Full wwPDB EM Validation Report

Nov 20, 2022 – 07:29 pm GMT

PDB ID	:	4CR3
EMDB ID	:	EMD-2595
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	:	9.30 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*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

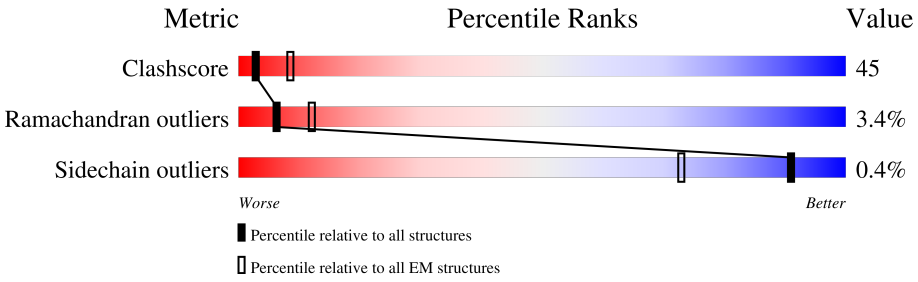
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 9.30 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 >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	215	40% 47% 44% • 5%
2	2	261	31% 55% 26% 5% 15%
3	3	205	44% 65% 33% •
4	4	198	28% 64% 35% •
5	5	287	25% 40% 31% • 26%
6	6	241	27% 56% 34% • 8%
7	7	266	28% 48% 37% • 12%
8	A	252	33% 45% 47% • •

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Mol	Chain	Length	Quality of chain
9	B	250	39% 57% 39%
10	C	258	34% 53% 41% 5%
11	D	254	30% 65% 27% 5%
12	E	260	34% 57% 36% 7%
13	F	234	31% 50% 44% 5%
14	G	288	31% 44% 37% 15%
15	H	467	31% 43% 29% 23%
16	I	437	34% 43% 37% 17%
17	J	405	34% 49% 40% 8%
18	K	428	34% 46% 40% 11%
19	L	437	31% 40% 40% 17%
20	M	434	37% 48% 33% 15%
21	N	945	25% 53% 33% 10%
22	O	393	24% 37% 54% 6%
23	P	445	16% 48% 40% 5% 7%
24	Q	434	34% 53% 43%
25	R	429	18% 46% 42% 5% 7%
26	S	523	20% 39% 26% 33%
27	T	274	27% 49% 42% 8%
28	U	338	21% 37% 31% 5% 25%
29	V	306	29% 38% 38% 19%
30	W	268	31% 29% 35% 7% 26%
31	X	156	25% 35% 40% 6% 19%
32	Y	89	11% 10% 79%
33	Z	993	24% 41% 36% 5% 18%

2 Entry composition

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
1	1	205	Total	C	N	O	S	0	0
			1576	996	261	312	7		

- Molecule 2 is a protein called PROTEASOME COMPONENT PUP1.

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

- Molecule 3 is a protein called PROTEASOME COMPONENT PUP3.

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

- Molecule 4 is a protein called PROTEASOME COMPONENT C11.

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

- Molecule 5 is a protein called PROTEASOME COMPONENT PRE2.

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

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
13	F	233	Total	C	N	O	S	0	0
			1795	1129	312	350	4		

- Molecule 14 is a protein called PROTEASOME COMPONENT C1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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.

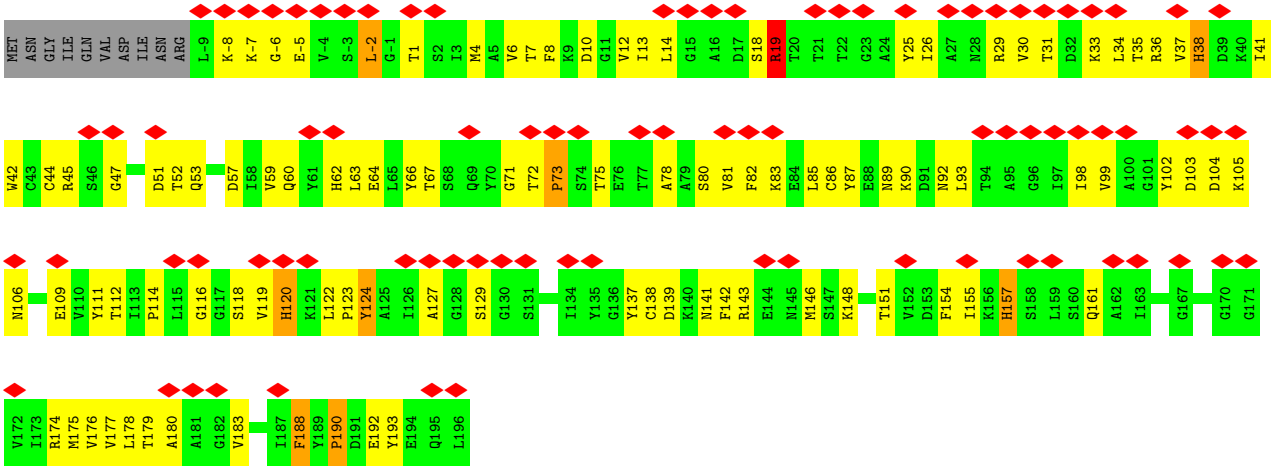
Mol	Chain	Residues	Atoms					AltConf	Trace
33	Z	813	Total	C	N	O	S	0	0
			6289	3995	1029	1236	29		

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.

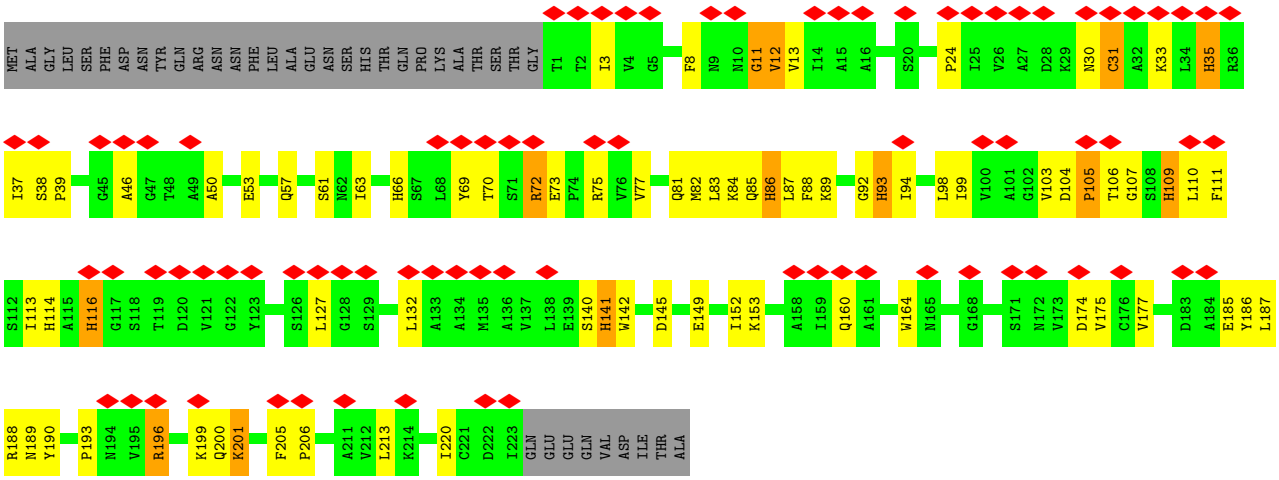
• Molecule 1: PROTEASOME COMPONENT PRE3

Chain 1:



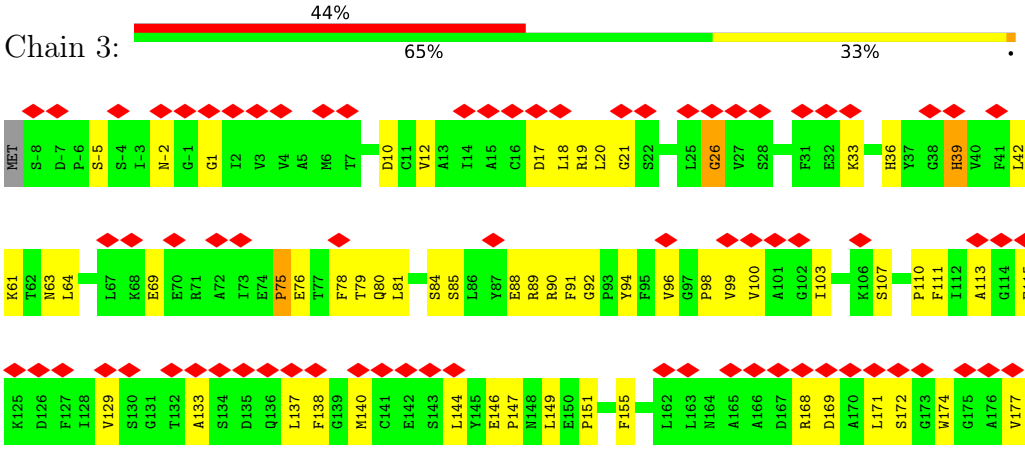
• Molecule 2: PROTEASOME COMPONENT PUP1

Chain 2:



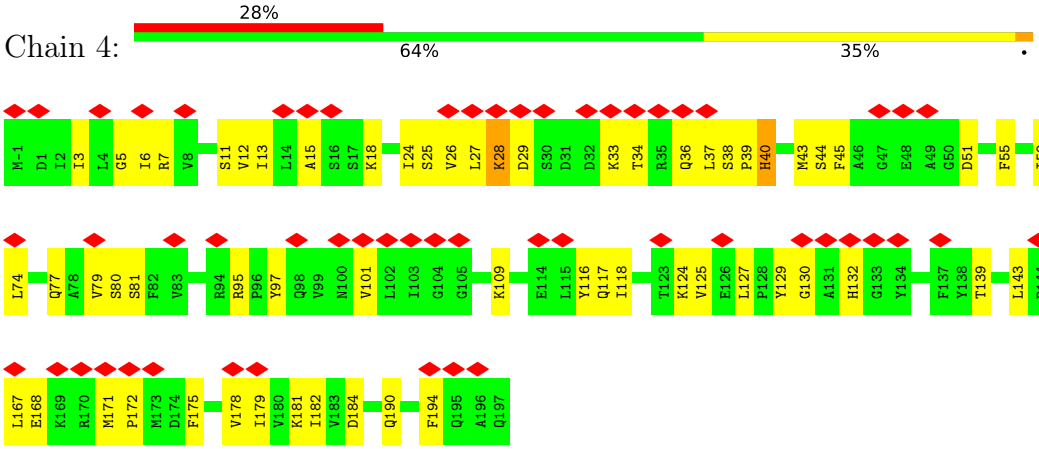
• Molecule 3: PROTEASOME COMPONENT PUP3

Chain 3:



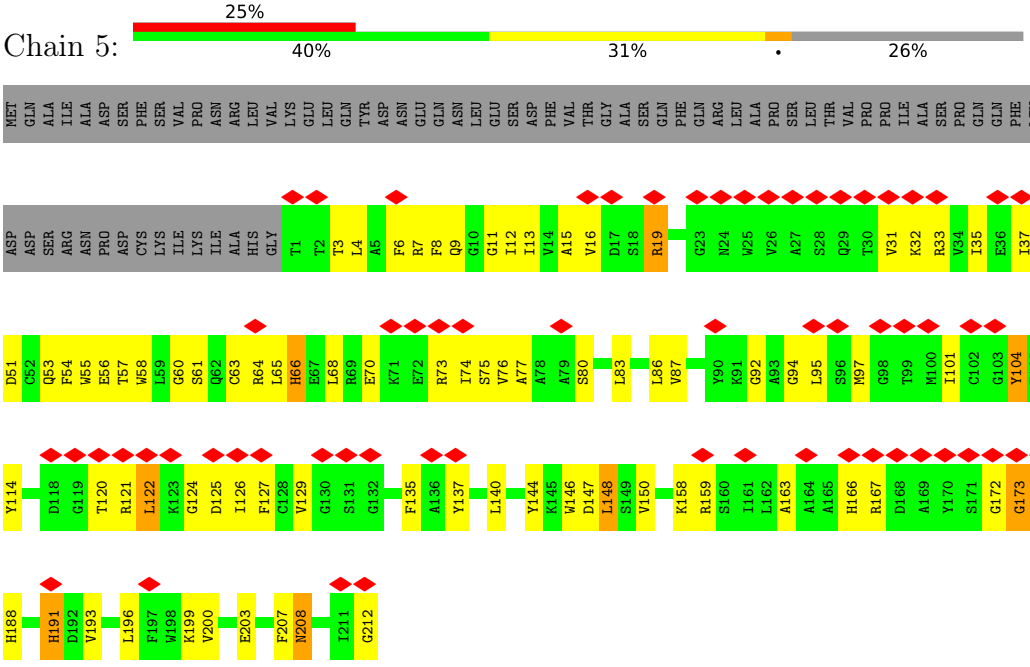
• Molecule 4: PROTEASOME COMPONENT C11

Chain 4:



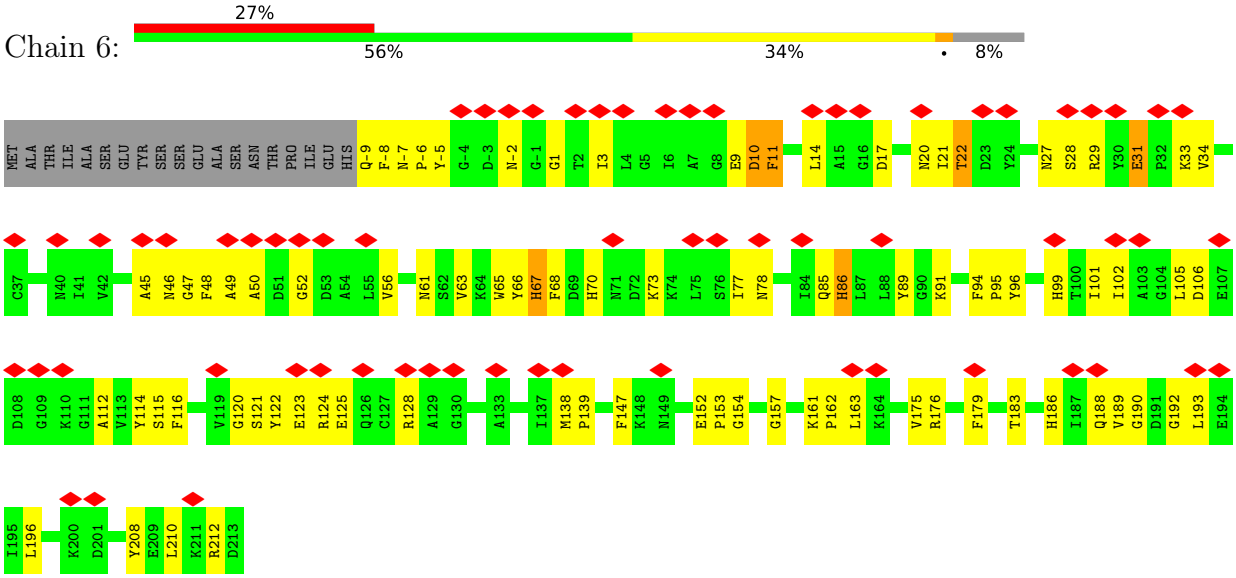
• Molecule 5: PROTEASOME COMPONENT PRE2

Chain 5:



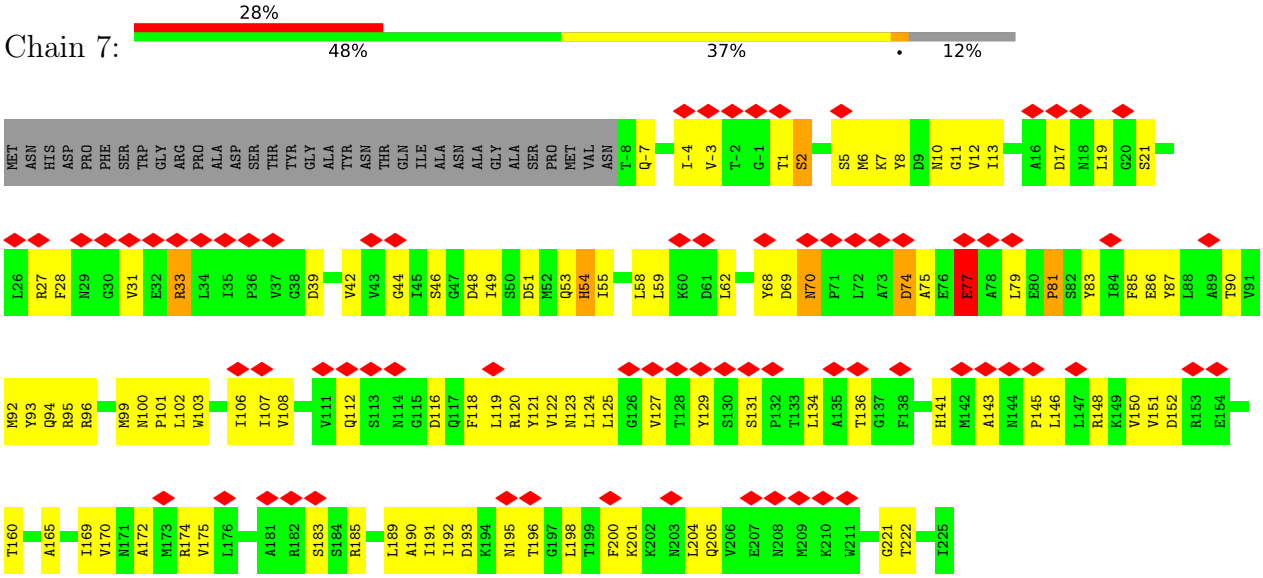
• Molecule 6: PROTEASOME COMPONENT C5

Chain 6:



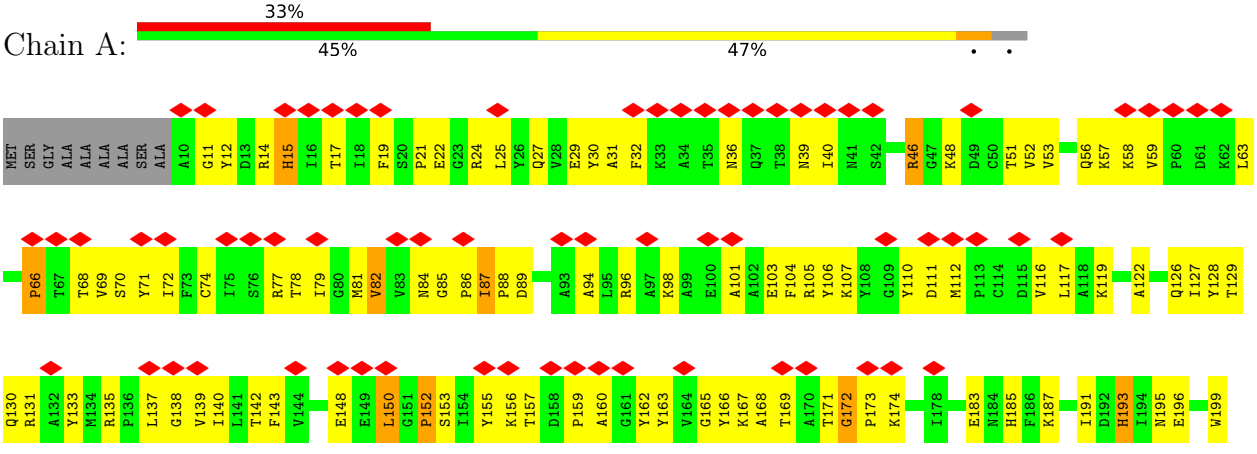
• Molecule 7: PROTEASOME COMPONENT PRE4

Chain 7:



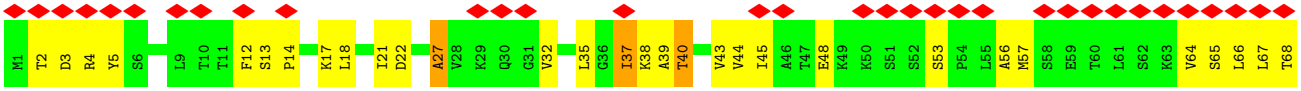
• Molecule 8: PROTEASOME COMPONENT C7-ALPHA

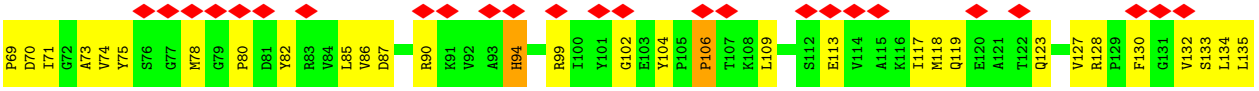
Chain A:

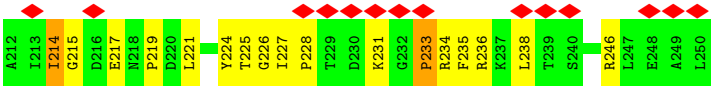


• Molecule 9: PROTEASOME COMPONENT Y7

Chain B:

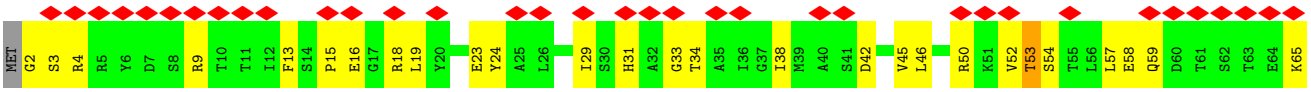


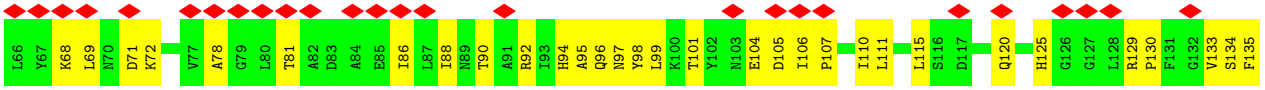


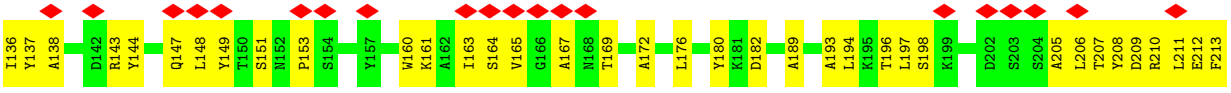


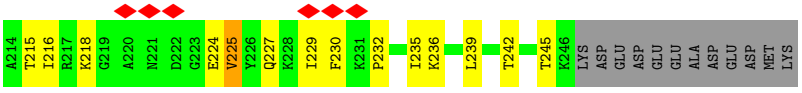
• Molecule 10: PROTEASOME COMPONENT Y13

Chain C:



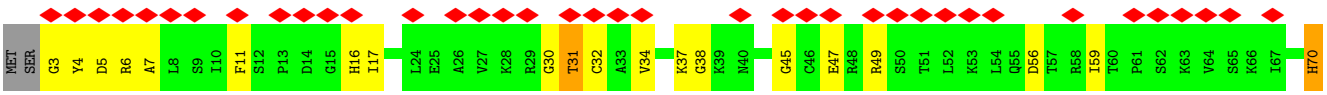


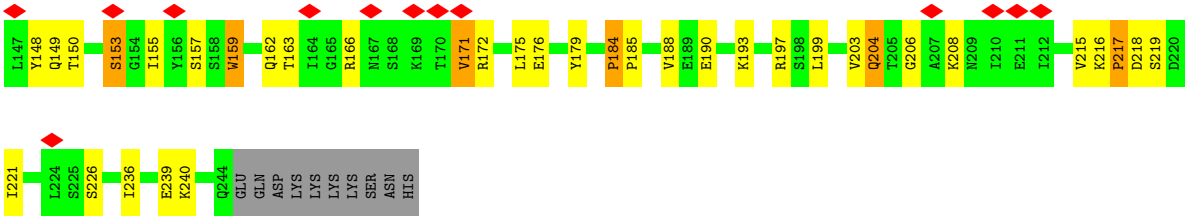




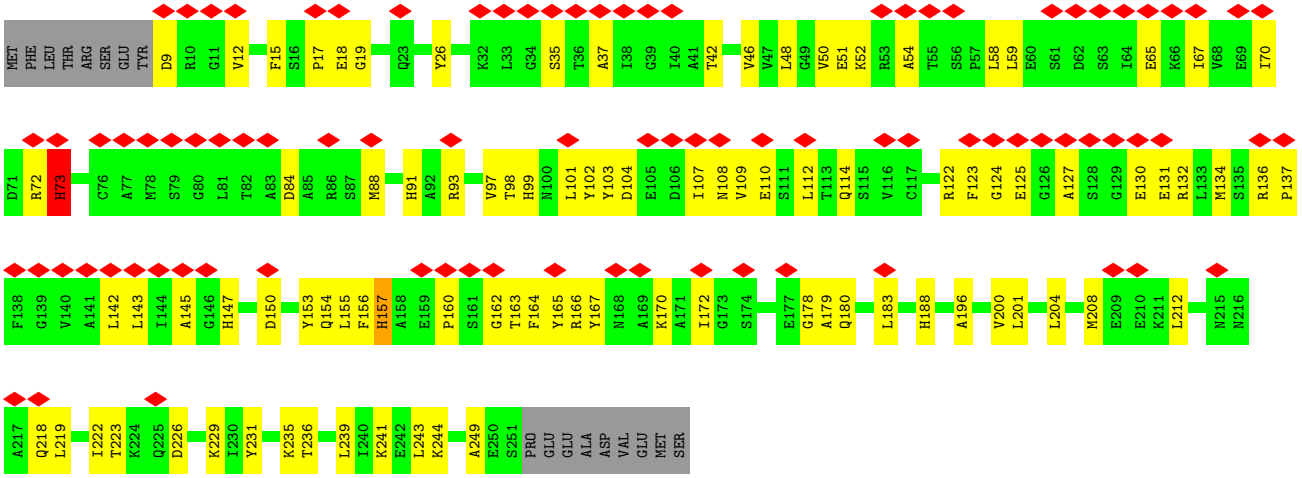
• Molecule 11: PROTEASOME COMPONENT PRE6

Chain D:

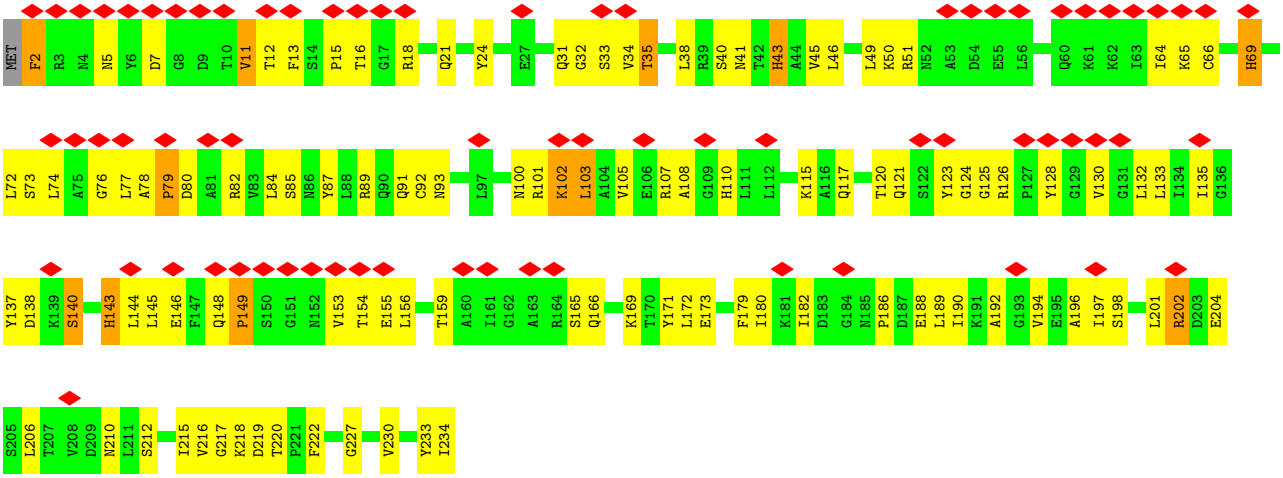




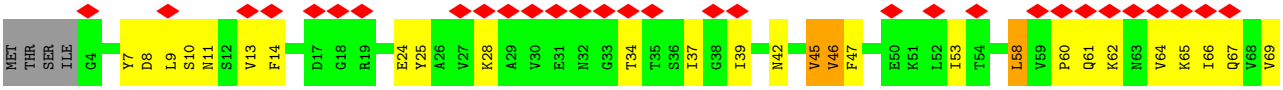
• Molecule 12: PROTEASOME COMPONENT PUP2

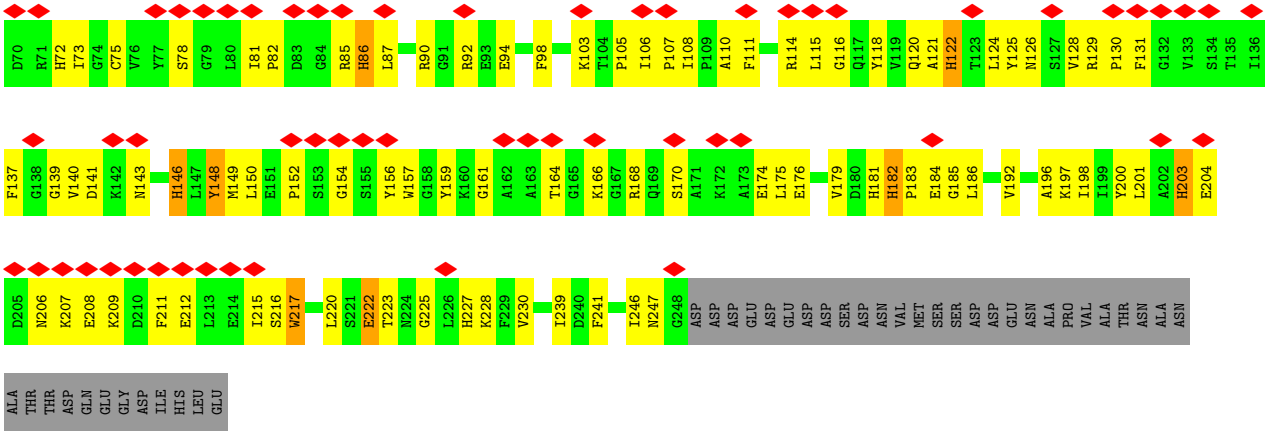


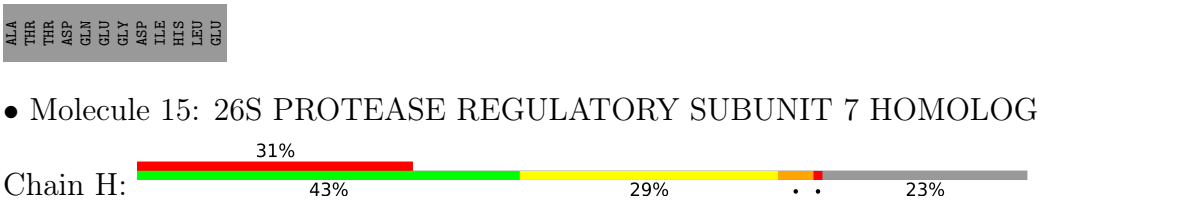
• Molecule 13: PROTEASOME COMPONENT PRE5



• Molecule 14: PROTEASOME COMPONENT C1

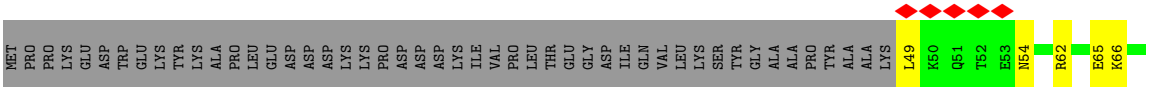


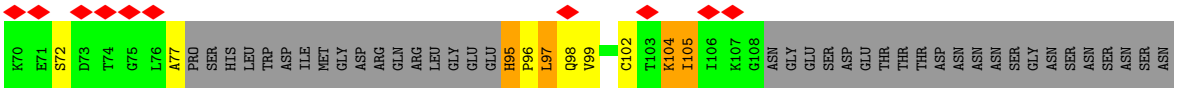


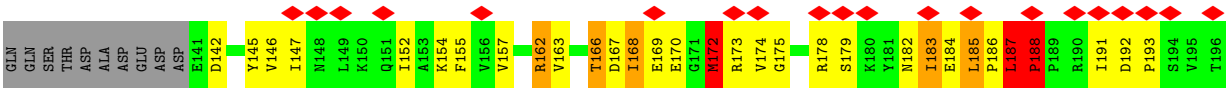


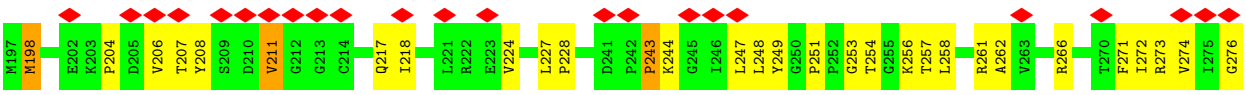
• Molecule 15: 26S PROTEASE REGULATORY SUBUNIT 7 HOMOLOG

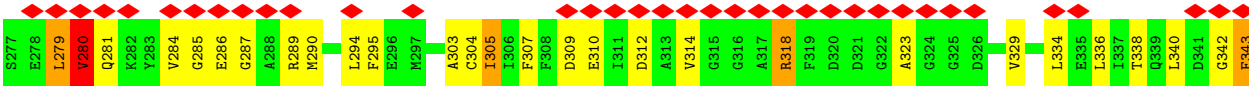
Chain H:

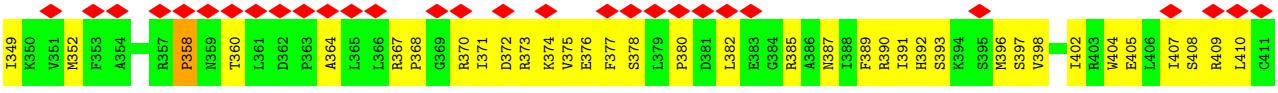


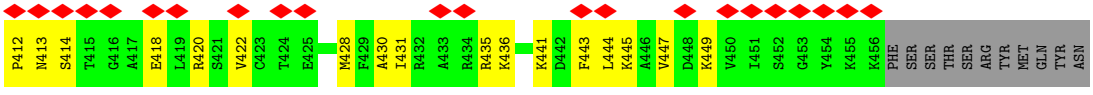






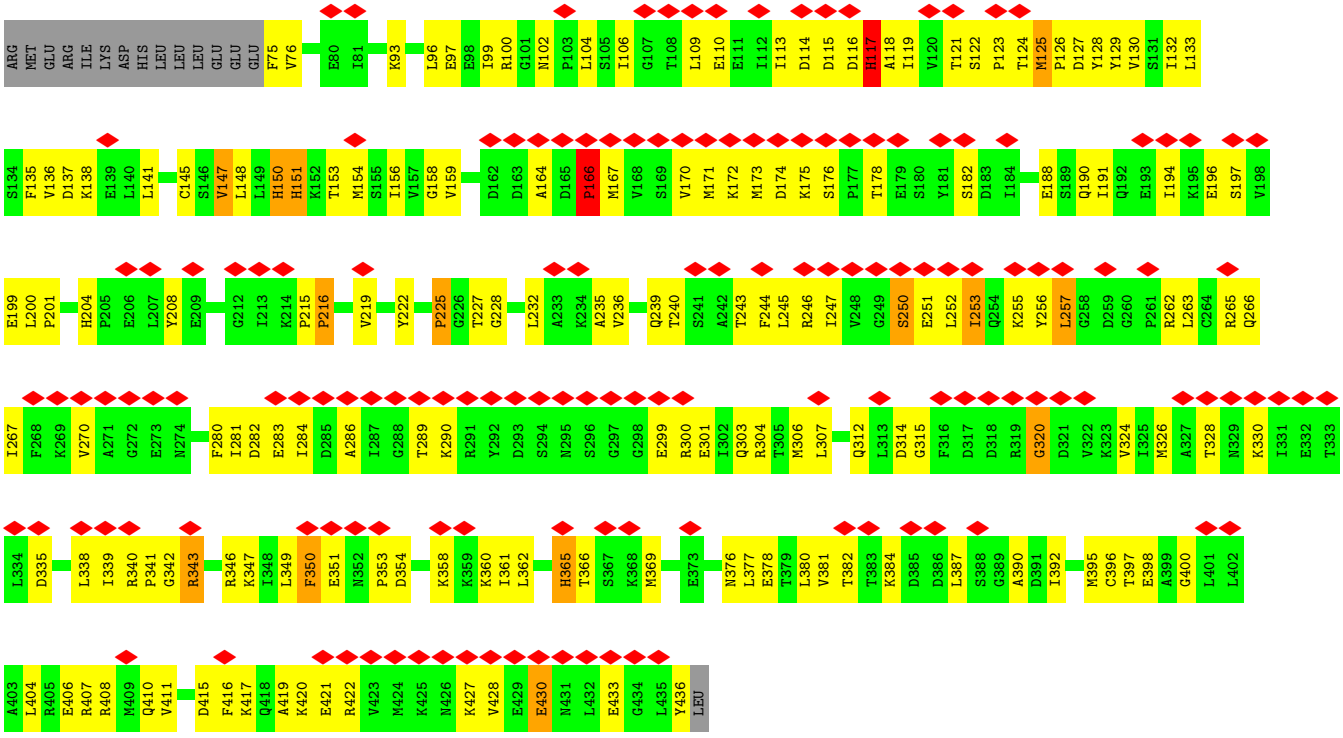






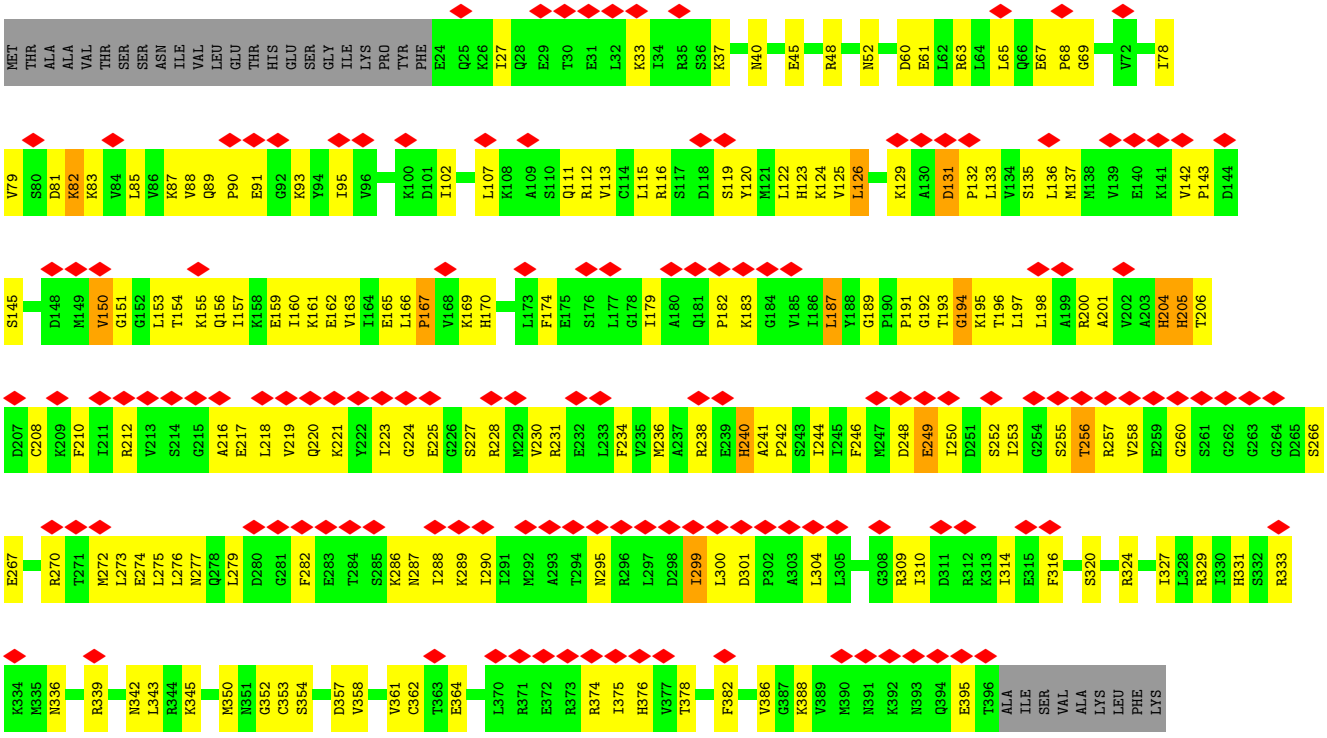
• Molecule 16: 26S PROTEASE REGULATORY SUBUNIT 4 HOMOLOG

Chain I:



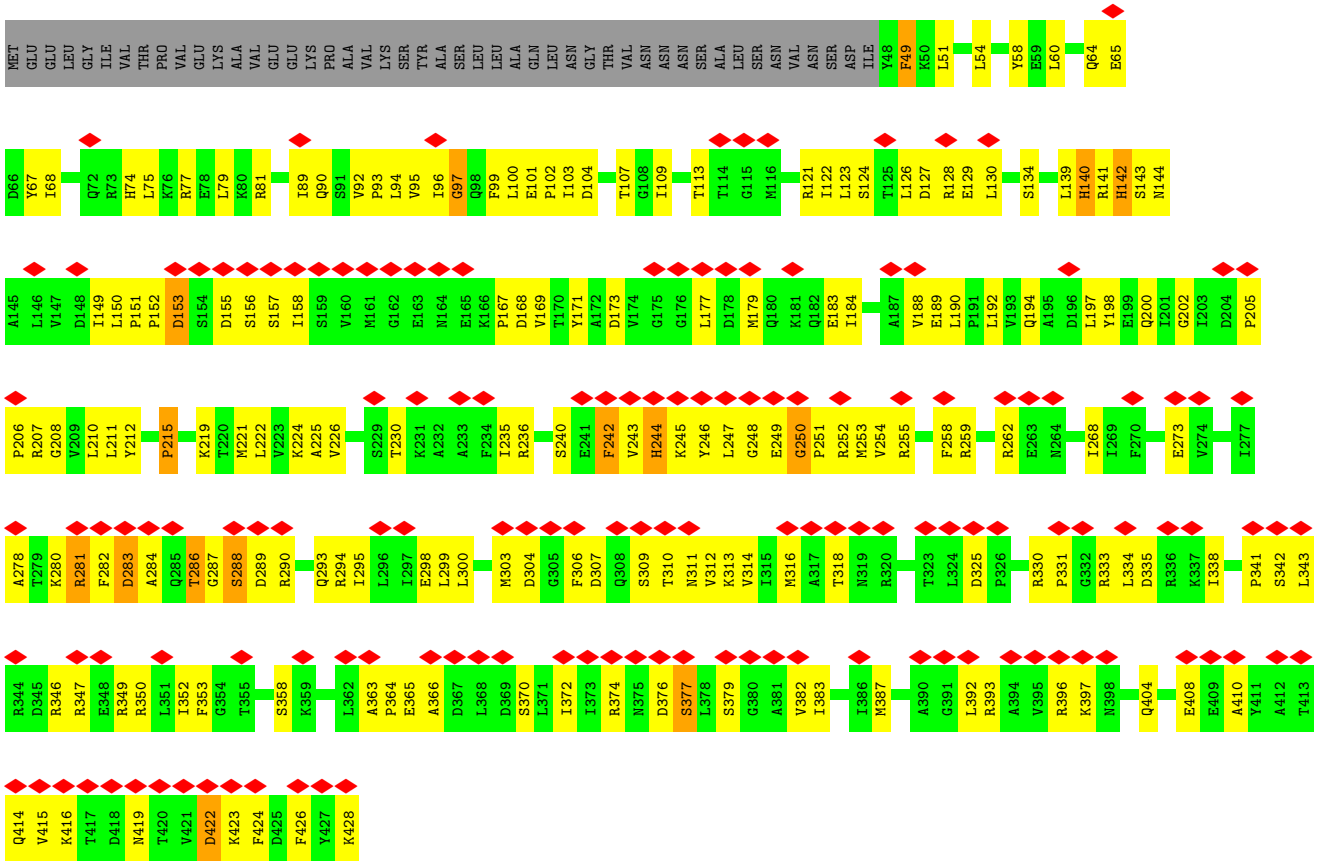
• Molecule 17: 26S PROTEASE REGULATORY SUBUNIT 8 HOMOLOG

Chain J:



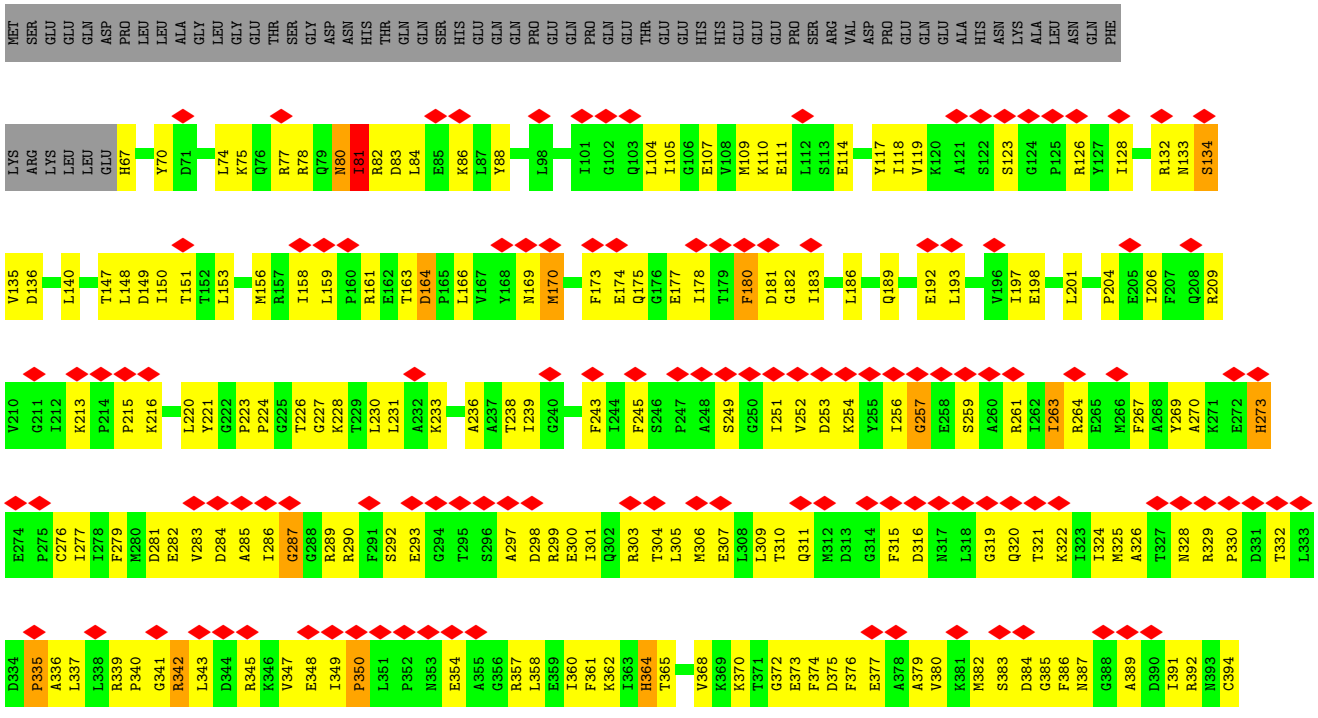
• Molecule 18: 26S PROTEASE REGULATORY SUBUNIT 6B HOMOLOG

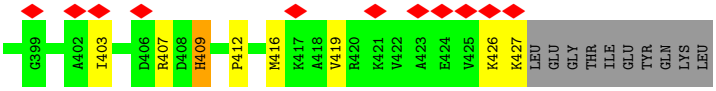
Chain K:



• Molecule 19: 26S PROTEASE SUBUNIT RPT4

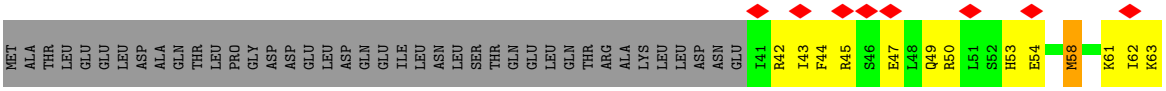
Chain L:

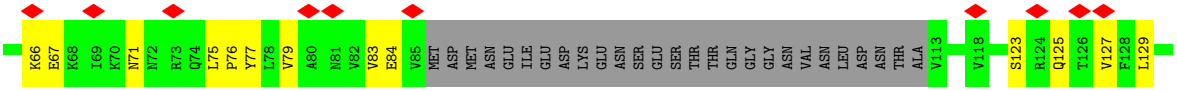


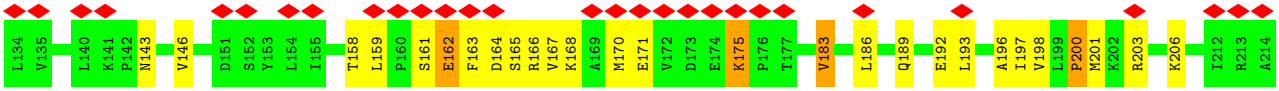


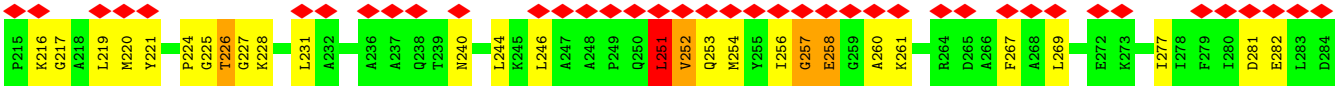
• Molecule 20: 26S PROTEASE REGULATORY SUBUNIT 6A

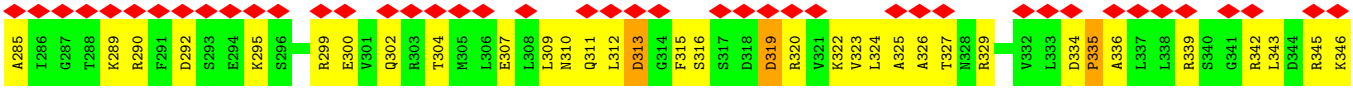
Chain M:

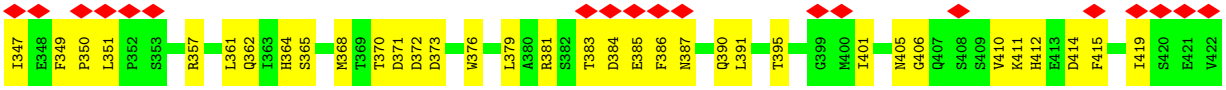


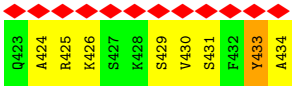






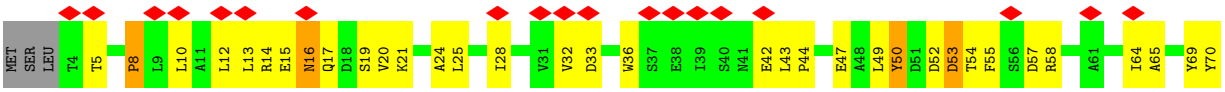


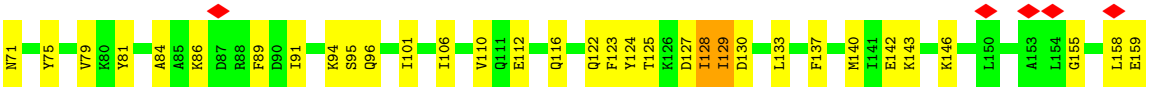


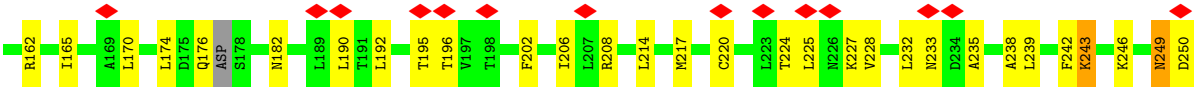


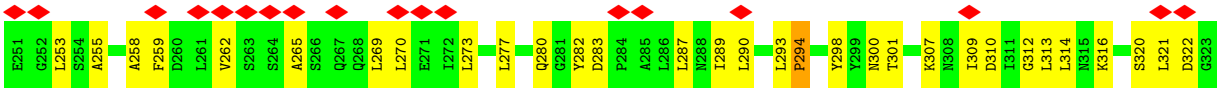
• Molecule 21: 26S PROTEASOME REGULATORY SUBUNIT RPN2

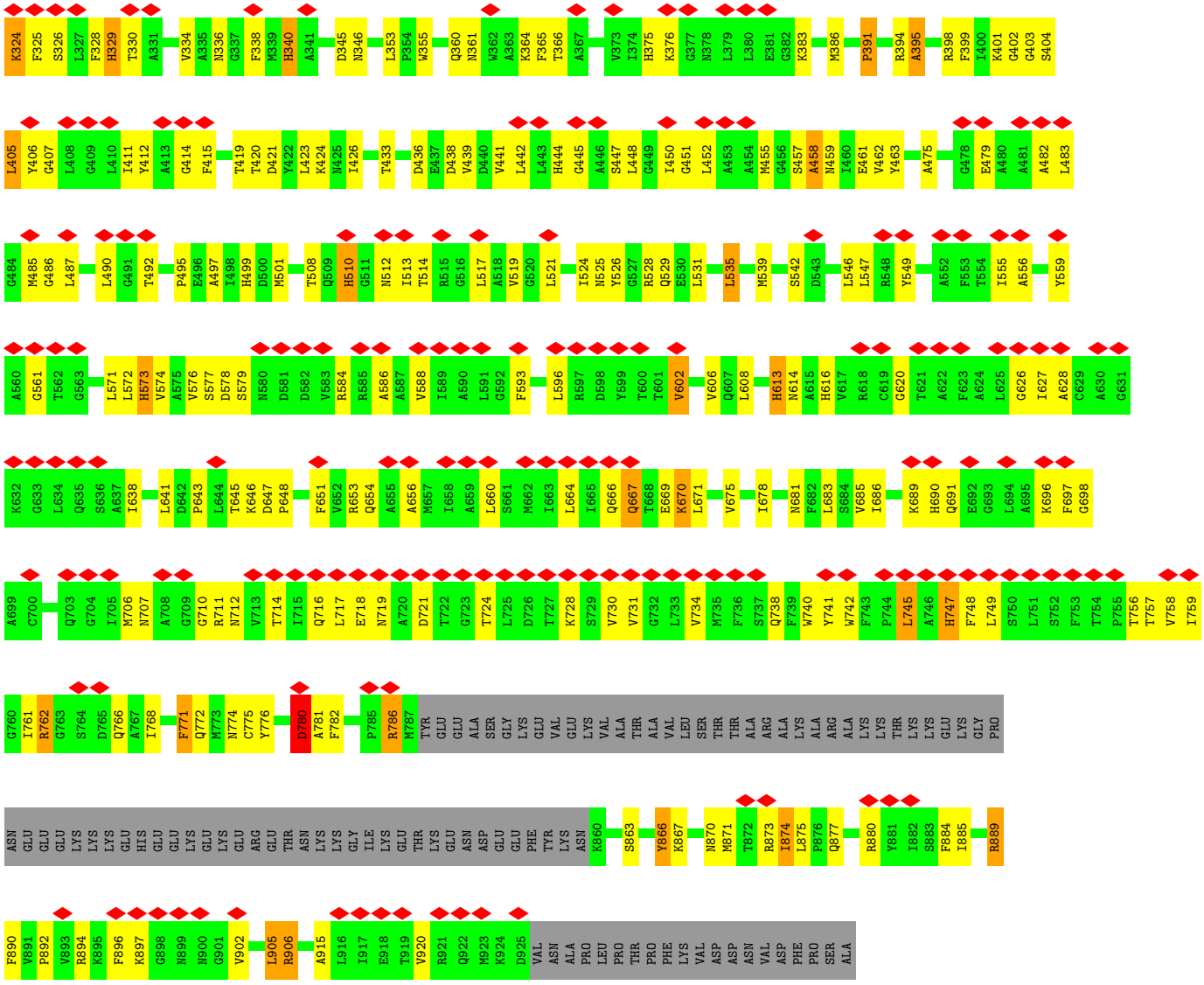
Chain N:





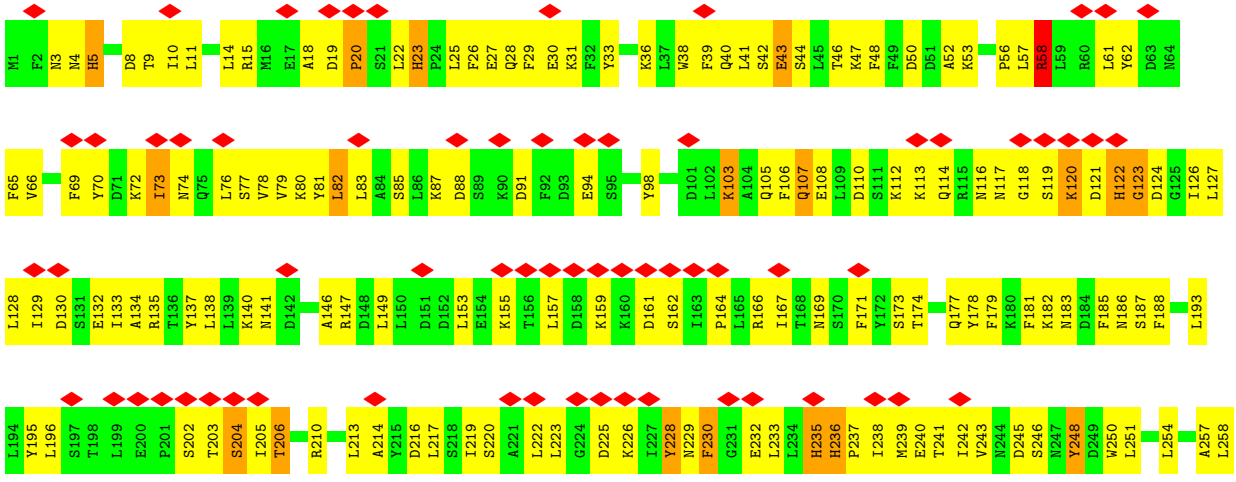


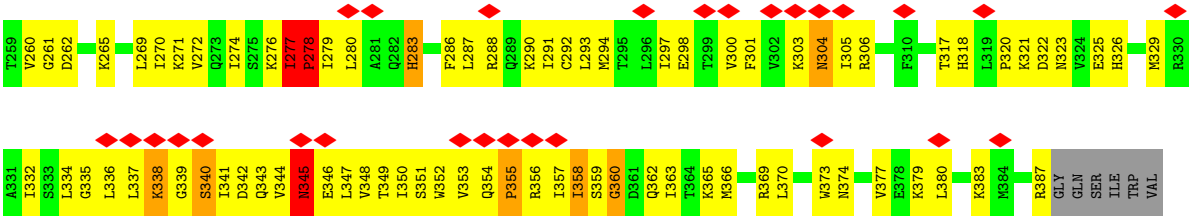




• Molecule 22: 26S PROTEASOME REGULATORY SUBUNIT RPN9

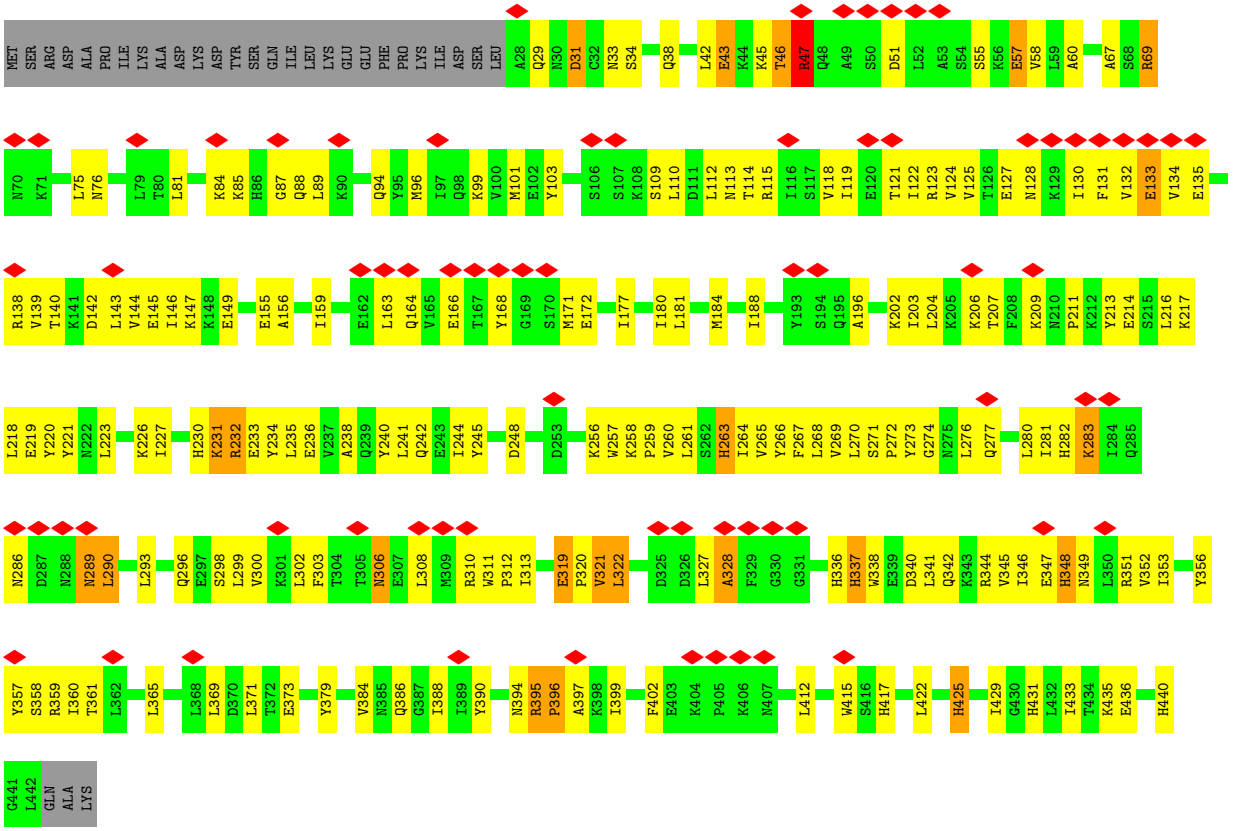
Chain O:





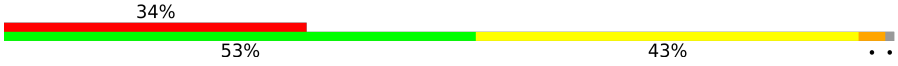
• Molecule 23: 26S PROTEASOME REGULATORY SUBUNIT RPN5

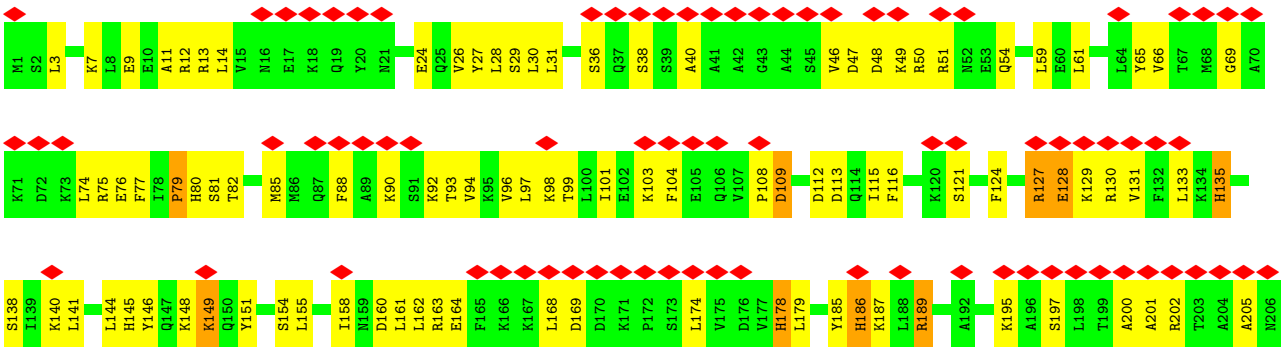
Chain P:

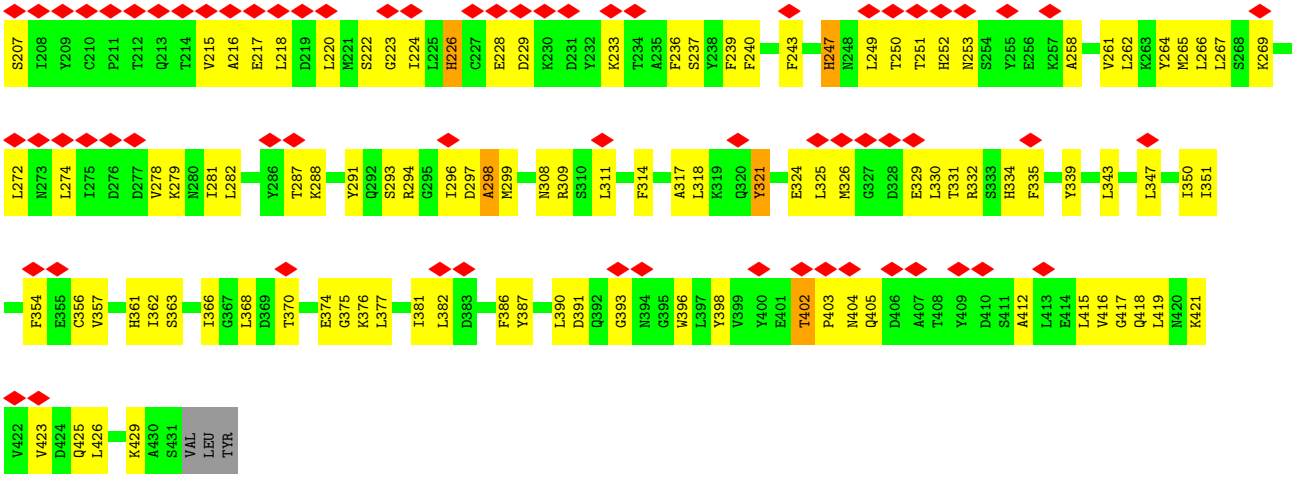


• Molecule 24: 26S PROTEASOME REGULATORY SUBUNIT RPN6

Chain Q:

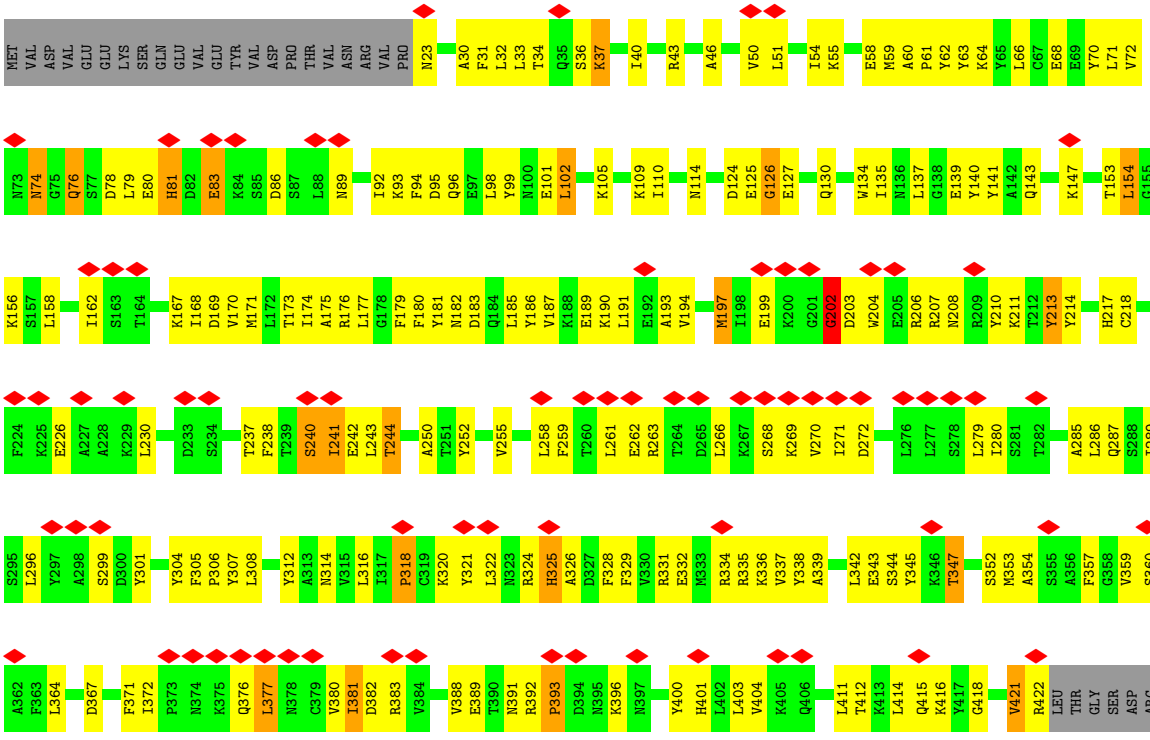






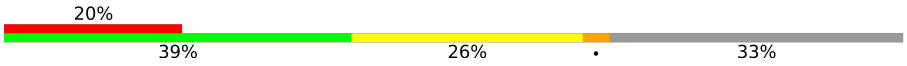
• Molecule 25: 26S PROTEASOME REGULATORY SUBUNIT RPN7

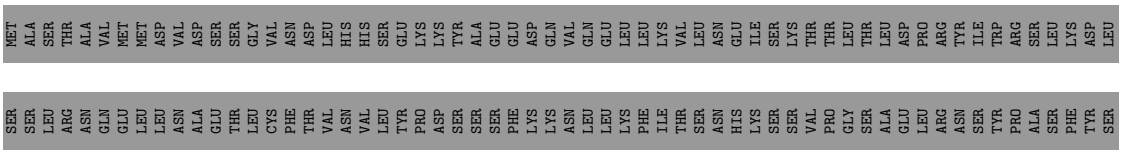
Chain R:

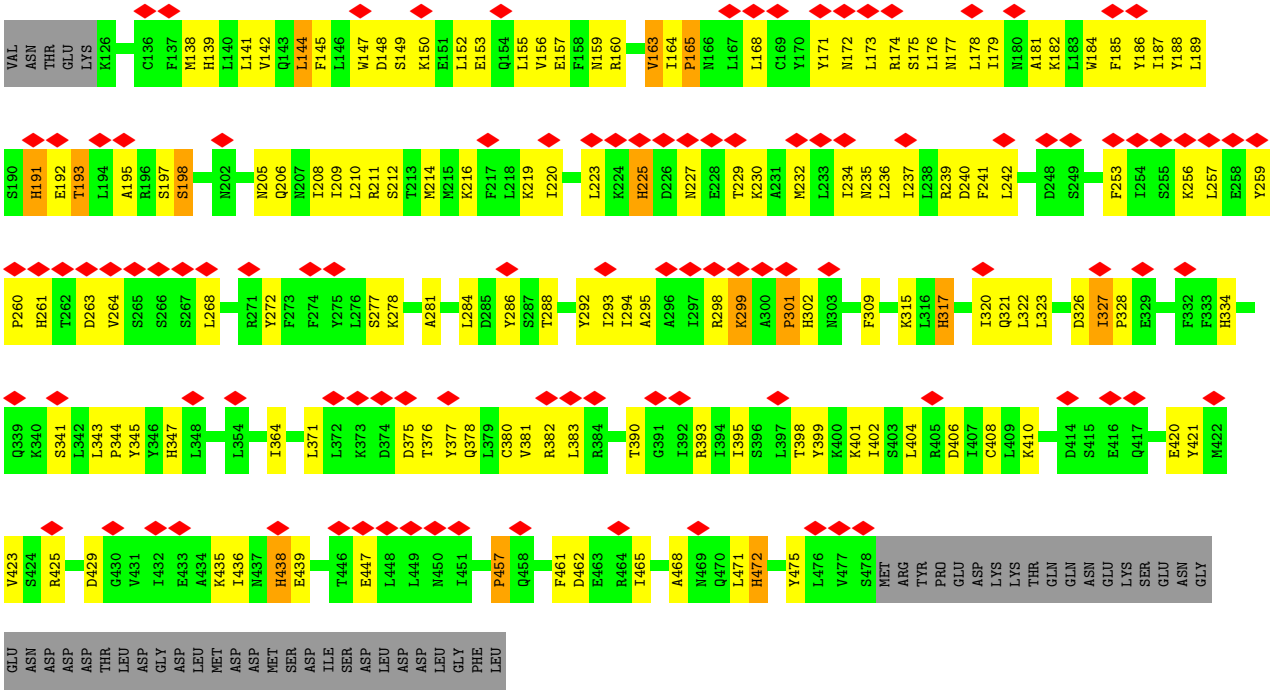


• Molecule 26: 26S PROTEASOME REGULATORY SUBUNIT RPN3

Chain S:

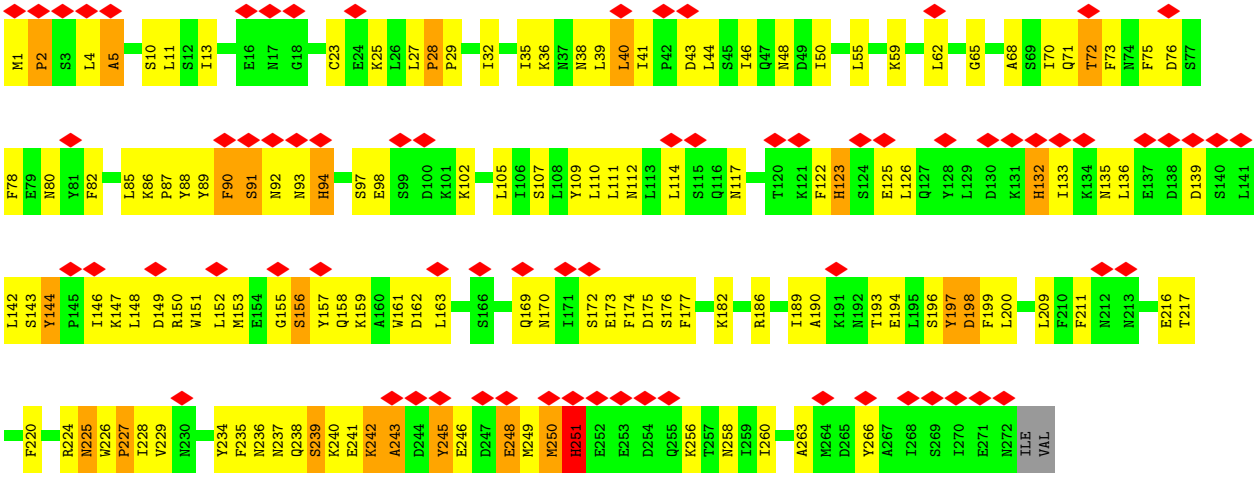






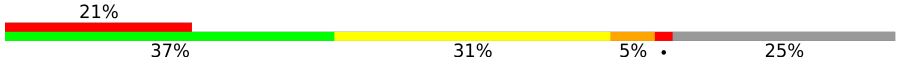
• Molecule 27: 26S PROTEASOME REGULATORY SUBUNIT RPN12

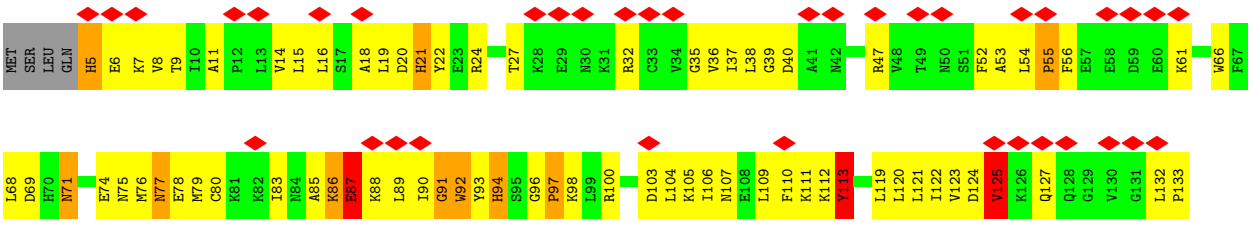
Chain T:

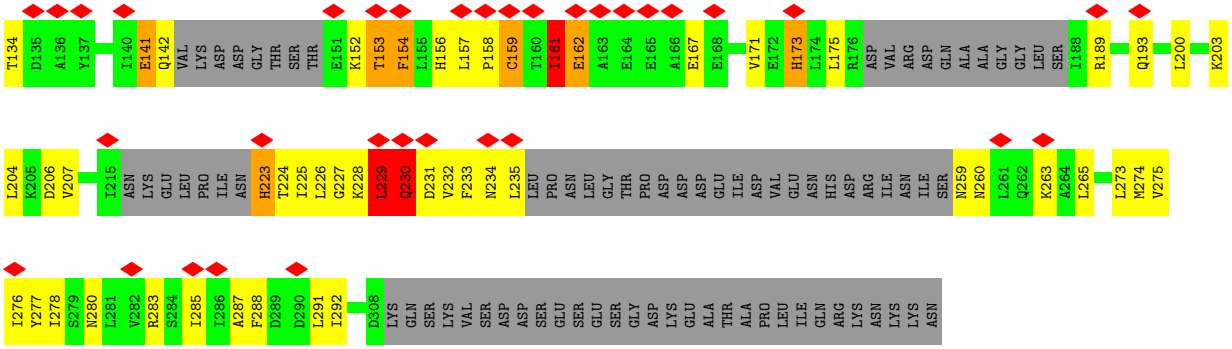


• Molecule 28: 26S PROTEASOME REGULATORY SUBUNIT RPN8

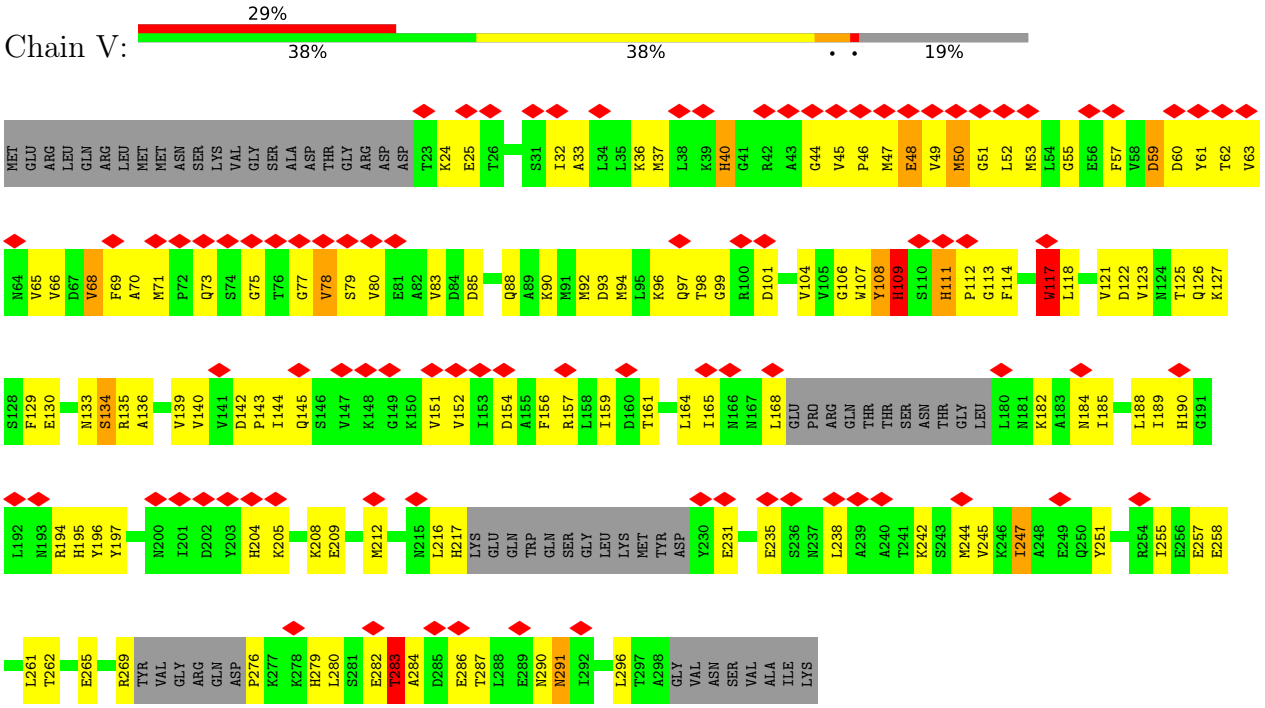
Chain U:



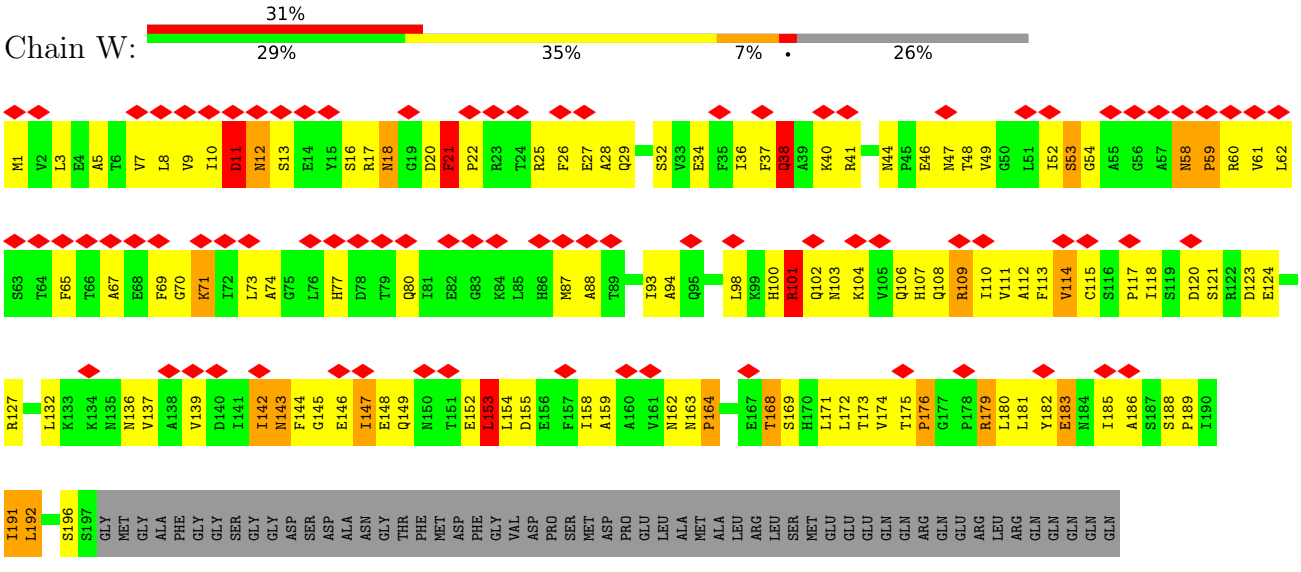




• Molecule 29: 26S PROTEASOME REGULATORY SUBUNIT RPN11

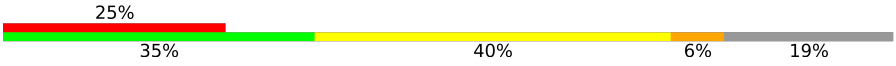


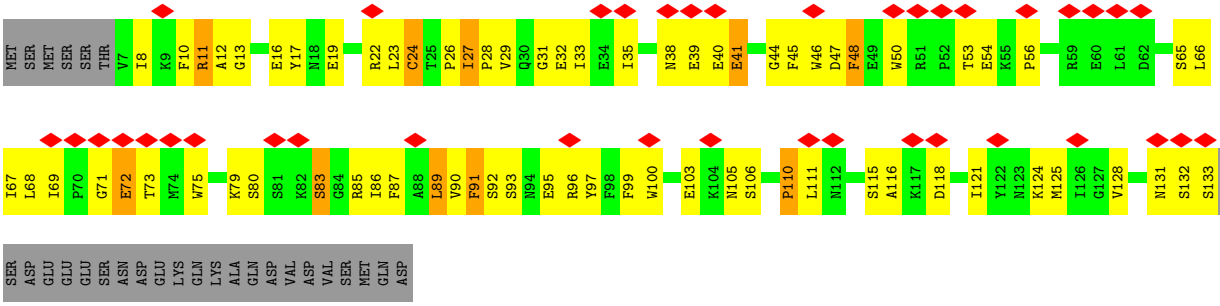
• Molecule 30: 26S PROTEASOME REGULATORY SUBUNIT RPN10



• Molecule 31: 26S PROTEASOME REGULATORY SUBUNIT RPN13

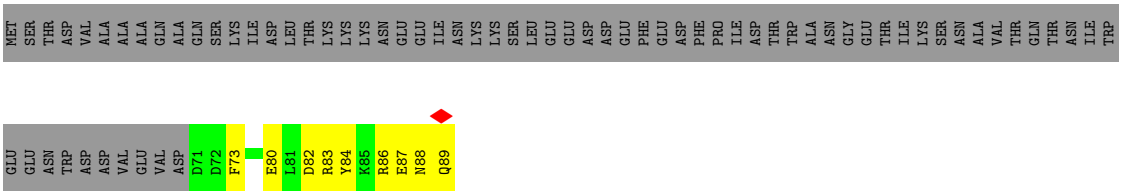
Chain X:





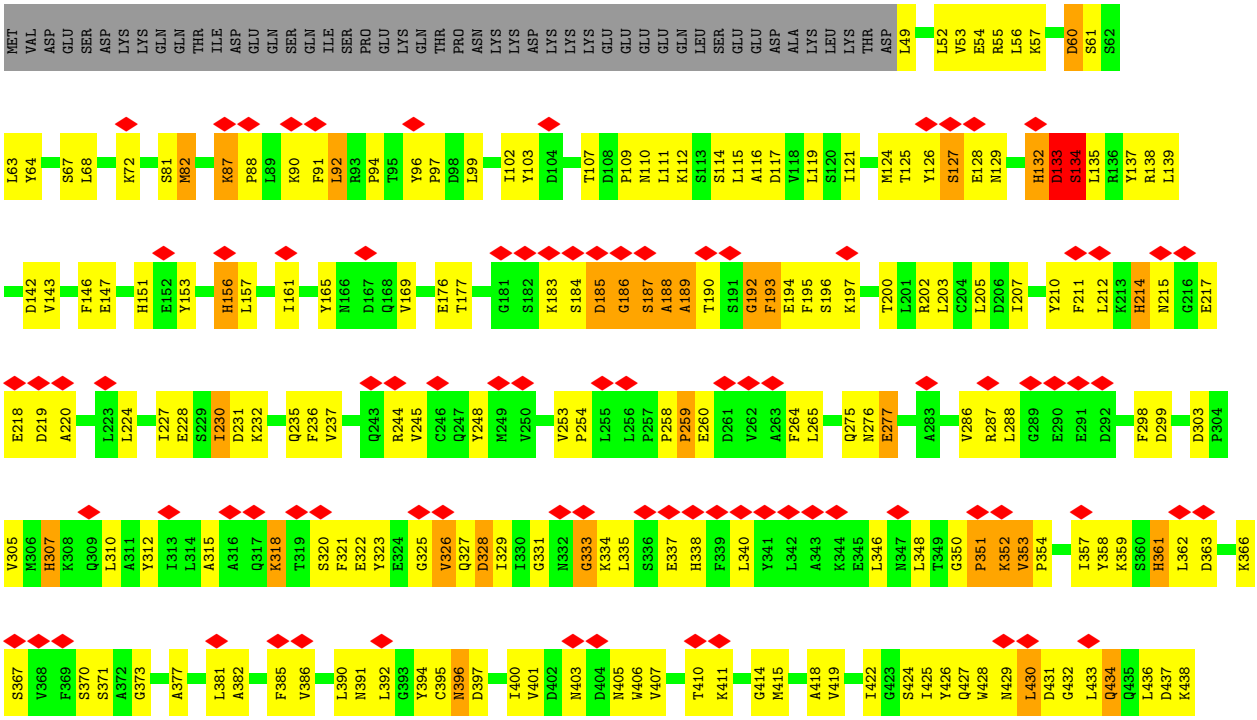
• Molecule 32: 26S PROTEASOME COMPLEX SUBUNIT SEM1

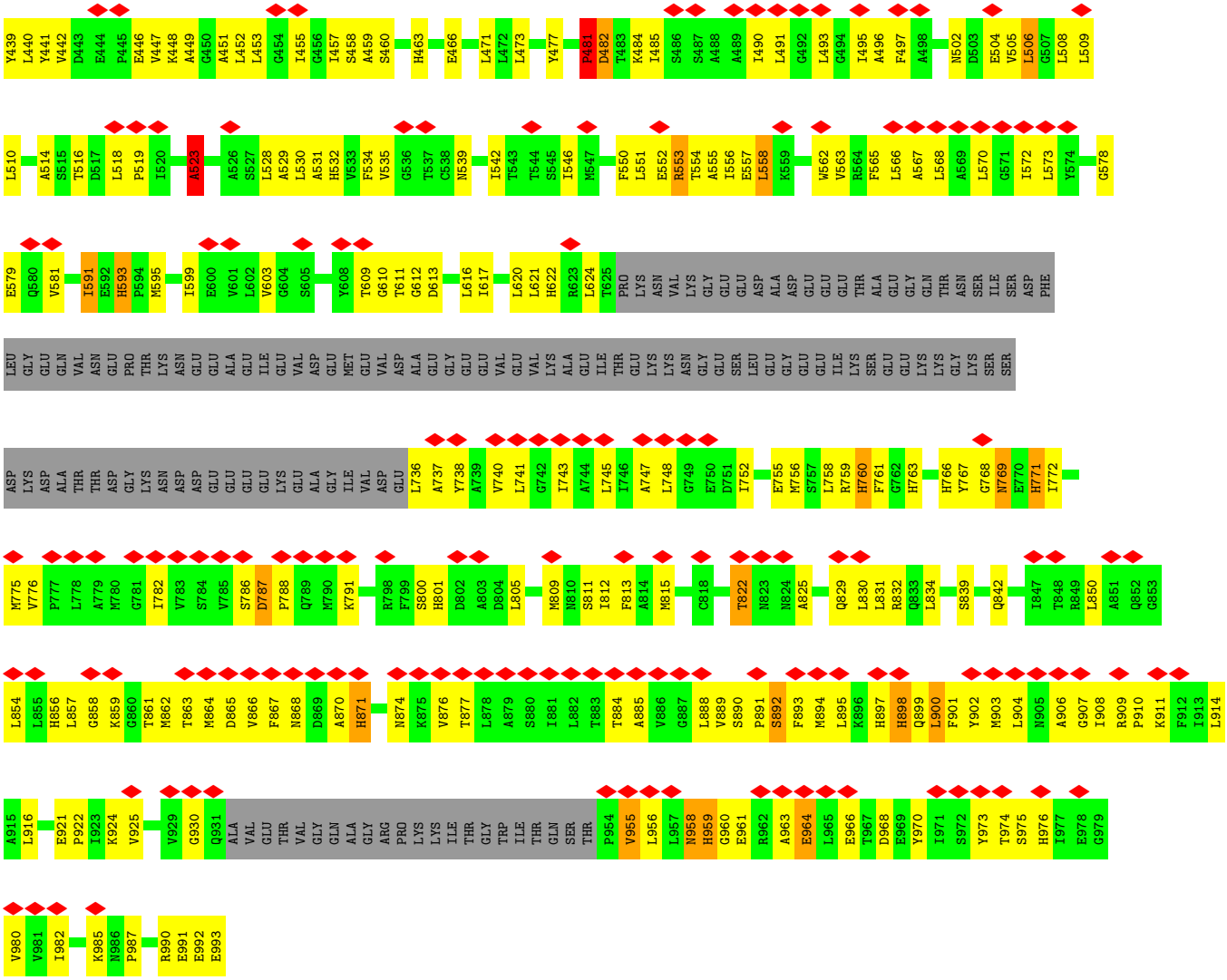
Chain Y:



• Molecule 33: 26S PROTEASOME REGULATORY SUBUNIT RPN1

Chain Z:




Y439 L440 Y441 V442 D443 E444 P445 E446 V447 K448 A449 G450 A451 L452 L453 G454 I455 G456 I457 S458 A459 S460 H463 E466 L471 L472 L473 Y477 P481 D482 T483 K484 I485 S486 S487 A488 A489 I490 L491 G492 L493 G494 I495 A496 F497 A498 N502 D503 E504 V505 L506 G507 L508 L509
L510 A514 S515 T516 D517 L518 P519 I520 A523 A526 S527 L528 A529 L530 A531 H532 V533 F534 V535 G536 T537 C538 N539 I542 T543 T544 S545 I546 W547 F550 L551 E552 R553 T554 A555 I556 E557 L558 K559 W562 V563 R564 F565 L566 A567 L568 A569 L570 G571 I572 L573 Y574 G578
E579 Q580 V581 I591 E592 H593 P594 M595 I599 E600 V601 L602 V603 G604 S605 Y608 T609 G610 T611 G612 D613 L616 I617 L620 L621 H622 R623 L624 T625 PRO LYS ASN VAL LYS GLY GLU GLU ASP ALA ASP GLU GLU GLU THR ALA GLU GLY GLN THR ASN SER ILE SER ASP PHE
LEU GLY GLU GLN VAL ASN GLU PRO THR LYS ASN GLU GLU ALA GLU ILE GLU VAL ASP GLU MET GLU VAL ASP ALA GLU GLY GLU GLU VAL GLU VAL LYS ALA GLU ILE THR GLU LYS LYS ASN GLY GLU SER LEU GLU GLY GLU GLU ILE LYS SER GLU GLU LYS LYS GLY LYS SER SER
ASP LYS ASP ALA THR THR ASP GLY LYS ASN ASP ASP GLU GLU GLU GLU LYS GLU ALA GLY ILE VAL ASP GLU L736 A737 Y738 A739 V740 L741 G742 I743 A744 L745 I746 A747 L748 G749 E750 D751 I752 E755 M756 S757 L758 R759 H760 F761 G762 H763 H766 Y767 G768 N769 E770 H771 I772
M775 V776 P777 L778 A779 M780 G781 I782 V783 S784 V785 S786 D787 P788 Q789 M790 K791 R798 F799 S800 H801 D802 A803 D804 L805 M809 N810 S811 I812 F813 A814 M815 C818 T822 N823 N824 A825 Q829 L830 L831 R832 Q833 L834 S839 Q842 I847 T848 R849 L850 A851 Q852 G853
L854 L855 H856 L857 G858 K859 G860 T861 M862 T863 M864 D865 V866 F867 N868 D869 A870 H871 N874 K875 V876 T877 L878 A879 S880 I881 L882 T883 T884 A885 V886 G887 L888 V889 S890 P891 S892 F893 M894 L895 K896 H897 H898 Q899 L900 F901 Y902 M903 L904 N905 A906 G907 I908 R909 P910 K911 F912 I913 L914
A915 L916 E921 P922 I923 K924 V925 V929 G930 Q931 ALA VAL GLU THR VAL GLY GLN ALA GLY ARG PRO LYS LYS ILE THR GLY TRP ILE THR GLN SER THR P954 V955 L956 L957 N958 H959 G960 E961 R962 A963 E964 L965 E966 T967 D968 E969 Y970 I971 S972 Y973 T974 S975 H976 I977 E978 G979
V980 V981 I982 K985 N986 P987 R990 E991 E992 E993

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	300000	Depositor
Resolution determination method	Not provided	
CTF correction method	MICROGRAPH	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	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	4.676	Depositor
Minimum map value	-3.278	Depositor
Average map value	0.010	Depositor
Map value standard deviation	0.145	Depositor
Recommended contour level	0.63	Depositor
Map size (Å)	557.2, 557.2, 557.2	wwPDB
Map dimensions	280, 280, 280	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	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	1.21	8/1605 (0.5%)	1.20	5/2171 (0.2%)
2	2	1.24	14/1723 (0.8%)	1.25	4/2337 (0.2%)
3	3	1.18	7/1611 (0.4%)	1.17	2/2174 (0.1%)
4	4	1.16	7/1613 (0.4%)	1.22	2/2173 (0.1%)
5	5	1.19	8/1683 (0.5%)	1.22	3/2277 (0.1%)
6	6	1.22	11/1795 (0.6%)	1.18	4/2420 (0.2%)
7	7	1.14	6/1855 (0.3%)	1.14	2/2514 (0.1%)
8	A	1.23	10/1959 (0.5%)	1.21	10/2652 (0.4%)
9	B	1.21	8/1952 (0.4%)	1.21	5/2642 (0.2%)
10	C	1.16	11/1943 (0.6%)	1.18	2/2629 (0.1%)
11	D	1.12	7/1928 (0.4%)	1.13	2/2610 (0.1%)
12	E	1.19	8/1892 (0.4%)	1.14	2/2549 (0.1%)
13	F	1.23	13/1823 (0.7%)	1.16	4/2463 (0.2%)
14	G	1.24	15/1940 (0.8%)	1.22	4/2619 (0.2%)
15	H	1.08	7/2831 (0.2%)	1.28	11/3808 (0.3%)
16	I	1.17	15/2859 (0.5%)	1.20	8/3853 (0.2%)
17	J	1.17	13/2962 (0.4%)	1.15	4/3975 (0.1%)
18	K	1.21	11/3061 (0.4%)	1.37	11/4129 (0.3%)
19	L	1.16	11/2895 (0.4%)	1.14	3/3892 (0.1%)
20	M	1.17	10/2903 (0.3%)	1.24	14/3909 (0.4%)
21	N	1.15	31/6670 (0.5%)	1.21	26/9023 (0.3%)
22	O	0.73	10/3243 (0.3%)	0.95	4/4374 (0.1%)
23	P	1.17	12/3452 (0.3%)	1.20	12/4657 (0.3%)
24	Q	1.11	16/3527 (0.5%)	1.09	7/4748 (0.1%)
25	R	1.05	11/3272 (0.3%)	1.08	4/4412 (0.1%)
26	S	1.08	13/2945 (0.4%)	1.11	2/3976 (0.1%)
27	T	1.04	9/2279 (0.4%)	1.07	3/3077 (0.1%)
28	U	1.83	12/2087 (0.6%)	1.16	11/2811 (0.4%)
29	V	1.20	12/1969 (0.6%)	1.26	16/2652 (0.6%)
30	W	1.40	12/1556 (0.8%)	1.73	16/2108 (0.8%)
31	X	1.20	4/1058 (0.4%)	1.33	5/1432 (0.3%)
32	Y	0.97	0/169	0.95	0/223
33	Z	1.03	31/6403 (0.5%)	1.12	15/8686 (0.2%)
All	All	1.16	373/81463 (0.5%)	1.19	223/109975 (0.2%)

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
6	6	0	1
7	7	0	2
8	A	0	3
11	D	0	1
13	F	0	1
15	H	0	6
17	J	0	1
19	L	0	4
20	M	0	2
21	N	0	7
22	O	0	2
23	P	0	3
24	Q	0	1
25	R	0	2
26	S	0	1
27	T	0	2
28	U	0	6
29	V	0	6
30	W	0	11
31	X	0	3
33	Z	0	7
All	All	0	73

All (373) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	U	230	GLN	N-CA	70.25	2.86	1.46
30	W	38	GLN	C-N	-38.06	0.46	1.34
18	K	242	PHE	C-N	21.55	1.83	1.34
20	M	257	GLY	C-N	20.38	1.80	1.34
33	Z	134	SER	N-CA	16.20	1.78	1.46
29	V	99	GLY	C-N	13.68	1.65	1.34
19	L	257	GLY	C-N	13.04	1.64	1.34
29	V	282	GLU	C-N	12.49	1.62	1.34
30	W	154	LEU	C-N	-12.39	1.05	1.34
29	V	291	ASN	C-N	11.43	1.60	1.34
30	W	153	LEU	C-N	9.51	1.55	1.34
13	F	149	PRO	N-CD	9.06	1.60	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	T	28	PRO	N-CD	8.78	1.60	1.47
8	A	66	PRO	N-CD	8.54	1.59	1.47
4	4	172	PRO	N-CD	8.39	1.59	1.47
27	T	65	GLY	CA-C	-8.27	1.38	1.51
3	3	147	PRO	N-CD	8.07	1.59	1.47
21	N	8	PRO	N-CD	7.81	1.58	1.47
17	J	68	PRO	N-CD	7.79	1.58	1.47
10	C	232	PRO	N-CD	7.76	1.58	1.47
20	M	58	MET	C-N	-7.70	1.16	1.34
8	A	165	GLY	CA-C	-7.64	1.39	1.51
28	U	97	PRO	N-CD	7.47	1.58	1.47
21	N	451	GLY	CA-C	-7.42	1.40	1.51
5	5	94	GLY	CA-C	-7.41	1.40	1.51
29	V	55	GLY	CA-C	-7.40	1.40	1.51
21	N	762	ARG	CD-NE	7.34	1.58	1.46
16	I	123	PRO	N-CD	7.33	1.58	1.47
17	J	150	VAL	C-N	7.33	1.46	1.33
8	A	173	PRO	N-CD	7.31	1.58	1.47
16	I	353	PRO	N-CD	7.26	1.58	1.47
11	D	184	PRO	N-CD	7.25	1.58	1.47
20	M	335	PRO	N-CD	7.25	1.57	1.47
19	L	330	PRO	N-CD	7.20	1.57	1.47
1	1	190	PRO	N-CD	7.17	1.57	1.47
21	N	643	PRO	N-CD	7.10	1.57	1.47
17	J	260	GLY	N-CA	-7.10	1.35	1.46
21	N	561	GLY	CA-C	-7.07	1.40	1.51
28	U	113	TYR	CZ-OH	7.04	1.49	1.37
16	I	166	PRO	N-CD	6.97	1.57	1.47
15	H	358	PRO	N-CD	6.97	1.57	1.47
26	S	457	PRO	N-CD	6.90	1.57	1.47
21	N	391	PRO	N-CD	6.88	1.57	1.47
6	6	153	PRO	N-CD	6.87	1.57	1.47
18	K	97	GLY	CA-C	-6.86	1.40	1.51
30	W	53	SER	CA-CB	6.83	1.63	1.52
22	O	278	PRO	N-CD	6.75	1.57	1.47
10	C	15	PRO	N-CD	6.71	1.57	1.47
21	N	648	PRO	N-CD	6.69	1.57	1.47
21	N	44	PRO	N-CD	6.67	1.57	1.47
3	3	151	PRO	N-CD	6.65	1.57	1.47
13	F	2	PHE	N-CA	6.64	1.59	1.46
21	N	906	ARG	CD-NE	6.56	1.57	1.46
26	S	165	PRO	N-CD	6.53	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	Z	354	PRO	N-CD	6.53	1.56	1.47
6	6	47	GLY	CA-C	-6.52	1.41	1.51
19	L	412	PRO	N-CD	6.52	1.56	1.47
8	A	152	PRO	N-CD	6.52	1.56	1.47
29	V	143	PRO	N-CD	6.49	1.56	1.47
14	G	130	PRO	N-CD	6.39	1.56	1.47
17	J	187	LEU	CA-C	-6.38	1.36	1.52
25	R	306	PRO	N-CD	6.37	1.56	1.47
6	6	162	PRO	N-CD	6.36	1.56	1.47
30	W	117	PRO	N-CD	6.36	1.56	1.47
14	G	139	GLY	N-CA	-6.31	1.36	1.46
18	K	206	PRO	N-CD	6.31	1.56	1.47
10	C	153	PRO	N-CD	6.26	1.56	1.47
19	L	335	PRO	N-CD	6.26	1.56	1.47
14	G	154	GLY	CA-C	-6.26	1.41	1.51
16	I	145	CYS	N-CA	-6.25	1.33	1.46
30	W	22	PRO	N-CD	6.25	1.56	1.47
31	X	71	GLY	N-CA	-6.23	1.36	1.46
14	G	152	PRO	N-CD	6.22	1.56	1.47
10	C	232	PRO	CA-C	-6.20	1.40	1.52
21	N	294	PRO	N-CD	6.17	1.56	1.47
16	I	341	PRO	N-CD	6.14	1.56	1.47
7	7	222	THR	N-CA	-6.13	1.34	1.46
23	P	263	HIS	CG-CD2	6.11	1.46	1.35
30	W	189	PRO	N-CD	6.11	1.56	1.47
15	H	392	HIS	CG-CD2	6.11	1.46	1.35
23	P	336	HIS	CG-CD2	6.11	1.46	1.35
24	Q	178	HIS	CG-CD2	6.10	1.46	1.35
8	A	209	HIS	CG-CD2	6.10	1.46	1.35
1	1	120	HIS	CG-CD2	6.10	1.46	1.35
2	2	109	HIS	CG-CD2	6.09	1.46	1.35
17	J	331	HIS	CG-CD2	6.09	1.46	1.35
33	Z	976	HIS	CG-CD2	6.09	1.46	1.35
21	N	444	HIS	CG-CD2	6.09	1.46	1.35
23	P	425	HIS	CG-CD2	6.09	1.46	1.35
33	Z	307	HIS	CG-CD2	6.09	1.46	1.35
5	5	66	HIS	CG-CD2	6.09	1.46	1.35
26	S	347	HIS	CG-CD2	6.09	1.46	1.35
28	U	223	HIS	CG-CD2	6.09	1.46	1.35
4	4	145	HIS	CG-CD2	6.08	1.46	1.35
16	I	150	HIS	CG-CD2	6.08	1.46	1.35
33	Z	771	HIS	CG-CD2	6.08	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	2	116	HIS	CG-CD2	6.08	1.46	1.35
11	D	96	HIS	CG-CD2	6.08	1.46	1.35
21	N	340	HIS	CG-CD2	6.08	1.46	1.35
1	1	38	HIS	CG-CD2	6.08	1.46	1.35
3	3	39	HIS	CG-CD2	6.08	1.46	1.35
16	I	151	HIS	CG-CD2	6.08	1.46	1.35
22	O	23	HIS	CG-CD2	6.08	1.46	1.35
22	O	326	HIS	CG-CD2	6.08	1.46	1.35
23	P	230	HIS	CG-CD2	6.08	1.46	1.35
29	V	204	HIS	CG-CD2	6.08	1.46	1.35
14	G	122	HIS	CG-CD2	6.08	1.46	1.35
15	H	95	HIS	CG-CD2	6.08	1.46	1.35
25	R	318	PRO	N-CD	6.08	1.56	1.47
33	Z	338	HIS	CG-CD2	6.08	1.46	1.35
6	6	86	HIS	CG-CD2	6.08	1.46	1.35
9	B	94	HIS	CG-CD2	6.08	1.46	1.35
19	L	409	HIS	CG-CD2	6.08	1.46	1.35
20	M	412	HIS	CG-CD2	6.08	1.46	1.35
27	T	251	HIS	CG-CD2	6.08	1.46	1.35
28	U	21	HIS	CG-CD2	6.08	1.46	1.35
33	Z	760	HIS	CG-CD2	6.08	1.46	1.35
1	1	62	HIS	CG-CD2	6.07	1.46	1.35
17	J	240	HIS	CG-CD2	6.07	1.46	1.35
22	O	122	HIS	CG-CD2	6.07	1.46	1.35
24	Q	145	HIS	CG-CD2	6.07	1.46	1.35
29	V	111	HIS	CG-CD2	6.07	1.46	1.35
33	Z	622	HIS	CG-CD2	6.07	1.46	1.35
9	B	139	HIS	CG-CD2	6.07	1.46	1.35
12	E	91	HIS	CG-CD2	6.07	1.46	1.35
14	G	181	HIS	CG-CD2	6.07	1.46	1.35
21	N	510	HIS	CG-CD2	6.07	1.46	1.35
24	Q	80	HIS	CG-CD2	6.07	1.46	1.35
8	A	193	HIS	CG-CD2	6.07	1.46	1.35
20	M	364	HIS	CG-CD2	6.07	1.46	1.35
22	O	283	HIS	CG-CD2	6.07	1.46	1.35
21	N	616	HIS	CG-CD2	6.07	1.46	1.35
27	T	132	HIS	CG-CD2	6.07	1.46	1.35
4	4	40	HIS	CG-CD2	6.07	1.46	1.35
6	6	70	HIS	CG-CD2	6.07	1.46	1.35
12	E	99	HIS	CG-CD2	6.07	1.46	1.35
24	Q	186	HIS	CG-CD2	6.07	1.46	1.35
28	U	5	HIS	CG-CD2	6.07	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	Z	856	HIS	CG-CD2	6.07	1.46	1.35
1	1	157	HIS	CG-CD2	6.07	1.46	1.35
17	J	123	HIS	CG-CD2	6.07	1.46	1.35
17	J	170	HIS	CG-CD2	6.07	1.46	1.35
21	N	573	HIS	CG-CD2	6.07	1.46	1.35
25	R	325	HIS	CG-CD2	6.07	1.46	1.35
28	U	156	HIS	CG-CD2	6.07	1.46	1.35
33	Z	897	HIS	CG-CD2	6.07	1.46	1.35
21	N	329	HIS	CG-CD2	6.06	1.46	1.35
22	O	235	HIS	CG-CD2	6.06	1.46	1.35
33	Z	593	HIS	CG-CD2	6.06	1.46	1.35
33	Z	766	HIS	CG-CD2	6.06	1.46	1.35
17	J	376	HIS	CG-CD2	6.06	1.46	1.35
18	K	244	HIS	CG-CD2	6.06	1.46	1.35
25	R	401	HIS	CG-CD2	6.06	1.46	1.35
8	A	185	HIS	CG-CD2	6.06	1.46	1.35
14	G	182	HIS	CG-CD2	6.06	1.46	1.35
14	G	203	HIS	CG-CD2	6.06	1.46	1.35
18	K	250	GLY	CA-C	6.06	1.61	1.51
23	P	431	HIS	CG-CD2	6.06	1.46	1.35
33	Z	532	HIS	CG-CD2	6.06	1.46	1.35
2	2	86	HIS	CG-CD2	6.06	1.46	1.35
13	F	43	HIS	CG-CD2	6.06	1.46	1.35
23	P	282	HIS	CG-CD2	6.06	1.46	1.35
26	S	438	HIS	CG-CD2	6.06	1.46	1.35
33	Z	361	HIS	CG-CD2	6.06	1.46	1.35
33	Z	871	HIS	CG-CD2	6.06	1.46	1.35
3	3	36	HIS	CG-CD2	6.06	1.46	1.35
13	F	69	HIS	CG-CD2	6.06	1.46	1.35
27	T	123	HIS	CG-CD2	6.06	1.46	1.35
20	M	53	HIS	CG-CD2	6.05	1.46	1.35
22	O	318	HIS	CG-CD2	6.05	1.46	1.35
26	S	225	HIS	CG-CD2	6.05	1.46	1.35
33	Z	132	HIS	CG-CD2	6.05	1.46	1.35
4	4	132	HIS	CG-CD2	6.05	1.46	1.35
12	E	157	HIS	CG-CD2	6.05	1.46	1.35
33	Z	959	HIS	CG-CD2	6.05	1.46	1.35
17	J	204	HIS	CG-CD2	6.05	1.46	1.35
22	O	5	HIS	CG-CD2	6.05	1.46	1.35
23	P	440	HIS	CG-CD2	6.05	1.46	1.35
12	E	188	HIS	CG-CD2	6.05	1.46	1.35
13	F	143	HIS	CG-CD2	6.05	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	P	417	HIS	CG-CD2	6.05	1.46	1.35
29	V	195	HIS	CG-CD2	6.05	1.46	1.35
6	6	186	HIS	CG-CD2	6.05	1.46	1.35
24	Q	334	HIS	CG-CD2	6.05	1.46	1.35
33	Z	801	HIS	CG-CD2	6.05	1.46	1.35
2	2	35	HIS	CG-CD2	6.05	1.46	1.35
14	G	227	HIS	CG-CD2	6.05	1.46	1.35
17	J	205	HIS	CG-CD2	6.05	1.46	1.35
24	Q	226	HIS	CG-CD2	6.05	1.46	1.35
26	S	302	HIS	CG-CD2	6.05	1.46	1.35
33	Z	763	HIS	CG-CD2	6.05	1.46	1.35
11	D	70	HIS	CG-CD2	6.04	1.46	1.35
2	2	114	HIS	CG-CD2	6.04	1.46	1.35
19	L	364	HIS	CG-CD2	6.04	1.46	1.35
25	R	217	HIS	CG-CD2	6.04	1.46	1.35
26	S	317	HIS	CG-CD2	6.04	1.46	1.35
27	T	94	HIS	CG-CD2	6.04	1.46	1.35
33	Z	898	HIS	CG-CD2	6.04	1.46	1.35
8	A	15	HIS	CG-CD2	6.04	1.46	1.35
26	S	139	HIS	CG-CD2	6.04	1.46	1.35
28	U	94	HIS	CG-CD2	6.04	1.46	1.35
29	V	190	HIS	CG-CD2	6.04	1.46	1.35
29	V	217	HIS	CG-CD2	6.04	1.46	1.35
2	2	66	HIS	CG-CD2	6.04	1.46	1.35
16	I	204	HIS	CG-CD2	6.04	1.46	1.35
5	5	179	HIS	CG-CD2	6.04	1.46	1.35
16	I	365	HIS	CG-CD2	6.04	1.46	1.35
18	K	140	HIS	CG-CD2	6.04	1.46	1.35
21	N	375	HIS	CG-CD2	6.04	1.46	1.35
21	N	697	PHE	C-N	6.04	1.44	1.33
24	Q	247	HIS	CG-CD2	6.04	1.46	1.35
21	N	499	HIS	CG-CD2	6.04	1.46	1.35
5	5	188	HIS	CG-CD2	6.04	1.46	1.35
6	6	99	HIS	CG-CD2	6.04	1.46	1.35
18	K	142	HIS	CG-CD2	6.04	1.46	1.35
22	O	236	HIS	CG-CD2	6.04	1.46	1.35
24	Q	135	HIS	CG-CD2	6.04	1.46	1.35
13	F	110	HIS	CG-CD2	6.03	1.46	1.35
26	S	191	HIS	CG-CD2	6.03	1.46	1.35
33	Z	463	HIS	CG-CD2	6.03	1.46	1.35
23	P	337	HIS	CG-CD2	6.03	1.46	1.35
24	Q	361	HIS	CG-CD2	6.03	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	Z	151	HIS	CG-CD2	6.03	1.46	1.35
9	B	190	HIS	CG-CD2	6.03	1.46	1.35
1	1	73	PRO	N-CD	6.03	1.56	1.47
25	R	81	HIS	CG-CD2	6.03	1.46	1.35
14	G	146	HIS	CG-CD2	6.03	1.46	1.35
26	S	472	HIS	CG-CD2	6.03	1.46	1.35
29	V	40	HIS	CG-CD2	6.03	1.46	1.35
5	5	166	HIS	CG-CD2	6.02	1.46	1.35
18	K	74	HIS	CG-CD2	6.02	1.46	1.35
26	S	334	HIS	CG-CD2	6.02	1.46	1.35
2	2	93	HIS	CG-CD2	6.02	1.46	1.35
2	2	141	HIS	CG-CD2	6.02	1.46	1.35
14	G	72	HIS	CG-CD2	6.02	1.46	1.35
28	U	173	HIS	CG-CD2	6.02	1.46	1.35
4	4	146	HIS	CG-CD2	6.02	1.46	1.35
12	E	73	HIS	CG-CD2	6.02	1.46	1.35
12	E	147	HIS	CG-CD2	6.02	1.46	1.35
16	I	117	HIS	CG-CD2	6.02	1.46	1.35
21	N	613	HIS	CG-CD2	6.02	1.46	1.35
21	N	690	HIS	CG-CD2	6.02	1.46	1.35
24	Q	252	HIS	CG-CD2	6.02	1.46	1.35
26	S	261	HIS	CG-CD2	6.02	1.46	1.35
33	Z	214	HIS	CG-CD2	6.02	1.46	1.35
19	L	67	HIS	CG-CD2	6.02	1.46	1.35
6	6	67	HIS	CG-CD2	6.02	1.46	1.35
14	G	86	HIS	CG-CD2	6.02	1.46	1.35
7	7	141	HIS	CG-CD2	6.01	1.46	1.35
10	C	94	HIS	CG-CD2	6.01	1.46	1.35
23	P	348	HIS	CG-CD2	6.01	1.46	1.35
11	D	16	HIS	CG-CD2	6.01	1.46	1.35
10	C	125	HIS	CG-CD2	6.01	1.46	1.35
7	7	44	GLY	CA-C	-6.01	1.42	1.51
19	L	273	HIS	CG-CD2	6.01	1.46	1.35
30	W	77	HIS	CG-CD2	6.01	1.46	1.35
30	W	107	HIS	CG-CD2	6.01	1.46	1.35
7	7	54	HIS	CG-CD2	6.00	1.46	1.35
13	F	108	ALA	C-N	6.00	1.43	1.33
33	Z	156	HIS	CG-CD2	6.00	1.46	1.35
10	C	31	HIS	CG-CD2	6.00	1.46	1.35
5	5	191	HIS	CG-CD2	6.00	1.46	1.35
33	Z	97	PRO	N-CD	6.00	1.56	1.47
21	N	747	HIS	CG-CD2	5.99	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	N	445	GLY	CA-C	-5.99	1.42	1.51
30	W	100	HIS	CG-CD2	5.99	1.46	1.35
19	L	350	PRO	N-CD	5.97	1.56	1.47
23	P	396	PRO	N-CD	5.96	1.56	1.47
33	Z	506	LEU	C-N	5.91	1.43	1.33
16	I	225	PRO	N-CD	5.91	1.56	1.47
11	D	206	GLY	N-CA	-5.90	1.37	1.46
25	R	393	PRO	N-CD	5.90	1.56	1.47
15	H	287	GLY	N-CA	-5.87	1.37	1.46
17	J	167	PRO	N-CD	5.86	1.56	1.47
20	M	224	PRO	N-CD	5.86	1.56	1.47
33	Z	788	PRO	N-CD	5.86	1.56	1.47
2	2	11	GLY	CA-C	-5.85	1.42	1.51
21	N	626	GLY	N-CA	-5.78	1.37	1.46
25	R	102	LEU	CA-C	-5.77	1.38	1.52
13	F	186	PRO	N-CD	5.77	1.55	1.47
15	H	380	PRO	N-CD	5.76	1.55	1.47
11	D	159	TRP	N-CA	-5.74	1.34	1.46
33	Z	930	GLY	CA-C	5.74	1.61	1.51
7	7	81	PRO	N-CD	5.73	1.55	1.47
20	M	406	GLY	CA-C	-5.72	1.42	1.51
15	H	243	PRO	N-CD	5.69	1.55	1.47
3	3	26	GLY	CA-C	-5.69	1.42	1.51
33	Z	892	SER	N-CA	-5.69	1.34	1.46
26	S	301	PRO	N-CD	5.68	1.55	1.47
3	3	75	PRO	N-CD	5.67	1.55	1.47
8	A	86	PRO	N-CD	5.67	1.55	1.47
1	1	116	GLY	N-CA	-5.65	1.37	1.46
24	Q	375	GLY	CA-C	-5.64	1.42	1.51
23	P	31	ASP	CA-CB	5.59	1.66	1.53
33	Z	987	PRO	N-CD	5.56	1.55	1.47
10	C	2	GLY	CA-C	-5.55	1.43	1.51
18	K	202	GLY	N-CA	-5.55	1.37	1.46
13	F	77	LEU	N-CA	-5.54	1.35	1.46
2	2	206	PRO	N-CA	-5.54	1.37	1.47
7	7	101	PRO	N-CD	5.52	1.55	1.47
28	U	55	PRO	N-CD	5.52	1.55	1.47
33	Z	481	PRO	N-CD	5.48	1.55	1.47
3	3	113	ALA	CA-C	-5.47	1.38	1.52
24	Q	108	PRO	N-CD	5.47	1.55	1.47
6	6	190	GLY	CA-C	-5.47	1.43	1.51
24	Q	69	GLY	CA-C	-5.46	1.43	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	C	130	PRO	N-CD	5.46	1.55	1.47
1	1	71	GLY	N-CA	-5.44	1.37	1.46
15	H	305	ILE	CA-C	-5.43	1.38	1.52
30	W	188	SER	N-CA	5.41	1.57	1.46
24	Q	127	ARG	C-N	5.41	1.46	1.34
13	F	79	PRO	N-CD	5.40	1.55	1.47
28	U	39	GLY	CA-C	-5.39	1.43	1.51
12	E	42	THR	N-CA	-5.39	1.35	1.46
17	J	194	GLY	CA-C	-5.39	1.43	1.51
28	U	78	GLU	CD-OE2	5.39	1.31	1.25
16	I	250	SER	N-CA	-5.38	1.35	1.46
19	L	263	ILE	CA-C	-5.36	1.39	1.52
4	4	5	GLY	CA-C	-5.33	1.43	1.51
29	V	286	GLU	CG-CD	-5.33	1.44	1.51
9	B	135	LEU	CA-C	-5.32	1.39	1.52
11	D	217	PRO	N-CD	5.32	1.55	1.47
21	N	775	CYS	CA-CB	5.32	1.65	1.53
20	M	200	PRO	N-CD	5.29	1.55	1.47
20	M	350	PRO	N-CD	5.29	1.55	1.47
2	2	24	PRO	N-CD	5.28	1.55	1.47
30	W	77	HIS	CA-C	5.28	1.66	1.52
10	C	15	PRO	CA-C	-5.28	1.42	1.52
31	X	50	TRP	NE1-CE2	-5.27	1.30	1.37
2	2	105	PRO	N-CD	5.25	1.55	1.47
2	2	206	PRO	N-CD	5.25	1.55	1.47
8	A	138	GLY	N-CA	-5.25	1.38	1.46
6	6	95	PRO	N-CD	5.24	1.55	1.47
14	G	58	LEU	N-CA	-5.23	1.35	1.46
21	N	462	VAL	N-CA	-5.23	1.35	1.46
13	F	140	SER	C-N	5.22	1.42	1.33
9	B	106	PRO	N-CD	5.21	1.55	1.47
9	B	219	PRO	N-CD	5.21	1.55	1.47
25	R	126	GLY	N-CA	-5.21	1.38	1.46
27	T	227	PRO	N-CD	5.21	1.55	1.47
2	2	174	ASP	CA-C	-5.20	1.39	1.52
13	F	125	GLY	N-CA	-5.19	1.38	1.46
21	N	407	GLY	N-CA	-5.17	1.38	1.46
6	6	11	PHE	N-CA	-5.16	1.36	1.46
14	G	148	TYR	C-N	5.16	1.46	1.34
27	T	2	PRO	N-CD	5.16	1.55	1.47
10	C	53	THR	CA-C	-5.15	1.39	1.52
24	Q	79	PRO	N-CD	5.15	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	N	495	PRO	N-CD	5.14	1.55	1.47
31	X	91	PHE	N-CA	-5.13	1.36	1.46
21	N	646	LYS	N-CA	-5.13	1.36	1.46
24	Q	207	SER	C-N	5.12	1.45	1.34
9	B	37	ILE	N-CA	-5.12	1.36	1.46
16	I	320	GLY	C-N	5.11	1.45	1.34
22	O	164	PRO	N-CD	5.11	1.55	1.47
4	4	28	LYS	N-CA	-5.11	1.36	1.46
5	5	39	PRO	N-CD	5.10	1.54	1.47
18	K	151	PRO	N-CD	5.09	1.54	1.47
12	E	160	PRO	N-CD	5.08	1.54	1.47
16	I	430	GLU	N-CA	-5.08	1.36	1.46
14	G	247	ASN	N-CA	-5.08	1.36	1.46
9	B	138	GLY	CA-C	-5.07	1.43	1.51
27	T	72	THR	N-CA	-5.06	1.36	1.46
5	5	11	GLY	CA-C	-5.06	1.43	1.51
21	N	461	GLU	N-CA	-5.06	1.36	1.46
25	R	61	PRO	N-CD	5.05	1.54	1.47
25	R	189	GLU	C-N	5.04	1.45	1.34
31	X	110	PRO	N-CD	5.04	1.54	1.47
19	L	340	PRO	N-CD	5.04	1.54	1.47
16	I	216	PRO	N-CD	5.03	1.54	1.47
18	K	149	ILE	N-CA	-5.02	1.36	1.46
13	F	217	GLY	CA-C	-5.01	1.43	1.51
21	N	405	LEU	N-CA	-5.00	1.36	1.46

All (223) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	W	154	LEU	O-C-N	34.31	177.59	122.70
18	K	242	PHE	O-C-N	27.36	166.48	122.70
18	K	242	PHE	C-N-CA	-26.80	54.71	121.70
30	W	154	LEU	CA-C-N	-25.04	62.10	117.20
21	N	889	ARG	NE-CZ-NH1	23.00	131.80	120.30
20	M	58	MET	O-C-N	-21.07	89.00	122.70
18	K	242	PHE	CA-C-N	-20.61	71.86	117.20
30	W	154	LEU	C-N-CA	-19.92	71.90	121.70
30	W	58	ASN	C-N-CD	-17.04	83.10	120.60
15	H	279	LEU	O-C-N	15.79	147.96	122.70
15	H	187	LEU	C-N-CD	-15.19	87.18	120.60
30	W	153	LEU	O-C-N	-15.17	98.42	122.70
15	H	279	LEU	CA-C-N	-11.10	92.78	117.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	N	889	ARG	NE-CZ-NH2	-10.22	115.19	120.30
23	P	69	ARG	NE-CZ-NH1	9.90	125.25	120.30
20	M	257	GLY	O-C-N	-9.65	107.25	122.70
30	W	109	ARG	NH1-CZ-NH2	-9.61	108.83	119.40
30	W	11	ASP	O-C-N	-9.37	107.72	122.70
21	N	776	TYR	CG-CD2-CE2	-9.33	113.84	121.30
21	N	890	PHE	CB-CG-CD2	-9.30	114.29	120.80
21	N	762	ARG	CD-NE-CZ	-9.26	110.64	123.60
30	W	11	ASP	C-N-CA	9.19	144.67	121.70
21	N	780	ASP	CB-CG-OD1	9.16	126.55	118.30
19	L	257	GLY	O-C-N	-8.94	108.40	122.70
29	V	290	ASN	O-C-N	-8.94	108.40	122.70
28	U	229	LEU	C-N-CA	8.78	143.65	121.70
30	W	109	ARG	NE-CZ-NH1	8.58	124.59	120.30
15	H	279	LEU	C-N-CA	-8.40	100.70	121.70
20	M	251	LEU	CA-C-N	-7.99	99.61	117.20
23	P	51	ASP	CB-CG-OD2	-7.99	111.11	118.30
20	M	251	LEU	C-N-CA	-7.91	101.94	121.70
8	A	242	GLU	CA-CB-CG	7.79	130.54	113.40
28	U	113	TYR	CB-CG-CD2	-7.74	116.36	121.00
23	P	47	ARG	NE-CZ-NH1	7.64	124.12	120.30
28	U	113	TYR	CB-CG-CD1	7.34	125.40	121.00
22	O	345	ASN	C-N-CA	7.27	139.88	121.70
28	U	230	GLN	N-CA-C	7.21	130.46	111.00
18	K	54	LEU	C-N-CA	7.12	139.50	121.70
29	V	47	MET	C-N-CA	7.06	139.34	121.70
29	V	282	GLU	O-C-N	7.04	133.96	122.70
26	S	327	ILE	C-N-CD	-7.03	105.14	120.60
30	W	111	VAL	CA-CB-CG2	7.03	121.44	110.90
23	P	47	ARG	NE-CZ-NH2	-6.91	116.84	120.30
33	Z	133	ASP	C-N-CA	6.85	138.83	121.70
16	I	256	TYR	CB-CG-CD1	-6.83	116.91	121.00
21	N	781	ALA	C-N-CA	6.79	138.67	121.70
29	V	283	THR	C-N-CA	6.78	138.66	121.70
30	W	191	ILE	C-N-CA	6.75	138.57	121.70
23	P	69	ARG	NE-CZ-NH2	-6.70	116.95	120.30
21	N	776	TYR	CZ-CE2-CD2	6.64	125.77	119.80
8	A	246	VAL	CA-CB-CG2	-6.62	100.98	110.90
29	V	50	MET	C-N-CA	-6.62	108.41	122.30
21	N	906	ARG	NE-CZ-NH1	6.59	123.59	120.30
8	A	87	ILE	CA-C-N	6.59	135.54	117.10
28	U	78	GLU	O-C-N	-6.57	112.19	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	A	242	GLU	CB-CA-C	-6.56	97.28	110.40
29	V	78	VAL	C-N-CA	6.56	138.10	121.70
15	H	280	VAL	O-C-N	-6.54	112.23	122.70
8	A	11	GLY	N-CA-C	-6.45	96.97	113.10
6	6	22	THR	N-CA-C	-6.36	93.82	111.00
15	H	163	VAL	O-C-N	-6.34	112.56	122.70
6	6	31	GLU	N-CA-C	-6.31	93.95	111.00
9	B	214	ILE	N-CA-C	-6.30	94.00	111.00
21	N	762	ARG	NE-CZ-NH1	-6.30	117.15	120.30
28	U	78	GLU	OE1-CD-OE2	-6.26	115.79	123.30
33	Z	92	LEU	O-C-N	6.26	132.71	122.70
31	X	54	GLU	OE1-CD-OE2	-6.24	115.81	123.30
29	V	66	VAL	O-C-N	6.23	132.67	122.70
30	W	111	VAL	O-C-N	-6.22	112.75	122.70
29	V	283	THR	O-C-N	-6.18	112.82	122.70
15	H	285	GLY	O-C-N	-6.17	112.82	122.70
33	Z	88	PRO	O-C-N	6.16	132.56	122.70
15	H	172	MET	N-CA-C	6.07	127.38	111.00
31	X	56	PRO	O-C-N	-6.05	113.03	122.70
29	V	66	VAL	CA-C-N	-6.04	103.91	117.20
15	H	54	ASN	O-C-N	-6.02	113.07	122.70
13	F	64	ILE	N-CA-C	-6.00	94.81	111.00
21	N	95	SER	N-CA-C	-5.98	94.86	111.00
22	O	206	THR	N-CA-C	-5.96	94.92	111.00
16	I	147	VAL	N-CA-C	-5.96	94.92	111.00
9	B	202	GLY	O-C-N	5.94	132.20	122.70
1	1	124	TYR	N-CA-C	-5.94	94.97	111.00
33	Z	134	SER	N-CA-C	-5.92	95.00	111.00
31	X	83	SER	N-CA-C	-5.91	95.04	111.00
17	J	79	VAL	C-N-CA	5.91	136.47	121.70
24	Q	321	TYR	O-C-N	5.91	132.15	122.70
18	K	235	ILE	N-CA-C	-5.90	95.06	111.00
20	M	319	ASP	N-CA-C	-5.89	95.09	111.00
21	N	905	LEU	CB-CG-CD1	5.89	121.01	111.00
2	2	175	VAL	N-CA-C	-5.88	95.12	111.00
20	M	370	THR	N-CA-C	-5.86	95.19	111.00
8	A	56	GLN	O-C-N	-5.85	113.34	122.70
21	N	889	ARG	NH1-CZ-NH2	-5.81	113.01	119.40
33	Z	371	SER	N-CA-C	-5.80	95.35	111.00
23	P	43	GLU	CB-CA-C	5.79	121.99	110.40
28	U	69	ASP	O-C-N	-5.79	113.44	122.70
1	1	19	ARG	N-CA-C	-5.76	95.46	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	D	153	SER	C-N-CA	5.74	134.36	122.30
2	2	103	VAL	N-CA-C	-5.74	95.52	111.00
23	P	395	ARG	CA-C-N	5.72	133.11	117.10
20	M	84	GLU	N-CA-C	-5.71	95.57	111.00
28	U	230	GLN	CB-CA-C	-5.71	98.97	110.40
29	V	50	MET	CA-CB-CG	5.71	123.01	113.30
29	V	48	GLU	N-CA-C	5.70	126.38	111.00
33	Z	776	VAL	CA-C-O	-5.68	108.17	120.10
33	Z	134	SER	CA-C-N	5.67	129.69	117.20
29	V	66	VAL	C-N-CA	-5.67	107.53	121.70
15	H	188	PRO	N-CA-C	5.64	126.78	112.10
13	F	107	ARG	O-C-N	5.63	131.70	122.70
15	H	162	ARG	CA-CB-CG	5.63	125.78	113.40
19	L	257	GLY	CA-C-N	5.62	129.56	117.20
31	X	89	LEU	N-CA-C	-5.62	95.84	111.00
2	2	12	VAL	N-CA-C	-5.60	95.87	111.00
3	3	99	VAL	N-CA-C	-5.59	95.92	111.00
20	M	58	MET	C-N-CA	5.58	135.65	121.70
22	O	19	ASP	CB-CG-OD2	-5.58	113.28	118.30
8	A	226	GLY	N-CA-C	-5.56	99.20	113.10
21	N	250	ASP	N-CA-C	-5.56	96.00	111.00
30	W	53	SER	C-N-CA	5.56	133.97	122.30
30	W	112	ALA	O-C-N	-5.56	113.81	122.70
8	A	241	ILE	O-C-N	-5.54	113.84	122.70
24	Q	298	ALA	O-C-N	-5.53	113.85	122.70
5	5	122	LEU	O-C-N	-5.51	113.88	122.70
29	V	282	GLU	CA-C-N	-5.51	105.08	117.20
18	K	318	THR	N-CA-C	-5.51	96.12	111.00
21	N	866	TYR	CB-CG-CD1	5.47	124.28	121.00
14	G	246	ILE	N-CA-C	-5.46	96.26	111.00
1	1	47	GLY	N-CA-C	-5.41	99.57	113.10
7	7	160	THR	N-CA-C	-5.41	96.39	111.00
9	B	27	ALA	C-N-CA	5.41	135.22	121.70
10	C	38	ILE	N-CA-C	-5.41	96.39	111.00
4	4	13	ILE	N-CA-C	-5.41	96.40	111.00
6	6	45	ALA	N-CA-C	-5.41	96.41	111.00
18	K	177	LEU	C-N-CA	5.40	135.20	121.70
9	B	140	ASP	N-CA-C	-5.39	96.44	111.00
16	I	343	ARG	N-CA-C	-5.38	96.46	111.00
31	X	54	GLU	CA-CB-CG	5.38	125.24	113.40
8	A	82	VAL	N-CA-C	-5.37	96.50	111.00
20	M	61	LYS	N-CA-C	5.36	125.47	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	Z	366	LYS	N-CA-C	5.35	125.45	111.00
20	M	54	GLU	O-C-N	-5.34	114.15	122.70
21	N	867	LYS	N-CA-CB	5.34	120.21	110.60
26	S	150	LYS	C-N-CA	5.34	135.04	121.70
9	B	210	GLU	N-CA-C	-5.33	96.62	111.00
21	N	874	ILE	N-CA-C	-5.33	96.62	111.00
21	N	890	PHE	CB-CG-CD1	5.32	124.52	120.80
19	L	180	PHE	O-C-N	-5.31	114.20	122.70
18	K	250	GLY	CA-C-O	-5.31	111.05	120.60
21	N	780	ASP	CB-CA-C	5.30	121.00	110.40
33	Z	134	SER	CA-C-O	-5.30	108.97	120.10
23	P	29	GLN	CG-CD-OE1	5.30	132.19	121.60
24	Q	29	SER	O-C-N	-5.30	114.23	122.70
23	P	373	GLU	O-C-N	5.29	131.17	122.70
29	V	77	GLY	O-C-N	-5.29	114.23	122.70
25	R	154	LEU	CA-C-N	5.29	126.77	116.20
33	Z	434	GLN	C-N-CA	5.28	134.91	121.70
21	N	602	VAL	CA-C-N	5.27	131.85	117.10
21	N	761	ILE	CG1-CB-CG2	-5.27	99.81	111.40
33	Z	968	ASP	N-CA-C	-5.27	96.78	111.00
21	N	129	ILE	C-N-CA	5.26	134.86	121.70
27	T	144	TYR	CA-C-N	5.26	131.83	117.10
8	A	72	ILE	N-CA-C	-5.26	96.80	111.00
6	6	192	GLY	O-C-N	5.26	131.11	122.70
20	M	310	ASN	O-C-N	5.26	131.11	122.70
16	I	253	ILE	O-C-N	-5.25	114.30	122.70
23	P	258	LYS	CA-C-N	5.24	131.78	117.10
16	I	158	GLY	N-CA-C	-5.24	100.00	113.10
27	T	227	PRO	O-C-N	5.24	131.09	122.70
24	Q	368	LEU	C-N-CA	5.24	134.79	121.70
17	J	256	THR	N-CA-C	-5.24	96.86	111.00
24	Q	393	GLY	N-CA-C	-5.23	100.03	113.10
21	N	780	ASP	CB-CG-OD2	-5.20	113.62	118.30
25	R	347	THR	N-CA-C	-5.20	96.97	111.00
18	K	208	GLY	N-CA-C	-5.19	100.13	113.10
22	O	22	LEU	CB-CG-CD2	5.18	119.81	111.00
33	Z	591	ILE	O-C-N	-5.18	114.42	122.70
17	J	155	LYS	O-C-N	5.18	130.98	122.70
30	W	80	GLN	N-CA-C	-5.15	97.10	111.00
2	2	110	LEU	N-CA-C	-5.14	97.13	111.00
4	4	38	SER	N-CA-C	-5.14	97.12	111.00
21	N	243	LYS	O-C-N	5.14	130.92	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	M	251	LEU	O-C-N	5.14	130.92	122.70
5	5	212	GLY	N-CA-C	-5.13	100.27	113.10
21	N	459	ASN	N-CA-C	-5.13	97.15	111.00
3	3	21	GLY	O-C-N	5.13	130.90	122.70
28	U	71	ASN	CA-CB-CG	5.12	124.66	113.40
16	I	350	PHE	C-N-CA	5.12	134.49	121.70
25	R	213	TYR	C-N-CA	5.12	134.49	121.70
33	Z	900	LEU	CA-C-N	5.11	128.45	117.20
13	F	102	LYS	C-N-CA	5.11	134.48	121.70
16	I	136	VAL	N-CA-C	-5.11	97.20	111.00
28	U	77	ASN	CB-CA-C	5.11	120.62	110.40
17	J	244	ILE	N-CA-C	-5.11	97.20	111.00
1	1	188	PHE	N-CA-C	-5.10	97.23	111.00
16	I	257	LEU	CB-CG-CD1	-5.09	102.35	111.00
29	V	78	VAL	CA-CB-CG1	5.09	118.53	110.90
11	D	171	VAL	O-C-N	-5.09	114.56	122.70
33	Z	363	ASP	O-C-N	-5.08	114.57	122.70
14	G	45	VAL	O-C-N	-5.08	114.57	122.70
12	E	19	GLY	O-C-N	5.08	130.83	122.70
13	F	35	THR	N-CA-C	-5.08	97.29	111.00
27	T	76	ASP	O-C-N	-5.07	114.59	122.70
23	P	46	THR	C-N-CA	5.07	134.37	121.70
1	1	35	THR	O-C-N	5.07	130.80	122.70
20	M	183	VAL	N-CA-C	-5.06	97.33	111.00
24	Q	40	ALA	O-C-N	-5.06	114.60	122.70
7	7	77	GLU	O-C-N	-5.06	114.61	122.70
25	R	202	GLY	C-N-CA	5.06	134.34	121.70
23	P	47	ARG	N-CA-CB	5.05	119.69	110.60
14	G	216	SER	N-CA-C	-5.05	97.36	111.00
18	K	49	PHE	C-N-CA	5.05	134.33	121.70
10	C	205	ALA	O-C-N	5.05	130.78	122.70
30	W	191	ILE	N-CA-CB	5.05	122.41	110.80
33	Z	822	THR	N-CA-C	-5.04	97.40	111.00
21	N	535	LEU	O-C-N	-5.04	114.64	122.70
24	Q	377	LEU	CA-C-O	-5.03	109.53	120.10
14	G	46	VAL	N-CA-C	-5.03	97.42	111.00
20	M	313	ASP	C-N-CA	5.03	132.86	122.30
29	V	47	MET	N-CA-CB	5.03	119.65	110.60
12	E	37	ALA	N-CA-C	-5.02	97.44	111.00
28	U	87	GLU	N-CA-C	-5.02	97.45	111.00
5	5	173	GLY	N-CA-C	-5.01	100.57	113.10
18	K	282	PHE	O-C-N	-5.00	114.69	122.70

There are no chirality outliers.

All (73) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	-2	LEU	Peptide
6	6	-9	GLN	Peptide
7	7	100	ASN	Peptide
7	7	33	ARG	Peptide
8	A	172	GLY	Peptide
8	A	46	ARG	Mainchain
8	A	85	GLY	Peptide
11	D	56	ASP	Peptide
13	F	32	GLY	Peptide
15	H	172	MET	Peptide
15	H	182	ASN	Peptide
15	H	188	PRO	Peptide
15	H	192	ASP	Peptide
15	H	204	PRO	Peptide
15	H	280	VAL	Mainchain
17	J	82	LYS	Peptide
19	L	257	GLY	Mainchain
19	L	342	ARG	Mainchain
19	L	80	ASN	Peptide
19	L	81	ILE	Peptide
20	M	251	LEU	Mainchain
20	M	58	MET	Mainchain
21	N	346	ASN	Peptide
21	N	667	GLN	Peptide
21	N	762	ARG	Sidechain
21	N	780	ASP	Peptide
21	N	889	ARG	Sidechain
21	N	892	PRO	Peptide
21	N	906	ARG	Peptide
22	O	123	GLY	Peptide
22	O	277	ILE	Peptide
23	P	319	GLU	Peptide
23	P	45	LYS	Peptide
23	P	47	ARG	Sidechain
24	Q	402	THR	Peptide
25	R	202	GLY	Peptide
25	R	381	ILE	Peptide
26	S	163	VAL	Peptide
27	T	228	ILE	Peptide
27	T	243	ALA	Peptide

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Mol	Chain	Res	Type	Group
28	U	113	TYR	Sidechain
28	U	125	VAL	Peptide
28	U	153	THR	Peptide
28	U	161	ILE	Peptide
28	U	229	LEU	Peptide
28	U	91	GLY	Peptide
29	V	108	TYR	Mainchain
29	V	109	HIS	Sidechain
29	V	117	TRP	Peptide
29	V	216	LEU	Peptide
29	V	283	THR	Mainchain
29	V	46	PRO	Peptide
30	W	109	ARG	Peptide,Sidechain
30	W	13	SER	Peptide
30	W	153	LEU	Mainchain
30	W	168	THR	Peptide
30	W	175	THR	Peptide
30	W	181	LEU	Peptide
30	W	21	PHE	Peptide
30	W	38	GLN	Mainchain
30	W	53	SER	Peptide
30	W	71	LYS	Peptide
31	X	118	ASP	Peptide
31	X	13	GLY	Peptide
31	X	27	ILE	Peptide
33	Z	134	SER	Mainchain
33	Z	328	ASP	Peptide
33	Z	523	ALA	Peptide
33	Z	539	ASN	Peptide
33	Z	60	ASP	Peptide
33	Z	822	THR	Peptide
33	Z	958	ASN	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	1555	200	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	2	1692	0	1699	93	0
3	3	1581	0	1574	101	0
4	4	1585	0	1590	91	0
5	5	1646	0	1595	122	0
6	6	1757	0	1711	87	0
7	7	1824	0	1832	150	0
8	A	1921	0	1909	159	0
9	B	1915	0	1929	144	0
10	C	1913	0	1914	146	0
11	D	1899	0	1908	109	0
12	E	1867	0	1841	163	0
13	F	1795	0	1797	178	0
14	G	1900	0	1888	192	0
15	H	2792	0	2878	283	0
16	I	2822	0	2869	288	0
17	J	2928	0	3054	357	0
18	K	3019	0	3079	411	0
19	L	2853	0	2925	285	0
20	M	2866	0	2936	287	0
21	N	6562	0	6625	482	0
22	O	3182	0	3207	604	0
23	P	3401	0	3483	320	0
24	Q	3471	0	3494	359	0
25	R	3218	0	3216	408	0
26	S	2893	0	2937	245	0
27	T	2235	0	2206	305	0
28	U	2061	0	2116	375	0
29	V	1942	0	1954	251	0
30	W	1534	0	1538	204	0
31	X	1032	0	1017	181	0
32	Y	168	0	153	17	0
33	Z	6289	0	6233	619	0
All	All	80139	0	80662	7214	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 45.

All (7214) 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)
33:Z:321:PHE:CZ	33:Z:350:GLY:HA2	1.23	1.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:373:TRP:CD1	28:U:200:LEU:HD21	1.29	1.65
24:Q:243:PHE:HZ	24:Q:287:THR:CA	1.07	1.64
22:O:373:TRP:HD1	28:U:200:LEU:CD2	1.01	1.62
33:Z:321:PHE:CE1	33:Z:350:GLY:HA2	1.26	1.60
18:K:200:GLN:CG	25:R:204:TRP:HH2	1.15	1.60
24:Q:243:PHE:CZ	24:Q:287:THR:CA	1.79	1.60
17:J:69:GLY:CA	18:K:144:ASN:HD21	1.16	1.58
22:O:258:LEU:CD2	22:O:287:LEU:HD21	1.25	1.58
21:N:399:PHE:CE1	21:N:441:VAL:HG21	1.36	1.58
18:K:200:GLN:CB	25:R:204:TRP:CZ2	1.76	1.57
24:Q:14:LEU:CD1	24:Q:26:VAL:HG21	1.33	1.56
27:T:197:TYR:CD2	27:T:235:PHE:CE1	1.90	1.56
29:V:117:TRP:HE1	29:V:196:TYR:CB	0.99	1.56
16:I:281:ILE:CG2	16:I:284:ILE:HD11	1.35	1.56
27:T:197:TYR:CE2	27:T:235:PHE:CE1	1.92	1.54
18:K:200:GLN:HB3	25:R:204:TRP:CZ2	1.03	1.53
19:L:252:VAL:CG1	20:M:256:ILE:CD1	1.80	1.53
17:J:219:VAL:HB	18:K:281:ARG:CD	1.36	1.52
18:K:200:GLN:HB3	25:R:204:TRP:CH2	1.39	1.52
22:O:306:ARG:HD2	22:O:351:SER:C	1.28	1.52
22:O:210:ARG:HH21	22:O:242:ILE:CA	1.14	1.51
24:Q:243:PHE:CZ	24:Q:287:THR:HA	1.00	1.51
22:O:79:VAL:CG2	22:O:122:HIS:HA	1.40	1.51
4:4:66:TYR:CE1	4:4:74:LEU:HD21	1.45	1.50
18:K:200:GLN:CG	25:R:204:TRP:CH2	1.94	1.49
22:O:373:TRP:CD1	28:U:200:LEU:CD2	1.83	1.49
28:U:275:VAL:HG11	29:V:251:TYR:CE1	1.46	1.49
21:N:399:PHE:CE1	21:N:441:VAL:CG2	1.95	1.48
27:T:193:THR:HG21	27:T:226:TRP:CH2	1.48	1.48
18:K:200:GLN:CB	25:R:204:TRP:CH2	1.95	1.47
18:K:364:PRO:HB3	24:Q:247:HIS:CE1	1.45	1.47
21:N:399:PHE:CD1	21:N:441:VAL:HG21	1.47	1.47
33:Z:321:PHE:CZ	33:Z:350:GLY:CA	1.91	1.46
22:O:277:ILE:CG2	22:O:279:ILE:H	1.27	1.46
22:O:277:ILE:HG21	22:O:279:ILE:CG1	1.44	1.45
33:Z:189:ALA:HB1	33:Z:193:PHE:CB	1.46	1.45
22:O:124:ASP:CG	22:O:127:LEU:HD13	1.34	1.45
16:I:340:ARG:HH12	16:I:343:ARG:CG	1.27	1.45
29:V:118:LEU:CD1	29:V:140:VAL:HB	1.45	1.44
21:N:406:TYR:CE1	21:N:448:LEU:HD13	1.50	1.43
22:O:210:ARG:NH2	22:O:242:ILE:CA	1.72	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:57:LYS:HE2	8:A:69:VAL:CG1	1.43	1.43
33:Z:193:PHE:CD2	33:Z:196:SER:HB2	1.49	1.43
18:K:210:LEU:CD2	18:K:212:TYR:CE2	2.00	1.42
18:K:364:PRO:CB	24:Q:247:HIS:CE1	2.02	1.42
27:T:193:THR:CG2	27:T:226:TRP:CH2	2.00	1.42
33:Z:134:SER:N	33:Z:134:SER:CA	1.78	1.42
28:U:275:VAL:HG11	29:V:251:TYR:CZ	1.55	1.42
19:L:309:LEU:CD2	19:L:342:ARG:HD3	1.51	1.41
22:O:153:LEU:CD1	22:O:174:THR:HG21	1.47	1.41
33:Z:133:ASP:HA	33:Z:137:TYR:CD1	1.56	1.41
19:L:161:ARG:NH2	19:L:261:ARG:HH12	1.04	1.41
22:O:250:TRP:CZ2	22:O:270:ILE:HG23	1.56	1.41
24:Q:243:PHE:CE1	24:Q:287:THR:HA	1.52	1.40
18:K:210:LEU:HD21	18:K:212:TYR:CZ	1.55	1.40
22:O:277:ILE:CG2	22:O:279:ILE:HG12	1.52	1.40
22:O:80:LYS:HE2	22:O:81:TYR:CZ	1.55	1.39
23:P:425:HIS:CD2	28:U:225:ILE:HG23	1.56	1.39
25:R:422:ARG:NH1	26:S:301:PRO:HB3	1.33	1.39
17:J:69:GLY:N	18:K:144:ASN:ND2	1.69	1.38
3:3:59:ARG:NH2	10:C:99:LEU:HD11	1.34	1.38
18:K:200:GLN:CA	25:R:204:TRP:HZ2	1.37	1.38
14:G:146:HIS:HB3	14:G:148:TYR:CE1	1.57	1.38
16:I:281:ILE:HG21	16:I:284:ILE:CD1	1.54	1.38
17:J:219:VAL:HG11	18:K:284:ALA:CA	1.52	1.38
30:W:37:PHE:CE1	30:W:49:VAL:HG11	1.59	1.38
28:U:189:ARG:HH12	29:V:296:LEU:CD2	1.36	1.37
30:W:5:ALA:HB2	30:W:103:ASN:ND2	1.38	1.37
1:1:75:THR:HG22	1:1:111:TYR:CD1	1.60	1.37
12:E:157:HIS:CE1	12:E:172:ILE:HG21	1.58	1.37
17:J:69:GLY:CA	18:K:144:ASN:ND2	1.84	1.36
9:B:179:TRP:CD1	9:B:183:LEU:HD13	1.58	1.36
27:T:150:ARG:NH2	27:T:151:TRP:CZ2	1.92	1.36
13:F:201:LEU:HD12	13:F:206:LEU:CD1	1.52	1.36
18:K:134:SER:CB	18:K:255:ARG:HH21	1.37	1.36
27:T:1:MET:HB3	27:T:2:PRO:CD	1.55	1.36
27:T:32:ILE:O	27:T:35:ILE:HG22	1.26	1.36
1:1:75:THR:CG2	1:1:111:TYR:HD1	1.37	1.35
21:N:25:LEU:CD1	21:N:57:ASP:HB2	1.54	1.35
25:R:308:LEU:HD12	25:R:334:ARG:CZ	1.54	1.35
25:R:308:LEU:HD12	25:R:334:ARG:NH1	1.08	1.35
27:T:82:PHE:HE1	27:T:109:TYR:CD2	1.41	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:172:MET:CE	16:I:129:TYR:HD2	1.37	1.35
16:I:174:ASP:OD1	17:J:282:PHE:HB2	1.27	1.35
27:T:82:PHE:CE1	27:T:109:TYR:CD2	2.11	1.34
15:H:172:MET:CE	16:I:129:TYR:CD2	2.09	1.34
25:R:308:LEU:HB2	25:R:334:ARG:NH2	1.38	1.34
26:S:371:LEU:HD13	26:S:380:CYS:SG	1.68	1.34
25:R:422:ARG:HH12	26:S:301:PRO:CB	1.39	1.34
20:M:257:GLY:C	20:M:258:GLU:N	1.80	1.33
17:J:219:VAL:CB	18:K:281:ARG:HD3	1.57	1.33
27:T:197:TYR:CE2	27:T:235:PHE:CD1	2.14	1.33
16:I:340:ARG:NH1	16:I:343:ARG:CG	1.86	1.33
19:L:180:PHE:CD2	19:L:238:THR:OG1	1.82	1.33
18:K:210:LEU:HD21	18:K:212:TYR:CE2	1.62	1.33
19:L:161:ARG:HH21	19:L:261:ARG:NH1	1.25	1.33
28:U:275:VAL:CG1	29:V:251:TYR:CE1	2.11	1.33
25:R:308:LEU:CD1	25:R:334:ARG:CZ	2.07	1.32
33:Z:471:LEU:HA	33:Z:497:PHE:CZ	1.63	1.32
24:Q:61:LEU:HB3	24:Q:65:TYR:CZ	1.64	1.32
14:G:140:VAL:CG2	14:G:220:LEU:HD21	1.60	1.32
16:I:100:ARG:O	16:I:104:LEU:CD1	1.77	1.32
25:R:208:ASN:ND2	25:R:238:PHE:HD1	1.28	1.32
16:I:175:LYS:O	17:J:282:PHE:CZ	1.83	1.31
11:D:96:HIS:CD2	11:D:100:LEU:HD12	1.66	1.31
24:Q:135:HIS:ND1	24:Q:161:LEU:HD23	1.44	1.31
9:B:158:PRO:O	10:C:57:LEU:HD12	1.15	1.31
19:L:252:VAL:HG12	20:M:256:ILE:CD1	0.83	1.31
21:N:399:PHE:HE1	21:N:441:VAL:CG2	1.36	1.31
25:R:208:ASN:ND2	25:R:238:PHE:CD1	1.99	1.31
27:T:197:TYR:CD1	27:T:198:ASP:N	1.95	1.30
33:Z:318:LYS:NZ	33:Z:459:ALA:O	1.62	1.30
33:Z:924:LYS:HB2	33:Z:959:HIS:CE1	1.64	1.30
21:N:21:LYS:HG3	21:N:55:PHE:CD2	1.66	1.30
29:V:117:TRP:NE1	29:V:196:TYR:HB3	0.97	1.29
15:H:99:VAL:HG22	15:H:173:ARG:NH2	1.44	1.29
22:O:79:VAL:CB	22:O:122:HIS:HA	1.61	1.29
33:Z:610:GLY:CA	33:Z:748:LEU:HD13	1.63	1.29
1:1:122:LEU:HD11	7:7:28:PHE:CE1	1.68	1.29
22:O:76:LEU:HD22	22:O:121:ASP:OD1	1.31	1.28
6:6:91:LYS:HD2	6:6:96:TYR:OH	1.16	1.28
22:O:80:LYS:HE2	22:O:81:TYR:CE2	1.69	1.28
1:1:75:THR:CG2	1:1:111:TYR:CD1	2.12	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:252:VAL:CG1	20:M:256:ILE:HD12	1.42	1.28
28:U:223:HIS:CE1	28:U:224:THR:OG1	1.87	1.28
33:Z:318:LYS:HE2	33:Z:496:ALA:O	1.31	1.28
22:O:373:TRP:HZ3	28:U:233:PHE:CB	1.45	1.27
22:O:373:TRP:CZ3	28:U:233:PHE:HB3	1.66	1.27
33:Z:321:PHE:CE1	33:Z:350:GLY:CA	2.08	1.27
16:I:340:ARG:NH1	16:I:343:ARG:HG3	0.96	1.27
20:M:289:LYS:NZ	20:M:302:GLN:HE22	1.32	1.27
16:I:100:ARG:O	16:I:104:LEU:HD11	1.31	1.27
22:O:306:ARG:HD3	22:O:350:ILE:O	1.18	1.27
20:M:75:LEU:CD1	20:M:77:TYR:CE1	2.18	1.26
24:Q:14:LEU:CD1	24:Q:26:VAL:CG2	2.13	1.26
23:P:303:PHE:O	23:P:348:HIS:NE2	1.68	1.26
15:H:99:VAL:CG2	15:H:173:ARG:HH21	1.47	1.26
18:K:200:GLN:CD	25:R:204:TRP:HH2	1.38	1.26
8:A:19:PHE:CZ	9:B:128:ARG:NH1	2.04	1.26
28:U:275:VAL:CG1	29:V:251:TYR:HE1	1.45	1.26
9:B:158:PRO:O	10:C:57:LEU:CD1	1.83	1.25
22:O:124:ASP:OD2	22:O:127:LEU:HD13	1.35	1.25
18:K:210:LEU:HD21	18:K:212:TYR:OH	1.31	1.25
29:V:261:LEU:CD2	29:V:283:THR:HG21	1.64	1.25
12:E:125:GLU:OE1	13:F:123:TYR:CE1	1.90	1.25
20:M:75:LEU:HD11	20:M:77:TYR:CE1	1.71	1.25
17:J:219:VAL:CG1	18:K:284:ALA:HA	1.64	1.25
18:K:364:PRO:CA	24:Q:247:HIS:CE1	2.20	1.25
19:L:309:LEU:HD22	19:L:342:ARG:NE	1.50	1.25
19:L:259:SER:CB	19:L:303:ARG:HH22	1.48	1.25
26:S:256:LYS:O	26:S:259:TYR:CE2	1.90	1.25
17:J:219:VAL:O	18:K:281:ARG:HD2	1.25	1.24
27:T:197:TYR:CZ	27:T:235:PHE:HD1	1.53	1.24
30:W:5:ALA:CB	30:W:103:ASN:HD22	1.48	1.24
17:J:193:THR:HB	17:J:316:PHE:CZ	1.72	1.24
28:U:56:PHE:CD1	28:U:68:LEU:HD21	1.70	1.24
17:J:219:VAL:HG21	18:K:284:ALA:CA	1.65	1.24
14:G:140:VAL:HG21	14:G:220:LEU:CD2	1.68	1.24
25:R:308:LEU:CD1	25:R:334:ARG:NH1	1.99	1.24
24:Q:202:ARG:NH2	24:Q:222:SER:OG	1.68	1.24
30:W:21:PHE:CE1	30:W:144:PHE:CZ	2.26	1.24
16:I:252:LEU:N	16:I:253:ILE:N	1.86	1.23
26:S:211:ARG:NH2	26:S:240:ASP:HB3	1.52	1.23
29:V:117:TRP:CE2	29:V:196:TYR:HB3	1.72	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:19:ARG:NH1	1:1:29:ARG:HG3	1.53	1.23
15:H:286:GLU:OE2	15:H:289:ARG:NH2	1.70	1.23
21:N:277:LEU:CD1	21:N:290:LEU:CD1	2.15	1.23
22:O:118:GLY:O	22:O:166:ARG:CG	1.86	1.23
22:O:79:VAL:CG1	22:O:121:ASP:O	1.85	1.23
3:3:96:VAL:O	3:3:117:LEU:HD12	1.32	1.23
20:M:368:MET:SD	20:M:395:THR:CG2	2.26	1.23
25:R:175:ALA:O	25:R:179:PHE:HD1	1.19	1.23
25:R:304:TYR:CE1	25:R:308:LEU:HD11	1.72	1.23
18:K:364:PRO:CA	24:Q:247:HIS:HE1	1.49	1.23
22:O:43:GLU:OE2	22:O:44:SER:HB2	1.32	1.23
22:O:79:VAL:HG21	22:O:122:HIS:CA	1.69	1.23
28:U:21:HIS:CE1	28:U:53:ALA:HB1	1.72	1.23
18:K:349:ARG:NH1	18:K:377:SER:H	1.34	1.22
30:W:59:PRO:HG2	30:W:93:ILE:CG1	1.68	1.22
21:N:421:ASP:HA	21:N:424:LYS:NZ	1.53	1.22
20:M:77:TYR:HE2	20:M:159:LEU:CD1	1.52	1.22
22:O:306:ARG:HD2	22:O:351:SER:O	1.36	1.22
33:Z:924:LYS:CB	33:Z:959:HIS:CE1	2.23	1.22
20:M:385:GLU:HB3	20:M:426:LYS:NZ	1.55	1.21
25:R:125:GLU:CD	25:R:126:GLY:H	1.44	1.21
27:T:197:TYR:CD2	27:T:235:PHE:CD1	2.26	1.21
30:W:21:PHE:HE1	30:W:144:PHE:CZ	1.57	1.21
15:H:172:MET:HE3	16:I:129:TYR:CD2	1.74	1.21
20:M:75:LEU:CG	20:M:77:TYR:CE1	2.23	1.21
16:I:175:LYS:O	17:J:282:PHE:CE1	1.94	1.21
18:K:210:LEU:CD2	18:K:212:TYR:HE2	1.41	1.21
29:V:92:MET:HG3	29:V:101:ASP:OD1	1.40	1.21
16:I:400:GLY:HA3	17:J:179:ILE:CG1	1.70	1.21
18:K:364:PRO:HA	24:Q:247:HIS:CE1	1.75	1.21
31:X:75:TRP:CD1	31:X:87:PHE:CE1	2.29	1.21
33:Z:81:SER:O	33:Z:82:MET:HG3	1.37	1.21
21:N:24:ALA:O	21:N:28:ILE:HG12	1.38	1.21
22:O:119:SER:O	22:O:166:ARG:NH1	1.71	1.21
22:O:230:PHE:CE1	22:O:251:LEU:HG	1.74	1.21
23:P:425:HIS:CG	28:U:225:ILE:HG23	1.75	1.21
27:T:216:GLU:O	27:T:220:PHE:HD1	1.23	1.21
17:J:60:ASP:OD1	17:J:63:ARG:NH2	1.73	1.20
20:M:75:LEU:HG	20:M:77:TYR:CE1	1.77	1.20
33:Z:189:ALA:CB	33:Z:193:PHE:CB	2.18	1.20
25:R:415:GLN:CG	26:S:471:LEU:HD21	1.71	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:157:GLU:OE2	26:S:160:ARG:NH2	1.72	1.20
21:N:25:LEU:HD11	21:N:57:ASP:CB	1.70	1.20
23:P:349:ASN:O	23:P:353:ILE:HG12	1.42	1.20
33:Z:237:VAL:HG12	33:Z:245:VAL:CG1	1.71	1.20
33:Z:321:PHE:CZ	33:Z:350:GLY:C	2.15	1.20
25:R:137:LEU:CD1	25:R:141:TYR:HE2	1.55	1.19
27:T:197:TYR:CZ	27:T:235:PHE:CD1	2.30	1.19
33:Z:189:ALA:HB1	33:Z:193:PHE:HB2	1.20	1.19
20:M:75:LEU:HG	20:M:77:TYR:CD1	1.74	1.19
22:O:42:SER:O	22:O:46:THR:CB	1.90	1.19
30:W:40:LYS:HE3	30:W:47:ASN:HB3	1.23	1.19
17:J:193:THR:HG21	17:J:316:PHE:CE1	1.75	1.19
18:K:244:HIS:CE1	18:K:250:GLY:HA3	1.76	1.19
33:Z:767:TYR:CD2	33:Z:772:ILE:HG13	1.77	1.19
18:K:113:THR:HA	18:K:252:ARG:NH1	1.56	1.19
22:O:62:TYR:CE2	22:O:82:LEU:HD22	1.77	1.19
28:U:273:LEU:HD11	28:U:277:TYR:OH	1.42	1.19
33:Z:429:ASN:O	33:Z:430:LEU:HG	1.41	1.19
28:U:56:PHE:HD1	28:U:68:LEU:CD2	1.54	1.19
18:K:281:ARG:HH12	18:K:287:GLY:CA	1.55	1.18
20:M:50:ARG:HB3	30:W:73:LEU:HD13	1.20	1.18
21:N:14:ARG:NH2	21:N:42:GLU:OE2	1.73	1.18
17:J:193:THR:CB	17:J:316:PHE:CZ	2.26	1.18
14:G:140:VAL:HG21	14:G:220:LEU:HD21	1.20	1.18
30:W:146:GLU:O	30:W:147:ILE:CG1	1.91	1.18
3:3:18:LEU:HD11	3:3:177:VAL:CG1	1.74	1.18
11:D:203:VAL:O	11:D:204:GLN:OE1	1.62	1.18
19:L:309:LEU:HD22	19:L:342:ARG:CD	1.73	1.18
27:T:89:TYR:OH	27:T:102:LYS:NZ	1.77	1.18
33:Z:471:LEU:HG	33:Z:497:PHE:CE2	1.78	1.18
22:O:373:TRP:CZ3	28:U:233:PHE:CB	2.24	1.17
28:U:189:ARG:NH1	29:V:296:LEU:HD22	1.58	1.17
33:Z:924:LYS:HA	33:Z:959:HIS:ND1	1.57	1.17
22:O:232:GLU:O	22:O:236:HIS:HB2	1.43	1.17
22:O:118:GLY:O	22:O:166:ARG:HD3	1.43	1.17
27:T:1:MET:CB	27:T:2:PRO:CD	2.22	1.17
18:K:364:PRO:HB3	24:Q:247:HIS:NE2	1.60	1.17
24:Q:135:HIS:ND1	24:Q:161:LEU:CD2	2.08	1.17
28:U:21:HIS:CE1	28:U:53:ALA:CB	2.26	1.17
33:Z:218:GLU:HB2	33:Z:248:TYR:CZ	1.79	1.17
33:Z:401:VAL:HG22	33:Z:426:TYR:OH	1.39	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:210:LEU:CG	18:K:212:TYR:CE2	2.28	1.17
22:O:118:GLY:O	22:O:166:ARG:CD	1.93	1.17
24:Q:61:LEU:HB3	24:Q:65:TYR:CE2	1.80	1.17
26:S:188:TYR:OH	26:S:210:LEU:HD22	1.45	1.17
33:Z:321:PHE:CE2	33:Z:351:PRO:HD3	1.78	1.17
33:Z:924:LYS:CB	33:Z:959:HIS:HE1	1.58	1.17
17:J:336:ASN:ND2	25:R:204:TRP:NE1	1.91	1.16
22:O:42:SER:O	22:O:46:THR:HB	1.43	1.16
22:O:277:ILE:HG21	22:O:279:ILE:CB	1.73	1.16
25:R:422:ARG:HH12	26:S:301:PRO:CG	1.56	1.16
28:U:66:TRP:CZ3	28:U:68:LEU:HG	1.80	1.16
21:N:329:HIS:CE1	21:N:355:TRP:CE3	2.32	1.16
22:O:258:LEU:CD2	22:O:287:LEU:CD2	2.22	1.16
31:X:66:LEU:HD13	31:X:99:PHE:CZ	1.79	1.16
6:6:175:VAL:HG13	6:6:179:PHE:CE2	1.79	1.16
15:H:280:VAL:HG21	16:I:304:ARG:HD3	1.24	1.16
18:K:134:SER:CB	18:K:255:ARG:NH2	2.07	1.16
21:N:28:ILE:O	21:N:32:VAL:HG23	1.45	1.16
22:O:306:ARG:CD	22:O:351:SER:C	2.14	1.16
25:R:353:MET:HE2	25:R:364:LEU:CD2	1.76	1.16
8:A:57:LYS:CE	8:A:69:VAL:HG12	1.75	1.16
17:J:219:VAL:CB	18:K:284:ALA:HA	1.74	1.16
5:5:135:PHE:CE2	5:5:163:ALA:HB1	1.81	1.16
8:A:131:ARG:NH1	8:A:133:TYR:OH	1.79	1.16
15:H:77:ALA:O	16:I:153:THR:HG22	1.42	1.16
17:J:234:PHE:CZ	17:J:279:LEU:HD21	1.79	1.16
21:N:479:GLU:HB2	21:N:512:ASN:ND2	1.61	1.16
28:U:8:VAL:O	28:U:159:CYS:SG	2.04	1.16
20:M:50:ARG:CB	30:W:73:LEU:HD13	1.76	1.15
25:R:353:MET:CE	25:R:364:LEU:HD21	1.76	1.15
20:M:289:LYS:HZ2	20:M:302:GLN:NE2	1.43	1.15
22:O:214:ALA:HB1	22:O:248:TYR:OH	1.43	1.15
23:P:132:VAL:HA	23:P:171:MET:CE	1.76	1.15
18:K:49:PHE:CD1	21:N:192:LEU:HD12	1.80	1.15
20:M:75:LEU:CD1	20:M:77:TYR:CD1	2.30	1.15
31:X:10:PHE:O	31:X:33:ILE:HG22	1.40	1.15
33:Z:401:VAL:CG2	33:Z:426:TYR:OH	1.93	1.15
19:L:309:LEU:CD2	19:L:342:ARG:CD	2.23	1.15
25:R:33:LEU:HD21	25:R:92:ILE:HD13	1.27	1.15
27:T:150:ARG:NH2	27:T:151:TRP:CE2	2.14	1.15
22:O:306:ARG:CD	22:O:350:ILE:O	1.94	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:165:TYR:HB2	12:E:167:TYR:CE1	1.82	1.14
13:F:201:LEU:CD1	13:F:206:LEU:CD1	2.25	1.14
14:G:215:ILE:HG23	14:G:230:VAL:HB	1.26	1.14
15:H:206:VAL:HG11	15:H:258:LEU:HD22	1.28	1.14
21:N:421:ASP:CA	21:N:424:LYS:HZ3	1.59	1.14
28:U:223:HIS:ND1	28:U:224:THR:OG1	1.76	1.14
33:Z:321:PHE:HZ	33:Z:350:GLY:C	1.47	1.14
12:E:178:GLY:HA3	15:H:409:ARG:HH22	1.10	1.14
15:H:172:MET:HE1	16:I:129:TYR:CD2	1.76	1.14
17:J:216:ALA:O	17:J:219:VAL:N	1.78	1.14
21:N:277:LEU:HD11	21:N:290:LEU:HD11	1.16	1.14
22:O:185:PHE:CG	22:O:223:LEU:HB3	1.82	1.14
22:O:258:LEU:HD22	22:O:287:LEU:CD2	1.77	1.14
30:W:59:PRO:CG	30:W:93:ILE:HG13	1.76	1.14
14:G:73:ILE:HG12	14:G:108:ILE:CD1	1.78	1.14
17:J:375:ILE:HD12	25:R:204:TRP:CE3	1.83	1.14
22:O:69:PHE:CD2	22:O:78:VAL:HG22	1.82	1.14
22:O:250:TRP:CE2	22:O:270:ILE:HG23	1.82	1.14
25:R:280:ILE:HD12	25:R:289:ILE:HG13	1.22	1.14
11:D:88:LYS:NZ	11:D:120:TYR:OH	1.81	1.14
18:K:49:PHE:CD1	21:N:192:LEU:CD1	2.30	1.14
22:O:214:ALA:CB	22:O:248:TYR:OH	1.94	1.14
25:R:214:TYR:OH	25:R:226:GLU:HB3	1.47	1.14
15:H:390:ARG:HA	15:H:404:TRP:CZ2	1.82	1.13
18:K:134:SER:OG	18:K:255:ARG:NH2	1.79	1.13
22:O:277:ILE:CG2	22:O:279:ILE:N	2.10	1.13
25:R:137:LEU:HD11	25:R:141:TYR:CE2	1.83	1.13
31:X:75:TRP:CD1	31:X:87:PHE:CD1	2.35	1.13
18:K:210:LEU:HG	18:K:212:TYR:CE2	1.84	1.13
21:N:253:LEU:HD22	21:N:894:ARG:HH21	1.12	1.13
28:U:161:ILE:HG22	28:U:162:GLU:N	1.52	1.13
33:Z:146:PHE:C	33:Z:210:TYR:OH	1.87	1.13
8:A:57:LYS:CE	8:A:69:VAL:CG1	2.26	1.13
21:N:277:LEU:HB2	21:N:287:LEU:HD21	1.19	1.13
30:W:5:ALA:CB	30:W:103:ASN:ND2	2.09	1.13
16:I:281:ILE:CG2	16:I:284:ILE:CD1	2.16	1.13
23:P:308:LEU:HD23	23:P:369:LEU:HA	1.28	1.13
25:R:175:ALA:O	25:R:179:PHE:CD1	2.01	1.13
30:W:146:GLU:O	30:W:147:ILE:HG13	0.97	1.13
33:Z:193:PHE:CD2	33:Z:196:SER:CB	2.32	1.13
33:Z:551:LEU:CD1	33:Z:591:ILE:HG22	1.78	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:135:PHE:HE2	5:5:163:ALA:HB1	1.05	1.12
21:N:277:LEU:CD1	21:N:290:LEU:HD12	1.75	1.12
24:Q:423:VAL:HG13	25:R:414:LEU:HD11	1.31	1.12
31:X:11:ARG:CB	31:X:103:GLU:HG3	1.79	1.12
17:J:27:ILE:HA	18:K:51:LEU:CD2	1.78	1.12
17:J:219:VAL:CB	18:K:281:ARG:CD	2.19	1.12
29:V:117:TRP:HZ2	29:V:196:TYR:HA	1.15	1.12
30:W:120:ASP:C	30:W:121:SER:N	2.02	1.12
15:H:307:PHE:CZ	15:H:309:ASP:OD1	2.02	1.12
17:J:224:GLY:C	17:J:225:GLU:N	2.03	1.12
25:R:308:LEU:CB	25:R:334:ARG:NH2	2.13	1.12
25:R:415:GLN:CG	26:S:471:LEU:CD2	2.28	1.12
28:U:35:GLY:CA	28:U:93:TYR:HB3	1.80	1.12
21:N:277:LEU:HD12	21:N:290:LEU:CD1	1.79	1.12
6:6:91:LYS:CD	6:6:96:TYR:OH	1.98	1.12
10:C:160:TRP:CD2	10:C:163:ILE:HD13	1.85	1.12
13:F:105:VAL:HG11	13:F:143:HIS:ND1	1.62	1.12
23:P:132:VAL:HA	23:P:171:MET:HE2	1.20	1.12
27:T:82:PHE:CE1	27:T:109:TYR:CG	2.09	1.12
29:V:117:TRP:NE1	29:V:196:TYR:CB	1.68	1.12
33:Z:610:GLY:O	33:Z:748:LEU:HD22	1.50	1.12
3:3:96:VAL:O	3:3:117:LEU:CD1	1.98	1.11
9:B:179:TRP:HD1	9:B:183:LEU:CD1	1.63	1.11
12:E:109:VAL:HG11	12:E:156:PHE:CD1	1.84	1.11
14:G:73:ILE:HG12	14:G:108:ILE:HD11	1.13	1.11
15:H:206:VAL:HG11	15:H:258:LEU:CD2	1.80	1.11
21:N:399:PHE:CD1	21:N:441:VAL:CG2	2.20	1.11
23:P:234:TYR:HA	23:P:267:PHE:CE2	1.84	1.11
17:J:193:THR:CB	17:J:316:PHE:CE1	2.33	1.11
22:O:277:ILE:HG22	22:O:279:ILE:H	1.13	1.11
29:V:261:LEU:HD21	29:V:283:THR:HG21	1.31	1.11
30:W:5:ALA:CB	30:W:103:ASN:HB2	1.78	1.11
16:I:75:PHE:HD2	16:I:76:VAL:HG23	1.16	1.11
22:O:210:ARG:NH2	22:O:242:ILE:HA	0.78	1.11
22:O:230:PHE:HE1	22:O:251:LEU:CG	1.62	1.11
22:O:277:ILE:HG13	22:O:279:ILE:HB	1.23	1.11
3:3:12:VAL:HG22	3:3:103:ILE:HD11	1.26	1.11
10:C:160:TRP:CE3	10:C:163:ILE:HD13	1.85	1.11
27:T:55:LEU:HG	27:T:59:LYS:HE2	1.20	1.11
17:J:219:VAL:HG11	18:K:284:ALA:HA	1.15	1.11
16:I:400:GLY:HA3	17:J:179:ILE:CD1	1.80	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:115:LEU:HD21	17:J:120:TYR:HA	1.19	1.10
23:P:245:TYR:HE1	23:P:257:TRP:CZ2	1.67	1.10
24:Q:329:GLU:OE1	24:Q:332:ARG:NH2	1.83	1.10
25:R:137:LEU:CD1	25:R:141:TYR:CE2	2.33	1.10
1:1:119:VAL:CG2	14:G:103:LYS:HZ2	1.64	1.10
23:P:302:LEU:HB3	23:P:310:ARG:HE	0.94	1.10
24:Q:46:VAL:HG23	24:Q:50:ARG:HB2	1.28	1.10
26:S:205:ASN:O	26:S:208:ILE:HG22	1.50	1.10
33:Z:312:TYR:OH	33:Z:348:LEU:HA	1.48	1.10
6:6:34:VAL:HG12	6:6:196:LEU:HD12	1.31	1.10
15:H:168:ILE:HG22	15:H:169:GLU:N	1.66	1.10
24:Q:31:LEU:HG	24:Q:50:ARG:HH21	1.10	1.10
26:S:163:VAL:HG22	26:S:184:TRP:CZ3	1.85	1.10
29:V:118:LEU:HD12	29:V:140:VAL:HB	1.24	1.10
30:W:143:ASN:HB3	30:W:173:THR:HA	1.31	1.10
4:4:80:SER:HB2	4:4:124:LYS:HD2	1.28	1.10
15:H:248:LEU:HD22	15:H:377:PHE:HE2	1.03	1.10
22:O:373:TRP:NE1	28:U:200:LEU:HD21	1.65	1.10
28:U:66:TRP:CZ3	28:U:68:LEU:CG	2.34	1.10
33:Z:87:LYS:HE2	33:Z:90:LYS:HB2	1.34	1.10
4:4:43:MET:HG3	4:4:45:PHE:CZ	1.86	1.09
11:D:96:HIS:NE2	11:D:100:LEU:HD12	1.65	1.09
12:E:48:LEU:HD11	12:E:145:ALA:HB3	1.34	1.09
22:O:30:GLU:OE1	22:O:40:GLN:OE1	1.70	1.09
28:U:92:TRP:HZ3	28:U:106:ILE:HB	1.01	1.09
12:E:201:LEU:HD11	12:E:239:LEU:HG	1.33	1.09
24:Q:249:LEU:O	24:Q:250:THR:HG22	1.51	1.09
30:W:5:ALA:HB2	30:W:103:ASN:CB	1.83	1.09
33:Z:357:ILE:HD11	33:Z:914:LEU:HD13	1.30	1.09
15:H:389:PHE:HB3	15:H:404:TRP:CZ3	1.87	1.09
17:J:219:VAL:HG11	18:K:284:ALA:C	1.73	1.09
20:M:361:LEU:HB3	20:M:376:TRP:CD2	1.88	1.09
21:N:19:SER:HB3	27:T:35:ILE:CG2	1.82	1.09
21:N:277:LEU:HD12	21:N:290:LEU:HD12	1.27	1.09
24:Q:46:VAL:O	24:Q:50:ARG:HG2	1.50	1.09
8:A:195:ASN:O	8:A:196:GLU:HG2	1.51	1.09
18:K:240:SER:HB2	19:L:306:MET:HE2	1.31	1.09
25:R:415:GLN:HG3	26:S:471:LEU:CD2	1.82	1.09
1:1:119:VAL:HG21	14:G:103:LYS:HZ2	1.10	1.09
21:N:421:ASP:HA	21:N:424:LYS:HZ3	0.94	1.09
14:G:146:HIS:CB	14:G:148:TYR:HE1	1.64	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:99:VAL:CG2	15:H:173:ARG:NH2	2.09	1.08
21:N:14:ARG:HH21	21:N:42:GLU:CD	1.55	1.08
27:T:35:ILE:HD12	27:T:40:LEU:HD11	1.17	1.08
28:U:161:ILE:CG2	28:U:162:GLU:H	1.65	1.08
1:1:14:LEU:HD11	1:1:44:CYS:SG	1.92	1.08
9:B:38:LYS:O	9:B:179:TRP:CZ2	2.06	1.08
17:J:27:ILE:CA	18:K:51:LEU:HD21	1.82	1.08
17:J:301:ASP:H	17:J:304:LEU:HD12	1.14	1.08
19:L:360:ILE:CG2	19:L:391:ILE:HD13	1.84	1.08
19:L:370:LYS:HB2	19:L:374:PHE:CZ	1.87	1.08
22:O:38:TRP:HE3	22:O:53:LYS:HD3	1.10	1.08
30:W:101:ARG:HH12	30:W:104:LYS:HG2	1.17	1.08
2:2:8:PHE:CZ	2:2:11:GLY:HA3	1.87	1.08
15:H:248:LEU:HD22	15:H:377:PHE:CE2	1.87	1.08
15:H:390:ARG:HA	15:H:404:TRP:CE2	1.88	1.08
20:M:75:LEU:CG	20:M:77:TYR:CD1	2.36	1.08
21:N:406:TYR:CE1	21:N:448:LEU:CD1	2.35	1.08
22:O:118:GLY:O	22:O:166:ARG:HG2	1.48	1.08
27:T:190:ALA:HB2	27:T:224:ARG:CZ	1.83	1.08
17:J:219:VAL:CG2	18:K:284:ALA:HB2	1.82	1.08
22:O:80:LYS:HE2	22:O:81:TYR:OH	1.52	1.08
22:O:283:HIS:NE2	22:O:287:LEU:HD12	1.66	1.08
28:U:92:TRP:CZ3	28:U:106:ILE:HB	1.88	1.08
28:U:94:HIS:HE1	28:U:96:GLY:HA2	1.12	1.08
30:W:25:ARG:HD2	30:W:144:PHE:CE2	1.88	1.08
33:Z:189:ALA:HB1	33:Z:193:PHE:HB3	1.16	1.08
17:J:219:VAL:CG1	18:K:284:ALA:CA	2.27	1.08
21:N:277:LEU:CB	21:N:287:LEU:HD21	1.82	1.08
1:1:8:PHE:CE2	1:1:10:ASP:HB2	1.89	1.07
1:1:75:THR:HG21	1:1:111:TYR:HD1	1.12	1.07
19:L:150:ILE:HG13	19:L:151:THR:HG23	1.33	1.07
22:O:358:ILE:HG22	22:O:360:GLY:H	1.11	1.07
27:T:197:TYR:CE2	27:T:235:PHE:HE1	1.46	1.07
27:T:229:VAL:HG22	27:T:234:TYR:HE1	1.19	1.07
30:W:7:VAL:HG23	30:W:110:ILE:HD13	1.09	1.07
33:Z:422:ILE:HB	33:Z:426:TYR:CE2	1.88	1.07
33:Z:510:LEU:HD13	33:Z:542:ILE:HG12	1.34	1.07
33:Z:551:LEU:HD13	33:Z:591:ILE:CG2	1.84	1.07
15:H:280:VAL:HG21	16:I:304:ARG:CD	1.84	1.07
17:J:193:THR:CG2	17:J:316:PHE:CE1	2.36	1.07
24:Q:65:TYR:HD2	24:Q:74:LEU:HB2	1.17	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:272:LEU:HD23	24:Q:274:LEU:HD12	1.34	1.07
28:U:275:VAL:HG11	29:V:251:TYR:OH	1.53	1.07
9:B:178:ARG:HH12	9:B:194:LEU:CB	1.66	1.07
12:E:231:TYR:HE2	12:E:236:THR:HA	1.08	1.07
13:F:201:LEU:CD1	13:F:206:LEU:HD12	1.82	1.07
22:O:69:PHE:HD2	22:O:78:VAL:HG22	0.97	1.07
22:O:124:ASP:HB3	22:O:127:LEU:HB2	1.19	1.07
30:W:7:VAL:HG23	30:W:110:ILE:CD1	1.84	1.07
12:E:231:TYR:CE2	12:E:236:THR:HA	1.88	1.07
16:I:361:ILE:HG22	16:I:392:ILE:HG21	1.35	1.07
18:K:210:LEU:CD2	18:K:212:TYR:CZ	2.32	1.07
21:N:47:GLU:O	21:N:50:TYR:HB3	1.52	1.07
22:O:233:LEU:HA	22:O:236:HIS:HB3	1.34	1.07
24:Q:311:LEU:HD12	24:Q:366:ILE:HG12	1.32	1.07
25:R:296:LEU:HD13	25:R:337:VAL:HG23	1.32	1.07
29:V:114:PHE:CD1	29:V:118:LEU:O	2.08	1.07
33:Z:610:GLY:HA2	33:Z:748:LEU:HD13	1.30	1.07
1:1:-6:GLY:HA3	2:2:116:HIS:CD2	1.90	1.07
15:H:168:ILE:HG22	15:H:169:GLU:H	1.13	1.07
23:P:181:LEU:HD21	23:P:219:GLU:HB3	1.09	1.07
24:Q:160:ASP:OD1	24:Q:163:ARG:NH2	1.87	1.07
15:H:198:MET:CE	15:H:272:ILE:HG23	1.84	1.06
17:J:234:PHE:CE1	17:J:279:LEU:HD21	1.90	1.06
19:L:252:VAL:HG12	20:M:256:ILE:HD11	1.14	1.06
19:L:360:ILE:HG21	19:L:391:ILE:CD1	1.85	1.06
1:1:8:PHE:HE2	1:1:10:ASP:HB2	0.97	1.06
18:K:423:LYS:HE2	18:K:424:PHE:CE2	1.90	1.06
22:O:134:ALA:HB1	22:O:153:LEU:HD11	1.36	1.06
23:P:245:TYR:CE1	23:P:257:TRP:NE1	2.23	1.06
30:W:182:TYR:O	30:W:183:GLU:HG3	1.53	1.06
33:Z:358:TYR:HD2	33:Z:428:TRP:NE1	1.50	1.06
33:Z:471:LEU:CA	33:Z:497:PHE:CZ	2.38	1.06
15:H:340:LEU:CD1	15:H:370:ARG:HH11	1.66	1.06
20:M:385:GLU:CB	20:M:426:LYS:NZ	2.18	1.06
22:O:153:LEU:HD13	22:O:174:THR:CG2	1.84	1.06
23:P:234:TYR:HA	23:P:267:PHE:CZ	1.90	1.06
24:Q:382:LEU:HD11	25:R:299:SER:HB2	1.32	1.06
25:R:353:MET:HA	25:R:357:PHE:CD1	1.90	1.06
18:K:68:ILE:HG12	21:N:608:LEU:CD2	1.85	1.06
23:P:241:LEU:O	23:P:244:ILE:HG22	1.52	1.06
30:W:124:GLU:OE2	30:W:127:ARG:NH2	1.87	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:4:66:TYR:CE1	4:4:74:LEU:CD2	2.38	1.06
18:K:281:ARG:HH12	18:K:287:GLY:HA2	1.10	1.06
6:6:115:SER:OG	6:6:128:ARG:NH1	1.89	1.05
24:Q:14:LEU:HD11	24:Q:26:VAL:CG2	1.80	1.05
6:6:10:ASP:OD1	6:6:11:PHE:HD1	1.38	1.05
16:I:132:ILE:CD1	16:I:138:LYS:HE2	1.86	1.05
18:K:210:LEU:HD23	18:K:212:TYR:HE2	1.18	1.05
19:L:252:VAL:HG12	20:M:256:ILE:HD13	1.14	1.05
22:O:11:LEU:HB3	22:O:43:GLU:OE1	1.56	1.05
22:O:62:TYR:HE2	22:O:82:LEU:CD2	1.69	1.05
22:O:233:LEU:HD22	22:O:238:ILE:HD11	1.31	1.05
30:W:21:PHE:CZ	30:W:144:PHE:CE1	2.44	1.05
33:Z:237:VAL:HG12	33:Z:245:VAL:HG11	1.36	1.05
19:L:365:THR:OG1	19:L:376:PHE:HZ	1.40	1.05
28:U:283:ARG:HD2	29:V:284:ALA:HA	1.36	1.05
6:6:175:VAL:CG1	6:6:179:PHE:HE2	1.69	1.05
15:H:449:LYS:HZ2	16:I:346:ARG:NH1	1.54	1.05
22:O:232:GLU:O	22:O:236:HIS:CB	2.03	1.05
28:U:283:ARG:CD	29:V:284:ALA:HA	1.86	1.05
33:Z:189:ALA:CB	33:Z:193:PHE:HB3	1.81	1.05
17:J:329:ARG:HG3	17:J:333:ARG:NH1	1.70	1.05
18:K:254:VAL:HG11	18:K:299:LEU:HD23	1.39	1.05
20:M:77:TYR:CE2	20:M:159:LEU:CD1	2.39	1.05
22:O:73:ILE:HG23	22:O:74:ASN:H	1.18	1.05
31:X:40:GLU:O	31:X:41:GLU:HG2	1.55	1.05
33:Z:400:ILE:CD1	33:Z:418:ALA:HB1	1.86	1.05
5:5:6:PHE:CE1	5:5:13:ILE:HB	1.92	1.04
13:F:155:GLU:OE1	14:G:62:LYS:HB3	1.56	1.04
17:J:241:ALA:HB1	17:J:287:ASN:HD22	1.20	1.04
19:L:259:SER:CB	19:L:303:ARG:NH2	2.20	1.04
21:N:19:SER:CB	27:T:35:ILE:HG21	1.87	1.04
26:S:286:TYR:HE1	26:S:323:LEU:HD13	1.18	1.04
33:Z:138:ARG:HD2	33:Z:157:LEU:HD13	1.39	1.04
27:T:197:TYR:CZ	27:T:199:PHE:HA	1.93	1.04
33:Z:64:TYR:CE1	33:Z:111:LEU:HB3	1.93	1.04
33:Z:133:ASP:HB3	33:Z:137:TYR:CE2	1.92	1.04
16:I:121:THR:HA	16:I:127:ASP:OD1	1.55	1.04
21:N:253:LEU:HD22	21:N:894:ARG:NH2	1.70	1.04
26:S:163:VAL:CG2	26:S:184:TRP:HZ3	1.69	1.04
31:X:11:ARG:HB3	31:X:103:GLU:HG3	1.40	1.04
17:J:136:LEU:HD22	17:J:217:GLU:HG3	1.35	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:79:VAL:HG21	22:O:122:HIS:HA	1.12	1.04
21:N:399:PHE:HE1	21:N:441:VAL:HG23	1.10	1.04
22:O:76:LEU:CD2	22:O:121:ASP:OD1	2.04	1.04
28:U:273:LEU:HD11	28:U:277:TYR:CZ	1.93	1.04
22:O:38:TRP:CE3	22:O:53:LYS:HD3	1.94	1.03
22:O:79:VAL:CG2	22:O:122:HIS:CA	2.27	1.03
26:S:471:LEU:CD1	28:U:288:PHE:CZ	2.40	1.03
27:T:226:TRP:CE2	27:T:235:PHE:HE2	1.75	1.03
28:U:275:VAL:HG12	29:V:251:TYR:HE1	1.17	1.03
29:V:52:LEU:HD11	29:V:107:TRP:CZ3	1.93	1.03
31:X:23:LEU:O	31:X:24:CYS:SG	2.16	1.03
33:Z:471:LEU:CA	33:Z:497:PHE:HZ	1.69	1.03
9:B:4:ARG:HH22	11:D:5:ASP:HB2	1.20	1.03
16:I:208:TYR:CE2	16:I:215:PRO:HB3	1.93	1.03
18:K:49:PHE:HE1	21:N:192:LEU:HG	1.23	1.03
18:K:200:GLN:CB	25:R:204:TRP:HZ2	1.32	1.03
21:N:383:LYS:N	21:N:412:TYR:OH	1.90	1.03
22:O:124:ASP:CG	22:O:127:LEU:CD1	2.26	1.03
22:O:223:LEU:HD11	22:O:277:ILE:HD11	1.33	1.03
27:T:1:MET:CB	27:T:2:PRO:HD3	1.84	1.03
27:T:229:VAL:HG22	27:T:234:TYR:CE1	1.93	1.03
3:3:18:LEU:CD1	3:3:177:VAL:HG13	1.88	1.03
3:3:179:TYR:OH	3:3:188:LYS:HE3	1.57	1.03
17:J:150:VAL:HG23	17:J:153:LEU:HD11	1.37	1.03
17:J:219:VAL:CG2	18:K:284:ALA:CA	2.37	1.03
18:K:200:GLN:HG2	25:R:204:TRP:CH2	1.82	1.03
18:K:236:ARG:HH21	19:L:310:THR:HG23	1.22	1.03
18:K:423:LYS:HE2	18:K:424:PHE:HE2	1.23	1.03
28:U:223:HIS:ND1	28:U:224:THR:N	2.07	1.03
29:V:118:LEU:CD1	29:V:140:VAL:CB	2.36	1.03
33:Z:218:GLU:CB	33:Z:248:TYR:CZ	2.40	1.03
33:Z:551:LEU:CD1	33:Z:591:ILE:CG2	2.36	1.03
10:C:147:GLN:HB3	10:C:149:TYR:HE1	1.22	1.03
17:J:27:ILE:HA	18:K:51:LEU:HD21	1.07	1.03
17:J:333:ARG:HH12	17:J:343:LEU:HD11	1.20	1.03
21:N:33:ASP:HA	21:N:71:ASN:HD21	1.21	1.03
24:Q:243:PHE:CZ	24:Q:287:THR:C	2.31	1.03
28:U:152:LYS:HB3	28:U:154:PHE:CZ	1.94	1.03
29:V:117:TRP:CE2	29:V:196:TYR:CB	2.36	1.03
33:Z:102:ILE:HG22	33:Z:112:LYS:HG3	1.39	1.03
33:Z:135:LEU:O	33:Z:139:LEU:HG	1.59	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:89:ARG:O	3:3:94:TYR:CE1	2.12	1.02
6:6:48:PHE:CE2	6:6:50:ALA:HB3	1.94	1.02
12:E:125:GLU:HB3	13:F:123:TYR:HE1	1.17	1.02
15:H:389:PHE:HB3	15:H:404:TRP:CE3	1.93	1.02
16:I:250:SER:O	16:I:253:ILE:HB	1.59	1.02
17:J:219:VAL:CG2	18:K:284:ALA:CB	2.37	1.02
22:O:329:MET:HA	23:P:357:TYR:OH	1.59	1.02
28:U:66:TRP:O	30:W:93:ILE:HD12	1.56	1.02
28:U:189:ARG:HH12	29:V:296:LEU:HD22	0.87	1.02
30:W:5:ALA:HB2	30:W:103:ASN:CG	1.78	1.02
16:I:339:ILE:HG21	16:I:347:LYS:HE2	1.39	1.02
20:M:361:LEU:HD13	20:M:376:TRP:CE3	1.94	1.02
25:R:415:GLN:HG3	26:S:471:LEU:HD21	1.05	1.02
8:A:57:LYS:HE2	8:A:69:VAL:HG11	1.39	1.02
16:I:252:LEU:C	16:I:253:ILE:N	2.13	1.02
20:M:289:LYS:NZ	20:M:334:ASP:HB2	1.74	1.02
21:N:782:PHE:CD1	21:N:875:LEU:HD22	1.94	1.02
23:P:181:LEU:HA	23:P:223:LEU:HD11	1.40	1.02
1:1:122:LEU:CD1	7:7:28:PHE:CE1	2.43	1.02
25:R:320:LYS:HE3	25:R:324:ARG:HD2	1.41	1.02
25:R:353:MET:HE3	25:R:364:LEU:HD11	1.40	1.02
13:F:201:LEU:HD12	13:F:206:LEU:HD11	1.04	1.02
22:O:80:LYS:CE	22:O:81:TYR:CE2	2.42	1.02
1:1:-6:GLY:CA	2:2:116:HIS:CD2	2.42	1.01
6:6:175:VAL:O	6:6:179:PHE:HD2	1.41	1.01
13:F:78:ALA:N	20:M:433:TYR:OH	1.91	1.01
15:H:172:MET:HE2	16:I:129:TYR:HB2	1.38	1.01
16:I:174:ASP:OD1	17:J:282:PHE:CB	2.08	1.01
22:O:133:ILE:HG12	22:O:137:TYR:CE2	1.95	1.01
25:R:199:GLU:HB3	25:R:206:ARG:NE	1.75	1.01
28:U:56:PHE:HD1	28:U:68:LEU:HD21	0.95	1.01
7:7:86:GLU:HG3	13:F:100:ASN:HB2	1.39	1.01
15:H:96:PRO:HA	15:H:193:PRO:HG2	1.36	1.01
16:I:132:ILE:HD12	16:I:138:LYS:CE	1.90	1.01
18:K:210:LEU:CD2	18:K:212:TYR:OH	2.06	1.01
21:N:28:ILE:O	21:N:32:VAL:CG2	2.09	1.01
22:O:185:PHE:CG	22:O:223:LEU:CB	2.42	1.01
24:Q:7:LYS:HG3	24:Q:30:LEU:HD13	1.39	1.01
25:R:422:ARG:NH1	26:S:301:PRO:CB	2.07	1.01
25:R:422:ARG:HH22	26:S:301:PRO:HD3	1.24	1.01
33:Z:352:LYS:O	33:Z:353:VAL:HG23	1.60	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:381:VAL:HG11	27:T:123:HIS:NE2	1.76	1.01
14:G:197:LYS:HD2	14:G:241:PHE:CE2	1.96	1.01
17:J:219:VAL:HG21	18:K:284:ALA:CB	1.90	1.01
19:L:161:ARG:NH2	19:L:261:ARG:NH1	1.89	1.01
19:L:178:ILE:HD13	19:L:230:LEU:HD22	1.41	1.01
21:N:329:HIS:CE1	21:N:355:TRP:CZ3	2.47	1.01
22:O:153:LEU:CD1	22:O:174:THR:CG2	2.38	1.01
33:Z:786:SER:O	33:Z:787:ASP:CG	1.99	1.01
15:H:99:VAL:HG23	15:H:173:ARG:HH21	1.24	1.01
19:L:221:TYR:CZ	19:L:348:GLU:HB3	1.96	1.01
20:M:50:ARG:CA	30:W:73:LEU:HD13	1.89	1.01
24:Q:243:PHE:HZ	24:Q:287:THR:C	1.62	1.01
33:Z:767:TYR:CE2	33:Z:772:ILE:HG13	1.95	1.01
33:Z:924:LYS:CA	33:Z:959:HIS:CE1	2.44	1.01
16:I:100:ARG:O	16:I:104:LEU:HD12	1.59	1.00
21:N:25:LEU:HD11	21:N:57:ASP:HB2	1.05	1.00
22:O:185:PHE:CB	22:O:223:LEU:HB3	1.91	1.00
24:Q:51:ARG:HH22	24:Q:92:LYS:HD3	1.16	1.00
27:T:35:ILE:HD12	27:T:40:LEU:CD1	1.91	1.00
27:T:209:LEU:HB3	27:T:211:PHE:CE1	1.96	1.00
6:6:175:VAL:HG13	6:6:179:PHE:HE2	0.87	1.00
12:E:110:GLU:HG3	12:E:164:PHE:HE2	1.23	1.00
15:H:340:LEU:HD12	15:H:370:ARG:HH11	1.26	1.00
16:I:400:GLY:HA3	17:J:179:ILE:HD11	1.38	1.00
19:L:180:PHE:CE2	19:L:238:THR:OG1	2.03	1.00
19:L:221:TYR:OH	19:L:348:GLU:HB3	1.60	1.00
22:O:325:GLU:O	22:O:329:MET:HG3	1.61	1.00
22:O:373:TRP:HD1	28:U:200:LEU:HD22	0.86	1.00
24:Q:61:LEU:CB	24:Q:65:TYR:CZ	2.37	1.00
25:R:174:ILE:HB	25:R:190:LYS:HD3	1.42	1.00
23:P:221:TYR:CE2	23:P:244:ILE:HB	1.96	1.00
24:Q:31:LEU:HG	24:Q:50:ARG:NH2	1.76	1.00
5:5:8:PHE:CE1	5:5:13:ILE:HG12	1.97	1.00
25:R:415:GLN:HG2	26:S:471:LEU:HD22	1.44	1.00
8:A:220:LYS:HD2	8:A:238:ALA:O	1.62	1.00
26:S:371:LEU:CD1	26:S:380:CYS:SG	2.49	1.00
26:S:436:ILE:HG12	27:T:196:SER:O	1.61	1.00
8:A:57:LYS:NZ	8:A:69:VAL:HB	1.77	1.00
18:K:364:PRO:CB	24:Q:247:HIS:HE1	1.50	1.00
22:O:62:TYR:HE2	22:O:82:LEU:HD22	0.84	1.00
18:K:254:VAL:CG1	18:K:299:LEU:HD23	1.91	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:379:LEU:HD22	20:M:415:PHE:CD1	1.97	1.00
25:R:304:TYR:HE1	25:R:308:LEU:HD11	1.11	1.00
27:T:226:TRP:CE2	27:T:235:PHE:CE2	2.50	1.00
28:U:94:HIS:CE1	28:U:96:GLY:HA2	1.95	1.00
12:E:165:TYR:HB2	12:E:167:TYR:CZ	1.97	0.99
23:P:132:VAL:CA	23:P:171:MET:HE2	1.89	0.99
9:B:178:ARG:NH1	9:B:194:LEU:HB2	1.76	0.99
17:J:219:VAL:CG2	18:K:284:ALA:HA	1.91	0.99
22:O:79:VAL:HG12	22:O:121:ASP:O	1.60	0.99
23:P:221:TYR:OH	23:P:240:TYR:O	1.80	0.99
25:R:286:LEU:HD23	25:R:289:ILE:HD11	1.44	0.99
30:W:186:ALA:HA	30:W:192:LEU:HD12	1.44	0.99
13:F:105:VAL:HG11	13:F:143:HIS:CE1	1.96	0.99
20:M:307:GLU:HG3	20:M:311:GLN:NE2	1.76	0.99
21:N:277:LEU:HB2	21:N:287:LEU:CD2	1.91	0.99
22:O:83:LEU:CD1	22:O:128:LEU:HD22	1.91	0.99
22:O:250:TRP:CZ2	22:O:270:ILE:CG2	2.45	0.99
2:2:109:HIS:HB3	2:2:111:PHE:HE2	1.23	0.99
12:E:125:GLU:HB3	13:F:123:TYR:CE1	1.97	0.99
2:2:109:HIS:HB3	2:2:111:PHE:CE2	1.96	0.99
6:6:125:GLU:OE1	6:6:128:ARG:HD3	1.61	0.99
10:C:18:ARG:NH1	10:C:23:GLU:OE2	1.94	0.99
12:E:157:HIS:CE1	12:E:172:ILE:CG2	2.44	0.99
17:J:301:ASP:N	17:J:304:LEU:HD12	1.77	0.99
1:1:122:LEU:HD21	7:7:28:PHE:HD1	1.26	0.99
20:M:385:GLU:HB3	20:M:426:LYS:HZ2	1.24	0.99
33:Z:610:GLY:HA2	33:Z:748:LEU:CD1	1.91	0.99
33:Z:610:GLY:HA3	33:Z:748:LEU:HD13	1.44	0.99
19:L:132:ARG:NH2	19:L:156:MET:HG3	1.76	0.99
21:N:399:PHE:CD1	21:N:441:VAL:CB	2.44	0.99
23:P:425:HIS:CD2	28:U:225:ILE:CG2	2.45	0.99
24:Q:174:LEU:HD11	24:Q:178:HIS:NE2	1.76	0.99
28:U:21:HIS:HE1	28:U:53:ALA:HB1	1.21	0.99
29:V:161:THR:HA	29:V:189:ILE:HD11	1.45	0.99
30:W:21:PHE:CE1	30:W:144:PHE:CE1	2.51	0.99
1:1:122:LEU:HD11	7:7:28:PHE:CD1	1.96	0.99
12:E:241:LYS:HA	12:E:244:LYS:NZ	1.78	0.99
22:O:79:VAL:HB	22:O:122:HIS:HA	1.44	0.99
23:P:140:THR:HG21	23:P:163:LEU:HD22	1.41	0.99
29:V:80:VAL:HG23	29:V:125:THR:HA	1.45	0.99
31:X:12:ALA:HB3	31:X:33:ILE:HB	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:250:TRP:NE1	22:O:270:ILE:HA	1.76	0.99
27:T:216:GLU:O	27:T:220:PHE:CD1	2.15	0.99
33:Z:189:ALA:CB	33:Z:193:PHE:HB2	1.89	0.99
1:1:19:ARG:NH1	1:1:29:ARG:CG	2.24	0.99
20:M:170:MET:HB3	20:M:244:LEU:HD11	1.42	0.99
12:E:125:GLU:CB	13:F:123:TYR:HE1	1.76	0.98
12:E:201:LEU:CD1	12:E:239:LEU:HG	1.93	0.98
18:K:200:GLN:CD	25:R:204:TRP:CH2	2.23	0.98
25:R:305:PHE:HA	25:R:334:ARG:HH12	1.23	0.98
28:U:275:VAL:CG1	29:V:251:TYR:OH	2.10	0.98
30:W:5:ALA:HB2	30:W:103:ASN:HD22	0.91	0.98
1:1:45:ARG:NH2	1:1:53:GLN:N	2.10	0.98
22:O:277:ILE:HG22	22:O:278:PRO:N	1.74	0.98
23:P:135:GLU:HG2	23:P:138:ARG:NH2	1.78	0.98
28:U:66:TRP:HZ3	28:U:68:LEU:CG	1.74	0.98
8:A:57:LYS:HE2	8:A:69:VAL:HG12	1.02	0.98
22:O:365:LYS:HB3	22:O:369:ARG:HH12	1.26	0.98
24:Q:243:PHE:HE1	24:Q:287:THR:HG22	1.29	0.98
31:X:46:TRP:HB2	31:X:68:LEU:HD13	1.46	0.98
33:Z:471:LEU:HA	33:Z:497:PHE:HZ	0.82	0.98
16:I:400:GLY:CA	17:J:179:ILE:HD11	1.92	0.98
18:K:49:PHE:CE1	21:N:192:LEU:HG	1.98	0.98
19:L:365:THR:OG1	19:L:376:PHE:CZ	2.11	0.98
23:P:132:VAL:CA	23:P:171:MET:CE	2.31	0.98
23:P:302:LEU:HB3	23:P:310:ARG:NE	1.77	0.98
25:R:263:ARG:HH11	25:R:296:LEU:HG	1.29	0.98
27:T:71:GLN:NE2	27:T:173:GLU:OE2	1.95	0.98
23:P:245:TYR:HE1	23:P:257:TRP:CE2	1.81	0.98
15:H:77:ALA:O	16:I:153:THR:CG2	2.12	0.98
15:H:172:MET:HE1	16:I:129:TYR:HD2	0.84	0.98
17:J:219:VAL:HG22	18:K:284:ALA:HB2	1.44	0.98
22:O:230:PHE:HE1	22:O:251:LEU:HG	0.84	0.98
22:O:219:ILE:O	22:O:223:LEU:HD13	1.63	0.98
22:O:306:ARG:HB3	22:O:350:ILE:O	1.63	0.98
23:P:234:TYR:CD2	23:P:267:PHE:CE1	2.52	0.98
1:1:83:LYS:HD3	1:1:119:VAL:HG23	1.42	0.98
25:R:320:LYS:CE	25:R:324:ARG:HD2	1.92	0.98
2:2:82:MET:O	2:2:86:HIS:HD2	1.47	0.97
16:I:408:ARG:NH1	16:I:410:GLN:O	1.96	0.97
17:J:67:GLU:HG2	17:J:69:GLY:H	1.27	0.97
19:L:253:ASP:C	20:M:256:ILE:HG13	1.85	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:286:TYR:CZ	26:S:323:LEU:HB3	1.99	0.97
28:U:275:VAL:CG1	29:V:251:TYR:CZ	2.43	0.97
33:Z:551:LEU:HA	33:Z:593:HIS:NE2	1.78	0.97
23:P:245:TYR:CE1	23:P:257:TRP:CZ2	2.51	0.97
24:Q:51:ARG:NH2	24:Q:92:LYS:HD3	1.79	0.97
33:Z:133:ASP:HA	33:Z:137:TYR:CE1	1.99	0.97
33:Z:857:LEU:HD13	33:Z:908:ILE:HG13	1.44	0.97
28:U:66:TRP:CE3	28:U:68:LEU:HG	1.99	0.97
29:V:261:LEU:HD11	29:V:283:THR:CG2	1.94	0.97
33:Z:392:LEU:HD12	33:Z:424:SER:O	1.63	0.97
15:H:271:PHE:HZ	15:H:307:PHE:HD2	1.00	0.97
17:J:40:ASN:HB3	18:K:65:GLU:OE2	1.64	0.97
21:N:14:ARG:HB2	27:T:80:ASN:HD21	1.29	0.97
21:N:21:LYS:HE3	21:N:55:PHE:CZ	1.99	0.97
22:O:356:ARG:HH21	22:O:362:GLN:HG3	1.27	0.97
22:O:79:VAL:HG12	22:O:118:GLY:HA2	1.42	0.97
24:Q:314:PHE:CE2	24:Q:339:TYR:CD1	2.51	0.97
24:Q:331:THR:HG22	24:Q:335:PHE:CE2	1.99	0.97
32:Y:80:GLU:OE2	32:Y:83:ARG:NH2	1.97	0.97
17:J:219:VAL:C	18:K:281:ARG:HD2	1.83	0.97
27:T:193:THR:CB	27:T:226:TRP:HH2	1.77	0.97
33:Z:133:ASP:HA	33:Z:137:TYR:CG	1.98	0.97
1:1:66:TYR:CE2	1:1:73:PRO:HA	2.00	0.97
9:B:4:ARG:HG2	13:F:123:TYR:OH	1.64	0.97
15:H:307:PHE:CE2	15:H:309:ASP:OD1	2.18	0.97
19:L:269:TYR:CE2	19:L:273:HIS:CE1	2.52	0.97
21:N:277:LEU:HD11	21:N:290:LEU:CD1	1.84	0.97
9:B:178:ARG:HH12	9:B:194:LEU:HB2	1.26	0.97
19:L:309:LEU:HD23	19:L:342:ARG:HD3	1.42	0.97
26:S:471:LEU:HD12	28:U:288:PHE:CZ	1.99	0.97
33:Z:321:PHE:HE1	33:Z:350:GLY:HA2	1.20	0.97
13:F:143:HIS:HE1	13:F:145:LEU:HB2	1.29	0.97
26:S:286:TYR:CE1	26:S:323:LEU:HD13	2.00	0.97
28:U:283:ARG:HD2	29:V:284:ALA:CA	1.93	0.97
33:Z:146:PHE:O	33:Z:210:TYR:CZ	2.18	0.97
33:Z:147:GLU:N	33:Z:210:TYR:OH	1.98	0.97
17:J:167:PRO:HA	17:J:174:PHE:CE1	1.99	0.96
33:Z:889:VAL:HG12	33:Z:894:MET:CE	1.94	0.96
3:3:89:ARG:O	3:3:94:TYR:HE1	1.44	0.96
13:F:105:VAL:CG1	13:F:143:HIS:CE1	2.48	0.96
18:K:281:ARG:NH1	18:K:287:GLY:HA2	1.80	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:196:ALA:HB1	23:P:227:ILE:HD11	1.47	0.96
18:K:200:GLN:CA	25:R:204:TRP:CZ2	2.27	0.96
19:L:252:VAL:CB	20:M:256:ILE:HD12	1.82	0.96
21:N:325:PHE:CA	29:V:182:LYS:HG2	1.95	0.96
22:O:258:LEU:HD23	22:O:287:LEU:HD21	1.46	0.96
24:Q:51:ARG:NH2	24:Q:92:LYS:HB3	1.79	0.96
10:C:149:TYR:OH	11:D:59:ILE:HB	1.64	0.96
13:F:65:LYS:HD3	13:F:222:PHE:CE2	2.01	0.96
33:Z:551:LEU:HG	33:Z:593:HIS:NE2	1.80	0.96
33:Z:889:VAL:HG12	33:Z:894:MET:HE1	1.44	0.96
31:X:66:LEU:HD13	31:X:99:PHE:HZ	1.29	0.96
21:N:21:LYS:CG	21:N:55:PHE:CD2	2.48	0.96
21:N:25:LEU:CD1	21:N:57:ASP:CB	2.35	0.96
33:Z:758:LEU:HD22	33:Z:791:LYS:HD3	1.45	0.96
29:V:261:LEU:CD1	29:V:283:THR:HG21	1.94	0.96
33:Z:189:ALA:HB3	33:Z:193:PHE:HD2	1.31	0.96
18:K:240:SER:H	19:L:306:MET:HE1	1.31	0.96
23:P:349:ASN:O	23:P:353:ILE:CG1	2.13	0.96
24:Q:46:VAL:O	24:Q:50:ARG:CG	2.14	0.96
25:R:137:LEU:HD11	25:R:141:TYR:HE2	1.22	0.96
30:W:37:PHE:CZ	30:W:49:VAL:HG11	2.01	0.96
12:E:88:MET:HE2	12:E:142:LEU:CD1	1.96	0.95
15:H:449:LYS:NZ	16:I:346:ARG:NH1	2.12	0.95
1:1:45:ARG:HH21	1:1:53:GLN:N	1.61	0.95
27:T:62:LEU:CD1	27:T:88:TYR:CE2	2.50	0.95
31:X:66:LEU:HD13	31:X:99:PHE:CE1	2.00	0.95
1:1:124:TYR:OH	1:1:139:ASP:OD1	1.81	0.95
20:M:50:ARG:CA	30:W:73:LEU:CD1	2.43	0.95
22:O:66:VAL:CG1	22:O:106:PHE:CE1	2.49	0.95
22:O:185:PHE:HE2	22:O:219:ILE:HG22	1.28	0.95
25:R:308:LEU:HB2	25:R:334:ARG:HH22	1.17	0.95
1:1:119:VAL:HB	14:G:103:LYS:NZ	1.82	0.95
17:J:193:THR:OG1	17:J:316:PHE:CZ	2.18	0.95
26:S:211:ARG:HH21	26:S:240:ASP:HB3	1.21	0.95
22:O:373:TRP:CD1	28:U:200:LEU:HD22	1.76	0.95
27:T:197:TYR:CG	27:T:235:PHE:CD1	2.54	0.95
27:T:216:GLU:HG2	27:T:220:PHE:CE1	2.01	0.95
33:Z:321:PHE:HZ	33:Z:350:GLY:CA	1.49	0.95
21:N:325:PHE:HA	29:V:182:LYS:HG2	1.45	0.95
22:O:134:ALA:CB	22:O:153:LEU:HD11	1.94	0.95
27:T:82:PHE:CE1	27:T:109:TYR:CE2	2.42	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:218:GLU:CB	33:Z:248:TYR:OH	2.13	0.95
3:3:18:LEU:HD11	3:3:177:VAL:HG13	0.99	0.95
4:4:26:VAL:HG11	4:4:29:ASP:HB3	1.46	0.95
13:F:166:GLN:HA	20:M:381:ARG:NH2	1.82	0.95
22:O:300:VAL:HG12	22:O:301:PHE:CD2	2.01	0.95
28:U:92:TRP:HD1	28:U:119:LEU:O	1.48	0.95
19:L:360:ILE:HG23	19:L:391:ILE:HD13	1.46	0.95
31:X:75:TRP:HD1	31:X:87:PHE:CD1	1.77	0.95
6:6:91:LYS:HD2	6:6:96:TYR:HH	1.25	0.95
14:G:166:LYS:HZ2	14:G:206:ASN:HA	1.32	0.95
20:M:50:ARG:HA	30:W:73:LEU:HD12	1.46	0.95
33:Z:103:TYR:CD1	33:Z:116:ALA:HB2	2.01	0.95
11:D:203:VAL:C	11:D:204:GLN:OE1	2.05	0.94
19:L:259:SER:HB2	19:L:303:ARG:NH1	1.82	0.94
29:V:57:PHE:HB2	29:V:62:THR:O	1.65	0.94
33:Z:305:VAL:HG13	33:Z:982:ILE:HG12	1.45	0.94
4:4:36:GLN:HE21	4:4:39:PRO:HA	1.32	0.94
11:D:138:PHE:HE1	11:D:215:VAL:HG12	1.26	0.94
27:T:193:THR:CG2	27:T:226:TRP:HH2	1.63	0.94
17:J:193:THR:HB	17:J:316:PHE:HZ	1.24	0.94
31:X:75:TRP:CZ2	31:X:125:MET:HG3	2.02	0.94
1:1:119:VAL:CB	14:G:103:LYS:NZ	2.30	0.94
16:I:190:GLN:OE1	16:I:349:LEU:HD12	1.68	0.94
21:N:233:ASN:OD1	21:N:269:LEU:HD22	1.67	0.94
28:U:92:TRP:HZ3	28:U:106:ILE:CB	1.79	0.94
17:J:115:LEU:CD2	17:J:120:TYR:HA	1.97	0.94
21:N:399:PHE:HD1	21:N:441:VAL:HG11	1.29	0.94
30:W:120:ASP:O	30:W:121:SER:N	1.99	0.94
33:Z:189:ALA:HB3	33:Z:193:PHE:CD2	2.03	0.94
8:A:52:VAL:HG21	8:A:202:VAL:HG12	1.47	0.94
17:J:167:PRO:N	17:J:174:PHE:CE1	2.36	0.94
22:O:277:ILE:HB	22:O:279:ILE:N	1.83	0.94
27:T:197:TYR:CE1	27:T:235:PHE:HD1	1.85	0.94
29:V:114:PHE:HD1	29:V:118:LEU:O	1.50	0.94
30:W:7:VAL:CG2	30:W:110:ILE:HD13	1.97	0.94
33:Z:510:LEU:HD11	33:Z:542:ILE:HA	1.50	0.94
27:T:197:TYR:HD1	27:T:198:ASP:H	0.97	0.94
28:U:66:TRP:CZ3	28:U:68:LEU:HD12	2.02	0.94
31:X:66:LEU:HD11	31:X:97:TYR:HB2	1.47	0.94
6:6:175:VAL:CG1	6:6:179:PHE:CE2	2.48	0.94
12:E:109:VAL:CG1	12:E:156:PHE:CD1	2.51	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:174:VAL:HG13	15:H:183:ILE:HG13	1.47	0.94
18:K:158:ILE:HG23	19:L:256:ILE:HG23	1.49	0.94
21:N:214:LEU:HD12	21:N:217:MET:CE	1.96	0.94
22:O:223:LEU:CD1	22:O:277:ILE:HD11	1.97	0.94
22:O:341:ILE:HD11	22:O:348:VAL:HG22	1.48	0.94
25:R:137:LEU:CG	25:R:141:TYR:HE2	1.81	0.94
25:R:263:ARG:NH1	25:R:296:LEU:O	2.00	0.94
26:S:157:GLU:CD	26:S:160:ARG:HH21	1.70	0.94
27:T:193:THR:HG21	27:T:226:TRP:CZ3	2.02	0.94
27:T:226:TRP:HD1	27:T:241:GLU:OE1	1.50	0.94
33:Z:312:TYR:OH	33:Z:348:LEU:CA	2.14	0.94
33:Z:491:LEU:CD1	33:Z:900:LEU:HD12	1.97	0.94
33:Z:767:TYR:HD2	33:Z:772:ILE:HG13	1.29	0.94
12:E:110:GLU:HG3	12:E:164:PHE:CE2	2.03	0.94
12:E:165:TYR:CB	12:E:167:TYR:CE1	2.51	0.94
26:S:188:TYR:CZ	26:S:210:LEU:HD13	2.03	0.94
33:Z:102:ILE:HG12	33:Z:107:THR:OG1	1.66	0.94
33:Z:609:THR:HG23	33:Z:745:LEU:HD22	1.48	0.94
17:J:69:GLY:HA2	18:K:144:ASN:HD21	0.79	0.94
21:N:324:LYS:HG3	21:N:325:PHE:CD1	2.02	0.94
23:P:245:TYR:CE1	23:P:257:TRP:CE2	2.55	0.94
24:Q:314:PHE:CD2	24:Q:339:TYR:CD1	2.56	0.94
25:R:33:LEU:CD2	25:R:92:ILE:HD13	1.98	0.94
27:T:35:ILE:CD1	27:T:40:LEU:HD11	1.98	0.94
27:T:245:TYR:HE2	27:T:251:HIS:HE2	1.16	0.94
28:U:66:TRP:CZ3	28:U:68:LEU:CD1	2.50	0.94
31:X:75:TRP:HA	31:X:87:PHE:HE1	1.33	0.94
33:Z:56:LEU:HD22	33:Z:115:LEU:HD13	1.49	0.94
1:1:45:ARG:HH22	1:1:53:GLN:HB2	1.32	0.93
5:5:8:PHE:CZ	5:5:13:ILE:HD11	2.02	0.93
17:J:136:LEU:CD2	17:J:217:GLU:HG3	1.98	0.93
22:O:124:ASP:OD1	22:O:127:LEU:N	2.01	0.93
30:W:172:LEU:HD22	30:W:185:ILE:HA	1.49	0.93
33:Z:867:PHE:HE2	33:Z:871:HIS:HD1	1.10	0.93
1:1:19:ARG:NH1	1:1:29:ARG:HA	1.82	0.93
22:O:258:LEU:HD21	22:O:287:LEU:HD21	1.50	0.93
25:R:308:LEU:HD13	25:R:334:ARG:CZ	1.94	0.93
1:1:1:THR:HG22	1:1:129:SER:H	1.32	0.93
11:D:159:TRP:CZ3	12:E:59:LEU:HD13	2.04	0.93
12:E:157:HIS:HE1	12:E:172:ILE:HG21	1.24	0.93
13:F:31:GLN:HA	20:M:430:VAL:CG1	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:75:LEU:HD12	20:M:77:TYR:CD1	2.02	0.93
20:M:385:GLU:CB	20:M:426:LYS:HZ3	1.77	0.93
27:T:28:PRO:HB2	27:T:29:PRO:HD3	1.49	0.93
16:I:228:GLY:HA3	16:I:350:PHE:CE1	2.04	0.93
22:O:11:LEU:HD22	22:O:15:ARG:HH12	1.30	0.93
25:R:259:PHE:CD2	25:R:329:PHE:CE1	2.56	0.93
33:Z:146:PHE:O	33:Z:210:TYR:OH	1.85	0.93
33:Z:193:PHE:HD2	33:Z:196:SER:HB2	1.33	0.93
14:G:182:HIS:CE1	14:G:186:LEU:HD12	2.04	0.93
17:J:69:GLY:HA2	18:K:144:ASN:ND2	1.59	0.93
24:Q:331:THR:CG2	24:Q:335:PHE:HE2	1.81	0.93
28:U:189:ARG:NH1	29:V:296:LEU:CD2	2.22	0.93
33:Z:924:LYS:CA	33:Z:959:HIS:ND1	2.31	0.93
17:J:336:ASN:ND2	25:R:204:TRP:CD1	2.36	0.93
18:K:349:ARG:NH1	18:K:377:SER:N	2.16	0.93
22:O:50:ASP:HA	22:O:53:LYS:NZ	1.84	0.93
22:O:210:ARG:HH22	22:O:242:ILE:HA	1.19	0.93
22:O:258:LEU:HD22	22:O:287:LEU:HD21	0.93	0.93
33:Z:318:LYS:CE	33:Z:496:ALA:O	2.16	0.93
6:6:34:VAL:CG1	6:6:196:LEU:HD12	1.98	0.93
16:I:132:ILE:HG12	16:I:156:ILE:HD12	1.49	0.93
9:B:139:HIS:CE1	9:B:145:PHE:CE2	2.57	0.93
13:F:201:LEU:HD12	13:F:206:LEU:HD12	1.46	0.93
15:H:271:PHE:HZ	15:H:307:PHE:CD2	1.87	0.93
30:W:5:ALA:HB2	30:W:103:ASN:HB2	1.44	0.93
7:7:8:TYR:CZ	7:7:11:GLY:HA3	2.04	0.93
12:E:88:MET:CE	12:E:142:LEU:CD1	2.47	0.93
15:H:261:ARG:NH2	15:H:273:ARG:NH2	2.16	0.93
17:J:193:THR:HG21	17:J:316:PHE:HE1	1.27	0.93
17:J:219:VAL:HG21	18:K:284:ALA:N	1.84	0.93
20:M:390:GLN:NE2	20:M:425:ARG:HB3	1.84	0.93
23:P:302:LEU:HB2	23:P:310:ARG:HH21	1.34	0.93
24:Q:51:ARG:HD2	24:Q:96:VAL:HG21	1.51	0.93
27:T:209:LEU:HD13	27:T:211:PHE:CZ	2.04	0.93
22:O:69:PHE:HD2	22:O:78:VAL:CG2	1.82	0.93
33:Z:506:LEU:HG	33:Z:530:LEU:HD11	1.51	0.93
8:A:77:ARG:HG3	8:A:78:THR:HG23	1.48	0.92
18:K:68:ILE:HG12	21:N:608:LEU:HD23	1.50	0.92
24:Q:85:MET:HE2	24:Q:93:THR:HA	1.51	0.92
29:V:117:TRP:CZ2	29:V:196:TYR:HA	2.04	0.92
33:Z:325:GLY:O	33:Z:326:VAL:HG22	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:201:LEU:CD1	13:F:206:LEU:HD11	1.92	0.92
22:O:47:LYS:HZ1	22:O:65:PHE:HE2	1.07	0.92
28:U:21:HIS:CE1	28:U:53:ALA:HB2	2.04	0.92
24:Q:135:HIS:HB3	24:Q:161:LEU:HD22	1.51	0.92
24:Q:65:TYR:HB2	24:Q:74:LEU:HD22	1.51	0.92
28:U:18:ALA:HB1	28:U:93:TYR:OH	1.69	0.92
16:I:380:LEU:HA	16:I:420:LYS:HZ3	1.33	0.92
18:K:49:PHE:CE1	21:N:192:LEU:CG	2.52	0.92
19:L:370:LYS:HD2	19:L:374:PHE:CE1	2.04	0.92
26:S:175:SER:HB2	26:S:229:THR:OG1	1.68	0.92
27:T:197:TYR:CE1	27:T:235:PHE:CD1	2.57	0.92
28:U:40:ASP:HB3	28:U:47:ARG:HH21	1.31	0.92
28:U:40:ASP:HB3	28:U:47:ARG:NH2	1.84	0.92
31:X:11:ARG:HB2	31:X:103:GLU:HG3	1.49	0.92
31:X:41:GLU:HB2	31:X:45:PHE:H	1.33	0.92
14:G:140:VAL:HG11	14:G:220:LEU:HG	1.50	0.92
19:L:259:SER:HB3	19:L:303:ARG:HH22	1.35	0.92
23:P:286:ASN:C	23:P:293:LEU:HD11	1.90	0.92
24:Q:299:MET:CE	24:Q:335:PHE:HZ	1.83	0.92
28:U:35:GLY:N	28:U:93:TYR:HB3	1.84	0.92
33:Z:81:SER:O	33:Z:82:MET:CG	2.16	0.92
1:1:19:ARG:HH12	1:1:29:ARG:CG	1.82	0.92
8:A:162:TYR:CZ	18:K:428:LYS:HB2	2.05	0.92
17:J:167:PRO:CA	17:J:174:PHE:CE1	2.51	0.92
26:S:191:HIS:NE2	26:S:206:GLN:HG3	1.85	0.92
26:S:425:ARG:NH1	27:T:155:GLY:HA2	1.83	0.92
27:T:197:TYR:CZ	27:T:199:PHE:CA	2.52	0.92
22:O:277:ILE:CG1	22:O:279:ILE:HB	2.00	0.92
28:U:66:TRP:CH2	28:U:68:LEU:HD12	2.04	0.92
31:X:10:PHE:CE2	31:X:103:GLU:OE2	2.23	0.92
31:X:41:GLU:CB	31:X:45:PHE:H	1.82	0.92
16:I:75:PHE:CD2	16:I:76:VAL:HG23	2.05	0.92
18:K:353:PHE:CD1	18:K:387:MET:SD	2.63	0.92
27:T:193:THR:CB	27:T:226:TRP:CH2	2.51	0.92
7:7:107:ILE:HD11	7:7:136:THR:HG23	1.51	0.91
18:K:68:ILE:CD1	21:N:608:LEU:HD21	1.99	0.91
24:Q:47:ASP:CA	24:Q:50:ARG:HB3	1.99	0.91
25:R:312:TYR:HA	25:R:316:LEU:HD12	1.50	0.91
25:R:422:ARG:NH2	26:S:301:PRO:HD3	1.85	0.91
30:W:25:ARG:NH2	30:W:115:CYS:SG	2.43	0.91
21:N:19:SER:HB3	27:T:35:ILE:HG21	1.44	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:43:LEU:HD21	21:N:69:TYR:CE1	2.04	0.91
24:Q:14:LEU:HD12	24:Q:26:VAL:HG21	1.51	0.91
24:Q:174:LEU:HD11	24:Q:178:HIS:HE2	1.34	0.91
27:T:241:GLU:HA	27:T:246:GLU:HB2	1.52	0.91
29:V:118:LEU:HD13	29:V:140:VAL:HB	1.52	0.91
16:I:361:ILE:HG22	16:I:392:ILE:CG2	1.99	0.91
26:S:256:LYS:O	26:S:259:TYR:HE2	1.51	0.91
27:T:216:GLU:CG	27:T:220:PHE:CE1	2.54	0.91
30:W:182:TYR:O	30:W:183:GLU:CG	2.17	0.91
33:Z:924:LYS:HB2	33:Z:959:HIS:HE1	0.76	0.91
15:H:172:MET:CE	16:I:129:TYR:HB2	2.00	0.91
17:J:167:PRO:CD	17:J:174:PHE:CZ	2.54	0.91
22:O:277:ILE:HG21	22:O:279:ILE:H	1.31	0.91
28:U:16:LEU:HD22	29:V:209:GLU:OE2	1.68	0.91
20:M:365:SER:HB3	20:M:376:TRP:HZ2	1.33	0.91
24:Q:331:THR:CG2	24:Q:335:PHE:CE2	2.53	0.91
26:S:188:TYR:CE2	26:S:210:LEU:HD13	2.04	0.91
30:W:32:SER:O	30:W:36:ILE:HG12	1.71	0.91
4:4:26:VAL:CG1	4:4:28:LYS:O	2.18	0.91
19:L:253:ASP:CA	20:M:256:ILE:HG13	2.01	0.91
22:O:66:VAL:HG12	22:O:106:PHE:CE1	2.06	0.91
29:V:114:PHE:H	29:V:118:LEU:HD23	1.36	0.91
20:M:289:LYS:NZ	20:M:302:GLN:NE2	2.07	0.91
28:U:5:HIS:ND1	28:U:6:GLU:N	2.19	0.91
22:O:250:TRP:CH2	22:O:270:ILE:HG23	2.05	0.91
24:Q:135:HIS:CB	24:Q:161:LEU:HD22	2.01	0.91
25:R:31:PHE:CZ	25:R:182:ASN:ND2	2.39	0.91
25:R:280:ILE:HD12	25:R:289:ILE:CG1	2.01	0.91
10:C:160:TRP:CZ3	10:C:163:ILE:HD13	2.05	0.91
22:O:69:PHE:CD2	22:O:78:VAL:CG2	2.53	0.91
24:Q:14:LEU:HD11	24:Q:26:VAL:HG21	0.92	0.91
28:U:94:HIS:CE1	28:U:96:GLY:CA	2.53	0.91
1:1:19:ARG:HH12	1:1:29:ARG:HG3	1.21	0.91
14:G:182:HIS:CG	14:G:186:LEU:HG	2.05	0.91
31:X:46:TRP:CZ2	31:X:132:SER:HA	2.06	0.91
33:Z:400:ILE:HD11	33:Z:418:ALA:HB1	1.52	0.91
14:G:53:ILE:HD11	14:G:212:GLU:HB2	1.53	0.90
17:J:166:LEU:C	17:J:174:PHE:CE1	2.43	0.90
19:L:309:LEU:HD22	19:L:342:ARG:HE	1.33	0.90
20:M:50:ARG:HB3	30:W:73:LEU:CD1	1.99	0.90
21:N:277:LEU:CD1	21:N:290:LEU:HD11	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:269:LYS:NZ	24:Q:281:ILE:HD11	1.85	0.90
33:Z:358:TYR:HD2	33:Z:428:TRP:HE1	0.91	0.90
22:O:202:SER:O	22:O:203:THR:HG22	1.70	0.90
22:O:233:LEU:HD23	22:O:236:HIS:ND1	1.86	0.90
22:O:365:LYS:HB3	22:O:369:ARG:NH1	1.86	0.90
6:6:115:SER:CB	6:6:128:ARG:NH1	2.34	0.90
28:U:283:ARG:HH22	29:V:283:THR:HG22	1.34	0.90
15:H:251:PRO:O	15:H:254:THR:HG23	1.70	0.90
18:K:49:PHE:CE1	21:N:192:LEU:HD12	2.06	0.90
27:T:193:THR:HG22	27:T:226:TRP:CH2	2.06	0.90
3:3:-2:ASN:O	3:3:19:ARG:NH1	2.04	0.90
14:G:7:TYR:CE1	14:G:13:VAL:HG23	2.06	0.90
15:H:105:ILE:HG22	15:H:105:ILE:O	1.70	0.90
24:Q:47:ASP:N	24:Q:50:ARG:HB3	1.86	0.90
25:R:171:MET:CE	25:R:206:ARG:HG3	2.00	0.90
25:R:241:ILE:HG22	25:R:242:GLU:HG3	1.52	0.90
29:V:261:LEU:CD1	29:V:283:THR:CG2	2.48	0.90
30:W:9:VAL:O	30:W:113:PHE:HD2	1.52	0.90
3:3:59:ARG:HH21	10:C:99:LEU:HD11	1.37	0.90
18:K:364:PRO:CB	24:Q:247:HIS:NE2	2.26	0.90
22:O:79:VAL:CG1	22:O:118:GLY:HA2	2.02	0.90
22:O:103:LYS:O	22:O:129:ILE:CG1	2.19	0.90
22:O:133:ILE:CG1	22:O:137:TYR:CE2	2.54	0.90
27:T:216:GLU:CG	27:T:220:PHE:HE1	1.84	0.90
28:U:152:LYS:CB	28:U:154:PHE:CZ	2.51	0.90
33:Z:357:ILE:HG23	33:Z:960:GLY:O	1.72	0.90
12:E:48:LEU:HD11	12:E:145:ALA:CB	2.00	0.90
13:F:145:LEU:HD21	13:F:153:VAL:HG13	1.54	0.90
14:G:204:GLU:HA	14:G:207:LYS:HE2	1.52	0.90
18:K:210:LEU:HD11	18:K:212:TYR:CZ	2.07	0.90
1:1:8:PHE:HE2	1:1:10:ASP:CB	1.85	0.90
1:1:176:VAL:HG13	1:1:183:VAL:CG1	2.01	0.90
4:4:95:ARG:HE	5:5:92:GLY:HA3	1.37	0.90
7:7:-3:VAL:HG11	7:7:49:ILE:HB	1.53	0.90
9:B:178:ARG:NH1	9:B:194:LEU:CB	2.34	0.90
27:T:89:TYR:CZ	27:T:102:LYS:NZ	2.40	0.90
27:T:216:GLU:HG3	27:T:220:PHE:HE1	1.33	0.90
27:T:226:TRP:HA	27:T:241:GLU:OE1	1.72	0.90
28:U:152:LYS:CB	28:U:154:PHE:CE1	2.32	0.90
31:X:41:GLU:CG	31:X:45:PHE:HB2	2.02	0.90
10:C:149:TYR:CE1	11:D:59:ILE:HD12	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:346:ARG:HE	18:K:372:ILE:HG21	1.37	0.90
22:O:277:ILE:HG21	22:O:279:ILE:HG12	0.90	0.90
22:O:293:LEU:O	22:O:297:ILE:HG13	1.70	0.90
29:V:154:ASP:HB3	29:V:156:PHE:CE1	2.06	0.90
13:F:120:THR:O	14:G:129:ARG:NH2	2.04	0.90
15:H:271:PHE:CZ	15:H:307:PHE:HD2	1.89	0.90
19:L:227:GLY:H	20:M:339:ARG:NH2	1.69	0.90
22:O:358:ILE:HG22	22:O:359:SER:N	1.83	0.90
29:V:53:MET:CE	29:V:65:VAL:HG11	2.02	0.90
30:W:132:LEU:HD22	30:W:137:VAL:HG11	1.52	0.90
13:F:153:VAL:HB	14:G:85:ARG:HH12	1.37	0.89
19:L:362:LYS:HA	19:L:376:PHE:CZ	2.07	0.89
21:N:406:TYR:HE1	21:N:448:LEU:HD13	1.12	0.89
22:O:4:ASN:HB2	22:O:39:PHE:HD1	1.36	0.89
30:W:21:PHE:HE1	30:W:144:PHE:HZ	1.15	0.89
10:C:160:TRP:CE2	10:C:163:ILE:HD13	2.06	0.89
14:G:94:GLU:OE2	14:G:118:TYR:OH	1.90	0.89
18:K:113:THR:CA	18:K:252:ARG:NH1	2.34	0.89
21:N:399:PHE:HD1	21:N:441:VAL:CG1	1.85	0.89
22:O:124:ASP:OD2	22:O:127:LEU:CD1	2.20	0.89
25:R:415:GLN:HG2	26:S:471:LEU:CD2	2.00	0.89
31:X:40:GLU:O	31:X:41:GLU:CG	2.19	0.89
19:L:362:LYS:HA	19:L:376:PHE:CE2	2.08	0.89
22:O:73:ILE:HG23	22:O:74:ASN:N	1.88	0.89
28:U:38:LEU:HB2	28:U:88:LYS:O	1.72	0.89
29:V:117:TRP:NE1	29:V:196:TYR:HB2	1.82	0.89
31:X:10:PHE:O	31:X:33:ILE:CG2	2.20	0.89
33:Z:103:TYR:O	33:Z:112:LYS:NZ	2.06	0.89
33:Z:133:ASP:HB2	33:Z:137:TYR:CD2	2.07	0.89
12:E:241:LYS:HA	12:E:244:LYS:HZ2	1.37	0.89
16:I:400:GLY:HA3	17:J:179:ILE:HG13	1.53	0.89
25:R:94:PHE:CZ	25:R:99:TYR:CZ	2.61	0.89
25:R:190:LYS:HB2	25:R:213:TYR:OH	1.73	0.89
29:V:126:GLN:NE2	29:V:130:GLU:OE2	2.04	0.89
32:Y:88:ASN:O	32:Y:89:GLN:HB3	1.70	0.89
33:Z:348:LEU:HD11	33:Z:921:GLU:HG2	1.54	0.89
28:U:283:ARG:CZ	29:V:284:ALA:HA	2.01	0.89
6:6:175:VAL:O	6:6:179:PHE:CD2	2.25	0.89
7:7:121:TYR:HE2	7:7:136:THR:HG22	1.36	0.89
19:L:227:GLY:N	20:M:339:ARG:NH2	2.18	0.89
20:M:50:ARG:HA	30:W:73:LEU:CD1	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:226:TRP:CZ2	27:T:235:PHE:HE2	1.89	0.89
28:U:161:ILE:CG2	28:U:162:GLU:N	2.27	0.89
28:U:273:LEU:CD1	28:U:277:TYR:CZ	2.55	0.89
16:I:106:ILE:CD1	17:J:85:LEU:HD22	2.02	0.89
17:J:69:GLY:H	18:K:144:ASN:ND2	1.69	0.89
17:J:136:LEU:HD22	17:J:217:GLU:CG	2.01	0.89
23:P:181:LEU:CD2	23:P:219:GLU:HB3	2.00	0.89
25:R:208:ASN:HD22	25:R:238:PHE:HD1	0.98	0.89
18:K:347:ARG:NH1	24:Q:205:ALA:CB	2.36	0.89
21:N:421:ASP:OD1	21:N:424:LYS:NZ	2.05	0.89
33:Z:218:GLU:HB2	33:Z:248:TYR:OH	1.68	0.89
11:D:138:PHE:CE1	11:D:215:VAL:HG12	2.08	0.89
15:H:261:ARG:NH2	16:I:315:GLY:O	2.05	0.89
28:U:5:HIS:CG	28:U:6:GLU:H	1.91	0.89
18:K:358:SER:OG	24:Q:240:PHE:CE1	2.26	0.89
33:Z:193:PHE:CE2	33:Z:196:SER:HA	2.08	0.89
21:N:70:TYR:HE2	26:S:219:LYS:HE2	1.36	0.88
22:O:205:ILE:HD12	22:O:210:ARG:HD2	1.55	0.88
3:3:155:PHE:CE1	3:3:189:ARG:HD2	2.08	0.88
15:H:206:VAL:CG1	15:H:258:LEU:HD22	2.02	0.88
17:J:193:THR:CG2	17:J:316:PHE:HE1	1.79	0.88
17:J:301:ASP:HB2	17:J:304:LEU:HG	1.54	0.88
21:N:579:SER:HA	21:N:584:ARG:NH2	1.88	0.88
30:W:180:LEU:HA	30:W:183:GLU:OE1	1.71	0.88
16:I:339:ILE:HD13	16:I:347:LYS:HE2	1.56	0.88
23:P:273:TYR:OH	23:P:386:GLN:OE1	1.90	0.88
28:U:94:HIS:HE1	28:U:96:GLY:CA	1.85	0.88
28:U:283:ARG:NH1	29:V:284:ALA:HA	1.88	0.88
18:K:248:GLY:HA2	18:K:251:PRO:HG2	1.56	0.88
20:M:75:LEU:CG	20:M:77:TYR:HE1	1.84	0.88
33:Z:358:TYR:CD2	33:Z:428:TRP:NE1	2.38	0.88
3:3:-2:ASN:C	3:3:19:ARG:NH1	2.26	0.88
18:K:200:GLN:O	25:R:204:TRP:NE1	2.07	0.88
21:N:666:GLN:HG3	21:N:873:ARG:HH21	1.35	0.88
22:O:370:LEU:HD13	28:U:204:LEU:HA	1.53	0.88
24:Q:162:LEU:HD11	24:Q:178:HIS:HE2	1.36	0.88
25:R:191:LEU:HB2	25:R:213:TYR:HE2	1.37	0.88
31:X:68:LEU:HD11	31:X:128:VAL:HB	1.52	0.88
33:Z:868:ASN:HD21	33:Z:870:ALA:HB3	1.36	0.88
14:G:140:VAL:CB	14:G:220:LEU:HD21	2.02	0.88
17:J:167:PRO:N	17:J:174:PHE:CZ	2.42	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:410:VAL:HG13	20:M:414:ASP:CB	2.02	0.88
22:O:277:ILE:CB	22:O:279:ILE:N	2.36	0.88
7:7:8:TYR:CE2	7:7:10:ASN:OD1	2.26	0.88
17:J:167:PRO:HG3	17:J:174:PHE:CE2	2.09	0.88
17:J:336:ASN:ND2	25:R:204:TRP:HE1	1.60	0.88
18:K:281:ARG:HH12	18:K:287:GLY:N	1.71	0.88
23:P:135:GLU:HG2	23:P:138:ARG:HH21	1.38	0.88
26:S:286:TYR:CE1	26:S:323:LEU:HB3	2.09	0.88
8:A:162:TYR:CE2	18:K:428:LYS:HB2	2.08	0.88
14:G:121:ALA:O	14:G:125:TYR:HD1	1.56	0.88
18:K:347:ARG:NH1	24:Q:205:ALA:HB3	1.87	0.88
6:6:14:LEU:HD23	6:6:34:VAL:HG13	1.55	0.88
19:L:111:GLU:HG2	19:L:117:TYR:CD2	2.08	0.88
20:M:289:LYS:HZ2	20:M:302:GLN:HE22	0.90	0.88
20:M:361:LEU:HB3	20:M:376:TRP:CE2	2.09	0.88
20:M:368:MET:SD	20:M:395:THR:HG22	2.12	0.88
21:N:602:VAL:O	21:N:606:VAL:HG22	1.74	0.88
24:Q:82:THR:O	24:Q:85:MET:HG2	1.73	0.88
30:W:21:PHE:CZ	30:W:144:PHE:CZ	2.61	0.88
33:Z:133:ASP:CB	33:Z:137:TYR:CD2	2.57	0.88
33:Z:237:VAL:HG12	33:Z:245:VAL:HG12	1.56	0.88
33:Z:401:VAL:HG22	33:Z:426:TYR:HH	1.29	0.88
20:M:77:TYR:CE2	20:M:159:LEU:HD11	2.07	0.88
25:R:422:ARG:HH12	26:S:301:PRO:HG3	1.37	0.88
27:T:1:MET:HB3	27:T:2:PRO:HD3	0.91	0.88
27:T:62:LEU:HD12	27:T:88:TYR:CE2	2.09	0.88
20:M:50:ARG:CB	30:W:73:LEU:CD1	2.52	0.87
30:W:71:LYS:HA	30:W:74:ALA:HB3	1.57	0.87
33:Z:64:TYR:CE1	33:Z:68:LEU:HD11	2.09	0.87
21:N:479:GLU:CB	21:N:512:ASN:HD21	1.87	0.87
22:O:3:ASN:HB2	22:O:39:PHE:CZ	2.09	0.87
33:Z:359:LYS:NZ	33:Z:429:ASN:HD22	1.72	0.87
1:1:66:TYR:HE2	1:1:73:PRO:HA	1.37	0.87
33:Z:493:LEU:CD1	33:Z:497:PHE:CD2	2.57	0.87
8:A:81:MET:SD	8:A:143:PHE:CE2	2.67	0.87
15:H:66:LYS:HG2	16:I:99:ILE:HD13	1.56	0.87
19:L:259:SER:CB	19:L:303:ARG:HH12	1.88	0.87
16:I:366:THR:HG21	16:I:377:LEU:HD21	1.55	0.87
20:M:368:MET:SD	20:M:395:THR:HG21	2.15	0.87
26:S:145:PHE:O	26:S:149:SER:OG	1.91	0.87
28:U:66:TRP:HZ3	28:U:68:LEU:CB	1.87	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:5:ALA:HB3	30:W:103:ASN:HB2	1.57	0.87
18:K:155:ASP:O	19:L:126:ARG:CZ	2.23	0.87
21:N:579:SER:HA	21:N:584:ARG:CZ	2.04	0.87
22:O:185:PHE:CE2	22:O:219:ILE:HG22	2.09	0.87
22:O:373:TRP:HZ3	28:U:233:PHE:HB3	0.73	0.87
33:Z:133:ASP:CA	33:Z:137:TYR:CD1	2.52	0.87
13:F:166:GLN:CA	20:M:381:ARG:NH2	2.37	0.87
25:R:353:MET:CE	25:R:364:LEU:HD11	2.04	0.87
8:A:130:GLN:HB3	9:B:127:VAL:HG23	1.57	0.87
15:H:253:GLY:HA2	16:I:314:ASP:OD1	1.73	0.87
16:I:100:ARG:C	16:I:104:LEU:HD11	1.96	0.87
17:J:115:LEU:HB2	17:J:122:LEU:HD23	1.57	0.87
18:K:169:VAL:H	19:L:315:PHE:HE1	1.23	0.87
22:O:25:LEU:O	22:O:29:PHE:CG	2.28	0.87
28:U:5:HIS:HD1	28:U:6:GLU:H	1.20	0.87
33:Z:321:PHE:CE2	33:Z:351:PRO:CD	2.57	0.87
1:1:119:VAL:CB	14:G:103:LYS:HZ2	1.87	0.87
8:A:220:LYS:HD3	8:A:242:GLU:HB2	1.55	0.87
20:M:410:VAL:HG13	20:M:414:ASP:HB2	1.55	0.87
22:O:66:VAL:HG12	22:O:106:PHE:HE1	1.39	0.87
22:O:153:LEU:HD13	22:O:174:THR:HG21	0.88	0.87
24:Q:65:TYR:CD2	24:Q:74:LEU:HB2	2.08	0.87
25:R:125:GLU:CD	25:R:126:GLY:N	2.29	0.87
27:T:55:LEU:CG	27:T:59:LYS:HE2	2.05	0.87
30:W:147:ILE:O	30:W:147:ILE:HG22	1.74	0.87
33:Z:55:ARG:NH1	33:Z:63:LEU:HD22	1.89	0.87
33:Z:244:ARG:O	33:Z:248:TYR:HD1	1.58	0.87
10:C:42:ASP:HA	10:C:218:LYS:HZ3	1.38	0.86
15:H:155:PHE:HE1	20:M:77:TYR:N	1.73	0.86
16:I:132:ILE:HD12	16:I:138:LYS:HE2	0.94	0.86
22:O:188:PHE:CD2	22:O:220:SER:HB3	2.09	0.86
23:P:203:ILE:CG2	23:P:220:TYR:CE1	2.58	0.86
23:P:369:LEU:HB3	23:P:371:LEU:HD12	1.55	0.86
30:W:168:THR:HG22	30:W:169:SER:HB3	1.57	0.86
16:I:400:GLY:N	17:J:179:ILE:HD11	1.90	0.86
19:L:259:SER:HB2	19:L:303:ARG:HH12	1.35	0.86
21:N:479:GLU:HB2	21:N:512:ASN:HD21	1.34	0.86
22:O:80:LYS:CE	22:O:81:TYR:CZ	2.51	0.86
26:S:163:VAL:CG2	26:S:184:TRP:CZ3	2.50	0.86
31:X:66:LEU:CD1	31:X:99:PHE:CZ	2.58	0.86
4:4:43:MET:CG	4:4:45:PHE:CZ	2.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:198:MET:HE2	15:H:272:ILE:HG23	1.56	0.86
21:N:399:PHE:HD1	21:N:441:VAL:HG21	1.36	0.86
27:T:155:GLY:O	27:T:156:SER:CB	2.23	0.86
28:U:152:LYS:HB3	28:U:154:PHE:CE1	2.06	0.86
29:V:52:LEU:CD1	29:V:107:TRP:CZ3	2.57	0.86
31:X:46:TRP:HZ2	31:X:132:SER:CA	1.86	0.86
2:2:82:MET:O	2:2:86:HIS:CD2	2.28	0.86
3:3:26:GLY:HA3	3:3:174:TRP:CZ2	2.09	0.86
6:6:116:PHE:CE2	6:6:122:TYR:HB3	2.11	0.86
12:E:125:GLU:OE1	13:F:123:TYR:CD1	2.27	0.86
17:J:166:LEU:C	17:J:174:PHE:HE1	1.77	0.86
18:K:210:LEU:HD21	18:K:212:TYR:HH	1.37	0.86
25:R:171:MET:SD	25:R:194:VAL:HG21	2.14	0.86
28:U:19:LEU:HD12	28:U:127:GLN:CD	1.94	0.86
2:2:8:PHE:CE1	2:2:12:VAL:N	2.42	0.86
9:B:27:ALA:CB	18:K:426:PHE:HE1	1.88	0.86
11:D:11:PHE:CZ	12:E:137:PRO:HD2	2.10	0.86
17:J:193:THR:HB	17:J:316:PHE:CE1	2.03	0.86
18:K:49:PHE:HE1	21:N:192:LEU:CG	1.87	0.86
20:M:163:PHE:CE1	20:M:261:LYS:HG2	2.10	0.86
21:N:365:PHE:CZ	21:N:406:TYR:HB2	2.10	0.86
26:S:256:LYS:O	26:S:259:TYR:CZ	2.27	0.86
26:S:436:ILE:HD12	26:S:438:HIS:NE2	1.91	0.86
30:W:21:PHE:CG	30:W:25:ARG:HA	2.10	0.86
30:W:59:PRO:HB2	30:W:93:ILE:HG21	1.55	0.86
31:X:85:ARG:NH2	31:X:116:ALA:H	1.72	0.86
20:M:77:TYR:CE2	20:M:159:LEU:HD13	2.10	0.86
21:N:202:PHE:CE2	21:N:206:ILE:HD11	2.11	0.86
21:N:714:THR:HG23	21:N:756:THR:OG1	1.75	0.86
28:U:283:ARG:NH1	29:V:284:ALA:N	2.23	0.86
30:W:143:ASN:CB	30:W:173:THR:HA	2.05	0.86
13:F:179:PHE:HE1	13:F:188:GLU:OE2	1.59	0.86
17:J:115:LEU:HD21	17:J:120:TYR:CA	2.04	0.86
30:W:21:PHE:HZ	30:W:144:PHE:CE1	1.93	0.86
30:W:37:PHE:HE1	30:W:49:VAL:HG11	1.36	0.86
18:K:210:LEU:CG	18:K:212:TYR:CZ	2.56	0.86
21:N:479:GLU:HB2	21:N:512:ASN:CG	1.95	0.86
21:N:514:THR:HG22	21:N:546:LEU:HD13	1.57	0.86
28:U:16:LEU:CD2	29:V:209:GLU:HG2	2.05	0.86
31:X:17:TYR:CE1	31:X:19:GLU:OE1	2.29	0.86
10:C:239:LEU:HB3	10:C:245:THR:HG22	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:140:VAL:HG21	14:G:220:LEU:HD23	1.57	0.86
18:K:68:ILE:CG1	21:N:608:LEU:CD2	2.54	0.86
18:K:95:VAL:HG13	18:K:139:LEU:HB2	1.58	0.86
19:L:426:LYS:HG3	19:L:427:LYS:H	1.40	0.86
4:4:66:TYR:HE1	4:4:74:LEU:HD21	1.29	0.86
7:7:150:VAL:HG12	7:7:151:VAL:HG23	1.58	0.86
15:H:146:VAL:HG12	15:H:155:PHE:HB3	1.57	0.86
20:M:77:TYR:HE2	20:M:159:LEU:HD13	1.39	0.86
20:M:203:ARG:HB3	20:M:206:LYS:HD2	1.54	0.85
22:O:79:VAL:CB	22:O:121:ASP:O	2.23	0.85
22:O:370:LEU:HD11	28:U:207:VAL:HG21	1.58	0.85
28:U:92:TRP:CD1	28:U:119:LEU:O	2.28	0.85
15:H:271:PHE:HE1	15:H:273:ARG:HB2	1.40	0.85
17:J:115:LEU:HD12	17:J:122:LEU:CD2	2.06	0.85
22:O:42:SER:OG	22:O:50:ASP:HB2	1.75	0.85
22:O:306:ARG:HG3	22:O:351:SER:HA	1.57	0.85
23:P:245:TYR:CD1	23:P:257:TRP:NE1	2.40	0.85
24:Q:202:ARG:HH21	24:Q:222:SER:CB	1.88	0.85
26:S:211:ARG:CZ	26:S:240:ASP:HB3	2.04	0.85
27:T:250:MET:O	27:T:251:HIS:CD2	2.29	0.85
33:Z:419:VAL:O	33:Z:422:ILE:HG12	1.75	0.85
11:D:96:HIS:CD2	11:D:100:LEU:CD1	2.58	0.85
19:L:111:GLU:HG2	19:L:117:TYR:HD2	1.41	0.85
22:O:214:ALA:HB3	22:O:248:TYR:OH	1.75	0.85
24:Q:314:PHE:CD2	24:Q:339:TYR:HD1	1.94	0.85
16:I:222:TYR:CZ	16:I:349:LEU:HA	2.11	0.85
17:J:219:VAL:HB	18:K:281:ARG:NE	1.90	0.85
18:K:113:THR:HA	18:K:252:ARG:HH12	1.40	0.85
24:Q:174:LEU:CD1	24:Q:178:HIS:NE2	2.38	0.85
24:Q:311:LEU:CD1	24:Q:366:ILE:HG12	2.05	0.85
27:T:59:LYS:HD2	27:T:97:SER:O	1.75	0.85
27:T:224:ARG:O	27:T:225:ASN:CB	2.25	0.85
28:U:104:LEU:HB2	28:U:152:LYS:HG2	1.58	0.85
12:E:165:TYR:HB2	12:E:167:TYR:OH	1.75	0.85
17:J:241:ALA:HB1	17:J:287:ASN:ND2	1.91	0.85
6:6:10:ASP:OD1	6:6:11:PHE:CD1	2.28	0.85
13:F:65:LYS:HD3	13:F:222:PHE:HE2	1.42	0.85
16:I:252:LEU:CA	16:I:253:ILE:N	2.38	0.85
30:W:59:PRO:HG2	30:W:93:ILE:HG13	0.88	0.85
31:X:16:GLU:HB3	31:X:27:ILE:HB	1.56	0.85
33:Z:286:VAL:O	33:Z:287:ARG:HB3	1.74	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:550:PHE:CD1	33:Z:562:TRP:CZ3	2.64	0.85
4:4:43:MET:SD	4:4:45:PHE:HZ	1.98	0.85
19:L:132:ARG:HH22	19:L:156:MET:HG3	1.38	0.85
23:P:308:LEU:HD23	23:P:369:LEU:HD23	1.59	0.85
27:T:197:TYR:OH	27:T:199:PHE:HA	1.75	0.85
28:U:161:ILE:HG22	28:U:162:GLU:H	0.75	0.85
29:V:261:LEU:HD21	29:V:283:THR:CG2	2.06	0.85
33:Z:133:ASP:CB	33:Z:137:TYR:CE2	2.58	0.85
20:M:385:GLU:CB	20:M:426:LYS:HZ2	1.86	0.85
22:O:42:SER:O	22:O:46:THR:CG2	2.24	0.85
22:O:358:ILE:CG2	22:O:359:SER:N	2.39	0.85
23:P:311:TRP:HH2	23:P:338:TRP:HE1	1.23	0.85
25:R:320:LYS:HE3	25:R:324:ARG:CD	2.06	0.85
26:S:230:LYS:NZ	26:S:256:LYS:HE3	1.91	0.85
33:Z:737:ALA:HB1	33:Z:775:MET:SD	2.17	0.85
12:E:178:GLY:HA3	15:H:409:ARG:NH2	1.92	0.85
16:I:340:ARG:CZ	16:I:343:ARG:HG3	2.03	0.85
16:I:400:GLY:H	17:J:179:ILE:HD11	1.40	0.85
17:J:234:PHE:CZ	17:J:279:LEU:CD2	2.58	0.85
18:K:158:ILE:CG2	19:L:256:ILE:HG23	2.06	0.85
18:K:200:GLN:C	25:R:204:TRP:HZ2	1.78	0.85
18:K:244:HIS:CE1	18:K:250:GLY:CA	2.60	0.85
24:Q:46:VAL:O	24:Q:50:ARG:CB	2.24	0.85
28:U:56:PHE:CD1	28:U:68:LEU:CD2	2.45	0.85
23:P:207:THR:OG1	23:P:217:LYS:NZ	2.09	0.84
28:U:19:LEU:CD1	28:U:127:GLN:OE1	2.25	0.84
29:V:165:ILE:HG21	29:V:189:ILE:HG21	1.58	0.84
31:X:35:ILE:CG1	31:X:124:LYS:HE2	2.05	0.84
1:1:66:TYR:HE2	1:1:73:PRO:CA	1.90	0.84
18:K:392:LEU:HG	18:K:396:ARG:NH1	1.92	0.84
22:O:26:PHE:HA	22:O:61:LEU:HD21	1.56	0.84
22:O:79:VAL:CB	22:O:122:HIS:CA	2.52	0.84
27:T:225:ASN:HD22	27:T:241:GLU:HA	1.40	0.84
11:D:78:LEU:HD23	16:I:436:TYR:HE1	1.42	0.84
16:I:281:ILE:HG22	16:I:284:ILE:CD1	2.06	0.84
29:V:238:LEU:HD11	29:V:242:LYS:HE3	1.59	0.84
30:W:37:PHE:CE1	30:W:49:VAL:CG1	2.55	0.84
31:X:41:GLU:HG3	31:X:45:PHE:HB2	1.60	0.84
9:B:139:HIS:ND1	9:B:145:PHE:CE2	2.45	0.84
17:J:69:GLY:N	18:K:144:ASN:HD22	1.72	0.84
24:Q:14:LEU:HD13	24:Q:26:VAL:CG2	2.05	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:382:LEU:HD11	25:R:299:SER:CB	2.08	0.84
33:Z:55:ARG:CZ	33:Z:63:LEU:HD22	2.07	0.84
8:A:104:PHE:CE2	8:A:110:TYR:O	2.31	0.84
16:I:244:PHE:HE1	16:I:246:ARG:HG2	1.42	0.84
18:K:49:PHE:CE1	21:N:192:LEU:CD1	2.60	0.84
22:O:277:ILE:CB	22:O:279:ILE:H	1.88	0.84
24:Q:146:TYR:CD1	24:Q:151:TYR:HE1	1.95	0.84
24:Q:250:THR:HG23	24:Q:251:THR:N	1.93	0.84
28:U:92:TRP:CE3	28:U:110:PHE:CE2	2.65	0.84
24:Q:130:ARG:NH2	24:Q:133:LEU:HD12	1.93	0.84
1:1:176:VAL:CG1	1:1:183:VAL:CG1	2.56	0.84
8:A:119:LYS:HG2	8:A:163:TYR:CE2	2.13	0.84
12:E:201:LEU:HD11	12:E:239:LEU:CG	2.06	0.84
20:M:75:LEU:HD11	20:M:77:TYR:CZ	2.11	0.84
33:Z:805:LEU:HB3	33:Z:893:PHE:CE1	2.13	0.84
9:B:66:LEU:HD12	9:B:71:ILE:O	1.77	0.84
24:Q:46:VAL:HG23	24:Q:50:ARG:CB	2.08	0.84
25:R:342:LEU:HG	25:R:392:ARG:HH21	1.41	0.84
12:E:88:MET:HE2	12:E:142:LEU:HD11	1.60	0.84
15:H:284:VAL:CG1	20:M:252:VAL:HG12	2.08	0.84
21:N:399:PHE:CD1	21:N:441:VAL:HG11	2.11	0.84
21:N:490:LEU:HD21	21:N:526:TYR:CD2	2.13	0.84
12:E:157:HIS:CD2	12:E:170:LYS:NZ	2.46	0.84
20:M:368:MET:SD	20:M:395:THR:HG23	2.15	0.84
22:O:25:LEU:O	22:O:29:PHE:CD2	2.31	0.84
22:O:233:LEU:CD2	22:O:236:HIS:ND1	2.41	0.84
25:R:308:LEU:HD12	25:R:334:ARG:HH12	1.38	0.84
12:E:88:MET:CE	12:E:142:LEU:HD11	2.07	0.83
15:H:261:ARG:HH22	15:H:273:ARG:NH2	1.74	0.83
21:N:21:LYS:CE	21:N:55:PHE:CE2	2.61	0.83
22:O:124:ASP:CB	22:O:127:LEU:HB2	2.07	0.83
22:O:223:LEU:HD11	22:O:277:ILE:CD1	2.07	0.83
23:P:134:VAL:CG2	23:P:138:ARG:HH12	1.91	0.83
33:Z:400:ILE:HD12	33:Z:418:ALA:HB1	1.58	0.83
1:1:19:ARG:NH1	1:1:29:ARG:CB	2.40	0.83
21:N:782:PHE:CD1	21:N:875:LEU:CD2	2.61	0.83
22:O:105:GLN:HA	22:O:108:GLU:OE2	1.78	0.83
33:Z:72:LYS:HE2	33:Z:117:ASP:OD2	1.77	0.83
7:7:95:ARG:NH1	7:7:102:LEU:HD13	1.93	0.83
11:D:70:HIS:HD2	11:D:138:PHE:O	1.62	0.83
15:H:155:PHE:HE1	20:M:77:TYR:H	1.24	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:171:MET:HE2	25:R:206:ARG:HG3	1.59	0.83
7:7:55:ILE:HD11	7:7:102:LEU:HD21	1.59	0.83
18:K:188:VAL:HA	18:K:313:LYS:NZ	1.92	0.83
27:T:197:TYR:CE1	27:T:198:ASP:C	2.52	0.83
33:Z:55:ARG:HD3	33:Z:63:LEU:HB3	1.58	0.83
22:O:124:ASP:HB3	22:O:127:LEU:CB	2.07	0.83
22:O:306:ARG:HD2	22:O:352:TRP:N	1.93	0.83
23:P:308:LEU:CD2	23:P:369:LEU:HD23	2.09	0.83
30:W:146:GLU:C	30:W:147:ILE:HG13	1.98	0.83
30:W:172:LEU:CD2	30:W:185:ILE:HA	2.07	0.83
3:3:59:ARG:NH2	10:C:99:LEU:CD1	2.31	0.83
5:5:6:PHE:CZ	5:5:13:ILE:HB	2.13	0.83
7:7:13:ILE:CG2	7:7:169:ILE:HG13	2.08	0.83
7:7:107:ILE:CD1	7:7:136:THR:HG23	2.07	0.83
19:L:370:LYS:HB2	19:L:374:PHE:HZ	1.38	0.83
23:P:221:TYR:HE2	23:P:244:ILE:HB	1.43	0.83
28:U:189:ARG:HH12	29:V:296:LEU:HD23	1.38	0.83
12:E:231:TYR:CE2	12:E:236:THR:CA	2.62	0.83
22:O:306:ARG:CG	22:O:352:TRP:N	2.42	0.83
25:R:208:ASN:HD21	25:R:238:PHE:HB2	1.42	0.83
25:R:280:ILE:CD1	25:R:289:ILE:HG13	2.05	0.83
26:S:471:LEU:HD12	28:U:288:PHE:HZ	1.38	0.83
4:4:66:TYR:CD1	4:4:74:LEU:HD11	2.13	0.83
16:I:244:PHE:CE1	16:I:246:ARG:HG2	2.14	0.83
18:K:113:THR:CA	18:K:252:ARG:HH12	1.92	0.83
24:Q:85:MET:CE	24:Q:93:THR:HA	2.08	0.83
27:T:197:TYR:CD1	27:T:235:PHE:CD1	2.66	0.83
30:W:186:ALA:O	30:W:192:LEU:HB2	1.79	0.83
16:I:358:LYS:HZ1	16:I:387:LEU:H	1.23	0.83
17:J:375:ILE:O	25:R:204:TRP:CD1	2.32	0.83
27:T:193:THR:CG2	27:T:226:TRP:CZ2	2.62	0.83
33:Z:260:GLU:HG2	33:Z:611:THR:HG21	1.60	0.83
22:O:79:VAL:HG11	22:O:121:ASP:O	1.79	0.83
22:O:83:LEU:HD11	22:O:128:LEU:HD22	1.59	0.83
27:T:1:MET:CB	27:T:2:PRO:HD2	2.08	0.83
27:T:197:TYR:HE2	27:T:235:PHE:HE1	1.27	0.83
16:I:106:ILE:HD11	17:J:85:LEU:HD22	1.57	0.82
21:N:514:THR:HG22	21:N:546:LEU:CD1	2.08	0.82
24:Q:299:MET:CE	24:Q:335:PHE:CZ	2.62	0.82
26:S:176:LEU:HD11	26:S:179:ILE:HB	1.61	0.82
28:U:92:TRP:CE2	28:U:120:LEU:HD13	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:924:LYS:HA	33:Z:959:HIS:CE1	2.09	0.82
15:H:167:ASP:HB3	15:H:186:PRO:HG2	1.60	0.82
18:K:254:VAL:HG13	18:K:258:PHE:HE1	1.41	0.82
22:O:358:ILE:HG22	22:O:360:GLY:N	1.92	0.82
23:P:134:VAL:HG23	23:P:138:ARG:HH12	1.43	0.82
31:X:8:ILE:CG2	31:X:124:LYS:HD2	2.08	0.82
10:C:160:TRP:CZ3	10:C:163:ILE:CD1	2.62	0.82
13:F:166:GLN:HB3	20:M:381:ARG:CZ	2.09	0.82
15:H:172:MET:HE3	16:I:129:TYR:CG	2.14	0.82
16:I:262:ARG:HB3	17:J:223:ILE:HD12	1.60	0.82
17:J:219:VAL:HG21	18:K:284:ALA:HB2	1.53	0.82
22:O:130:ASP:O	22:O:133:ILE:HG22	1.79	0.82
25:R:31:PHE:HZ	25:R:182:ASN:ND2	1.74	0.82
5:5:135:PHE:HE2	5:5:163:ALA:CB	1.90	0.82
10:C:29:ILE:HD13	10:C:134:SER:HB3	1.61	0.82
11:D:96:HIS:NE2	11:D:100:LEU:CD1	2.42	0.82
17:J:183:LYS:HA	17:J:286:LYS:HE3	1.61	0.82
20:M:313:ASP:HA	20:M:316:SER:OG	1.79	0.82
22:O:79:VAL:HB	22:O:122:HIS:CA	2.10	0.82
24:Q:46:VAL:C	24:Q:50:ARG:CB	2.47	0.82
33:Z:491:LEU:HD11	33:Z:900:LEU:CD1	2.09	0.82
17:J:219:VAL:O	18:K:281:ARG:CD	2.19	0.82
29:V:53:MET:HE3	29:V:65:VAL:HG11	1.59	0.82
29:V:113:GLY:HA2	29:V:118:LEU:HD22	1.59	0.82
29:V:258:GLU:HA	29:V:261:LEU:HD12	1.60	0.82
33:Z:491:LEU:HD13	33:Z:900:LEU:HD12	1.60	0.82
10:C:42:ASP:HA	10:C:218:LYS:NZ	1.94	0.82
13:F:198:SER:HB3	13:F:206:LEU:HD22	1.60	0.82
18:K:347:ARG:NE	24:Q:215:VAL:HG13	1.94	0.82
20:M:163:PHE:CD1	20:M:261:LYS:HE3	2.14	0.82
23:P:196:ALA:HB1	23:P:227:ILE:CD1	2.08	0.82
23:P:234:TYR:CD2	23:P:267:PHE:CD1	2.68	0.82
23:P:234:TYR:CE2	23:P:267:PHE:CE1	2.67	0.82
23:P:241:LEU:O	23:P:244:ILE:CG2	2.27	0.82
26:S:421:TYR:CD2	27:T:157:TYR:HB2	2.13	0.82
27:T:23:CYS:O	27:T:27:LEU:HG	1.79	0.82
28:U:223:HIS:ND1	28:U:224:THR:CB	2.42	0.82
29:V:114:PHE:CE1	29:V:118:LEU:O	2.31	0.82
31:X:17:TYR:HE1	31:X:19:GLU:OE1	1.62	0.82
7:7:-3:VAL:CG1	7:7:49:ILE:HB	2.09	0.82
17:J:37:LYS:HE3	18:K:58:TYR:CZ	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:277:LEU:CB	21:N:287:LEU:CD2	2.54	0.82
25:R:308:LEU:HD13	25:R:334:ARG:NE	1.93	0.82
30:W:5:ALA:CB	30:W:103:ASN:CB	2.50	0.82
12:E:88:MET:CE	12:E:142:LEU:HD12	2.08	0.82
12:E:165:TYR:HB2	12:E:167:TYR:HE1	1.41	0.82
13:F:105:VAL:HG11	13:F:143:HIS:HD1	1.45	0.82
21:N:365:PHE:HZ	21:N:406:TYR:HB2	1.44	0.82
24:Q:382:LEU:CD1	25:R:299:SER:HB2	2.09	0.82
27:T:197:TYR:CE2	27:T:200:LEU:N	2.47	0.82
18:K:49:PHE:HD1	21:N:192:LEU:CD1	1.91	0.82
22:O:137:TYR:HB3	22:O:149:LEU:HD11	1.61	0.82
33:Z:446:GLU:HG3	33:Z:484:LYS:HZ2	1.42	0.82
33:Z:471:LEU:HG	33:Z:497:PHE:CZ	2.15	0.82
33:Z:535:VAL:HG23	33:Z:572:ILE:O	1.80	0.82
13:F:65:LYS:CD	13:F:222:PHE:CE2	2.62	0.82
21:N:21:LYS:CE	21:N:55:PHE:CZ	2.62	0.82
24:Q:186:HIS:O	24:Q:189:ARG:NH2	2.12	0.82
26:S:471:LEU:HD13	28:U:288:PHE:CZ	2.12	0.82
33:Z:397:ASP:HB3	33:Z:425:ILE:HD13	1.61	0.82
1:1:137:TYR:CZ	1:1:157:HIS:HD2	1.96	0.81
22:O:80:LYS:CE	22:O:81:TYR:OH	2.28	0.81
22:O:341:ILE:HG13	22:O:348:VAL:HA	1.60	0.81
23:P:76:ASN:HD21	23:P:118:VAL:HG21	1.43	0.81
23:P:234:TYR:CE2	23:P:267:PHE:CD1	2.68	0.81
23:P:270:LEU:HD22	23:P:340:ASP:HB2	1.62	0.81
31:X:66:LEU:CD1	31:X:99:PHE:HZ	1.91	0.81
33:Z:218:GLU:HB2	33:Z:248:TYR:CE2	2.15	0.81
33:Z:422:ILE:HB	33:Z:426:TYR:HE2	1.45	0.81
1:1:19:ARG:NH2	1:1:26:ILE:HG21	1.95	0.81
23:P:184:MET:SD	23:P:223:LEU:HD13	2.19	0.81
8:A:84:ASN:ND2	8:A:171:THR:HG21	1.95	0.81
19:L:178:ILE:CD1	19:L:230:LEU:HD22	2.09	0.81
20:M:357:ARG:NH2	20:M:386:PHE:H	1.78	0.81
24:Q:7:LYS:HG3	24:Q:30:LEU:CD1	2.10	0.81
25:R:58:GLU:OE2	25:R:105:LYS:HB3	1.80	0.81
25:R:63:TYR:OH	25:R:92:ILE:O	1.97	0.81
26:S:341:SER:O	26:S:344:PRO:HG2	1.80	0.81
26:S:435:LYS:NZ	27:T:238:GLN:OE1	2.14	0.81
28:U:94:HIS:CE1	28:U:96:GLY:H	1.97	0.81
33:Z:493:LEU:HD12	33:Z:497:PHE:CD2	2.16	0.81
9:B:139:HIS:ND1	9:B:145:PHE:CZ	2.48	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:309:LEU:HD21	19:L:342:ARG:HD3	1.62	0.81
20:M:289:LYS:HZ3	20:M:334:ASP:HB2	1.43	0.81
25:R:422:ARG:NH1	26:S:301:PRO:CG	2.39	0.81
28:U:283:ARG:NH1	29:V:284:ALA:CA	2.43	0.81
33:Z:530:LEU:HD12	33:Z:534:PHE:CD2	2.15	0.81
17:J:142:VAL:HG13	17:J:204:HIS:CE1	2.16	0.81
19:L:227:GLY:N	20:M:339:ARG:HH21	1.76	0.81
20:M:62:ILE:HG13	20:M:66:LYS:HE3	1.63	0.81
25:R:33:LEU:HD12	25:R:43:ARG:HG3	1.62	0.81
26:S:421:TYR:HD2	27:T:157:TYR:HB2	1.45	0.81
25:R:94:PHE:HE2	25:R:96:GLN:HG2	1.45	0.81
10:C:106:ILE:HD13	10:C:111:LEU:HB2	1.62	0.81
14:G:122:HIS:CD2	14:G:128:VAL:HG11	2.15	0.81
22:O:15:ARG:HD3	22:O:72:LYS:O	1.80	0.81
23:P:140:THR:HG21	23:P:163:LEU:CD2	2.10	0.81
28:U:283:ARG:NE	29:V:284:ALA:HA	1.96	0.81
8:A:39:ASN:HD21	8:A:58:LYS:HD2	1.44	0.81
13:F:65:LYS:CD	13:F:222:PHE:CD2	2.63	0.81
28:U:92:TRP:CZ3	28:U:106:ILE:CG2	2.63	0.81
3:3:26:GLY:HA3	3:3:174:TRP:CE2	2.16	0.81
5:5:6:PHE:CZ	5:5:13:ILE:HG13	2.16	0.81
23:P:308:LEU:CD2	23:P:369:LEU:CD2	2.59	0.81
25:R:396:LYS:HG2	25:R:400:TYR:CE2	2.16	0.81
26:S:230:LYS:CE	26:S:256:LYS:HE3	2.11	0.81
28:U:109:LEU:HD11	30:W:58:ASN:O	1.80	0.81
33:Z:147:GLU:HA	33:Z:210:TYR:CE1	2.16	0.81
10:C:213:PHE:HD2	10:C:230:PHE:CD2	1.99	0.81
18:K:392:LEU:HG	18:K:396:ARG:HH12	1.44	0.81
21:N:124:TYR:HB2	21:N:162:ARG:HG3	1.62	0.81
30:W:20:ASP:O	30:W:21:PHE:HB2	1.81	0.81
33:Z:103:TYR:CD1	33:Z:116:ALA:CB	2.63	0.81
2:2:8:PHE:CZ	2:2:11:GLY:CA	2.65	0.80
8:A:52:VAL:CG2	8:A:202:VAL:HG12	2.11	0.80
21:N:70:TYR:CE2	26:S:219:LYS:HE2	2.16	0.80
22:O:38:TRP:HE3	22:O:53:LYS:CD	1.91	0.80
22:O:356:ARG:NH2	22:O:362:GLN:HG3	1.95	0.80
24:Q:24:GLU:OE2	24:Q:77:PHE:HE2	1.63	0.80
24:Q:27:TYR:OH	24:Q:54:GLN:HG3	1.81	0.80
33:Z:193:PHE:CG	33:Z:196:SER:HB2	2.15	0.80
9:B:178:ARG:HH12	9:B:194:LEU:HB3	1.45	0.80
15:H:251:PRO:O	15:H:254:THR:CG2	2.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:241:GLU:HA	27:T:246:GLU:CB	2.10	0.80
28:U:223:HIS:CE1	28:U:224:THR:CB	2.64	0.80
33:Z:218:GLU:HB3	33:Z:248:TYR:OH	1.81	0.80
24:Q:243:PHE:CE1	24:Q:287:THR:HG22	2.15	0.80
18:K:346:ARG:NE	18:K:372:ILE:HG21	1.97	0.80
22:O:188:PHE:HZ	22:O:216:ASP:HB3	1.46	0.80
23:P:245:TYR:HE1	23:P:257:TRP:HZ2	1.29	0.80
24:Q:202:ARG:NH2	24:Q:222:SER:CB	2.44	0.80
19:L:370:LYS:CB	19:L:374:PHE:CZ	2.64	0.80
22:O:80:LYS:CD	22:O:81:TYR:CE2	2.64	0.80
22:O:119:SER:HB2	22:O:166:ARG:HD3	1.63	0.80
23:P:234:TYR:CD2	23:P:267:PHE:CZ	2.69	0.80
23:P:303:PHE:O	23:P:348:HIS:CD2	2.34	0.80
23:P:395:ARG:HE	24:Q:357:VAL:HA	1.45	0.80
26:S:398:THR:N	26:S:447:GLU:OE1	2.13	0.80
28:U:92:TRP:HE3	28:U:110:PHE:CE2	1.99	0.80
3:3:42:LEU:HD22	3:3:78:PHE:HZ	1.46	0.80
14:G:166:LYS:NZ	14:G:206:ASN:OD1	2.14	0.80
22:O:103:LYS:O	22:O:129:ILE:HG13	1.81	0.80
22:O:338:LYS:O	22:O:350:ILE:HG23	1.81	0.80
25:R:208:ASN:ND2	25:R:238:PHE:HB2	1.97	0.80
28:U:19:LEU:HD12	28:U:127:GLN:OE1	1.82	0.80
33:Z:438:LYS:O	33:Z:442:VAL:HG23	1.81	0.80
13:F:143:HIS:CE1	13:F:145:LEU:HB2	2.16	0.80
24:Q:151:TYR:CZ	24:Q:187:LYS:HG3	2.17	0.80
17:J:166:LEU:O	17:J:174:PHE:HE1	1.63	0.80
23:P:281:ILE:HG13	23:P:300:VAL:HG21	1.64	0.80
24:Q:249:LEU:O	24:Q:250:THR:CG2	2.29	0.80
27:T:190:ALA:CB	27:T:224:ARG:CZ	2.60	0.80
33:Z:970:TYR:OH	33:Z:992:GLU:O	1.99	0.80
15:H:175:GLY:CA	15:H:183:ILE:HB	2.12	0.80
16:I:361:ILE:CG2	16:I:392:ILE:HG21	2.11	0.80
25:R:421:VAL:O	25:R:422:ARG:CB	2.30	0.80
25:R:422:ARG:HH22	26:S:301:PRO:CD	1.94	0.80
30:W:5:ALA:CA	30:W:103:ASN:HD22	1.94	0.80
31:X:75:TRP:HD1	31:X:87:PHE:CE1	1.85	0.80
1:1:19:ARG:NH1	1:1:29:ARG:CA	2.45	0.80
8:A:174:LYS:CD	8:A:214:LEU:HG	2.12	0.80
8:A:174:LYS:HD2	8:A:214:LEU:HG	1.62	0.80
14:G:223:THR:HG23	14:G:228:LYS:HD2	1.63	0.80
16:I:339:ILE:HG21	16:I:347:LYS:CE	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:190:LEU:HD11	21:N:228:VAL:HG23	1.63	0.80
22:O:344:VAL:HG21	23:P:361:THR:HG22	1.62	0.80
24:Q:272:LEU:HD23	24:Q:274:LEU:CD1	2.10	0.80
33:Z:805:LEU:HD22	33:Z:893:PHE:CE1	2.17	0.80
9:B:32:VAL:HG11	9:B:48:GLU:HB2	1.62	0.79
15:H:318:ARG:NH1	15:H:364:ALA:CB	2.45	0.79
18:K:184:ILE:HD12	18:K:222:LEU:HD13	1.64	0.79
21:N:320:SER:CB	21:N:686:ILE:HG22	2.11	0.79
22:O:79:VAL:HB	22:O:121:ASP:O	1.81	0.79
22:O:196:LEU:HB2	22:O:213:LEU:HD21	1.64	0.79
24:Q:90:LYS:HD3	24:Q:129:LYS:NZ	1.96	0.79
28:U:100:ARG:O	28:U:152:LYS:HD3	1.81	0.79
30:W:1:MET:N	30:W:44:ASN:HD21	1.80	0.79
8:A:195:ASN:O	8:A:196:GLU:CG	2.31	0.79
20:M:289:LYS:HZ1	20:M:334:ASP:HB2	1.46	0.79
24:Q:46:VAL:O	24:Q:47:ASP:OD1	2.00	0.79
33:Z:147:GLU:HA	33:Z:210:TYR:OH	1.82	0.79
21:N:33:ASP:HA	21:N:71:ASN:ND2	1.96	0.79
21:N:326:SER:N	29:V:182:LYS:HG3	1.97	0.79
1:1:176:VAL:CG1	1:1:183:VAL:HG13	2.10	0.79
3:3:61:LYS:NZ	3:3:85:SER:HB3	1.97	0.79
14:G:140:VAL:HB	14:G:220:LEU:HD11	1.64	0.79
15:H:271:PHE:CE1	15:H:273:ARG:HB2	2.17	0.79
16:I:75:PHE:HD2	16:I:76:VAL:CG2	1.93	0.79
20:M:379:LEU:HD22	20:M:415:PHE:HD1	1.47	0.79
21:N:24:ALA:O	21:N:28:ILE:CG1	2.27	0.79
21:N:596:LEU:CD1	21:N:717:LEU:HD22	2.12	0.79
22:O:280:LEU:HA	22:O:283:HIS:HB3	1.62	0.79
1:1:190:PRO:HA	1:1:193:TYR:HE1	1.47	0.79
13:F:198:SER:HA	13:F:206:LEU:HD11	1.64	0.79
15:H:334:LEU:HD23	20:M:282:GLU:HG2	1.65	0.79
18:K:240:SER:HB2	19:L:306:MET:CE	2.10	0.79
23:P:234:TYR:CA	23:P:267:PHE:CE2	2.65	0.79
33:Z:147:GLU:CA	33:Z:210:TYR:OH	2.31	0.79
1:1:122:LEU:HD21	7:7:28:PHE:CD1	2.16	0.79
7:7:-4:ILE:HG13	7:7:-3:VAL:HG23	1.63	0.79
7:7:145:PRO:HA	7:7:148:ARG:HE	1.48	0.79
21:N:112:GLU:O	21:N:116:GLN:HG2	1.83	0.79
23:P:308:LEU:HD23	23:P:369:LEU:CA	2.12	0.79
24:Q:59:LEU:HD13	24:Q:103:LYS:HD2	1.62	0.79
25:R:31:PHE:HZ	25:R:182:ASN:HD22	1.29	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:320:LYS:CD	25:R:324:ARG:HD2	2.13	0.79
27:T:226:TRP:CD1	27:T:241:GLU:OE1	2.36	0.79
28:U:127:GLN:OE1	29:V:208:LYS:HB3	1.83	0.79
1:1:45:ARG:NH2	1:1:53:GLN:CA	2.44	0.79
13:F:145:LEU:HD11	13:F:153:VAL:CG1	2.12	0.79
21:N:25:LEU:HD13	21:N:57:ASP:HB2	1.60	0.79
22:O:344:VAL:HB	23:P:361:THR:HG23	1.63	0.79
22:O:377:VAL:HG13	28:U:193:GLN:NE2	1.96	0.79
22:O:387:ARG:NH2	27:T:258:ASN:HB3	1.97	0.79
27:T:62:LEU:HD12	27:T:88:TYR:HE2	1.46	0.79
15:H:105:ILE:HG21	15:H:145:TYR:O	1.82	0.79
21:N:19:SER:HB3	27:T:35:ILE:HG23	1.63	0.79
23:P:302:LEU:CB	23:P:310:ARG:HE	1.86	0.79
24:Q:297:ASP:HB3	24:Q:321:TYR:OH	1.83	0.79
26:S:188:TYR:CZ	26:S:210:LEU:HD22	2.18	0.79
27:T:62:LEU:CD1	27:T:88:TYR:HE2	1.95	0.79
30:W:25:ARG:CD	30:W:144:PHE:CE2	2.64	0.79
7:7:93:TYR:HD1	7:7:96:ARG:HE	1.30	0.79
10:C:149:TYR:CZ	11:D:59:ILE:HB	2.18	0.79
17:J:169:LYS:NZ	17:J:206:THR:HA	1.97	0.79
17:J:208:CYS:SG	17:J:242:PRO:HB2	2.22	0.79
19:L:173:PHE:CZ	19:L:177:GLU:HB3	2.17	0.79
22:O:277:ILE:HG22	22:O:278:PRO:CD	2.13	0.79
16:I:244:PHE:CE1	16:I:246:ARG:CZ	2.64	0.79
19:L:132:ARG:NH2	19:L:156:MET:CG	2.46	0.79
22:O:42:SER:C	22:O:46:THR:HB	2.02	0.79
22:O:340:SER:HB3	23:P:358:SER:HB2	1.63	0.79
25:R:130:GLN:O	25:R:134:TRP:CD1	2.36	0.79
29:V:112:PRO:HB2	29:V:114:PHE:CE1	2.18	0.79
31:X:85:ARG:HH21	31:X:115:SER:CA	1.96	0.79
33:Z:64:TYR:OH	33:Z:115:LEU:HB2	1.82	0.79
15:H:175:GLY:C	15:H:183:ILE:HB	2.02	0.78
18:K:123:LEU:HD12	18:K:126:LEU:CD1	2.13	0.78
19:L:379:ALA:HA	19:L:382:MET:HE2	1.64	0.78
20:M:361:LEU:HD13	20:M:376:TRP:HE3	1.46	0.78
22:O:28:GLN:O	22:O:31:LYS:HB3	1.83	0.78
22:O:344:VAL:O	22:O:345:ASN:CG	2.21	0.78
28:U:32:ARG:NH2	28:U:56:PHE:HZ	1.79	0.78
29:V:57:PHE:CB	29:V:63:VAL:HA	2.13	0.78
31:X:17:TYR:HE1	31:X:19:GLU:CD	1.86	0.78
33:Z:218:GLU:HG2	33:Z:219:ASP:N	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:80:SER:HB2	14:G:103:LYS:HG3	1.64	0.78
8:A:19:PHE:CE1	9:B:128:ARG:NH1	2.51	0.78
15:H:431:ILE:CG2	16:I:196:GLU:OE2	2.31	0.78
18:K:168:ASP:N	19:L:315:PHE:CE1	2.52	0.78
20:M:75:LEU:HG	20:M:77:TYR:HD1	1.39	0.78
24:Q:7:LYS:CG	24:Q:30:LEU:HD13	2.12	0.78
4:4:69:ARG:HG3	11:D:90:ARG:NH1	1.99	0.78
15:H:249:TYR:CZ	15:H:376:GLU:HA	2.18	0.78
22:O:373:TRP:CZ3	28:U:233:PHE:CG	2.70	0.78
28:U:66:TRP:CZ2	28:U:109:LEU:HD12	2.18	0.78
29:V:117:TRP:HZ2	29:V:196:TYR:CA	1.94	0.78
33:Z:321:PHE:CD2	33:Z:351:PRO:HD3	2.17	0.78
26:S:421:TYR:CZ	27:T:158:GLN:HB2	2.19	0.78
27:T:70:ILE:HG21	27:T:173:GLU:HB3	1.66	0.78
7:7:8:TYR:CZ	7:7:11:GLY:CA	2.67	0.78
15:H:340:LEU:HD11	15:H:370:ARG:HH11	1.47	0.78
15:H:431:ILE:HG21	16:I:196:GLU:OE2	1.84	0.78
17:J:169:LYS:CE	17:J:206:THR:HA	2.14	0.78
17:J:169:LYS:HE2	17:J:206:THR:HA	1.65	0.78
17:J:219:VAL:HG21	18:K:284:ALA:HA	1.51	0.78
21:N:508:THR:HG21	21:N:513:ILE:CG2	2.12	0.78
22:O:43:GLU:CD	22:O:44:SER:HB2	2.02	0.78
22:O:47:LYS:NZ	22:O:65:PHE:HE2	1.81	0.78
27:T:82:PHE:HA	27:T:109:TYR:OH	1.83	0.78
12:E:201:LEU:HB3	12:E:243:LEU:HD22	1.66	0.78
18:K:240:SER:H	19:L:306:MET:CE	1.96	0.78
20:M:77:TYR:HE2	20:M:159:LEU:HD11	1.40	0.78
21:N:421:ASP:CA	21:N:424:LYS:NZ	2.28	0.78
22:O:4:ASN:HB2	22:O:39:PHE:CD1	2.18	0.78
22:O:233:LEU:HD23	22:O:236:HIS:CG	2.18	0.78
33:Z:471:LEU:CB	33:Z:497:PHE:CZ	2.67	0.78
33:Z:610:GLY:O	33:Z:748:LEU:CD2	2.32	0.78
22:O:277:ILE:HG23	22:O:279:ILE:HG12	1.65	0.78
27:T:190:ALA:HB2	27:T:224:ARG:NE	1.97	0.78
29:V:117:TRP:CZ2	29:V:196:TYR:CB	2.65	0.78
1:1:-6:GLY:HA2	2:2:116:HIS:CD2	2.19	0.78
3:3:12:VAL:HG22	3:3:103:ILE:CD1	2.10	0.78
7:7:121:TYR:CE2	7:7:136:THR:HG22	2.18	0.78
10:C:180:TYR:CE2	10:C:182:ASP:HA	2.18	0.78
17:J:375:ILE:HD12	25:R:204:TRP:HE3	1.45	0.78
22:O:306:ARG:CD	22:O:352:TRP:N	2.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:193:THR:HG22	27:T:226:TRP:CZ2	2.18	0.78
33:Z:786:SER:O	33:Z:787:ASP:OD2	2.00	0.78
33:Z:985:LYS:HB2	33:Z:991:GLU:OE2	1.83	0.78
8:A:104:PHE:HE2	8:A:111:ASP:O	1.65	0.78
15:H:249:TYR:OH	15:H:376:GLU:HB3	1.84	0.78
15:H:312:ASP:HA	15:H:360:THR:HG21	1.66	0.78
15:H:340:LEU:CD1	15:H:370:ARG:NH1	2.47	0.78
24:Q:405:GLN:O	25:R:396:LYS:HD3	1.84	0.78
29:V:118:LEU:HD11	29:V:140:VAL:HB	1.59	0.78
29:V:231:GLU:O	29:V:235:GLU:CB	2.32	0.78
31:X:46:TRP:CZ2	31:X:132:SER:CA	2.65	0.78
33:Z:218:GLU:HG2	33:Z:219:ASP:H	1.46	0.78
1:1:75:THR:HB	1:1:111:TYR:CE1	2.19	0.78
2:2:87:LEU:CD2	2:2:94:ILE:HD11	2.15	0.78
11:D:159:TRP:CE3	12:E:59:LEU:HD13	2.19	0.78
20:M:252:VAL:HG21	20:M:285:ALA:HB1	1.66	0.78
25:R:94:PHE:CE2	25:R:95:ASP:O	2.37	0.78
27:T:197:TYR:CE2	27:T:199:PHE:C	2.58	0.78
28:U:92:TRP:CE3	28:U:110:PHE:CD2	2.72	0.78
30:W:21:PHE:CB	30:W:25:ARG:HA	2.13	0.78
8:A:220:LYS:CD	8:A:238:ALA:O	2.32	0.77
18:K:254:VAL:HG11	18:K:299:LEU:CD2	2.12	0.77
21:N:406:TYR:CD1	21:N:448:LEU:CD1	2.66	0.77
24:Q:272:LEU:CD2	24:Q:274:LEU:HD12	2.14	0.77
26:S:181:ALA:O	26:S:236:LEU:HD21	1.84	0.77
31:X:95:GLU:HB3	31:X:97:TYR:CE1	2.19	0.77
1:1:122:LEU:CD1	7:7:28:PHE:HE1	1.97	0.77
4:4:26:VAL:CG1	4:4:29:ASP:HB3	2.14	0.77
4:4:43:MET:HG3	4:4:45:PHE:CE2	2.18	0.77
15:H:183:ILE:HG22	15:H:183:ILE:O	1.83	0.77
18:K:346:ARG:NH2	18:K:372:ILE:HD13	1.99	0.77
18:K:393:ARG:NH2	18:K:414:GLN:OE1	2.17	0.77
18:K:423:LYS:HG2	18:K:424:PHE:CD2	2.18	0.77
22:O:277:ILE:HG21	22:O:279:ILE:CA	2.13	0.77
27:T:193:THR:HB	27:T:226:TRP:CH2	2.19	0.77
28:U:223:HIS:CG	28:U:224:THR:H	2.02	0.77
5:5:55:TRP:HE1	6:6:89:TYR:HH	1.28	0.77
13:F:78:ALA:N	20:M:433:TYR:HH	1.80	0.77
14:G:73:ILE:CG1	14:G:108:ILE:CD1	2.61	0.77
14:G:182:HIS:CD2	14:G:186:LEU:HD11	2.19	0.77
15:H:420:ARG:HD2	16:I:343:ARG:HH12	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:167:PRO:HA	17:J:174:PHE:CD1	2.18	0.77
25:R:208:ASN:HD21	25:R:238:PHE:CB	1.96	0.77
27:T:155:GLY:O	27:T:156:SER:HB2	1.83	0.77
28:U:107:ASN:ND2	28:U:111:LYS:HE3	1.99	0.77
28:U:223:HIS:CE1	28:U:224:THR:HG1	1.85	0.77
33:Z:570:LEU:HD12	33:Z:599:ILE:HG21	1.66	0.77
33:Z:758:LEU:CD2	33:Z:791:LYS:HD3	2.14	0.77
14:G:73:ILE:CD1	14:G:108:ILE:HD13	2.14	0.77
22:O:210:ARG:CZ	22:O:242:ILE:HA	2.02	0.77
22:O:306:ARG:CB	22:O:350:ILE:O	2.33	0.77
25:R:191:LEU:HB2	25:R:213:TYR:CE2	2.18	0.77
29:V:57:PHE:HB3	29:V:63:VAL:HA	1.66	0.77
30:W:180:LEU:HD23	30:W:183:GLU:OE1	1.83	0.77
21:N:479:GLU:CB	21:N:512:ASN:ND2	2.42	0.77
27:T:112:ASN:HA	27:T:177:PHE:HE2	1.50	0.77
28:U:92:TRP:CZ2	28:U:120:LEU:HD13	2.20	0.77
8:A:46:ARG:HE	8:A:152:PRO:HB2	1.50	0.77
14:G:42:ASN:HD21	14:G:183:PRO:HG2	1.49	0.77
19:L:236:ALA:HB2	19:L:277:ILE:HD12	1.64	0.77
20:M:221:TYR:HE1	20:M:346:LYS:CG	1.97	0.77
23:P:241:LEU:C	23:P:244:ILE:HG22	2.04	0.77
27:T:240:LYS:HA	27:T:245:TYR:HB3	1.66	0.77
31:X:35:ILE:HG13	31:X:124:LYS:HE2	1.66	0.77
33:Z:359:LYS:HZ2	33:Z:429:ASN:HD22	1.29	0.77
33:Z:518:LEU:HD22	33:Z:562:TRP:HB2	1.65	0.77
16:I:250:SER:O	16:I:253:ILE:CB	2.30	0.77
18:K:90:GLN:HE22	18:K:143:SER:CB	1.97	0.77
18:K:236:ARG:NH2	19:L:310:THR:HG23	1.97	0.77
20:M:361:LEU:HB3	20:M:376:TRP:CE3	2.19	0.77
22:O:66:VAL:CG1	22:O:106:PHE:HE1	1.91	0.77
22:O:250:TRP:CD1	22:O:270:ILE:HA	2.18	0.77
30:W:182:TYR:O	30:W:183:GLU:CB	2.32	0.77
1:1:-8:LYS:HE2	2:2:88:PHE:CE1	2.19	0.77
7:7:13:ILE:HG21	7:7:169:ILE:HG13	1.66	0.77
13:F:76:GLY:O	20:M:433:TYR:CE2	2.36	0.77
15:H:253:GLY:CA	16:I:314:ASP:OD1	2.33	0.77
33:Z:361:HIS:NE2	33:Z:861:THR:HB	1.99	0.77
4:4:149:PRO:O	4:4:150:ASP:HB2	1.85	0.77
12:E:109:VAL:HB	12:E:156:PHE:CE1	2.19	0.77
12:E:157:HIS:CD2	12:E:170:LYS:HZ3	2.03	0.77
12:E:165:TYR:CB	12:E:167:TYR:CZ	2.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:196:ALA:O	14:G:200:TYR:CD2	2.38	0.77
18:K:155:ASP:O	19:L:126:ARG:NH2	2.18	0.77
18:K:168:ASP:HB2	19:L:315:PHE:CD1	2.18	0.77
23:P:245:TYR:CE1	23:P:257:TRP:HZ2	2.03	0.77
30:W:168:THR:HG22	30:W:169:SER:CB	2.15	0.77
33:Z:429:ASN:O	33:Z:430:LEU:CG	2.31	0.77
7:7:85:PHE:CE2	7:7:120:ARG:HD3	2.19	0.77
16:I:175:LYS:O	17:J:282:PHE:CE2	2.37	0.77
23:P:135:GLU:CG	23:P:138:ARG:NH2	2.47	0.77
24:Q:331:THR:HG22	24:Q:335:PHE:HE2	1.45	0.77
5:5:6:PHE:CZ	5:5:13:ILE:CG1	2.68	0.76
21:N:70:TYR:HE2	26:S:219:LYS:CE	1.98	0.76
24:Q:99:THR:CG2	24:Q:103:LYS:HE2	2.14	0.76
25:R:214:TYR:CE2	25:R:230:LEU:HD12	2.20	0.76
25:R:354:ALA:HB2	25:R:364:LEU:HD23	1.67	0.76
26:S:230:LYS:NZ	26:S:256:LYS:CE	2.47	0.76
26:S:471:LEU:HB3	28:U:288:PHE:CE1	2.20	0.76
27:T:93:ASN:ND2	27:T:94:HIS:HD2	1.81	0.76
31:X:66:LEU:CD1	31:X:97:TYR:HB2	2.14	0.76
33:Z:60:ASP:OD1	33:Z:63:LEU:HD12	1.85	0.76
15:H:172:MET:CE	16:I:129:TYR:CG	2.68	0.76
16:I:281:ILE:HG22	16:I:284:ILE:HG13	1.67	0.76
24:Q:51:ARG:HH21	24:Q:92:LYS:HB3	1.50	0.76
33:Z:103:TYR:HA	33:Z:112:LYS:HG2	1.66	0.76
33:Z:452:LEU:HD11	33:Z:485:ILE:HG23	1.67	0.76
5:5:32:LYS:HD2	5:5:45:MET:HE1	1.66	0.76
9:B:224:TYR:OH	9:B:228:PRO:HA	1.84	0.76
18:K:104:ASP:OD1	18:K:107:THR:HB	1.85	0.76
22:O:342:ASP:OD1	23:P:358:SER:HB3	1.84	0.76
24:Q:222:SER:O	24:Q:226:HIS:CD2	2.37	0.76
27:T:229:VAL:CG2	27:T:234:TYR:HE1	1.96	0.76
27:T:250:MET:O	27:T:251:HIS:CG	2.38	0.76
28:U:35:GLY:C	28:U:93:TYR:HB3	2.04	0.76
33:Z:857:LEU:HD23	33:Z:858:GLY:N	1.99	0.76
12:E:98:THR:O	12:E:102:TYR:HD1	1.67	0.76
19:L:259:SER:HB2	19:L:303:ARG:CZ	2.16	0.76
20:M:385:GLU:HB3	20:M:426:LYS:HZ3	1.36	0.76
28:U:11:ALA:HB3	28:U:14:VAL:HG23	1.68	0.76
29:V:261:LEU:CG	29:V:283:THR:HG21	2.15	0.76
1:1:19:ARG:HH11	1:1:29:ARG:HA	1.47	0.76
9:B:119:GLN:HG3	9:B:123:GLN:HE21	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:265:ALA:HB1	21:N:269:LEU:HD23	1.67	0.76
27:T:211:PHE:HD2	27:T:217:THR:HG1	1.33	0.76
28:U:66:TRP:O	30:W:93:ILE:CD1	2.33	0.76
31:X:8:ILE:HG21	31:X:124:LYS:HD2	1.65	0.76
33:Z:190:THR:H	33:Z:193:PHE:HB3	1.49	0.76
1:1:137:TYR:CZ	1:1:157:HIS:CD2	2.74	0.76
8:A:135:ARG:NE	14:G:124:LEU:HD23	2.01	0.76
9:B:32:VAL:CG1	9:B:48:GLU:HB2	2.15	0.76
13:F:38:LEU:HG	13:F:189:LEU:HD11	1.66	0.76
15:H:248:LEU:CD2	15:H:377:PHE:HE2	1.94	0.76
16:I:358:LYS:NZ	16:I:387:LEU:H	1.84	0.76
18:K:281:ARG:NH1	18:K:287:GLY:CA	2.40	0.76
21:N:325:PHE:HA	29:V:182:LYS:CG	2.15	0.76
24:Q:47:ASP:HA	24:Q:50:ARG:HB3	1.68	0.76
30:W:36:ILE:HD11	30:W:182:TYR:HB2	1.67	0.76
33:Z:767:TYR:CE2	33:Z:772:ILE:CG1	2.68	0.76
5:5:8:PHE:CZ	5:5:13:ILE:CD1	2.67	0.76
8:A:191:ILE:HD12	8:A:193:HIS:O	1.86	0.76
10:C:13:PHE:CZ	11:D:127:ARG:NH1	2.54	0.76
20:M:390:GLN:HE21	20:M:425:ARG:HB3	1.48	0.76
21:N:21:LYS:HE3	21:N:55:PHE:CE2	2.19	0.76
21:N:452:LEU:HD21	21:N:748:PHE:HE1	1.49	0.76
23:P:131:PHE:CE1	23:P:166:GLU:HB3	2.21	0.76
26:S:211:ARG:HH21	26:S:240:ASP:CB	1.98	0.76
27:T:62:LEU:HD11	27:T:88:TYR:CE2	2.20	0.76
28:U:66:TRP:CH2	28:U:109:LEU:HD12	2.20	0.76
33:Z:551:LEU:HG	33:Z:593:HIS:CE1	2.21	0.76
11:D:37:LYS:HG2	11:D:38:GLY:O	1.85	0.76
13:F:201:LEU:HD22	13:F:204:GLU:HB2	1.68	0.76
17:J:375:ILE:O	25:R:204:TRP:NE1	2.19	0.76
21:N:21:LYS:HE3	21:N:55:PHE:CE1	2.21	0.76
22:O:103:LYS:HA	22:O:129:ILE:HD11	1.68	0.76
22:O:233:LEU:CD2	22:O:236:HIS:CE1	2.68	0.76
23:P:213:TYR:HE2	23:P:217:LYS:HE3	1.50	0.76
24:Q:46:VAL:C	24:Q:50:ARG:HB3	2.05	0.76
27:T:224:ARG:O	27:T:225:ASN:CG	2.24	0.76
28:U:223:HIS:CG	28:U:224:THR:N	2.53	0.76
29:V:154:ASP:HB3	29:V:156:PHE:HE1	1.49	0.76
31:X:45:PHE:CZ	31:X:69:ILE:HG12	2.20	0.76
16:I:243:THR:CG2	16:I:245:LEU:HD21	2.15	0.76
16:I:251:GLU:C	16:I:253:ILE:N	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:311:TRP:HH2	23:P:338:TRP:NE1	1.83	0.76
31:X:100:TRP:HZ2	31:X:110:PRO:HG3	1.51	0.76
1:1:66:TYR:CE2	1:1:73:PRO:CA	2.67	0.76
9:B:179:TRP:CD1	9:B:183:LEU:CD1	2.50	0.76
21:N:10:LEU:HD22	21:N:42:GLU:HG3	1.66	0.76
23:P:263:HIS:CE1	23:P:327:LEU:HB2	2.21	0.76
29:V:118:LEU:HD13	29:V:140:VAL:CG1	2.16	0.76
18:K:155:ASP:OD1	18:K:156:SER:N	2.16	0.75
19:L:253:ASP:CA	20:M:256:ILE:HG21	2.06	0.75
20:M:62:ILE:CG1	20:M:66:LYS:HE3	2.17	0.75
24:Q:243:PHE:CE1	24:Q:287:THR:CB	2.69	0.75
27:T:32:ILE:O	27:T:35:ILE:CG2	2.22	0.75
33:Z:321:PHE:CZ	33:Z:351:PRO:CD	2.69	0.75
15:H:410:LEU:HD11	15:H:444:LEU:HD22	1.68	0.75
18:K:49:PHE:CD1	21:N:192:LEU:HD11	2.21	0.75
19:L:132:ARG:HH21	19:L:149:ASP:CG	1.90	0.75
21:N:666:GLN:HG3	21:N:873:ARG:NH2	2.02	0.75
23:P:101:MET:SD	23:P:139:VAL:HG13	2.26	0.75
24:Q:146:TYR:CE1	24:Q:151:TYR:CE1	2.73	0.75
26:S:163:VAL:HG21	26:S:184:TRP:HZ3	1.50	0.75
1:1:75:THR:HG21	1:1:111:TYR:CD1	2.03	0.75
16:I:281:ILE:HG22	16:I:284:ILE:CG1	2.16	0.75
19:L:192:GLU:OE1	19:L:347:VAL:HG13	1.86	0.75
21:N:75:TYR:O	21:N:79:VAL:HG23	1.87	0.75
22:O:277:ILE:CG2	22:O:279:ILE:CB	2.60	0.75
29:V:261:LEU:HD22	29:V:283:THR:HG21	1.67	0.75
30:W:44:ASN:HB2	30:W:47:ASN:ND2	2.01	0.75
9:B:4:ARG:NH1	11:D:3:GLY:HA3	2.00	0.75
15:H:261:ARG:NH2	15:H:273:ARG:HH22	1.83	0.75
21:N:555:ILE:HG23	21:N:559:TYR:CD2	2.21	0.75
24:Q:99:THR:HG23	24:Q:103:LYS:HE2	1.68	0.75
24:Q:146:TYR:CE1	24:Q:151:TYR:HE1	2.03	0.75
25:R:36:SER:O	25:R:43:ARG:NH2	2.18	0.75
25:R:94:PHE:HZ	25:R:99:TYR:CZ	2.03	0.75
25:R:411:LEU:HD13	28:U:285:ILE:HG12	1.67	0.75
25:R:422:ARG:HH11	26:S:301:PRO:HB3	1.49	0.75
10:C:193:ALA:O	10:C:197:LEU:HG	1.86	0.75
18:K:49:PHE:HD1	21:N:192:LEU:HD11	1.50	0.75
19:L:325:MET:SD	19:L:343:LEU:HD11	2.27	0.75
20:M:307:GLU:HG3	20:M:311:GLN:HE21	1.49	0.75
28:U:112:LYS:HZ3	30:W:60:ARG:HH21	1.33	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:7:LYS:HE3	7:7:119:LEU:HB3	1.68	0.75
7:7:8:TYR:HE2	7:7:10:ASN:OD1	1.64	0.75
7:7:190:ALA:HB2	7:7:200:PHE:CD2	2.22	0.75
10:C:213:PHE:CD2	10:C:230:PHE:CD2	2.74	0.75
15:H:168:ILE:HG12	15:H:186:PRO:HB2	1.68	0.75
22:O:166:ARG:HH21	22:O:169:ASN:HB3	1.52	0.75
28:U:40:ASP:CB	28:U:47:ARG:HH21	1.98	0.75
3:3:44:ILE:HG12	3:3:98:PRO:HB3	1.67	0.75
11:D:11:PHE:CE2	12:E:137:PRO:HD2	2.21	0.75
12:E:114:GLN:HE21	13:F:82:ARG:HD2	1.50	0.75
18:K:210:LEU:CD1	18:K:212:TYR:CZ	2.69	0.75
18:K:311:ASN:OD1	18:K:312:VAL:HG23	1.85	0.75
22:O:344:VAL:O	22:O:345:ASN:CB	2.34	0.75
24:Q:90:LYS:HD3	24:Q:129:LYS:HE2	1.69	0.75
29:V:257:GLU:O	29:V:261:LEU:HG	1.86	0.75
33:Z:56:LEU:HD22	33:Z:115:LEU:CD1	2.16	0.75
8:A:126:GLN:HE22	8:A:130:GLN:NE2	1.85	0.75
15:H:405:GLU:O	15:H:409:ARG:HG2	1.87	0.75
18:K:158:ILE:HG23	19:L:256:ILE:CG2	2.17	0.75
22:O:210:ARG:HH21	22:O:242:ILE:C	1.87	0.75
22:O:276:LYS:O	22:O:277:ILE:HB	1.87	0.75
25:R:259:PHE:CD2	25:R:329:PHE:HE1	2.01	0.75
27:T:225:ASN:HB3	27:T:241:GLU:HG2	1.68	0.75
33:Z:888:LEU:HG	33:Z:901:PHE:CE1	2.21	0.75
10:C:147:GLN:HB3	10:C:149:TYR:CE1	2.15	0.74
15:H:271:PHE:CZ	15:H:307:PHE:CD2	2.69	0.74
18:K:200:GLN:C	25:R:204:TRP:CZ2	2.57	0.74
28:U:94:HIS:CE1	28:U:96:GLY:N	2.54	0.74
31:X:46:TRP:HZ2	31:X:132:SER:N	1.86	0.74
33:Z:53:VAL:HG12	33:Z:92:LEU:HD23	1.69	0.74
1:1:118:SER:OG	7:7:53:GLN:HG3	1.88	0.74
17:J:27:ILE:CB	18:K:51:LEU:HD21	2.18	0.74
19:L:223:PRO:HB2	19:L:226:THR:HG23	1.69	0.74
20:M:361:LEU:CB	20:M:376:TRP:CD2	2.67	0.74
22:O:271:LYS:HD3	22:O:274:ILE:HD12	1.68	0.74
22:O:277:ILE:CG2	22:O:279:ILE:CG1	2.31	0.74
25:R:137:LEU:CG	25:R:141:TYR:CE2	2.69	0.74
25:R:304:TYR:CE1	25:R:308:LEU:CD1	2.64	0.74
29:V:118:LEU:HD12	29:V:140:VAL:CB	2.06	0.74
29:V:126:GLN:O	29:V:130:GLU:HG2	1.86	0.74
33:Z:87:LYS:CE	33:Z:90:LYS:HB2	2.15	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:558:LEU:HG	33:Z:558:LEU:O	1.85	0.74
1:1:59:VAL:HG11	1:1:82:PHE:CZ	2.22	0.74
14:G:203:HIS:CE1	14:G:211:PHE:HD1	2.05	0.74
21:N:322:ASP:HB2	21:N:689:LYS:NZ	2.01	0.74
21:N:666:GLN:HG3	21:N:873:ARG:HE	1.52	0.74
24:Q:90:LYS:HD3	24:Q:129:LYS:CE	2.17	0.74
26:S:163:VAL:HG22	26:S:184:TRP:CH2	2.22	0.74
31:X:85:ARG:NH2	31:X:115:SER:HB2	2.01	0.74
33:Z:510:LEU:HD13	33:Z:542:ILE:CG1	2.16	0.74
15:H:154:LYS:NZ	20:M:164:ASP:O	2.20	0.74
15:H:389:PHE:O	15:H:404:TRP:CH2	2.39	0.74
17:J:219:VAL:CG1	18:K:284:ALA:CB	2.66	0.74
18:K:68:ILE:HD11	21:N:608:LEU:HD21	1.66	0.74
19:L:309:LEU:CD2	19:L:342:ARG:NE	2.39	0.74
24:Q:253:ASN:HD22	24:Q:258:ALA:HB2	1.52	0.74
25:R:94:PHE:CZ	25:R:95:ASP:O	2.40	0.74
4:4:81:SER:N	4:4:124:LYS:NZ	2.36	0.74
9:B:38:LYS:O	9:B:179:TRP:CH2	2.39	0.74
13:F:123:TYR:CD1	13:F:124:GLY:N	2.54	0.74
17:J:69:GLY:H	18:K:144:ASN:HD22	1.28	0.74
18:K:248:GLY:CA	18:K:251:PRO:HG2	2.17	0.74
19:L:279:PHE:HE2	19:L:281:ASP:OD1	1.69	0.74
22:O:106:PHE:O	22:O:107:GLN:HB2	1.87	0.74
25:R:137:LEU:O	25:R:141:TYR:HD2	1.71	0.74
2:2:187:LEU:HD13	2:2:190:TYR:CD1	2.23	0.74
2:2:196:ARG:HE	2:2:199:LYS:HE3	1.53	0.74
3:3:61:LYS:HD3	3:3:81:LEU:HD11	1.70	0.74
3:3:75:PRO:HB2	3:3:111:PHE:CD2	2.23	0.74
10:C:160:TRP:CH2	10:C:163:ILE:CD1	2.70	0.74
18:K:353:PHE:CE1	18:K:387:MET:SD	2.80	0.74
19:L:259:SER:CB	19:L:303:ARG:NH1	2.48	0.74
22:O:373:TRP:CD1	28:U:200:LEU:CD1	2.70	0.74
15:H:175:GLY:O	15:H:183:ILE:HB	1.88	0.74
15:H:430:ALA:HA	15:H:435:ARG:HH21	1.52	0.74
24:Q:267:LEU:HD22	24:Q:331:THR:HG23	1.69	0.74
26:S:160:ARG:O	26:S:164:ILE:HG12	1.87	0.74
1:1:57:ASP:OD2	8:A:106:TYR:OH	1.95	0.74
8:A:103:GLU:OE2	8:A:107:LYS:NZ	2.20	0.74
9:B:119:GLN:HE21	9:B:123:GLN:HG3	1.52	0.74
9:B:183:LEU:HD23	9:B:184:GLU:O	1.88	0.74
15:H:284:VAL:HG13	20:M:252:VAL:HG12	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:123:SER:HA	20:M:125:GLN:HG2	1.70	0.74
22:O:5:HIS:CE1	22:O:27:GLU:HB3	2.22	0.74
29:V:57:PHE:CD1	29:V:63:VAL:HG13	2.23	0.74
33:Z:530:LEU:HD12	33:Z:534:PHE:HD2	1.53	0.74
13:F:179:PHE:CE1	13:F:188:GLU:OE2	2.40	0.74
13:F:215:ILE:HG13	13:F:220:THR:HG21	1.69	0.74
24:Q:146:TYR:CD1	24:Q:151:TYR:CE1	2.75	0.74
24:Q:329:GLU:CD	24:Q:332:ARG:HH21	1.88	0.74
25:R:183:ASP:CG	25:R:185:LEU:H	1.91	0.74
30:W:186:ALA:HA	30:W:192:LEU:CD1	2.16	0.74
4:4:11:SER:HB2	4:4:182:ILE:CG2	2.18	0.74
12:E:88:MET:HE2	12:E:142:LEU:HD12	1.65	0.74
23:P:140:THR:CG2	23:P:163:LEU:HD22	2.18	0.74
24:Q:396:TRP:HB2	24:Q:398:TYR:CE2	2.23	0.74
24:Q:429:LYS:HE3	29:V:269:ARG:HH22	1.53	0.74
25:R:34:THR:HA	25:R:70:TYR:CD1	2.23	0.74
25:R:137:LEU:HG	25:R:141:TYR:CE2	2.23	0.74
28:U:52:PHE:CE1	28:U:80:CYS:SG	2.80	0.74
33:Z:318:LYS:HE2	33:Z:496:ALA:C	2.07	0.74
33:Z:422:ILE:O	33:Z:426:TYR:CD2	2.41	0.74
33:Z:446:GLU:HG3	33:Z:484:LYS:NZ	2.02	0.74
9:B:174:PHE:CZ	9:B:198:GLU:OE1	2.41	0.73
13:F:105:VAL:CG1	13:F:143:HIS:ND1	2.45	0.73
17:J:142:VAL:CG1	17:J:204:HIS:HE1	2.01	0.73
22:O:303:LYS:O	22:O:304:ASN:HB2	1.87	0.73
24:Q:174:LEU:HG	24:Q:178:HIS:CE1	2.23	0.73
24:Q:250:THR:HG23	24:Q:251:THR:H	1.51	0.73
24:Q:272:LEU:CD2	24:Q:274:LEU:CD1	2.66	0.73
25:R:208:ASN:ND2	25:R:238:PHE:CG	2.56	0.73
25:R:353:MET:HE3	25:R:364:LEU:CD1	2.18	0.73
28:U:92:TRP:CZ3	28:U:106:ILE:CB	2.60	0.73
31:X:35:ILE:HG12	31:X:124:LYS:HE2	1.68	0.73
33:Z:299:ASP:OD1	33:Z:334:LYS:HE2	1.87	0.73
13:F:105:VAL:HG12	13:F:143:HIS:CE1	2.23	0.73
13:F:155:GLU:OE1	14:G:62:LYS:CB	2.35	0.73
15:H:206:VAL:HG11	15:H:258:LEU:HD23	1.67	0.73
16:I:243:THR:HG22	16:I:245:LEU:CD2	2.18	0.73
18:K:140:HIS:HB3	18:K:143:SER:HB3	1.69	0.73
19:L:84:LEU:HD22	19:L:88:TYR:OH	1.89	0.73
20:M:166:ARG:O	20:M:167:VAL:HG22	1.88	0.73
20:M:289:LYS:HZ3	20:M:302:GLN:HE22	1.32	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:351:LEU:HD22	20:M:387:ASN:OD1	1.87	0.73
23:P:286:ASN:O	23:P:293:LEU:HD21	1.87	0.73
26:S:471:LEU:CB	28:U:288:PHE:CE1	2.71	0.73
27:T:112:ASN:HA	27:T:177:PHE:CE2	2.23	0.73
33:Z:392:LEU:HG	33:Z:428:TRP:HZ3	1.53	0.73
5:5:68:LEU:HD13	12:E:70:ILE:O	1.88	0.73
8:A:218:PHE:HB2	8:A:223:LEU:HD21	1.69	0.73
10:C:213:PHE:CE2	10:C:230:PHE:CE2	2.76	0.73
14:G:197:LYS:HD2	14:G:241:PHE:HE2	1.53	0.73
15:H:155:PHE:CE1	20:M:76:PRO:HA	2.22	0.73
18:K:67:TYR:HE2	21:N:572:LEU:O	1.71	0.73
20:M:385:GLU:HB2	20:M:426:LYS:NZ	2.03	0.73
21:N:84:ALA:O	21:N:86:LYS:HG3	1.88	0.73
33:Z:147:GLU:HA	33:Z:210:TYR:CZ	2.23	0.73
15:H:449:LYS:NZ	16:I:346:ARG:HH11	1.87	0.73
21:N:249:ASN:OD1	21:N:282:TYR:OH	2.04	0.73
21:N:329:HIS:HE1	21:N:355:TRP:CE3	2.02	0.73
28:U:283:ARG:NH1	29:V:283:THR:C	2.41	0.73
2:2:142:TRP:HE1	2:2:145:ASP:HA	1.52	0.73
6:6:66:TYR:CE2	6:6:73:LYS:O	2.42	0.73
8:A:59:VAL:HG21	8:A:66:PRO:HB3	1.71	0.73
9:B:4:ARG:NH2	11:D:5:ASP:HB2	2.01	0.73
17:J:336:ASN:HD22	25:R:204:TRP:HE1	0.75	0.73
18:K:350:ARG:HH21	24:Q:215:VAL:HG11	1.53	0.73
22:O:337:LEU:O	22:O:338:LYS:HB3	1.87	0.73
25:R:130:GLN:O	25:R:134:TRP:HD1	1.70	0.73
30:W:40:LYS:CE	30:W:47:ASN:HB3	2.11	0.73
31:X:45:PHE:CE1	31:X:69:ILE:HG12	2.24	0.73
32:Y:88:ASN:O	32:Y:89:GLN:CB	2.32	0.73
1:1:36:ARG:HB2	1:1:42:TRP:CZ3	2.23	0.73
1:1:83:LYS:CD	1:1:119:VAL:HG23	2.18	0.73
4:4:66:TYR:CZ	4:4:74:LEU:HD21	2.21	0.73
13:F:76:GLY:O	20:M:433:TYR:CZ	2.42	0.73
16:I:106:ILE:HD11	17:J:85:LEU:CD2	2.19	0.73
17:J:27:ILE:CG1	18:K:51:LEU:HD21	2.19	0.73
19:L:357:ARG:O	19:L:361:PHE:CD2	2.41	0.73
21:N:399:PHE:HD1	21:N:441:VAL:CB	1.95	0.73
25:R:60:ALA:CB	25:R:102:LEU:HD22	2.19	0.73
1:1:124:TYR:CD1	1:1:142:PHE:CZ	2.76	0.73
17:J:324:ARG:NH2	17:J:352:GLY:H	1.87	0.73
23:P:132:VAL:CA	23:P:171:MET:HE1	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:197:TYR:CD2	27:T:200:LEU:HG	2.24	0.73
29:V:231:GLU:O	29:V:235:GLU:HB2	1.89	0.73
33:Z:321:PHE:CE1	33:Z:350:GLY:HA3	2.20	0.73
33:Z:491:LEU:HD21	33:Z:900:LEU:HD11	1.70	0.73
33:Z:514:ALA:HA	33:Z:546:ILE:HD13	1.71	0.73
1:1:19:ARG:HH21	1:1:26:ILE:HD13	1.53	0.73
1:1:37:VAL:HB	1:1:63:LEU:HD12	1.70	0.73
3:3:-2:ASN:C	3:3:19:ARG:HH11	1.89	0.73
4:4:72:TYR:OH	4:4:109:LYS:HE3	1.88	0.73
14:G:182:HIS:CE1	14:G:186:LEU:CD1	2.71	0.73
15:H:72:SER:HB3	16:I:153:THR:HG21	1.70	0.73
18:K:392:LEU:HD13	19:L:213:LYS:O	1.88	0.73
21:N:320:SER:HB2	21:N:686:ILE:HG22	1.69	0.73
22:O:185:PHE:HE2	22:O:219:ILE:CG2	2.00	0.73
22:O:210:ARG:NH2	22:O:242:ILE:CB	2.51	0.73
23:P:112:LEU:HD11	23:P:146:ILE:HG21	1.69	0.73
25:R:101:GLU:CG	25:R:105:LYS:HE3	2.18	0.73
25:R:305:PHE:HA	25:R:334:ARG:NH1	2.02	0.73
27:T:224:ARG:O	27:T:225:ASN:HB2	1.88	0.73
28:U:35:GLY:H	28:U:93:TYR:HB3	1.53	0.73
33:Z:811:SER:O	33:Z:815:MET:HG3	1.89	0.73
17:J:167:PRO:HD3	17:J:174:PHE:HZ	1.52	0.73
21:N:324:LYS:HG3	21:N:325:PHE:HD1	1.53	0.73
23:P:221:TYR:HE1	23:P:240:TYR:HB3	1.53	0.73
23:P:360:ILE:HG12	23:P:402:PHE:CE2	2.24	0.73
33:Z:133:ASP:HB3	33:Z:137:TYR:CZ	2.24	0.73
33:Z:312:TYR:HH	33:Z:348:LEU:HA	1.51	0.73
4:4:117:GLN:HE22	4:4:130:GLY:HA3	1.53	0.73
11:D:78:LEU:HD23	16:I:436:TYR:CE1	2.24	0.73
15:H:147:ILE:CD1	15:H:157:VAL:H	2.00	0.73
15:H:174:VAL:CG1	15:H:183:ILE:HG13	2.19	0.73
24:Q:162:LEU:HD11	24:Q:178:HIS:NE2	2.04	0.73
25:R:199:GLU:CB	25:R:206:ARG:NE	2.51	0.73
28:U:66:TRP:HZ3	28:U:68:LEU:HB2	1.51	0.73
28:U:105:LYS:HB3	30:W:58:ASN:ND2	2.04	0.73
29:V:182:LYS:HB3	29:V:185:ILE:HG22	1.71	0.73
33:Z:493:LEU:HD11	33:Z:497:PHE:CD2	2.24	0.73
6:6:115:SER:HB3	6:6:128:ARG:NH1	2.04	0.72
13:F:65:LYS:CG	13:F:222:PHE:CE2	2.71	0.72
21:N:14:ARG:HB2	27:T:80:ASN:ND2	2.01	0.72
22:O:223:LEU:CA	22:O:279:ILE:HG21	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:250:TRP:CD2	22:O:270:ILE:HG12	2.24	0.72
24:Q:90:LYS:HD3	24:Q:129:LYS:HZ1	1.53	0.72
31:X:85:ARG:HH22	31:X:116:ALA:H	1.36	0.72
33:Z:890:SER:HB2	33:Z:891:PRO:HD3	1.71	0.72
3:3:60:TYR:HD1	10:C:96:GLN:HB3	1.54	0.72
13:F:179:PHE:CZ	13:F:192:ALA:HB2	2.24	0.72
22:O:347:LEU:HB3	22:O:349:THR:HG23	1.71	0.72
23:P:241:LEU:HA	23:P:244:ILE:HG22	1.71	0.72
28:U:5:HIS:HD1	28:U:6:GLU:N	1.84	0.72
33:Z:397:ASP:HB3	33:Z:425:ILE:CD1	2.19	0.72
17:J:234:PHE:HZ	17:J:279:LEU:CD2	2.02	0.72
19:L:174:GLU:HG2	19:L:175:GLN:NE2	2.04	0.72
21:N:669:GLU:O	21:N:670:LYS:HB2	1.87	0.72
24:Q:130:ARG:HH21	24:Q:133:LEU:HD12	1.54	0.72
24:Q:299:MET:SD	24:Q:335:PHE:HZ	2.11	0.72
24:Q:423:VAL:HG13	25:R:414:LEU:CD1	2.16	0.72
25:R:416:LYS:O	26:S:298:ARG:NH1	2.22	0.72
27:T:1:MET:HB2	27:T:2:PRO:HD2	1.69	0.72
27:T:199:PHE:O	27:T:200:LEU:HD23	1.89	0.72
27:T:199:PHE:O	27:T:200:LEU:HG	1.90	0.72
29:V:117:TRP:CZ2	29:V:196:TYR:CA	2.72	0.72
10:C:115:LEU:HD13	10:C:137:TYR:OH	1.89	0.72
17:J:167:PRO:HD3	17:J:174:PHE:CZ	2.25	0.72
21:N:685:VAL:HG13	21:N:691:GLN:HG3	1.69	0.72
22:O:343:GLN:HG3	22:O:343:GLN:O	1.89	0.72
23:P:433:ILE:HD11	28:U:203:LYS:CD	2.20	0.72
25:R:60:ALA:HB2	25:R:102:LEU:HD22	1.72	0.72
25:R:137:LEU:HG	25:R:141:TYR:HE2	1.55	0.72
33:Z:610:GLY:O	33:Z:748:LEU:HB3	1.89	0.72
22:O:303:LYS:O	22:O:304:ASN:CB	2.37	0.72
22:O:303:LYS:NZ	28:U:234:ASN:ND2	2.37	0.72
25:R:59:MET:CE	25:R:143:GLN:O	2.37	0.72
25:R:101:GLU:HG2	25:R:105:LYS:HE3	1.69	0.72
27:T:250:MET:O	27:T:251:HIS:CB	2.37	0.72
11:D:190:GLU:OE1	11:D:193:LYS:NZ	2.22	0.72
14:G:87:LEU:HD11	14:G:115:LEU:HD22	1.70	0.72
18:K:210:LEU:HD11	18:K:212:TYR:OH	1.88	0.72
18:K:242:PHE:HB3	18:K:295:ILE:HD13	1.70	0.72
21:N:399:PHE:CD1	21:N:441:VAL:HB	2.25	0.72
22:O:356:ARG:HH21	22:O:362:GLN:CG	2.01	0.72
25:R:258:LEU:HD12	25:R:266:LEU:HD11	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:257:LEU:O	26:S:259:TYR:CD2	2.42	0.72
33:Z:312:TYR:OH	33:Z:348:LEU:CD2	2.38	0.72
33:Z:805:LEU:HD22	33:Z:893:PHE:CZ	2.25	0.72
1:1:8:PHE:HZ	1:1:179:THR:HG22	1.55	0.72
10:C:160:TRP:CE3	10:C:163:ILE:CD1	2.69	0.72
15:H:168:ILE:CG2	15:H:169:GLU:H	1.87	0.72
16:I:433:GLU:HA	16:I:436:TYR:CE1	2.24	0.72
21:N:195:THR:OG1	21:N:196:THR:HG23	1.90	0.72
21:N:366:THR:HG23	21:N:747:HIS:HE1	1.55	0.72
22:O:233:LEU:CA	22:O:236:HIS:HB3	2.19	0.72
27:T:241:GLU:O	27:T:242:LYS:HB3	1.89	0.72
28:U:141:GLU:O	28:U:142:GLN:HB3	1.88	0.72
31:X:44:GLY:O	31:X:46:TRP:CD1	2.42	0.72
33:Z:491:LEU:HD11	33:Z:900:LEU:HD12	1.70	0.72
7:7:54:HIS:CD2	7:7:95:ARG:HH22	2.08	0.72
17:J:219:VAL:HB	18:K:281:ARG:HD3	0.73	0.72
20:M:251:LEU:O	20:M:253:GLN:N	2.23	0.72
22:O:300:VAL:HG12	22:O:301:PHE:CE2	2.23	0.72
8:A:17:THR:HG21	8:A:129:THR:O	1.90	0.72
12:E:231:TYR:CE1	12:E:235:LYS:HB3	2.24	0.72
15:H:389:PHE:CB	15:H:404:TRP:CE3	2.72	0.72
16:I:339:ILE:HD13	16:I:347:LYS:CE	2.20	0.72
19:L:132:ARG:CZ	19:L:156:MET:CG	2.68	0.72
19:L:269:TYR:CD2	19:L:273:HIS:CE1	2.78	0.72
19:L:370:LYS:HD2	19:L:374:PHE:CD1	2.25	0.72
24:Q:47:ASP:OD1	24:Q:50:ARG:HG2	1.89	0.72
25:R:252:TYR:CD1	25:R:321:TYR:HB3	2.24	0.72
1:1:18:SER:HB3	1:1:31:THR:OG1	1.90	0.72
5:5:6:PHE:CZ	5:5:13:ILE:CB	2.73	0.72
8:A:220:LYS:HD2	8:A:238:ALA:C	2.10	0.72
17:J:142:VAL:CG1	17:J:204:HIS:CE1	2.73	0.72
17:J:183:LYS:HB3	17:J:276:LEU:HD13	1.72	0.72
19:L:328:ASN:HD22	19:L:329:ARG:HG2	1.54	0.72
20:M:307:GLU:CG	20:M:311:GLN:NE2	2.52	0.72
24:Q:391:ASP:OD1	25:R:347:THR:HB	1.90	0.72
26:S:381:VAL:CG1	27:T:123:HIS:NE2	2.51	0.72
33:Z:433:LEU:HD11	33:Z:455:ILE:HG23	1.70	0.72
1:1:119:VAL:HG21	14:G:103:LYS:NZ	1.98	0.71
5:5:51:ASP:OD2	5:5:95:LEU:HA	1.90	0.71
9:B:32:VAL:HG13	9:B:48:GLU:OE1	1.90	0.71
12:E:165:TYR:CB	12:E:167:TYR:OH	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:231:TYR:OH	12:E:235:LYS:O	2.07	0.71
14:G:197:LYS:CD	14:G:241:PHE:CE2	2.72	0.71
17:J:375:ILE:HD12	25:R:204:TRP:CD2	2.24	0.71
18:K:188:VAL:HA	18:K:313:LYS:HZ1	1.55	0.71
27:T:197:TYR:CE1	27:T:199:PHE:N	2.58	0.71
21:N:421:ASP:N	21:N:424:LYS:HZ3	1.87	0.71
22:O:87:LYS:HD3	22:O:132:GLU:OE1	1.90	0.71
23:P:308:LEU:HD23	23:P:369:LEU:CD2	2.20	0.71
24:Q:299:MET:HE2	24:Q:335:PHE:CZ	2.25	0.71
10:C:208:TYR:HA	10:C:235:ILE:HG21	1.73	0.71
15:H:146:VAL:H	15:H:157:VAL:HG21	1.54	0.71
15:H:168:ILE:CG2	15:H:169:GLU:N	2.42	0.71
17:J:115:LEU:HD23	17:J:116:ARG:O	1.91	0.71
19:L:206:ILE:HG12	19:L:209:ARG:NH2	2.05	0.71
33:Z:433:LEU:HD12	33:Z:455:ILE:HG12	1.71	0.71
33:Z:867:PHE:HD2	33:Z:871:HIS:HA	1.53	0.71
15:H:198:MET:SD	15:H:272:ILE:HG23	2.29	0.71
15:H:249:TYR:CE2	15:H:374:LYS:HG2	2.25	0.71
22:O:223:LEU:O	22:O:279:ILE:CG2	2.38	0.71
22:O:306:ARG:HG3	22:O:352:TRP:N	2.03	0.71
25:R:396:LYS:HG2	25:R:400:TYR:HE2	1.55	0.71
28:U:273:LEU:HG	28:U:277:TYR:CE2	2.24	0.71
31:X:40:GLU:O	31:X:41:GLU:CB	2.38	0.71
15:H:340:LEU:HD11	15:H:370:ARG:NH1	2.05	0.71
17:J:329:ARG:CG	17:J:333:ARG:NH1	2.51	0.71
18:K:280:LYS:NZ	18:K:293:GLN:HA	2.05	0.71
19:L:161:ARG:HH21	19:L:261:ARG:CZ	2.02	0.71
23:P:115:ARG:HH22	23:P:142:ASP:HB3	1.55	0.71
23:P:283:LYS:HB3	23:P:286:ASN:HB3	1.72	0.71
23:P:308:LEU:HD13	23:P:345:VAL:HG22	1.73	0.71
24:Q:174:LEU:HD11	24:Q:178:HIS:CE1	2.24	0.71
26:S:188:TYR:OH	26:S:210:LEU:CD2	2.31	0.71
33:Z:609:THR:CG2	33:Z:745:LEU:HD22	2.21	0.71
9:B:104:TYR:OH	9:B:140:ASP:HA	1.90	0.71
9:B:158:PRO:O	10:C:57:LEU:HD11	1.88	0.71
16:I:282:ASP:OD1	16:I:283:GLU:HG3	1.90	0.71
19:L:177:GLU:OE2	19:L:233:LYS:NZ	2.19	0.71
19:L:221:TYR:CZ	19:L:348:GLU:CB	2.74	0.71
21:N:391:PRO:HA	21:N:401:LYS:HD3	1.72	0.71
22:O:117:ASN:HD22	22:O:167:ILE:HA	1.55	0.71
23:P:221:TYR:CZ	23:P:244:ILE:HB	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:425:HIS:CG	28:U:225:ILE:CG2	2.67	0.71
24:Q:61:LEU:O	24:Q:65:TYR:CD1	2.44	0.71
24:Q:266:LEU:HD21	24:Q:281:ILE:HG21	1.71	0.71
28:U:37:ILE:HD13	28:U:121:LEU:CD1	2.20	0.71
29:V:24:LYS:NZ	29:V:197:TYR:CE2	2.58	0.71
8:A:57:LYS:HZ3	8:A:69:VAL:HB	1.52	0.71
17:J:273:LEU:HD11	17:J:304:LEU:HD23	1.71	0.71
19:L:189:GLN:OE1	19:L:349:ILE:HG12	1.90	0.71
23:P:177:ILE:CD1	23:P:216:LEU:HD13	2.20	0.71
31:X:12:ALA:HB3	31:X:33:ILE:CB	2.20	0.71
33:Z:312:TYR:OH	33:Z:348:LEU:CB	2.38	0.71
17:J:131:ASP:H	17:J:132:PRO:HD2	1.55	0.71
17:J:375:ILE:CD1	25:R:204:TRP:CE3	2.69	0.71
18:K:67:TYR:CE2	21:N:576:VAL:HB	2.26	0.71
21:N:89:PHE:CE1	21:N:101:ILE:HD11	2.26	0.71
22:O:78:VAL:HG11	22:O:106:PHE:CE2	2.24	0.71
22:O:339:GLY:O	22:O:340:SER:HB2	1.91	0.71
23:P:369:LEU:HB3	23:P:371:LEU:CD1	2.21	0.71
26:S:323:LEU:HD23	26:S:383:LEU:CD2	2.21	0.71
27:T:156:SER:HB3	27:T:159:LYS:HB2	1.72	0.71
27:T:197:TYR:CD1	27:T:198:ASP:CA	2.74	0.71
13:F:50:LYS:HE3	13:F:212:SER:CB	2.21	0.71
15:H:412:PRO:O	15:H:413:ASN:ND2	2.24	0.71
16:I:366:THR:HG21	16:I:377:LEU:CD2	2.21	0.71
22:O:230:PHE:CD1	22:O:251:LEU:CD1	2.73	0.71
22:O:232:GLU:O	22:O:236:HIS:HB3	1.90	0.71
22:O:306:ARG:HG3	22:O:351:SER:CA	2.21	0.71
23:P:184:MET:HB2	23:P:223:LEU:HD22	1.72	0.71
23:P:308:LEU:HD22	23:P:369:LEU:CD2	2.20	0.71
28:U:107:ASN:HD21	28:U:111:LYS:HE3	1.55	0.71
33:Z:138:ARG:CD	33:Z:157:LEU:HD13	2.19	0.71
21:N:21:LYS:HE2	21:N:55:PHE:CE2	2.25	0.71
22:O:79:VAL:HB	22:O:121:ASP:C	2.11	0.71
22:O:306:ARG:CG	22:O:351:SER:C	2.59	0.71
24:Q:46:VAL:CG2	24:Q:50:ARG:HB2	2.14	0.71
24:Q:135:HIS:CG	24:Q:161:LEU:CD2	2.74	0.71
24:Q:243:PHE:CE1	24:Q:287:THR:CA	2.39	0.71
33:Z:64:TYR:CD1	33:Z:111:LEU:HB3	2.26	0.71
33:Z:551:LEU:HD12	33:Z:591:ILE:HG22	1.72	0.71
33:Z:868:ASN:ND2	33:Z:870:ALA:HB3	2.05	0.71
6:6:-6:PRO:HA	7:7:125:LEU:HD22	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:91:LYS:HB2	6:6:96:TYR:CZ	2.26	0.70
12:E:157:HIS:CG	12:E:170:LYS:HZ3	2.09	0.70
13:F:74:LEU:HA	13:F:132:LEU:HD23	1.72	0.70
15:H:99:VAL:HG22	15:H:173:ARG:HH22	1.52	0.70
16:I:228:GLY:HA3	16:I:350:PHE:CZ	2.26	0.70
19:L:279:PHE:CE2	19:L:281:ASP:OD1	2.43	0.70
21:N:666:GLN:HA	21:N:873:ARG:NH2	2.06	0.70
22:O:373:TRP:CH2	28:U:233:PHE:CB	2.73	0.70
24:Q:351:ILE:HG22	24:Q:362:ILE:HD13	1.71	0.70
2:2:8:PHE:HE1	2:2:12:VAL:C	1.95	0.70
4:4:43:MET:CG	4:4:45:PHE:HZ	2.03	0.70
9:B:27:ALA:HA	18:K:426:PHE:CE1	2.26	0.70
17:J:27:ILE:HG12	18:K:51:LEU:HD21	1.73	0.70
17:J:272:MET:HE3	17:J:290:ILE:HD13	1.71	0.70
23:P:181:LEU:CA	23:P:223:LEU:HD11	2.21	0.70
24:Q:314:PHE:CE2	24:Q:339:TYR:HD1	2.03	0.70
26:S:188:TYR:HH	26:S:210:LEU:HD22	1.56	0.70
27:T:198:ASP:OD1	27:T:199:PHE:N	2.24	0.70
4:4:55:PHE:CZ	4:4:59:ILE:HG13	2.26	0.70
11:D:106:VAL:CG1	11:D:148:TYR:CE2	2.74	0.70
18:K:113:THR:HA	18:K:252:ARG:CZ	2.20	0.70
21:N:293:LEU:HB3	21:N:294:PRO:HD3	1.73	0.70
23:P:311:TRP:CH2	23:P:338:TRP:NE1	2.58	0.70
24:Q:179:LEU:HD13	24:Q:218:LEU:HD23	1.73	0.70
28:U:53:ALA:HB3	29:V:98:THR:HB	1.74	0.70
28:U:112:LYS:HZ3	30:W:60:ARG:NH2	1.89	0.70
30:W:20:ASP:O	30:W:21:PHE:CB	2.39	0.70
33:Z:305:VAL:HG13	33:Z:982:ILE:CG1	2.20	0.70
33:Z:352:LYS:O	33:Z:353:VAL:CG2	2.37	0.70
1:1:124:TYR:CD1	1:1:142:PHE:CE2	2.79	0.70
10:C:136:ILE:HD11	10:C:165:VAL:HG22	1.73	0.70
23:P:266:TYR:OH	23:P:322:LEU:HA	1.91	0.70
24:Q:243:PHE:HE1	24:Q:287:THR:CG2	2.03	0.70
28:U:35:GLY:CA	28:U:93:TYR:CB	2.64	0.70
1:1:80:SER:CB	14:G:103:LYS:HG3	2.22	0.70
9:B:27:ALA:CA	18:K:426:PHE:HE1	2.04	0.70
12:E:109:VAL:HG11	12:E:156:PHE:HD1	1.53	0.70
12:E:231:TYR:CD2	12:E:236:THR:OG1	2.44	0.70
17:J:236:MET:O	17:J:240:HIS:ND1	2.15	0.70
20:M:410:VAL:HG13	20:M:414:ASP:HB3	1.73	0.70
22:O:43:GLU:OE2	22:O:44:SER:CB	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:263:ARG:HD3	25:R:296:LEU:HG	1.71	0.70
28:U:76:MET:HB2	29:V:94:MET:HE1	1.73	0.70
33:Z:133:ASP:CA	33:Z:137:TYR:CE1	2.72	0.70
1:1:190:PRO:HA	1:1:193:TYR:CE1	2.25	0.70
4:4:26:VAL:HG12	4:4:28:LYS:O	1.89	0.70
6:6:115:SER:OG	6:6:128:ARG:CZ	2.38	0.70
11:D:49:ARG:HG2	11:D:203:VAL:HG13	1.72	0.70
12:E:98:THR:CG2	12:E:102:TYR:HE1	2.05	0.70
17:J:111:GLN:NE2	17:J:125:VAL:CG1	2.54	0.70
19:L:259:SER:OG	19:L:303:ARG:NH2	2.22	0.70
26:S:159:ASN:HB2	26:S:187:ILE:HD11	1.74	0.70
27:T:85:LEU:HD21	27:T:105:LEU:HD13	1.73	0.70
4:4:81:SER:N	4:4:124:LYS:HZ3	1.90	0.70
13:F:69:HIS:CE1	13:F:102:LYS:HB3	2.26	0.70
17:J:33:LYS:O	17:J:37:LYS:HG2	1.92	0.70
17:J:219:VAL:CA	18:K:281:ARG:HD3	2.21	0.70
21:N:14:ARG:NE	21:N:42:GLU:OE1	2.23	0.70
22:O:352:TRP:HZ3	28:U:228:LYS:HG3	1.56	0.70
24:Q:51:ARG:CD	24:Q:96:VAL:HG21	2.20	0.70
24:Q:65:TYR:CB	24:Q:74:LEU:HD22	2.22	0.70
26:S:425:ARG:HH11	27:T:155:GLY:HA2	1.54	0.70
33:Z:786:SER:O	33:Z:787:ASP:CB	2.39	0.70
9:B:17:LYS:HD2	9:B:22:ASP:OD2	1.92	0.70
13:F:49:LEU:CD1	13:F:210:ASN:HB3	2.22	0.70
13:F:120:THR:O	14:G:129:ARG:CZ	2.39	0.70
14:G:197:LYS:CD	14:G:241:PHE:HE2	2.04	0.70
16:I:281:ILE:CG2	16:I:284:ILE:CG1	2.69	0.70
17:J:162:GLU:HA	17:J:166:LEU:HD12	1.73	0.70
18:K:347:ARG:HH11	24:Q:205:ALA:CB	2.01	0.70
20:M:146:VAL:HG12	20:M:158:THR:HG23	1.72	0.70
21:N:19:SER:CB	27:T:35:ILE:CG2	2.55	0.70
24:Q:243:PHE:CZ	24:Q:287:THR:CB	2.72	0.70
25:R:94:PHE:CZ	25:R:99:TYR:CE2	2.80	0.70
29:V:52:LEU:O	29:V:108:TYR:HE1	1.75	0.70
30:W:3:LEU:HB3	30:W:106:GLN:HG2	1.74	0.70
30:W:32:SER:O	30:W:36:ILE:CG1	2.40	0.70
31:X:46:TRP:CE2	31:X:132:SER:HA	2.26	0.70
33:Z:183:LYS:NZ	33:Z:579:GLU:OE2	2.16	0.70
33:Z:193:PHE:CE2	33:Z:200:THR:HG21	2.26	0.70
7:7:170:VAL:HG12	7:7:174:ARG:HH22	1.55	0.70
19:L:227:GLY:H	20:M:339:ARG:HH22	1.40	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:223:LEU:O	22:O:279:ILE:HG21	1.92	0.70
24:Q:351:ILE:HG22	24:Q:362:ILE:CD1	2.22	0.70
2:2:94:ILE:CG2	3:3:90:ARG:HH21	2.05	0.70
17:J:216:ALA:O	17:J:219:VAL:HG23	1.90	0.70
18:K:300:LEU:O	18:K:333:ARG:NH2	2.19	0.70
20:M:307:GLU:CG	20:M:311:GLN:HE21	2.05	0.70
22:O:79:VAL:HG21	22:O:122:HIS:C	2.11	0.70
22:O:373:TRP:CD1	28:U:200:LEU:CG	2.74	0.70
7:7:8:TYR:OH	7:7:11:GLY:HA3	1.92	0.69
15:H:95:HIS:HE1	16:I:117:HIS:ND1	1.88	0.69
15:H:172:MET:CE	16:I:129:TYR:CB	2.70	0.69
15:H:217:GLN:HG3	15:H:376:GLU:CD	2.12	0.69
18:K:123:LEU:HD12	18:K:126:LEU:HD11	1.73	0.69
19:L:259:SER:CB	19:L:303:ARG:CZ	2.69	0.69
19:L:336:ALA:HA	19:L:339:ARG:HE	1.57	0.69
21:N:21:LYS:HG3	21:N:55:PHE:CG	2.26	0.69
21:N:49:LEU:HD13	21:N:57:ASP:OD2	1.92	0.69
21:N:137:PHE:HE2	21:N:165:ILE:HG13	1.55	0.69
21:N:771:PHE:HE2	21:N:885:ILE:CB	2.05	0.69
22:O:203:THR:O	22:O:204:SER:HB2	1.92	0.69
25:R:308:LEU:HD12	25:R:334:ARG:HH11	1.50	0.69
25:R:339:ALA:HB2	25:R:377:LEU:HD22	1.74	0.69
27:T:249:MET:O	27:T:250:MET:HB3	1.90	0.69
7:7:85:PHE:HE2	7:7:120:ARG:CZ	2.05	0.69
11:D:106:VAL:HG11	11:D:148:TYR:CE2	2.27	0.69
19:L:253:ASP:HA	20:M:256:ILE:HG21	1.73	0.69
22:O:358:ILE:CG2	22:O:359:SER:H	2.04	0.69
25:R:312:TYR:CE2	32:Y:73:PHE:CD1	2.80	0.69
27:T:197:TYR:O	27:T:198:ASP:HB3	1.92	0.69
29:V:117:TRP:CE2	29:V:196:TYR:HB2	2.24	0.69
30:W:20:ASP:O	30:W:21:PHE:HD1	1.76	0.69
33:Z:126:TYR:O	33:Z:127:SER:CB	2.38	0.69
33:Z:318:LYS:NZ	33:Z:459:ALA:C	2.45	0.69
33:Z:924:LYS:HD3	33:Z:958:ASN:OD1	1.92	0.69
11:D:203:VAL:O	11:D:204:GLN:HB2	1.91	0.69
14:G:140:VAL:CG2	14:G:220:LEU:CD2	2.41	0.69
16:I:244:PHE:HE1	16:I:246:ARG:CG	2.04	0.69
17:J:350:MET:HG2	17:J:386:VAL:HG13	1.72	0.69
21:N:414:GLY:HA3	21:N:728:LYS:NZ	2.07	0.69
23:P:265:VAL:HG22	23:P:280:LEU:CD2	2.22	0.69
28:U:158:PRO:O	28:U:159:CYS:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:223:HIS:HE1	28:U:224:THR:OG1	1.67	0.69
31:X:41:GLU:HB2	31:X:45:PHE:N	2.06	0.69
33:Z:397:ASP:OD2	33:Z:426:TYR:CE1	2.45	0.69
12:E:241:LYS:HA	12:E:244:LYS:HZ3	1.56	0.69
16:I:128:TYR:CD2	16:I:154:MET:HG3	2.27	0.69
17:J:37:LYS:HE3	18:K:58:TYR:CE1	2.26	0.69
17:J:167:PRO:CG	17:J:174:PHE:CZ	2.75	0.69
17:J:191:PRO:HA	17:J:295:ASN:ND2	2.07	0.69
18:K:254:VAL:CG1	18:K:299:LEU:CD2	2.65	0.69
18:K:254:VAL:HG13	18:K:258:PHE:CE1	2.25	0.69
22:O:177:GLN:O	22:O:181:PHE:CD2	2.45	0.69
22:O:344:VAL:CG2	23:P:361:THR:CG2	2.70	0.69
24:Q:253:ASN:ND2	24:Q:258:ALA:HB2	2.06	0.69
33:Z:193:PHE:HE2	33:Z:200:THR:HG21	1.57	0.69
4:4:37:LEU:HD21	4:4:43:MET:CE	2.23	0.69
14:G:164:THR:HA	14:G:168:ARG:HE	1.56	0.69
16:I:110:GLU:HB3	16:I:119:ILE:HG23	1.74	0.69
20:M:228:LYS:HE2	20:M:326:ALA:HB1	1.75	0.69
22:O:188:PHE:HD2	22:O:220:SER:HB3	1.53	0.69
24:Q:416:VAL:HG21	25:R:403:LEU:HD22	1.74	0.69
27:T:197:TYR:CD2	27:T:235:PHE:CZ	2.74	0.69
28:U:16:LEU:HD22	29:V:209:GLU:CG	2.22	0.69
9:B:179:TRP:HD1	9:B:183:LEU:HD13	0.69	0.69
12:E:88:MET:HE1	12:E:142:LEU:CD1	2.21	0.69
15:H:102:CYS:SG	15:H:174:VAL:HG22	2.33	0.69
15:H:168:ILE:HG12	15:H:186:PRO:CB	2.23	0.69
17:J:150:VAL:CG2	17:J:153:LEU:HD11	2.18	0.69
19:L:132:ARG:CZ	19:L:156:MET:HG2	2.23	0.69
25:R:343:GLU:HG2	25:R:392:ARG:HH12	1.58	0.69
28:U:38:LEU:HB3	28:U:89:LEU:HD23	1.75	0.69
28:U:92:TRP:CE3	28:U:106:ILE:CG2	2.76	0.69
30:W:114:VAL:O	30:W:114:VAL:HG12	1.92	0.69
33:Z:189:ALA:CB	33:Z:193:PHE:CD2	2.74	0.69
33:Z:854:LEU:HD22	33:Z:904:LEU:HD13	1.75	0.69
8:A:32:PHE:CZ	18:K:428:LYS:NZ	2.59	0.69
8:A:104:PHE:CD2	8:A:110:TYR:O	2.45	0.69
17:J:219:VAL:CA	18:K:281:ARG:CD	2.71	0.69
19:L:426:LYS:HG3	19:L:427:LYS:N	2.08	0.69
21:N:49:LEU:CD2	21:N:55:PHE:CD1	2.76	0.69
21:N:421:ASP:HA	21:N:424:LYS:CE	2.23	0.69
23:P:133:GLU:HG3	23:P:135:GLU:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:33:LEU:CD1	25:R:43:ARG:HG3	2.23	0.69
27:T:32:ILE:C	27:T:35:ILE:HG22	2.12	0.69
31:X:85:ARG:NH1	31:X:106:SER:HB3	2.07	0.69
4:4:43:MET:HG3	4:4:45:PHE:HZ	1.56	0.69
4:4:69:ARG:HG3	11:D:90:ARG:HH11	1.55	0.69
8:A:40:ILE:HD13	8:A:84:ASN:HA	1.75	0.69
10:C:53:THR:OG1	10:C:210:ARG:HG2	1.92	0.69
15:H:95:HIS:CE1	16:I:117:HIS:ND1	2.60	0.69
15:H:382:LEU:HD12	15:H:408:SER:HB3	1.72	0.69
16:I:244:PHE:CE1	16:I:246:ARG:CG	2.75	0.69
17:J:167:PRO:HG3	17:J:174:PHE:CZ	2.27	0.69
18:K:134:SER:HB3	18:K:255:ARG:NH2	2.01	0.69
20:M:163:PHE:CG	20:M:261:LYS:HE3	2.27	0.69
20:M:385:GLU:HB2	20:M:426:LYS:HZ3	1.58	0.69
22:O:5:HIS:ND1	22:O:27:GLU:HB3	2.08	0.69
22:O:66:VAL:CG1	22:O:106:PHE:CZ	2.75	0.69
22:O:230:PHE:CE1	22:O:251:LEU:CG	2.50	0.69
22:O:293:LEU:HG	22:O:297:ILE:HD11	1.74	0.69
28:U:16:LEU:HD22	29:V:209:GLU:HG2	1.73	0.69
30:W:163:ASN:HB3	30:W:164:PRO:HD2	1.73	0.69
1:1:45:ARG:HH22	1:1:53:GLN:CB	2.03	0.69
8:A:53:VAL:HG11	8:A:82:VAL:HG21	1.74	0.69
10:C:98:TYR:CE1	10:C:105:ASP:C	2.67	0.69
10:C:160:TRP:CH2	10:C:163:ILE:HD13	2.27	0.69
11:D:157:SER:HB3	11:D:159:TRP:HE1	1.57	0.69
14:G:98:PHE:CE2	14:G:106:ILE:HA	2.28	0.69
14:G:174:GLU:HB2	14:G:201:LEU:HD23	1.74	0.69
18:K:347:ARG:HH11	24:Q:205:ALA:HB3	1.55	0.69
21:N:399:PHE:CE1	21:N:441:VAL:HG23	1.94	0.69
22:O:79:VAL:CG2	22:O:122:HIS:CG	2.76	0.69
23:P:425:HIS:CD2	28:U:225:ILE:HG12	2.28	0.69
24:Q:51:ARG:HH22	24:Q:92:LYS:CD	2.00	0.69
28:U:35:GLY:HA3	28:U:93:TYR:HB3	1.73	0.69
29:V:118:LEU:HD13	29:V:140:VAL:CB	2.15	0.69
30:W:9:VAL:O	30:W:113:PHE:CD2	2.41	0.69
33:Z:64:TYR:OH	33:Z:115:LEU:HD22	1.92	0.69
20:M:162:GLU:HB2	20:M:166:ARG:HE	1.58	0.69
22:O:79:VAL:HG21	22:O:123:GLY:N	2.08	0.69
24:Q:14:LEU:HD13	24:Q:26:VAL:HG23	1.73	0.69
25:R:353:MET:HA	25:R:357:PHE:CG	2.27	0.69
28:U:37:ILE:HD13	28:U:121:LEU:HD12	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:-3:VAL:HG12	7:7:49:ILE:CG1	2.22	0.68
13:F:49:LEU:HD12	13:F:210:ASN:HB3	1.75	0.68
23:P:241:LEU:HD13	23:P:264:ILE:HG12	1.75	0.68
24:Q:174:LEU:CD1	24:Q:178:HIS:CE1	2.76	0.68
10:C:115:LEU:CD1	10:C:137:TYR:OH	2.41	0.68
14:G:140:VAL:HB	14:G:220:LEU:HD21	1.76	0.68
16:I:222:TYR:CE1	16:I:349:LEU:HA	2.28	0.68
23:P:203:ILE:HG21	23:P:220:TYR:CE1	2.27	0.68
26:S:230:LYS:HE3	26:S:234:ILE:HD11	1.75	0.68
26:S:471:LEU:HB2	28:U:288:PHE:CZ	2.28	0.68
30:W:71:LYS:HA	30:W:74:ALA:CB	2.22	0.68
33:Z:230:ILE:HG22	33:Z:231:ASP:N	2.07	0.68
6:6:116:PHE:CD2	6:6:122:TYR:HB3	2.28	0.68
21:N:365:PHE:CZ	21:N:406:TYR:CB	2.75	0.68
24:Q:269:LYS:HZ1	24:Q:281:ILE:HD11	1.56	0.68
25:R:259:PHE:CD2	25:R:329:PHE:CD1	2.82	0.68
25:R:418:GLY:O	26:S:475:TYR:HE1	1.77	0.68
29:V:109:HIS:CE1	29:V:122:ASP:OD1	2.46	0.68
30:W:101:ARG:NH1	30:W:104:LYS:HG2	2.02	0.68
5:5:83:LEU:HD11	5:5:97:MET:CE	2.23	0.68
7:7:92:MET:CE	7:7:102:LEU:HD23	2.24	0.68
9:B:231:LYS:HD3	9:B:234:ARG:HH22	1.58	0.68
12:E:204:LEU:O	12:E:208:MET:HG3	1.92	0.68
14:G:114:ARG:O	14:G:118:TYR:CD2	2.47	0.68
17:J:37:LYS:HE3	18:K:58:TYR:OH	1.94	0.68
17:J:40:ASN:CB	18:K:65:GLU:OE2	2.40	0.68
20:M:216:LYS:NZ	20:M:320:ARG:H	1.92	0.68
22:O:230:PHE:CD1	22:O:251:LEU:HD11	2.29	0.68
22:O:325:GLU:O	22:O:329:MET:CG	2.40	0.68
25:R:422:ARG:NH1	26:S:301:PRO:HG3	2.04	0.68
33:Z:103:TYR:HA	33:Z:112:LYS:CG	2.23	0.68
5:5:83:LEU:O	5:5:87:VAL:HG23	1.93	0.68
10:C:213:PHE:HE2	10:C:230:PHE:CE2	2.11	0.68
16:I:182:SER:O	16:I:360:LYS:HE2	1.93	0.68
17:J:333:ARG:HH12	17:J:343:LEU:CD1	2.04	0.68
18:K:331:PRO:HA	18:K:335:ASP:OD1	1.93	0.68
19:L:132:ARG:NH2	19:L:149:ASP:OD1	2.27	0.68
21:N:52:ASP:O	21:N:53:ASP:CB	2.41	0.68
33:Z:193:PHE:CE2	33:Z:196:SER:CA	2.76	0.68
33:Z:312:TYR:CE1	33:Z:348:LEU:O	2.46	0.68
33:Z:321:PHE:CZ	33:Z:351:PRO:HD3	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:325:GLY:O	33:Z:326:VAL:CG2	2.41	0.68
4:4:36:GLN:NE2	4:4:39:PRO:HA	2.06	0.68
9:B:75:TYR:HB3	9:B:134:LEU:HD23	1.73	0.68
17:J:119:SER:O	17:J:120:TYR:CG	2.47	0.68
19:L:379:ALA:HA	19:L:382:MET:CE	2.24	0.68
20:M:75:LEU:CD2	20:M:77:TYR:HE1	2.06	0.68
20:M:415:PHE:CE1	20:M:419:ILE:HD11	2.27	0.68
21:N:405:LEU:HD11	21:N:426:ILE:HD13	1.76	0.68
22:O:230:PHE:CE1	22:O:251:LEU:CD1	2.76	0.68
23:P:147:LYS:NZ	23:P:159:ILE:HG13	2.09	0.68
24:Q:326:MET:HE2	24:Q:332:ARG:HD2	1.74	0.68
30:W:180:LEU:HA	30:W:183:GLU:CD	2.14	0.68
31:X:33:ILE:HG13	31:X:48:PHE:CZ	2.28	0.68
6:6:66:TYR:HE2	6:6:73:LYS:O	1.77	0.68
15:H:187:LEU:HD22	16:I:115:ASP:OD1	1.94	0.68
15:H:243:PRO:HG2	15:H:373:ARG:HE	1.58	0.68
18:K:254:VAL:HG13	18:K:299:LEU:HD23	1.76	0.68
21:N:238:ALA:O	21:N:242:PHE:CD2	2.46	0.68
21:N:525:ASN:ND2	21:N:535:LEU:HD23	2.09	0.68
24:Q:85:MET:HE2	24:Q:93:THR:HG23	1.76	0.68
25:R:191:LEU:CB	25:R:213:TYR:HE2	2.06	0.68
26:S:465:ILE:HG13	27:T:266:TYR:HE2	1.56	0.68
27:T:199:PHE:O	27:T:200:LEU:CD2	2.41	0.68
29:V:113:GLY:HA2	29:V:118:LEU:CD2	2.23	0.68
30:W:20:ASP:O	30:W:21:PHE:CD1	2.47	0.68
33:Z:924:LYS:CB	33:Z:959:HIS:ND1	2.57	0.68
15:H:155:PHE:CD1	20:M:76:PRO:HA	2.28	0.68
18:K:68:ILE:CD1	21:N:608:LEU:CD2	2.72	0.68
18:K:350:ARG:NH2	24:Q:215:VAL:CG1	2.57	0.68
19:L:252:VAL:CG1	20:M:256:ILE:HD11	1.87	0.68
23:P:134:VAL:HG23	23:P:138:ARG:NH1	2.08	0.68
26:S:185:PHE:HD1	26:S:239:ARG:CZ	2.07	0.68
26:S:286:TYR:OH	26:S:323:LEU:HD22	1.94	0.68
29:V:133:ASN:O	29:V:134:SER:CB	2.42	0.68
33:Z:737:ALA:HB1	33:Z:775:MET:CE	2.24	0.68
1:1:19:ARG:HH11	1:1:29:ARG:HG3	1.53	0.68
3:3:179:TYR:HE2	3:3:188:LYS:HD2	1.58	0.68
8:A:21:PRO:HB2	8:A:22:GLU:OE2	1.93	0.68
18:K:99:PHE:CE1	18:K:101:GLU:O	2.47	0.68
22:O:205:ILE:HD12	22:O:210:ARG:CD	2.22	0.68
22:O:306:ARG:CG	22:O:350:ILE:O	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:302:LEU:CB	23:P:310:ARG:HH21	2.07	0.68
27:T:242:LYS:HG3	27:T:242:LYS:O	1.94	0.68
31:X:41:GLU:HG3	31:X:45:PHE:CB	2.23	0.68
2:2:8:PHE:CE2	2:2:11:GLY:HA3	2.27	0.68
4:4:80:SER:CB	4:4:124:LYS:HD2	2.15	0.68
5:5:40:PHE:CD2	5:5:41:LEU:HG	2.29	0.68
7:7:17:ASP:O	7:7:33:ARG:HD3	1.94	0.68
9:B:221:LEU:O	9:B:233:PRO:HD2	1.93	0.68
15:H:207:THR:CG2	15:H:208:TYR:CD2	2.77	0.68
21:N:14:ARG:CB	27:T:80:ASN:HD21	2.06	0.68
26:S:404:LEU:HG	26:S:408:CYS:SG	2.34	0.68
28:U:283:ARG:NH2	29:V:283:THR:HG22	2.07	0.68
33:Z:510:LEU:CD1	33:Z:542:ILE:HG12	2.18	0.68
7:7:8:TYR:CE2	7:7:11:GLY:N	2.62	0.67
8:A:135:ARG:HE	14:G:124:LEU:HD23	1.57	0.67
12:E:107:ILE:HD13	12:E:112:LEU:HD21	1.76	0.67
17:J:113:VAL:HG21	17:J:122:LEU:HD22	1.76	0.67
21:N:574:VAL:HG13	21:N:578:ASP:OD2	1.94	0.67
22:O:185:PHE:HD2	22:O:220:SER:HA	1.58	0.67
27:T:245:TYR:O	27:T:246:GLU:HB3	1.92	0.67
31:X:75:TRP:CH2	31:X:125:MET:HG3	2.29	0.67
33:Z:185:ASP:CG	33:Z:186:GLY:H	1.97	0.67
33:Z:321:PHE:CZ	33:Z:351:PRO:N	2.62	0.67
33:Z:329:ILE:HD11	33:Z:335:LEU:HB3	1.74	0.67
33:Z:963:ALA:O	33:Z:964:GLU:CD	2.33	0.67
7:7:119:LEU:HG	7:7:134:LEU:HD12	1.76	0.67
9:B:27:ALA:HB1	18:K:426:PHE:HE1	1.57	0.67
21:N:214:LEU:HD12	21:N:217:MET:HE3	1.74	0.67
23:P:302:LEU:HB2	23:P:310:ARG:NH2	2.08	0.67
29:V:244:MET:O	29:V:247:ILE:HG22	1.93	0.67
30:W:37:PHE:CZ	30:W:49:VAL:CG1	2.77	0.67
33:Z:133:ASP:CA	33:Z:137:TYR:CG	2.73	0.67
4:4:43:MET:SD	4:4:45:PHE:CZ	2.85	0.67
7:7:85:PHE:CE2	7:7:120:ARG:CD	2.77	0.67
13:F:201:LEU:HD13	13:F:206:LEU:HD12	1.71	0.67
15:H:105:ILE:HD13	15:H:146:VAL:HA	1.76	0.67
18:K:346:ARG:CZ	18:K:372:ILE:HD13	2.25	0.67
20:M:257:GLY:O	20:M:260:ALA:HB3	1.95	0.67
20:M:410:VAL:CG1	20:M:414:ASP:HB2	2.24	0.67
21:N:596:LEU:HD23	21:N:628:ALA:HA	1.75	0.67
22:O:42:SER:C	22:O:46:THR:CB	2.61	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:373:TRP:CZ3	28:U:233:PHE:HB2	2.25	0.67
23:P:121:THR:HG22	23:P:122:ILE:HG23	1.75	0.67
25:R:135:ILE:HA	25:R:154:LEU:HD13	1.76	0.67
33:Z:401:VAL:HG21	33:Z:426:TYR:OH	1.92	0.67
33:Z:758:LEU:HD22	33:Z:791:LYS:CD	2.20	0.67
1:1:14:LEU:CD1	1:1:44:CYS:SG	2.78	0.67
3:3:179:TYR:CZ	3:3:188:LYS:HE3	2.30	0.67
7:7:39:ASP:HA	7:7:198:LEU:HD22	1.76	0.67
13:F:84:LEU:HD21	13:F:128:TYR:CE2	2.29	0.67
14:G:121:ALA:O	14:G:125:TYR:CD1	2.44	0.67
16:I:247:ILE:HD13	16:I:267:ILE:HD13	1.75	0.67
19:L:370:LYS:HD2	19:L:374:PHE:CZ	2.28	0.67
22:O:124:ASP:CB	22:O:127:LEU:HD13	2.21	0.67
23:P:433:ILE:HD11	28:U:203:LYS:HD2	1.76	0.67
26:S:223:LEU:HD13	26:S:259:TYR:HE1	1.59	0.67
28:U:16:LEU:HD23	29:V:209:GLU:HG2	1.75	0.67
1:1:124:TYR:CE1	1:1:142:PHE:CD2	2.83	0.67
6:6:48:PHE:CZ	6:6:50:ALA:HB3	2.28	0.67
11:D:11:PHE:CE1	12:E:136:ARG:HB2	2.29	0.67
16:I:176:SER:O	17:J:282:PHE:CD1	2.48	0.67
17:J:45:GLU:OE1	21:N:608:LEU:HD11	1.94	0.67
18:K:200:GLN:HA	25:R:204:TRP:CZ2	2.29	0.67
20:M:50:ARG:N	30:W:73:LEU:HD13	2.09	0.67
21:N:479:GLU:CD	21:N:512:ASN:OD1	2.33	0.67
22:O:362:GLN:O	22:O:366:MET:HG3	1.94	0.67
30:W:143:ASN:CG	30:W:173:THR:HG23	2.14	0.67
33:Z:970:TYR:HH	33:Z:992:GLU:C	1.97	0.67
8:A:104:PHE:CE2	8:A:111:ASP:O	2.47	0.67
13:F:198:SER:HB3	13:F:206:LEU:CD2	2.23	0.67
22:O:137:TYR:CB	22:O:149:LEU:HD11	2.23	0.67
22:O:166:ARG:HH21	22:O:169:ASN:CB	2.08	0.67
24:Q:429:LYS:CE	29:V:269:ARG:HH22	2.08	0.67
33:Z:126:TYR:O	33:Z:127:SER:OG	2.10	0.67
13:F:117:GLN:NE2	13:F:121:GLN:HE21	1.92	0.67
21:N:19:SER:HB2	27:T:35:ILE:HG21	1.75	0.67
26:S:191:HIS:CD2	26:S:206:GLN:HG3	2.30	0.67
6:6:63:VAL:O	6:6:67:HIS:HD2	1.78	0.67
8:A:46:ARG:NE	8:A:152:PRO:HB2	2.09	0.67
10:C:149:TYR:OH	11:D:59:ILE:CB	2.42	0.67
11:D:92:GLU:OE2	11:D:108:TYR:HE2	1.77	0.67
12:E:18:GLU:HB3	13:F:31:GLN:HE22	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:8:ASP:OD1	14:G:9:LEU:HG	1.95	0.67
15:H:198:MET:HE2	15:H:272:ILE:CG2	2.25	0.67
18:K:350:ARG:HH21	24:Q:215:VAL:CG1	2.07	0.67
19:L:193:LEU:HD21	19:L:220:LEU:HD21	1.76	0.67
21:N:15:GLU:O	21:N:16:ASN:CB	2.43	0.67
22:O:41:LEU:HD11	22:O:47:LYS:HE2	1.76	0.67
22:O:269:LEU:CD2	22:O:270:ILE:HG13	2.24	0.67
24:Q:85:MET:HE2	24:Q:93:THR:CA	2.24	0.67
25:R:207:ARG:NH1	25:R:211:LYS:NZ	2.43	0.67
28:U:18:ALA:HB3	28:U:125:VAL:HG11	1.76	0.67
33:Z:146:PHE:O	33:Z:210:TYR:CE2	2.48	0.67
2:2:186:TYR:CE2	2:2:188:ARG:HB2	2.29	0.67
10:C:33:GLY:HA3	10:C:65:LYS:NZ	2.10	0.67
10:C:106:ILE:HG12	10:C:107:PRO:O	1.95	0.67
12:E:17:PRO:HA	13:F:24:TYR:CE1	2.30	0.67
17:J:220:GLN:HE22	18:K:293:GLN:HE22	1.39	0.67
20:M:44:PHE:HE2	22:O:110:ASP:O	1.76	0.67
21:N:52:ASP:OD1	21:N:54:THR:HG23	1.95	0.67
21:N:298:TYR:OH	21:N:766:GLN:OE1	2.13	0.67
22:O:185:PHE:CB	22:O:223:LEU:CB	2.66	0.67
23:P:286:ASN:CA	23:P:293:LEU:HD11	2.25	0.67
25:R:181:TYR:CD2	25:R:183:ASP:HB2	2.30	0.67
27:T:199:PHE:O	27:T:200:LEU:CG	2.42	0.67
31:X:66:LEU:CD1	31:X:97:TYR:CB	2.73	0.67
1:1:-8:LYS:HE3	1:1:51:ASP:OD1	1.94	0.67
10:C:160:TRP:CZ2	10:C:163:ILE:HD13	2.30	0.67
20:M:357:ARG:HG2	20:M:391:LEU:HD11	1.77	0.67
22:O:42:SER:O	22:O:46:THR:HG21	1.89	0.67
23:P:347:GLU:O	23:P:351:ARG:HG3	1.95	0.67
25:R:63:TYR:HH	25:R:92:ILE:C	1.98	0.67
25:R:125:GLU:OE1	25:R:127:GLU:N	2.27	0.67
27:T:197:TYR:O	27:T:198:ASP:CB	2.43	0.67
27:T:224:ARG:HG2	27:T:242:LYS:HG2	1.77	0.67
30:W:143:ASN:O	30:W:174:VAL:O	2.12	0.67
33:Z:236:PHE:CE2	33:Z:245:VAL:HG22	2.30	0.67
3:3:179:TYR:CE2	3:3:188:LYS:HG3	2.31	0.66
9:B:66:LEU:HD13	9:B:235:PHE:CG	2.30	0.66
17:J:27:ILE:HG12	18:K:51:LEU:CG	2.25	0.66
20:M:200:PRO:HB2	20:M:319:ASP:OD2	1.95	0.66
25:R:238:PHE:HD2	25:R:244:THR:HG21	1.61	0.66
26:S:471:LEU:CB	28:U:288:PHE:CZ	2.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:889:VAL:HG22	33:Z:891:PRO:HD2	1.77	0.66
4:4:81:SER:HA	4:4:124:LYS:HZ3	1.61	0.66
8:A:207:ILE:CG2	8:A:211:ILE:HD11	2.25	0.66
18:K:124:SER:O	18:K:127:ASP:OD1	2.13	0.66
18:K:244:HIS:HB2	19:L:256:ILE:HG12	1.76	0.66
20:M:379:LEU:HD13	20:M:415:PHE:CD1	2.30	0.66
21:N:190:LEU:HD13	21:N:224:THR:HG23	1.77	0.66
22:O:62:TYR:CE2	22:O:82:LEU:CD2	2.58	0.66
23:P:221:TYR:HE2	23:P:244:ILE:CB	2.08	0.66
23:P:245:TYR:HD1	23:P:257:TRP:HE1	1.32	0.66
24:Q:138:SER:CB	24:Q:161:LEU:HD11	2.26	0.66
24:Q:138:SER:HB3	24:Q:161:LEU:HD11	1.76	0.66
25:R:137:LEU:HD11	25:R:141:TYR:CZ	2.29	0.66
26:S:315:LYS:HG2	26:S:345:TYR:OH	1.94	0.66
29:V:51:GLY:HA2	29:V:71:MET:HG2	1.75	0.66
4:4:26:VAL:HG13	4:4:28:LYS:O	1.93	0.66
15:H:410:LEU:HB2	15:H:447:VAL:HG11	1.77	0.66
21:N:508:THR:HG21	21:N:513:ILE:HB	1.77	0.66
23:P:241:LEU:CA	23:P:244:ILE:HG22	2.25	0.66
24:Q:269:LYS:HZ2	24:Q:281:ILE:CD1	2.09	0.66
27:T:227:PRO:HD3	27:T:241:GLU:OE2	1.95	0.66
27:T:241:GLU:CA	27:T:246:GLU:HB2	2.22	0.66
30:W:52:ILE:HD13	30:W:94:ALA:HB2	1.77	0.66
33:Z:491:LEU:CD1	33:Z:900:LEU:CD1	2.67	0.66
1:1:13:ILE:HD12	1:1:177:VAL:HG22	1.76	0.66
1:1:19:ARG:HH11	1:1:29:ARG:CA	2.06	0.66
7:7:8:TYR:CD2	7:7:10:ASN:OD1	2.47	0.66
10:C:53:THR:HB	10:C:59:GLN:NE2	2.09	0.66
11:D:106:VAL:HG11	11:D:148:TYR:HE2	1.59	0.66
17:J:301:ASP:H	17:J:304:LEU:CD1	2.02	0.66
21:N:514:THR:CG2	21:N:546:LEU:CD1	2.73	0.66
23:P:213:TYR:CE2	23:P:217:LYS:HE3	2.30	0.66
31:X:46:TRP:CB	31:X:68:LEU:HD13	2.24	0.66
33:Z:867:PHE:CD2	33:Z:871:HIS:HA	2.31	0.66
11:D:172:ARG:O	11:D:176:GLU:HG3	1.96	0.66
16:I:199:GLU:HG3	16:I:236:VAL:HG13	1.77	0.66
18:K:281:ARG:NH1	18:K:287:GLY:N	2.43	0.66
20:M:123:SER:O	20:M:125:GLN:HG3	1.96	0.66
21:N:458:ALA:HB2	21:N:492:THR:OG1	1.95	0.66
21:N:771:PHE:CD2	21:N:772:GLN:O	2.49	0.66
29:V:79:SER:HA	29:V:121:VAL:CG1	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:52:ILE:HG22	30:W:61:VAL:HG22	1.77	0.66
7:7:10:ASN:HD22	7:7:195:ASN:ND2	1.94	0.66
12:E:219:LEU:CD1	12:E:239:LEU:HD23	2.26	0.66
15:H:244:LYS:HE2	15:H:340:LEU:O	1.94	0.66
18:K:353:PHE:HD1	18:K:387:MET:SD	2.14	0.66
21:N:514:THR:CG2	21:N:546:LEU:HD12	2.25	0.66
22:O:225:ASP:O	22:O:226:LYS:HG3	1.96	0.66
24:Q:269:LYS:NZ	24:Q:281:ILE:CD1	2.57	0.66
25:R:176:ARG:HB2	25:R:243:LEU:HD11	1.76	0.66
28:U:280:ASN:HD21	29:V:291:ASN:CG	1.99	0.66
31:X:66:LEU:CD1	31:X:99:PHE:CE1	2.79	0.66
33:Z:72:LYS:CE	33:Z:117:ASP:OD2	2.43	0.66
33:Z:192:GLY:O	33:Z:193:PHE:HB2	1.96	0.66
33:Z:427:GLN:HG2	33:Z:428:TRP:CD2	2.31	0.66
13:F:50:LYS:HE3	13:F:212:SER:HB3	1.77	0.66
13:F:65:LYS:HD3	13:F:222:PHE:CD2	2.29	0.66
15:H:96:PRO:HA	15:H:193:PRO:CG	2.19	0.66
20:M:379:LEU:HD22	20:M:415:PHE:CE1	2.31	0.66
22:O:106:PHE:O	22:O:107:GLN:CB	2.43	0.66
22:O:214:ALA:HB1	22:O:248:TYR:CZ	2.29	0.66
24:Q:151:TYR:CE2	24:Q:187:LYS:HB3	2.29	0.66
25:R:208:ASN:ND2	25:R:238:PHE:CB	2.56	0.66
28:U:18:ALA:CB	28:U:93:TYR:OH	2.41	0.66
33:Z:562:TRP:CH2	33:Z:566:LEU:HD22	2.31	0.66
1:1:-5:GLU:H	2:2:116:HIS:CE1	2.14	0.66
3:3:75:PRO:CB	3:3:111:PHE:CD2	2.79	0.66
7:7:85:PHE:CE2	7:7:120:ARG:NE	2.63	0.66
7:7:201:LYS:CB	7:7:204:LEU:HD11	2.26	0.66
15:H:249:TYR:HE2	15:H:374:LYS:HG2	1.61	0.66
22:O:202:SER:O	22:O:203:THR:CG2	2.44	0.66
24:Q:331:THR:HG22	24:Q:335:PHE:CD2	2.30	0.66
27:T:241:GLU:N	27:T:246:GLU:HB2	2.10	0.66
31:X:46:TRP:CZ2	31:X:132:SER:N	2.64	0.66
33:Z:357:ILE:HG12	33:Z:960:GLY:HA3	1.78	0.66
4:4:81:SER:CA	4:4:124:LYS:HZ3	2.08	0.66
14:G:60:PRO:HB2	14:G:61:GLN:OE1	1.96	0.66
15:H:174:VAL:HG12	15:H:183:ILE:HG21	1.76	0.66
16:I:96:LEU:O	16:I:99:ILE:HG22	1.96	0.66
16:I:362:LEU:HG	16:I:377:LEU:HD22	1.77	0.66
18:K:113:THR:C	18:K:252:ARG:HH12	1.98	0.66
26:S:214:MET:CE	26:S:236:LEU:HD13	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:756:MET:CE	33:Z:759:ARG:HE	2.08	0.66
1:1:1:THR:HG22	1:1:129:SER:N	2.09	0.66
7:7:-3:VAL:HG12	7:7:49:ILE:HG12	1.77	0.66
9:B:180:ASN:O	9:B:181:ASP:HB2	1.95	0.66
16:I:135:PHE:CD2	16:I:159:VAL:HG22	2.31	0.66
18:K:68:ILE:CG1	21:N:608:LEU:HD21	2.24	0.66
20:M:379:LEU:HD13	20:M:415:PHE:CE1	2.31	0.66
21:N:176:GLN:HE21	21:N:182:ASN:ND2	1.93	0.66
26:S:188:TYR:CZ	26:S:210:LEU:CD1	2.77	0.66
26:S:237:ILE:HG21	26:S:253:PHE:CE1	2.31	0.66
27:T:89:TYR:CE1	27:T:102:LYS:NZ	2.62	0.66
33:Z:357:ILE:HD11	33:Z:914:LEU:CD1	2.18	0.66
33:Z:862:MET:SD	33:Z:910:PRO:HG3	2.36	0.66
1:1:102:TYR:OH	1:1:180:ALA:HB2	1.96	0.65
2:2:104:ASP:CG	2:2:106:THR:HG1	2.00	0.65
5:5:181:THR:OG1	5:5:184:GLY:O	2.11	0.65
9:B:189:ILE:HG21	9:B:246:ARG:HD3	1.77	0.65
17:J:37:LYS:HG3	18:K:58:TYR:CE1	2.32	0.65
18:K:140:HIS:HE1	18:K:142:HIS:HB2	1.60	0.65
19:L:270:ALA:HB1	19:L:276:CYS:SG	2.36	0.65
21:N:17:GLN:O	21:N:20:VAL:HG22	1.97	0.65
22:O:223:LEU:CD1	22:O:277:ILE:CD1	2.71	0.65
22:O:300:VAL:CG1	22:O:301:PHE:CE2	2.79	0.65
24:Q:61:LEU:CB	24:Q:65:TYR:CE2	2.70	0.65
24:Q:195:LYS:HE3	24:Q:229:ASP:OD2	1.96	0.65
28:U:40:ASP:CB	28:U:47:ARG:NH2	2.59	0.65
31:X:87:PHE:CE2	31:X:125:MET:SD	2.89	0.65
7:7:201:LYS:HB2	7:7:204:LEU:HD11	1.77	0.65
9:B:4:ARG:HH11	11:D:3:GLY:HA3	1.60	0.65
15:H:167:ASP:HB3	15:H:186:PRO:CG	2.26	0.65
16:I:122:SER:HB3	16:I:126:PRO:O	1.96	0.65
17:J:27:ILE:HG12	18:K:51:LEU:CD2	2.26	0.65
21:N:300:ASN:HD22	21:N:920:VAL:HG11	1.59	0.65
21:N:406:TYR:HE1	21:N:448:LEU:CD1	1.92	0.65
22:O:269:LEU:HD22	22:O:270:ILE:HG13	1.78	0.65
23:P:296:GLN:O	23:P:300:VAL:HG23	1.96	0.65
28:U:275:VAL:HG13	29:V:251:TYR:OH	1.94	0.65
33:Z:862:MET:CE	33:Z:910:PRO:HG3	2.26	0.65
5:5:114:TYR:CE1	5:5:129:VAL:HG21	2.31	0.65
14:G:61:GLN:HA	14:G:64:VAL:HG23	1.79	0.65
17:J:37:LYS:CE	18:K:58:TYR:OH	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:156:SER:HA	19:L:126:ARG:NH1	2.11	0.65
19:L:249:SER:O	19:L:252:VAL:N	2.29	0.65
20:M:163:PHE:CD1	20:M:261:LYS:HG2	2.31	0.65
21:N:202:PHE:CZ	21:N:206:ILE:HD11	2.32	0.65
21:N:322:ASP:HB2	21:N:689:LYS:HZ1	1.59	0.65
24:Q:31:LEU:CG	24:Q:50:ARG:NH2	2.55	0.65
26:S:468:ALA:O	26:S:472:HIS:HB2	1.96	0.65
28:U:38:LEU:HB2	28:U:88:LYS:C	2.17	0.65
30:W:87:MET:HB3	30:W:120:ASP:OD2	1.97	0.65
33:Z:286:VAL:O	33:Z:287:ARG:CB	2.37	0.65
33:Z:453:LEU:HD11	33:Z:899:GLN:CG	2.26	0.65
11:D:37:LYS:HE2	11:D:145:PRO:HB2	1.77	0.65
15:H:410:LEU:HD11	15:H:444:LEU:CD2	2.26	0.65
18:K:158:ILE:N	19:L:256:ILE:HG22	2.10	0.65
19:L:132:ARG:NH1	19:L:156:MET:HG2	2.11	0.65
20:M:217:GLY:HA3	20:M:343:LEU:HD23	1.78	0.65
21:N:329:HIS:ND1	21:N:355:TRP:CE3	2.65	0.65
21:N:399:PHE:CE1	21:N:441:VAL:CB	2.72	0.65
21:N:405:LEU:CD1	21:N:426:ILE:HD13	2.26	0.65
22:O:196:LEU:HD13	22:O:213:LEU:HD23	1.78	0.65
27:T:107:SER:HG	27:T:174:PHE:HZ	1.45	0.65
28:U:283:ARG:HH11	29:V:284:ALA:CA	2.10	0.65
28:U:288:PHE:HA	28:U:291:LEU:HD12	1.79	0.65
30:W:44:ASN:HB2	30:W:47:ASN:HD21	1.62	0.65
33:Z:493:LEU:HD11	33:Z:497:PHE:HD2	1.60	0.65
9:B:14:PRO:HA	10:C:24:TYR:CZ	2.32	0.65
13:F:165:SER:O	13:F:169:LYS:HG3	1.96	0.65
16:I:176:SER:HB2	17:J:282:PHE:CE1	2.31	0.65
22:O:11:LEU:CB	22:O:43:GLU:OE1	2.40	0.65
22:O:124:ASP:HB2	22:O:127:LEU:HD22	1.79	0.65
22:O:347:LEU:HB3	22:O:349:THR:CG2	2.26	0.65
25:R:94:PHE:HE2	25:R:96:GLN:CG	2.08	0.65
27:T:55:LEU:HG	27:T:59:LYS:CE	2.12	0.65
27:T:209:LEU:HB3	27:T:211:PHE:CZ	2.30	0.65
4:4:80:SER:C	4:4:124:LYS:HZ3	2.00	0.65
9:B:4:ARG:CG	13:F:123:TYR:OH	2.43	0.65
12:E:157:HIS:HB2	12:E:170:LYS:HD3	1.78	0.65
14:G:98:PHE:HE2	14:G:105:PRO:O	1.78	0.65
19:L:357:ARG:O	19:L:360:ILE:HG22	1.97	0.65
20:M:161:SER:O	20:M:166:ARG:NH2	2.30	0.65
20:M:379:LEU:CD2	20:M:415:PHE:CD1	2.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:48:PHE:CE1	22:O:80:LYS:HD3	2.32	0.65
22:O:119:SER:CB	22:O:166:ARG:HD3	2.26	0.65
24:Q:425:GLN:OE1	29:V:265:GLU:OE1	2.14	0.65
25:R:194:VAL:HG13	25:R:206:ARG:HH21	1.60	0.65
25:R:353:MET:HE2	25:R:364:LEU:HD21	0.83	0.65
29:V:104:VAL:HG11	29:V:107:TRP:NE1	2.11	0.65
33:Z:453:LEU:HD11	33:Z:899:GLN:HG2	1.78	0.65
2:2:205:PHE:HZ	3:3:144:LEU:HD22	1.62	0.65
5:5:8:PHE:HZ	5:5:13:ILE:HD11	1.56	0.65
6:6:115:SER:CB	6:6:128:ARG:HH11	2.08	0.65
15:H:430:ALA:HA	15:H:435:ARG:NH2	2.11	0.65
21:N:50:TYR:O	21:N:58:ARG:HG3	1.97	0.65
21:N:329:HIS:CE1	21:N:355:TRP:HE3	2.05	0.65
21:N:338:PHE:CZ	21:N:749:LEU:HB3	2.32	0.65
25:R:183:ASP:OD2	25:R:186:TYR:N	2.26	0.65
25:R:259:PHE:O	25:R:259:PHE:CD1	2.50	0.65
10:C:106:ILE:CD1	10:C:111:LEU:HB2	2.25	0.65
12:E:72:ARG:HG3	12:E:72:ARG:O	1.96	0.65
13:F:13:PHE:CE2	14:G:129:ARG:HG2	2.31	0.65
15:H:307:PHE:CE1	15:H:309:ASP:OD1	2.48	0.65
18:K:349:ARG:HH11	18:K:377:SER:H	1.42	0.65
18:K:352:ILE:CG2	18:K:383:ILE:HG22	2.27	0.65
19:L:77:ARG:HD3	19:L:80:ASN:HD22	1.61	0.65
20:M:361:LEU:O	20:M:376:TRP:CZ2	2.50	0.65
22:O:105:GLN:HG3	22:O:108:GLU:OE1	1.95	0.65
23:P:260:VAL:HG22	23:P:328:ALA:HB2	1.79	0.65
23:P:286:ASN:HA	23:P:293:LEU:HD11	1.79	0.65
2:2:104:ASP:OD2	2:2:106:THR:OG1	2.14	0.65
8:A:57:LYS:NZ	8:A:69:VAL:CB	2.57	0.65
14:G:174:GLU:HB2	14:G:201:LEU:CD2	2.26	0.65
16:I:75:PHE:CD2	16:I:76:VAL:CG2	2.74	0.65
20:M:357:ARG:NH2	20:M:386:PHE:N	2.44	0.65
21:N:239:LEU:HD11	21:N:243:LYS:HE3	1.78	0.65
21:N:666:GLN:HA	21:N:873:ARG:HH21	1.59	0.65
22:O:79:VAL:HG21	22:O:122:HIS:CG	2.31	0.65
23:P:203:ILE:HG21	23:P:220:TYR:CD1	2.32	0.65
24:Q:162:LEU:CD1	24:Q:178:HIS:HE2	2.08	0.65
33:Z:133:ASP:OD1	33:Z:134:SER:N	2.29	0.65
1:1:98:ILE:HD11	1:1:127:ALA:HB3	1.79	0.65
4:4:11:SER:HB2	4:4:182:ILE:HG23	1.78	0.65
5:5:32:LYS:HD2	5:5:45:MET:CE	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:111:GLN:NE2	17:J:125:VAL:HG13	2.11	0.65
18:K:303:MET:HB3	18:K:333:ARG:NH1	2.11	0.65
26:S:321:GLN:HG3	26:S:326:ASP:O	1.96	0.65
29:V:40:HIS:ND1	29:V:70:ALA:HB2	2.12	0.65
30:W:21:PHE:HB2	30:W:25:ARG:HA	1.79	0.65
31:X:24:CYS:HB2	31:X:80:SER:HA	1.77	0.65
33:Z:427:GLN:HG2	33:Z:428:TRP:CE3	2.32	0.65
33:Z:433:LEU:CD1	33:Z:455:ILE:HG12	2.27	0.65
33:Z:812:ILE:HA	33:Z:815:MET:HE3	1.78	0.65
1:1:119:VAL:CG1	14:G:103:LYS:HZ3	2.09	0.64
1:1:176:VAL:HG12	1:1:178:LEU:HD21	1.78	0.64
2:2:87:LEU:HD23	2:2:94:ILE:HD11	1.78	0.64
3:3:79:THR:HG23	3:3:115:PHE:CZ	2.32	0.64
8:A:57:LYS:HZ1	8:A:69:VAL:HB	1.59	0.64
12:E:107:ILE:HD13	12:E:112:LEU:CD2	2.27	0.64
15:H:280:VAL:HG21	16:I:304:ARG:HD2	1.77	0.64
17:J:136:LEU:HD22	17:J:217:GLU:CD	2.17	0.64
21:N:399:PHE:CD1	21:N:441:VAL:CG1	2.68	0.64
21:N:731:VAL:O	21:N:734:VAL:HG12	1.97	0.64
26:S:223:LEU:HD13	26:S:259:TYR:CE1	2.33	0.64
28:U:5:HIS:ND1	28:U:6:GLU:O	2.29	0.64
29:V:79:SER:HA	29:V:121:VAL:HG13	1.79	0.64
30:W:52:ILE:CD1	30:W:94:ALA:HB2	2.28	0.64
8:A:153:SER:HB2	8:A:155:TYR:HE1	1.62	0.64
14:G:67:GLN:HE22	14:G:85:ARG:HG2	1.62	0.64
17:J:119:SER:O	17:J:120:TYR:CD2	2.50	0.64
23:P:422:LEU:HD22	28:U:229:LEU:HD12	1.80	0.64
24:Q:112:ASP:O	24:Q:116:PHE:CD2	2.50	0.64
31:X:10:PHE:C	31:X:33:ILE:HG22	2.16	0.64
33:Z:188:ALA:O	33:Z:189:ALA:HB3	1.96	0.64
33:Z:889:VAL:CG2	33:Z:891:PRO:HD2	2.27	0.64
7:7:145:PRO:HB3	7:7:148:ARG:HH21	1.63	0.64
10:C:172:ALA:O	10:C:176:LEU:HG	1.97	0.64
14:G:87:LEU:CD1	14:G:115:LEU:HD22	2.27	0.64
15:H:147:ILE:HD13	15:H:157:VAL:H	1.61	0.64
16:I:102:ASN:HD21	17:J:83:LYS:NZ	1.93	0.64
16:I:243:THR:HG22	16:I:245:LEU:HD21	1.77	0.64
16:I:400:GLY:CA	17:J:179:ILE:HG13	2.27	0.64
17:J:115:LEU:HD12	17:J:122:LEU:HD21	1.77	0.64
22:O:79:VAL:HB	22:O:122:HIS:N	2.12	0.64
22:O:116:ASN:HD22	22:O:121:ASP:HB3	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:344:VAL:HG21	23:P:361:THR:CG2	2.28	0.64
25:R:422:ARG:HH21	26:S:299:LYS:CB	2.11	0.64
26:S:286:TYR:CE1	26:S:323:LEU:CD1	2.80	0.64
28:U:167:GLU:O	28:U:171:VAL:HG23	1.98	0.64
33:Z:446:GLU:CG	33:Z:484:LYS:NZ	2.61	0.64
14:G:200:TYR:OH	14:G:239:ILE:HA	1.97	0.64
21:N:127:ASP:O	21:N:128:ILE:HG13	1.98	0.64
21:N:313:LEU:HD22	21:N:786:ARG:NH2	2.13	0.64
22:O:155:LYS:O	22:O:159:LYS:HG3	1.97	0.64
22:O:250:TRP:CE2	22:O:270:ILE:CG2	2.72	0.64
25:R:207:ARG:NH1	25:R:211:LYS:HZ2	1.95	0.64
26:S:230:LYS:HZ3	26:S:256:LYS:CE	2.10	0.64
27:T:197:TYR:OH	27:T:234:TYR:HA	1.97	0.64
30:W:46:GLU:HB3	30:W:106:GLN:NE2	2.13	0.64
31:X:85:ARG:HH21	31:X:115:SER:HA	1.61	0.64
33:Z:68:LEU:HD22	33:Z:115:LEU:HA	1.78	0.64
1:1:176:VAL:HG12	1:1:178:LEU:CD2	2.28	0.64
4:4:66:TYR:CD1	4:4:74:LEU:HD21	2.26	0.64
4:4:117:GLN:NE2	4:4:127:LEU:HD12	2.12	0.64
10:C:208:TYR:CB	10:C:235:ILE:HG22	2.27	0.64
13:F:85:SER:O	13:F:89:ARG:HG3	1.96	0.64
15:H:248:LEU:HD23	15:H:375:VAL:HB	1.79	0.64
20:M:361:LEU:HD22	20:M:376:TRP:CZ3	2.32	0.64
21:N:320:SER:HB3	21:N:686:ILE:HG22	1.79	0.64
21:N:707:ASN:HD21	21:N:786:ARG:HH11	1.46	0.64
23:P:203:ILE:HG23	23:P:220:TYR:CE1	2.31	0.64
33:Z:471:LEU:CG	33:Z:497:PHE:CZ	2.80	0.64
33:Z:809:MET:HB2	33:Z:893:PHE:CD2	2.32	0.64
14:G:220:LEU:HD23	14:G:225:GLY:HA2	1.79	0.64
17:J:78:ILE:HD11	17:J:107:LEU:CB	2.28	0.64
22:O:119:SER:C	22:O:166:ARG:HD3	2.18	0.64
22:O:342:ASP:OD1	23:P:358:SER:CB	2.45	0.64
23:P:218:LEU:HD21	23:P:256:LYS:NZ	2.12	0.64
25:R:263:ARG:NH1	25:R:296:LEU:HG	2.09	0.64
28:U:94:HIS:ND1	28:U:96:GLY:N	2.44	0.64
29:V:231:GLU:O	29:V:235:GLU:HB3	1.98	0.64
33:Z:207:ILE:O	33:Z:210:TYR:HB2	1.97	0.64
1:1:119:VAL:CG2	14:G:103:LYS:NZ	2.47	0.64
8:A:89:ASP:OD1	8:A:135:ARG:NH2	2.31	0.64
8:A:126:GLN:NE2	8:A:130:GLN:NE2	2.45	0.64
14:G:7:TYR:HE1	14:G:13:VAL:HG23	1.58	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:113:ILE:HG22	16:I:115:ASP:H	1.62	0.64
22:O:277:ILE:HG21	22:O:279:ILE:N	1.92	0.64
23:P:422:LEU:HD23	28:U:229:LEU:HA	1.80	0.64
27:T:209:LEU:CD1	27:T:211:PHE:CZ	2.80	0.64
28:U:223:HIS:ND1	28:U:224:THR:CA	2.60	0.64
2:2:94:ILE:HG22	3:3:90:ARG:HH21	1.61	0.64
3:3:60:TYR:HD1	10:C:96:GLN:CB	2.10	0.64
10:C:69:LEU:CD2	10:C:88:ILE:HG23	2.27	0.64
13:F:31:GLN:HA	20:M:430:VAL:HG12	1.78	0.64
15:H:390:ARG:CA	15:H:404:TRP:CE2	2.75	0.64
21:N:190:LEU:HD11	21:N:228:VAL:CG2	2.28	0.64
21:N:666:GLN:CG	21:N:873:ARG:HH21	2.10	0.64
22:O:337:LEU:O	22:O:338:LYS:CB	2.45	0.64
23:P:207:THR:HB	23:P:217:LYS:HE2	1.80	0.64
23:P:303:PHE:C	23:P:348:HIS:NE2	2.50	0.64
31:X:85:ARG:NH2	31:X:116:ALA:N	2.44	0.64
33:Z:955:VAL:HG22	33:Z:956:LEU:N	2.12	0.64
3:3:96:VAL:O	3:3:117:LEU:HD11	1.97	0.64
6:6:-6:PRO:HA	7:7:125:LEU:CD2	2.26	0.64
8:A:156:LYS:HB3	8:A:166:TYR:CE1	2.32	0.64
16:I:369:MET:CE	16:I:416:PHE:HZ	2.11	0.64
23:P:412:LEU:HD13	29:V:245:VAL:HA	1.80	0.64
27:T:197:TYR:HD2	27:T:235:PHE:CE1	2.05	0.64
28:U:141:GLU:O	28:U:142:GLN:CB	2.45	0.64
33:Z:865:ASP:O	33:Z:877:THR:HG21	1.98	0.64
10:C:149:TYR:CZ	11:D:59:ILE:HD12	2.33	0.64
10:C:208:TYR:HA	10:C:235:ILE:CG2	2.26	0.64
16:I:253:ILE:HD11	16:I:286:ALA:HB3	1.80	0.64
16:I:400:GLY:HA3	17:J:179:ILE:HG12	1.76	0.64
16:I:400:GLY:CA	17:J:179:ILE:CD1	2.60	0.64
19:L:251:ILE:C	19:L:252:VAL:N	2.52	0.64
24:Q:419:LEU:HD23	24:Q:419:LEU:C	2.18	0.64
25:R:74:ASN:HA	25:R:86:ASP:OD2	1.96	0.64
29:V:114:PHE:HD1	29:V:118:LEU:C	2.01	0.64
30:W:59:PRO:CB	30:W:93:ILE:HG21	2.27	0.64
33:Z:737:ALA:CB	33:Z:775:MET:SD	2.85	0.64
1:1:6:VAL:HB	1:1:155:ILE:HD11	1.79	0.63
12:E:241:LYS:CA	12:E:244:LYS:NZ	2.58	0.63
17:J:324:ARG:HH21	17:J:353:CYS:H	1.46	0.63
21:N:52:ASP:O	21:N:53:ASP:HB2	1.98	0.63
22:O:233:LEU:HD22	22:O:238:ILE:CD1	2.19	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:358:ILE:CG2	22:O:360:GLY:H	1.99	0.63
22:O:373:TRP:CH2	28:U:233:PHE:HB2	2.32	0.63
27:T:225:ASN:HB2	27:T:241:GLU:CB	2.26	0.63
30:W:21:PHE:HB3	30:W:28:ALA:HB3	1.81	0.63
33:Z:581:VAL:HG21	33:Z:603:VAL:HG12	1.80	0.63
7:7:95:ARG:HH11	7:7:102:LEU:HD13	1.63	0.63
12:E:98:THR:HG23	12:E:102:TYR:HE1	1.63	0.63
15:H:257:THR:CG2	15:H:261:ARG:HE	2.11	0.63
18:K:240:SER:CB	19:L:306:MET:HE2	2.19	0.63
21:N:641:LEU:CB	21:N:660:LEU:HD21	2.28	0.63
24:Q:174:LEU:CG	24:Q:178:HIS:CE1	2.81	0.63
25:R:335:ARG:HA	25:R:371:PHE:CZ	2.34	0.63
33:Z:133:ASP:CG	33:Z:134:SER:H	2.00	0.63
14:G:108:ILE:CG2	14:G:148:TYR:CD1	2.81	0.63
15:H:430:ALA:HA	15:H:435:ARG:HE	1.64	0.63
21:N:406:TYR:CD1	21:N:448:LEU:HD12	2.34	0.63
22:O:79:VAL:HG11	22:O:123:GLY:N	2.12	0.63
28:U:18:ALA:HB1	28:U:125:VAL:HG21	1.81	0.63
33:Z:391:ASN:OD1	33:Z:394:TYR:HD2	1.80	0.63
1:1:80:SER:HB3	14:G:103:LYS:CD	2.29	0.63
8:A:17:THR:CG2	8:A:129:THR:O	2.46	0.63
8:A:57:LYS:CE	8:A:69:VAL:CB	2.76	0.63
8:A:81:MET:SD	8:A:143:PHE:CZ	2.92	0.63
10:C:97:ASN:O	10:C:101:THR:HG23	1.97	0.63
12:E:46:VAL:HB	12:E:222:ILE:HD12	1.79	0.63
15:H:146:VAL:H	15:H:157:VAL:CG2	2.10	0.63
18:K:365:GLU:HG2	18:K:404:GLN:H	1.62	0.63
19:L:252:VAL:HG11	20:M:299:ARG:NH2	2.13	0.63
21:N:190:LEU:HD13	21:N:224:THR:CG2	2.27	0.63
21:N:479:GLU:OE1	21:N:512:ASN:OD1	2.15	0.63
22:O:185:PHE:CD1	22:O:279:ILE:HG13	2.34	0.63
24:Q:243:PHE:CE1	24:Q:287:THR:CG2	2.80	0.63
26:S:399:TYR:HD2	26:S:401:LYS:O	1.80	0.63
33:Z:189:ALA:CB	33:Z:193:PHE:CG	2.81	0.63
33:Z:800:SER:OG	33:Z:815:MET:HE1	1.99	0.63
1:1:119:VAL:HG11	14:G:103:LYS:HZ3	1.64	0.63
24:Q:299:MET:HE2	24:Q:335:PHE:HZ	1.57	0.63
27:T:190:ALA:CB	27:T:224:ARG:NE	2.62	0.63
33:Z:877:THR:HG23	33:Z:907:GLY:HA2	1.80	0.63
9:B:27:ALA:HB1	18:K:426:PHE:CE1	2.32	0.63
9:B:82:TYR:HE1	9:B:134:LEU:HD22	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:340:ARG:NH1	16:I:343:ARG:CB	2.59	0.63
18:K:210:LEU:CD1	18:K:212:TYR:OH	2.47	0.63
21:N:277:LEU:CD1	21:N:287:LEU:HD23	2.28	0.63
22:O:188:PHE:CZ	22:O:216:ASP:HB3	2.30	0.63
27:T:1:MET:HB2	27:T:2:PRO:CD	2.23	0.63
28:U:32:ARG:HH21	28:U:56:PHE:HZ	1.45	0.63
31:X:89:LEU:HG	31:X:91:PHE:CZ	2.34	0.63
33:Z:244:ARG:O	33:Z:248:TYR:CD1	2.46	0.63
33:Z:551:LEU:HD13	33:Z:591:ILE:HG22	1.56	0.63
1:1:112:THR:CG2	7:7:27:ARG:HH21	2.12	0.63
15:H:318:ARG:HH12	15:H:364:ALA:CB	2.12	0.63
18:K:244:HIS:CE1	18:K:295:ILE:HD11	2.34	0.63
22:O:341:ILE:HD12	22:O:348:VAL:HG13	1.80	0.63
23:P:263:HIS:CE1	23:P:327:LEU:O	2.51	0.63
25:R:94:PHE:HZ	25:R:99:TYR:CE2	2.16	0.63
27:T:147:LYS:O	27:T:151:TRP:CD1	2.52	0.63
28:U:16:LEU:CD2	29:V:209:GLU:CG	2.77	0.63
32:Y:80:GLU:CD	32:Y:83:ARG:HH21	2.01	0.63
33:Z:407:VAL:HG12	33:Z:415:MET:HG3	1.79	0.63
11:D:197:ARG:NH2	11:D:239:GLU:OE1	2.32	0.63
15:H:155:PHE:CE1	20:M:76:PRO:CA	2.82	0.63
16:I:262:ARG:CB	17:J:223:ILE:HD12	2.29	0.63
18:K:240:SER:O	19:L:303:ARG:HG3	1.99	0.63
22:O:223:LEU:HA	22:O:279:ILE:HG21	1.79	0.63
23:P:207:THR:HB	23:P:217:LYS:CE	2.28	0.63
24:Q:51:ARG:NH2	24:Q:92:LYS:CD	2.57	0.63
27:T:250:MET:O	27:T:251:HIS:HB2	1.98	0.63
28:U:85:ALA:O	28:U:86:LYS:HB2	1.98	0.63
30:W:25:ARG:NE	30:W:144:PHE:CD2	2.66	0.63
31:X:8:ILE:CG2	31:X:124:LYS:CD	2.77	0.63
1:1:45:ARG:HE	1:1:52:THR:HB	1.63	0.63
13:F:80:ASP:CG	13:F:126:ARG:HH22	2.02	0.63
16:I:243:THR:HG21	16:I:245:LEU:HD21	1.80	0.63
17:J:154:THR:HA	17:J:157:ILE:HD12	1.80	0.63
18:K:349:ARG:HH12	18:K:377:SER:H	1.44	0.63
19:L:192:GLU:HB3	19:L:345:ARG:HH21	1.62	0.63
19:L:357:ARG:HE	19:L:380:VAL:HG13	1.63	0.63
21:N:325:PHE:N	29:V:182:LYS:HG2	2.14	0.63
22:O:322:ASP:O	22:O:325:GLU:HB2	1.98	0.63
24:Q:264:TYR:OH	24:Q:330:LEU:HD12	1.98	0.63
30:W:21:PHE:CE2	30:W:25:ARG:HG3	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:55:ARG:NE	33:Z:63:LEU:HD13	2.14	0.63
33:Z:958:ASN:N	33:Z:961:GLU:OE1	2.30	0.63
1:1:80:SER:HB3	14:G:103:LYS:HD3	1.81	0.62
11:D:104:VAL:HG11	11:D:109:LEU:HD11	1.81	0.62
13:F:117:GLN:HE21	13:F:121:GLN:HE21	1.47	0.62
15:H:155:PHE:CE1	20:M:77:TYR:N	2.60	0.62
21:N:768:ILE:HG21	21:N:871:MET:SD	2.39	0.62
23:P:181:LEU:HG	23:P:223:LEU:HD11	1.81	0.62
24:Q:54:GLN:HE22	24:Q:81:SER:HB2	1.62	0.62
31:X:46:TRP:O	31:X:68:LEU:HB2	2.00	0.62
2:2:104:ASP:CG	2:2:106:THR:OG1	2.36	0.62
3:3:1:GLY:HA3	3:3:33:LYS:NZ	2.14	0.62
7:7:69:ASP:O	7:7:70:ASN:HB2	1.99	0.62
12:E:154:GLN:OE1	12:E:166:ARG:HD2	1.99	0.62
21:N:596:LEU:CD2	21:N:717:LEU:HD22	2.29	0.62
22:O:332:ILE:HD11	22:O:341:ILE:HG21	1.80	0.62
25:R:353:MET:O	25:R:357:PHE:HB2	1.99	0.62
28:U:19:LEU:HD11	29:V:208:LYS:CB	2.29	0.62
29:V:182:LYS:HE2	29:V:185:ILE:HG21	1.81	0.62
33:Z:449:ALA:HB1	33:Z:899:GLN:HE22	1.64	0.62
33:Z:471:LEU:HD23	33:Z:471:LEU:C	2.19	0.62
1:1:-7:LYS:HD3	2:2:92:GLY:O	2.00	0.62
3:3:1:GLY:HA2	3:3:17:ASP:OD2	1.99	0.62
5:5:33:ARG:HD3	5:5:45:MET:O	1.99	0.62
20:M:192:GLU:OE1	20:M:347:ILE:HG23	2.00	0.62
21:N:366:THR:HG23	21:N:747:HIS:CE1	2.34	0.62
22:O:80:LYS:CE	22:O:81:TYR:HE2	2.10	0.62
22:O:133:ILE:HG12	22:O:137:TYR:CD2	2.34	0.62
24:Q:97:LEU:HD11	24:Q:121:SER:HB3	1.81	0.62
33:Z:914:LEU:HB3	33:Z:980:VAL:HG22	1.81	0.62
5:5:73:ARG:HH12	5:5:106:ARG:CD	2.12	0.62
8:A:153:SER:HB2	8:A:155:TYR:CE1	2.34	0.62
15:H:261:ARG:HH22	15:H:273:ARG:HH21	1.46	0.62
19:L:309:LEU:CD2	19:L:342:ARG:HE	2.10	0.62
20:M:189:GLN:O	20:M:193:LEU:HG	1.98	0.62
21:N:596:LEU:CD1	21:N:717:LEU:CD2	2.77	0.62
23:P:221:TYR:CE2	23:P:244:ILE:CB	2.76	0.62
25:R:171:MET:HE1	25:R:206:ARG:HG3	1.81	0.62
25:R:335:ARG:HA	25:R:371:PHE:HZ	1.64	0.62
30:W:16:SER:HA	30:W:25:ARG:HH11	1.63	0.62
30:W:87:MET:H	30:W:118:ILE:HD11	1.62	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:8:ILE:HG21	31:X:124:LYS:CD	2.28	0.62
31:X:41:GLU:HG3	31:X:45:PHE:CA	2.28	0.62
33:Z:211:PHE:CD2	33:Z:220:ALA:HB2	2.35	0.62
2:2:196:ARG:NE	2:2:199:LYS:HE3	2.13	0.62
3:3:59:ARG:HH22	10:C:99:LEU:HD11	1.52	0.62
7:7:62:LEU:HD11	7:7:87:TYR:CD2	2.35	0.62
11:D:96:HIS:HD2	11:D:100:LEU:HB2	1.63	0.62
15:H:390:ARG:HG3	15:H:404:TRP:NE1	2.14	0.62
16:I:252:LEU:H	16:I:253:ILE:N	1.96	0.62
17:J:219:VAL:HG11	18:K:284:ALA:CB	2.25	0.62
22:O:50:ASP:HA	22:O:53:LYS:HZ1	1.65	0.62
22:O:306:ARG:HG3	22:O:351:SER:C	2.20	0.62
23:P:119:ILE:HD12	23:P:143:LEU:HD22	1.80	0.62
23:P:132:VAL:O	23:P:133:GLU:HB2	1.99	0.62
24:Q:9:GLU:OE2	24:Q:12:ARG:NH2	2.32	0.62
24:Q:278:VAL:O	24:Q:282:LEU:HG	2.00	0.62
27:T:225:ASN:ND2	27:T:241:GLU:HA	2.13	0.62
31:X:8:ILE:HG22	31:X:124:LYS:HD2	1.79	0.62
17:J:272:MET:CE	17:J:290:ILE:HD13	2.30	0.62
22:O:222:LEU:HD22	22:O:270:ILE:HD11	1.81	0.62
23:P:308:LEU:CD2	23:P:369:LEU:HD22	2.29	0.62
24:Q:382:LEU:HB3	25:R:263:ARG:HH22	1.64	0.62
25:R:40:ILE:CG2	25:R:89:ASN:HD22	2.13	0.62
25:R:154:LEU:HD21	25:R:173:THR:HG21	1.82	0.62
25:R:421:VAL:O	25:R:422:ARG:HB2	1.99	0.62
30:W:143:ASN:OD1	30:W:173:THR:HG23	1.99	0.62
33:Z:161:ILE:CD1	33:Z:207:ILE:HD11	2.29	0.62
9:B:119:GLN:HG3	9:B:123:GLN:NE2	2.14	0.62
16:I:135:PHE:HD2	16:I:159:VAL:HG22	1.64	0.62
17:J:193:THR:HG21	17:J:316:PHE:CD1	2.33	0.62
22:O:9:THR:HG23	22:O:27:GLU:OE2	2.00	0.62
22:O:119:SER:CA	22:O:166:ARG:HD3	2.30	0.62
23:P:308:LEU:HD22	23:P:369:LEU:HD22	1.82	0.62
24:Q:90:LYS:O	24:Q:94:VAL:HG23	2.00	0.62
24:Q:222:SER:O	24:Q:226:HIS:HD2	1.79	0.62
25:R:258:LEU:HD12	25:R:266:LEU:CD1	2.30	0.62
33:Z:767:TYR:HE2	33:Z:772:ILE:CG1	2.11	0.62
33:Z:889:VAL:CG1	33:Z:894:MET:CE	2.74	0.62
1:1:92:ASN:OD1	1:1:93:LEU:HG	2.00	0.62
11:D:81:ASP:HB3	11:D:129:PHE:HD1	1.64	0.62
12:E:153:TYR:HE1	12:E:222:ILE:HG22	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:97:LEU:HB2	15:H:173:ARG:HG2	1.82	0.62
15:H:390:ARG:HG3	15:H:404:TRP:HE1	1.65	0.62
18:K:128:ARG:HD3	29:V:276:PRO:HD3	1.82	0.62
18:K:169:VAL:N	19:L:315:PHE:HE1	1.94	0.62
22:O:277:ILE:HG22	22:O:279:ILE:N	1.94	0.62
26:S:323:LEU:HD23	26:S:383:LEU:HD21	1.82	0.62
27:T:229:VAL:CG2	27:T:234:TYR:CE1	2.76	0.62
31:X:85:ARG:HH21	31:X:115:SER:CB	2.11	0.62
33:Z:134:SER:N	33:Z:134:SER:C	2.53	0.62
33:Z:312:TYR:CZ	33:Z:348:LEU:O	2.53	0.62
1:1:103:ASP:HB2	1:1:106:ASN:OD1	1.98	0.62
5:5:177:LEU:HD12	5:5:191:HIS:NE2	2.15	0.62
7:7:83:TYR:CZ	13:F:101:ARG:HG2	2.35	0.62
12:E:180:GLN:HA	12:E:183:LEU:HD12	1.80	0.62
12:E:201:LEU:HD11	12:E:239:LEU:CD2	2.28	0.62
15:H:410:LEU:CB	15:H:447:VAL:HG11	2.30	0.62
20:M:197:ILE:HG13	20:M:198:VAL:N	2.14	0.62
21:N:277:LEU:HB3	21:N:287:LEU:HD21	1.76	0.62
24:Q:279:LYS:HA	24:Q:282:LEU:HD12	1.81	0.62
25:R:101:GLU:OE2	25:R:105:LYS:NZ	2.28	0.62
26:S:257:LEU:O	26:S:259:TYR:HD2	1.83	0.62
31:X:10:PHE:HE2	31:X:103:GLU:OE2	1.78	0.62
33:Z:258:PRO:HB2	33:Z:259:PRO:HD3	1.82	0.62
33:Z:493:LEU:CD1	33:Z:497:PHE:CE2	2.83	0.62
33:Z:831:LEU:HA	33:Z:834:LEU:HD12	1.81	0.62
12:E:88:MET:HE1	12:E:142:LEU:HD12	1.81	0.62
14:G:146:HIS:CB	14:G:148:TYR:CE1	2.50	0.62
17:J:78:ILE:HD11	17:J:107:LEU:HB2	1.81	0.62
19:L:357:ARG:HB3	19:L:361:PHE:HE2	1.64	0.62
23:P:241:LEU:HA	23:P:244:ILE:CG2	2.30	0.62
25:R:125:GLU:CG	25:R:126:GLY:H	2.13	0.62
26:S:188:TYR:CE1	26:S:210:LEU:HD13	2.35	0.62
27:T:169:GLN:CD	27:T:174:PHE:CZ	2.73	0.62
31:X:95:GLU:HB3	31:X:97:TYR:HE1	1.63	0.62
33:Z:260:GLU:CG	33:Z:611:THR:HG21	2.29	0.62
33:Z:431:ASP:OD2	33:Z:458:SER:HB3	1.99	0.62
1:1:19:ARG:HH12	1:1:29:ARG:CB	2.08	0.61
9:B:27:ALA:HA	18:K:426:PHE:HE1	1.64	0.61
19:L:372:GLY:O	19:L:374:PHE:CE1	2.52	0.61
21:N:596:LEU:HD13	21:N:717:LEU:HD22	1.81	0.61
22:O:26:PHE:CA	22:O:61:LEU:HD21	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:124:ASP:CB	22:O:127:LEU:HD22	2.30	0.61
26:S:191:HIS:NE2	26:S:206:GLN:CG	2.61	0.61
27:T:236:ASN:ND2	27:T:240:LYS:HE3	2.15	0.61
30:W:21:PHE:HZ	30:W:144:PHE:CD1	2.17	0.61
30:W:158:ILE:HG13	30:W:171:LEU:HB2	1.82	0.61
1:1:19:ARG:HH11	1:1:29:ARG:CG	2.10	0.61
5:5:8:PHE:CE1	5:5:13:ILE:CG1	2.79	0.61
9:B:140:ASP:OD1	9:B:143:ASN:HB2	2.00	0.61
11:D:34:VAL:CG2	11:D:199:LEU:HD21	2.30	0.61
11:D:92:GLU:OE2	11:D:108:TYR:CE2	2.53	0.61
15:H:146:VAL:HG11	20:M:75:LEU:HB3	1.81	0.61
17:J:250:ILE:HA	17:J:299:ILE:CD1	2.29	0.61
18:K:99:PHE:CZ	18:K:101:GLU:C	2.73	0.61
20:M:225:GLY:O	20:M:226:THR:CG2	2.48	0.61
24:Q:46:VAL:HB	24:Q:48:ASP:OD1	2.00	0.61
24:Q:412:ALA:HB2	25:R:400:TYR:HE1	1.65	0.61
25:R:79:LEU:HD13	25:R:93:LYS:CE	2.28	0.61
26:S:185:PHE:CE1	26:S:239:ARG:HD2	2.35	0.61
27:T:170:ASN:HA	27:T:174:PHE:HB2	1.83	0.61
28:U:16:LEU:HD22	29:V:209:GLU:CD	2.19	0.61
30:W:20:ASP:C	30:W:21:PHE:HD1	2.02	0.61
8:A:156:LYS:HE3	8:A:169:THR:HG21	1.81	0.61
16:I:176:SER:O	17:J:282:PHE:CE1	2.54	0.61
21:N:12:LEU:HD13	27:T:40:LEU:HD13	1.82	0.61
22:O:50:ASP:HA	22:O:53:LYS:HZ3	1.63	0.61
22:O:373:TRP:CZ3	28:U:233:PHE:CD2	2.88	0.61
25:R:199:GLU:HB3	25:R:206:ARG:CD	2.30	0.61
25:R:335:ARG:HG3	25:R:371:PHE:CE1	2.35	0.61
33:Z:312:TYR:CE1	33:Z:348:LEU:C	2.73	0.61
33:Z:361:HIS:CE1	33:Z:861:THR:HB	2.35	0.61
33:Z:550:PHE:CD1	33:Z:562:TRP:HZ3	2.18	0.61
33:Z:970:TYR:CE1	33:Z:993:GLU:N	2.69	0.61
3:3:61:LYS:NZ	3:3:85:SER:CB	2.63	0.61
8:A:135:ARG:NH1	8:A:137:LEU:HD23	2.15	0.61
15:H:247:LEU:HD22	15:H:371:ILE:HD13	1.81	0.61
15:H:248:LEU:CD2	15:H:375:VAL:HB	2.31	0.61
17:J:115:LEU:HD12	17:J:122:LEU:HD23	1.81	0.61
25:R:243:LEU:O	25:R:244:THR:HB	2.00	0.61
31:X:85:ARG:HH12	31:X:106:SER:HB3	1.64	0.61
33:Z:68:LEU:CD2	33:Z:115:LEU:HA	2.30	0.61
5:5:207:PHE:O	5:5:208:ASN:OD1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:207:ILE:HG22	8:A:211:ILE:CD1	2.30	0.61
12:E:165:TYR:C	12:E:167:TYR:CE1	2.74	0.61
17:J:45:GLU:OE1	21:N:608:LEU:CG	2.49	0.61
22:O:140:LYS:HG2	22:O:141:ASN:OD1	2.00	0.61
22:O:344:VAL:CG2	23:P:361:THR:HG22	2.30	0.61
23:P:360:ILE:HG12	23:P:402:PHE:CZ	2.35	0.61
24:Q:291:TYR:OH	24:Q:293:SER:CB	2.49	0.61
25:R:36:SER:C	25:R:43:ARG:NH2	2.53	0.61
27:T:193:THR:HG21	27:T:226:TRP:HH2	1.20	0.61
27:T:193:THR:O	27:T:197:TYR:HB2	2.00	0.61
33:Z:298:PHE:O	33:Z:307:HIS:NE2	2.33	0.61
33:Z:805:LEU:HD22	33:Z:893:PHE:HE1	1.65	0.61
9:B:178:ARG:NH1	9:B:194:LEU:HB3	2.10	0.61
12:E:72:ARG:O	12:E:73:HIS:CG	2.53	0.61
14:G:166:LYS:NZ	14:G:206:ASN:HA	2.11	0.61
17:J:45:GLU:OE1	21:N:608:LEU:CD1	2.49	0.61
18:K:90:GLN:HE22	18:K:143:SER:HB2	1.64	0.61
18:K:94:LEU:HB2	19:L:128:ILE:HB	1.83	0.61
18:K:134:SER:HB2	18:K:255:ARG:NH2	2.12	0.61
21:N:21:LYS:O	21:N:25:LEU:HG	2.01	0.61
21:N:328:PHE:HZ	21:N:696:LYS:HD2	1.65	0.61
21:N:452:LEU:HD21	21:N:748:PHE:CE1	2.33	0.61
28:U:85:ALA:O	28:U:86:LYS:CB	2.48	0.61
11:D:153:SER:OG	11:D:155:ILE:HG12	2.01	0.61
15:H:312:ASP:OD1	15:H:360:THR:HG21	2.01	0.61
17:J:224:GLY:O	17:J:227:SER:HB2	2.01	0.61
19:L:252:VAL:HG12	20:M:256:ILE:HD12	0.86	0.61
20:M:361:LEU:CD1	20:M:376:TRP:CE3	2.80	0.61
21:N:666:GLN:HG3	21:N:873:ARG:NE	2.14	0.61
25:R:270:VAL:O	25:R:270:VAL:HG12	2.01	0.61
27:T:149:ASP:O	27:T:153:MET:HG2	2.00	0.61
29:V:50:MET:HB2	29:V:78:VAL:HG13	1.83	0.61
6:6:115:SER:HB3	6:6:128:ARG:HH11	1.66	0.61
12:E:15:PHE:HZ	13:F:126:ARG:HD2	1.65	0.61
16:I:387:LEU:HA	16:I:427:LYS:NZ	2.15	0.61
18:K:194:GLN:HG2	18:K:197:LEU:HG	1.83	0.61
21:N:325:PHE:CA	29:V:182:LYS:CG	2.74	0.61
21:N:420:THR:O	21:N:424:LYS:HG3	2.01	0.61
22:O:10:ILE:O	22:O:14:LEU:HG	2.01	0.61
23:P:181:LEU:HA	23:P:223:LEU:CD1	2.24	0.61
24:Q:135:HIS:CB	24:Q:161:LEU:CD2	2.77	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:154:SER:O	24:Q:158:ILE:HG13	2.01	0.61
25:R:33:LEU:HB2	25:R:46:ALA:HB1	1.83	0.61
25:R:396:LYS:CG	25:R:400:TYR:CE2	2.84	0.61
28:U:5:HIS:CG	28:U:6:GLU:N	2.62	0.61
30:W:11:ASP:OD1	30:W:12:ASN:N	2.34	0.61
31:X:46:TRP:CZ2	31:X:131:ASN:C	2.73	0.61
31:X:75:TRP:CZ3	31:X:125:MET:HB2	2.36	0.61
5:5:114:TYR:HE1	5:5:129:VAL:HG11	1.65	0.61
8:A:117:LEU:HD23	8:A:143:PHE:CD2	2.36	0.61
16:I:126:PRO:HB2	16:I:128:TYR:CE2	2.36	0.61
17:J:45:GLU:OE1	21:N:608:LEU:HG	2.00	0.61
18:K:347:ARG:HG3	24:Q:215:VAL:HG11	1.83	0.61
19:L:357:ARG:O	19:L:361:PHE:HD2	1.83	0.61
23:P:181:LEU:CG	23:P:223:LEU:HD11	2.31	0.61
23:P:412:LEU:HB3	29:V:245:VAL:HG22	1.83	0.61
25:R:64:LYS:O	25:R:68:GLU:HG3	2.00	0.61
27:T:190:ALA:HA	27:T:224:ARG:NH1	2.15	0.61
28:U:235:LEU:O	28:U:263:LYS:HD3	2.00	0.61
30:W:25:ARG:HD2	30:W:144:PHE:HE2	1.56	0.61
31:X:46:TRP:NE1	31:X:132:SER:HA	2.15	0.61
31:X:75:TRP:CZ3	31:X:125:MET:CB	2.84	0.61
33:Z:551:LEU:HD13	33:Z:591:ILE:HG21	1.80	0.61
1:1:45:ARG:HH21	1:1:52:THR:C	2.03	0.61
1:1:75:THR:HG22	1:1:111:TYR:CG	2.29	0.61
13:F:46:LEU:HD21	13:F:73:SER:HB3	1.82	0.61
16:I:408:ARG:NH2	16:I:415:ASP:OD2	2.33	0.61
18:K:67:TYR:CE2	21:N:572:LEU:O	2.54	0.61
18:K:246:TYR:HB3	19:L:256:ILE:HD11	1.83	0.61
18:K:303:MET:HB3	18:K:333:ARG:HH12	1.64	0.61
19:L:132:ARG:HD2	19:L:133:ASN:N	2.16	0.61
21:N:21:LYS:HG3	21:N:55:PHE:HD2	1.54	0.61
22:O:196:LEU:CB	22:O:213:LEU:HD21	2.31	0.61
25:R:194:VAL:O	25:R:199:GLU:OE1	2.19	0.61
26:S:188:TYR:CD2	26:S:210:LEU:HD13	2.36	0.61
28:U:35:GLY:HA3	28:U:93:TYR:CB	2.29	0.61
33:Z:188:ALA:O	33:Z:189:ALA:CB	2.49	0.61
33:Z:551:LEU:CA	33:Z:593:HIS:NE2	2.59	0.61
33:Z:809:MET:HB2	33:Z:893:PHE:HD2	1.66	0.61
1:1:98:ILE:HD11	1:1:127:ALA:CB	2.31	0.60
6:6:68:PHE:CZ	13:F:66:CYS:O	2.54	0.60
10:C:160:TRP:CZ2	10:C:163:ILE:CD1	2.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:34:THR:OG1	14:G:65:LYS:NZ	2.33	0.60
22:O:219:ILE:HG22	22:O:223:LEU:HD22	1.78	0.60
24:Q:178:HIS:CB	24:Q:201:ALA:HB2	2.31	0.60
25:R:214:TYR:HH	25:R:226:GLU:HB3	1.65	0.60
28:U:112:LYS:NZ	30:W:60:ARG:NH2	2.49	0.60
33:Z:567:ALA:CB	33:Z:599:ILE:HG12	2.31	0.60
1:1:-6:GLY:HA3	2:2:116:HIS:CG	2.35	0.60
5:5:40:PHE:CE2	5:5:41:LEU:HG	2.36	0.60
18:K:273:GLU:OE1	19:L:306:MET:HB2	2.01	0.60
20:M:227:GLY:O	20:M:231:LEU:HG	2.00	0.60
21:N:579:SER:HA	21:N:584:ARG:NE	2.14	0.60
22:O:43:GLU:CD	22:O:44:SER:CB	2.70	0.60
23:P:203:ILE:CG2	23:P:220:TYR:CD1	2.84	0.60
23:P:422:LEU:CD2	28:U:229:LEU:HA	2.30	0.60
25:R:305:PHE:CA	25:R:334:ARG:HH12	2.06	0.60
26:S:436:ILE:CG1	27:T:196:SER:O	2.45	0.60
29:V:104:VAL:HG13	29:V:106:GLY:O	2.01	0.60
33:Z:52:LEU:HD13	33:Z:67:SER:HA	1.83	0.60
33:Z:194:GLU:HG2	33:Z:195:PHE:CD2	2.36	0.60
33:Z:610:GLY:C	33:Z:748:LEU:HB3	2.21	0.60
33:Z:854:LEU:HD21	33:Z:864:MET:SD	2.41	0.60
2:2:8:PHE:CE2	2:2:11:GLY:CA	2.84	0.60
6:6:-8:PHE:HE1	7:7:124:LEU:HD13	1.66	0.60
11:D:4:TYR:O	11:D:4:TYR:CD1	2.54	0.60
18:K:350:ARG:NH2	24:Q:215:VAL:HG12	2.16	0.60
20:M:170:MET:HB3	20:M:244:LEU:CD1	2.24	0.60
21:N:43:LEU:HD21	21:N:69:TYR:CZ	2.35	0.60
21:N:475:ALA:HB1	21:N:510:HIS:NE2	2.16	0.60
23:P:231:LYS:O	23:P:232:ARG:HB2	2.01	0.60
23:P:235:LEU:HD21	23:P:276:LEU:HD11	1.81	0.60
28:U:132:LEU:HG	28:U:134:THR:H	1.66	0.60
29:V:24:LYS:NZ	29:V:197:TYR:OH	2.34	0.60
29:V:182:LYS:HE2	29:V:185:ILE:CG2	2.31	0.60
33:Z:102:ILE:CG2	33:Z:112:LYS:HG3	2.21	0.60
33:Z:737:ALA:HA	33:Z:775:MET:HE2	1.83	0.60
3:3:59:ARG:CZ	10:C:99:LEU:HD11	2.23	0.60
5:5:73:ARG:NH1	5:5:106:ARG:HD2	2.16	0.60
15:H:77:ALA:C	16:I:153:THR:HG22	2.20	0.60
19:L:253:ASP:HA	20:M:256:ILE:CB	2.31	0.60
25:R:125:GLU:OE1	25:R:126:GLY:N	2.32	0.60
26:S:288:THR:HG22	26:S:292:TYR:CE2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:209:LEU:CB	27:T:211:PHE:CE1	2.80	0.60
28:U:66:TRP:C	30:W:93:ILE:HD12	2.21	0.60
29:V:106:GLY:C	29:V:107:TRP:CD1	2.74	0.60
6:6:22:THR:OG1	6:6:27:ASN:ND2	2.31	0.60
12:E:17:PRO:HA	13:F:24:TYR:CD1	2.36	0.60
16:I:253:ILE:HB	17:J:267:GLU:OE2	2.02	0.60
21:N:320:SER:HB2	21:N:686:ILE:CG2	2.31	0.60
22:O:329:MET:CA	23:P:357:TYR:OH	2.45	0.60
25:R:308:LEU:CB	25:R:334:ARG:CZ	2.79	0.60
27:T:59:LYS:HD3	27:T:97:SER:HB2	1.83	0.60
27:T:225:ASN:HB2	27:T:241:GLU:CA	2.31	0.60
30:W:172:LEU:CD2	30:W:185:ILE:CA	2.80	0.60
33:Z:863:THR:OG1	33:Z:911:LYS:HE2	2.01	0.60
33:Z:867:PHE:HE2	33:Z:871:HIS:ND1	1.92	0.60
5:5:83:LEU:HD21	5:5:97:MET:SD	2.41	0.60
8:A:148:GLU:HG2	8:A:230:LYS:HE3	1.82	0.60
17:J:142:VAL:O	17:J:142:VAL:HG12	2.01	0.60
20:M:166:ARG:O	20:M:167:VAL:CG2	2.50	0.60
21:N:398:ARG:HD2	21:N:438:ASP:HB3	1.83	0.60
21:N:402:GLY:HA2	21:N:442:LEU:HD12	1.84	0.60
21:N:771:PHE:CE2	21:N:772:GLN:O	2.55	0.60
22:O:373:TRP:CD1	28:U:200:LEU:HD11	2.35	0.60
23:P:234:TYR:HA	23:P:267:PHE:HE2	1.55	0.60
25:R:134:TRP:CH2	25:R:156:LYS:NZ	2.66	0.60
25:R:320:LYS:HD2	25:R:324:ARG:HD2	1.84	0.60
26:S:153:GLU:HA	26:S:156:VAL:HG23	1.83	0.60
26:S:286:TYR:CE1	26:S:323:LEU:CB	2.83	0.60
26:S:420:GLU:O	26:S:423:VAL:HG12	2.01	0.60
31:X:100:TRP:HZ2	31:X:110:PRO:CG	2.14	0.60
33:Z:193:PHE:CE2	33:Z:196:SER:CB	2.84	0.60
1:1:75:THR:CB	1:1:111:TYR:CD1	2.83	0.60
8:A:48:LYS:HD2	8:A:195:ASN:CG	2.22	0.60
17:J:133:LEU:HD23	17:J:137:MET:CE	2.32	0.60
17:J:219:VAL:CG1	18:K:284:ALA:HB1	2.31	0.60
21:N:127:ASP:C	21:N:128:ILE:HG13	2.22	0.60
27:T:35:ILE:CD1	27:T:40:LEU:CD1	2.69	0.60
33:Z:186:GLY:O	33:Z:187:SER:CB	2.49	0.60
33:Z:970:TYR:OH	33:Z:992:GLU:C	2.39	0.60
1:1:36:ARG:HG3	1:1:38:HIS:O	2.01	0.60
4:4:80:SER:C	4:4:124:LYS:NZ	2.55	0.60
8:A:130:GLN:HB3	9:B:127:VAL:CG2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:208:TYR:HB2	10:C:235:ILE:CG2	2.32	0.60
14:G:73:ILE:HG12	14:G:108:ILE:HD13	1.80	0.60
17:J:143:PRO:O	17:J:204:HIS:ND1	2.35	0.60
21:N:528:ARG:NH2	21:N:531:LEU:O	2.27	0.60
22:O:223:LEU:HG	22:O:279:ILE:HG13	1.84	0.60
26:S:471:LEU:HB2	28:U:288:PHE:CE1	2.36	0.60
27:T:93:ASN:ND2	27:T:94:HIS:CD2	2.67	0.60
27:T:245:TYR:HE2	27:T:251:HIS:NE2	1.92	0.60
33:Z:471:LEU:HG	33:Z:497:PHE:CD2	2.35	0.60
33:Z:970:TYR:CE1	33:Z:993:GLU:HB2	2.36	0.60
5:5:126:ILE:HD11	5:5:144:TYR:CZ	2.37	0.60
8:A:48:LYS:NZ	8:A:195:ASN:HD21	1.99	0.60
8:A:172:GLY:H	18:K:419:ASN:ND2	2.00	0.60
14:G:182:HIS:CD2	14:G:186:LEU:CD1	2.85	0.60
15:H:249:TYR:OH	15:H:376:GLU:CB	2.49	0.60
15:H:340:LEU:HD12	15:H:370:ARG:NH1	2.09	0.60
18:K:68:ILE:HD11	21:N:608:LEU:CD2	2.31	0.60
20:M:335:PRO:O	20:M:342:ARG:NH1	2.35	0.60
21:N:47:GLU:O	21:N:50:TYR:CB	2.41	0.60
22:O:335:GLY:O	22:O:336:LEU:HB2	2.02	0.60
24:Q:51:ARG:NH2	24:Q:92:LYS:CB	2.58	0.60
31:X:75:TRP:CG	31:X:87:PHE:CE1	2.88	0.60
12:E:226:ASP:OD2	12:E:229:LYS:HD2	2.02	0.60
13:F:166:GLN:O	20:M:381:ARG:NH2	2.35	0.60
17:J:167:PRO:CD	17:J:174:PHE:HZ	2.06	0.60
22:O:179:PHE:CZ	22:O:187:SER:HB3	2.37	0.60
22:O:217:LEU:HD21	22:O:236:HIS:HE1	1.67	0.60
22:O:373:TRP:CH2	28:U:233:PHE:CG	2.90	0.60
25:R:37:LYS:HA	25:R:43:ARG:HH22	1.67	0.60
25:R:421:VAL:O	25:R:422:ARG:HB3	2.01	0.60
26:S:138:MET:SD	26:S:179:ILE:HG12	2.42	0.60
26:S:237:ILE:HG21	26:S:253:PHE:HE1	1.67	0.60
29:V:261:LEU:CD2	29:V:283:THR:CG2	2.57	0.60
30:W:20:ASP:C	30:W:21:PHE:CD1	2.75	0.60
30:W:98:LEU:O	30:W:98:LEU:HG	2.00	0.60
33:Z:102:ILE:HG22	33:Z:112:LYS:CG	2.24	0.60
1:1:38:HIS:HE1	1:1:67:THR:CG2	2.14	0.59
1:1:85:LEU:HD12	1:1:89:ASN:ND2	2.17	0.59
4:4:37:LEU:HD23	4:4:60:GLN:OE1	2.02	0.59
15:H:104:LYS:HB3	15:H:170:GLU:OE1	2.02	0.59
16:I:306:MET:SD	16:I:338:LEU:HD11	2.42	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:202:PHE:CE2	21:N:206:ILE:CD1	2.83	0.59
22:O:118:GLY:C	22:O:166:ARG:HD3	2.20	0.59
25:R:101:GLU:HG2	25:R:105:LYS:CE	2.31	0.59
26:S:371:LEU:HD13	26:S:380:CYS:HG	1.60	0.59
30:W:65:PHE:CD2	30:W:65:PHE:O	2.54	0.59
31:X:8:ILE:HB	31:X:124:LYS:HE3	1.83	0.59
33:Z:551:LEU:CG	33:Z:593:HIS:NE2	2.60	0.59
1:1:80:SER:HB3	14:G:103:LYS:CG	2.32	0.59
2:2:77:VAL:O	2:2:81:GLN:HG2	2.02	0.59
8:A:52:VAL:CG2	8:A:202:VAL:CG1	2.80	0.59
11:D:106:VAL:HG12	11:D:148:TYR:CE2	2.37	0.59
15:H:244:LYS:HE3	15:H:340:LEU:HD22	1.84	0.59
21:N:436:ASP:O	21:N:439:VAL:HG12	2.02	0.59
22:O:43:GLU:O	22:O:46:THR:HB	2.02	0.59
22:O:196:LEU:HD13	22:O:213:LEU:CD2	2.31	0.59
23:P:269:VAL:HA	23:P:277:GLN:NE2	2.17	0.59
24:Q:266:LEU:HD21	24:Q:281:ILE:CG2	2.31	0.59
25:R:137:LEU:O	25:R:141:TYR:CD2	2.53	0.59
26:S:159:ASN:HB2	26:S:187:ILE:CD1	2.32	0.59
26:S:185:PHE:CD1	26:S:239:ARG:CZ	2.84	0.59
27:T:28:PRO:HB2	27:T:29:PRO:CD	2.29	0.59
29:V:144:ILE:HG22	29:V:145:GLN:HE21	1.66	0.59
29:V:184:ASN:O	29:V:188:LEU:HG	2.01	0.59
31:X:10:PHE:CD2	31:X:11:ARG:O	2.54	0.59
1:1:13:ILE:CD1	1:1:177:VAL:HG22	2.32	0.59
4:4:81:SER:CA	4:4:124:LYS:NZ	2.65	0.59
10:C:16:GLU:OE1	10:C:18:ARG:NH2	2.36	0.59
14:G:7:TYR:CD1	14:G:13:VAL:HG23	2.37	0.59
14:G:150:LEU:HD12	14:G:156:TYR:HB3	1.84	0.59
15:H:208:TYR:OH	15:H:266:ARG:HD2	2.02	0.59
17:J:119:SER:C	17:J:120:TYR:CG	2.76	0.59
19:L:328:ASN:ND2	19:L:329:ARG:NE	2.50	0.59
19:L:360:ILE:CG2	19:L:391:ILE:CD1	2.51	0.59
23:P:231:LYS:O	23:P:232:ARG:CB	2.49	0.59
24:Q:112:ASP:O	24:Q:116:PHE:HD2	1.85	0.59
24:Q:135:HIS:NE2	24:Q:164:GLU:HG3	2.16	0.59
25:R:59:MET:HE1	25:R:143:GLN:O	2.00	0.59
25:R:353:MET:HA	25:R:357:PHE:CE1	2.37	0.59
26:S:421:TYR:CE1	27:T:158:GLN:HB2	2.37	0.59
27:T:224:ARG:CG	27:T:242:LYS:HG2	2.32	0.59
28:U:105:LYS:HB3	30:W:58:ASN:HD21	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:1:MET:H3	30:W:44:ASN:HD21	1.49	0.59
30:W:21:PHE:CZ	30:W:25:ARG:HG3	2.37	0.59
33:Z:124:MET:CE	33:Z:153:TYR:HA	2.32	0.59
1:1:109:GLU:HB3	1:1:111:TYR:CE1	2.37	0.59
6:6:147:PHE:CD2	6:6:163:LEU:HA	2.37	0.59
12:E:125:GLU:CD	13:F:123:TYR:CE1	2.74	0.59
12:E:157:HIS:HB3	12:E:170:LYS:HZ3	1.67	0.59
14:G:140:VAL:HG21	14:G:225:GLY:HA2	1.84	0.59
14:G:141:ASP:OD1	14:G:143:ASN:N	2.22	0.59
17:J:166:LEU:C	17:J:174:PHE:CZ	2.75	0.59
19:L:276:CYS:SG	19:L:321:THR:HG23	2.42	0.59
21:N:14:ARG:NH2	21:N:42:GLU:CD	2.35	0.59
22:O:33:TYR:CE1	22:O:57:LEU:HB2	2.38	0.59
26:S:186:TYR:OH	26:S:309:PHE:HZ	1.85	0.59
28:U:287:ALA:O	28:U:291:LEU:HG	2.03	0.59
29:V:261:LEU:CD1	29:V:283:THR:HG22	2.30	0.59
30:W:88:ALA:HB2	30:W:120:ASP:HB3	1.84	0.59
33:Z:189:ALA:HB3	33:Z:193:PHE:HB3	1.82	0.59
33:Z:800:SER:OG	33:Z:815:MET:CE	2.50	0.59
1:1:119:VAL:CG1	14:G:103:LYS:NZ	2.64	0.59
3:3:89:ARG:NE	3:3:94:TYR:OH	2.29	0.59
7:7:81:PRO:HD2	7:7:112:GLN:HG2	1.84	0.59
15:H:102:CYS:SG	15:H:174:VAL:CG2	2.90	0.59
17:J:219:VAL:HG13	18:K:284:ALA:HB1	1.85	0.59
19:L:164:ASP:O	19:L:166:LEU:HD12	2.02	0.59
20:M:383:THR:HB	20:M:386:PHE:CD1	2.37	0.59
21:N:555:ILE:HG23	21:N:559:TYR:CE2	2.38	0.59
22:O:140:LYS:HD3	22:O:141:ASN:HD21	1.66	0.59
25:R:360:SER:HA	32:Y:86:ARG:NH2	2.18	0.59
28:U:275:VAL:HG12	29:V:251:TYR:CE1	2.04	0.59
31:X:35:ILE:HG12	31:X:124:LYS:CE	2.32	0.59
31:X:66:LEU:HD12	31:X:97:TYR:CG	2.37	0.59
1:1:176:VAL:HG13	1:1:183:VAL:HG12	1.83	0.59
3:3:20:LEU:HD13	4:4:125:VAL:HG21	1.84	0.59
10:C:53:THR:HB	10:C:59:GLN:CD	2.23	0.59
12:E:153:TYR:OH	12:E:223:THR:HA	2.02	0.59
13:F:120:THR:HB	14:G:129:ARG:HH22	1.67	0.59
21:N:238:ALA:O	21:N:242:PHE:HD2	1.83	0.59
21:N:542:SER:HB3	21:N:547:LEU:HD12	1.84	0.59
22:O:66:VAL:HG11	22:O:106:PHE:CE1	2.37	0.59
22:O:140:LYS:HD3	22:O:141:ASN:ND2	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:202:ARG:NH2	24:Q:222:SER:HG	1.97	0.59
31:X:41:GLU:CB	31:X:45:PHE:N	2.62	0.59
4:4:7:ARG:HG3	4:4:12:VAL:HG22	1.84	0.59
4:4:95:ARG:NE	5:5:92:GLY:HA3	2.14	0.59
5:5:4:LEU:HD11	5:5:15:ALA:HB3	1.83	0.59
7:7:10:ASN:HD22	7:7:195:ASN:HD21	1.49	0.59
8:A:119:LYS:HG2	8:A:163:TYR:CZ	2.37	0.59
8:A:130:GLN:CB	9:B:127:VAL:HG23	2.32	0.59
12:E:162:GLY:O	13:F:82:ARG:NH2	2.36	0.59
14:G:111:PHE:CE2	14:G:115:LEU:HD11	2.38	0.59
14:G:122:HIS:CD2	14:G:128:VAL:CG1	2.85	0.59
16:I:362:LEU:CD2	16:I:377:LEU:HD22	2.31	0.59
18:K:158:ILE:N	19:L:256:ILE:CG2	2.65	0.59
21:N:338:PHE:CE1	21:N:749:LEU:HB3	2.37	0.59
21:N:719:ASN:HB3	21:N:721:ASP:OD1	2.02	0.59
22:O:62:TYR:CE2	22:O:82:LEU:HD13	2.37	0.59
22:O:185:PHE:HB3	22:O:223:LEU:CB	2.32	0.59
22:O:293:LEU:O	22:O:297:ILE:CG1	2.47	0.59
24:Q:382:LEU:HD21	25:R:344:SER:HB3	1.84	0.59
26:S:242:LEU:HD21	26:S:278:LYS:HG2	1.85	0.59
27:T:225:ASN:HB2	27:T:241:GLU:HB3	1.83	0.59
4:4:34:THR:OG1	4:4:181:LYS:NZ	2.36	0.59
16:I:113:ILE:HG22	16:I:114:ASP:N	2.18	0.59
17:J:219:VAL:CG1	18:K:281:ARG:NE	2.66	0.59
19:L:259:SER:HB2	19:L:303:ARG:NH2	2.09	0.59
21:N:324:LYS:HG3	21:N:325:PHE:CE1	2.37	0.59
21:N:596:LEU:HD11	21:N:717:LEU:CD2	2.32	0.59
21:N:641:LEU:HB2	21:N:660:LEU:HD21	1.85	0.59
25:R:110:ILE:HD11	25:R:140:TYR:OH	2.02	0.59
25:R:415:GLN:CG	26:S:471:LEU:HD22	2.08	0.59
2:2:8:PHE:CE1	2:2:11:GLY:C	2.76	0.59
8:A:14:ARG:HA	8:A:27:GLN:NE2	2.18	0.59
9:B:27:ALA:CB	18:K:426:PHE:CE1	2.79	0.59
9:B:85:LEU:HD21	9:B:118:MET:HE3	1.85	0.59
11:D:96:HIS:CD2	11:D:100:LEU:HB2	2.38	0.59
13:F:38:LEU:HD13	13:F:172:LEU:HD22	1.83	0.59
15:H:105:ILE:CD1	15:H:146:VAL:HA	2.33	0.59
20:M:75:LEU:HG	20:M:77:TYR:HE1	1.46	0.59
22:O:140:LYS:HG2	22:O:141:ASN:CG	2.22	0.59
22:O:306:ARG:CD	22:O:351:SER:O	2.29	0.59
27:T:175:ASP:OD1	27:T:176:SER:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:11:ARG:O	31:X:103:GLU:OE2	2.20	0.59
33:Z:963:ALA:C	33:Z:964:GLU:OE1	2.41	0.59
4:4:40:HIS:HD2	4:4:184:ASP:O	1.86	0.59
6:6:9:GLU:HG2	6:6:11:PHE:HE1	1.67	0.59
8:A:122:ALA:CB	8:A:163:TYR:CD1	2.86	0.59
13:F:65:LYS:HG3	13:F:222:PHE:CE2	2.38	0.59
13:F:194:VAL:HG11	13:F:234:ILE:HA	1.84	0.59
16:I:378:GLU:O	16:I:382:THR:HG23	2.02	0.59
17:J:113:VAL:CG2	17:J:122:LEU:HD22	2.33	0.59
20:M:365:SER:HB3	20:M:376:TRP:CZ2	2.25	0.59
21:N:298:TYR:OH	21:N:766:GLN:HB3	2.02	0.59
21:N:641:LEU:CD1	21:N:660:LEU:HD23	2.33	0.59
21:N:667:GLN:HG3	21:N:671:LEU:HD23	1.82	0.59
22:O:82:LEU:HD23	22:O:98:TYR:OH	2.02	0.59
23:P:221:TYR:HE2	23:P:244:ILE:CG1	2.16	0.59
23:P:303:PHE:C	23:P:348:HIS:HE2	2.02	0.59
31:X:35:ILE:CG1	31:X:124:LYS:CE	2.79	0.59
33:Z:321:PHE:HE1	33:Z:350:GLY:CA	1.85	0.59
33:Z:352:LYS:C	33:Z:353:VAL:HG23	2.23	0.59
33:Z:924:LYS:CG	33:Z:959:HIS:CE1	2.85	0.59
1:1:75:THR:HB	1:1:111:TYR:HE1	1.65	0.58
3:3:172:SER:O	3:3:193:MET:HE1	2.03	0.58
7:7:7:LYS:CE	7:7:119:LEU:HB3	2.32	0.58
9:B:4:ARG:HH22	11:D:5:ASP:CB	2.07	0.58
10:C:98:TYR:CE1	10:C:105:ASP:O	2.56	0.58
15:H:187:LEU:HD22	16:I:115:ASP:CG	2.24	0.58
18:K:173:ASP:HB2	18:K:221:MET:SD	2.43	0.58
18:K:281:ARG:NH2	18:K:286:THR:C	2.56	0.58
23:P:369:LEU:O	23:P:371:LEU:HG	2.03	0.58
23:P:433:ILE:HD11	28:U:203:LYS:HD3	1.85	0.58
25:R:167:LYS:O	25:R:171:MET:HG2	2.03	0.58
29:V:109:HIS:HE1	29:V:122:ASP:OD1	1.85	0.58
33:Z:542:ILE:O	33:Z:546:ILE:HG12	2.04	0.58
7:7:1:THR:HG22	7:7:2:SER:OG	2.03	0.58
13:F:65:LYS:HD2	13:F:222:PHE:CD2	2.37	0.58
13:F:153:VAL:HB	14:G:85:ARG:NH1	2.14	0.58
18:K:150:LEU:HD11	19:L:128:ILE:HD11	1.84	0.58
21:N:326:SER:N	29:V:182:LYS:CG	2.65	0.58
21:N:671:LEU:HD22	21:N:782:PHE:CE1	2.38	0.58
22:O:80:LYS:HD3	22:O:81:TYR:CE2	2.38	0.58
22:O:228:TYR:CD1	22:O:294:MET:HG3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:250:TRP:CE2	22:O:270:ILE:HA	2.38	0.58
22:O:340:SER:O	23:P:358:SER:HB2	2.03	0.58
24:Q:48:ASP:HB3	24:Q:88:PHE:CE1	2.38	0.58
30:W:145:GLY:HA3	30:W:148:GLU:OE1	2.03	0.58
1:1:119:VAL:CB	14:G:103:LYS:HZ3	2.16	0.58
8:A:87:ILE:CG2	8:A:88:PRO:HD3	2.32	0.58
15:H:98:GLN:OE1	15:H:178:ARG:NE	2.34	0.58
15:H:105:ILE:HA	15:H:170:GLU:OE2	2.03	0.58
15:H:274:VAL:HG21	15:H:294:LEU:HD13	1.85	0.58
18:K:281:ARG:NH2	18:K:287:GLY:N	2.51	0.58
19:L:197:ILE:HA	19:L:322:LYS:HE3	1.85	0.58
21:N:707:ASN:HD21	21:N:786:ARG:NH1	2.01	0.58
22:O:137:TYR:CB	22:O:149:LEU:CD1	2.81	0.58
24:Q:46:VAL:C	24:Q:50:ARG:HB2	2.22	0.58
24:Q:297:ASP:HB3	24:Q:321:TYR:CZ	2.37	0.58
25:R:193:ALA:O	25:R:197:MET:HG3	2.03	0.58
27:T:39:LEU:O	27:T:40:LEU:CB	2.51	0.58
1:1:90:LYS:HE2	7:7:-7:GLN:OE1	2.03	0.58
1:1:119:VAL:HG11	14:G:103:LYS:NZ	2.18	0.58
3:3:61:LYS:HZ2	3:3:85:SER:HB3	1.69	0.58
10:C:68:LYS:HG3	10:C:229:ILE:HD11	1.85	0.58
16:I:339:ILE:O	16:I:340:ARG:HB3	2.04	0.58
16:I:369:MET:HE1	16:I:416:PHE:HZ	1.67	0.58
17:J:163:VAL:HG13	17:J:182:PRO:HG2	1.84	0.58
17:J:273:LEU:HD22	17:J:309:ARG:O	2.02	0.58
17:J:327:ILE:HG22	17:J:358:VAL:HG11	1.85	0.58
21:N:316:LYS:HE2	21:N:683:LEU:HD11	1.86	0.58
21:N:328:PHE:HE1	21:N:696:LYS:HB2	1.67	0.58
21:N:479:GLU:HB3	21:N:512:ASN:HD21	1.69	0.58
21:N:884:PHE:CD2	21:N:896:PHE:HB2	2.38	0.58
22:O:345:ASN:O	22:O:347:LEU:HG	2.02	0.58
23:P:260:VAL:HG22	23:P:328:ALA:CB	2.33	0.58
23:P:286:ASN:O	23:P:293:LEU:HD11	2.03	0.58
30:W:98:LEU:HD11	30:W:108:GLN:CG	2.33	0.58
33:Z:265:LEU:HD13	33:Z:288:LEU:HD21	1.85	0.58
17:J:250:ILE:HA	17:J:299:ILE:HD13	1.84	0.58
19:L:136:ASP:O	19:L:158:ILE:HD13	2.03	0.58
19:L:389:ALA:HA	19:L:392:ARG:CZ	2.33	0.58
20:M:289:LYS:HD2	20:M:295:LYS:HE3	1.85	0.58
21:N:641:LEU:HD12	21:N:660:LEU:HD23	1.85	0.58
22:O:303:LYS:HZ3	28:U:234:ASN:ND2	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:303:LYS:HZ2	28:U:234:ASN:ND2	2.00	0.58
23:P:94:GLN:HG3	23:P:125:VAL:HG12	1.84	0.58
23:P:327:LEU:O	23:P:328:ALA:HB3	2.04	0.58
24:Q:3:LEU:HD23	24:Q:36:SER:HA	1.86	0.58
24:Q:419:LEU:HD23	24:Q:419:LEU:O	2.02	0.58
28:U:92:TRP:CE3	28:U:110:PHE:HE2	2.20	0.58
33:Z:624:LEU:HD13	33:Z:736:LEU:O	2.04	0.58
4:4:77:GLN:OE1	4:4:116:TYR:OH	2.05	0.58
9:B:82:TYR:HE1	9:B:134:LEU:CD2	2.17	0.58
10:C:194:LEU:HD23	10:C:197:LEU:HD12	1.86	0.58
14:G:98:PHE:CD2	14:G:106:ILE:HA	2.37	0.58
15:H:198:MET:HE1	15:H:272:ILE:HG12	1.86	0.58
15:H:295:PHE:CE1	15:H:336:LEU:HD12	2.38	0.58
17:J:329:ARG:HB2	17:J:343:LEU:HD13	1.85	0.58
19:L:259:SER:HB3	19:L:303:ARG:NH2	2.03	0.58
19:L:382:MET:HE1	19:L:416:MET:HA	1.86	0.58
21:N:329:HIS:ND1	21:N:355:TRP:HE3	2.00	0.58
23:P:298:SER:O	23:P:302:LEU:HG	2.02	0.58
29:V:24:LYS:HZ2	29:V:197:TYR:HE2	1.44	0.58
31:X:75:TRP:HA	31:X:87:PHE:CE1	2.26	0.58
31:X:100:TRP:CZ2	31:X:110:PRO:HD3	2.39	0.58
5:5:58:TRP:CH2	5:5:86:LEU:HD11	2.38	0.58
10:C:4:ARG:HG3	10:C:9:ARG:NH2	2.18	0.58
15:H:147:ILE:HD11	15:H:157:VAL:O	2.04	0.58
15:H:166:THR:O	15:H:186:PRO:HB3	2.03	0.58
16:I:384:LYS:NZ	16:I:395:MET:SD	2.75	0.58
17:J:329:ARG:HG3	17:J:333:ARG:HH12	1.61	0.58
18:K:262:ARG:NH1	18:K:311:ASN:ND2	2.51	0.58
18:K:306:PHE:O	18:K:307:ASP:HB2	2.03	0.58
22:O:133:ILE:O	22:O:137:TYR:CG	2.56	0.58
22:O:205:ILE:CD1	22:O:210:ARG:HD2	2.31	0.58
22:O:235:HIS:NE2	22:O:358:ILE:HG23	2.19	0.58
23:P:360:ILE:CD1	23:P:365:LEU:HD13	2.34	0.58
26:S:176:LEU:CD1	26:S:179:ILE:HB	2.33	0.58
31:X:85:ARG:HE	31:X:115:SER:HB3	1.68	0.58
2:2:84:LYS:HE3	2:2:85:GLN:HE21	1.68	0.58
2:2:152:ILE:CD1	2:2:177:VAL:HG21	2.34	0.58
3:3:-2:ASN:C	3:3:19:ARG:HH12	2.07	0.58
15:H:97:LEU:HD13	15:H:174:VAL:C	2.23	0.58
16:I:190:GLN:NE2	16:I:351:GLU:HB3	2.19	0.58
19:L:81:ILE:O	19:L:83:ASP:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:237:THR:HG22	25:R:250:ALA:HA	1.86	0.58
25:R:292:LEU:HD21	25:R:307:TYR:CB	2.34	0.58
27:T:46:ILE:CD1	27:T:94:HIS:NE2	2.67	0.58
27:T:241:GLU:H	27:T:246:GLU:HB2	1.68	0.58
8:A:48:LYS:HZ1	8:A:195:ASN:HD21	1.50	0.58
10:C:120:GLN:NE2	11:D:81:ASP:OD1	2.37	0.58
15:H:49:LEU:C	15:H:49:LEU:HD13	2.25	0.58
16:I:167:MET:CG	16:I:270:VAL:HG11	2.33	0.58
18:K:254:VAL:CG1	18:K:258:PHE:HE1	2.11	0.58
18:K:347:ARG:HH12	24:Q:205:ALA:CB	2.13	0.58
21:N:300:ASN:ND2	21:N:920:VAL:HG11	2.19	0.58
24:Q:65:TYR:HD2	24:Q:74:LEU:CB	2.04	0.58
25:R:54:ILE:HD12	25:R:54:ILE:C	2.24	0.58
26:S:343:LEU:N	26:S:344:PRO:HD2	2.17	0.58
27:T:197:TYR:CZ	27:T:199:PHE:C	2.77	0.58
27:T:241:GLU:O	27:T:242:LYS:CB	2.51	0.58
33:Z:490:ILE:HG23	33:Z:529:ALA:HB2	1.86	0.58
15:H:389:PHE:CE2	15:H:407:ILE:HG22	2.39	0.58
16:I:252:LEU:C	16:I:253:ILE:CA	2.72	0.58
17:J:27:ILE:HG13	18:K:51:LEU:HD11	1.86	0.58
17:J:192:GLY:HA2	17:J:253:ILE:HG13	1.84	0.58
17:J:276:LEU:HD22	17:J:286:LYS:HE2	1.86	0.58
18:K:200:GLN:O	25:R:204:TRP:CE2	2.56	0.58
21:N:738:GLN:NE2	21:N:742:TRP:CH2	2.72	0.58
23:P:119:ILE:CD1	23:P:143:LEU:HD22	2.33	0.58
23:P:271:SER:O	23:P:344:ARG:HD3	2.03	0.58
25:R:412:THR:HG22	25:R:416:LYS:HE3	1.86	0.58
28:U:90:ILE:C	28:U:90:ILE:HD12	2.25	0.58
28:U:280:ASN:HD21	29:V:291:ASN:CB	2.17	0.58
33:Z:889:VAL:HG22	33:Z:890:SER:N	2.19	0.58
6:6:-2:ASN:HD22	6:6:49:ALA:H	1.52	0.57
10:C:18:ARG:NH1	10:C:23:GLU:CD	2.57	0.57
24:Q:314:PHE:CZ	24:Q:339:TYR:HB2	2.39	0.57
33:Z:394:TYR:CD2	33:Z:395:CYS:N	2.67	0.57
12:E:165:TYR:O	12:E:167:TYR:CE1	2.58	0.57
16:I:303:GLN:O	16:I:307:LEU:HG	2.04	0.57
17:J:27:ILE:HG12	18:K:51:LEU:HG	1.85	0.57
17:J:166:LEU:HB2	17:J:174:PHE:HZ	1.68	0.57
18:K:200:GLN:CG	25:R:204:TRP:CZ2	2.54	0.57
21:N:508:THR:HG21	21:N:513:ILE:CB	2.33	0.57
22:O:166:ARG:NH2	22:O:169:ASN:HB3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:217:LEU:HD21	22:O:236:HIS:CE1	2.38	0.57
23:P:238:ALA:O	23:P:242:GLN:HG3	2.04	0.57
24:Q:61:LEU:HB3	24:Q:65:TYR:CE1	2.31	0.57
27:T:226:TRP:CD2	27:T:235:PHE:CE2	2.92	0.57
28:U:92:TRP:NE1	28:U:120:LEU:HB2	2.20	0.57
28:U:283:ARG:HH11	29:V:284:ALA:HA	1.63	0.57
33:Z:56:LEU:HB3	33:Z:99:LEU:HD21	1.85	0.57
4:4:37:LEU:HD21	4:4:43:MET:SD	2.44	0.57
10:C:9:ARG:HD3	12:E:9:ASP:OD1	2.03	0.57
13:F:123:TYR:CD1	13:F:123:TYR:C	2.77	0.57
16:I:106:ILE:HD13	17:J:85:LEU:HD22	1.82	0.57
16:I:222:TYR:OH	16:I:349:LEU:HB3	2.04	0.57
17:J:45:GLU:OE2	17:J:48:ARG:NH2	2.27	0.57
23:P:164:GLN:HE22	23:P:202:LYS:NZ	2.01	0.57
25:R:292:LEU:HD21	25:R:307:TYR:HB3	1.85	0.57
26:S:471:LEU:CD1	28:U:288:PHE:CE2	2.87	0.57
28:U:92:TRP:CE3	28:U:106:ILE:HG21	2.38	0.57
29:V:52:LEU:O	29:V:108:TYR:CE1	2.57	0.57
30:W:16:SER:HA	30:W:25:ARG:NH1	2.19	0.57
1:1:8:PHE:HD2	1:1:10:ASP:H	1.50	0.57
7:7:62:LEU:HD21	7:7:87:TYR:CZ	2.39	0.57
16:I:300:ARG:HG2	16:I:304:ARG:HH11	1.69	0.57
17:J:219:VAL:C	18:K:281:ARG:CD	2.66	0.57
18:K:254:VAL:CG1	18:K:258:PHE:CE1	2.87	0.57
21:N:510:HIS:CE1	21:N:512:ASN:HB3	2.39	0.57
22:O:26:PHE:HD1	22:O:61:LEU:CD2	2.16	0.57
22:O:230:PHE:HD1	22:O:251:LEU:CD1	2.16	0.57
23:P:131:PHE:CD1	23:P:166:GLU:HB3	2.40	0.57
23:P:342:GLN:HE21	23:P:346:ILE:HD11	1.70	0.57
24:Q:294:ARG:NH2	24:Q:324:GLU:HB2	2.20	0.57
24:Q:390:LEU:HD23	25:R:345:TYR:CE1	2.39	0.57
27:T:38:ASN:O	27:T:39:LEU:HD23	2.03	0.57
27:T:93:ASN:HD21	27:T:94:HIS:HD2	1.50	0.57
27:T:173:GLU:HA	27:T:175:ASP:OD1	2.04	0.57
33:Z:510:LEU:CD1	33:Z:542:ILE:HA	2.31	0.57
8:A:220:LYS:CD	8:A:242:GLU:HB2	2.32	0.57
12:E:130:GLU:CD	12:E:132:ARG:HE	2.08	0.57
15:H:62:ARG:HG2	15:H:66:LYS:HE3	1.86	0.57
16:I:196:GLU:O	16:I:208:TYR:OH	2.21	0.57
16:I:358:LYS:CE	16:I:387:LEU:H	2.17	0.57
16:I:380:LEU:HA	16:I:420:LYS:NZ	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:394:CYS:SG	19:L:419:VAL:HA	2.45	0.57
21:N:158:LEU:HD13	21:N:192:LEU:CD2	2.34	0.57
22:O:81:TYR:O	22:O:82:LEU:CB	2.51	0.57
24:Q:61:LEU:HD13	24:Q:65:TYR:CE2	2.39	0.57
27:T:189:ILE:HG21	27:T:209:LEU:HD23	1.85	0.57
29:V:50:MET:CB	29:V:78:VAL:HG13	2.35	0.57
33:Z:81:SER:C	33:Z:82:MET:HG3	2.19	0.57
33:Z:312:TYR:OH	33:Z:348:LEU:HD23	2.05	0.57
33:Z:407:VAL:CG1	33:Z:415:MET:HG3	2.33	0.57
7:7:68:TYR:CE2	14:G:92:ARG:HB3	2.39	0.57
8:A:24:ARG:NE	8:A:29:GLU:OE2	2.37	0.57
9:B:139:HIS:HB2	9:B:145:PHE:CE1	2.39	0.57
10:C:208:TYR:HB2	10:C:235:ILE:HG22	1.87	0.57
13:F:137:TYR:CE2	13:F:218:LYS:HA	2.39	0.57
15:H:367:ARG:HH21	20:M:225:GLY:HA2	1.69	0.57
17:J:301:ASP:N	17:J:304:LEU:CD1	2.61	0.57
19:L:403:ILE:HG23	20:M:203:ARG:HH11	1.70	0.57
20:M:220:MET:HB3	20:M:349:PHE:HE1	1.69	0.57
21:N:399:PHE:CE2	21:N:438:ASP:OD1	2.58	0.57
22:O:79:VAL:CG2	22:O:122:HIS:CB	2.82	0.57
22:O:79:VAL:HG23	22:O:122:HIS:CG	2.40	0.57
23:P:218:LEU:HD21	23:P:256:LYS:HZ1	1.67	0.57
23:P:415:TRP:CG	28:U:265:LEU:HD11	2.39	0.57
27:T:139:ASP:HB2	27:T:142:LEU:HD12	1.86	0.57
33:Z:394:TYR:CG	33:Z:395:CYS:N	2.72	0.57
33:Z:889:VAL:H	33:Z:894:MET:CE	2.18	0.57
4:4:24:ILE:HG23	4:4:25:SER:HB3	1.86	0.57
7:7:85:PHE:CE2	7:7:120:ARG:CZ	2.86	0.57
9:B:53:SER:HB3	9:B:56:ALA:HB2	1.86	0.57
11:D:49:ARG:CG	11:D:203:VAL:HG13	2.33	0.57
14:G:42:ASN:ND2	14:G:183:PRO:HG2	2.19	0.57
14:G:108:ILE:HG22	14:G:148:TYR:CD1	2.38	0.57
15:H:95:HIS:HE2	15:H:187:LEU:HD13	1.67	0.57
16:I:253:ILE:HG22	16:I:253:ILE:O	2.05	0.57
17:J:111:GLN:CD	17:J:125:VAL:HG13	2.24	0.57
18:K:134:SER:OG	18:K:255:ARG:CZ	2.52	0.57
22:O:133:ILE:HG13	22:O:137:TYR:CZ	2.40	0.57
22:O:137:TYR:HB2	22:O:149:LEU:HD13	1.86	0.57
22:O:369:ARG:HE	28:U:226:LEU:HD22	1.68	0.57
25:R:43:ARG:NE	25:R:70:TYR:OH	2.28	0.57
33:Z:52:LEU:HB3	33:Z:67:SER:OG	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:737:ALA:HB1	33:Z:775:MET:HE1	1.85	0.57
2:2:187:LEU:HD13	2:2:190:TYR:CE1	2.40	0.57
4:4:69:ARG:HA	11:D:90:ARG:NH1	2.19	0.57
5:5:159:ARG:NH2	5:5:203:GLU:OE1	2.35	0.57
6:6:9:GLU:HG2	6:6:11:PHE:CE1	2.39	0.57
18:K:350:ARG:NH2	24:Q:215:VAL:HG11	2.18	0.57
25:R:72:VAL:HA	25:R:76:GLN:OE1	2.05	0.57
25:R:199:GLU:HB3	25:R:206:ARG:CZ	2.35	0.57
26:S:323:LEU:HD23	26:S:383:LEU:HD23	1.85	0.57
28:U:283:ARG:NH2	29:V:283:THR:O	2.37	0.57
29:V:79:SER:CA	29:V:121:VAL:CG1	2.83	0.57
29:V:80:VAL:CG2	29:V:125:THR:HA	2.28	0.57
33:Z:906:ALA:O	33:Z:909:ARG:NH1	2.34	0.57
1:1:78:ALA:O	1:1:82:PHE:CD2	2.58	0.57
1:1:124:TYR:CE1	1:1:142:PHE:CE2	2.93	0.57
1:1:148:LYS:HE3	1:1:177:VAL:HG11	1.87	0.57
4:4:117:GLN:NE2	4:4:130:GLY:HA3	2.19	0.57
9:B:85:LEU:HD21	9:B:118:MET:CE	2.35	0.57
10:C:16:GLU:OE1	10:C:18:ARG:CZ	2.53	0.57
15:H:217:GLN:HG2	15:H:376:GLU:O	2.04	0.57
15:H:318:ARG:NH1	15:H:364:ALA:HB3	2.18	0.57
16:I:190:GLN:OE1	16:I:349:LEU:CD1	2.48	0.57
17:J:350:MET:SD	17:J:361:VAL:HG21	2.45	0.57
22:O:79:VAL:HG21	22:O:123:GLY:H	1.69	0.57
22:O:276:LYS:O	22:O:277:ILE:CB	2.53	0.57
23:P:213:TYR:CE2	23:P:217:LYS:CE	2.88	0.57
25:R:176:ARG:HB2	25:R:243:LEU:CD1	2.34	0.57
30:W:101:ARG:CZ	30:W:104:LYS:HA	2.33	0.57
31:X:85:ARG:CZ	31:X:115:SER:HB2	2.34	0.57
3:3:44:ILE:HG12	3:3:98:PRO:CB	2.33	0.57
5:5:73:ARG:HH12	5:5:106:ARG:HD2	1.70	0.57
9:B:65:SER:HB2	9:B:90:ARG:HH21	1.70	0.57
10:C:213:PHE:CZ	10:C:215:THR:CG2	2.88	0.57
14:G:73:ILE:CG1	14:G:108:ILE:HD13	2.33	0.57
14:G:137:PHE:CZ	14:G:148:TYR:HB2	2.40	0.57
15:H:420:ARG:CD	16:I:343:ARG:HH12	2.17	0.57
18:K:173:ASP:CB	18:K:221:MET:SD	2.92	0.57
20:M:183:VAL:HG12	20:M:186:LEU:HD12	1.87	0.57
20:M:372:ASP:O	20:M:373:ASP:OD1	2.23	0.57
22:O:79:VAL:HG21	22:O:122:HIS:CB	2.34	0.57
22:O:366:MET:HG2	28:U:226:LEU:HD13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:293:LEU:HD23	23:P:293:LEU:C	2.25	0.57
29:V:96:LYS:N	29:V:101:ASP:HB2	2.19	0.57
29:V:161:THR:HA	29:V:189:ILE:CD1	2.29	0.57
31:X:41:GLU:CD	31:X:45:PHE:HB2	2.25	0.57
6:6:34:VAL:HG12	6:6:196:LEU:CD1	2.21	0.56
6:6:48:PHE:CZ	6:6:50:ALA:CB	2.88	0.56
6:6:73:LYS:HD3	12:E:150:ASP:OD2	2.05	0.56
14:G:122:HIS:NE2	14:G:128:VAL:HG11	2.20	0.56
14:G:182:HIS:ND1	14:G:186:LEU:HG	2.19	0.56
18:K:140:HIS:CE1	18:K:142:HIS:HB2	2.38	0.56
18:K:363:ALA:HB1	18:K:364:PRO:HD2	1.86	0.56
19:L:253:ASP:HA	20:M:256:ILE:CG2	2.34	0.56
21:N:277:LEU:HD12	21:N:287:LEU:HD23	1.86	0.56
21:N:588:VAL:HG12	21:N:620:GLY:O	2.04	0.56
22:O:294:MET:SD	22:O:357:ILE:HG23	2.45	0.56
22:O:352:TRP:CH2	28:U:227:GLY:HA3	2.39	0.56
25:R:80:GLU:HG3	25:R:81:HIS:CD2	2.40	0.56
25:R:101:GLU:O	25:R:105:LYS:HG3	2.05	0.56
25:R:304:TYR:CZ	25:R:337:VAL:HG21	2.40	0.56
25:R:342:LEU:CG	25:R:392:ARG:HH21	2.17	0.56
26:S:138:MET:HB3	26:S:179:ILE:HD11	1.87	0.56
26:S:223:LEU:HD21	26:S:230:LYS:HE2	1.86	0.56
27:T:155:GLY:O	27:T:156:SER:OG	2.22	0.56
30:W:10:ILE:HA	30:W:113:PHE:CD2	2.40	0.56
31:X:16:GLU:CB	31:X:27:ILE:HB	2.33	0.56
31:X:44:GLY:O	31:X:46:TRP:HD1	1.85	0.56
33:Z:169:VAL:HG22	33:Z:192:GLY:HA3	1.87	0.56
33:Z:394:TYR:CE2	33:Z:395:CYS:O	2.58	0.56
33:Z:422:ILE:HD11	33:Z:436:LEU:CD2	2.35	0.56
33:Z:433:LEU:CD1	33:Z:455:ILE:HG23	2.36	0.56
33:Z:857:LEU:HD23	33:Z:857:LEU:C	2.25	0.56
1:1:141:ASN:HB2	1:1:154:PHE:HE1	1.69	0.56
8:A:57:LYS:CE	8:A:69:VAL:HB	2.35	0.56
8:A:94:ALA:O	8:A:98:LYS:HG3	2.05	0.56
12:E:84:ASP:OD1	12:E:136:ARG:NH2	2.26	0.56
17:J:350:MET:CG	17:J:386:VAL:HG13	2.35	0.56
20:M:75:LEU:HD21	20:M:77:TYR:HE1	1.68	0.56
22:O:4:ASN:HD21	22:O:30:GLU:HB3	1.69	0.56
22:O:366:MET:HE2	28:U:226:LEU:CD1	2.35	0.56
24:Q:370:THR:O	24:Q:374:GLU:HG3	2.04	0.56
25:R:263:ARG:HD3	25:R:296:LEU:CG	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:25:LYS:O	27:T:28:PRO:HD2	2.05	0.56
31:X:32:GLU:HG3	31:X:53:THR:OG1	2.05	0.56
1:1:36:ARG:HB2	1:1:42:TRP:CH2	2.40	0.56
1:1:38:HIS:CE1	1:1:67:THR:OG1	2.59	0.56
2:2:140:SER:OG	2:2:141:HIS:CD2	2.59	0.56
2:2:220:ILE:CD1	3:3:39:HIS:CE1	2.88	0.56
3:3:60:TYR:CD1	10:C:96:GLN:CB	2.88	0.56
5:5:57:THR:HG22	12:E:101:LEU:CD1	2.35	0.56
5:5:66:HIS:CE1	5:5:70:GLU:OE2	2.58	0.56
9:B:82:TYR:CE1	9:B:134:LEU:CD2	2.89	0.56
13:F:138:ASP:OD1	13:F:140:SER:HB2	2.05	0.56
13:F:166:GLN:CB	20:M:381:ARG:NH2	2.67	0.56
13:F:197:ILE:HG23	13:F:206:LEU:HD21	1.87	0.56
15:H:105:ILE:CD1	15:H:147:ILE:H	2.18	0.56
15:H:249:TYR:CE1	15:H:376:GLU:HA	2.40	0.56
15:H:393:SER:HB2	15:H:404:TRP:CH2	2.41	0.56
16:I:167:MET:HG3	16:I:270:VAL:HG11	1.85	0.56
16:I:172:LYS:HD3	17:J:275:LEU:HD21	1.88	0.56
16:I:201:PRO:HG3	16:I:208:TYR:CZ	2.40	0.56
18:K:169:VAL:HB	18:K:224:LYS:HD2	1.86	0.56
18:K:188:VAL:HA	18:K:313:LYS:HZ3	1.65	0.56
20:M:196:ALA:HB2	20:M:345:ARG:HE	1.70	0.56
20:M:221:TYR:HE1	20:M:346:LYS:HG3	1.67	0.56
21:N:28:ILE:O	21:N:32:VAL:HG22	2.02	0.56
21:N:326:SER:H	29:V:182:LYS:HG3	1.70	0.56
21:N:771:PHE:HE2	21:N:885:ILE:HB	1.69	0.56
22:O:58:ARG:HD2	22:O:58:ARG:C	2.26	0.56
22:O:117:ASN:HD22	22:O:167:ILE:CA	2.18	0.56
22:O:250:TRP:CH2	22:O:270:ILE:CG2	2.79	0.56
22:O:344:VAL:O	22:O:345:ASN:HB2	2.04	0.56
23:P:67:ALA:HB2	23:P:75:LEU:HD22	1.87	0.56
23:P:241:LEU:HB3	23:P:264:ILE:HD11	1.86	0.56
25:R:296:LEU:CD1	25:R:337:VAL:HG23	2.20	0.56
26:S:462:ASP:O	26:S:465:ILE:HG22	2.04	0.56
28:U:92:TRP:CZ3	28:U:106:ILE:HG22	2.39	0.56
33:Z:49:LEU:HD12	33:Z:55:ARG:NH1	2.20	0.56
33:Z:64:TYR:HE1	33:Z:68:LEU:HD11	1.70	0.56
33:Z:866:VAL:HA	33:Z:877:THR:CG2	2.35	0.56
8:A:126:GLN:HE22	8:A:130:GLN:CD	2.08	0.56
10:C:4:ARG:HA	10:C:9:ARG:HH22	1.69	0.56
12:E:98:THR:O	12:E:102:TYR:CD1	2.55	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:64:VAL:HG12	14:G:66:ILE:H	1.70	0.56
14:G:182:HIS:NE2	14:G:186:LEU:CD1	2.68	0.56
17:J:143:PRO:HD2	17:J:204:HIS:HA	1.88	0.56
18:K:244:HIS:HE1	18:K:295:ILE:HD11	1.71	0.56
18:K:248:GLY:HA2	18:K:251:PRO:CG	2.27	0.56
22:O:277:ILE:HG22	22:O:278:PRO:HD2	1.83	0.56
23:P:257:TRP:CZ3	23:P:290:LEU:HD11	2.40	0.56
25:R:263:ARG:NH1	25:R:296:LEU:C	2.58	0.56
29:V:159:ILE:HG23	29:V:164:LEU:HD12	1.87	0.56
30:W:60:ARG:O	30:W:60:ARG:HD2	2.05	0.56
30:W:149:GLN:HG2	30:W:152:GLU:HG3	1.88	0.56
31:X:95:GLU:HB3	31:X:97:TYR:CD1	2.40	0.56
33:Z:452:LEU:CD1	33:Z:485:ILE:HG23	2.33	0.56
33:Z:481:PRO:O	33:Z:482:ASP:HB2	2.06	0.56
12:E:98:THR:CG2	12:E:102:TYR:CE1	2.87	0.56
12:E:157:HIS:CB	12:E:170:LYS:HD3	2.36	0.56
13:F:146:GLU:OE2	13:F:148:GLN:NE2	2.38	0.56
14:G:90:ARG:HH12	14:G:122:HIS:HE1	1.54	0.56
16:I:148:LEU:HD11	17:J:95:ILE:CG2	2.35	0.56
17:J:169:LYS:HZ1	17:J:206:THR:HA	1.68	0.56
19:L:370:LYS:HB2	19:L:374:PHE:CE1	2.39	0.56
21:N:433:THR:CG2	21:N:439:VAL:HG21	2.35	0.56
21:N:651:PHE:CG	21:N:740:TRP:HH2	2.23	0.56
22:O:80:LYS:HG2	22:O:81:TYR:CE2	2.41	0.56
22:O:186:ASN:HD21	22:O:226:LYS:HD2	1.71	0.56
22:O:339:GLY:O	22:O:340:SER:CB	2.53	0.56
23:P:286:ASN:O	23:P:293:LEU:CG	2.54	0.56
23:P:369:LEU:CB	23:P:371:LEU:HD12	2.31	0.56
24:Q:135:HIS:CA	24:Q:161:LEU:HD22	2.35	0.56
25:R:207:ARG:CZ	25:R:211:LYS:HZ1	2.19	0.56
25:R:259:PHE:CG	25:R:329:PHE:CE1	2.94	0.56
25:R:382:ASP:OD2	26:S:402:ILE:HA	2.05	0.56
27:T:211:PHE:HD2	27:T:217:THR:OG1	1.88	0.56
31:X:48:PHE:CD1	31:X:48:PHE:C	2.78	0.56
3:3:78:PHE:HE2	3:3:100:VAL:HG22	1.70	0.56
3:3:179:TYR:CE2	3:3:188:LYS:HD2	2.39	0.56
4:4:95:ARG:HH21	5:5:92:GLY:CA	2.18	0.56
6:6:52:GLY:O	6:6:56:VAL:HG23	2.05	0.56
6:6:179:PHE:O	6:6:183:THR:HG23	2.05	0.56
9:B:119:GLN:CG	9:B:123:GLN:HE21	2.18	0.56
13:F:179:PHE:CD1	13:F:188:GLU:HG3	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:412:PRO:O	15:H:413:ASN:CG	2.44	0.56
17:J:67:GLU:HG2	18:K:144:ASN:HD22	1.70	0.56
17:J:111:GLN:CD	17:J:125:VAL:CG1	2.74	0.56
17:J:253:ILE:HG12	17:J:255:SER:H	1.70	0.56
19:L:328:ASN:ND2	19:L:329:ARG:HG2	2.20	0.56
22:O:358:ILE:HG23	22:O:359:SER:H	1.71	0.56
24:Q:326:MET:CE	24:Q:332:ARG:HD2	2.35	0.56
28:U:283:ARG:HD2	29:V:284:ALA:CB	2.36	0.56
28:U:283:ARG:HH22	29:V:283:THR:CG2	2.14	0.56
30:W:70:GLY:O	30:W:73:LEU:HB2	2.06	0.56
31:X:69:ILE:HB	31:X:73:THR:HG23	1.86	0.56
33:Z:805:LEU:HB3	33:Z:893:PHE:CZ	2.41	0.56
2:2:220:ILE:HD11	3:3:39:HIS:CE1	2.41	0.56
9:B:38:LYS:NZ	9:B:145:PHE:O	2.37	0.56
9:B:179:TRP:HE1	9:B:183:LEU:HB3	1.71	0.56
15:H:191:ILE:HG22	15:H:191:ILE:O	2.04	0.56
16:I:384:LYS:HG3	16:I:420:LYS:HD2	1.88	0.56
17:J:272:MET:HE3	17:J:290:ILE:HG21	1.86	0.56
17:J:327:ILE:HG22	17:J:358:VAL:CG1	2.36	0.56
18:K:169:VAL:HB	18:K:224:LYS:CD	2.36	0.56
20:M:49:GLN:HG3	30:W:73:LEU:HD11	1.88	0.56
20:M:183:VAL:CG1	20:M:186:LEU:HD12	2.36	0.56
25:R:396:LYS:CG	25:R:400:TYR:HE2	2.19	0.56
28:U:92:TRP:CE3	28:U:106:ILE:HG22	2.41	0.56
30:W:16:SER:HA	30:W:25:ARG:HD3	1.88	0.56
31:X:93:SER:CB	31:X:96:ARG:HH21	2.19	0.56
33:Z:258:PRO:HB2	33:Z:259:PRO:CD	2.36	0.56
6:6:31:GLU:OE1	6:6:33:LYS:NZ	2.32	0.56
7:7:8:TYR:CE1	7:7:11:GLY:C	2.79	0.56
7:7:170:VAL:HG12	7:7:174:ARG:NH2	2.19	0.56
8:A:207:ILE:HG22	8:A:211:ILE:HD12	1.88	0.56
13:F:201:LEU:O	13:F:202:ARG:HG3	2.06	0.56
14:G:182:HIS:HB3	14:G:183:PRO:HD2	1.88	0.56
15:H:430:ALA:HA	15:H:435:ARG:NE	2.21	0.56
17:J:200:ARG:HG3	17:J:210:PHE:CZ	2.40	0.56
17:J:357:ASP:O	17:J:361:VAL:HG23	2.05	0.56
21:N:514:THR:HG21	21:N:546:LEU:HD12	1.87	0.56
21:N:525:ASN:ND2	21:N:535:LEU:CD2	2.68	0.56
22:O:69:PHE:CZ	22:O:73:ILE:HG21	2.41	0.56
22:O:277:ILE:CB	22:O:279:ILE:HB	2.36	0.56
24:Q:88:PHE:HB3	24:Q:92:LYS:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:63:TYR:OH	25:R:92:ILE:C	2.42	0.56
28:U:98:LYS:HE2	28:U:122:ILE:HG22	1.87	0.56
29:V:53:MET:CE	29:V:65:VAL:CG1	2.82	0.56
33:Z:771:HIS:O	33:Z:775:MET:HG2	2.06	0.56
2:2:185:GLU:HG2	9:B:225:THR:OG1	2.06	0.56
8:A:36:ASN:HD21	8:A:140:ILE:CD1	2.19	0.56
10:C:207:THR:O	10:C:211:LEU:HG	2.05	0.56
15:H:314:VAL:HG13	15:H:329:VAL:HG13	1.87	0.56
16:I:167:MET:HG2	16:I:171:MET:SD	2.45	0.56
17:J:200:ARG:CG	17:J:210:PHE:CZ	2.89	0.56
21:N:424:LYS:HG2	21:N:450:ILE:HD11	1.87	0.56
22:O:250:TRP:CD1	22:O:269:LEU:O	2.59	0.56
22:O:258:LEU:HB3	22:O:291:ILE:HG13	1.87	0.56
25:R:208:ASN:CG	25:R:238:PHE:CD1	2.77	0.56
26:S:188:TYR:CE1	26:S:210:LEU:CD1	2.89	0.56
27:T:39:LEU:O	27:T:40:LEU:HG	2.06	0.56
33:Z:96:TYR:HE1	33:Z:119:LEU:HD22	1.70	0.56
2:2:8:PHE:CE2	2:2:11:GLY:N	2.74	0.56
2:2:83:LEU:HD21	2:2:98:LEU:HD12	1.87	0.56
3:3:60:TYR:HA	10:C:96:GLN:OE1	2.05	0.56
5:5:120:THR:HG22	5:5:122:LEU:HG	1.87	0.56
8:A:174:LYS:HD3	8:A:214:LEU:HG	1.86	0.56
14:G:182:HIS:CG	14:G:186:LEU:CG	2.86	0.56
15:H:167:ASP:OD2	15:H:183:ILE:HD12	2.06	0.56
15:H:276:GLY:O	15:H:314:VAL:HG21	2.06	0.56
16:I:362:LEU:HD21	16:I:377:LEU:CD2	2.36	0.56
18:K:90:GLN:NE2	18:K:143:SER:OG	2.36	0.56
21:N:122:GLN:HA	21:N:124:TYR:CE2	2.41	0.56
21:N:246:LYS:NZ	21:N:280:GLN:HB2	2.21	0.56
22:O:66:VAL:HG12	22:O:106:PHE:CZ	2.41	0.56
22:O:240:GLU:C	22:O:241:THR:HG23	2.26	0.56
22:O:258:LEU:HD21	22:O:287:LEU:HD11	1.87	0.56
23:P:177:ILE:HD12	23:P:216:LEU:HD13	1.86	0.56
24:Q:99:THR:HG22	24:Q:103:LYS:HG2	1.86	0.56
25:R:71:LEU:HG	25:R:72:VAL:HG23	1.86	0.56
29:V:78:VAL:C	29:V:121:VAL:HG11	2.26	0.56
29:V:111:HIS:HD2	29:V:140:VAL:HG21	1.71	0.56
6:6:176:ARG:HD2	6:6:208:TYR:CE2	2.41	0.55
9:B:37:ILE:HD11	9:B:175:LEU:HD22	1.88	0.55
13:F:92:CYS:SG	13:F:103:LEU:HD23	2.46	0.55
14:G:86:HIS:NE2	14:G:90:ARG:NH2	2.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:182:HIS:NE2	14:G:186:LEU:HD11	2.21	0.55
17:J:375:ILE:HB	25:R:204:TRP:CD2	2.41	0.55
19:L:358:LEU:HD12	19:L:376:PHE:HB3	1.87	0.55
21:N:36:TRP:HB3	21:N:71:ASN:HD22	1.71	0.55
21:N:596:LEU:HD11	21:N:717:LEU:HD22	1.89	0.55
23:P:260:VAL:O	23:P:264:ILE:HG13	2.05	0.55
26:S:159:ASN:CB	26:S:187:ILE:CD1	2.84	0.55
27:T:193:THR:HB	27:T:226:TRP:CZ2	2.40	0.55
28:U:97:PRO:HG2	28:U:100:ARG:HH21	1.70	0.55
30:W:7:VAL:O	30:W:110:ILE:HD12	2.05	0.55
2:2:99:ILE:HG13	2:2:127:LEU:HD12	1.87	0.55
7:7:145:PRO:CB	7:7:148:ARG:HH21	2.18	0.55
14:G:116:GLY:O	14:G:120:GLN:HG3	2.06	0.55
14:G:215:ILE:HG23	14:G:230:VAL:CB	2.18	0.55
15:H:428:MET:CE	15:H:431:ILE:HD12	2.36	0.55
17:J:115:LEU:HB2	17:J:122:LEU:CD2	2.33	0.55
19:L:283:VAL:HG11	19:L:325:MET:CE	2.36	0.55
23:P:177:ILE:HG23	23:P:203:ILE:HD11	1.88	0.55
25:R:194:VAL:HG13	25:R:206:ARG:NH2	2.20	0.55
25:R:404:VAL:HG22	28:U:278:ILE:HG12	1.88	0.55
26:S:256:LYS:HD2	26:S:259:TYR:OH	2.06	0.55
27:T:39:LEU:O	27:T:40:LEU:HB2	2.05	0.55
28:U:19:LEU:HD11	29:V:208:LYS:HB3	1.89	0.55
28:U:38:LEU:CD1	28:U:87:GLU:HG2	2.37	0.55
33:Z:440:LEU:HD21	33:Z:477:TYR:OH	2.06	0.55
3:3:69:GLU:OE2	9:B:109:LEU:HD22	2.06	0.55
3:3:179:TYR:CE2	3:3:188:LYS:CD	2.90	0.55
4:4:81:SER:HA	4:4:124:LYS:NZ	2.21	0.55
8:A:12:TYR:HB2	8:A:15:HIS:HD2	1.71	0.55
8:A:57:LYS:HZ3	8:A:69:VAL:CB	2.17	0.55
8:A:150:LEU:CD2	8:A:155:TYR:OH	2.55	0.55
22:O:119:SER:HB2	22:O:166:ARG:CD	2.34	0.55
22:O:137:TYR:HB2	22:O:149:LEU:CD1	2.37	0.55
23:P:76:ASN:ND2	23:P:118:VAL:HG21	2.17	0.55
23:P:283:LYS:HB3	23:P:286:ASN:CB	2.36	0.55
23:P:286:ASN:O	23:P:293:LEU:CD2	2.53	0.55
24:Q:51:ARG:HA	24:Q:54:GLN:HB3	1.89	0.55
24:Q:76:GLU:C	24:Q:79:PRO:HD2	2.27	0.55
24:Q:291:TYR:OH	24:Q:293:SER:HB3	2.07	0.55
26:S:186:TYR:HH	26:S:309:PHE:HZ	1.51	0.55
28:U:98:LYS:HZ2	28:U:124:ASP:HB2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:392:LEU:HG	33:Z:428:TRP:CZ3	2.39	0.55
33:Z:889:VAL:HG22	33:Z:891:PRO:CD	2.35	0.55
2:2:152:ILE:HD11	2:2:177:VAL:HG21	1.88	0.55
4:4:60:GLN:HE21	4:4:64:GLN:NE2	2.04	0.55
10:C:144:TYR:HB2	10:C:147:GLN:NE2	2.22	0.55
21:N:414:GLY:HA3	21:N:728:LYS:HZ3	1.71	0.55
24:Q:178:HIS:HB3	24:Q:201:ALA:HB2	1.89	0.55
25:R:60:ALA:HB3	25:R:102:LEU:CD2	2.36	0.55
25:R:177:LEU:HB2	25:R:190:LYS:NZ	2.21	0.55
25:R:207:ARG:NH2	25:R:211:LYS:HZ1	2.05	0.55
26:S:159:ASN:CB	26:S:187:ILE:HD13	2.37	0.55
27:T:46:ILE:HD13	27:T:94:HIS:NE2	2.21	0.55
27:T:82:PHE:CZ	27:T:109:TYR:CG	2.87	0.55
27:T:197:TYR:CD1	27:T:198:ASP:C	2.79	0.55
27:T:245:TYR:O	27:T:246:GLU:CB	2.51	0.55
28:U:283:ARG:CZ	29:V:283:THR:C	2.75	0.55
31:X:100:TRP:CZ2	31:X:110:PRO:HG3	2.37	0.55
33:Z:169:VAL:CG2	33:Z:192:GLY:HA3	2.36	0.55
33:Z:551:LEU:CD1	33:Z:591:ILE:HG23	2.35	0.55
5:5:7:ARG:HG3	5:5:110:PRO:HB2	1.87	0.55
9:B:27:ALA:CA	18:K:426:PHE:CE1	2.85	0.55
14:G:81:ILE:HB	14:G:82:PRO:HD3	1.89	0.55
20:M:170:MET:HG2	20:M:246:LEU:HD13	1.87	0.55
21:N:490:LEU:HD23	21:N:490:LEU:C	2.26	0.55
22:O:76:LEU:HD22	22:O:121:ASP:CG	2.20	0.55
22:O:83:LEU:HD13	22:O:128:LEU:HD22	1.85	0.55
22:O:344:VAL:HB	23:P:361:THR:CG2	2.35	0.55
26:S:147:TRP:O	26:S:148:ASP:HB2	2.07	0.55
26:S:185:PHE:CE1	26:S:239:ARG:NH1	2.75	0.55
26:S:465:ILE:HG13	27:T:266:TYR:CE2	2.39	0.55
28:U:19:LEU:HD23	28:U:19:LEU:C	2.26	0.55
28:U:226:LEU:HD23	28:U:226:LEU:C	2.27	0.55
30:W:29:GLN:O	30:W:32:SER:HB3	2.06	0.55
33:Z:60:ASP:CG	33:Z:63:LEU:HD12	2.26	0.55
1:1:45:ARG:NH2	1:1:52:THR:OG1	2.39	0.55
4:4:149:PRO:O	4:4:150:ASP:CB	2.52	0.55
8:A:239:GLU:O	8:A:243:GLU:HG3	2.06	0.55
9:B:12:PHE:HZ	10:C:129:ARG:HH21	1.52	0.55
14:G:108:ILE:HG21	14:G:148:TYR:CD1	2.42	0.55
16:I:113:ILE:HD11	16:I:119:ILE:HB	1.89	0.55
17:J:333:ARG:NH1	17:J:343:LEU:HD11	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:197:ILE:O	20:M:200:PRO:HD2	2.07	0.55
20:M:415:PHE:HE1	20:M:419:ILE:HD11	1.70	0.55
21:N:91:ILE:HD12	21:N:140:MET:SD	2.46	0.55
21:N:758:VAL:HB	21:N:874:ILE:HD13	1.87	0.55
22:O:377:VAL:O	28:U:193:GLN:NE2	2.34	0.55
23:P:213:TYR:CD2	23:P:217:LYS:HE2	2.41	0.55
25:R:312:TYR:CD2	32:Y:73:PHE:HD1	2.25	0.55
26:S:188:TYR:CZ	26:S:210:LEU:CD2	2.88	0.55
28:U:16:LEU:C	29:V:32:ILE:HD11	2.27	0.55
28:U:21:HIS:ND1	28:U:53:ALA:HB2	2.21	0.55
28:U:66:TRP:CH2	28:U:109:LEU:CD1	2.88	0.55
28:U:92:TRP:CD1	28:U:120:LEU:HA	2.42	0.55
33:Z:829:GLN:HG2	33:Z:832:ARG:NH2	2.21	0.55
33:Z:963:ALA:C	33:Z:964:GLU:CD	2.65	0.55
9:B:65:SER:HB2	9:B:90:ARG:NH2	2.22	0.55
10:C:68:LYS:CG	10:C:229:ILE:HD11	2.36	0.55
16:I:121:THR:CA	16:I:127:ASP:OD1	2.45	0.55
16:I:380:LEU:HD23	16:I:420:LYS:NZ	2.22	0.55
18:K:153:ASP:HB2	19:L:110:LYS:NZ	2.22	0.55
20:M:225:GLY:O	20:M:226:THR:HG23	2.05	0.55
22:O:26:PHE:HA	22:O:61:LEU:CD2	2.34	0.55
22:O:233:LEU:HD23	22:O:236:HIS:CE1	2.40	0.55
23:P:234:TYR:HD2	23:P:267:PHE:CG	2.25	0.55
28:U:109:LEU:CD2	30:W:60:ARG:HB2	2.37	0.55
28:U:133:PRO:HD3	29:V:212:MET:SD	2.47	0.55
29:V:53:MET:HE2	29:V:65:VAL:CG1	2.37	0.55
29:V:117:TRP:CZ2	29:V:196:TYR:HB3	2.35	0.55
30:W:180:LEU:O	30:W:183:GLU:HB2	2.06	0.55
33:Z:361:HIS:CE1	33:Z:861:THR:O	2.60	0.55
12:E:157:HIS:CB	12:E:170:LYS:HZ3	2.20	0.55
13:F:145:LEU:HD23	13:F:146:GLU:C	2.27	0.55
16:I:175:LYS:O	17:J:282:PHE:CD1	2.56	0.55
18:K:254:VAL:HG13	18:K:299:LEU:CD2	2.36	0.55
22:O:58:ARG:HD2	22:O:58:ARG:O	2.06	0.55
25:R:286:LEU:HD23	25:R:289:ILE:CD1	2.28	0.55
26:S:471:LEU:HD13	28:U:288:PHE:CE2	2.41	0.55
27:T:126:LEU:HD21	27:T:136:LEU:HD21	1.89	0.55
28:U:92:TRP:HE3	28:U:110:PHE:HE2	1.53	0.55
28:U:280:ASN:ND2	29:V:291:ASN:CG	2.59	0.55
33:Z:195:PHE:HB3	33:Z:197:LYS:NZ	2.22	0.55
33:Z:348:LEU:CD1	33:Z:921:GLU:HG2	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:80:SER:CB	14:G:103:LYS:CG	2.85	0.55
9:B:38:LYS:HE3	9:B:145:PHE:HB2	1.89	0.55
11:D:159:TRP:CE3	12:E:59:LEU:CD1	2.90	0.55
14:G:203:HIS:CE1	14:G:211:PHE:CD1	2.91	0.55
15:H:280:VAL:HG11	16:I:304:ARG:CZ	2.37	0.55
16:I:244:PHE:HE1	16:I:246:ARG:CZ	2.20	0.55
17:J:166:LEU:HB2	17:J:167:PRO:HD3	1.88	0.55
17:J:166:LEU:CB	17:J:174:PHE:HZ	2.19	0.55
22:O:107:GLN:O	22:O:107:GLN:HG2	2.07	0.55
22:O:119:SER:C	22:O:166:ARG:CD	2.75	0.55
23:P:429:ILE:HG23	28:U:203:LYS:HD3	1.88	0.55
24:Q:351:ILE:HD12	24:Q:386:PHE:CE1	2.41	0.55
27:T:197:TYR:CE1	27:T:199:PHE:CA	2.89	0.55
31:X:66:LEU:HD11	31:X:97:TYR:CB	2.27	0.55
31:X:125:MET:O	31:X:128:VAL:HG22	2.07	0.55
33:Z:551:LEU:HD11	33:Z:591:ILE:CG2	2.31	0.55
2:2:50:ALA:HB2	3:3:120:CYS:SG	2.47	0.55
8:A:234:PHE:HE2	8:A:236:LEU:HD21	1.71	0.55
11:D:149:GLN:CD	11:D:162:GLN:HG2	2.27	0.55
12:E:98:THR:HG22	12:E:102:TYR:CE1	2.42	0.55
13:F:65:LYS:HB2	13:F:222:PHE:CE2	2.42	0.55
16:I:387:LEU:HA	16:I:427:LYS:HZ2	1.72	0.55
20:M:44:PHE:CE2	22:O:110:ASP:O	2.58	0.55
21:N:155:GLY:O	21:N:159:GLU:HG3	2.07	0.55
21:N:399:PHE:HD1	21:N:441:VAL:CG2	1.90	0.55
22:O:80:LYS:HG2	22:O:81:TYR:CD2	2.42	0.55
22:O:341:ILE:CG1	22:O:348:VAL:HA	2.33	0.55
24:Q:98:LYS:O	24:Q:140:LYS:NZ	2.40	0.55
29:V:127:LYS:NZ	29:V:194:ARG:NH2	2.55	0.55
30:W:1:MET:H2	30:W:44:ASN:HD21	1.52	0.55
1:1:176:VAL:HG12	1:1:183:VAL:HG13	1.88	0.54
10:C:160:TRP:CE2	10:C:163:ILE:CD1	2.86	0.54
13:F:215:ILE:CG1	13:F:220:THR:HG21	2.37	0.54
18:K:93:PRO:HB3	19:L:153:LEU:HB2	1.89	0.54
19:L:252:VAL:CG1	20:M:256:ILE:HD13	1.92	0.54
21:N:94:LYS:HE3	21:N:143:LYS:HZ3	1.72	0.54
21:N:420:THR:HG22	21:N:424:LYS:HZ2	1.71	0.54
21:N:666:GLN:NE2	21:N:712:ASN:HA	2.22	0.54
22:O:48:PHE:CD1	22:O:81:TYR:HE2	2.24	0.54
22:O:203:THR:O	22:O:204:SER:CB	2.55	0.54
22:O:366:MET:CE	28:U:226:LEU:CD1	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:370:LEU:HD11	28:U:207:VAL:CG2	2.33	0.54
23:P:221:TYR:OH	23:P:244:ILE:HB	2.07	0.54
25:R:422:ARG:NH2	26:S:299:LYS:CB	2.70	0.54
28:U:66:TRP:N	30:W:93:ILE:HD11	2.22	0.54
28:U:173:HIS:HE1	29:V:151:VAL:H	1.55	0.54
5:5:45:MET:HE1	5:5:53:GLN:OE1	2.07	0.54
12:E:179:ALA:O	12:E:183:LEU:HG	2.08	0.54
16:I:362:LEU:CG	16:I:377:LEU:HD22	2.38	0.54
17:J:131:ASP:H	17:J:132:PRO:CD	2.20	0.54
21:N:549:TYR:CE2	21:N:586:ALA:HB2	2.42	0.54
21:N:573:HIS:O	21:N:576:VAL:HG12	2.07	0.54
21:N:771:PHE:CE2	21:N:885:ILE:HB	2.43	0.54
21:N:774:ASN:ND2	21:N:885:ILE:HD11	2.21	0.54
23:P:207:THR:CB	23:P:217:LYS:HZ3	2.18	0.54
28:U:283:ARG:CZ	29:V:283:THR:O	2.55	0.54
29:V:133:ASN:O	29:V:134:SER:HB3	2.07	0.54
33:Z:752:ILE:O	33:Z:755:GLU:HB2	2.07	0.54
33:Z:830:LEU:O	33:Z:834:LEU:HG	2.07	0.54
1:1:122:LEU:CD1	7:7:28:PHE:CD1	2.81	0.54
4:4:147:TYR:HE1	4:4:151:MET:HB2	1.73	0.54
6:6:14:LEU:CD2	6:6:34:VAL:HG13	2.31	0.54
6:6:61:ASN:O	6:6:65:TRP:CD1	2.61	0.54
8:A:183:GLU:O	8:A:187:LYS:HG3	2.07	0.54
9:B:139:HIS:CE1	9:B:145:PHE:CZ	2.92	0.54
9:B:142:PHE:O	9:B:143:ASN:OD1	2.24	0.54
12:E:110:GLU:CG	12:E:164:PHE:HE2	2.09	0.54
15:H:280:VAL:CG2	16:I:304:ARG:CD	2.73	0.54
17:J:81:ASP:O	17:J:82:LYS:HB2	2.08	0.54
17:J:89:GLN:N	17:J:90:PRO:CD	2.70	0.54
17:J:219:VAL:HB	18:K:284:ALA:HA	1.83	0.54
18:K:422:ASP:OD2	18:K:428:LYS:HD3	2.08	0.54
21:N:94:LYS:HE3	21:N:143:LYS:NZ	2.23	0.54
21:N:214:LEU:CD1	21:N:217:MET:CE	2.79	0.54
21:N:483:LEU:HD21	21:N:519:VAL:HB	1.89	0.54
22:O:222:LEU:HD22	22:O:270:ILE:CD1	2.36	0.54
23:P:289:ASN:O	23:P:293:LEU:HD13	2.07	0.54
23:P:429:ILE:CG2	28:U:203:LYS:HD3	2.37	0.54
24:Q:272:LEU:HD21	24:Q:274:LEU:HD11	1.89	0.54
25:R:187:VAL:O	25:R:213:TYR:OH	2.17	0.54
26:S:241:PHE:CZ	26:S:253:PHE:CE2	2.95	0.54
26:S:436:ILE:HD12	26:S:438:HIS:CD2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:197:TYR:HD1	27:T:198:ASP:N	1.60	0.54
29:V:154:ASP:CB	29:V:156:PHE:HE1	2.18	0.54
30:W:159:ALA:HA	30:W:162:ASN:ND2	2.21	0.54
33:Z:491:LEU:HD22	33:Z:903:MET:SD	2.46	0.54
2:2:8:PHE:CE1	2:2:12:VAL:C	2.78	0.54
3:3:75:PRO:HB3	3:3:111:PHE:HD2	1.73	0.54
4:4:167:LEU:HD22	4:4:171:MET:CE	2.38	0.54
11:D:70:HIS:CD2	11:D:138:PHE:O	2.53	0.54
13:F:145:LEU:HD23	13:F:146:GLU:N	2.22	0.54
14:G:140:VAL:HG23	14:G:220:LEU:HD21	1.78	0.54
15:H:62:ARG:HG3	16:I:133:LEU:HD11	1.89	0.54
18:K:141:ARG:NH1	19:L:153:LEU:CD1	2.71	0.54
22:O:41:LEU:HG	22:O:43:GLU:H	1.72	0.54
27:T:209:LEU:HD13	27:T:211:PHE:CE2	2.42	0.54
28:U:233:PHE:CE1	28:U:260:ASN:HB2	2.42	0.54
33:Z:357:ILE:HG23	33:Z:960:GLY:CA	2.36	0.54
1:1:34:LEU:HD13	1:1:176:VAL:HG23	1.89	0.54
3:3:98:PRO:HG2	3:3:115:PHE:HB2	1.89	0.54
4:4:139:THR:O	4:4:143:LEU:HG	2.06	0.54
8:A:207:ILE:CG2	8:A:211:ILE:CD1	2.84	0.54
15:H:224:VAL:O	15:H:228:PRO:HG3	2.07	0.54
19:L:111:GLU:HG2	19:L:117:TYR:CE2	2.43	0.54
20:M:197:ILE:HB	20:M:322:LYS:HD3	1.90	0.54
21:N:15:GLU:O	21:N:16:ASN:HB3	2.07	0.54
21:N:433:THR:HG22	21:N:439:VAL:HG21	1.90	0.54
23:P:308:LEU:HD13	23:P:345:VAL:CG2	2.36	0.54
27:T:110:LEU:HD22	27:T:122:PHE:CE1	2.42	0.54
28:U:9:THR:HB	28:U:162:GLU:HB3	1.89	0.54
29:V:24:LYS:NZ	29:V:197:TYR:CZ	2.74	0.54
30:W:123:ASP:HB3	30:W:127:ARG:HH12	1.72	0.54
31:X:38:ASN:HD21	31:X:47:ASP:HB2	1.71	0.54
31:X:85:ARG:NH2	31:X:115:SER:CB	2.70	0.54
33:Z:331:GLY:HA3	33:Z:346:LEU:HD13	1.89	0.54
6:6:175:VAL:HG12	6:6:179:PHE:CE2	2.42	0.54
7:7:106:ILE:HB	7:7:122:VAL:CG1	2.37	0.54
8:A:234:PHE:HE2	8:A:236:LEU:CD2	2.21	0.54
13:F:145:LEU:HD11	13:F:153:VAL:HG11	1.90	0.54
15:H:207:THR:HG22	15:H:208:TYR:CD2	2.41	0.54
16:I:380:LEU:CD1	16:I:416:PHE:HB3	2.38	0.54
16:I:398:GLU:CD	16:I:422:ARG:HH21	2.11	0.54
18:K:300:LEU:HA	18:K:333:ARG:NH1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:169:ASN:O	19:L:170:MET:HB2	2.07	0.54
22:O:377:VAL:HG21	28:U:200:LEU:CD1	2.37	0.54
24:Q:311:LEU:HD11	24:Q:366:ILE:HD11	1.90	0.54
25:R:158:LEU:HD13	25:R:170:VAL:CG2	2.38	0.54
26:S:171:TYR:HE2	26:S:176:LEU:HA	1.72	0.54
27:T:97:SER:OG	27:T:98:GLU:HG3	2.08	0.54
29:V:83:VAL:HG11	29:V:107:TRP:CH2	2.42	0.54
30:W:60:ARG:CZ	30:W:62:LEU:HD21	2.38	0.54
33:Z:318:LYS:HG2	33:Z:496:ALA:O	2.07	0.54
33:Z:812:ILE:HA	33:Z:815:MET:CE	2.37	0.54
1:1:114:PRO:HG2	1:1:118:SER:HB3	1.89	0.54
6:6:94:PHE:HE1	7:7:99:MET:CE	2.21	0.54
11:D:188:VAL:HG21	11:D:216:LYS:CE	2.37	0.54
16:I:170:VAL:HG23	16:I:171:MET:HG3	1.88	0.54
17:J:124:LYS:NZ	18:K:103:ILE:HG21	2.23	0.54
18:K:244:HIS:HE1	18:K:250:GLY:HA3	1.60	0.54
19:L:253:ASP:HA	20:M:256:ILE:HG13	1.85	0.54
20:M:251:LEU:C	20:M:253:GLN:N	2.61	0.54
22:O:103:LYS:O	22:O:129:ILE:CD1	2.55	0.54
22:O:229:ASN:CG	22:O:287:LEU:HG	2.28	0.54
22:O:343:GLN:HB3	23:P:360:ILE:HG22	1.90	0.54
25:R:320:LYS:O	25:R:324:ARG:HG3	2.08	0.54
25:R:389:GLU:OE2	26:S:399:TYR:HE1	1.90	0.54
33:Z:741:LEU:HD22	33:Z:782:ILE:CD1	2.36	0.54
33:Z:756:MET:HE3	33:Z:759:ARG:HE	1.71	0.54
2:2:37:ILE:HG22	2:2:63:ILE:HG21	1.89	0.54
4:4:80:SER:HB2	4:4:124:LYS:CD	2.20	0.54
9:B:139:HIS:ND1	9:B:145:PHE:CD2	2.71	0.54
12:E:143:LEU:CD2	12:E:157:HIS:ND1	2.71	0.54
13:F:80:ASP:OD2	13:F:126:ARG:NH1	2.39	0.54
15:H:174:VAL:HG13	15:H:183:ILE:CG1	2.28	0.54
16:I:124:THR:O	16:I:125:MET:HB2	2.08	0.54
16:I:194:ILE:CG2	16:I:236:VAL:HG21	2.37	0.54
17:J:160:ILE:CD1	17:J:314:ILE:HG21	2.37	0.54
18:K:156:SER:OG	18:K:249:GLU:HB3	2.08	0.54
19:L:267:PHE:CZ	19:L:311:GLN:NE2	2.76	0.54
20:M:171:GLU:O	20:M:244:LEU:HD12	2.08	0.54
21:N:25:LEU:HD11	21:N:57:ASP:CG	2.28	0.54
21:N:70:TYR:HE2	26:S:219:LYS:CD	2.20	0.54
23:P:181:LEU:HG	23:P:223:LEU:CD1	2.38	0.54
24:Q:326:MET:HE3	24:Q:332:ARG:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:191:LEU:CA	25:R:213:TYR:HE2	2.21	0.54
25:R:404:VAL:CG2	28:U:278:ILE:HD11	2.38	0.54
26:S:185:PHE:CD1	26:S:239:ARG:HD2	2.42	0.54
27:T:190:ALA:HB1	27:T:224:ARG:HD3	1.90	0.54
27:T:193:THR:HB	27:T:226:TRP:HH2	1.57	0.54
30:W:98:LEU:HD11	30:W:108:GLN:HG3	1.90	0.54
30:W:147:ILE:O	30:W:147:ILE:CG2	2.47	0.54
33:Z:970:TYR:CZ	33:Z:993:GLU:HB2	2.43	0.54
13:F:145:LEU:CD2	13:F:153:VAL:HG13	2.34	0.54
13:F:154:THR:HG22	13:F:156:LEU:CD1	2.38	0.54
18:K:99:PHE:CZ	18:K:102:PRO:N	2.76	0.54
18:K:342:SER:OG	18:K:343:LEU:HG	2.08	0.54
19:L:132:ARG:CZ	19:L:156:MET:HG3	2.35	0.54
19:L:204:PRO:HG3	19:L:320:GLN:NE2	2.23	0.54
19:L:206:ILE:HG12	19:L:209:ARG:HH22	1.73	0.54
22:O:277:ILE:CG2	22:O:278:PRO:N	2.48	0.54
22:O:366:MET:CE	28:U:226:LEU:HD13	2.38	0.54
25:R:312:TYR:HE2	32:Y:73:PHE:HB2	1.72	0.54
29:V:117:TRP:CE3	29:V:123:VAL:HG22	2.43	0.54
31:X:24:CYS:HB2	31:X:79:LYS:O	2.08	0.54
33:Z:325:GLY:C	33:Z:326:VAL:HG22	2.28	0.54
33:Z:737:ALA:HB2	33:Z:771:HIS:CE1	2.43	0.54
5:5:6:PHE:HZ	5:5:13:ILE:HG13	1.68	0.54
11:D:113:VAL:HG11	11:D:135:ILE:HD11	1.90	0.54
18:K:346:ARG:HE	18:K:372:ILE:CG2	2.16	0.54
18:K:353:PHE:HD1	18:K:387:MET:CG	2.21	0.54
18:K:364:PRO:HB2	24:Q:247:HIS:NE2	2.22	0.54
19:L:197:ILE:O	19:L:322:LYS:HE3	2.08	0.54
20:M:43:ILE:HG21	30:W:26:PHE:CE2	2.42	0.54
21:N:641:LEU:HB3	21:N:660:LEU:HD21	1.90	0.54
23:P:425:HIS:HE1	28:U:228:LYS:HB2	1.72	0.54
24:Q:90:LYS:CD	24:Q:129:LYS:NZ	2.70	0.54
24:Q:299:MET:SD	24:Q:335:PHE:CZ	2.99	0.54
25:R:238:PHE:CD2	25:R:244:THR:HG21	2.42	0.54
33:Z:54:GLU:O	33:Z:57:LYS:HB3	2.08	0.54
1:1:78:ALA:O	1:1:82:PHE:HD2	1.90	0.53
3:3:96:VAL:H	3:3:117:LEU:HG	1.73	0.53
5:5:66:HIS:CE1	5:5:70:GLU:CD	2.82	0.53
8:A:142:THR:OG1	8:A:156:LYS:HE2	2.07	0.53
12:E:231:TYR:CZ	12:E:235:LYS:HB3	2.42	0.53
18:K:152:PRO:CB	18:K:259:ARG:HD2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:379:SER:OG	18:K:382:VAL:HG23	2.07	0.53
21:N:52:ASP:O	21:N:53:ASP:CG	2.47	0.53
23:P:306:ASN:HD22	23:P:310:ARG:HD3	1.73	0.53
24:Q:418:GLN:HB3	29:V:262:THR:HG21	1.90	0.53
25:R:304:TYR:CD1	25:R:308:LEU:HD11	2.39	0.53
28:U:18:ALA:HB2	28:U:93:TYR:HE2	1.73	0.53
33:Z:193:PHE:CD2	33:Z:196:SER:CA	2.91	0.53
33:Z:495:ILE:HD12	33:Z:906:ALA:HB2	1.90	0.53
13:F:91:GLN:NE2	13:F:115:LYS:NZ	2.56	0.53
16:I:137:ASP:O	16:I:141:LEU:HG	2.08	0.53
19:L:269:TYR:CZ	19:L:273:HIS:CE1	2.95	0.53
21:N:89:PHE:HE1	21:N:101:ILE:HD11	1.73	0.53
22:O:283:HIS:CD2	22:O:287:LEU:HD12	2.39	0.53
22:O:300:VAL:CG1	22:O:301:PHE:CD2	2.85	0.53
23:P:234:TYR:CG	23:P:267:PHE:CZ	2.96	0.53
28:U:92:TRP:HE1	28:U:120:LEU:HB2	1.73	0.53
33:Z:312:TYR:CZ	33:Z:348:LEU:CA	2.91	0.53
1:1:18:SER:OG	1:1:33:LYS:HG2	2.08	0.53
1:1:176:VAL:CG1	1:1:178:LEU:HD21	2.37	0.53
5:5:33:ARG:HH11	5:5:46:ALA:HB2	1.72	0.53
9:B:12:PHE:CE2	9:B:18:LEU:HD21	2.43	0.53
11:D:171:VAL:O	11:D:175:LEU:HG	2.08	0.53
12:E:241:LYS:CA	12:E:244:LYS:HZ3	2.20	0.53
16:I:172:LYS:HA	17:J:231:ARG:CZ	2.37	0.53
16:I:194:ILE:HG21	16:I:236:VAL:HG21	1.89	0.53
17:J:37:LYS:CE	18:K:58:TYR:CE1	2.92	0.53
22:O:185:PHE:CE1	22:O:279:ILE:HG13	2.44	0.53
22:O:277:ILE:HG21	22:O:279:ILE:HB	1.79	0.53
22:O:373:TRP:HE1	28:U:200:LEU:HD21	1.67	0.53
24:Q:258:ALA:O	24:Q:261:VAL:HG12	2.08	0.53
25:R:214:TYR:CZ	25:R:218:CYS:SG	3.01	0.53
26:S:212:SER:O	26:S:216:LYS:HG3	2.08	0.53
3:3:60:TYR:CD1	10:C:96:GLN:HG3	2.43	0.53
8:A:19:PHE:HZ	9:B:128:ARG:HH12	1.51	0.53
18:K:243:VAL:O	18:K:243:VAL:HG12	2.09	0.53
20:M:75:LEU:CD2	20:M:77:TYR:CE1	2.85	0.53
20:M:277:ILE:HG21	20:M:324:LEU:HD12	1.90	0.53
20:M:357:ARG:HH22	20:M:385:GLU:N	2.06	0.53
22:O:250:TRP:CG	22:O:270:ILE:HG12	2.41	0.53
23:P:257:TRP:CZ2	23:P:261:LEU:HD22	2.43	0.53
24:Q:99:THR:CG2	24:Q:103:LYS:CE	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:157:LEU:HD23	28:U:157:LEU:C	2.29	0.53
29:V:52:LEU:HD11	29:V:107:TRP:HZ3	1.66	0.53
29:V:80:VAL:HG23	29:V:125:THR:CA	2.29	0.53
33:Z:460:SER:HB2	33:Z:495:ILE:HG22	1.90	0.53
10:C:106:ILE:HG23	10:C:106:ILE:O	2.08	0.53
10:C:194:LEU:HA	10:C:197:LEU:HD12	1.91	0.53
12:E:109:VAL:CB	12:E:156:PHE:CE1	2.90	0.53
14:G:86:HIS:HD2	14:G:131:PHE:HZ	1.55	0.53
15:H:147:ILE:HD11	15:H:157:VAL:HB	1.91	0.53
18:K:171:TYR:CE2	18:K:225:ALA:HB1	2.44	0.53
19:L:161:ARG:HH12	19:L:264:ARG:NH2	2.06	0.53
21:N:28:ILE:HG21	21:N:64:ILE:HD13	1.91	0.53
22:O:105:GLN:HA	22:O:108:GLU:CD	2.29	0.53
22:O:337:LEU:HB3	22:O:350:ILE:HG21	1.91	0.53
23:P:221:TYR:CZ	23:P:240:TYR:O	2.62	0.53
24:Q:155:LEU:CD1	24:Q:185:TYR:HE1	2.21	0.53
28:U:36:VAL:HB	28:U:89:LEU:HD22	1.90	0.53
33:Z:218:GLU:HB3	33:Z:248:TYR:CZ	2.35	0.53
33:Z:563:VAL:HG11	33:Z:595:MET:CE	2.38	0.53
4:4:66:TYR:HE1	4:4:74:LEU:CD2	2.02	0.53
6:6:115:SER:HB2	6:6:128:ARG:HG2	1.89	0.53
9:B:18:LEU:HD12	9:B:21:ILE:HD12	1.90	0.53
14:G:192:VAL:HG13	14:G:215:ILE:HD13	1.89	0.53
14:G:215:ILE:CG2	14:G:230:VAL:HB	2.18	0.53
15:H:420:ARG:CZ	16:I:343:ARG:NH1	2.72	0.53
18:K:200:GLN:O	25:R:204:TRP:CZ2	2.62	0.53
20:M:50:ARG:N	30:W:73:LEU:CD1	2.70	0.53
21:N:877:GLN:OE1	21:N:880:ARG:NH2	2.42	0.53
22:O:195:TYR:HD2	22:O:213:LEU:HD13	1.74	0.53
22:O:217:LEU:CD2	22:O:238:ILE:HD13	2.38	0.53
27:T:197:TYR:CG	27:T:198:ASP:N	2.44	0.53
28:U:283:ARG:HE	29:V:287:THR:HB	1.74	0.53
29:V:261:LEU:HD13	29:V:283:THR:CG2	2.38	0.53
32:Y:84:TYR:O	32:Y:88:ASN:ND2	2.41	0.53
33:Z:218:GLU:HA	33:Z:248:TYR:CE1	2.44	0.53
33:Z:554:THR:O	33:Z:555:ALA:HB3	2.07	0.53
33:Z:610:GLY:CA	33:Z:748:LEU:CD1	2.52	0.53
33:Z:617:ILE:HG23	33:Z:743:ILE:HG23	1.91	0.53
33:Z:621:LEU:HD13	33:Z:760:HIS:NE2	2.24	0.53
1:1:75:THR:CB	1:1:111:TYR:CE1	2.91	0.53
1:1:109:GLU:HB3	1:1:111:TYR:HE1	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:179:TYR:CE2	3:3:188:LYS:CG	2.92	0.53
7:7:54:HIS:CD2	7:7:58:LEU:HD11	2.43	0.53
13:F:166:GLN:CA	20:M:381:ARG:HH21	2.21	0.53
13:F:179:PHE:CE1	13:F:192:ALA:HB2	2.44	0.53
14:G:73:ILE:HD13	14:G:108:ILE:HD13	1.91	0.53
15:H:318:ARG:NH1	15:H:364:ALA:HB2	2.24	0.53
21:N:106:ILE:O	21:N:110:VAL:HG23	2.09	0.53
21:N:383:LYS:H	21:N:412:TYR:HH	1.52	0.53
21:N:457:SER:O	21:N:458:ALA:HB3	2.09	0.53
22:O:73:ILE:CG2	22:O:74:ASN:H	2.07	0.53
22:O:82:LEU:CD2	22:O:98:TYR:OH	2.56	0.53
22:O:87:LYS:CD	22:O:135:ARG:HD2	2.39	0.53
22:O:103:LYS:O	22:O:129:ILE:HD11	2.09	0.53
23:P:202:LYS:HE2	23:P:206:LYS:HZ1	1.74	0.53
24:Q:162:LEU:CD1	24:Q:178:HIS:NE2	2.68	0.53
25:R:360:SER:CB	32:Y:86:ARG:HH22	2.21	0.53
27:T:256:LYS:O	27:T:260:ILE:HG12	2.08	0.53
33:Z:385:PHE:HZ	33:Z:898:HIS:ND1	2.06	0.53
33:Z:557:GLU:O	33:Z:558:LEU:HB3	2.09	0.53
1:1:8:PHE:CE2	1:1:10:ASP:CB	2.74	0.53
2:2:72:ARG:NH1	8:A:116:VAL:HG21	2.23	0.53
2:2:142:TRP:NE1	2:2:145:ASP:HA	2.21	0.53
3:3:63:ASN:HD22	10:C:96:GLN:HE22	1.57	0.53
7:7:48:ASP:OD2	7:7:103:TRP:CD1	2.62	0.53
15:H:428:MET:HE2	15:H:431:ILE:HD12	1.91	0.53
17:J:67:GLU:O	18:K:144:ASN:HB2	2.09	0.53
18:K:68:ILE:HG12	21:N:608:LEU:HD21	1.77	0.53
20:M:225:GLY:C	20:M:226:THR:HG23	2.28	0.53
20:M:362:GLN:HA	20:M:376:TRP:HE1	1.72	0.53
21:N:328:PHE:CZ	21:N:696:LYS:HD2	2.42	0.53
23:P:202:LYS:HE2	23:P:206:LYS:NZ	2.23	0.53
23:P:286:ASN:HA	23:P:293:LEU:CD1	2.38	0.53
24:Q:217:GLU:HA	24:Q:220:LEU:HD12	1.91	0.53
25:R:78:ASP:O	25:R:93:LYS:HG3	2.09	0.53
28:U:152:LYS:CG	28:U:154:PHE:CZ	2.92	0.53
6:6:28:SER:OG	6:6:31:GLU:HB2	2.09	0.53
9:B:156:TYR:CE1	10:C:81:THR:HG21	2.44	0.53
10:C:206:LEU:HD11	10:C:211:LEU:HD11	1.91	0.53
13:F:80:ASP:OD2	13:F:126:ARG:NH2	2.42	0.53
18:K:167:PRO:HB2	19:L:315:PHE:HZ	1.74	0.53
21:N:176:GLN:NE2	21:N:182:ASN:ND2	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:47:LYS:NZ	22:O:69:PHE:CD1	2.68	0.53
23:P:384:VAL:HG13	23:P:390:TYR:HA	1.90	0.53
25:R:208:ASN:CG	25:R:238:PHE:HB2	2.30	0.53
27:T:169:GLN:OE1	27:T:174:PHE:CZ	2.61	0.53
27:T:249:MET:O	27:T:250:MET:CB	2.57	0.53
28:U:66:TRP:H	30:W:93:ILE:HD11	1.73	0.53
28:U:94:HIS:HB3	28:U:122:ILE:HG12	1.89	0.53
29:V:53:MET:HE2	29:V:65:VAL:HG11	1.85	0.53
30:W:179:ARG:O	30:W:180:LEU:HB2	2.08	0.53
33:Z:236:PHE:CE2	33:Z:245:VAL:CG2	2.92	0.53
33:Z:359:LYS:NZ	33:Z:429:ASN:ND2	2.51	0.53
1:1:104:ASP:OD1	1:1:105:LYS:HG3	2.09	0.53
4:4:3:ILE:HD11	4:4:44:SER:OG	2.08	0.53
5:5:124:GLY:N	5:5:127:PHE:HZ	2.07	0.53
5:5:135:PHE:HB2	5:5:167:ARG:NH1	2.24	0.53
10:C:216:ILE:HG12	10:C:227:GLN:HG2	1.91	0.53
16:I:166:PRO:HG2	16:I:270:VAL:HG21	1.90	0.53
16:I:433:GLU:HA	16:I:436:TYR:CZ	2.43	0.53
19:L:325:MET:CE	19:L:337:LEU:HD13	2.39	0.53
21:N:89:PHE:CZ	21:N:101:ILE:HD11	2.44	0.53
21:N:158:LEU:HD13	21:N:192:LEU:HD21	1.90	0.53
21:N:741:TYR:H	21:N:742:TRP:HE3	1.57	0.53
22:O:120:LYS:CB	22:O:166:ARG:HD2	2.39	0.53
22:O:210:ARG:NE	22:O:242:ILE:O	2.36	0.53
24:Q:429:LYS:NZ	29:V:269:ARG:HH22	2.07	0.53
26:S:197:SER:O	26:S:198:SER:CB	2.57	0.53
31:X:86:ILE:HG12	31:X:100:TRP:CD1	2.44	0.53
33:Z:49:LEU:CD1	33:Z:55:ARG:CZ	2.87	0.53
33:Z:81:SER:O	33:Z:82:MET:CB	2.57	0.53
6:6:11:PHE:HA	6:6:105:LEU:HD21	1.90	0.52
8:A:220:LYS:HD3	8:A:242:GLU:CB	2.36	0.52
9:B:174:PHE:CE1	24:Q:169:ASP:OD2	2.62	0.52
10:C:19:LEU:HD11	11:D:127:ARG:NH2	2.24	0.52
13:F:49:LEU:HD23	13:F:51:ARG:NH2	2.23	0.52
16:I:150:HIS:ND1	16:I:151:HIS:N	2.58	0.52
23:P:308:LEU:O	23:P:308:LEU:HG	2.08	0.52
24:Q:343:LEU:CD2	24:Q:376:LYS:HG2	2.39	0.52
24:Q:418:GLN:O	24:Q:421:LYS:HB2	2.09	0.52
25:R:268:SER:OG	25:R:269:LYS:HG3	2.09	0.52
26:S:186:TYR:OH	26:S:309:PHE:CZ	2.62	0.52
27:T:190:ALA:HB2	27:T:224:ARG:NH2	2.20	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:37:VAL:HB	1:1:63:LEU:CD1	2.39	0.52
5:5:76:VAL:HG12	5:5:113:TYR:HD1	1.74	0.52
7:7:8:TYR:CE2	7:7:10:ASN:C	2.82	0.52
9:B:82:TYR:CD1	9:B:134:LEU:HD21	2.44	0.52
10:C:107:PRO:HD2	10:C:110:ILE:HD12	1.91	0.52
15:H:284:VAL:HG13	20:M:252:VAL:CG1	2.39	0.52
17:J:374:ARG:NH1	17:J:378:THR:HG21	2.23	0.52
19:L:81:ILE:HG22	19:L:82:ARG:N	2.23	0.52
19:L:328:ASN:HD21	19:L:329:ARG:NE	2.07	0.52
22:O:286:PHE:HE1	22:O:334:LEU:HD11	1.74	0.52
23:P:99:LYS:O	23:P:103:TYR:HD1	1.92	0.52
25:R:240:SER:OG	25:R:244:THR:HG22	2.10	0.52
26:S:214:MET:HE2	26:S:236:LEU:HD13	1.91	0.52
30:W:17:ARG:O	30:W:18:ASN:CG	2.48	0.52
8:A:110:TYR:CD2	8:A:111:ASP:O	2.62	0.52
10:C:98:TYR:CD1	10:C:104:GLU:O	2.62	0.52
17:J:189:GLY:O	17:J:295:ASN:OD1	2.26	0.52
18:K:141:ARG:NH1	19:L:153:LEU:HD11	2.23	0.52
20:M:410:VAL:HG12	20:M:411:LYS:O	2.09	0.52
21:N:49:LEU:HD21	21:N:55:PHE:CD1	2.44	0.52
22:O:66:VAL:HG13	22:O:106:PHE:CZ	2.44	0.52
23:P:395:ARG:NE	24:Q:357:VAL:HA	2.20	0.52
24:Q:47:ASP:O	24:Q:51:ARG:HB2	2.09	0.52
24:Q:291:TYR:CZ	24:Q:293:SER:HB2	2.44	0.52
24:Q:417:GLY:O	24:Q:421:LYS:HG3	2.09	0.52
27:T:11:LEU:HD21	27:T:27:LEU:CD2	2.40	0.52
27:T:227:PRO:CD	27:T:241:GLU:OE2	2.58	0.52
28:U:132:LEU:HG	28:U:134:THR:N	2.24	0.52
30:W:34:GLU:O	30:W:38:GLN:HG3	2.08	0.52
33:Z:102:ILE:HG12	33:Z:107:THR:HG1	1.73	0.52
33:Z:312:TYR:CZ	33:Z:348:LEU:HA	2.39	0.52
33:Z:955:VAL:O	33:Z:956:LEU:HB2	2.09	0.52
8:A:36:ASN:HD21	8:A:140:ILE:HD12	1.73	0.52
8:A:48:LYS:NZ	8:A:195:ASN:ND2	2.57	0.52
8:A:183:GLU:HG2	8:A:187:LYS:HE2	1.90	0.52
12:E:219:LEU:HD11	12:E:239:LEU:HD23	1.91	0.52
13:F:135:ILE:HG22	13:F:144:LEU:HD13	1.91	0.52
15:H:198:MET:HE1	15:H:272:ILE:HG23	1.86	0.52
15:H:207:THR:HG23	15:H:208:TYR:CD2	2.44	0.52
16:I:281:ILE:HG21	16:I:284:ILE:HD11	0.57	0.52
18:K:289:ASP:O	18:K:293:GLN:HG3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:360:GLN:O	21:N:364:LYS:HG3	2.10	0.52
22:O:240:GLU:O	22:O:241:THR:OG1	2.20	0.52
24:Q:11:ALA:O	24:Q:14:LEU:HB2	2.09	0.52
24:Q:31:LEU:CG	24:Q:50:ARG:HH21	2.00	0.52
24:Q:75:ARG:HH21	24:Q:113:ASP:HA	1.74	0.52
26:S:256:LYS:HD2	26:S:259:TYR:HH	1.72	0.52
31:X:33:ILE:CD1	31:X:48:PHE:CZ	2.93	0.52
31:X:48:PHE:C	31:X:48:PHE:HD1	2.12	0.52
31:X:83:SER:HB3	31:X:86:ILE:HD11	1.91	0.52
33:Z:889:VAL:HB	33:Z:901:PHE:CZ	2.44	0.52
33:Z:916:LEU:HD23	33:Z:922:PRO:CA	2.39	0.52
33:Z:973:TYR:HD2	33:Z:974:THR:HG22	1.75	0.52
7:7:13:ILE:HG22	7:7:169:ILE:HG13	1.90	0.52
18:K:75:LEU:O	18:K:79:LEU:HG	2.10	0.52
19:L:173:PHE:HD1	19:L:175:GLN:O	1.93	0.52
20:M:50:ARG:CB	30:W:73:LEU:HB3	2.39	0.52
22:O:11:LEU:CD2	22:O:15:ARG:HH12	2.13	0.52
22:O:137:TYR:HB3	22:O:149:LEU:CD1	2.37	0.52
22:O:369:ARG:HE	28:U:226:LEU:CD2	2.22	0.52
23:P:234:TYR:CA	23:P:267:PHE:CZ	2.80	0.52
25:R:94:PHE:CG	25:R:95:ASP:N	2.77	0.52
25:R:137:LEU:HD23	25:R:153:THR:HB	1.90	0.52
28:U:66:TRP:CZ3	28:U:68:LEU:HB2	2.40	0.52
29:V:182:LYS:CB	29:V:185:ILE:HG22	2.40	0.52
30:W:25:ARG:NE	30:W:144:PHE:CE2	2.77	0.52
2:2:220:ILE:CD1	3:3:39:HIS:ND1	2.73	0.52
5:5:125:ASP:OD1	5:5:126:ILE:N	2.42	0.52
8:A:46:ARG:HG3	8:A:152:PRO:HB2	1.91	0.52
16:I:252:LEU:HD22	16:I:263:LEU:CD2	2.39	0.52
20:M:302:GLN:OE1	20:M:302:GLN:HA	2.09	0.52
21:N:421:ASP:N	21:N:424:LYS:NZ	2.52	0.52
22:O:166:ARG:NH2	22:O:169:ASN:CB	2.72	0.52
24:Q:11:ALA:HA	24:Q:14:LEU:HD12	1.91	0.52
24:Q:265:MET:CE	24:Q:281:ILE:HD13	2.40	0.52
26:S:205:ASN:O	26:S:208:ILE:CG2	2.39	0.52
26:S:315:LYS:HA	26:S:345:TYR:OH	2.08	0.52
27:T:82:PHE:HE1	27:T:109:TYR:CE2	1.95	0.52
31:X:22:ARG:HE	31:X:96:ARG:HH12	1.58	0.52
33:Z:335:LEU:HG	33:Z:335:LEU:O	2.09	0.52
2:2:30:ASN:O	2:2:31:CYS:HB2	2.09	0.52
9:B:70:ASP:O	9:B:214:ILE:HG21	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:144:TYR:CB	10:C:147:GLN:HE21	2.23	0.52
11:D:218:ASP:O	11:D:219:SER:HB2	2.09	0.52
17:J:219:VAL:CA	18:K:281:ARG:HD2	2.33	0.52
18:K:189:GLU:HG3	18:K:230:THR:HG22	1.91	0.52
19:L:407:ARG:HD3	19:L:409:HIS:CD2	2.45	0.52
22:O:87:LYS:HD2	22:O:135:ARG:CD	2.40	0.52
24:Q:311:LEU:CD1	24:Q:366:ILE:CG1	2.86	0.52
25:R:259:PHE:CD1	25:R:259:PHE:C	2.82	0.52
25:R:354:ALA:HB1	25:R:361:VAL:HA	1.91	0.52
29:V:57:PHE:CD2	29:V:63:VAL:HG22	2.44	0.52
1:1:85:LEU:HD12	1:1:89:ASN:HD22	1.75	0.52
1:1:120:HIS:NE2	7:7:49:ILE:HG21	2.25	0.52
2:2:70:THR:OG1	2:2:72:ARG:HG3	2.10	0.52
9:B:45:ILE:HD12	9:B:74:VAL:HG13	1.92	0.52
10:C:18:ARG:HH11	10:C:23:GLU:CD	2.08	0.52
15:H:172:MET:HE2	16:I:129:TYR:CB	2.25	0.52
18:K:349:ARG:CZ	18:K:376:ASP:HA	2.40	0.52
21:N:21:LYS:CG	21:N:55:PHE:CE2	2.93	0.52
21:N:277:LEU:HB3	21:N:287:LEU:CD2	2.36	0.52
22:O:52:ALA:HB3	22:O:85:SER:HB3	1.90	0.52
22:O:140:LYS:CD	22:O:141:ASN:HD21	2.23	0.52
24:Q:265:MET:HE2	24:Q:281:ILE:HD13	1.91	0.52
25:R:60:ALA:HB3	25:R:102:LEU:HD22	1.91	0.52
25:R:252:TYR:CE1	25:R:321:TYR:HB3	2.45	0.52
28:U:100:ARG:O	28:U:152:LYS:CD	2.55	0.52
28:U:123:VAL:HG12	28:U:125:VAL:HG13	1.92	0.52
30:W:59:PRO:CB	30:W:93:ILE:HG13	2.38	0.52
30:W:182:TYR:O	30:W:183:GLU:HB2	2.06	0.52
33:Z:128:GLU:OE2	33:Z:132:HIS:HB2	2.10	0.52
33:Z:187:SER:O	33:Z:188:ALA:HB3	2.10	0.52
5:5:158:LYS:HE3	5:5:196:LEU:HD11	1.92	0.52
6:6:-8:PHE:CE1	7:7:124:LEU:HD13	2.44	0.52
7:7:185:ARG:HG2	7:7:205:GLN:HG3	1.92	0.52
13:F:166:GLN:HA	20:M:381:ARG:HH22	1.70	0.52
14:G:60:PRO:HB3	14:G:212:GLU:OE2	2.10	0.52
15:H:66:LYS:HE2	16:I:99:ILE:HB	1.92	0.52
15:H:249:TYR:CZ	15:H:376:GLU:CA	2.91	0.52
18:K:95:VAL:CG1	18:K:139:LEU:HB2	2.34	0.52
18:K:254:VAL:O	18:K:258:PHE:HD1	1.92	0.52
18:K:347:ARG:NH1	24:Q:205:ALA:HB1	2.23	0.52
18:K:352:ILE:HG21	18:K:383:ILE:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:407:ARG:HD3	19:L:409:HIS:NE2	2.25	0.52
21:N:645:THR:HG21	21:N:660:LEU:HD11	1.91	0.52
22:O:260:VAL:HG11	22:O:262:ASP:OD2	2.10	0.52
22:O:335:GLY:O	22:O:336:LEU:CB	2.58	0.52
23:P:268:LEU:HD12	23:P:280:LEU:HD23	1.91	0.52
23:P:273:TYR:HE2	23:P:388:ILE:HG13	1.75	0.52
23:P:352:VAL:HB	23:P:356:TYR:CE2	2.45	0.52
24:Q:266:LEU:HD23	24:Q:281:ILE:CD1	2.40	0.52
25:R:137:LEU:HD12	25:R:141:TYR:CE2	2.35	0.52
26:S:237:ILE:CG2	26:S:253:PHE:CE1	2.92	0.52
27:T:86:LYS:HB3	27:T:87:PRO:HD3	1.90	0.52
28:U:132:LEU:HD21	28:U:134:THR:O	2.10	0.52
33:Z:391:ASN:OD1	33:Z:394:TYR:CD2	2.62	0.52
33:Z:424:SER:OG	33:Z:457:ILE:HG21	2.10	0.52
33:Z:506:LEU:HD23	33:Z:506:LEU:C	2.30	0.52
33:Z:955:VAL:HG22	33:Z:956:LEU:HG	1.90	0.52
1:1:-6:GLY:CA	2:2:116:HIS:CG	2.91	0.52
1:1:122:LEU:CG	7:7:28:PHE:CE1	2.93	0.52
5:5:37:ILE:HG22	5:5:38:ASN:HB2	1.90	0.52
7:7:54:HIS:HD2	7:7:95:ARG:HH22	1.56	0.52
13:F:65:LYS:CD	13:F:222:PHE:HD2	2.22	0.52
15:H:168:ILE:HD13	15:H:174:VAL:CG1	2.40	0.52
16:I:132:ILE:CG1	16:I:156:ILE:HD12	2.29	0.52
18:K:262:ARG:NH1	18:K:311:ASN:OD1	2.43	0.52
19:L:360:ILE:HG21	19:L:391:ILE:HD12	1.83	0.52
20:M:50:ARG:HB3	30:W:73:LEU:HB3	1.90	0.52
20:M:196:ALA:HB2	20:M:345:ARG:NE	2.24	0.52
21:N:277:LEU:HD23	21:N:280:GLN:NE2	2.25	0.52
21:N:508:THR:HG21	21:N:513:ILE:HG22	1.90	0.52
27:T:224:ARG:HB3	27:T:242:LYS:CB	2.40	0.52
33:Z:147:GLU:HA	33:Z:210:TYR:HE1	1.70	0.52
33:Z:620:LEU:HD23	33:Z:743:ILE:CG1	2.40	0.52
2:2:87:LEU:HD21	2:2:94:ILE:HD11	1.92	0.51
6:6:61:ASN:O	6:6:65:TRP:HD1	1.92	0.51
11:D:203:VAL:O	11:D:204:GLN:CB	2.58	0.51
12:E:143:LEU:HD21	12:E:157:HIS:ND1	2.25	0.51
12:E:157:HIS:HD2	12:E:170:LYS:NZ	2.07	0.51
13:F:51:ARG:NH2	13:F:204:GLU:OE1	2.33	0.51
15:H:402:ILE:HD13	15:H:443:PHE:HE2	1.75	0.51
18:K:303:MET:HE2	18:K:314:VAL:HG11	1.92	0.51
23:P:135:GLU:CG	23:P:138:ARG:HH22	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:110:ILE:HG22	25:R:114:ASN:ND2	2.25	0.51
27:T:197:TYR:HE2	27:T:200:LEU:N	2.04	0.51
28:U:15:LEU:HD12	28:U:125:VAL:HG12	1.92	0.51
28:U:35:GLY:C	28:U:93:TYR:CB	2.77	0.51
28:U:273:LEU:O	28:U:277:TYR:CG	2.62	0.51
30:W:25:ARG:HD2	30:W:144:PHE:CZ	2.43	0.51
8:A:174:LYS:HD3	8:A:214:LEU:HA	1.91	0.51
9:B:4:ARG:NH2	11:D:5:ASP:H	2.06	0.51
12:E:165:TYR:CB	12:E:167:TYR:HE1	2.09	0.51
14:G:7:TYR:CE1	14:G:13:VAL:CG2	2.89	0.51
18:K:89:ILE:HG22	18:K:90:GLN:HE21	1.75	0.51
18:K:127:ASP:OD1	18:K:128:ARG:N	2.42	0.51
18:K:157:SER:C	19:L:256:ILE:HG22	2.31	0.51
20:M:163:PHE:CD1	20:M:261:LYS:CE	2.90	0.51
20:M:290:ARG:NE	20:M:292:ASP:OD2	2.38	0.51
22:O:69:PHE:HZ	22:O:77:SER:HB3	1.75	0.51
23:P:147:LYS:HD3	23:P:155:GLU:HG3	1.91	0.51
24:Q:65:TYR:CD2	24:Q:74:LEU:HD13	2.44	0.51
24:Q:74:LEU:HD21	24:Q:104:PHE:HE1	1.75	0.51
29:V:108:TYR:O	29:V:109:HIS:CD2	2.63	0.51
29:V:168:LEU:CD1	29:V:182:LYS:HD2	2.41	0.51
30:W:142:ILE:CG2	30:W:185:ILE:HD12	2.40	0.51
33:Z:220:ALA:O	33:Z:224:LEU:HG	2.10	0.51
33:Z:437:ASP:O	33:Z:441:TYR:CD2	2.64	0.51
33:Z:963:ALA:O	33:Z:964:GLU:CG	2.58	0.51
2:2:72:ARG:CZ	2:2:75:ARG:HH12	2.23	0.51
6:6:120:GLY:O	6:6:121:SER:HB2	2.10	0.51
11:D:34:VAL:HG21	11:D:199:LEU:HD21	1.92	0.51
14:G:98:PHE:CZ	14:G:107:PRO:HD3	2.45	0.51
17:J:169:LYS:HE2	17:J:206:THR:HG22	1.93	0.51
21:N:433:THR:HG22	21:N:439:VAL:HG11	1.93	0.51
21:N:490:LEU:HD21	21:N:526:TYR:CG	2.46	0.51
21:N:555:ILE:HB	21:N:571:LEU:HD21	1.92	0.51
22:O:41:LEU:CD1	22:O:47:LYS:HG2	2.41	0.51
22:O:217:LEU:HD21	22:O:238:ILE:HD13	1.92	0.51
22:O:269:LEU:HD23	22:O:269:LEU:C	2.30	0.51
22:O:373:TRP:CH2	28:U:229:LEU:O	2.64	0.51
23:P:234:TYR:CD2	23:P:267:PHE:CE2	2.99	0.51
24:Q:74:LEU:HD21	24:Q:104:PHE:CE1	2.45	0.51
24:Q:351:ILE:HD12	24:Q:386:PHE:CD1	2.45	0.51
24:Q:351:ILE:CG2	24:Q:362:ILE:HD13	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:168:LEU:HD13	26:S:184:TRP:CZ2	2.45	0.51
29:V:40:HIS:CE1	29:V:70:ALA:HB2	2.44	0.51
29:V:79:SER:CA	29:V:121:VAL:HG13	2.39	0.51
30:W:71:LYS:CA	30:W:74:ALA:HB3	2.34	0.51
31:X:46:TRP:HE1	31:X:132:SER:HA	1.75	0.51
31:X:91:PHE:O	31:X:92:SER:HB2	2.11	0.51
33:Z:64:TYR:OH	33:Z:115:LEU:CB	2.57	0.51
3:3:44:ILE:HG22	3:3:51:VAL:HG22	1.92	0.51
4:4:27:LEU:HD12	5:5:137:TYR:CE1	2.45	0.51
4:4:28:LYS:HE2	5:5:127:PHE:CE2	2.44	0.51
13:F:65:LYS:HD2	13:F:222:PHE:HD2	1.73	0.51
15:H:198:MET:CE	15:H:272:ILE:CG2	2.72	0.51
17:J:219:VAL:CB	18:K:281:ARG:NE	2.63	0.51
17:J:220:GLN:HE22	18:K:293:GLN:NE2	2.07	0.51
17:J:339:ARG:HH12	25:R:168:ILE:HG13	1.76	0.51
18:K:353:PHE:HD1	18:K:387:MET:HG3	1.74	0.51
19:L:254:LYS:N	20:M:256:ILE:HG13	2.23	0.51
21:N:386:MET:CE	21:N:404:SER:HA	2.40	0.51
21:N:669:GLU:O	21:N:670:LYS:CB	2.54	0.51
22:O:133:ILE:HG13	22:O:137:TYR:CE2	2.42	0.51
26:S:232:MET:HA	26:S:272:TYR:OH	2.11	0.51
26:S:465:ILE:HG12	27:T:266:TYR:CD2	2.46	0.51
29:V:261:LEU:HD11	29:V:283:THR:HG22	1.83	0.51
31:X:10:PHE:CE2	31:X:11:ARG:O	2.64	0.51
33:Z:185:ASP:CG	33:Z:186:GLY:N	2.63	0.51
1:1:120:HIS:CB	7:7:28:PHE:CE1	2.93	0.51
3:3:155:PHE:CE1	3:3:189:ARG:CD	2.89	0.51
5:5:74:ILE:HG12	5:5:75:SER:O	2.10	0.51
7:7:124:LEU:HD12	7:7:124:LEU:C	2.31	0.51
9:B:139:HIS:ND1	9:B:145:PHE:CE1	2.77	0.51
11:D:138:PHE:HE1	11:D:215:VAL:CG1	2.09	0.51
13:F:198:SER:HA	13:F:206:LEU:CD1	2.36	0.51
14:G:106:ILE:HG23	14:G:106:ILE:O	2.10	0.51
17:J:133:LEU:HD23	17:J:137:MET:HE3	1.91	0.51
23:P:234:TYR:CD2	23:P:267:PHE:CG	2.98	0.51
26:S:277:SER:OG	26:S:293:ILE:HG13	2.11	0.51
26:S:288:THR:CG2	26:S:292:TYR:CE2	2.93	0.51
29:V:69:PHE:C	29:V:108:TYR:OH	2.49	0.51
31:X:75:TRP:CE3	31:X:125:MET:HB3	2.45	0.51
33:Z:124:MET:HE1	33:Z:153:TYR:HA	1.91	0.51
33:Z:254:PRO:HB3	33:Z:287:ARG:HH12	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:505:VAL:O	33:Z:509:LEU:HG	2.10	0.51
3:3:75:PRO:CB	3:3:111:PHE:HD2	2.23	0.51
5:5:32:LYS:HB2	6:6:123:GLU:OE2	2.10	0.51
5:5:66:HIS:HE1	5:5:70:GLU:CD	2.14	0.51
5:5:159:ARG:HH12	5:5:200:VAL:HA	1.76	0.51
8:A:135:ARG:NH2	14:G:124:LEU:HD21	2.25	0.51
9:B:178:ARG:CD	9:B:191:ILE:HG23	2.40	0.51
11:D:159:TRP:CH2	12:E:59:LEU:HD13	2.45	0.51
15:H:146:VAL:N	15:H:157:VAL:HG21	2.24	0.51
15:H:338:THR:HG21	20:M:281:ASP:CG	2.31	0.51
16:I:358:LYS:HZ1	16:I:387:LEU:N	2.02	0.51
19:L:161:ARG:HH21	19:L:261:ARG:HH12	0.52	0.51
21:N:542:SER:HB3	21:N:547:LEU:CD1	2.41	0.51
21:N:641:LEU:O	21:N:645:THR:HG23	2.10	0.51
22:O:254:LEU:O	22:O:258:LEU:HG	2.11	0.51
23:P:308:LEU:HD22	23:P:369:LEU:HD23	1.86	0.51
24:Q:250:THR:CG2	24:Q:251:THR:N	2.62	0.51
24:Q:426:LEU:HD23	24:Q:426:LEU:C	2.31	0.51
26:S:141:LEU:O	26:S:145:PHE:CE2	2.64	0.51
26:S:425:ARG:NH1	27:T:155:GLY:CA	2.66	0.51
31:X:85:ARG:HE	31:X:115:SER:CB	2.23	0.51
33:Z:403:ASN:OD1	33:Z:405:ASN:HB2	2.11	0.51
10:C:161:LYS:HD2	10:C:180:TYR:OH	2.10	0.51
13:F:12:THR:HG22	13:F:13:PHE:O	2.10	0.51
14:G:90:ARG:HH12	14:G:122:HIS:CE1	2.28	0.51
17:J:234:PHE:HE1	17:J:279:LEU:HD21	1.69	0.51
17:J:286:LYS:NZ	17:J:289:LYS:HG2	2.26	0.51
21:N:395:ALA:HB3	21:N:401:LYS:HE3	1.93	0.51
21:N:771:PHE:CG	21:N:772:GLN:N	2.78	0.51
22:O:30:GLU:OE1	22:O:40:GLN:CD	2.48	0.51
22:O:138:LEU:CD2	22:O:146:ALA:CB	2.89	0.51
22:O:173:SER:HB3	22:O:195:TYR:CE1	2.46	0.51
22:O:277:ILE:HB	22:O:278:PRO:C	2.31	0.51
22:O:387:ARG:HH22	27:T:258:ASN:HB3	1.72	0.51
24:Q:9:GLU:CD	24:Q:12:ARG:HH21	2.13	0.51
24:Q:85:MET:HE2	24:Q:93:THR:CG2	2.40	0.51
25:R:259:PHE:HD2	25:R:329:PHE:HE1	1.57	0.51
25:R:381:ILE:HG22	25:R:388:VAL:HG22	1.92	0.51
27:T:111:LEU:HD21	27:T:177:PHE:HB2	1.91	0.51
28:U:68:LEU:HD13	28:U:110:PHE:CZ	2.46	0.51
31:X:73:THR:CG2	31:X:91:PHE:CE1	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:970:TYR:CD1	33:Z:993:GLU:HB2	2.45	0.51
5:5:77:ALA:HA	5:5:121:ARG:HH21	1.75	0.51
9:B:38:LYS:CE	9:B:145:PHE:O	2.59	0.51
9:B:75:TYR:HB3	9:B:134:LEU:CD2	2.41	0.51
15:H:342:GLY:O	15:H:343:PHE:HB2	2.09	0.51
17:J:329:ARG:CB	17:J:343:LEU:HD13	2.40	0.51
21:N:596:LEU:HD21	21:N:627:ILE:HG22	1.93	0.51
21:N:666:GLN:HG3	21:N:873:ARG:CZ	2.40	0.51
26:S:439:GLU:OE2	27:T:199:PHE:HB2	2.11	0.51
27:T:163:LEU:HD13	27:T:163:LEU:C	2.31	0.51
28:U:154:PHE:CD1	28:U:154:PHE:N	2.78	0.51
30:W:59:PRO:CG	30:W:93:ILE:CG1	2.58	0.51
31:X:46:TRP:O	31:X:68:LEU:CB	2.59	0.51
5:5:54:PHE:HE1	6:6:86:HIS:HD1	1.57	0.51
10:C:71:ASP:OD1	10:C:72:LYS:HG3	2.11	0.51
12:E:46:VAL:HG11	12:E:145:ALA:HB1	1.93	0.51
16:I:148:LEU:HD11	17:J:95:ILE:HG21	1.92	0.51
16:I:235:ALA:O	16:I:239:GLN:HG2	2.10	0.51
18:K:60:LEU:O	18:K:64:GLN:HG3	2.11	0.51
18:K:283:ASP:O	18:K:284:ALA:HB3	2.11	0.51
19:L:245:PHE:CZ	19:L:281:ASP:OD2	2.64	0.51
21:N:542:SER:CB	21:N:547:LEU:HD13	2.40	0.51
21:N:579:SER:CA	21:N:584:ARG:NH2	2.69	0.51
23:P:425:HIS:CE1	28:U:228:LYS:HB2	2.46	0.51
26:S:465:ILE:HG12	27:T:266:TYR:HD2	1.76	0.51
28:U:98:LYS:NZ	28:U:124:ASP:HB2	2.25	0.51
31:X:39:GLU:HA	31:X:133:SER:OG	2.11	0.51
33:Z:924:LYS:CG	33:Z:959:HIS:ND1	2.74	0.51
4:4:72:TYR:HB2	10:C:143:ARG:NH2	2.25	0.51
12:E:157:HIS:ND1	12:E:172:ILE:HG21	2.15	0.51
14:G:114:ARG:O	14:G:118:TYR:HD2	1.94	0.51
16:I:113:ILE:CG2	16:I:114:ASP:N	2.73	0.51
16:I:222:TYR:OH	16:I:349:LEU:CB	2.59	0.51
16:I:361:ILE:CG2	16:I:392:ILE:CG2	2.79	0.51
17:J:219:VAL:HG22	18:K:284:ALA:CB	2.17	0.51
20:M:228:LYS:HE2	20:M:326:ALA:CB	2.40	0.51
21:N:33:ASP:O	21:N:36:TRP:HD1	1.94	0.51
21:N:738:GLN:NE2	21:N:742:TRP:CZ3	2.80	0.51
22:O:103:LYS:O	22:O:129:ILE:HG12	2.07	0.51
23:P:248:ASP:OD1	23:P:256:LYS:NZ	2.41	0.51
23:P:268:LEU:HD12	23:P:280:LEU:CD2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:311:LEU:HD11	24:Q:366:ILE:CD1	2.41	0.51
24:Q:326:MET:HE2	24:Q:332:ARG:CD	2.39	0.51
25:R:263:ARG:HD3	25:R:296:LEU:CD2	2.41	0.51
26:S:343:LEU:HB2	26:S:344:PRO:CD	2.41	0.51
33:Z:165:TYR:O	33:Z:169:VAL:HG23	2.11	0.51
5:5:65:LEU:HD13	12:E:97:VAL:HG21	1.92	0.50
7:7:-3:VAL:HG12	7:7:49:ILE:HB	1.92	0.50
10:C:13:PHE:CE1	11:D:127:ARG:HD2	2.46	0.50
18:K:316:MET:HG3	18:K:334:LEU:HD21	1.92	0.50
19:L:197:ILE:HG23	19:L:322:LYS:HD2	1.92	0.50
19:L:228:LYS:NZ	19:L:326:ALA:HB1	2.27	0.50
21:N:273:LEU:O	21:N:277:LEU:HG	2.11	0.50
21:N:330:THR:O	21:N:334:VAL:HG23	2.10	0.50
22:O:70:TYR:OH	22:O:113:LYS:HE3	2.11	0.50
22:O:222:LEU:CD2	22:O:270:ILE:CD1	2.90	0.50
22:O:379:LYS:HE2	22:O:383:LYS:NZ	2.26	0.50
23:P:289:ASN:O	23:P:290:LEU:HB2	2.10	0.50
23:P:353:ILE:HG22	23:P:402:PHE:CZ	2.46	0.50
24:Q:294:ARG:HB2	24:Q:324:GLU:OE1	2.11	0.50
24:Q:429:LYS:HG2	28:U:292:ILE:HG22	1.92	0.50
27:T:114:LEU:HD13	27:T:148:LEU:HD23	1.92	0.50
28:U:127:GLN:HG2	29:V:212:MET:HB3	1.92	0.50
30:W:41:ARG:CZ	30:W:67:ALA:O	2.60	0.50
30:W:159:ALA:HA	30:W:162:ASN:HD21	1.76	0.50
1:1:124:TYR:HD1	1:1:142:PHE:CZ	2.29	0.50
4:4:51:ASP:HB3	4:4:97:TYR:HD1	1.76	0.50
5:5:3:THR:HG23	5:5:16:VAL:HG12	1.92	0.50
8:A:52:VAL:HG23	8:A:202:VAL:CG1	2.41	0.50
13:F:12:THR:HG21	14:G:9:LEU:HD23	1.93	0.50
16:I:300:ARG:HG2	16:I:304:ARG:NH1	2.26	0.50
17:J:342:ASN:HB2	17:J:345:LYS:HD2	1.94	0.50
18:K:158:ILE:CG2	19:L:256:ILE:CG2	2.82	0.50
18:K:300:LEU:HA	18:K:333:ARG:HH12	1.76	0.50
21:N:91:ILE:O	21:N:94:LYS:HE2	2.11	0.50
21:N:214:LEU:HD12	21:N:217:MET:HE2	1.90	0.50
21:N:253:LEU:HD13	21:N:894:ARG:NE	2.25	0.50
22:O:226:LYS:HB3	22:O:226:LYS:NZ	2.26	0.50
23:P:265:VAL:HG22	23:P:280:LEU:HD23	1.93	0.50
24:Q:390:LEU:HD23	25:R:345:TYR:HE1	1.76	0.50
25:R:416:LYS:NZ	26:S:294:ILE:HG21	2.26	0.50
27:T:194:GLU:OE2	27:T:239:SER:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:20:ASP:OD2	30:W:176:PRO:HB3	2.11	0.50
31:X:11:ARG:HG2	31:X:103:GLU:HA	1.93	0.50
31:X:80:SER:OG	31:X:83:SER:HB3	2.11	0.50
31:X:100:TRP:HZ2	31:X:110:PRO:HD3	1.76	0.50
33:Z:617:ILE:HD11	33:Z:747:ALA:HB2	1.93	0.50
3:3:84:SER:O	3:3:88:GLU:HG3	2.12	0.50
6:6:17:ASP:OD2	6:6:189:VAL:HA	2.11	0.50
7:7:129:TYR:CE2	7:7:134:LEU:HD22	2.45	0.50
8:A:40:ILE:CD1	8:A:84:ASN:HA	2.41	0.50
15:H:62:ARG:HA	16:I:133:LEU:HD11	1.94	0.50
17:J:115:LEU:CB	17:J:122:LEU:HD23	2.35	0.50
17:J:196:THR:HA	17:J:246:PHE:CZ	2.46	0.50
22:O:81:TYR:O	22:O:82:LEU:HB2	2.10	0.50
22:O:223:LEU:C	22:O:279:ILE:HG21	2.31	0.50
23:P:272:PRO:HG2	23:P:273:TYR:CD1	2.47	0.50
26:S:322:LEU:CD2	26:S:327:ILE:HG22	2.41	0.50
27:T:161:TRP:HE3	27:T:162:ASP:OD1	1.93	0.50
27:T:209:LEU:CD1	27:T:211:PHE:CE2	2.94	0.50
27:T:240:LYS:HA	27:T:245:TYR:CB	2.38	0.50
29:V:32:ILE:O	29:V:36:LYS:HG2	2.11	0.50
33:Z:232:LYS:HA	33:Z:235:GLN:HB3	1.93	0.50
33:Z:357:ILE:CD1	33:Z:914:LEU:HD13	2.22	0.50
1:1:138:CYS:HA	1:1:154:PHE:HZ	1.75	0.50
2:2:61:SER:OG	9:B:94:HIS:HB3	2.10	0.50
6:6:3:ILE:CD1	6:6:101:ILE:HD12	2.40	0.50
6:6:73:LYS:NZ	12:E:108:ASN:ND2	2.59	0.50
7:7:121:TYR:CE1	7:7:123:ASN:HB3	2.46	0.50
8:A:156:LYS:HB3	8:A:166:TYR:HE1	1.75	0.50
18:K:192:LEU:HD21	18:K:313:LYS:HG2	1.92	0.50
19:L:104:LEU:HD13	20:M:127:VAL:HG12	1.94	0.50
19:L:140:LEU:CD2	19:L:158:ILE:HG12	2.42	0.50
20:M:345:ARG:NH2	20:M:347:ILE:HG12	2.26	0.50
21:N:328:PHE:HE1	21:N:696:LYS:CB	2.24	0.50
22:O:15:ARG:HD2	22:O:43:GLU:OE2	2.11	0.50
22:O:138:LEU:CD2	22:O:146:ALA:HB1	2.41	0.50
22:O:258:LEU:HD13	22:O:291:ILE:HD11	1.94	0.50
23:P:127:GLU:OE2	23:P:130:ILE:HG22	2.12	0.50
23:P:184:MET:CB	23:P:223:LEU:HD22	2.39	0.50
27:T:32:ILE:HA	27:T:35:ILE:CG2	2.42	0.50
27:T:225:ASN:CB	27:T:241:GLU:HA	2.41	0.50
27:T:246:GLU:HG3	27:T:246:GLU:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:359:LYS:HZ3	33:Z:429:ASN:HD22	1.53	0.50
2:2:85:GLN:O	2:2:89:LYS:HG3	2.12	0.50
9:B:82:TYR:O	9:B:86:VAL:HG23	2.11	0.50
10:C:57:LEU:HG	10:C:58:GLU:O	2.12	0.50
14:G:217:TRP:HE1	14:G:228:LYS:HB2	1.76	0.50
15:H:168:ILE:HA	15:H:174:VAL:HG11	1.94	0.50
17:J:166:LEU:O	17:J:174:PHE:CE1	2.54	0.50
19:L:119:VAL:HG11	19:L:148:LEU:HD11	1.93	0.50
19:L:147:THR:OG1	19:L:159:LEU:HD11	2.11	0.50
21:N:220:CYS:HB3	21:N:225:LEU:HD11	1.93	0.50
25:R:181:TYR:HD2	25:R:183:ASP:HB2	1.75	0.50
25:R:259:PHE:HZ	25:R:332:GLU:OE1	1.95	0.50
30:W:38:GLN:HG2	30:W:69:PHE:HZ	1.76	0.50
33:Z:422:ILE:HD11	33:Z:436:LEU:HD23	1.94	0.50
33:Z:737:ALA:CA	33:Z:775:MET:CE	2.89	0.50
33:Z:888:LEU:HG	33:Z:901:PHE:HE1	1.71	0.50
4:4:27:LEU:HD12	5:5:137:TYR:CZ	2.46	0.50
12:E:208:MET:SD	12:E:212:LEU:HD13	2.52	0.50
16:I:176:SER:HB2	17:J:282:PHE:HE1	1.76	0.50
17:J:187:LEU:HD13	17:J:198:LEU:HD23	1.93	0.50
17:J:272:MET:HE3	17:J:290:ILE:CG2	2.41	0.50
17:J:374:ARG:NH1	17:J:378:THR:CG2	2.74	0.50
18:K:107:THR:OG1	18:K:121:ARG:NH1	2.44	0.50
20:M:257:GLY:CA	20:M:258:GLU:N	2.72	0.50
20:M:376:TRP:CE3	20:M:376:TRP:HA	2.47	0.50
21:N:21:LYS:HE2	21:N:55:PHE:CZ	2.40	0.50
21:N:321:LEU:HD22	21:N:328:PHE:CD1	2.47	0.50
22:O:233:LEU:HD22	22:O:236:HIS:ND1	2.25	0.50
22:O:306:ARG:CD	22:O:351:SER:CA	2.88	0.50
22:O:340:SER:CB	23:P:358:SER:HB2	2.38	0.50
23:P:134:VAL:CG2	23:P:138:ARG:NH1	2.68	0.50
24:Q:195:LYS:NZ	24:Q:229:ASP:HB3	2.27	0.50
24:Q:282:LEU:HD23	24:Q:288:LYS:HE3	1.93	0.50
25:R:301:TYR:HD2	25:R:357:PHE:O	1.95	0.50
25:R:308:LEU:HB3	25:R:334:ARG:NH2	2.18	0.50
25:R:404:VAL:HG21	28:U:274:MET:SD	2.51	0.50
27:T:248:GLU:O	27:T:248:GLU:HG2	2.11	0.50
31:X:23:LEU:O	31:X:24:CYS:CB	2.59	0.50
31:X:33:ILE:HD11	31:X:48:PHE:CE2	2.46	0.50
33:Z:854:LEU:HD11	33:Z:864:MET:SD	2.51	0.50
33:Z:985:LYS:HB2	33:Z:991:GLU:HG3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:63:ASN:ND2	10:C:96:GLN:HE22	2.09	0.50
3:3:85:SER:HA	3:3:88:GLU:OE1	2.10	0.50
5:5:6:PHE:CE1	5:5:13:ILE:CB	2.79	0.50
5:5:76:VAL:HG13	5:5:101:ILE:HG22	1.92	0.50
6:6:1:GLY:C	6:6:46:ASN:HD21	2.15	0.50
12:E:143:LEU:HG	12:E:172:ILE:CD1	2.40	0.50
13:F:43:HIS:NE2	13:F:219:ASP:OD1	2.27	0.50
15:H:167:ASP:CG	15:H:168:ILE:N	2.65	0.50
15:H:402:ILE:HD13	15:H:443:PHE:CE2	2.47	0.50
17:J:150:VAL:CG1	17:J:197:LEU:HD13	2.42	0.50
17:J:212:ARG:HH12	18:K:330:ARG:HD3	1.77	0.50
17:J:224:GLY:O	17:J:228:ARG:N	2.43	0.50
18:K:158:ILE:HG22	19:L:256:ILE:HG23	1.91	0.50
20:M:175:LYS:NZ	20:M:240:ASN:HB3	2.27	0.50
22:O:153:LEU:HD11	22:O:174:THR:HG21	1.75	0.50
23:P:311:TRP:HB3	23:P:312:PRO:HD3	1.93	0.50
25:R:383:ARG:HD3	26:S:406:ASP:OD1	2.10	0.50
29:V:113:GLY:HA3	29:V:142:ASP:OD2	2.11	0.50
3:3:44:ILE:HG12	3:3:98:PRO:HA	1.94	0.50
4:4:18:LYS:HB3	4:4:179:ILE:HG13	1.93	0.50
9:B:117:ILE:HG22	9:B:130:PHE:CE2	2.46	0.50
10:C:98:TYR:CD1	10:C:106:ILE:N	2.80	0.50
10:C:208:TYR:CB	10:C:235:ILE:CG2	2.89	0.50
13:F:45:VAL:HG13	13:F:189:LEU:HD23	1.93	0.50
13:F:179:PHE:HD1	13:F:188:GLU:HG3	1.76	0.50
13:F:215:ILE:CD1	13:F:220:THR:HG21	2.41	0.50
14:G:86:HIS:HD2	14:G:131:PHE:CZ	2.29	0.50
14:G:140:VAL:CG1	14:G:220:LEU:HG	2.34	0.50
15:H:295:PHE:HE1	15:H:336:LEU:HD12	1.76	0.50
16:I:335:ASP:HB2	16:I:338:LEU:HG	1.94	0.50
17:J:143:PRO:O	17:J:204:HIS:CG	2.64	0.50
17:J:256:THR:O	17:J:257:ARG:HB2	2.12	0.50
18:K:244:HIS:ND1	18:K:250:GLY:HA3	2.24	0.50
20:M:309:LEU:HD22	20:M:342:ARG:HG2	1.93	0.50
21:N:123:PHE:HZ	21:N:129:ILE:HB	1.77	0.50
24:Q:178:HIS:HB2	24:Q:201:ALA:HB2	1.94	0.50
24:Q:331:THR:HG21	24:Q:335:PHE:HE2	1.68	0.50
25:R:83:GLU:HG3	25:R:83:GLU:O	2.12	0.50
33:Z:318:LYS:HZ1	33:Z:459:ALA:HB1	1.77	0.50
4:4:27:LEU:CD1	5:5:137:TYR:CE1	2.95	0.50
5:5:104:TYR:C	5:5:104:TYR:CD1	2.86	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:62:LEU:HD11	7:7:87:TYR:CE2	2.47	0.50
7:7:193:ASP:OD2	7:7:195:ASN:HB2	2.12	0.50
8:A:162:TYR:CZ	18:K:428:LYS:CB	2.86	0.50
10:C:98:TYR:CE1	10:C:104:GLU:O	2.65	0.50
11:D:157:SER:HB3	11:D:159:TRP:NE1	2.26	0.50
15:H:145:TYR:HB2	15:H:162:ARG:CZ	2.42	0.50
15:H:284:VAL:HB	20:M:254:MET:HB3	1.92	0.50
16:I:244:PHE:CE1	16:I:246:ARG:NE	2.78	0.50
18:K:211:LEU:HD23	18:K:338:ILE:HB	1.94	0.50
18:K:262:ARG:NH1	18:K:311:ASN:CG	2.66	0.50
20:M:175:LYS:HZ3	20:M:240:ASN:HB3	1.77	0.50
20:M:379:LEU:HB3	20:M:415:PHE:CE1	2.46	0.50
23:P:320:PRO:O	23:P:321:VAL:HB	2.12	0.50
28:U:127:GLN:HB3	29:V:212:MET:HB2	1.94	0.50
30:W:101:ARG:HH12	30:W:104:LYS:CG	2.04	0.50
33:Z:124:MET:SD	33:Z:153:TYR:HA	2.52	0.50
1:1:176:VAL:HG13	1:1:183:VAL:HG13	1.79	0.49
6:6:114:TYR:CE2	6:6:124:ARG:HB2	2.46	0.49
7:7:13:ILE:HG12	7:7:191:ILE:HG12	1.94	0.49
7:7:95:ARG:HH12	7:7:102:LEU:HD13	1.73	0.49
12:E:103:TYR:O	12:E:104:ASP:HB2	2.12	0.49
13:F:166:GLN:C	20:M:381:ARG:HH21	2.15	0.49
16:I:361:ILE:O	16:I:365:HIS:CD2	2.65	0.49
18:K:179:MET:O	18:K:183:GLU:HG3	2.12	0.49
20:M:203:ARG:CB	20:M:206:LYS:HD2	2.37	0.49
21:N:486:GLY:HA2	21:N:524:ILE:CG2	2.42	0.49
21:N:542:SER:CB	21:N:547:LEU:CD1	2.90	0.49
21:N:671:LEU:HD22	21:N:782:PHE:HE1	1.76	0.49
22:O:69:PHE:CE2	22:O:78:VAL:CG2	2.94	0.49
22:O:293:LEU:HG	22:O:297:ILE:CD1	2.42	0.49
22:O:374:ASN:HA	28:U:200:LEU:HD13	1.93	0.49
24:Q:308:ASN:O	24:Q:309:ARG:HB2	2.12	0.49
25:R:301:TYR:HE2	25:R:359:VAL:CG1	2.25	0.49
25:R:334:ARG:O	25:R:338:TYR:CD2	2.65	0.49
27:T:28:PRO:CB	27:T:29:PRO:HD3	2.34	0.49
27:T:189:ILE:HG21	27:T:209:LEU:CD2	2.42	0.49
27:T:225:ASN:CB	27:T:241:GLU:HG2	2.41	0.49
28:U:20:ASP:O	28:U:24:ARG:HG3	2.11	0.49
29:V:114:PHE:N	29:V:118:LEU:HD23	2.16	0.49
29:V:145:GLN:HB3	29:V:152:VAL:HG21	1.94	0.49
33:Z:228:GLU:OE2	33:Z:259:PRO:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:442:VAL:O	33:Z:448:LYS:HE3	2.12	0.49
33:Z:857:LEU:HD22	33:Z:908:ILE:HG21	1.94	0.49
33:Z:866:VAL:HA	33:Z:877:THR:HG22	1.93	0.49
2:2:104:ASP:OD1	2:2:106:THR:OG1	2.24	0.49
4:4:168:GLU:OE2	4:4:175:PHE:CD1	2.65	0.49
5:5:66:HIS:HE1	5:5:70:GLU:OE2	1.94	0.49
7:7:8:TYR:CE1	7:7:12:VAL:N	2.81	0.49
9:B:43:VAL:CG1	9:B:214:ILE:HB	2.42	0.49
9:B:140:ASP:OD1	9:B:140:ASP:O	2.30	0.49
12:E:123:PHE:O	12:E:123:PHE:CD1	2.65	0.49
13:F:49:LEU:HD11	13:F:210:ASN:HB3	1.93	0.49
13:F:65:LYS:HG3	13:F:222:PHE:CD2	2.47	0.49
17:J:219:VAL:CG1	18:K:281:ARG:CD	2.89	0.49
18:K:198:TYR:CB	18:K:205:PRO:HG3	2.42	0.49
18:K:352:ILE:HG22	18:K:383:ILE:HG22	1.94	0.49
18:K:353:PHE:CD1	18:K:387:MET:CG	2.94	0.49
19:L:403:ILE:CG2	20:M:203:ARG:HH11	2.25	0.49
22:O:283:HIS:NE2	22:O:287:LEU:CD1	2.56	0.49
22:O:306:ARG:CG	22:O:351:SER:CA	2.89	0.49
25:R:308:LEU:HD13	25:R:334:ARG:CD	2.41	0.49
25:R:312:TYR:CD2	32:Y:73:PHE:CD1	3.00	0.49
31:X:8:ILE:HG22	31:X:124:LYS:CE	2.42	0.49
31:X:16:GLU:CD	31:X:27:ILE:HG21	2.33	0.49
31:X:67:ILE:HG12	31:X:95:GLU:OE2	2.12	0.49
33:Z:142:ASP:OD2	33:Z:202:ARG:HB2	2.11	0.49
33:Z:415:MET:HE1	33:Z:447:VAL:HG23	1.94	0.49
1:1:142:PHE:HA	1:1:146:MET:CE	2.42	0.49
8:A:87:ILE:HG23	8:A:88:PRO:HD3	1.92	0.49
8:A:128:TYR:HD1	8:A:131:ARG:HD2	1.76	0.49
8:A:195:ASN:C	8:A:196:GLU:HG2	2.29	0.49
10:C:9:ARG:CZ	11:D:6:ARG:HH12	2.25	0.49
10:C:176:LEU:HD21	10:C:196:THR:HG21	1.94	0.49
13:F:166:GLN:CB	20:M:381:ARG:CZ	2.86	0.49
14:G:86:HIS:NE2	14:G:90:ARG:CZ	2.74	0.49
17:J:27:ILE:HA	18:K:51:LEU:HD22	1.87	0.49
17:J:183:LYS:C	17:J:276:LEU:HD13	2.32	0.49
21:N:137:PHE:CE2	21:N:165:ILE:HG13	2.43	0.49
21:N:782:PHE:HD1	21:N:875:LEU:CD2	2.20	0.49
22:O:157:LEU:HD22	22:O:171:PHE:CG	2.47	0.49
22:O:179:PHE:CE2	22:O:187:SER:HB3	2.47	0.49
24:Q:162:LEU:CD1	24:Q:178:HIS:CD2	2.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:187:ILE:HG23	26:S:188:TYR:N	2.27	0.49
31:X:66:LEU:HD12	31:X:97:TYR:CB	2.42	0.49
33:Z:531:ALA:HA	33:Z:573:LEU:HG	1.93	0.49
33:Z:985:LYS:HB2	33:Z:991:GLU:CD	2.33	0.49
1:1:178:LEU:HD23	1:1:183:VAL:HG13	1.94	0.49
2:2:83:LEU:HD23	2:2:113:ILE:HG12	1.93	0.49
3:3:146:GLU:O	3:3:149:LEU:HD11	2.12	0.49
6:6:147:PHE:CE2	6:6:163:LEU:HA	2.48	0.49
8:A:74:CYS:HG	8:A:233:PHE:HD2	1.58	0.49
11:D:34:VAL:HG22	11:D:163:THR:OG1	2.12	0.49
14:G:206:ASN:HD21	14:G:209:LYS:HB2	1.76	0.49
17:J:193:THR:OG1	17:J:316:PHE:CE1	2.51	0.49
18:K:392:LEU:CG	18:K:396:ARG:HH12	2.18	0.49
20:M:43:ILE:HD13	30:W:26:PHE:HE2	1.77	0.49
20:M:289:LYS:HZ1	20:M:334:ASP:CB	2.21	0.49
21:N:14:ARG:NH2	21:N:42:GLU:OE1	2.42	0.49
21:N:43:LEU:HD11	21:N:69:TYR:CZ	2.47	0.49
21:N:208:ARG:HG2	21:N:232:LEU:HD13	1.94	0.49
21:N:253:LEU:HD13	21:N:894:ARG:HE	1.78	0.49
22:O:196:LEU:HD21	22:O:242:ILE:HD11	1.93	0.49
23:P:101:MET:CE	23:P:139:VAL:HG22	2.43	0.49
23:P:394:ASN:OD1	23:P:396:PRO:HD2	2.13	0.49
24:Q:291:TYR:CZ	24:Q:293:SER:CB	2.95	0.49
25:R:320:LYS:HE3	25:R:324:ARG:CZ	2.42	0.49
26:S:234:ILE:HG22	26:S:257:LEU:HD13	1.94	0.49
27:T:143:SER:O	27:T:146:ILE:HG22	2.12	0.49
28:U:276:ILE:HB	29:V:291:ASN:HD22	1.78	0.49
29:V:108:TYR:HA	29:V:139:VAL:O	2.12	0.49
31:X:73:THR:HG21	31:X:91:PHE:HE1	1.76	0.49
33:Z:133:ASP:CB	33:Z:137:TYR:CG	2.94	0.49
1:1:83:LYS:CE	1:1:119:VAL:HG23	2.42	0.49
7:7:169:ILE:HG21	7:7:189:LEU:HD11	1.94	0.49
13:F:2:PHE:HB2	13:F:5:ASN:ND2	2.27	0.49
14:G:10:SER:O	14:G:11:ASN:OD1	2.30	0.49
15:H:96:PRO:O	15:H:97:LEU:HB3	2.11	0.49
15:H:271:PHE:CE1	15:H:273:ARG:CZ	2.95	0.49
16:I:244:PHE:CZ	16:I:280:PHE:CG	3.01	0.49
16:I:376:ASN:OD1	16:I:378:GLU:HB2	2.12	0.49
18:K:198:TYR:HB3	18:K:205:PRO:HG3	1.95	0.49
18:K:304:ASP:HB2	18:K:333:ARG:CZ	2.43	0.49
21:N:322:ASP:HB2	21:N:689:LYS:HZ2	1.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:326:SER:H	29:V:182:LYS:CG	2.24	0.49
22:O:222:LEU:CD2	22:O:270:ILE:HD12	2.42	0.49
24:Q:7:LYS:HB3	24:Q:30:LEU:HD22	1.94	0.49
25:R:271:ILE:O	25:R:272:ASP:HB2	2.11	0.49
27:T:89:TYR:HE1	27:T:102:LYS:HZ2	1.53	0.49
33:Z:265:LEU:HB3	33:Z:288:LEU:HD11	1.93	0.49
33:Z:424:SER:OG	33:Z:457:ILE:HD13	2.13	0.49
33:Z:471:LEU:CG	33:Z:497:PHE:CE2	2.71	0.49
3:3:80:GLN:HG2	9:B:102:GLY:CA	2.42	0.49
5:5:124:GLY:HA3	5:5:127:PHE:CZ	2.48	0.49
8:A:167:LYS:HE3	9:B:57:MET:HG2	1.94	0.49
13:F:13:PHE:CZ	14:G:129:ARG:HG2	2.48	0.49
15:H:168:ILE:CG1	15:H:186:PRO:HB2	2.40	0.49
16:I:361:ILE:HB	16:I:392:ILE:HD13	1.93	0.49
17:J:166:LEU:CB	17:J:174:PHE:CZ	2.95	0.49
17:J:324:ARG:HH22	17:J:352:GLY:H	1.60	0.49
19:L:286:ILE:HB	19:L:304:THR:HG21	1.94	0.49
21:N:710:GLY:O	21:N:711:ARG:HB2	2.11	0.49
22:O:76:LEU:HD21	22:O:121:ASP:OD1	2.08	0.49
25:R:59:MET:HE2	25:R:143:GLN:O	2.11	0.49
28:U:85:ALA:O	28:U:86:LYS:HG3	2.13	0.49
31:X:66:LEU:CD1	31:X:97:TYR:CG	2.95	0.49
33:Z:129:ASN:OD1	33:Z:156:HIS:NE2	2.46	0.49
2:2:35:HIS:HE1	2:2:53:GLU:HG2	1.78	0.49
3:3:129:VAL:HG22	3:3:138:PHE:CE1	2.48	0.49
3:3:133:ALA:O	3:3:137:LEU:HG	2.12	0.49
7:7:86:GLU:HG3	13:F:100:ASN:CB	2.28	0.49
10:C:68:LYS:HD2	10:C:229:ILE:CD1	2.42	0.49
13:F:169:LYS:O	13:F:173:GLU:HG3	2.13	0.49
21:N:238:ALA:HB1	21:N:242:PHE:HE2	1.78	0.49
22:O:69:PHE:CD2	22:O:78:VAL:HG23	2.45	0.49
23:P:310:ARG:O	23:P:313:ILE:HB	2.13	0.49
24:Q:99:THR:HG22	24:Q:103:LYS:CG	2.43	0.49
25:R:301:TYR:CD2	25:R:357:PHE:O	2.65	0.49
25:R:404:VAL:HG23	28:U:278:ILE:HD11	1.94	0.49
28:U:22:TYR:CE1	28:U:27:THR:HG22	2.48	0.49
31:X:121:ILE:O	31:X:125:MET:HG2	2.13	0.49
33:Z:184:SER:OG	33:Z:185:ASP:N	2.43	0.49
6:6:-6:PRO:CA	7:7:125:LEU:HD22	2.42	0.49
8:A:135:ARG:NE	14:G:124:LEU:CD2	2.74	0.49
10:C:149:TYR:OH	11:D:59:ILE:CG2	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:231:TYR:HD2	12:E:236:THR:OG1	1.90	0.49
13:F:38:LEU:CG	13:F:189:LEU:HD11	2.40	0.49
16:I:109:LEU:HD11	16:I:147:VAL:HG11	1.95	0.49
16:I:428:VAL:HG12	16:I:428:VAL:O	2.12	0.49
18:K:192:LEU:HD11	18:K:268:ILE:HD11	1.94	0.49
18:K:258:PHE:HE1	18:K:299:LEU:HD23	1.77	0.49
24:Q:54:GLN:NE2	24:Q:81:SER:HB2	2.27	0.49
27:T:132:HIS:CG	27:T:133:ILE:N	2.81	0.49
33:Z:567:ALA:HB1	33:Z:738:TYR:CE2	2.48	0.49
1:1:6:VAL:CG2	1:1:155:ILE:HD11	2.43	0.49
2:2:38:SER:HB3	2:2:39:PRO:HD2	1.95	0.49
2:2:72:ARG:HD3	2:2:73:GLU:O	2.13	0.49
4:4:37:LEU:HD13	4:4:79:VAL:HG11	1.95	0.49
5:5:147:ASP:O	5:5:148:LEU:HB2	2.13	0.49
7:7:33:ARG:NH2	7:7:46:SER:HA	2.28	0.49
9:B:3:ASP:OD1	9:B:3:ASP:O	2.31	0.49
9:B:174:PHE:CE2	9:B:198:GLU:OE1	2.66	0.49
11:D:216:LYS:HB3	11:D:217:PRO:CD	2.43	0.49
12:E:93:ARG:O	12:E:97:VAL:HG23	2.13	0.49
13:F:120:THR:HB	14:G:129:ARG:NH2	2.28	0.49
17:J:200:ARG:HG2	17:J:210:PHE:CZ	2.48	0.49
18:K:99:PHE:HZ	18:K:102:PRO:N	2.11	0.49
18:K:210:LEU:HG	18:K:212:TYR:CD2	2.43	0.49
19:L:84:LEU:HD22	19:L:88:TYR:CZ	2.47	0.49
19:L:132:ARG:CG	19:L:133:ASN:H	2.26	0.49
24:Q:162:LEU:HD13	24:Q:178:HIS:CD2	2.47	0.49
26:S:138:MET:SD	26:S:178:LEU:HB2	2.52	0.49
27:T:226:TRP:CZ2	27:T:235:PHE:CE2	2.82	0.49
28:U:283:ARG:HH12	29:V:283:THR:HG22	1.77	0.49
33:Z:298:PHE:CZ	33:Z:310:LEU:HD13	2.48	0.49
2:2:35:HIS:CE1	2:2:53:GLU:HG2	2.48	0.49
5:5:55:TRP:CZ3	5:5:86:LEU:HD13	2.47	0.49
5:5:63:CYS:SG	5:5:74:ILE:HD13	2.53	0.49
6:6:91:LYS:HB2	6:6:96:TYR:OH	2.12	0.49
7:7:48:ASP:CG	7:7:103:TRP:CD1	2.86	0.49
11:D:188:VAL:HG21	11:D:216:LYS:HE2	1.94	0.49
14:G:183:PRO:HD2	14:G:186:LEU:HD23	1.94	0.49
16:I:104:LEU:O	17:J:95:ILE:HG22	2.13	0.49
16:I:408:ARG:HH12	16:I:411:VAL:HA	1.76	0.49
17:J:88:VAL:HG21	17:J:91:GLU:HB2	1.95	0.49
17:J:161:LYS:HG3	17:J:165:GLU:OE1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:371:ASP:OD2	20:M:411:LYS:HG2	2.12	0.49
22:O:377:VAL:CG1	28:U:193:GLN:NE2	2.72	0.49
24:Q:314:PHE:CD2	24:Q:339:TYR:CE1	2.99	0.49
25:R:79:LEU:HD13	25:R:93:LYS:NZ	2.28	0.49
26:S:235:ASN:HB2	26:S:272:TYR:CE1	2.48	0.49
26:S:322:LEU:HD21	26:S:327:ILE:HG22	1.94	0.49
27:T:85:LEU:CD2	27:T:105:LEU:HD13	2.43	0.49
27:T:209:LEU:HD13	27:T:211:PHE:HZ	1.67	0.49
28:U:19:LEU:HD12	28:U:127:GLN:NE2	2.25	0.49
28:U:32:ARG:HG3	28:U:100:ARG:NH1	2.27	0.49
29:V:168:LEU:HD12	29:V:182:LYS:NZ	2.28	0.49
33:Z:55:ARG:HG2	33:Z:60:ASP:OD2	2.13	0.49
33:Z:392:LEU:CD1	33:Z:424:SER:O	2.50	0.49
3:3:64:LEU:CD2	10:C:92:ARG:HB3	2.43	0.48
10:C:13:PHE:HA	10:C:19:LEU:HD23	1.95	0.48
16:I:387:LEU:CD2	16:I:427:LYS:HD3	2.43	0.48
18:K:173:ASP:HB3	18:K:221:MET:SD	2.52	0.48
19:L:75:LYS:HG2	19:L:78:ARG:NH2	2.28	0.48
19:L:336:ALA:HA	19:L:339:ARG:NE	2.27	0.48
19:L:383:SER:O	19:L:384:ASP:OD1	2.31	0.48
20:M:193:LEU:HD23	20:M:347:ILE:HD13	1.95	0.48
21:N:124:TYR:CE1	21:N:125:THR:HG22	2.47	0.48
21:N:338:PHE:CE2	21:N:749:LEU:HD23	2.48	0.48
22:O:112:LYS:O	22:O:113:LYS:HB2	2.13	0.48
22:O:188:PHE:CE2	22:O:220:SER:HB3	2.47	0.48
22:O:320:PRO:HD2	22:O:323:ASN:HD22	1.77	0.48
23:P:209:LYS:O	23:P:211:PRO:HD3	2.13	0.48
25:R:79:LEU:HB2	25:R:93:LYS:HE2	1.95	0.48
31:X:31:GLY:HA2	31:X:53:THR:H	1.78	0.48
31:X:41:GLU:HG3	31:X:45:PHE:O	2.13	0.48
33:Z:756:MET:HE3	33:Z:759:ARG:HH21	1.77	0.48
11:D:179:TYR:CE1	11:D:184:PRO:HB3	2.48	0.48
12:E:162:GLY:HA3	13:F:79:PRO:HG3	1.95	0.48
13:F:145:LEU:HD11	13:F:153:VAL:HG13	1.92	0.48
14:G:45:VAL:HG23	14:G:47:PHE:HE1	1.78	0.48
16:I:380:LEU:O	16:I:384:LYS:HG3	2.12	0.48
19:L:364:HIS:O	19:L:368:VAL:HG23	2.13	0.48
21:N:406:TYR:CE1	21:N:448:LEU:HB3	2.48	0.48
21:N:433:THR:HB	21:N:439:VAL:HG21	1.96	0.48
21:N:656:ALA:O	21:N:660:LEU:HG	2.14	0.48
22:O:277:ILE:CG2	22:O:279:ILE:HB	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:354:GLN:HG3	22:O:355:PRO:HD2	1.94	0.48
24:Q:318:LEU:HD11	24:Q:326:MET:SD	2.53	0.48
25:R:60:ALA:CB	25:R:102:LEU:CD2	2.91	0.48
25:R:214:TYR:CE1	25:R:218:CYS:SG	3.06	0.48
25:R:292:LEU:CD2	25:R:307:TYR:HB2	2.43	0.48
25:R:389:GLU:OE2	26:S:399:TYR:CE1	2.66	0.48
26:S:144:LEU:O	26:S:155:LEU:HD13	2.13	0.48
27:T:75:PHE:O	27:T:78:PHE:HB3	2.13	0.48
27:T:225:ASN:HB2	27:T:241:GLU:HA	1.95	0.48
29:V:161:THR:CA	29:V:189:ILE:HD11	2.32	0.48
29:V:168:LEU:HD13	29:V:182:LYS:HD2	1.95	0.48
31:X:40:GLU:O	31:X:41:GLU:HB2	2.13	0.48
31:X:41:GLU:HG3	31:X:45:PHE:C	2.33	0.48
33:Z:91:PHE:O	33:Z:94:PRO:HD2	2.14	0.48
33:Z:400:ILE:HD12	33:Z:407:VAL:HG22	1.94	0.48
33:Z:581:VAL:CG2	33:Z:603:VAL:HG12	2.42	0.48
33:Z:756:MET:HE1	33:Z:759:ARG:HE	1.77	0.48
7:7:170:VAL:CG1	7:7:174:ARG:HH22	2.24	0.48
9:B:68:THR:OG1	9:B:71:ILE:HD12	2.14	0.48
9:B:177:LYS:NZ	24:Q:168:LEU:HA	2.28	0.48
10:C:208:TYR:CE1	10:C:209:ASP:HB3	2.48	0.48
15:H:257:THR:HG22	15:H:261:ARG:HE	1.77	0.48
17:J:115:LEU:HD23	17:J:116:ARG:N	2.28	0.48
17:J:375:ILE:O	25:R:204:TRP:CE2	2.66	0.48
22:O:80:LYS:CG	22:O:81:TYR:CE2	2.97	0.48
22:O:185:PHE:HB2	22:O:223:LEU:HB3	1.86	0.48
25:R:241:ILE:CG2	25:R:242:GLU:HG3	2.36	0.48
26:S:230:LYS:HZ1	26:S:256:LYS:CE	2.23	0.48
26:S:471:LEU:HD12	28:U:288:PHE:CE2	2.48	0.48
29:V:106:GLY:O	29:V:107:TRP:CD1	2.66	0.48
29:V:212:MET:HG3	29:V:212:MET:O	2.13	0.48
30:W:179:ARG:O	30:W:180:LEU:CB	2.61	0.48
1:1:122:LEU:CD2	7:7:28:PHE:HD1	2.12	0.48
5:5:8:PHE:CZ	5:5:13:ILE:CG1	2.96	0.48
7:7:201:LYS:HB3	7:7:204:LEU:HD11	1.94	0.48
8:A:112:MET:HE1	8:A:116:VAL:HG12	1.96	0.48
10:C:45:VAL:HG21	10:C:189:ALA:CB	2.43	0.48
12:E:35:SER:OG	12:E:51:GLU:HB2	2.14	0.48
12:E:122:ARG:HD3	12:E:131:GLU:O	2.13	0.48
13:F:190:ILE:HG21	13:F:233:TYR:CD1	2.49	0.48
15:H:168:ILE:HD13	15:H:174:VAL:HG11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:I:124:THR:O	16:I:125:MET:CB	2.60	0.48
18:K:49:PHE:CD1	21:N:192:LEU:HG	2.45	0.48
18:K:246:TYR:CG	18:K:247:LEU:N	2.81	0.48
19:L:375:ASP:OD1	19:L:377:GLU:HB2	2.14	0.48
20:M:401:ILE:HG22	20:M:405:ASN:ND2	2.28	0.48
23:P:204:LEU:HD22	23:P:240:TYR:CE2	2.48	0.48
24:Q:249:LEU:C	24:Q:250:THR:HG22	2.31	0.48
24:Q:350:ILE:HG22	24:Q:362:ILE:HG12	1.96	0.48
26:S:461:PHE:HE2	27:T:263:ALA:HB1	1.77	0.48
28:U:38:LEU:HD11	28:U:87:GLU:HG2	1.95	0.48
30:W:143:ASN:HD21	30:W:149:GLN:HG3	1.78	0.48
33:Z:551:LEU:O	33:Z:551:LEU:HD23	2.13	0.48
1:1:-8:LYS:HE2	2:2:88:PHE:CD1	2.48	0.48
8:A:25:LEU:HD11	9:B:128:ARG:NH2	2.28	0.48
8:A:111:ASP:OD1	8:A:112:MET:N	2.45	0.48
9:B:109:LEU:O	9:B:113:GLU:HG2	2.13	0.48
9:B:180:ASN:O	9:B:181:ASP:CB	2.61	0.48
12:E:114:GLN:NE2	13:F:82:ARG:HD2	2.22	0.48
12:E:231:TYR:CE2	12:E:236:THR:N	2.81	0.48
14:G:222:GLU:HG3	14:G:222:GLU:O	2.14	0.48
15:H:368:PRO:HA	15:H:372:ASP:OD1	2.13	0.48
18:K:77:ARG:HB3	18:K:81:ARG:HH12	1.78	0.48
18:K:97:GLY:HA3	18:K:139:LEU:HD11	1.94	0.48
19:L:177:GLU:HG2	19:L:233:LYS:HD3	1.95	0.48
21:N:556:ALA:HB1	21:N:593:PHE:HB2	1.94	0.48
22:O:366:MET:O	22:O:370:LEU:HG	2.13	0.48
23:P:415:TRP:CD2	28:U:265:LEU:HD11	2.49	0.48
24:Q:47:ASP:HA	24:Q:50:ARG:CB	2.42	0.48
24:Q:76:GLU:O	24:Q:79:PRO:HD2	2.14	0.48
25:R:354:ALA:HA	25:R:364:LEU:HD22	1.95	0.48
2:2:104:ASP:HB2	2:2:105:PRO:HD2	1.95	0.48
8:A:135:ARG:CZ	14:G:124:LEU:CD2	2.92	0.48
10:C:206:LEU:CD1	10:C:211:LEU:HD11	2.43	0.48
17:J:78:ILE:HD11	17:J:107:LEU:HB3	1.95	0.48
21:N:69:TYR:CE2	21:N:81:TYR:CE2	3.01	0.48
21:N:714:THR:CG2	21:N:756:THR:OG1	2.57	0.48
22:O:42:SER:O	22:O:46:THR:OG1	2.31	0.48
23:P:274:GLY:HA3	23:P:344:ARG:NH2	2.28	0.48
25:R:105:LYS:O	25:R:109:LYS:HG2	2.14	0.48
31:X:100:TRP:HZ2	31:X:110:PRO:CD	2.26	0.48
33:Z:358:TYR:CE1	33:Z:910:PRO:HG2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:69:GLU:OE2	9:B:109:LEU:HB2	2.14	0.48
7:7:108:VAL:CG1	7:7:118:PHE:HE2	2.27	0.48
9:B:189:ILE:HG21	9:B:246:ARG:CD	2.43	0.48
11:D:215:VAL:HG13	11:D:221:ILE:HG12	1.96	0.48
15:H:312:ASP:OD1	15:H:360:THR:CG2	2.61	0.48
18:K:415:VAL:HG13	18:K:416:LYS:HG2	1.94	0.48
20:M:383:THR:HB	20:M:386:PHE:CG	2.48	0.48
21:N:262:VAL:HA	21:N:270:LEU:HD21	1.95	0.48
21:N:771:PHE:CE2	21:N:885:ILE:HG21	2.48	0.48
22:O:48:PHE:CD1	22:O:81:TYR:CE2	3.01	0.48
23:P:233:GLU:HG3	23:P:236:GLU:H	1.78	0.48
24:Q:66:VAL:HG23	24:Q:109:ASP:HB3	1.96	0.48
24:Q:151:TYR:CE2	24:Q:187:LYS:CB	2.96	0.48
25:R:312:TYR:CE2	32:Y:73:PHE:HD1	2.27	0.48
29:V:261:LEU:HB3	29:V:280:LEU:CD1	2.43	0.48
30:W:48:THR:H	30:W:103:ASN:HD21	1.62	0.48
33:Z:318:LYS:CE	33:Z:459:ALA:O	2.58	0.48
33:Z:955:VAL:CG2	33:Z:956:LEU:N	2.76	0.48
1:1:13:ILE:HG21	1:1:151:THR:HG22	1.96	0.48
1:1:175:MET:CE	1:1:188:PHE:CE1	2.96	0.48
5:5:35:ILE:HG21	5:5:56:GLU:HB2	1.95	0.48
10:C:86:ILE:O	10:C:90:THR:HG23	2.13	0.48
10:C:213:PHE:CD2	10:C:230:PHE:CE2	2.99	0.48
10:C:224:GLU:O	10:C:225:VAL:HB	2.14	0.48
13:F:130:VAL:O	13:F:149:PRO:HB3	2.13	0.48
13:F:135:ILE:HG22	13:F:144:LEU:CD1	2.43	0.48
14:G:108:ILE:HG22	14:G:148:TYR:CE1	2.49	0.48
19:L:277:ILE:HG23	19:L:324:ILE:HD12	1.96	0.48
20:M:228:LYS:NZ	20:M:327:THR:H	2.12	0.48
22:O:233:LEU:HD13	22:O:251:LEU:HD13	1.95	0.48
23:P:241:LEU:HB3	23:P:264:ILE:CD1	2.44	0.48
26:S:223:LEU:CD2	26:S:230:LYS:HG2	2.44	0.48
26:S:376:THR:HG23	26:S:378:GLN:HG2	1.95	0.48
27:T:86:LYS:NZ	27:T:125:GLU:HG3	2.27	0.48
28:U:18:ALA:CB	28:U:125:VAL:HG11	2.41	0.48
29:V:114:PHE:CD1	29:V:118:LEU:C	2.80	0.48
33:Z:740:VAL:HA	33:Z:743:ILE:HD12	1.96	0.48
1:1:19:ARG:NH2	1:1:26:ILE:HD13	2.27	0.48
10:C:144:TYR:HB2	10:C:147:GLN:HE21	1.79	0.48
10:C:198:SER:CA	10:C:206:LEU:HD22	2.44	0.48
14:G:45:VAL:HG23	14:G:47:PHE:CE1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:115:LEU:HB3	14:G:150:LEU:CD2	2.44	0.48
14:G:182:HIS:CB	14:G:186:LEU:HG	2.43	0.48
16:I:328:THR:HG23	16:I:330:LYS:O	2.13	0.48
18:K:294:ARG:HH12	18:K:298:GLU:HB2	1.79	0.48
20:M:252:VAL:CG2	20:M:285:ALA:HB1	2.41	0.48
21:N:479:GLU:HB2	21:N:512:ASN:OD1	2.11	0.48
21:N:742:TRP:HB3	21:N:745:LEU:HD22	1.96	0.48
22:O:120:LYS:HB2	22:O:166:ARG:HD2	1.96	0.48
23:P:234:TYR:CE2	23:P:267:PHE:O	2.66	0.48
25:R:34:THR:HA	25:R:70:TYR:CE1	2.48	0.48
25:R:301:TYR:CZ	25:R:338:TYR:CE1	3.01	0.48
27:T:39:LEU:O	27:T:40:LEU:CG	2.61	0.48
31:X:11:ARG:HB2	31:X:103:GLU:CG	2.32	0.48
33:Z:868:ASN:OD1	33:Z:871:HIS:N	2.46	0.48
7:7:83:TYR:CD2	13:F:101:ARG:NE	2.81	0.48
8:A:57:LYS:HE3	8:A:69:VAL:HG12	1.83	0.48
9:B:12:PHE:HZ	10:C:129:ARG:NH2	2.12	0.48
11:D:32:CYS:SG	11:D:166:ARG:O	2.68	0.48
11:D:129:PHE:HB3	11:D:131:VAL:HG12	1.96	0.48
13:F:156:LEU:HD22	13:F:159:THR:HB	1.95	0.48
13:F:216:VAL:HG12	13:F:222:PHE:HA	1.95	0.48
16:I:265:ARG:HA	16:I:312:GLN:HE22	1.79	0.48
16:I:362:LEU:HD21	16:I:377:LEU:HD23	1.95	0.48
19:L:382:MET:CE	19:L:416:MET:HA	2.44	0.48
21:N:365:PHE:CE2	21:N:403:GLY:HA2	2.49	0.48
21:N:414:GLY:HA3	21:N:728:LYS:HZ1	1.76	0.48
22:O:117:ASN:C	22:O:166:ARG:HG2	2.33	0.48
22:O:269:LEU:HD23	22:O:270:ILE:HG13	1.96	0.48
24:Q:261:VAL:HG13	24:Q:262:LEU:N	2.29	0.48
25:R:167:LYS:HD3	25:R:202:GLY:HA2	1.94	0.48
25:R:320:LYS:HE3	25:R:324:ARG:NE	2.28	0.48
25:R:339:ALA:HA	25:R:377:LEU:HD11	1.95	0.48
26:S:293:ILE:HG21	26:S:317:HIS:HB2	1.96	0.48
27:T:89:TYR:CE1	27:T:102:LYS:CE	2.97	0.48
30:W:132:LEU:CD2	30:W:137:VAL:HG21	2.44	0.48
31:X:90:VAL:HG12	31:X:92:SER:H	1.79	0.48
32:Y:82:ASP:HB3	32:Y:86:ARG:NH1	2.29	0.48
33:Z:546:ILE:HG21	33:Z:566:LEU:HD21	1.96	0.48
33:Z:737:ALA:CB	33:Z:775:MET:CE	2.91	0.48
33:Z:748:LEU:HD23	33:Z:748:LEU:C	2.34	0.48
1:1:82:PHE:CD2	1:1:99:VAL:HG21	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:4:33:LYS:O	4:4:34:THR:CG2	2.62	0.47
4:4:167:LEU:HD22	4:4:171:MET:HE1	1.95	0.47
12:E:157:HIS:CD2	12:E:170:LYS:HZ1	2.28	0.47
14:G:39:ILE:HD11	14:G:198:ILE:HD12	1.96	0.47
15:H:142:ASP:HB3	15:H:157:VAL:HG13	1.95	0.47
17:J:160:ILE:HD11	17:J:314:ILE:HG21	1.96	0.47
24:Q:90:LYS:CD	24:Q:129:LYS:HZ1	2.25	0.47
25:R:93:LYS:HG2	25:R:94:PHE:N	2.29	0.47
26:S:390:THR:HA	26:S:393:ARG:NH2	2.29	0.47
31:X:89:LEU:HG	31:X:91:PHE:CE2	2.48	0.47
33:Z:237:VAL:CG1	33:Z:245:VAL:HG11	2.26	0.47
33:Z:370:SER:OG	33:Z:390:LEU:CD1	2.61	0.47
33:Z:466:GLU:OE1	33:Z:466:GLU:N	2.34	0.47
5:5:54:PHE:HB2	6:6:85:GLN:HE22	1.79	0.47
7:7:172:ALA:O	7:7:175:VAL:HB	2.14	0.47
10:C:33:GLY:HA3	10:C:65:LYS:HZ3	1.79	0.47
11:D:190:GLU:OE1	11:D:193:LYS:CE	2.62	0.47
17:J:52:ASN:HD21	21:N:613:HIS:H	1.61	0.47
17:J:69:GLY:N	18:K:144:ASN:CG	2.57	0.47
19:L:370:LYS:CD	19:L:374:PHE:CZ	2.96	0.47
19:L:372:GLY:O	19:L:374:PHE:HE1	1.95	0.47
21:N:596:LEU:HD13	21:N:717:LEU:CD2	2.42	0.47
27:T:107:SER:OG	27:T:174:PHE:HZ	1.96	0.47
28:U:38:LEU:HG	28:U:87:GLU:HG2	1.96	0.47
33:Z:406:TRP:O	33:Z:410:THR:HG23	2.14	0.47
33:Z:552:GLU:O	33:Z:553:ARG:CB	2.61	0.47
1:1:66:TYR:HE2	1:1:73:PRO:N	2.11	0.47
2:2:8:PHE:HE1	2:2:12:VAL:O	1.95	0.47
5:5:77:ALA:CA	5:5:121:ARG:HH21	2.28	0.47
6:6:77:ILE:CD1	6:6:102:ILE:HD12	2.44	0.47
8:A:57:LYS:NZ	8:A:69:VAL:CG1	2.77	0.47
14:G:78:SER:HB2	14:G:164:THR:HG23	1.96	0.47
15:H:431:ILE:HG22	16:I:196:GLU:OE2	2.14	0.47
17:J:112:ARG:HD3	17:J:129:LYS:HD2	1.96	0.47
17:J:224:GLY:O	17:J:227:SER:N	2.47	0.47
18:K:129:GLU:O	18:K:130:LEU:HD23	2.14	0.47
19:L:253:ASP:HA	20:M:256:ILE:CG1	2.44	0.47
20:M:77:TYR:CE2	20:M:79:VAL:HG12	2.49	0.47
21:N:771:PHE:CE2	21:N:885:ILE:HG13	2.49	0.47
23:P:109:SER:O	23:P:112:LEU:HB3	2.14	0.47
23:P:234:TYR:HD2	23:P:267:PHE:CD2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:P:299:LEU:HD23	23:P:302:LEU:HD12	1.95	0.47
25:R:292:LEU:CD2	25:R:307:TYR:CB	2.91	0.47
33:Z:312:TYR:OH	33:Z:348:LEU:HB3	2.12	0.47
33:Z:813:PHE:CE2	33:Z:885:ALA:HB2	2.49	0.47
2:2:220:ILE:HD12	3:3:39:HIS:ND1	2.29	0.47
6:6:21:ILE:HD11	6:6:188:GLN:HG2	1.97	0.47
8:A:89:ASP:HB3	8:A:139:VAL:HG13	1.96	0.47
12:E:12:VAL:HG11	12:E:124:GLY:HA3	1.96	0.47
13:F:80:ASP:OD1	13:F:126:ARG:NH2	2.48	0.47
15:H:167:ASP:CG	15:H:168:ILE:H	2.18	0.47
16:I:289:THR:O	16:I:306:MET:SD	2.72	0.47
17:J:135:SER:O	17:J:136:LEU:HB2	2.14	0.47
17:J:200:ARG:HG2	17:J:210:PHE:CE2	2.49	0.47
17:J:225:GLU:OE2	17:J:228:ARG:NH2	2.25	0.47
19:L:183:ILE:HD12	19:L:231:LEU:HD23	1.94	0.47
19:L:224:PRO:HA	19:L:228:LYS:HE2	1.97	0.47
22:O:79:VAL:HG23	22:O:122:HIS:CD2	2.49	0.47
24:Q:233:LYS:O	24:Q:236:PHE:HB3	2.14	0.47
25:R:353:MET:CE	25:R:364:LEU:CD1	2.81	0.47
29:V:107:TRP:CE2	29:V:129:PHE:CZ	3.02	0.47
4:4:37:LEU:HD21	4:4:43:MET:HE1	1.94	0.47
7:7:77:GLU:O	7:7:77:GLU:HG3	2.15	0.47
8:A:12:TYR:HB2	8:A:15:HIS:CD2	2.48	0.47
8:A:140:ILE:HG12	8:A:159:PRO:HD3	1.96	0.47
10:C:50:ARG:HD2	10:C:212:GLU:OE2	2.14	0.47
11:D:149:GLN:OE1	11:D:162:GLN:HG2	2.15	0.47
12:E:226:ASP:O	12:E:226:ASP:OD1	2.32	0.47
14:G:47:PHE:O	14:G:215:ILE:HG13	2.15	0.47
15:H:65:GLU:HG3	16:I:133:LEU:CB	2.44	0.47
17:J:115:LEU:HD23	17:J:115:LEU:C	2.34	0.47
19:L:206:ILE:CG1	19:L:209:ARG:NH2	2.76	0.47
20:M:165:SER:OG	20:M:168:LYS:HB2	2.14	0.47
21:N:771:PHE:HE2	21:N:885:ILE:HG13	1.79	0.47
23:P:327:LEU:O	23:P:328:ALA:CB	2.61	0.47
23:P:342:GLN:O	23:P:345:VAL:HG12	2.14	0.47
24:Q:266:LEU:HD23	24:Q:281:ILE:HD12	1.96	0.47
25:R:62:TYR:CE2	25:R:180:PHE:CZ	3.02	0.47
25:R:208:ASN:OD1	25:R:238:PHE:HB2	2.14	0.47
26:S:234:ILE:CG2	26:S:257:LEU:HD13	2.44	0.47
28:U:54:LEU:HD12	28:U:55:PRO:HD2	1.95	0.47
28:U:83:ILE:HD13	29:V:70:ALA:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:127:GLN:CG	29:V:212:MET:CB	2.93	0.47
29:V:57:PHE:HE2	29:V:59:ASP:HB3	1.78	0.47
30:W:1:MET:H3	30:W:44:ASN:ND2	2.11	0.47
30:W:25:ARG:NH2	30:W:115:CYS:HA	2.30	0.47
1:1:25:TYR:HE2	2:2:132:LEU:HB2	1.80	0.47
1:1:59:VAL:HG22	1:1:81:VAL:HG12	1.95	0.47
2:2:72:ARG:NH2	2:2:75:ARG:HH12	2.11	0.47
9:B:13:SER:HB3	9:B:14:PRO:HD2	1.97	0.47
13:F:65:LYS:CB	13:F:222:PHE:CE2	2.98	0.47
16:I:324:VAL:HG12	16:I:326:MET:HG3	1.97	0.47
17:J:277:ASN:HB2	17:J:309:ARG:NH1	2.30	0.47
20:M:196:ALA:HB1	20:M:345:ARG:HG3	1.96	0.47
21:N:158:LEU:CD1	21:N:192:LEU:HD22	2.45	0.47
22:O:257:ALA:HA	22:O:265:LYS:HG2	1.95	0.47
22:O:258:LEU:HD23	22:O:287:LEU:CD2	2.22	0.47
24:Q:109:ASP:O	24:Q:109:ASP:OD1	2.32	0.47
24:Q:135:HIS:CG	24:Q:161:LEU:HD23	2.33	0.47
24:Q:272:LEU:CD2	24:Q:274:LEU:HD11	2.41	0.47
24:Q:308:ASN:C	24:Q:309:ARG:HD3	2.34	0.47
24:Q:423:VAL:CG1	25:R:414:LEU:HD11	2.22	0.47
25:R:353:MET:CE	25:R:364:LEU:CG	2.92	0.47
26:S:159:ASN:HB3	26:S:187:ILE:HD13	1.96	0.47
29:V:52:LEU:CD1	29:V:107:TRP:CE3	2.97	0.47
33:Z:351:PRO:O	33:Z:352:LYS:HB2	2.14	0.47
33:Z:446:GLU:CG	33:Z:484:LYS:HZ3	2.26	0.47
33:Z:737:ALA:O	33:Z:740:VAL:HG12	2.15	0.47
1:1:137:TYR:CE1	1:1:157:HIS:CD2	3.03	0.47
3:3:1:GLY:HA3	3:3:33:LYS:HZ2	1.79	0.47
3:3:179:TYR:OH	3:3:188:LYS:CE	2.46	0.47
4:4:15:ALA:HB1	4:4:178:VAL:HG21	1.96	0.47
6:6:94:PHE:HE1	7:7:99:MET:HE2	1.79	0.47
7:7:-3:VAL:CG1	7:7:49:ILE:CB	2.87	0.47
7:7:1:THR:O	7:7:2:SER:HB2	2.14	0.47
8:A:31:ALA:HA	14:G:14:PHE:CE2	2.50	0.47
8:A:71:TYR:OH	14:G:157:TRP:CZ2	2.67	0.47
8:A:87:ILE:HG22	8:A:88:PRO:HD3	1.96	0.47
9:B:67:LEU:HD11	9:B:73:ALA:HB2	1.97	0.47
10:C:115:LEU:HD12	10:C:137:TYR:OH	2.15	0.47
12:E:219:LEU:HB2	12:E:231:TYR:CD2	2.50	0.47
13:F:182:ILE:CD1	13:F:188:GLU:HG2	2.45	0.47
13:F:227:GLY:O	13:F:230:VAL:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:108:ILE:CG2	14:G:148:TYR:CE1	2.97	0.47
15:H:62:ARG:HA	16:I:133:LEU:CD1	2.45	0.47
15:H:389:PHE:C	15:H:404:TRP:CZ3	2.88	0.47
15:H:420:ARG:NH1	16:I:343:ARG:NH2	2.63	0.47
16:I:102:ASN:HD21	17:J:83:LYS:HZ2	1.60	0.47
16:I:380:LEU:HD11	16:I:416:PHE:CB	2.45	0.47
16:I:396:CYS:O	17:J:179:ILE:CD1	2.63	0.47
17:J:219:VAL:O	17:J:219:VAL:HG12	2.15	0.47
17:J:220:GLN:OE1	18:K:290:ARG:HD3	2.15	0.47
18:K:49:PHE:CE1	21:N:192:LEU:CB	2.98	0.47
18:K:92:VAL:HA	18:K:94:LEU:HG	1.97	0.47
18:K:222:LEU:O	18:K:226:VAL:HG23	2.15	0.47
19:L:133:ASN:O	19:L:134:SER:CB	2.63	0.47
20:M:361:LEU:CB	20:M:376:TRP:CE3	2.96	0.47
21:N:576:VAL:HG13	21:N:577:SER:N	2.30	0.47
21:N:741:TYR:HD2	21:N:742:TRP:CZ3	2.33	0.47
22:O:129:ILE:O	22:O:133:ILE:HB	2.15	0.47
24:Q:9:GLU:O	24:Q:13:ARG:HG3	2.14	0.47
24:Q:90:LYS:HZ1	24:Q:129:LYS:HD3	1.79	0.47
24:Q:243:PHE:CE2	24:Q:287:THR:C	2.84	0.47
25:R:380:VAL:HG21	25:R:391:ASN:HD22	1.79	0.47
27:T:93:ASN:HD21	27:T:94:HIS:CD2	2.32	0.47
27:T:209:LEU:CB	27:T:211:PHE:CZ	2.97	0.47
28:U:79:MET:CE	29:V:90:LYS:HE2	2.45	0.47
28:U:104:LEU:HD13	28:U:152:LYS:HA	1.97	0.47
31:X:11:ARG:HH22	31:X:105:ASN:HD22	1.63	0.47
33:Z:768:GLY:O	33:Z:769:ASN:CB	2.63	0.47
33:Z:874:ASN:OD1	33:Z:876:VAL:HB	2.14	0.47
33:Z:982:ILE:HD12	33:Z:982:ILE:N	2.29	0.47
8:A:77:ARG:CG	8:A:78:THR:HG23	2.33	0.47
15:H:162:ARG:HH21	15:H:167:ASP:CG	2.18	0.47
15:H:334:LEU:CD2	20:M:282:GLU:HG2	2.42	0.47
16:I:93:LYS:O	16:I:97:GLU:HG2	2.15	0.47
19:L:223:PRO:CB	19:L:226:THR:HG23	2.42	0.47
19:L:263:ILE:HD13	19:L:307:GLU:HB2	1.97	0.47
20:M:327:THR:HG21	20:M:329:ARG:O	2.15	0.47
20:M:385:GLU:HB2	20:M:426:LYS:HD3	1.96	0.47
21:N:757:THR:OG1	21:N:759:ILE:HG23	2.15	0.47
22:O:173:SER:O	22:O:177:GLN:HG3	2.15	0.47
23:P:42:LEU:O	23:P:46:THR:HG23	2.15	0.47
23:P:123:ARG:NH1	23:P:128:ASN:HD22	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:115:ILE:HG23	24:Q:141:LEU:HD11	1.95	0.47
25:R:94:PHE:CE1	25:R:98:LEU:HD23	2.50	0.47
25:R:187:VAL:HA	25:R:213:TYR:OH	2.15	0.47
26:S:152:LEU:O	26:S:156:VAL:HG23	2.15	0.47
26:S:390:THR:HA	26:S:393:ARG:CZ	2.44	0.47
31:X:46:TRP:H	31:X:68:LEU:HB3	1.80	0.47
33:Z:381:LEU:HD23	33:Z:414:GLY:HA2	1.97	0.47
5:5:150:VAL:HG21	5:5:179:HIS:ND1	2.30	0.47
9:B:39:ALA:O	9:B:40:THR:HB	2.15	0.47
12:E:107:ILE:HG21	12:E:112:LEU:HD21	1.95	0.47
18:K:123:LEU:HD12	18:K:126:LEU:HD12	1.91	0.47
18:K:156:SER:CA	19:L:126:ARG:NH1	2.76	0.47
21:N:314:LEU:HD11	21:N:340:HIS:HE1	1.80	0.47
21:N:579:SER:HA	21:N:584:ARG:HH21	1.74	0.47
22:O:69:PHE:CE2	22:O:78:VAL:HG23	2.50	0.47
22:O:195:TYR:CD2	22:O:213:LEU:HD13	2.49	0.47
22:O:338:LYS:H	22:O:350:ILE:HG23	1.80	0.47
23:P:272:PRO:HA	23:P:344:ARG:HD3	1.97	0.47
23:P:290:LEU:HB2	23:P:293:LEU:HB2	1.97	0.47
24:Q:101:ILE:CG2	24:Q:140:LYS:HD3	2.45	0.47
25:R:416:LYS:HZ2	26:S:294:ILE:HG21	1.79	0.47
26:S:343:LEU:HB2	26:S:344:PRO:HD3	1.97	0.47
27:T:224:ARG:O	27:T:242:LYS:HB2	2.15	0.47
28:U:90:ILE:HD12	28:U:91:GLY:N	2.30	0.47
28:U:109:LEU:HD22	30:W:60:ARG:HB2	1.97	0.47
29:V:144:ILE:HG22	29:V:145:GLN:NE2	2.30	0.47
31:X:66:LEU:HD21	31:X:91:PHE:CZ	2.50	0.47
32:Y:89:GLN:HG3	32:Y:89:GLN:O	2.14	0.47
33:Z:99:LEU:HD22	33:Z:115:LEU:HD11	1.97	0.47
33:Z:558:LEU:O	33:Z:558:LEU:CG	2.58	0.47
10:C:54:SER:H	10:C:59:GLN:NE2	2.13	0.47
19:L:166:LEU:HD22	19:L:169:ASN:OD1	2.15	0.47
19:L:216:LYS:NZ	19:L:341:GLY:HA2	2.30	0.47
19:L:292:SER:O	19:L:293:GLU:HB2	2.15	0.47
21:N:176:GLN:HG3	21:N:182:ASN:HD22	1.80	0.47
22:O:229:ASN:HB2	22:O:258:LEU:HD13	1.95	0.47
23:P:81:LEU:HA	23:P:84:LYS:HE2	1.97	0.47
28:U:38:LEU:HD23	28:U:38:LEU:H	1.80	0.47
28:U:283:ARG:HH12	29:V:283:THR:C	2.18	0.47
29:V:109:HIS:CG	29:V:111:HIS:HE2	2.33	0.47
33:Z:552:GLU:O	33:Z:553:ARG:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:10:ASP:HA	3:3:110:PRO:HD3	1.96	0.46
9:B:178:ARG:HD2	9:B:191:ILE:HG23	1.96	0.46
11:D:38:GLY:HA2	11:D:185:PRO:HD2	1.96	0.46
16:I:194:ILE:HD11	16:I:232:LEU:HD13	1.97	0.46
17:J:143:PRO:HD2	17:J:204:HIS:CA	2.45	0.46
17:J:252:SER:HA	17:J:258:VAL:HG22	1.97	0.46
18:K:347:ARG:HH12	24:Q:205:ALA:HB3	1.74	0.46
19:L:285:ALA:O	19:L:301:ILE:HG12	2.15	0.46
21:N:771:PHE:HE2	21:N:885:ILE:CG1	2.27	0.46
22:O:25:LEU:HB3	22:O:29:PHE:CE2	2.50	0.46
22:O:69:PHE:HZ	22:O:77:SER:CB	2.29	0.46
22:O:286:PHE:CE1	22:O:334:LEU:HD11	2.50	0.46
23:P:144:VAL:HG13	23:P:156:ALA:HB1	1.96	0.46
25:R:62:TYR:O	25:R:66:LEU:HG	2.15	0.46
26:S:256:LYS:O	26:S:259:TYR:OH	2.31	0.46
26:S:457:PRO:HG3	28:U:274:MET:HB2	1.96	0.46
27:T:11:LEU:HD21	27:T:27:LEU:HD21	1.97	0.46
31:X:93:SER:HB2	31:X:96:ARG:NH2	2.30	0.46
33:Z:312:TYR:OH	33:Z:348:LEU:HD22	2.13	0.46
1:1:14:LEU:HD11	1:1:44:CYS:HG	1.78	0.46
3:3:92:GLY:O	3:3:94:TYR:CD1	2.68	0.46
5:5:77:ALA:HB1	5:5:121:ARG:NH2	2.30	0.46
10:C:194:LEU:HD12	10:C:242:THR:HG21	1.96	0.46
12:E:65:GLU:HB2	12:E:218:GLN:OE1	2.14	0.46
13:F:13:PHE:CE2	14:G:129:ARG:CG	2.99	0.46
14:G:203:HIS:ND1	14:G:211:PHE:CD1	2.83	0.46
15:H:62:ARG:CG	15:H:66:LYS:HE3	2.45	0.46
15:H:393:SER:CB	15:H:404:TRP:HH2	2.27	0.46
17:J:187:LEU:C	17:J:195:LYS:HZ2	2.18	0.46
20:M:50:ARG:HB3	30:W:73:LEU:CB	2.46	0.46
20:M:163:PHE:HE1	20:M:261:LYS:HG2	1.77	0.46
20:M:219:LEU:HD12	20:M:325:ALA:HB3	1.96	0.46
20:M:300:GLU:O	20:M:304:THR:HG23	2.15	0.46
21:N:399:PHE:HA	21:N:441:VAL:CG1	2.45	0.46
22:O:321:LYS:O	22:O:325:GLU:HG3	2.15	0.46
22:O:365:LYS:HE3	22:O:369:ARG:HH12	1.80	0.46
24:Q:51:ARG:HH21	24:Q:92:LYS:CB	2.22	0.46
24:Q:216:ALA:O	24:Q:220:LEU:HG	2.15	0.46
25:R:174:ILE:CB	25:R:190:LYS:HD3	2.29	0.46
25:R:191:LEU:HD13	25:R:213:TYR:HD2	1.80	0.46
25:R:250:ALA:HB1	25:R:279:LEU:HD21	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:325:HIS:O	25:R:328:PHE:HB2	2.15	0.46
26:S:465:ILE:CG1	27:T:266:TYR:CE2	2.98	0.46
29:V:117:TRP:HE1	29:V:196:TYR:HB3	0.58	0.46
33:Z:218:GLU:CA	33:Z:248:TYR:CZ	2.98	0.46
33:Z:491:LEU:HD21	33:Z:900:LEU:CD1	2.44	0.46
33:Z:563:VAL:HG11	33:Z:595:MET:HE2	1.97	0.46
1:1:120:HIS:HB3	7:7:28:PHE:CE1	2.50	0.46
2:2:93:HIS:HB3	3:3:91:PHE:CE1	2.50	0.46
3:3:80:GLN:HG2	9:B:102:GLY:N	2.30	0.46
8:A:63:LEU:HD21	14:G:179:VAL:HG11	1.97	0.46
8:A:101:ALA:O	8:A:105:ARG:HG3	2.15	0.46
9:B:204:PHE:CZ	9:B:209:ILE:HD11	2.49	0.46
15:H:430:ALA:HA	15:H:435:ARG:CZ	2.44	0.46
16:I:227:THR:OG1	16:I:390:ALA:HB2	2.15	0.46
19:L:287:GLY:HA2	19:L:305:LEU:HD13	1.96	0.46
20:M:201:MET:HE2	20:M:322:LYS:HE3	1.97	0.46
22:O:341:ILE:HB	22:O:350:ILE:HG13	1.96	0.46
25:R:183:ASP:OD2	25:R:185:LEU:HB2	2.14	0.46
25:R:252:TYR:HD1	25:R:321:TYR:HB3	1.79	0.46
28:U:85:ALA:O	28:U:86:LYS:CG	2.63	0.46
28:U:92:TRP:NE1	28:U:120:LEU:HA	2.30	0.46
28:U:280:ASN:HD21	29:V:291:ASN:HB3	1.80	0.46
13:F:155:GLU:CD	14:G:62:LYS:HB3	2.33	0.46
17:J:375:ILE:CD1	25:R:204:TRP:HB3	2.45	0.46
20:M:63:LYS:O	20:M:67:GLU:HG2	2.16	0.46
21:N:277:LEU:HA	21:N:280:GLN:HG2	1.97	0.46
23:P:433:ILE:HD13	28:U:203:LYS:HA	1.96	0.46
23:P:436:GLU:OE1	28:U:206:ASP:OD2	2.33	0.46
24:Q:396:TRP:HB2	24:Q:398:TYR:CZ	2.49	0.46
25:R:320:LYS:HE3	25:R:324:ARG:NH1	2.29	0.46
28:U:19:LEU:HD11	28:U:127:GLN:OE1	2.13	0.46
30:W:123:ASP:HB3	30:W:127:ARG:NH1	2.31	0.46
31:X:38:ASN:HD21	31:X:47:ASP:CB	2.28	0.46
31:X:95:GLU:O	31:X:96:ARG:HB3	2.16	0.46
1:1:87:TYR:OH	7:7:51:ASP:OD1	2.16	0.46
4:4:45:PHE:HD1	4:4:101:VAL:HG12	1.80	0.46
6:6:112:ALA:HB1	6:6:114:TYR:CE1	2.51	0.46
7:7:17:ASP:OD2	7:7:183:SER:HA	2.16	0.46
7:7:190:ALA:HB2	7:7:200:PHE:HD2	1.75	0.46
8:A:119:LYS:HG2	8:A:163:TYR:HE2	1.74	0.46
12:E:196:ALA:O	12:E:200:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:35:THR:HG23	13:F:133:LEU:HD12	1.96	0.46
15:H:227:LEU:N	15:H:228:PRO:HD2	2.30	0.46
16:I:182:SER:O	16:I:360:LYS:CE	2.62	0.46
17:J:241:ALA:CB	17:J:287:ASN:HD22	2.09	0.46
18:K:245:LYS:HE3	19:L:300:GLU:OE2	2.15	0.46
19:L:186:LEU:CD2	19:L:387:ASN:OD1	2.64	0.46
22:O:91:ASP:HB3	22:O:94:GLU:HB2	1.96	0.46
22:O:233:LEU:HA	22:O:236:HIS:CB	2.25	0.46
22:O:306:ARG:HG3	22:O:352:TRP:H	1.78	0.46
25:R:285:ALA:CB	25:R:314:ASN:HD22	2.28	0.46
26:S:264:VAL:HG11	26:S:272:TYR:HE2	1.79	0.46
33:Z:133:ASP:CB	33:Z:137:TYR:CZ	2.95	0.46
5:5:8:PHE:CZ	5:5:13:ILE:HG12	2.49	0.46
5:5:8:PHE:HA	5:5:146:TRP:CD1	2.51	0.46
5:5:45:MET:O	5:5:46:ALA:HB2	2.16	0.46
5:5:158:LYS:HG2	5:5:196:LEU:HD21	1.98	0.46
6:6:91:LYS:CB	6:6:96:TYR:OH	2.64	0.46
9:B:224:TYR:HD2	9:B:226:GLY:H	1.63	0.46
13:F:65:LYS:CG	13:F:222:PHE:CD2	2.97	0.46
13:F:117:GLN:HE21	13:F:121:GLN:HG3	1.80	0.46
15:H:375:VAL:HG12	15:H:377:PHE:CE2	2.51	0.46
16:I:128:TYR:CD2	16:I:154:MET:CG	2.97	0.46
18:K:141:ARG:HH12	19:L:153:LEU:HD11	1.81	0.46
18:K:346:ARG:NH2	18:K:372:ILE:CD1	2.76	0.46
20:M:186:LEU:HB2	20:M:231:LEU:HD21	1.97	0.46
21:N:47:GLU:CD	21:N:81:TYR:OH	2.54	0.46
21:N:654:GLN:HG3	21:N:698:GLY:CA	2.45	0.46
22:O:87:LYS:HD2	22:O:135:ARG:HD2	1.96	0.46
22:O:117:ASN:O	22:O:166:ARG:HG2	2.16	0.46
24:Q:269:LYS:CE	24:Q:281:ILE:HD11	2.46	0.46
25:R:285:ALA:O	25:R:287:GLN:HG3	2.15	0.46
25:R:353:MET:CE	25:R:364:LEU:CD2	2.61	0.46
33:Z:427:GLN:CG	33:Z:428:TRP:CE3	2.99	0.46
33:Z:534:PHE:O	33:Z:573:LEU:CD2	2.64	0.46
1:1:80:SER:CB	14:G:103:LYS:CD	2.94	0.46
2:2:160:GLN:O	2:2:164:TRP:CD1	2.68	0.46
11:D:11:PHE:CZ	12:E:137:PRO:CD	2.93	0.46
15:H:336:LEU:HG	15:H:370:ARG:HH12	1.80	0.46
17:J:27:ILE:CG1	18:K:51:LEU:HD11	2.46	0.46
19:L:173:PHE:O	19:L:243:PHE:HB3	2.16	0.46
22:O:23:HIS:CB	22:O:26:PHE:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:23:HIS:HB3	22:O:26:PHE:HB3	1.98	0.46
22:O:225:ASP:HB3	22:O:290:LYS:HE2	1.96	0.46
22:O:344:VAL:CB	23:P:361:THR:CG2	2.94	0.46
23:P:140:THR:CB	23:P:163:LEU:HD22	2.46	0.46
24:Q:128:GLU:HG3	24:Q:129:LYS:HG2	1.98	0.46
25:R:353:MET:CA	25:R:357:PHE:CD1	2.82	0.46
29:V:79:SER:N	29:V:121:VAL:HG11	2.30	0.46
33:Z:805:LEU:CD2	33:Z:893:PHE:CZ	2.97	0.46
4:4:66:TYR:CD1	4:4:74:LEU:CD1	2.92	0.46
10:C:46:LEU:HD11	10:C:138:ALA:CB	2.46	0.46
14:G:140:VAL:HG11	14:G:220:LEU:CG	2.34	0.46
16:I:199:GLU:HA	16:I:240:THR:HG22	1.96	0.46
17:J:248:ASP:O	17:J:249:GLU:CB	2.64	0.46
18:K:49:PHE:CD1	21:N:192:LEU:CG	2.86	0.46
19:L:328:ASN:ND2	19:L:329:ARG:HE	2.12	0.46
19:L:332:THR:HG21	20:M:295:LYS:HD3	1.97	0.46
21:N:681:ASN:O	21:N:685:VAL:HG23	2.16	0.46
22:O:287:LEU:C	22:O:287:LEU:HD23	2.36	0.46
23:P:218:LEU:HD11	23:P:256:LYS:CE	2.46	0.46
25:R:360:SER:HB3	32:Y:86:ARG:HH22	1.81	0.46
26:S:390:THR:OG1	26:S:393:ARG:NH2	2.49	0.46
28:U:21:HIS:HE1	28:U:53:ALA:CB	1.92	0.46
28:U:92:TRP:NE1	28:U:120:LEU:CA	2.78	0.46
30:W:41:ARG:NH1	30:W:67:ALA:O	2.49	0.46
30:W:144:PHE:HE1	30:W:176:PRO:HA	1.80	0.46
30:W:172:LEU:HD21	30:W:185:ILE:N	2.31	0.46
31:X:8:ILE:CG2	31:X:124:LYS:CE	2.93	0.46
31:X:22:ARG:HG2	31:X:96:ARG:NH1	2.31	0.46
31:X:85:ARG:HH21	31:X:116:ALA:N	2.13	0.46
33:Z:212:LEU:HD13	33:Z:217:GLU:OE2	2.15	0.46
33:Z:312:TYR:CZ	33:Z:348:LEU:C	2.88	0.46
5:5:57:THR:HG22	12:E:101:LEU:HD12	1.97	0.46
9:B:43:VAL:HG21	9:B:137:ALA:HB1	1.98	0.46
9:B:78:MET:HG2	9:B:80:PRO:HD2	1.98	0.46
12:E:157:HIS:CG	12:E:170:LYS:NZ	2.81	0.46
15:H:280:VAL:CG2	16:I:304:ARG:HD2	2.42	0.46
21:N:647:ASP:O	21:N:653:ARG:NE	2.49	0.46
21:N:666:GLN:CG	21:N:873:ARG:HE	2.23	0.46
23:P:308:LEU:CD2	23:P:369:LEU:HA	2.20	0.46
25:R:36:SER:C	25:R:43:ARG:HH21	2.15	0.46
25:R:304:TYR:CE2	25:R:337:VAL:HG21	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:281:ALA:HB2	26:S:320:ILE:HD11	1.97	0.46
26:S:435:LYS:NZ	27:T:238:GLN:CD	2.68	0.46
26:S:471:LEU:CD1	28:U:288:PHE:HZ	2.00	0.46
27:T:59:LYS:HD3	27:T:97:SER:CB	2.45	0.46
27:T:89:TYR:CE1	27:T:102:LYS:HE3	2.51	0.46
27:T:193:THR:CB	27:T:226:TRP:CZ2	2.94	0.46
28:U:273:LEU:O	28:U:277:TYR:CD2	2.69	0.46
30:W:5:ALA:CB	30:W:103:ASN:CG	2.60	0.46
33:Z:96:TYR:CE1	33:Z:119:LEU:HD22	2.51	0.46
33:Z:737:ALA:CA	33:Z:775:MET:HE2	2.46	0.46
1:1:122:LEU:CG	7:7:28:PHE:HE1	2.29	0.46
5:5:150:VAL:CG2	5:5:179:HIS:CE1	2.99	0.46
7:7:92:MET:HE2	7:7:102:LEU:HD23	1.97	0.46
7:7:129:TYR:HE2	7:7:134:LEU:CD2	2.30	0.46
9:B:35:LEU:C	9:B:35:LEU:HD12	2.36	0.46
15:H:217:GLN:HG3	15:H:376:GLU:OE2	2.15	0.46
18:K:347:ARG:HH11	24:Q:205:ALA:HB1	1.77	0.46
20:M:42:ARG:HB2	30:W:27:GLU:HB3	1.98	0.46
20:M:175:LYS:NZ	20:M:240:ASN:CB	2.79	0.46
21:N:870:ASN:OD1	21:N:871:MET:HG2	2.16	0.46
23:P:132:VAL:HA	23:P:171:MET:SD	2.55	0.46
23:P:145:GLU:O	23:P:149:GLU:HG3	2.16	0.46
24:Q:115:ILE:HG23	24:Q:141:LEU:CD1	2.46	0.46
26:S:227:ASN:OD1	26:S:263:ASP:CG	2.55	0.46
26:S:323:LEU:CD2	26:S:383:LEU:HD21	2.45	0.46
28:U:94:HIS:HD1	28:U:96:GLY:H	1.60	0.46
29:V:33:ALA:O	29:V:37:MET:HG3	2.16	0.46
1:1:59:VAL:HG21	1:1:82:PHE:CE1	2.51	0.45
3:3:63:ASN:HD22	10:C:96:GLN:NE2	2.14	0.45
15:H:280:VAL:O	15:H:280:VAL:HG12	2.16	0.45
15:H:387:ASN:O	15:H:391:ILE:HG13	2.16	0.45
16:I:178:THR:HG23	17:J:282:PHE:HA	1.98	0.45
16:I:250:SER:O	16:I:253:ILE:CG1	2.63	0.45
17:J:375:ILE:HB	25:R:204:TRP:CE3	2.51	0.45
19:L:269:TYR:CE2	19:L:273:HIS:NE2	2.84	0.45
21:N:49:LEU:HD21	21:N:55:PHE:CE1	2.51	0.45
21:N:707:ASN:HB3	21:N:711:ARG:CZ	2.46	0.45
23:P:235:LEU:CD2	23:P:276:LEU:HD11	2.46	0.45
23:P:293:LEU:HD23	23:P:293:LEU:O	2.16	0.45
27:T:38:ASN:O	27:T:39:LEU:CD2	2.64	0.45
28:U:154:PHE:N	28:U:154:PHE:HD1	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:223:HIS:CE1	28:U:224:THR:HB	2.49	0.45
31:X:73:THR:HG22	31:X:91:PHE:CD1	2.52	0.45
33:Z:318:LYS:CD	33:Z:496:ALA:O	2.62	0.45
33:Z:434:GLN:O	33:Z:437:ASP:HB2	2.16	0.45
1:1:7:THR:HA	1:1:12:VAL:HA	1.98	0.45
5:5:104:TYR:C	5:5:104:TYR:HD1	2.20	0.45
11:D:37:LYS:CE	11:D:145:PRO:HB2	2.46	0.45
12:E:48:LEU:CD1	12:E:145:ALA:HB3	2.25	0.45
12:E:48:LEU:HD21	12:E:155:LEU:HD13	1.98	0.45
12:E:165:TYR:O	12:E:167:TYR:CD1	2.69	0.45
15:H:251:PRO:O	15:H:254:THR:HG21	2.13	0.45
15:H:393:SER:OG	15:H:404:TRP:HH2	1.99	0.45
17:J:88:VAL:HG23	17:J:91:GLU:H	1.80	0.45
17:J:336:ASN:ND2	18:K:200:GLN:O	2.47	0.45
18:K:190:LEU:HB2	18:K:198:TYR:OH	2.15	0.45
19:L:389:ALA:HA	19:L:392:ARG:NH2	2.31	0.45
22:O:73:ILE:CG2	22:O:74:ASN:N	2.63	0.45
22:O:214:ALA:HB3	22:O:248:TYR:HH	1.79	0.45
23:P:60:ALA:HA	23:P:96:MET:HE1	1.98	0.45
28:U:19:LEU:HD11	29:V:208:LYS:HB2	1.96	0.45
29:V:104:VAL:HG11	29:V:107:TRP:HE1	1.81	0.45
29:V:117:TRP:HH2	29:V:157:ARG:C	2.20	0.45
33:Z:64:TYR:HE1	33:Z:111:LEU:O	2.00	0.45
33:Z:452:LEU:HD11	33:Z:485:ILE:CG2	2.44	0.45
33:Z:502:ASN:ND2	33:Z:505:VAL:HG23	2.31	0.45
33:Z:567:ALA:HB1	33:Z:599:ILE:HG12	1.97	0.45
1:1:8:PHE:CZ	1:1:179:THR:HG22	2.44	0.45
2:2:220:ILE:HD12	3:3:39:HIS:CE1	2.50	0.45
4:4:28:LYS:CE	5:5:127:PHE:CE2	3.00	0.45
9:B:68:THR:HB	9:B:69:PRO:HD2	1.98	0.45
9:B:236:ARG:NH1	9:B:238:LEU:CD2	2.79	0.45
11:D:11:PHE:HD2	12:E:26:TYR:HB2	1.82	0.45
13:F:117:GLN:HE21	13:F:121:GLN:NE2	2.14	0.45
15:H:397:SER:OG	15:H:436:LYS:HE2	2.17	0.45
17:J:274:GLU:HA	17:J:309:ARG:NH1	2.32	0.45
18:K:49:PHE:HE1	21:N:192:LEU:CB	2.29	0.45
19:L:206:ILE:CG1	19:L:209:ARG:HH22	2.28	0.45
19:L:311:GLN:NE2	19:L:316:ASP:HB2	2.32	0.45
20:M:50:ARG:CB	30:W:73:LEU:CB	2.95	0.45
22:O:341:ILE:CD1	22:O:348:VAL:HA	2.47	0.45
26:S:141:LEU:O	26:S:145:PHE:CZ	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:227:ASN:ND2	26:S:260:PRO:HD2	2.31	0.45
27:T:250:MET:O	27:T:251:HIS:HD2	1.93	0.45
28:U:288:PHE:O	28:U:291:LEU:HB2	2.16	0.45
29:V:185:ILE:HA	29:V:188:LEU:HD12	1.98	0.45
33:Z:361:HIS:HE1	33:Z:861:THR:O	1.98	0.45
33:Z:620:LEU:HD23	33:Z:743:ILE:HG13	1.98	0.45
1:1:119:VAL:HB	14:G:103:LYS:HZ3	1.71	0.45
3:3:79:THR:HG23	3:3:115:PHE:HZ	1.81	0.45
5:5:19:ARG:H	5:5:31:VAL:HG12	1.81	0.45
5:5:159:ARG:HH11	5:5:200:VAL:HG13	1.81	0.45
7:7:83:TYR:CE1	13:F:101:ARG:HG2	2.51	0.45
7:7:85:PHE:CD2	7:7:120:ARG:HD3	2.50	0.45
9:B:44:VAL:CG2	9:B:211:LEU:HD11	2.47	0.45
13:F:166:GLN:C	20:M:381:ARG:NH2	2.70	0.45
14:G:73:ILE:HG22	14:G:75:CYS:SG	2.57	0.45
16:I:176:SER:C	17:J:282:PHE:CD1	2.90	0.45
16:I:397:THR:O	17:J:179:ILE:HD12	2.16	0.45
18:K:258:PHE:CE1	18:K:299:LEU:HD23	2.52	0.45
19:L:132:ARG:CD	19:L:133:ASN:H	2.29	0.45
21:N:192:LEU:C	21:N:192:LEU:HD23	2.36	0.45
22:O:230:PHE:CE1	22:O:251:LEU:HD11	2.48	0.45
23:P:180:ILE:HD11	23:P:206:LYS:NZ	2.31	0.45
25:R:207:ARG:HH12	25:R:211:LYS:NZ	2.15	0.45
25:R:259:PHE:O	25:R:259:PHE:HD1	1.98	0.45
26:S:185:PHE:CD1	26:S:239:ARG:NH1	2.85	0.45
27:T:46:ILE:HD11	27:T:94:HIS:NE2	2.31	0.45
27:T:156:SER:HB3	27:T:159:LYS:CB	2.44	0.45
27:T:226:TRP:NE1	27:T:235:PHE:CD2	2.85	0.45
29:V:133:ASN:HD22	29:V:136:ALA:HB2	1.81	0.45
1:1:18:SER:O	1:1:19:ARG:HB2	2.17	0.45
7:7:8:TYR:CZ	7:7:11:GLY:N	2.84	0.45
7:7:74:ASP:HA	7:7:79:LEU:HD12	1.97	0.45
11:D:190:GLU:OE1	11:D:193:LYS:HE2	2.16	0.45
12:E:109:VAL:CG1	12:E:156:PHE:CG	2.99	0.45
15:H:175:GLY:H	15:H:183:ILE:HG13	1.82	0.45
15:H:382:LEU:HD13	15:H:385:ARG:HH21	1.82	0.45
16:I:196:GLU:OE2	16:I:200:LEU:HD23	2.16	0.45
16:I:299:GLU:O	16:I:303:GLN:HG2	2.16	0.45
18:K:171:TYR:CD2	18:K:225:ALA:HB1	2.52	0.45
18:K:262:ARG:NH1	18:K:311:ASN:HD21	2.13	0.45
20:M:327:THR:CG2	20:M:329:ARG:O	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:270:ILE:HG22	22:O:271:LYS:N	2.31	0.45
23:P:110:LEU:O	23:P:113:ASN:HB2	2.17	0.45
23:P:352:VAL:HG23	23:P:353:ILE:N	2.31	0.45
23:P:360:ILE:CD1	23:P:402:PHE:HZ	2.29	0.45
27:T:55:LEU:HD22	27:T:94:HIS:CD2	2.51	0.45
28:U:76:MET:CB	29:V:94:MET:HE1	2.45	0.45
29:V:113:GLY:O	29:V:114:PHE:CG	2.69	0.45
33:Z:546:ILE:CG2	33:Z:566:LEU:HD21	2.46	0.45
33:Z:973:TYR:CD2	33:Z:974:THR:HG22	2.51	0.45
1:1:-5:GLU:O	2:2:116:HIS:CE1	2.69	0.45
3:3:69:GLU:OE1	9:B:106:PRO:HG2	2.17	0.45
5:5:199:LYS:HG2	5:5:203:GLU:OE1	2.16	0.45
10:C:180:TYR:HE2	10:C:182:ASP:HA	1.76	0.45
12:E:15:PHE:CZ	13:F:126:ARG:HD2	2.50	0.45
13:F:51:ARG:HH21	13:F:204:GLU:CD	2.19	0.45
14:G:45:VAL:CG2	14:G:47:PHE:HE1	2.30	0.45
14:G:98:PHE:CE2	14:G:105:PRO:O	2.63	0.45
16:I:173:MET:H	17:J:231:ARG:NH2	2.13	0.45
16:I:417:LYS:O	16:I:421:GLU:HG3	2.16	0.45
17:J:153:LEU:O	17:J:157:ILE:HG13	2.16	0.45
17:J:329:ARG:CA	17:J:343:LEU:HD13	2.47	0.45
20:M:384:ASP:O	20:M:386:PHE:CD1	2.70	0.45
21:N:521:LEU:HD13	21:N:539:MET:SD	2.56	0.45
22:O:140:LYS:CD	22:O:141:ASN:ND2	2.78	0.45
22:O:196:LEU:HD21	22:O:242:ILE:CD1	2.46	0.45
22:O:344:VAL:O	22:O:345:ASN:ND2	2.49	0.45
23:P:213:TYR:HD2	23:P:217:LYS:HG2	1.82	0.45
23:P:433:ILE:CD1	28:U:203:LYS:HA	2.47	0.45
24:Q:65:TYR:HB2	24:Q:74:LEU:CD2	2.36	0.45
24:Q:195:LYS:HZ2	24:Q:229:ASP:HB3	1.81	0.45
24:Q:381:ILE:HG21	25:R:344:SER:HA	1.97	0.45
24:Q:426:LEU:HD21	28:U:292:ILE:HD11	1.98	0.45
25:R:301:TYR:HE2	25:R:359:VAL:HG13	1.81	0.45
26:S:471:LEU:CB	28:U:288:PHE:HE1	2.24	0.45
27:T:59:LYS:HD3	27:T:97:SER:HA	1.98	0.45
31:X:83:SER:OG	31:X:110:PRO:HG3	2.17	0.45
33:Z:103:TYR:CG	33:Z:116:ALA:HB2	2.48	0.45
33:Z:362:LEU:CD2	33:Z:858:GLY:O	2.65	0.45
33:Z:502:ASN:CG	33:Z:505:VAL:HG23	2.36	0.45
1:1:119:VAL:HB	14:G:103:LYS:HZ1	1.76	0.45
4:4:66:TYR:CG	4:4:74:LEU:HD11	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:-3:VAL:HG12	7:7:49:ILE:CB	2.45	0.45
9:B:127:VAL:HG22	9:B:128:ARG:O	2.17	0.45
11:D:122:GLN:HG3	12:E:134:MET:SD	2.56	0.45
14:G:45:VAL:CG2	14:G:47:PHE:CE1	2.99	0.45
16:I:225:PRO:HB3	17:J:309:ARG:HH21	1.80	0.45
18:K:226:VAL:O	18:K:230:THR:HG23	2.17	0.45
18:K:347:ARG:HG3	24:Q:215:VAL:CG1	2.46	0.45
20:M:219:LEU:CD1	20:M:325:ALA:HB3	2.47	0.45
21:N:328:PHE:CE1	21:N:696:LYS:HB2	2.50	0.45
21:N:399:PHE:HE2	21:N:438:ASP:OD1	2.00	0.45
22:O:193:LEU:HD13	22:O:236:HIS:CD2	2.51	0.45
23:P:397:ALA:HB1	23:P:399:ILE:HD12	1.98	0.45
25:R:34:THR:HG22	25:R:70:TYR:HB2	1.98	0.45
26:S:173:LEU:O	26:S:174:ARG:NH1	2.43	0.45
26:S:189:LEU:HD12	26:S:193:THR:HB	1.99	0.45
26:S:364:ILE:HD13	26:S:380:CYS:HB3	1.99	0.45
33:Z:528:LEU:HD11	33:Z:565:PHE:CD1	2.51	0.45
33:Z:551:LEU:CB	33:Z:593:HIS:NE2	2.80	0.45
33:Z:624:LEU:CD1	33:Z:736:LEU:O	2.64	0.45
1:1:38:HIS:NE2	1:1:73:PRO:HD2	2.31	0.45
3:3:140:MET:CG	3:3:168:ARG:HH22	2.30	0.45
5:5:33:ARG:NH1	5:5:46:ALA:HB2	2.31	0.45
7:7:42:VAL:HG23	7:7:192:ILE:HD11	1.99	0.45
7:7:62:LEU:HD21	7:7:87:TYR:CE2	2.52	0.45
11:D:34:VAL:HB	11:D:199:LEU:HD21	1.97	0.45
11:D:45:GLY:HA3	11:D:199:LEU:CD1	2.47	0.45
12:E:50:VAL:HG22	12:E:67:ILE:HD11	1.99	0.45
17:J:88:VAL:HB	17:J:90:PRO:HD2	1.97	0.45
19:L:174:GLU:HG2	19:L:175:GLN:CD	2.38	0.45
21:N:774:ASN:ND2	21:N:885:ILE:CD1	2.80	0.45
24:Q:426:LEU:HD23	24:Q:426:LEU:O	2.16	0.45
25:R:147:LYS:HD3	25:R:181:TYR:CZ	2.52	0.45
25:R:153:THR:O	25:R:156:LYS:HB2	2.17	0.45
25:R:422:ARG:HH22	26:S:301:PRO:CG	2.30	0.45
26:S:144:LEU:C	26:S:155:LEU:HD13	2.37	0.45
26:S:175:SER:HB2	26:S:229:THR:HG1	1.77	0.45
29:V:25:GLU:OE2	29:V:157:ARG:NH1	2.50	0.45
29:V:118:LEU:HD12	29:V:140:VAL:CG2	2.47	0.45
31:X:8:ILE:HG22	31:X:124:LYS:CD	2.44	0.45
33:Z:53:VAL:O	33:Z:56:LEU:HB2	2.17	0.45
33:Z:570:LEU:CD1	33:Z:599:ILE:HG21	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:120:HIS:HB2	7:7:28:PHE:CZ	2.52	0.45
2:2:200:GLN:O	2:2:201:LYS:HB2	2.17	0.45
3:3:-2:ASN:CA	3:3:19:ARG:NH1	2.80	0.45
3:3:61:LYS:HZ2	3:3:85:SER:CB	2.28	0.45
8:A:57:LYS:NZ	8:A:66:PRO:O	2.47	0.45
10:C:208:TYR:CA	10:C:235:ILE:HG21	2.44	0.45
11:D:45:GLY:HA3	11:D:199:LEU:HD11	1.99	0.45
13:F:128:TYR:HB3	13:F:130:VAL:HG12	1.99	0.45
13:F:166:GLN:HA	20:M:381:ARG:HH21	1.72	0.45
14:G:161:GLY:HA3	14:G:175:LEU:HD21	1.97	0.45
14:G:217:TRP:O	14:G:217:TRP:HD1	2.00	0.45
15:H:271:PHE:CZ	15:H:273:ARG:CZ	3.00	0.45
17:J:87:LYS:HD2	17:J:93:LYS:HE2	1.99	0.45
17:J:165:GLU:OE2	17:J:205:HIS:CD2	2.70	0.45
20:M:129:LEU:C	20:M:129:LEU:HD12	2.37	0.45
21:N:745:LEU:O	21:N:748:PHE:HD2	1.99	0.45
21:N:758:VAL:H	21:N:874:ILE:HD12	1.82	0.45
23:P:286:ASN:O	23:P:293:LEU:CD1	2.65	0.45
26:S:163:VAL:HG21	26:S:184:TRP:CZ3	2.37	0.45
27:T:143:SER:O	27:T:147:LYS:HG3	2.16	0.45
28:U:40:ASP:HB2	28:U:47:ARG:HE	1.82	0.45
28:U:40:ASP:HB2	28:U:47:ARG:NE	2.32	0.45
29:V:261:LEU:HD11	29:V:283:THR:HG21	1.67	0.45
30:W:132:LEU:HD22	30:W:137:VAL:HG21	1.99	0.45
30:W:182:TYR:C	30:W:183:GLU:HG3	2.31	0.45
33:Z:315:ALA:CA	33:Z:327:GLN:HE22	2.29	0.45
33:Z:889:VAL:H	33:Z:894:MET:HE3	1.79	0.45
1:1:-2:LEU:C	1:1:-2:LEU:HD12	2.37	0.45
1:1:29:ARG:HE	1:1:30:VAL:HG23	1.82	0.45
11:D:236:ILE:O	11:D:240:LYS:HG3	2.17	0.45
20:M:186:LEU:CD1	20:M:231:LEU:HD21	2.47	0.45
21:N:70:TYR:CE2	26:S:219:LYS:CE	2.86	0.45
21:N:227:LYS:HA	21:N:724:THR:HG21	1.99	0.45
22:O:185:PHE:CE2	22:O:219:ILE:CG2	2.86	0.45
24:Q:288:LYS:NZ	24:Q:296:ILE:HG21	2.32	0.45
25:R:72:VAL:O	25:R:72:VAL:HG12	2.16	0.45
26:S:211:ARG:NE	26:S:240:ASP:HB3	2.30	0.45
27:T:4:LEU:O	27:T:5:ALA:HB3	2.17	0.45
27:T:224:ARG:HB3	27:T:242:LYS:HB2	1.98	0.45
28:U:37:ILE:HD13	28:U:121:LEU:HD11	1.97	0.45
31:X:40:GLU:C	31:X:41:GLU:HG2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:41:GLU:CB	31:X:45:PHE:HB2	2.47	0.45
1:1:82:PHE:O	1:1:86:CYS:SG	2.72	0.44
5:5:150:VAL:HG23	5:5:179:HIS:CE1	2.52	0.44
5:5:159:ARG:NH1	5:5:200:VAL:HG13	2.32	0.44
7:7:-3:VAL:CG1	7:7:49:ILE:CG1	2.93	0.44
7:7:103:TRP:CD1	7:7:103:TRP:O	2.70	0.44
8:A:57:LYS:CE	8:A:69:VAL:HG11	2.21	0.44
9:B:12:PHE:CZ	9:B:18:LEU:HD21	2.52	0.44
9:B:179:TRP:NE1	9:B:183:LEU:HB3	2.32	0.44
15:H:98:GLN:NE2	15:H:193:PRO:O	2.50	0.44
16:I:75:PHE:CD2	16:I:76:VAL:N	2.85	0.44
16:I:102:ASN:ND2	17:J:83:LYS:NZ	2.62	0.44
17:J:234:PHE:HZ	17:J:279:LEU:HD21	1.49	0.44
18:K:349:ARG:HH11	18:K:377:SER:N	2.01	0.44
19:L:336:ALA:HA	19:L:339:ARG:HH21	1.82	0.44
19:L:362:LYS:CA	19:L:376:PHE:CE2	2.93	0.44
21:N:19:SER:C	27:T:35:ILE:HG12	2.36	0.44
21:N:759:ILE:HG12	21:N:902:VAL:HG12	1.99	0.44
22:O:373:TRP:NE1	28:U:200:LEU:HD11	2.32	0.44
23:P:425:HIS:CD2	28:U:225:ILE:CB	3.00	0.44
24:Q:124:PHE:CD1	24:Q:127:ARG:NH2	2.85	0.44
26:S:185:PHE:HE1	26:S:239:ARG:NH1	2.14	0.44
28:U:152:LYS:HG2	28:U:154:PHE:CZ	2.53	0.44
30:W:142:ILE:HG22	30:W:185:ILE:HD12	1.99	0.44
1:1:82:PHE:CE2	1:1:99:VAL:HG21	2.53	0.44
3:3:80:GLN:HG2	9:B:102:GLY:HA3	1.99	0.44
4:4:55:PHE:CE2	4:4:59:ILE:HG13	2.52	0.44
5:5:40:PHE:CE2	5:5:41:LEU:CG	3.00	0.44
7:7:119:LEU:HD23	7:7:131:SER:O	2.17	0.44
7:7:121:TYR:HE1	7:7:123:ASN:HB3	1.82	0.44
8:A:39:ASN:ND2	8:A:58:LYS:HD2	2.21	0.44
9:B:82:TYR:CE1	9:B:134:LEU:HD21	2.53	0.44
12:E:165:TYR:O	12:E:167:TYR:HE1	1.98	0.44
13:F:38:LEU:CD2	13:F:189:LEU:CD1	2.96	0.44
17:J:61:GLU:O	17:J:65:LEU:HG	2.17	0.44
17:J:248:ASP:O	17:J:249:GLU:HB3	2.18	0.44
20:M:163:PHE:CE1	20:M:261:LYS:HE3	2.52	0.44
21:N:5:THR:HG23	21:N:8:PRO:CD	2.47	0.44
21:N:17:GLN:H	21:N:20:VAL:CG2	2.29	0.44
21:N:170:LEU:O	21:N:174:LEU:HG	2.17	0.44
21:N:258:ALA:CB	21:N:289:ILE:HG21	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:300:ASN:HD22	21:N:920:VAL:HG21	1.82	0.44
22:O:210:ARG:NH2	22:O:242:ILE:CG1	2.80	0.44
23:P:221:TYR:HE2	23:P:244:ILE:HD13	1.82	0.44
25:R:126:GLY:O	25:R:127:GLU:HB2	2.16	0.44
25:R:331:ARG:NH2	25:R:367:ASP:HB3	2.33	0.44
30:W:120:ASP:O	30:W:121:SER:O	2.35	0.44
31:X:33:ILE:CG1	31:X:48:PHE:CZ	2.99	0.44
31:X:46:TRP:CH2	31:X:131:ASN:HB2	2.52	0.44
33:Z:551:LEU:HD23	33:Z:551:LEU:C	2.38	0.44
1:1:120:HIS:HB2	7:7:28:PHE:CE1	2.53	0.44
3:3:59:ARG:NE	10:C:99:LEU:HD21	2.32	0.44
7:7:123:ASN:HD21	7:7:127:VAL:HB	1.81	0.44
8:A:51:THR:HB	8:A:228:ALA:HB3	1.98	0.44
10:C:68:LYS:HD2	10:C:229:ILE:HD11	1.98	0.44
13:F:33:SER:HA	13:F:51:ARG:NH1	2.32	0.44
16:I:243:THR:HG22	16:I:245:LEU:CG	2.47	0.44
17:J:133:LEU:HD23	17:J:137:MET:SD	2.57	0.44
17:J:142:VAL:HG12	17:J:204:HIS:CE1	2.51	0.44
19:L:335:PRO:O	19:L:339:ARG:HG3	2.16	0.44
21:N:664:LEU:O	21:N:706:MET:CE	2.65	0.44
22:O:69:PHE:HE2	22:O:78:VAL:N	2.15	0.44
22:O:303:LYS:O	22:O:304:ASN:CG	2.55	0.44
23:P:214:GLU:O	23:P:218:LEU:HG	2.18	0.44
26:S:176:LEU:HG	26:S:179:ILE:O	2.18	0.44
26:S:395:ILE:HD12	26:S:410:LYS:HD3	1.98	0.44
26:S:471:LEU:HB2	28:U:288:PHE:HZ	1.76	0.44
29:V:108:TYR:O	29:V:109:HIS:CG	2.70	0.44
30:W:16:SER:CB	30:W:25:ARG:NH1	2.81	0.44
30:W:65:PHE:CZ	30:W:102:GLN:OE1	2.71	0.44
33:Z:563:VAL:HG11	33:Z:595:MET:HE3	2.00	0.44
1:1:45:ARG:HE	1:1:52:THR:CB	2.29	0.44
8:A:79:ILE:CD1	8:A:112:MET:HB3	2.47	0.44
10:C:137:TYR:HE1	10:C:151:SER:OG	2.01	0.44
11:D:188:VAL:CG2	11:D:216:LYS:HE2	2.48	0.44
14:G:140:VAL:CB	14:G:220:LEU:CD2	2.84	0.44
16:I:300:ARG:O	16:I:304:ARG:HG3	2.17	0.44
16:I:380:LEU:HD11	16:I:416:PHE:HB3	1.98	0.44
17:J:364:GLU:OE1	17:J:388:LYS:HD3	2.18	0.44
20:M:49:GLN:CG	30:W:73:LEU:HD11	2.48	0.44
20:M:307:GLU:CD	20:M:311:GLN:HE21	2.19	0.44
21:N:419:THR:O	21:N:423:LEU:HG	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:179:PHE:HB3	22:O:188:PHE:HB2	1.99	0.44
24:Q:46:VAL:O	24:Q:50:ARG:HB2	2.10	0.44
24:Q:138:SER:HB2	24:Q:161:LEU:HD11	1.96	0.44
24:Q:326:MET:HB3	24:Q:332:ARG:HD3	1.99	0.44
25:R:263:ARG:HH11	25:R:296:LEU:C	2.20	0.44
27:T:245:TYR:CE2	27:T:251:HIS:NE2	2.76	0.44
29:V:117:TRP:NE1	29:V:196:TYR:CG	2.49	0.44
1:1:6:VAL:CB	1:1:155:ILE:HD11	2.46	0.44
7:7:13:ILE:HD12	7:7:165:ALA:HB1	2.00	0.44
8:A:133:TYR:HB3	9:B:5:TYR:CE2	2.53	0.44
10:C:137:TYR:HE1	10:C:151:SER:HG	1.64	0.44
13:F:7:ASP:HA	13:F:21:GLN:HE21	1.83	0.44
15:H:105:ILE:CG2	15:H:145:TYR:O	2.61	0.44
17:J:102:ILE:HD11	17:J:122:LEU:HB2	2.00	0.44
19:L:105:ILE:HG12	19:L:159:LEU:CD1	2.47	0.44
21:N:255:ALA:O	21:N:259:PHE:CD2	2.70	0.44
21:N:884:PHE:CE2	21:N:896:PHE:HB2	2.53	0.44
22:O:261:GLY:CA	22:O:288:ARG:HH22	2.30	0.44
25:R:241:ILE:HG22	25:R:242:GLU:N	2.33	0.44
25:R:339:ALA:O	25:R:342:LEU:HB3	2.18	0.44
29:V:88:GLN:HG3	29:V:92:MET:HE2	1.99	0.44
29:V:127:LYS:HZ1	29:V:194:ARG:NH2	2.15	0.44
30:W:16:SER:CA	30:W:25:ARG:HH11	2.29	0.44
31:X:26:PRO:O	31:X:27:ILE:HD13	2.18	0.44
31:X:45:PHE:CD1	31:X:68:LEU:O	2.71	0.44
33:Z:612:GLY:HA2	33:Z:616:LEU:HD12	1.99	0.44
33:Z:850:LEU:HD21	33:Z:901:PHE:CE1	2.53	0.44
2:2:8:PHE:CE1	2:2:13:VAL:HG23	2.52	0.44
5:5:60:GLY:O	5:5:64:ARG:HG3	2.18	0.44
7:7:85:PHE:CZ	7:7:120:ARG:HG2	2.53	0.44
17:J:145:SER:OG	17:J:201:ALA:HB2	2.18	0.44
19:L:81:ILE:HG22	19:L:82:ARG:HA	2.00	0.44
19:L:135:VAL:HB	19:L:158:ILE:HD11	2.00	0.44
19:L:374:PHE:N	19:L:374:PHE:HD1	2.15	0.44
20:M:383:THR:HB	20:M:386:PHE:CE1	2.53	0.44
23:P:290:LEU:HB2	23:P:293:LEU:CB	2.48	0.44
24:Q:363:SER:O	24:Q:366:ILE:HG22	2.17	0.44
25:R:110:ILE:CG2	25:R:114:ASN:ND2	2.80	0.44
26:S:295:ALA:HA	26:S:298:ARG:NE	2.32	0.44
27:T:182:LYS:HG2	27:T:186:ARG:NE	2.33	0.44
28:U:52:PHE:CZ	28:U:80:CYS:SG	3.10	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:189:ALA:HB3	33:Z:196:SER:HB2	1.99	0.44
33:Z:276:ASN:O	33:Z:277:GLU:HB2	2.18	0.44
33:Z:448:LYS:O	33:Z:451:ALA:HB3	2.17	0.44
33:Z:457:ILE:HD11	33:Z:902:TYR:CD1	2.52	0.44
33:Z:610:GLY:O	33:Z:748:LEU:CB	2.62	0.44
33:Z:613:ASP:H	33:Z:616:LEU:HB2	1.83	0.44
1:1:19:ARG:CZ	1:1:26:ILE:HG21	2.48	0.44
4:4:147:TYR:CE1	4:4:151:MET:HB2	2.51	0.44
8:A:79:ILE:HD11	8:A:112:MET:O	2.18	0.44
14:G:140:VAL:HB	14:G:220:LEU:CD1	2.42	0.44
15:H:155:PHE:CE1	20:M:77:TYR:O	2.71	0.44
16:I:366:THR:HA	16:I:369:MET:SD	2.58	0.44
18:K:236:ARG:HH21	19:L:310:THR:CG2	2.11	0.44
19:L:374:PHE:CD1	19:L:374:PHE:N	2.84	0.44
20:M:196:ALA:CB	20:M:345:ARG:HG3	2.47	0.44
21:N:96:GLN:HE22	26:S:220:ILE:HD13	1.83	0.44
21:N:406:TYR:HD1	21:N:448:LEU:HB2	1.83	0.44
21:N:510:HIS:NE2	29:V:60:ASP:HB2	2.33	0.44
22:O:26:PHE:CD1	22:O:61:LEU:CD2	3.00	0.44
22:O:359:SER:O	22:O:363:ILE:HD12	2.18	0.44
23:P:115:ARG:HH22	23:P:142:ASP:CB	2.29	0.44
23:P:302:LEU:CB	23:P:310:ARG:NE	2.62	0.44
24:Q:7:LYS:CB	24:Q:30:LEU:HD13	2.47	0.44
24:Q:250:THR:CG2	24:Q:251:THR:H	2.14	0.44
24:Q:298:ALA:HB1	24:Q:325:LEU:HD22	1.98	0.44
24:Q:429:LYS:HE3	29:V:269:ARG:NH2	2.27	0.44
28:U:132:LEU:CD2	28:U:134:THR:O	2.66	0.44
33:Z:359:LYS:HZ3	33:Z:429:ASN:ND2	2.12	0.44
1:1:66:TYR:CD2	1:1:73:PRO:HB3	2.53	0.44
2:2:149:GLU:CG	2:2:153:LYS:HE3	2.48	0.44
3:3:59:ARG:HE	10:C:99:LEU:HD21	1.81	0.44
5:5:55:TRP:NE1	6:6:89:TYR:OH	2.28	0.44
7:7:170:VAL:CG1	7:7:174:ARG:NH2	2.81	0.44
15:H:397:SER:C	15:H:398:VAL:HG13	2.37	0.44
16:I:255:LYS:NZ	17:J:267:GLU:OE1	2.51	0.44
16:I:349:LEU:HD12	16:I:349:LEU:C	2.39	0.44
17:J:150:VAL:CG1	17:J:197:LEU:CD1	2.95	0.44
18:K:370:SER:O	18:K:374:ARG:HG3	2.18	0.44
19:L:259:SER:HB3	19:L:303:ARG:HH12	1.77	0.44
22:O:203:THR:OG1	22:O:204:SER:N	2.49	0.44
22:O:341:ILE:CD1	22:O:348:VAL:HG22	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:377:VAL:HG21	28:U:200:LEU:HD11	2.00	0.44
23:P:188:ILE:HD13	23:P:226:LYS:HB3	1.99	0.44
25:R:261:LEU:O	25:R:336:LYS:NZ	2.49	0.44
27:T:197:TYR:CG	27:T:198:ASP:H	1.73	0.44
28:U:276:ILE:HB	29:V:291:ASN:ND2	2.32	0.44
33:Z:121:ILE:O	33:Z:125:THR:HG23	2.18	0.44
33:Z:312:TYR:HH	33:Z:348:LEU:HD23	1.82	0.44
33:Z:315:ALA:HA	33:Z:327:GLN:HE22	1.83	0.44
1:1:175:MET:CE	1:1:188:PHE:HE1	2.30	0.44
1:1:188:PHE:HA	1:1:192:GLU:OE1	2.17	0.44
5:5:77:ALA:CB	5:5:121:ARG:NH2	2.81	0.44
7:7:68:TYR:CZ	14:G:92:ARG:HG2	2.52	0.44
11:D:133:THR:OG1	11:D:150:THR:OG1	2.36	0.44
12:E:127:ALA:HB3	12:E:130:GLU:HG2	2.00	0.44
15:H:390:ARG:CA	15:H:404:TRP:CZ2	2.75	0.44
18:K:200:GLN:CD	25:R:204:TRP:CZ3	2.88	0.44
19:L:173:PHE:HZ	19:L:177:GLU:HB3	1.75	0.44
20:M:50:ARG:HB3	30:W:73:LEU:CG	2.48	0.44
20:M:170:MET:CE	20:M:269:LEU:HD12	2.47	0.44
20:M:267:PHE:CZ	20:M:315:PHE:CD2	3.06	0.44
21:N:399:PHE:HA	21:N:441:VAL:HG11	2.00	0.44
21:N:510:HIS:CE1	21:N:512:ASN:CB	3.00	0.44
21:N:771:PHE:HE2	21:N:885:ILE:CG2	2.30	0.44
24:Q:48:ASP:CG	24:Q:49:LYS:H	2.22	0.44
24:Q:279:LYS:O	24:Q:282:LEU:HB2	2.18	0.44
26:S:241:PHE:CZ	26:S:253:PHE:CZ	3.06	0.44
33:Z:612:GLY:C	33:Z:616:LEU:HD12	2.38	0.44
33:Z:839:SER:O	33:Z:842:GLN:HG3	2.18	0.44
5:5:19:ARG:HD2	5:5:172:GLY:N	2.33	0.43
5:5:107:LYS:O	5:5:108:GLU:HG3	2.18	0.43
8:A:46:ARG:HH21	8:A:152:PRO:HD2	1.83	0.43
8:A:219:SER:HB2	8:A:222:ASP:OD2	2.18	0.43
12:E:122:ARG:CD	12:E:131:GLU:O	2.66	0.43
15:H:154:LYS:HZ2	20:M:162:GLU:HG2	1.82	0.43
15:H:183:ILE:O	15:H:183:ILE:CG2	2.54	0.43
15:H:248:LEU:HB2	15:H:256:LYS:HD3	2.00	0.43
16:I:208:TYR:CE2	16:I:215:PRO:CB	2.84	0.43
17:J:126:LEU:HD21	18:K:103:ILE:HD13	2.00	0.43
21:N:25:LEU:CD2	21:N:64:ILE:HD12	2.48	0.43
21:N:258:ALA:HB1	21:N:289:ILE:HG21	2.00	0.43
22:O:245:ASP:O	22:O:246:SER:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:258:LEU:HB3	22:O:291:ILE:CD1	2.48	0.43
22:O:345:ASN:HD21	23:P:359:ARG:HH11	1.66	0.43
23:P:133:GLU:N	23:P:171:MET:SD	2.82	0.43
23:P:202:LYS:HG2	23:P:206:LYS:HE3	1.99	0.43
25:R:259:PHE:CE2	25:R:329:PHE:CD1	3.05	0.43
31:X:46:TRP:HB2	31:X:68:LEU:CD1	2.32	0.43
31:X:72:GLU:O	31:X:72:GLU:HG2	2.18	0.43
33:Z:72:LYS:NZ	33:Z:117:ASP:OD2	2.49	0.43
33:Z:426:TYR:CD2	33:Z:432:GLY:HA3	2.53	0.43
33:Z:884:THR:HG22	33:Z:888:LEU:HD13	1.99	0.43
1:1:8:PHE:CE2	1:1:10:ASP:CA	3.01	0.43
1:1:36:ARG:N	1:1:42:TRP:CE3	2.85	0.43
3:3:17:ASP:C	3:3:17:ASP:OD1	2.56	0.43
8:A:74:CYS:SG	8:A:233:PHE:HD2	2.41	0.43
10:C:208:TYR:CA	10:C:235:ILE:CG2	2.95	0.43
12:E:165:TYR:C	12:E:167:TYR:HE1	2.20	0.43
14:G:182:HIS:HB3	14:G:186:LEU:HG	1.99	0.43
15:H:393:SER:HA	15:H:396:MET:CE	2.48	0.43
16:I:167:MET:CG	16:I:270:VAL:CG1	2.96	0.43
17:J:300:LEU:C	17:J:304:LEU:HD12	2.35	0.43
17:J:329:ARG:HA	17:J:343:LEU:CD1	2.48	0.43
18:K:67:TYR:CD1	18:K:67:TYR:C	2.92	0.43
18:K:153:ASP:HB2	19:L:110:LYS:HZ2	1.83	0.43
19:L:163:THR:O	19:L:164:ASP:HB2	2.16	0.43
19:L:236:ALA:CB	19:L:277:ILE:HD12	2.41	0.43
20:M:166:ARG:C	20:M:167:VAL:HG22	2.39	0.43
20:M:357:ARG:HH22	20:M:385:GLU:H	1.65	0.43
22:O:134:ALA:HB3	22:O:153:LEU:HD21	2.00	0.43
22:O:137:TYR:HD2	22:O:149:LEU:HD21	1.83	0.43
22:O:365:LYS:CB	22:O:369:ARG:HH12	2.14	0.43
25:R:23:ASN:HD21	25:R:143:GLN:NE2	2.16	0.43
25:R:316:LEU:HD23	25:R:322:LEU:HD13	2.00	0.43
26:S:187:ILE:HG23	26:S:188:TYR:CD1	2.54	0.43
27:T:197:TYR:CG	27:T:235:PHE:CG	3.04	0.43
28:U:76:MET:HB2	29:V:94:MET:CE	2.46	0.43
28:U:231:ASP:OD1	28:U:232:VAL:N	2.51	0.43
29:V:40:HIS:CG	29:V:70:ALA:HB2	2.52	0.43
31:X:85:ARG:O	31:X:100:TRP:CD1	2.70	0.43
33:Z:491:LEU:CD2	33:Z:900:LEU:CD1	2.95	0.43
33:Z:504:GLU:O	33:Z:508:LEU:HG	2.18	0.43
4:4:60:GLN:HE21	4:4:64:GLN:CD	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:7:8:TYR:CE1	7:7:11:GLY:CA	3.01	0.43
13:F:34:VAL:H	13:F:51:ARG:HH12	1.64	0.43
15:H:290:MET:O	15:H:294:LEU:HG	2.19	0.43
16:I:148:LEU:CD1	17:J:95:ILE:HG21	2.47	0.43
17:J:111:GLN:NE2	17:J:125:VAL:HG12	2.33	0.43
17:J:119:SER:C	17:J:120:TYR:CD1	2.91	0.43
18:K:99:PHE:CZ	18:K:102:PRO:HD3	2.53	0.43
18:K:141:ARG:HH11	19:L:153:LEU:CD1	2.30	0.43
18:K:245:LYS:NZ	19:L:299:ARG:HE	2.16	0.43
19:L:132:ARG:NH1	19:L:156:MET:CG	2.79	0.43
23:P:132:VAL:O	23:P:133:GLU:CB	2.66	0.43
23:P:425:HIS:CD2	28:U:225:ILE:CG1	3.00	0.43
24:Q:151:TYR:CZ	24:Q:187:LYS:CG	2.94	0.43
27:T:43:ASP:OD1	27:T:44:LEU:N	2.48	0.43
31:X:73:THR:CG2	31:X:91:PHE:HE1	2.30	0.43
31:X:85:ARG:O	31:X:100:TRP:HD1	2.01	0.43
33:Z:64:TYR:CD1	33:Z:111:LEU:HD22	2.53	0.43
33:Z:318:LYS:HZ1	33:Z:459:ALA:C	2.19	0.43
33:Z:367:SER:OG	33:Z:859:LYS:O	2.35	0.43
33:Z:491:LEU:CD2	33:Z:900:LEU:HD11	2.44	0.43
33:Z:760:HIS:HD1	33:Z:761:PHE:HD1	1.65	0.43
1:1:122:LEU:CD2	7:7:28:PHE:CD1	2.95	0.43
2:2:81:GLN:HA	2:2:84:LYS:HE2	2.00	0.43
7:7:54:HIS:O	7:7:58:LEU:HG	2.18	0.43
8:A:46:ARG:CG	8:A:152:PRO:HB2	2.48	0.43
9:B:156:TYR:CD1	10:C:81:THR:HG21	2.52	0.43
13:F:156:LEU:HG	14:G:58:LEU:HD23	2.01	0.43
14:G:137:PHE:CE2	14:G:148:TYR:HB2	2.53	0.43
14:G:149:MET:HB3	14:G:159:TYR:CE1	2.53	0.43
15:H:65:GLU:HG3	16:I:133:LEU:HB2	2.00	0.43
16:I:243:THR:HG22	16:I:245:LEU:HG	2.00	0.43
17:J:329:ARG:HA	17:J:343:LEU:HD13	2.00	0.43
19:L:383:SER:OG	19:L:386:PHE:CG	2.67	0.43
21:N:65:ALA:O	21:N:69:TYR:CD2	2.72	0.43
21:N:158:LEU:CD1	21:N:192:LEU:CD2	2.96	0.43
22:O:41:LEU:HD11	22:O:47:LYS:HG2	2.01	0.43
22:O:377:VAL:HG21	28:U:200:LEU:HD12	2.00	0.43
22:O:377:VAL:HA	28:U:193:GLN:HE22	1.83	0.43
23:P:147:LYS:HZ1	23:P:159:ILE:HG13	1.81	0.43
25:R:154:LEU:HD21	25:R:173:THR:CG2	2.46	0.43
26:S:182:LYS:HE3	26:S:309:PHE:CZ	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:197:TYR:CD1	27:T:235:PHE:CG	3.05	0.43
28:U:61:LYS:NZ	30:W:127:ARG:HB3	2.34	0.43
30:W:46:GLU:HB3	30:W:106:GLN:HE22	1.81	0.43
31:X:10:PHE:C	31:X:33:ILE:CG2	2.82	0.43
31:X:85:ARG:NE	31:X:115:SER:CB	2.81	0.43
33:Z:49:LEU:HD11	33:Z:55:ARG:CZ	2.48	0.43
33:Z:516:THR:HB	33:Z:554:THR:HB	1.99	0.43
1:1:4:MET:O	1:1:14:LEU:HD12	2.19	0.43
2:2:3:ILE:HD13	2:2:46:ALA:HB2	2.00	0.43
4:4:69:ARG:CA	11:D:90:ARG:NH1	2.82	0.43
4:4:72:TYR:HH	4:4:109:LYS:HE3	1.80	0.43
4:4:118:ILE:HG12	4:4:124:LYS:HG3	2.01	0.43
5:5:135:PHE:HB2	5:5:167:ARG:HH12	1.84	0.43
5:5:135:PHE:HB2	5:5:167:ARG:NH2	2.33	0.43
8:A:48:LYS:HD2	8:A:195:ASN:HA	2.00	0.43
8:A:81:MET:SD	8:A:143:PHE:HE2	2.36	0.43
9:B:117:ILE:HG22	9:B:130:PHE:HE2	1.83	0.43
12:E:163:THR:HB	12:E:165:TYR:CE1	2.53	0.43
13:F:31:GLN:HA	20:M:430:VAL:HG11	1.93	0.43
13:F:49:LEU:HD23	13:F:51:ARG:CZ	2.49	0.43
14:G:69:VAL:HG11	14:G:111:PHE:CE1	2.53	0.43
15:H:271:PHE:CZ	15:H:273:ARG:NH2	2.87	0.43
18:K:294:ARG:NH1	18:K:298:GLU:HB2	2.33	0.43
18:K:300:LEU:C	18:K:333:ARG:HH22	2.15	0.43
19:L:186:LEU:HD23	19:L:387:ASN:OD1	2.17	0.43
19:L:259:SER:HB3	19:L:303:ARG:NH1	2.33	0.43
20:M:228:LYS:CE	20:M:326:ALA:HB1	2.45	0.43
21:N:208:ARG:CG	21:N:232:LEU:HD13	2.48	0.43
21:N:307:LYS:NZ	21:N:345:ASP:OD2	2.50	0.43
22:O:103:LYS:CA	22:O:129:ILE:HD11	2.43	0.43
23:P:425:HIS:NE2	28:U:225:ILE:HA	2.33	0.43
25:R:32:LEU:CD2	25:R:318:PRO:HA	2.48	0.43
25:R:252:TYR:CD1	25:R:321:TYR:CB	2.98	0.43
26:S:197:SER:O	26:S:198:SER:HB3	2.19	0.43
26:S:232:MET:HE3	26:S:268:LEU:HD13	2.01	0.43
28:U:123:VAL:CG1	28:U:125:VAL:HG13	2.49	0.43
29:V:111:HIS:CD2	29:V:140:VAL:HG21	2.51	0.43
33:Z:138:ARG:NE	33:Z:203:LEU:HD11	2.34	0.43
33:Z:357:ILE:HG23	33:Z:960:GLY:C	2.38	0.43
33:Z:427:GLN:O	33:Z:428:TRP:HB2	2.19	0.43
1:1:59:VAL:HG21	1:1:82:PHE:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:4:LEU:C	5:5:4:LEU:HD12	2.39	0.43
6:6:193:LEU:HB2	6:6:210:LEU:HD11	2.01	0.43
7:7:129:TYR:CE2	7:7:134:LEU:CD2	3.01	0.43
11:D:144:GLU:HA	11:D:145:PRO:HD3	1.64	0.43
12:E:165:TYR:CG	12:E:167:TYR:OH	2.71	0.43
12:E:241:LYS:O	12:E:244:LYS:HG2	2.19	0.43
15:H:175:GLY:HA2	15:H:183:ILE:HB	1.94	0.43
15:H:393:SER:HB2	15:H:404:TRP:CZ2	2.53	0.43
16:I:148:LEU:HD11	17:J:95:ILE:HG22	1.99	0.43
16:I:380:LEU:HD13	16:I:416:PHE:HB3	2.00	0.43
16:I:433:GLU:O	16:I:436:TYR:CE2	2.71	0.43
17:J:324:ARG:NH2	17:J:352:GLY:N	2.61	0.43
19:L:181:ASP:OD1	19:L:182:GLY:N	2.52	0.43
21:N:716:GLN:HG3	21:N:718:GLU:H	1.84	0.43
25:R:259:PHE:HD2	25:R:329:PHE:CE1	2.29	0.43
25:R:357:PHE:CD1	25:R:357:PHE:N	2.87	0.43
27:T:226:TRP:NE1	27:T:235:PHE:CE2	2.85	0.43
28:U:35:GLY:HA3	28:U:93:TYR:CG	2.53	0.43
33:Z:192:GLY:O	33:Z:193:PHE:CB	2.64	0.43
33:Z:862:MET:HG2	33:Z:910:PRO:HA	1.99	0.43
5:5:135:PHE:HB2	5:5:167:ARG:CZ	2.49	0.43
7:7:17:ASP:C	7:7:17:ASP:OD1	2.57	0.43
7:7:169:ILE:CG2	7:7:189:LEU:HD11	2.48	0.43
8:A:69:VAL:HA	14:G:157:TRP:CZ3	2.54	0.43
8:A:96:ARG:HH12	8:A:137:LEU:HD11	1.82	0.43
9:B:85:LEU:CD2	9:B:118:MET:HE2	2.48	0.43
10:C:45:VAL:HG21	10:C:189:ALA:HB3	1.98	0.43
15:H:389:PHE:HE1	15:H:422:VAL:HB	1.84	0.43
16:I:340:ARG:HH12	16:I:343:ARG:CD	2.17	0.43
18:K:393:ARG:HD2	18:K:410:ALA:HB1	2.00	0.43
19:L:373:GLU:C	19:L:374:PHE:HD1	2.21	0.43
20:M:221:TYR:HE1	20:M:346:LYS:HG2	1.81	0.43
20:M:312:LEU:HD11	20:M:323:VAL:HG21	2.00	0.43
20:M:385:GLU:O	20:M:426:LYS:HD2	2.18	0.43
21:N:310:ASP:OD1	21:N:312:GLY:N	2.48	0.43
21:N:321:LEU:C	21:N:321:LEU:HD12	2.39	0.43
21:N:383:LYS:CA	21:N:412:TYR:OH	2.65	0.43
21:N:433:THR:CB	21:N:439:VAL:HG21	2.49	0.43
22:O:69:PHE:CZ	22:O:77:SER:CB	3.02	0.43
22:O:344:VAL:CB	23:P:361:THR:HG23	2.42	0.43
23:P:101:MET:HE2	23:P:139:VAL:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:149:ASP:HA	27:T:152:LEU:HD12	2.00	0.43
28:U:142:GLN:O	28:U:142:GLN:HG3	2.19	0.43
28:U:283:ARG:CZ	29:V:284:ALA:CA	2.83	0.43
31:X:41:GLU:HG3	31:X:45:PHE:N	2.33	0.43
31:X:111:LEU:HD23	31:X:115:SER:HA	2.00	0.43
33:Z:546:ILE:HG21	33:Z:566:LEU:CD2	2.48	0.43
33:Z:985:LYS:HD2	33:Z:991:GLU:OE2	2.18	0.43
6:6:63:VAL:O	6:6:67:HIS:CD2	2.66	0.43
7:7:143:ALA:O	7:7:146:LEU:HB2	2.18	0.43
10:C:208:TYR:CD2	10:C:236:LYS:HG2	2.54	0.43
11:D:176:GLU:HG2	12:E:58:LEU:CD1	2.49	0.43
13:F:80:ASP:CG	13:F:126:ARG:NH2	2.72	0.43
15:H:105:ILE:H	15:H:170:GLU:CD	2.22	0.43
19:L:174:GLU:HG2	19:L:175:GLN:HE22	1.77	0.43
22:O:270:ILE:HG22	22:O:271:LYS:HG2	2.01	0.43
23:P:241:LEU:CD1	23:P:264:ILE:HG12	2.45	0.43
23:P:337:HIS:O	23:P:341:LEU:HG	2.18	0.43
23:P:360:ILE:HD12	23:P:365:LEU:HD13	2.01	0.43
25:R:171:MET:SD	25:R:194:VAL:CG2	2.99	0.43
25:R:422:ARG:NH2	26:S:299:LYS:HB2	2.34	0.43
27:T:48:ASN:OD1	27:T:50:ILE:HB	2.19	0.43
28:U:18:ALA:HB2	28:U:93:TYR:CE2	2.53	0.43
28:U:230:GLN:HG3	28:U:231:ASP:N	2.32	0.43
28:U:283:ARG:NE	29:V:287:THR:HB	2.33	0.43
33:Z:61:SER:OG	33:Z:111:LEU:HD11	2.19	0.43
33:Z:333:GLY:O	33:Z:334:LYS:HB2	2.19	0.43
6:6:106:ASP:C	6:6:106:ASP:OD1	2.57	0.43
8:A:119:LYS:CG	8:A:163:TYR:CE2	2.94	0.43
9:B:177:LYS:HZ1	24:Q:168:LEU:HA	1.83	0.43
11:D:96:HIS:CE1	11:D:100:LEU:HD12	2.46	0.43
12:E:143:LEU:HG	12:E:172:ILE:HD13	1.99	0.43
15:H:389:PHE:CE1	15:H:422:VAL:HB	2.54	0.43
15:H:420:ARG:HE	16:I:342:GLY:HA3	1.83	0.43
16:I:384:LYS:HZ1	16:I:395:MET:CE	2.31	0.43
18:K:67:TYR:CD2	21:N:572:LEU:HB3	2.53	0.43
19:L:197:ILE:O	19:L:201:LEU:HG	2.18	0.43
19:L:357:ARG:HB3	19:L:361:PHE:CE2	2.49	0.43
20:M:77:TYR:CE2	20:M:79:VAL:CG1	3.02	0.43
20:M:256:ILE:O	20:M:258:GLU:N	2.51	0.43
21:N:325:PHE:HA	29:V:182:LYS:CD	2.48	0.43
21:N:721:ASP:O	21:N:897:LYS:NZ	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:26:PHE:HD1	22:O:61:LEU:HG	1.82	0.43
22:O:380:LEU:HD22	28:U:259:ASN:HD22	1.84	0.43
23:P:180:ILE:HD11	23:P:206:LYS:HZ1	1.83	0.43
24:Q:14:LEU:HD12	24:Q:26:VAL:CG2	2.23	0.43
24:Q:51:ARG:NH2	24:Q:92:LYS:CG	2.82	0.43
24:Q:298:ALA:CB	24:Q:325:LEU:HD22	2.48	0.43
27:T:10:SER:O	27:T:13:ILE:HG22	2.19	0.43
27:T:110:LEU:O	27:T:114:LEU:HG	2.18	0.43
33:Z:64:TYR:OH	33:Z:115:LEU:CD2	2.64	0.43
33:Z:99:LEU:HD22	33:Z:115:LEU:HD21	1.99	0.43
33:Z:193:PHE:HE2	33:Z:200:THR:CG2	2.29	0.43
33:Z:205:LEU:HA	33:Z:232:LYS:HD3	2.00	0.43
33:Z:377:ALA:HB2	33:Z:411:LYS:HD3	2.00	0.43
33:Z:610:GLY:O	33:Z:748:LEU:CG	2.66	0.43
33:Z:889:VAL:CG2	33:Z:890:SER:N	2.82	0.43
33:Z:890:SER:CB	33:Z:891:PRO:HD3	2.45	0.43
1:1:38:HIS:HB3	1:1:41:ILE:HB	2.00	0.43
5:5:124:GLY:N	5:5:127:PHE:CZ	2.86	0.43
6:6:138:MET:HB3	6:6:139:PRO:HD3	2.00	0.43
7:7:6:MET:HE1	7:7:165:ALA:HA	2.00	0.43
7:7:68:TYR:O	7:7:69:ASP:HB2	2.19	0.43
8:A:46:ARG:CZ	8:A:152:PRO:O	2.67	0.43
15:H:168:ILE:HG12	15:H:186:PRO:HB3	2.01	0.43
15:H:305:ILE:CG2	15:H:352:MET:SD	3.07	0.43
15:H:430:ALA:HB1	15:H:435:ARG:HB2	2.01	0.43
18:K:96:ILE:HG13	19:L:128:ILE:HG13	2.01	0.43
20:M:313:ASP:HA	20:M:316:SER:HG	1.79	0.43
21:N:406:TYR:CE1	21:N:448:LEU:CB	3.01	0.43
21:N:482:ALA:HB1	21:N:517:LEU:HD23	2.01	0.43
23:P:299:LEU:O	23:P:303:PHE:CD2	2.71	0.43
24:Q:356:CYS:SG	24:Q:398:TYR:CE1	3.07	0.43
24:Q:415:LEU:HD21	28:U:278:ILE:CG2	2.48	0.43
25:R:301:TYR:HA	25:R:304:TYR:HB3	2.01	0.43
25:R:353:MET:HE3	25:R:364:LEU:CG	2.49	0.43
33:Z:422:ILE:HD11	33:Z:436:LEU:HD21	2.01	0.43
33:Z:446:GLU:CD	33:Z:484:LYS:HZ3	2.22	0.43
1:1:122:LEU:HB3	1:1:123:PRO:HD2	2.01	0.42
4:4:11:SER:CB	4:4:182:ILE:CG2	2.94	0.42
8:A:68:THR:O	14:G:157:TRP:CZ3	2.72	0.42
9:B:132:VAL:HG22	9:B:133:SER:N	2.33	0.42
10:C:176:LEU:CD2	10:C:196:THR:HG21	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:171:TYR:CE1	13:F:196:ALA:HB2	2.53	0.42
17:J:37:LYS:CG	18:K:58:TYR:CE1	3.01	0.42
17:J:156:GLN:HG2	17:J:160:ILE:CG1	2.49	0.42
22:O:76:LEU:CD2	22:O:121:ASP:CG	2.82	0.42
24:Q:351:ILE:HG22	24:Q:362:ILE:HD11	2.00	0.42
25:R:110:ILE:CG2	25:R:114:ASN:HD21	2.32	0.42
28:U:19:LEU:HD13	29:V:209:GLU:HG3	2.00	0.42
30:W:162:ASN:O	30:W:163:ASN:ND2	2.52	0.42
33:Z:68:LEU:HD13	33:Z:114:SER:HB2	2.01	0.42
33:Z:568:LEU:HG	33:Z:738:TYR:OH	2.18	0.42
33:Z:581:VAL:CG2	33:Z:603:VAL:CG1	2.97	0.42
33:Z:889:VAL:HG11	33:Z:892:SER:HB3	2.01	0.42
2:2:33:LYS:O	2:2:35:HIS:CD2	2.72	0.42
2:2:57:GLN:HB3	9:B:99:ARG:HD3	2.01	0.42
3:3:76:GLU:HA	3:3:111:PHE:CZ	2.54	0.42
7:7:42:VAL:CG2	7:7:192:ILE:HD11	2.49	0.42
9:B:141:GLU:OE2	9:B:231:LYS:HD2	2.19	0.42
10:C:34:THR:OG1	10:C:167:ALA:O	2.31	0.42
10:C:133:VAL:HG13	10:C:135:PHE:CE1	2.54	0.42
15:H:430:ALA:CA	15:H:435:ARG:HH21	2.28	0.42
16:I:252:LEU:CD2	16:I:263:LEU:HD21	2.49	0.42
17:J:167:PRO:CA	17:J:174:PHE:CZ	2.93	0.42
18:K:99:PHE:CE2	18:K:102:PRO:HD3	2.54	0.42
18:K:240:SER:CB	19:L:306:MET:CE	2.88	0.42
19:L:75:LYS:HA	19:L:78:ARG:HH21	1.83	0.42
19:L:174:GLU:O	19:L:175:GLN:HB2	2.19	0.42
19:L:227:GLY:CA	20:M:339:ARG:NH2	2.82	0.42
19:L:269:TYR:CZ	19:L:273:HIS:CD2	3.06	0.42
21:N:13:LEU:HD12	21:N:21:LYS:HD3	2.00	0.42
21:N:675:VAL:HA	21:N:678:ILE:HD12	2.01	0.42
22:O:30:GLU:OE2	22:O:58:ARG:HD3	2.19	0.42
22:O:185:PHE:CD1	22:O:279:ILE:CD1	3.02	0.42
22:O:210:ARG:HH22	22:O:242:ILE:CG1	2.32	0.42
22:O:226:LYS:HB3	22:O:226:LYS:HZ3	1.84	0.42
23:P:60:ALA:HA	23:P:96:MET:CE	2.49	0.42
24:Q:149:LYS:HG2	24:Q:149:LYS:O	2.19	0.42
25:R:93:LYS:CG	25:R:94:PHE:N	2.81	0.42
26:S:284:LEU:HD13	26:S:382:ARG:NH2	2.34	0.42
28:U:19:LEU:HD22	28:U:20:ASP:OD1	2.19	0.42
31:X:93:SER:CB	31:X:96:ARG:NH2	2.82	0.42
33:Z:506:LEU:HD23	33:Z:506:LEU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:157:HIS:NE2	1:1:161:GLN:NE2	2.67	0.42
3:3:42:LEU:HD22	3:3:78:PHE:CZ	2.38	0.42
3:3:44:ILE:HG12	3:3:98:PRO:CA	2.48	0.42
4:4:95:ARG:HH21	5:5:92:GLY:HA3	1.83	0.42
8:A:126:GLN:NE2	8:A:130:GLN:CD	2.72	0.42
10:C:92:ARG:O	10:C:95:ALA:HB3	2.19	0.42
11:D:104:VAL:HG11	11:D:109:LEU:CD1	2.49	0.42
13:F:154:THR:CG2	13:F:156:LEU:HD11	2.49	0.42
18:K:236:ARG:HE	19:L:310:THR:HG23	1.85	0.42
18:K:240:SER:N	19:L:306:MET:CE	2.74	0.42
19:L:74:LEU:HD11	20:M:47:GLU:HB3	2.00	0.42
21:N:12:LEU:HD11	27:T:40:LEU:HB3	2.01	0.42
21:N:314:LEU:CD1	21:N:336:ASN:OD1	2.67	0.42
22:O:62:TYR:CE2	22:O:82:LEU:CD1	3.01	0.42
22:O:117:ASN:ND2	22:O:167:ILE:HA	2.29	0.42
24:Q:90:LYS:CD	24:Q:129:LYS:HE2	2.46	0.42
24:Q:223:GLY:HA3	24:Q:239:PHE:CZ	2.54	0.42
25:R:139:GLU:O	25:R:143:GLN:HG2	2.19	0.42
25:R:158:LEU:HD13	25:R:170:VAL:HG23	2.01	0.42
25:R:382:ASP:HB2	26:S:399:TYR:HB3	2.01	0.42
25:R:422:ARG:HH21	26:S:299:LYS:HG3	1.84	0.42
26:S:185:PHE:CD1	26:S:239:ARG:CD	3.03	0.42
26:S:421:TYR:CE2	27:T:158:GLN:HB2	2.53	0.42
28:U:5:HIS:CE1	28:U:6:GLU:O	2.71	0.42
28:U:38:LEU:HD21	28:U:52:PHE:HE1	1.83	0.42
29:V:261:LEU:HD13	29:V:283:THR:HG22	2.00	0.42
33:Z:741:LEU:CD2	33:Z:782:ILE:HD12	2.48	0.42
1:1:31:THR:O	1:1:174:ARG:HD2	2.18	0.42
3:3:75:PRO:HB3	3:3:111:PHE:CD2	2.49	0.42
7:7:93:TYR:O	7:7:96:ARG:HG2	2.19	0.42
15:H:152:ILE:O	15:H:152:ILE:HG22	2.18	0.42
15:H:184:GLU:HG2	15:H:185:LEU:HG	2.00	0.42
22:O:161:ASP:O	22:O:162:SER:HB2	2.19	0.42
22:O:345:ASN:ND2	23:P:359:ARG:HD2	2.34	0.42
26:S:439:GLU:OE1	26:S:439:GLU:N	2.53	0.42
27:T:41:ILE:HG23	27:T:43:ASP:H	1.83	0.42
29:V:279:HIS:O	29:V:283:THR:N	2.42	0.42
31:X:46:TRP:HH2	31:X:131:ASN:CB	2.33	0.42
31:X:69:ILE:H	31:X:73:THR:HG21	1.83	0.42
4:4:129:TYR:CD2	4:4:143:LEU:HD13	2.55	0.42
5:5:83:LEU:HD11	5:5:97:MET:HE1	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:65:TRP:CZ2	13:F:93:ASN:ND2	2.86	0.42
7:7:5:SER:OG	7:7:119:LEU:HD11	2.19	0.42
9:B:64:VAL:HG22	9:B:74:VAL:HG12	2.02	0.42
12:E:178:GLY:H	15:H:409:ARG:HH12	1.66	0.42
14:G:146:HIS:HB3	14:G:148:TYR:HE1	0.84	0.42
16:I:398:GLU:OE1	16:I:419:ALA:HB1	2.20	0.42
17:J:48:ARG:HD3	18:K:68:ILE:HG23	2.00	0.42
17:J:124:LYS:HZ1	18:K:103:ILE:HG21	1.83	0.42
17:J:250:ILE:HA	17:J:299:ILE:HD11	2.01	0.42
18:K:96:ILE:HD11	19:L:118:ILE:HG12	2.01	0.42
19:L:135:VAL:HB	19:L:158:ILE:CD1	2.49	0.42
19:L:328:ASN:HD22	19:L:329:ARG:CG	2.28	0.42
21:N:25:LEU:CD1	21:N:57:ASP:HB3	2.43	0.42
21:N:455:MET:HG2	21:N:487:LEU:O	2.19	0.42
21:N:555:ILE:O	21:N:559:TYR:HD2	2.03	0.42
21:N:641:LEU:HB2	21:N:660:LEU:CD2	2.48	0.42
22:O:345:ASN:HD21	23:P:359:ARG:NH1	2.17	0.42
23:P:114:THR:O	23:P:118:VAL:HG23	2.19	0.42
23:P:181:LEU:HD12	23:P:223:LEU:CD1	2.49	0.42
23:P:207:THR:CB	23:P:217:LYS:CE	2.95	0.42
25:R:191:LEU:HD12	25:R:210:TYR:CE1	2.55	0.42
25:R:372:ILE:HD11	25:R:381:ILE:HG12	2.00	0.42
29:V:36:LYS:HB3	29:V:68:VAL:HG12	2.01	0.42
31:X:12:ALA:HB3	31:X:33:ILE:CG2	2.49	0.42
33:Z:329:ILE:HG12	33:Z:334:LYS:O	2.20	0.42
33:Z:768:GLY:O	33:Z:769:ASN:HB3	2.19	0.42
1:1:138:CYS:O	1:1:142:PHE:HB2	2.20	0.42
2:2:188:ARG:H	9:B:227:ILE:HD12	1.84	0.42
5:5:80:SER:HA	5:5:101:ILE:CD1	2.50	0.42
8:A:104:PHE:CE2	8:A:112:MET:HA	2.55	0.42
8:A:127:ILE:O	8:A:131:ARG:HG3	2.20	0.42
12:E:165:TYR:OH	20:M:434:ALA:HB3	2.19	0.42
15:H:279:LEU:O	15:H:281:GLN:N	2.52	0.42
16:I:301:GLU:CD	16:I:304:ARG:HH21	2.22	0.42
17:J:111:GLN:CG	17:J:125:VAL:HG13	2.50	0.42
18:K:244:HIS:CE1	18:K:250:GLY:N	2.87	0.42
18:K:309:SER:O	18:K:310:THR:HB	2.20	0.42
20:M:186:LEU:CB	20:M:231:LEU:HD21	2.49	0.42
21:N:309:ILE:HD12	21:N:340:HIS:HD2	1.83	0.42
21:N:376:LYS:HA	21:N:411:ILE:HG12	2.02	0.42
22:O:230:PHE:HD1	22:O:251:LEU:HD12	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:254:LEU:HA	22:O:269:LEU:HD11	2.00	0.42
23:P:34:SER:O	23:P:38:GLN:HB2	2.19	0.42
24:Q:24:GLU:O	24:Q:28:LEU:HG	2.19	0.42
24:Q:27:TYR:OH	24:Q:54:GLN:CG	2.62	0.42
24:Q:115:ILE:HD11	24:Q:148:LYS:HD2	2.01	0.42
26:S:320:ILE:HD13	26:S:323:LEU:HD12	2.00	0.42
27:T:59:LYS:CD	27:T:97:SER:HA	2.49	0.42
28:U:22:TYR:CE1	28:U:27:THR:CG2	3.02	0.42
30:W:9:VAL:HG22	30:W:52:ILE:HD11	2.01	0.42
33:Z:850:LEU:CD2	33:Z:901:PHE:CE1	3.02	0.42
33:Z:985:LYS:HB2	33:Z:991:GLU:CG	2.50	0.42
1:1:-5:GLU:N	2:2:116:HIS:ND1	2.67	0.42
5:5:124:GLY:CA	5:5:127:PHE:CZ	3.03	0.42
10:C:98:TYR:CE1	10:C:106:ILE:N	2.88	0.42
12:E:52:LYS:HE2	12:E:218:GLN:HB2	2.02	0.42
14:G:37:ILE:C	14:G:37:ILE:HD12	2.40	0.42
15:H:166:THR:O	15:H:166:THR:HG22	2.20	0.42
15:H:224:VAL:HG22	15:H:243:PRO:HG2	2.02	0.42
17:J:350:MET:CG	17:J:386:VAL:HG22	2.49	0.42
18:K:156:SER:HB3	18:K:253:MET:HE3	2.00	0.42
19:L:325:MET:HE2	19:L:337:LEU:HD13	2.01	0.42
19:L:354:GLU:HG2	19:L:357:ARG:NH2	2.35	0.42
21:N:142:GLU:O	21:N:146:LYS:HG3	2.19	0.42
21:N:510:HIS:HD1	21:N:512:ASN:N	2.17	0.42
22:O:5:HIS:HE1	22:O:27:GLU:OE1	2.02	0.42
23:P:196:ALA:CB	23:P:227:ILE:CD1	2.91	0.42
24:Q:61:LEU:HD13	24:Q:65:TYR:HE2	1.81	0.42
27:T:224:ARG:O	27:T:225:ASN:ND2	2.52	0.42
31:X:47:ASP:OD2	31:X:65:SER:HB3	2.20	0.42
31:X:66:LEU:HD21	31:X:91:PHE:HZ	1.84	0.42
5:5:76:VAL:HG12	5:5:113:TYR:CD1	2.53	0.42
6:6:152:GLU:HB2	6:6:161:LYS:HG3	2.02	0.42
10:C:54:SER:H	10:C:59:GLN:HE21	1.67	0.42
12:E:219:LEU:HB2	12:E:231:TYR:HD2	1.85	0.42
13:F:78:ALA:HB3	13:F:79:PRO:HD3	2.02	0.42
14:G:183:PRO:O	14:G:184:GLU:HG2	2.20	0.42
15:H:304:CYS:SG	15:H:349:ILE:HG12	2.60	0.42
15:H:441:LYS:O	15:H:445:LYS:HG3	2.19	0.42
16:I:188:GLU:HA	16:I:191:ILE:HD12	2.02	0.42
16:I:354:ASP:C	16:I:354:ASP:OD1	2.57	0.42
18:K:122:ILE:HD12	18:K:127:ASP:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:225:GLY:C	20:M:226:THR:CG2	2.88	0.42
20:M:309:LEU:HD22	20:M:342:ARG:CG	2.49	0.42
21:N:361:ASN:ND2	21:N:399:PHE:CZ	2.87	0.42
21:N:641:LEU:CB	21:N:660:LEU:CD2	2.96	0.42
22:O:258:LEU:HB3	22:O:291:ILE:CG1	2.49	0.42
22:O:261:GLY:HA3	22:O:288:ARG:HH12	1.85	0.42
24:Q:24:GLU:OE2	24:Q:77:PHE:CE2	2.55	0.42
24:Q:429:LYS:HG2	28:U:292:ILE:CG2	2.49	0.42
25:R:34:THR:O	25:R:70:TYR:CE1	2.73	0.42
25:R:312:TYR:HE2	32:Y:73:PHE:CD1	2.33	0.42
27:T:59:LYS:HZ3	27:T:97:SER:HA	1.84	0.42
27:T:82:PHE:HB2	27:T:109:TYR:HE1	1.64	0.42
27:T:135:ASN:O	27:T:142:LEU:HD12	2.19	0.42
28:U:5:HIS:HD1	28:U:6:GLU:C	2.21	0.42
29:V:251:TYR:O	29:V:255:ILE:HG12	2.18	0.42
29:V:280:LEU:HA	29:V:283:THR:HB	2.01	0.42
30:W:58:ASN:HA	30:W:59:PRO:HD3	1.61	0.42
31:X:75:TRP:CZ3	31:X:125:MET:HB3	2.55	0.42
33:Z:188:ALA:O	33:Z:193:PHE:HD2	2.02	0.42
33:Z:237:VAL:CG1	33:Z:245:VAL:HG12	2.40	0.42
33:Z:321:PHE:CE2	33:Z:351:PRO:N	2.87	0.42
1:1:138:CYS:HA	1:1:154:PHE:CZ	2.54	0.42
2:2:8:PHE:CE1	2:2:12:VAL:CA	3.02	0.42
4:4:37:LEU:HA	4:4:60:GLN:HE22	1.85	0.42
6:6:17:ASP:OD1	6:6:17:ASP:C	2.58	0.42
6:6:77:ILE:HD11	6:6:102:ILE:HD12	2.02	0.42
9:B:37:ILE:HD11	9:B:175:LEU:CD2	2.49	0.42
10:C:78:ALA:HB3	10:C:165:VAL:HG23	2.01	0.42
11:D:32:CYS:SG	11:D:166:ARG:HB3	2.59	0.42
12:E:72:ARG:C	12:E:73:HIS:CG	2.94	0.42
12:E:143:LEU:HD23	12:E:157:HIS:ND1	2.34	0.42
13:F:15:PRO:HG3	14:G:25:TYR:CZ	2.55	0.42
14:G:24:GLU:O	14:G:28:LYS:HG3	2.20	0.42
15:H:172:MET:HE3	16:I:129:TYR:CB	2.42	0.42
15:H:420:ARG:NE	16:I:343:ARG:NH1	2.68	0.42
16:I:252:LEU:HD22	16:I:263:LEU:HD23	2.00	0.42
16:I:262:ARG:CG	17:J:223:ILE:HD12	2.50	0.42
17:J:182:PRO:O	17:J:286:LYS:NZ	2.45	0.42
17:J:238:ARG:HA	17:J:288:ILE:HD11	2.01	0.42
18:K:207:ARG:NE	18:K:307:ASP:O	2.53	0.42
18:K:347:ARG:CD	24:Q:215:VAL:HG13	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:309:LEU:HD23	19:L:342:ARG:CD	2.21	0.42
19:L:392:ARG:HH21	20:M:339:ARG:HG3	1.85	0.42
21:N:14:ARG:CZ	21:N:42:GLU:OE1	2.68	0.42
21:N:21:LYS:HE3	21:N:49:LEU:HD21	2.02	0.42
21:N:123:PHE:CZ	21:N:129:ILE:HB	2.55	0.42
23:P:263:HIS:NE2	23:P:327:LEU:HB2	2.35	0.42
24:Q:197:SER:O	24:Q:200:ALA:HB3	2.20	0.42
25:R:199:GLU:CB	25:R:206:ARG:HE	2.28	0.42
26:S:142:VAL:HA	26:S:145:PHE:CE2	2.54	0.42
27:T:90:PHE:O	27:T:91:SER:HB3	2.20	0.42
28:U:97:PRO:CG	28:U:100:ARG:HH21	2.31	0.42
29:V:24:LYS:NZ	29:V:197:TYR:HE2	2.09	0.42
33:Z:49:LEU:HD11	33:Z:55:ARG:NH2	2.34	0.42
5:5:9:GLN:HA	5:5:146:TRP:CZ2	2.54	0.42
5:5:174:SER:HA	5:5:193:VAL:HG13	2.02	0.42
11:D:179:TYR:CE1	11:D:184:PRO:CB	3.03	0.42
11:D:203:VAL:C	11:D:204:GLN:CD	2.76	0.42
12:E:157:HIS:CD2	12:E:170:LYS:CE	3.03	0.42
15:H:389:PHE:C	15:H:404:TRP:CH2	2.93	0.42
15:H:410:LEU:HB3	15:H:447:VAL:HG11	2.02	0.42
16:I:380:LEU:HD23	16:I:420:LYS:HZ3	1.85	0.42
20:M:71:ASN:HB3	29:V:75:GLY:HA3	2.02	0.42
20:M:170:MET:CB	20:M:244:LEU:HD11	2.30	0.42
21:N:195:THR:C	21:N:196:THR:HG23	2.40	0.42
21:N:246:LYS:HE2	21:N:282:TYR:CB	2.50	0.42
21:N:280:GLN:HG3	21:N:282:TYR:H	1.85	0.42
22:O:83:LEU:CD1	22:O:128:LEU:CD2	2.82	0.42
22:O:116:ASN:HD22	22:O:121:ASP:CB	2.31	0.42
22:O:185:PHE:HB3	22:O:223:LEU:HB2	2.01	0.42
22:O:277:ILE:CG2	22:O:279:ILE:CA	2.82	0.42
22:O:304:ASN:HB3	22:O:352:TRP:CD1	2.55	0.42
24:Q:115:ILE:HG13	24:Q:144:LEU:HD13	2.02	0.42
26:S:468:ALA:O	26:S:472:HIS:CB	2.66	0.42
27:T:198:ASP:O	27:T:199:PHE:CD1	2.73	0.42
28:U:158:PRO:O	28:U:159:CYS:CB	2.62	0.42
33:Z:471:LEU:C	33:Z:471:LEU:CD2	2.88	0.42
1:1:-5:GLU:N	2:2:116:HIS:CE1	2.86	0.41
3:3:169:ASP:CG	3:3:171:LEU:H	2.23	0.41
5:5:126:ILE:HG23	5:5:140:LEU:HD21	2.02	0.41
7:7:19:LEU:HD21	7:7:21:SER:OG	2.20	0.41
11:D:31:THR:OG1	11:D:47:GLU:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:168:ILE:CD1	15:H:186:PRO:HB2	2.50	0.41
16:I:102:ASN:HD21	17:J:83:LYS:HZ1	1.63	0.41
16:I:118:ALA:O	16:I:130:VAL:HG22	2.20	0.41
16:I:250:SER:HA	16:I:253:ILE:CD1	2.50	0.41
17:J:208:CYS:HG	17:J:242:PRO:HB2	1.85	0.41
18:K:304:ASP:HB2	18:K:333:ARG:NH2	2.34	0.41
19:L:111:GLU:CG	19:L:117:TYR:CD2	2.94	0.41
19:L:198:GLU:HG3	19:L:239:ILE:HD11	2.01	0.41
19:L:372:GLY:O	19:L:374:PHE:CD1	2.73	0.41
21:N:479:GLU:CG	21:N:512:ASN:OD1	2.68	0.41
21:N:782:PHE:CE1	21:N:875:LEU:HD22	2.50	0.41
22:O:88:ASP:OD2	22:O:206:THR:HG21	2.20	0.41
23:P:241:LEU:HD13	23:P:264:ILE:CG1	2.46	0.41
24:Q:265:MET:HE3	24:Q:281:ILE:HG12	2.02	0.41
25:R:352:SER:O	25:R:357:PHE:CD1	2.73	0.41
28:U:92:TRP:CD1	28:U:92:TRP:N	2.88	0.41
28:U:127:GLN:CG	29:V:212:MET:HB3	2.50	0.41
33:Z:126:TYR:O	33:Z:127:SER:HB3	2.16	0.41
33:Z:357:ILE:HG12	33:Z:960:GLY:CA	2.47	0.41
4:4:179:ILE:HG21	4:4:190:GLN:NE2	2.35	0.41
5:5:83:LEU:HD11	5:5:97:MET:SD	2.60	0.41
8:A:199:TRP:HH2	8:A:244:ARG:HH11	1.68	0.41
14:G:107:PRO:HD2	14:G:110:ALA:CB	2.50	0.41
15:H:211:VAL:HA	15:H:218:ILE:CD1	2.50	0.41
16:I:290:LYS:HB3	16:I:335:ASP:OD2	2.19	0.41
18:K:99:PHE:CZ	18:K:102:PRO:CD	3.04	0.41
19:L:82:ARG:NH1	19:L:86:LYS:NZ	2.69	0.41
20:M:189:GLN:OE1	20:M:189:GLN:N	2.47	0.41
20:M:361:LEU:CB	20:M:376:TRP:CE2	2.94	0.41
21:N:190:LEU:HD23	21:N:190:LEU:C	2.40	0.41
21:N:246:LYS:HZ1	21:N:280:GLN:HB2	1.83	0.41
22:O:69:PHE:CZ	22:O:77:SER:HB3	2.55	0.41
22:O:117:ASN:HB3	22:O:166:ARG:HB3	2.01	0.41
22:O:260:VAL:HG12	22:O:262:ASP:CG	2.41	0.41
24:Q:237:SER:O	24:Q:240:PHE:HB3	2.19	0.41
24:Q:412:ALA:HB2	25:R:400:TYR:CE1	2.51	0.41
25:R:292:LEU:CD2	25:R:307:TYR:HB3	2.49	0.41
26:S:182:LYS:HE3	26:S:309:PHE:CE2	2.56	0.41
26:S:208:ILE:HG23	26:S:209:ILE:N	2.34	0.41
28:U:226:LEU:HD23	28:U:226:LEU:O	2.20	0.41
29:V:44:GLY:HA3	29:V:49:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:W:69:PHE:O	30:W:73:LEU:HG	2.20	0.41
30:W:152:GLU:O	30:W:155:ASP:HB2	2.20	0.41
33:Z:471:LEU:HD23	33:Z:471:LEU:O	2.20	0.41
33:Z:534:PHE:O	33:Z:573:LEU:HD22	2.19	0.41
33:Z:610:GLY:C	33:Z:748:LEU:HD13	2.35	0.41
33:Z:809:MET:SD	33:Z:893:PHE:HB2	2.61	0.41
5:5:12:ILE:O	5:5:179:HIS:HD2	2.03	0.41
5:5:61:SER:HA	5:5:64:ARG:NH2	2.36	0.41
6:6:-7:ASN:OD1	6:6:-5:TYR:HB2	2.20	0.41
7:7:195:ASN:C	7:7:196:THR:HG23	2.40	0.41
8:A:87:ILE:HD13	14:G:157:TRP:CH2	2.55	0.41
9:B:139:HIS:CG	9:B:145:PHE:CE1	3.07	0.41
14:G:94:GLU:CD	14:G:118:TYR:OH	2.56	0.41
14:G:204:GLU:HA	14:G:207:LYS:CE	2.37	0.41
16:I:167:MET:HG2	16:I:270:VAL:HG11	2.00	0.41
17:J:320:SER:O	17:J:324:ARG:HG3	2.20	0.41
18:K:124:SER:O	18:K:127:ASP:CG	2.58	0.41
18:K:152:PRO:HB3	18:K:259:ARG:HD2	2.02	0.41
18:K:280:LYS:HE2	18:K:325:ASP:OD2	2.19	0.41
19:L:163:THR:HG21	19:L:269:TYR:CD2	2.55	0.41
21:N:510:HIS:HD1	21:N:512:ASN:H	1.67	0.41
21:N:517:LEU:O	21:N:521:LEU:HG	2.20	0.41
24:Q:416:VAL:CG2	25:R:403:LEU:HD22	2.44	0.41
25:R:63:TYR:CZ	25:R:92:ILE:O	2.72	0.41
25:R:71:LEU:HD12	25:R:76:GLN:HB2	2.01	0.41
26:S:223:LEU:HD22	26:S:259:TYR:CE1	2.55	0.41
26:S:364:ILE:HG23	26:S:371:LEU:CD1	2.50	0.41
26:S:377:TYR:CD2	27:T:132:HIS:CD2	3.08	0.41
26:S:398:THR:OG1	26:S:402:ILE:HD11	2.20	0.41
28:U:32:ARG:NH1	28:U:103:ASP:OD1	2.46	0.41
31:X:75:TRP:CE2	31:X:125:MET:HG3	2.50	0.41
32:Y:83:ARG:O	32:Y:87:GLU:HG3	2.20	0.41
33:Z:189:ALA:O	33:Z:190:THR:HB	2.20	0.41
33:Z:214:HIS:O	33:Z:214:HIS:CG	2.72	0.41
33:Z:322:GLU:HG2	33:Z:323:TYR:CD2	2.56	0.41
2:2:213:LEU:HB2	3:3:192:LYS:HB2	2.03	0.41
13:F:11:VAL:HG21	14:G:126:ASN:O	2.21	0.41
13:F:215:ILE:HG13	13:F:220:THR:CG2	2.45	0.41
15:H:318:ARG:HH11	15:H:364:ALA:HB3	1.85	0.41
15:H:414:SER:HA	15:H:418:GLU:OE2	2.20	0.41
16:I:266:GLN:NE2	17:J:223:ILE:HG21	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:374:ARG:HH11	17:J:378:THR:CG2	2.34	0.41
22:O:356:ARG:CZ	22:O:362:GLN:HG3	2.48	0.41
25:R:30:ALA:O	25:R:34:THR:HG23	2.20	0.41
25:R:207:ARG:HH12	25:R:211:LYS:HZ2	1.65	0.41
27:T:35:ILE:HA	27:T:40:LEU:HD11	2.02	0.41
29:V:133:ASN:HD22	29:V:136:ALA:CB	2.32	0.41
29:V:168:LEU:HD12	29:V:182:LYS:HZ3	1.85	0.41
30:W:168:THR:O	30:W:169:SER:OG	2.38	0.41
31:X:46:TRP:CH2	31:X:131:ASN:CB	3.03	0.41
33:Z:161:ILE:HD13	33:Z:207:ILE:HD11	2.00	0.41
33:Z:253:VAL:HG13	33:Z:264:PHE:HE2	1.86	0.41
33:Z:473:LEU:O	33:Z:477:TYR:CD2	2.72	0.41
33:Z:617:ILE:CD1	33:Z:747:ALA:HB2	2.50	0.41
5:5:104:TYR:CD1	5:5:182:GLU:HA	2.56	0.41
8:A:205:PHE:CZ	8:A:209:HIS:NE2	2.88	0.41
10:C:198:SER:HA	10:C:206:LEU:HD22	2.03	0.41
11:D:208:LYS:HG2	11:D:226:SER:HB3	2.02	0.41
12:E:165:TYR:HB3	12:E:167:TYR:CZ	2.52	0.41
12:E:231:TYR:CZ	12:E:235:LYS:C	2.94	0.41
13:F:40:SER:HA	13:F:180:ILE:HA	2.02	0.41
14:G:197:LYS:HD3	14:G:241:PHE:HE2	1.83	0.41
18:K:244:HIS:CE1	18:K:250:GLY:H	2.39	0.41
18:K:268:ILE:HD13	18:K:313:LYS:HB2	2.03	0.41
21:N:406:TYR:CD1	21:N:448:LEU:CB	3.04	0.41
21:N:539:MET:HE3	21:N:547:LEU:HA	2.02	0.41
22:O:188:PHE:CD2	22:O:220:SER:CB	2.93	0.41
23:P:135:GLU:HG3	23:P:138:ARG:HH22	1.86	0.41
23:P:143:LEU:HG	23:P:147:LYS:HE3	2.02	0.41
23:P:147:LYS:HZ2	23:P:159:ILE:HG13	1.82	0.41
23:P:269:VAL:HA	23:P:277:GLN:HE21	1.86	0.41
23:P:345:VAL:HG13	23:P:346:ILE:N	2.36	0.41
24:Q:299:MET:HE1	24:Q:335:PHE:CZ	2.50	0.41
26:S:211:ARG:NE	26:S:240:ASP:CB	2.83	0.41
27:T:68:ALA:O	27:T:72:THR:HG23	2.21	0.41
28:U:141:GLU:HG2	28:U:142:GLN:N	2.35	0.41
29:V:78:VAL:C	29:V:121:VAL:CG1	2.89	0.41
33:Z:64:TYR:CE1	33:Z:111:LEU:O	2.73	0.41
33:Z:381:LEU:O	33:Z:385:PHE:HD2	2.04	0.41
2:2:104:ASP:OD1	2:2:107:GLY:N	2.54	0.41
2:2:186:TYR:CZ	2:2:188:ARG:HB2	2.56	0.41
2:2:188:ARG:HG2	2:2:189:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:5:32:LYS:CD	5:5:45:MET:CE	2.97	0.41
7:7:59:LEU:HD23	7:7:62:LEU:HD12	2.01	0.41
9:B:217:GLU:OE2	9:B:234:ARG:NH2	2.54	0.41
11:D:11:PHE:HE1	12:E:136:ARG:HD2	1.85	0.41
16:I:199:GLU:HA	16:I:240:THR:CG2	2.51	0.41
16:I:262:ARG:CG	17:J:223:ILE:HG21	2.50	0.41
16:I:358:LYS:HG2	16:I:392:ILE:HD11	2.00	0.41
16:I:406:GLU:O	16:I:407:ARG:HB2	2.21	0.41
17:J:339:ARG:NH1	25:R:168:ILE:HG13	2.35	0.41
18:K:99:PHE:CE1	18:K:101:GLU:C	2.92	0.41
18:K:215:PRO:HA	18:K:219:LYS:HE2	2.00	0.41
19:L:111:GLU:CG	19:L:117:TYR:CE2	3.03	0.41
21:N:158:LEU:HD13	21:N:192:LEU:HD22	2.01	0.41
21:N:717:LEU:HD23	21:N:730:VAL:HG22	2.03	0.41
22:O:25:LEU:O	22:O:29:PHE:CB	2.69	0.41
22:O:377:VAL:HG13	28:U:193:GLN:CD	2.40	0.41
23:P:203:ILE:HG23	23:P:220:TYR:CD1	2.53	0.41
23:P:213:TYR:CD2	23:P:217:LYS:CE	3.04	0.41
24:Q:347:LEU:O	24:Q:351:ILE:HG12	2.21	0.41
24:Q:419:LEU:O	24:Q:423:VAL:HG23	2.21	0.41
25:R:316:LEU:HD22	25:R:322:LEU:HB3	2.02	0.41
26:S:341:SER:O	26:S:344:PRO:CG	2.62	0.41
27:T:197:TYR:CD1	27:T:235:PHE:HB2	2.55	0.41
27:T:216:GLU:HG3	27:T:220:PHE:CE1	2.23	0.41
28:U:175:LEU:HD23	29:V:205:LYS:NZ	2.36	0.41
33:Z:916:LEU:HD23	33:Z:922:PRO:HB3	2.03	0.41
2:2:69:TYR:CE2	9:B:87:ASP:OD2	2.74	0.41
3:3:-2:ASN:CA	3:3:19:ARG:HH12	2.33	0.41
4:4:26:VAL:HG12	4:4:28:LYS:C	2.39	0.41
8:A:162:TYR:CD1	18:K:428:LYS:HD2	2.56	0.41
15:H:295:PHE:CZ	15:H:336:LEU:HD12	2.56	0.41
15:H:382:LEU:HD21	15:H:409:ARG:CZ	2.51	0.41
20:M:162:GLU:HB2	20:M:166:ARG:HH21	1.86	0.41
20:M:379:LEU:CD1	20:M:415:PHE:CD1	3.01	0.41
21:N:497:ALA:O	21:N:501:MET:HG3	2.20	0.41
21:N:771:PHE:HE2	21:N:885:ILE:HG21	1.85	0.41
22:O:124:ASP:OD1	22:O:126:ILE:N	2.54	0.41
22:O:240:GLU:O	22:O:241:THR:CB	2.69	0.41
23:P:360:ILE:HG12	23:P:402:PHE:HE2	1.77	0.41
25:R:255:VAL:HG11	25:R:322:LEU:HD13	2.03	0.41
27:T:38:ASN:O	27:T:39:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:83:VAL:HG11	29:V:107:TRP:HH2	1.85	0.41
30:W:21:PHE:HE1	30:W:144:PHE:CE1	2.07	0.41
33:Z:176:GLU:HB3	33:Z:177:THR:HG23	2.03	0.41
33:Z:188:ALA:HB1	33:Z:200:THR:HG22	2.02	0.41
33:Z:340:LEU:HD12	33:Z:340:LEU:C	2.41	0.41
33:Z:888:LEU:N	33:Z:894:MET:SD	2.90	0.41
33:Z:970:TYR:CZ	33:Z:993:GLU:N	2.89	0.41
1:1:64:GLU:OE1	8:A:105:ARG:HD2	2.21	0.41
9:B:140:ASP:CG	9:B:143:ASN:HB2	2.41	0.41
10:C:148:LEU:HB3	10:C:160:TRP:O	2.21	0.41
10:C:160:TRP:CZ2	10:C:163:ILE:HD11	2.54	0.41
10:C:164:SER:HB2	10:C:169:THR:HG23	2.03	0.41
11:D:179:TYR:CZ	11:D:184:PRO:HB3	2.55	0.41
13:F:74:LEU:C	13:F:74:LEU:HD12	2.41	0.41
13:F:155:GLU:C	13:F:156:LEU:HD12	2.41	0.41
14:G:150:LEU:CD1	14:G:156:TYR:HB3	2.48	0.41
16:I:197:SER:OG	16:I:219:VAL:HG11	2.20	0.41
17:J:37:LYS:CG	18:K:58:TYR:HE1	2.34	0.41
17:J:159:GLU:O	17:J:163:VAL:HG23	2.20	0.41
18:K:96:ILE:CG1	19:L:128:ILE:HG13	2.51	0.41
21:N:645:THR:CG2	21:N:660:LEU:HD11	2.50	0.41
22:O:87:LYS:HD3	22:O:135:ARG:HD2	2.02	0.41
22:O:87:LYS:HD2	22:O:135:ARG:HD3	2.03	0.41
22:O:260:VAL:CG1	22:O:262:ASP:CG	2.88	0.41
25:R:50:VAL:O	25:R:54:ILE:HG23	2.21	0.41
25:R:79:LEU:HB2	25:R:93:LYS:CE	2.51	0.41
26:S:185:PHE:CD1	26:S:239:ARG:NE	2.89	0.41
28:U:92:TRP:CE2	28:U:120:LEU:CD1	2.96	0.41
30:W:101:ARG:NH1	30:W:104:LYS:HA	2.36	0.41
30:W:168:THR:CG2	30:W:169:SER:HB3	2.39	0.41
31:X:22:ARG:NE	31:X:96:ARG:HH12	2.17	0.41
33:Z:60:ASP:OD2	33:Z:63:LEU:HD12	2.21	0.41
33:Z:453:LEU:HD11	33:Z:899:GLN:CB	2.51	0.41
33:Z:490:ILE:HD11	33:Z:523:ALA:HA	2.02	0.41
33:Z:493:LEU:CD1	33:Z:497:PHE:HD2	2.18	0.41
33:Z:612:GLY:HA2	33:Z:616:LEU:CD1	2.50	0.41
1:1:90:LYS:NZ	7:7:-7:GLN:HB3	2.35	0.41
4:4:6:ILE:CD1	4:4:159:LEU:HD23	2.50	0.41
6:6:-2:ASN:ND2	6:6:48:PHE:CD1	2.89	0.41
7:7:51:ASP:OD2	7:7:103:TRP:HB3	2.20	0.41
8:A:135:ARG:CZ	14:G:124:LEU:HD23	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:47:GLU:OE2	11:D:203:VAL:HG22	2.20	0.41
12:E:166:ARG:C	12:E:167:TYR:CD1	2.94	0.41
12:E:201:LEU:CD1	12:E:239:LEU:CG	2.78	0.41
12:E:208:MET:HE1	12:E:212:LEU:HA	2.03	0.41
13:F:87:TYR:O	13:F:91:GLN:HG3	2.21	0.41
13:F:154:THR:HG22	13:F:156:LEU:HD11	2.01	0.41
14:G:140:VAL:CG2	14:G:225:GLY:HA2	2.48	0.41
14:G:146:HIS:ND1	14:G:148:TYR:OH	2.41	0.41
14:G:170:SER:HB3	14:G:201:LEU:HG	2.02	0.41
14:G:176:GLU:O	14:G:179:VAL:HG12	2.21	0.41
15:H:208:TYR:H	15:H:262:ALA:CB	2.33	0.41
16:I:100:ARG:HH21	17:J:95:ILE:CD1	2.33	0.41
17:J:252:SER:CA	17:J:258:VAL:HG22	2.51	0.41
17:J:266:SER:O	17:J:270:ARG:HG3	2.21	0.41
18:K:100:LEU:HB2	18:K:109:ILE:HG23	2.03	0.41
18:K:280:LYS:HG2	18:K:325:ASP:OD2	2.20	0.41
19:L:107:GLU:O	19:L:109:MET:HE2	2.21	0.41
19:L:298:ASP:HA	19:L:301:ILE:HD12	2.03	0.41
20:M:75:LEU:HD12	20:M:77:TYR:CG	2.52	0.41
20:M:75:LEU:HD21	20:M:77:TYR:CE1	2.50	0.41
20:M:162:GLU:CB	20:M:166:ARG:HE	2.32	0.41
21:N:447:SER:O	21:N:450:ILE:HG22	2.21	0.41
22:O:8:ASP:OD1	22:O:41:LEU:HD23	2.21	0.41
22:O:47:LYS:CE	22:O:65:PHE:HE2	2.32	0.41
22:O:79:VAL:CG1	22:O:118:GLY:CA	2.87	0.41
22:O:292:CYS:SG	22:O:317:THR:OG1	2.72	0.41
22:O:362:GLN:NE2	28:U:223:HIS:N	2.69	0.41
22:O:379:LYS:HE2	22:O:383:LYS:HZ2	1.85	0.41
23:P:132:VAL:C	23:P:171:MET:HE1	2.41	0.41
23:P:234:TYR:O	23:P:267:PHE:HE2	2.04	0.41
23:P:281:ILE:CG1	23:P:300:VAL:HG21	2.43	0.41
23:P:311:TRP:CH2	23:P:338:TRP:CD1	3.08	0.41
23:P:435:LYS:NZ	28:U:153:THR:HA	2.36	0.41
24:Q:317:ALA:O	24:Q:321:TYR:HB2	2.21	0.41
24:Q:326:MET:HE3	24:Q:332:ARG:CG	2.51	0.41
25:R:43:ARG:HE	25:R:70:TYR:HH	1.61	0.41
25:R:304:TYR:CE1	25:R:337:VAL:HG11	2.55	0.41
26:S:230:LYS:HZ1	26:S:256:LYS:HE2	1.86	0.41
27:T:72:THR:O	27:T:73:PHE:HB2	2.20	0.41
29:V:37:MET:HE3	29:V:139:VAL:CG1	2.51	0.41
29:V:93:ASP:O	29:V:97:GLN:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:265:GLU:HG2	29:V:269:ARG:HE	1.86	0.41
30:W:60:ARG:HD2	30:W:60:ARG:C	2.40	0.41
31:X:24:CYS:CB	31:X:79:LYS:O	2.69	0.41
33:Z:237:VAL:HB	33:Z:275:GLN:OE1	2.20	0.41
33:Z:396:ASN:OD1	33:Z:396:ASN:O	2.38	0.41
33:Z:439:TYR:O	33:Z:447:VAL:HG12	2.21	0.41
33:Z:857:LEU:CD1	33:Z:908:ILE:HG13	2.32	0.41
1:1:6:VAL:O	1:1:13:ILE:HG22	2.21	0.41
1:1:45:ARG:NH2	1:1:52:THR:C	2.70	0.41
7:7:116:ASP:C	7:7:116:ASP:OD1	2.58	0.41
7:7:121:TYR:CD1	7:7:129:TYR:CE1	3.08	0.41
8:A:70:SER:O	8:A:71:TYR:CG	2.74	0.41
10:C:111:LEU:O	10:C:115:LEU:HG	2.21	0.41
13:F:72:LEU:HD12	13:F:72:LEU:C	2.40	0.41
15:H:175:GLY:N	15:H:183:ILE:HB	2.36	0.41
15:H:449:LYS:HZ3	16:I:346:ARG:HH11	1.62	0.41
16:I:215:PRO:HA	16:I:216:PRO:HD3	1.94	0.41
16:I:362:LEU:CD2	16:I:377:LEU:CD2	2.96	0.41
16:I:377:LEU:O	16:I:381:VAL:HG23	2.21	0.41
17:J:115:LEU:CD2	17:J:116:ARG:O	2.66	0.41
17:J:362:CYS:HA	17:J:382:PHE:HE1	1.85	0.41
18:K:240:SER:N	19:L:306:MET:HE1	2.14	0.41
20:M:292:ASP:C	20:M:292:ASP:OD1	2.59	0.41
22:O:62:TYR:CE2	22:O:66:VAL:CG2	3.04	0.41
22:O:356:ARG:HE	22:O:362:GLN:HG3	1.85	0.41
23:P:425:HIS:HD2	28:U:225:ILE:HG12	1.81	0.41
25:R:51:LEU:O	25:R:55:LYS:HG2	2.21	0.41
27:T:132:HIS:O	27:T:136:LEU:HG	2.21	0.41
28:U:94:HIS:HD1	28:U:96:GLY:N	2.18	0.41
28:U:107:ASN:O	28:U:111:LYS:HG3	2.20	0.41
33:Z:303:ASP:C	33:Z:303:ASP:OD1	2.59	0.41
33:Z:382:ALA:O	33:Z:386:VAL:HG23	2.20	0.41
1:1:8:PHE:CE2	1:1:10:ASP:N	2.88	0.40
1:1:72:THR:HG23	1:1:72:THR:O	2.21	0.40
5:5:120:THR:CG2	5:5:122:LEU:HG	2.49	0.40
8:A:157:THR:HG22	8:A:163:TYR:HB2	2.03	0.40
10:C:50:ARG:HD2	10:C:212:GLU:CD	2.42	0.40
13:F:201:LEU:O	13:F:202:ARG:CG	2.69	0.40
15:H:389:PHE:CB	15:H:404:TRP:CZ3	2.80	0.40
16:I:361:ILE:O	16:I:365:HIS:HD2	2.04	0.40
17:J:286:LYS:HZ1	17:J:289:LYS:HG2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:280:LYS:NZ	18:K:293:GLN:HG2	2.36	0.40
19:L:336:ALA:CB	19:L:339:ARG:HH21	2.34	0.40
21:N:28:ILE:CG2	21:N:64:ILE:HD13	2.51	0.40
21:N:638:ILE:HD12	21:N:664:LEU:HD11	2.03	0.40
21:N:782:PHE:CE1	21:N:875:LEU:CD2	3.04	0.40
22:O:287:LEU:HD23	22:O:287:LEU:O	2.21	0.40
22:O:359:SER:O	22:O:363:ILE:CD1	2.69	0.40
23:P:218:LEU:O	23:P:221:TYR:HB2	2.22	0.40
24:Q:135:HIS:HB3	24:Q:161:LEU:CD2	2.36	0.40
24:Q:135:HIS:CD2	24:Q:164:GLU:HG3	2.56	0.40
24:Q:186:HIS:HE1	24:Q:228:GLU:HG3	1.85	0.40
25:R:169:ASP:O	25:R:173:THR:HG23	2.21	0.40
26:S:315:LYS:CG	26:S:345:TYR:OH	2.64	0.40
30:W:139:VAL:HG13	30:W:169:SER:HA	2.01	0.40
33:Z:741:LEU:HD22	33:Z:782:ILE:HD12	2.03	0.40
6:6:77:ILE:HG23	6:6:78:ASN:N	2.35	0.40
7:7:28:PHE:HB3	7:7:31:VAL:HG23	2.04	0.40
11:D:176:GLU:CG	12:E:58:LEU:CD1	3.00	0.40
15:H:271:PHE:HE1	15:H:273:ARG:CB	2.20	0.40
19:L:249:SER:O	19:L:252:VAL:HB	2.21	0.40
19:L:357:ARG:NE	19:L:380:VAL:HG13	2.32	0.40
20:M:167:VAL:HG23	20:M:167:VAL:O	2.21	0.40
20:M:257:GLY:O	20:M:260:ALA:CB	2.68	0.40
21:N:463:TYR:CE2	21:N:485:MET:SD	3.14	0.40
22:O:294:MET:SD	22:O:357:ILE:CG2	3.10	0.40
23:P:202:LYS:HE2	23:P:206:LYS:CE	2.52	0.40
23:P:270:LEU:HD22	23:P:340:ASP:CB	2.41	0.40
24:Q:31:LEU:CD2	24:Q:50:ARG:NH2	2.84	0.40
24:Q:138:SER:HB2	24:Q:161:LEU:CD1	2.50	0.40
25:R:376:GLN:O	25:R:377:LEU:HB2	2.21	0.40
25:R:422:ARG:NH2	26:S:299:LYS:HB3	2.36	0.40
26:S:435:LYS:HZ1	27:T:238:GLN:CD	2.11	0.40
27:T:144:TYR:HD2	27:T:169:GLN:HE21	1.68	0.40
1:1:60:GLN:O	1:1:64:GLU:HG3	2.22	0.40
2:2:104:ASP:OD1	2:2:106:THR:N	2.54	0.40
2:2:109:HIS:CB	2:2:111:PHE:HE2	2.12	0.40
2:2:149:GLU:HG2	2:2:153:LYS:HE3	2.03	0.40
5:5:114:TYR:CE1	5:5:129:VAL:HG11	2.51	0.40
6:6:20:ASN:HB3	6:6:28:SER:HB3	2.03	0.40
7:7:90:THR:O	7:7:94:GLN:HG3	2.21	0.40
11:D:11:PHE:HA	11:D:17:ILE:HD13	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:46:VAL:CG1	14:G:215:ILE:HD11	2.51	0.40
19:L:70:TYR:CD2	20:M:45:ARG:HG3	2.56	0.40
19:L:104:LEU:HD12	20:M:127:VAL:HA	2.03	0.40
19:L:140:LEU:HD23	19:L:158:ILE:HG12	2.03	0.40
21:N:19:SER:HB3	27:T:35:ILE:CG1	2.52	0.40
21:N:235:ALA:O	21:N:238:ALA:HB3	2.21	0.40
21:N:399:PHE:CE1	21:N:441:VAL:HB	2.50	0.40
21:N:490:LEU:CD1	21:N:731:VAL:HG21	2.51	0.40
23:P:259:PRO:O	23:P:263:HIS:ND1	2.23	0.40
24:Q:51:ARG:O	24:Q:54:GLN:HB3	2.22	0.40
25:R:258:LEU:CD1	25:R:266:LEU:CD1	2.98	0.40
25:R:285:ALA:HB3	25:R:314:ASN:HD22	1.86	0.40
27:T:216:GLU:HG2	27:T:220:PHE:CD1	2.53	0.40
30:W:162:ASN:O	30:W:163:ASN:CG	2.60	0.40
33:Z:357:ILE:O	33:Z:361:HIS:HB2	2.21	0.40
33:Z:963:ALA:O	33:Z:964:GLU:HG3	2.21	0.40
33:Z:970:TYR:CZ	33:Z:993:GLU:CA	3.05	0.40
2:2:8:PHE:CZ	2:2:11:GLY:C	2.95	0.40
3:3:60:TYR:CD1	10:C:96:GLN:CG	3.05	0.40
5:5:95:LEU:HD13	5:5:95:LEU:C	2.41	0.40
6:6:3:ILE:HG13	6:6:101:ILE:HD12	2.03	0.40
9:B:178:ARG:HD3	9:B:191:ILE:HG23	2.04	0.40
11:D:30:GLY:HA2	16:I:436:TYR:CD2	2.56	0.40
14:G:140:VAL:HB	14:G:220:LEU:CD2	2.50	0.40
15:H:340:LEU:CD1	15:H:370:ARG:HD2	2.51	0.40
16:I:404:LEU:HD21	17:J:166:LEU:HD13	2.03	0.40
17:J:218:LEU:HG	17:J:230:VAL:HG22	2.04	0.40
18:K:200:GLN:NE2	25:R:204:TRP:CH2	2.87	0.40
18:K:404:GLN:O	18:K:408:GLU:HG3	2.22	0.40
19:L:114:GLU:HA	19:L:117:TYR:OH	2.22	0.40
21:N:301:THR:OG1	21:N:920:VAL:HG13	2.21	0.40
22:O:118:GLY:C	22:O:166:ARG:HG2	2.32	0.40
22:O:305:ILE:CG2	22:O:306:ARG:N	2.85	0.40
23:P:55:SER:OG	23:P:57:GLU:HB3	2.22	0.40
23:P:177:ILE:CD1	23:P:216:LEU:HD22	2.52	0.40
23:P:265:VAL:HA	23:P:280:LEU:HD23	2.03	0.40
23:P:346:ILE:HG21	23:P:379:TYR:CD2	2.57	0.40
25:R:71:LEU:HA	25:R:76:GLN:HB2	2.04	0.40
26:S:425:ARG:HG3	26:S:429:ASP:OD2	2.21	0.40
27:T:193:THR:HG22	27:T:235:PHE:CE2	2.56	0.40
28:U:92:TRP:NE1	28:U:120:LEU:CB	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:109:HIS:H	29:V:140:VAL:HG22	1.87	0.40
33:Z:132:HIS:C	33:Z:137:TYR:CE1	2.95	0.40
33:Z:227:ILE:O	33:Z:227:ILE:HG22	2.21	0.40
33:Z:551:LEU:HD11	33:Z:591:ILE:HG23	1.98	0.40
1:1:19:ARG:CZ	1:1:29:ARG:HA	2.49	0.40
1:1:112:THR:CG2	7:7:27:ARG:NH2	2.84	0.40
1:1:143:ARG:H	1:1:146:MET:CE	2.33	0.40
2:2:75:ARG:NH2	8:A:110:TYR:HB3	2.37	0.40
5:5:8:PHE:CE1	5:5:13:ILE:CD1	3.05	0.40
5:5:150:VAL:CG2	5:5:179:HIS:ND1	2.84	0.40
6:6:29:ARG:HB3	6:6:212:ARG:HH12	1.86	0.40
8:A:30:TYR:O	14:G:14:PHE:HE2	2.04	0.40
8:A:104:PHE:HE2	8:A:111:ASP:C	2.24	0.40
9:B:12:PHE:CZ	10:C:129:ARG:NH2	2.79	0.40
11:D:11:PHE:HD2	12:E:26:TYR:CB	2.33	0.40
12:E:157:HIS:HD2	12:E:170:LYS:HZ1	1.68	0.40
13:F:16:THR:OG1	13:F:18:ARG:O	2.40	0.40
13:F:40:SER:O	13:F:41:ASN:CG	2.60	0.40
17:J:364:GLU:CD	17:J:388:LYS:HD3	2.42	0.40
18:K:184:ILE:CD1	18:K:222:LEU:HD13	2.43	0.40
18:K:396:ARG:HH11	19:L:215:PRO:HG3	1.86	0.40
19:L:198:GLU:HA	19:L:239:ILE:HD11	2.03	0.40
19:L:201:LEU:HG	19:L:322:LYS:HE2	2.03	0.40
20:M:186:LEU:HD13	20:M:231:LEU:HG	2.03	0.40
20:M:221:TYR:CE1	20:M:346:LYS:HG3	2.53	0.40
20:M:361:LEU:O	20:M:376:TRP:CE2	2.74	0.40
21:N:130:ASP:HB3	21:N:133:LEU:HD12	2.03	0.40
21:N:738:GLN:HG2	21:N:742:TRP:CE3	2.57	0.40
22:O:147:ARG:NH2	22:O:178:TYR:OH	2.53	0.40
22:O:178:TYR:CZ	22:O:182:LYS:HD2	2.57	0.40
22:O:298:GLU:O	22:O:365:LYS:NZ	2.50	0.40
23:P:342:GLN:O	23:P:346:ILE:HG13	2.21	0.40
24:Q:220:LEU:O	24:Q:224:ILE:HG13	2.21	0.40
26:S:364:ILE:HG23	26:S:371:LEU:HD12	2.03	0.40
27:T:35:ILE:HG23	27:T:36:LYS:N	2.36	0.40
27:T:190:ALA:HB1	27:T:224:ARG:CD	2.51	0.40
28:U:273:LEU:CG	28:U:277:TYR:CZ	3.03	0.40
31:X:75:TRP:CA	31:X:87:PHE:HE1	2.17	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%)	13 (6%)	1 (0%)	29	69
2	2	221/261 (85%)	207 (94%)	10 (4%)	4 (2%)	8	40
3	3	202/205 (98%)	188 (93%)	12 (6%)	2 (1%)	15	55
4	4	196/198 (99%)	181 (92%)	13 (7%)	2 (1%)	15	55
5	5	210/287 (73%)	194 (92%)	11 (5%)	5 (2%)	6	33
6	6	220/241 (91%)	206 (94%)	11 (5%)	3 (1%)	11	46
7	7	231/266 (87%)	208 (90%)	16 (7%)	7 (3%)	4	28
8	A	241/252 (96%)	217 (90%)	20 (8%)	4 (2%)	9	42
9	B	248/250 (99%)	227 (92%)	15 (6%)	6 (2%)	6	33
10	C	243/258 (94%)	224 (92%)	16 (7%)	3 (1%)	13	50
11	D	240/254 (94%)	221 (92%)	16 (7%)	3 (1%)	12	48
12	E	241/260 (93%)	225 (93%)	13 (5%)	3 (1%)	13	50
13	F	231/234 (99%)	209 (90%)	19 (8%)	3 (1%)	12	48
14	G	243/288 (84%)	224 (92%)	16 (7%)	3 (1%)	13	50
15	H	353/467 (76%)	298 (84%)	36 (10%)	19 (5%)	2	19
16	I	358/437 (82%)	326 (91%)	25 (7%)	7 (2%)	7	38
17	J	367/405 (91%)	337 (92%)	21 (6%)	9 (2%)	5	32
18	K	377/428 (88%)	336 (89%)	29 (8%)	12 (3%)	4	26
19	L	357/437 (82%)	326 (91%)	18 (5%)	13 (4%)	3	25
20	M	363/434 (84%)	322 (89%)	29 (8%)	12 (3%)	4	26
21	N	843/945 (89%)	786 (93%)	37 (4%)	20 (2%)	6	33
22	O	385/393 (98%)	309 (80%)	44 (11%)	32 (8%)	1	12
23	P	413/445 (93%)	374 (91%)	22 (5%)	17 (4%)	3	23
24	Q	429/434 (99%)	390 (91%)	28 (6%)	11 (3%)	5	31
25	R	398/429 (93%)	345 (87%)	36 (9%)	17 (4%)	2	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
26	S	351/523 (67%)	308 (88%)	31 (9%)	12 (3%)	3 26
27	T	270/274 (98%)	235 (87%)	16 (6%)	19 (7%)	1 14
28	U	245/338 (72%)	226 (92%)	9 (4%)	10 (4%)	3 23
29	V	239/306 (78%)	212 (89%)	18 (8%)	9 (4%)	3 24
30	W	193/268 (72%)	156 (81%)	17 (9%)	20 (10%)	0 8
31	X	125/156 (80%)	101 (81%)	19 (15%)	5 (4%)	3 23
32	Y	17/89 (19%)	17 (100%)	0	0	100 100
33	Z	807/993 (81%)	690 (86%)	68 (8%)	49 (6%)	1 17
All	All	10060/11670 (86%)	9014 (90%)	704 (7%)	342 (3%)	6 26

All (342) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	4	150	ASP
9	B	203	GLU
11	D	31	THR
11	D	204	GLN
15	H	183	ILE
15	H	185	LEU
15	H	188	PRO
15	H	303	ALA
16	I	125	MET
16	I	430	GLU
17	J	151	GLY
17	J	249	GLU
17	J	310	ILE
18	K	281	ARG
18	K	283	ASP
18	K	366	ALA
19	L	81	ILE
19	L	134	SER
19	L	170	MET
19	L	282	GLU
19	L	297	ALA
20	M	252	VAL
20	M	258	GLU
20	M	433	TYR
21	N	16	ASN
21	N	53	ASP

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Mol	Chain	Res	Type
21	N	415	PHE
21	N	915	ALA
22	O	20	PRO
22	O	43	GLU
22	O	73	ILE
22	O	82	LEU
22	O	103	LYS
22	O	107	GLN
22	O	243	VAL
22	O	277	ILE
22	O	304	ASN
22	O	338	LYS
22	O	340	SER
22	O	345	ASN
22	O	358	ILE
23	P	232	ARG
24	Q	149	LYS
24	Q	402	THR
24	Q	404	ASN
25	R	203	ASP
25	R	240	SER
26	S	328	PRO
27	T	5	ALA
27	T	156	SER
27	T	239	SER
27	T	245	TYR
27	T	251	HIS
28	U	7	LYS
28	U	86	LYS
28	U	87	GLU
28	U	113	TYR
28	U	161	ILE
29	V	45	VAL
29	V	48	GLU
29	V	61	TYR
29	V	117	TRP
29	V	135	ARG
30	W	11	ASP
30	W	12	ASN
30	W	18	ASN
30	W	59	PRO
30	W	147	ILE

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Mol	Chain	Res	Type
30	W	179	ARG
30	W	183	GLU
30	W	192	LEU
31	X	29	VAL
31	X	41	GLU
33	Z	82	MET
33	Z	127	SER
33	Z	134	SER
33	Z	187	SER
33	Z	189	ALA
33	Z	193	PHE
33	Z	277	GLU
33	Z	318	LYS
33	Z	337	GLU
33	Z	353	VAL
33	Z	430	LEU
33	Z	553	ARG
33	Z	558	LEU
33	Z	787	ASP
33	Z	825	ALA
33	Z	955	VAL
33	Z	966	GLU
2	2	31	CYS
5	5	19	ARG
5	5	46	ALA
5	5	208	ASN
7	7	77	GLU
7	7	152	ASP
8	A	160	ALA
9	B	181	ASP
11	D	7	ALA
12	E	249	ALA
13	F	11	VAL
13	F	103	LEU
15	H	179	SER
15	H	323	ALA
17	J	354	SER
17	J	395	GLU
18	K	422	ASP
19	L	290	ARG
21	N	50	TYR
21	N	128	ILE

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Mol	Chain	Res	Type
21	N	249	ASN
21	N	324	LYS
21	N	394	ARG
21	N	395	ALA
21	N	745	LEU
22	O	18	ALA
22	O	58	ARG
22	O	120	LYS
22	O	346	GLU
23	P	47	ARG
23	P	133	GLU
23	P	231	LYS
23	P	283	LYS
23	P	289	ASN
23	P	321	VAL
23	P	328	ALA
24	Q	38	SER
24	Q	128	GLU
24	Q	131	VAL
24	Q	189	ARG
24	Q	387	TYR
24	Q	403	PRO
25	R	162	ILE
25	R	197	MET
25	R	244	THR
25	R	290	SER
25	R	421	VAL
26	S	193	THR
27	T	117	ASN
27	T	197	TYR
27	T	198	ASP
27	T	225	ASN
27	T	243	ALA
27	T	248	GLU
27	T	250	MET
28	U	141	GLU
28	U	159	CYS
29	V	134	SER
30	W	21	PHE
30	W	54	GLY
30	W	114	VAL
30	W	153	LEU

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Mol	Chain	Res	Type
30	W	191	ILE
31	X	72	GLU
33	Z	110	ASN
33	Z	185	ASP
33	Z	188	ALA
33	Z	320	SER
33	Z	482	ASP
33	Z	769	ASN
33	Z	990	ARG
1	1	19	ARG
2	2	193	PRO
2	2	196	ARG
5	5	148	LEU
6	6	10	ASP
7	7	2	SER
7	7	74	ASP
7	7	75	ALA
8	A	150	LEU
9	B	40	THR
9	B	215	GLY
10	C	52	VAL
12	E	54	ALA
12	E	73	HIS
14	G	208	GLU
15	H	97	LEU
15	H	172	MET
15	H	310	GLU
15	H	343	PHE
16	I	164	ALA
16	I	320	GLY
17	J	131	ASP
17	J	194	GLY
18	K	153	ASP
18	K	288	SER
18	K	377	SER
19	L	319	GLY
20	M	162	GLU
20	M	336	ALA
20	M	424	ALA
20	M	429	SER
21	N	529	GLN
21	N	614	ASN

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Mol	Chain	Res	Type
21	N	863	SER
22	O	56	PRO
22	O	183	ASN
22	O	228	TYR
22	O	248	TYR
23	P	168	TYR
23	P	319	GLU
24	Q	109	ASP
25	R	37	LYS
25	R	76	GLN
25	R	124	ASP
25	R	326	ALA
25	R	377	LEU
26	S	172	ASN
26	S	177	ASN
26	S	195	ALA
26	S	225	HIS
26	S	299	LYS
27	T	40	LEU
27	T	91	SER
27	T	92	ASN
27	T	237	ASN
29	V	59	ASP
29	V	73	GLN
30	W	101	ARG
30	W	136	ASN
30	W	143	ASN
30	W	164	PRO
31	X	28	PRO
33	Z	186	GLY
33	Z	230	ILE
33	Z	333	GLY
33	Z	352	LYS
33	Z	396	ASN
33	Z	523	ALA
33	Z	895	LEU
3	3	-5	SER
6	6	157	GLY
7	7	221	GLY
8	A	231	ASP
9	B	2	THR
14	G	222	GLU

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Mol	Chain	Res	Type
15	H	166	THR
15	H	168	ILE
15	H	318	ARG
15	H	358	PRO
16	I	166	PRO
18	K	341	PRO
19	L	164	ASP
19	L	289	ARG
19	L	385	GLY
21	N	283	ASP
21	N	458	ALA
21	N	670	LYS
22	O	36	LYS
22	O	114	GLN
22	O	204	SER
22	O	353	VAL
23	P	87	GLY
23	P	322	LEU
24	Q	354	PHE
25	R	83	GLU
25	R	241	ILE
25	R	262	GLU
26	S	144	LEU
26	S	192	GLU
26	S	375	ASP
27	T	90	PHE
28	U	230	GLN
33	Z	133	ASP
33	Z	215	ASN
33	Z	259	PRO
33	Z	964	GLU
2	2	201	LYS
3	3	107	SER
8	A	168	ALA
9	B	233	PRO
14	G	185	GLY
15	H	104	LYS
16	I	117	HIS
17	J	126	LEU
18	K	286	THR
18	K	397	LYS
20	M	431	SER

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Mol	Chain	Res	Type
21	N	771	PHE
21	N	786	ARG
22	O	239	MET
23	P	89	LEU
23	P	172	GLU
23	P	306	ASN
26	S	198	SER
27	T	172	SER
27	T	242	LYS
28	U	162	GLU
29	V	247	ILE
30	W	142	ILE
33	Z	143	VAL
33	Z	556	ILE
33	Z	975	SER
4	4	194	PHE
10	C	3	SER
13	F	202	ARG
15	H	187	LEU
15	H	378	SER
16	I	116	ASP
18	K	278	ALA
19	L	284	ASP
20	M	143	ASN
20	M	226	THR
22	O	230	PHE
22	O	272	VAL
23	P	290	LEU
25	R	74	ASN
25	R	393	PRO
30	W	196	SER
31	X	24	CYS
33	Z	109	PRO
33	Z	328	ASP
33	Z	351	PRO
33	Z	578	GLY
5	5	173	GLY
15	H	211	VAL
19	L	350	PRO
20	M	175	LYS
22	O	355	PRO
23	P	124	VAL

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Mol	Chain	Res	Type
33	Z	87	LYS
33	Z	326	VAL
7	7	70	ASN
10	C	225	VAL
28	U	125	VAL
33	Z	373	GLY
17	J	299	ILE
18	K	215	PRO
20	M	83	VAL
22	O	237	PRO
22	O	278	PRO
22	O	360	GLY
26	S	165	PRO
33	Z	192	GLY
15	H	105	ILE
19	L	287	GLY
21	N	353	LEU
33	Z	481	PRO
33	Z	925	VAL
6	6	154	GLY
30	W	176	PRO
33	Z	519	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%)	168 (99%)	1 (1%)	86 92
6	6	185/201 (92%)	185 (100%)	0	100 100
7	7	199/224 (89%)	199 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
8	A	207/210 (99%)	207 (100%)	0	100 100
9	B	209/209 (100%)	209 (100%)	0	100 100
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%)	192 (100%)	0	100 100
14	G	201/239 (84%)	200 (100%)	1 (0%)	88 93
15	H	303/399 (76%)	302 (100%)	1 (0%)	92 95
16	I	319/385 (83%)	318 (100%)	1 (0%)	92 95
17	J	325/352 (92%)	324 (100%)	1 (0%)	92 95
18	K	334/374 (89%)	333 (100%)	1 (0%)	92 95
19	L	308/377 (82%)	308 (100%)	0	100 100
20	M	315/375 (84%)	315 (100%)	0	100 100
21	N	713/797 (90%)	710 (100%)	3 (0%)	91 94
22	O	363/368 (99%)	361 (99%)	2 (1%)	86 92
23	P	388/415 (94%)	380 (98%)	8 (2%)	53 72
24	Q	388/391 (99%)	388 (100%)	0	100 100
25	R	351/379 (93%)	351 (100%)	0	100 100
26	S	330/489 (68%)	330 (100%)	0	100 100
27	T	254/256 (99%)	254 (100%)	0	100 100
28	U	234/308 (76%)	228 (97%)	6 (3%)	46 66
29	V	217/268 (81%)	214 (99%)	3 (1%)	67 80
30	W	171/230 (74%)	169 (99%)	2 (1%)	71 83
31	X	116/144 (81%)	114 (98%)	2 (2%)	60 78
32	Y	18/81 (22%)	18 (100%)	0	100 100
33	Z	692/850 (81%)	692 (100%)	0	100 100
All	All	8816/10146 (87%)	8783 (100%)	33 (0%)	91 94

All (33) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	2	72	ARG
5	5	104	TYR

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Mol	Chain	Res	Type
14	G	217	TRP
15	H	198	MET
16	I	257	LEU
17	J	221	LYS
18	K	288	SER
21	N	780	ASP
21	N	866	TYR
21	N	905	LEU
22	O	20	PRO
22	O	58	ARG
23	P	31	ASP
23	P	33	ASN
23	P	43	GLU
23	P	57	GLU
23	P	58	VAL
23	P	69	ARG
23	P	85	LYS
23	P	88	GLN
28	U	71	ASN
28	U	74	GLU
28	U	75	ASN
28	U	77	ASN
28	U	92	TRP
28	U	154	PHE
29	V	68	VAL
29	V	85	ASP
29	V	109	HIS
30	W	8	LEU
30	W	101	ARG
31	X	11	ARG
31	X	48	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (171) such sidechains are listed below:

Mol	Chain	Res	Type
1	1	38	HIS
1	1	89	ASN
1	1	157	HIS
1	1	161	GLN
2	2	35	HIS
2	2	66	HIS
2	2	85	GLN

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Mol	Chain	Res	Type
2	2	86	HIS
2	2	114	HIS
2	2	116	HIS
2	2	141	HIS
3	3	63	ASN
3	3	160	GLN
4	4	36	GLN
4	4	60	GLN
4	4	64	GLN
4	4	117	GLN
4	4	145	HIS
4	4	146	HIS
5	5	179	HIS
6	6	-2	ASN
6	6	27	ASN
6	6	46	ASN
6	6	67	HIS
6	6	85	GLN
7	7	18	ASN
7	7	195	ASN
8	A	36	ASN
8	A	37	GLN
8	A	39	ASN
8	A	126	GLN
8	A	130	GLN
9	B	119	GLN
9	B	123	GLN
10	C	59	GLN
10	C	94	HIS
10	C	147	GLN
10	C	173	GLN
11	D	40	ASN
11	D	70	HIS
11	D	96	HIS
11	D	118	GLN
12	E	108	ASN
12	E	114	GLN
12	E	157	HIS
13	F	31	GLN
13	F	69	HIS
13	F	91	GLN
13	F	117	GLN

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Mol	Chain	Res	Type
13	F	143	HIS
14	G	42	ASN
14	G	67	GLN
14	G	120	GLN
14	G	122	HIS
14	G	182	HIS
15	H	95	HIS
15	H	339	GLN
16	I	102	ASN
16	I	312	GLN
16	I	365	HIS
17	J	111	GLN
17	J	205	HIS
17	J	277	ASN
17	J	287	ASN
17	J	336	ASN
17	J	342	ASN
18	K	72	GLN
18	K	90	GLN
18	K	105	GLN
18	K	106	ASN
18	K	144	ASN
18	K	180	GLN
18	K	264	ASN
18	K	293	GLN
18	K	419	ASN
19	L	67	HIS
19	L	73	GLN
19	L	80	ASN
19	L	311	GLN
19	L	320	GLN
19	L	328	ASN
20	M	302	GLN
20	M	311	GLN
20	M	390	GLN
21	N	71	ASN
21	N	96	GLN
21	N	182	ASN
21	N	280	GLN
21	N	300	ASN
21	N	306	ASN
21	N	329	HIS

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Mol	Chain	Res	Type
21	N	375	HIS
21	N	667	GLN
21	N	707	ASN
21	N	719	ASN
21	N	738	GLN
21	N	747	HIS
22	O	4	ASN
22	O	5	HIS
22	O	28	GLN
22	O	40	GLN
22	O	116	ASN
22	O	117	ASN
22	O	141	ASN
22	O	169	ASN
22	O	186	ASN
22	O	211	GLN
22	O	229	ASN
22	O	323	ASN
22	O	345	ASN
22	O	362	GLN
22	O	376	GLN
23	P	76	ASN
23	P	164	GLN
23	P	210	ASN
23	P	306	ASN
23	P	315	GLN
23	P	342	GLN
23	P	425	HIS
24	Q	54	GLN
24	Q	114	GLN
24	Q	226	HIS
24	Q	247	HIS
24	Q	252	HIS
24	Q	253	ASN
25	R	81	HIS
25	R	89	ASN
25	R	114	ASN
25	R	143	GLN
25	R	182	ASN
25	R	208	ASN
25	R	314	ASN
25	R	391	ASN

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Mol	Chain	Res	Type
26	S	143	GLN
26	S	235	ASN
26	S	378	GLN
27	T	47	GLN
27	T	80	ASN
27	T	93	ASN
27	T	94	HIS
27	T	225	ASN
27	T	236	ASN
28	U	21	HIS
28	U	107	ASN
28	U	117	ASN
28	U	173	HIS
28	U	234	ASN
28	U	259	ASN
28	U	280	ASN
29	V	88	GLN
29	V	109	HIS
29	V	133	ASN
29	V	145	GLN
29	V	291	ASN
30	W	44	ASN
30	W	58	ASN
30	W	103	ASN
30	W	108	GLN
30	W	136	ASN
30	W	143	ASN
30	W	162	ASN
30	W	163	ASN
31	X	38	ASN
31	X	105	ASN
33	Z	309	GLN
33	Z	361	HIS
33	Z	429	ASN
33	Z	435	GLN
33	Z	532	HIS
33	Z	899	GLN
33	Z	959	HIS

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
30	W	3
17	J	2
18	K	2
19	L	2
20	M	2
29	V	2
16	I	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	J	218:LEU	C	219:VAL	N	3.99
1	K	248:GLY	C	249:GLU	N	3.09
1	L	251:ILE	C	252:VAL	N	2.52
1	I	252:LEU	C	253:ILE	N	2.13
1	J	224:GLY	C	225:GLU	N	2.03
1	W	120:ASP	C	121:SER	N	2.02
1	K	242:PHE	C	243:VAL	N	1.83
1	M	257:GLY	C	258:GLU	N	1.80
1	V	99:GLY	C	100:ARG	N	1.65
1	L	257:GLY	C	258:GLU	N	1.64

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	V	282:GLU	C	283:THR	N	1.62
1	M	58:MET	C	59:LEU	N	1.16
1	W	154:LEU	C	155:ASP	N	1.05
1	W	38:GLN	C	39:ALA	N	0.46

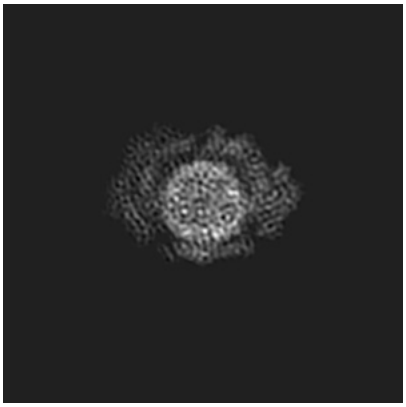
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2595. 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

6.1.1 Primary map



X

Y

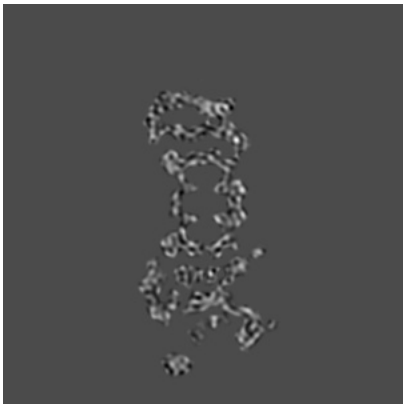
Z

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

6.2 Central slices

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: 91

Y Index: 149

Z Index: 147

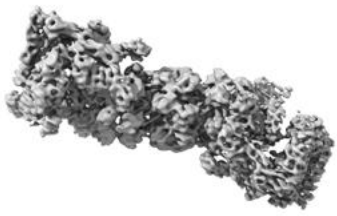
The images above show the largest variance slices of the map in three orthogonal directions.

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 0.63. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

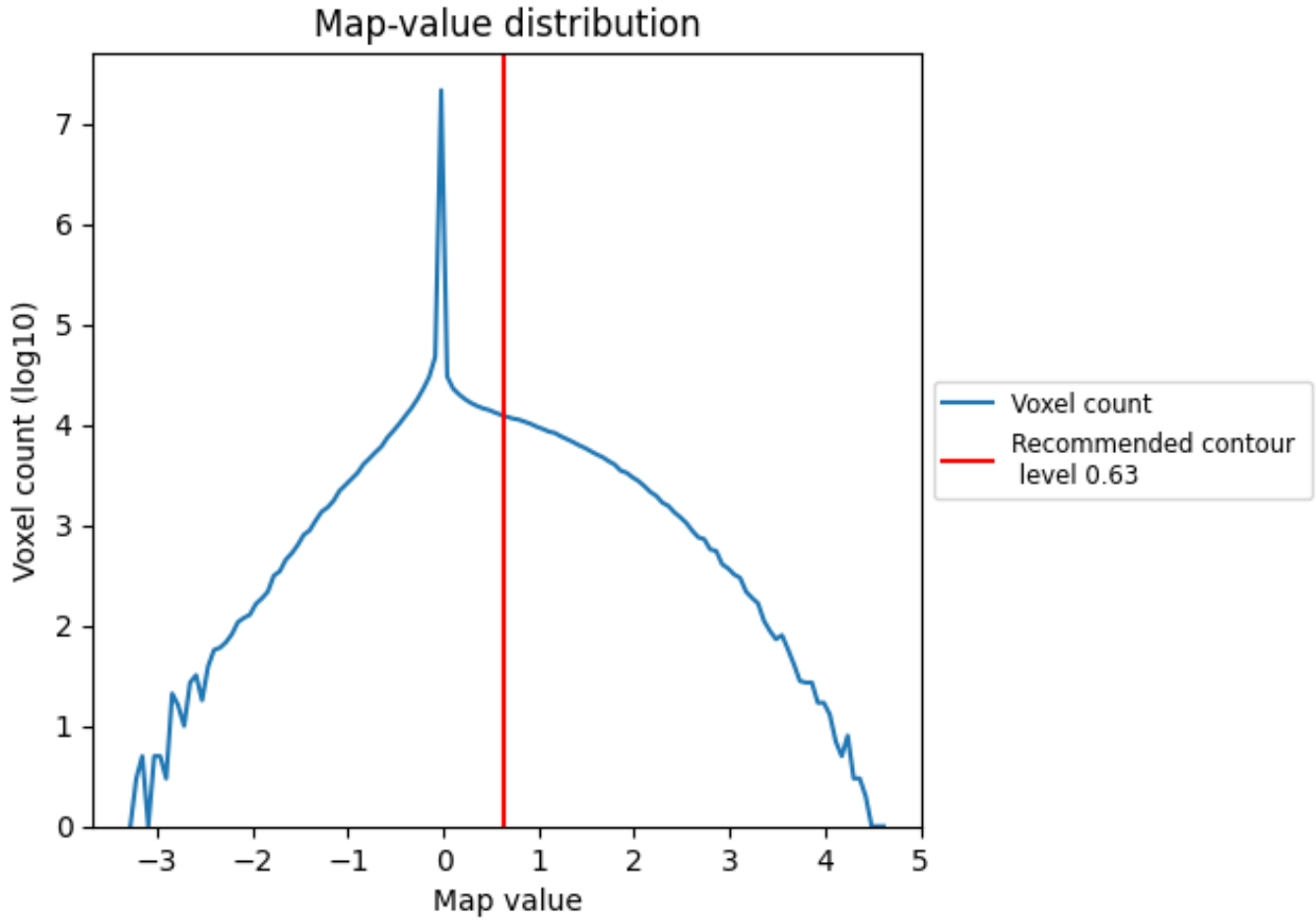
6.5 Mask visualisation (i)

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

7 Map analysis

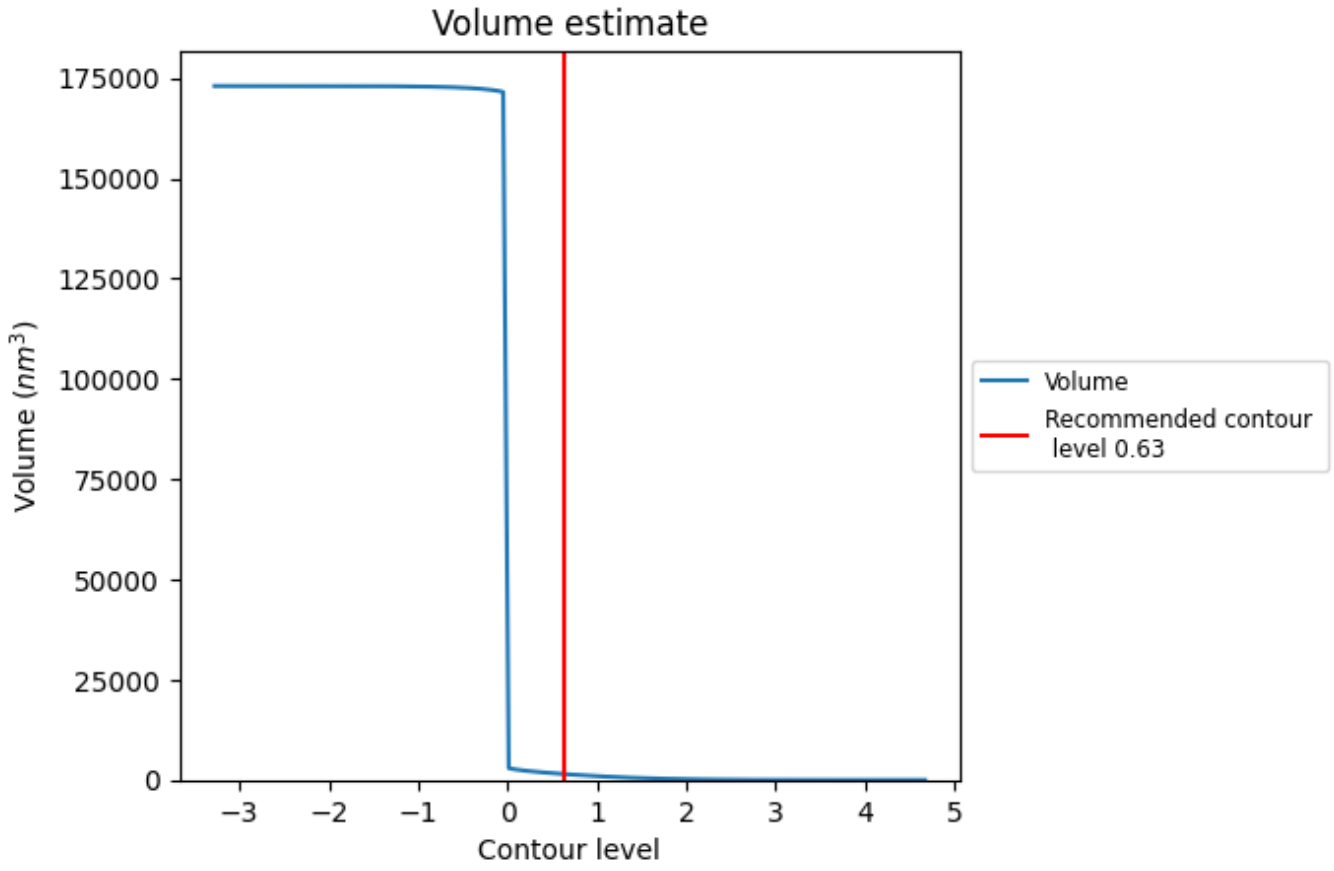
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

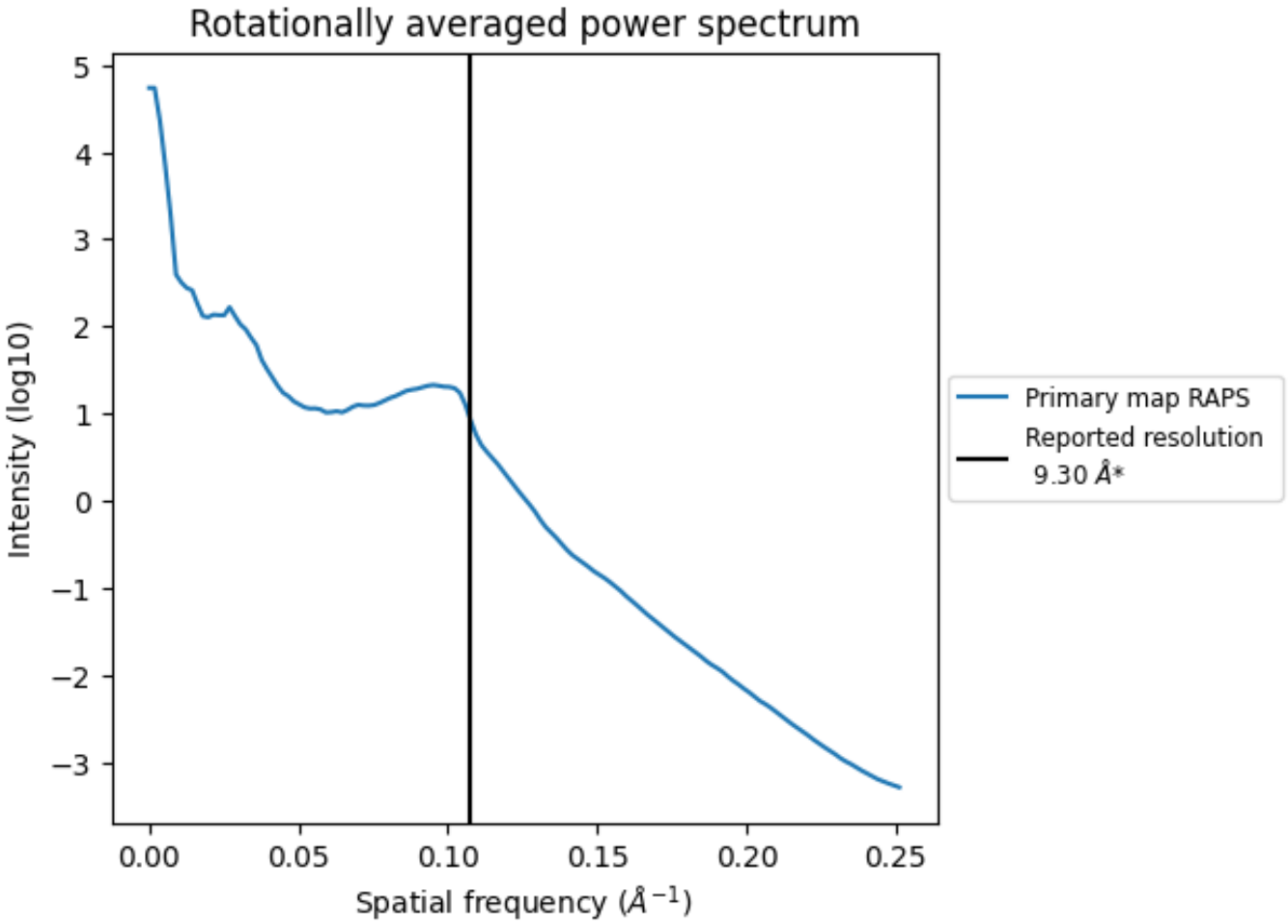
7.2 Volume estimate



The volume at the recommended contour level is 1478 nm^3; this corresponds to an approximate mass of 1335 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 0.108 Å^{-1}

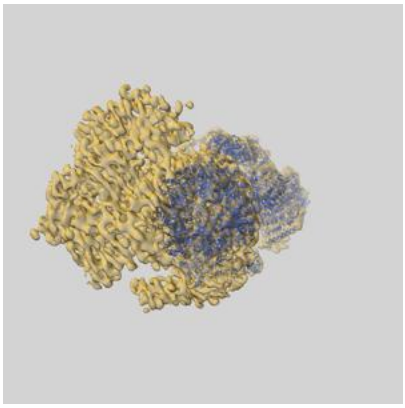
8 Fourier-Shell correlation

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

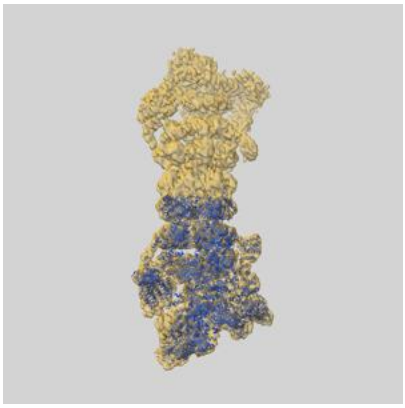
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2595 and PDB model 4CR3. Per-residue inclusion information can be found in section 3 on page 9.

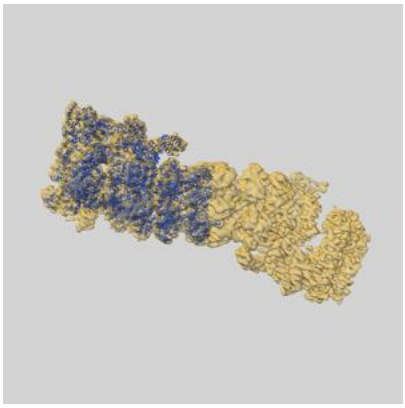
9.1 Map-model overlay



X



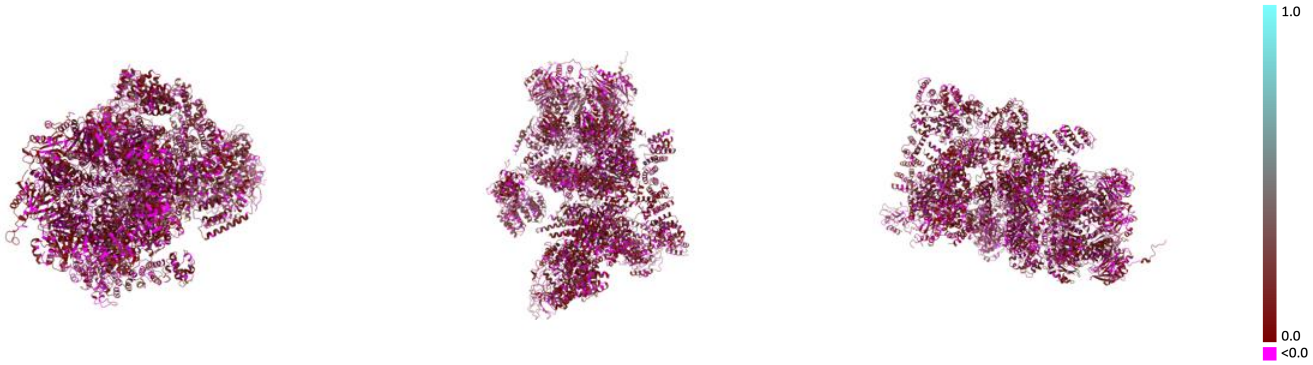
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.63 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.

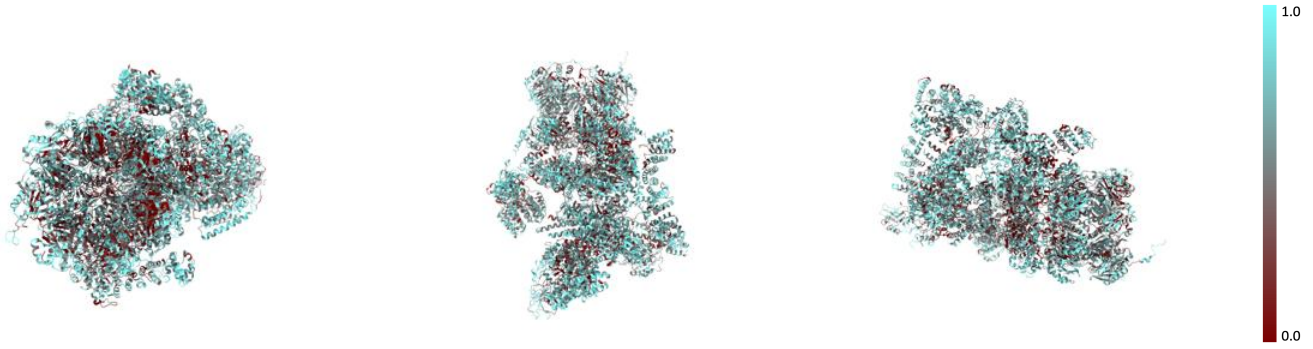
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according 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.

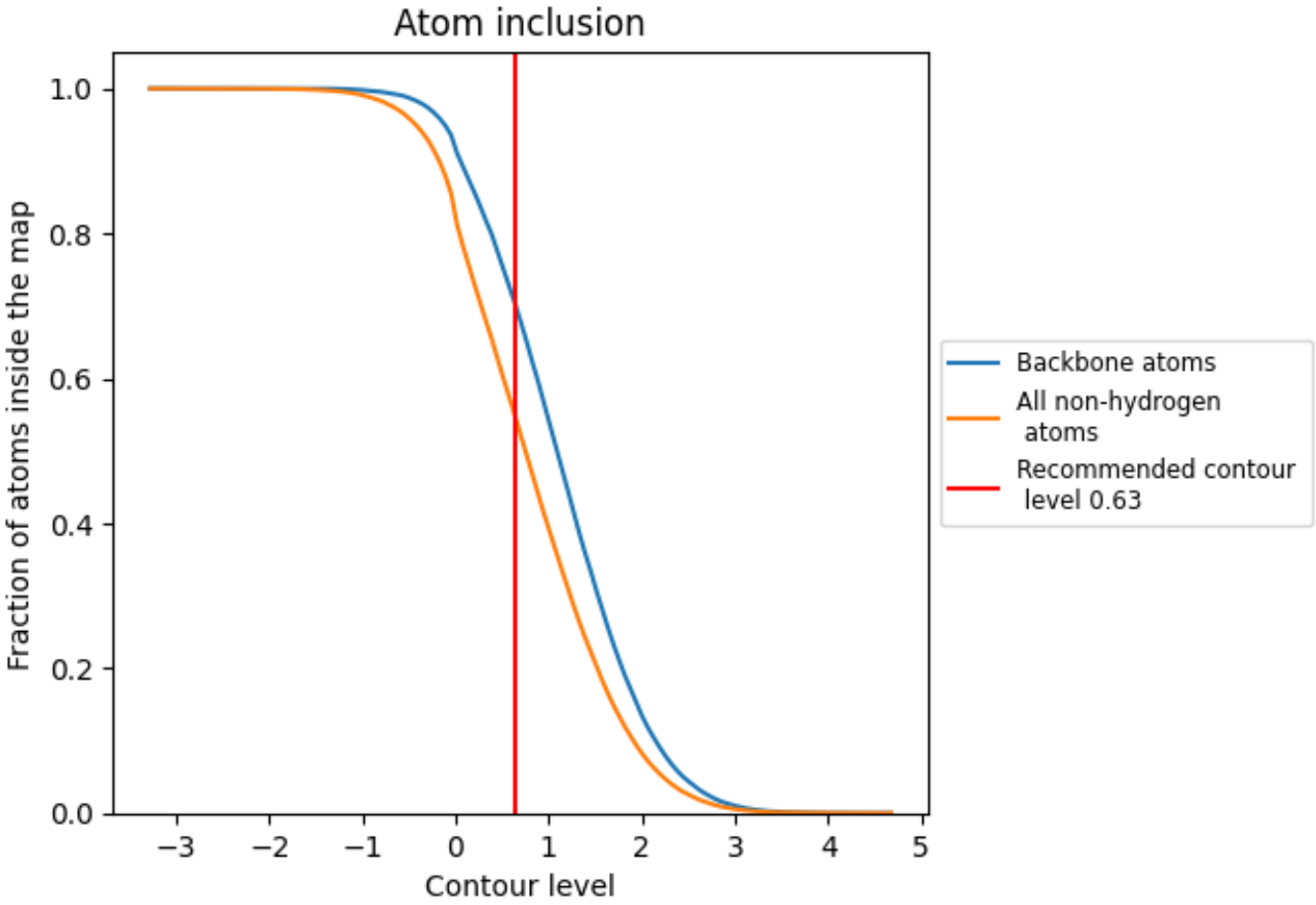
9.3 Atom inclusion mapped to coordinate model



X Y Z

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 (0.63).

9.4 Atom inclusion (i)



At the recommended contour level, 71% of all backbone atoms, 55% 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 (0.63) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5515	0.0850
1	0.4929	0.0560
2	0.5387	0.0770
3	0.4801	0.0750
4	0.5735	0.0900
5	0.5556	0.0850
6	0.5592	0.0830
7	0.5713	0.0810
A	0.5390	0.0930
B	0.5029	0.0800
C	0.5251	0.0980
D	0.5525	0.1030
E	0.5394	0.0860
F	0.5549	0.0850
G	0.5107	0.0800
H	0.4877	0.0680
I	0.4576	0.0800
J	0.4928	0.0710
K	0.4851	0.0820
L	0.5081	0.0920
M	0.4689	0.0700
N	0.5960	0.0980
O	0.6218	0.0860
P	0.6586	0.0990
Q	0.5468	0.0830
R	0.6436	0.0940
S	0.5601	0.0990
T	0.6201	0.0790
U	0.5801	0.1030
V	0.4927	0.0830
W	0.4901	0.0650
X	0.6002	0.0740
Y	0.7607	0.1240
Z	0.5979	0.0860