:MET:CE	21:N:88:ARG:HH22	2.33	0.41
22:O:242:ILE:HD12	22:O:242:ILE:C	2.41	0.41
23:P:125:VAL:HA	23:P:136:ARG:HG3	2.03	0.41
24:Q:264:TYR:HE1	24:Q:331:THR:N	2.19	0.41
25:R:209:ARG:NH1	25:R:243:LEU:HD13	2.36	0.41
26:S:164:ILE:HG12	26:S:168:LEU:HD23	2.02	0.41
27:T:50:ILE:HD11	27:T:51:TYR:CE2	2.56	0.41
30:W:155:ASP:HA	30:W:171:LEU:HD22	2.02	0.41
33:Z:571:GLY:CA	33:Z:574:TYR:HE2	2.21	0.41
2:2:66:HIS:ND1	8:A:108:TYR:CE1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:38:GLY:O	3:3:39:HIS:CG	2.74	0.41
6:6:3:ILE:HG23	6:6:46:ASN:HD22	1.85	0.41
6:6:34:VAL:HG12	6:6:196:LEU:CD1	2.51	0.41
6:6:63:VAL:HG12	6:6:67:HIS:CD2	2.56	0.41
7:7:144:ASN:HB3	7:7:145:PRO:HD3	2.03	0.41
7:7:175:VAL:HG13	7:7:179:ARG:NH1	2.36	0.41
8:A:42:SER:HB2	8:A:171:THR:HG22	1.98	0.41
9:B:43:VAL:HB	9:B:214:ILE:HD12	2.02	0.41
10:C:87:LEU:HD13	10:C:119:LYS:HE2	2.02	0.41
13:F:113:CYS:CB	14:G:85:ARG:CD	2.91	0.41
13:F:157:TYR:CZ	14:G:59:VAL:HG23	2.55	0.41
15:H:147:ILE:HG22	15:H:177:ASP:OD2	2.21	0.41
16:I:169:SER:OG	16:I:170:VAL:N	2.52	0.41
16:I:358:LYS:NZ	16:I:384:LYS:HB3	2.34	0.41
16:I:404:LEU:HD13	17:J:174:PHE:CZ	2.56	0.41
16:I:426:ASN:HD22	17:J:313:LYS:HD3	1.86	0.41
17:J:170:HIS:CE1	17:J:173:LEU:CD2	3.03	0.41
17:J:244:ILE:CG2	17:J:291:ILE:HD12	2.50	0.41
18:K:66:ASP:O	18:K:69:LYS:HB2	2.21	0.41
18:K:90:GLN:HB3	18:K:147:VAL:HG13	2.03	0.41
18:K:244:HIS:NE2	18:K:251:PRO:HD3	2.22	0.41
19:L:74:LEU:CD1	20:M:51:LEU:CD1	2.99	0.41
19:L:392:ARG:HE	20:M:339:ARG:HH22	1.68	0.41
20:M:49:GLN:NE2	20:M:53:HIS:NE2	2.63	0.41
20:M:176:PRO:O	20:M:237:ALA:HB2	2.20	0.41
20:M:309:LEU:HD22	20:M:342:ARG:HD3	2.02	0.41
20:M:319:ASP:CB	20:M:322:LYS:HZ1	2.21	0.41
20:M:362:GLN:CD	20:M:376:TRP:CZ3	2.94	0.41
21:N:313:LEU:HD11	21:N:703:GLN:NE2	2.36	0.41
21:N:514:THR:HG21	21:N:546:LEU:CB	2.33	0.41
22:O:1:MET:HG3	22:O:37:LEU:HD11	2.02	0.41
22:O:23:HIS:CG	22:O:24:PRO:HD2	2.56	0.41
22:O:48:PHE:CE2	22:O:77:SER:HB3	2.55	0.41
22:O:76:LEU:HD21	22:O:115:ARG:NH1	2.36	0.41
22:O:127:LEU:HD21	22:O:167:ILE:CG1	2.33	0.41
22:O:296:LEU:HD11	22:O:316:ALA:CB	2.51	0.41
23:P:35:ALA:HB3	23:P:69:ARG:NH1	2.36	0.41
23:P:230:HIS:O	23:P:232:ARG:NH1	2.53	0.41
23:P:429:ILE:CG2	23:P:433:ILE:HD11	2.50	0.41
24:Q:11:ALA:CA	24:Q:26:VAL:HG11	2.50	0.41
24:Q:165:PHE:CG	24:Q:173:SER:OG	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:80:GLU:O	25:R:80:GLU:CG	2.69	0.41
25:R:137:LEU:CG	25:R:141:TYR:CE2	3.03	0.41
27:T:85:LEU:CD2	27:T:105:LEU:HD13	2.51	0.41
28:U:36:VAL:CG2	28:U:54:LEU:HD21	2.50	0.41
28:U:107:ASN:OD1	28:U:120:LEU:HD12	2.21	0.41
31:X:89:LEU:HD13	31:X:97:TYR:CD2	2.55	0.41
33:Z:96:TYR:CZ	33:Z:100:CYS:SG	3.14	0.41
33:Z:284:LEU:CD1	33:Z:293:MET:HE1	2.47	0.41
33:Z:370:SER:HB2	33:Z:390:LEU:HD22	2.03	0.41
33:Z:400:ILE:O	33:Z:404:ASP:OD1	2.39	0.41
33:Z:497:PHE:CD1	33:Z:497:PHE:N	2.88	0.41
1:1:58:ILE:HA	8:A:106:TYR:HE1	1.84	0.41
1:1:123:PRO:HG2	1:1:124:TYR:HD1	1.84	0.41
2:2:48:THR:O	2:2:52:THR:HG23	2.21	0.41
8:A:21:PRO:HD3	9:B:23:TYR:CE1	2.56	0.41
8:A:47:GLY:HA2	8:A:194:ILE:HB	2.03	0.41
8:A:91:ARG:NH1	8:A:95:LEU:CB	2.66	0.41
12:E:166:ARG:H	13:F:60:GLN:NE2	2.18	0.41
13:F:121:GLN:HG2	14:G:129:ARG:HB3	2.03	0.41
17:J:186:ILE:CG2	17:J:313:LYS:HG3	2.50	0.41
19:L:88:TYR:CD1	20:M:62:ILE:HD13	2.56	0.41
19:L:98:LEU:HD22	20:M:156:LEU:CD2	2.32	0.41
21:N:336:ASN:OD1	21:N:340:HIS:CD2	2.74	0.41
22:O:27:GLU:O	22:O:31:LYS:HG3	2.21	0.41
22:O:41:LEU:HD21	22:O:82:LEU:HD21	2.01	0.41
22:O:83:LEU:O	22:O:86:LEU:HB2	2.19	0.41
22:O:272:VAL:HG13	22:O:273:GLN:N	2.35	0.41
23:P:306:ASN:ND2	23:P:349:ASN:CB	2.84	0.41
23:P:311:TRP:CD2	23:P:345:VAL:HG21	2.56	0.41
23:P:321:VAL:HG23	23:P:325:ASP:CG	2.41	0.41
23:P:352:VAL:HG23	23:P:353:ILE:N	2.35	0.41
24:Q:151:TYR:CZ	24:Q:187:LYS:HG3	2.56	0.41
24:Q:387:TYR:CG	24:Q:402:THR:OG1	2.65	0.41
25:R:67:CYS:SG	25:R:92:ILE:HG12	2.61	0.41
26:S:171:TYR:OH	26:S:176:LEU:CD1	2.69	0.41
27:T:86:LYS:HE2	27:T:128:TYR:CZ	2.56	0.41
27:T:88:TYR:HA	27:T:94:HIS:NE2	2.35	0.41
28:U:36:VAL:HG23	28:U:54:LEU:CG	2.51	0.41
33:Z:532:HIS:HA	33:Z:535:VAL:HG23	2.02	0.41
33:Z:534:PHE:CA	33:Z:573:LEU:HD22	2.47	0.41
33:Z:811:SER:O	33:Z:815:MET:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:874:ASN:ND2	33:Z:877:THR:H	2.19	0.41
1:1:59:VAL:CG1	1:1:82:PHE:CZ	2.81	0.40
1:1:65:LEU:HD13	8:A:99:ALA:HA	2.03	0.40
6:6:192:GLY:O	6:6:210:LEU:HD12	2.22	0.40
9:B:118:MET:HE1	9:B:151:ASP:O	2.20	0.40
9:B:148:TYR:CD1	9:B:158:PRO:HB3	2.56	0.40
18:K:423:LYS:O	18:K:424:PHE:HB2	2.21	0.40
20:M:407:GLN:HE22	20:M:411:LYS:HZ2	1.67	0.40
22:O:340:SER:OG	23:P:358:SER:HB2	2.21	0.40
23:P:119:ILE:O	23:P:126:THR:HG23	2.20	0.40
25:R:31:PHE:CG	25:R:320:LYS:HG2	2.56	0.40
27:T:147:LYS:O	27:T:151:TRP:HD1	2.05	0.40
27:T:151:TRP:CZ3	27:T:159:LYS:HD3	2.55	0.40
28:U:119:LEU:HD11	28:U:136:ALA:HB1	2.03	0.40
29:V:216:LEU:O	29:V:217:HIS:HB2	2.21	0.40
30:W:10:ILE:HD12	30:W:51:LEU:HD11	2.02	0.40
30:W:141:ILE:HD12	30:W:158:ILE:HG12	2.02	0.40
31:X:10:PHE:HB2	31:X:33:ILE:HG23	2.02	0.40
31:X:89:LEU:HD13	31:X:97:TYR:HD2	1.87	0.40
33:Z:490:ILE:HG21	33:Z:526:ALA:HA	2.02	0.40
1:1:4:MET:CE	1:1:159:LEU:HD21	2.49	0.40
1:1:8:PHE:HE1	1:1:12:VAL:C	2.25	0.40
1:1:87:TYR:HH	7:7:51:ASP:CG	2.24	0.40
4:4:106:TYR:CE2	4:4:108:LYS:HA	2.56	0.40
7:7:45:ILE:HG21	7:7:52:MET:HG3	2.03	0.40
7:7:49:ILE:HD12	7:7:52:MET:CE	2.51	0.40
9:B:92:VAL:HG11	9:B:113:GLU:CG	2.50	0.40
10:C:115:LEU:O	10:C:119:LYS:HG3	2.20	0.40
12:E:147:HIS:ND1	12:E:153:TYR:CD2	2.89	0.40
13:F:27:GLU:HG2	13:F:31:GLN:HE21	1.87	0.40
19:L:235:VAL:O	19:L:238:THR:HG22	2.22	0.40
19:L:335:PRO:HA	19:L:338:LEU:HB2	2.02	0.40
20:M:257:GLY:O	20:M:260:ALA:HB3	2.22	0.40
21:N:358:LYS:HB3	29:V:181:ASN:CB	2.52	0.40
22:O:79:VAL:HG21	22:O:123:GLY:C	2.41	0.40
23:P:136:ARG:NE	23:P:163:LEU:CD2	2.84	0.40
24:Q:302:VAL:HG13	24:Q:314:PHE:CE1	2.55	0.40
25:R:350:LEU:HB2	25:R:388:VAL:HG23	2.03	0.40
31:X:29:VAL:HG13	31:X:61:LEU:HD13	2.04	0.40
31:X:36:LYS:NZ	31:X:39:GLU:OE2	2.51	0.40
33:Z:298:PHE:CE2	33:Z:341:TYR:CZ	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:887:GLY:CA	33:Z:900:LEU:HD13	2.51	0.40
2:2:75:ARG:HB3	2:2:77:VAL:HG22	2.04	0.40
3:3:5:ALA:HA	3:3:13:ALA:O	2.22	0.40
4:4:44:SER:OG	4:4:102:LEU:HB2	2.21	0.40
7:7:62:LEU:HD11	7:7:66:ASN:HD21	1.86	0.40
9:B:43:VAL:HB	9:B:214:ILE:HB	2.03	0.40
10:C:118:ILE:HG21	10:C:122:TYR:OH	2.21	0.40
11:D:151:GLU:OE1	11:D:155:ILE:HD11	2.22	0.40
11:D:174:PHE:CE2	11:D:198:SER:HB2	2.56	0.40
13:F:156:LEU:HD21	14:G:58:LEU:HD23	1.97	0.40
14:G:51:LYS:HA	14:G:65:LYS:NZ	2.37	0.40
15:H:210:ASP:CB	15:H:258:LEU:HD13	2.49	0.40
16:I:110:GLU:C	16:I:111:GLU:HG2	2.42	0.40
17:J:164:ILE:O	17:J:289:LYS:HE3	2.22	0.40
18:K:141:ARG:HE	29:V:148:LYS:NZ	2.20	0.40
19:L:176:GLY:HA3	19:L:237:ALA:HB2	2.04	0.40
21:N:245:LEU:HD21	21:N:254:SER:CB	2.51	0.40
21:N:338:PHE:CZ	21:N:749:LEU:HD12	2.55	0.40
21:N:514:THR:HG21	21:N:546:LEU:CG	2.40	0.40
21:N:627:ILE:CG2	21:N:717:LEU:CD2	2.96	0.40
26:S:388:ILE:HG21	26:S:422:MET:CE	2.51	0.40
28:U:280:ASN:OD1	29:V:291:ASN:HB3	2.22	0.40
29:V:47:MET:CE	29:V:73:GLN:HB3	2.44	0.40
29:V:51:GLY:HA3	29:V:108:TYR:HH	1.86	0.40
31:X:30:GLN:HB3	31:X:54:GLU:HB2	2.01	0.40
33:Z:373:GLY:HA3	33:Z:406:TRP:CH2	2.56	0.40
33:Z:381:LEU:CG	33:Z:385:PHE:CE2	3.04	0.40
33:Z:473:LEU:CD2	33:Z:477:TYR:CE2	3.04	0.40
33:Z:737:ALA:HB1	33:Z:775:MET:CG	2.50	0.40
1:1:87:TYR:HE1	7:7:51:ASP:OD1	2.05	0.40
1:1:124:TYR:CD1	1:1:142:PHE:CE1	3.09	0.40
3:3:41:PHE:CD1	3:3:181:ILE:HD13	2.56	0.40
5:5:32:LYS:HE2	5:5:35:ILE:CG1	2.43	0.40
6:6:2:THR:HG21	6:6:133:ALA:HB3	2.04	0.40
7:7:116:ASP:C	7:7:116:ASP:OD1	2.60	0.40
11:D:43:VAL:HG23	11:D:191:CYS:SG	2.61	0.40
12:E:44:GLU:OE1	12:E:192:THR:HA	2.21	0.40
12:E:147:HIS:ND1	12:E:153:TYR:N	2.70	0.40
13:F:135:ILE:HG22	13:F:144:LEU:CD1	2.52	0.40
16:I:221:LEU:HD12	16:I:325:ILE:CG2	2.52	0.40
19:L:95:ILE:HD13	20:M:68:LYS:HD2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:299:ARG:HG3	20:M:300:GLU:N	2.37	0.40
20:M:401:ILE:HG21	20:M:417:GLU:OE1	2.22	0.40
21:N:239:LEU:CD2	21:N:276:GLU:HB3	2.51	0.40
22:O:167:ILE:CG2	22:O:168:THR:N	2.84	0.40
22:O:297:ILE:HG13	22:O:308:LEU:HD11	2.04	0.40
23:P:229:LEU:CD2	23:P:330:GLY:CA	2.93	0.40
23:P:328:ALA:O	23:P:329:PHE:HB2	2.22	0.40
25:R:109:LYS:O	25:R:113:LEU:HD23	2.21	0.40
25:R:312:TYR:O	25:R:316:LEU:HB2	2.21	0.40
26:S:244:ASN:ND2	27:T:92:ASN:CB	2.83	0.40
26:S:415:SER:HB3	27:T:159:LYS:NZ	2.36	0.40
33:Z:71:LEU:HD13	33:Z:92:LEU:HD22	2.03	0.40
33:Z:239:GLU:HG3	33:Z:240:ASN:CG	2.42	0.40
33:Z:466:GLU:O	33:Z:467:VAL:HG23	2.21	0.40
1:1:35:THR:OG1	1:1:45:ARG:NE	2.42	0.40
4:4:155:GLU:O	4:4:159:LEU:HG	2.22	0.40
7:7:93:TYR:O	7:7:96:ARG:HG2	2.21	0.40
8:A:91:ARG:HH12	8:A:95:LEU:CA	2.33	0.40
9:B:12:PHE:CD2	9:B:16:GLY:O	2.75	0.40
11:D:146:LYS:HB3	11:D:148:TYR:HE2	1.86	0.40
11:D:151:GLU:CD	11:D:155:ILE:HD11	2.42	0.40
12:E:20:ARG:HH21	12:E:25:GLU:CD	2.24	0.40
12:E:165:TYR:CB	12:E:167:TYR:OH	2.44	0.40
13:F:110:HIS:HA	14:G:85:ARG:HD3	2.03	0.40
13:F:173:GLU:CG	14:G:57:LEU:HD11	2.50	0.40
15:H:66:LYS:O	15:H:70:LYS:HG3	2.21	0.40
15:H:294:LEU:HD21	15:H:308:PHE:HE1	1.86	0.40
15:H:312:ASP:HB3	16:I:300:ARG:NH1	2.36	0.40
15:H:389:PHE:CZ	15:H:419:LEU:CD2	3.04	0.40
16:I:105:SER:CB	17:J:94:TYR:CD2	3.04	0.40
16:I:424:MET:O	16:I:428:VAL:HG23	2.21	0.40
18:K:99:PHE:HE2	18:K:133:PRO:HA	1.84	0.40
19:L:157:ARG:HG2	19:L:158:ILE:N	2.36	0.40
19:L:254:LYS:CG	20:M:256:ILE:HG12	2.52	0.40
20:M:227:GLY:O	20:M:231:LEU:HG	2.20	0.40
21:N:622:ALA:HA	21:N:641:LEU:CD2	2.51	0.40
21:N:759:ILE:HG23	21:N:903:VAL:CG1	2.22	0.40
28:U:49:THR:HB	29:V:39:LYS:CE	2.51	0.40
33:Z:394:TYR:OH	33:Z:859:LYS:HB2	2.21	0.40
33:Z:917:ASN:CG	33:Z:918:ASP:H	2.25	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 PDB entries followed by that with respect to all EM entries.

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	1	203/215 (94%)	189 (93%)	12 (6%)	2 (1%)	15	55
2	2	221/261 (85%)	209 (95%)	9 (4%)	3 (1%)	11	46
3	3	202/205 (98%)	179 (89%)	14 (7%)	9 (4%)	2	22
4	4	196/198 (99%)	178 (91%)	15 (8%)	3 (2%)	10	46
5	5	210/287 (73%)	199 (95%)	8 (4%)	3 (1%)	11	46
6	6	220/241 (91%)	207 (94%)	9 (4%)	4 (2%)	8	40
7	7	231/266 (87%)	208 (90%)	18 (8%)	5 (2%)	6	35
8	A	241/252 (96%)	222 (92%)	16 (7%)	3 (1%)	13	50
9	B	248/250 (99%)	235 (95%)	11 (4%)	2 (1%)	19	60
10	C	243/258 (94%)	229 (94%)	13 (5%)	1 (0%)	34	72
11	D	240/254 (94%)	222 (92%)	15 (6%)	3 (1%)	12	48
12	E	241/260 (93%)	224 (93%)	11 (5%)	6 (2%)	5	32
13	F	231/234 (99%)	216 (94%)	13 (6%)	2 (1%)	17	57
14	G	243/288 (84%)	224 (92%)	17 (7%)	2 (1%)	19	60
15	H	351/467 (75%)	297 (85%)	37 (10%)	17 (5%)	2	21
16	I	358/437 (82%)	322 (90%)	28 (8%)	8 (2%)	6	35
17	J	371/405 (92%)	336 (91%)	24 (6%)	11 (3%)	4	28
18	K	377/428 (88%)	343 (91%)	23 (6%)	11 (3%)	4	29
19	L	357/437 (82%)	320 (90%)	28 (8%)	9 (2%)	5	32
20	M	363/434 (84%)	331 (91%)	22 (6%)	10 (3%)	5	30
21	N	843/945 (89%)	772 (92%)	45 (5%)	26 (3%)	4	27
22	O	385/393 (98%)	332 (86%)	26 (7%)	27 (7%)	1	14
23	P	413/445 (93%)	377 (91%)	19 (5%)	17 (4%)	3	23
24	Q	429/434 (99%)	398 (93%)	20 (5%)	11 (3%)	5	31
25	R	398/429 (93%)	351 (88%)	36 (9%)	11 (3%)	5	30

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	S	351/523 (67%)	318 (91%)	19 (5%)	14 (4%)	3	23
27	T	270/274 (98%)	233 (86%)	25 (9%)	12 (4%)	2	22
28	U	245/338 (72%)	237 (97%)	5 (2%)	3 (1%)	13	50
29	V	239/306 (78%)	214 (90%)	15 (6%)	10 (4%)	3	22
30	W	195/268 (73%)	171 (88%)	12 (6%)	12 (6%)	1	17
31	X	125/156 (80%)	83 (66%)	18 (14%)	24 (19%)	0	2
32	Y	17/89 (19%)	17 (100%)	0	0	100	100
33	Z	807/993 (81%)	714 (88%)	59 (7%)	34 (4%)	3	22
All	All	10064/11670 (86%)	9107 (90%)	642 (6%)	315 (3%)	7	27

All (315) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	2	196	ARG
3	3	194	ARG
5	5	31	VAL
7	7	209	MET
10	C	224	GLU
11	D	54	LEU
11	D	219	SER
15	H	76	LEU
15	H	188	PRO
15	H	286	GLU
16	I	125	MET
16	I	154	MET
18	K	426	PHE
19	L	297	ALA
20	M	74	GLN
20	M	169	ALA
20	M	319	ASP
21	N	217	MET
21	N	308	ASN
21	N	434	SER
21	N	634	LEU
21	N	669	GLU
21	N	761	ILE
21	N	872	THR
21	N	874	ILE
21	N	904	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	N	914	VAL
22	O	16	MET
22	O	18	ALA
22	O	34	GLU
22	O	41	LEU
22	O	122	HIS
22	O	184	ASP
22	O	203	THR
22	O	227	ILE
22	O	247	ASN
22	O	304	ASN
22	O	353	VAL
23	P	287	ASP
23	P	328	ALA
24	Q	2	SER
24	Q	35	SER
24	Q	167	LYS
25	R	244	THR
26	S	225	HIS
26	S	259	TYR
26	S	450	ASN
27	T	242	LYS
27	T	243	ALA
27	T	246	GLU
28	U	130	VAL
28	U	133	PRO
29	V	159	ILE
29	V	163	ALA
29	V	181	ASN
29	V	197	TYR
29	V	204	HIS
30	W	46	GLU
30	W	105	VAL
30	W	147	ILE
31	X	24	CYS
31	X	28	PRO
31	X	54	GLU
31	X	57	VAL
31	X	78	ILE
31	X	80	SER
31	X	116	ALA
31	X	117	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	Z	60	ASP
33	Z	127	SER
33	Z	366	LYS
33	Z	889	VAL
33	Z	963	ALA
1	1	92	ASN
3	3	94	TYR
3	3	107	SER
4	4	152	THR
5	5	208	ASN
6	6	40	ASN
7	7	69	ASP
8	A	37	GLN
8	A	160	ALA
9	B	3	ASP
15	H	143	ALA
15	H	170	GLU
15	H	177	ASP
15	H	197	MET
15	H	343	PHE
17	J	129	LYS
17	J	226	GLY
17	J	258	VAL
18	K	144	ASN
18	K	171	TYR
20	M	240	ASN
20	M	282	GLU
20	M	316	SER
21	N	670	LYS
21	N	718	GLU
21	N	903	VAL
22	O	15	ARG
22	O	73	ILE
22	O	108	GLU
22	O	117	ASN
22	O	246	SER
23	P	86	HIS
23	P	89	LEU
23	P	108	LYS
23	P	231	LYS
23	P	283	LYS
23	P	284	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	P	323	ASN
23	P	325	ASP
24	Q	41	ALA
24	Q	231	ASP
25	R	162	ILE
25	R	394	ASP
25	R	421	VAL
26	S	144	LEU
26	S	167	LEU
26	S	244	ASN
26	S	300	ALA
29	V	165	ILE
30	W	83	GLY
30	W	103	ASN
30	W	193	GLU
31	X	12	ALA
31	X	15	CYS
31	X	38	ASN
31	X	65	SER
31	X	114	LEU
33	Z	373	GLY
33	Z	523	ALA
33	Z	539	ASN
33	Z	553	ARG
33	Z	558	LEU
33	Z	803	ALA
33	Z	888	LEU
33	Z	928	ARG
1	1	19	ARG
2	2	182	LYS
3	3	31	PHE
4	4	122	GLY
6	6	121	SER
7	7	221	GLY
11	D	39	LYS
12	E	53	ARG
13	F	203	ASP
14	G	71	ARG
14	G	185	GLY
15	H	145	TYR
15	H	303	ALA
16	I	150	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	I	285	ASP
16	I	291	ARG
16	I	328	THR
17	J	142	VAL
17	J	249	GLU
17	J	250	ILE
17	J	263	GLY
18	K	289	ASP
18	K	417	THR
19	L	115	GLU
19	L	125	PRO
19	L	319	GLY
19	L	409	HIS
20	M	290	ARG
21	N	17	GLN
21	N	307	LYS
21	N	310	ASP
21	N	739	PHE
21	N	774	ASN
21	N	863	SER
22	O	42	SER
22	O	82	LEU
22	O	119	SER
22	O	318	HIS
23	P	289	ASN
23	P	306	ASN
23	P	329	PHE
24	Q	38	SER
24	Q	129	LYS
25	R	37	LYS
25	R	222	ARG
25	R	326	ALA
25	R	397	ASN
26	S	327	ILE
27	T	73	PHE
27	T	93	ASN
27	T	210	PHE
27	T	240	LYS
29	V	115	GLY
29	V	162	GLY
29	V	167	ASN
30	W	12	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	W	151	THR
30	W	163	ASN
31	X	37	PRO
31	X	94	ASN
33	Z	262	VAL
33	Z	277	GLU
33	Z	333	GLY
33	Z	340	LEU
33	Z	516	THR
33	Z	612	GLY
33	Z	917	ASN
3	3	106	LYS
3	3	184	ASP
5	5	19	ARG
6	6	157	GLY
7	7	2	SER
8	A	34	ALA
12	E	123	PHE
15	H	252	PRO
15	H	255	GLY
15	H	325	GLY
16	I	320	GLY
17	J	90	PRO
17	J	110	SER
18	K	397	LYS
19	L	282	GLU
21	N	744	PRO
21	N	896	PHE
22	O	20	PRO
23	P	53	ALA
23	P	232	ARG
24	Q	42	ALA
24	Q	273	ASN
25	R	182	ASN
25	R	241	ILE
26	S	146	LEU
26	S	150	LYS
26	S	284	LEU
26	S	307	LEU
27	T	172	SER
27	T	251	HIS
27	T	254	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	W	120	ASP
31	X	18	ASN
31	X	21	SER
31	X	115	SER
33	Z	110	ASN
33	Z	190	THR
33	Z	786	SER
2	2	145	ASP
3	3	-5	SER
3	3	148	ASN
7	7	-4	ILE
12	E	34	GLY
12	E	226	ASP
12	E	249	ALA
13	F	4	ASN
16	I	228	GLY
18	K	167	PRO
18	K	333	ARG
18	K	424	PHE
19	L	100	SER
20	M	425	ARG
21	N	87	ASP
22	O	43	GLU
22	O	74	ASN
22	O	307	MET
24	Q	34	ASP
24	Q	354	PHE
26	S	227	ASN
27	T	241	GLU
27	T	250	MET
30	W	22	PRO
31	X	85	ARG
33	Z	81	SER
33	Z	276	ASN
33	Z	341	TYR
33	Z	442	VAL
33	Z	578	GLY
33	Z	609	THR
4	4	150	ASP
12	E	121	LEU
15	H	99	VAL
15	H	176	VAL

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Mol	Chain	Res	Type
15	H	311	ILE
17	J	299	ILE
18	K	288	SER
19	L	286	ILE
21	N	325	PHE
21	N	768	ILE
22	O	357	ILE
23	P	321	VAL
23	P	410	GLN
25	R	81	HIS
26	S	228	GLU
28	U	132	LEU
33	Z	238	ASP
33	Z	467	VAL
33	Z	481	PRO
6	6	153	PRO
22	O	344	VAL
31	X	27	ILE
31	X	84	GLY
3	3	-6	PRO
15	H	183	ILE
19	L	352	PRO
21	N	130	ASP
21	N	353	LEU
29	V	72	PRO
9	B	233	PRO
17	J	223	ILE
30	W	195	GLY
31	X	63	PRO
18	K	152	PRO
20	M	167	VAL
22	O	238	ILE
31	X	56	PRO
33	Z	520	ILE
33	Z	610	GLY
20	M	252	VAL
31	X	77	PRO

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM

entries.

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	1	169/178 (95%)	169 (100%)	0	100	100
2	2	182/214 (85%)	181 (100%)	1 (0%)	88	93
3	3	172/173 (99%)	172 (100%)	0	100	100
4	4	175/175 (100%)	175 (100%)	0	100	100
5	5	169/235 (72%)	169 (100%)	0	100	100
6	6	185/201 (92%)	185 (100%)	0	100	100
7	7	199/224 (89%)	199 (100%)	0	100	100
8	A	207/210 (99%)	207 (100%)	0	100	100
9	B	209/209 (100%)	208 (100%)	1 (0%)	88	93
10	C	204/216 (94%)	204 (100%)	0	100	100
11	D	214/226 (95%)	214 (100%)	0	100	100
12	E	199/215 (93%)	199 (100%)	0	100	100
13	F	192/193 (100%)	191 (100%)	1 (0%)	88	93
14	G	201/239 (84%)	200 (100%)	1 (0%)	88	93
15	H	303/399 (76%)	300 (99%)	3 (1%)	76	86
16	I	319/385 (83%)	316 (99%)	3 (1%)	78	87
17	J	325/352 (92%)	325 (100%)	0	100	100
18	K	334/374 (89%)	334 (100%)	0	100	100
19	L	308/377 (82%)	306 (99%)	2 (1%)	86	92
20	M	315/375 (84%)	314 (100%)	1 (0%)	92	95
21	N	713/797 (90%)	711 (100%)	2 (0%)	92	95
22	O	363/368 (99%)	363 (100%)	0	100	100
23	P	388/415 (94%)	385 (99%)	3 (1%)	81	89
24	Q	388/391 (99%)	388 (100%)	0	100	100
25	R	351/379 (93%)	350 (100%)	1 (0%)	92	95
26	S	330/489 (68%)	329 (100%)	1 (0%)	92	95
27	T	254/256 (99%)	254 (100%)	0	100	100
28	U	234/308 (76%)	234 (100%)	0	100	100
29	V	217/268 (81%)	217 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	W	171/230 (74%)	169 (99%)	2 (1%)	71	83
31	X	116/144 (81%)	116 (100%)	0	100	100
32	Y	18/81 (22%)	18 (100%)	0	100	100
33	Z	692/850 (81%)	691 (100%)	1 (0%)	93	97
All	All	8816/10146 (87%)	8793 (100%)	23 (0%)	92	95

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	2	196	ARG
9	B	217	GLU
13	F	222	PHE
14	G	217	TRP
15	H	166	THR
15	H	326	ASP
15	H	436	LYS
16	I	256	TYR
16	I	257	LEU
16	I	259	ASP
19	L	192	GLU
19	L	195	GLU
20	M	433	TYR
21	N	740	TRP
21	N	873	ARG
23	P	253	ASP
23	P	254	GLU
23	P	288	ASN
25	R	397	ASN
26	S	416	GLU
30	W	21	PHE
30	W	22	PRO
33	Z	897	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (166) such sidechains are listed below:

Mol	Chain	Res	Type
2	2	9	ASN
2	2	30	ASN
2	2	86	HIS
2	2	172	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	2	194	ASN
3	3	36	HIS
3	3	63	ASN
3	3	136	GLN
3	3	160	GLN
4	4	36	GLN
4	4	40	HIS
4	4	165	GLN
5	5	66	HIS
5	5	133	GLN
5	5	179	HIS
6	6	46	ASN
6	6	71	ASN
6	6	85	GLN
6	6	146	ASN
6	6	188	GLN
7	7	66	ASN
7	7	70	ASN
7	7	141	HIS
7	7	144	ASN
8	A	27	GLN
8	A	36	ASN
8	A	41	ASN
8	A	56	GLN
8	A	84	ASN
8	A	209	HIS
9	B	139	HIS
10	C	31	HIS
10	C	120	GLN
10	C	177	GLN
10	C	227	GLN
10	C	233	GLN
11	D	19	GLN
11	D	70	HIS
11	D	79	ASN
11	D	96	HIS
11	D	118	GLN
11	D	167	ASN
11	D	209	ASN
12	E	23	GLN
12	E	114	GLN
13	F	31	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
13	F	60	GLN
13	F	119	ASN
14	G	20	ASN
14	G	42	ASN
14	G	67	GLN
14	G	86	HIS
14	G	89	ASN
14	G	120	GLN
14	G	181	HIS
14	G	182	HIS
14	G	206	ASN
14	G	243	GLN
15	H	265	ASN
15	H	339	GLN
16	I	117	HIS
16	I	311	ASN
16	I	410	GLN
17	J	128	ASN
17	J	156	GLN
17	J	170	HIS
17	J	277	ASN
17	J	331	HIS
17	J	336	ASN
17	J	379	GLN
18	K	74	HIS
18	K	144	ASN
18	K	285	GLN
18	K	308	GLN
19	L	67	HIS
19	L	320	GLN
20	M	65	ASN
20	M	311	GLN
20	M	328	ASN
20	M	364	HIS
20	M	412	HIS
21	N	219	ASN
21	N	329	HIS
21	N	340	HIS
21	N	430	ASN
21	N	529	GLN
21	N	580	ASN
21	N	654	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	N	738	GLN
21	N	772	GLN
21	N	899	ASN
22	O	40	GLN
22	O	75	GLN
22	O	169	ASN
22	O	289	GLN
22	O	323	ASN
22	O	362	GLN
22	O	374	ASN
22	O	376	GLN
23	P	195	GLN
23	P	263	HIS
23	P	296	GLN
23	P	315	GLN
23	P	336	HIS
23	P	337	HIS
23	P	342	GLN
23	P	425	HIS
24	Q	54	GLN
24	Q	63	GLN
24	Q	186	HIS
24	Q	404	ASN
25	R	73	ASN
25	R	100	ASN
25	R	136	ASN
25	R	208	ASN
25	R	323	ASN
25	R	385	ASN
25	R	397	ASN
25	R	399	GLN
26	S	191	HIS
26	S	302	HIS
26	S	311	GLN
26	S	417	GLN
26	S	438	HIS
26	S	469	ASN
27	T	47	GLN
27	T	80	ASN
27	T	118	ASN
27	T	132	HIS
27	T	169	GLN

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Mol	Chain	Res	Type
27	T	204	ASN
27	T	238	GLN
27	T	258	ASN
28	U	70	HIS
28	U	71	ASN
28	U	127	GLN
28	U	302	GLN
29	V	73	GLN
29	V	133	ASN
29	V	145	GLN
29	V	167	ASN
29	V	181	ASN
29	V	190	HIS
29	V	204	HIS
29	V	215	ASN
30	W	29	GLN
30	W	38	GLN
30	W	47	ASN
30	W	58	ASN
30	W	106	GLN
30	W	108	GLN
30	W	162	ASN
31	X	105	ASN
33	Z	214	HIS
33	Z	240	ASN
33	Z	307	HIS
33	Z	317	GLN
33	Z	327	GLN
33	Z	380	ASN
33	Z	463	HIS
33	Z	475	GLN
33	Z	532	HIS
33	Z	874	ASN
33	Z	897	HIS
33	Z	899	GLN
33	Z	917	ASN

### 5.3.3 RNA

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
15	H	2
29	V	2
20	M	2
16	I	1
18	K	1
19	L	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	I	252:LEU	C	253:ILE	N	3.25
1	H	279:LEU	C	280:VAL	N	2.88
1	K	242:PHE	C	243:VAL	N	2.46
1	L	251:ILE	C	252:VAL	N	2.09
1	H	285:GLY	C	286:GLU	N	1.97
1	V	290:ASN	C	291:ASN	N	1.83
1	M	257:GLY	C	258:GLU	N	1.69
1	M	251:LEU	C	252:VAL	N	1.20
1	V	282:GLU	C	283:THR	N	1.03

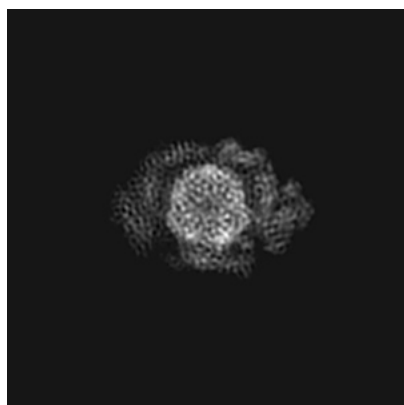
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2596. These allow visual inspection of the internal detail of the map and identification of artifacts.

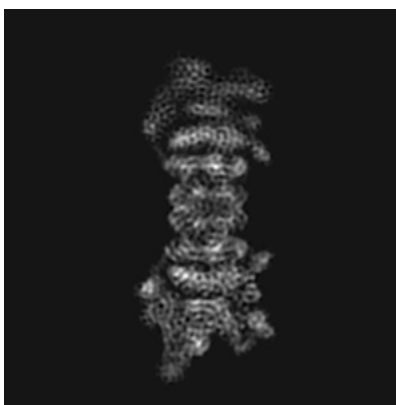
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

#### 6.1.1 Primary map



X



Y

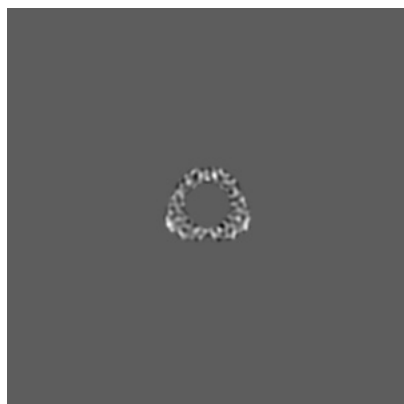


Z

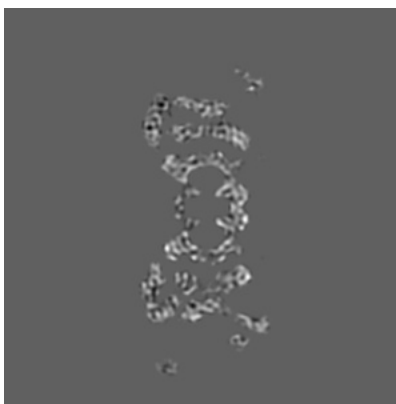
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

#### 6.2.1 Primary map



X Index: 140



Y Index: 140

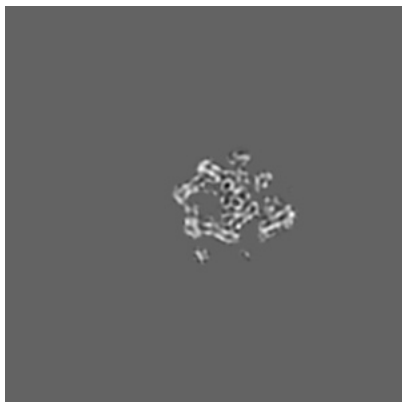


Z Index: 140

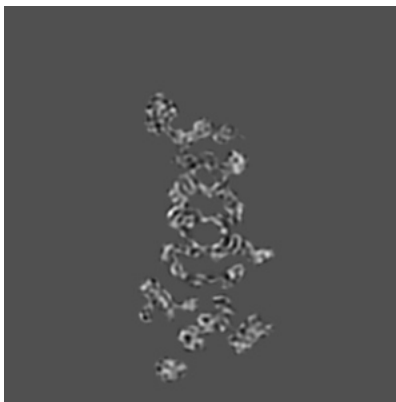
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

### 6.3.1 Primary map



X Index: 93



Y Index: 149



Z Index: 134

The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.81. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

## 6.5 Mask visualisation

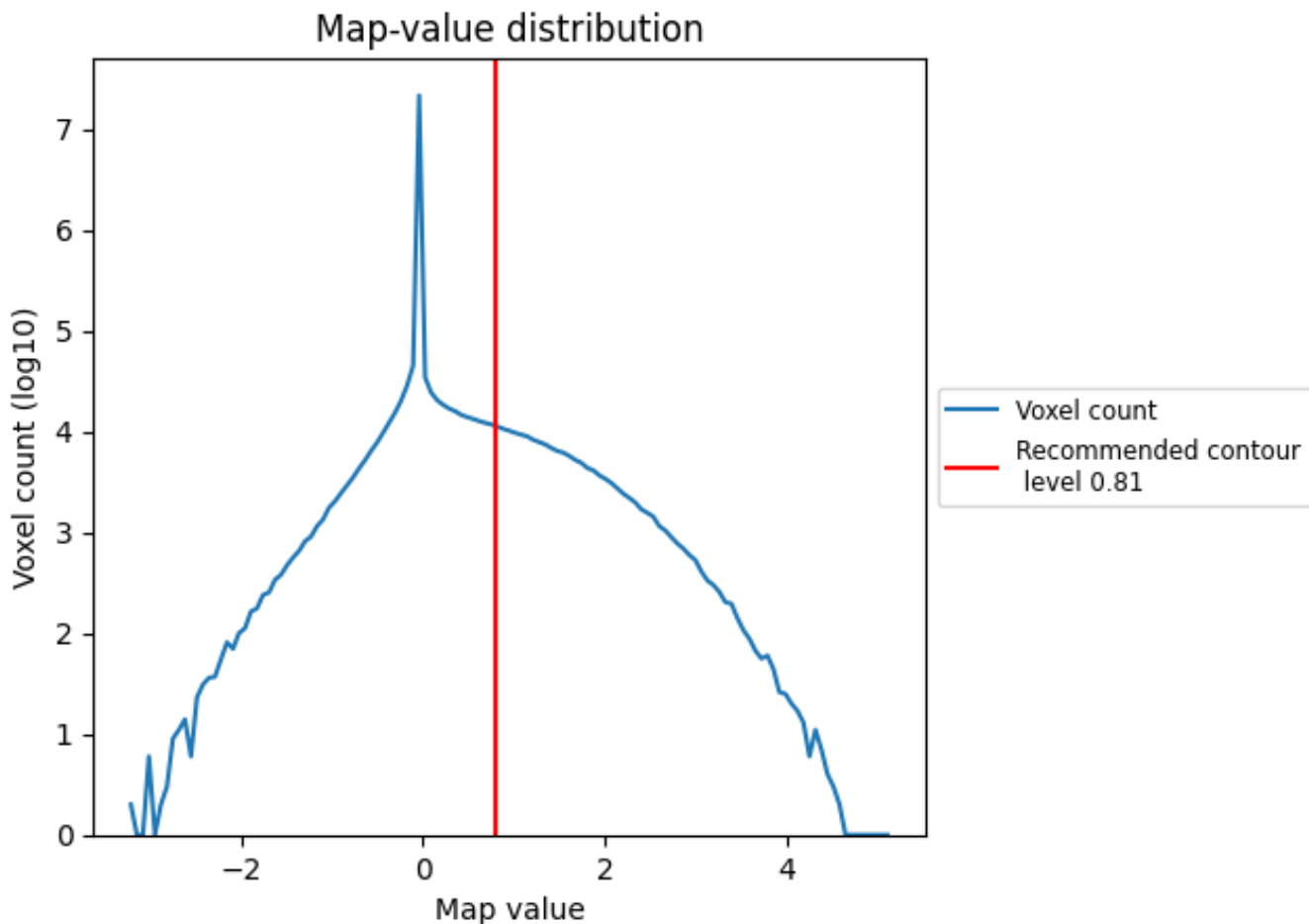
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

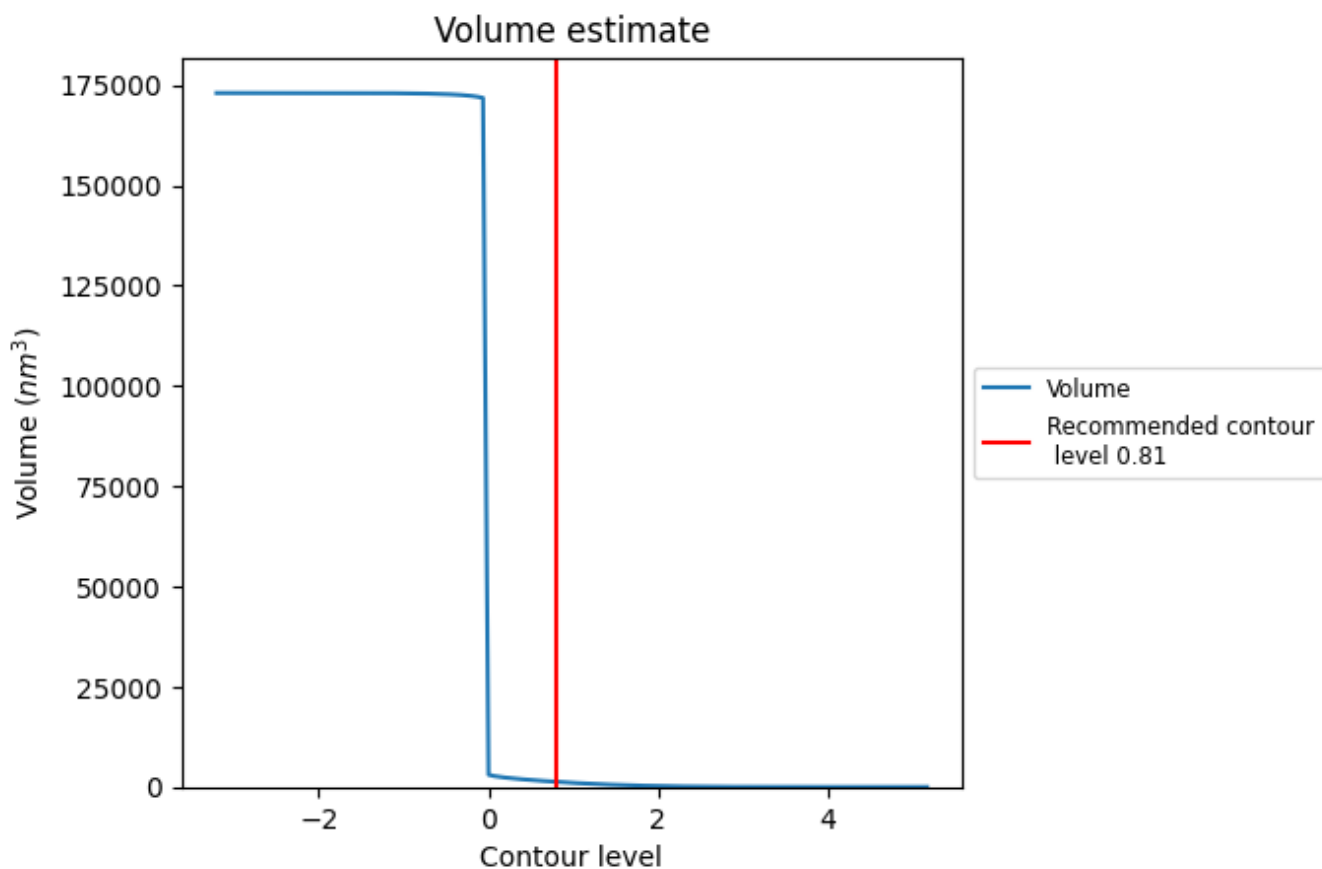
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

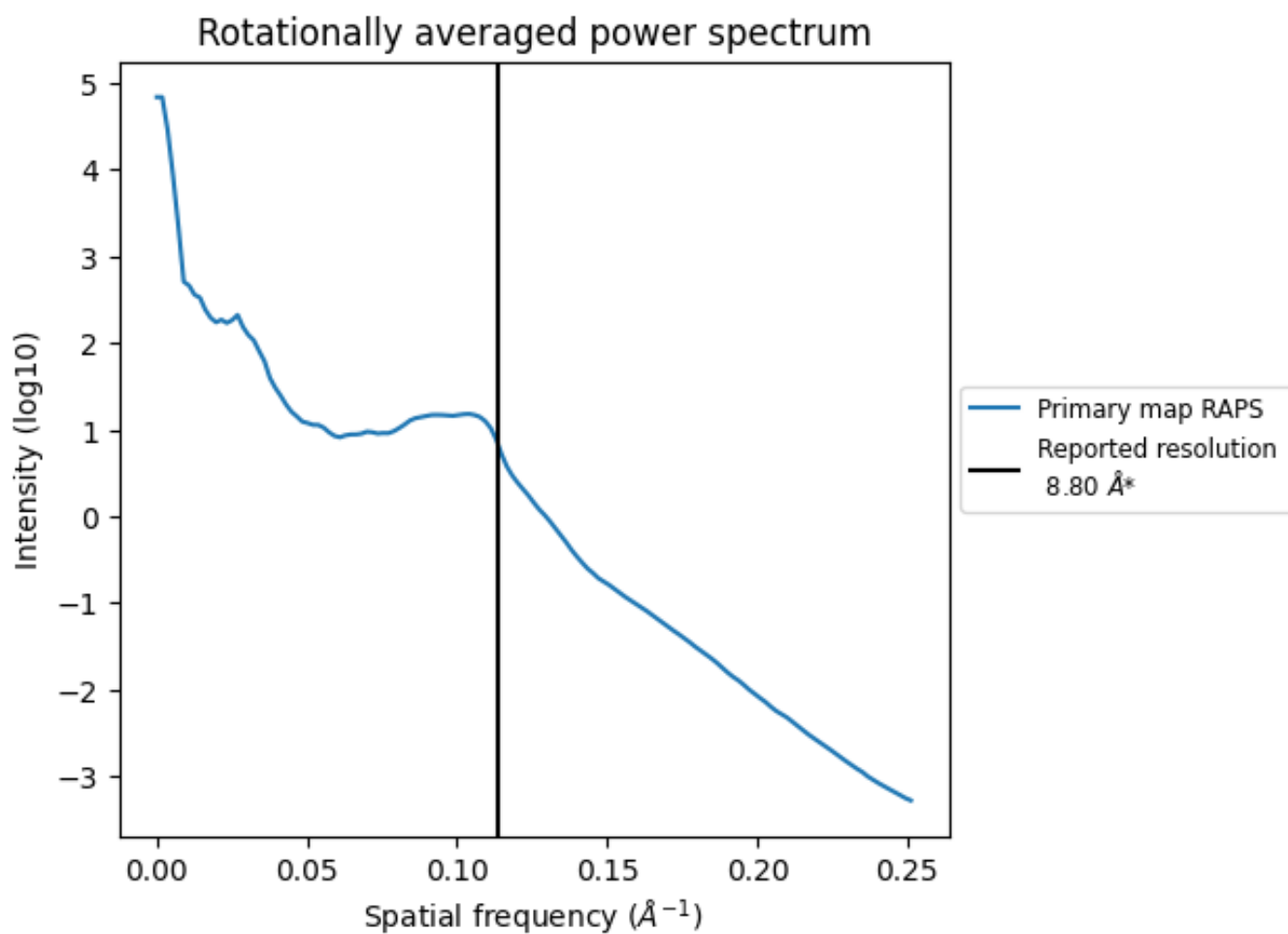
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1269 nm<sup>3</sup>; this corresponds to an approximate mass of 1146 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum [i](#)



\*Reported resolution corresponds to spatial frequency of 0.114 Å<sup>-1</sup>

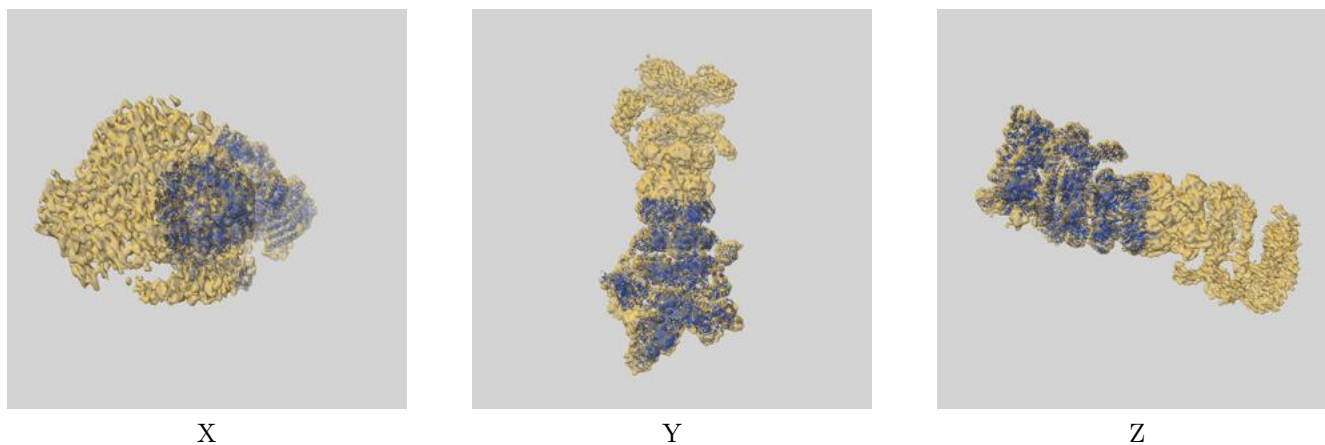
## 8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

## 9 Map-model fit [i](#)

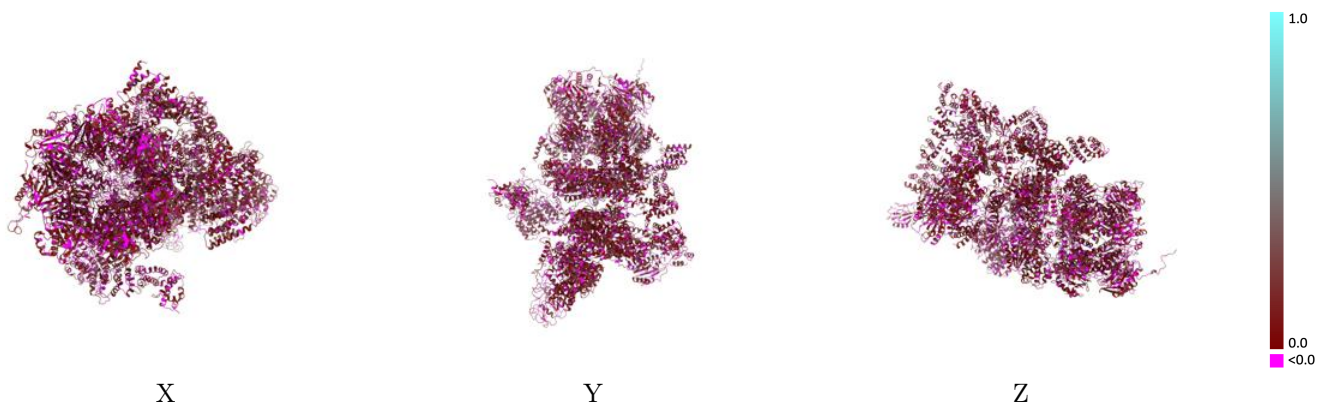
This section contains information regarding the fit between EMDB map EMD-2596 and PDB model 4CR4. Per-residue inclusion information can be found in section 3 on page 9.

### 9.1 Map-model overlay [i](#)



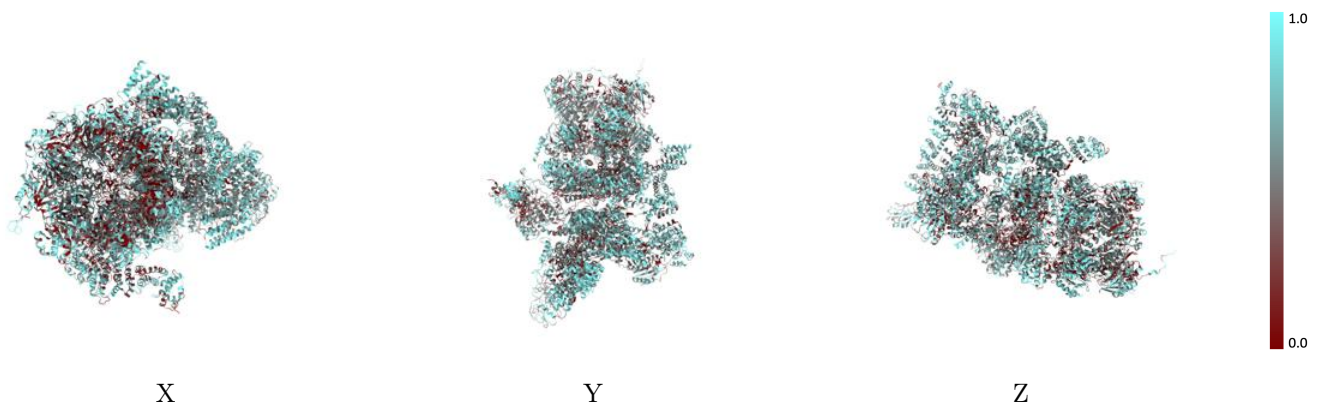
The images above show the 3D surface view of the map at the recommended contour level 0.81 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



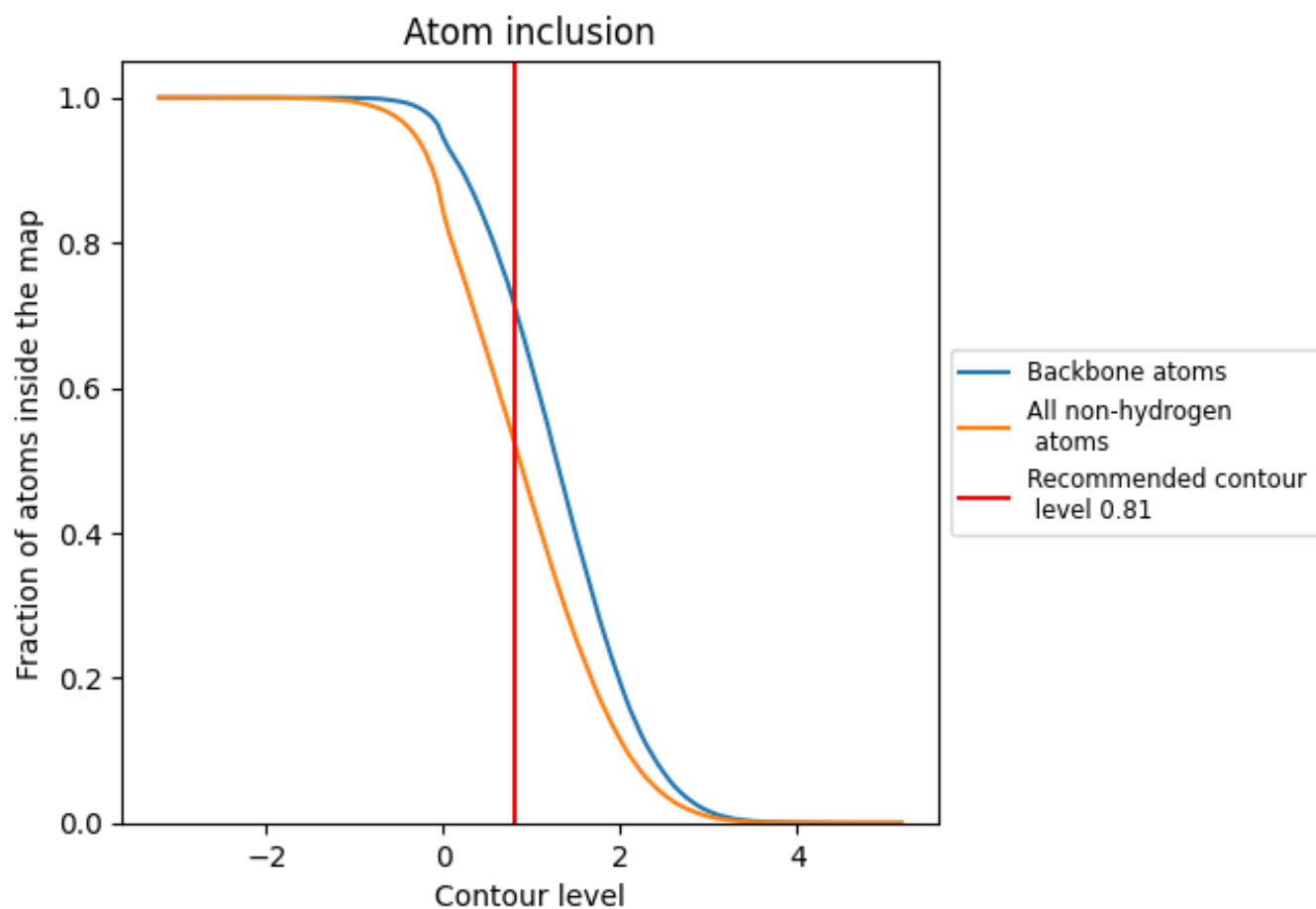
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.81).





































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 71% of all backbone atoms, 52% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.81) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5224	 0.0950
1	 0.4599	 0.0620
2	 0.4865	 0.0940
3	 0.4216	 0.0820
4	 0.5322	 0.0980
5	 0.5264	 0.0990
6	 0.5075	 0.0980
7	 0.4880	 0.0750
A	 0.4790	 0.1150
B	 0.4387	 0.0940
C	 0.4989	 0.0930
D	 0.4987	 0.1020
E	 0.4867	 0.0970
F	 0.5003	 0.0860
G	 0.5305	 0.0960
H	 0.5229	 0.0860
I	 0.4195	 0.0790
J	 0.4719	 0.0900
K	 0.4437	 0.1040
L	 0.5167	 0.0990
M	 0.4575	 0.0890
N	 0.5618	 0.1060
O	 0.6036	 0.0960
P	 0.6553	 0.1040
Q	 0.6184	 0.1110
R	 0.6142	 0.1040
S	 0.4909	 0.0920
T	 0.6142	 0.1080
U	 0.5270	 0.1130
V	 0.4651	 0.0920
W	 0.4623	 0.0690
X	 0.5656	 0.0510
Y	 0.6994	 0.1450
Z	 0.5367	 0.0900

