Full wwPDB X-ray Structure Validation Report (i)

Aug 21, 2023 – 12:47 PM EDT

PDB ID	:	2PPB
Title	:	Crystal structure of the T. thermophilus RNAP polymerase elongation complex with the ntp substrate analog and antibiotic streptolydigin
Authors	:	Vassylyev, D.G.; Vassylyeva, M.N.; Artsimovitch, I.; Landick, R.
Deposited on	:	2007-04-28
Resolution	:	3.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (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:

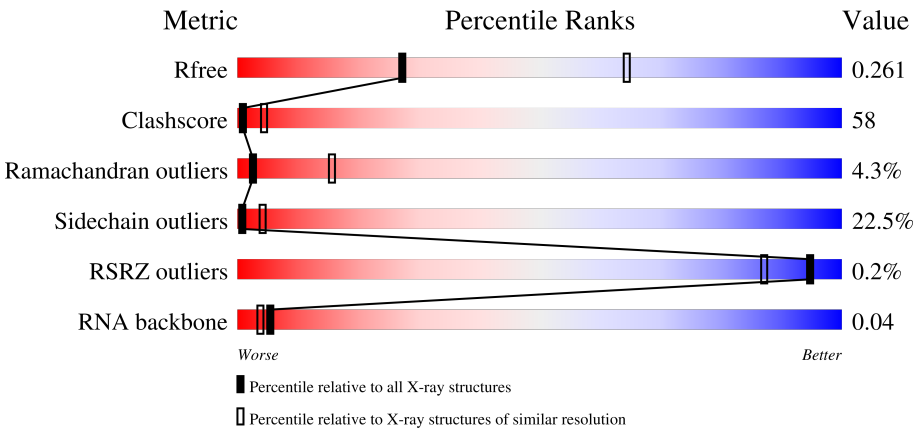
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (3.30-2.70)

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

Mol	Chain	Length	Quality of chain
1	G	23	22% 48% 26% •
1	X	23	17% 52% 30%
2	H	16	19% 81%
2	Y	16	25% 75%

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Mol	Chain	Length	Quality of chain
3	I	14	21% 57% 14% 7%
3	Z	14	29% 64% 7%
4	A	315	17% 45% 10% 27%
4	B	315	23% 40% 9% • 27%
4	K	315	19% 43% 11% • 27%
4	L	315	21% 42% 10% 27%
5	C	1119	25% 58% 16% •
5	M	1119	23% 59% 18% •
6	D	1524	22% 49% 14% • 14%
6	N	1524	21% 50% 14% • 14%
7	E	99	22% 58% 14% • •
7	O	99	25% 56% 11% • •

2 Entry composition (i)

There are 12 unique types of molecules in this entry. The entry contains 51962 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a DNA chain called DNA (5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	G	23	467	220	80	144	23	0	0	0
1	X	23	467	220	80	144	23	0	0	0

- Molecule 2 is a RNA chain called RNA (5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	H	16	347	153	64	114	16	0	0	0
2	Y	16	347	153	64	114	16	0	0	0

- Molecule 3 is a DNA chain called DNA (5'-D(*AP*AP*CP*GP*CP*CP*AP*GP*AP*CP*AP*GP*GP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
3	I	13	270	126	57	74	13	0	0	0
3	Z	13	270	126	57	74	13	0	0	0

- Molecule 4 is a protein called DNA-directed RNA polymerase alpha chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	A	229	1806	1153	313	337	3	0	0	0
4	B	229	1806	1153	313	337	3	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	K	229	1806	1153	313	337	3	0	0	0
			Total	C	N	O	S			
4	L	229	1806	1153	313	337	3	0	0	0

- Molecule 5 is a protein called DNA-directed RNA polymerase beta chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	C	1119	8829	5581	1577	1647	24	0	0	0
			Total	C	N	O	S			
5	M	1119	8829	5581	1577	1647	24	0	0	0

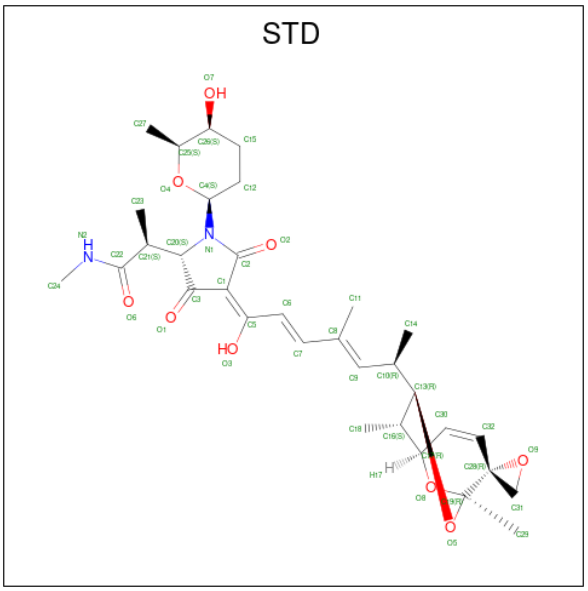
- Molecule 6 is a protein called DNA-directed RNA polymerase beta' chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	D	1314	10373	6565	1838	1937	33	0	0	0
			Total	C	N	O	S			
6	N	1314	10373	6565	1838	1937	33	0	0	0

- Molecule 7 is a protein called DNA-directed RNA polymerase omega chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	E	95	770	491	133	142	4	0	0	0
			Total	C	N	O	S			
7	O	95	770	491	133	142	4	0	0	0

- Molecule 8 is STREPTOLYDIGIN (three-letter code: STD) (formula: $C_{32}H_{44}N_2O_9$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
8	D	1	43	32	2	9	0	0
			Total	C	N	O		
8	N	1	43	32	2	9	0	0

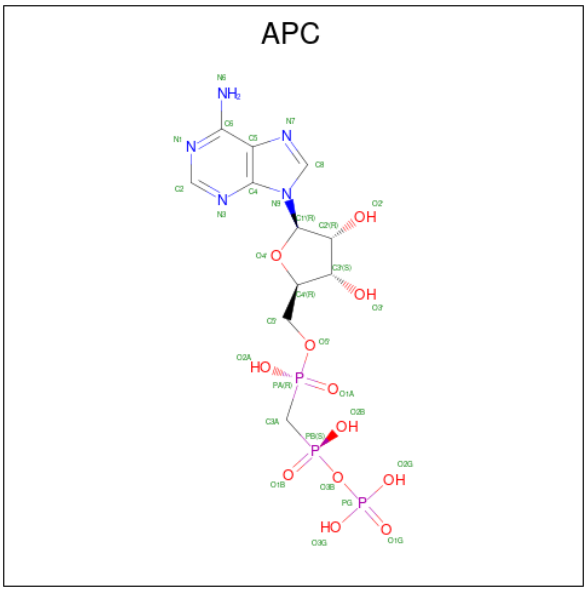
- Molecule 9 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
9	D	2	2	2	0	0
			Total	Zn		
9	N	2	2	2	0	0

- Molecule 10 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
10	D	2	2	2	0	0
			Total	Mg		
10	N	2	2	2	0	0

- Molecule 11 is DIPHOSPHOMETHYLPHOSPHONIC ACID ADENOSYL ESTER (three-letter code: APC) (formula: $C_{11}H_{18}N_5O_{12}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
11	D	1	31	11	5	12	3	0	0
			Total	C	N	O	P		
11	M	1	31	11	5	12	3	0	0

- Molecule 12 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
12	G	39	39	39	0	0
			Total	O		
12	H	22	22	22	0	0
			Total	O		
12	I	31	31	31	0	0
			Total	O		
12	X	31	31	31	0	0
			Total	O		
12	Y	26	26	26	0	0
			Total	O		
12	Z	18	18	18	0	0
			Total	O		
12	A	78	78	78	0	0
			Total	O		
12	B	117	117	117	0	0
			Total	O		
12	C	408	408	408	0	0
			Total	O		
12	D	531	531	531	0	0

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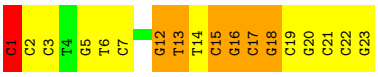
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
12	E	34	34	34	0	0
			Total	O		
12	K	81	81	81	0	0
			Total	O		
12	L	95	95	95	0	0
			Total	O		
12	M	396	396	396	0	0
			Total	O		
12	N	510	510	510	0	0
			Total	O		
12	O	53	53	53	0	0

3 Residue-property plots (i)

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

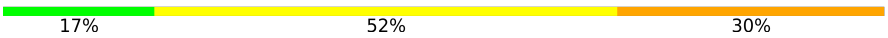
• Molecule 1: DNA (5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3')

Chain G:



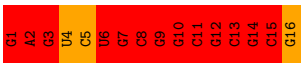
• Molecule 1: DNA (5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3')

Chain X:



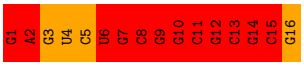
• Molecule 2: RNA (5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3')

Chain H:



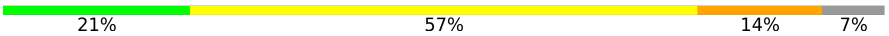
• Molecule 2: RNA (5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3')

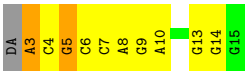
Chain Y:



• Molecule 3: DNA (5'-D(*AP*AP*CP*GP*CP*CP*AP*GP*AP*CP*AP*GP*GP*G)-3')

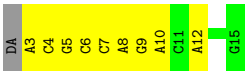
Chain I:





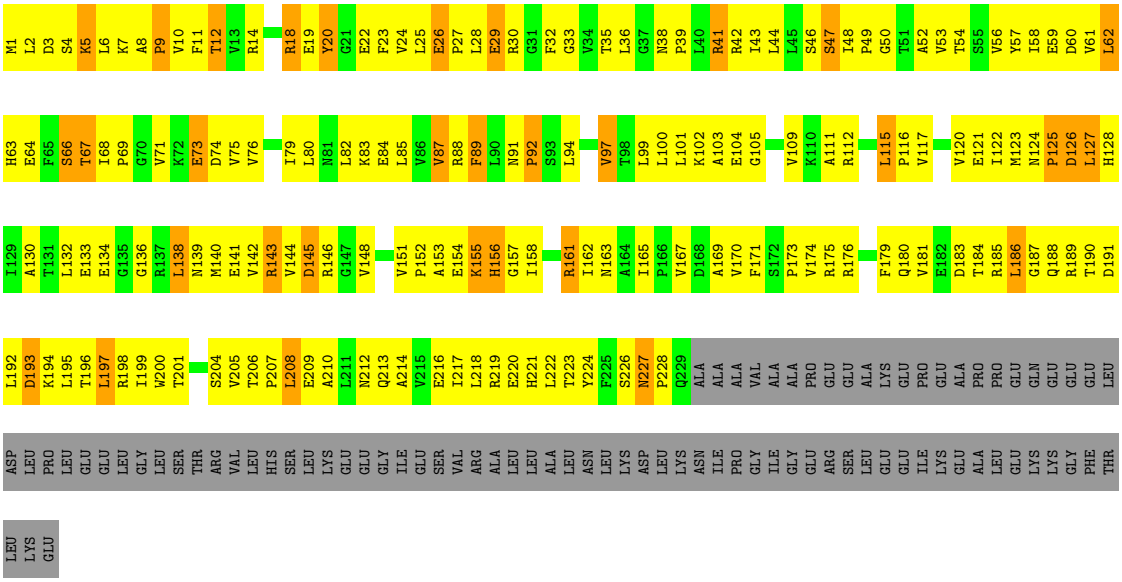
• Molecule 3: DNA (5'-D(*AP*AP*CP*GP*CP*CP*AP*GP*AP*CP*AP*GP*GP*G)-3')

Chain Z: 29% 64% 7%



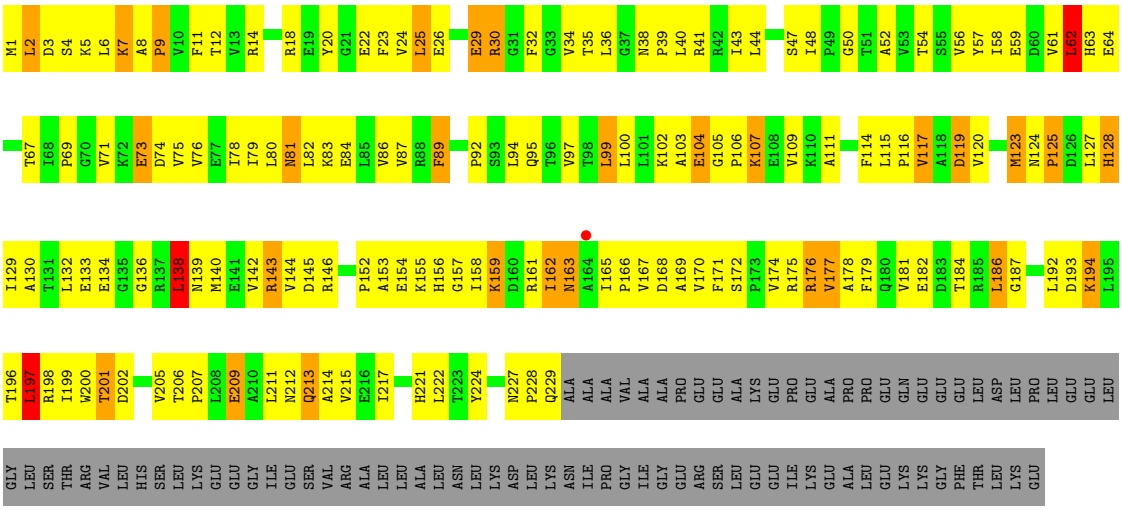
• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain A: 17% 45% 10% 27%



• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain B: 23% 40% 9% • 27%



• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain K: 19% 43% 11% • 27%

M1 L2 D3 S4 K5 L6 K7 A8 P9 V10 F11 T12 V13 R14 T15 R18 E19 Y20 F23 V24 L25 E26 P27 L28 E29 R30 G31 F32 G33 L36 G37 N38 P39 L40 R41 R42 I43 L44 L45 S46 S47 I48 P49 G50 T51 A52 V53 T54 S55 V56 Y57 I58 E59 D60 V61 L62 H63

E64 F65 S66 T67 I68 E73 D74 V75 V76 E77 I78 I79 L80 N81 L82 K83 E84 L85 V86 V87 R88 F89 L90 N91 P92 S93 L94 Q95 T96 V97 L100 L101 K102 A103 E104 G105 P106 K107 E108 V109 K110 A111 R112 D113 F114 L115 P116 V117 A118 D119 V120 M123 N124 P125 D126 L127 H128

I129 A130 T131 L132 E133 E134 G135 G136 R137 L138 N139 V142 R143 V144 D145 R146 G147 V148 G149 P152 A153 E154 K155 H156 G157 I158 R161 I162 N163 A164 I165 P166 V167 D168 F171 S172 P173 V174 R175 R176 V177 A178 F179 Q180 V181 E182 D183 L186 G187 Q188 R189 T190 D191 L192 D193

K194 L195 T196 L197 R198 I199 W200 T201 S204 V205 T206 P207 L208 E209 A210 L211 N212 Q213 A214 V215 E216 I217 L218 R219 E220 H221 L222 T223 Y224 F225 S226 N227 P228 Q229 ALA ALA ALA VAL ALA ALA PRO GLU GLU ALA LYS GLU PRO GLU ALA PRO PRO GLU GLN GLU GLU GLU LEU ASP LEU

PRO LEU GLU GLU LEU GLY LEU SER THR ARG VAL LEU HIS SER LEU LYS GLU GLU GLY ILE GLU SER VAL ARG ALA LEU LEU ALA LEU ASN LEU LYS ASP LEU LYS ASN ILE PRO GLY ILE GLY GLU ARG SER LEU GLU GLU ILE LYS GLU ALA LEU GLU LYS LYS GLY PHE THR LEU LYS

GLU

• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain L: 21% 42% 10% 27%

M1 L2 D3 S4 K5 L6 K7 A8 P9 T12 V13 Q16 G17 R18 E19 Y20 G21 E22 F23 V24 L25 E26 P27 L28 E29 G33 V34 T35 L36 G37 N38 P39 L40 R41 R42 I43 L44 L45 S46 S47 I48 P49 A52 V56 Y57 I58 E59 D60 V61 L62 H63 E64 F65 S66 T67

I68 K72 E73 D74 V75 V76 E77 I78 I79 L80 N81 L82 K83 E84 L85 V86 V87 R88 F89 L90 N91 P92 S93 L94 Q95 T96 V97 T98 L99 L100 L101 K102 A103 E104 G105 P106 K107 E108 V109 K110 A111 R112 D113 F114 L115 D119 V120 E121 I122 M123 N124 P125 D126 L127 H128 I129 A130 T131

L132 E133 E134 G135 G136 R137 L138 N139 M140 E141 V142 R143 V144 D145 R146 P152 A153 E154 K155 H156 G157 I158 K159 D160 R161 I162 N163 A164 I165 V170 P173 V174 R175 R176 V177 A178 F179 Q180 V181 E182 D183 T184 R185 L186 G187 Q188 R189 T190 D191 L192 D193 K194 L195 T196 L197 R198 I199

W200 T201 D202 G203 S204 V205 T206 P207 L208 E209 A210 L211 N212 Q213 A214 V215 E216 I217 L218 R219 L222 T223 Y224 F225 S226 N227 P228 Q229 ALA ALA ALA VAL ALA ALA PRO GLU GLU ALA LYS GLU PRO GLU ALA PRO PRO GLU GLN GLU GLU GLU LEU ASP LEU PRO LEU GLU GLU LEU GLY

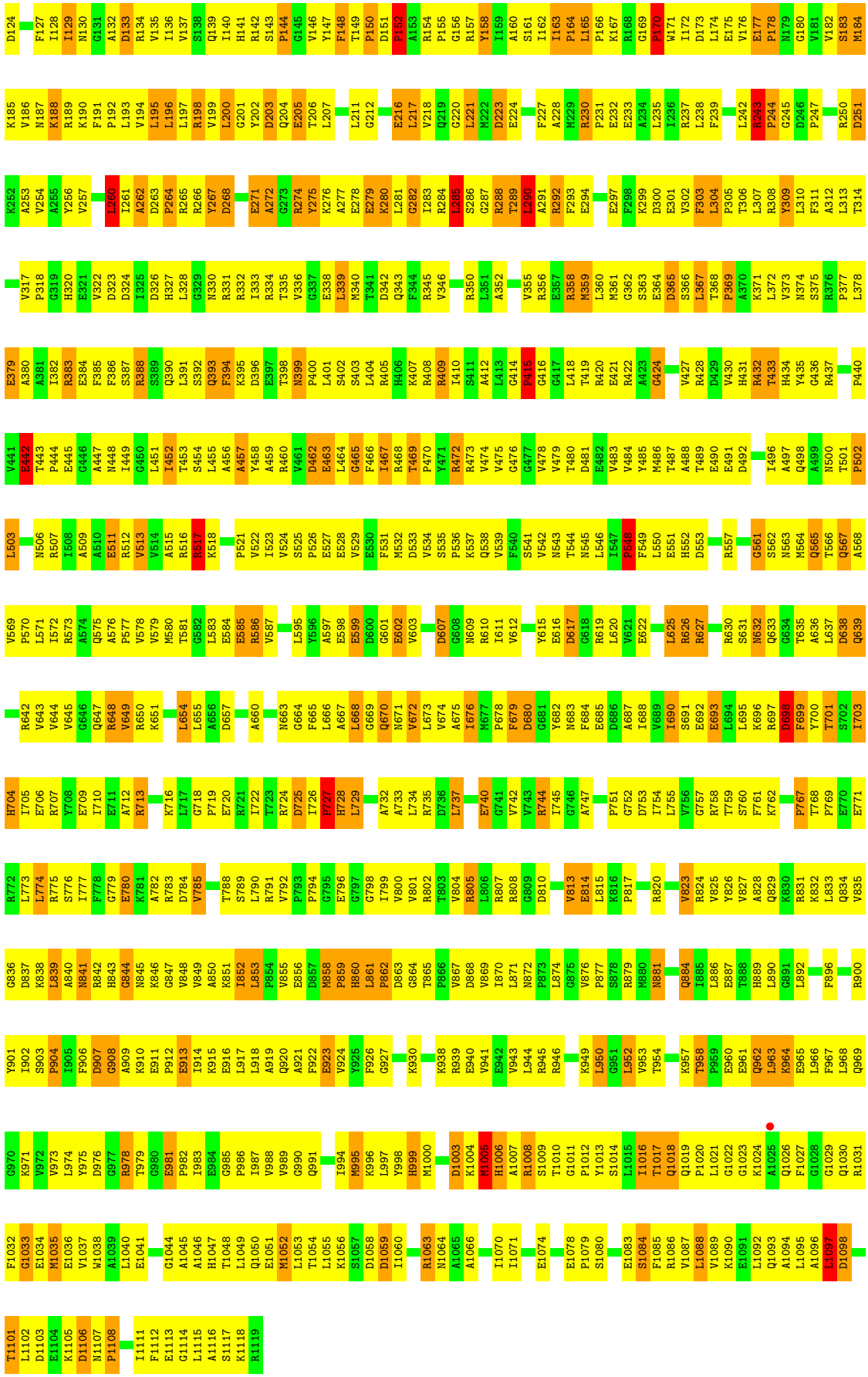
LEU SER THR ARG VAL LEU HIS SER LEU LYS GLU GLU GLY ILE GLU SER VAL ARG ALA LEU LEU ALA LEU ASN LEU LYS ASP LEU LYS ASN ILE PRO GLY ILE GLY GLU ARG SER LEU GLU GLU ILE LYS GLU ALA LEU GLU LYS LYS GLY PHE THR LEU LYS GLU

• Molecule 5: DNA-directed RNA polymerase beta chain

Chain C: 25% 58% 16% •

M1 E2 I3 K4 R5 F6 G7 R8 I9 R10 E11 V12 I13 P14 L15 P16 P17 L18 T19 E20 I21 Q22 V23 E24 S25 Y26 R27 L30 Q31 V34 P35 P36 E37 K38 R39 E40 N41 V42 G43 I44 Q45 A46 A47 F48 R49 E50 T51 F52 P53 I54 E55 E56 E57 D58 K59 G62 G63

L64 V65 L66 D67 F68 L69 E70 Y71 R72 L73 G74 E75 P76 P77 F78 P79 Q80 D81 E82 C83 R84 E85 K86 D87 L88 T89 Y90 Q91 A92 P93 L94 Y95 A96 R97 L98 Q99 L100 I101 H102 K103 D104 T105 G106 L107 I108 K109 E110 D111 E112 V113 F114 L115 G116 H117 I118 P119 L120 M121 T122 E123


T1101 L1102 D1103 E1104 K1105 D1106 N1107 P1108 I1111 F1112 E1113 G1114 L1115 A1116 S1117 K1118 R1119
F1032 G1033 E1034 M1035 E1036 V1037 W1038 A1039 L1040 E1041 G1044 A1045 A1046 H1047 T1048 L1049 Q1050 E1051 M1052 L1053 T1054 L1055 K1056 S1057 D1058 D1059 I1060 R1063 N1064 A1065 A1066 I1070 I1071 E1074 E1078 P1079 S1080 E1083 S1084 F1085 R1086 V1087 L1088 V1089 K1090 E1091 L1092 Q1093 A1094 L1095 A1096 L1097 D1098
G970 K971 V972 V973 L974 Y975 D976 G977 R978 T979 G980 E981 P982 I983 E984 G985 P986 I987 V988 V989 G990 Q991 I994 M995 K996 L997 Y998 H999 M1000 D1003 K1004 M1005 H1006 A1007 R1008 S1009 T1010 G1011 P1012 Y1013 S1014 L1015 I1016 T1017 Q1018 Q1019 P1020 L1021 G1022 G1023 K1024 A1025 Q1026 F1027 G1028 G1029 Q1030 R1031
Y901 I902 S903 P904 I905 F906 D907 G908 A909 K910 E911 P912 E913 I914 K915 E916 L917 I918 A919 Q920 A921 F922 E923 V924 Y925 F926 G927 K930 K938 R939 E940 V941 E942 V943 L944 R945 R946 K949 L950 G951 L952 V953 T954 K957 T958 P959 E960 E961 Q962 L963 K964 E965 L966 F967 L968 Q969
G836 D837 K838 L839 A840 N841 R842 H843 G844 N845 K846 G847 V848 V849 A850 K851 I852 L853 P854 V855 E856 D857 M858 P859 H860 L861 P862 D863 G864 T865 P866 V867 D868 V869 I870 L871 N872 P873 L874 G875 V876 P877 S878 R879 M880 N881 Q884 I885 L886 E887 T888 H889 L890 G891 L892 F896 R900
R772 L773 L774 R775 S776 I777 F778 G779 E780 K781 A782 R783 D784 V785 T788 S789 L790 R791 V792 P793 P794 G795 E796 G797 G798 I799 V800 V801 R802 T803 V804 R805 L806 R807 R808 G809 D810 V813 E814 L815 K816 P817 R820 V823 R824 V825 Y826 V827 A828 Q829 K830 R831 K832 L833 Q834 V835
H704 I705 E706 R707 Y708 E709 I710 E711 A712 R713 K716 L717 G718 P719 E720 R721 I722 T723 R724 D725 I726 P727 H728 L729 A732 A733 L734 R735 D736 L737 E740 G741 V742 V743 R744 I745 G746 A747 P751 G752 D753 I754 L755 V756 G757 R758 T759 S760 F761 K762 P767 T768 P769 E770 E771
G970 K971 V972 V973 L974 Y975 D976 G977 R978 T979 G980 E981 P982 I983 E984 G985 P986 I987 V988 V989 G990 Q991 I994 M995 K996 L997 Y998 H999 M1000 D1003 K1004 M1005 H1006 A1007 R1008 S1009 T1010 G1011 P1012 Y1013 S1014 L1015 I1016 T1017 Q1018 Q1019 P1020 L1021 G1022 G1023 K1024 A1025 Q1026 F1027 G1028 G1029 Q1030 R1031
V569 P570 L571 I572 R573 A574 Q575 A576 P577 V578 V579 M580 T581 G582 L583 E584 E585 R586 V587 L595 Y596 A597 E598 E599 D600 G601 E602 V603 D607 G608 N609 R610 I611 V612 Y615 E616 D617 G618 R619 L620 V621 E622 L625 R626 R627 R630 S631 N632 Q633 G634 T635 A636 L637 D638 Q639
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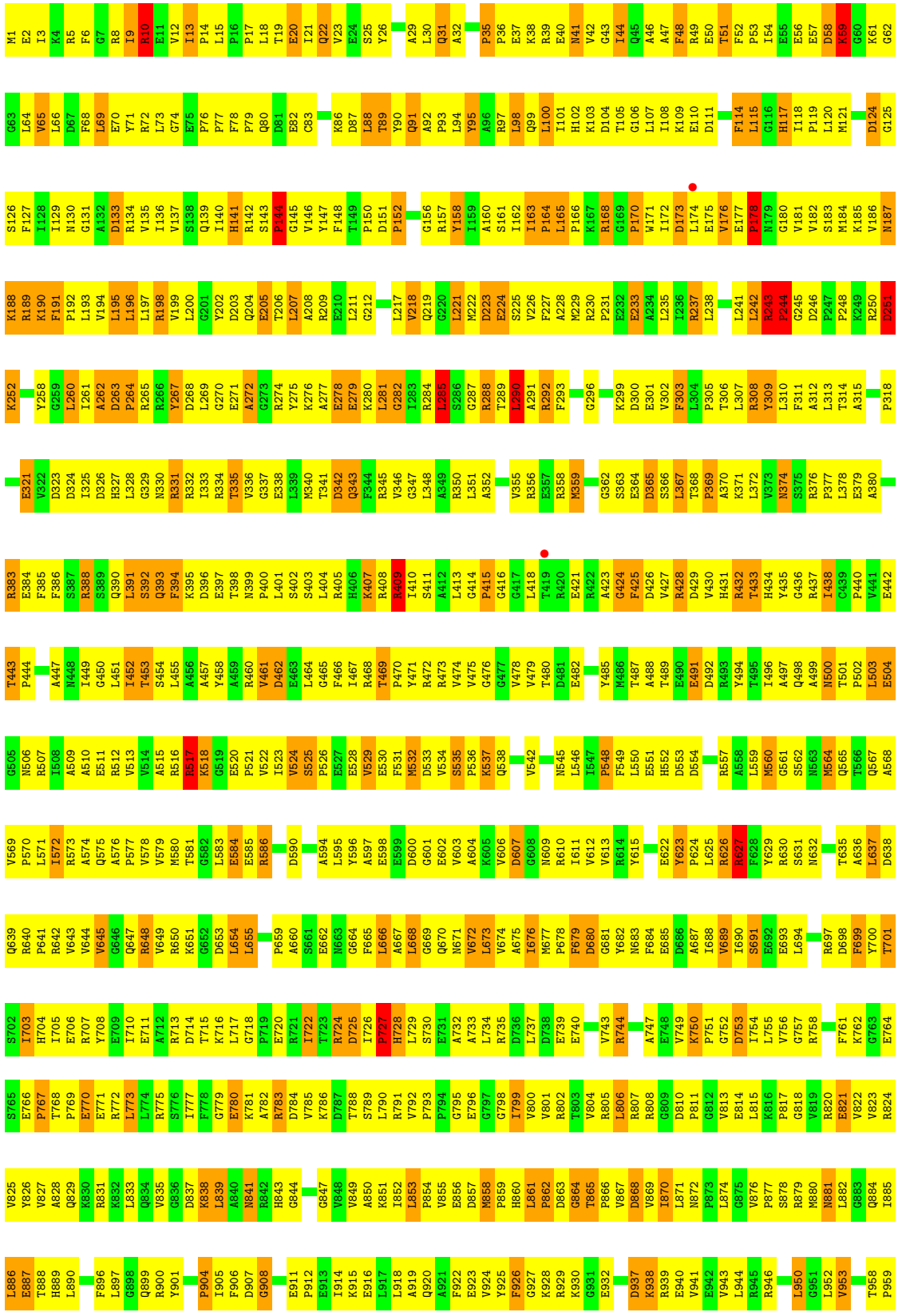
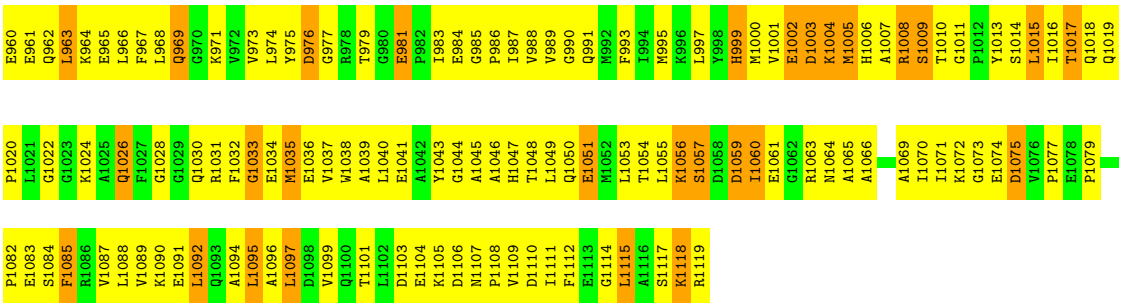
D124 F127 I128 I129 N130 G131 A132 D133 R134 V135 I136 V137 S138 Q139 I140 H141 R142 S143 P144 G145 V146 Y147 F148 T149 P150 D151 P152 A153 R154 P155 G156 R157 Y158 I159 A160 S161 I162 I163 P164 L165 P166 K167 R168 G169 P170 W171 I172 D173 L174 E175 V176 E177 P178 N179 G180 V181 V182 S183 M184
K185 V186 N187 K188 R189 K190 F191 P192 L193 R194 V194 L195 L196 L197 R198 V199 L200 G201 Y202 D203 Q204 E205 T206 L207 L211 G212 E216 L217 V218 Q219 G220 L221 M222 D223 E224 F227 A228 M229 R230 P231 E232 E233 A234 L235 I236 R237 L238 F239 L242 R243 P244 G245 D246 P247 R250 D251

• Molecule 5: DNA-directed RNA polymerase beta chain

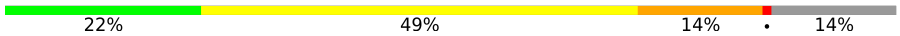
Chain M: 23% 59% 18%

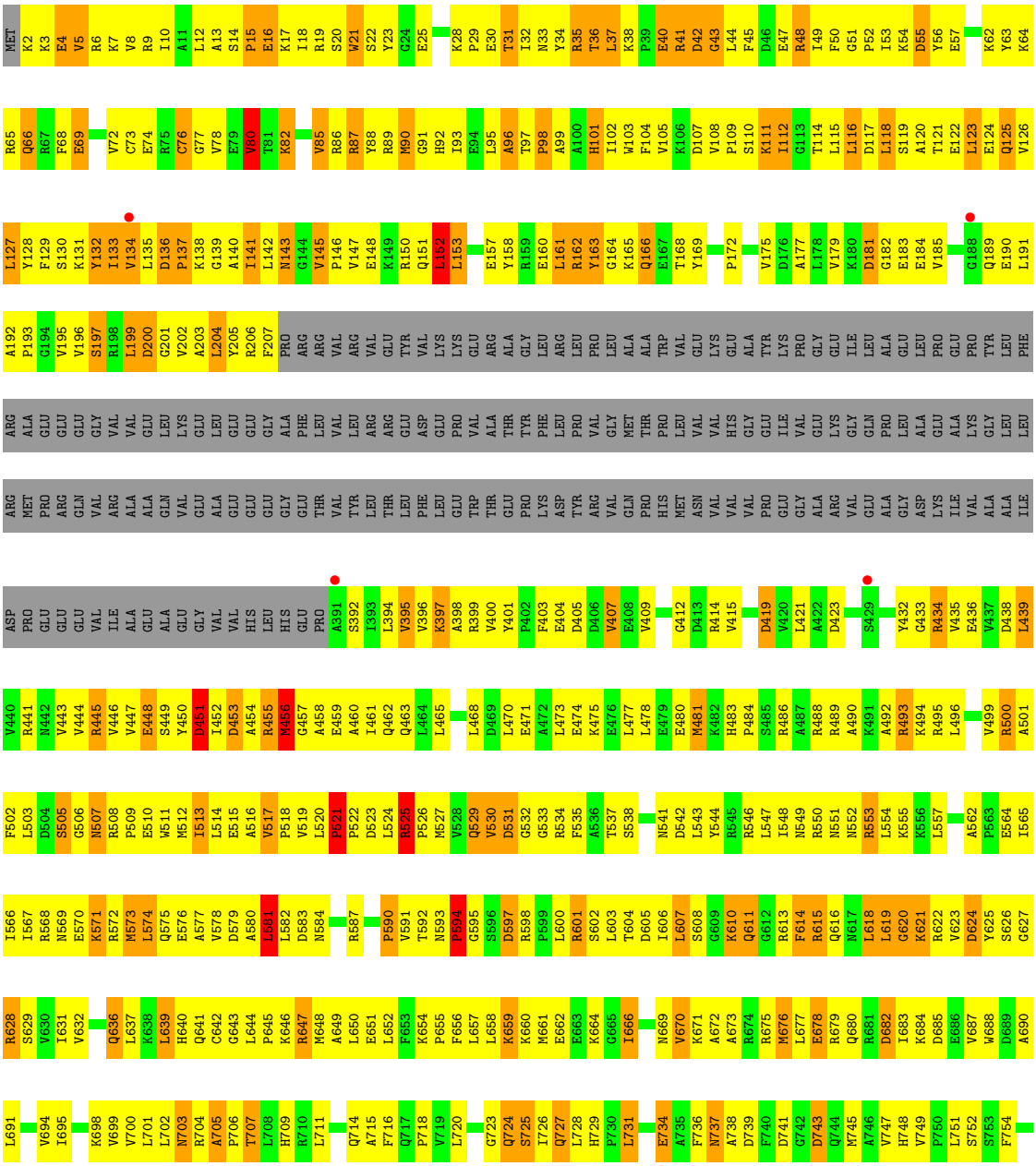


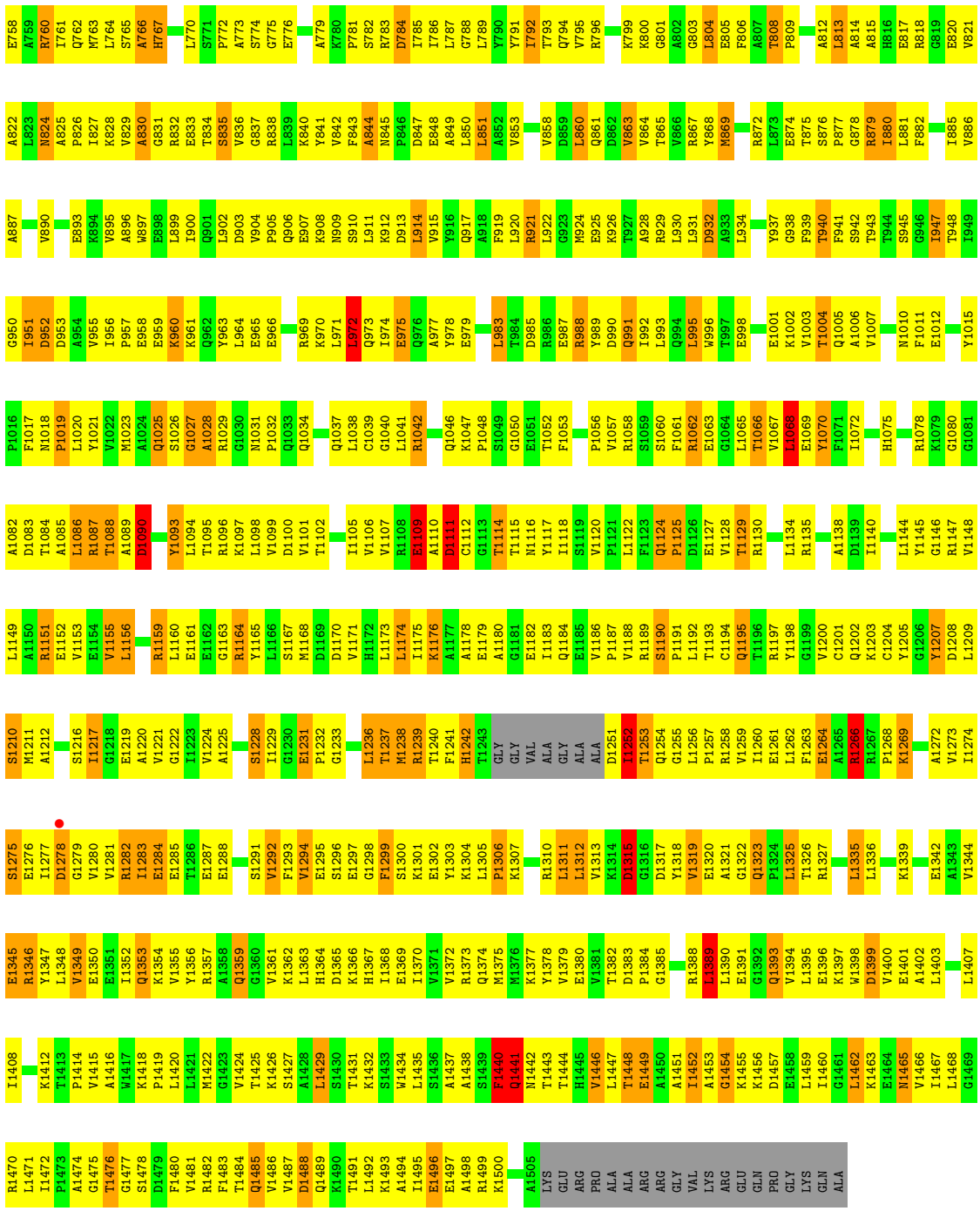


- Molecule 6: DNA-directed RNA polymerase beta' chain

Chain D:

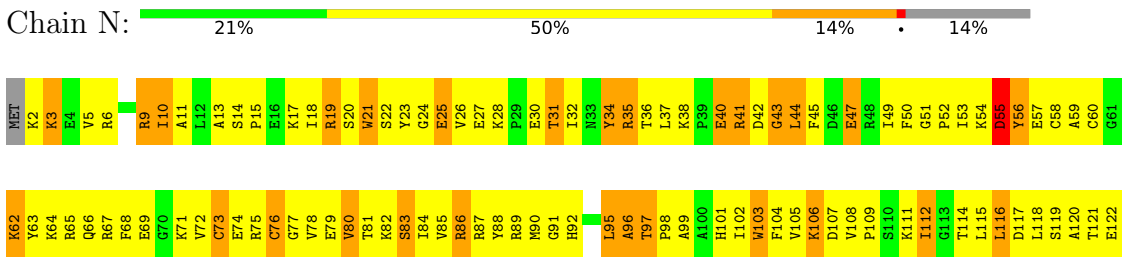






• Molecule 6: DNA-directed RNA polymerase beta' chain

Chain N:



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V886 A887 E891 D892 E893 K894 V895 A896 W897 E898 L899 I900 Q901 L902 D903 Q906 E907 K908 L911 K912 D913 L914 V915 Y916 Q917 A918 F919 L920 R921 M924 T927 A928 R929 L930 L931 D932 A933 L934 K935 Y936 Y937 G938 F939 T940 F941 S942 T943 T944 S945 G946 I947 T948 I949 G950 I951
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V186 K187 G188 Q189 E190 L191 A192 P193 G194 V195 V196 S197 R198 L199 D200 G201 V202 A203 L204 Y205 R206 F207 PRO ARG ARG VAL ARG VAL GLU TYR VAL LYS LYS GLU ARG ALA GLY LEU ARG LEU PRO VAL GLY PRO LEU ALA ALA TRP PRO LEU VAL VAL LYS GLU ALA TYR LYS PRO GLY GLU ILE LEU ALA GLU LEU
PRO GLU PRO TYR LEU PHE ARG ALA GLU GLU GLU GLY VAL ARG VAL GLU LEU LYS GLU LEU GLU GLU GLY ALA PHE LEU VAL VAL LEU ARG ARG GLU ASP GLU PRO VAL THR TYR PHE LEU PRO LYS VAL GLY MET THR PRO HIS MET ASN VAL VAL HIS GLY GLU GLU VAL GLY GLY GLN GLY GLY LYS GLN PRO LEU ALA
GLU ALA LYS GLY LEU LEU LEU ARG MET PRO ARG GLN VAL ARG ALA ALA GLN VAL GLU ALA GLU GLU GLU GLU GLY GLU VAL THR VAL VAL TYR LEU THR LEU PHE LEU GLU TRP THR GLU PRO LYS ASP TYR ARG VAL GLN PRO HIS MET ASN VAL VAL VAL PRO GLU GLY ALA ARG VAL GLU ALA GLY LEU ASP
LYS ILE VAL ALA ALA ILE ASP PRO GLU GLU GLU VAL VAL ILE ALA GLU ALA GLU GLY VAL VAL HIS LEU HIS GLU PRO A391 S392 I393 L394 V395 V396 K397 A398 R399 V400 Y401 P402 F403 E404 D405 V409 S410 T411 G412 D413 R414 V415 A416 D419 V420 L421 A422 D423 K426 V427 K428 S429
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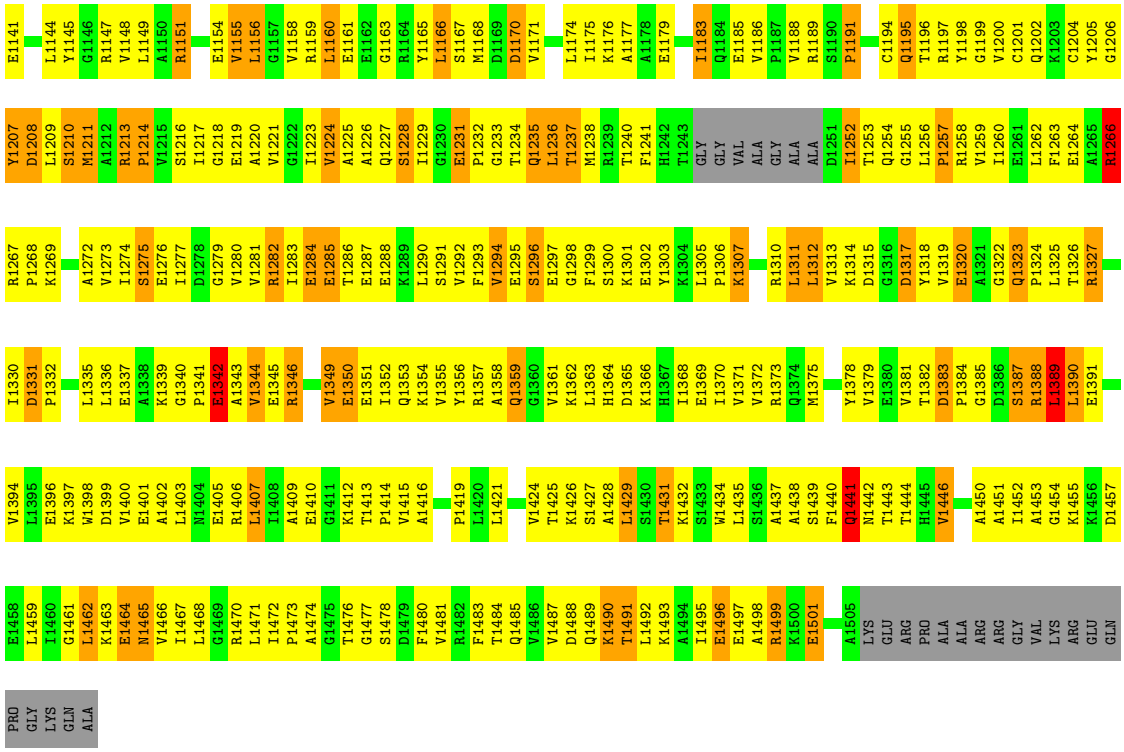
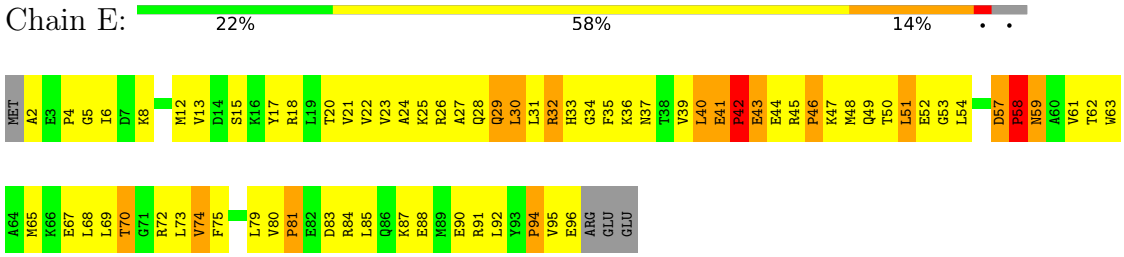
R628 S629 V630 I631 V632 V633 G634 P635 Q636 L637 K638 L639 H640 Q641 C642 G643 L644 P645 K646 R647 M648 A649 L650 E651 L652 F653 K654 P655 F656 L657 L658 K659 K660 M661 E662 I666 V670 K671 R675 M676 L677 E678 R679 Q680 R681 D682 I683 K684 D685 E686 V687 W688 D689 A690 L691 E692 E693



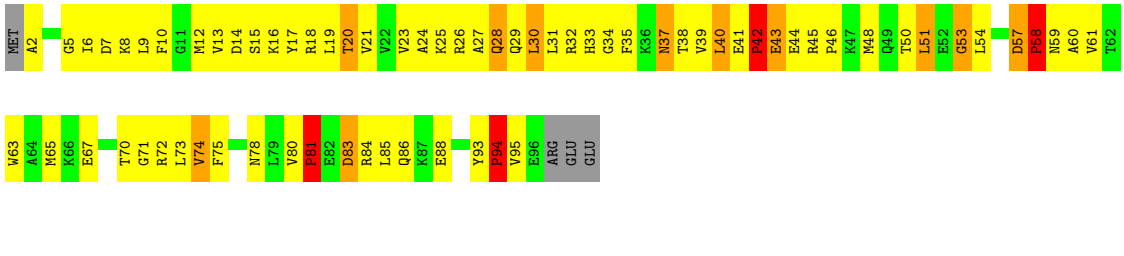
- Molecule 7: DNA-directed RNA polymerase omega chain

Chain E:



- Molecule 7: DNA-directed RNA polymerase omega chain

Chain O:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 41	Depositor
Cell constants a, b, c, α, β, γ	155.38Å 155.38Å 496.99Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.00 39.78 – 3.00	Depositor EDS
% Data completeness (in resolution range)	87.8 (40.00-3.00) 82.1 (39.78-3.00)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	0.11	Depositor
$< I/\sigma(I) >$ [1]	1.84 (at 3.01Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.234 , 0.266 0.235 , 0.261	Depositor DCC
R_{free} test set	10938 reflections (5.70%)	wwPDB-VP
Wilson B-factor (Å^2)	58.4	Xtriage
Anisotropy	0.050	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 114.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.41$, $< L^2 > = 0.24$	Xtriage
Estimated twinning fraction	0.147 for h,-k,-l	Xtriage
F_o,F_c correlation	0.87	EDS
Total number of atoms	51962	wwPDB-VP
Average B, all atoms (Å^2)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.89% of the height of the origin peak. No significant pseudotranslation is detected.*

[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: STD, ZN, MG, APC

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	G	0.90	1/520 (0.2%)	1.13	2/798 (0.3%)
1	X	0.97	1/520 (0.2%)	1.14	0/798
2	H	1.48	5/387 (1.3%)	2.79	37/601 (6.2%)
2	Y	1.46	2/387 (0.5%)	2.77	38/601 (6.3%)
3	I	0.81	0/304	1.22	3/467 (0.6%)
3	Z	0.76	0/304	1.10	1/467 (0.2%)
4	A	0.73	0/1838	0.79	2/2498 (0.1%)
4	B	0.73	0/1838	0.78	4/2498 (0.2%)
4	K	0.72	0/1838	0.82	3/2498 (0.1%)
4	L	0.76	0/1838	0.79	3/2498 (0.1%)
5	C	0.77	0/8997	0.89	15/12164 (0.1%)
5	M	0.79	2/8997 (0.0%)	0.90	14/12164 (0.1%)
6	D	0.82	12/10547 (0.1%)	0.93	21/14245 (0.1%)
6	N	0.81	7/10547 (0.1%)	0.90	16/14245 (0.1%)
7	E	0.77	1/784 (0.1%)	1.06	3/1057 (0.3%)
7	O	0.81	1/784 (0.1%)	1.07	4/1057 (0.4%)
All	All	0.81	32/50430 (0.1%)	0.97	166/68656 (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	G	0	6
1	X	0	7
2	H	0	2
2	Y	0	1
6	D	0	1
All	All	0	17

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	133	ILE	N-CA	11.89	1.70	1.46
6	D	132	TYR	CA-C	9.71	1.78	1.52
2	Y	1	G	C3'-O3'	8.60	1.54	1.42
2	H	1	G	OP3-P	-7.94	1.51	1.61
6	D	456	MET	N-CA	7.80	1.61	1.46
6	N	133	ILE	N-CA	7.50	1.61	1.46
6	D	455	ARG	CA-C	7.38	1.72	1.52
1	X	1	DC	OP3-P	-7.22	1.52	1.61
6	D	132	TYR	CD2-CE2	6.96	1.49	1.39
2	H	1	G	C3'-O3'	6.93	1.51	1.42
6	N	132	TYR	CA-C	6.81	1.70	1.52
6	D	132	TYR	CD1-CE1	6.67	1.49	1.39
1	G	1	DC	OP3-P	-6.63	1.53	1.61
6	D	134	VAL	N-CA	6.61	1.59	1.46
6	N	456	MET	N-CA	6.42	1.59	1.46
2	Y	2	A	P-O5'	6.25	1.66	1.59
2	H	2	A	P-O5'	6.17	1.66	1.59
6	D	455	ARG	N-CA	6.13	1.58	1.46
2	H	1	G	C2'-C1'	6.12	1.60	1.53
7	E	94	PRO	N-CA	5.98	1.57	1.47
7	O	94	PRO	N-CA	5.92	1.57	1.47
6	D	132	TYR	CB-CG	5.89	1.60	1.51
6	N	132	TYR	CD2-CE2	5.84	1.48	1.39
6	N	455	ARG	CA-C	5.70	1.67	1.52
6	D	132	TYR	N-CA	5.68	1.57	1.46
6	N	1039	CYS	CB-SG	-5.47	1.73	1.81
5	M	887	GLU	CB-CG	5.40	1.62	1.52
2	H	1	G	P-O5'	5.32	1.65	1.59
6	D	103	TRP	CB-CG	-5.23	1.40	1.50
5	M	887	GLU	CG-CD	5.14	1.59	1.51
6	D	133	ILE	CA-C	5.11	1.66	1.52
6	N	134	VAL	N-CA	5.07	1.56	1.46

All (166) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	1	G	N9-C1'-C2'	25.00	146.50	114.00
2	Y	1	G	N9-C1'-C2'	20.87	141.13	114.00
2	Y	1	G	P-O3'-C3'	19.40	142.98	119.70
2	H	1	G	P-O3'-C3'	19.01	142.51	119.70
2	Y	2	A	O4'-C1'-N9	16.04	121.03	108.20
2	H	1	G	O4'-C1'-N9	-15.64	95.69	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	Y	2	A	N9-C1'-C2'	-15.35	94.04	114.00
6	D	1266	ARG	NE-CZ-NH2	-12.51	114.05	120.30
2	H	2	A	N9-C1'-C2'	-12.48	97.78	114.00
2	H	7	G	N9-C1'-C2'	-11.54	99.00	114.00
5	M	243	ARG	C-N-CD	-11.39	95.53	120.60
7	O	94	PRO	CA-N-CD	-11.38	95.57	111.50
2	Y	7	G	N9-C1'-C2'	-11.32	99.28	114.00
3	I	7	DC	O5'-P-OP2	11.29	124.25	110.70
7	E	94	PRO	CA-N-CD	-10.62	96.63	111.50
2	Y	14	G	N9-C1'-C2'	-10.29	100.63	114.00
7	O	94	PRO	N-CA-C	9.59	137.02	112.10
2	H	16	G	C4'-C3'-O3'	9.26	131.53	113.00
7	E	94	PRO	N-CA-C	9.09	135.73	112.10
2	H	14	G	N9-C1'-C2'	-8.92	102.19	112.00
6	N	1389	LEU	CA-CB-CG	8.72	135.35	115.30
2	Y	16	G	C4'-C3'-O3'	8.70	130.40	113.00
6	D	1266	ARG	NE-CZ-NH1	8.66	124.63	120.30
2	Y	9	G	N9-C1'-C2'	-8.59	102.55	112.00
2	Y	1	G	O4'-C1'-N9	-8.53	101.37	108.20
2	H	2	A	O4'-C1'-N9	8.51	115.00	108.20
2	H	6	U	O4'-C1'-N1	8.50	115.00	108.20
6	D	152	LEU	CA-CB-CG	8.40	134.63	115.30
5	C	409	ARG	NE-CZ-NH1	8.28	124.44	120.30
2	H	2	A	P-O3'-C3'	-8.19	109.88	119.70
2	Y	6	U	O4'-C1'-N1	8.17	114.74	108.20
2	Y	2	A	P-O3'-C3'	-8.14	109.93	119.70
6	N	1266	ARG	NE-CZ-NH1	8.10	124.35	120.30
6	N	1266	ARG	NE-CZ-NH2	-8.09	116.26	120.30
2	H	2	A	OP1-P-OP2	-8.07	107.50	119.60
2	H	5	C	O4'-C1'-N1	8.06	114.65	108.20
2	H	9	G	N9-C1'-C2'	-8.03	103.16	112.00
2	Y	5	C	O4'-C1'-N1	7.92	114.53	108.20
3	Z	7	DC	O5'-P-OP2	7.87	120.14	110.70
6	D	581	LEU	CA-CB-CG	7.87	133.39	115.30
2	Y	9	G	O4'-C1'-N9	7.83	114.46	108.20
5	C	243	ARG	C-N-CD	-7.76	103.53	120.60
6	D	1090	ASP	CB-CG-OD2	7.66	125.19	118.30
2	H	12	G	O4'-C1'-N9	7.63	114.31	108.20
5	C	409	ARG	NE-CZ-NH2	-7.61	116.50	120.30
2	Y	11	C	N1-C1'-C2'	-7.59	103.65	112.00
2	Y	2	A	OP1-P-OP2	-7.50	108.35	119.60
2	Y	15	C	O4'-C1'-N1	7.37	114.10	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	15	C	O4'-C1'-N1	7.36	114.08	108.20
2	H	9	G	O4'-C1'-N9	7.32	114.06	108.20
2	H	9	G	C5'-C4'-O4'	-7.29	100.36	109.10
2	Y	8	C	O4'-C1'-N1	7.29	114.03	108.20
4	L	90	LEU	CA-CB-CG	7.28	132.05	115.30
6	N	1090	ASP	CB-CG-OD2	7.21	124.79	118.30
2	Y	12	G	O4'-C1'-N9	7.20	113.96	108.20
2	Y	10	G	O4'-C1'-N9	7.16	113.93	108.20
5	M	409	ARG	NE-CZ-NH1	7.11	123.86	120.30
4	B	138	LEU	CA-CB-CG	7.07	131.55	115.30
6	D	1429	LEU	CA-CB-CG	7.03	131.47	115.30
2	Y	14	G	O4'-C1'-N9	6.94	113.75	108.20
2	H	16	G	O4'-C1'-N9	6.91	113.72	108.20
2	H	10	G	N9-C1'-C2'	-6.90	104.41	112.00
2	H	1	G	C3'-C2'-C1'	6.84	106.97	101.50
2	Y	1	G	C3'-C2'-C1'	6.78	106.92	101.50
2	H	8	C	O4'-C1'-N1	6.78	113.62	108.20
6	D	456	MET	CB-CA-C	-6.74	96.92	110.40
5	C	815	LEU	CA-CB-CG	6.73	130.78	115.30
2	Y	9	G	C5'-C4'-O4'	-6.72	101.04	109.10
2	H	14	G	O4'-C1'-N9	6.71	113.57	108.20
2	H	15	C	N1-C1'-C2'	-6.69	104.64	112.00
2	H	10	G	O4'-C1'-N9	6.65	113.52	108.20
5	M	88	LEU	CA-CB-CG	6.63	130.54	115.30
2	Y	10	G	N9-C1'-C2'	-6.61	104.72	112.00
2	H	1	G	OP1-P-OP2	-6.61	109.69	119.60
2	H	11	C	O4'-C1'-N1	6.59	113.47	108.20
6	D	132	TYR	C-N-CA	6.58	138.16	121.70
2	Y	7	G	C4'-C3'-O3'	6.53	126.06	113.00
5	M	285	LEU	CA-CB-CG	6.53	130.32	115.30
2	Y	1	G	C2'-C3'-O3'	6.51	124.12	113.70
5	M	165	LEU	C-N-CD	-6.46	106.39	120.60
2	Y	3	G	OP1-P-OP2	-6.44	109.94	119.60
2	Y	4	U	OP1-P-OP2	-6.40	110.00	119.60
2	Y	11	C	O4'-C1'-N1	6.39	113.31	108.20
6	N	1492	LEU	CA-CB-CG	6.38	129.98	115.30
3	I	5	DG	OP2-P-O3'	6.33	119.13	105.20
2	H	4	U	OP1-P-OP2	-6.32	110.11	119.60
2	Y	1	G	OP1-P-OP2	-6.32	110.12	119.60
6	D	1440	PHE	CB-CG-CD2	6.25	125.17	120.80
5	C	861	LEU	CA-CB-CG	6.22	129.61	115.30
5	M	409	ARG	NE-CZ-NH2	-6.21	117.20	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	K	186	LEU	CA-CB-CG	6.18	129.52	115.30
2	H	2	A	O4'-C4'-C3'	-6.13	97.87	104.00
2	H	1	G	O3'-P-O5'	6.12	115.62	104.00
6	N	1109	GLU	C-N-CA	6.12	137.00	121.70
4	A	186	LEU	CA-CB-CG	6.12	129.37	115.30
2	Y	16	G	O4'-C1'-N9	6.03	113.02	108.20
6	D	133	ILE	CB-CA-C	-6.01	99.58	111.60
2	H	3	G	OP1-P-OP2	-6.01	110.59	119.60
5	C	18	LEU	CA-CB-CG	-6.00	101.49	115.30
2	Y	6	U	C3'-C2'-C1'	5.97	106.28	101.50
6	D	1252	ILE	CA-C-N	5.96	130.30	117.20
5	M	244	PRO	CA-N-CD	-5.92	103.21	111.50
2	H	13	C	O4'-C1'-N1	5.92	112.94	108.20
2	H	6	U	C3'-C2'-C1'	5.91	106.23	101.50
2	H	7	G	C4'-C3'-O3'	5.91	124.83	113.00
5	M	861	LEU	CA-CB-CG	5.91	128.89	115.30
6	D	1109	GLU	C-N-CA	5.90	136.44	121.70
6	D	1236	LEU	CA-CB-CG	5.86	128.77	115.30
2	Y	16	G	N9-C1'-C2'	-5.85	105.57	112.00
1	G	12	DG	OP1-P-O3'	-5.83	92.39	105.20
5	C	165	LEU	C-N-CD	-5.81	107.82	120.60
2	H	16	G	N9-C1'-C2'	-5.79	105.64	112.00
2	H	11	C	N1-C1'-C2'	-5.78	105.64	112.00
6	D	1068	LEU	CA-CB-CG	-5.77	102.03	115.30
6	D	166	GLN	CA-C-N	-5.72	104.61	117.20
6	D	1109	GLU	CA-C-N	-5.71	104.65	117.20
2	H	13	C	N1-C1'-C2'	-5.67	105.76	112.00
6	N	813	LEU	CA-CB-CG	5.66	128.31	115.30
4	K	208	LEU	CA-CB-CG	5.64	128.27	115.30
5	C	58	ASP	C-N-CA	5.61	135.73	121.70
2	Y	1	G	C1'-O4'-C4'	5.59	114.37	109.90
5	M	673	LEU	CA-CB-CG	-5.59	102.45	115.30
5	M	58	ASP	C-N-CA	5.58	135.64	121.70
7	O	93	TYR	C-N-CD	-5.56	108.36	120.60
4	L	138	LEU	CA-CB-CG	5.55	128.07	115.30
5	C	260	LEU	CA-CB-CG	5.54	128.05	115.30
6	N	1109	GLU	CA-C-N	-5.49	105.12	117.20
6	D	1389	LEU	CA-CB-CG	5.48	127.90	115.30
2	Y	16	G	C5'-C4'-O4'	-5.47	102.53	109.10
6	N	152	LEU	CA-CB-CG	5.45	127.82	115.30
5	C	285	LEU	CA-CB-CG	5.44	127.81	115.30
6	D	972	LEU	CA-CB-CG	5.41	127.75	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	Y	13	C	O4'-C1'-N1	5.38	112.50	108.20
6	N	153	LEU	CA-CB-CG	5.35	127.61	115.30
5	M	264	PRO	C-N-CA	-5.33	108.37	121.70
1	G	12	DG	OP2-P-O3'	5.30	116.87	105.20
6	N	1252	ILE	CA-C-N	5.30	128.87	117.20
7	E	50	THR	C-N-CA	5.22	134.74	121.70
3	I	3	DA	OP1-P-OP2	-5.21	111.78	119.60
5	C	728	HIS	CA-C-N	5.20	128.64	117.20
2	H	2	A	C4'-C3'-C2'	5.19	107.79	102.60
5	M	165	LEU	C-N-CA	5.19	143.79	122.00
6	N	1183	ILE	CG1-CB-CG2	-5.18	100.01	111.40
4	B	197	LEU	CA-CB-CG	5.17	127.19	115.30
2	Y	15	C	N1-C1'-C2'	-5.17	106.32	112.00
4	K	192	LEU	CA-CB-CG	-5.16	103.44	115.30
6	D	1440	PHE	CB-CG-CD1	-5.14	117.20	120.80
6	N	132	TYR	C-N-CA	5.14	134.55	121.70
5	C	165	LEU	C-N-CA	5.12	143.51	122.00
4	L	80	LEU	CA-CB-CG	5.12	127.08	115.30
5	C	546	LEU	CA-CB-CG	-5.11	103.56	115.30
5	C	737	LEU	CA-CB-CG	5.10	127.03	115.30
4	B	2	LEU	CA-CB-CG	5.09	127.00	115.30
6	D	80	VAL	C-N-CA	5.08	134.41	121.70
5	M	260	LEU	CA-CB-CG	5.07	126.97	115.30
7	O	50	THR	C-N-CA	5.07	134.38	121.70
6	D	621	LYS	CA-C-N	5.07	128.35	117.20
5	C	88	LEU	CA-CB-CG	5.05	126.92	115.30
5	M	728	HIS	CA-C-N	5.05	128.32	117.20
6	N	1090	ASP	CB-CG-OD1	-5.04	113.77	118.30
4	B	62	LEU	CA-CB-CG	5.03	126.88	115.30
4	A	115	LEU	CA-CB-CG	5.03	126.87	115.30
2	Y	13	C	N1-C1'-C2'	-5.03	106.47	112.00
6	N	621	LYS	CA-C-N	5.01	128.22	117.20
6	N	1331	ASP	CB-CG-OD2	5.01	122.81	118.30
2	Y	1	G	C4'-C3'-C2'	-5.01	97.59	102.60

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
6	D	1093	TYR	Sidechain
1	G	1	DC	Sidechain
1	G	13	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	G	15	DC	Sidechain
1	G	16	DG	Sidechain
1	G	17	DC	Sidechain
1	G	18	DG	Sidechain
2	H	1	G	Sidechain
2	H	14	G	Sidechain
1	X	1	DC	Sidechain
1	X	13	DT	Sidechain
1	X	15	DC	Sidechain
1	X	16	DG	Sidechain
1	X	17	DC	Sidechain
1	X	18	DG	Sidechain
1	X	19	DC	Sidechain
2	Y	14	G	Sidechain

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	G	467	0	259	46	0
1	X	467	0	259	45	0
2	H	347	0	174	75	0
2	Y	347	0	174	61	0
3	I	270	0	144	18	0
3	Z	270	0	144	18	0
4	A	1806	0	1861	186	0
4	B	1806	0	1861	178	0
4	K	1806	0	1861	206	0
4	L	1806	0	1861	173	0
5	C	8829	0	8933	1078	0
5	M	8829	0	8933	1061	0
6	D	10373	0	10599	1472	0
6	N	10373	0	10599	1397	0
7	E	770	0	784	124	0
7	O	770	0	784	105	0
8	D	43	0	34	6	0
8	N	43	0	31	6	0
9	D	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	N	2	0	0	0	0
10	D	2	0	0	0	0
10	N	2	0	0	0	0
11	D	31	0	14	5	0
11	M	31	0	14	2	0
12	A	78	0	0	13	0
12	B	117	0	0	29	0
12	C	408	0	0	103	0
12	D	531	0	0	107	0
12	E	34	0	0	17	0
12	G	39	0	0	6	0
12	H	22	0	0	6	0
12	I	31	0	0	3	0
12	K	81	0	0	26	0
12	L	95	0	0	12	0
12	M	396	0	0	100	0
12	N	510	0	0	120	0
12	O	53	0	0	16	0
12	X	31	0	0	5	0
12	Y	26	0	0	3	0
12	Z	18	0	0	3	0
All	All	51962	0	49323	5743	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 58.

All (5743) 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)
6:D:133:ILE:N	6:D:133:ILE:CA	1.70	1.55
6:D:132:TYR:C	6:D:132:TYR:CA	1.78	1.49
7:E:92:LEU:HD23	12:E:113:HOH:O	1.25	1.32
2:Y:2:A:OP2	6:N:671:LYS:NZ	1.72	1.21
6:D:87:ARG:HD3	6:D:524:LEU:HD11	1.30	1.12
6:N:165:LYS:HB2	6:N:397:LYS:HB2	1.20	1.11
2:H:7:G:H21	5:C:1021:LEU:HB2	1.13	1.11
2:H:16:G:H21	6:D:705:ALA:HB1	1.03	1.10
6:N:478:LEU:HD22	6:N:1388:ARG:HE	1.16	1.09
5:M:554:ASP:HB2	5:M:880:MET:HB2	1.32	1.08
5:C:162:ILE:HD11	5:C:306:THR:HG21	1.36	1.06
6:D:501:ALA:HB1	6:D:1453:ALA:HB2	1.37	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1034:GLU:HB3	6:N:619:LEU:HD22	1.37	1.06
1:G:21:DC:H4'	5:C:134:ARG:HH21	1.18	1.06
1:X:14:DT:H2"	1:X:15:DC:H5'	1.37	1.06
7:E:92:LEU:CD2	12:E:113:HOH:O	1.88	1.06
1:G:14:DT:H2"	1:G:15:DC:H5'	1.33	1.05
6:N:432:TYR:HB3	6:N:450:TYR:HB2	1.37	1.05
6:D:398:ALA:HB2	6:D:447:VAL:HA	1.37	1.04
5:M:1011:GLY:HA2	5:M:1026:GLN:HE21	1.21	1.03
6:D:165:LYS:HB2	6:D:397:LYS:HB2	1.37	1.03
7:E:45:ARG:HG2	7:E:46:PRO:HD2	1.38	1.03
4:B:94:LEU:HD11	4:B:119:ASP:HB2	1.35	1.03
6:N:204:LEU:HB3	6:N:441:ARG:HH22	1.22	1.02
6:D:676:MET:HE1	6:D:683:ILE:HA	1.41	1.02
6:D:32:ILE:HD12	6:D:527:MET:HG2	1.40	1.01
6:D:1300:SER:HB2	6:N:60:CYS:HB3	1.42	1.00
5:C:987:ILE:HG23	6:D:948:THR:HG21	1.44	1.00
7:E:23:VAL:CG1	7:E:61:VAL:HG13	1.92	1.00
5:M:874:LEU:HD11	6:N:787:LEU:HD22	1.43	1.00
2:H:16:G:N2	6:D:705:ALA:HB1	1.76	1.00
6:D:521:PRO:HB2	6:D:524:LEU:HD13	1.41	1.00
6:D:908:LYS:HB3	6:D:1027:GLY:HA3	1.43	1.00
5:M:334:ARG:HD2	5:M:418:LEU:HD21	1.41	0.99
6:D:1284:GLU:HB2	6:N:75:ARG:HE	1.24	0.99
5:C:86:LYS:HG2	5:C:813:VAL:HB	1.39	0.98
5:C:1034:GLU:HB3	6:D:619:LEU:HD22	1.44	0.98
6:D:136:ASP:HB3	6:D:137:PRO:HD3	1.45	0.98
1:G:23:DG:H2'	6:D:534:ARG:HH21	1.26	0.98
6:D:928:ALA:HA	6:D:931:LEU:HD12	1.44	0.98
5:C:626:ARG:HB2	5:C:639:GLN:HE22	1.28	0.98
6:D:115:LEU:HD13	6:D:499:VAL:HG22	1.45	0.98
4:L:22:GLU:HG2	4:L:198:ARG:HG2	1.42	0.98
6:N:51:GLY:HA3	6:N:86:ARG:HA	1.41	0.98
6:D:1284:GLU:HB2	6:N:75:ARG:NE	1.79	0.97
6:N:1406:ARG:HG3	6:N:1412:LYS:HG3	1.46	0.97
2:Y:1:G:O2'	2:Y:2:A:H5"	1.63	0.97
5:C:775:ARG:HH21	5:C:782:ALA:HB1	1.27	0.96
7:O:23:VAL:HG12	7:O:61:VAL:HG13	1.44	0.96
5:C:979:THR:HG23	5:C:981:GLU:H	1.26	0.96
6:D:116:LEU:HD13	6:D:118:LEU:HD21	1.46	0.96
6:D:1281:VAL:HG23	6:D:1319:VAL:HG21	1.45	0.96
5:C:516:ARG:HD2	5:C:521:PRO:HA	1.45	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:145:VAL:HG22	6:D:146:PRO:HD2	1.46	0.96
6:N:1144:LEU:HD22	6:N:1166:LEU:HD11	1.48	0.96
5:M:979:THR:HG23	5:M:981:GLU:H	1.29	0.96
5:M:711:GLU:HG2	5:M:822:VAL:HG12	1.47	0.96
5:M:636:ALA:HB3	5:M:703:ILE:HD13	1.48	0.96
6:D:1240:THR:HG23	6:D:1253:THR:HB	1.44	0.96
6:D:1468:LEU:HD22	6:D:1470:ARG:HB2	1.45	0.96
2:Y:6:U:H2'	2:Y:7:G:C8	2.01	0.95
5:C:115:LEU:HD22	5:C:373:VAL:HG11	1.48	0.95
6:D:1485:GLN:HE21	7:E:80:VAL:H	1.04	0.95
6:D:1297:GLU:O	6:N:52:PRO:HA	1.65	0.95
6:D:409:VAL:HG21	6:D:421:LEU:HD23	1.48	0.95
6:D:1281:VAL:HG11	6:D:1313:VAL:HG13	1.46	0.95
6:D:148:GLU:HB3	6:D:151:GLN:HB2	1.48	0.95
7:O:23:VAL:CG1	7:O:61:VAL:HG13	1.97	0.95
6:D:165:LYS:H	6:D:397:LYS:H	1.11	0.95
6:D:1153:VAL:HG13	6:N:561:GLY:HA3	1.46	0.94
6:N:525:ARG:HB2	6:N:538:SER:HB3	1.47	0.94
2:H:7:G:N2	5:C:1021:LEU:HB2	1.81	0.94
5:M:135:VAL:HG11	5:M:407:LYS:HA	1.47	0.94
6:N:438:ASP:HB2	6:N:445:ARG:HH12	1.32	0.94
4:A:64:GLU:HG3	4:A:165:ILE:HD13	1.49	0.94
5:C:274:ARG:HG3	5:C:285:LEU:HD22	1.49	0.94
5:M:10:ARG:NH1	5:M:10:ARG:HA	1.83	0.94
2:H:6:U:H2'	2:H:7:G:C8	2.02	0.94
6:D:1240:THR:HG21	6:D:1355:VAL:HG13	1.49	0.94
5:C:889:HIS:HE1	6:D:951:ILE:H	1.12	0.93
6:D:1261:GLU:HA	6:D:1266:ARG:HD2	1.51	0.93
6:D:525:ARG:HB2	6:D:538:SER:HB3	1.50	0.93
4:K:224:TYR:HB3	4:L:9:PRO:HB2	1.51	0.93
5:M:409:ARG:HA	5:M:454:SER:HA	1.51	0.93
6:N:540:LEU:HA	6:N:543:LEU:HD12	1.51	0.93
6:N:637:LEU:HD21	6:N:642:CYS:HA	1.47	0.93
5:M:847:GLY:HA2	6:N:741:ASP:HA	1.51	0.92
1:G:18:DG:H2"	1:G:19:DC:H5'	1.49	0.92
2:Y:12:G:H8	2:Y:12:G:H5'	1.33	0.92
6:D:890:VAL:HG11	6:D:922:LEU:HD13	1.50	0.92
6:D:1481:VAL:HG11	7:E:18:ARG:HA	1.50	0.92
6:D:1282:ARG:HB3	6:N:75:ARG:C	1.90	0.91
4:L:57:TYR:HB3	4:L:141:GLU:HG3	1.49	0.91
6:D:799:LYS:HB3	6:D:826:PRO:HG2	1.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1220:ALA:HB1	6:N:1223:ILE:HD13	1.52	0.91
5:M:1054:THR:HG22	5:M:1059:ASP:HB2	1.51	0.91
6:N:977:ALA:HB1	6:N:983:LEU:HD21	1.50	0.91
6:N:990:ASP:HA	6:N:993:LEU:HD12	1.52	0.91
5:C:1031:ARG:HA	6:D:621:LYS:O	1.69	0.91
6:N:1281:VAL:HG11	6:N:1313:VAL:HG13	1.51	0.91
5:C:292:ARG:HE	5:C:294:GLU:HG2	1.33	0.91
5:M:512:ARG:HB3	5:M:523:ILE:HD11	1.52	0.91
6:N:1382:THR:HA	6:N:1389:LEU:HD13	1.52	0.91
4:A:117:VAL:HB	4:A:120:VAL:HG12	1.53	0.91
6:N:161:LEU:HD21	6:N:452:ILE:HG21	1.53	0.91
6:N:1440:PHE:HB3	12:N:9281:HOH:O	1.69	0.90
5:M:626:ARG:H	5:M:639:GLN:HE21	1.14	0.90
5:M:478:VAL:HA	5:M:506:ASN:O	1.72	0.90
6:N:1472:ILE:HG22	6:N:1474:ALA:H	1.33	0.90
5:C:64:LEU:HD22	5:C:359:MET:HG3	1.52	0.90
6:N:119:SER:HB2	6:N:123:LEU:H	1.37	0.90
5:M:762:LYS:HA	5:M:786:LYS:HD2	1.53	0.90
6:N:526:PRO:O	6:N:537:THR:HA	1.72	0.90
6:D:785:ILE:H	6:D:785:ILE:HD12	1.35	0.90
4:K:54:THR:HG22	4:K:158:ILE:HG13	1.54	0.90
4:K:117:VAL:HB	4:K:120:VAL:HG12	1.54	0.89
6:N:24:GLY:HA3	6:N:49:ILE:HG12	1.50	0.89
6:N:1232:PRO:HB3	6:N:1361:VAL:HG21	1.51	0.89
6:D:1042:ARG:HH11	6:D:1042:ARG:HB2	1.38	0.89
2:H:7:G:H1	5:C:1014:SER:HA	1.38	0.89
5:M:953:VAL:HG13	5:M:966:LEU:HD13	1.52	0.89
4:L:56:VAL:HG13	4:L:142:VAL:HG12	1.55	0.88
4:A:186:LEU:HD13	4:A:192:LEU:HD13	1.55	0.88
4:B:56:VAL:HG13	4:B:142:VAL:HG12	1.55	0.88
1:X:17:DC:H2"	1:X:18:DG:H5'	1.56	0.88
5:M:567:GLN:HB2	5:M:997:LEU:HD22	1.55	0.88
6:N:1236:LEU:HB3	6:N:1359:GLN:HB3	1.54	0.88
6:N:478:LEU:HD13	6:N:1388:ARG:HH21	1.38	0.88
6:N:799:LYS:HB3	6:N:826:PRO:HG2	1.54	0.88
6:D:165:LYS:HE2	6:D:199:LEU:HD13	1.54	0.88
6:D:477:LEU:HD21	6:D:495:ARG:HD3	1.55	0.88
3:I:9:DG:H4'	6:D:108:VAL:HG12	1.55	0.88
6:D:133:ILE:HB	6:D:153:LEU:O	1.73	0.88
6:N:478:LEU:HD22	6:N:1388:ARG:NE	1.87	0.88
5:C:579:VAL:HB	5:C:890:LEU:HD22	1.52	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:165:LYS:H	6:D:397:LYS:N	1.72	0.87
7:E:41:GLU:HA	7:E:45:ARG:HG3	1.55	0.87
6:D:164:GLY:CA	6:D:447:VAL:HB	2.03	0.87
6:D:543:LEU:HD22	6:D:580:ALA:HB1	1.56	0.87
6:D:1225:ALA:HA	6:D:1367:HIS:ND1	1.89	0.87
6:N:169:TYR:HB3	6:N:195:VAL:HG11	1.57	0.87
6:N:1213:ARG:HH22	7:O:10:PHE:HB3	1.39	0.87
2:Y:14:G:O2'	2:Y:15:C:H5'	1.75	0.86
4:B:109:VAL:HG21	4:B:138:LEU:HD21	1.55	0.86
5:C:395:LYS:HE2	5:C:403:SER:HB2	1.56	0.86
6:D:6:ARG:HG3	6:D:1470:ARG:HH12	1.40	0.86
2:H:12:G:H5'	2:H:12:G:H8	1.38	0.86
1:X:18:DG:H2"	1:X:19:DC:H5'	1.58	0.86
4:B:87:VAL:HG21	4:B:144:VAL:HG11	1.56	0.86
5:C:227:PHE:HA	5:C:230:ARG:HE	1.40	0.86
6:D:1375:MET:HA	12:D:9224:HOH:O	1.74	0.86
5:M:724:ARG:HH21	5:M:734:LEU:HB3	1.41	0.86
5:M:729:LEU:HD22	6:N:675:ARG:HD2	1.57	0.86
2:Y:12:G:H5'	2:Y:12:G:C8	2.09	0.86
5:C:597:ALA:HB2	5:C:655:LEU:HD21	1.57	0.86
2:H:12:G:H5'	2:H:12:G:C8	2.11	0.86
4:B:58:ILE:HD13	4:B:140:MET:HB3	1.55	0.86
5:M:1056:LYS:O	6:N:624:ASP:HB2	1.76	0.86
5:C:66:LEU:HD22	5:C:372:LEU:HD23	1.57	0.86
5:C:737:LEU:HD11	5:C:754:ILE:HB	1.58	0.86
4:A:143:ARG:HE	4:A:158:ILE:HG21	1.40	0.86
6:D:119:SER:HB2	6:D:123:LEU:HB2	1.58	0.86
6:D:133:ILE:HA	6:D:456:MET:CB	2.06	0.86
6:D:432:TYR:HB3	6:D:450:TYR:HB2	1.57	0.86
6:N:871:LYS:HD2	6:N:873:LEU:HD21	1.55	0.86
5:C:612:VAL:HG22	5:C:622:GLU:HG3	1.57	0.85
5:M:841:ASN:ND2	5:M:843:HIS:H	1.74	0.85
6:N:1037:GLN:HG2	6:N:1042:ARG:HB2	1.59	0.85
5:C:279:GLU:HG3	5:C:280:LYS:HD2	1.57	0.85
5:C:409:ARG:HA	5:C:454:SER:HA	1.55	0.85
6:D:486:ARG:HA	6:D:489:ARG:HG2	1.58	0.85
5:M:690:ILE:HG13	5:M:694:LEU:HD12	1.56	0.85
3:Z:6:DC:H3'	6:N:1266:ARG:NH2	1.91	0.85
5:C:89:THR:HG21	5:C:383:ARG:HH22	1.41	0.85
5:C:1056:LYS:HD3	6:D:623:VAL:HG13	1.56	0.85
6:N:806:PHE:CE1	6:N:813:LEU:HB3	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:244:PRO:HD2	5:C:245:GLY:H	1.40	0.85
5:C:587:VAL:HG11	5:C:666:LEU:HD22	1.56	0.85
6:D:164:GLY:HA3	6:D:447:VAL:HB	1.57	0.85
5:C:276:LYS:HA	5:C:280:LYS:HD3	1.59	0.85
5:C:1054:THR:HG22	5:C:1059:ASP:HB2	1.58	0.85
6:D:1426:LYS:HA	6:D:1429:LEU:HD22	1.55	0.85
4:L:94:LEU:HD23	4:L:97:VAL:HG21	1.58	0.85
5:M:722:ILE:HD12	5:M:823:VAL:HG21	1.58	0.85
5:M:328:LEU:HD13	5:M:433:THR:HB	1.57	0.85
2:H:5:C:H2'	2:H:6:U:C6	2.11	0.85
5:M:654:LEU:HD23	5:M:654:LEU:H	1.40	0.85
2:H:7:G:H21	5:C:1021:LEU:CB	1.88	0.84
7:E:27:ALA:HB2	7:E:61:VAL:HG22	1.59	0.84
2:Y:8:C:O2'	2:Y:9:G:H5'	1.77	0.84
5:C:428:ARG:HH21	5:C:451:LEU:HD11	1.42	0.84
6:N:9:ARG:HE	6:N:11:ALA:HB2	1.42	0.84
7:E:23:VAL:HG12	7:E:61:VAL:HG13	1.57	0.84
6:N:475:LYS:HA	6:N:478:LEU:HG	1.58	0.84
5:M:890:LEU:HA	5:M:914:ILE:HD11	1.57	0.84
4:L:87:VAL:HG21	4:L:144:VAL:HG11	1.59	0.84
5:C:478:VAL:HA	5:C:506:ASN:O	1.78	0.84
5:M:710:ILE:HB	5:M:790:LEU:HD22	1.59	0.84
5:M:545:ASN:HD22	5:M:583:LEU:HD21	1.41	0.84
2:H:14:G:O2'	2:H:15:C:H5'	1.76	0.84
2:Y:12:G:H2'	2:Y:13:C:C6	2.13	0.84
6:N:1274:ILE:HD12	6:N:1322:GLY:HA2	1.60	0.84
5:C:966:LEU:HD11	5:C:986:PRO:HG2	1.60	0.83
6:N:695:ILE:HG21	6:N:720:LEU:HD11	1.61	0.83
6:N:1481:VAL:HG11	7:O:18:ARG:HA	1.60	0.83
6:D:1063:GLU:HB2	12:D:9306:HOH:O	1.79	0.83
6:D:1232:PRO:HB3	6:D:1361:VAL:HG21	1.60	0.83
5:C:183:SER:HB2	5:C:190:LYS:HD3	1.60	0.83
4:L:186:LEU:HB2	4:L:192:LEU:HD11	1.60	0.83
4:B:24:VAL:HG13	4:B:196:THR:HG22	1.60	0.83
5:C:367:LEU:HA	5:C:371:LYS:HD3	1.60	0.83
6:D:493:ARG:HD3	6:D:1390:LEU:HB3	1.61	0.83
6:D:907:GLU:HG2	6:D:909:ASN:H	1.42	0.83
4:K:9:PRO:HB2	4:L:224:TYR:HB3	1.61	0.83
1:G:17:DC:H2"	1:G:18:DG:H5'	1.61	0.83
2:H:8:C:O2'	2:H:9:G:H5'	1.78	0.83
5:C:755:LEU:HD22	5:C:825:VAL:HG11	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:212:GLY:HA3	5:C:218:VAL:HG21	1.59	0.83
5:C:1018:GLN:HG3	5:C:1060:ILE:HD13	1.61	0.83
6:D:783:ARG:HD2	6:D:1029:ARG:HG2	1.59	0.82
4:A:220:GLU:O	4:A:223:THR:HG22	1.79	0.82
6:D:1379:VAL:HG12	6:D:1419:PRO:HA	1.60	0.82
4:A:9:PRO:HB2	4:B:224:TYR:HB3	1.59	0.82
6:D:526:PRO:O	6:D:537:THR:HA	1.80	0.82
6:N:522:PRO:HA	6:N:525:ARG:HH11	1.43	0.82
6:D:1209:LEU:HD23	6:D:1211:MET:H	1.45	0.82
4:L:59:GLU:HG3	4:L:139:ASN:ND2	1.94	0.82
6:D:165:LYS:N	6:D:397:LYS:H	1.76	0.82
2:H:16:G:H21	6:D:705:ALA:CB	1.88	0.82
2:Y:5:C:H2'	2:Y:6:U:C6	2.15	0.82
6:D:906:GLN:HB3	6:D:911:LEU:HD11	1.62	0.82
6:D:1111:ASP:HB3	6:D:1203:LYS:HE3	1.60	0.82
5:M:851:LYS:HE3	5:M:853:LEU:HA	1.60	0.82
6:N:810:GLU:O	6:N:813:LEU:HG	1.79	0.82
6:D:97:THR:HG23	6:D:459:GLU:HB2	1.60	0.82
6:D:127:LEU:HD11	6:D:461:ILE:HD11	1.62	0.82
5:M:1096:ALA:O	6:N:13:ALA:HB2	1.80	0.82
5:M:974:LEU:HD13	5:M:987:ILE:HB	1.62	0.81
5:M:877:PRO:HG3	6:N:1023:MET:SD	2.20	0.81
2:H:9:G:H2'	2:H:10:G:C8	2.16	0.81
5:M:12:VAL:HG11	12:M:7276:HOH:O	1.79	0.81
4:A:109:VAL:HG21	4:A:138:LEU:HD21	1.62	0.81
5:C:136:ILE:HD13	5:C:392:SER:HB3	1.62	0.81
5:C:304:LEU:HD23	5:C:305:PRO:HD3	1.62	0.81
5:M:83:CYS:HA	5:M:88:LEU:HB3	1.62	0.81
5:M:987:ILE:HG23	6:N:948:THR:HG21	1.61	0.81
6:D:1189:ARG:HD2	6:D:1203:LYS:HB3	1.62	0.81
7:E:23:VAL:CG1	7:E:61:VAL:CG1	2.58	0.81
6:N:720:LEU:H	6:N:720:LEU:HD12	1.46	0.81
6:N:172:PRO:HG2	6:N:175:VAL:HG21	1.61	0.81
6:N:398:ALA:HB2	6:N:447:VAL:HA	1.61	0.81
5:M:472:ARG:HB3	12:M:7276:HOH:O	1.80	0.81
6:N:1100:ASP:HB3	6:N:1428:ALA:HB1	1.61	0.81
6:N:846:PRO:HA	12:N:9216:HOH:O	1.79	0.81
7:E:40:LEU:HB3	7:E:72:ARG:CZ	2.11	0.81
4:B:47:SER:HB3	4:B:217:ILE:HD13	1.63	0.80
5:C:15:LEU:H	5:C:586:ARG:NH2	1.80	0.80
4:L:206:THR:HG22	4:L:209:GLU:H	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:28:LYS:HB2	6:N:41:ARG:HD2	1.63	0.80
6:N:493:ARG:HG2	6:N:1390:LEU:HD12	1.61	0.80
6:N:1465:ASN:HD21	6:N:1470:ARG:HD2	1.46	0.80
4:A:25:LEU:HD23	4:A:28:LEU:HD21	1.63	0.80
4:B:22:GLU:HG2	4:B:198:ARG:HG2	1.63	0.80
5:C:110:GLU:H	5:C:368:THR:HG21	1.45	0.80
5:M:579:VAL:HB	5:M:890:LEU:HD22	1.63	0.80
6:N:660:LYS:HB2	12:N:9248:HOH:O	1.81	0.80
6:N:83:SER:O	6:N:86:ARG:HB3	1.81	0.80
4:A:62:LEU:HD12	4:A:62:LEU:H	1.43	0.80
6:N:785:ILE:H	6:N:785:ILE:HD12	1.44	0.80
5:C:79:PRO:HG2	5:C:82:GLU:HB2	1.64	0.80
5:C:362:GLY:HA3	5:C:367:LEU:HD23	1.64	0.80
6:D:814:ALA:HB1	6:D:818:ARG:HH21	1.47	0.80
4:K:146:ARG:HB2	12:K:1714:HOH:O	1.81	0.80
6:N:1471:LEU:HD12	6:N:1472:ILE:H	1.47	0.80
6:D:650:LEU:HA	6:D:691:LEU:HD21	1.64	0.80
5:C:110:GLU:HG3	5:C:369:PRO:HG3	1.62	0.80
5:C:535:SER:H	5:C:538:GLN:NE2	1.79	0.80
5:M:1115:LEU:H	5:M:1115:LEU:HD12	1.44	0.80
5:C:196:LEU:HA	12:C:1255:HOH:O	1.81	0.80
7:E:30:LEU:O	7:E:35:PHE:HA	1.82	0.80
5:C:557:ARG:HB3	12:C:1341:HOH:O	1.80	0.79
4:K:52:ALA:HA	12:K:1273:HOH:O	1.81	0.79
4:K:129:ILE:HG12	12:K:661:HOH:O	1.82	0.79
6:N:774:SER:HB3	6:N:1362:LYS:O	1.83	0.79
5:C:927:GLY:HA2	5:C:930:LYS:HD3	1.65	0.79
5:M:494:TYR:HB3	12:M:7105:HOH:O	1.81	0.79
6:N:470:LEU:HD23	6:N:470:LEU:H	1.47	0.79
2:H:1:G:O2'	2:H:2:A:H5"	1.83	0.79
4:B:102:LYS:HE2	4:B:139:ASN:HB2	1.64	0.79
6:N:87:ARG:HD3	6:N:523:ASP:HB2	1.65	0.79
5:C:516:ARG:HE	6:D:1068:LEU:HD13	1.46	0.79
5:C:1050:GLN:HG2	5:C:1079:PRO:HG2	1.63	0.79
6:D:690:ALA:O	6:D:694:VAL:HG23	1.82	0.79
6:D:786:ILE:HG22	6:D:1026:SER:HB3	1.62	0.79
6:N:145:VAL:HG22	6:N:146:PRO:HD2	1.64	0.79
2:Y:12:G:H2'	2:Y:13:C:H6	1.45	0.79
6:D:1291:SER:HB2	6:N:75:ARG:NE	1.98	0.79
7:E:43:GLU:HG3	7:E:44:GLU:H	1.46	0.79
5:M:292:ARG:HB2	5:M:299:LYS:HE2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:710:ARG:HD2	6:N:768:ASN:HD21	1.47	0.79
6:N:1342:GLU:H	6:N:1342:GLU:CD	1.85	0.79
4:B:186:LEU:HB2	4:B:192:LEU:HD11	1.63	0.79
2:Y:9:G:H2'	2:Y:10:G:C8	2.18	0.79
5:C:847:GLY:HA2	6:D:741:ASP:HA	1.64	0.79
5:M:79:PRO:HG2	5:M:82:GLU:HB2	1.64	0.79
6:N:1020:LEU:HD21	6:N:1035:ILE:HG23	1.65	0.79
7:O:25:LYS:HA	7:O:28:GLN:HE21	1.46	0.79
6:D:525:ARG:HG2	6:D:541:ASN:HD21	1.49	0.78
4:B:182:GLU:HG3	4:B:194:LYS:HD2	1.63	0.78
6:N:1240:THR:HG21	6:N:1355:VAL:HG13	1.65	0.78
7:O:40:LEU:HD21	7:O:67:GLU:HA	1.66	0.78
6:D:204:LEU:HD13	6:D:441:ARG:HH22	1.48	0.78
6:D:1144:LEU:HD11	6:D:1186:VAL:HG21	1.64	0.78
6:N:619:LEU:HD12	6:N:621:LYS:NZ	1.99	0.78
5:M:801:VAL:HG23	5:M:802:ARG:HG3	1.65	0.78
6:N:520:LEU:HD21	6:N:524:LEU:HB3	1.65	0.78
6:N:1294:VAL:HG22	6:N:1325:LEU:HD21	1.65	0.78
6:D:47:GLU:CD	6:D:53:ILE:HB	2.04	0.78
6:D:1295:GLU:HB3	6:N:76:CYS:HB2	1.66	0.78
5:M:142:ARG:NH1	5:M:325:ILE:HA	1.99	0.78
5:M:516:ARG:HD3	5:M:521:PRO:HA	1.64	0.78
5:M:675:ALA:HA	5:M:989:VAL:HG12	1.63	0.78
6:N:1389:LEU:HG	6:N:1390:LEU:HD23	1.65	0.78
5:C:630:ARG:HH21	5:C:706:GLU:HA	1.49	0.78
6:D:433:GLY:HA2	6:D:449:SER:C	2.04	0.78
6:D:456:MET:O	6:D:459:GLU:HB3	1.84	0.78
4:L:80:LEU:HG	6:N:844:ALA:HA	1.63	0.78
2:H:12:G:H2'	2:H:13:C:C6	2.17	0.78
5:C:36:PRO:HG2	5:C:70:GLU:HB3	1.66	0.78
6:D:28:LYS:HB3	6:D:41:ARG:HD2	1.66	0.78
6:D:783:ARG:HA	6:D:1028:ALA:HA	1.65	0.78
5:M:557:ARG:HG2	5:M:879:ARG:HB3	1.64	0.78
6:D:5:VAL:HB	6:D:1468:LEU:HD11	1.64	0.78
6:D:584:ASN:HB2	6:D:602:SER:HB3	1.65	0.78
5:M:584:GLU:HB2	12:M:7223:HOH:O	1.82	0.78
6:N:970:LYS:HG2	6:N:995:LEU:HD13	1.64	0.78
6:N:1149:LEU:HD11	6:N:1160:LEU:HD13	1.65	0.78
7:O:27:ALA:HB2	7:O:61:VAL:HG22	1.64	0.78
6:D:52:PRO:HA	12:D:9054:HOH:O	1.84	0.77
6:N:1379:VAL:HG12	6:N:1419:PRO:HA	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:437:ARG:HG2	5:C:467:ILE:HB	1.67	0.77
6:D:1233:GLY:O	6:D:1237:THR:HB	1.84	0.77
5:M:952:LEU:HB3	5:M:966:LEU:HD11	1.66	0.77
5:C:65:VAL:HG23	5:C:101:ILE:HB	1.64	0.77
5:C:312:ALA:HB1	5:C:318:PRO:HG2	1.65	0.77
4:K:89:PHE:HD1	4:K:120:VAL:HG23	1.49	0.77
6:N:1493:LYS:O	6:N:1497:GLU:HG2	1.84	0.77
5:C:636:ALA:HB3	5:C:703:ILE:HD13	1.67	0.77
5:M:810:ASP:HB3	5:M:813:VAL:HG22	1.65	0.77
4:L:59:GLU:HB2	4:L:137:ARG:HH12	1.49	0.77
5:M:10:ARG:HA	5:M:10:ARG:HH11	1.47	0.77
5:C:88:LEU:HD12	5:C:89:THR:H	1.47	0.77
5:C:1116:ALA:HB3	12:C:1130:HOH:O	1.84	0.77
6:D:169:TYR:HB3	6:D:195:VAL:HG11	1.67	0.77
6:D:637:LEU:HD21	6:D:642:CYS:HA	1.64	0.77
6:D:1282:ARG:NH2	6:N:72:VAL:HG21	1.99	0.77
6:N:73:CYS:HB3	6:N:76:CYS:O	1.84	0.77
6:D:396:VAL:HB	6:D:447:VAL:HG12	1.67	0.77
4:K:221:HIS:HB3	4:L:36:LEU:HD11	1.64	0.77
6:N:164:GLY:HA3	6:N:447:VAL:HB	1.67	0.77
7:O:35:PHE:HZ	7:O:60:ALA:HA	1.49	0.77
5:C:1105:LYS:HG3	5:C:1107:ASN:HD22	1.49	0.77
7:E:25:LYS:HA	7:E:28:GLN:HE21	1.48	0.77
5:M:703:ILE:H	5:M:703:ILE:HD12	1.50	0.77
5:M:1009:SER:HB2	6:N:651:GLU:O	1.85	0.77
6:N:204:LEU:HB3	6:N:441:ARG:NH2	1.98	0.77
6:N:827:ILE:HB	6:N:828:LYS:HE3	1.67	0.77
6:D:838:ARG:HH21	6:D:863:VAL:HG11	1.50	0.77
7:E:36:LYS:NZ	7:E:45:ARG:HH22	1.83	0.77
4:B:89:PHE:HB3	4:B:94:LEU:HD12	1.66	0.76
6:D:73:CYS:HB3	6:D:76:CYS:O	1.84	0.76
6:D:133:ILE:HG12	6:D:456:MET:HB3	1.68	0.76
6:D:396:VAL:HG21	6:D:445:ARG:HD3	1.65	0.76
6:D:1046:GLN:HA	6:D:1052:THR:HA	1.68	0.76
6:D:1291:SER:HB3	6:D:1293:PHE:HE1	1.49	0.76
6:N:136:ASP:HB3	6:N:137:PRO:HD3	1.65	0.76
5:C:478:VAL:HG13	5:C:506:ASN:HB3	1.65	0.76
5:M:203:ASP:OD1	5:M:205:GLU:HG3	1.85	0.76
5:M:941:VAL:HA	5:M:944:LEU:HD12	1.67	0.76
6:N:544:TYR:O	6:N:548:ILE:HG12	1.86	0.76
6:D:1236:LEU:HA	6:D:1359:GLN:HE21	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:520:LEU:HD11	6:N:524:LEU:HD13	1.68	0.76
6:N:1383:ASP:HB2	6:N:1416:ALA:HB3	1.65	0.76
6:N:1438:ALA:O	6:N:1443:THR:HG22	1.86	0.76
1:G:17:DC:H5"	5:C:1030:GLN:HE21	1.48	0.76
5:C:904:PRO:HD2	5:C:908:GLY:HA2	1.68	0.76
5:C:939:ARG:HB3	5:C:982:PRO:HG3	1.67	0.76
5:M:579:VAL:HG11	5:M:887:GLU:HG3	1.66	0.76
5:M:971:LYS:HA	5:M:988:VAL:HA	1.66	0.76
6:N:403:PHE:HA	12:N:9471:HOH:O	1.84	0.76
6:N:1223:ILE:H	6:N:1223:ILE:HD12	1.50	0.76
6:D:789:LEU:HD13	6:D:934:LEU:HD22	1.68	0.76
6:D:1382:THR:HG21	6:D:1418:LYS:HE3	1.65	0.76
4:L:58:ILE:HD13	4:L:140:MET:HB3	1.68	0.76
5:M:862:PRO:HB3	5:M:929:ARG:HH22	1.50	0.76
6:N:11:ALA:HB1	6:N:507:ASN:OD1	1.84	0.76
5:C:284:ARG:HG2	5:C:285:LEU:H	1.51	0.76
5:M:889:HIS:HE1	6:N:951:ILE:H	1.33	0.76
6:D:136:ASP:HB2	6:D:455:ARG:HH22	1.51	0.76
5:M:312:ALA:HB1	5:M:318:PRO:HG2	1.68	0.76
5:C:794:PRO:HB2	5:C:1027:PHE:CZ	2.21	0.76
6:D:1427:SER:HB2	12:D:9224:HOH:O	1.86	0.76
6:N:30:GLU:HG3	6:N:41:ARG:HG2	1.68	0.76
6:N:51:GLY:HA3	6:N:86:ARG:CA	2.14	0.76
6:N:1042:ARG:O	6:N:1057:VAL:HB	1.86	0.76
2:H:12:G:H2'	2:H:13:C:H6	1.51	0.75
6:D:1476:THR:HG22	7:E:21:VAL:HG22	1.67	0.75
5:M:578:VAL:HG11	5:M:991:GLN:HB3	1.67	0.75
6:N:699:VAL:H	6:N:756:GLN:NE2	1.82	0.75
4:A:58:ILE:HD13	4:A:140:MET:HB3	1.67	0.75
6:D:773:ALA:HA	6:D:1228:SER:HB3	1.67	0.75
6:D:900:ILE:HG22	6:D:914:LEU:HD21	1.66	0.75
5:M:965:GLU:HA	5:M:968:LEU:HD12	1.67	0.75
5:M:1007:ALA:HB1	6:N:652:LEU:HD13	1.69	0.75
6:N:1406:ARG:HD2	6:N:1412:LYS:HE3	1.67	0.75
6:D:760:ARG:O	6:D:764:LEU:HD23	1.87	0.75
6:D:1353:GLN:HE21	6:D:1357:ARG:NE	1.83	0.75
4:K:95:GLN:HA	12:K:1714:HOH:O	1.85	0.75
5:M:367:LEU:O	5:M:372:LEU:HD13	1.86	0.75
5:M:753:ASP:O	5:M:792:VAL:HG23	1.86	0.75
6:N:1101:VAL:HG21	6:N:1424:VAL:HG22	1.67	0.75
7:O:30:LEU:O	7:O:35:PHE:HA	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:415:VAL:HG13	6:D:419:ASP:HB3	1.69	0.75
6:D:567:ILE:HG22	6:D:571:LYS:NZ	2.00	0.75
6:N:143:ASN:HD21	6:N:145:VAL:HG12	1.51	0.75
2:H:10:G:O2'	2:H:11:C:H5'	1.87	0.75
6:N:1046:GLN:HA	6:N:1052:THR:HA	1.69	0.75
4:B:38:ASN:HB2	12:B:368:HOH:O	1.85	0.75
5:C:1054:THR:HG21	5:C:1079:PRO:HB3	1.67	0.75
4:A:228:PRO:HG3	12:A:318:HOH:O	1.86	0.75
6:D:455:ARG:HA	12:D:9294:HOH:O	1.86	0.75
4:K:103:ALA:HB3	12:K:672:HOH:O	1.87	0.75
5:M:195:LEU:HD11	5:M:238:LEU:HB2	1.68	0.75
6:N:1129:THR:HG23	6:N:1130:ARG:H	1.51	0.75
6:D:785:ILE:HG22	6:D:789:LEU:HD11	1.68	0.75
6:D:895:VAL:HG11	6:D:922:LEU:HD21	1.69	0.75
6:D:1189:ARG:HB3	6:D:1204:CYS:HA	1.68	0.75
5:M:904:PRO:HD2	5:M:908:GLY:HA2	1.68	0.75
4:A:79:ILE:HG21	4:A:165:ILE:HD11	1.68	0.75
4:A:80:LEU:HA	4:A:83:LYS:HE3	1.67	0.75
5:C:636:ALA:HA	12:C:1463:HOH:O	1.86	0.75
5:M:69:LEU:HD22	5:M:70:GLU:HG3	1.69	0.75
7:O:54:LEU:HD23	7:O:58:PRO:HD2	1.67	0.75
5:C:176:VAL:HG12	5:C:182:VAL:HG13	1.67	0.74
6:D:952:ASP:HA	6:D:1062:ARG:NH2	2.00	0.74
7:E:27:ALA:CB	7:E:61:VAL:HG22	2.16	0.74
5:M:1011:GLY:HA2	5:M:1026:GLN:NE2	2.01	0.74
5:C:141:HIS:HB3	5:C:418:LEU:HG	1.67	0.74
6:D:203:ALA:HB2	12:D:9157:HOH:O	1.86	0.74
6:D:1353:GLN:HE21	6:D:1357:ARG:HE	1.34	0.74
6:N:557:LEU:HD11	6:N:566:ILE:HG22	1.68	0.74
2:H:13:C:H4'	5:C:409:ARG:NH2	2.02	0.74
6:D:678:GLU:HG2	6:D:679:ARG:HG3	1.68	0.74
6:N:486:ARG:HA	6:N:489:ARG:HG2	1.70	0.74
12:G:1182:HOH:O	6:D:706:PRO:HA	1.87	0.74
4:A:12:THR:HG23	4:A:24:VAL:HB	1.68	0.74
5:C:383:ARG:HB2	5:C:383:ARG:NH1	2.02	0.74
5:C:810:ASP:HB3	5:C:813:VAL:HG13	1.68	0.74
6:D:842:VAL:HG22	12:D:9048:HOH:O	1.87	0.74
4:L:179:PHE:HB2	4:L:195:LEU:HD11	1.69	0.74
4:B:92:PRO:HA	4:B:146:ARG:NH1	2.01	0.74
5:C:1052:MET:SD	5:C:1056:LYS:HD2	2.28	0.74
6:D:1025:GLN:HA	6:D:1025:GLN:HE21	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:677:MET:HB3	5:M:987:ILE:HD13	1.68	0.74
4:A:57:TYR:HB3	4:A:141:GLU:HG2	1.69	0.74
5:C:998:TYR:HB3	12:C:1158:HOH:O	1.88	0.74
12:L:865:HOH:O	6:N:848:GLU:HB3	1.87	0.74
5:M:274:ARG:HH22	5:M:284:ARG:HG3	1.53	0.74
6:N:780:LYS:HD3	6:N:912:LYS:HE2	1.70	0.74
6:N:118:LEU:HB3	6:N:123:LEU:HD23	1.68	0.74
6:N:690:ALA:O	6:N:694:VAL:HG23	1.88	0.74
6:D:1153:VAL:CG1	6:N:561:GLY:HA3	2.16	0.74
6:N:729:HIS:HD1	6:N:731:LEU:H	1.32	0.74
6:N:1147:ARG:HB3	6:N:1188:VAL:HG21	1.67	0.74
7:E:28:GLN:O	7:E:32:ARG:HG3	1.88	0.74
5:M:575:GLN:HA	5:M:662:GLU:OE2	1.88	0.74
6:N:1426:LYS:HA	6:N:1429:LEU:HD22	1.69	0.74
2:Y:10:G:O2'	2:Y:11:C:H5'	1.88	0.73
5:M:611:ILE:HD11	5:M:641:PRO:HG3	1.70	0.73
6:N:699:VAL:H	6:N:756:GLN:HE22	1.35	0.73
5:C:141:HIS:HB3	5:C:418:LEU:CG	2.18	0.73
5:C:839:LEU:HB3	12:C:1441:HOH:O	1.87	0.73
6:D:1282:ARG:HH22	6:N:72:VAL:HG21	1.53	0.73
6:D:1283:ILE:N	6:N:75:ARG:HA	2.02	0.73
2:H:9:G:H2'	2:H:10:G:H8	1.54	0.73
4:A:53:VAL:HG11	4:A:82:LEU:HD13	1.70	0.73
5:C:83:CYS:HA	5:C:88:LEU:HB3	1.69	0.73
5:C:88:LEU:HB2	5:C:814:GLU:OE1	1.87	0.73
6:D:808:THR:HB	6:D:809:PRO:HD3	1.71	0.73
6:N:483:HIS:HB2	6:N:484:PRO:HD3	1.68	0.73
6:N:619:LEU:HD12	6:N:621:LYS:HZ3	1.53	0.73
6:N:1077:ALA:HA	12:N:9042:HOH:O	1.88	0.73
12:H:272:HOH:O	5:C:1012:PRO:HB3	1.87	0.73
3:I:5:DG:H1'	3:I:6:DC:H5'	1.69	0.73
6:D:477:LEU:HB3	6:D:496:LEU:HD12	1.70	0.73
4:K:67:THR:HG21	5:M:609:ASN:ND2	2.02	0.73
4:L:201:THR:HG22	4:L:203:GLY:H	1.53	0.73
5:C:683:ASN:HA	5:C:687:ALA:HB3	1.69	0.73
5:C:690:ILE:HD12	5:C:833:LEU:HD23	1.71	0.73
4:K:50:GLY:HA3	4:K:173:PRO:HG3	1.68	0.73
6:N:758:GLU:O	6:N:762:GLN:HG3	1.89	0.73
2:H:10:G:H2'	2:H:11:C:C6	2.23	0.73
4:A:36:LEU:HD11	4:B:221:HIS:HB3	1.69	0.73
5:C:1005:MET:HB2	6:D:648:MET:HE3	1.68	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:139:GLN:O	5:M:333:ILE:HA	1.87	0.73
6:N:25:GLU:HG2	6:N:92:HIS:O	1.88	0.73
6:N:1115:THR:HG21	6:N:1151:ARG:HH21	1.53	0.73
6:N:1363:LEU:HD23	6:N:1363:LEU:H	1.54	0.73
5:C:437:ARG:CZ	5:C:488:ALA:HA	2.16	0.73
6:D:133:ILE:HA	6:D:456:MET:HB2	1.69	0.73
6:D:1175:ILE:HD11	12:D:9440:HOH:O	1.89	0.73
4:K:87:VAL:HG21	4:K:144:VAL:HG11	1.71	0.73
6:N:133:ILE:HA	6:N:456:MET:CB	2.19	0.73
5:C:575:GLN:HB2	5:C:670:GLN:HG2	1.71	0.73
6:D:704:ARG:HD2	6:D:705:ALA:H	1.54	0.73
6:D:1298:GLY:N	6:N:47:GLU:HB2	2.03	0.73
6:D:1342:GLU:CD	6:D:1342:GLU:H	1.92	0.73
5:M:833:LEU:HD11	5:M:839:LEU:HD21	1.68	0.73
5:M:1031:ARG:HA	6:N:621:LYS:O	1.89	0.73
6:N:610:LYS:O	6:N:615:ARG:HG2	1.88	0.73
6:N:1240:THR:HG23	6:N:1253:THR:HB	1.71	0.73
6:D:703:ASN:HD21	6:D:707:THR:HG23	1.54	0.73
4:L:59:GLU:CB	4:L:137:ARG:HH12	2.01	0.73
5:M:325:ILE:HG22	5:M:331:ARG:NH1	2.04	0.73
4:B:99:LEU:HD22	4:B:144:VAL:HG21	1.71	0.72
6:D:141:ILE:HG12	6:D:448:GLU:O	1.88	0.72
6:D:551:ASN:HD21	6:D:555:LYS:HZ3	1.36	0.72
6:N:133:ILE:HG12	6:N:456:MET:HB3	1.70	0.72
6:N:171:LEU:HD11	6:N:393:ILE:HD11	1.71	0.72
6:N:703:ASN:HD22	6:N:704:ARG:N	1.87	0.72
5:C:492:ASP:HB3	5:C:518:LYS:HE2	1.71	0.72
5:C:579:VAL:HB	5:C:890:LEU:CD2	2.19	0.72
5:C:861:LEU:HD23	5:C:863:ASP:H	1.53	0.72
6:D:30:GLU:OE2	6:D:40:GLU:HG2	1.89	0.72
6:D:119:SER:H	6:D:123:LEU:HD22	1.54	0.72
6:D:917:GLN:O	6:D:921:ARG:HG2	1.88	0.72
6:D:1114:THR:HB	6:D:1195:GLN:HE21	1.54	0.72
4:L:210:ALA:HB2	12:L:1413:HOH:O	1.88	0.72
6:N:44:LEU:H	6:N:44:LEU:HD23	1.54	0.72
6:N:877:PRO:O	6:N:880:ILE:HG22	1.89	0.72
6:N:1416:ALA:HB1	12:N:9011:HOH:O	1.89	0.72
6:N:1166:LEU:H	6:N:1166:LEU:HD23	1.52	0.72
2:H:12:G:O2'	2:H:13:C:H5'	1.89	0.72
6:D:143:ASN:HD21	6:D:145:VAL:HG12	1.54	0.72
6:D:947:ILE:HG22	6:D:1019:PRO:HG3	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:710:ILE:HD12	5:M:790:LEU:HB2	1.70	0.72
6:N:163:TYR:HB2	6:N:166:GLN:HG3	1.70	0.72
6:N:708:LEU:HD22	6:N:1231:GLU:HA	1.69	0.72
1:X:18:DG:O3'	5:M:1001:VAL:HB	1.88	0.72
6:N:1018:ASN:HB3	6:N:1021:TYR:HB3	1.70	0.72
5:C:473:ARG:HD2	5:C:475:VAL:HG22	1.72	0.72
5:C:971:LYS:HA	5:C:988:VAL:HA	1.70	0.72
6:D:436:GLU:HB2	6:D:445:ARG:HH11	1.55	0.72
4:K:27:PRO:HB3	4:K:186:LEU:HD11	1.71	0.72
5:M:534:VAL:H	5:M:538:GLN:NE2	1.88	0.72
4:A:105:GLY:O	4:A:132:LEU:HB3	1.90	0.72
5:C:146:VAL:HG22	5:C:162:ILE:HG12	1.72	0.72
6:D:1465:ASN:HD21	6:D:1470:ARG:HB3	1.55	0.72
5:M:395:LYS:HE3	5:M:403:SER:HB2	1.70	0.72
6:N:796:ARG:NH1	6:N:861:GLN:HB2	2.04	0.72
5:M:754:ILE:HG12	5:M:791:ARG:HD3	1.69	0.72
5:M:896:PHE:O	5:M:924:VAL:HG11	1.90	0.72
6:N:18:ILE:HG23	6:N:518:PRO:HG3	1.69	0.72
4:K:41:ARG:HH21	4:K:45:LEU:HD21	1.54	0.72
6:D:1293:PHE:HB2	6:N:75:ARG:O	1.89	0.71
5:M:683:ASN:HA	5:M:687:ALA:HB3	1.71	0.71
5:M:874:LEU:HA	6:N:1023:MET:SD	2.30	0.71
6:N:799:LYS:HZ3	6:N:824:ASN:HA	1.53	0.71
6:N:1098:LEU:HD12	6:N:1424:VAL:HG21	1.72	0.71
6:D:202:VAL:HG21	6:D:400:VAL:HB	1.72	0.71
6:D:544:TYR:O	6:D:548:ILE:HG12	1.90	0.71
6:D:639:LEU:HD11	12:E:102:HOH:O	1.89	0.71
4:B:116:PRO:HA	12:B:336:HOH:O	1.90	0.71
6:D:1188:VAL:HB	12:D:9531:HOH:O	1.89	0.71
5:M:716:LYS:HE2	12:M:7334:HOH:O	1.91	0.71
5:M:762:LYS:HG3	5:M:784:ASP:O	1.90	0.71
6:N:1442:ASN:OD1	6:N:1444:THR:HB	1.89	0.71
1:X:18:DG:O4'	5:M:1002:GLU:HB3	1.89	0.71
4:A:212:ASN:O	4:A:216:GLU:HG2	1.89	0.71
5:M:962:GLN:HG2	12:M:7146:HOH:O	1.87	0.71
6:N:1291:SER:HB2	6:N:1293:PHE:HE1	1.56	0.71
5:C:383:ARG:HB2	5:C:383:ARG:HH11	1.54	0.71
5:C:579:VAL:HG11	5:C:887:GLU:HG3	1.71	0.71
5:C:1034:GLU:HG2	6:D:619:LEU:HD13	1.72	0.71
6:D:444:VAL:HG13	12:D:9150:HOH:O	1.89	0.71
5:M:502:PRO:HB2	5:M:509:ALA:HB3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1106:VAL:HG11	6:N:1474:ALA:HB2	1.71	0.71
6:N:1399:ASP:O	6:N:1403:LEU:HB2	1.91	0.71
5:C:264:PRO:HA	12:C:1174:HOH:O	1.89	0.71
4:K:206:THR:HG22	4:K:209:GLU:H	1.56	0.71
6:N:615:ARG:HH11	6:N:615:ARG:HB2	1.56	0.71
6:N:1476:THR:HG23	7:O:21:VAL:HG22	1.71	0.71
5:C:84:ARG:NH2	5:C:128:ILE:HD11	2.06	0.71
6:D:517:VAL:HG21	6:D:547:LEU:HD21	1.73	0.71
6:D:618:LEU:HB3	6:D:619:LEU:HD23	1.73	0.71
5:M:36:PRO:HG2	5:M:70:GLU:HB3	1.70	0.71
5:M:78:PHE:HB2	5:M:88:LEU:HD21	1.73	0.71
5:M:580:MET:SD	5:M:584:GLU:HG3	2.30	0.71
5:C:137:VAL:O	5:C:391:LEU:HD21	1.91	0.71
6:D:1485:GLN:HE21	7:E:80:VAL:N	1.85	0.71
5:M:685:GLU:HG2	6:N:739:ASP:HB3	1.73	0.71
5:M:757:GLY:HA2	5:M:789:SER:HB3	1.72	0.71
4:B:92:PRO:HA	4:B:146:ARG:HH12	1.56	0.71
4:B:224:TYR:HA	12:B:408:HOH:O	1.91	0.71
5:C:976:ASP:HB2	5:C:979:THR:HG22	1.72	0.71
6:D:30:GLU:HB3	6:D:40:GLU:HB3	1.72	0.71
11:M:6999:APC:H8	11:M:6999:APC:H5'1	1.73	0.71
3:I:6:DC:C5'	6:D:1266:ARG:HH22	2.03	0.70
4:A:88:ARG:HB2	4:A:204:SER:HA	1.73	0.70
5:C:283:ILE:HB	12:C:1220:HOH:O	1.91	0.70
5:C:290:LEU:HB3	5:C:302:VAL:CG1	2.21	0.70
6:D:788:GLY:O	6:D:792:ILE:HG22	1.91	0.70
6:D:1148:VAL:HB	6:D:1203:LYS:O	1.91	0.70
5:M:768:THR:HB	5:M:771:GLU:HB3	1.73	0.70
5:M:1008:ARG:HG3	5:M:1028:GLY:H	1.53	0.70
5:M:1055:LEU:HD22	5:M:1066:ALA:HB2	1.72	0.70
5:C:470:PRO:HB2	5:C:534:VAL:HG21	1.73	0.70
5:C:1097:LEU:HD22	5:C:1097:LEU:H	1.53	0.70
6:D:414:ARG:HG2	6:D:451:ASP:N	2.06	0.70
6:D:775:GLY:HA3	6:D:1145:TYR:HE1	1.55	0.70
5:C:139:GLN:HE22	5:C:415:PRO:HD2	1.57	0.70
5:C:420:ARG:HA	12:C:1154:HOH:O	1.90	0.70
5:C:966:LEU:HD21	5:C:986:PRO:HG3	1.70	0.70
6:D:54:LYS:HG2	6:D:57:GLU:HB3	1.74	0.70
6:D:550:ARG:HE	6:D:553:ARG:NH1	1.89	0.70
11:D:5999:APC:H8	11:D:5999:APC:H5'1	1.73	0.70
4:K:179:PHE:HB2	4:K:195:LEU:HD11	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:633:VAL:HB	6:N:740:PHE:CE1	2.26	0.70
6:N:1425:THR:O	6:N:1429:LEU:HD13	1.91	0.70
6:D:112:ILE:HG12	6:D:128:TYR:OH	1.90	0.70
5:M:241:LEU:HD21	12:M:7332:HOH:O	1.92	0.70
5:M:762:LYS:HG2	5:M:786:LYS:HG3	1.73	0.70
2:H:7:G:N1	5:C:1014:SER:HA	2.06	0.70
5:C:342:ASP:O	5:C:346:VAL:HG23	1.91	0.70
6:D:87:ARG:HG3	6:D:88:TYR:CD2	2.25	0.70
5:M:479:VAL:HG21	5:M:503:LEU:HD21	1.72	0.70
2:H:6:U:H2'	2:H:7:G:N7	2.06	0.70
5:C:672:VAL:HG23	5:C:868:ASP:HB2	1.72	0.70
5:C:996:LYS:HG2	12:C:1441:HOH:O	1.91	0.70
5:M:428:ARG:CZ	5:M:428:ARG:HA	2.20	0.70
5:M:1054:THR:HG21	5:M:1079:PRO:HB3	1.71	0.70
5:M:1060:ILE:HD12	5:M:1063:ARG:HH12	1.55	0.70
6:N:491:LYS:HE2	6:N:495:ARG:NH1	2.05	0.70
6:N:860:LEU:H	6:N:860:LEU:HD12	1.55	0.70
6:N:1047:LYS:HZ2	6:N:1053:PHE:HA	1.56	0.70
6:N:1273:VAL:HG22	6:N:1326:THR:OG1	1.91	0.70
6:D:125:GLN:NE2	6:D:587:ARG:HE	1.90	0.70
6:D:162:ARG:HA	12:D:9260:HOH:O	1.90	0.70
6:D:202:VAL:HG23	6:D:398:ALA:O	1.92	0.70
6:D:1465:ASN:ND2	6:D:1470:ARG:HB3	2.07	0.70
6:N:2:LYS:HB2	12:N:9093:HOH:O	1.90	0.70
6:N:618:LEU:HB3	6:N:619:LEU:HD23	1.72	0.70
5:C:449:ILE:O	5:C:451:LEU:HG	1.91	0.70
5:M:752:GLY:H	5:M:792:VAL:HB	1.55	0.70
6:D:657:LEU:HB2	6:D:691:LEU:HD13	1.72	0.70
5:M:410:ILE:HD11	5:M:455:LEU:HB3	1.73	0.70
6:N:781:PRO:HG2	6:N:911:LEU:HD23	1.72	0.70
2:H:7:G:H3'	12:H:1604:HOH:O	1.91	0.70
6:D:547:LEU:HD23	6:D:581:LEU:HD21	1.73	0.70
6:D:1280:VAL:HG22	6:D:1318:TYR:N	2.07	0.70
5:M:399:ASN:O	5:M:402:SER:HB3	1.92	0.70
6:N:165:LYS:HD3	12:N:9447:HOH:O	1.91	0.70
1:G:21:DC:H4'	5:C:134:ARG:NH2	2.02	0.69
6:D:787:LEU:HD11	6:D:947:ILE:HG12	1.72	0.69
2:Y:13:C:H5"	5:M:409:ARG:HH22	1.57	0.69
4:A:161:ARG:NH1	4:A:161:ARG:HB2	2.06	0.69
4:B:63:HIS:HB3	12:B:395:HOH:O	1.91	0.69
5:C:626:ARG:HB2	5:C:639:GLN:NE2	2.03	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:988:ARG:HH11	6:D:992:ILE:HD11	1.57	0.69
6:D:1493:LYS:O	6:D:1497:GLU:HG2	1.92	0.69
7:E:23:VAL:HG12	7:E:61:VAL:CG1	2.20	0.69
5:M:1111:ILE:HG13	5:M:1112:PHE:H	1.57	0.69
6:N:1176:LYS:HA	6:N:1179:GLU:OE1	1.92	0.69
6:N:1281:VAL:HG23	6:N:1319:VAL:HG21	1.73	0.69
5:C:421:GLU:HG2	12:C:1233:HOH:O	1.92	0.69
6:D:93:ILE:O	6:D:516:ALA:HA	1.92	0.69
6:D:1018:ASN:HB3	6:D:1021:TYR:HB3	1.75	0.69
6:N:710:ARG:HH11	6:N:768:ASN:ND2	1.89	0.69
6:N:1236:LEU:HB3	6:N:1359:GLN:CB	2.22	0.69
7:O:17:TYR:O	7:O:20:THR:HG22	1.92	0.69
7:O:23:VAL:CG1	7:O:61:VAL:CG1	2.70	0.69
5:C:1059:ASP:OD1	5:C:1080:SER:HB3	1.92	0.69
6:D:1087:ARG:HG2	6:D:1238:MET:HA	1.73	0.69
6:D:1153:VAL:HG13	6:N:561:GLY:CA	2.23	0.69
5:M:1032:PHE:O	5:M:1036:GLU:HB2	1.92	0.69
6:N:179:VAL:HG13	6:N:183:GLU:HB3	1.73	0.69
6:N:900:ILE:HD11	6:N:902:LEU:HD23	1.75	0.69
6:N:1144:LEU:HD11	6:N:1186:VAL:HG11	1.75	0.69
2:Y:10:G:H2'	2:Y:11:C:C6	2.27	0.69
3:Z:5:DG:H1'	3:Z:6:DC:H5'	1.74	0.69
6:D:662:GLU:HG3	12:D:9068:HOH:O	1.92	0.69
6:D:850:LEU:HD12	6:D:850:LEU:H	1.57	0.69
6:D:1281:VAL:HG11	6:D:1313:VAL:CG1	2.20	0.69
5:M:922:PHE:HZ	5:M:963:LEU:HB3	1.58	0.69
7:O:23:VAL:HG12	7:O:61:VAL:CG1	2.19	0.69
5:C:129:ILE:HD13	5:C:134:ARG:HB2	1.73	0.69
5:C:195:LEU:HD21	5:C:238:LEU:HG	1.75	0.69
5:C:1016:ILE:HG21	6:D:526:PRO:HG3	1.73	0.69
6:D:13:ALA:O	6:D:511:TRP:HB3	1.93	0.69
6:D:148:GLU:HG2	6:D:151:GLN:HE21	1.58	0.69
6:D:1281:VAL:HG23	6:D:1319:VAL:CG2	2.22	0.69
6:N:45:PHE:HD1	6:N:522:PRO:HB3	1.57	0.69
4:A:23:PHE:HE1	4:A:208:LEU:HD12	1.58	0.69
6:D:610:LYS:HA	6:D:615:ARG:NH2	2.08	0.69
7:E:40:LEU:HD21	7:E:67:GLU:HA	1.73	0.69
5:M:183:SER:HB2	5:M:190:LYS:HG2	1.75	0.69
6:N:421:LEU:HD12	6:N:427:VAL:HG12	1.74	0.69
4:A:58:ILE:HG21	4:A:68:ILE:HD11	1.75	0.69
4:B:44:LEU:HD23	4:B:48:ILE:HD11	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:97:VAL:HB	12:B:403:HOH:O	1.92	0.69
4:B:179:PHE:HB3	4:B:197:LEU:HD12	1.75	0.69
5:C:314:THR:HA	12:C:1396:HOH:O	1.92	0.69
6:D:63:TYR:CE1	6:D:73:CYS:HA	2.28	0.69
6:D:615:ARG:NH2	6:D:1096:ARG:HH12	1.91	0.69
6:D:817:GLU:O	6:D:821:VAL:HG23	1.93	0.69
4:L:16:GLN:HA	4:L:16:GLN:HE21	1.58	0.69
5:M:142:ARG:NH2	5:M:325:ILE:HG12	2.07	0.69
5:M:162:ILE:HD11	5:M:306:THR:HG21	1.75	0.69
5:M:537:LYS:HB3	5:M:545:ASN:HD21	1.58	0.69
5:C:99:GLN:HB3	5:C:109:LYS:HG3	1.75	0.69
5:C:162:ILE:O	5:C:164:PRO:HD3	1.93	0.69
6:D:614:PHE:CE2	6:D:1438:ALA:HB1	2.28	0.69
6:D:794:GLN:O	6:D:861:GLN:HB3	1.93	0.69
5:M:724:ARG:CZ	5:M:724:ARG:HB2	2.21	0.69
5:M:851:LYS:HG3	5:M:853:LEU:HD12	1.75	0.69
6:N:1272:ALA:HA	6:N:1326:THR:HB	1.74	0.69
6:N:1429:LEU:HG	6:N:1441:GLN:CG	2.21	0.69
2:Y:6:U:H2'	2:Y:7:G:N7	2.07	0.69
4:B:52:ALA:HB2	4:B:170:VAL:O	1.93	0.69
5:C:84:ARG:HH21	5:C:128:ILE:HD11	1.57	0.69
6:D:877:PRO:O	6:D:880:ILE:HG22	1.92	0.69
5:M:17:PRO:O	5:M:20:GLU:HB3	1.92	0.69
5:M:841:ASN:HD21	5:M:843:HIS:CD2	2.11	0.69
5:M:1092:LEU:HA	5:M:1095:LEU:HD12	1.73	0.69
6:D:639:LEU:HD12	6:D:640:HIS:H	1.56	0.68
5:M:878:SER:HB3	6:N:1029:ARG:HD2	1.75	0.68
6:D:139:GLY:O	6:D:147:VAL:HB	1.92	0.68
6:D:989:TYR:O	6:D:993:LEU:HG	1.93	0.68
6:N:796:ARG:HH11	6:N:861:GLN:HB2	1.58	0.68
5:C:139:GLN:OE1	5:C:414:GLY:HA3	1.93	0.68
5:C:198:ARG:NH1	5:C:198:ARG:HB3	2.08	0.68
5:C:511:GLU:O	5:C:526:PRO:HD3	1.94	0.68
6:D:65:ARG:HG3	6:D:66:GLN:H	1.58	0.68
6:D:105:VAL:HB	12:D:9087:HOH:O	1.94	0.68
6:D:163:TYR:CD1	6:D:166:GLN:HB2	2.27	0.68
6:D:524:LEU:H	6:D:524:LEU:HD12	1.59	0.68
6:D:1305:LEU:HD21	6:D:1326:THR:OG1	1.91	0.68
7:E:62:THR:HA	7:E:65:MET:HE2	1.76	0.68
4:K:20:TYR:HE2	4:K:198:ARG:HB3	1.59	0.68
5:M:190:LYS:HE3	12:M:7048:HOH:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:562:SER:O	5:C:565:GLN:HG3	1.93	0.68
5:C:1032:PHE:O	5:C:1036:GLU:HB2	1.93	0.68
6:D:470:LEU:HD12	6:D:503:LEU:HD21	1.74	0.68
6:D:1345:GLU:O	6:D:1349:VAL:HG23	1.92	0.68
6:N:1109:GLU:OE2	6:N:1217:ILE:HD11	1.93	0.68
6:D:396:VAL:O	6:D:398:ALA:N	2.27	0.68
6:D:1019:PRO:O	6:D:1023:MET:HG3	1.94	0.68
5:M:274:ARG:HB2	5:M:285:LEU:HD13	1.73	0.68
6:N:19:ARG:HH21	6:N:516:ALA:HB2	1.57	0.68
6:N:444:VAL:HG21	12:N:9209:HOH:O	1.94	0.68
1:G:21:DC:H3'	12:G:1612:HOH:O	1.94	0.68
5:C:212:GLY:HA3	5:C:218:VAL:CG2	2.24	0.68
6:D:1048:PRO:HG3	6:D:1075:HIS:ND1	2.09	0.68
4:K:53:VAL:HG12	4:K:167:VAL:HG21	1.74	0.68
5:M:145:GLY:H	5:M:163:ILE:HG13	1.58	0.68
5:M:511:GLU:O	5:M:526:PRO:HD3	1.93	0.68
5:M:534:VAL:H	5:M:538:GLN:HE22	1.41	0.68
5:M:682:TYR:HB3	5:M:689:VAL:HG13	1.76	0.68
6:N:133:ILE:O	6:N:152:LEU:HB2	1.93	0.68
6:N:522:PRO:HA	6:N:525:ARG:NH1	2.09	0.68
6:N:787:LEU:HD21	6:N:947:ILE:HD11	1.76	0.68
6:N:1047:LYS:NZ	6:N:1053:PHE:HA	2.08	0.68
7:O:39:VAL:HB	12:O:2451:HOH:O	1.93	0.68
5:C:202:TYR:OH	5:C:304:LEU:HD22	1.94	0.68
5:C:964:LYS:O	5:C:968:LEU:HG	1.93	0.68
5:C:1096:ALA:O	6:D:13:ALA:HB2	1.93	0.68
6:D:530:VAL:HB	6:D:534:ARG:HB2	1.74	0.68
5:M:203:ASP:O	5:M:207:LEU:HB2	1.94	0.68
5:M:264:PRO:HB3	5:M:289:THR:CB	2.23	0.68
6:N:572:ARG:HB3	12:N:9115:HOH:O	1.92	0.68
6:N:642:CYS:SG	6:N:716:PHE:HB2	2.33	0.68
6:N:777:PRO:O	6:N:780:LYS:HG2	1.93	0.68
5:C:328:LEU:HD13	5:C:433:THR:HB	1.74	0.68
5:C:538:GLN:HB2	12:C:1361:HOH:O	1.94	0.68
6:D:62:LYS:HB2	6:D:73:CYS:SG	2.34	0.68
6:D:98:PRO:O	6:D:458:ALA:HB3	1.93	0.68
6:D:562:ALA:HB1	6:D:567:ILE:HD11	1.74	0.68
6:D:584:ASN:OD1	6:D:590:PRO:HD2	1.94	0.68
5:M:443:THR:O	5:M:559:LEU:HD21	1.93	0.68
6:N:165:LYS:HB2	6:N:397:LYS:CB	2.11	0.68
1:G:22:DC:H4'	5:C:388:ARG:HG3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:94:LEU:HG	4:A:97:VAL:HG22	1.75	0.68
5:C:798:GLY:H	5:C:827:VAL:CG1	2.07	0.68
6:D:477:LEU:HD22	6:D:492:ALA:HB1	1.76	0.68
6:N:135:LEU:HD21	6:N:452:ILE:HG13	1.76	0.68
2:Y:12:G:O2'	2:Y:13:C:H5'	1.93	0.68
5:C:88:LEU:HD22	5:C:814:GLU:OE2	1.94	0.68
5:C:184:MET:HB2	5:C:193:LEU:HG	1.76	0.68
5:C:479:VAL:HG21	5:C:503:LEU:HD11	1.74	0.68
5:C:545:ASN:HD22	5:C:583:LEU:CD2	2.07	0.68
6:D:853:VAL:HG22	6:D:858:VAL:HG23	1.77	0.68
6:D:1256:LEU:O	6:D:1260:ILE:HG12	1.94	0.68
2:Y:9:G:H2'	2:Y:10:G:H8	1.57	0.67
4:A:153:ALA:HA	4:A:156:HIS:NE2	2.09	0.67
5:C:472:ARG:HD3	12:C:1386:HOH:O	1.93	0.67
6:D:28:LYS:HG3	6:D:29:PRO:HD2	1.76	0.67
6:D:87:ARG:HG3	6:D:88:TYR:HD2	1.58	0.67
4:B:144:VAL:HB	12:B:403:HOH:O	1.93	0.67
5:C:18:LEU:HD21	5:C:542:VAL:HG21	1.75	0.67
5:C:120:LEU:HD23	5:C:121:MET:H	1.58	0.67
5:C:516:ARG:NH1	5:C:521:PRO:HB3	2.08	0.67
5:C:983:ILE:HG21	5:C:987:ILE:HD11	1.74	0.67
5:C:1036:GLU:HG3	6:D:707:THR:HG21	1.76	0.67
6:D:703:ASN:HD21	6:D:707:THR:CG2	2.06	0.67
5:M:198:ARG:HB3	5:M:198:ARG:NH1	2.08	0.67
5:M:758:ARG:HB3	5:M:788:THR:O	1.95	0.67
6:N:761:ILE:HG22	12:N:9085:HOH:O	1.94	0.67
5:C:232:GLU:HA	5:C:235:LEU:HD12	1.76	0.67
5:C:462:ASP:HB3	5:C:468:ARG:HD2	1.76	0.67
5:C:758:ARG:NH2	5:C:788:THR:HB	2.09	0.67
5:C:851:LYS:HG2	5:C:853:LEU:HD12	1.77	0.67
5:C:874:LEU:HD21	6:D:1028:ALA:HB1	1.77	0.67
5:C:1016:ILE:CG2	6:D:526:PRO:HG3	2.25	0.67
6:D:602:SER:O	6:D:606:ILE:HG13	1.95	0.67
4:K:44:LEU:HD23	4:K:48:ILE:HD11	1.74	0.67
7:O:27:ALA:CB	7:O:61:VAL:HG22	2.23	0.67
5:C:432:ARG:HD3	6:D:1048:PRO:HG2	1.75	0.67
5:C:569:VAL:HG11	5:C:996:LYS:NZ	2.09	0.67
5:C:768:THR:HB	5:C:771:GLU:HB3	1.75	0.67
6:D:1042:ARG:O	6:D:1057:VAL:HB	1.94	0.67
4:K:100:LEU:HB2	4:K:115:LEU:HD11	1.75	0.67
5:C:195:LEU:HD11	5:C:238:LEU:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1237:THR:HG21	6:D:1256:LEU:HD22	1.76	0.67
5:M:12:VAL:HB	5:M:472:ARG:NH1	2.09	0.67
5:M:630:ARG:HH21	5:M:707:ARG:H	1.41	0.67
6:N:162:ARG:HH12	6:N:414:ARG:CZ	2.08	0.67
6:N:1281:VAL:HG11	6:N:1313:VAL:CG1	2.23	0.67
5:C:139:GLN:HG2	5:C:418:LEU:HD22	1.77	0.67
7:E:18:ARG:O	7:E:22:VAL:HG23	1.94	0.67
5:M:332:ARG:CZ	5:M:464:LEU:HD11	2.25	0.67
5:M:362:GLY:HA3	5:M:367:LEU:HD23	1.75	0.67
5:M:678:PRO:O	6:N:943:THR:HA	1.95	0.67
5:M:950:LEU:HD12	5:M:952:LEU:HD13	1.77	0.67
6:N:866:VAL:HG11	6:N:880:ILE:HD11	1.77	0.67
6:N:1209:LEU:HD23	6:N:1210:SER:N	2.10	0.67
6:N:1382:THR:HA	6:N:1389:LEU:CD1	2.24	0.67
6:N:1394:VAL:HB	6:N:1397:LYS:HD2	1.77	0.67
2:H:13:C:H4'	5:C:409:ARG:HH22	1.58	0.67
5:C:58:ASP:O	5:C:59:LYS:HG3	1.94	0.67
6:D:864:VAL:HG12	6:D:865:THR:H	1.60	0.67
5:M:610:ARG:HD3	5:M:622:GLU:OE1	1.94	0.67
5:M:874:LEU:HG	6:N:1023:MET:SD	2.35	0.67
5:M:986:PRO:HB3	12:M:7135:HOH:O	1.95	0.67
5:M:1046:ALA:HB3	6:N:1476:THR:HB	1.76	0.67
5:C:921:ALA:HB1	12:C:1371:HOH:O	1.95	0.67
6:D:87:ARG:HD3	6:D:524:LEU:CD1	2.18	0.67
6:D:514:LEU:HB2	12:D:9387:HOH:O	1.94	0.67
6:D:1109:GLU:HA	12:D:9273:HOH:O	1.95	0.67
5:M:264:PRO:HB3	5:M:289:THR:HB	1.75	0.67
6:N:119:SER:HB2	6:N:123:LEU:N	2.09	0.67
1:G:17:DC:H5"	5:C:1030:GLN:NE2	2.08	0.67
6:D:678:GLU:HB2	12:D:9364:HOH:O	1.95	0.67
6:N:1057:VAL:HG13	6:N:1069:GLU:HB3	1.77	0.67
5:C:19:THR:HG21	5:C:124:ASP:O	1.95	0.67
5:C:533:ASP:HB3	5:C:538:GLN:NE2	2.10	0.67
6:D:204:LEU:HG	6:D:394:LEU:O	1.95	0.67
6:D:639:LEU:HD13	6:D:766:ALA:HB2	1.77	0.67
6:N:676:MET:HE1	6:N:684:LYS:H	1.60	0.67
5:C:516:ARG:HH21	6:D:1068:LEU:HB3	1.60	0.66
6:D:639:LEU:HB2	12:D:9297:HOH:O	1.95	0.66
5:M:18:LEU:HD23	5:M:404:LEU:HD21	1.76	0.66
12:C:1481:HOH:O	6:D:622:ARG:HD3	1.95	0.66
6:D:550:ARG:HD2	6:D:573:MET:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:988:ARG:O	6:D:992:ILE:HG13	1.95	0.66
6:N:710:ARG:HG2	6:N:772:PRO:HG2	1.78	0.66
6:N:1262:LEU:HD23	6:N:1352:ILE:HG13	1.76	0.66
2:Y:8:C:H5'	12:Y:707:HOH:O	1.95	0.66
4:A:123:MET:HE3	4:A:204:SER:HA	1.78	0.66
5:C:732:ALA:HB1	5:C:735:ARG:NH2	2.10	0.66
6:D:941:PHE:HB3	12:D:9052:HOH:O	1.95	0.66
6:D:1192:LEU:HD13	6:D:1345:GLU:HG2	1.77	0.66
4:K:30:ARG:HB3	12:L:1657:HOH:O	1.93	0.66
7:O:51:LEU:HD21	12:O:1656:HOH:O	1.94	0.66
6:D:885:ILE:HB	12:D:9263:HOH:O	1.94	0.66
6:D:1146:GLY:HA3	6:D:1207:TYR:HB2	1.75	0.66
6:D:1160:LEU:HD22	6:D:1164:ARG:HH12	1.59	0.66
5:M:1097:LEU:H	5:M:1097:LEU:HD22	1.60	0.66
6:N:165:LYS:HG2	6:N:199:LEU:HD13	1.77	0.66
6:N:412:GLY:HA2	6:N:434:ARG:HD3	1.77	0.66
4:B:102:LYS:HD2	4:B:139:ASN:OD1	1.96	0.66
6:D:550:ARG:HB3	6:D:574:LEU:HD12	1.78	0.66
7:E:23:VAL:HG13	7:E:61:VAL:HG13	1.77	0.66
4:K:47:SER:HB2	4:K:217:ILE:HD13	1.78	0.66
1:G:14:DT:C2'	1:G:15:DC:H5'	2.19	0.66
1:G:18:DG:H5"	6:D:628:ARG:NH1	2.10	0.66
4:A:23:PHE:HB2	4:A:197:LEU:HD23	1.78	0.66
4:A:133:GLU:HG2	4:A:134:GLU:N	2.11	0.66
5:C:573:ARG:HD2	5:C:698:ASP:O	1.95	0.66
5:C:732:ALA:HB1	5:C:735:ARG:HH22	1.60	0.66
6:D:28:LYS:CB	6:D:41:ARG:HD2	2.26	0.66
6:D:202:VAL:CG2	6:D:400:VAL:HB	2.25	0.66
6:D:1273:VAL:HG22	6:D:1326:THR:OG1	1.96	0.66
6:D:1335:LEU:HD23	6:D:1344:VAL:HG22	1.77	0.66
5:M:189:ARG:HG3	12:M:7100:HOH:O	1.94	0.66
6:N:781:PRO:HB2	6:N:786:ILE:HD12	1.77	0.66
4:B:153:ALA:HB3	12:B:359:HOH:O	1.95	0.66
5:C:173:ASP:OD2	5:C:185:LYS:HB2	1.96	0.66
5:C:839:LEU:HD21	5:C:849:VAL:HG23	1.76	0.66
6:D:1264:GLU:O	6:D:1266:ARG:HG3	1.96	0.66
6:N:455:ARG:HB3	6:N:459:GLU:CG	2.26	0.66
6:N:1221:VAL:O	6:N:1224:VAL:HG12	1.96	0.66
6:N:1293:PHE:CZ	6:N:1302:GLU:HG2	2.31	0.66
7:O:75:PHE:HB3	12:O:1760:HOH:O	1.96	0.66
4:A:7:LYS:NZ	4:A:186:LEU:HD23	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:922:PHE:HB3	5:C:964:LYS:NZ	2.11	0.66
6:D:172:PRO:HG2	6:D:175:VAL:HG21	1.77	0.66
4:K:186:LEU:HD13	4:K:192:LEU:HD13	1.77	0.66
5:M:428:ARG:HD3	5:M:451:LEU:HD22	1.76	0.66
5:M:530:GLU:HG3	12:M:7124:HOH:O	1.94	0.66
5:M:625:LEU:HD11	5:M:641:PRO:HG3	1.76	0.66
5:M:854:PRO:HB3	12:M:7363:HOH:O	1.96	0.66
5:C:437:ARG:NH1	5:C:488:ALA:HA	2.11	0.66
6:D:166:GLN:HG3	6:D:396:VAL:HG12	1.77	0.66
6:D:1240:THR:HG22	6:D:1254:GLN:C	2.16	0.66
5:M:1015:LEU:HG	5:M:1016:ILE:HG23	1.77	0.66
6:N:454:ALA:N	6:N:455:ARG:HE	1.94	0.66
6:N:478:LEU:CD2	6:N:1388:ARG:HE	2.02	0.66
6:N:1384:PRO:HB2	12:N:9117:HOH:O	1.96	0.66
6:N:1434:TRP:CZ3	6:N:1457:ASP:HB2	2.31	0.66
7:O:51:LEU:HD11	12:O:1282:HOH:O	1.96	0.66
4:A:44:LEU:HD23	4:A:48:ILE:HD11	1.77	0.66
4:A:73:GLU:OE1	4:A:130:ALA:HA	1.95	0.66
5:C:889:HIS:CE1	6:D:951:ILE:H	2.04	0.66
6:D:906:GLN:HB3	6:D:911:LEU:CD1	2.26	0.66
6:D:970:LYS:HA	6:D:973:GLN:CD	2.15	0.66
6:D:1408:ILE:O	5:M:370:ALA:HB1	1.96	0.66
1:G:18:DG:H5”	6:D:628:ARG:HH12	1.61	0.65
4:B:38:ASN:HB3	4:B:39:PRO:HD3	1.78	0.65
4:B:80:LEU:HD21	6:D:867:ARG:HB2	1.77	0.65
7:E:45:ARG:HG2	7:E:46:PRO:CD	2.20	0.65
4:K:73:GLU:H	4:K:73:GLU:CD	1.98	0.65
4:L:92:PRO:HA	4:L:146:ARG:NH1	2.11	0.65
5:M:21:ILE:H	5:M:21:ILE:HD12	1.58	0.65
4:A:112:ARG:HH21	4:A:125:PRO:HB2	1.59	0.65
4:B:206:THR:HG22	4:B:209:GLU:HB2	1.78	0.65
5:C:487:THR:HB	5:C:490:GLU:HG3	1.78	0.65
5:C:703:ILE:HD12	5:C:703:ILE:H	1.60	0.65
6:D:166:GLN:CD	6:D:394:LEU:HD13	2.16	0.65
6:D:1412:LYS:O	6:D:1414:PRO:HD3	1.96	0.65
5:M:290:LEU:HD21	12:M:7062:HOH:O	1.96	0.65
5:M:937:ASP:HA	12:M:7238:HOH:O	1.96	0.65
6:N:715:ALA:HB3	6:N:764:LEU:HA	1.79	0.65
1:G:12:DG:H2’	1:G:13:DT:H71	1.77	0.65
2:Y:13:C:H4’	5:M:409:ARG:HH22	1.61	0.65
5:C:15:LEU:N	5:C:586:ARG:NH2	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:263:ASP:HB2	5:C:264:PRO:HD3	1.76	0.65
5:C:844:GLY:HA3	12:C:1341:HOH:O	1.95	0.65
5:C:1101:THR:HG21	5:C:1111:ILE:HG23	1.78	0.65
6:N:507:ASN:HA	12:N:9024:HOH:O	1.96	0.65
6:N:1209:LEU:HD23	6:N:1211:MET:H	1.61	0.65
5:C:264:PRO:HB3	5:C:289:THR:CB	2.27	0.65
5:C:775:ARG:NH2	5:C:782:ALA:HB1	2.08	0.65
5:C:889:HIS:HB2	12:C:1179:HOH:O	1.97	0.65
6:D:96:ALA:HB3	6:D:554:LEU:HD23	1.77	0.65
6:D:1109:GLU:HG2	6:D:1201:CYS:HA	1.77	0.65
4:K:58:ILE:HB	4:K:61:VAL:HB	1.78	0.65
5:M:186:VAL:HG23	5:M:187:ASN:H	1.59	0.65
5:M:775:ARG:HG3	12:M:7073:HOH:O	1.95	0.65
6:N:808:THR:OG1	6:N:809:PRO:HD3	1.97	0.65
6:N:1209:LEU:HD21	7:O:16:LYS:HD3	1.78	0.65
6:N:1275:SER:HB2	6:N:1294:VAL:HG11	1.77	0.65
12:I:1102:HOH:O	5:C:422:ARG:HD3	1.95	0.65
4:A:132:LEU:HD13	4:A:138:LEU:HD23	1.79	0.65
4:A:219:ARG:HD2	12:B:358:HOH:O	1.95	0.65
5:C:428:ARG:CZ	5:C:451:LEU:HD21	2.26	0.65
5:C:576:ALA:HB3	5:C:900:ARG:NH2	2.11	0.65
6:D:52:PRO:HD2	6:D:85:VAL:HG23	1.79	0.65
6:D:204:LEU:HB3	6:D:441:ARG:NH2	2.12	0.65
5:M:799:ILE:HB	12:M:7116:HOH:O	1.96	0.65
6:N:531:ASP:HA	12:N:9426:HOH:O	1.95	0.65
6:N:915:VAL:HG13	6:N:931:LEU:HD21	1.77	0.65
2:H:1:G:C2'	2:H:2:A:H5"	2.27	0.65
1:X:14:DT:C2'	1:X:15:DC:H5'	2.22	0.65
4:B:20:TYR:OH	4:B:22:GLU:HG3	1.97	0.65
5:C:537:LYS:HB3	5:C:545:ASN:HD21	1.62	0.65
5:C:561:GLY:O	5:C:564:MET:HG2	1.95	0.65
6:D:1281:VAL:HG22	12:D:9442:HOH:O	1.95	0.65
6:D:1429:LEU:HG	6:D:1441:GLN:HG3	1.76	0.65
7:E:62:THR:HA	7:E:65:MET:CE	2.26	0.65
6:N:127:LEU:HA	6:N:132:TYR:HD1	1.61	0.65
6:N:818:ARG:HD3	12:N:9061:HOH:O	1.97	0.65
5:C:473:ARG:HH11	5:C:475:VAL:HG22	1.62	0.65
5:C:487:THR:HG22	5:C:489:THR:H	1.61	0.65
5:C:1083:GLU:OE1	5:C:1083:GLU:HA	1.95	0.65
6:D:470:LEU:HD12	6:D:503:LEU:CD2	2.27	0.65
6:N:728:LEU:HD23	6:N:740:PHE:HE2	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:770:LEU:HG	6:N:919:PHE:CE1	2.32	0.65
6:N:774:SER:HB2	6:N:776:GLU:HG2	1.79	0.65
2:H:11:C:H2'	2:H:12:G:C8	2.32	0.65
4:B:54:THR:HB	4:B:143:ARG:HD3	1.79	0.65
5:C:603:VAL:HG21	5:C:643:VAL:HG11	1.78	0.65
5:C:627:ARG:O	5:C:638:ASP:HB2	1.96	0.65
6:D:117:ASP:CG	6:D:495:ARG:HE	2.00	0.65
6:D:794:GLN:HB3	6:D:1017:PHE:CZ	2.31	0.65
6:D:1485:GLN:NE2	7:E:80:VAL:H	1.87	0.65
5:M:130:ASN:HD21	5:M:383:ARG:NH2	1.95	0.65
6:N:615:ARG:HD2	6:N:619:LEU:HG	1.76	0.65
2:Y:11:C:H2'	2:Y:12:G:C8	2.32	0.65
5:C:399:ASN:HB3	5:C:568:ALA:O	1.97	0.65
5:C:1016:ILE:HD13	5:C:1016:ILE:H	1.61	0.65
6:D:865:THR:HG22	6:D:874:GLU:HG2	1.78	0.65
6:D:957:PRO:HG2	6:D:1007:VAL:HA	1.78	0.65
5:M:342:ASP:O	5:M:346:VAL:HG23	1.96	0.65
5:M:573:ARG:HB3	5:M:670:GLN:OE1	1.97	0.65
2:H:9:G:H5'	2:H:9:G:C8	2.32	0.65
5:C:841:ASN:C	5:C:841:ASN:HD22	2.00	0.65
6:D:436:GLU:OE1	6:D:447:VAL:HG11	1.97	0.65
6:D:1284:GLU:OE1	6:D:1285:GLU:HG2	1.96	0.65
6:D:1296:SER:HB2	6:N:47:GLU:HG3	1.77	0.65
4:K:20:TYR:CE2	4:K:198:ARG:HB3	2.31	0.65
4:L:79:ILE:HA	4:L:82:LEU:HD12	1.79	0.65
5:M:263:ASP:HB2	5:M:264:PRO:HD3	1.77	0.65
5:M:567:GLN:CB	5:M:997:LEU:HD22	2.27	0.65
6:N:32:ILE:HD12	6:N:527:MET:HG2	1.79	0.65
4:A:9:PRO:HB3	4:A:25:LEU:HG	1.78	0.64
5:C:896:PHE:O	5:C:924:VAL:HG11	1.97	0.64
7:E:27:ALA:CB	7:E:61:VAL:CG2	2.75	0.64
4:L:57:TYR:HB3	4:L:141:GLU:CG	2.24	0.64
5:M:292:ARG:NH1	5:M:299:LYS:HD3	2.11	0.64
6:N:1405:GLU:CD	6:N:1413:THR:HB	2.18	0.64
7:O:8:LYS:O	7:O:12:MET:HG3	1.95	0.64
5:C:675:ALA:HB2	5:C:867:VAL:HG11	1.79	0.64
6:D:904:VAL:HG13	12:D:9113:HOH:O	1.97	0.64
6:D:1481:VAL:HG13	7:E:18:ARG:HE	1.62	0.64
6:D:1498:ALA:HB2	7:E:88:GLU:OE1	1.97	0.64
4:L:201:THR:HG21	4:L:205:VAL:O	1.97	0.64
5:M:437:ARG:NH1	5:M:488:ALA:HA	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:861:LEU:HD23	5:M:863:ASP:H	1.62	0.64
5:M:1033:GLY:O	5:M:1037:VAL:HG23	1.97	0.64
6:N:591:VAL:HB	12:N:9357:HOH:O	1.96	0.64
4:A:224:TYR:HB3	4:B:9:PRO:HB2	1.77	0.64
5:C:328:LEU:HD11	5:C:434:HIS:HD2	1.63	0.64
5:C:831:ARG:HH12	5:C:1004:LYS:HE3	1.61	0.64
6:D:1109:GLU:OE1	6:D:1201:CYS:HB2	1.96	0.64
6:D:1434:TRP:CZ3	6:D:1457:ASP:HB2	2.33	0.64
4:K:14:ARG:HH22	4:K:24:VAL:CG2	2.10	0.64
6:N:134:VAL:HG22	6:N:460:ALA:HA	1.79	0.64
6:N:136:ASP:OD2	6:N:463:GLN:HB3	1.97	0.64
6:N:480:GLU:O	6:N:484:PRO:HD2	1.97	0.64
6:N:700:VAL:HG12	6:N:749:VAL:HG13	1.79	0.64
6:N:837:GLY:HA2	12:N:9212:HOH:O	1.97	0.64
3:I:6:DC:H3'	6:D:1266:ARG:NH2	2.12	0.64
5:C:154:ARG:HH12	5:C:177:GLU:HG3	1.61	0.64
5:C:492:ASP:OD1	5:C:518:LYS:HG3	1.97	0.64
5:C:943:VAL:HG23	5:C:985:GLY:H	1.63	0.64
6:D:806:PHE:CE1	6:D:813:LEU:HB3	2.33	0.64
6:D:1083:ASP:HB3	6:D:1242:HIS:HE1	1.62	0.64
4:K:25:LEU:HD22	4:L:225:PHE:CE2	2.33	0.64
5:M:837:ASP:HA	5:M:999:HIS:HE1	1.61	0.64
6:N:486:ARG:HA	6:N:489:ARG:HD3	1.78	0.64
6:N:1149:LEU:HD12	6:N:1160:LEU:HD22	1.78	0.64
6:N:1199:GLY:HA3	12:N:9128:HOH:O	1.98	0.64
5:C:198:ARG:HB3	5:C:198:ARG:HH11	1.63	0.64
5:C:367:LEU:O	5:C:372:LEU:HD13	1.97	0.64
5:C:1071:ILE:O	6:D:659:LYS:HG2	1.96	0.64
6:D:115:LEU:CD1	6:D:499:VAL:HG22	2.26	0.64
6:D:398:ALA:HB2	6:D:447:VAL:CA	2.22	0.64
6:D:1299:PHE:C	6:N:59:ALA:HB1	2.18	0.64
6:D:1398:TRP:HA	6:D:1398:TRP:CE3	2.32	0.64
5:M:394:PHE:CE1	5:M:632:ASN:HB3	2.31	0.64
5:M:462:ASP:OD2	5:M:468:ARG:HD2	1.96	0.64
5:M:684:PHE:HD1	6:N:784:ASP:HB2	1.63	0.64
6:N:164:GLY:CA	6:N:447:VAL:HB	2.27	0.64
6:N:181:ASP:HB3	6:N:441:ARG:HD3	1.80	0.64
6:N:456:MET:O	6:N:459:GLU:HB3	1.97	0.64
6:N:1236:LEU:HA	6:N:1359:GLN:NE2	2.13	0.64
6:N:1462:LEU:HD22	6:N:1472:ILE:HG23	1.78	0.64
1:G:23:DG:H2'	6:D:534:ARG:NH2	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:166:PRO:HD3	5:C:265:ARG:HD2	1.79	0.64
5:C:705:ILE:HD12	12:C:1463:HOH:O	1.98	0.64
6:D:414:ARG:HG2	6:D:451:ASP:CA	2.28	0.64
6:D:952:ASP:HA	6:D:1062:ARG:HH21	1.63	0.64
6:D:1353:GLN:NE2	6:D:1357:ARG:HE	1.96	0.64
4:L:44:LEU:HD23	4:L:48:ILE:HD11	1.80	0.64
6:N:82:LYS:C	6:N:84:ILE:H	2.01	0.64
6:N:704:ARG:HD3	6:N:738:ALA:HB2	1.77	0.64
3:Z:3:DA:H2"	3:Z:4:DC:H5"	1.78	0.64
5:C:198:ARG:HH21	5:C:203:ASP:HA	1.63	0.64
5:C:979:THR:HG23	5:C:981:GLU:N	2.08	0.64
5:M:139:GLN:HG2	5:M:418:LEU:HD22	1.79	0.64
3:I:6:DC:C3'	6:D:1266:ARG:NH2	2.60	0.64
5:C:227:PHE:HA	5:C:230:ARG:NE	2.11	0.64
5:C:284:ARG:HG2	5:C:285:LEU:N	2.12	0.64
5:C:1009:SER:HB2	6:D:651:GLU:O	1.98	0.64
6:D:484:PRO:HB3	6:D:488:ARG:HE	1.63	0.64
6:D:1090:ASP:HB3	6:D:1256:LEU:HD21	1.78	0.64
6:D:1205:TYR:O	6:D:1366:LYS:HE3	1.97	0.64
5:M:200:LEU:HD13	5:M:300:ASP:CG	2.17	0.64
6:N:754:PHE:CZ	7:O:21:VAL:HA	2.33	0.64
6:N:813:LEU:O	6:N:817:GLU:HB2	1.96	0.64
5:C:113:VAL:O	5:C:115:LEU:HD23	1.97	0.64
5:C:460:ARG:HH21	5:C:485:TYR:HB2	1.63	0.64
6:D:489:ARG:HG3	6:D:490:ALA:N	2.12	0.64
12:D:9474:HOH:O	7:E:15:SER:HB2	1.96	0.64
5:M:545:ASN:HD22	5:M:583:LEU:CD2	2.10	0.64
6:N:689:ASP:HB3	12:N:9135:HOH:O	1.97	0.64
7:O:43:GLU:HG3	7:O:44:GLU:H	1.63	0.64
4:A:58:ILE:HB	4:A:61:VAL:HB	1.80	0.64
6:D:785:ILE:H	6:D:785:ILE:CD1	2.08	0.64
7:E:41:GLU:HB2	7:E:45:ARG:CZ	2.28	0.64
4:K:176:ARG:HD2	5:M:865:THR:N	2.13	0.64
5:M:13:ILE:HB	12:M:7012:HOH:O	1.98	0.64
5:M:334:ARG:NH1	5:M:415:PRO:HG2	2.13	0.64
6:N:41:ARG:HD3	6:N:42:ASP:H	1.63	0.64
6:N:150:ARG:NH1	6:N:468:LEU:HD22	2.12	0.64
6:N:761:ILE:HG23	7:O:6:ILE:HD11	1.78	0.64
6:N:1490:LYS:HE3	12:O:859:HOH:O	1.97	0.64
4:B:107:LYS:HD2	12:B:319:HOH:O	1.96	0.63
5:C:271:GLU:OE1	5:C:271:GLU:HA	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:731:LEU:HD13	6:D:779:ALA:HB1	1.80	0.63
6:D:1232:PRO:HB3	6:D:1361:VAL:HG11	1.79	0.63
4:K:83:LYS:HD2	12:M:7286:HOH:O	1.98	0.63
5:M:478:VAL:HG22	5:M:506:ASN:HB3	1.78	0.63
5:M:668:LEU:O	5:M:995:MET:HG2	1.98	0.63
6:N:657:LEU:HD22	6:N:691:LEU:HD13	1.80	0.63
5:C:264:PRO:HB3	5:C:289:THR:HB	1.79	0.63
6:D:1298:GLY:H	6:N:47:GLU:HB2	1.63	0.63
4:K:130:ALA:HB3	12:K:2221:HOH:O	1.97	0.63
5:M:937:ASP:O	5:M:941:VAL:HG23	1.98	0.63
6:N:415:VAL:HG13	6:N:419:ASP:HB2	1.80	0.63
4:B:59:GLU:HG2	4:B:139:ASN:HD22	1.62	0.63
5:C:48:PHE:O	5:C:52:PHE:HB2	1.98	0.63
5:C:139:GLN:NE2	5:C:415:PRO:HD2	2.13	0.63
5:C:798:GLY:H	5:C:827:VAL:HG11	1.63	0.63
5:C:1008:ARG:NH1	5:C:1011:GLY:N	2.47	0.63
6:D:1153:VAL:HG22	6:N:561:GLY:HA3	1.81	0.63
4:K:226:SER:O	4:K:228:PRO:HD3	1.99	0.63
5:M:91:GLN:NE2	5:M:117:HIS:HB3	2.13	0.63
5:M:437:ARG:CZ	5:M:488:ALA:HA	2.28	0.63
6:N:703:ASN:HD22	6:N:704:ARG:H	1.46	0.63
5:C:545:ASN:HD22	5:C:583:LEU:HD22	1.62	0.63
6:D:134:VAL:HG22	6:D:455:ARG:O	1.99	0.63
5:M:18:LEU:HB2	5:M:590:ASP:HB3	1.80	0.63
6:N:160:GLU:O	6:N:164:GLY:O	2.16	0.63
6:N:205:TYR:HE1	12:N:9033:HOH:O	1.81	0.63
7:O:25:LYS:HA	7:O:28:GLN:NE2	2.13	0.63
3:I:3:DA:H2"	3:I:4:DC:H5"	1.81	0.63
5:C:54:ILE:HD11	5:C:356:ARG:HG2	1.80	0.63
5:C:194:VAL:HG21	5:C:221:LEU:O	1.99	0.63
5:C:470:PRO:HB3	5:C:485:TYR:CE2	2.33	0.63
6:D:138:LYS:HB2	12:D:9456:HOH:O	1.98	0.63
6:D:996:TRP:CE2	6:D:1056:PRO:HG2	2.33	0.63
6:D:1167:SER:O	6:D:1171:VAL:HG23	1.98	0.63
4:K:9:PRO:HB3	4:K:25:LEU:HG	1.81	0.63
4:K:42:ARG:HH12	4:L:34:VAL:HB	1.63	0.63
4:K:229:GLN:HB3	4:L:12:THR:HG22	1.80	0.63
5:M:576:ALA:HB1	5:M:580:MET:SD	2.38	0.63
6:N:136:ASP:CB	6:N:137:PRO:HD3	2.29	0.63
6:N:777:PRO:HG2	6:N:915:VAL:HB	1.80	0.63
6:N:996:TRP:O	6:N:1000:THR:HG22	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1465:ASN:ND2	6:N:1470:ARG:HD2	2.13	0.63
2:H:2:A:C2'	2:H:3:G:O5'	2.46	0.63
5:C:437:ARG:HB3	5:C:467:ILE:HD12	1.79	0.63
6:D:465:LEU:HD22	6:D:510:GLU:HA	1.81	0.63
6:D:508:ARG:HB3	6:D:510:GLU:OE2	1.97	0.63
6:D:524:LEU:HD12	6:D:524:LEU:N	2.14	0.63
6:D:677:LEU:HD21	6:D:687:VAL:HG11	1.80	0.63
6:D:1293:PHE:CE1	6:N:75:ARG:HD3	2.34	0.63
4:K:30:ARG:NH1	4:K:191:ASP:HB2	2.13	0.63
4:L:91:ASN:OD1	4:L:93:SER:HB2	1.98	0.63
6:N:148:GLU:HB3	6:N:151:GLN:HB2	1.80	0.63
6:N:1412:LYS:O	6:N:1414:PRO:HD3	1.98	0.63
4:B:97:VAL:HG22	12:B:388:HOH:O	1.98	0.63
5:C:601:GLY:HA2	5:C:616:GLU:HG2	1.80	0.63
5:C:922:PHE:HZ	5:C:963:LEU:HB3	1.63	0.63
6:D:814:ALA:HB1	6:D:818:ARG:HE	1.63	0.63
4:K:25:LEU:HD22	4:L:225:PHE:HE2	1.64	0.63
5:M:217:LEU:HD12	5:M:311:PHE:HA	1.80	0.63
5:M:428:ARG:HA	5:M:428:ARG:NH1	2.14	0.63
5:M:672:VAL:HG23	5:M:868:ASP:HB2	1.81	0.63
6:N:1031:ASN:OD1	6:N:1034:GLN:HG3	1.98	0.63
6:N:1341:PRO:HD2	6:N:1342:GLU:OE2	1.99	0.63
4:B:123:MET:C	4:B:125:PRO:HD3	2.18	0.63
5:C:227:PHE:HD2	5:C:230:ARG:HH21	1.45	0.63
5:C:1050:GLN:CG	5:C:1079:PRO:HG2	2.29	0.63
7:E:25:LYS:HA	7:E:28:GLN:NE2	2.14	0.63
6:N:951:ILE:O	6:N:951:ILE:HD13	1.99	0.63
4:B:124:ASN:OD1	4:B:127:LEU:HB2	1.99	0.63
5:C:607:ASP:HB3	5:C:610:ARG:H	1.64	0.63
5:C:839:LEU:HD12	5:C:994:ILE:HG21	1.81	0.63
4:K:123:MET:C	4:K:125:PRO:HD3	2.19	0.63
5:M:428:ARG:HD3	5:M:451:LEU:CD2	2.28	0.63
6:N:1345:GLU:O	6:N:1349:VAL:HG23	1.99	0.63
1:G:6:DT:H2"	1:G:7:DC:C6	2.34	0.62
1:G:18:DG:H2"	1:G:19:DC:C5'	2.26	0.62
2:H:8:C:H2'	2:H:9:G:C8	2.34	0.62
5:C:1013:TYR:CE1	5:C:1020:PRO:HG3	2.33	0.62
6:D:97:THR:HB	6:D:571:LYS:HD3	1.81	0.62
6:D:501:ALA:CB	6:D:1453:ALA:HB2	2.23	0.62
6:D:660:LYS:HE2	6:D:694:VAL:HA	1.80	0.62
5:M:48:PHE:O	5:M:52:PHE:HB2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:971:LYS:HB3	5:M:988:VAL:HG12	1.80	0.62
6:N:119:SER:HB2	6:N:123:LEU:HB2	1.80	0.62
6:N:581:LEU:HD23	6:N:581:LEU:H	1.63	0.62
6:N:615:ARG:HG3	12:N:9306:HOH:O	1.98	0.62
6:N:981:GLY:HA2	12:N:9185:HOH:O	1.99	0.62
6:N:1273:VAL:HB	6:N:1303:TYR:CD2	2.33	0.62
6:N:1312:LEU:HD23	12:N:9120:HOH:O	1.97	0.62
6:D:93:ILE:HD11	6:D:519:VAL:HG22	1.81	0.62
6:D:1083:ASP:HB3	6:D:1242:HIS:CE1	2.34	0.62
6:D:1295:GLU:CB	6:N:76:CYS:HB2	2.28	0.62
6:D:1354:LYS:HE3	6:D:1357:ARG:NH1	2.14	0.62
6:D:1481:VAL:HG12	7:E:21:VAL:HG21	1.81	0.62
5:M:313:LEU:HD13	5:M:321:GLU:HB2	1.80	0.62
5:M:444:PRO:HG2	5:M:452:ILE:HD11	1.81	0.62
6:N:432:TYR:HB3	6:N:450:TYR:CB	2.21	0.62
2:H:16:G:H4'	6:D:743:ASP:OD2	1.99	0.62
5:C:512:ARG:HD3	5:C:523:ILE:HD11	1.81	0.62
5:C:1111:ILE:HG13	5:C:1112:PHE:H	1.64	0.62
6:D:433:GLY:HA3	6:D:447:VAL:O	1.99	0.62
6:D:480:GLU:HG2	6:D:492:ALA:HB2	1.81	0.62
6:D:1239:ARG:HG3	6:D:1239:ARG:HH11	1.64	0.62
6:D:1263:PHE:O	6:D:1424:VAL:HG12	1.97	0.62
5:M:134:ARG:NH2	5:M:393:GLN:HA	2.14	0.62
5:M:203:ASP:OD1	5:M:206:THR:HG22	1.99	0.62
5:M:674:VAL:HG21	5:M:871:LEU:CD1	2.29	0.62
5:M:997:LEU:HG	12:M:7228:HOH:O	1.99	0.62
6:N:202:VAL:HG21	6:N:400:VAL:HB	1.82	0.62
6:N:1372:VAL:O	6:N:1375:MET:HB2	1.99	0.62
1:G:20:DG:H4'	5:C:394:PHE:CD2	2.34	0.62
3:Z:5:DG:H4'	8:N:8001:STD:O1	1.99	0.62
5:C:726:ILE:HD13	5:C:734:LEU:HD11	1.82	0.62
4:K:222:LEU:HG	4:L:215:VAL:HB	1.81	0.62
5:M:30:LEU:HA	12:M:7092:HOH:O	2.00	0.62
5:M:437:ARG:HG2	5:M:467:ILE:O	1.98	0.62
6:N:566:ILE:O	6:N:570:GLU:HG2	1.99	0.62
6:D:104:PHE:HB3	6:D:512:MET:HE2	1.81	0.62
6:D:546:ARG:HH21	6:D:550:ARG:HH22	1.46	0.62
4:K:64:GLU:HB2	4:K:165:ILE:HG21	1.82	0.62
4:L:58:ILE:HB	4:L:61:VAL:HB	1.81	0.62
5:M:427:VAL:HG12	5:M:428:ARG:HH21	1.62	0.62
5:M:905:ILE:HD12	5:M:905:ILE:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1240:THR:HG23	6:N:1253:THR:CB	2.29	0.62
5:C:302:VAL:C	5:C:305:PRO:HD2	2.20	0.62
5:C:326:ASP:OD1	5:C:427:VAL:HA	1.98	0.62
5:C:398:THR:O	5:C:635:THR:HG21	1.99	0.62
5:C:512:ARG:HB3	5:C:523:ILE:HD11	1.79	0.62
5:C:918:LEU:HD23	5:C:968:LEU:HA	1.80	0.62
5:C:971:LYS:HD2	5:C:986:PRO:HB2	1.82	0.62
6:D:89:ARG:O	6:D:521:PRO:HG3	2.00	0.62
4:K:136:GLY:HA3	12:K:1785:HOH:O	1.99	0.62
4:L:123:MET:C	4:L:125:PRO:HD3	2.18	0.62
5:M:92:ALA:HB2	5:M:120:LEU:HD21	1.82	0.62
6:N:96:ALA:HB3	6:N:554:LEU:HD23	1.81	0.62
4:B:2:LEU:HD12	4:B:3:ASP:N	2.14	0.62
5:C:564:MET:HE1	5:C:840:ALA:O	2.00	0.62
6:D:706:PRO:HG2	11:D:5999:APC:H2	1.81	0.62
4:K:18:ARG:HG2	12:K:1775:HOH:O	1.98	0.62
6:N:1272:ALA:CA	6:N:1326:THR:HB	2.29	0.62
2:Y:13:C:H2'	2:Y:14:G:C8	2.34	0.62
4:B:62:LEU:H	4:B:62:LEU:HD12	1.64	0.62
5:C:52:PHE:CD2	5:C:68:PHE:HB2	2.35	0.62
6:D:1117:TYR:HE1	6:N:560:GLN:HE22	1.45	0.62
5:M:775:ARG:HD2	5:M:782:ALA:CB	2.29	0.62
5:M:815:LEU:HD21	12:M:7270:HOH:O	1.99	0.62
4:A:59:GLU:HG3	4:A:139:ASN:HB3	1.82	0.62
5:C:548:PRO:HA	5:C:581:THR:HG22	1.80	0.62
5:C:587:VAL:CG1	5:C:666:LEU:HD22	2.29	0.62
5:C:941:VAL:HA	5:C:944:LEU:HD12	1.82	0.62
6:D:48:ARG:HB3	6:D:48:ARG:HH11	1.63	0.62
6:D:133:ILE:HD11	12:D:9302:HOH:O	2.00	0.62
6:D:133:ILE:O	6:D:153:LEU:N	2.32	0.62
6:D:400:VAL:HG22	6:D:443:VAL:CG2	2.30	0.62
6:D:631:ILE:HG12	6:D:743:ASP:O	1.99	0.62
6:D:1397:LYS:HZ3	6:D:1432:LYS:HG3	1.63	0.62
6:D:1498:ALA:HB1	7:E:84:ARG:NH2	2.15	0.62
6:N:45:PHE:CD1	6:N:522:PRO:HB3	2.34	0.62
6:N:398:ALA:CB	6:N:447:VAL:HA	2.30	0.62
6:N:409:VAL:HG23	6:N:421:LEU:HA	1.82	0.62
6:N:501:ALA:HB1	6:N:1453:ALA:HB2	1.82	0.62
6:N:866:VAL:HG11	6:N:880:ILE:CD1	2.30	0.62
6:N:1206:GLY:HA3	6:N:1366:LYS:HZ1	1.64	0.62
5:C:15:LEU:H	5:C:15:LEU:HD12	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:457:ALA:HB3	5:C:538:GLN:HA	1.82	0.62
5:C:768:THR:HG22	5:C:771:GLU:H	1.65	0.62
5:C:911:GLU:OE2	6:D:951:ILE:HD12	2.00	0.62
5:C:1063:ARG:HG2	5:C:1064:ASN:N	2.15	0.62
6:D:192:ALA:HB1	6:D:193:PRO:HD2	1.81	0.62
6:D:474:GLU:O	6:D:478:LEU:HG	2.00	0.62
6:D:524:LEU:O	6:D:526:PRO:HD3	2.00	0.62
6:D:551:ASN:HD21	6:D:555:LYS:NZ	1.98	0.62
6:D:639:LEU:HD12	6:D:640:HIS:N	2.14	0.62
5:M:194:VAL:HG21	5:M:221:LEU:O	2.00	0.62
5:M:679:PHE:C	6:N:943:THR:HG22	2.20	0.62
5:M:806:LEU:HG	5:M:822:VAL:HG23	1.81	0.62
6:N:678:GLU:HG3	6:N:679:ARG:HG3	1.82	0.62
3:Z:8:DA:H1'	3:Z:9:DG:H5'	1.82	0.61
6:D:50:PHE:O	6:D:86:ARG:HA	1.99	0.61
6:D:1266:ARG:O	6:D:1268:PRO:HD3	2.00	0.61
4:K:56:VAL:HG13	4:K:142:VAL:HG12	1.81	0.61
5:M:237:ARG:CB	5:M:237:ARG:HH11	2.13	0.61
6:N:1101:VAL:HG13	6:N:1428:ALA:N	2.15	0.61
5:C:704:HIS:O	5:C:828:ALA:HA	2.00	0.61
6:D:567:ILE:HG22	6:D:571:LYS:HZ3	1.63	0.61
6:D:670:VAL:HG23	6:D:671:LYS:H	1.64	0.61
6:D:758:GLU:O	6:D:762:GLN:HG2	1.99	0.61
6:D:1262:LEU:HD23	6:D:1352:ILE:HG12	1.81	0.61
6:D:1397:LYS:NZ	6:D:1432:LYS:HZ1	1.99	0.61
5:M:198:ARG:HB3	5:M:198:ARG:HH11	1.65	0.61
5:M:1118:LYS:HG3	5:M:1119:ARG:HG3	1.82	0.61
6:N:108:VAL:HB	6:N:109:PRO:HD3	1.82	0.61
6:N:447:VAL:HG23	12:N:9198:HOH:O	2.01	0.61
6:N:875:THR:HG21	6:N:902:LEU:HD13	1.82	0.61
1:G:12:DG:OP1	6:D:1441:GLN:O	2.17	0.61
4:A:27:PRO:CG	4:A:186:LEU:HD11	2.31	0.61
4:A:57:TYR:HB3	4:A:141:GLU:CG	2.30	0.61
5:C:290:LEU:HB3	5:C:302:VAL:HG11	1.81	0.61
5:C:752:GLY:H	5:C:792:VAL:HB	1.65	0.61
5:C:759:THR:HG21	5:C:783:ARG:NH1	2.15	0.61
6:D:133:ILE:N	6:D:133:ILE:HA	2.02	0.61
4:L:59:GLU:HG3	4:L:139:ASN:HD21	1.63	0.61
4:L:88:ARG:HD3	4:L:121:GLU:OE1	2.00	0.61
5:M:166:PRO:HD3	5:M:265:ARG:HD2	1.80	0.61
5:M:574:ALA:O	5:M:662:GLU:HG3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:650:ARG:HG2	5:M:653:ASP:HB2	1.80	0.61
6:N:1232:PRO:HB3	6:N:1361:VAL:HG11	1.82	0.61
6:N:1281:VAL:HG23	6:N:1319:VAL:HG11	1.82	0.61
4:A:23:PHE:CE1	4:A:208:LEU:HD12	2.35	0.61
5:C:183:SER:HB2	5:C:190:LYS:CD	2.28	0.61
6:D:133:ILE:CG1	6:D:456:MET:HB3	2.30	0.61
7:E:36:LYS:HZ2	7:E:45:ARG:HH22	1.47	0.61
4:K:225:PHE:CE2	4:L:211:LEU:HD11	2.36	0.61
5:M:137:VAL:O	5:M:391:LEU:HD21	2.01	0.61
5:M:497:ALA:HA	5:M:515:ALA:HA	1.83	0.61
5:M:713:ARG:HB3	5:M:720:GLU:OE2	2.00	0.61
6:N:15:PRO:HB3	6:N:19:ARG:HH22	1.63	0.61
5:C:437:ARG:HG2	5:C:467:ILE:O	2.00	0.61
5:C:771:GLU:O	5:C:775:ARG:HG2	2.01	0.61
6:D:480:GLU:HB2	12:D:9200:HOH:O	2.01	0.61
6:D:845:ASN:HA	6:D:867:ARG:NH2	2.15	0.61
6:D:955:VAL:HG11	6:D:1015:TYR:HE2	1.65	0.61
6:D:977:ALA:HB3	6:D:983:LEU:HD11	1.81	0.61
6:N:15:PRO:O	6:N:19:ARG:HG2	2.00	0.61
6:N:756:GLN:HG3	6:N:760:ARG:HD2	1.81	0.61
6:N:820:GLU:HG3	6:N:836:VAL:HG11	1.82	0.61
6:N:1175:ILE:O	6:N:1179:GLU:HG3	2.00	0.61
4:A:56:VAL:HG13	4:A:142:VAL:HG12	1.81	0.61
4:A:112:ARG:HH21	4:A:126:ASP:N	1.98	0.61
5:C:464:LEU:HD21	12:C:1279:HOH:O	2.01	0.61
5:C:752:GLY:O	6:D:679:ARG:HG2	2.00	0.61
5:M:966:LEU:HA	5:M:969:GLN:HG3	1.81	0.61
6:N:841:TYR:HA	12:N:9409:HOH:O	2.00	0.61
4:A:189:ARG:HH22	4:B:155:LYS:HG2	1.65	0.61
6:D:97:THR:CG2	6:D:459:GLU:HB2	2.31	0.61
6:D:553:ARG:HD3	6:D:570:GLU:OE1	2.00	0.61
6:D:773:ALA:HA	6:D:1228:SER:CB	2.31	0.61
6:D:917:GLN:HE21	6:D:921:ARG:HE	1.49	0.61
6:D:1053:PHE:CE1	6:D:1072:ILE:HD12	2.36	0.61
4:K:219:ARG:HE	4:L:219:ARG:HD2	1.65	0.61
5:M:139:GLN:NE2	5:M:418:LEU:HD22	2.15	0.61
6:N:10:ILE:HD11	6:N:1434:TRP:CE2	2.36	0.61
4:B:36:LEU:O	4:B:40:LEU:HG	2.00	0.61
6:D:52:PRO:HD2	6:D:85:VAL:CG2	2.30	0.61
6:D:462:GLN:HA	6:D:513:ILE:HD13	1.83	0.61
6:D:882:PHE:HA	6:D:885:ILE:HD12	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:27:ALA:HB2	7:E:61:VAL:CG2	2.28	0.61
4:K:173:PRO:HB2	4:K:205:VAL:HG22	1.82	0.61
4:L:16:GLN:HE21	4:L:16:GLN:CA	2.13	0.61
5:M:1051:GLU:HG2	5:M:1056:LYS:HZ2	1.66	0.61
6:N:27:GLU:O	6:N:28:LYS:HD2	2.01	0.61
6:N:525:ARG:HG2	6:N:541:ASN:HD21	1.65	0.61
6:N:1277:ILE:O	6:N:1294:VAL:HG11	2.01	0.61
1:X:17:DC:H2"	1:X:18:DG:C5'	2.28	0.61
2:Y:13:C:H2'	2:Y:14:G:H8	1.65	0.61
4:B:81:ASN:ND2	4:B:127:LEU:HD11	2.16	0.61
5:C:139:GLN:OE1	5:C:415:PRO:HD2	2.01	0.61
5:C:211:LEU:HD13	5:C:308:ARG:HG2	1.82	0.61
5:C:580:MET:O	5:C:902:ILE:HA	2.01	0.61
5:C:660:ALA:HB1	5:C:667:ALA:O	2.00	0.61
5:C:710:ILE:HG23	5:C:823:VAL:HG23	1.83	0.61
7:E:54:LEU:HG	7:E:58:PRO:HG2	1.83	0.61
5:M:19:THR:HG21	5:M:124:ASP:O	2.01	0.61
5:M:876:VAL:HG22	5:M:884:GLN:HE21	1.66	0.61
6:N:770:LEU:HG	6:N:919:PHE:CD1	2.36	0.61
6:N:786:ILE:HD11	6:N:908:LYS:HA	1.83	0.61
6:N:1240:THR:HG22	6:N:1254:GLN:C	2.21	0.61
6:N:1473:PRO:O	6:N:1478:SER:HA	2.00	0.61
5:C:42:VAL:HG12	5:C:43:GLY:H	1.66	0.61
5:C:409:ARG:NH1	5:C:452:ILE:HD12	2.16	0.61
6:D:522:PRO:HA	6:D:525:ARG:NH1	2.15	0.61
6:D:1425:THR:O	6:D:1429:LEU:HD13	2.01	0.61
5:M:93:PRO:HG3	5:M:117:HIS:HE1	1.65	0.61
5:M:142:ARG:NE	5:M:325:ILE:HG23	2.16	0.61
5:M:185:LYS:HB3	5:M:188:LYS:O	2.01	0.61
6:N:15:PRO:HB3	6:N:19:ARG:NH2	2.16	0.61
6:N:153:LEU:HD21	12:N:9025:HOH:O	2.00	0.61
5:C:200:LEU:HD13	5:C:300:ASP:CG	2.21	0.60
5:C:684:PHE:HE1	6:D:782:SER:HB3	1.66	0.60
5:C:835:VAL:HG21	12:D:9317:HOH:O	1.99	0.60
4:L:226:SER:HA	12:L:1298:HOH:O	2.01	0.60
5:M:248:PRO:HG2	12:M:7185:HOH:O	1.99	0.60
5:M:922:PHE:CZ	5:M:963:LEU:HB3	2.36	0.60
6:N:31:THR:HG23	6:N:44:LEU:HD11	1.82	0.60
6:N:972:LEU:HD23	6:N:973:GLN:N	2.16	0.60
4:A:117:VAL:HB	4:A:120:VAL:CG1	2.28	0.60
4:B:62:LEU:HD13	4:B:63:HIS:HD2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:366:SER:HB2	12:C:1203:HOH:O	2.01	0.60
5:C:534:VAL:N	5:C:538:GLN:HE22	2.00	0.60
5:C:740:GLU:H	5:C:740:GLU:CD	2.05	0.60
6:D:1114:THR:HB	6:D:1195:GLN:NE2	2.15	0.60
6:D:1198:TYR:HE2	6:D:1377:LYS:HZ1	1.48	0.60
6:D:1297:GLU:OE1	6:N:52:PRO:HD3	2.01	0.60
4:K:8:ALA:HB1	4:L:224:TYR:CE1	2.36	0.60
4:L:80:LEU:HD21	6:N:867:ARG:HB2	1.82	0.60
5:M:636:ALA:CB	5:M:703:ILE:HD13	2.27	0.60
6:N:131:LYS:HG3	6:N:568:ARG:HG2	1.82	0.60
4:A:176:ARG:HG3	4:A:200:TRP:CE3	2.37	0.60
4:A:179:PHE:HB2	4:A:195:LEU:HD11	1.83	0.60
5:C:141:HIS:CE1	5:C:332:ARG:HH11	2.17	0.60
6:D:799:LYS:HB3	6:D:826:PRO:CG	2.30	0.60
4:L:99:LEU:HD13	4:L:144:VAL:HG21	1.83	0.60
5:M:52:PHE:CD2	5:M:68:PHE:HB2	2.36	0.60
5:M:444:PRO:HG2	5:M:452:ILE:CD1	2.32	0.60
5:M:730:SER:O	5:M:734:LEU:HD13	2.01	0.60
5:M:839:LEU:HA	12:M:7228:HOH:O	2.00	0.60
6:N:792:ILE:HD11	6:N:878:GLY:O	2.00	0.60
6:N:972:LEU:HD23	6:N:973:GLN:HG3	1.83	0.60
6:N:1268:PRO:HB3	12:N:9094:HOH:O	2.01	0.60
6:N:1350:GLU:O	6:N:1354:LYS:HG2	2.01	0.60
4:A:224:TYR:CD1	4:B:9:PRO:HD2	2.37	0.60
6:D:85:VAL:O	6:D:89:ARG:HD2	2.01	0.60
6:D:881:LEU:O	6:D:885:ILE:HG13	2.01	0.60
4:K:7:LYS:NZ	4:K:186:LEU:HD23	2.16	0.60
4:L:152:PRO:HD2	4:L:155:LYS:HG3	1.83	0.60
5:M:1036:GLU:HA	6:N:707:THR:HG21	1.83	0.60
11:M:6999:APC:H5'1	11:M:6999:APC:C8	2.31	0.60
6:N:758:GLU:HB2	6:N:762:GLN:NE2	2.17	0.60
6:N:1281:VAL:HG21	6:N:1313:VAL:HG11	1.81	0.60
1:G:18:DG:H5'	1:G:18:DG:H8	1.65	0.60
2:H:13:C:H2'	2:H:14:G:C8	2.35	0.60
4:B:1:MET:O	4:B:6:LEU:HD22	2.00	0.60
5:C:69:LEU:HD12	5:C:97:ARG:HB3	1.84	0.60
5:C:102:HIS:HE1	12:C:1135:HOH:O	1.84	0.60
5:C:198:ARG:HD3	5:C:228:ALA:HA	1.81	0.60
5:C:203:ASP:O	5:C:207:LEU:HB2	2.01	0.60
6:D:62:LYS:HE2	12:D:9457:HOH:O	2.00	0.60
6:D:1090:ASP:HB3	6:D:1256:LEU:CD2	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:41:GLU:HG2	7:E:42:PRO:N	2.16	0.60
4:K:42:ARG:HD2	5:M:977:GLY:O	2.01	0.60
5:M:611:ILE:CD1	5:M:625:LEU:HD11	2.32	0.60
5:M:905:ILE:CD1	5:M:905:ILE:H	2.14	0.60
6:N:557:LEU:HB3	12:N:9268:HOH:O	2.01	0.60
6:N:804:LEU:HB2	6:N:830:ALA:O	2.01	0.60
6:N:868:TYR:HB3	12:N:9504:HOH:O	2.01	0.60
6:N:1191:PRO:HG3	6:N:1200:VAL:HG11	1.83	0.60
4:A:87:VAL:HG21	4:A:144:VAL:HG11	1.82	0.60
5:C:773:LEU:O	5:C:777:ILE:HG13	2.01	0.60
6:D:199:LEU:HD11	12:D:9219:HOH:O	2.02	0.60
6:D:603:LEU:HA	6:D:606:ILE:HD12	1.82	0.60
6:D:804:LEU:HB2	6:D:830:ALA:O	2.01	0.60
6:D:814:ALA:HB1	6:D:818:ARG:NH2	2.16	0.60
6:D:1138:ALA:HB1	6:D:1362:LYS:HE2	1.82	0.60
5:M:52:PHE:HE1	5:M:66:LEU:HG	1.65	0.60
5:M:626:ARG:N	5:M:639:GLN:HE21	1.94	0.60
6:N:784:ASP:HB3	6:N:939:PHE:HE2	1.67	0.60
6:N:787:LEU:HD21	6:N:947:ILE:CD1	2.30	0.60
6:N:799:LYS:NZ	6:N:824:ASN:HA	2.15	0.60
6:N:1148:VAL:HG13	6:N:1163:GLY:O	2.00	0.60
6:N:1274:ILE:HD11	12:N:9314:HOH:O	2.00	0.60
1:X:17:DC:H5"	5:M:1030:GLN:HE22	1.67	0.60
4:B:228:PRO:O	4:B:229:GLN:HG3	2.02	0.60
6:D:133:ILE:HA	6:D:456:MET:HB3	1.83	0.60
4:K:39:PRO:HG3	4:L:39:PRO:HG3	1.83	0.60
4:K:176:ARG:HD2	5:M:864:GLY:C	2.21	0.60
5:M:979:THR:HG23	5:M:981:GLU:N	2.10	0.60
6:N:154:THR:HG23	6:N:157:GLU:H	1.67	0.60
1:X:6:DT:H2"	1:X:7:DC:C6	2.36	0.60
4:A:42:ARG:NH1	5:C:978:ARG:HA	2.16	0.60
4:B:206:THR:CG2	4:B:209:GLU:H	2.14	0.60
5:C:151:ASP:HB2	5:C:157:ARG:O	2.01	0.60
5:C:195:LEU:HG	5:C:238:LEU:HD12	1.84	0.60
6:D:95:LEU:HB3	12:D:9119:HOH:O	2.00	0.60
6:D:97:THR:CB	6:D:571:LYS:HD3	2.32	0.60
6:D:133:ILE:CA	6:D:456:MET:HB3	2.31	0.60
6:D:679:ARG:HB2	6:D:682:ASP:OD1	2.01	0.60
6:D:820:GLU:HB2	6:D:836:VAL:HG11	1.82	0.60
5:M:162:ILE:O	5:M:164:PRO:HD3	2.01	0.60
5:M:174:LEU:HB3	5:M:310:LEU:HD22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:101:HIS:O	6:N:105:VAL:HG23	2.02	0.60
6:N:456:MET:HA	6:N:460:ALA:HB2	1.83	0.60
6:N:1197:ARG:HB3	6:N:1396:GLU:HG3	1.82	0.60
1:G:6:DT:H2'	12:G:84:HOH:O	2.00	0.60
5:C:285:LEU:HD23	5:C:285:LEU:O	2.02	0.60
5:C:601:GLY:HA3	5:C:615:TYR:HA	1.83	0.60
5:C:1032:PHE:O	5:C:1033:GLY:O	2.20	0.60
6:D:505:SER:HB2	6:D:1454:GLY:N	2.16	0.60
6:D:623:VAL:HG21	6:D:748:HIS:NE2	2.15	0.60
6:D:793:THR:HG21	6:D:906:GLN:HG2	1.84	0.60
5:M:305:PRO:HA	5:M:308:ARG:HB3	1.84	0.60
6:N:833:GLU:HB3	12:N:9227:HOH:O	2.01	0.60
6:N:1216:SER:HB3	7:O:15:SER:OG	2.01	0.60
2:H:2:A:O2'	2:H:3:G:O5'	2.20	0.60
5:C:192:PRO:HB2	5:C:195:LEU:HB3	1.84	0.60
5:C:447:ALA:O	8:D:7001:STD:H291	2.01	0.60
5:C:1031:ARG:HG2	6:D:621:LYS:HB3	1.84	0.60
12:C:1148:HOH:O	6:D:8:VAL:HG12	2.02	0.60
6:D:163:TYR:CG	6:D:166:GLN:HB2	2.37	0.60
6:D:610:LYS:HA	6:D:615:ARG:CZ	2.32	0.60
4:K:111:ALA:HB2	4:K:127:LEU:HG	1.84	0.60
4:K:117:VAL:HB	4:K:120:VAL:CG1	2.28	0.60
4:K:219:ARG:HH21	4:L:219:ARG:HD2	1.67	0.60
5:M:368:THR:HB	5:M:369:PRO:HD3	1.84	0.60
6:N:1240:THR:OG1	6:N:1359:GLN:HG3	2.02	0.60
7:O:19:LEU:O	7:O:23:VAL:HG23	2.02	0.60
2:H:11:C:H2'	2:H:12:G:H8	1.67	0.59
4:A:143:ARG:HE	4:A:158:ILE:CG2	2.14	0.59
4:B:105:GLY:O	4:B:132:LEU:HB3	2.02	0.59
5:C:402:SER:HA	5:C:566:THR:HG23	1.83	0.59
5:C:516:ARG:NH2	6:D:1068:LEU:HD22	2.16	0.59
5:C:549:PHE:CD1	5:C:886:LEU:HD23	2.37	0.59
5:C:751:PRO:HB2	6:D:680:GLN:HG3	1.84	0.59
5:C:773:LEU:HD13	12:C:1288:HOH:O	2.01	0.59
5:C:881:ASN:O	5:C:884:GLN:HG3	2.02	0.59
6:N:87:ARG:HD3	6:N:523:ASP:CB	2.30	0.59
6:N:1044:LEU:HD21	6:N:1056:PRO:HG3	1.85	0.59
2:H:13:C:H2'	2:H:14:G:H8	1.66	0.59
3:I:6:DC:P	6:D:1266:ARG:HH12	2.25	0.59
5:C:50:GLU:HG3	5:C:266:ARG:HD2	1.83	0.59
5:C:301:GLU:O	5:C:305:PRO:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:881:ASN:HD22	5:C:881:ASN:N	2.00	0.59
6:D:455:ARG:HB3	6:D:459:GLU:CG	2.32	0.59
6:D:1156:LEU:HD11	12:D:9058:HOH:O	2.02	0.59
5:M:625:LEU:HB3	5:M:639:GLN:HB2	1.84	0.59
5:M:708:TYR:HA	12:M:7161:HOH:O	2.02	0.59
6:N:50:PHE:O	6:N:86:ARG:HA	2.01	0.59
6:N:758:GLU:HB2	6:N:762:GLN:HE21	1.66	0.59
6:N:955:VAL:HB	6:N:1011:PHE:HE1	1.67	0.59
6:N:988:ARG:O	6:N:992:ILE:HG13	2.01	0.59
5:C:141:HIS:CD2	5:C:334:ARG:HD2	2.36	0.59
5:C:394:PHE:CE1	5:C:632:ASN:HB3	2.37	0.59
5:C:800:VAL:HB	12:C:1408:HOH:O	2.01	0.59
6:D:133:ILE:O	6:D:152:LEU:HB2	2.02	0.59
6:D:972:LEU:HD23	6:D:973:GLN:N	2.17	0.59
5:M:660:ALA:HB1	5:M:667:ALA:O	2.02	0.59
5:M:804:VAL:HB	5:M:824:ARG:HB2	1.83	0.59
6:N:700:VAL:HG22	6:N:718:PRO:HG3	1.85	0.59
6:N:817:GLU:O	6:N:821:VAL:HG23	2.02	0.59
5:C:52:PHE:HE1	5:C:66:LEU:HG	1.66	0.59
6:D:546:ARG:HH21	6:D:550:ARG:NH2	2.00	0.59
6:D:643:GLY:HA3	6:D:727:GLN:HB2	1.84	0.59
6:D:772:PRO:HB3	6:D:1224:VAL:HG13	1.84	0.59
6:D:1296:SER:O	6:N:59:ALA:HB2	2.02	0.59
4:L:102:LYS:HD2	4:L:139:ASN:HB2	1.85	0.59
5:M:217:LEU:HD13	12:M:7064:HOH:O	2.01	0.59
5:M:260:LEU:HA	5:M:291:ALA:CB	2.33	0.59
5:M:606:VAL:CG2	5:M:645:VAL:HG22	2.33	0.59
5:M:687:ALA:C	5:M:688:ILE:HD12	2.23	0.59
6:N:162:ARG:HH12	6:N:414:ARG:NH1	2.00	0.59
6:N:1109:GLU:HG2	6:N:1201:CYS:HA	1.83	0.59
6:N:1233:GLY:O	6:N:1237:THR:HB	2.02	0.59
6:N:1273:VAL:O	6:N:1325:LEU:HB2	2.02	0.59
4:A:9:PRO:HD2	4:B:224:TYR:CD1	2.37	0.59
4:B:143:ARG:HD2	4:B:158:ILE:HG21	1.84	0.59
5:C:516:ARG:CZ	6:D:1068:LEU:HD22	2.32	0.59
5:C:881:ASN:HD22	5:C:881:ASN:H	1.51	0.59
6:D:15:PRO:O	6:D:19:ARG:HG3	2.02	0.59
6:D:774:SER:HB3	6:D:1362:LYS:O	2.01	0.59
5:M:119:PRO:HB3	12:M:7068:HOH:O	2.02	0.59
5:M:880:MET:HE1	6:N:1034:GLN:HG2	1.84	0.59
5:M:1004:LYS:HD3	6:N:724:GLN:NE2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1032:PHE:O	5:M:1033:GLY:O	2.21	0.59
6:N:17:LYS:HG2	6:N:21:TRP:NE1	2.18	0.59
6:N:1147:ARG:HB3	6:N:1188:VAL:CG2	2.31	0.59
7:O:48:MET:N	7:O:54:LEU:HB2	2.17	0.59
1:X:12:DG:H2'	1:X:13:DT:H71	1.83	0.59
5:C:424:GLY:HA3	5:C:428:ARG:NH1	2.17	0.59
5:C:734:LEU:HD12	5:C:737:LEU:HD22	1.84	0.59
5:C:837:ASP:O	5:C:848:VAL:HG13	2.02	0.59
5:C:855:VAL:HG23	12:C:1209:HOH:O	2.01	0.59
6:D:175:VAL:HG13	12:D:9137:HOH:O	2.03	0.59
4:L:132:LEU:HD11	4:L:138:LEU:HD13	1.84	0.59
5:M:237:ARG:HH11	5:M:237:ARG:HB2	1.67	0.59
5:M:1007:ALA:HB2	6:N:648:MET:HG3	1.85	0.59
6:N:646:LYS:HE2	6:N:722:GLU:OE2	2.03	0.59
1:X:18:DG:H5'	1:X:18:DG:H8	1.67	0.59
5:C:167:LYS:HG2	12:C:1525:HOH:O	2.02	0.59
5:C:569:VAL:HG23	5:C:635:THR:HG22	1.85	0.59
6:D:698:LYS:HE3	12:E:125:HOH:O	2.01	0.59
6:D:799:LYS:O	6:D:826:PRO:HD2	2.02	0.59
6:D:1149:LEU:HD22	6:D:1151:ARG:O	2.03	0.59
6:D:1380:GLU:HB2	6:D:1420:LEU:HD11	1.83	0.59
6:D:1438:ALA:O	6:D:1443:THR:HG22	2.02	0.59
7:E:54:LEU:HD21	12:E:114:HOH:O	2.02	0.59
5:M:309:TYR:HE1	12:M:7321:HOH:O	1.85	0.59
5:M:374:ASN:ND2	5:M:377:PRO:HD3	2.17	0.59
6:N:598:ARG:CB	6:N:598:ARG:HH11	2.16	0.59
6:N:875:THR:HG22	6:N:879:ARG:HB2	1.85	0.59
2:H:9:G:O2'	2:H:10:G:H5'	2.03	0.59
6:D:647:ARG:HE	6:D:723:GLY:H	1.51	0.59
4:K:145:ASP:O	4:K:171:PHE:HE1	1.86	0.59
5:M:775:ARG:HD2	5:M:782:ALA:HB3	1.85	0.59
6:N:63:TYR:HB3	6:N:68:PHE:CE1	2.38	0.59
6:N:1020:LEU:CD2	6:N:1035:ILE:HG23	2.32	0.59
3:Z:5:DG:H5"	12:Z:970:HOH:O	2.01	0.59
5:C:831:ARG:NH1	5:C:1004:LYS:HE3	2.18	0.59
6:D:133:ILE:CA	6:D:456:MET:CB	2.81	0.59
5:M:577:PRO:HD2	5:M:580:MET:SD	2.43	0.59
5:M:726:ILE:HG12	5:M:754:ILE:CD1	2.33	0.59
5:M:862:PRO:HB2	5:M:929:ARG:HH12	1.67	0.59
6:N:1047:LYS:HE3	6:N:1053:PHE:CD2	2.38	0.59
6:N:1223:ILE:HD12	6:N:1223:ILE:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:42:ARG:HH11	5:C:978:ARG:HA	1.66	0.59
5:C:305:PRO:HA	5:C:308:ARG:HB2	1.85	0.59
5:C:603:VAL:HG21	5:C:643:VAL:CG1	2.33	0.59
6:D:782:SER:H	6:D:785:ILE:HD13	1.67	0.59
6:D:843:PHE:CE1	6:D:864:VAL:HG11	2.37	0.59
6:D:964:LEU:HD11	6:D:1041:LEU:HD13	1.83	0.59
6:D:1115:THR:CG2	6:D:1151:ARG:HH21	2.16	0.59
7:E:47:LYS:HA	7:E:54:LEU:HB3	1.85	0.59
4:K:54:THR:CG2	4:K:158:ILE:HG13	2.32	0.59
4:L:110:LYS:HD2	4:L:112:ARG:HH11	1.67	0.59
6:N:1429:LEU:HG	6:N:1441:GLN:HG3	1.84	0.59
2:Y:8:C:H2'	2:Y:9:G:C8	2.38	0.58
5:C:877:PRO:HB3	6:D:1020:LEU:CD1	2.33	0.58
5:C:911:GLU:O	5:C:915:LYS:HG2	2.03	0.58
6:D:5:VAL:HG21	6:D:1468:LEU:HD21	1.85	0.58
6:D:166:GLN:HA	6:D:395:VAL:O	2.03	0.58
6:D:475:LYS:HA	6:D:478:LEU:HG	1.84	0.58
6:D:660:LYS:CD	6:D:694:VAL:HG22	2.33	0.58
4:K:129:ILE:HG22	12:K:2221:HOH:O	2.01	0.58
4:L:186:LEU:HB2	4:L:192:LEU:CD1	2.31	0.58
5:M:141:HIS:HB3	5:M:418:LEU:HD23	1.85	0.58
5:M:196:LEU:HD12	5:M:238:LEU:HD11	1.83	0.58
5:M:428:ARG:HG3	5:M:428:ARG:HH11	1.67	0.58
6:N:628:ARG:NH1	6:N:744:GLN:HE22	2.01	0.58
6:N:708:LEU:HD22	6:N:1231:GLU:CA	2.33	0.58
6:N:813:LEU:HD11	12:N:9308:HOH:O	2.03	0.58
7:O:54:LEU:HD23	7:O:54:LEU:O	2.03	0.58
1:X:20:DG:H4'	5:M:394:PHE:CZ	2.38	0.58
4:A:82:LEU:HD11	4:A:142:VAL:HG11	1.85	0.58
5:C:77:PRO:HB2	5:C:78:PHE:CD1	2.38	0.58
5:C:116:GLY:HA3	5:C:378:LEU:HD23	1.84	0.58
5:C:116:GLY:HA2	5:C:379:GLU:OE1	2.03	0.58
5:C:1085:PHE:O	5:C:1089:VAL:HG23	2.03	0.58
6:D:1272:ALA:HA	6:D:1326:THR:HB	1.85	0.58
4:K:206:THR:CG2	4:K:209:GLU:H	2.14	0.58
5:M:141:HIS:O	5:M:331:ARG:HA	2.03	0.58
5:M:754:ILE:HG12	5:M:791:ARG:CD	2.32	0.58
5:M:1101:THR:HB	6:N:5:VAL:HG13	1.84	0.58
6:N:1106:VAL:HG12	6:N:1108:ARG:HD3	1.84	0.58
6:N:1441:GLN:NE2	6:N:1442:ASN:HB2	2.18	0.58
2:H:11:C:C2'	2:H:12:G:H5"	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:94:LEU:HB3	12:C:1296:HOH:O	2.02	0.58
5:C:197:LEU:HB3	5:C:202:TYR:HB2	1.85	0.58
5:C:247:PRO:HD2	5:C:250:ARG:NH1	2.18	0.58
5:C:570:PRO:HD2	5:C:635:THR:HB	1.85	0.58
5:C:692:GLU:HG2	5:C:696:LYS:HE2	1.84	0.58
6:D:136:ASP:HB2	6:D:455:ARG:NH2	2.17	0.58
4:K:213:GLN:O	4:K:217:ILE:HG13	2.03	0.58
5:M:611:ILE:HD11	5:M:625:LEU:HD11	1.84	0.58
5:M:1046:ALA:HB1	6:N:1471:LEU:CD1	2.34	0.58
6:N:166:GLN:HG2	6:N:396:VAL:HG12	1.84	0.58
6:N:817:GLU:HG3	6:N:839:LEU:HD23	1.85	0.58
7:O:26:ARG:HH22	7:O:38:THR:HA	1.67	0.58
4:B:115:LEU:HD12	4:B:115:LEU:O	2.02	0.58
5:C:352:ALA:HA	5:C:355:VAL:HG12	1.85	0.58
5:C:580:MET:HB3	5:C:584:GLU:CD	2.24	0.58
5:C:922:PHE:CD2	5:C:964:LYS:HD2	2.38	0.58
6:D:496:LEU:O	6:D:500:ARG:HG2	2.04	0.58
6:D:1364:HIS:CE1	6:D:1366:LYS:HG3	2.37	0.58
7:E:35:PHE:HB2	12:E:133:HOH:O	2.03	0.58
5:M:204:GLN:HA	12:M:7206:HOH:O	2.02	0.58
5:M:1007:ALA:HB2	6:N:648:MET:SD	2.43	0.58
5:M:1060:ILE:HA	5:M:1063:ARG:NH1	2.18	0.58
6:N:1144:LEU:HD11	6:N:1186:VAL:HG21	1.83	0.58
6:N:1280:VAL:HG13	6:N:1317:ASP:C	2.24	0.58
2:Y:8:C:HO2'	2:Y:9:G:H5'	1.68	0.58
4:A:169:ALA:HB1	4:A:171:PHE:CE2	2.39	0.58
4:B:56:VAL:HG11	12:B:379:HOH:O	2.03	0.58
5:C:712:ALA:O	5:C:820:ARG:HB3	2.03	0.58
5:C:1017:THR:OG1	5:C:1019:GLN:HG3	2.03	0.58
5:C:1078:GLU:OE1	5:C:1078:GLU:HA	2.03	0.58
6:D:10:ILE:HD11	6:D:1434:TRP:NE1	2.18	0.58
6:D:23:TYR:CG	6:D:89:ARG:HG2	2.39	0.58
6:D:104:PHE:CD2	6:D:1448:THR:HG23	2.38	0.58
6:D:116:LEU:O	6:D:118:LEU:HG	2.03	0.58
6:D:483:HIS:HB2	6:D:484:PRO:HD3	1.85	0.58
6:D:607:LEU:O	6:D:614:PHE:HB2	2.04	0.58
4:K:64:GLU:HA	4:K:165:ILE:HD13	1.84	0.58
5:M:87:ASP:HA	12:M:7233:HOH:O	2.04	0.58
5:M:579:VAL:CG1	5:M:887:GLU:HG3	2.33	0.58
5:M:675:ALA:HB2	5:M:867:VAL:HG11	1.86	0.58
5:M:860:HIS:CE1	5:M:975:TYR:HB2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1004:LYS:NZ	6:N:724:GLN:HE22	2.01	0.58
5:M:1074:GLU:HG2	5:M:1075:ASP:H	1.69	0.58
6:N:455:ARG:HB3	6:N:459:GLU:HG3	1.85	0.58
6:N:756:GLN:O	6:N:760:ARG:HG2	2.03	0.58
4:A:206:THR:CG2	4:A:209:GLU:H	2.15	0.58
4:B:117:VAL:HG23	4:B:120:VAL:HB	1.86	0.58
5:C:232:GLU:O	5:C:235:LEU:HB2	2.02	0.58
5:C:260:LEU:HA	5:C:291:ALA:CB	2.34	0.58
6:D:9:ARG:HH21	6:D:507:ASN:ND2	2.00	0.58
6:D:1361:VAL:HG22	12:D:9062:HOH:O	2.03	0.58
6:N:970:LYS:HB2	12:N:9095:HOH:O	2.03	0.58
6:N:1001:GLU:O	6:N:1004:THR:HB	2.04	0.58
1:G:13:DT:H2"	5:C:422:ARG:NH2	2.17	0.58
1:G:22:DC:OP1	5:C:387:SER:HB2	2.03	0.58
5:C:129:ILE:HG13	5:C:386:PHE:HB3	1.86	0.58
5:C:859:PRO:O	5:C:867:VAL:HG22	2.03	0.58
6:D:619:LEU:HD12	6:D:621:LYS:NZ	2.18	0.58
6:D:676:MET:CE	6:D:684:LYS:HG3	2.34	0.58
6:D:676:MET:HE3	6:D:684:LYS:HG3	1.85	0.58
6:D:1297:GLU:HB2	6:N:51:GLY:C	2.24	0.58
4:L:33:GLY:O	4:L:195:LEU:HD22	2.04	0.58
5:M:285:LEU:HD23	5:M:285:LEU:O	2.02	0.58
5:M:752:GLY:N	5:M:792:VAL:HB	2.18	0.58
5:M:793:PRO:HB2	12:M:7015:HOH:O	2.04	0.58
6:N:141:ILE:HG21	6:N:449:SER:OG	2.04	0.58
6:N:403:PHE:CE2	6:N:444:VAL:HG23	2.39	0.58
7:O:41:GLU:O	7:O:45:ARG:HD2	2.02	0.58
7:O:54:LEU:CD2	7:O:63:TRP:HE1	2.17	0.58
1:G:14:DT:H6	1:G:14:DT:H5'	1.69	0.58
3:I:5:DG:H4'	8:D:7001:STD:O1	2.03	0.58
5:C:86:LYS:CG	5:C:813:VAL:HB	2.23	0.58
5:C:497:ALA:HA	5:C:515:ALA:HA	1.85	0.58
5:C:758:ARG:HB3	5:C:788:THR:O	2.03	0.58
5:C:874:LEU:CD2	6:D:1028:ALA:HB1	2.34	0.58
6:D:644:LEU:HD12	6:D:645:PRO:HD2	1.86	0.58
6:D:1147:ARG:HB3	6:D:1188:VAL:CG2	2.34	0.58
4:L:105:GLY:O	4:L:132:LEU:HB3	2.03	0.58
5:M:195:LEU:O	5:M:199:VAL:HG23	2.04	0.58
5:M:773:LEU:O	5:M:777:ILE:HG13	2.03	0.58
5:M:926:PHE:O	5:M:930:LYS:HG3	2.03	0.58
6:N:493:ARG:HD3	6:N:1390:LEU:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:13:C:C5'	5:M:409:ARG:HH22	2.17	0.58
4:A:127:LEU:HD12	4:A:128:HIS:N	2.18	0.58
4:A:221:HIS:HA	4:A:224:TYR:HD2	1.68	0.58
6:D:804:LEU:HD13	6:D:830:ALA:O	2.04	0.58
6:D:1472:ILE:HB	12:D:9209:HOH:O	2.03	0.58
5:M:462:ASP:CG	5:M:468:ARG:HD2	2.24	0.58
5:M:681:GLY:HA3	6:N:939:PHE:CE1	2.39	0.58
6:N:133:ILE:HA	6:N:456:MET:CA	2.34	0.58
6:N:896:ALA:O	6:N:900:ILE:HG23	2.03	0.58
3:I:6:DC:H5"	6:D:1266:ARG:HH22	1.66	0.58
3:Z:6:DC:P	6:N:1266:ARG:HH22	2.27	0.58
4:A:57:TYR:CD2	4:A:161:ARG:HD2	2.39	0.58
5:C:1095:LEU:HG	6:D:603:LEU:HD22	1.85	0.58
6:D:621:LYS:O	6:D:622:ARG:HG3	2.04	0.58
6:D:1084:THR:HG22	6:D:1238:MET:HG2	1.86	0.58
6:D:1440:PHE:C	6:D:1440:PHE:CD2	2.76	0.58
7:E:54:LEU:HA	7:E:58:PRO:HG2	1.85	0.58
4:K:195:LEU:HD12	4:K:196:THR:N	2.19	0.58
4:K:225:PHE:HE2	4:L:211:LEU:HD11	1.69	0.58
5:M:550:LEU:HG	6:N:1070:TYR:HE1	1.67	0.58
6:N:486:ARG:HA	6:N:489:ARG:CG	2.32	0.58
6:N:592:THR:HA	12:N:9040:HOH:O	2.04	0.58
2:H:6:U:C2'	2:H:7:G:C8	2.85	0.57
4:A:14:ARG:NH2	4:A:22:GLU:HB3	2.19	0.57
4:A:151:VAL:HB	4:A:169:ALA:HB3	1.85	0.57
6:D:615:ARG:O	6:D:619:LEU:HG	2.04	0.57
4:K:44:LEU:HA	4:K:48:ILE:HD11	1.86	0.57
5:M:41:ASN:O	5:M:46:ALA:HB2	2.04	0.57
5:M:499:ALA:HA	5:M:532:MET:SD	2.43	0.57
5:M:744:ARG:NE	5:M:747:ALA:HB2	2.19	0.57
6:N:101:HIS:ND1	6:N:103:TRP:HB2	2.18	0.57
6:N:927:THR:O	6:N:931:LEU:HG	2.04	0.57
2:H:10:G:H2'	2:H:11:C:H6	1.69	0.57
2:Y:11:C:C2'	2:Y:12:G:H5"	2.33	0.57
4:B:132:LEU:HG	4:B:136:GLY:HA3	1.86	0.57
5:C:292:ARG:NE	5:C:294:GLU:HG2	2.14	0.57
5:C:1006:HIS:O	6:D:627:GLY:HA2	2.04	0.57
6:D:117:ASP:HB2	6:D:495:ARG:HH21	1.67	0.57
6:D:520:LEU:HD12	6:D:521:PRO:HD2	1.86	0.57
6:D:875:THR:HG22	6:D:879:ARG:HB2	1.86	0.57
6:D:1085:ALA:C	8:D:7001:STD:H32	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1149:LEU:HD23	6:D:1187:PRO:O	2.03	0.57
4:K:11:PHE:HD1	4:K:25:LEU:HD13	1.68	0.57
4:K:106:PRO:HG3	4:K:134:GLU:OE1	2.03	0.57
5:M:601:GLY:HA3	5:M:615:TYR:HA	1.86	0.57
5:M:685:GLU:CG	6:N:739:ASP:HB3	2.34	0.57
6:N:1226:ALA:HA	6:N:1229:ILE:HD12	1.85	0.57
6:N:1236:LEU:HD21	6:N:1361:VAL:CB	2.34	0.57
4:B:34:VAL:HG12	12:B:368:HOH:O	2.03	0.57
5:C:533:ASP:HB3	5:C:538:GLN:HE22	1.68	0.57
5:C:1051:GLU:OE2	6:D:751:LEU:HB2	2.03	0.57
6:D:63:TYR:HE1	6:D:73:CYS:HA	1.67	0.57
6:D:1278:ASP:HB3	6:D:1320:GLU:HA	1.86	0.57
6:D:1472:ILE:HG22	6:D:1474:ALA:H	1.69	0.57
4:K:23:PHE:CE1	4:K:208:LEU:HD13	2.39	0.57
5:M:252:LYS:HA	12:M:7260:HOH:O	2.02	0.57
5:M:329:GLY:HA3	5:M:489:THR:HG23	1.87	0.57
5:M:1105:LYS:HG3	5:M:1107:ASN:HD22	1.69	0.57
6:N:177:ALA:HB3	6:N:205:TYR:OH	2.04	0.57
6:N:181:ASP:OD1	6:N:205:TYR:HB2	2.05	0.57
6:N:977:ALA:CB	6:N:983:LEU:HD21	2.30	0.57
2:Y:7:G:H2'	2:Y:7:G:N3	2.20	0.57
5:C:118:ILE:HG22	5:C:382:ILE:HD13	1.85	0.57
6:D:1491:THR:HA	12:D:9274:HOH:O	2.04	0.57
5:M:142:ARG:O	5:M:163:ILE:HD11	2.04	0.57
5:M:175:GLU:HB3	5:M:183:SER:OG	2.04	0.57
5:M:861:LEU:HD21	5:M:925:TYR:HE2	1.69	0.57
5:M:1115:LEU:HA	12:N:9264:HOH:O	2.03	0.57
6:N:438:ASP:HB2	6:N:445:ARG:NH1	2.12	0.57
5:C:142:ARG:HD3	5:C:163:ILE:HG21	1.87	0.57
5:C:395:LYS:HE3	5:C:407:LYS:HE2	1.86	0.57
5:C:713:ARG:HB2	5:C:720:GLU:OE1	2.04	0.57
6:D:789:LEU:CD1	6:D:934:LEU:HD22	2.34	0.57
6:D:1282:ARG:HB3	6:N:76:CYS:N	2.20	0.57
5:M:8:ARG:HD2	5:M:10:ARG:HH21	1.68	0.57
5:M:464:LEU:O	5:M:466:PHE:N	2.37	0.57
6:N:116:LEU:HD13	6:N:118:LEU:HD11	1.87	0.57
6:N:453:ASP:HA	6:N:455:ARG:HH21	1.69	0.57
6:N:574:LEU:HG	6:N:575:GLN:N	2.18	0.57
6:N:760:ARG:O	6:N:764:LEU:HD23	2.05	0.57
6:N:992:ILE:HD12	6:N:1054:GLU:OE2	2.05	0.57
6:N:1033:GLN:HE21	6:N:1036:ARG:NH1	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1320:GLU:O	6:N:1323:GLN:HB3	2.03	0.57
5:C:462:ASP:CG	5:C:463:GLU:H	2.07	0.57
6:D:119:SER:H	6:D:123:LEU:HB2	1.69	0.57
6:D:502:PHE:CE1	6:D:509:PRO:HB3	2.39	0.57
6:D:542:ASP:O	6:D:546:ARG:HG3	2.04	0.57
6:D:917:GLN:HE21	6:D:921:ARG:NE	2.02	0.57
6:D:957:PRO:CG	6:D:1007:VAL:HA	2.35	0.57
6:D:1106:VAL:HG11	6:D:1474:ALA:CB	2.33	0.57
5:M:352:ALA:HA	5:M:355:VAL:HG12	1.85	0.57
6:N:80:VAL:HG12	6:N:81:THR:O	2.04	0.57
6:N:127:LEU:HA	6:N:132:TYR:CD1	2.38	0.57
6:N:793:THR:O	6:N:879:ARG:HD3	2.05	0.57
6:N:963:TYR:HD1	6:N:963:TYR:H	1.50	0.57
6:N:1213:ARG:HG3	6:N:1214:PRO:N	2.19	0.57
6:N:1253:THR:CG2	6:N:1358:ALA:HB1	2.34	0.57
2:H:9:G:H5"	12:H:1047:HOH:O	2.05	0.57
2:H:16:G:C2	6:D:705:ALA:HB1	2.39	0.57
5:C:6:PHE:CE1	5:C:901:TYR:HB3	2.40	0.57
5:C:38:LYS:HG2	12:C:1187:HOH:O	2.05	0.57
6:D:95:LEU:N	6:D:515:GLU:O	2.38	0.57
6:D:645:PRO:HD3	6:D:726:ILE:HG12	1.87	0.57
6:D:1037:GLN:HG2	6:D:1042:ARG:HB3	1.86	0.57
6:D:1262:LEU:HD23	6:D:1352:ILE:CG1	2.35	0.57
4:L:4:SER:HA	4:L:7:LYS:NZ	2.19	0.57
5:M:147:TYR:HB3	5:M:323:ASP:HB2	1.87	0.57
5:M:173:ASP:O	5:M:184:MET:HA	2.05	0.57
5:M:1034:GLU:HB3	6:N:619:LEU:CD2	2.25	0.57
6:N:119:SER:CB	6:N:123:LEU:HB2	2.34	0.57
6:N:470:LEU:HD21	6:N:508:ARG:NH1	2.18	0.57
5:C:276:LYS:CA	5:C:280:LYS:HD3	2.33	0.57
5:C:517:ARG:HH12	5:C:524:VAL:HG23	1.70	0.57
5:C:695:LEU:HD22	5:C:832:LYS:HD3	1.86	0.57
5:C:817:PRO:O	6:D:532:GLY:HA2	2.04	0.57
6:D:1403:LEU:HD11	12:D:9065:HOH:O	2.04	0.57
5:M:22:GLN:HG2	12:M:7098:HOH:O	2.04	0.57
5:M:38:LYS:HE2	5:M:38:LYS:HA	1.87	0.57
5:M:971:LYS:HD3	5:M:986:PRO:HB2	1.86	0.57
6:N:165:LYS:CG	6:N:199:LEU:HD13	2.33	0.57
6:N:199:LEU:HD21	12:N:9407:HOH:O	2.05	0.57
6:N:799:LYS:O	6:N:829:VAL:HG13	2.05	0.57
6:N:875:THR:HG21	6:N:902:LEU:CD1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:947:ILE:O	6:N:947:ILE:HD12	2.04	0.57
2:Y:9:G:H5'	2:Y:9:G:C8	2.39	0.57
4:A:25:LEU:HD11	4:B:224:TYR:O	2.05	0.57
5:C:88:LEU:HD12	5:C:89:THR:N	2.18	0.57
5:C:136:ILE:HG21	5:C:336:VAL:HG13	1.86	0.57
6:D:775:GLY:HA3	6:D:1145:TYR:CE1	2.39	0.57
6:D:1082:ALA:O	8:D:7001:STD:H312	2.05	0.57
5:M:474:VAL:HG11	5:M:529:VAL:HG12	1.86	0.57
5:M:572:ILE:HD11	5:M:701:THR:HB	1.87	0.57
6:N:36:THR:C	6:N:38:LYS:H	2.08	0.57
6:N:51:GLY:O	6:N:86:ARG:HD2	2.04	0.57
6:N:633:VAL:HG22	6:N:635:PRO:HD3	1.87	0.57
1:G:17:DC:H2"	1:G:18:DG:C5'	2.35	0.57
3:I:8:DA:H1'	3:I:9:DG:H5'	1.85	0.57
4:A:112:ARG:NH2	4:A:125:PRO:HB2	2.19	0.57
5:C:6:PHE:HE1	5:C:901:TYR:HB3	1.70	0.57
5:C:78:PHE:CD1	5:C:88:LEU:HD21	2.39	0.57
5:C:455:LEU:HD12	5:C:456:ALA:O	2.05	0.57
5:C:1040:LEU:HD21	5:C:1048:THR:HG22	1.87	0.57
6:D:1312:LEU:HG	6:D:1327:ARG:NH1	2.20	0.57
7:E:40:LEU:HB3	7:E:72:ARG:NH1	2.20	0.57
4:L:74:ASP:HB3	6:N:872:ARG:HH22	1.70	0.57
5:M:147:TYR:HA	5:M:323:ASP:OD2	2.05	0.57
5:M:395:LYS:HE2	5:M:397:GLU:HG2	1.87	0.57
6:N:804:LEU:HD23	6:N:804:LEU:H	1.70	0.57
6:N:824:ASN:HB3	12:N:9083:HOH:O	2.04	0.57
1:X:17:DC:H5"	5:M:1030:GLN:NE2	2.20	0.56
2:Y:9:G:O2'	2:Y:10:G:H5'	2.05	0.56
4:A:206:THR:HG22	4:A:209:GLU:HG3	1.86	0.56
4:B:184:THR:O	4:B:192:LEU:HD12	2.05	0.56
4:B:221:HIS:HA	4:B:224:TYR:CD2	2.40	0.56
5:C:65:VAL:O	5:C:101:ILE:HG12	2.06	0.56
5:C:394:PHE:CZ	5:C:632:ASN:HB3	2.40	0.56
5:C:496:ILE:HA	5:C:531:PHE:O	2.05	0.56
5:C:710:ILE:O	5:C:823:VAL:HG23	2.05	0.56
6:D:42:ASP:O	6:D:43:GLY:O	2.23	0.56
6:D:141:ILE:CD1	6:D:432:TYR:HB2	2.35	0.56
6:D:163:TYR:O	6:D:166:GLN:HG3	2.05	0.56
6:D:1282:ARG:C	6:N:75:ARG:HA	2.25	0.56
6:D:1291:SER:HB3	6:D:1293:PHE:CE1	2.37	0.56
6:D:1403:LEU:O	6:D:1407:LEU:HB2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:175:ARG:HB2	12:N:9429:HOH:O	2.05	0.56
5:M:19:THR:O	5:M:23:VAL:HG23	2.03	0.56
5:M:500:ASN:HD21	6:N:1067:VAL:CG2	2.18	0.56
5:M:722:ILE:HG21	5:M:821:GLU:OE2	2.05	0.56
5:M:795:GLY:O	5:M:796:GLU:HG2	2.04	0.56
5:M:837:ASP:HA	5:M:999:HIS:CE1	2.40	0.56
6:N:30:GLU:HB3	6:N:40:GLU:HB3	1.86	0.56
6:N:478:LEU:HD13	6:N:1388:ARG:NH2	2.13	0.56
6:N:771:SER:HB3	6:N:778:LEU:HD22	1.86	0.56
4:A:49:PRO:HB3	4:A:148:VAL:HG22	1.87	0.56
5:C:473:ARG:HD2	5:C:475:VAL:CG2	2.35	0.56
6:D:809:PRO:HB2	6:D:812:ALA:HB2	1.87	0.56
6:D:1441:GLN:NE2	6:D:1442:ASN:H	2.02	0.56
5:M:99:GLN:HB3	5:M:109:LYS:HG3	1.86	0.56
6:N:526:PRO:HD2	6:N:538:SER:HB2	1.86	0.56
6:N:1100:ASP:HB3	6:N:1428:ALA:CB	2.32	0.56
6:N:1102:THR:HG21	6:N:1371:VAL:HG22	1.86	0.56
6:N:1216:SER:CB	7:O:16:LYS:H	2.17	0.56
7:O:27:ALA:CB	7:O:61:VAL:CG2	2.83	0.56
2:H:11:C:O2'	5:C:390:GLN:HG2	2.05	0.56
4:A:143:ARG:NE	4:A:158:ILE:HG21	2.15	0.56
5:C:132:ALA:HB1	5:C:394:PHE:CE1	2.41	0.56
5:C:141:HIS:O	5:C:331:ARG:HA	2.04	0.56
5:C:314:THR:HG22	12:C:1391:HOH:O	2.05	0.56
5:C:719:PRO:HD3	12:C:1333:HOH:O	2.05	0.56
5:C:758:ARG:HH21	5:C:788:THR:HB	1.69	0.56
5:C:767:PRO:HB3	12:C:1474:HOH:O	2.04	0.56
6:D:4:GLU:HG2	6:D:1470:ARG:NH2	2.20	0.56
6:D:185:VAL:HG21	6:D:203:ALA:HB2	1.88	0.56
6:D:523:ASP:HB2	12:D:9338:HOH:O	2.03	0.56
6:D:795:VAL:HG22	6:D:876:SER:OG	2.05	0.56
6:D:1446:VAL:HG12	6:D:1447:LEU:HD12	1.87	0.56
5:M:9:ILE:H	5:M:9:ILE:HD12	1.71	0.56
5:M:54:ILE:HG22	5:M:66:LEU:HB3	1.86	0.56
5:M:182:VAL:HG23	12:M:7385:HOH:O	2.05	0.56
5:M:296:GLY:HA3	12:M:7298:HOH:O	2.04	0.56
5:M:433:THR:HG21	5:M:488:ALA:HB1	1.87	0.56
5:M:691:SER:HB2	5:M:858:MET:SD	2.45	0.56
5:M:704:HIS:CD2	5:M:831:ARG:HH21	2.24	0.56
6:N:114:THR:HG22	6:N:498:VAL:HG21	1.87	0.56
6:N:520:LEU:CD1	6:N:524:LEU:HD13	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1324:PRO:HG3	6:N:1330:ILE:HD11	1.87	0.56
7:O:27:ALA:HB2	7:O:61:VAL:CG2	2.33	0.56
4:A:163:ASN:HD22	4:A:163:ASN:N	2.04	0.56
5:C:118:ILE:HG22	5:C:382:ILE:HG21	1.85	0.56
5:C:690:ILE:HD12	5:C:833:LEU:CD2	2.35	0.56
5:C:835:VAL:HA	5:C:849:VAL:HG12	1.87	0.56
6:D:114:THR:HG22	6:D:495:ARG:HA	1.86	0.56
6:D:136:ASP:CB	6:D:455:ARG:HH22	2.18	0.56
6:D:160:GLU:O	6:D:164:GLY:O	2.23	0.56
6:D:182:GLY:O	6:D:400:VAL:HG11	2.04	0.56
6:D:414:ARG:HG2	6:D:451:ASP:HA	1.87	0.56
6:D:454:ALA:C	6:D:455:ARG:HE	2.08	0.56
6:D:1493:LYS:HG3	12:D:9421:HOH:O	2.04	0.56
4:K:14:ARG:HH22	4:K:24:VAL:HG23	1.70	0.56
4:K:49:PRO:HB2	12:K:602:HOH:O	2.05	0.56
6:N:23:TYR:O	6:N:49:ILE:HG23	2.04	0.56
6:N:103:TRP:CD1	6:N:1444:THR:HG23	2.41	0.56
6:N:181:ASP:HA	6:N:205:TYR:CD1	2.41	0.56
6:N:639:LEU:HD13	6:N:766:ALA:HB2	1.87	0.56
6:N:880:ILE:HB	12:N:9106:HOH:O	2.05	0.56
6:N:957:PRO:HG2	6:N:1007:VAL:HG22	1.86	0.56
6:N:1170:ASP:O	6:N:1174:LEU:HG	2.06	0.56
4:A:201:THR:HG21	4:A:205:VAL:O	2.06	0.56
4:B:186:LEU:HB2	4:B:192:LEU:CD1	2.33	0.56
5:C:110:GLU:HG3	5:C:369:PRO:CG	2.33	0.56
5:C:430:VAL:HA	5:C:434:HIS:CE1	2.40	0.56
5:C:1088:LEU:HD23	5:C:1089:VAL:N	2.20	0.56
6:D:111:LYS:HZ2	6:D:1448:THR:HG22	1.69	0.56
6:D:394:LEU:O	6:D:394:LEU:HD12	2.05	0.56
6:D:1015:TYR:HB3	12:D:9167:HOH:O	2.05	0.56
6:D:1083:ASP:CG	6:D:1241:PHE:HE2	2.09	0.56
4:K:133:GLU:N	12:K:1785:HOH:O	2.39	0.56
4:L:88:ARG:O	4:L:121:GLU:HG2	2.05	0.56
5:M:135:VAL:CG1	5:M:407:LYS:HA	2.28	0.56
5:M:274:ARG:HD2	5:M:285:LEU:HD22	1.87	0.56
5:M:315:ALA:HB2	12:M:7326:HOH:O	2.06	0.56
5:M:905:ILE:HD12	5:M:905:ILE:H	1.71	0.56
5:M:1005:MET:SD	6:N:724:GLN:HG3	2.46	0.56
6:N:95:LEU:HD21	6:N:574:LEU:HD11	1.87	0.56
6:N:114:THR:O	6:N:495:ARG:HG3	2.05	0.56
6:N:721:VAL:HG11	6:N:727:GLN:OE1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:894:LYS:O	6:N:898:GLU:HG3	2.06	0.56
2:Y:12:G:H8	2:Y:12:G:C5'	2.14	0.56
5:C:52:PHE:HB3	5:C:53:PRO:HD3	1.88	0.56
5:C:206:THR:HG23	5:C:207:LEU:N	2.21	0.56
5:C:572:ILE:HG23	5:C:703:ILE:HD11	1.88	0.56
5:C:886:LEU:CD1	6:D:951:ILE:HG13	2.35	0.56
5:C:1037:VAL:O	5:C:1041:GLU:HG3	2.06	0.56
6:D:101:HIS:O	6:D:105:VAL:HG23	2.04	0.56
6:D:165:LYS:HB2	6:D:397:LYS:CB	2.26	0.56
6:D:169:TYR:HD1	6:D:191:LEU:HD12	1.70	0.56
6:D:714:GLN:NE2	6:D:765:SER:HA	2.21	0.56
6:D:1291:SER:O	6:N:75:ARG:HG2	2.06	0.56
7:E:67:GLU:OE1	7:E:73:LEU:HD21	2.05	0.56
4:L:86:VAL:HG12	4:L:124:ASN:HB2	1.86	0.56
4:L:92:PRO:HA	4:L:146:ARG:CZ	2.35	0.56
5:M:537:LYS:HG3	5:M:905:ILE:CD1	2.35	0.56
5:M:1034:GLU:H	6:N:619:LEU:HD13	1.70	0.56
6:N:436:GLU:OE2	6:N:445:ARG:HD2	2.06	0.56
6:N:583:ASP:HB2	6:N:604:THR:OG1	2.05	0.56
6:N:591:VAL:HG11	6:N:597:ASP:HA	1.87	0.56
6:N:615:ARG:HD2	6:N:619:LEU:CG	2.34	0.56
6:N:1335:LEU:HD22	12:N:9123:HOH:O	2.05	0.56
4:A:59:GLU:HG3	4:A:139:ASN:HD22	1.69	0.56
6:D:22:SER:HA	6:D:90:MET:O	2.05	0.56
6:D:456:MET:C	6:D:459:GLU:HB3	2.26	0.56
6:D:525:ARG:HG2	6:D:541:ASN:ND2	2.17	0.56
6:D:820:GLU:OE1	6:D:840:LYS:HD2	2.05	0.56
6:D:1189:ARG:CB	6:D:1204:CYS:HA	2.35	0.56
5:M:557:ARG:HE	5:M:879:ARG:HD3	1.71	0.56
6:N:582:LEU:HA	6:N:603:LEU:HD12	1.86	0.56
6:N:631:ILE:HG12	6:N:743:ASP:O	2.05	0.56
5:C:577:PRO:HA	5:C:671:ASN:HD21	1.70	0.56
5:C:697:ARG:O	5:C:699:PHE:N	2.39	0.56
5:C:862:PRO:HA	5:C:975:TYR:CE1	2.41	0.56
6:D:41:ARG:HD3	6:D:42:ASP:N	2.21	0.56
6:D:52:PRO:HG2	6:D:80:VAL:HG12	1.87	0.56
6:D:465:LEU:HD11	6:D:509:PRO:O	2.06	0.56
6:D:521:PRO:CB	6:D:524:LEU:HD13	2.26	0.56
6:D:659:LYS:C	6:D:659:LYS:HD3	2.27	0.56
6:D:1296:SER:HB2	6:N:47:GLU:CG	2.36	0.56
6:D:1297:GLU:HB2	6:N:47:GLU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:174:VAL:HG22	4:K:201:THR:HG23	1.88	0.56
12:K:974:HOH:O	4:L:28:LEU:HD21	2.06	0.56
5:M:129:ILE:HG22	5:M:130:ASN:N	2.21	0.56
5:M:467:ILE:HD11	12:M:7162:HOH:O	2.06	0.56
6:N:82:LYS:C	6:N:84:ILE:N	2.59	0.56
6:N:179:VAL:HG13	6:N:183:GLU:CD	2.25	0.56
1:X:13:DT:OP1	6:N:1096:ARG:NH2	2.38	0.56
4:A:146:ARG:HG3	12:A:338:HOH:O	2.05	0.56
4:A:156:HIS:HD2	4:A:157:GLY:H	1.54	0.56
4:B:40:LEU:HD21	12:B:392:HOH:O	2.05	0.56
5:C:564:MET:HA	5:C:567:GLN:OE1	2.05	0.56
5:C:976:ASP:CB	5:C:979:THR:HG22	2.35	0.56
6:D:102:ILE:HG21	6:D:583:ASP:HB3	1.87	0.56
6:D:770:LEU:HB2	12:D:9443:HOH:O	2.05	0.56
6:D:1476:THR:HB	12:D:9080:HOH:O	2.05	0.56
4:K:90:LEU:HD12	4:K:119:ASP:O	2.05	0.56
5:M:697:ARG:O	5:M:699:PHE:N	2.39	0.56
5:M:1005:MET:CE	6:N:724:GLN:HA	2.36	0.56
3:I:3:DA:H5"	12:I:1827:HOH:O	2.05	0.56
4:A:9:PRO:HB3	4:A:25:LEU:CG	2.36	0.56
4:A:89:PHE:HD1	4:A:120:VAL:HG23	1.70	0.56
4:A:123:MET:C	4:A:125:PRO:HD3	2.26	0.56
6:D:204:LEU:HD22	6:D:441:ARG:HH12	1.71	0.56
6:D:562:ALA:HB1	6:D:567:ILE:CD1	2.34	0.56
6:D:773:ALA:CA	6:D:1228:SER:HB3	2.33	0.56
6:D:1118:ILE:HG13	6:D:1192:LEU:HB2	1.87	0.56
7:E:48:MET:N	7:E:54:LEU:HB2	2.21	0.56
4:K:50:GLY:O	4:K:146:ARG:HA	2.06	0.56
5:M:732:ALA:HA	5:M:735:ARG:NH1	2.21	0.56
5:M:767:PRO:HB2	12:M:7021:HOH:O	2.05	0.56
6:N:735:ALA:HB2	12:N:9048:HOH:O	2.06	0.56
6:N:996:TRP:CE2	6:N:1056:PRO:HG2	2.41	0.56
4:B:59:GLU:HG2	4:B:139:ASN:ND2	2.21	0.55
5:C:192:PRO:HD2	5:C:195:LEU:HD23	1.87	0.55
6:D:480:GLU:O	6:D:484:PRO:HD2	2.05	0.55
6:D:989:TYR:CE1	6:D:993:LEU:HD21	2.41	0.55
6:D:1147:ARG:HB3	6:D:1188:VAL:HG21	1.87	0.55
6:D:1292:VAL:O	6:D:1303:TYR:HB2	2.06	0.55
5:M:80:GLN:HG3	12:M:7315:HOH:O	2.05	0.55
5:M:479:VAL:CG2	5:M:503:LEU:HD21	2.36	0.55
5:M:674:VAL:HG12	5:M:990:GLY:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:710:ILE:CB	5:M:790:LEU:HD22	2.34	0.55
6:N:65:ARG:HG3	6:N:66:GLN:H	1.71	0.55
6:N:945:SER:OG	6:N:947:ILE:HG23	2.06	0.55
1:X:22:DC:H4'	5:M:388:ARG:HD3	1.88	0.55
4:A:27:PRO:CB	4:A:186:LEU:HD11	2.35	0.55
5:C:35:PRO:HD2	12:C:1187:HOH:O	2.05	0.55
5:C:876:VAL:H	5:C:877:PRO:HD2	1.72	0.55
6:D:676:MET:CE	6:D:684:LYS:H	2.18	0.55
6:D:1093:TYR:CE1	6:D:1097:LYS:HE3	2.42	0.55
4:L:73:GLU:OE1	4:L:130:ALA:HA	2.06	0.55
5:M:510:ALA:HB3	5:M:513:VAL:HG23	1.87	0.55
6:N:6:ARG:O	6:N:1459:LEU:HG	2.07	0.55
6:N:571:LYS:O	6:N:574:LEU:HD23	2.06	0.55
6:N:1471:LEU:HD12	6:N:1472:ILE:N	2.16	0.55
2:H:8:C:H5'	12:H:1604:HOH:O	2.05	0.55
3:I:6:DC:OP1	6:D:1266:ARG:NH1	2.37	0.55
4:A:91:ASN:OD1	4:A:92:PRO:HD2	2.06	0.55
4:A:161:ARG:HB2	4:A:161:ARG:HH11	1.72	0.55
5:C:54:ILE:HG22	5:C:66:LEU:HB3	1.88	0.55
5:C:274:ARG:HB2	5:C:285:LEU:HD13	1.88	0.55
5:C:737:LEU:HD21	5:C:754:ILE:HG21	1.88	0.55
5:C:923:GLU:OE1	5:C:923:GLU:HA	2.06	0.55
6:D:550:ARG:HE	6:D:553:ARG:HH12	1.53	0.55
6:D:715:ALA:HB3	6:D:764:LEU:HA	1.86	0.55
6:D:1207:TYR:HB3	12:D:9158:HOH:O	2.07	0.55
7:E:54:LEU:HG	7:E:58:PRO:CG	2.35	0.55
4:K:49:PRO:HD2	4:K:213:GLN:OE1	2.07	0.55
4:K:146:ARG:HG2	12:K:602:HOH:O	2.05	0.55
6:N:405:ASP:HB2	6:N:423:ASP:OD1	2.06	0.55
6:N:1267:ARG:HG2	12:N:9241:HOH:O	2.04	0.55
6:N:1425:THR:HG22	6:N:1429:LEU:HD21	1.87	0.55
7:O:31:LEU:HA	7:O:35:PHE:HD1	1.72	0.55
1:G:23:DG:H5'	12:G:61:HOH:O	2.05	0.55
4:A:10:VAL:HG13	4:B:229:GLN:NE2	2.22	0.55
4:B:5:LYS:O	4:B:8:ALA:HB2	2.06	0.55
5:C:276:LYS:O	5:C:280:LYS:HB2	2.06	0.55
5:C:290:LEU:HB3	5:C:302:VAL:HG12	1.89	0.55
5:C:375:SER:HA	12:C:1459:HOH:O	2.05	0.55
5:C:958:THR:HG23	5:C:961:GLU:HB2	1.87	0.55
6:D:133:ILE:O	6:D:152:LEU:CA	2.55	0.55
4:K:40:LEU:O	4:K:44:LEU:HD12	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:433:GLY:HA3	6:N:447:VAL:O	2.06	0.55
6:N:433:GLY:HA2	6:N:449:SER:O	2.07	0.55
6:N:574:LEU:O	6:N:578:VAL:HG23	2.06	0.55
6:N:617:ASN:HB3	6:N:1467:ILE:HG23	1.88	0.55
6:N:847:ASP:O	6:N:851:LEU:HG	2.06	0.55
6:N:1063:GLU:HG2	6:N:1064:GLY:N	2.21	0.55
6:N:1290:LEU:HD11	12:N:9339:HOH:O	2.06	0.55
4:B:67:THR:HB	4:B:74:ASP:OD1	2.06	0.55
5:C:224:GLU:HB2	12:C:1133:HOH:O	2.05	0.55
5:C:440:PRO:HD3	12:C:1247:HOH:O	2.06	0.55
6:D:473:LEU:H	6:D:473:LEU:HD12	1.70	0.55
6:D:1152:GLU:HG2	6:D:1160:LEU:O	2.07	0.55
7:E:67:GLU:HB3	7:E:73:LEU:HD11	1.88	0.55
5:M:755:LEU:HD22	5:M:825:VAL:HG11	1.88	0.55
5:M:876:VAL:H	5:M:877:PRO:HD2	1.71	0.55
6:N:481:MET:HE1	6:N:1389:LEU:HB3	1.87	0.55
6:N:792:ILE:HA	6:N:861:GLN:NE2	2.21	0.55
6:N:799:LYS:O	6:N:826:PRO:HD2	2.06	0.55
6:N:955:VAL:HG11	6:N:1015:TYR:HE2	1.71	0.55
6:N:1240:THR:HB	6:N:1255:GLY:HA3	1.87	0.55
6:N:1464:GLU:HA	6:N:1467:ILE:HD12	1.87	0.55
2:Y:11:C:O2'	2:Y:12:G:H5"	2.06	0.55
3:Z:10:DA:H2'	12:Z:759:HOH:O	2.07	0.55
4:B:169:ALA:HB2	12:B:322:HOH:O	2.05	0.55
5:C:41:ASN:O	5:C:46:ALA:HB2	2.06	0.55
5:C:302:VAL:O	5:C:305:PRO:HD2	2.07	0.55
6:D:54:LYS:HE2	6:D:57:GLU:OE1	2.07	0.55
6:D:455:ARG:HB3	6:D:459:GLU:CD	2.26	0.55
6:D:1176:LYS:O	6:D:1176:LYS:HD3	2.05	0.55
5:M:516:ARG:CZ	5:M:521:PRO:HB3	2.37	0.55
5:M:537:LYS:HG3	5:M:905:ILE:HD13	1.88	0.55
5:M:1013:TYR:CE1	5:M:1020:PRO:HG3	2.42	0.55
5:M:1104:GLU:H	5:M:1104:GLU:CD	2.10	0.55
6:N:31:THR:HA	6:N:44:LEU:HD11	1.88	0.55
6:N:414:ARG:HG2	6:N:451:ASP:OD1	2.06	0.55
6:N:421:LEU:HD21	6:N:429:SER:HB2	1.87	0.55
6:N:1047:LYS:HD2	6:N:1051:GLU:OE2	2.07	0.55
2:H:7:G:N3	2:H:7:G:H2'	2.22	0.55
4:B:29:GLU:HG3	12:B:324:HOH:O	2.07	0.55
4:B:99:LEU:HB3	4:B:114:PHE:CD2	2.41	0.55
5:C:118:ILE:HD12	5:C:118:ILE:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:796:GLU:HG3	5:C:1004:LYS:NZ	2.22	0.55
5:C:850:ALA:HA	6:D:632:VAL:HG13	1.89	0.55
5:C:1007:ALA:HB2	6:D:648:MET:HG3	1.88	0.55
6:D:820:GLU:HA	6:D:825:ALA:O	2.07	0.55
4:K:153:ALA:HA	4:K:156:HIS:NE2	2.22	0.55
4:L:105:GLY:HA3	12:L:1250:HOH:O	2.06	0.55
5:M:115:LEU:H	5:M:115:LEU:HD12	1.72	0.55
5:M:147:TYR:HB3	5:M:323:ASP:CB	2.37	0.55
5:M:301:GLU:O	5:M:305:PRO:HG2	2.07	0.55
5:M:601:GLY:O	5:M:648:ARG:HA	2.06	0.55
5:M:681:GLY:O	6:N:633:VAL:HG11	2.07	0.55
6:N:58:CYS:SG	6:N:59:ALA:N	2.80	0.55
6:N:97:THR:HG21	6:N:571:LYS:HD3	1.89	0.55
6:N:118:LEU:HD12	6:N:124:GLU:OE2	2.07	0.55
6:N:179:VAL:CG1	6:N:183:GLU:HB3	2.36	0.55
1:X:20:DG:H3'	12:X:665:HOH:O	2.06	0.55
4:A:27:PRO:HB3	4:A:186:LEU:HD11	1.89	0.55
4:B:78:ILE:HD11	4:B:130:ALA:HB2	1.89	0.55
5:C:405:ARG:HD3	5:C:566:THR:OG1	2.07	0.55
5:C:728:HIS:O	5:C:729:LEU:HG	2.07	0.55
5:C:754:ILE:HD13	5:C:791:ARG:CD	2.36	0.55
6:D:206:ARG:HH11	6:D:206:ARG:HG3	1.71	0.55
6:D:537:THR:OG1	6:D:541:ASN:ND2	2.39	0.55
6:D:619:LEU:HD12	6:D:621:LYS:CE	2.36	0.55
5:M:269:LEU:HB2	5:M:288:ARG:NE	2.22	0.55
5:M:498:GLN:HG2	6:N:1068:LEU:HD12	1.88	0.55
6:N:820:GLU:HA	6:N:825:ALA:O	2.07	0.55
6:N:955:VAL:N	6:N:1039:CYS:SG	2.79	0.55
6:N:1256:LEU:O	6:N:1260:ILE:HG12	2.07	0.55
2:H:14:G:P	5:C:409:ARG:HH12	2.30	0.55
5:C:171:TRP:HB2	12:C:1250:HOH:O	2.06	0.55
5:C:312:ALA:HB2	12:C:1388:HOH:O	2.07	0.55
5:C:688:ILE:CD1	5:C:847:GLY:HA3	2.37	0.55
6:D:119:SER:N	6:D:123:LEU:HB2	2.22	0.55
6:D:143:ASN:ND2	6:D:145:VAL:H	2.04	0.55
6:D:400:VAL:HG22	6:D:443:VAL:HG21	1.88	0.55
6:D:675:ARG:HG3	6:D:678:GLU:OE2	2.07	0.55
6:D:1295:GLU:CD	6:N:77:GLY:H	2.10	0.55
6:D:1481:VAL:CG1	7:E:21:VAL:HG21	2.36	0.55
4:K:9:PRO:HB3	4:K:25:LEU:CG	2.37	0.55
5:M:564:MET:HG3	5:M:565:GLN:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:971:LYS:CD	5:M:986:PRO:HB2	2.37	0.55
6:N:397:LYS:O	6:N:448:GLU:HB2	2.07	0.55
6:N:762:GLN:HB3	12:N:9085:HOH:O	2.06	0.55
6:N:782:SER:H	6:N:785:ILE:HD13	1.71	0.55
6:N:1340:GLY:O	6:N:1343:ALA:HB3	2.07	0.55
1:X:19:DC:H4'	5:M:1000:MET:HE2	1.89	0.55
4:A:221:HIS:HA	4:A:224:TYR:CD2	2.41	0.55
5:C:1102:LEU:HD11	6:D:9:ARG:HB3	1.89	0.55
6:D:829:VAL:H	6:D:835:SER:HB3	1.72	0.55
7:E:48:MET:HB2	7:E:54:LEU:HD12	1.89	0.55
4:K:116:PRO:HA	12:K:2457:HOH:O	2.06	0.55
5:M:1004:LYS:HD3	6:N:724:GLN:HE22	1.72	0.55
5:M:1046:ALA:HB1	6:N:1471:LEU:HD11	1.87	0.55
6:N:770:LEU:HD23	6:N:777:PRO:HA	1.89	0.55
6:N:996:TRP:CD2	6:N:1056:PRO:HG2	2.42	0.55
6:N:1003:VAL:O	6:N:1007:VAL:HG23	2.07	0.55
6:N:1292:VAL:HG23	6:N:1305:LEU:HD12	1.89	0.55
4:B:169:ALA:HB1	4:B:171:PHE:CE2	2.42	0.54
4:B:221:HIS:HA	4:B:224:TYR:HD2	1.71	0.54
5:C:102:HIS:HB2	5:C:106:GLY:O	2.06	0.54
5:C:205:GLU:HG3	5:C:206:THR:H	1.72	0.54
5:C:496:ILE:H	5:C:496:ILE:HD12	1.72	0.54
5:C:693:GLU:HG2	5:C:855:VAL:HB	1.89	0.54
6:D:659:LYS:HD3	6:D:659:LYS:O	2.07	0.54
6:D:1363:LEU:HD12	6:D:1363:LEU:O	2.08	0.54
7:E:51:LEU:HG	7:E:52:GLU:N	2.22	0.54
7:E:96:GLU:HA	12:E:120:HOH:O	2.07	0.54
5:M:126:SER:HB3	5:M:407:LYS:HZ3	1.72	0.54
5:M:190:LYS:HD2	12:M:7100:HOH:O	2.07	0.54
5:M:724:ARG:NH2	5:M:734:LEU:HB3	2.17	0.54
6:N:135:LEU:HA	6:N:453:ASP:O	2.07	0.54
6:N:619:LEU:HD23	6:N:619:LEU:N	2.21	0.54
6:N:693:GLU:HA	7:O:48:MET:HE1	1.89	0.54
6:N:754:PHE:O	6:N:758:GLU:HG2	2.07	0.54
6:N:800:LYS:HD2	6:N:804:LEU:HD22	1.89	0.54
6:N:1462:LEU:HD22	6:N:1472:ILE:CG2	2.37	0.54
2:Y:11:C:H2'	2:Y:12:G:H8	1.70	0.54
2:Y:13:C:H4'	5:M:409:ARG:NH2	2.23	0.54
4:A:162:ILE:HD12	4:A:163:ASN:HD21	1.71	0.54
5:C:290:LEU:HD23	5:C:290:LEU:H	1.73	0.54
5:C:334:ARG:HD2	5:C:418:LEU:HD21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:358:ARG:HA	5:C:361:MET:HB2	1.89	0.54
5:C:412:ALA:HB1	5:C:419:THR:OG1	2.07	0.54
5:C:636:ALA:CB	5:C:703:ILE:HD13	2.36	0.54
6:D:522:PRO:HA	6:D:525:ARG:HH11	1.71	0.54
6:D:734:GLU:HB2	12:D:9253:HOH:O	2.07	0.54
6:D:1114:THR:CG2	6:D:1195:GLN:HB3	2.37	0.54
7:E:26:ARG:O	7:E:30:LEU:HD12	2.07	0.54
4:K:186:LEU:HD11	4:K:192:LEU:HD22	1.88	0.54
4:L:159:LYS:H	4:L:159:LYS:HD3	1.71	0.54
5:M:150:PRO:HA	5:M:158:TYR:HB3	1.90	0.54
5:M:537:LYS:HE2	5:M:905:ILE:HD13	1.87	0.54
5:M:952:LEU:HB3	5:M:966:LEU:CD1	2.37	0.54
5:M:1051:GLU:HG2	5:M:1056:LYS:NZ	2.22	0.54
5:M:1103:ASP:CG	5:M:1104:GLU:H	2.10	0.54
6:N:447:VAL:HG22	12:N:9019:HOH:O	2.06	0.54
6:N:510:GLU:O	6:N:513:ILE:HD12	2.07	0.54
6:N:584:ASN:OD1	6:N:590:PRO:HD2	2.07	0.54
6:N:1128:VAL:O	6:N:1129:THR:C	2.46	0.54
7:O:54:LEU:HA	7:O:58:PRO:HG2	1.88	0.54
3:Z:3:DA:H2"	3:Z:4:DC:C5'	2.38	0.54
5:C:428:ARG:NH2	5:C:451:LEU:HD11	2.19	0.54
5:C:879:ARG:H	5:C:879:ARG:HD2	1.71	0.54
6:D:161:LEU:HD12	12:D:9475:HOH:O	2.07	0.54
6:D:181:ASP:CG	6:D:441:ARG:HG2	2.28	0.54
6:D:562:ALA:HB3	12:D:9040:HOH:O	2.06	0.54
6:D:649:ALA:CB	6:D:720:LEU:HD11	2.37	0.54
6:D:1106:VAL:HG11	6:D:1474:ALA:HB1	1.89	0.54
4:K:107:LYS:HE2	4:K:113:ASP:OD2	2.07	0.54
5:M:571:LEU:HD21	5:M:700:TYR:CD2	2.42	0.54
5:M:674:VAL:HG21	5:M:871:LEU:HD11	1.89	0.54
5:M:717:LEU:HD21	5:M:764:GLU:O	2.07	0.54
5:M:1057:SER:HB2	6:N:622:ARG:O	2.08	0.54
6:N:814:ALA:O	6:N:818:ARG:HG3	2.07	0.54
6:N:1082:ALA:O	8:N:8001:STD:H312	2.06	0.54
6:N:1280:VAL:HB	12:N:9324:HOH:O	2.06	0.54
6:N:1280:VAL:HG12	6:N:1281:VAL:N	2.22	0.54
6:N:1394:VAL:HG12	6:N:1397:LYS:H	1.72	0.54
6:N:1432:LYS:HE3	12:N:9166:HOH:O	2.07	0.54
2:Y:4:U:H2'	2:Y:5:C:C6	2.42	0.54
4:A:206:THR:HG22	4:A:209:GLU:H	1.72	0.54
5:C:142:ARG:HA	5:C:330:ASN:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:573:ARG:HB3	5:C:670:GLN:OE1	2.07	0.54
5:C:598:GLU:HB2	5:C:615:TYR:HE1	1.72	0.54
6:D:14:SER:OG	6:D:16:GLU:HG3	2.06	0.54
6:D:454:ALA:O	6:D:455:ARG:HG3	2.08	0.54
6:D:660:LYS:NZ	6:D:694:VAL:HG13	2.22	0.54
6:D:1034:GLN:O	6:D:1038:LEU:HD12	2.08	0.54
6:D:1298:GLY:N	6:N:47:GLU:CB	2.70	0.54
6:D:1365:ASP:O	6:D:1369:GLU:HG3	2.08	0.54
6:D:1384:PRO:HG3	6:D:1389:LEU:HA	1.89	0.54
4:K:24:VAL:HG22	4:K:196:THR:CG2	2.38	0.54
5:M:141:HIS:HB3	5:M:418:LEU:CG	2.37	0.54
5:M:496:ILE:N	5:M:496:ILE:HD12	2.23	0.54
6:N:481:MET:CE	6:N:1389:LEU:HB3	2.38	0.54
6:N:793:THR:HG21	6:N:906:GLN:HG2	1.89	0.54
6:N:844:ALA:HB3	6:N:848:GLU:OE2	2.08	0.54
6:N:1053:PHE:CZ	6:N:1072:ILE:HD12	2.43	0.54
6:N:1284:GLU:CD	6:N:1285:GLU:H	2.11	0.54
4:A:20:TYR:HE2	4:A:198:ARG:HB3	1.73	0.54
4:A:52:ALA:HB2	4:A:170:VAL:O	2.08	0.54
4:B:217:ILE:HG23	12:B:341:HOH:O	2.07	0.54
5:C:374:ASN:O	5:C:377:PRO:HD2	2.07	0.54
5:C:379:GLU:O	5:C:383:ARG:HB3	2.08	0.54
5:C:516:ARG:CD	5:C:521:PRO:HA	2.29	0.54
6:D:470:LEU:HB2	6:D:503:LEU:HD21	1.88	0.54
6:D:1129:THR:HG23	6:D:1130:ARG:H	1.72	0.54
6:D:1275:SER:HB2	6:D:1294:VAL:HG21	1.90	0.54
4:K:32:PHE:HZ	4:L:47:SER:HG	1.55	0.54
4:K:174:VAL:HG13	4:K:200:TRP:O	2.07	0.54
4:L:47:SER:HB3	4:L:217:ILE:HD13	1.90	0.54
5:M:600:ASP:OD1	5:M:651:LYS:N	2.40	0.54
5:M:672:VAL:CG2	5:M:868:ASP:HB2	2.38	0.54
6:N:49:ILE:HA	12:N:9497:HOH:O	2.05	0.54
6:N:455:ARG:HD3	6:N:463:GLN:NE2	2.22	0.54
6:N:486:ARG:HA	6:N:489:ARG:CD	2.37	0.54
6:N:761:ILE:HD11	7:O:23:VAL:HG11	1.89	0.54
6:N:800:LYS:HA	12:N:9502:HOH:O	2.06	0.54
6:N:996:TRP:HE3	12:N:9282:HOH:O	1.91	0.54
4:B:86:VAL:HG21	4:B:202:ASP:OD2	2.07	0.54
4:B:213:GLN:O	4:B:217:ILE:HG13	2.08	0.54
5:C:185:LYS:CE	5:C:190:LYS:HE2	2.38	0.54
5:C:804:VAL:HB	5:C:824:ARG:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:861:LEU:HD23	5:C:863:ASP:N	2.23	0.54
6:D:36:THR:C	6:D:38:LYS:H	2.09	0.54
6:D:101:HIS:CE1	6:D:582:LEU:HD22	2.42	0.54
6:D:161:LEU:HG	6:D:449:SER:OG	2.07	0.54
6:D:409:VAL:HG23	6:D:421:LEU:HA	1.88	0.54
6:D:646:LYS:HA	6:D:720:LEU:HG	1.89	0.54
6:D:647:ARG:HE	6:D:723:GLY:N	2.05	0.54
6:D:652:LEU:HG	6:D:749:VAL:HG21	1.90	0.54
6:D:911:LEU:HD23	6:D:934:LEU:HD13	1.89	0.54
6:D:1147:ARG:O	6:D:1165:TYR:HA	2.08	0.54
12:D:9274:HOH:O	7:E:92:LEU:HD12	2.07	0.54
4:L:4:SER:HA	4:L:7:LYS:HZ3	1.73	0.54
5:M:233:GLU:HG2	12:M:7193:HOH:O	2.08	0.54
6:N:1236:LEU:HD11	6:N:1361:VAL:HB	1.90	0.54
5:C:502:PRO:HB2	5:C:509:ALA:HB3	1.88	0.54
6:D:65:ARG:CG	6:D:66:GLN:H	2.20	0.54
6:D:148:GLU:CG	6:D:151:GLN:HE21	2.21	0.54
6:D:185:VAL:HG21	12:D:9157:HOH:O	2.07	0.54
6:D:470:LEU:HB2	6:D:503:LEU:HD11	1.89	0.54
6:D:895:VAL:O	6:D:899:LEU:HG	2.08	0.54
6:D:951:ILE:O	6:D:951:ILE:HD13	2.07	0.54
6:D:1042:ARG:HB2	6:D:1042:ARG:NH1	2.17	0.54
6:D:1440:PHE:O	6:D:1441:GLN:O	2.25	0.54
5:M:264:PRO:HB3	5:M:289:THR:HG21	1.90	0.54
5:M:802:ARG:HB3	5:M:802:ARG:CZ	2.38	0.54
5:M:861:LEU:HD21	5:M:925:TYR:CE2	2.42	0.54
6:N:959:GLU:CD	6:N:959:GLU:H	2.11	0.54
6:N:1148:VAL:HG21	12:N:9462:HOH:O	2.07	0.54
6:N:1258:ARG:HG2	6:N:1262:LEU:HD13	1.90	0.54
6:N:1276:GLU:HB2	6:N:1301:LYS:HG2	1.89	0.54
6:N:1410:GLU:HG2	12:N:9214:HOH:O	2.08	0.54
1:X:14:DT:H6	1:X:14:DT:H5'	1.72	0.54
5:C:74:GLY:O	5:C:76:PRO:HD3	2.07	0.54
6:D:96:ALA:CB	6:D:554:LEU:HD23	2.38	0.54
6:D:524:LEU:H	6:D:524:LEU:CD1	2.21	0.54
6:D:987:GLU:O	6:D:991:GLN:HB2	2.08	0.54
6:D:1041:LEU:HD12	6:D:1058:ARG:HA	1.89	0.54
6:D:1066:THR:HG23	6:D:1069:GLU:H	1.72	0.54
6:D:1197:ARG:HG3	6:D:1198:TYR:H	1.72	0.54
6:D:1240:THR:HB	6:D:1255:GLY:HA3	1.89	0.54
6:D:1378:TYR:OH	6:D:1431:THR:HA	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:218:LEU:HD11	4:L:218:LEU:HD21	1.89	0.54
5:M:751:PRO:HB2	6:N:680:GLN:HG3	1.88	0.54
5:M:831:ARG:HH12	5:M:1004:LYS:HE3	1.73	0.54
6:N:204:LEU:HA	6:N:441:ARG:NH1	2.23	0.54
6:N:603:LEU:HA	6:N:606:ILE:HD12	1.90	0.54
6:N:631:ILE:HG21	6:N:745:MET:SD	2.47	0.54
6:N:656:PHE:HB3	6:N:694:VAL:HG11	1.90	0.54
6:N:1237:THR:CG2	6:N:1256:LEU:HB2	2.38	0.54
2:H:8:C:H2'	2:H:9:G:N7	2.22	0.54
1:X:18:DG:H2"	1:X:19:DC:C5'	2.35	0.54
2:Y:8:C:H2'	2:Y:9:G:N7	2.22	0.54
5:C:290:LEU:HD23	5:C:290:LEU:N	2.22	0.54
5:C:346:VAL:O	5:C:350:ARG:HG3	2.07	0.54
5:C:1049:LEU:HD23	6:D:1472:ILE:HD11	1.89	0.54
6:D:441:ARG:NH2	6:D:445:ARG:NH2	2.56	0.54
6:D:502:PHE:CZ	6:D:1452:ILE:HG12	2.42	0.54
6:D:1128:VAL:O	6:D:1129:THR:C	2.46	0.54
6:D:1276:GLU:HB2	6:D:1301:LYS:HG2	1.89	0.54
5:M:106:GLY:O	5:M:107:LEU:HD23	2.07	0.54
5:M:139:GLN:CG	5:M:418:LEU:HD22	2.37	0.54
5:M:598:GLU:O	5:M:651:LYS:HG3	2.08	0.54
5:M:762:LYS:HG2	5:M:786:LYS:CG	2.37	0.54
6:N:179:VAL:HG12	12:N:9033:HOH:O	2.08	0.54
6:N:778:LEU:HD12	6:N:780:LYS:HE3	1.90	0.54
6:N:788:GLY:HA3	6:N:938:GLY:O	2.08	0.54
6:N:1103:HIS:HD2	6:N:1463:LYS:H	1.56	0.54
6:N:1236:LEU:CD2	6:N:1359:GLN:HB3	2.37	0.54
6:N:1237:THR:HG23	6:N:1256:LEU:HB2	1.90	0.54
6:N:1485:GLN:HB3	12:N:9440:HOH:O	2.06	0.54
4:A:18:ARG:O	4:A:207:PRO:HD3	2.08	0.54
5:C:56:GLU:HB2	5:C:64:LEU:HD23	1.88	0.54
5:C:140:ILE:O	5:C:418:LEU:HD23	2.08	0.54
5:C:462:ASP:CB	5:C:468:ARG:HD2	2.38	0.54
5:C:1018:GLN:OE1	5:C:1018:GLN:HA	2.06	0.54
6:D:119:SER:CB	6:D:123:LEU:HB2	2.36	0.54
6:D:133:ILE:O	6:D:152:LEU:HA	2.08	0.54
6:D:546:ARG:NH2	6:D:550:ARG:HH22	2.05	0.54
6:D:1398:TRP:HA	6:D:1398:TRP:HE3	1.71	0.54
4:K:29:GLU:HB2	4:K:32:PHE:CE1	2.43	0.54
4:K:89:PHE:HB3	4:K:94:LEU:HD22	1.90	0.54
4:L:36:LEU:O	4:L:39:PRO:HD2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:198:ARG:HD3	5:M:228:ALA:HA	1.89	0.54
5:M:430:VAL:HG21	5:M:440:PRO:HB3	1.89	0.54
5:M:1047:HIS:NE2	6:N:1476:THR:HG21	2.22	0.54
6:N:493:ARG:HD2	6:N:493:ARG:C	2.28	0.54
6:N:957:PRO:HG3	6:N:1007:VAL:HA	1.90	0.54
5:C:146:VAL:CG2	5:C:162:ILE:HG12	2.36	0.53
5:C:428:ARG:NE	5:C:451:LEU:HD21	2.23	0.53
5:C:642:ARG:HG3	5:C:657:ASP:OD2	2.08	0.53
6:D:145:VAL:CG2	6:D:146:PRO:HD2	2.30	0.53
6:D:403:PHE:CE2	6:D:444:VAL:HG23	2.43	0.53
6:D:525:ARG:CB	6:D:538:SER:HB3	2.31	0.53
6:D:1040:GLY:O	6:D:1060:SER:HB3	2.08	0.53
6:D:1116:ASN:O	6:D:1193:THR:HB	2.08	0.53
6:D:1440:PHE:C	6:D:1440:PHE:HD2	2.10	0.53
5:M:625:LEU:O	5:M:627:ARG:N	2.41	0.53
5:M:984:GLU:HG2	6:N:944:THR:O	2.08	0.53
6:N:520:LEU:HG	6:N:521:PRO:HD2	1.89	0.53
6:D:165:LYS:CB	6:D:397:LYS:H	2.21	0.53
6:D:191:LEU:HD11	12:D:9157:HOH:O	2.07	0.53
6:D:1148:VAL:HG13	6:D:1163:GLY:HA2	1.90	0.53
6:D:1153:VAL:CG2	6:N:561:GLY:HA3	2.38	0.53
6:D:1194:CYS:HB3	6:D:1373:ARG:HH22	1.73	0.53
7:E:36:LYS:HZ3	7:E:45:ARG:HH22	1.55	0.53
4:K:109:VAL:HG23	4:K:132:LEU:HD13	1.89	0.53
5:M:190:LYS:CD	5:M:190:LYS:H	2.20	0.53
5:M:217:LEU:CD1	5:M:311:PHE:HA	2.38	0.53
5:M:889:HIS:CE1	6:N:951:ILE:H	2.20	0.53
6:N:28:LYS:O	6:N:43:GLY:HA2	2.09	0.53
6:N:133:ILE:CG1	6:N:456:MET:HB3	2.38	0.53
6:N:1236:LEU:HD21	6:N:1361:VAL:HG23	1.90	0.53
6:N:1273:VAL:HG21	6:N:1303:TYR:HB3	1.89	0.53
2:Y:6:U:C2'	2:Y:7:G:C8	2.85	0.53
2:Y:10:G:H2'	2:Y:11:C:H6	1.71	0.53
2:Y:16:G:H21	6:N:705:ALA:HB1	1.73	0.53
4:A:206:THR:HG22	4:A:209:GLU:CG	2.38	0.53
5:C:12:VAL:HG21	12:C:1386:HOH:O	2.08	0.53
5:C:403:SER:OG	5:C:404:LEU:N	2.42	0.53
5:C:927:GLY:HA2	5:C:930:LYS:CD	2.36	0.53
5:C:1053:LEU:HD11	6:D:1466:VAL:HG13	1.90	0.53
5:C:1054:THR:CG2	5:C:1059:ASP:HB2	2.35	0.53
6:D:1237:THR:OG1	6:D:1256:LEU:HB2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1281:VAL:CG1	6:D:1282:ARG:N	2.72	0.53
6:D:1326:THR:HG22	6:D:1327:ARG:H	1.72	0.53
7:E:36:LYS:NZ	7:E:45:ARG:HH12	2.06	0.53
7:E:54:LEU:HD23	7:E:54:LEU:O	2.07	0.53
4:K:5:LYS:O	4:K:8:ALA:HB2	2.09	0.53
5:M:274:ARG:NH1	5:M:285:LEU:H	2.06	0.53
5:M:341:THR:O	5:M:345:ARG:HG2	2.08	0.53
5:M:606:VAL:HG22	5:M:645:VAL:HG22	1.90	0.53
5:M:831:ARG:NH1	5:M:1004:LYS:HE3	2.24	0.53
6:N:10:ILE:O	6:N:1451:ALA:HA	2.09	0.53
6:N:699:VAL:HB	6:N:716:PHE:O	2.09	0.53
6:N:1114:THR:HG23	6:N:1114:THR:O	2.09	0.53
6:N:1145:TYR:HA	6:N:1171:VAL:HG21	1.88	0.53
2:H:8:C:O5'	2:H:8:C:H6	1.91	0.53
3:I:3:DA:H2"	3:I:4:DC:C5'	2.38	0.53
5:C:190:LYS:HB2	12:C:1145:HOH:O	2.07	0.53
5:C:274:ARG:NH1	5:C:285:LEU:HD22	2.23	0.53
5:C:436:GLY:HA2	5:C:538:GLN:O	2.08	0.53
6:D:648:MET:SD	6:D:726:ILE:HD11	2.49	0.53
6:D:658:LEU:HD22	6:D:673:ALA:HB3	1.90	0.53
6:D:1161:GLU:HG2	6:D:1164:ARG:HB2	1.90	0.53
6:D:1258:ARG:NE	6:D:1262:LEU:HD11	2.23	0.53
4:L:137:ARG:HH11	4:L:139:ASN:HB3	1.72	0.53
5:M:524:VAL:HG22	5:M:528:GLU:OE2	2.08	0.53
6:N:477:LEU:HD13	6:N:492:ALA:O	2.08	0.53
6:N:809:PRO:HB2	6:N:812:ALA:HB2	1.89	0.53
6:N:1236:LEU:HD21	6:N:1361:VAL:HB	1.90	0.53
6:N:1405:GLU:OE2	6:N:1413:THR:HB	2.08	0.53
6:N:1406:ARG:HB2	12:N:9309:HOH:O	2.08	0.53
6:N:1496:GLU:HA	6:N:1499:ARG:HG3	1.90	0.53
5:C:395:LYS:CE	5:C:407:LYS:HE2	2.38	0.53
5:C:501:THR:HG22	5:C:513:VAL:HG22	1.90	0.53
5:C:676:ILE:O	5:C:676:ILE:CG2	2.57	0.53
5:C:1016:ILE:H	5:C:1016:ILE:CD1	2.22	0.53
6:D:400:VAL:HG12	12:D:9188:HOH:O	2.09	0.53
6:D:531:ASP:C	6:D:533:GLY:H	2.12	0.53
6:D:662:GLU:OE2	6:D:669:ASN:HA	2.08	0.53
6:D:785:ILE:HG13	6:D:939:PHE:CE2	2.44	0.53
6:D:864:VAL:HG13	12:D:9335:HOH:O	2.08	0.53
6:D:950:GLY:H	6:D:953:ASP:HB2	1.73	0.53
6:D:1160:LEU:HD22	6:D:1164:ARG:NH1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1399:ASP:O	6:D:1403:LEU:HB2	2.09	0.53
12:D:9206:HOH:O	6:N:54:LYS:HB3	2.08	0.53
5:M:47:ALA:O	5:M:50:GLU:HB3	2.08	0.53
5:M:100:LEU:HD22	5:M:372:LEU:HD22	1.91	0.53
5:M:151:ASP:HB2	5:M:157:ARG:O	2.09	0.53
5:M:190:LYS:HD2	5:M:190:LYS:H	1.73	0.53
5:M:264:PRO:HB3	5:M:289:THR:CG2	2.38	0.53
6:N:454:ALA:O	6:N:455:ARG:HG3	2.07	0.53
6:N:475:LYS:CA	6:N:478:LEU:HG	2.35	0.53
4:A:100:LEU:HD23	4:A:101:LEU:N	2.23	0.53
4:B:127:LEU:HD12	4:B:128:HIS:H	1.74	0.53
5:C:65:VAL:CG2	5:C:101:ILE:HB	2.34	0.53
5:C:108:ILE:HB	5:C:368:THR:OG1	2.08	0.53
5:C:726:ILE:HD13	5:C:734:LEU:CD1	2.38	0.53
6:D:29:PRO:HA	12:D:9360:HOH:O	2.09	0.53
6:D:122:GLU:HG3	12:D:9139:HOH:O	2.08	0.53
6:D:200:ASP:O	6:D:397:LYS:HA	2.09	0.53
6:D:204:LEU:HD13	6:D:441:ARG:NH2	2.19	0.53
6:D:450:TYR:CG	6:D:451:ASP:N	2.76	0.53
6:D:843:PHE:CZ	6:D:864:VAL:HG11	2.43	0.53
6:D:972:LEU:HD23	6:D:973:GLN:HG3	1.90	0.53
4:L:74:ASP:HB3	6:N:872:ARG:NH2	2.24	0.53
4:L:205:VAL:HG23	12:L:1413:HOH:O	2.07	0.53
4:L:218:LEU:O	4:L:222:LEU:HG	2.09	0.53
5:M:177:GLU:N	12:M:7250:HOH:O	2.40	0.53
5:M:535:SER:O	5:M:538:GLN:HG2	2.08	0.53
5:M:881:ASN:N	5:M:881:ASN:HD22	2.07	0.53
6:N:42:ASP:O	6:N:43:GLY:O	2.25	0.53
6:N:51:GLY:CA	6:N:86:ARG:HA	2.29	0.53
6:N:187:LYS:HD2	6:N:198:ARG:O	2.09	0.53
6:N:819:GLY:HA3	12:N:9083:HOH:O	2.08	0.53
6:N:868:TYR:HB2	6:N:873:LEU:HD12	1.89	0.53
6:N:1103:HIS:CG	6:N:1104:GLU:N	2.77	0.53
6:N:1342:GLU:CD	6:N:1342:GLU:N	2.59	0.53
1:X:11:DC:H5"	6:N:1442:ASN:ND2	2.24	0.53
5:C:444:PRO:HG2	5:C:452:ILE:CD1	2.39	0.53
5:C:647:GLN:OE1	5:C:649:VAL:HG13	2.09	0.53
5:C:966:LEU:HD11	5:C:986:PRO:CG	2.35	0.53
5:C:1115:LEU:HD12	5:C:1115:LEU:N	2.23	0.53
6:D:1118:ILE:HB	6:D:1190:SER:HB3	1.90	0.53
6:D:1487:VAL:HG21	7:E:79:LEU:HG	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:90:LEU:HD23	12:L:611:HOH:O	2.08	0.53
5:M:274:ARG:NH2	5:M:284:ARG:HG3	2.20	0.53
5:M:442:GLU:HG2	5:M:454:SER:HB2	1.91	0.53
5:M:499:ALA:HA	5:M:532:MET:CE	2.39	0.53
5:M:518:LYS:HB3	5:M:518:LYS:NZ	2.23	0.53
5:M:1016:ILE:HG21	6:N:524:LEU:O	2.09	0.53
5:M:1085:PHE:O	5:M:1089:VAL:HG23	2.08	0.53
6:N:165:LYS:CB	6:N:397:LYS:HB2	2.14	0.53
6:N:485:SER:HB2	12:N:9386:HOH:O	2.08	0.53
6:N:1101:VAL:HG21	6:N:1424:VAL:CG2	2.37	0.53
4:A:132:LEU:CD1	4:A:138:LEU:HD23	2.39	0.53
4:B:32:PHE:O	4:B:36:LEU:HG	2.08	0.53
4:B:156:HIS:HE1	4:B:166:PRO:HB3	1.72	0.53
5:C:98:LEU:HD12	5:C:98:LEU:N	2.24	0.53
4:L:82:LEU:HB2	12:L:644:HOH:O	2.08	0.53
5:M:403:SER:OG	5:M:404:LEU:N	2.41	0.53
5:M:773:LEU:HD11	12:M:7309:HOH:O	2.07	0.53
6:N:471:GLU:O	6:N:475:LYS:HG3	2.08	0.53
6:N:784:ASP:HB3	6:N:939:PHE:CE2	2.44	0.53
6:N:1121:PRO:HG2	12:N:9073:HOH:O	2.09	0.53
6:N:1209:LEU:CD2	6:N:1211:MET:H	2.21	0.53
6:N:1219:GLU:HB2	7:O:17:TYR:HE2	1.74	0.53
6:N:1232:PRO:HB3	6:N:1361:VAL:CG2	2.32	0.53
7:O:40:LEU:HD21	7:O:67:GLU:HG2	1.91	0.53
5:C:244:PRO:CD	5:C:245:GLY:H	2.17	0.53
5:C:524:VAL:HG22	5:C:528:GLU:HB2	1.89	0.53
5:C:838:LYS:HB3	5:C:848:VAL:HG22	1.90	0.53
6:D:93:ILE:O	6:D:517:VAL:N	2.35	0.53
4:K:28:LEU:O	4:K:192:LEU:HD23	2.08	0.53
4:L:153:ALA:HA	4:L:156:HIS:NE2	2.23	0.53
5:M:626:ARG:HB3	5:M:629:TYR:HD1	1.74	0.53
5:M:851:LYS:CG	5:M:853:LEU:HD12	2.38	0.53
6:N:24:GLY:HA3	6:N:49:ILE:CG1	2.31	0.53
6:N:652:LEU:HG	12:N:9431:HOH:O	2.08	0.53
6:N:975:GLU:HA	12:N:9081:HOH:O	2.09	0.53
6:N:1314:LYS:HA	12:N:9270:HOH:O	2.08	0.53
5:C:401:LEU:CD2	5:C:565:GLN:HB2	2.39	0.53
5:C:580:MET:HB3	5:C:584:GLU:OE2	2.08	0.53
5:C:745:ILE:H	5:C:745:ILE:HD12	1.73	0.53
5:C:1022:GLY:HA3	5:C:1026:GLN:O	2.09	0.53
6:D:111:LYS:HZ2	6:D:1448:THR:CG2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1277:ILE:HD12	6:D:1301:LYS:N	2.24	0.53
6:D:1350:GLU:O	6:D:1354:LYS:HG2	2.09	0.53
4:K:37:GLY:HA3	4:K:179:PHE:CD1	2.44	0.53
4:L:102:LYS:HG3	4:L:139:ASN:HB2	1.91	0.53
5:M:192:PRO:HB2	5:M:195:LEU:HB3	1.91	0.53
5:M:498:GLN:CG	6:N:1068:LEU:HD12	2.39	0.53
5:M:536:PRO:HA	12:M:7028:HOH:O	2.09	0.53
5:M:943:VAL:HG23	5:M:985:GLY:H	1.73	0.53
5:M:1030:GLN:OE1	6:N:628:ARG:HD3	2.08	0.53
6:N:101:HIS:CE1	6:N:103:TRP:HB2	2.43	0.53
6:N:767:HIS:HE1	7:O:2:ALA:HB1	1.72	0.53
6:N:1045:MET:O	6:N:1053:PHE:HD1	1.92	0.53
6:N:1327:ARG:HB3	6:N:1327:ARG:HH11	1.73	0.53
6:N:1381:VAL:O	6:N:1389:LEU:HD12	2.08	0.53
5:C:684:PHE:O	5:C:872:ASN:ND2	2.42	0.52
5:C:837:ASP:HA	5:C:999:HIS:CE1	2.44	0.52
5:C:1093:GLN:NE2	5:C:1098:ASP:HA	2.25	0.52
6:D:481:MET:HE1	6:D:1389:LEU:HD12	1.91	0.52
6:D:788:GLY:HA3	6:D:938:GLY:O	2.09	0.52
6:D:1470:ARG:HG2	6:D:1471:LEU:N	2.23	0.52
7:E:43:GLU:HG3	7:E:44:GLU:N	2.19	0.52
5:M:332:ARG:NH2	5:M:464:LEU:HD11	2.23	0.52
5:M:378:LEU:HB2	12:M:7272:HOH:O	2.08	0.52
5:M:438:ILE:CD1	5:M:467:ILE:HD12	2.39	0.52
5:M:499:ALA:HA	5:M:532:MET:HE1	1.91	0.52
5:M:564:MET:HE3	5:M:997:LEU:HD21	1.91	0.52
5:M:890:LEU:HA	5:M:914:ILE:CD1	2.36	0.52
6:N:165:LYS:H	6:N:397:LYS:H	1.57	0.52
6:N:638:LYS:HA	6:N:932:ASP:OD1	2.09	0.52
6:N:703:ASN:ND2	6:N:704:ARG:N	2.57	0.52
6:N:887:ALA:HB1	6:N:893:GLU:HG3	1.91	0.52
6:N:1223:ILE:H	6:N:1223:ILE:CD1	2.21	0.52
6:N:1487:VAL:HB	7:O:74:VAL:HG23	1.89	0.52
2:H:4:U:O2'	2:H:5:C:H5'	2.09	0.52
1:X:13:DT:H72	12:X:1946:HOH:O	2.09	0.52
4:B:165:ILE:HB	12:B:376:HOH:O	2.09	0.52
5:C:113:VAL:HG11	5:C:373:VAL:HB	1.91	0.52
5:C:160:ALA:O	5:C:173:ASP:HA	2.09	0.52
5:C:598:GLU:HB2	5:C:615:TYR:CE1	2.44	0.52
5:C:710:ILE:HG23	5:C:823:VAL:CG2	2.39	0.52
12:C:1176:HOH:O	6:D:520:LEU:HD11	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1209:LEU:HD23	6:D:1210:SER:N	2.25	0.52
12:K:974:HOH:O	4:L:25:LEU:HD11	2.09	0.52
4:L:228:PRO:O	4:L:229:GLN:HG3	2.09	0.52
5:M:36:PRO:HB2	5:M:70:GLU:OE2	2.08	0.52
5:M:69:LEU:HD21	12:M:7033:HOH:O	2.09	0.52
5:M:191:PHE:HD2	5:M:195:LEU:HD23	1.74	0.52
6:N:792:ILE:HD13	6:N:793:THR:HG22	1.90	0.52
6:N:1003:VAL:O	6:N:1006:ALA:HB3	2.10	0.52
6:N:1101:VAL:CG2	6:N:1424:VAL:HG22	2.38	0.52
6:N:1495:ILE:HG12	7:O:80:VAL:CG1	2.40	0.52
2:H:7:G:C8	2:H:7:G:C5'	2.92	0.52
4:B:12:THR:OG1	4:B:24:VAL:HB	2.09	0.52
4:B:43:ILE:HG21	4:B:214:ALA:HA	1.91	0.52
4:B:83:LYS:HE3	4:B:168:ASP:HB2	1.90	0.52
4:B:156:HIS:CE1	4:B:166:PRO:HB3	2.45	0.52
5:C:317:VAL:HG22	5:C:320:HIS:CE1	2.44	0.52
5:C:328:LEU:HD11	5:C:434:HIS:CD2	2.43	0.52
5:C:378:LEU:HG	5:C:382:ILE:CD1	2.40	0.52
5:C:836:GLY:HA3	6:D:724:GLN:HG2	1.91	0.52
6:D:510:GLU:O	6:D:513:ILE:HD12	2.09	0.52
6:D:568:ARG:HE	6:D:572:ARG:HG2	1.73	0.52
6:D:1396:GLU:O	6:D:1400:VAL:HG23	2.09	0.52
4:K:177:VAL:HG22	4:K:199:ILE:HG23	1.92	0.52
5:M:15:LEU:O	5:M:586:ARG:NH1	2.43	0.52
5:M:440:PRO:C	6:N:1078:ARG:HH21	2.13	0.52
5:M:516:ARG:HG3	6:N:1068:LEU:HD13	1.91	0.52
5:M:557:ARG:HA	5:M:560:MET:HG3	1.89	0.52
5:M:732:ALA:HB1	5:M:735:ARG:NH2	2.24	0.52
5:M:1000:MET:HB3	5:M:1002:GLU:CG	2.39	0.52
12:M:7241:HOH:O	6:N:524:LEU:HD22	2.09	0.52
6:N:415:VAL:O	6:N:432:TYR:HA	2.10	0.52
6:N:525:ARG:HB2	6:N:538:SER:CB	2.31	0.52
6:N:654:LYS:HB3	6:N:655:PRO:HD3	1.92	0.52
6:N:658:LEU:HD13	6:N:670:VAL:HG12	1.91	0.52
6:N:728:LEU:HD23	6:N:740:PHE:CE2	2.43	0.52
6:N:1232:PRO:CB	6:N:1361:VAL:HG11	2.39	0.52
7:O:54:LEU:HG	7:O:58:PRO:HG2	1.91	0.52
7:O:65:MET:HB3	12:O:1688:HOH:O	2.10	0.52
7:O:72:ARG:HD3	12:O:2451:HOH:O	2.09	0.52
4:A:67:THR:HG23	5:C:627:ARG:NH2	2.24	0.52
5:C:115:LEU:HD22	5:C:373:VAL:CG1	2.31	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:146:VAL:HG11	5:C:281:LEU:HD13	1.92	0.52
5:C:164:PRO:HD2	5:C:170:PRO:O	2.09	0.52
5:C:247:PRO:HD2	5:C:250:ARG:CZ	2.39	0.52
5:C:304:LEU:HG	5:C:308:ARG:HD3	1.91	0.52
5:C:516:ARG:HG3	6:D:1068:LEU:HD13	1.90	0.52
5:C:675:ALA:HA	5:C:989:VAL:HG12	1.91	0.52
6:D:102:ILE:HA	12:D:9087:HOH:O	2.08	0.52
6:D:701:LEU:O	6:D:702:LEU:HD12	2.10	0.52
6:D:955:VAL:HA	12:D:9332:HOH:O	2.09	0.52
4:K:20:TYR:OH	4:K:198:ARG:HG2	2.09	0.52
4:K:186:LEU:CD1	4:K:192:LEU:HD22	2.39	0.52
6:N:115:LEU:HD22	6:N:502:PHE:HE1	1.74	0.52
6:N:771:SER:HB3	6:N:778:LEU:HD13	1.91	0.52
6:N:1237:THR:HG21	6:N:1256:LEU:HD22	1.91	0.52
6:N:1398:TRP:HZ3	6:N:1401:GLU:HG3	1.75	0.52
6:N:1472:ILE:O	6:N:1477:GLY:HA3	2.09	0.52
4:B:170:VAL:O	4:B:170:VAL:HG23	2.10	0.52
5:C:148:PHE:HB3	5:C:313:LEU:HD22	1.91	0.52
5:C:151:ASP:OD1	5:C:152:PRO:HD2	2.10	0.52
5:C:173:ASP:O	5:C:184:MET:HA	2.10	0.52
5:C:228:ALA:HA	12:C:1266:HOH:O	2.09	0.52
5:C:654:LEU:HD21	12:C:1240:HOH:O	2.09	0.52
5:C:820:ARG:HB2	12:C:1252:HOH:O	2.08	0.52
6:D:434:ARG:HB3	6:D:434:ARG:HH11	1.73	0.52
6:D:631:ILE:HG21	6:D:745:MET:SD	2.50	0.52
6:D:1380:GLU:OE2	6:D:1390:LEU:HD23	2.09	0.52
4:K:182:GLU:C	5:M:938:LYS:HZ2	2.11	0.52
4:L:58:ILE:HG21	4:L:68:ILE:HD11	1.92	0.52
4:L:98:THR:HG21	12:L:596:HOH:O	2.09	0.52
5:M:126:SER:HB3	5:M:407:LYS:NZ	2.25	0.52
5:M:333:ILE:HG21	12:M:7162:HOH:O	2.09	0.52
5:M:395:LYS:HE2	5:M:397:GLU:CG	2.39	0.52
1:G:13:DT:H2"	5:C:422:ARG:HH22	1.72	0.52
2:H:12:G:H8	2:H:12:G:C5'	2.16	0.52
4:A:189:ARG:NH2	4:B:155:LYS:HG2	2.24	0.52
4:B:212:ASN:HA	12:B:348:HOH:O	2.09	0.52
5:C:516:ARG:NE	6:D:1068:LEU:HD13	2.21	0.52
5:C:578:VAL:HG21	5:C:991:GLN:HB2	1.91	0.52
5:C:732:ALA:O	5:C:735:ARG:CZ	2.57	0.52
5:C:926:PHE:O	5:C:930:LYS:HG3	2.10	0.52
5:C:949:LYS:HZ2	6:D:828:LYS:HZ2	1.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:104:PHE:CE2	6:D:1448:THR:HG23	2.43	0.52
6:D:191:LEU:HD21	12:D:9157:HOH:O	2.09	0.52
6:D:1382:THR:HG21	6:D:1418:LYS:CE	2.36	0.52
5:M:15:LEU:HG	5:M:458:TYR:CZ	2.44	0.52
5:M:595:LEU:HG	5:M:655:LEU:HD12	1.92	0.52
6:N:696:HIS:HB2	7:O:48:MET:HE1	1.92	0.52
6:N:1063:GLU:HG2	6:N:1064:GLY:H	1.74	0.52
6:N:1472:ILE:HG22	6:N:1474:ALA:N	2.15	0.52
4:A:23:PHE:CE2	4:A:199:ILE:HD12	2.45	0.52
4:A:218:LEU:O	4:A:222:LEU:HD13	2.10	0.52
5:C:89:THR:HA	5:C:129:ILE:O	2.10	0.52
5:C:146:VAL:HG11	5:C:281:LEU:CD1	2.40	0.52
5:C:751:PRO:HA	5:C:792:VAL:HB	1.92	0.52
5:C:981:GLU:HA	5:C:981:GLU:OE1	2.09	0.52
6:D:54:LYS:HG3	6:D:55:ASP:N	2.25	0.52
6:D:179:VAL:HG13	6:D:183:GLU:HB3	1.90	0.52
6:D:397:LYS:O	6:D:448:GLU:HB2	2.10	0.52
6:D:465:LEU:HD13	6:D:513:ILE:HD11	1.92	0.52
6:D:661:MET:HA	6:D:666:ILE:HD12	1.91	0.52
6:D:764:LEU:HD21	6:D:767:HIS:CE1	2.45	0.52
6:D:804:LEU:HD12	6:D:831:GLY:HA2	1.91	0.52
6:D:1194:CYS:HB3	6:D:1373:ARG:HH12	1.75	0.52
6:D:1298:GLY:HA2	6:N:53:ILE:H	1.75	0.52
6:D:1480:PHE:HB2	12:D:9337:HOH:O	2.10	0.52
7:E:74:VAL:HB	7:E:79:LEU:HD21	1.91	0.52
5:M:280:LYS:HE2	12:M:7317:HOH:O	2.09	0.52
5:M:281:LEU:CD1	5:M:306:THR:HA	2.40	0.52
5:M:882:LEU:HD11	6:N:1038:LEU:HB3	1.91	0.52
6:N:204:LEU:HG	6:N:394:LEU:O	2.10	0.52
6:N:1465:ASN:OD1	6:N:1473:PRO:HG3	2.09	0.52
4:A:20:TYR:CE2	4:A:198:ARG:HB3	2.45	0.52
4:A:186:LEU:HG	12:A:364:HOH:O	2.10	0.52
5:C:169:GLY:HA2	5:C:263:ASP:HB3	1.91	0.52
5:C:724:ARG:O	5:C:734:LEU:HD11	2.10	0.52
6:D:114:THR:O	6:D:495:ARG:HG3	2.10	0.52
6:D:800:LYS:HD2	6:D:804:LEU:HD22	1.91	0.52
6:D:1275:SER:HB2	6:D:1294:VAL:CG2	2.40	0.52
6:D:1318:TYR:OH	6:N:42:ASP:HB2	2.10	0.52
11:D:5999:APC:H5'1	11:D:5999:APC:C8	2.37	0.52
4:K:67:THR:HG21	5:M:609:ASN:HD21	1.73	0.52
4:L:197:LEU:O	4:L:197:LEU:HD23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:2:GLU:O	5:M:3:ILE:HD13	2.09	0.52
5:M:976:ASP:CB	5:M:979:THR:HG22	2.40	0.52
6:N:1481:VAL:HG13	7:O:18:ARG:HE	1.74	0.52
6:N:1495:ILE:HG12	7:O:80:VAL:HG11	1.92	0.52
1:X:19:DC:H4'	5:M:1000:MET:CE	2.39	0.52
4:A:167:VAL:HA	12:A:333:HOH:O	2.08	0.52
4:B:83:LYS:CE	4:B:168:ASP:HB2	2.40	0.52
5:C:198:ARG:HD3	12:C:1266:HOH:O	2.10	0.52
5:C:444:PRO:HG2	5:C:452:ILE:HG13	1.92	0.52
6:D:204:LEU:HD21	6:D:445:ARG:HD3	1.90	0.52
5:M:25:SER:OG	5:M:335:THR:HB	2.10	0.52
5:M:165:LEU:HD12	5:M:166:PRO:C	2.29	0.52
5:M:325:ILE:HG22	5:M:331:ARG:HH11	1.74	0.52
5:M:367:LEU:HB3	5:M:371:LYS:HG2	1.92	0.52
5:M:473:ARG:HG3	5:M:474:VAL:N	2.24	0.52
5:M:580:MET:HB3	5:M:584:GLU:CD	2.30	0.52
5:M:1050:GLN:NE2	6:N:1471:LEU:N	2.57	0.52
6:N:591:VAL:CG1	6:N:597:ASP:HA	2.40	0.52
6:N:625:TYR:HB3	6:N:749:VAL:HG23	1.92	0.52
6:N:1330:ILE:HG22	6:N:1331:ASP:N	2.25	0.52
6:N:1396:GLU:O	6:N:1400:VAL:HG23	2.09	0.52
6:N:1440:PHE:O	6:N:1441:GLN:O	2.28	0.52
7:O:41:GLU:HG3	7:O:42:PRO:HD3	1.90	0.52
7:O:57:ASP:H	7:O:58:PRO:HD3	1.74	0.52
4:A:101:LEU:HD23	4:A:102:LYS:N	2.24	0.52
4:A:132:LEU:HG	4:A:136:GLY:HA3	1.92	0.52
5:C:279:GLU:HG3	5:C:280:LYS:CD	2.37	0.52
5:C:617:ASP:HB2	5:C:619:ARG:HD3	1.92	0.52
6:D:69:GLU:HB2	12:D:9407:HOH:O	2.09	0.52
6:D:438:ASP:HB3	6:D:445:ARG:HH22	1.74	0.52
6:D:470:LEU:CB	6:D:503:LEU:HD11	2.40	0.52
6:D:766:ALA:HA	12:D:9297:HOH:O	2.10	0.52
6:D:1240:THR:HG23	6:D:1253:THR:CB	2.30	0.52
6:D:1278:ASP:OD2	6:N:41:ARG:HA	2.10	0.52
7:E:17:TYR:O	7:E:21:VAL:HG23	2.10	0.52
4:K:176:ARG:NH1	5:M:865:THR:HB	2.24	0.52
5:M:163:ILE:HG13	5:M:163:ILE:O	2.10	0.52
5:M:310:LEU:O	5:M:314:THR:HG23	2.10	0.52
5:M:530:GLU:HB2	12:M:7105:HOH:O	2.09	0.52
6:N:491:LYS:HE2	6:N:495:ARG:HH12	1.72	0.52
4:A:71:VAL:HG22	4:A:132:LEU:CD1	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:50:GLY:HA3	4:B:171:PHE:O	2.10	0.51
5:C:278:GLU:HA	5:C:282:GLY:O	2.11	0.51
5:C:501:THR:HG22	5:C:513:VAL:CG2	2.40	0.51
6:D:185:VAL:HG13	6:D:189:GLN:NE2	2.25	0.51
6:D:660:LYS:HD3	6:D:694:VAL:HG22	1.91	0.51
6:D:897:TRP:HA	6:D:900:ILE:HG13	1.91	0.51
6:D:1232:PRO:HB3	6:D:1361:VAL:CG2	2.36	0.51
7:E:95:VAL:CG1	12:E:117:HOH:O	2.59	0.51
4:L:124:ASN:OD1	4:L:127:LEU:HB2	2.10	0.51
5:M:52:PHE:O	5:M:54:ILE:N	2.43	0.51
5:M:83:CYS:HA	5:M:88:LEU:HD23	1.91	0.51
5:M:126:SER:CB	5:M:395:LYS:HZ2	2.22	0.51
5:M:160:ALA:O	5:M:173:ASP:HA	2.11	0.51
5:M:260:LEU:HA	5:M:291:ALA:HB2	1.92	0.51
6:N:139:GLY:O	6:N:147:VAL:HB	2.10	0.51
6:N:152:LEU:HD21	12:N:9148:HOH:O	2.10	0.51
6:N:581:LEU:HD23	6:N:581:LEU:N	2.25	0.51
6:N:1087:ARG:HD2	6:N:1087:ARG:N	2.25	0.51
1:G:22:DC:H4'	5:C:388:ARG:HD2	1.92	0.51
6:D:415:VAL:HG13	6:D:419:ASP:CB	2.38	0.51
4:L:159:LYS:HD3	4:L:159:LYS:N	2.25	0.51
5:M:139:GLN:CD	5:M:418:LEU:HD22	2.30	0.51
5:M:164:PRO:HD2	5:M:170:PRO:O	2.10	0.51
5:M:194:VAL:HG21	5:M:221:LEU:HA	1.92	0.51
5:M:751:PRO:HA	5:M:792:VAL:CG1	2.40	0.51
5:M:798:GLY:H	5:M:827:VAL:HG11	1.76	0.51
5:M:863:ASP:O	5:M:865:THR:N	2.43	0.51
5:M:905:ILE:N	5:M:905:ILE:CD1	2.74	0.51
7:O:94:PRO:CG	12:O:1341:HOH:O	2.57	0.51
4:A:38:ASN:HB3	4:A:39:PRO:HD3	1.93	0.51
4:A:209:GLU:O	4:A:213:GLN:HG3	2.10	0.51
5:C:54:ILE:HG23	5:C:54:ILE:O	2.10	0.51
5:C:118:ILE:CG2	5:C:382:ILE:HD13	2.39	0.51
5:C:810:ASP:CB	5:C:813:VAL:HG13	2.39	0.51
6:D:470:LEU:HD13	12:D:9127:HOH:O	2.10	0.51
6:D:606:ILE:O	6:D:613:ARG:N	2.40	0.51
6:D:860:LEU:HB2	6:D:861:GLN:NE2	2.25	0.51
6:D:902:LEU:HB3	12:D:9499:HOH:O	2.10	0.51
6:D:1414:PRO:HA	12:D:9161:HOH:O	2.08	0.51
4:L:94:LEU:HD21	4:L:119:ASP:OD1	2.11	0.51
6:N:607:LEU:HA	6:N:613:ARG:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:843:PHE:CE1	6:N:864:VAL:HG11	2.46	0.51
6:N:1011:PHE:HB3	6:N:1021:TYR:CD1	2.45	0.51
6:N:1094:LEU:HD13	6:N:1260:ILE:HD13	1.91	0.51
6:N:1106:VAL:HB	6:N:1108:ARG:NE	2.24	0.51
6:N:1114:THR:CG2	6:N:1195:GLN:HB2	2.41	0.51
2:H:11:C:O2'	2:H:12:G:H5"	2.10	0.51
5:C:73:LEU:HD12	5:C:73:LEU:O	2.10	0.51
5:C:80:GLN:O	5:C:83:CYS:HB2	2.11	0.51
5:C:129:ILE:HG12	5:C:386:PHE:O	2.09	0.51
5:C:517:ARG:HB3	12:C:1211:HOH:O	2.09	0.51
5:C:906:PHE:CD1	6:D:1067:VAL:HG22	2.46	0.51
5:C:960:GLU:HA	12:C:1124:HOH:O	2.09	0.51
5:C:1092:LEU:HD21	6:D:607:LEU:HD21	1.91	0.51
6:D:396:VAL:CB	6:D:447:VAL:HG12	2.38	0.51
6:D:619:LEU:HD23	6:D:619:LEU:N	2.26	0.51
6:D:929:ARG:HG2	12:D:9142:HOH:O	2.10	0.51
6:D:1145:TYR:CD2	6:D:1168:MET:SD	3.03	0.51
6:D:1300:SER:N	6:N:59:ALA:HB1	2.25	0.51
7:E:48:MET:CB	7:E:54:LEU:HB2	2.39	0.51
4:L:5:LYS:O	4:L:8:ALA:HB2	2.10	0.51
4:L:18:ARG:HD2	12:L:889:HOH:O	2.09	0.51
5:M:395:LYS:CE	5:M:403:SER:HB2	2.38	0.51
5:M:684:PHE:CE2	5:M:685:GLU:HB2	2.46	0.51
6:N:161:LEU:O	6:N:449:SER:HB2	2.10	0.51
6:N:843:PHE:CD1	6:N:849:ALA:HA	2.45	0.51
6:N:1262:LEU:HD21	6:N:1351:GLU:HG3	1.91	0.51
5:C:267:TYR:HB2	5:C:272:ALA:HB1	1.93	0.51
5:C:753:ASP:HA	6:D:679:ARG:NH1	2.26	0.51
6:D:792:ILE:HD12	6:D:941:PHE:CE1	2.45	0.51
6:D:805:GLU:HB2	12:D:9063:HOH:O	2.10	0.51
6:D:1463:LYS:O	6:D:1467:ILE:HD12	2.10	0.51
6:D:1468:LEU:O	6:D:1468:LEU:HD23	2.10	0.51
4:K:222:LEU:HD21	4:L:215:VAL:O	2.10	0.51
4:L:101:LEU:HB2	4:L:114:PHE:CD2	2.46	0.51
5:M:146:VAL:HG22	5:M:162:ILE:HA	1.91	0.51
5:M:690:ILE:HG13	5:M:694:LEU:CD1	2.34	0.51
5:M:987:ILE:HD11	6:N:946:GLY:HA2	1.93	0.51
5:M:1059:ASP:HA	12:M:7288:HOH:O	2.10	0.51
6:N:50:PHE:O	6:N:89:ARG:HB2	2.10	0.51
6:N:130:SER:HB3	6:N:132:TYR:HE1	1.75	0.51
6:N:900:ILE:HG22	6:N:914:LEU:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1276:GLU:OE2	6:N:1301:LYS:HE2	2.10	0.51
1:X:10:DG:H3'	6:N:586:ARG:HH21	1.76	0.51
5:C:31:GLN:NE2	5:C:71:TYR:OH	2.44	0.51
5:C:52:PHE:CE1	5:C:66:LEU:HG	2.45	0.51
5:C:198:ARG:HH21	5:C:203:ASP:HB3	1.76	0.51
6:D:415:VAL:O	6:D:432:TYR:HA	2.11	0.51
6:D:502:PHE:CD2	6:D:509:PRO:HD3	2.46	0.51
4:K:48:ILE:HD13	4:K:210:ALA:HB1	1.92	0.51
4:K:224:TYR:CD1	4:L:9:PRO:HD2	2.46	0.51
4:L:176:ARG:HH11	6:N:884:ARG:NH1	2.07	0.51
5:M:292:ARG:NH2	5:M:299:LYS:HZ3	2.08	0.51
5:M:964:LYS:O	5:M:968:LEU:HG	2.11	0.51
6:N:796:ARG:HG3	6:N:828:LYS:HD2	1.93	0.51
6:N:1236:LEU:HD13	6:N:1356:TYR:HA	1.93	0.51
1:X:19:DC:H5"	5:M:1001:VAL:HG23	1.93	0.51
2:Y:16:G:H5'	12:Y:777:HOH:O	2.10	0.51
4:A:33:GLY:O	4:A:195:LEU:HD22	2.10	0.51
5:C:243:ARG:HG3	12:C:1426:HOH:O	2.11	0.51
5:C:630:ARG:HE	5:C:705:ILE:HG22	1.76	0.51
5:C:759:THR:HB	5:C:785:VAL:CG1	2.41	0.51
5:C:944:LEU:HD22	5:C:962:GLN:OE1	2.11	0.51
5:C:949:LYS:HZ2	6:D:828:LYS:NZ	2.09	0.51
6:D:729:HIS:CE1	6:D:731:LEU:HB2	2.46	0.51
6:D:767:HIS:CD2	7:E:6:ILE:HG12	2.45	0.51
6:D:926:LYS:HA	6:D:929:ARG:HG3	1.93	0.51
6:D:956:ILE:HG12	6:D:1039:CYS:HA	1.93	0.51
6:D:1037:GLN:CG	6:D:1042:ARG:HB3	2.40	0.51
4:K:19:GLU:HB3	12:K:909:HOH:O	2.11	0.51
4:K:173:PRO:O	4:K:201:THR:HG22	2.10	0.51
5:M:29:ALA:O	5:M:44:ILE:HG12	2.11	0.51
5:M:496:ILE:HD12	5:M:496:ILE:H	1.76	0.51
5:M:545:ASN:HB3	5:M:583:LEU:HD22	1.93	0.51
5:M:552:HIS:HB3	6:N:1061:PHE:O	2.10	0.51
5:M:881:ASN:HD22	5:M:881:ASN:H	1.59	0.51
5:M:1094:ALA:O	6:N:518:PRO:HB2	2.11	0.51
6:N:1235:GLN:HG3	6:N:1236:LEU:N	2.24	0.51
6:N:1283:ILE:HG12	6:N:1311:LEU:CD1	2.41	0.51
2:H:10:G:H1'	12:H:505:HOH:O	2.10	0.51
5:C:300:ASP:OD2	5:C:303:PHE:HB2	2.10	0.51
5:C:433:THR:HG21	5:C:488:ALA:HB1	1.92	0.51
5:C:753:ASP:HA	6:D:679:ARG:CZ	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:133:ILE:CB	6:D:456:MET:HB3	2.41	0.51
6:D:637:LEU:HD11	6:D:642:CYS:CA	2.41	0.51
6:D:1117:TYR:CD1	6:D:1187:PRO:HA	2.46	0.51
6:D:1280:VAL:HA	6:D:1318:TYR:HA	1.92	0.51
6:D:1281:VAL:HB	6:D:1313:VAL:HG22	1.91	0.51
6:D:1313:VAL:HG21	6:D:1319:VAL:HG11	1.92	0.51
6:D:1366:LYS:O	6:D:1370:ILE:HG12	2.11	0.51
4:K:154:GLU:HB3	12:K:1920:HOH:O	2.10	0.51
5:M:290:LEU:HD13	12:M:7044:HOH:O	2.09	0.51
5:M:427:VAL:HB	5:M:428:ARG:HE	1.75	0.51
5:M:1020:PRO:HD2	6:N:622:ARG:O	2.11	0.51
6:N:450:TYR:CG	6:N:451:ASP:N	2.79	0.51
6:N:460:ALA:O	6:N:464:LEU:HG	2.11	0.51
6:N:482:LYS:HD2	12:N:9158:HOH:O	2.10	0.51
6:N:686:GLU:HA	6:N:689:ASP:OD2	2.11	0.51
6:N:780:LYS:CD	6:N:912:LYS:HE2	2.41	0.51
6:N:1209:LEU:HD22	6:N:1211:MET:HB2	1.91	0.51
6:N:1236:LEU:HD22	6:N:1359:GLN:HB3	1.93	0.51
6:N:1425:THR:HG22	6:N:1429:LEU:CD2	2.39	0.51
1:X:14:DT:H5'	1:X:14:DT:C6	2.45	0.51
2:Y:5:C:O5'	2:Y:5:C:H6	1.94	0.51
4:A:56:VAL:HG21	4:A:82:LEU:HD12	1.92	0.51
4:B:211:LEU:O	4:B:215:VAL:HG13	2.10	0.51
5:C:95:TYR:CD2	5:C:114:PHE:HB3	2.45	0.51
5:C:254:VAL:HG13	12:C:1450:HOH:O	2.09	0.51
5:C:418:LEU:N	5:C:418:LEU:HD12	2.26	0.51
5:C:1050:GLN:HG2	12:C:1306:HOH:O	2.11	0.51
6:D:409:VAL:HG11	6:D:435:VAL:HG21	1.93	0.51
6:D:647:ARG:HH21	6:D:723:GLY:H	1.58	0.51
6:D:922:LEU:HD23	12:D:9115:HOH:O	2.10	0.51
7:E:36:LYS:NZ	7:E:45:ARG:NH2	2.58	0.51
4:K:111:ALA:N	12:K:661:HOH:O	2.43	0.51
4:L:2:LEU:HD12	4:L:3:ASP:N	2.26	0.51
4:L:111:ALA:O	4:L:114:PHE:HD1	1.93	0.51
5:M:100:LEU:HD22	5:M:372:LEU:CD2	2.40	0.51
5:M:276:LYS:O	5:M:280:LYS:HB2	2.09	0.51
5:M:772:ARG:HA	12:M:7352:HOH:O	2.11	0.51
5:M:1111:ILE:HG13	5:M:1112:PHE:N	2.25	0.51
6:N:57:GLU:HG2	6:N:58:CYS:N	2.26	0.51
6:N:139:GLY:HA2	6:N:451:ASP:O	2.11	0.51
6:N:610:LYS:HA	6:N:615:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:911:LEU:O	6:N:915:VAL:HG23	2.11	0.51
6:N:1156:LEU:HD13	12:N:9239:HOH:O	2.11	0.51
6:N:1280:VAL:HG13	6:N:1317:ASP:O	2.11	0.51
6:N:1281:VAL:CG2	6:N:1319:VAL:HG11	2.39	0.51
4:A:10:VAL:HG13	4:B:229:GLN:CD	2.32	0.51
5:C:328:LEU:HD12	5:C:328:LEU:N	2.25	0.51
5:C:611:ILE:HG13	5:C:625:LEU:HD21	1.92	0.51
5:C:835:VAL:HG13	6:D:725:SER:OG	2.11	0.51
5:C:1008:ARG:O	6:D:625:TYR:HA	2.11	0.51
6:D:1001:GLU:O	6:D:1004:THR:HB	2.09	0.51
5:M:427:VAL:CG1	5:M:428:ARG:HH21	2.23	0.51
5:M:1035:MET:HB3	6:N:707:THR:HB	1.92	0.51
6:N:18:ILE:HD13	6:N:21:TRP:CH2	2.46	0.51
6:N:36:THR:HB	6:N:38:LYS:HD3	1.92	0.51
6:N:90:MET:HE2	6:N:521:PRO:HD3	1.92	0.51
6:N:710:ARG:CD	6:N:768:ASN:HD21	2.20	0.51
6:N:899:LEU:HD12	6:N:900:ILE:HG23	1.92	0.51
6:N:1012:GLU:OE1	6:N:1013:GLU:HG3	2.11	0.51
6:N:1357:ARG:HG2	12:N:9071:HOH:O	2.10	0.51
6:N:1409:ALA:HB1	12:N:9113:HOH:O	2.10	0.51
4:B:170:VAL:HG11	6:D:848:GLU:CD	2.32	0.50
5:C:135:VAL:O	5:C:392:SER:HA	2.10	0.50
5:C:211:LEU:HD12	5:C:211:LEU:O	2.11	0.50
5:C:302:VAL:O	5:C:306:THR:HG23	2.12	0.50
5:C:760:SER:O	5:C:785:VAL:HG22	2.11	0.50
5:C:922:PHE:CZ	5:C:963:LEU:HB3	2.43	0.50
6:D:21:TRP:HA	12:D:9333:HOH:O	2.10	0.50
6:D:165:LYS:HD3	6:D:199:LEU:HD22	1.93	0.50
6:D:988:ARG:HD3	6:D:992:ILE:HD11	1.93	0.50
6:D:1180:ALA:HB2	12:D:9058:HOH:O	2.12	0.50
6:D:1232:PRO:CB	6:D:1361:VAL:HG11	2.41	0.50
6:D:1318:TYR:HE2	6:N:42:ASP:OD1	1.94	0.50
6:D:1496:GLU:CD	6:D:1500:LYS:HE3	2.31	0.50
5:M:193:LEU:O	5:M:197:LEU:HG	2.11	0.50
5:M:690:ILE:HG23	5:M:852:ILE:HA	1.92	0.50
5:M:961:GLU:HA	5:M:961:GLU:OE2	2.10	0.50
5:M:1043:TYR:CZ	6:N:710:ARG:HD3	2.47	0.50
6:N:924:MET:HB3	7:O:7:ASP:OD1	2.11	0.50
6:N:927:THR:O	6:N:930:LEU:HB3	2.11	0.50
6:N:994:GLN:NE2	6:N:994:GLN:HA	2.25	0.50
7:O:33:HIS:HB2	7:O:37:ASN:ND2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:4:DC:H2"	3:I:5:DG:O5'	2.10	0.50
2:Y:16:G:H4'	6:N:743:ASP:OD2	2.11	0.50
4:B:92:PRO:HG3	12:B:332:HOH:O	2.11	0.50
4:B:103:ALA:O	4:B:138:LEU:HD23	2.10	0.50
4:B:143:ARG:CD	4:B:158:ILE:HG21	2.42	0.50
5:C:80:GLN:OE1	5:C:128:ILE:HD12	2.10	0.50
5:C:260:LEU:HA	5:C:291:ALA:HB2	1.92	0.50
5:C:356:ARG:HA	12:C:1263:HOH:O	2.11	0.50
5:C:464:LEU:O	5:C:466:PHE:N	2.44	0.50
5:C:996:LYS:HA	12:C:1441:HOH:O	2.12	0.50
5:C:1034:GLU:CB	6:D:619:LEU:HD22	2.30	0.50
5:C:1056:LYS:O	6:D:624:ASP:HB2	2.11	0.50
6:D:119:SER:HB2	6:D:123:LEU:CB	2.35	0.50
6:D:477:LEU:O	6:D:481:MET:HB2	2.10	0.50
6:D:1297:GLU:HA	6:N:78:VAL:HG22	1.92	0.50
6:D:1307:LYS:HG3	12:D:9301:HOH:O	2.12	0.50
6:D:1347:TYR:HD2	6:D:1348:LEU:HD22	1.75	0.50
6:D:1481:VAL:HG12	6:D:1481:VAL:O	2.11	0.50
5:M:437:ARG:HE	5:M:469:THR:HG22	1.76	0.50
6:N:67:ARG:HB2	12:N:9177:HOH:O	2.10	0.50
6:N:181:ASP:CB	6:N:441:ARG:HD3	2.41	0.50
6:N:409:VAL:CG2	6:N:421:LEU:HA	2.41	0.50
6:N:478:LEU:CD1	6:N:1388:ARG:HH21	2.19	0.50
6:N:581:LEU:O	6:N:603:LEU:HG	2.11	0.50
6:N:1090:ASP:HB3	6:N:1256:LEU:CD2	2.40	0.50
6:N:1106:VAL:HG21	6:N:1462:LEU:HD21	1.93	0.50
6:N:1207:TYR:H	6:N:1366:LYS:HZ1	1.59	0.50
6:N:1358:ALA:HB1	12:N:9142:HOH:O	2.12	0.50
6:N:1368:ILE:O	6:N:1372:VAL:HG12	2.10	0.50
4:B:104:GLU:HA	4:B:136:GLY:O	2.11	0.50
5:C:21:ILE:HG22	5:C:335:THR:HG22	1.92	0.50
5:C:120:LEU:CD2	5:C:121:MET:H	2.24	0.50
5:C:603:VAL:HG23	5:C:647:GLN:O	2.11	0.50
6:D:23:TYR:CD1	6:D:89:ARG:HG2	2.46	0.50
6:D:107:ASP:O	6:D:108:VAL:C	2.50	0.50
6:D:657:LEU:HB2	6:D:691:LEU:CD1	2.41	0.50
6:D:789:LEU:HD13	6:D:911:LEU:HD21	1.94	0.50
6:D:1147:ARG:HH12	6:D:1190:SER:HB2	1.76	0.50
6:D:1346:ARG:HA	6:D:1346:ARG:HH11	1.76	0.50
4:K:10:VAL:HG12	4:K:12:THR:HG23	1.92	0.50
4:L:19:GLU:O	4:L:200:TRP:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1:MET:SD	5:M:900:ARG:NH1	2.84	0.50
5:M:32:ALA:HA	12:M:7240:HOH:O	2.10	0.50
5:M:1005:MET:HB2	6:N:648:MET:HE1	1.94	0.50
6:N:143:ASN:HA	12:N:9476:HOH:O	2.10	0.50
6:N:402:PRO:HA	6:N:443:VAL:HG23	1.93	0.50
6:N:524:LEU:O	6:N:526:PRO:HD3	2.11	0.50
6:N:693:GLU:HA	7:O:48:MET:CE	2.41	0.50
6:N:771:SER:CB	6:N:778:LEU:HD13	2.41	0.50
6:N:809:PRO:O	6:N:812:ALA:HB3	2.11	0.50
6:N:1353:GLN:HB3	6:N:1357:ARG:NE	2.26	0.50
8:N:8001:STD:H20	12:N:9065:HOH:O	2.11	0.50
4:B:47:SER:CB	4:B:217:ILE:HD13	2.38	0.50
4:B:86:VAL:HG12	4:B:124:ASN:HB2	1.93	0.50
6:D:165:LYS:HG2	6:D:199:LEU:HD22	1.94	0.50
6:D:403:PHE:CE1	6:D:407:VAL:HG22	2.46	0.50
6:D:662:GLU:CD	6:D:669:ASN:HA	2.31	0.50
6:D:705:ALA:CB	6:D:706:PRO:HD3	2.41	0.50
6:D:761:ILE:HD11	7:E:23:VAL:HG11	1.92	0.50
6:D:993:LEU:HD22	6:D:1052:THR:HG23	1.94	0.50
6:D:1062:ARG:HG3	6:D:1062:ARG:NH1	2.26	0.50
6:D:1128:VAL:HG23	12:D:9178:HOH:O	2.11	0.50
6:D:1372:VAL:HA	6:D:1375:MET:HG3	1.93	0.50
5:M:136:ILE:HG21	5:M:336:VAL:HG13	1.93	0.50
5:M:278:GLU:HA	5:M:282:GLY:O	2.12	0.50
5:M:918:LEU:HD23	5:M:967:PHE:O	2.11	0.50
5:M:1041:GLU:OE1	6:N:1462:LEU:HB2	2.11	0.50
6:N:106:LYS:HB3	6:N:586:ARG:HD2	1.94	0.50
6:N:163:TYR:O	6:N:166:GLN:HG3	2.12	0.50
6:N:520:LEU:HD22	6:N:540:LEU:CD2	2.41	0.50
6:N:705:ALA:CB	6:N:706:PRO:HD3	2.41	0.50
6:N:962:GLN:HB3	6:N:966:GLU:OE1	2.11	0.50
6:N:1047:LYS:HG2	6:N:1053:PHE:CZ	2.46	0.50
6:N:1363:LEU:H	6:N:1363:LEU:CD2	2.23	0.50
5:C:52:PHE:O	5:C:54:ILE:N	2.45	0.50
5:C:95:TYR:HD2	5:C:114:PHE:HB3	1.77	0.50
5:C:674:VAL:HG12	5:C:990:GLY:O	2.11	0.50
6:D:96:ALA:HB2	6:D:555:LYS:HD2	1.94	0.50
6:D:112:ILE:HG13	6:D:124:GLU:OE2	2.10	0.50
6:D:112:ILE:O	6:D:116:LEU:HB2	2.12	0.50
6:D:477:LEU:HD11	6:D:495:ARG:HG2	1.93	0.50
6:D:1062:ARG:HG3	6:D:1062:ARG:HH11	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1087:ARG:HG3	6:D:1237:THR:HG23	1.93	0.50
6:D:1145:TYR:HA	6:D:1171:VAL:HG21	1.92	0.50
6:D:1297:GLU:C	6:N:52:PRO:HA	2.31	0.50
7:E:13:VAL:HA	12:E:116:HOH:O	2.12	0.50
4:K:15:THR:HG22	12:K:829:HOH:O	2.11	0.50
4:K:179:PHE:HB2	4:K:195:LEU:CD1	2.42	0.50
5:M:343:GLN:HG2	5:M:385:PHE:HB2	1.93	0.50
5:M:496:ILE:HA	5:M:531:PHE:O	2.11	0.50
5:M:744:ARG:N	12:M:7095:HOH:O	2.45	0.50
6:N:87:ARG:HB2	6:N:523:ASP:OD2	2.12	0.50
6:N:133:ILE:HB	6:N:153:LEU:O	2.11	0.50
6:N:531:ASP:C	6:N:533:GLY:H	2.14	0.50
6:N:771:SER:OG	6:N:778:LEU:HD13	2.11	0.50
6:N:1236:LEU:HD21	6:N:1361:VAL:H	1.75	0.50
1:X:18:DG:H5”	6:N:628:ARG:NH2	2.26	0.50
4:A:171:PHE:O	4:A:173:PRO:HD3	2.11	0.50
4:B:92:PRO:HA	4:B:146:ARG:CZ	2.41	0.50
5:C:216:GLU:OE1	5:C:217:LEU:HG	2.12	0.50
5:C:350:ARG:HG2	5:C:350:ARG:HH11	1.77	0.50
5:C:435:TYR:CE1	5:C:539:VAL:HG22	2.46	0.50
5:C:687:ALA:C	5:C:688:ILE:HD12	2.31	0.50
5:C:1030:GLN:HB2	6:D:626:SER:HB2	1.93	0.50
6:D:664:LYS:HG2	12:D:9090:HOH:O	2.11	0.50
6:D:706:PRO:HG2	11:D:5999:APC:C2	2.41	0.50
6:D:860:LEU:HA	6:D:877:PRO:HB2	1.94	0.50
6:D:912:LYS:HD2	6:D:913:ASP:OD2	2.12	0.50
6:D:1205:TYR:CZ	6:D:1366:LYS:HD3	2.47	0.50
6:D:1440:PHE:CD2	6:D:1441:GLN:N	2.80	0.50
6:D:1442:ASN:OD1	6:D:1444:THR:HB	2.12	0.50
7:E:25:LYS:O	7:E:28:GLN:HB2	2.10	0.50
4:K:48:ILE:HG23	4:K:213:GLN:OE1	2.11	0.50
4:L:18:ARG:O	4:L:207:PRO:HD3	2.12	0.50
4:L:104:GLU:HA	4:L:136:GLY:O	2.11	0.50
4:L:162:ILE:HG13	4:L:163:ASN:N	2.25	0.50
5:M:218:VAL:HA	5:M:221:LEU:HD23	1.93	0.50
5:M:751:PRO:HG3	5:M:796:GLU:HA	1.93	0.50
5:M:971:LYS:HB3	5:M:988:VAL:CG1	2.42	0.50
5:M:1005:MET:SD	6:N:724:GLN:HA	2.52	0.50
5:M:1018:GLN:OE1	5:M:1018:GLN:HA	2.11	0.50
6:N:493:ARG:CD	6:N:1390:LEU:HB2	2.41	0.50
6:N:1127:GLU:HB3	6:N:1133:ARG:CZ	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:18:DG:H5'	1:G:18:DG:C8	2.46	0.50
4:A:82:LEU:HD11	4:A:142:VAL:CG1	2.41	0.50
4:A:155:LYS:HA	4:A:155:LYS:HE3	1.92	0.50
5:C:47:ALA:O	5:C:50:GLU:HB3	2.11	0.50
5:C:119:PRO:HG2	5:C:386:PHE:CD2	2.47	0.50
5:C:176:VAL:HG23	12:C:1232:HOH:O	2.12	0.50
5:C:290:LEU:HD21	12:C:1356:HOH:O	2.12	0.50
5:C:342:ASP:HA	5:C:345:ARG:CZ	2.41	0.50
5:C:639:GLN:N	5:C:639:GLN:HE21	2.10	0.50
5:C:690:ILE:HG23	5:C:852:ILE:HA	1.93	0.50
5:C:910:LYS:H	5:C:913:GLU:HG3	1.77	0.50
6:D:6:ARG:HA	6:D:1470:ARG:NH1	2.26	0.50
6:D:481:MET:SD	6:D:493:ARG:HB2	2.52	0.50
6:D:1465:ASN:HD21	6:D:1470:ARG:HD3	1.77	0.50
4:L:80:LEU:HD12	4:L:83:LYS:NZ	2.27	0.50
4:L:143:ARG:NH2	4:L:158:ILE:HD12	2.26	0.50
5:M:328:LEU:HD22	5:M:433:THR:O	2.12	0.50
5:M:597:ALA:HB2	5:M:655:LEU:HD21	1.92	0.50
6:N:1236:LEU:HD21	6:N:1361:VAL:CG2	2.42	0.50
6:N:1281:VAL:HA	6:N:1293:PHE:O	2.12	0.50
7:O:51:LEU:HG	7:O:53:GLY:H	1.76	0.50
1:G:14:DT:H5'	1:G:14:DT:C6	2.46	0.50
4:A:24:VAL:HG22	4:A:196:THR:CG2	2.41	0.50
5:C:601:GLY:O	5:C:648:ARG:HA	2.12	0.50
6:D:18:ILE:HG22	6:D:92:HIS:HB3	1.94	0.50
6:D:762:GLN:NE2	7:E:20:THR:HG21	2.26	0.50
6:D:989:TYR:HA	6:D:992:ILE:HD12	1.92	0.50
6:D:1101:VAL:HG21	6:D:1424:VAL:HG23	1.94	0.50
6:D:1102:THR:HG22	6:D:1222:GLY:CA	2.42	0.50
6:D:1369:GLU:HA	6:D:1372:VAL:HG12	1.93	0.50
5:M:274:ARG:CB	5:M:285:LEU:HD13	2.41	0.50
5:M:428:ARG:NH1	5:M:450:GLY:C	2.65	0.50
5:M:474:VAL:HG23	5:M:478:VAL:O	2.12	0.50
5:M:703:ILE:H	5:M:703:ILE:CD1	2.15	0.50
5:M:756:VAL:HG23	5:M:825:VAL:HG21	1.93	0.50
6:N:820:GLU:HG3	6:N:836:VAL:CG1	2.40	0.50
4:B:30:ARG:NH1	4:B:30:ARG:HG2	2.27	0.50
4:B:201:THR:HG21	4:B:205:VAL:HG23	1.94	0.50
5:C:524:VAL:HG22	5:C:525:SER:H	1.77	0.50
6:D:510:GLU:OE2	6:D:510:GLU:N	2.44	0.50
6:D:562:ALA:C	6:D:567:ILE:HD11	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1255:GLY:O	6:D:1258:ARG:N	2.44	0.50
6:D:1397:LYS:CE	6:D:1432:LYS:HZ1	2.24	0.50
6:D:1435:LEU:HG	6:D:1467:ILE:HD13	1.94	0.50
4:K:46:SER:HB3	5:M:856:GLU:CD	2.32	0.50
5:M:21:ILE:O	5:M:25:SER:HB2	2.12	0.50
5:M:118:ILE:O	5:M:118:ILE:HD12	2.12	0.50
5:M:242:LEU:HD23	5:M:243:ARG:H	1.75	0.50
5:M:728:HIS:NE2	5:M:775:ARG:NH2	2.60	0.50
6:N:31:THR:N	6:N:44:LEU:HD21	2.27	0.50
6:N:858:VAL:HG12	6:N:859:ASP:O	2.11	0.50
6:N:1115:THR:CG2	6:N:1151:ARG:HH21	2.23	0.50
6:N:1402:ALA:HB2	6:N:1415:VAL:CG2	2.41	0.50
6:N:1497:GLU:HB3	12:N:9257:HOH:O	2.11	0.50
2:H:13:C:OP1	5:C:452:ILE:HD13	2.11	0.49
2:Y:15:C:O2'	2:Y:16:G:H5'	2.11	0.49
3:Z:9:DG:H2"	3:Z:10:DA:C8	2.47	0.49
4:A:74:ASP:OD1	4:A:76:VAL:HB	2.12	0.49
5:C:185:LYS:HD3	5:C:190:LYS:HG2	1.94	0.49
5:C:678:PRO:O	6:D:943:THR:HA	2.12	0.49
5:C:890:LEU:HD21	5:C:901:TYR:CD1	2.47	0.49
5:C:913:GLU:O	5:C:916:GLU:HB3	2.12	0.49
5:C:950:LEU:HB3	5:C:952:LEU:HD22	1.94	0.49
6:D:91:GLY:O	6:D:518:PRO:HA	2.12	0.49
6:D:1146:GLY:CA	6:D:1207:TYR:HB2	2.42	0.49
4:K:197:LEU:CD2	4:K:199:ILE:HD11	2.42	0.49
4:L:57:TYR:CZ	4:L:161:ARG:HG2	2.46	0.49
5:M:139:GLN:OE1	5:M:415:PRO:HD2	2.12	0.49
5:M:285:LEU:HD12	12:M:7143:HOH:O	2.12	0.49
5:M:338:GLU:HA	5:M:341:THR:HG22	1.94	0.49
5:M:468:ARG:HE	5:M:487:THR:N	2.10	0.49
5:M:714:ASP:HB2	12:M:7055:HOH:O	2.12	0.49
6:N:192:ALA:HB1	6:N:193:PRO:HD2	1.94	0.49
6:N:789:LEU:HD13	6:N:934:LEU:HD22	1.94	0.49
6:N:957:PRO:CG	6:N:1007:VAL:HG22	2.42	0.49
6:N:999:THR:HG22	12:N:9282:HOH:O	2.11	0.49
6:N:1147:ARG:O	6:N:1165:TYR:HA	2.12	0.49
6:N:1346:ARG:HB2	6:N:1346:ARG:HH11	1.77	0.49
3:Z:6:DC:C3'	6:N:1266:ARG:NH2	2.68	0.49
4:A:41:ARG:HH11	4:A:41:ARG:HG3	1.76	0.49
4:B:109:VAL:HG12	4:B:129:ILE:HB	1.93	0.49
5:C:201:GLY:HA2	12:C:1283:HOH:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:617:ASP:CG	5:C:619:ARG:HE	2.16	0.49
5:C:904:PRO:CD	5:C:908:GLY:HA2	2.41	0.49
6:D:163:TYR:HB3	6:D:434:ARG:NH2	2.28	0.49
6:D:551:ASN:ND2	6:D:555:LYS:NZ	2.60	0.49
6:D:610:LYS:O	6:D:615:ARG:HG2	2.12	0.49
6:D:781:PRO:O	6:D:786:ILE:HD11	2.13	0.49
6:D:958:GLU:O	6:D:961:LYS:HG2	2.12	0.49
6:D:1184:GLN:HG2	12:D:9250:HOH:O	2.12	0.49
4:L:57:TYR:CE2	4:L:161:ARG:HG2	2.47	0.49
5:M:1044:GLY:HA3	7:O:17:TYR:CD1	2.47	0.49
5:M:1088:LEU:CD2	5:M:1092:LEU:HD12	2.42	0.49
6:N:598:ARG:HH11	6:N:598:ARG:HB3	1.76	0.49
1:G:15:DC:H5"	5:C:1035:MET:SD	2.53	0.49
2:Y:7:G:C8	2:Y:7:G:C5'	2.95	0.49
5:C:167:LYS:N	12:C:1362:HOH:O	2.46	0.49
5:C:861:LEU:HD13	5:C:865:THR:OG1	2.12	0.49
6:D:14:SER:OG	6:D:17:LYS:HB2	2.12	0.49
6:D:54:LYS:CG	6:D:57:GLU:HB3	2.42	0.49
6:D:190:GLU:HG2	6:D:196:VAL:HG22	1.94	0.49
6:D:615:ARG:HG3	6:D:619:LEU:HG	1.94	0.49
6:D:1310:ARG:HG3	6:D:1327:ARG:HD3	1.94	0.49
6:D:1312:LEU:HG	6:D:1327:ARG:CZ	2.41	0.49
6:D:1397:LYS:NZ	6:D:1432:LYS:NZ	2.59	0.49
6:D:1472:ILE:O	6:D:1477:GLY:HA3	2.13	0.49
7:E:54:LEU:HA	7:E:58:PRO:CG	2.43	0.49
4:K:39:PRO:O	4:K:43:ILE:HG12	2.12	0.49
4:K:111:ALA:O	4:K:114:PHE:HD1	1.96	0.49
4:L:20:TYR:OH	4:L:198:ARG:HD3	2.12	0.49
4:L:99:LEU:HD13	4:L:144:VAL:CG2	2.42	0.49
5:M:195:LEU:HD21	5:M:238:LEU:HG	1.93	0.49
5:M:374:ASN:O	5:M:377:PRO:HD2	2.11	0.49
6:N:107:ASP:O	6:N:108:VAL:C	2.50	0.49
6:N:777:PRO:O	6:N:780:LYS:HE3	2.12	0.49
6:N:900:ILE:HG21	12:N:9373:HOH:O	2.12	0.49
6:N:959:GLU:HA	6:N:962:GLN:OE1	2.12	0.49
6:N:1103:HIS:CD2	6:N:1463:LYS:H	2.29	0.49
6:N:1353:GLN:HA	6:N:1353:GLN:HE21	1.77	0.49
5:C:572:ILE:HG13	5:C:573:ARG:N	2.27	0.49
5:C:1023:GLY:HA2	12:C:1137:HOH:O	2.11	0.49
5:C:1066:ALA:O	5:C:1070:ILE:HG13	2.11	0.49
6:D:5:VAL:CG2	6:D:1468:LEU:HD21	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:6:ARG:C	6:D:1459:LEU:HD12	2.32	0.49
6:D:403:PHE:CD2	6:D:444:VAL:HG23	2.48	0.49
6:D:764:LEU:HD12	6:D:766:ALA:N	2.28	0.49
6:D:1093:TYR:CZ	6:D:1097:LYS:HE3	2.47	0.49
7:E:4:PRO:HA	12:E:128:HOH:O	2.12	0.49
7:E:34:GLY:HA2	12:E:117:HOH:O	2.13	0.49
5:M:35:PRO:HB2	5:M:37:GLU:HG3	1.94	0.49
5:M:139:GLN:HE21	5:M:334:ARG:CD	2.26	0.49
5:M:218:VAL:HG22	5:M:221:LEU:CD2	2.43	0.49
5:M:414:GLY:O	5:M:416:GLY:N	2.45	0.49
6:N:10:ILE:HD12	6:N:1450:ALA:HB3	1.95	0.49
6:N:23:TYR:HB3	12:N:9497:HOH:O	2.13	0.49
6:N:133:ILE:HA	6:N:456:MET:HA	1.95	0.49
6:N:190:GLU:HG2	6:N:196:VAL:HG22	1.94	0.49
6:N:470:LEU:HG	12:N:9059:HOH:O	2.12	0.49
6:N:694:VAL:HG22	12:N:9248:HOH:O	2.12	0.49
6:N:1129:THR:HG23	6:N:1130:ARG:N	2.25	0.49
4:B:159:LYS:H	4:B:159:LYS:NZ	2.10	0.49
5:C:442:GLU:HG2	5:C:454:SER:OG	2.12	0.49
5:C:632:ASN:HB2	5:C:633:GLN:HE21	1.77	0.49
5:C:666:LEU:HG	5:C:668:LEU:HD11	1.94	0.49
6:D:115:LEU:HD12	6:D:115:LEU:O	2.12	0.49
6:D:919:PHE:HE2	6:D:1212:ALA:HB2	1.78	0.49
6:D:1080:GLY:O	6:D:1084:THR:HG23	2.11	0.49
6:D:1097:LYS:HG2	6:D:1440:PHE:HE1	1.77	0.49
4:K:1:MET:O	4:K:6:LEU:HD22	2.11	0.49
4:L:75:VAL:O	4:L:79:ILE:HG23	2.12	0.49
5:M:217:LEU:HD11	5:M:314:THR:OG1	2.12	0.49
5:M:392:SER:C	5:M:393:GLN:HG3	2.33	0.49
5:M:689:VAL:HG23	5:M:870:ILE:O	2.13	0.49
5:M:853:LEU:HD22	5:M:858:MET:HB3	1.94	0.49
5:M:1110:ASP:HB2	12:M:7031:HOH:O	2.11	0.49
6:N:133:ILE:O	6:N:152:LEU:CA	2.61	0.49
6:N:702:LEU:HD23	6:N:745:MET:HE1	1.93	0.49
6:N:827:ILE:O	6:N:837:GLY:HA3	2.12	0.49
6:N:1213:ARG:NH2	7:O:10:PHE:HB3	2.19	0.49
4:B:206:THR:HG23	4:B:209:GLU:H	1.77	0.49
5:C:139:GLN:O	5:C:333:ILE:HA	2.13	0.49
5:C:185:LYS:CD	5:C:190:LYS:HG2	2.42	0.49
5:C:254:VAL:HA	5:C:257:VAL:HG23	1.94	0.49
5:C:260:LEU:HD12	5:C:260:LEU:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:517:ARG:HH22	5:C:528:GLU:CD	2.16	0.49
5:C:597:ALA:CB	5:C:655:LEU:HD21	2.38	0.49
5:C:713:ARG:O	5:C:720:GLU:HG3	2.13	0.49
5:C:860:HIS:CD2	5:C:975:TYR:HB2	2.48	0.49
5:C:1005:MET:SD	6:D:724:GLN:HA	2.52	0.49
5:C:1008:ARG:NH1	6:D:624:ASP:OD2	2.45	0.49
6:D:37:LEU:HD22	6:D:535:PHE:CZ	2.46	0.49
6:D:165:LYS:HG2	6:D:199:LEU:CB	2.43	0.49
6:D:868:TYR:CG	6:D:869:MET:N	2.80	0.49
6:D:970:LYS:HA	6:D:973:GLN:NE2	2.26	0.49
6:D:1275:SER:HB2	6:D:1294:VAL:HG11	1.95	0.49
4:K:42:ARG:HH12	4:L:34:VAL:CG1	2.26	0.49
5:M:626:ARG:H	5:M:639:GLN:NE2	1.95	0.49
5:M:798:GLY:H	5:M:827:VAL:CG1	2.25	0.49
5:M:1008:ARG:HG3	5:M:1028:GLY:N	2.24	0.49
5:M:1092:LEU:HA	5:M:1095:LEU:CD1	2.42	0.49
5:M:1108:PRO:HG3	12:M:7061:HOH:O	2.12	0.49
6:N:136:ASP:HB3	6:N:137:PRO:CD	2.38	0.49
6:N:415:VAL:HG13	6:N:419:ASP:CB	2.43	0.49
6:N:598:ARG:HB3	6:N:598:ARG:NH1	2.28	0.49
6:N:829:VAL:O	6:N:835:SER:HB2	2.11	0.49
6:N:1364:HIS:CE1	6:N:1366:LYS:HG3	2.48	0.49
4:A:58:ILE:HG21	4:A:68:ILE:CD1	2.40	0.49
5:C:244:PRO:HD2	5:C:245:GLY:N	2.19	0.49
5:C:517:ARG:HH11	5:C:522:VAL:HG11	1.77	0.49
6:D:185:VAL:HG22	6:D:189:GLN:NE2	2.27	0.49
6:D:660:LYS:CG	6:D:694:VAL:HG22	2.42	0.49
6:D:737:ASN:ND2	11:D:5999:APC:O3'	2.46	0.49
6:D:875:THR:HG23	6:D:879:ARG:HE	1.78	0.49
4:K:42:ARG:HH12	4:L:34:VAL:CB	2.25	0.49
5:M:205:GLU:HA	5:M:209:ARG:NH2	2.27	0.49
5:M:516:ARG:CD	6:N:1068:LEU:HD13	2.43	0.49
5:M:546:LEU:C	5:M:581:THR:HG21	2.33	0.49
5:M:551:GLU:HG2	5:M:906:PHE:HA	1.94	0.49
6:N:52:PRO:HG2	6:N:80:VAL:HG13	1.94	0.49
6:N:90:MET:CE	6:N:521:PRO:HD3	2.42	0.49
6:N:162:ARG:HH22	6:N:414:ARG:CZ	2.25	0.49
6:N:201:GLY:HA3	6:N:396:VAL:O	2.13	0.49
6:N:433:GLY:HA2	6:N:449:SER:C	2.33	0.49
6:N:525:ARG:HG2	6:N:541:ASN:ND2	2.26	0.49
6:N:575:GLN:CA	6:N:575:GLN:HE21	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:619:LEU:HB2	6:N:621:LYS:HD3	1.94	0.49
6:N:814:ALA:HB2	12:N:9131:HOH:O	2.13	0.49
4:A:156:HIS:CD2	4:A:157:GLY:H	2.30	0.49
6:D:169:TYR:CE1	6:D:197:SER:HA	2.47	0.49
6:D:591:VAL:HB	12:D:9428:HOH:O	2.11	0.49
6:D:700:VAL:HG22	6:D:718:PRO:HG3	1.94	0.49
6:D:764:LEU:CD1	6:D:766:ALA:HB3	2.43	0.49
6:D:781:PRO:HG2	6:D:911:LEU:HD23	1.95	0.49
5:M:59:LYS:HG3	12:M:7296:HOH:O	2.13	0.49
5:M:474:VAL:HG23	5:M:478:VAL:C	2.32	0.49
5:M:676:ILE:O	5:M:676:ILE:CG2	2.60	0.49
5:M:838:LYS:H	5:M:838:LYS:HD2	1.78	0.49
6:N:119:SER:H	6:N:123:LEU:HB2	1.77	0.49
6:N:864:VAL:HG12	6:N:865:THR:H	1.77	0.49
6:N:1109:GLU:HG2	6:N:1202:GLN:H	1.77	0.49
6:N:1114:THR:HG21	6:N:1195:GLN:HB2	1.94	0.49
6:N:1253:THR:HG22	6:N:1358:ALA:HB1	1.95	0.49
4:A:88:ARG:HB2	4:A:123:MET:HE3	1.95	0.49
4:B:99:LEU:HD22	4:B:144:VAL:CG2	2.40	0.49
5:C:89:THR:O	5:C:91:GLN:HG3	2.13	0.49
5:C:100:LEU:HD12	5:C:101:ILE:N	2.28	0.49
5:C:174:LEU:HG	5:C:184:MET:SD	2.53	0.49
5:C:335:THR:O	5:C:339:LEU:HD12	2.13	0.49
6:D:181:ASP:O	6:D:441:ARG:HD3	2.13	0.49
6:D:396:VAL:HG23	6:D:398:ALA:HB3	1.95	0.49
6:D:1086:LEU:HB3	6:D:1087:ARG:NH1	2.28	0.49
4:K:44:LEU:HA	4:K:48:ILE:CD1	2.43	0.49
4:L:72:LYS:HB2	12:L:1676:HOH:O	2.12	0.49
5:M:328:LEU:HD21	5:M:434:HIS:HA	1.94	0.49
5:M:440:PRO:HA	6:N:1078:ARG:NH2	2.28	0.49
5:M:549:PHE:HB3	5:M:552:HIS:CD2	2.48	0.49
6:N:129:PHE:HZ	12:N:9171:HOH:O	1.95	0.49
6:N:704:ARG:HB2	6:N:736:PHE:HD2	1.77	0.49
6:N:845:ASN:HB3	6:N:848:GLU:HG3	1.93	0.49
7:O:54:LEU:HD21	12:O:1249:HOH:O	2.12	0.49
1:G:16:DG:OP1	6:D:621:LYS:HE2	2.13	0.49
2:H:2:A:H2'	2:H:3:G:O5'	2.13	0.49
2:H:7:G:C8	2:H:7:G:H5"	2.47	0.49
4:A:43:ILE:HG21	4:A:214:ALA:HA	1.95	0.49
4:B:23:PHE:O	4:B:196:THR:HA	2.12	0.49
5:C:718:GLY:HA2	12:C:1333:HOH:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:732:ALA:HA	5:C:735:ARG:NH1	2.28	0.49
5:C:886:LEU:HD13	6:D:951:ILE:HG13	1.95	0.49
6:D:19:ARG:O	6:D:22:SER:HB3	2.13	0.49
6:D:47:GLU:OE2	6:D:53:ILE:HB	2.13	0.49
6:D:465:LEU:HD21	6:D:509:PRO:O	2.12	0.49
6:D:1111:ASP:CB	6:D:1203:LYS:HE3	2.37	0.49
7:E:95:VAL:HG11	12:E:117:HOH:O	2.13	0.49
4:L:173:PRO:HA	4:L:202:ASP:OD2	2.13	0.49
5:M:103:LYS:HB2	12:M:7017:HOH:O	2.12	0.49
5:M:143:SER:O	5:M:145:GLY:N	2.46	0.49
5:M:244:PRO:HD2	5:M:245:GLY:H	1.77	0.49
5:M:272:ALA:HB1	12:M:7209:HOH:O	2.13	0.49
5:M:517:ARG:CZ	5:M:522:VAL:HG11	2.43	0.49
5:M:744:ARG:HG3	5:M:747:ALA:HB2	1.94	0.49
5:M:750:LYS:HB2	6:N:681:ARG:HD3	1.95	0.49
5:M:780:GLU:HG3	5:M:781:LYS:N	2.26	0.49
5:M:877:PRO:HG2	5:M:878:SER:H	1.77	0.49
5:M:1071:ILE:O	6:N:659:LYS:HB2	2.13	0.49
6:N:19:ARG:HA	6:N:92:HIS:ND1	2.28	0.49
6:N:26:VAL:N	12:N:9328:HOH:O	2.46	0.49
6:N:860:LEU:HA	6:N:877:PRO:HB2	1.95	0.49
6:N:1231:GLU:OE1	6:N:1232:PRO:HD3	2.13	0.49
6:N:1389:LEU:CG	6:N:1390:LEU:HD23	2.40	0.49
5:C:433:THR:CG2	5:C:488:ALA:HB1	2.43	0.48
5:C:569:VAL:HG11	5:C:996:LYS:HZ1	1.76	0.48
5:C:598:GLU:O	5:C:651:LYS:HG3	2.13	0.48
5:C:954:THR:HG22	12:C:1155:HOH:O	2.12	0.48
5:C:971:LYS:HB3	5:C:988:VAL:HG12	1.94	0.48
6:D:41:ARG:HD3	6:D:43:GLY:H	1.78	0.48
6:D:74:GLU:HG3	12:D:9216:HOH:O	2.13	0.48
6:D:181:ASP:OD2	6:D:441:ARG:HG2	2.13	0.48
6:D:654:LYS:HB3	6:D:655:PRO:HD3	1.95	0.48
6:D:787:LEU:HD12	6:D:787:LEU:O	2.13	0.48
6:D:1171:VAL:O	6:D:1175:ILE:HG13	2.13	0.48
5:M:196:LEU:O	5:M:199:VAL:HB	2.13	0.48
5:M:432:ARG:CZ	6:N:1048:PRO:HD2	2.43	0.48
5:M:749:VAL:HG23	5:M:749:VAL:O	2.13	0.48
5:M:817:PRO:O	6:N:532:GLY:HA2	2.13	0.48
6:N:57:GLU:HG3	6:N:64:LYS:CG	2.42	0.48
6:N:618:LEU:HD21	6:N:1439:SER:OG	2.13	0.48
6:N:758:GLU:HA	7:O:20:THR:OG1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:21:ILE:HG22	5:C:335:THR:CG2	2.43	0.48
5:C:191:PHE:CZ	5:C:196:LEU:HD12	2.48	0.48
5:C:599:GLU:HG3	5:C:651:LYS:HE3	1.95	0.48
5:C:602:GLU:OE1	5:C:648:ARG:HB3	2.12	0.48
5:C:610:ARG:NH2	12:C:1504:HOH:O	2.44	0.48
5:C:776:SER:HA	5:C:780:GLU:HB3	1.94	0.48
5:C:909:ALA:HA	5:C:913:GLU:OE1	2.13	0.48
6:D:51:GLY:N	6:D:86:ARG:HG3	2.28	0.48
6:D:125:GLN:NE2	6:D:587:ARG:NE	2.57	0.48
6:D:432:TYR:HB3	6:D:450:TYR:CB	2.37	0.48
6:D:656:PHE:HB3	6:D:694:VAL:HG11	1.95	0.48
6:D:704:ARG:CD	6:D:705:ALA:H	2.26	0.48
6:D:1011:PHE:CD2	6:D:1021:TYR:HB2	2.48	0.48
6:D:1176:LYS:O	6:D:1179:GLU:HB3	2.12	0.48
6:D:1197:ARG:HB3	6:D:1396:GLU:HG3	1.95	0.48
6:D:1237:THR:CG2	6:D:1256:LEU:HD22	2.43	0.48
6:D:1277:ILE:HG13	6:D:1301:LYS:HB2	1.94	0.48
6:D:1281:VAL:O	6:D:1282:ARG:HD3	2.13	0.48
6:D:1297:GLU:HB3	6:N:52:PRO:N	2.28	0.48
6:D:1498:ALA:HB1	7:E:84:ARG:HH21	1.76	0.48
4:K:13:VAL:HG22	4:K:23:PHE:CD1	2.48	0.48
4:L:101:LEU:HD11	4:L:113:ASP:HB2	1.94	0.48
4:L:124:ASN:N	4:L:125:PRO:HD3	2.28	0.48
5:M:302:VAL:C	5:M:305:PRO:HD2	2.34	0.48
5:M:1096:ALA:C	6:N:13:ALA:HB2	2.32	0.48
6:N:699:VAL:HG22	6:N:756:GLN:NE2	2.28	0.48
6:N:764:LEU:HD21	6:N:767:HIS:CE1	2.48	0.48
6:N:963:TYR:N	6:N:963:TYR:CD1	2.81	0.48
6:N:1166:LEU:HD23	6:N:1166:LEU:N	2.24	0.48
6:N:1206:GLY:HA3	6:N:1366:LYS:NZ	2.28	0.48
6:N:1275:SER:HA	6:N:1294:VAL:HG21	1.94	0.48
6:N:1314:LYS:HE3	12:N:9483:HOH:O	2.12	0.48
6:N:1429:LEU:HG	6:N:1441:GLN:HG2	1.94	0.48
1:X:23:DG:OP1	5:M:388:ARG:NH1	2.47	0.48
5:C:874:LEU:HA	6:D:1023:MET:SD	2.53	0.48
5:C:1093:GLN:HE22	5:C:1098:ASP:HA	1.78	0.48
5:C:1105:LYS:O	5:C:1107:ASN:N	2.46	0.48
6:D:701:LEU:C	6:D:702:LEU:HD12	2.33	0.48
6:D:783:ARG:HA	6:D:1028:ALA:CA	2.41	0.48
6:D:1205:TYR:CE1	6:D:1366:LYS:HD3	2.48	0.48
6:D:1292:VAL:CG2	6:D:1325:LEU:HD23	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1300:SER:OG	6:N:59:ALA:HB3	2.12	0.48
5:M:146:VAL:HG13	5:M:161:SER:O	2.13	0.48
5:M:324:ASP:OD2	5:M:431:HIS:HE1	1.96	0.48
5:M:517:ARG:HD3	5:M:522:VAL:HG21	1.96	0.48
5:M:747:ALA:C	5:M:799:ILE:HG22	2.32	0.48
5:M:861:LEU:HD23	5:M:862:PRO:N	2.28	0.48
6:N:493:ARG:HD3	6:N:1390:LEU:HB2	1.95	0.48
6:N:630:VAL:HA	6:N:744:GLN:HG2	1.93	0.48
6:N:639:LEU:HD21	6:N:928:ALA:HB1	1.94	0.48
6:N:662:GLU:OE1	6:N:670:VAL:HG22	2.14	0.48
6:N:767:HIS:CE1	7:O:2:ALA:HB1	2.47	0.48
6:N:1256:LEU:HB3	6:N:1257:PRO:HD3	1.96	0.48
6:N:1292:VAL:O	6:N:1303:TYR:HB2	2.13	0.48
1:X:18:DG:H5'	1:X:18:DG:C8	2.48	0.48
4:A:162:ILE:HD12	4:A:163:ASN:ND2	2.28	0.48
5:C:19:THR:O	5:C:23:VAL:HG23	2.13	0.48
5:C:57:GLU:O	5:C:62:GLY:HA3	2.13	0.48
5:C:112:GLU:OE1	5:C:112:GLU:HA	2.12	0.48
5:C:432:ARG:HH22	6:D:1047:LYS:HD3	1.78	0.48
5:C:1003:ASP:CG	5:C:1004:LYS:N	2.66	0.48
5:C:1046:ALA:HB1	6:D:1471:LEU:HD11	1.96	0.48
6:D:165:LYS:CG	6:D:199:LEU:HD22	2.43	0.48
6:D:1197:ARG:HD3	6:D:1396:GLU:OE1	2.13	0.48
5:M:42:VAL:HG12	5:M:43:GLY:H	1.78	0.48
5:M:612:VAL:HG22	5:M:622:GLU:HA	1.93	0.48
5:M:1019:GLN:HE22	6:N:616:GLN:HG3	1.78	0.48
6:N:28:LYS:HD3	6:N:41:ARG:NH1	2.28	0.48
6:N:453:ASP:OD2	6:N:453:ASP:N	2.45	0.48
6:N:486:ARG:CA	6:N:489:ARG:HG2	2.42	0.48
6:N:584:ASN:CG	6:N:590:PRO:HD2	2.34	0.48
6:N:1085:ALA:C	8:N:8001:STD:H32	2.33	0.48
7:O:9:LEU:HD13	7:O:19:LEU:HD11	1.95	0.48
5:C:217:LEU:CD1	5:C:311:PHE:HA	2.43	0.48
5:C:545:ASN:HD22	5:C:583:LEU:HD21	1.78	0.48
6:D:737:ASN:ND2	6:D:737:ASN:O	2.46	0.48
6:D:792:ILE:O	6:D:878:GLY:HA3	2.13	0.48
6:D:1194:CYS:HB3	6:D:1373:ARG:NH2	2.28	0.48
6:D:1277:ILE:O	6:D:1294:VAL:HG11	2.14	0.48
7:E:70:THR:CB	7:E:72:ARG:HE	2.26	0.48
4:K:86:VAL:HG12	4:K:124:ASN:HB2	1.95	0.48
5:M:127:PHE:HE1	5:M:386:PHE:HE2	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:303:PHE:HA	12:M:7156:HOH:O	2.13	0.48
5:M:492:ASP:HB3	5:M:518:LYS:HG3	1.95	0.48
5:M:668:LEU:H	5:M:668:LEU:HD12	1.78	0.48
5:M:876:VAL:N	5:M:877:PRO:HD2	2.29	0.48
6:N:721:VAL:HB	12:N:9034:HOH:O	2.14	0.48
7:O:39:VAL:HG22	7:O:67:GLU:OE2	2.13	0.48
4:A:141:GLU:HG3	4:A:161:ARG:NH1	2.29	0.48
5:C:26:TYR:HE1	5:C:340:MET:HG3	1.79	0.48
5:C:334:ARG:NH1	5:C:418:LEU:HD11	2.29	0.48
5:C:892:LEU:HD11	5:C:967:PHE:CZ	2.48	0.48
5:C:1030:GLN:HE22	6:D:628:ARG:HD3	1.78	0.48
6:D:23:TYR:O	6:D:49:ILE:HG23	2.14	0.48
6:D:117:ASP:CB	6:D:495:ARG:HH21	2.27	0.48
6:D:477:LEU:HD11	6:D:495:ARG:HD3	1.96	0.48
6:D:867:ARG:HD2	6:D:867:ARG:C	2.33	0.48
6:D:1105:ILE:HD11	6:D:1374:GLN:NE2	2.28	0.48
6:D:1492:LEU:O	6:D:1492:LEU:HD13	2.14	0.48
5:M:380:ALA:O	5:M:384:GLU:HB2	2.13	0.48
5:M:516:ARG:HG3	6:N:1068:LEU:CD1	2.43	0.48
6:N:112:ILE:HG12	6:N:128:TYR:OH	2.14	0.48
6:N:137:PRO:HD2	6:N:453:ASP:OD1	2.14	0.48
6:N:782:SER:HA	12:N:9058:HOH:O	2.13	0.48
6:N:1090:ASP:HB3	6:N:1256:LEU:HD23	1.94	0.48
6:N:1216:SER:HB3	7:O:16:LYS:H	1.77	0.48
4:B:158:ILE:HG22	12:B:343:HOH:O	2.13	0.48
5:C:115:LEU:HB2	12:C:1459:HOH:O	2.12	0.48
5:C:175:GLU:O	5:C:183:SER:N	2.42	0.48
5:C:405:ARG:HD2	5:C:543:ASN:ND2	2.29	0.48
5:C:562:SER:HA	5:C:565:GLN:OE1	2.13	0.48
6:D:567:ILE:HG22	6:D:571:LYS:HZ1	1.75	0.48
6:D:917:GLN:NE2	6:D:921:ARG:HE	2.10	0.48
6:D:955:VAL:N	6:D:1039:CYS:SG	2.87	0.48
6:D:1047:LYS:HG2	6:D:1053:PHE:CE1	2.49	0.48
6:D:1094:LEU:HG	6:D:1098:LEU:HD13	1.95	0.48
6:D:1183:ILE:O	6:D:1183:ILE:HD12	2.13	0.48
4:K:177:VAL:O	5:M:864:GLY:HA3	2.12	0.48
12:K:2157:HOH:O	4:L:215:VAL:HG21	2.14	0.48
4:L:87:VAL:HG21	4:L:144:VAL:CG1	2.38	0.48
4:L:182:GLU:OE1	4:L:194:LYS:HD3	2.13	0.48
5:M:130:ASN:HD21	5:M:383:ARG:HH22	1.59	0.48
5:M:219:GLN:HG2	12:M:7197:HOH:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:244:PRO:HG2	5:M:246:ASP:OD2	2.14	0.48
5:M:1101:THR:OG1	5:M:1109:VAL:HG13	2.14	0.48
6:N:1281:VAL:HB	6:N:1313:VAL:CG2	2.44	0.48
2:H:6:U:O5'	2:H:6:U:H6	1.96	0.48
4:A:24:VAL:HG13	4:A:196:THR:HG22	1.95	0.48
5:C:18:LEU:HD22	5:C:404:LEU:HD21	1.94	0.48
5:C:110:GLU:N	5:C:368:THR:HG21	2.23	0.48
5:C:139:GLN:HE22	5:C:415:PRO:CD	2.25	0.48
5:C:150:PRO:HA	5:C:158:TYR:HB3	1.94	0.48
5:C:327:HIS:HA	5:C:431:HIS:CD2	2.49	0.48
5:C:564:MET:HE3	5:C:840:ALA:HB3	1.96	0.48
6:D:36:THR:O	6:D:38:LYS:N	2.46	0.48
6:D:62:LYS:HG3	12:D:9344:HOH:O	2.14	0.48
6:D:135:LEU:HD13	6:D:148:GLU:HB2	1.94	0.48
6:D:1003:VAL:O	6:D:1006:ALA:HB3	2.13	0.48
4:K:53:VAL:HG21	4:K:82:LEU:HB3	1.96	0.48
4:L:25:LEU:HD23	4:L:25:LEU:O	2.14	0.48
5:M:523:ILE:HG23	5:M:523:ILE:O	2.14	0.48
5:M:550:LEU:HG	6:N:1070:TYR:CE1	2.48	0.48
5:M:553:ASP:HA	5:M:881:ASN:HA	1.95	0.48
6:N:400:VAL:HG22	6:N:443:VAL:CG2	2.44	0.48
6:N:699:VAL:HG22	6:N:756:GLN:HE22	1.77	0.48
6:N:983:LEU:HA	6:N:987:GLU:OE2	2.13	0.48
6:N:1135:ARG:HB3	6:N:1140:ILE:HD11	1.94	0.48
1:X:16:DG:H3'	5:M:1031:ARG:HD2	1.94	0.48
5:C:56:GLU:HA	12:C:1329:HOH:O	2.12	0.48
5:C:191:PHE:CE2	5:C:196:LEU:HB2	2.49	0.48
5:C:745:ILE:HD12	5:C:745:ILE:N	2.29	0.48
5:C:881:ASN:N	5:C:881:ASN:ND2	2.60	0.48
6:D:131:LYS:O	6:D:132:TYR:CG	2.67	0.48
6:D:551:ASN:HA	6:D:574:LEU:HD11	1.95	0.48
6:D:682:ASP:OD1	6:D:682:ASP:N	2.45	0.48
6:D:1209:LEU:HD23	6:D:1211:MET:N	2.23	0.48
6:D:1284:GLU:HG3	6:N:62:LYS:HE2	1.96	0.48
4:K:14:ARG:HH22	4:K:24:VAL:HG21	1.76	0.48
4:K:97:VAL:O	4:K:144:VAL:HG23	2.13	0.48
5:M:142:ARG:CD	5:M:325:ILE:HG23	2.44	0.48
5:M:274:ARG:HD2	5:M:285:LEU:HB3	1.96	0.48
5:M:442:GLU:HG2	5:M:454:SER:CB	2.43	0.48
5:M:475:VAL:HB	12:M:7304:HOH:O	2.13	0.48
5:M:578:VAL:HG23	5:M:579:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:859:PRO:O	5:M:867:VAL:HG22	2.14	0.48
6:N:91:GLY:HA3	12:N:9328:HOH:O	2.13	0.48
6:N:880:ILE:HD13	12:N:9216:HOH:O	2.14	0.48
6:N:971:LEU:HD12	6:N:971:LEU:O	2.14	0.48
6:N:1403:LEU:O	6:N:1407:LEU:HB2	2.14	0.48
6:N:1499:ARG:HB3	12:N:9215:HOH:O	2.13	0.48
2:Y:12:G:H1'	5:M:393:GLN:HG2	1.96	0.48
4:A:23:PHE:HE2	4:A:199:ILE:HD12	1.78	0.48
5:C:5:ARG:NH1	5:C:902:ILE:HD13	2.29	0.48
5:C:39:ARG:HA	12:C:1121:HOH:O	2.14	0.48
5:C:42:VAL:HG12	5:C:43:GLY:N	2.28	0.48
5:C:137:VAL:HG13	5:C:393:GLN:HE22	1.78	0.48
5:C:139:GLN:CD	5:C:415:PRO:HD2	2.34	0.48
5:C:328:LEU:HD13	5:C:433:THR:CB	2.42	0.48
5:C:408:ARG:CZ	5:C:455:LEU:HG	2.43	0.48
5:C:575:GLN:HB2	5:C:670:GLN:CG	2.43	0.48
5:C:577:PRO:HD2	5:C:580:MET:HG2	1.96	0.48
5:C:861:LEU:HG	5:C:862:PRO:HD2	1.95	0.48
6:D:481:MET:O	6:D:489:ARG:HB2	2.14	0.48
6:D:814:ALA:HB1	6:D:818:ARG:NE	2.29	0.48
6:D:1102:THR:HG22	6:D:1102:THR:O	2.14	0.48
6:D:1122:LEU:HD13	6:D:1178:ALA:HB2	1.96	0.48
6:D:1299:PHE:HA	6:N:59:ALA:HA	1.96	0.48
4:K:44:LEU:HD23	4:K:48:ILE:CD1	2.42	0.48
4:K:112:ARG:HE	4:K:125:PRO:CB	2.26	0.48
5:M:1000:MET:HB3	5:M:1002:GLU:HG2	1.95	0.48
5:M:1054:THR:HG22	5:M:1059:ASP:CB	2.33	0.48
6:N:454:ALA:HB2	12:N:9025:HOH:O	2.14	0.48
6:N:1106:VAL:HG11	6:N:1474:ALA:CB	2.42	0.48
6:N:1191:PRO:O	6:N:1373:ARG:HD2	2.14	0.48
6:N:1253:THR:HG21	6:N:1358:ALA:HB1	1.95	0.48
2:Y:12:G:C8	2:Y:12:G:C5'	2.91	0.47
4:A:5:LYS:O	4:A:8:ALA:HB2	2.14	0.47
4:A:11:PHE:O	4:B:228:PRO:HA	2.14	0.47
4:A:24:VAL:HG22	4:A:196:THR:HG22	1.95	0.47
4:A:99:LEU:HD21	4:A:122:ILE:HD11	1.96	0.47
4:A:191:ASP:O	4:A:192:LEU:HG	2.14	0.47
4:B:170:VAL:HG11	6:D:848:GLU:OE2	2.14	0.47
5:C:21:ILE:O	5:C:25:SER:HB2	2.13	0.47
5:C:579:VAL:CG1	5:C:887:GLU:HG3	2.41	0.47
5:C:683:ASN:HB2	5:C:872:ASN:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:697:ARG:HD2	5:C:699:PHE:CE1	2.49	0.47
5:C:886:LEU:HA	12:C:1179:HOH:O	2.14	0.47
6:D:28:LYS:O	6:D:43:GLY:HA2	2.14	0.47
6:D:101:HIS:HB3	6:D:104:PHE:HD1	1.79	0.47
6:D:119:SER:N	6:D:123:LEU:HD22	2.27	0.47
6:D:134:VAL:HG21	6:D:463:GLN:HB2	1.96	0.47
6:D:834:THR:HG22	6:D:874:GLU:OE1	2.14	0.47
6:D:1061:PHE:CE1	6:D:1065:LEU:HD22	2.49	0.47
6:D:1238:MET:O	6:D:1242:HIS:ND1	2.47	0.47
5:M:351:LEU:HD22	12:M:7272:HOH:O	2.13	0.47
5:M:879:ARG:HD3	12:M:7263:HOH:O	2.13	0.47
6:N:54:LYS:HG2	6:N:57:GLU:OE1	2.13	0.47
6:N:1031:ASN:HD22	6:N:1032:PRO:HD2	1.79	0.47
6:N:1332:PRO:HB2	6:N:1421:LEU:HD21	1.96	0.47
7:O:29:GLN:HB2	7:O:33:HIS:CD2	2.48	0.47
1:X:17:DC:O3'	6:N:628:ARG:NH2	2.47	0.47
3:Z:4:DC:H2"	3:Z:5:DG:O5'	2.14	0.47
4:A:103:ALA:HB2	12:A:344:HOH:O	2.14	0.47
5:C:194:VAL:HG11	5:C:204:GLN:NE2	2.29	0.47
5:C:211:LEU:HD13	5:C:308:ARG:CG	2.44	0.47
6:D:702:LEU:HD12	6:D:747:VAL:HG23	1.96	0.47
6:D:882:PHE:O	6:D:886:VAL:HG23	2.15	0.47
6:D:956:ILE:HG12	6:D:1039:CYS:O	2.14	0.47
6:D:1353:GLN:HB3	6:D:1357:ARG:NE	2.29	0.47
4:K:109:VAL:CG2	4:K:132:LEU:HD13	2.44	0.47
5:M:64:LEU:HD12	5:M:65:VAL:N	2.29	0.47
5:M:89:THR:HA	5:M:129:ILE:O	2.14	0.47
5:M:142:ARG:HD3	5:M:325:ILE:HG23	1.95	0.47
5:M:405:ARG:HD2	5:M:442:GLU:OE1	2.13	0.47
5:M:577:PRO:HA	5:M:671:ASN:HD21	1.80	0.47
6:N:10:ILE:HD11	6:N:1434:TRP:NE1	2.29	0.47
6:N:459:GLU:O	6:N:463:GLN:HG2	2.13	0.47
6:N:483:HIS:ND1	6:N:483:HIS:N	2.62	0.47
6:N:793:THR:HB	6:N:879:ARG:HD3	1.96	0.47
6:N:893:GLU:O	6:N:896:ALA:HB3	2.14	0.47
6:N:1232:PRO:CB	6:N:1361:VAL:HG21	2.35	0.47
6:N:1273:VAL:HG22	6:N:1326:THR:HG1	1.80	0.47
4:A:47:SER:CB	4:A:217:ILE:HD13	2.44	0.47
4:A:226:SER:O	4:A:228:PRO:HD3	2.14	0.47
5:C:45:GLN:HB2	5:C:71:TYR:CZ	2.49	0.47
5:C:154:ARG:NH1	5:C:177:GLU:HG3	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:362:GLY:HA3	5:C:367:LEU:CD2	2.39	0.47
5:C:480:THR:HG22	5:C:481:ASP:N	2.29	0.47
5:C:940:GLU:O	5:C:944:LEU:HG	2.14	0.47
5:C:946:ARG:HH12	6:D:861:GLN:HE22	1.62	0.47
5:C:981:GLU:HB3	12:C:1406:HOH:O	2.13	0.47
5:C:1044:GLY:HA3	7:E:17:TYR:CD1	2.49	0.47
6:D:122:GLU:O	6:D:126:VAL:HG23	2.14	0.47
6:D:571:LYS:NZ	6:D:571:LYS:HB2	2.29	0.47
6:D:876:SER:HB2	6:D:879:ARG:HG3	1.97	0.47
6:D:911:LEU:O	6:D:915:VAL:HG23	2.14	0.47
6:D:1138:ALA:CB	6:D:1362:LYS:HE2	2.43	0.47
7:E:31:LEU:HD23	7:E:35:PHE:HD1	1.79	0.47
4:L:23:PHE:O	4:L:196:THR:HA	2.13	0.47
5:M:1:MET:CE	5:M:900:ARG:HH12	2.27	0.47
5:M:31:GLN:HB3	5:M:71:TYR:OH	2.15	0.47
5:M:195:LEU:HG	5:M:238:LEU:HD12	1.96	0.47
5:M:436:GLY:HA2	5:M:538:GLN:O	2.14	0.47
6:N:82:LYS:HB2	6:N:84:ILE:HG23	1.95	0.47
6:N:115:LEU:CD1	6:N:499:VAL:HG22	2.44	0.47
6:N:799:LYS:HZ3	6:N:824:ASN:CA	2.22	0.47
6:N:1437:ALA:O	6:N:1446:VAL:HG21	2.14	0.47
4:B:159:LYS:HD3	4:B:159:LYS:N	2.29	0.47
5:C:260:LEU:HD13	5:C:291:ALA:HB1	1.96	0.47
6:D:206:ARG:NH2	6:D:394:LEU:HD22	2.30	0.47
6:D:1231:GLU:HB3	6:D:1232:PRO:HD3	1.96	0.47
6:D:1325:LEU:HD21	12:D:9442:HOH:O	2.15	0.47
7:E:33:HIS:HB2	7:E:37:ASN:ND2	2.29	0.47
5:M:19:THR:HG21	5:M:125:GLY:HA3	1.96	0.47
5:M:131:GLY:HA2	12:M:7233:HOH:O	2.12	0.47
5:M:906:PHE:CZ	6:N:1067:VAL:HA	2.49	0.47
6:N:78:VAL:HG12	6:N:80:VAL:HG22	1.96	0.47
6:N:756:GLN:HE21	6:N:760:ARG:HD2	1.79	0.47
6:N:1101:VAL:HG13	6:N:1428:ALA:CA	2.43	0.47
6:N:1101:VAL:HG11	6:N:1427:SER:HB3	1.96	0.47
1:G:12:DG:H2"	1:G:13:DT:O5'	2.14	0.47
1:G:14:DT:OP2	6:D:1089:ALA:HB1	2.14	0.47
1:G:20:DG:H4'	5:C:394:PHE:CE2	2.50	0.47
2:H:4:U:H2'	2:H:5:C:C6	2.50	0.47
2:Y:10:G:C2'	2:Y:11:C:H5'	2.44	0.47
4:B:117:VAL:CG2	4:B:120:VAL:HB	2.44	0.47
5:C:110:GLU:HB2	5:C:368:THR:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:286:SER:HB2	5:C:299:LYS:HE2	1.95	0.47
5:C:804:VAL:HG23	5:C:826:TYR:HE1	1.78	0.47
6:D:119:SER:HB2	6:D:123:LEU:H	1.79	0.47
6:D:400:VAL:HG22	6:D:443:VAL:HG22	1.95	0.47
6:D:577:ALA:O	6:D:580:ALA:HB3	2.15	0.47
6:D:1377:LYS:HA	6:D:1395:LEU:HD23	1.95	0.47
7:E:70:THR:HG21	7:E:72:ARG:NE	2.29	0.47
4:K:89:PHE:CD1	4:K:120:VAL:HG23	2.40	0.47
4:K:181:VAL:O	5:M:938:LYS:HD3	2.15	0.47
5:M:208:ALA:O	5:M:218:VAL:HG21	2.15	0.47
5:M:238:LEU:O	5:M:241:LEU:HB3	2.13	0.47
5:M:334:ARG:HD2	5:M:418:LEU:CD2	2.29	0.47
5:M:937:ASP:HB3	5:M:939:ARG:HG2	1.96	0.47
5:M:1007:ALA:HB2	6:N:648:MET:CG	2.44	0.47
6:N:1305:LEU:HD21	6:N:1326:THR:OG1	2.14	0.47
6:N:1336:LEU:HB2	6:N:1344:VAL:HG21	1.96	0.47
7:O:70:THR:HG22	7:O:71:GLY:H	1.78	0.47
7:O:95:VAL:CG1	12:O:884:HOH:O	2.61	0.47
2:Y:1:G:HO2'	2:Y:2:A:H5"	1.77	0.47
4:A:28:LEU:HB2	4:A:193:ASP:HB2	1.97	0.47
5:C:68:PHE:HZ	5:C:71:TYR:HD2	1.62	0.47
5:C:211:LEU:HD11	5:C:308:ARG:HA	1.96	0.47
5:C:304:LEU:CD2	5:C:305:PRO:HD3	2.40	0.47
6:D:441:ARG:HH22	6:D:445:ARG:CZ	2.28	0.47
6:D:899:LEU:HD12	6:D:900:ILE:HG23	1.96	0.47
4:L:41:ARG:HG2	4:L:42:ARG:N	2.29	0.47
5:M:83:CYS:SG	5:M:90:TYR:HB2	2.54	0.47
5:M:289:THR:O	5:M:291:ALA:N	2.48	0.47
5:M:315:ALA:HB3	12:M:7160:HOH:O	2.13	0.47
5:M:326:ASP:HA	5:M:331:ARG:CZ	2.45	0.47
5:M:347:GLY:HA2	5:M:350:ARG:HD2	1.95	0.47
5:M:438:ILE:HD11	5:M:467:ILE:HD12	1.96	0.47
5:M:571:LEU:HD23	5:M:699:PHE:O	2.14	0.47
5:M:676:ILE:HG22	5:M:988:VAL:HG22	1.94	0.47
5:M:1034:GLU:OE1	6:N:619:LEU:HD21	2.15	0.47
6:N:477:LEU:HD21	6:N:495:ARG:NH2	2.30	0.47
6:N:507:ASN:HD22	6:N:507:ASN:H	1.61	0.47
6:N:543:LEU:O	6:N:546:ARG:HB2	2.14	0.47
6:N:625:TYR:CE1	6:N:751:LEU:HD11	2.50	0.47
6:N:863:VAL:HG21	12:N:9437:HOH:O	2.14	0.47
6:N:969:ARG:O	6:N:972:LEU:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1240:THR:HA	6:N:1253:THR:OG1	2.14	0.47
2:Y:6:U:H6	2:Y:6:U:O5'	1.98	0.47
4:A:85:LEU:HD11	4:A:87:VAL:HG13	1.97	0.47
4:B:58:ILE:HB	4:B:61:VAL:HB	1.96	0.47
4:B:102:LYS:CE	4:B:139:ASN:HB2	2.39	0.47
4:B:127:LEU:HD12	4:B:128:HIS:N	2.30	0.47
5:C:625:LEU:O	5:C:627:ARG:N	2.48	0.47
5:C:761:PHE:N	5:C:761:PHE:CD1	2.83	0.47
5:C:769:PRO:HG2	12:D:9120:HOH:O	2.14	0.47
5:C:841:ASN:C	5:C:841:ASN:ND2	2.67	0.47
5:C:892:LEU:HG	5:C:918:LEU:HD11	1.96	0.47
6:D:93:ILE:N	6:D:517:VAL:O	2.46	0.47
6:D:632:VAL:O	6:D:727:GLN:HA	2.15	0.47
6:D:772:PRO:O	6:D:1367:HIS:NE2	2.47	0.47
6:D:853:VAL:HG13	6:D:858:VAL:O	2.15	0.47
6:D:864:VAL:HG12	6:D:865:THR:N	2.27	0.47
6:D:896:ALA:O	6:D:900:ILE:HG23	2.14	0.47
6:D:1047:LYS:HB3	6:D:1048:PRO:HD2	1.97	0.47
6:D:1372:VAL:O	6:D:1375:MET:HB2	2.15	0.47
4:K:9:PRO:HD2	4:L:224:TYR:CE1	2.49	0.47
4:K:36:LEU:O	4:K:39:PRO:HD2	2.14	0.47
4:L:101:LEU:HD22	4:L:140:MET:CE	2.45	0.47
5:M:54:ILE:HD13	5:M:64:LEU:HD21	1.96	0.47
5:M:54:ILE:O	5:M:54:ILE:HG23	2.14	0.47
5:M:92:ALA:CB	5:M:120:LEU:HD21	2.45	0.47
5:M:97:ARG:HA	5:M:111:ASP:O	2.15	0.47
5:M:144:PRO:HA	5:M:163:ILE:CD1	2.44	0.47
5:M:191:PHE:CZ	5:M:196:LEU:HB2	2.50	0.47
5:M:395:LYS:HG2	5:M:397:GLU:HG3	1.97	0.47
5:M:594:ALA:HB3	5:M:596:TYR:HE1	1.79	0.47
5:M:820:ARG:HA	12:M:7091:HOH:O	2.15	0.47
5:M:1010:THR:HG22	5:M:1011:GLY:N	2.30	0.47
5:M:1090:LYS:HD3	5:M:1090:LYS:HA	1.70	0.47
5:M:1103:ASP:HA	12:N:9050:HOH:O	2.15	0.47
6:N:41:ARG:HD3	6:N:42:ASP:N	2.28	0.47
6:N:42:ASP:OD1	6:N:49:ILE:HD11	2.14	0.47
6:N:56:TYR:HE2	6:N:69:GLU:HB3	1.79	0.47
6:N:115:LEU:HD22	6:N:502:PHE:CE1	2.49	0.47
6:N:399:ARG:HB2	6:N:401:TYR:CE1	2.50	0.47
6:N:480:GLU:OE2	6:N:484:PRO:HG2	2.15	0.47
6:N:584:ASN:HB2	6:N:602:SER:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:701:LEU:HD21	6:N:763:MET:CE	2.45	0.47
6:N:754:PHE:CG	7:O:24:ALA:HB1	2.48	0.47
6:N:1031:ASN:ND2	6:N:1032:PRO:HD2	2.30	0.47
6:N:1148:VAL:O	6:N:1188:VAL:HG23	2.14	0.47
7:O:80:VAL:HG22	12:O:1400:HOH:O	2.14	0.47
7:O:83:ASP:O	7:O:86:GLN:HG2	2.14	0.47
7:O:84:ARG:HB2	12:O:907:HOH:O	2.14	0.47
2:H:9:G:C8	2:H:9:G:C5'	2.98	0.47
1:X:20:DG:H4'	5:M:394:PHE:CE2	2.50	0.47
4:A:27:PRO:HG2	12:A:364:HOH:O	2.14	0.47
5:C:36:PRO:CG	5:C:70:GLU:HB3	2.40	0.47
5:C:141:HIS:HB3	5:C:418:LEU:CD2	2.45	0.47
5:C:728:HIS:CE1	5:C:775:ARG:HH12	2.32	0.47
5:C:1090:LYS:HZ3	6:D:90:MET:HG3	1.78	0.47
5:C:1096:ALA:N	12:C:1246:HOH:O	2.48	0.47
6:D:2:LYS:HG2	12:D:9286:HOH:O	2.15	0.47
6:D:37:LEU:HD22	6:D:535:PHE:HZ	1.80	0.47
6:D:179:VAL:HG21	6:D:191:LEU:HD23	1.97	0.47
6:D:785:ILE:HG22	6:D:789:LEU:CD1	2.43	0.47
6:D:908:LYS:HB3	6:D:1027:GLY:CA	2.29	0.47
6:D:1402:ALA:HB2	6:D:1415:VAL:CG2	2.45	0.47
4:K:24:VAL:HG22	4:K:196:THR:HG22	1.97	0.47
5:M:606:VAL:O	5:M:606:VAL:HG23	2.14	0.47
5:M:665:PHE:CE1	5:M:900:ARG:NH2	2.83	0.47
5:M:1118:LYS:NZ	5:M:1118:LYS:HB3	2.30	0.47
6:N:974:ILE:O	6:N:983:LEU:HD11	2.15	0.47
6:N:984:THR:HG22	6:N:986:ARG:H	1.80	0.47
6:N:984:THR:HB	6:N:987:GLU:HG3	1.97	0.47
6:N:1149:LEU:CD1	6:N:1160:LEU:HD22	2.44	0.47
6:N:1307:LYS:H	6:N:1307:LYS:HD2	1.80	0.47
6:N:1335:LEU:HD12	6:N:1339:LYS:HB2	1.97	0.47
2:H:8:C:C2'	2:H:9:G:C8	2.98	0.47
2:H:12:G:C8	2:H:12:G:C5'	2.92	0.47
4:B:75:VAL:O	4:B:79:ILE:HG23	2.14	0.47
4:B:106:PRO:HG3	4:B:134:GLU:CD	2.34	0.47
5:C:378:LEU:HG	5:C:382:ILE:HD11	1.97	0.47
5:C:479:VAL:HG21	5:C:532:MET:HE2	1.97	0.47
5:C:496:ILE:HD12	5:C:496:ILE:N	2.29	0.47
5:C:632:ASN:N	5:C:632:ASN:OD1	2.48	0.47
5:C:672:VAL:CG2	5:C:868:ASP:HB2	2.43	0.47
5:C:774:LEU:HD23	12:C:1328:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:141:ILE:CG1	6:D:448:GLU:O	2.61	0.47
6:D:455:ARG:HB3	6:D:459:GLU:HG2	1.96	0.47
6:D:704:ARG:HD3	6:D:738:ALA:HB2	1.96	0.47
6:D:895:VAL:CG1	6:D:922:LEU:HD21	2.43	0.47
6:D:1197:ARG:HB3	6:D:1396:GLU:CG	2.45	0.47
6:D:1263:PHE:HB3	6:D:1424:VAL:HG11	1.96	0.47
6:D:1313:VAL:HG21	6:D:1319:VAL:CG1	2.45	0.47
4:K:46:SER:HB3	5:M:856:GLU:HG2	1.97	0.47
4:L:34:VAL:HG22	4:L:181:VAL:HG21	1.97	0.47
5:M:80:GLN:O	5:M:83:CYS:HB2	2.15	0.47
5:M:206:THR:HG23	5:M:207:LEU:N	2.30	0.47
5:M:364:GLU:O	5:M:367:LEU:HG	2.15	0.47
5:M:622:GLU:O	5:M:624:PRO:HD3	2.15	0.47
5:M:714:ASP:HB3	5:M:818:GLY:O	2.15	0.47
5:M:1008:ARG:NH1	5:M:1011:GLY:N	2.63	0.47
6:N:1047:LYS:HG2	6:N:1053:PHE:CE2	2.50	0.47
6:N:1440:PHE:CD2	6:N:1440:PHE:C	2.87	0.47
7:O:94:PRO:HG2	12:O:820:HOH:O	2.14	0.47
2:H:7:G:C5'	2:H:7:G:H8	2.28	0.47
2:H:9:G:C5'	2:H:9:G:H8	2.28	0.47
2:Y:8:C:H5"	12:Y:578:HOH:O	2.14	0.47
4:A:121:GLU:HG3	4:A:123:MET:SD	2.55	0.47
4:B:18:ARG:O	4:B:207:PRO:HD3	2.16	0.47
4:B:29:GLU:HB2	4:B:32:PHE:CE1	2.50	0.47
5:C:64:LEU:HB2	5:C:359:MET:SD	2.55	0.47
5:C:334:ARG:CD	5:C:418:LEU:HD21	2.45	0.47
5:C:364:GLU:O	5:C:367:LEU:HG	2.15	0.47
5:C:660:ALA:O	5:C:667:ALA:HB3	2.15	0.47
5:C:877:PRO:HB3	6:D:1020:LEU:HD11	1.97	0.47
6:D:50:PHE:C	6:D:86:ARG:HA	2.36	0.47
6:D:462:GLN:HA	6:D:513:ILE:CD1	2.44	0.47
6:D:574:LEU:O	6:D:578:VAL:HG23	2.15	0.47
6:D:938:GLY:O	6:D:942:SER:HB3	2.15	0.47
6:D:1118:ILE:O	6:D:1188:VAL:HG12	2.15	0.47
6:D:1326:THR:HG22	6:D:1327:ARG:N	2.29	0.47
4:K:88:ARG:HB2	4:K:204:SER:HA	1.97	0.47
5:M:260:LEU:HB2	5:M:291:ALA:HB1	1.97	0.47
5:M:470:PRO:HD3	5:M:485:TYR:CE2	2.50	0.47
5:M:520:GLU:O	5:M:522:VAL:HG23	2.14	0.47
5:M:874:LEU:HD11	6:N:787:LEU:CD2	2.31	0.47
5:M:881:ASN:O	5:M:884:GLN:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:958:THR:HG23	5:M:961:GLU:H	1.79	0.47
5:M:1032:PHE:HZ	5:M:1040:LEU:HD13	1.80	0.47
5:M:1036:GLU:OE1	6:N:707:THR:HB	2.15	0.47
6:N:161:LEU:HD23	6:N:162:ARG:H	1.80	0.47
6:N:202:VAL:HG12	6:N:204:LEU:HD23	1.96	0.47
6:N:470:LEU:HD11	6:N:508:ARG:CZ	2.46	0.47
6:N:1071:PHE:O	6:N:1071:PHE:HD1	1.97	0.47
2:H:5:C:H6	2:H:5:C:O5'	1.98	0.46
1:X:6:DT:H2'	12:X:1642:HOH:O	2.15	0.46
4:B:165:ILE:HG13	4:B:165:ILE:O	2.16	0.46
5:C:127:PHE:O	5:C:133:ASP:HA	2.15	0.46
5:C:139:GLN:CG	5:C:418:LEU:HD22	2.43	0.46
5:C:342:ASP:HA	5:C:345:ARG:HG2	1.97	0.46
5:C:420:ARG:HG3	12:C:1136:HOH:O	2.15	0.46
5:C:473:ARG:HH11	5:C:475:VAL:CG2	2.27	0.46
6:D:57:GLU:HB2	6:D:64:LYS:HG3	1.96	0.46
6:D:591:VAL:HG12	6:D:592:THR:O	2.15	0.46
6:D:893:GLU:O	6:D:896:ALA:HB3	2.15	0.46
6:D:1191:PRO:O	6:D:1373:ARG:HD2	2.15	0.46
5:M:243:ARG:HG2	5:M:243:ARG:HH11	1.79	0.46
5:M:688:ILE:HD13	5:M:847:GLY:HA3	1.96	0.46
5:M:694:LEU:O	5:M:699:PHE:HB2	2.15	0.46
5:M:835:VAL:HA	5:M:849:VAL:HG12	1.98	0.46
6:N:704:ARG:NH1	6:N:705:ALA:CB	2.78	0.46
6:N:736:PHE:O	6:N:738:ALA:N	2.48	0.46
6:N:1236:LEU:CD2	6:N:1361:VAL:H	2.27	0.46
2:H:10:G:C2'	2:H:11:C:H5'	2.44	0.46
4:A:191:ASP:C	4:A:192:LEU:HG	2.36	0.46
4:B:97:VAL:HG12	4:B:99:LEU:HD13	1.98	0.46
4:B:182:GLU:O	4:B:194:LYS:HB3	2.16	0.46
5:C:18:LEU:CD2	5:C:404:LEU:HD21	2.45	0.46
5:C:147:TYR:HB3	5:C:323:ASP:HB2	1.96	0.46
5:C:185:LYS:NZ	5:C:190:LYS:HE2	2.29	0.46
5:C:253:ALA:O	5:C:256:TYR:HB2	2.14	0.46
5:C:274:ARG:HB2	12:C:1392:HOH:O	2.16	0.46
5:C:910:LYS:HB3	5:C:912:PRO:HD2	1.97	0.46
6:D:9:ARG:HA	6:D:1455:LYS:O	2.14	0.46
6:D:412:GLY:HA2	6:D:434:ARG:HD3	1.96	0.46
6:D:457:GLY:O	6:D:460:ALA:HB3	2.14	0.46
6:D:564:GLU:HA	6:D:567:ILE:HD12	1.97	0.46
6:D:646:LYS:HG3	6:D:647:ARG:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1453:ALA:O	6:D:1455:LYS:N	2.47	0.46
7:E:67:GLU:CB	7:E:73:LEU:HD11	2.45	0.46
4:K:9:PRO:HD2	4:L:224:TYR:CD1	2.51	0.46
4:K:43:ILE:HD11	4:L:35:THR:HG21	1.96	0.46
5:M:100:LEU:HD23	5:M:368:THR:HA	1.96	0.46
5:M:408:ARG:NH1	5:M:542:VAL:HG23	2.30	0.46
5:M:534:VAL:N	5:M:538:GLN:NE2	2.61	0.46
6:N:397:LYS:NZ	6:N:448:GLU:OE2	2.48	0.46
6:N:660:LYS:HD2	12:N:9393:HOH:O	2.15	0.46
6:N:1094:LEU:HD13	6:N:1260:ILE:CD1	2.45	0.46
4:B:25:LEU:HA	12:B:411:HOH:O	2.14	0.46
4:B:165:ILE:HD11	12:B:321:HOH:O	2.15	0.46
5:C:47:ALA:HA	5:C:50:GLU:OE2	2.15	0.46
5:C:122:THR:HB	5:C:124:ASP:OD1	2.15	0.46
5:C:166:PRO:HG2	12:C:1363:HOH:O	2.15	0.46
5:C:550:LEU:HG	6:D:1070:TYR:HE1	1.79	0.46
5:C:654:LEU:HD13	5:C:664:GLY:N	2.30	0.46
5:C:710:ILE:HB	5:C:790:LEU:HD22	1.97	0.46
6:D:148:GLU:HG2	6:D:151:GLN:NE2	2.26	0.46
6:D:399:ARG:HB2	6:D:401:TYR:OH	2.15	0.46
6:D:613:ARG:HH11	6:D:616:GLN:HG2	1.79	0.46
6:D:728:LEU:HG	6:D:729:HIS:N	2.30	0.46
6:D:1494:ALA:HB1	7:E:88:GLU:OE2	2.16	0.46
4:K:76:VAL:O	4:K:79:ILE:HG13	2.15	0.46
4:L:40:LEU:O	4:L:44:LEU:HG	2.14	0.46
5:M:22:GLN:O	5:M:121:MET:HE1	2.16	0.46
5:M:414:GLY:C	5:M:416:GLY:N	2.69	0.46
5:M:706:GLU:HG2	5:M:708:TYR:CE2	2.50	0.46
5:M:1045:ALA:HB1	5:M:1048:THR:HB	1.97	0.46
5:M:1069:ALA:O	5:M:1072:LYS:HB3	2.15	0.46
6:N:398:ALA:HB2	6:N:447:VAL:HG12	1.98	0.46
6:N:637:LEU:HD11	6:N:642:CYS:N	2.31	0.46
3:I:10:DA:H5"	6:D:121:THR:HG23	1.97	0.46
4:A:143:ARG:NH1	4:A:145:ASP:OD1	2.49	0.46
5:C:85:GLU:OE1	5:C:804:VAL:HG21	2.16	0.46
5:C:551:GLU:O	6:D:1065:LEU:HB3	2.14	0.46
5:C:1055:LEU:HD11	12:C:1200:HOH:O	2.15	0.46
5:C:1103:ASP:N	5:C:1107:ASN:O	2.48	0.46
6:D:458:ALA:HA	6:D:461:ILE:HG12	1.98	0.46
6:D:1061:PHE:HE1	6:D:1065:LEU:HD22	1.80	0.46
6:D:1297:GLU:N	6:N:47:GLU:HB2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:2:ALA:HB2	12:E:102:HOH:O	2.14	0.46
4:K:221:HIS:HA	4:K:224:TYR:CD2	2.50	0.46
5:M:176:VAL:C	5:M:178:PRO:HD3	2.35	0.46
5:M:260:LEU:CB	5:M:291:ALA:HB1	2.46	0.46
5:M:309:TYR:HA	5:M:312:ALA:HB3	1.97	0.46
5:M:557:ARG:NE	5:M:879:ARG:HG2	2.31	0.46
5:M:911:GLU:HB3	5:M:912:PRO:HD3	1.98	0.46
5:M:1030:GLN:HG2	6:N:746:ALA:HB1	1.98	0.46
5:M:1084:SER:O	5:M:1087:VAL:HG12	2.15	0.46
6:N:133:ILE:CA	6:N:456:MET:HB3	2.46	0.46
6:N:731:LEU:HD23	6:N:731:LEU:HA	1.77	0.46
6:N:828:LYS:HA	12:N:9437:HOH:O	2.14	0.46
6:N:1489:GLN:O	6:N:1493:LYS:HG2	2.15	0.46
4:A:79:ILE:HD12	4:A:80:LEU:N	2.31	0.46
4:B:83:LYS:NZ	4:B:168:ASP:H	2.13	0.46
4:B:124:ASN:N	4:B:125:PRO:HD3	2.30	0.46
4:B:138:LEU:HG	12:B:334:HOH:O	2.14	0.46
5:C:69:LEU:HB2	5:C:97:ARG:HB2	1.98	0.46
5:C:185:LYS:CG	5:C:190:LYS:HG2	2.46	0.46
5:C:906:PHE:CE1	6:D:1067:VAL:HA	2.50	0.46
5:C:949:LYS:NZ	6:D:828:LYS:NZ	2.64	0.46
6:D:72:VAL:CG2	6:D:77:GLY:HA2	2.46	0.46
6:D:76:CYS:SG	6:D:78:VAL:HG23	2.55	0.46
6:D:679:ARG:HB2	6:D:682:ASP:CG	2.36	0.46
6:D:705:ALA:HB1	6:D:706:PRO:HD3	1.97	0.46
6:D:919:PHE:HE1	6:D:924:MET:HG3	1.81	0.46
6:D:1236:LEU:CD2	6:D:1361:VAL:HB	2.46	0.46
6:D:1284:GLU:HG2	6:N:74:GLU:HB2	1.97	0.46
4:K:23:PHE:O	4:K:196:THR:HA	2.16	0.46
4:K:182:GLU:HG2	4:K:194:LYS:HD3	1.98	0.46
5:M:185:LYS:HD3	12:M:7048:HOH:O	2.15	0.46
5:M:337:GLY:O	5:M:341:THR:HG22	2.16	0.46
5:M:557:ARG:CG	5:M:879:ARG:HB3	2.41	0.46
5:M:1038:TRP:HA	5:M:1041:GLU:HG3	1.96	0.46
6:N:134:VAL:HG12	6:N:152:LEU:HB3	1.96	0.46
6:N:145:VAL:HB	12:N:9320:HOH:O	2.14	0.46
6:N:478:LEU:HD22	6:N:1388:ARG:CD	2.46	0.46
6:N:512:MET:SD	6:N:1452:ILE:HD11	2.56	0.46
3:I:9:DG:H2"	3:I:10:DA:C8	2.50	0.46
4:A:23:PHE:O	4:A:196:THR:HA	2.16	0.46
4:B:107:LYS:HD3	12:B:382:HOH:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:129:ILE:CG1	5:C:386:PHE:HB3	2.45	0.46
5:C:139:GLN:NE2	5:C:418:LEU:HD22	2.31	0.46
5:C:191:PHE:HZ	5:C:196:LEU:HD12	1.80	0.46
5:C:1005:MET:HB3	6:D:629:SER:OG	2.16	0.46
5:C:1045:ALA:HB1	5:C:1048:THR:HB	1.97	0.46
5:C:1106:ASP:CG	6:D:1456:LYS:HD3	2.36	0.46
6:D:1083:ASP:O	6:D:1087:ARG:HD2	2.16	0.46
6:D:1194:CYS:HB3	6:D:1373:ARG:NH1	2.30	0.46
6:D:1281:VAL:HG12	6:D:1282:ARG:N	2.30	0.46
6:D:1487:VAL:HG12	6:D:1488:ASP:N	2.30	0.46
4:L:159:LYS:HG2	4:L:159:LYS:O	2.15	0.46
5:M:65:VAL:HB	5:M:101:ILE:HB	1.97	0.46
5:M:114:PHE:CG	5:M:114:PHE:O	2.68	0.46
5:M:142:ARG:CZ	5:M:325:ILE:HG23	2.45	0.46
5:M:279:GLU:HG2	12:M:7102:HOH:O	2.15	0.46
5:M:280:LYS:HE3	12:M:7102:HOH:O	2.15	0.46
5:M:410:ILE:CD1	5:M:455:LEU:HB3	2.43	0.46
5:M:442:GLU:HG2	5:M:454:SER:H	1.81	0.46
5:M:611:ILE:HD12	5:M:611:ILE:N	2.30	0.46
6:N:470:LEU:HD12	6:N:503:LEU:HG	1.96	0.46
6:N:838:ARG:NE	6:N:863:VAL:HB	2.31	0.46
4:B:87:VAL:HG21	4:B:144:VAL:CG1	2.37	0.46
4:B:146:ARG:HG3	4:B:146:ARG:O	2.16	0.46
5:C:96:ALA:HB2	12:C:1219:HOH:O	2.14	0.46
5:C:751:PRO:HD2	6:D:680:GLN:OE1	2.16	0.46
5:C:966:LEU:O	5:C:969:GLN:HB2	2.14	0.46
5:C:1030:GLN:OE1	6:D:628:ARG:HG2	2.16	0.46
6:D:531:ASP:O	6:D:534:ARG:HG3	2.15	0.46
6:D:551:ASN:ND2	6:D:555:LYS:HZ3	2.11	0.46
6:D:955:VAL:HG11	6:D:1015:TYR:CE2	2.49	0.46
6:D:1017:PHE:C	12:D:9167:HOH:O	2.54	0.46
6:D:1083:ASP:OD1	6:D:1241:PHE:HE2	1.98	0.46
6:D:1122:LEU:O	6:D:1122:LEU:HD23	2.15	0.46
6:D:1161:GLU:CG	6:D:1164:ARG:HB2	2.46	0.46
6:D:1191:PRO:HG2	6:D:1370:ILE:HD13	1.98	0.46
6:D:1256:LEU:N	12:D:9193:HOH:O	2.49	0.46
6:D:1275:SER:HB2	6:D:1294:VAL:CG1	2.46	0.46
6:D:1480:PHE:O	7:E:18:ARG:NH2	2.49	0.46
6:D:1487:VAL:HG11	6:D:1492:LEU:HD23	1.98	0.46
4:K:23:PHE:HB2	4:K:197:LEU:HD23	1.97	0.46
5:M:57:GLU:O	5:M:62:GLY:HA3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:140:ILE:HB	5:M:331:ARG:HG2	1.97	0.46
5:M:141:HIS:HB3	5:M:418:LEU:CD2	2.44	0.46
5:M:250:ARG:NH1	12:M:7148:HOH:O	2.49	0.46
5:M:418:LEU:N	5:M:418:LEU:HD12	2.30	0.46
5:M:437:ARG:HA	5:M:467:ILE:HG21	1.97	0.46
5:M:500:ASN:HD21	6:N:1067:VAL:HG23	1.81	0.46
5:M:524:VAL:HG13	5:M:525:SER:N	2.30	0.46
5:M:684:PHE:CD1	6:N:784:ASP:HB2	2.46	0.46
5:M:1022:GLY:HA3	5:M:1026:GLN:O	2.16	0.46
7:O:34:GLY:HA2	12:O:884:HOH:O	2.14	0.46
4:A:76:VAL:O	4:A:79:ILE:HG13	2.15	0.46
5:C:191:PHE:O	5:C:193:LEU:HD12	2.15	0.46
5:C:402:SER:HB2	5:C:566:THR:O	2.15	0.46
5:C:966:LEU:HD21	5:C:986:PRO:CG	2.42	0.46
5:C:996:LYS:NZ	12:C:1442:HOH:O	2.49	0.46
6:D:116:LEU:HD21	6:D:468:LEU:HD11	1.98	0.46
6:D:584:ASN:CG	6:D:590:PRO:HD2	2.36	0.46
6:D:1187:PRO:HB3	6:N:560:GLN:OE1	2.16	0.46
6:D:1481:VAL:HG11	7:E:18:ARG:CA	2.34	0.46
4:K:11:PHE:CD1	4:L:225:PHE:HA	2.51	0.46
4:L:72:LYS:HB3	4:L:73:GLU:OE2	2.16	0.46
4:L:86:VAL:CG1	4:L:124:ASN:HB2	2.45	0.46
5:M:142:ARG:HA	5:M:330:ASN:O	2.16	0.46
5:M:207:LEU:HD13	12:M:7206:HOH:O	2.15	0.46
5:M:515:ALA:C	5:M:516:ARG:HG2	2.34	0.46
5:M:552:HIS:CD2	5:M:886:LEU:HD13	2.51	0.46
5:M:707:ARG:HG3	5:M:826:TYR:CZ	2.51	0.46
5:M:904:PRO:CD	5:M:908:GLY:HA2	2.43	0.46
5:M:1060:ILE:HG23	5:M:1061:GLU:N	2.31	0.46
5:M:1087:VAL:HG22	5:M:1091:GLU:OE2	2.16	0.46
6:N:126:VAL:O	6:N:132:TYR:HE1	1.98	0.46
6:N:133:ILE:CA	6:N:456:MET:CB	2.90	0.46
6:N:141:ILE:CG2	6:N:161:LEU:HD12	2.46	0.46
6:N:157:GLU:HA	6:N:160:GLU:OE1	2.15	0.46
6:N:463:GLN:O	6:N:467:GLU:HG3	2.16	0.46
6:N:619:LEU:HB2	6:N:621:LYS:HE2	1.97	0.46
6:N:1018:ASN:HB3	6:N:1021:TYR:CB	2.41	0.46
6:N:1283:ILE:HG21	6:N:1311:LEU:HD11	1.98	0.46
7:O:17:TYR:O	7:O:21:VAL:HG23	2.16	0.46
7:O:26:ARG:NH1	7:O:29:GLN:HE21	2.14	0.46
2:H:7:G:H2'	2:H:8:C:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:116:PRO:HA	12:A:378:HOH:O	2.15	0.46
4:B:76:VAL:O	4:B:79:ILE:HG13	2.16	0.46
5:C:191:PHE:HE2	5:C:196:LEU:HB2	1.81	0.46
5:C:274:ARG:CB	5:C:285:LEU:HD13	2.45	0.46
5:C:1059:ASP:CG	5:C:1080:SER:HB3	2.35	0.46
6:D:774:SER:C	6:D:776:GLU:H	2.19	0.46
6:D:963:TYR:CE2	6:D:1002:LYS:HE2	2.50	0.46
6:D:1011:PHE:HD1	6:D:1015:TYR:HB2	1.81	0.46
4:K:104:GLU:HA	4:K:136:GLY:O	2.16	0.46
4:K:181:VAL:HA	4:K:194:LYS:O	2.15	0.46
4:L:173:PRO:HB2	4:L:205:VAL:HG22	1.97	0.46
5:M:89:THR:O	5:M:91:GLN:HG3	2.16	0.46
5:M:769:PRO:HB3	12:M:7112:HOH:O	2.16	0.46
5:M:1103:ASP:N	5:M:1107:ASN:O	2.49	0.46
6:N:19:ARG:O	6:N:22:SER:HB3	2.16	0.46
6:N:36:THR:O	6:N:38:LYS:N	2.48	0.46
6:N:421:LEU:HD21	6:N:429:SER:CB	2.46	0.46
6:N:678:GLU:HG3	6:N:679:ARG:CG	2.46	0.46
6:N:1398:TRP:CZ3	6:N:1401:GLU:HG3	2.50	0.46
6:N:1401:GLU:OE2	6:N:1405:GLU:HB2	2.16	0.46
3:Z:3:DA:H1'	5:M:423:ALA:HA	1.98	0.46
4:A:19:GLU:O	4:A:200:TRP:HA	2.15	0.46
4:B:125:PRO:HA	12:B:399:HOH:O	2.15	0.46
5:C:405:ARG:HA	12:C:1122:HOH:O	2.16	0.46
5:C:943:VAL:HG22	12:C:1225:HOH:O	2.16	0.46
5:C:1030:GLN:O	6:D:622:ARG:HA	2.16	0.46
6:D:136:ASP:HB3	6:D:137:PRO:CD	2.30	0.46
6:D:433:GLY:HA2	6:D:450:TYR:N	2.30	0.46
6:D:666:ILE:HD11	12:D:9408:HOH:O	2.16	0.46
6:D:714:GLN:CD	6:D:765:SER:HA	2.36	0.46
6:D:926:LYS:HZ1	6:D:929:ARG:NH2	2.13	0.46
6:D:1114:THR:HG23	6:D:1114:THR:O	2.16	0.46
6:D:1336:LEU:HB2	6:D:1344:VAL:HG21	1.97	0.46
4:K:41:ARG:O	4:K:45:LEU:HD13	2.16	0.46
4:K:198:ARG:NH1	12:K:762:HOH:O	2.49	0.46
4:L:124:ASN:HD21	4:L:127:LEU:HD13	1.81	0.46
5:M:430:VAL:HG13	5:M:430:VAL:O	2.16	0.46
5:M:474:VAL:HA	5:M:478:VAL:O	2.16	0.46
5:M:557:ARG:O	5:M:560:MET:HG3	2.16	0.46
5:M:598:GLU:HG3	5:M:623:TYR:OH	2.16	0.46
6:N:52:PRO:CG	6:N:80:VAL:HG13	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:400:VAL:HG22	6:N:443:VAL:HG21	1.97	0.46
6:N:1117:TYR:N	6:N:1117:TYR:CD2	2.84	0.46
6:N:1280:VAL:O	6:N:1294:VAL:HA	2.15	0.46
3:Z:6:DC:H3'	6:N:1266:ARG:CZ	2.44	0.45
5:C:202:TYR:HB3	5:C:207:LEU:HD12	1.97	0.45
5:C:408:ARG:NH1	5:C:456:ALA:O	2.47	0.45
5:C:449:ILE:C	5:C:451:LEU:H	2.20	0.45
5:C:734:LEU:HA	5:C:737:LEU:HD13	1.98	0.45
5:C:850:ALA:HA	6:D:632:VAL:CG1	2.45	0.45
5:C:906:PHE:CZ	6:D:1067:VAL:HA	2.51	0.45
6:D:184:GLU:HB2	12:D:9238:HOH:O	2.15	0.45
6:D:514:LEU:CD2	6:D:517:VAL:HG22	2.46	0.45
6:D:1047:LYS:HG2	6:D:1053:PHE:CD1	2.51	0.45
6:D:1189:ARG:CZ	6:D:1203:LYS:HD2	2.46	0.45
6:D:1241:PHE:HD1	6:D:1257:PRO:HG2	1.80	0.45
6:D:1475:GLY:O	6:D:1478:SER:HB3	2.16	0.45
6:D:1496:GLU:HA	6:D:1499:ARG:HG3	1.97	0.45
5:M:58:ASP:C	5:M:59:LYS:HG2	2.36	0.45
5:M:198:ARG:HE	5:M:203:ASP:HA	1.80	0.45
5:M:218:VAL:HG22	5:M:221:LEU:HD23	1.97	0.45
5:M:302:VAL:O	5:M:306:THR:HG23	2.16	0.45
5:M:367:LEU:HA	5:M:371:LYS:HE2	1.98	0.45
5:M:707:ARG:HD2	5:M:826:TYR:OH	2.16	0.45
6:N:452:ILE:HD11	12:N:9025:HOH:O	2.17	0.45
6:N:614:PHE:O	6:N:618:LEU:HD13	2.16	0.45
6:N:705:ALA:HB3	6:N:706:PRO:HD3	1.97	0.45
6:N:978:TYR:HB2	6:N:983:LEU:HD12	1.98	0.45
6:N:1154:GLU:HG2	6:N:1159:ARG:HG3	1.98	0.45
6:N:1291:SER:HB2	6:N:1293:PHE:CE1	2.45	0.45
7:O:9:LEU:HD22	7:O:19:LEU:CD1	2.46	0.45
3:I:3:DA:N6	12:I:1102:HOH:O	2.49	0.45
5:C:3:ILE:CD1	5:C:900:ARG:HB2	2.46	0.45
5:C:176:VAL:CG1	5:C:182:VAL:HG13	2.42	0.45
5:C:242:LEU:HD12	12:C:1489:HOH:O	2.16	0.45
5:C:292:ARG:HD2	5:C:299:LYS:HD2	1.97	0.45
5:C:474:VAL:HG23	5:C:478:VAL:C	2.36	0.45
5:C:688:ILE:HD13	5:C:847:GLY:HA3	1.99	0.45
5:C:906:PHE:CG	6:D:1067:VAL:HG22	2.52	0.45
6:D:9:ARG:HB2	6:D:1456:LYS:HA	1.98	0.45
6:D:177:ALA:HB3	6:D:205:TYR:OH	2.17	0.45
6:D:550:ARG:CZ	6:D:573:MET:HG2	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:786:ILE:HG21	6:D:1027:GLY:N	2.31	0.45
6:D:987:GLU:HG3	12:D:9282:HOH:O	2.16	0.45
6:D:1239:ARG:HG3	6:D:1239:ARG:NH1	2.29	0.45
4:K:149:GLY:O	4:K:171:PHE:HB2	2.16	0.45
4:K:222:LEU:CD1	4:L:218:LEU:HD23	2.46	0.45
5:M:47:ALA:HA	5:M:50:GLU:OE2	2.15	0.45
5:M:267:TYR:HB2	5:M:272:ALA:HB1	1.97	0.45
5:M:287:GLY:O	5:M:288:ARG:C	2.54	0.45
5:M:549:PHE:HE2	5:M:887:GLU:HA	1.81	0.45
5:M:966:LEU:O	5:M:969:GLN:HB2	2.16	0.45
6:N:602:SER:O	6:N:606:ILE:HG13	2.16	0.45
6:N:699:VAL:N	6:N:756:GLN:HE22	2.10	0.45
6:N:773:ALA:HA	6:N:1228:SER:HB2	1.98	0.45
6:N:799:LYS:HD3	6:N:826:PRO:HD3	1.99	0.45
6:N:954:ALA:HB1	6:N:1039:CYS:SG	2.56	0.45
6:N:1137:ARG:HG2	6:N:1141:GLU:OE1	2.15	0.45
1:G:23:DG:H1'	12:G:1601:HOH:O	2.17	0.45
2:H:1:G:O6	5:C:773:LEU:HD23	2.15	0.45
1:X:2:DC:H2"	1:X:3:DC:C6	2.51	0.45
4:A:32:PHE:HE2	4:B:43:ILE:HD13	1.82	0.45
5:C:184:MET:CB	5:C:193:LEU:HG	2.46	0.45
5:C:442:GLU:OE2	5:C:543:ASN:HB3	2.16	0.45
5:C:647:GLN:NE2	5:C:648:ARG:O	2.49	0.45
5:C:669:GLY:HA3	5:C:995:MET:HA	1.99	0.45
5:C:922:PHE:HE1	5:C:963:LEU:HD22	1.82	0.45
6:D:99:ALA:HB1	6:D:575:GLN:OE1	2.16	0.45
6:D:794:GLN:NE2	6:D:905:PRO:HG2	2.32	0.45
6:D:957:PRO:CD	6:D:1007:VAL:HG22	2.47	0.45
6:D:1189:ARG:NH1	6:D:1203:LYS:HD2	2.32	0.45
6:D:1236:LEU:CD2	6:D:1356:TYR:HA	2.47	0.45
6:D:1415:VAL:O	6:D:1415:VAL:HG23	2.16	0.45
5:M:50:GLU:CD	5:M:345:ARG:HH11	2.19	0.45
5:M:91:GLN:HB3	5:M:118:ILE:C	2.37	0.45
5:M:191:PHE:CD2	5:M:195:LEU:HD23	2.50	0.45
5:M:603:VAL:HG22	5:M:613:VAL:HG12	1.97	0.45
5:M:1030:GLN:HE22	6:N:628:ARG:HD3	1.82	0.45
5:M:1103:ASP:CG	6:N:3:LYS:HZ1	2.19	0.45
5:M:1109:VAL:HG23	6:N:3:LYS:HG3	1.99	0.45
6:N:162:ARG:HH22	6:N:414:ARG:HD2	1.80	0.45
6:N:788:GLY:O	6:N:792:ILE:HG22	2.16	0.45
6:N:1273:VAL:O	6:N:1273:VAL:HG23	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1281:VAL:HG23	6:N:1319:VAL:CG2	2.44	0.45
6:N:1331:ASP:OD2	6:N:1332:PRO:N	2.50	0.45
6:N:1464:GLU:H	6:N:1464:GLU:HG2	1.45	0.45
2:Y:4:U:O2'	2:Y:5:C:H5'	2.17	0.45
4:B:57:TYR:CZ	4:B:161:ARG:HG2	2.51	0.45
4:B:83:LYS:HZ1	4:B:168:ASP:CG	2.19	0.45
5:C:45:GLN:HB2	5:C:71:TYR:CE2	2.52	0.45
5:C:289:THR:O	5:C:291:ALA:N	2.49	0.45
5:C:414:GLY:O	5:C:416:GLY:N	2.49	0.45
5:C:874:LEU:CD2	6:D:1029:ARG:HB2	2.47	0.45
6:D:9:ARG:HG3	6:D:1455:LYS:O	2.16	0.45
6:D:98:PRO:C	6:D:458:ALA:HB3	2.37	0.45
6:D:204:LEU:HD11	6:D:445:ARG:CD	2.46	0.45
6:D:1105:ILE:HG23	6:D:1200:VAL:HG23	1.97	0.45
4:K:105:GLY:O	4:K:132:LEU:HB3	2.16	0.45
4:K:183:ASP:HA	5:M:938:LYS:HZ1	1.82	0.45
5:M:95:TYR:HD2	5:M:114:PHE:HB2	1.80	0.45
5:M:410:ILE:HB	5:M:453:THR:O	2.16	0.45
5:M:432:ARG:H	5:M:432:ARG:HG2	1.41	0.45
5:M:433:THR:CG2	5:M:488:ALA:HB1	2.46	0.45
5:M:861:LEU:CD2	5:M:863:ASP:H	2.28	0.45
5:M:1039:ALA:HA	6:N:1227:GLN:HE22	1.81	0.45
6:N:137:PRO:HD2	6:N:453:ASP:CG	2.37	0.45
6:N:906:GLN:HB3	6:N:911:LEU:CD1	2.46	0.45
6:N:1197:ARG:HG3	6:N:1198:TYR:H	1.81	0.45
6:N:1258:ARG:HG3	6:N:1258:ARG:NH1	2.31	0.45
6:N:1401:GLU:HA	12:N:9382:HOH:O	2.17	0.45
2:Y:7:G:C8	2:Y:7:G:H5"	2.51	0.45
3:Z:6:DC:OP1	6:N:1266:ARG:NH2	2.49	0.45
4:A:181:VAL:HA	4:A:194:LYS:O	2.16	0.45
4:B:86:VAL:O	4:B:86:VAL:HG13	2.17	0.45
5:C:64:LEU:HD13	5:C:359:MET:CG	2.46	0.45
5:C:94:LEU:HG	5:C:116:GLY:O	2.17	0.45
5:C:172:ILE:HD12	5:C:172:ILE:N	2.32	0.45
5:C:238:LEU:O	5:C:238:LEU:HD23	2.17	0.45
5:C:309:TYR:HA	5:C:312:ALA:HB3	1.97	0.45
5:C:333:ILE:N	5:C:465:GLY:O	2.44	0.45
5:C:401:LEU:HD21	5:C:565:GLN:HB2	1.98	0.45
5:C:498:GLN:OE1	6:D:1068:LEU:HB2	2.16	0.45
5:C:863:ASP:O	5:C:865:THR:N	2.49	0.45
6:D:45:PHE:HB3	6:D:86:ARG:NH2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:162:ARG:HE	6:D:434:ARG:HE	1.63	0.45
6:D:165:LYS:CA	6:D:397:LYS:H	2.29	0.45
6:D:414:ARG:HB3	6:D:450:TYR:CD1	2.52	0.45
6:D:1031:ASN:HB3	6:D:1034:GLN:HG3	1.98	0.45
6:D:1153:VAL:HG22	6:N:561:GLY:CA	2.45	0.45
6:D:1462:LEU:N	6:D:1462:LEU:HD23	2.32	0.45
6:D:1486:VAL:HG22	7:E:22:VAL:HG13	1.98	0.45
4:K:31:GLY:N	4:K:193:ASP:OD1	2.48	0.45
4:L:62:LEU:HA	4:L:163:ASN:CG	2.36	0.45
5:M:224:GLU:H	5:M:224:GLU:HG2	1.50	0.45
6:N:710:ARG:HD2	6:N:768:ASN:ND2	2.24	0.45
6:N:1115:THR:CG2	6:N:1151:ARG:NH2	2.80	0.45
6:N:1171:VAL:O	6:N:1175:ILE:HG13	2.17	0.45
1:X:12:DG:H2"	1:X:13:DT:O5'	2.15	0.45
4:A:14:ARG:HH21	4:A:22:GLU:HB3	1.82	0.45
5:C:754:ILE:HD13	5:C:791:ARG:NE	2.31	0.45
5:C:1095:LEU:HG	6:D:603:LEU:HD13	1.99	0.45
6:D:10:ILE:CD1	6:D:1447:LEU:HG	2.47	0.45
6:D:471:GLU:O	6:D:474:GLU:HB3	2.17	0.45
6:D:672:ALA:HB2	12:D:9135:HOH:O	2.17	0.45
6:D:974:ILE:HD11	6:D:995:LEU:HD13	1.99	0.45
7:E:41:GLU:HG2	7:E:42:PRO:CD	2.46	0.45
7:E:57:ASP:H	7:E:58:PRO:HD3	1.82	0.45
4:K:44:LEU:HD22	4:K:199:ILE:HG21	1.99	0.45
4:K:194:LYS:HE2	4:K:196:THR:CG2	2.46	0.45
5:M:1096:ALA:HB1	6:N:13:ALA:HB3	1.99	0.45
6:N:146:PRO:HG3	12:N:9111:HOH:O	2.16	0.45
6:N:477:LEU:HB3	6:N:496:LEU:HD22	1.99	0.45
6:N:965:GLU:HA	6:N:968:ASP:OD2	2.17	0.45
4:A:1:MET:O	4:A:6:LEU:HB2	2.17	0.45
5:C:64:LEU:CD2	5:C:359:MET:HG3	2.37	0.45
5:C:890:LEU:HD23	5:C:890:LEU:C	2.37	0.45
6:D:136:ASP:CB	6:D:137:PRO:HD3	2.30	0.45
6:D:150:ARG:HH12	6:D:468:LEU:CD2	2.30	0.45
6:D:546:ARG:HB2	12:D:9041:HOH:O	2.15	0.45
6:D:660:LYS:CE	6:D:694:VAL:HA	2.47	0.45
6:D:783:ARG:NH2	6:D:1029:ARG:CZ	2.80	0.45
6:D:932:ASP:N	6:D:932:ASP:OD1	2.49	0.45
6:D:957:PRO:O	6:D:960:LYS:HB3	2.17	0.45
6:D:1263:PHE:HA	6:D:1375:MET:CE	2.47	0.45
6:D:1407:LEU:HA	12:D:9390:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1442:ASN:CG	6:D:1444:THR:HB	2.37	0.45
7:E:90:GLU:HA	12:E:115:HOH:O	2.16	0.45
4:K:124:ASN:N	4:K:125:PRO:HD3	2.31	0.45
5:M:86:LYS:NZ	5:M:813:VAL:HG12	2.32	0.45
5:M:119:PRO:HG2	5:M:386:PHE:CD2	2.52	0.45
5:M:437:ARG:HA	5:M:467:ILE:CG2	2.47	0.45
5:M:551:GLU:O	6:N:1065:LEU:HB3	2.17	0.45
5:M:1065:ALA:HB1	5:M:1077:PRO:HG2	1.98	0.45
6:N:82:LYS:O	6:N:84:ILE:N	2.50	0.45
6:N:133:ILE:O	6:N:152:LEU:HA	2.17	0.45
6:N:1047:LYS:HB3	6:N:1048:PRO:HD2	1.99	0.45
6:N:1047:LYS:HA	6:N:1053:PHE:CE1	2.52	0.45
6:N:1174:LEU:O	6:N:1183:ILE:HD11	2.16	0.45
6:N:1197:ARG:HB3	6:N:1396:GLU:CG	2.47	0.45
6:N:1237:THR:OG1	6:N:1256:LEU:HB2	2.16	0.45
7:O:54:LEU:HG	7:O:58:PRO:CG	2.47	0.45
2:Y:7:G:H2'	2:Y:8:C:OP1	2.17	0.45
5:C:85:GLU:HA	5:C:85:GLU:OE2	2.17	0.45
5:C:137:VAL:HG22	5:C:391:LEU:HG	1.99	0.45
5:C:630:ARG:NH2	5:C:706:GLU:HA	2.25	0.45
5:C:843:HIS:CD2	5:C:884:GLN:HA	2.51	0.45
5:C:874:LEU:HD23	6:D:1029:ARG:HB2	1.98	0.45
5:C:914:ILE:HA	5:C:917:LEU:HD12	1.99	0.45
5:C:1054:THR:HG21	5:C:1079:PRO:CB	2.40	0.45
12:C:1190:HOH:O	6:D:651:GLU:HG3	2.16	0.45
6:D:195:VAL:HG23	12:D:9368:HOH:O	2.17	0.45
6:D:447:VAL:O	6:D:449:SER:N	2.49	0.45
6:D:826:PRO:HD2	6:D:829:VAL:HG22	1.99	0.45
6:D:844:ALA:O	6:D:867:ARG:HB3	2.17	0.45
6:D:969:ARG:O	6:D:972:LEU:HB3	2.17	0.45
6:D:1109:GLU:HG2	6:D:1202:GLN:H	1.81	0.45
6:D:1209:LEU:CD2	6:D:1211:MET:H	2.21	0.45
6:D:1311:LEU:HD12	6:D:1311:LEU:O	2.16	0.45
6:D:1346:ARG:HG3	12:D:9099:HOH:O	2.16	0.45
5:M:226:VAL:HG13	5:M:227:PHE:CD1	2.51	0.45
5:M:352:ALA:HA	5:M:355:VAL:CG1	2.47	0.45
5:M:365:ASP:O	5:M:367:LEU:N	2.50	0.45
5:M:367:LEU:HD23	5:M:371:LYS:HE3	1.99	0.45
5:M:676:ILE:O	5:M:676:ILE:HG23	2.17	0.45
5:M:710:ILE:HG23	5:M:823:VAL:HB	1.98	0.45
5:M:1008:ARG:CZ	5:M:1011:GLY:HA3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:131:LYS:HG3	6:N:568:ARG:CG	2.47	0.45
6:N:399:ARG:HB2	6:N:401:TYR:HE1	1.82	0.45
6:N:455:ARG:HB3	6:N:459:GLU:CD	2.37	0.45
6:N:895:VAL:O	6:N:899:LEU:HG	2.16	0.45
6:N:1196:THR:HG21	12:N:9128:HOH:O	2.17	0.45
6:N:1273:VAL:HG22	6:N:1305:LEU:HD21	1.98	0.45
1:X:11:DC:H5'	12:X:877:HOH:O	2.17	0.45
4:A:59:GLU:HG3	4:A:139:ASN:ND2	2.32	0.45
5:C:39:ARG:O	5:C:41:ASN:N	2.50	0.45
5:C:95:TYR:HE1	12:C:1214:HOH:O	2.00	0.45
5:C:119:PRO:HG2	5:C:386:PHE:CG	2.52	0.45
5:C:486:MET:HE3	5:C:490:GLU:HB2	1.99	0.45
5:C:572:ILE:HG13	5:C:573:ARG:H	1.82	0.45
5:C:578:VAL:HG11	5:C:991:GLN:CD	2.36	0.45
5:C:670:GLN:HE22	5:C:699:PHE:HA	1.82	0.45
5:C:922:PHE:HB3	5:C:964:LYS:HZ1	1.81	0.45
5:C:1096:ALA:O	6:D:21:TRP:HH2	2.00	0.45
6:D:8:VAL:C	6:D:1434:TRP:HH2	2.21	0.45
6:D:14:SER:O	6:D:17:LYS:N	2.50	0.45
6:D:107:ASP:OD1	6:D:109:PRO:HD2	2.17	0.45
6:D:439:LEU:HD12	6:D:439:LEU:H	1.81	0.45
6:D:879:ARG:NH2	6:D:903:ASP:HA	2.31	0.45
6:D:947:ILE:H	6:D:947:ILE:HD12	1.82	0.45
6:D:1021:TYR:CE2	6:D:1025:GLN:HG3	2.52	0.45
6:D:1098:LEU:HD21	6:D:1229:ILE:CG2	2.47	0.45
6:D:1098:LEU:HD21	6:D:1229:ILE:HG21	1.99	0.45
6:D:1384:PRO:HG3	6:D:1389:LEU:CA	2.47	0.45
7:E:41:GLU:HB2	7:E:45:ARG:NE	2.31	0.45
4:K:33:GLY:O	4:K:195:LEU:HD22	2.16	0.45
4:K:42:ARG:NH1	4:L:34:VAL:HB	2.29	0.45
4:K:58:ILE:HG21	4:K:68:ILE:HD11	1.97	0.45
4:L:42:ARG:HG2	4:L:42:ARG:HH11	1.82	0.45
5:M:44:ILE:HD13	5:M:340:MET:HE1	1.99	0.45
5:M:101:ILE:HG22	5:M:102:HIS:N	2.32	0.45
5:M:820:ARG:HB2	12:M:7055:HOH:O	2.17	0.45
6:N:28:LYS:CB	6:N:41:ARG:HD2	2.40	0.45
6:N:56:TYR:CE2	6:N:66:GLN:HA	2.52	0.45
6:N:141:ILE:HD11	6:N:448:GLU:CD	2.37	0.45
6:N:704:ARG:HB2	6:N:736:PHE:CD2	2.52	0.45
5:C:136:ILE:CD1	5:C:392:SER:HB3	2.42	0.45
5:C:455:LEU:HD11	12:C:1429:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:580:MET:SD	5:C:584:GLU:HG3	2.57	0.45
5:C:725:ASP:O	5:C:727:PRO:HD3	2.17	0.45
5:C:858:MET:SD	5:C:867:VAL:HG23	2.56	0.45
5:C:962:GLN:NE2	12:C:1264:HOH:O	2.50	0.45
6:D:48:ARG:HB3	6:D:48:ARG:NH1	2.32	0.45
6:D:97:THR:HG21	6:D:571:LYS:HD3	1.99	0.45
6:D:131:LYS:HG3	6:D:456:MET:HE1	1.99	0.45
6:D:161:LEU:CD2	6:D:452:ILE:HG21	2.47	0.45
6:D:770:LEU:HD11	6:D:919:PHE:CE2	2.52	0.45
6:D:928:ALA:HB1	12:E:102:HOH:O	2.17	0.45
6:D:956:ILE:HA	6:D:1039:CYS:HB3	1.98	0.45
6:D:1272:ALA:CA	6:D:1326:THR:HB	2.46	0.45
7:E:48:MET:HG2	7:E:49:GLN:N	2.31	0.45
4:L:142:VAL:HG23	4:L:142:VAL:O	2.17	0.45
5:M:141:HIS:HD2	5:M:332:ARG:O	2.00	0.45
5:M:578:VAL:HG11	5:M:991:GLN:CB	2.42	0.45
6:N:423:ASP:HB3	6:N:426:LYS:HB3	1.99	0.45
5:C:220:GLY:HA2	5:C:223:ASP:OD1	2.16	0.44
5:C:267:TYR:HD2	5:C:267:TYR:O	2.00	0.44
5:C:275:TYR:CD2	5:C:276:LYS:HG3	2.53	0.44
5:C:334:ARG:O	5:C:339:LEU:HD11	2.16	0.44
5:C:399:ASN:ND2	5:C:402:SER:HB3	2.32	0.44
5:C:422:ARG:O	8:D:7001:STD:H143	2.18	0.44
5:C:492:ASP:CB	5:C:518:LYS:HE2	2.42	0.44
5:C:744:ARG:O	5:C:800:VAL:HG21	2.17	0.44
5:C:1008:ARG:HA	6:D:651:GLU:OE2	2.17	0.44
5:C:1084:SER:HA	5:C:1087:VAL:HG12	1.99	0.44
6:D:397:LYS:O	6:D:448:GLU:N	2.40	0.44
6:D:409:VAL:CG2	6:D:421:LEU:HA	2.47	0.44
6:D:1118:ILE:HG13	6:D:1190:SER:OG	2.17	0.44
6:D:1161:GLU:CD	6:D:1164:ARG:HB2	2.37	0.44
4:L:64:GLU:HA	4:L:165:ILE:HD13	1.99	0.44
5:M:93:PRO:HG3	5:M:117:HIS:CE1	2.49	0.44
5:M:139:GLN:HE21	5:M:334:ARG:HD3	1.81	0.44
5:M:270:GLY:O	5:M:274:ARG:HB3	2.17	0.44
5:M:428:ARG:NH1	5:M:450:GLY:O	2.49	0.44
5:M:862:PRO:HD3	5:M:973:VAL:O	2.17	0.44
5:M:1001:VAL:O	5:M:1001:VAL:HG12	2.17	0.44
6:N:398:ALA:HB2	6:N:447:VAL:CA	2.41	0.44
6:N:519:VAL:HG22	6:N:544:TYR:CE1	2.52	0.44
6:N:704:ARG:NH1	6:N:705:ALA:HB2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:710:ARG:HH11	6:N:768:ASN:HD21	1.58	0.44
6:N:996:TRP:HB3	12:N:9282:HOH:O	2.16	0.44
6:N:1044:LEU:HB2	12:N:9330:HOH:O	2.16	0.44
6:N:1148:VAL:HG12	6:N:1163:GLY:HA2	1.98	0.44
2:Y:8:C:H6	2:Y:8:C:O5'	2.00	0.44
4:A:62:LEU:HD13	4:A:63:HIS:ND1	2.32	0.44
5:C:93:PRO:HB3	5:C:117:HIS:HE1	1.81	0.44
5:C:682:TYR:CE1	5:C:851:LYS:HD2	2.52	0.44
5:C:796:GLU:HG3	5:C:1004:LYS:HZ1	1.81	0.44
5:C:839:LEU:N	5:C:839:LEU:HD23	2.31	0.44
5:C:988:VAL:HG11	6:D:950:GLY:HA2	1.99	0.44
5:C:1018:GLN:HG3	5:C:1060:ILE:CD1	2.39	0.44
6:D:28:LYS:CG	6:D:29:PRO:HD2	2.45	0.44
6:D:506:GLY:O	6:D:507:ASN:C	2.55	0.44
6:D:809:PRO:O	6:D:812:ALA:HB3	2.16	0.44
7:E:41:GLU:N	7:E:42:PRO:CD	2.79	0.44
4:L:52:ALA:HB2	4:L:170:VAL:O	2.17	0.44
4:L:94:LEU:HD23	4:L:97:VAL:CG2	2.37	0.44
4:L:176:ARG:NH1	6:N:884:ARG:HD3	2.32	0.44
5:M:195:LEU:O	5:M:195:LEU:HD12	2.17	0.44
5:M:332:ARG:NE	5:M:464:LEU:HD11	2.31	0.44
5:M:411:SER:HA	5:M:452:ILE:HG22	1.99	0.44
5:M:499:ALA:HB3	5:M:536:PRO:HD3	1.98	0.44
5:M:906:PHE:CE2	6:N:1067:VAL:HA	2.53	0.44
5:M:1005:MET:HB2	6:N:648:MET:CE	2.47	0.44
5:M:1103:ASP:CG	5:M:1104:GLU:N	2.70	0.44
6:N:6:ARG:NH1	6:N:6:ARG:HB3	2.31	0.44
6:N:72:VAL:CG2	6:N:77:GLY:HA2	2.47	0.44
6:N:104:PHE:HB3	6:N:512:MET:CE	2.47	0.44
6:N:157:GLU:HG2	12:N:9472:HOH:O	2.16	0.44
6:N:506:GLY:O	6:N:507:ASN:C	2.56	0.44
6:N:616:GLN:HA	12:N:9306:HOH:O	2.17	0.44
6:N:643:GLY:HA3	6:N:727:GLN:HB2	2.00	0.44
6:N:728:LEU:HD21	6:N:733:CYS:SG	2.57	0.44
6:N:774:SER:C	6:N:776:GLU:H	2.21	0.44
6:N:799:LYS:HB3	6:N:826:PRO:CG	2.37	0.44
6:N:1105:ILE:HG21	6:N:1370:ILE:HG23	2.00	0.44
6:N:1259:VAL:HG22	6:N:1355:VAL:HG21	1.99	0.44
6:N:1301:LYS:HA	6:N:1301:LYS:HD2	1.75	0.44
1:X:17:DC:P	5:M:1031:ARG:HG3	2.57	0.44
4:A:50:GLY:O	4:A:146:ARG:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:186:LEU:HD22	4:A:192:LEU:CD1	2.47	0.44
4:B:22:GLU:N	12:B:393:HOH:O	2.48	0.44
4:B:80:LEU:HG	6:D:844:ALA:HA	1.97	0.44
5:C:15:LEU:N	5:C:586:ARG:HH22	2.13	0.44
5:C:198:ARG:NH2	5:C:203:ASP:HA	2.30	0.44
5:C:393:GLN:HE21	5:C:393:GLN:H	1.63	0.44
5:C:553:ASP:OD1	5:C:843:HIS:ND1	2.50	0.44
5:C:578:VAL:HG11	5:C:991:GLN:HB3	1.99	0.44
5:C:860:HIS:CD2	5:C:860:HIS:H	2.35	0.44
6:D:134:VAL:HG21	6:D:463:GLN:CB	2.47	0.44
6:D:141:ILE:HD13	6:D:432:TYR:HB2	1.97	0.44
6:D:206:ARG:HG3	6:D:206:ARG:NH1	2.32	0.44
6:D:434:ARG:O	6:D:447:VAL:HG22	2.17	0.44
6:D:619:LEU:O	6:D:620:GLY:O	2.35	0.44
6:D:701:LEU:HD21	6:D:763:MET:CE	2.47	0.44
6:D:963:TYR:CD2	6:D:1002:LYS:HB3	2.53	0.44
6:D:975:GLU:O	6:D:979:GLU:HG3	2.17	0.44
6:D:1085:ALA:O	6:D:1088:THR:HG22	2.17	0.44
6:D:1274:ILE:HB	6:D:1322:GLY:HA2	1.99	0.44
6:D:1383:ASP:HB3	6:D:1416:ALA:HB3	1.98	0.44
7:E:59:ASN:HB3	7:E:62:THR:OG1	2.17	0.44
7:E:87:LYS:O	7:E:91:ARG:HG3	2.17	0.44
4:K:61:VAL:HG22	12:K:1349:HOH:O	2.16	0.44
4:K:64:GLU:O	4:K:64:GLU:HG2	2.18	0.44
4:K:206:THR:HG22	4:K:209:GLU:HG3	1.98	0.44
5:M:92:ALA:HB2	5:M:120:LEU:HD11	2.00	0.44
5:M:258:TYR:CD1	5:M:258:TYR:N	2.85	0.44
5:M:502:PRO:O	5:M:503:LEU:HD12	2.16	0.44
5:M:1032:PHE:HZ	5:M:1040:LEU:CD1	2.30	0.44
5:M:1070:ILE:HG23	6:N:656:PHE:CE2	2.52	0.44
5:M:1090:LYS:HE2	5:M:1112:PHE:CE1	2.52	0.44
5:M:1105:LYS:O	5:M:1107:ASN:N	2.49	0.44
6:N:163:TYR:HB2	6:N:166:GLN:CG	2.44	0.44
6:N:179:VAL:HA	6:N:183:GLU:OE1	2.18	0.44
6:N:728:LEU:HD11	6:N:732:VAL:HG23	1.98	0.44
6:N:1144:LEU:HD11	6:N:1186:VAL:CG1	2.46	0.44
6:N:1191:PRO:HD3	6:N:1204:CYS:O	2.16	0.44
6:N:1236:LEU:HD23	6:N:1359:GLN:O	2.18	0.44
6:N:1281:VAL:HB	6:N:1313:VAL:HG22	1.99	0.44
6:N:1295:GLU:CB	6:N:1300:SER:HB3	2.48	0.44
2:Y:15:C:H2'	2:Y:16:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:32:PHE:CE2	4:B:43:ILE:HD13	2.52	0.44
4:A:48:ILE:HD12	4:A:174:VAL:HG21	1.99	0.44
4:A:71:VAL:HG22	4:A:132:LEU:HD11	1.98	0.44
5:C:53:PRO:HG3	12:C:1281:HOH:O	2.17	0.44
5:C:141:HIS:HE1	5:C:332:ARG:HH11	1.63	0.44
5:C:260:LEU:CB	5:C:291:ALA:HB1	2.47	0.44
5:C:469:THR:OG1	5:C:470:PRO:HD2	2.18	0.44
5:C:747:ALA:O	5:C:800:VAL:HG22	2.17	0.44
6:D:137:PRO:HD2	6:D:453:ASP:CG	2.38	0.44
6:D:529:GLN:HG3	6:D:535:PHE:CE1	2.52	0.44
6:D:646:LYS:CA	6:D:720:LEU:HG	2.47	0.44
6:D:704:ARG:HH21	6:D:737:ASN:HD22	1.65	0.44
6:D:794:GLN:HB3	6:D:1017:PHE:HZ	1.81	0.44
6:D:1078:ARG:HG2	6:D:1078:ARG:HH11	1.81	0.44
6:D:1310:ARG:HG2	6:D:1310:ARG:HH11	1.83	0.44
6:D:1383:ASP:HA	12:D:9485:HOH:O	2.16	0.44
4:K:59:GLU:HG3	4:K:139:ASN:O	2.18	0.44
4:K:74:ASP:O	4:K:78:ILE:HG13	2.18	0.44
4:L:194:LYS:HE2	12:L:689:HOH:O	2.18	0.44
5:M:51:THR:HB	5:M:348:LEU:HG	1.99	0.44
5:M:143:SER:O	5:M:144:PRO:C	2.55	0.44
5:M:175:GLU:O	5:M:183:SER:N	2.47	0.44
5:M:290:LEU:HB3	5:M:302:VAL:CG1	2.48	0.44
5:M:625:LEU:CD1	5:M:641:PRO:HG3	2.44	0.44
5:M:660:ALA:O	5:M:667:ALA:O	2.35	0.44
5:M:668:LEU:HB2	5:M:995:MET:SD	2.57	0.44
5:M:725:ASP:O	5:M:727:PRO:HD3	2.16	0.44
5:M:838:LYS:HD2	5:M:838:LYS:N	2.33	0.44
5:M:1032:PHE:HE2	5:M:1037:VAL:HA	1.82	0.44
5:M:1082:PRO:HD3	12:M:7137:HOH:O	2.16	0.44
12:M:7189:HOH:O	6:N:940:THR:HG23	2.16	0.44
6:N:130:SER:O	6:N:568:ARG:NH2	2.47	0.44
6:N:720:LEU:H	6:N:720:LEU:CD1	2.24	0.44
6:N:860:LEU:HB2	6:N:861:GLN:NE2	2.33	0.44
6:N:928:ALA:HA	6:N:931:LEU:HD12	1.99	0.44
6:N:995:LEU:O	6:N:999:THR:HB	2.17	0.44
6:N:1093:TYR:CE1	6:N:1097:LYS:HE3	2.53	0.44
7:O:67:GLU:OE1	7:O:73:LEU:HD11	2.17	0.44
4:A:26:GLU:HB3	4:A:194:LYS:HG3	2.00	0.44
5:C:630:ARG:HH21	5:C:706:GLU:CA	2.25	0.44
5:C:744:ARG:HD2	5:C:747:ALA:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:757:GLY:HA2	5:C:789:SER:HB3	2.00	0.44
5:C:923:GLU:O	5:C:927:GLY:HA3	2.18	0.44
6:D:7:LYS:HA	6:D:1457:ASP:O	2.18	0.44
6:D:660:LYS:HZ3	6:D:694:VAL:HA	1.82	0.44
6:D:1258:ARG:NH2	12:D:9088:HOH:O	2.50	0.44
6:D:1281:VAL:CG2	6:D:1319:VAL:HG11	2.48	0.44
6:D:1321:ALA:O	6:D:1339:LYS:HD2	2.17	0.44
7:E:54:LEU:O	7:E:63:TRP:HZ2	1.99	0.44
4:L:48:ILE:HA	4:L:49:PRO:HD3	1.89	0.44
4:L:52:ALA:CB	4:L:170:VAL:H	2.31	0.44
4:L:59:GLU:HB3	4:L:137:ARG:HH12	1.78	0.44
4:L:173:PRO:CB	4:L:205:VAL:HG22	2.48	0.44
5:M:629:TYR:CB	5:M:637:LEU:HD12	2.47	0.44
6:N:161:LEU:CD2	6:N:452:ILE:HD13	2.48	0.44
6:N:844:ALA:O	6:N:867:ARG:HB3	2.18	0.44
6:N:1141:GLU:HB3	6:N:1168:MET:HE1	1.98	0.44
7:O:48:MET:CB	7:O:54:LEU:HB2	2.48	0.44
1:G:22:DC:H4'	5:C:388:ARG:CG	2.44	0.44
2:H:16:G:OP1	5:C:846:LYS:HD3	2.17	0.44
3:I:13:DG:H2"	3:I:14:DG:C8	2.52	0.44
4:A:88:ARG:HB3	4:A:123:MET:SD	2.58	0.44
4:B:61:VAL:HG11	4:B:75:VAL:HG21	1.98	0.44
4:B:111:ALA:HB3	4:B:124:ASN:O	2.17	0.44
5:C:174:LEU:HB3	5:C:310:LEU:HD22	1.99	0.44
5:C:175:GLU:HB3	5:C:183:SER:OG	2.17	0.44
5:C:187:ASN:O	5:C:188:LYS:HG3	2.17	0.44
5:C:470:PRO:HD2	12:C:1361:HOH:O	2.17	0.44
5:C:859:PRO:HD2	5:C:870:ILE:HD11	2.00	0.44
12:C:1387:HOH:O	6:D:5:VAL:HG12	2.16	0.44
6:D:4:GLU:HG2	6:D:1470:ARG:HH21	1.82	0.44
6:D:204:LEU:HD11	6:D:445:ARG:HD2	2.00	0.44
6:D:441:ARG:CZ	6:D:445:ARG:NH2	2.80	0.44
6:D:525:ARG:HG2	6:D:525:ARG:O	2.18	0.44
6:D:547:LEU:CD2	6:D:581:LEU:HD21	2.42	0.44
6:D:611:GLN:HE21	6:D:611:GLN:HB2	1.68	0.44
6:D:704:ARG:HB2	6:D:736:PHE:HB3	1.98	0.44
6:D:704:ARG:CZ	6:D:737:ASN:O	2.66	0.44
4:K:7:LYS:HZ3	4:K:186:LEU:HD23	1.82	0.44
4:K:41:ARG:HG2	4:K:177:VAL:CG1	2.47	0.44
5:M:21:ILE:HA	12:M:7145:HOH:O	2.16	0.44
5:M:261:ILE:N	5:M:261:ILE:HD12	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:329:GLY:HA3	5:M:489:THR:CG2	2.48	0.44
5:M:408:ARG:NH1	5:M:455:LEU:HD12	2.33	0.44
5:M:691:SER:HB3	5:M:868:ASP:HA	2.00	0.44
5:M:876:VAL:HG22	5:M:884:GLN:NE2	2.31	0.44
5:M:1004:LYS:HZ3	6:N:724:GLN:HE22	1.65	0.44
6:N:50:PHE:CB	6:N:522:PRO:HG2	2.47	0.44
6:N:57:GLU:HG3	6:N:64:LYS:HG3	1.99	0.44
6:N:162:ARG:HH22	6:N:414:ARG:NE	2.16	0.44
6:N:396:VAL:O	6:N:398:ALA:N	2.44	0.44
6:N:557:LEU:HD23	6:N:557:LEU:O	2.18	0.44
6:N:577:ALA:HB3	12:N:9173:HOH:O	2.16	0.44
6:N:647:ARG:NH1	12:N:9284:HOH:O	2.48	0.44
6:N:756:GLN:HG3	6:N:760:ARG:CD	2.48	0.44
6:N:954:ALA:C	6:N:1039:CYS:SG	2.96	0.44
6:N:1086:LEU:HB3	6:N:1087:ARG:HH11	1.83	0.44
6:N:1397:LYS:NZ	6:N:1432:LYS:HD2	2.32	0.44
6:N:1429:LEU:HD11	6:N:1440:PHE:CE1	2.53	0.44
2:H:8:C:C2'	2:H:9:G:H5'	2.47	0.44
4:A:144:VAL:HG11	12:A:360:HOH:O	2.17	0.44
5:C:544:THR:HG22	5:C:550:LEU:HD22	1.99	0.44
5:C:862:PRO:HA	5:C:975:TYR:HE1	1.83	0.44
5:C:1047:HIS:CD2	12:D:9080:HOH:O	2.71	0.44
6:D:477:LEU:CD2	6:D:495:ARG:HD3	2.37	0.44
6:D:502:PHE:CZ	6:D:509:PRO:HB3	2.53	0.44
6:D:553:ARG:O	6:D:557:LEU:HG	2.17	0.44
6:D:616:GLN:HA	12:D:9218:HOH:O	2.18	0.44
6:D:795:VAL:HG11	6:D:863:VAL:HG13	1.99	0.44
6:D:799:LYS:HZ3	6:D:824:ASN:HA	1.82	0.44
6:D:861:GLN:CD	6:D:861:GLN:H	2.21	0.44
6:D:1152:GLU:CD	6:D:1159:ARG:HE	2.21	0.44
6:D:1174:LEU:O	6:D:1183:ILE:HD11	2.18	0.44
6:D:1176:LYS:NZ	6:N:411:THR:HG22	2.33	0.44
6:D:1258:ARG:O	6:D:1262:LEU:HD13	2.18	0.44
6:D:1422:MET:CE	6:D:1426:LYS:HD3	2.48	0.44
6:D:1448:THR:HG22	6:D:1449:GLU:N	2.33	0.44
4:K:79:ILE:HD12	4:K:80:LEU:N	2.32	0.44
4:K:100:LEU:O	4:K:115:LEU:HG	2.18	0.44
4:K:101:LEU:O	4:K:101:LEU:HD23	2.17	0.44
4:K:112:ARG:HE	4:K:125:PRO:HB3	1.83	0.44
4:L:107:LYS:HG2	4:L:108:GLU:N	2.32	0.44
5:M:61:LYS:HG2	12:M:7213:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:654:LEU:HD13	5:M:664:GLY:N	2.32	0.44
5:M:729:LEU:CD2	6:N:675:ARG:HD2	2.38	0.44
5:M:733:ALA:HB1	6:N:679:ARG:HH12	1.82	0.44
5:M:798:GLY:HA3	5:M:828:ALA:O	2.18	0.44
5:M:1092:LEU:CA	5:M:1095:LEU:HD12	2.47	0.44
5:M:1104:GLU:CD	5:M:1104:GLU:N	2.71	0.44
6:N:22:SER:CB	6:N:92:HIS:ND1	2.80	0.44
6:N:569:ASN:O	6:N:572:ARG:HB2	2.18	0.44
6:N:619:LEU:O	6:N:620:GLY:O	2.34	0.44
6:N:1101:VAL:HG13	6:N:1428:ALA:HB2	1.98	0.44
6:N:1183:ILE:HD12	6:N:1183:ILE:O	2.18	0.44
6:N:1283:ILE:N	6:N:1283:ILE:HD12	2.33	0.44
6:N:1453:ALA:O	6:N:1455:LYS:N	2.50	0.44
1:G:5:DG:C2'	1:G:6:DT:H71	2.48	0.44
4:A:9:PRO:CB	4:B:224:TYR:HB3	2.40	0.44
4:B:162:ILE:HG13	4:B:163:ASN:N	2.33	0.44
5:C:101:ILE:HG22	5:C:102:HIS:N	2.32	0.44
5:C:262:ALA:O	5:C:264:PRO:O	2.35	0.44
5:C:368:THR:N	5:C:369:PRO:CD	2.81	0.44
5:C:403:SER:O	5:C:407:LYS:HG3	2.18	0.44
5:C:416:GLY:HA2	12:C:1136:HOH:O	2.17	0.44
5:C:728:HIS:HB3	5:C:729:LEU:HD12	2.00	0.44
5:C:742:VAL:HG23	5:C:805:ARG:NH2	2.33	0.44
6:D:168:THR:HG23	6:D:206:ARG:NH1	2.33	0.44
6:D:1110:ALA:O	6:D:1111:ASP:C	2.56	0.44
6:D:1216:SER:HB3	12:D:9474:HOH:O	2.17	0.44
6:D:1394:VAL:HG12	6:D:1397:LYS:H	1.82	0.44
4:K:63:HIS:ND1	4:K:63:HIS:N	2.65	0.44
4:L:176:ARG:HG3	4:L:200:TRP:CE3	2.53	0.44
5:M:78:PHE:CB	5:M:88:LEU:HD21	2.46	0.44
5:M:193:LEU:HD23	5:M:307:LEU:HD13	2.00	0.44
5:M:313:LEU:HD13	5:M:321:GLU:CB	2.48	0.44
5:M:421:GLU:HG2	12:M:7290:HOH:O	2.17	0.44
5:M:732:ALA:HB1	5:M:735:ARG:HH22	1.83	0.44
5:M:733:ALA:HB1	6:N:679:ARG:NH1	2.33	0.44
6:N:47:GLU:H	6:N:47:GLU:HG2	1.35	0.44
6:N:502:PHE:CZ	6:N:509:PRO:HB3	2.53	0.44
6:N:613:ARG:NH1	6:N:616:GLN:HG2	2.32	0.44
6:N:639:LEU:HD13	6:N:766:ALA:CB	2.48	0.44
6:N:711:LEU:HB3	6:N:714:GLN:HE21	1.82	0.44
6:N:764:LEU:HD12	6:N:767:HIS:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:939:PHE:O	6:N:943:THR:HG23	2.18	0.44
6:N:1194:CYS:SG	6:N:1200:VAL:HG13	2.58	0.44
6:N:1274:ILE:HG21	6:N:1330:ILE:HG23	2.00	0.44
6:N:1279:GLY:O	6:N:1318:TYR:HA	2.16	0.44
6:N:1296:SER:C	6:N:1298:GLY:H	2.21	0.44
6:N:1311:LEU:HD11	12:N:9292:HOH:O	2.18	0.44
6:N:1327:ARG:HH11	6:N:1327:ARG:CB	2.31	0.44
6:N:1353:GLN:HE22	6:N:1363:LEU:CD2	2.31	0.44
6:N:1438:ALA:N	6:N:1446:VAL:HG11	2.33	0.44
1:G:2:DC:H2"	1:G:3:DC:C6	2.53	0.44
1:G:22:DC:H4'	5:C:388:ARG:CD	2.47	0.44
5:C:21:ILE:HD12	5:C:22:GLN:H	1.83	0.44
5:C:147:TYR:HB3	5:C:323:ASP:CB	2.47	0.44
5:C:292:ARG:NH2	5:C:294:GLU:OE1	2.50	0.44
5:C:676:ILE:O	6:D:948:THR:HG22	2.18	0.44
5:C:805:ARG:HG3	5:C:823:VAL:HG13	1.99	0.44
5:C:889:HIS:O	5:C:892:LEU:HB3	2.18	0.44
5:C:902:ILE:O	5:C:904:PRO:HD3	2.17	0.44
5:C:1047:HIS:HD2	12:D:9080:HOH:O	2.01	0.44
12:C:1357:HOH:O	7:E:31:LEU:HD13	2.17	0.44
6:D:97:THR:CG2	6:D:571:LYS:HD3	2.48	0.44
6:D:148:GLU:CB	6:D:151:GLN:HB2	2.33	0.44
6:D:642:CYS:SG	6:D:716:PHE:HB2	2.57	0.44
6:D:661:MET:HA	6:D:666:ILE:CD1	2.48	0.44
6:D:786:ILE:HG21	6:D:1027:GLY:H	1.83	0.44
6:D:937:TYR:HA	6:D:940:THR:OG1	2.17	0.44
6:D:1120:VAL:HG23	6:D:1188:VAL:HG11	2.00	0.44
6:D:1258:ARG:HE	6:D:1262:LEU:HD11	1.83	0.44
6:D:1275:SER:HB3	6:D:1325:LEU:HD13	2.00	0.44
7:E:25:LYS:O	7:E:29:GLN:HG2	2.18	0.44
4:K:199:ILE:N	4:K:199:ILE:HD12	2.31	0.44
5:M:212:GLY:HA3	5:M:218:VAL:HG21	2.00	0.44
5:M:524:VAL:HG13	5:M:525:SER:O	2.18	0.44
5:M:604:ALA:HB3	5:M:612:VAL:O	2.17	0.44
5:M:897:LEU:HD11	5:M:920:GLN:NE2	2.32	0.44
5:M:969:GLN:HE21	5:M:969:GLN:HB3	1.53	0.44
5:M:1059:ASP:O	5:M:1063:ARG:HG2	2.17	0.44
6:N:457:GLY:C	6:N:459:GLU:N	2.71	0.44
6:N:800:LYS:HD2	6:N:804:LEU:HB3	1.99	0.44
6:N:900:ILE:HG22	6:N:914:LEU:CD1	2.47	0.44
6:N:975:GLU:O	6:N:979:GLU:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1145:TYR:CD2	6:N:1168:MET:SD	3.11	0.44
6:N:1435:LEU:HD13	6:N:1457:ASP:CG	2.38	0.44
1:G:18:DG:H2'	1:G:19:DC:C6	2.51	0.43
4:A:105:GLY:HA3	12:A:356:HOH:O	2.17	0.43
4:A:152:PRO:HB3	4:A:154:GLU:OE1	2.18	0.43
5:C:480:THR:HG22	5:C:481:ASP:H	1.83	0.43
5:C:745:ILE:HA	12:C:1408:HOH:O	2.17	0.43
5:C:1078:GLU:HA	5:C:1079:PRO:HD3	1.78	0.43
6:D:10:ILE:O	6:D:1451:ALA:HA	2.18	0.43
6:D:41:ARG:CD	6:D:42:ASP:H	2.31	0.43
6:D:41:ARG:CD	6:D:42:ASP:N	2.81	0.43
6:D:93:ILE:HD12	6:D:517:VAL:HB	2.00	0.43
6:D:153:LEU:HD11	6:D:158:TYR:N	2.33	0.43
6:D:396:VAL:O	6:D:396:VAL:HG23	2.18	0.43
6:D:524:LEU:CD1	6:D:524:LEU:N	2.81	0.43
6:D:801:GLY:HA3	12:D:9235:HOH:O	2.17	0.43
6:D:908:LYS:CB	6:D:1027:GLY:HA3	2.30	0.43
6:D:996:TRP:HA	6:D:996:TRP:CE3	2.53	0.43
6:D:1109:GLU:HG2	6:D:1201:CYS:CA	2.46	0.43
6:D:1277:ILE:CD1	6:D:1301:LYS:HB2	2.48	0.43
4:K:86:VAL:CG1	4:K:124:ASN:HB2	2.49	0.43
4:L:103:ALA:H	4:L:138:LEU:HD23	1.82	0.43
5:M:18:LEU:CD2	5:M:404:LEU:HD21	2.45	0.43
5:M:127:PHE:O	5:M:133:ASP:HA	2.18	0.43
5:M:181:VAL:HG12	5:M:182:VAL:N	2.33	0.43
5:M:565:GLN:HE21	5:M:995:MET:CE	2.30	0.43
5:M:585:GLU:HG2	5:M:665:PHE:CD2	2.52	0.43
5:M:874:LEU:HD21	6:N:1028:ALA:HB1	1.99	0.43
6:N:51:GLY:C	6:N:86:ARG:HB2	2.38	0.43
6:N:500:ARG:NH2	6:N:1387:SER:HA	2.33	0.43
6:N:520:LEU:HG	6:N:521:PRO:CD	2.47	0.43
6:N:525:ARG:HG2	6:N:525:ARG:O	2.18	0.43
6:N:583:ASP:OD1	6:N:586:ARG:HB2	2.17	0.43
6:N:1205:TYR:HE2	6:N:1208:ASP:O	2.00	0.43
6:N:1240:THR:HB	6:N:1255:GLY:CA	2.48	0.43
6:N:1319:VAL:HG12	6:N:1323:GLN:CD	2.39	0.43
6:N:1498:ALA:HB2	7:O:88:GLU:OE1	2.18	0.43
2:Y:13:C:C4'	5:M:409:ARG:HH22	2.30	0.43
4:A:227:ASN:HB2	12:A:326:HOH:O	2.18	0.43
4:B:69:PRO:O	4:B:71:VAL:HG23	2.18	0.43
5:C:435:TYR:C	5:C:437:ARG:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:474:VAL:HA	5:C:478:VAL:O	2.18	0.43
5:C:1085:PHE:O	5:C:1088:LEU:HB3	2.18	0.43
6:D:165:LYS:CD	6:D:199:LEU:HD22	2.48	0.43
6:D:591:VAL:CG1	6:D:597:ASP:HA	2.47	0.43
6:D:731:LEU:HA	6:D:731:LEU:HD23	1.78	0.43
6:D:767:HIS:NE2	7:E:6:ILE:HG12	2.34	0.43
6:D:1026:SER:C	6:D:1028:ALA:H	2.22	0.43
6:D:1102:THR:HG22	6:D:1222:GLY:HA2	1.99	0.43
6:D:1424:VAL:HG13	6:D:1425:THR:N	2.33	0.43
7:E:54:LEU:HG	7:E:58:PRO:HB2	2.00	0.43
4:K:133:GLU:HG2	4:K:134:GLU:N	2.33	0.43
4:L:38:ASN:HB3	4:L:39:PRO:HD3	2.00	0.43
5:M:292:ARG:CZ	5:M:299:LYS:HD3	2.48	0.43
5:M:476:GLY:C	5:M:478:VAL:H	2.21	0.43
5:M:579:VAL:HB	5:M:890:LEU:CD2	2.42	0.43
5:M:665:PHE:HA	12:M:7223:HOH:O	2.18	0.43
5:M:674:VAL:HG23	5:M:869:VAL:HG13	1.99	0.43
5:M:684:PHE:CE1	6:N:782:SER:HB3	2.53	0.43
5:M:1036:GLU:HG3	6:N:707:THR:OG1	2.18	0.43
5:M:1117:SER:O	6:N:23:TYR:OH	2.37	0.43
6:N:119:SER:HA	12:N:9418:HOH:O	2.18	0.43
6:N:206:ARG:NE	6:N:394:LEU:HD23	2.33	0.43
6:N:911:LEU:HD21	6:N:934:LEU:HD22	2.00	0.43
6:N:1048:PRO:HG3	6:N:1075:HIS:CE1	2.53	0.43
6:N:1371:VAL:HG13	6:N:1424:VAL:HG23	1.99	0.43
7:O:57:ASP:N	7:O:58:PRO:HD3	2.33	0.43
4:B:99:LEU:CD2	4:B:144:VAL:HG21	2.46	0.43
5:C:150:PRO:HG3	5:C:158:TYR:HD2	1.83	0.43
5:C:200:LEU:HD22	5:C:300:ASP:OD1	2.18	0.43
5:C:265:ARG:HD3	5:C:267:TYR:CD1	2.52	0.43
5:C:343:GLN:OE1	5:C:346:VAL:HG21	2.18	0.43
5:C:352:ALA:HA	5:C:355:VAL:CG1	2.48	0.43
5:C:435:TYR:O	5:C:437:ARG:HD2	2.18	0.43
5:C:536:PRO:HB3	5:C:906:PHE:HD1	1.83	0.43
5:C:577:PRO:HB3	5:C:842:ARG:NH2	2.33	0.43
5:C:716:LYS:HD2	12:D:9254:HOH:O	2.18	0.43
5:C:729:LEU:HD13	6:D:675:ARG:NE	2.31	0.43
5:C:861:LEU:HA	5:C:974:LEU:HD12	2.00	0.43
5:C:946:ARG:HG3	12:C:1210:HOH:O	2.18	0.43
5:C:1050:GLN:HB3	12:C:1306:HOH:O	2.18	0.43
6:D:926:LYS:NZ	6:D:929:ARG:CZ	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:1233:GLY:C	6:D:1237:THR:HB	2.38	0.43
6:D:1279:GLY:O	6:D:1318:TYR:HA	2.18	0.43
6:D:1301:LYS:HD2	6:D:1301:LYS:HA	1.85	0.43
6:D:1496:GLU:HA	6:D:1499:ARG:NE	2.33	0.43
4:K:131:THR:HG21	12:K:1287:HOH:O	2.17	0.43
4:L:36:LEU:C	4:L:39:PRO:HD2	2.38	0.43
5:M:73:LEU:HD12	5:M:73:LEU:O	2.18	0.43
5:M:437:ARG:HH22	5:M:491:GLU:HB2	1.83	0.43
5:M:607:ASP:HB3	5:M:609:ASN:H	1.83	0.43
5:M:684:PHE:HD2	6:N:740:PHE:CE1	2.36	0.43
6:N:134:VAL:HA	6:N:152:LEU:HA	2.00	0.43
6:N:453:ASP:CA	6:N:455:ARG:HH21	2.31	0.43
6:N:541:ASN:O	6:N:545:ARG:HG3	2.18	0.43
6:N:684:LYS:O	6:N:687:VAL:HG23	2.18	0.43
6:N:781:PRO:HB2	6:N:786:ILE:CD1	2.47	0.43
6:N:1031:ASN:O	6:N:1035:ILE:HG12	2.17	0.43
6:N:1048:PRO:HG3	6:N:1075:HIS:ND1	2.33	0.43
6:N:1428:ALA:O	6:N:1431:THR:HG22	2.19	0.43
3:Z:12:DA:H3'	12:Z:1652:HOH:O	2.19	0.43
4:A:99:LEU:CD2	4:A:122:ILE:HD11	2.48	0.43
4:B:97:VAL:HG11	4:B:120:VAL:HG21	2.00	0.43
5:C:166:PRO:HB3	12:C:1362:HOH:O	2.19	0.43
5:C:408:ARG:NH1	5:C:542:VAL:HG23	2.33	0.43
5:C:759:THR:HB	5:C:785:VAL:CG2	2.48	0.43
5:C:1029:GLY:HA3	6:D:623:VAL:O	2.18	0.43
6:D:141:ILE:HG21	6:D:448:GLU:O	2.18	0.43
6:D:1124:GLN:HA	6:D:1125:PRO:HD3	1.54	0.43
6:D:1403:LEU:HD23	6:D:1407:LEU:HD22	2.00	0.43
6:D:1460:ILE:O	6:D:1460:ILE:HG13	2.16	0.43
7:E:24:ALA:O	7:E:28:GLN:HG3	2.18	0.43
4:K:19:GLU:O	4:K:200:TRP:HA	2.18	0.43
4:L:48:ILE:HD13	4:L:210:ALA:HB1	1.98	0.43
4:L:174:VAL:HG13	4:L:200:TRP:O	2.19	0.43
5:M:20:GLU:OE2	5:M:460:ARG:HB2	2.18	0.43
5:M:56:GLU:HB2	5:M:359:MET:HE3	2.00	0.43
5:M:243:ARG:HD2	5:M:243:ARG:O	2.19	0.43
5:M:409:ARG:HB3	5:M:454:SER:OG	2.18	0.43
5:M:424:GLY:O	5:M:425:PHE:C	2.56	0.43
5:M:573:ARG:HD3	5:M:699:PHE:CE1	2.53	0.43
5:M:718:GLY:HA3	5:M:761:PHE:CE1	2.53	0.43
5:M:789:SER:O	5:M:791:ARG:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:806:PHE:O	6:N:806:PHE:CG	2.70	0.43
6:N:1093:TYR:HD2	6:N:1093:TYR:HA	1.65	0.43
6:N:1262:LEU:HD23	6:N:1352:ILE:CG1	2.46	0.43
2:Y:8:C:C2'	2:Y:9:G:C8	3.01	0.43
4:A:14:ARG:CZ	4:A:22:GLU:HB3	2.49	0.43
4:B:14:ARG:HH11	4:B:14:ARG:HG3	1.82	0.43
5:C:185:LYS:HE2	5:C:190:LYS:HE2	2.00	0.43
5:C:414:GLY:C	5:C:416:GLY:N	2.71	0.43
5:C:564:MET:CE	5:C:840:ALA:HB3	2.48	0.43
5:C:571:LEU:HD21	5:C:700:TYR:HD2	1.83	0.43
5:C:617:ASP:HB2	5:C:619:ARG:CD	2.48	0.43
5:C:1086:ARG:HD3	5:C:1112:PHE:HD2	1.84	0.43
6:D:130:SER:HA	6:D:572:ARG:NE	2.34	0.43
6:D:793:THR:OG1	6:D:905:PRO:HA	2.18	0.43
6:D:814:ALA:O	6:D:818:ARG:HG3	2.19	0.43
6:D:880:ILE:HD13	6:D:880:ILE:O	2.19	0.43
6:D:911:LEU:HD23	6:D:934:LEU:CD1	2.48	0.43
6:D:1005:GLN:HG2	12:D:9051:HOH:O	2.17	0.43
6:D:1146:GLY:O	6:D:1207:TYR:N	2.51	0.43
4:K:62:LEU:HG	4:K:163:ASN:OD1	2.18	0.43
5:M:168:ARG:NH2	12:M:7365:HOH:O	2.51	0.43
5:M:325:ILE:HG22	5:M:331:ARG:HH12	1.83	0.43
5:M:749:VAL:HG22	5:M:798:GLY:O	2.18	0.43
5:M:958:THR:CG2	5:M:961:GLU:HG2	2.48	0.43
6:N:525:ARG:HA	6:N:526:PRO:HD3	1.62	0.43
6:N:1305:LEU:HD12	12:N:9055:HOH:O	2.17	0.43
6:N:1481:VAL:HG11	7:O:18:ARG:CA	2.41	0.43
4:A:73:GLU:H	4:A:73:GLU:HG2	1.52	0.43
4:B:50:GLY:O	4:B:146:ARG:HA	2.19	0.43
5:C:398:THR:O	5:C:570:PRO:HD3	2.18	0.43
5:C:524:VAL:CG2	5:C:528:GLU:HB2	2.49	0.43
5:C:754:ILE:H	6:D:679:ARG:HH22	1.64	0.43
5:C:877:PRO:HG3	6:D:1023:MET:HE3	2.00	0.43
12:C:1246:HOH:O	6:D:518:PRO:HD2	2.18	0.43
6:D:505:SER:CB	6:D:1454:GLY:N	2.81	0.43
6:D:551:ASN:CG	6:D:555:LYS:HZ2	2.21	0.43
6:D:827:ILE:O	6:D:837:GLY:HA3	2.17	0.43
6:D:861:GLN:CD	6:D:861:GLN:N	2.71	0.43
6:D:1107:VAL:HG12	6:D:1217:ILE:HG23	2.01	0.43
6:D:1310:ARG:HG2	6:D:1310:ARG:NH1	2.33	0.43
6:D:1488:ASP:OD1	7:E:26:ARG:CZ	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:8:LYS:O	7:E:12:MET:HG3	2.18	0.43
4:K:12:THR:OG1	4:K:24:VAL:HB	2.19	0.43
4:K:50:GLY:CA	4:K:173:PRO:HG3	2.44	0.43
5:M:478:VAL:HG22	5:M:506:ASN:CB	2.48	0.43
5:M:649:VAL:HA	12:M:7333:HOH:O	2.18	0.43
5:M:674:VAL:O	5:M:989:VAL:HA	2.19	0.43
5:M:710:ILE:CD1	5:M:790:LEU:HB2	2.43	0.43
5:M:1045:ALA:N	6:N:762:GLN:HE22	2.17	0.43
6:N:954:ALA:O	6:N:1062:ARG:NH2	2.51	0.43
6:N:1040:GLY:O	6:N:1060:SER:HB3	2.18	0.43
6:N:1292:VAL:HG11	6:N:1325:LEU:HG	2.01	0.43
6:N:1400:VAL:HG21	12:N:9363:HOH:O	2.17	0.43
6:N:1435:LEU:HD13	6:N:1457:ASP:OD2	2.17	0.43
6:N:1485:GLN:O	7:O:75:PHE:HA	2.18	0.43
2:Y:9:G:C8	2:Y:9:G:C5'	3.02	0.43
4:A:111:ALA:HB3	4:A:124:ASN:O	2.18	0.43
4:B:7:LYS:HD3	12:B:317:HOH:O	2.19	0.43
4:B:132:LEU:HD21	4:B:136:GLY:O	2.18	0.43
4:B:155:LYS:HA	12:B:401:HOH:O	2.18	0.43
4:B:178:ALA:O	4:B:198:ARG:N	2.45	0.43
5:C:140:ILE:HA	5:C:332:ARG:O	2.18	0.43
5:C:515:ALA:O	5:C:516:ARG:HD3	2.18	0.43
5:C:680:ASP:HB2	5:C:682:TYR:CD2	2.53	0.43
5:C:838:LYS:HG3	5:C:997:LEU:HB2	2.01	0.43
6:D:52:PRO:CG	6:D:80:VAL:HG12	2.49	0.43
6:D:87:ARG:HG3	6:D:88:TYR:CE2	2.54	0.43
6:D:204:LEU:CD1	6:D:394:LEU:HD11	2.48	0.43
6:D:521:PRO:O	6:D:525:ARG:HD2	2.19	0.43
6:D:1020:LEU:HA	6:D:1023:MET:CE	2.49	0.43
6:D:1236:LEU:HB2	6:D:1359:GLN:HG3	2.00	0.43
7:E:70:THR:HG21	7:E:72:ARG:HE	1.83	0.43
4:K:65:PHE:HE1	12:M:7116:HOH:O	2.01	0.43
5:M:12:VAL:HB	5:M:472:ARG:HH12	1.83	0.43
5:M:134:ARG:HH21	5:M:393:GLN:HA	1.84	0.43
5:M:352:ALA:O	5:M:355:VAL:HG12	2.19	0.43
5:M:401:LEU:HD12	5:M:401:LEU:O	2.18	0.43
5:M:713:ARG:HB3	5:M:720:GLU:CD	2.38	0.43
5:M:1047:HIS:CD2	6:N:1476:THR:HG21	2.54	0.43
6:N:133:ILE:O	6:N:153:LEU:N	2.51	0.43
6:N:719:VAL:HG22	12:N:9124:HOH:O	2.19	0.43
6:N:932:ASP:HA	6:N:935:LYS:HE2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1257:PRO:HG3	8:N:8001:STD:O6	2.19	0.43
6:N:1281:VAL:HG13	6:N:1292:VAL:HG13	2.00	0.43
6:N:1353:GLN:OE1	6:N:1368:ILE:HD12	2.19	0.43
7:O:41:GLU:CG	7:O:42:PRO:HD3	2.49	0.43
7:O:54:LEU:HA	7:O:58:PRO:CG	2.48	0.43
7:O:54:LEU:HG	7:O:58:PRO:HB2	2.01	0.43
5:C:13:ILE:HG13	5:C:458:TYR:HE2	1.84	0.43
5:C:26:TYR:CE1	5:C:340:MET:HG3	2.54	0.43
5:C:165:LEU:HD12	5:C:166:PRO:C	2.39	0.43
5:C:405:ARG:NH1	5:C:563:ASN:HA	2.34	0.43
5:C:476:GLY:C	5:C:478:VAL:H	2.22	0.43
5:C:626:ARG:O	5:C:638:ASP:HA	2.18	0.43
5:C:684:PHE:CE1	6:D:782:SER:HB3	2.49	0.43
5:C:727:PRO:HG3	5:C:783:ARG:HD3	2.00	0.43
6:D:87:ARG:HA	12:D:9338:HOH:O	2.19	0.43
6:D:403:PHE:HD1	6:D:405:ASP:O	2.02	0.43
6:D:477:LEU:HD21	6:D:495:ARG:CD	2.39	0.43
6:D:477:LEU:HD13	6:D:492:ALA:O	2.18	0.43
6:D:1106:VAL:HG11	6:D:1474:ALA:HB2	2.01	0.43
6:D:1282:ARG:HA	6:D:1315:ASP:HA	2.00	0.43
6:D:1300:SER:HB2	6:N:60:CYS:CB	2.31	0.43
6:D:1344:VAL:HG12	6:D:1348:LEU:HD23	2.01	0.43
6:D:1495:ILE:HG12	7:E:80:VAL:CG1	2.49	0.43
7:E:62:THR:HA	7:E:65:MET:HE1	2.01	0.43
4:K:206:THR:HG23	4:K:208:LEU:N	2.33	0.43
4:L:111:ALA:HB3	4:L:124:ASN:O	2.18	0.43
5:M:262:ALA:O	5:M:264:PRO:O	2.37	0.43
5:M:435:TYR:C	5:M:437:ARG:H	2.22	0.43
5:M:437:ARG:C	5:M:438:ILE:HD12	2.38	0.43
5:M:516:ARG:CD	5:M:521:PRO:HA	2.40	0.43
5:M:597:ALA:CA	5:M:655:LEU:HD21	2.49	0.43
5:M:1006:HIS:O	6:N:627:GLY:HA2	2.18	0.43
5:M:1051:GLU:HB3	5:M:1056:LYS:HZ3	1.84	0.43
6:N:17:LYS:HA	6:N:20:SER:HB3	2.00	0.43
6:N:122:GLU:O	6:N:126:VAL:HG23	2.19	0.43
6:N:729:HIS:HD1	6:N:731:LEU:N	2.10	0.43
6:N:754:PHE:CE2	7:O:21:VAL:HA	2.53	0.43
6:N:1124:GLN:HE21	6:N:1135:ARG:HG3	1.83	0.43
6:N:1282:ARG:NH2	12:N:9013:HOH:O	2.51	0.43
5:C:580:MET:O	5:C:903:SER:N	2.51	0.43
5:C:680:ASP:HB2	5:C:682:TYR:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:747:ALA:H	5:C:800:VAL:CG2	2.32	0.43
6:D:28:LYS:HB2	6:D:41:ARG:HH11	1.84	0.43
6:D:102:ILE:HD12	6:D:579:ASP:HB3	2.01	0.43
6:D:421:LEU:HD11	6:D:446:VAL:HG21	2.01	0.43
6:D:601:ARG:NH2	6:D:611:GLN:O	2.52	0.43
6:D:1047:LYS:HB3	6:D:1048:PRO:CD	2.48	0.43
4:K:218:LEU:HG	4:L:222:LEU:HD11	2.01	0.43
5:M:52:PHE:CZ	5:M:98:LEU:HD23	2.53	0.43
5:M:346:VAL:O	5:M:350:ARG:HD2	2.19	0.43
5:M:602:GLU:HA	5:M:647:GLN:O	2.19	0.43
5:M:724:ARG:O	5:M:726:ILE:HD12	2.19	0.43
5:M:862:PRO:HG2	5:M:925:TYR:OH	2.18	0.43
6:N:13:ALA:HB1	6:N:18:ILE:HD11	2.01	0.43
6:N:528:VAL:HG12	6:N:529:GLN:N	2.34	0.43
6:N:645:PRO:HB2	6:N:648:MET:HB2	2.01	0.43
6:N:683:ILE:HD12	6:N:683:ILE:N	2.33	0.43
7:O:26:ARG:NH2	7:O:38:THR:HA	2.33	0.43
1:X:20:DG:O3'	5:M:394:PHE:CE2	2.72	0.43
4:B:227:ASN:HA	4:B:228:PRO:HD3	1.91	0.43
5:C:38:LYS:HD3	5:C:38:LYS:HA	1.82	0.43
5:C:97:ARG:HA	5:C:111:ASP:O	2.19	0.43
5:C:456:ALA:HA	5:C:541:SER:HA	2.00	0.43
5:C:679:PHE:HA	6:D:943:THR:HG22	2.01	0.43
5:C:762:LYS:NZ	5:C:771:GLU:OE1	2.51	0.43
6:D:206:ARG:HB2	6:D:392:SER:O	2.18	0.43
6:D:875:THR:CG2	6:D:879:ARG:HB2	2.49	0.43
6:D:1058:ARG:HB3	12:D:9528:HOH:O	2.19	0.43
6:D:1295:GLU:HB2	6:D:1300:SER:OG	2.19	0.43
6:D:1302:GLU:OE2	6:D:1304:LYS:HE3	2.19	0.43
6:D:1353:GLN:HE21	6:D:1357:ARG:CZ	2.32	0.43
7:E:31:LEU:HD23	7:E:35:PHE:CD1	2.54	0.43
7:E:39:VAL:O	7:E:72:ARG:NH1	2.52	0.43
4:K:224:TYR:CD2	4:L:9:PRO:HG2	2.53	0.43
4:K:225:PHE:CE2	4:L:211:LEU:HD21	2.54	0.43
4:L:123:MET:CE	4:L:204:SER:HA	2.48	0.43
5:M:73:LEU:HB2	5:M:93:PRO:O	2.19	0.43
5:M:260:LEU:HD12	5:M:260:LEU:O	2.19	0.43
5:M:435:TYR:HA	6:N:1071:PHE:HE2	1.83	0.43
6:N:99:ALA:O	6:N:514:LEU:HB2	2.19	0.43
6:N:1120:VAL:HA	6:N:1121:PRO:HD3	1.80	0.43
6:N:1440:PHE:CG	6:N:1441:GLN:N	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:39:VAL:HG23	7:O:72:ARG:HD2	2.00	0.43
1:G:13:DT:H5'	6:D:1093:TYR:CE1	2.54	0.42
5:C:95:TYR:HB2	5:C:112:GLU:OE1	2.19	0.42
5:C:113:VAL:HG11	5:C:373:VAL:CG1	2.49	0.42
5:C:143:SER:O	5:C:144:PRO:C	2.56	0.42
5:C:265:ARG:HB3	5:C:267:TYR:CD1	2.54	0.42
5:C:305:PRO:O	5:C:308:ARG:HB2	2.19	0.42
5:C:829:GLN:HB2	12:C:1461:HOH:O	2.19	0.42
5:C:863:ASP:OD1	5:C:865:THR:HG23	2.18	0.42
6:D:139:GLY:H	6:D:147:VAL:HG21	1.84	0.42
6:D:699:VAL:HA	6:D:718:PRO:HD3	2.00	0.42
6:D:806:PHE:O	6:D:806:PHE:CG	2.72	0.42
6:D:1219:GLU:O	6:D:1221:VAL:HG23	2.19	0.42
6:D:1257:PRO:HG3	8:D:7001:STD:O6	2.19	0.42
6:D:1437:ALA:O	6:D:1446:VAL:HG21	2.19	0.42
6:D:1441:GLN:CD	6:D:1442:ASN:H	2.21	0.42
4:K:191:ASP:OD1	4:K:191:ASP:O	2.37	0.42
5:M:30:LEU:O	5:M:30:LEU:HD12	2.18	0.42
5:M:251:ASP:HB3	5:M:252:LYS:HG3	2.00	0.42
5:M:264:PRO:CB	5:M:289:THR:HB	2.45	0.42
5:M:397:GLU:O	5:M:398:THR:C	2.58	0.42
5:M:498:GLN:O	5:M:501:THR:HG23	2.19	0.42
5:M:603:VAL:HG21	5:M:643:VAL:HG11	1.99	0.42
5:M:660:ALA:O	5:M:667:ALA:HB3	2.19	0.42
5:M:946:ARG:HD3	5:M:984:GLU:HB2	2.01	0.42
5:M:1014:SER:HB3	5:M:1017:THR:O	2.19	0.42
5:M:1017:THR:OG1	5:M:1019:GLN:HG3	2.19	0.42
6:N:125:GLN:NE2	6:N:129:PHE:HD1	2.17	0.42
6:N:403:PHE:CD2	6:N:444:VAL:HG23	2.54	0.42
6:N:616:GLN:NE2	12:N:9306:HOH:O	2.51	0.42
6:N:970:LYS:O	6:N:974:ILE:HG13	2.19	0.42
6:N:1037:GLN:HB3	6:N:1061:PHE:CE2	2.54	0.42
6:N:1462:LEU:N	6:N:1462:LEU:HD23	2.34	0.42
6:N:1481:VAL:O	6:N:1481:VAL:HG12	2.18	0.42
2:H:9:G:H5'	2:H:9:G:H8	1.79	0.42
2:Y:7:G:H22	5:M:1014:SER:HA	1.83	0.42
4:A:39:PRO:HG3	4:B:39:PRO:CG	2.48	0.42
4:A:71:VAL:HG22	4:A:132:LEU:HD12	2.01	0.42
4:B:41:ARG:HG3	4:B:177:VAL:CG2	2.49	0.42
5:C:172:ILE:HA	5:C:185:LYS:O	2.18	0.42
5:C:194:VAL:HG11	5:C:204:GLN:HE21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:290:LEU:H	5:C:290:LEU:CD2	2.32	0.42
5:C:552:HIS:CD2	5:C:886:LEU:HD22	2.54	0.42
5:C:693:GLU:OE1	5:C:855:VAL:HB	2.19	0.42
5:C:1046:ALA:HB2	12:D:9209:HOH:O	2.18	0.42
5:C:1095:LEU:HD21	6:D:603:LEU:HB3	2.01	0.42
5:C:1111:ILE:H	5:C:1111:ILE:HG12	1.51	0.42
5:C:1115:LEU:N	5:C:1115:LEU:CD1	2.82	0.42
6:D:110:SER:OG	6:D:112:ILE:HG23	2.19	0.42
6:D:133:ILE:HG23	6:D:455:ARG:C	2.39	0.42
6:D:133:ILE:HG23	6:D:456:MET:N	2.34	0.42
6:D:202:VAL:HG21	6:D:400:VAL:N	2.35	0.42
6:D:583:ASP:HB2	6:D:604:THR:OG1	2.19	0.42
6:D:619:LEU:HD12	6:D:621:LYS:HE3	2.00	0.42
6:D:796:ARG:HB2	6:D:828:LYS:HD2	2.01	0.42
6:D:800:LYS:NZ	6:D:804:LEU:HD22	2.33	0.42
6:D:1057:VAL:HG13	6:D:1069:GLU:HB3	2.01	0.42
6:D:1145:TYR:HB2	6:D:1168:MET:CE	2.48	0.42
6:D:1255:GLY:O	6:D:1259:VAL:HG23	2.19	0.42
6:D:1291:SER:HB2	6:N:75:ARG:CZ	2.48	0.42
7:E:59:ASN:ND2	12:E:125:HOH:O	2.52	0.42
4:K:27:PRO:CB	4:K:186:LEU:HD11	2.44	0.42
4:K:152:PRO:HG2	12:K:1303:HOH:O	2.19	0.42
5:M:39:ARG:O	5:M:41:ASN:N	2.52	0.42
5:M:460:ARG:NH1	5:M:462:ASP:HA	2.34	0.42
5:M:758:ARG:HG2	5:M:758:ARG:HH11	1.84	0.42
5:M:1063:ARG:HG3	5:M:1064:ASN:N	2.33	0.42
6:N:1127:GLU:HB3	6:N:1133:ARG:NH2	2.34	0.42
6:N:1209:LEU:HD23	6:N:1210:SER:H	1.82	0.42
7:O:41:GLU:N	7:O:42:PRO:CD	2.82	0.42
7:O:81:PRO:HB2	12:O:907:HOH:O	2.18	0.42
1:X:16:DG:H4'	12:X:729:HOH:O	2.19	0.42
4:A:42:ARG:CZ	4:B:34:VAL:HB	2.49	0.42
4:B:83:LYS:HZ2	4:B:168:ASP:N	2.17	0.42
4:B:176:ARG:HG3	4:B:200:TRP:HB2	2.01	0.42
5:C:113:VAL:HG11	5:C:373:VAL:CB	2.49	0.42
5:C:118:ILE:H	5:C:118:ILE:HG13	1.72	0.42
5:C:242:LEU:HA	12:C:1134:HOH:O	2.19	0.42
5:C:332:ARG:HA	5:C:465:GLY:O	2.18	0.42
5:C:733:ALA:HB1	6:D:679:ARG:NH2	2.34	0.42
6:D:133:ILE:HG22	6:D:134:VAL:N	2.34	0.42
6:D:161:LEU:HD23	6:D:449:SER:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:465:LEU:O	6:D:465:LEU:HD23	2.19	0.42
6:D:475:LYS:HA	6:D:478:LEU:CG	2.50	0.42
6:D:817:GLU:HA	6:D:836:VAL:HG21	2.00	0.42
6:D:1209:LEU:HD22	6:D:1211:MET:HB3	2.02	0.42
6:D:1275:SER:CB	6:D:1294:VAL:HG11	2.49	0.42
4:L:123:MET:H	4:L:123:MET:HG2	1.64	0.42
5:M:141:HIS:CE1	5:M:165:LEU:HD23	2.54	0.42
5:M:173:ASP:OD1	5:M:185:LYS:HB2	2.19	0.42
5:M:265:ARG:HB3	5:M:267:TYR:CD2	2.53	0.42
6:N:478:LEU:HB3	6:N:1388:ARG:NH2	2.34	0.42
6:N:481:MET:O	6:N:489:ARG:HB2	2.18	0.42
6:N:645:PRO:HG3	6:N:725:SER:O	2.19	0.42
6:N:704:ARG:HD2	6:N:705:ALA:H	1.84	0.42
6:N:958:GLU:O	6:N:962:GLN:OE1	2.37	0.42
6:N:970:LYS:O	6:N:970:LYS:HG3	2.20	0.42
6:N:1295:GLU:HB2	6:N:1300:SER:HB3	2.02	0.42
6:N:1397:LYS:HZ1	6:N:1432:LYS:HB2	1.84	0.42
1:X:16:DG:H5"	5:M:1031:ARG:HB2	2.01	0.42
4:B:48:ILE:HD12	4:B:174:VAL:HG21	2.01	0.42
4:B:71:VAL:HG22	4:B:132:LEU:CD1	2.49	0.42
5:C:175:GLU:HB3	5:C:183:SER:HG	1.85	0.42
5:C:267:TYR:HB2	5:C:272:ALA:CB	2.49	0.42
5:C:901:TYR:O	5:C:902:ILE:HG13	2.19	0.42
5:C:909:ALA:HB1	5:C:914:ILE:HD13	2.01	0.42
6:D:19:ARG:HA	6:D:22:SER:HB3	2.01	0.42
6:D:48:ARG:HH11	6:D:48:ARG:CB	2.30	0.42
6:D:436:GLU:HB2	6:D:445:ARG:NH1	2.30	0.42
6:D:502:PHE:CG	6:D:509:PRO:HD3	2.55	0.42
6:D:1295:GLU:HG3	6:N:76:CYS:SG	2.59	0.42
6:D:1453:ALA:HB1	12:D:9151:HOH:O	2.19	0.42
6:D:1476:THR:C	6:D:1478:SER:N	2.71	0.42
4:L:92:PRO:HA	4:L:146:ARG:NH2	2.34	0.42
5:M:300:ASP:OD2	5:M:303:PHE:HB2	2.19	0.42
5:M:770:GLU:H	5:M:770:GLU:HG2	1.44	0.42
5:M:1004:LYS:HD3	5:M:1004:LYS:HA	1.81	0.42
5:M:1109:VAL:HB	6:N:3:LYS:HD3	2.01	0.42
6:N:521:PRO:HA	6:N:522:PRO:HD3	1.92	0.42
6:N:549:ASN:HD22	6:N:549:ASN:HA	1.61	0.42
6:N:629:SER:HB3	6:N:726:ILE:HG13	2.02	0.42
6:N:701:LEU:HD21	6:N:763:MET:HE3	2.01	0.42
6:N:1236:LEU:HD21	6:N:1361:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1294:VAL:HG22	6:N:1325:LEU:CD2	2.40	0.42
6:N:1480:PHE:HB2	12:N:9424:HOH:O	2.19	0.42
1:G:1:DC:H2'	12:G:1552:HOH:O	2.20	0.42
2:Y:7:G:C5'	2:Y:7:G:H8	2.32	0.42
5:C:87:ASP:O	5:C:814:GLU:HG3	2.19	0.42
5:C:332:ARG:HH22	5:C:338:GLU:CD	2.22	0.42
5:C:474:VAL:HG23	5:C:478:VAL:O	2.19	0.42
5:C:631:SER:HB3	5:C:635:THR:O	2.19	0.42
5:C:690:ILE:HG12	5:C:691:SER:N	2.34	0.42
5:C:752:GLY:N	5:C:792:VAL:HB	2.33	0.42
5:C:1008:ARG:HD2	6:D:624:ASP:O	2.19	0.42
6:D:8:VAL:O	6:D:1457:ASP:N	2.42	0.42
6:D:127:LEU:CD1	6:D:461:ILE:HD11	2.41	0.42
6:D:517:VAL:HG11	6:D:547:LEU:HD21	2.00	0.42
6:D:701:LEU:HD21	6:D:763:MET:HE3	2.00	0.42
6:D:791:TYR:CD2	6:D:945:SER:HB2	2.55	0.42
6:D:977:ALA:CB	6:D:983:LEU:HD11	2.49	0.42
6:D:1148:VAL:CG1	6:D:1163:GLY:HA2	2.48	0.42
4:K:83:LYS:HE2	4:K:168:ASP:OD2	2.19	0.42
5:M:516:ARG:CG	6:N:1068:LEU:HD13	2.49	0.42
5:M:520:GLU:OE1	6:N:1047:LYS:HE2	2.19	0.42
5:M:743:VAL:HG13	5:M:800:VAL:HG11	2.01	0.42
5:M:804:VAL:HG12	5:M:806:LEU:HD21	2.02	0.42
5:M:976:ASP:HB3	5:M:979:THR:HG22	2.02	0.42
5:M:1003:ASP:O	5:M:1005:MET:N	2.53	0.42
6:N:141:ILE:HD12	6:N:141:ILE:HA	1.77	0.42
6:N:162:ARG:HH12	6:N:414:ARG:NH2	2.16	0.42
6:N:891:GLU:HG2	12:N:9132:HOH:O	2.18	0.42
6:N:960:LYS:O	6:N:964:LEU:HB2	2.19	0.42
6:N:1225:ALA:O	6:N:1229:ILE:HG13	2.19	0.42
6:N:1465:ASN:HD22	6:N:1465:ASN:HA	1.55	0.42
6:N:1491:THR:O	6:N:1495:ILE:HD13	2.19	0.42
1:X:3:DC:H2'	1:X:4:DT:H72	2.01	0.42
2:Y:16:G:N2	6:N:705:ALA:HB1	2.35	0.42
5:C:479:VAL:CG2	5:C:532:MET:HE2	2.50	0.42
5:C:801:VAL:HG23	5:C:802:ARG:N	2.34	0.42
5:C:862:PRO:HD3	5:C:973:VAL:O	2.19	0.42
5:C:1038:TRP:O	5:C:1041:GLU:HB2	2.19	0.42
6:D:169:TYR:CD1	6:D:191:LEU:HD12	2.52	0.42
6:D:202:VAL:HG12	6:D:204:LEU:CD2	2.50	0.42
6:D:202:VAL:HG11	6:D:400:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:592:THR:OG1	6:D:600:LEU:HD21	2.19	0.42
6:D:656:PHE:HB3	6:D:694:VAL:CG1	2.50	0.42
6:D:847:ASP:O	6:D:851:LEU:HG	2.20	0.42
6:D:939:PHE:O	6:D:943:THR:HG23	2.19	0.42
6:D:1191:PRO:HG2	6:D:1370:ILE:CD1	2.50	0.42
6:D:1280:VAL:HG22	6:D:1317:ASP:C	2.40	0.42
4:K:58:ILE:HG21	4:K:68:ILE:CD1	2.49	0.42
4:K:161:ARG:HB2	4:K:161:ARG:HH11	1.83	0.42
4:K:174:VAL:HG22	4:K:201:THR:CG2	2.49	0.42
4:L:72:LYS:HD3	4:L:73:GLU:N	2.35	0.42
5:M:6:PHE:HE1	5:M:901:TYR:HB3	1.84	0.42
5:M:72:ARG:HD2	5:M:95:TYR:CE1	2.54	0.42
5:M:369:PRO:HB2	5:M:370:ALA:H	1.52	0.42
5:M:650:ARG:HB2	12:M:7040:HOH:O	2.19	0.42
5:M:685:GLU:OE1	6:N:783:ARG:NH2	2.48	0.42
5:M:850:ALA:HA	6:N:632:VAL:HG13	2.02	0.42
5:M:874:LEU:H	5:M:874:LEU:HD12	1.83	0.42
5:M:997:LEU:N	12:M:7228:HOH:O	2.52	0.42
5:M:1038:TRP:CH2	6:N:1099:VAL:HG21	2.55	0.42
6:N:55:ASP:HB3	6:N:56:TYR:H	1.69	0.42
6:N:431:VAL:HG12	6:N:432:TYR:N	2.34	0.42
6:N:632:VAL:O	6:N:727:GLN:HA	2.19	0.42
6:N:704:ARG:NE	6:N:737:ASN:O	2.51	0.42
6:N:710:ARG:NH1	6:N:768:ASN:ND2	2.63	0.42
6:N:796:ARG:NH2	12:N:9311:HOH:O	2.53	0.42
7:O:29:GLN:HB2	7:O:33:HIS:HD2	1.83	0.42
4:A:46:SER:HB3	5:C:856:GLU:HG2	2.02	0.42
4:A:142:VAL:HG23	4:A:142:VAL:O	2.19	0.42
4:B:84:GLU:HB3	4:B:127:LEU:HD21	2.00	0.42
4:B:206:THR:HG22	4:B:209:GLU:H	1.83	0.42
6:D:108:VAL:HB	6:D:109:PRO:HD3	2.01	0.42
6:D:401:TYR:HE1	6:D:446:VAL:HB	1.85	0.42
6:D:519:VAL:HG12	6:D:525:ARG:HH21	1.85	0.42
6:D:581:LEU:C	6:D:603:LEU:HD12	2.39	0.42
6:D:676:MET:HE1	6:D:684:LYS:H	1.85	0.42
6:D:703:ASN:ND2	6:D:707:THR:HG23	2.26	0.42
6:D:1281:VAL:HB	6:D:1313:VAL:CG2	2.49	0.42
7:E:41:GLU:HA	7:E:45:ARG:CG	2.39	0.42
4:K:228:PRO:HB3	4:L:13:VAL:CG2	2.49	0.42
5:M:437:ARG:O	5:M:438:ILE:HD12	2.20	0.42
5:M:611:ILE:HD11	5:M:641:PRO:CG	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:690:ILE:CG2	5:M:852:ILE:HG12	2.49	0.42
5:M:863:ASP:OD1	5:M:865:THR:HG22	2.20	0.42
5:M:865:THR:HA	5:M:866:PRO:HD3	1.90	0.42
5:M:928:LYS:HG3	12:M:7107:HOH:O	2.19	0.42
6:N:1213:ARG:HG3	6:N:1214:PRO:CD	2.50	0.42
6:N:1213:ARG:NH1	12:N:9283:HOH:O	2.53	0.42
6:N:1341:PRO:O	6:N:1344:VAL:HG23	2.19	0.42
6:N:1498:ALA:HA	6:N:1501:GLU:OE2	2.20	0.42
4:A:82:LEU:O	4:A:85:LEU:HB3	2.20	0.42
4:A:156:HIS:HA	12:A:365:HOH:O	2.19	0.42
4:B:178:ALA:O	4:B:197:LEU:HA	2.20	0.42
5:C:50:GLU:HA	5:C:266:ARG:HE	1.85	0.42
5:C:108:ILE:HD11	5:C:365:ASP:OD2	2.19	0.42
5:C:129:ILE:HG21	5:C:387:SER:HB3	2.02	0.42
5:C:585:GLU:H	5:C:585:GLU:HG3	1.60	0.42
5:C:841:ASN:ND2	5:C:844:GLY:H	2.18	0.42
5:C:907:ASP:O	5:C:908:GLY:O	2.37	0.42
5:C:1054:THR:HG22	5:C:1059:ASP:CB	2.39	0.42
5:C:1084:SER:O	5:C:1087:VAL:HG12	2.19	0.42
6:D:15:PRO:HA	6:D:18:ILE:CG1	2.50	0.42
6:D:477:LEU:HD11	6:D:495:ARG:CG	2.49	0.42
4:K:45:LEU:HD23	5:M:855:VAL:HG22	2.02	0.42
4:K:206:THR:HG23	4:K:208:LEU:H	1.84	0.42
5:M:396:ASP:OD2	5:M:396:ASP:C	2.58	0.42
5:M:487:THR:HG22	5:M:489:THR:H	1.84	0.42
5:M:676:ILE:O	6:N:948:THR:HG22	2.19	0.42
6:N:10:ILE:HD11	6:N:1434:TRP:CD1	2.54	0.42
6:N:409:VAL:HG11	6:N:435:VAL:HG21	2.01	0.42
6:N:584:ASN:HB2	6:N:602:SER:CB	2.49	0.42
6:N:760:ARG:HH11	6:N:760:ARG:HG3	1.84	0.42
6:N:992:ILE:O	6:N:995:LEU:HB3	2.19	0.42
6:N:1119:SER:HB2	6:N:1185:GLU:OE1	2.20	0.42
6:N:1147:ARG:CB	6:N:1188:VAL:HG21	2.44	0.42
6:N:1165:TYR:HB3	6:N:1207:TYR:CE2	2.55	0.42
6:N:1235:GLN:HG3	6:N:1236:LEU:HG	2.01	0.42
6:N:1281:VAL:CG1	6:N:1282:ARG:N	2.82	0.42
1:X:13:DT:OP1	6:N:1093:TYR:CE2	2.73	0.42
4:A:154:GLU:H	4:A:154:GLU:CD	2.22	0.42
5:C:21:ILE:CD1	5:C:22:GLN:H	2.33	0.42
5:C:395:LYS:NZ	5:C:407:LYS:HE2	2.35	0.42
5:C:492:ASP:CG	5:C:518:LYS:HG3	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:394:LEU:HD12	6:D:394:LEU:C	2.40	0.42
6:D:436:GLU:OE2	6:D:445:ARG:HD2	2.20	0.42
6:D:521:PRO:HA	6:D:522:PRO:HD3	1.77	0.42
6:D:531:ASP:C	6:D:533:GLY:N	2.73	0.42
6:D:664:LYS:HD2	12:D:9408:HOH:O	2.18	0.42
6:D:978:TYR:HA	12:D:9391:HOH:O	2.19	0.42
6:D:1144:LEU:HD13	6:D:1174:LEU:HD13	2.01	0.42
6:D:1379:VAL:HA	6:D:1420:LEU:HB2	2.02	0.42
6:D:1485:GLN:O	7:E:75:PHE:HA	2.20	0.42
4:K:18:ARG:NH2	4:K:88:ARG:HH21	2.18	0.42
4:K:86:VAL:HG12	4:K:124:ASN:HD22	1.85	0.42
4:L:84:GLU:HB3	4:L:127:LEU:HD21	2.02	0.42
4:L:181:VAL:HA	4:L:194:LYS:O	2.20	0.42
5:M:684:PHE:HB3	6:N:740:PHE:HE1	1.83	0.42
6:N:17:LYS:HD3	6:N:21:TRP:HE1	1.84	0.42
6:N:18:ILE:HA	6:N:21:TRP:CZ3	2.54	0.42
6:N:126:VAL:O	6:N:130:SER:HB3	2.19	0.42
6:N:766:ALA:HA	6:N:769:LEU:HD21	2.02	0.42
6:N:794:GLN:O	6:N:861:GLN:HB3	2.20	0.42
6:N:1041:LEU:HD13	6:N:1058:ARG:O	2.19	0.42
6:N:1231:GLU:HG2	6:N:1232:PRO:N	2.34	0.42
6:N:1282:ARG:HB2	6:N:1295:GLU:OE2	2.19	0.42
6:N:1301:LYS:HD3	12:N:9369:HOH:O	2.19	0.42
5:C:140:ILE:C	5:C:418:LEU:HD23	2.41	0.42
5:C:196:LEU:O	5:C:199:VAL:HB	2.20	0.42
5:C:276:LYS:HA	5:C:280:LYS:CD	2.39	0.42
5:C:535:SER:N	5:C:538:GLN:NE2	2.58	0.42
5:C:698:ASP:OD2	5:C:698:ASP:N	2.48	0.42
5:C:1040:LEU:HD21	5:C:1048:THR:CG2	2.49	0.42
6:D:181:ASP:C	6:D:441:ARG:HD3	2.40	0.42
6:D:619:LEU:HB2	6:D:621:LYS:HE3	2.01	0.42
6:D:704:ARG:HD2	6:D:705:ALA:N	2.29	0.42
6:D:838:ARG:HH21	6:D:863:VAL:CG1	2.27	0.42
6:D:849:ALA:O	6:D:853:VAL:HG23	2.19	0.42
6:D:1101:VAL:CG2	6:D:1424:VAL:HG23	2.50	0.42
6:D:1232:PRO:HB3	6:D:1361:VAL:CG1	2.49	0.42
6:D:1275:SER:HA	6:D:1294:VAL:HG21	2.02	0.42
6:D:1353:GLN:HG2	6:D:1368:ILE:HD11	2.02	0.42
4:K:146:ARG:HD3	12:K:712:HOH:O	2.19	0.42
4:L:23:PHE:HD2	4:L:197:LEU:HD23	1.84	0.42
4:L:101:LEU:HD23	4:L:101:LEU:C	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:14:PRO:HD2	12:M:7012:HOH:O	2.19	0.42
5:M:23:VAL:HA	5:M:121:MET:SD	2.60	0.42
5:M:59:LYS:HB2	12:M:7296:HOH:O	2.19	0.42
5:M:267:TYR:HD1	12:M:7209:HOH:O	2.02	0.42
5:M:355:VAL:HG13	5:M:356:ARG:N	2.35	0.42
5:M:798:GLY:HA3	5:M:829:GLN:HB2	2.02	0.42
6:N:162:ARG:HH22	6:N:414:ARG:CD	2.32	0.42
6:N:616:GLN:HA	6:N:616:GLN:NE2	2.35	0.42
6:N:702:LEU:HD23	6:N:745:MET:CE	2.49	0.42
3:Z:5:DG:H4'	8:N:8001:STD:C3	2.50	0.41
4:A:7:LYS:HZ1	4:A:186:LEU:HD23	1.85	0.41
4:B:30:ARG:HG2	4:B:30:ARG:HH11	1.83	0.41
4:B:142:VAL:HG23	4:B:142:VAL:O	2.20	0.41
4:B:181:VAL:HA	4:B:194:LYS:O	2.19	0.41
5:C:77:PRO:HD3	5:C:91:GLN:O	2.19	0.41
5:C:172:ILE:CG2	5:C:173:ASP:N	2.83	0.41
5:C:275:TYR:HD2	5:C:276:LYS:HG3	1.84	0.41
5:C:278:GLU:N	12:C:1120:HOH:O	2.53	0.41
6:D:10:ILE:HG13	6:D:1434:TRP:CZ2	2.55	0.41
6:D:179:VAL:CG1	6:D:183:GLU:HB3	2.50	0.41
6:D:700:VAL:HB	6:D:748:HIS:O	2.19	0.41
6:D:917:GLN:HE21	6:D:921:ARG:CD	2.33	0.41
6:D:957:PRO:HG2	6:D:1007:VAL:HG22	2.00	0.41
6:D:1152:GLU:HG3	6:D:1161:GLU:HA	2.02	0.41
6:D:1482:ARG:HB2	6:D:1483:PHE:HD1	1.85	0.41
4:K:138:LEU:HD22	12:K:2221:HOH:O	2.19	0.41
5:M:172:ILE:HA	5:M:185:LYS:O	2.19	0.41
5:M:243:ARG:N	5:M:244:PRO:HD3	2.30	0.41
5:M:443:THR:HG23	5:M:449:ILE:HG13	2.01	0.41
5:M:551:GLU:HB2	5:M:552:HIS:CE1	2.55	0.41
5:M:571:LEU:HD22	5:M:669:GLY:HA2	2.02	0.41
5:M:668:LEU:HD12	5:M:668:LEU:N	2.35	0.41
5:M:1039:ALA:O	5:M:1043:TYR:HD1	2.03	0.41
5:M:1072:LYS:HD3	5:M:1074:GLU:HB2	2.01	0.41
6:N:62:LYS:HB2	6:N:73:CYS:SG	2.60	0.41
6:N:633:VAL:HG22	6:N:635:PRO:CD	2.49	0.41
6:N:702:LEU:O	6:N:713:ILE:HA	2.20	0.41
6:N:1207:TYR:N	6:N:1366:LYS:HZ1	2.18	0.41
6:N:1219:GLU:O	6:N:1221:VAL:N	2.53	0.41
4:B:175:ARG:HE	4:B:202:ASP:HB3	1.84	0.41
5:C:238:LEU:HD12	12:C:1255:HOH:O	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:310:LEU:O	5:C:314:THR:HG23	2.20	0.41
5:C:433:THR:C	5:C:435:TYR:H	2.22	0.41
5:C:455:LEU:CD1	5:C:459:ALA:HB3	2.50	0.41
6:D:685:ASP:HA	6:D:688:TRP:CD1	2.55	0.41
6:D:691:LEU:HD12	6:D:691:LEU:HA	1.93	0.41
6:D:704:ARG:HH21	6:D:737:ASN:ND2	2.18	0.41
6:D:815:ALA:HA	6:D:818:ARG:HD2	2.02	0.41
6:D:841:TYR:HB3	6:D:843:PHE:CE2	2.55	0.41
6:D:945:SER:OG	6:D:947:ILE:HG13	2.20	0.41
6:D:1095:THR:O	6:D:1099:VAL:HG23	2.19	0.41
6:D:1110:ALA:O	6:D:1112:CYS:N	2.54	0.41
6:D:1149:LEU:CD2	6:D:1187:PRO:HG2	2.49	0.41
6:D:1269:LYS:N	12:D:9341:HOH:O	2.53	0.41
6:D:1298:GLY:HA3	6:N:47:GLU:CG	2.51	0.41
4:K:14:ARG:NH2	4:K:24:VAL:HG23	2.34	0.41
4:K:134:GLU:HA	4:K:134:GLU:OE2	2.19	0.41
4:K:219:ARG:O	4:K:223:THR:HG23	2.19	0.41
4:L:91:ASN:C	4:L:146:ARG:HH22	2.23	0.41
5:M:86:LYS:HE2	5:M:813:VAL:HG12	2.03	0.41
5:M:118:ILE:H	5:M:118:ILE:HG13	1.77	0.41
5:M:569:VAL:HA	5:M:570:PRO:HD3	1.92	0.41
5:M:676:ILE:CG2	5:M:988:VAL:HG22	2.50	0.41
5:M:1054:THR:HG23	5:M:1082:PRO:HG3	2.02	0.41
6:N:102:ILE:HG13	12:N:9171:HOH:O	2.19	0.41
6:N:402:PRO:CA	6:N:443:VAL:HG23	2.50	0.41
6:N:625:TYR:OH	6:N:655:PRO:HG2	2.20	0.41
6:N:639:LEU:HD12	6:N:640:HIS:H	1.84	0.41
6:N:710:ARG:HG3	6:N:711:LEU:N	2.36	0.41
6:N:1158:VAL:HG12	6:N:1159:ARG:N	2.35	0.41
6:N:1258:ARG:HG3	6:N:1258:ARG:HH11	1.84	0.41
6:N:1364:HIS:ND1	6:N:1365:ASP:N	2.67	0.41
1:G:13:DT:OP1	6:D:1093:TYR:CE2	2.73	0.41
1:X:19:DC:P	5:M:1001:VAL:HB	2.60	0.41
4:A:6:LEU:O	4:A:6:LEU:HG	2.19	0.41
4:A:133:GLU:CG	4:A:134:GLU:N	2.77	0.41
4:A:156:HIS:CD2	4:A:156:HIS:H	2.39	0.41
4:A:188:GLN:HG3	4:A:189:ARG:H	1.84	0.41
4:B:214:ALA:HA	4:B:217:ILE:HD12	2.02	0.41
5:C:155:PRO:HA	12:C:1141:HOH:O	2.19	0.41
5:C:277:ALA:HB1	12:C:1120:HOH:O	2.20	0.41
5:C:358:ARG:HB3	5:C:371:LYS:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:901:TYR:C	5:C:902:ILE:HG13	2.40	0.41
5:C:1016:ILE:HG12	5:C:1017:THR:N	2.36	0.41
5:C:1093:GLN:HB3	6:D:90:MET:SD	2.60	0.41
5:C:1116:ALA:O	6:D:23:TYR:OH	2.38	0.41
6:D:23:TYR:CD2	6:D:89:ARG:HG2	2.55	0.41
6:D:129:PHE:CD2	6:D:587:ARG:NH1	2.88	0.41
6:D:1118:ILE:CG1	6:D:1192:LEU:HB2	2.51	0.41
4:L:73:GLU:CD	4:L:130:ALA:HA	2.40	0.41
4:L:143:ARG:HH11	4:L:160:ASP:CG	2.23	0.41
4:L:189:ARG:NH2	4:L:191:ASP:O	2.54	0.41
5:M:52:PHE:HZ	5:M:98:LEU:HD23	1.85	0.41
5:M:68:PHE:CZ	5:M:71:TYR:HB3	2.55	0.41
5:M:890:LEU:HD21	5:M:901:TYR:CD1	2.56	0.41
5:M:941:VAL:O	5:M:944:LEU:HB2	2.20	0.41
5:M:1073:GLY:HA3	12:M:7025:HOH:O	2.20	0.41
6:N:187:LYS:HE2	12:N:9087:HOH:O	2.19	0.41
6:N:457:GLY:O	6:N:460:ALA:N	2.53	0.41
6:N:646:LYS:HD2	6:N:688:TRP:CE3	2.55	0.41
6:N:977:ALA:HB3	6:N:983:LEU:HD11	2.02	0.41
6:N:1135:ARG:HD3	6:N:1139:ASP:HB3	2.02	0.41
6:N:1255:GLY:O	6:N:1258:ARG:N	2.47	0.41
6:N:1484:THR:O	7:O:25:LYS:HD2	2.20	0.41
1:G:17:DC:H2"	1:G:18:DG:H8	1.85	0.41
2:H:16:G:H5"	6:D:741:ASP:OD1	2.20	0.41
1:X:17:DC:H2"	1:X:18:DG:H8	1.85	0.41
1:X:18:DG:H2'	1:X:19:DC:C6	2.56	0.41
4:A:43:ILE:HG23	4:A:47:SER:OG	2.20	0.41
4:A:219:ARG:HG2	4:B:222:LEU:HD12	2.02	0.41
4:B:23:PHE:HE2	4:B:199:ILE:HD12	1.84	0.41
4:B:123:MET:HG3	12:B:404:HOH:O	2.20	0.41
5:C:365:ASP:O	5:C:367:LEU:N	2.53	0.41
5:C:380:ALA:O	5:C:384:GLU:HB2	2.21	0.41
5:C:384:GLU:O	5:C:388:ARG:HB2	2.20	0.41
5:C:486:MET:HE2	5:C:486:MET:HB3	1.80	0.41
5:C:837:ASP:HA	5:C:999:HIS:HE1	1.82	0.41
5:C:871:LEU:HA	5:C:871:LEU:HD23	1.86	0.41
5:C:1019:GLN:NE2	5:C:1058:ASP:OD1	2.53	0.41
5:C:1094:ALA:HB2	6:D:520:LEU:HD13	2.02	0.41
6:D:44:LEU:HD22	6:D:525:ARG:NH2	2.35	0.41
6:D:483:HIS:CB	6:D:484:PRO:HD3	2.50	0.41
6:D:489:ARG:CG	6:D:490:ALA:N	2.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:660:LYS:HZ3	6:D:694:VAL:HG13	1.85	0.41
6:D:800:LYS:HD2	6:D:804:LEU:CD2	2.51	0.41
6:D:1292:VAL:HB	6:D:1325:LEU:CD2	2.50	0.41
6:D:1318:TYR:CE2	6:N:42:ASP:OD1	2.72	0.41
6:D:1462:LEU:HD22	6:D:1472:ILE:CG2	2.50	0.41
7:E:36:LYS:HD3	7:E:36:LYS:HA	1.71	0.41
5:M:198:ARG:HG3	12:M:7010:HOH:O	2.20	0.41
5:M:557:ARG:HA	5:M:560:MET:CG	2.51	0.41
5:M:568:ALA:HB1	5:M:668:LEU:HB3	2.02	0.41
5:M:679:PHE:HE2	5:M:853:LEU:HD21	1.85	0.41
5:M:923:GLU:O	5:M:927:GLY:HA3	2.20	0.41
5:M:983:ILE:HG21	5:M:987:ILE:HD11	2.03	0.41
6:N:65:ARG:CG	6:N:66:GLN:H	2.31	0.41
6:N:126:VAL:O	6:N:132:TYR:CE1	2.73	0.41
6:N:704:ARG:HB2	6:N:736:PHE:HB3	2.02	0.41
6:N:813:LEU:HD12	6:N:814:ALA:N	2.35	0.41
6:N:965:GLU:O	6:N:969:ARG:HG2	2.21	0.41
6:N:1079:LYS:O	6:N:1083:ASP:N	2.53	0.41
6:N:1110:ALA:O	6:N:1111:ASP:C	2.57	0.41
2:H:5:C:H2'	2:H:6:U:C5	2.55	0.41
5:C:113:VAL:HG11	5:C:373:VAL:HG11	2.03	0.41
5:C:162:ILE:HB	5:C:172:ILE:HB	2.02	0.41
5:C:174:LEU:HD23	5:C:307:LEU:HD13	2.02	0.41
5:C:394:PHE:CE1	5:C:632:ASN:ND2	2.87	0.41
5:C:548:PRO:HD3	5:C:842:ARG:NH1	2.36	0.41
5:C:775:ARG:HH21	5:C:782:ALA:CB	2.15	0.41
5:C:789:SER:O	5:C:791:ARG:HG2	2.20	0.41
5:C:1090:LYS:NZ	6:D:90:MET:HG3	2.34	0.41
6:D:30:GLU:HB2	6:D:41:ARG:HG3	2.02	0.41
6:D:65:ARG:NH1	12:D:9479:HOH:O	2.53	0.41
6:D:162:ARG:NE	6:D:434:ARG:HE	2.19	0.41
6:D:166:GLN:CG	6:D:394:LEU:HD13	2.51	0.41
6:D:409:VAL:HG21	6:D:421:LEU:CD2	2.34	0.41
6:D:786:ILE:HD13	6:D:908:LYS:CB	2.50	0.41
6:D:1094:LEU:O	6:D:1098:LEU:HD13	2.20	0.41
6:D:1176:LYS:HZ3	6:N:411:THR:HG22	1.85	0.41
4:K:38:ASN:O	4:K:42:ARG:HG3	2.20	0.41
4:L:94:LEU:HD11	4:L:119:ASP:CG	2.41	0.41
5:M:183:SER:HB2	5:M:190:LYS:CG	2.47	0.41
5:M:281:LEU:O	5:M:281:LEU:HD23	2.21	0.41
5:M:281:LEU:HD11	5:M:306:THR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:1115:LEU:HD22	6:N:88:TYR:CD1	2.56	0.41
6:N:141:ILE:HG21	6:N:449:SER:CB	2.51	0.41
6:N:656:PHE:HB3	6:N:694:VAL:CG1	2.50	0.41
6:N:1020:LEU:HG	6:N:1035:ILE:HD12	2.02	0.41
6:N:1237:THR:OG1	6:N:1256:LEU:HD13	2.21	0.41
6:N:1426:LYS:HA	6:N:1429:LEU:CD2	2.46	0.41
4:A:116:PRO:HG3	12:A:392:HOH:O	2.20	0.41
4:A:162:ILE:HG21	12:A:376:HOH:O	2.20	0.41
4:B:73:GLU:OE1	4:B:130:ALA:HA	2.20	0.41
5:C:58:ASP:HB3	12:C:1238:HOH:O	2.19	0.41
5:C:1105:LYS:CG	5:C:1107:ASN:HD22	2.27	0.41
6:D:65:ARG:HA	6:D:65:ARG:HD2	1.80	0.41
6:D:166:GLN:HG2	6:D:394:LEU:HD13	2.02	0.41
6:D:470:LEU:N	6:D:470:LEU:HD23	2.35	0.41
6:D:505:SER:HB2	6:D:1454:GLY:H	1.82	0.41
6:D:1297:GLU:H	6:N:47:GLU:C	2.23	0.41
7:E:26:ARG:C	7:E:30:LEU:HD12	2.41	0.41
7:E:28:GLN:OE1	7:E:32:ARG:NH1	2.53	0.41
7:E:48:MET:HB3	7:E:54:LEU:HB2	2.01	0.41
4:L:6:LEU:O	4:L:8:ALA:N	2.52	0.41
5:M:21:ILE:HG13	12:M:7145:HOH:O	2.19	0.41
5:M:157:ARG:HG2	5:M:158:TYR:N	2.35	0.41
5:M:487:THR:HG22	5:M:488:ALA:N	2.36	0.41
5:M:627:ARG:O	5:M:638:ASP:HB3	2.21	0.41
5:M:805:ARG:NH1	12:M:7047:HOH:O	2.53	0.41
6:N:95:LEU:HD21	6:N:574:LEU:CD1	2.49	0.41
6:N:130:SER:O	6:N:568:ARG:NE	2.52	0.41
6:N:529:GLN:O	6:N:529:GLN:HG3	2.20	0.41
6:N:637:LEU:O	6:N:935:LYS:NZ	2.54	0.41
6:N:1046:GLN:HG3	6:N:1052:THR:HB	2.02	0.41
6:N:1107:VAL:O	6:N:1218:GLY:N	2.47	0.41
6:N:1189:ARG:HB3	6:N:1204:CYS:HA	2.01	0.41
6:N:1341:PRO:C	6:N:1343:ALA:N	2.74	0.41
7:O:33:HIS:HB2	7:O:37:ASN:HD21	1.84	0.41
2:H:15:C:O2'	2:H:16:G:H5'	2.21	0.41
1:X:10:DG:C3'	6:N:586:ARG:HH21	2.33	0.41
3:Z:9:DG:H5"	6:N:108:VAL:HG11	2.03	0.41
4:A:69:PRO:O	4:A:71:VAL:HG23	2.19	0.41
4:A:123:MET:SD	4:A:123:MET:N	2.94	0.41
5:C:69:LEU:HD12	5:C:97:ARG:CB	2.49	0.41
5:C:129:ILE:HG22	5:C:130:ASN:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:279:GLU:HG3	5:C:280:LYS:N	2.36	0.41
5:C:569:VAL:HG23	5:C:635:THR:CG2	2.51	0.41
5:C:639:GLN:NE2	5:C:639:GLN:N	2.68	0.41
5:C:945:ARG:O	5:C:949:LYS:HG3	2.20	0.41
5:C:957:LYS:HG2	12:C:1339:HOH:O	2.20	0.41
5:C:1008:ARG:NH2	5:C:1020:PRO:HB3	2.36	0.41
6:D:126:VAL:O	6:D:130:SER:HB3	2.21	0.41
6:D:1283:ILE:O	6:N:74:GLU:HB3	2.21	0.41
6:D:1323:GLN:HE21	6:D:1323:GLN:HB2	1.66	0.41
4:K:2:LEU:HA	4:K:6:LEU:HD22	2.01	0.41
5:M:194:VAL:CG2	5:M:221:LEU:HA	2.50	0.41
5:M:567:GLN:OE1	5:M:997:LEU:HD13	2.20	0.41
5:M:572:ILE:CD1	5:M:701:THR:HB	2.50	0.41
5:M:630:ARG:HH21	5:M:707:ARG:N	2.14	0.41
5:M:688:ILE:CD1	5:M:847:GLY:HA3	2.51	0.41
5:M:881:ASN:N	5:M:881:ASN:ND2	2.69	0.41
5:M:984:GLU:HG3	6:N:791:TYR:OH	2.21	0.41
6:N:34:TYR:CD2	6:N:35:ARG:N	2.87	0.41
6:N:131:LYS:CG	6:N:568:ARG:HG2	2.51	0.41
6:N:179:VAL:CG2	6:N:189:GLN:HE22	2.34	0.41
6:N:436:GLU:OE1	6:N:447:VAL:HG11	2.20	0.41
6:N:785:ILE:H	6:N:785:ILE:CD1	2.17	0.41
6:N:827:ILE:HB	6:N:828:LYS:CE	2.45	0.41
6:N:1047:LYS:HG2	6:N:1053:PHE:CE1	2.56	0.41
6:N:1148:VAL:CG1	6:N:1163:GLY:HA2	2.50	0.41
6:N:1263:PHE:CE1	6:N:1352:ILE:HG12	2.56	0.41
6:N:1378:TYR:O	6:N:1379:VAL:HG13	2.20	0.41
7:O:13:VAL:HG12	7:O:75:PHE:CE1	2.56	0.41
7:O:54:LEU:O	7:O:58:PRO:HD2	2.21	0.41
4:A:48:ILE:HD13	4:A:210:ALA:HB1	2.00	0.41
4:A:66:SER:O	4:A:75:VAL:HG23	2.21	0.41
4:B:6:LEU:O	4:B:8:ALA:N	2.53	0.41
4:B:83:LYS:HZ2	4:B:168:ASP:H	1.69	0.41
5:C:14:PRO:HB3	5:C:586:ARG:NH2	2.36	0.41
5:C:141:HIS:HB3	5:C:418:LEU:HD23	2.02	0.41
5:C:343:GLN:HG2	5:C:385:PHE:HB2	2.03	0.41
5:C:537:LYS:HB3	5:C:545:ASN:ND2	2.33	0.41
5:C:663:ASN:C	5:C:665:PHE:H	2.24	0.41
5:C:751:PRO:HB2	6:D:680:GLN:CG	2.48	0.41
5:C:877:PRO:HG3	6:D:1023:MET:CE	2.50	0.41
5:C:910:LYS:O	5:C:913:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:916:GLU:O	5:C:919:ALA:HB3	2.21	0.41
6:D:117:ASP:CG	6:D:495:ARG:NE	2.72	0.41
6:D:153:LEU:HB3	12:D:9243:HOH:O	2.19	0.41
6:D:695:ILE:CD1	6:D:718:PRO:HB2	2.51	0.41
6:D:806:PHE:O	6:D:806:PHE:CD1	2.74	0.41
6:D:1170:ASP:O	6:D:1173:LEU:HB3	2.21	0.41
6:D:1263:PHE:N	6:D:1263:PHE:CD1	2.88	0.41
6:D:1487:VAL:O	7:E:73:LEU:HA	2.21	0.41
7:E:45:ARG:HG2	12:E:104:HOH:O	2.20	0.41
7:E:57:ASP:N	7:E:58:PRO:HD3	2.36	0.41
7:E:70:THR:HG21	7:E:72:ARG:NH2	2.35	0.41
4:K:49:PRO:HA	4:K:148:VAL:HG22	2.03	0.41
4:L:178:ALA:O	4:L:197:LEU:HA	2.20	0.41
5:M:202:TYR:HB3	5:M:207:LEU:HG	2.03	0.41
5:M:243:ARG:HG2	5:M:243:ARG:NH1	2.35	0.41
5:M:265:ARG:CZ	5:M:267:TYR:HB3	2.51	0.41
5:M:334:ARG:HH11	5:M:415:PRO:HG2	1.81	0.41
5:M:433:THR:HG22	5:M:437:ARG:HH11	1.85	0.41
5:M:684:PHE:CG	5:M:685:GLU:N	2.88	0.41
5:M:841:ASN:HD21	5:M:843:HIS:H	1.63	0.41
5:M:916:GLU:O	5:M:919:ALA:HB3	2.21	0.41
6:N:103:TRP:NE1	6:N:1444:THR:HA	2.36	0.41
6:N:396:VAL:C	6:N:398:ALA:N	2.74	0.41
6:N:496:LEU:O	6:N:500:ARG:HG2	2.20	0.41
6:N:564:GLU:HA	6:N:567:ILE:HD12	2.01	0.41
6:N:676:MET:HE1	6:N:683:ILE:HA	2.03	0.41
6:N:711:LEU:HB3	6:N:714:GLN:NE2	2.36	0.41
6:N:1104:GLU:HA	6:N:1461:GLY:HA2	2.02	0.41
6:N:1109:GLU:HG2	6:N:1202:GLN:N	2.35	0.41
6:N:1361:VAL:HG12	6:N:1363:LEU:HD22	2.02	0.41
7:O:40:LEU:HD11	7:O:67:GLU:HG2	2.03	0.41
7:O:95:VAL:HG11	12:O:884:HOH:O	2.19	0.41
2:H:3:G:O2'	2:H:4:U:O4'	2.35	0.41
2:H:12:G:H4'	12:H:110:HOH:O	2.21	0.41
4:A:56:VAL:CG2	4:A:82:LEU:HD12	2.51	0.41
4:A:163:ASN:N	4:A:163:ASN:ND2	2.68	0.41
4:B:143:ARG:NH1	4:B:143:ARG:HG3	2.36	0.41
5:C:79:PRO:CG	5:C:82:GLU:HB2	2.41	0.41
5:C:139:GLN:HB3	5:C:334:ARG:HD3	2.03	0.41
5:C:174:LEU:CB	5:C:310:LEU:HD22	2.51	0.41
5:C:410:ILE:H	5:C:410:ILE:HG13	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:860:HIS:HD2	5:C:975:TYR:O	2.04	0.41
5:C:874:LEU:HD11	6:D:784:ASP:HA	2.03	0.41
5:C:877:PRO:HB3	6:D:1020:LEU:HD12	2.02	0.41
5:C:1086:ARG:HD3	5:C:1112:PHE:CD2	2.56	0.41
5:C:1095:LEU:CD1	6:D:603:LEU:HD22	2.51	0.41
6:D:18:ILE:HG23	6:D:518:PRO:HG3	2.02	0.41
6:D:33:ASN:HB3	6:D:35:ARG:NH1	2.35	0.41
6:D:35:ARG:HA	12:D:9285:HOH:O	2.21	0.41
6:D:197:SER:OG	6:D:395:VAL:HG21	2.21	0.41
6:D:514:LEU:HD13	6:D:578:VAL:CG1	2.51	0.41
6:D:736:PHE:O	6:D:738:ALA:N	2.53	0.41
6:D:764:LEU:HD11	6:D:766:ALA:HB3	2.02	0.41
6:D:885:ILE:HG13	6:D:885:ILE:H	1.62	0.41
6:D:887:ALA:HB1	6:D:893:GLU:HG3	2.02	0.41
6:D:1297:GLU:OE1	6:N:51:GLY:HA2	2.21	0.41
6:D:1369:GLU:O	6:D:1372:VAL:HG12	2.21	0.41
6:D:1393:GLN:OE1	6:D:1394:VAL:HB	2.21	0.41
6:D:1489:GLN:O	6:D:1493:LYS:HG2	2.21	0.41
7:E:54:LEU:HG	7:E:58:PRO:CB	2.51	0.41
4:K:173:PRO:HB3	4:K:204:SER:HB3	2.03	0.41
4:K:224:TYR:HB3	4:L:9:PRO:CB	2.36	0.41
4:L:80:LEU:HG	6:N:844:ALA:CA	2.43	0.41
4:L:88:ARG:HB2	4:L:123:MET:SD	2.60	0.41
5:M:21:ILE:HG12	5:M:455:LEU:HD21	2.02	0.41
5:M:142:ARG:CZ	5:M:325:ILE:HG12	2.51	0.41
5:M:176:VAL:HG12	5:M:182:VAL:HG13	2.03	0.41
5:M:184:MET:SD	5:M:191:PHE:HE1	2.44	0.41
5:M:424:GLY:O	5:M:427:VAL:N	2.54	0.41
5:M:435:TYR:HD2	5:M:471:TYR:HH	1.66	0.41
5:M:554:ASP:CB	5:M:880:MET:HB2	2.24	0.41
5:M:637:LEU:HA	5:M:659:PRO:HG3	2.03	0.41
5:M:654:LEU:H	5:M:654:LEU:CD2	2.17	0.41
5:M:666:LEU:HD21	5:M:668:LEU:HD11	2.03	0.41
5:M:811:PRO:HD2	5:M:813:VAL:CG1	2.51	0.41
5:M:912:PRO:O	5:M:915:LYS:HB2	2.20	0.41
6:N:26:VAL:HG13	6:N:43:GLY:C	2.42	0.41
6:N:133:ILE:O	6:N:152:LEU:CB	2.66	0.41
6:N:520:LEU:HD22	6:N:540:LEU:HD23	2.02	0.41
6:N:540:LEU:HD13	6:N:606:ILE:HD11	2.02	0.41
6:N:613:ARG:O	6:N:613:ARG:HD3	2.21	0.41
6:N:792:ILE:O	6:N:878:GLY:HA3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:917:GLN:HE21	6:N:921:ARG:NH1	2.19	0.41
6:N:953:ASP:O	6:N:955:VAL:HG23	2.21	0.41
6:N:959:GLU:CD	6:N:959:GLU:N	2.75	0.41
4:A:54:THR:HG22	4:A:158:ILE:HG13	2.02	0.41
4:B:109:VAL:O	4:B:129:ILE:HB	2.21	0.41
5:C:72:ARG:HD2	12:C:1214:HOH:O	2.21	0.41
5:C:148:PHE:CB	5:C:313:LEU:HD22	2.51	0.41
5:C:549:PHE:HB3	5:C:552:HIS:HD2	1.86	0.41
6:D:102:ILE:HD12	6:D:579:ASP:OD1	2.20	0.41
6:D:201:GLY:HA3	6:D:396:VAL:O	2.21	0.41
6:D:496:LEU:HD23	6:D:500:ARG:HG2	2.03	0.41
6:D:838:ARG:HD3	6:D:874:GLU:OE1	2.20	0.41
6:D:1135:ARG:HB3	6:D:1140:ILE:CG1	2.51	0.41
6:D:1219:GLU:O	6:D:1221:VAL:N	2.54	0.41
6:D:1297:GLU:HA	6:N:78:VAL:CG2	2.51	0.41
5:M:18:LEU:HG	5:M:408:ARG:NH2	2.36	0.41
5:M:351:LEU:HD13	5:M:374:ASN:O	2.21	0.41
5:M:398:THR:O	5:M:635:THR:HG21	2.21	0.41
5:M:1018:GLN:HG3	5:M:1083:GLU:HG3	2.03	0.41
6:N:133:ILE:HG23	6:N:456:MET:N	2.36	0.41
6:N:811:GLU:HG3	6:N:811:GLU:O	2.20	0.41
6:N:885:ILE:HD13	6:N:937:TYR:CG	2.56	0.41
6:N:1480:PHE:O	7:O:18:ARG:NH2	2.54	0.41
1:G:17:DC:H4'	6:D:628:ARG:HD3	2.03	0.40
4:B:132:LEU:HD22	4:B:138:LEU:HD22	2.02	0.40
5:C:437:ARG:NH1	5:C:491:GLU:OE2	2.54	0.40
5:C:473:ARG:HA	5:C:531:PHE:CD1	2.56	0.40
5:C:698:ASP:HB3	5:C:701:THR:OG1	2.21	0.40
5:C:745:ILE:HG13	12:C:1408:HOH:O	2.22	0.40
5:C:840:ALA:HB2	5:C:846:LYS:HA	2.03	0.40
5:C:1095:LEU:O	5:C:1096:ALA:C	2.60	0.40
6:D:42:ASP:OD2	6:D:49:ILE:HD11	2.21	0.40
6:D:85:VAL:HB	6:D:89:ARG:NH1	2.37	0.40
6:D:414:ARG:HB3	6:D:450:TYR:CE1	2.56	0.40
6:D:760:ARG:O	6:D:760:ARG:HG3	2.20	0.40
6:D:995:LEU:HA	6:D:998:GLU:OE1	2.21	0.40
6:D:1147:ARG:HH12	6:D:1190:SER:HA	1.86	0.40
6:D:1161:GLU:OE1	6:D:1164:ARG:HB2	2.21	0.40
6:D:1273:VAL:HG23	6:D:1273:VAL:O	2.20	0.40
7:E:95:VAL:H	7:E:95:VAL:HG23	1.60	0.40
4:L:77:GLU:CB	6:N:872:ARG:HH21	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:163:ASN:HD22	4:L:163:ASN:HA	1.70	0.40
5:M:17:PRO:O	5:M:18:LEU:C	2.57	0.40
5:M:140:ILE:HA	5:M:332:ARG:O	2.20	0.40
5:M:157:ARG:HE	5:M:314:THR:HB	1.86	0.40
5:M:227:PHE:HB3	12:M:7046:HOH:O	2.21	0.40
5:M:577:PRO:HG3	5:M:993:PHE:CE2	2.57	0.40
5:M:937:ASP:HB2	5:M:940:GLU:HG3	2.02	0.40
5:M:1049:LEU:HD23	6:N:1472:ILE:CG1	2.51	0.40
6:N:409:VAL:HG12	6:N:410:SER:N	2.35	0.40
6:N:493:ARG:CG	6:N:1390:LEU:HD12	2.42	0.40
6:N:792:ILE:HG13	6:N:941:PHE:CE1	2.56	0.40
6:N:1026:SER:C	6:N:1028:ALA:H	2.24	0.40
4:A:143:ARG:HH21	4:A:158:ILE:HD12	1.85	0.40
5:C:71:TYR:HD2	5:C:71:TYR:H	1.67	0.40
5:C:305:PRO:HA	5:C:308:ARG:HD3	2.03	0.40
5:C:569:VAL:HA	5:C:570:PRO:HD3	1.82	0.40
5:C:835:VAL:HG23	5:C:849:VAL:O	2.21	0.40
6:D:434:ARG:N	6:D:449:SER:O	2.54	0.40
6:D:520:LEU:CD1	6:D:521:PRO:HD2	2.50	0.40
6:D:1176:LYS:HE2	12:D:9058:HOH:O	2.22	0.40
6:D:1260:ILE:O	6:D:1264:GLU:HB2	2.21	0.40
6:D:1297:GLU:CD	6:N:89:ARG:HH11	2.25	0.40
7:E:41:GLU:HG2	7:E:42:PRO:HD3	2.02	0.40
7:E:54:LEU:O	7:E:58:PRO:HD2	2.21	0.40
7:E:61:VAL:O	7:E:65:MET:HG3	2.21	0.40
4:L:102:LYS:CD	4:L:139:ASN:HB2	2.50	0.40
5:M:358:ARG:HG2	5:M:371:LYS:O	2.21	0.40
5:M:461:VAL:CG2	12:M:7145:HOH:O	2.69	0.40
5:M:504:GLU:HG3	5:M:507:ARG:HB3	2.03	0.40
5:M:683:ASN:HB2	5:M:872:ASN:HB2	2.02	0.40
5:M:896:PHE:HB3	5:M:924:VAL:HB	2.03	0.40
5:M:928:LYS:HG2	5:M:932:GLU:HG3	2.04	0.40
5:M:1053:LEU:CD1	6:N:1466:VAL:HG13	2.51	0.40
6:N:133:ILE:HG23	6:N:455:ARG:C	2.42	0.40
6:N:394:LEU:HD12	6:N:396:VAL:HG13	2.03	0.40
6:N:493:ARG:CG	6:N:1390:LEU:HB2	2.51	0.40
6:N:641:GLN:HB3	6:N:717:GLN:O	2.21	0.40
6:N:783:ARG:H	6:N:783:ARG:HG2	1.59	0.40
6:N:789:LEU:HD13	6:N:934:LEU:CD2	2.51	0.40
6:N:846:PRO:HG2	12:N:9070:HOH:O	2.20	0.40
6:N:970:LYS:HA	6:N:973:GLN:NE2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:1280:VAL:HA	6:N:1318:TYR:HA	2.02	0.40
6:N:1292:VAL:CG1	6:N:1325:LEU:HG	2.51	0.40
6:N:1351:GLU:OE1	6:N:1354:LYS:HG3	2.20	0.40
6:N:1381:VAL:HG23	6:N:1391:GLU:O	2.22	0.40
6:N:1442:ASN:O	6:N:1446:VAL:HG23	2.21	0.40
7:O:13:VAL:HG21	7:O:19:LEU:HB2	2.03	0.40
4:A:47:SER:HB2	4:A:217:ILE:HD13	2.02	0.40
4:A:133:GLU:CG	4:A:134:GLU:H	2.34	0.40
4:B:79:ILE:HA	4:B:82:LEU:HD12	2.04	0.40
5:C:630:ARG:HH21	5:C:707:ARG:N	2.18	0.40
5:C:663:ASN:O	5:C:665:PHE:N	2.54	0.40
5:C:693:GLU:CD	5:C:855:VAL:HB	2.41	0.40
5:C:700:TYR:CD1	5:C:833:LEU:HD22	2.57	0.40
5:C:976:ASP:OD2	5:C:983:ILE:HG12	2.20	0.40
6:D:133:ILE:C	6:D:152:LEU:HB2	2.41	0.40
6:D:179:VAL:HG22	6:D:183:GLU:OE2	2.21	0.40
6:D:204:LEU:HB2	6:D:394:LEU:HG	2.03	0.40
6:D:494:LYS:NZ	12:D:9006:HOH:O	2.49	0.40
6:D:829:VAL:O	6:D:831:GLY:N	2.54	0.40
6:D:950:GLY:O	6:D:953:ASP:N	2.54	0.40
6:D:1192:LEU:HD22	6:D:1345:GLU:CG	2.52	0.40
6:D:1233:GLY:O	6:D:1237:THR:N	2.38	0.40
6:D:1281:VAL:HG23	6:D:1319:VAL:HG11	2.02	0.40
6:D:1451:ALA:O	6:D:1452:ILE:C	2.59	0.40
5:M:191:PHE:HZ	5:M:196:LEU:HB2	1.86	0.40
5:M:229:MET:HA	12:M:7258:HOH:O	2.22	0.40
5:M:510:ALA:HB3	5:M:513:VAL:CG2	2.50	0.40
5:M:631:SER:HB3	5:M:635:THR:O	2.21	0.40
5:M:648:ARG:H	5:M:648:ARG:HG2	1.43	0.40
6:N:603:LEU:HD23	6:N:606:ILE:HD12	2.04	0.40
6:N:754:PHE:CE2	6:N:1476:THR:HG21	2.56	0.40
6:N:792:ILE:HG22	6:N:792:ILE:H	1.69	0.40
6:N:829:VAL:O	6:N:831:GLY:N	2.53	0.40
6:N:960:LYS:HE2	6:N:1041:LEU:HD22	2.02	0.40
6:N:1108:ARG:HG2	12:N:9128:HOH:O	2.20	0.40
6:N:1256:LEU:HA	6:N:1259:VAL:HG23	2.03	0.40
6:N:1397:LYS:HG2	12:N:9363:HOH:O	2.21	0.40
7:O:70:THR:HG22	7:O:71:GLY:N	2.36	0.40
2:Y:9:G:C5'	2:Y:9:G:H8	2.33	0.40
4:A:104:GLU:HA	4:A:136:GLY:O	2.22	0.40
4:B:100:LEU:O	4:B:115:LEU:HG	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:156:HIS:ND1	4:B:157:GLY:N	2.69	0.40
5:C:15:LEU:N	5:C:15:LEU:HD12	2.35	0.40
5:C:129:ILE:HD12	5:C:129:ILE:N	2.37	0.40
5:C:287:GLY:O	5:C:288:ARG:C	2.59	0.40
5:C:437:ARG:CG	5:C:467:ILE:HB	2.44	0.40
5:C:448:ASN:HA	5:C:451:LEU:HD12	2.03	0.40
5:C:470:PRO:CB	5:C:534:VAL:HG21	2.48	0.40
5:C:751:PRO:HB2	6:D:680:GLN:CD	2.42	0.40
5:C:941:VAL:O	5:C:944:LEU:HB2	2.22	0.40
5:C:1016:ILE:HD13	5:C:1016:ILE:N	2.34	0.40
5:C:1118:LYS:HD3	6:D:20:SER:O	2.22	0.40
6:D:37:LEU:HD11	6:D:529:GLN:OE1	2.22	0.40
6:D:87:ARG:NH1	6:D:88:TYR:CE2	2.89	0.40
6:D:202:VAL:HG21	6:D:400:VAL:CB	2.48	0.40
6:D:636:GLN:H	6:D:636:GLN:HG2	1.78	0.40
6:D:897:TRP:HA	6:D:900:ILE:CG1	2.50	0.40
6:D:1084:THR:HA	6:D:1238:MET:CG	2.51	0.40
6:D:1344:VAL:O	6:D:1348:LEU:HD23	2.20	0.40
6:D:1443:THR:O	6:D:1447:LEU:HD13	2.22	0.40
7:E:47:LYS:C	7:E:54:LEU:HD13	2.42	0.40
4:K:27:PRO:O	4:K:28:LEU:HD23	2.21	0.40
5:M:76:PRO:HA	5:M:77:PRO:HD3	1.82	0.40
5:M:118:ILE:HA	5:M:119:PRO:HD3	1.93	0.40
5:M:140:ILE:HG22	5:M:333:ILE:HG13	2.03	0.40
5:M:218:VAL:O	5:M:221:LEU:HG	2.22	0.40
5:M:313:LEU:HD13	5:M:321:GLU:O	2.21	0.40
5:M:352:ALA:CA	5:M:355:VAL:HG12	2.50	0.40
5:M:762:LYS:HE3	5:M:784:ASP:O	2.20	0.40
5:M:1011:GLY:HA3	5:M:1026:GLN:HG2	2.03	0.40
6:N:18:ILE:HD13	6:N:21:TRP:CZ3	2.57	0.40
6:N:557:LEU:HD11	6:N:566:ILE:CG2	2.43	0.40
6:N:615:ARG:HD2	6:N:619:LEU:CD1	2.51	0.40
6:N:806:PHE:O	6:N:806:PHE:CD1	2.74	0.40
6:N:949:ILE:HD11	6:N:1023:MET:HE1	2.02	0.40
6:N:1155:VAL:CG1	6:N:1177:ALA:HB1	2.52	0.40
6:N:1213:ARG:HG3	6:N:1214:PRO:HD2	2.04	0.40
6:N:1280:VAL:CG1	6:N:1281:VAL:N	2.84	0.40
5:C:464:LEU:HD11	12:C:1524:HOH:O	2.20	0.40
5:C:626:ARG:O	5:C:639:GLN:NE2	2.54	0.40
5:C:674:VAL:HG23	5:C:869:VAL:HG13	2.03	0.40
5:C:794:PRO:HG3	12:C:1273:HOH:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:1108:PRO:HG3	12:C:1227:HOH:O	2.20	0.40
6:D:481:MET:CE	6:D:1389:LEU:HD12	2.51	0.40
6:D:593:ASN:HB3	6:D:594:PRO:HD2	2.04	0.40
6:D:658:LEU:HD22	6:D:673:ALA:CB	2.51	0.40
6:D:1236:LEU:HB2	6:D:1359:GLN:HB3	2.02	0.40
6:D:1281:VAL:HG21	6:D:1313:VAL:HG11	2.03	0.40
6:D:1434:TRP:CG	6:D:1435:LEU:N	2.90	0.40
6:D:1484:THR:O	7:E:25:LYS:HD2	2.21	0.40
4:K:11:PHE:CD1	4:K:25:LEU:HD13	2.53	0.40
4:K:94:LEU:HD23	4:K:97:VAL:HG21	2.03	0.40
4:L:103:ALA:HB3	4:L:138:LEU:CD2	2.51	0.40
5:M:42:VAL:HG12	5:M:43:GLY:N	2.37	0.40
5:M:332:ARG:NH1	12:M:7209:HOH:O	2.52	0.40
5:M:362:GLY:HA3	5:M:367:LEU:CD2	2.46	0.40
5:M:433:THR:O	5:M:437:ARG:HD2	2.21	0.40
5:M:491:GLU:O	5:M:491:GLU:HG3	2.21	0.40
5:M:545:ASN:CB	5:M:583:LEU:HD22	2.52	0.40
5:M:585:GLU:N	12:M:7223:HOH:O	2.53	0.40
5:M:671:ASN:N	5:M:671:ASN:HD22	2.19	0.40
5:M:676:ILE:HD13	5:M:885:ILE:CD1	2.51	0.40
5:M:1043:TYR:HE1	6:N:710:ARG:O	2.04	0.40
5:M:1054:THR:CG2	5:M:1059:ASP:HB2	2.35	0.40
6:N:142:LEU:HD23	12:N:9079:HOH:O	2.20	0.40
6:N:179:VAL:HG22	6:N:189:GLN:HE22	1.87	0.40
6:N:614:PHE:N	12:N:9399:HOH:O	2.54	0.40
6:N:767:HIS:CD2	7:O:6:ILE:HG12	2.57	0.40
6:N:1072:ILE:HD13	6:N:1072:ILE:HA	1.90	0.40
6:N:1209:LEU:HD12	6:N:1216:SER:H	1.86	0.40
6:N:1294:VAL:HG13	6:N:1319:VAL:HG21	2.04	0.40
6:N:1312:LEU:O	6:N:1312:LEU:HG	2.21	0.40
6:N:1481:VAL:HG12	7:O:21:VAL:HG21	2.04	0.40
7:O:54:LEU:HD21	7:O:63:TRP:HE1	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	A	227/315 (72%)	208 (92%)	16 (7%)	3 (1%)	12	45
4	B	227/315 (72%)	208 (92%)	15 (7%)	4 (2%)	8	37
4	K	227/315 (72%)	208 (92%)	16 (7%)	3 (1%)	12	45
4	L	227/315 (72%)	206 (91%)	18 (8%)	3 (1%)	12	45
5	C	1117/1119 (100%)	922 (82%)	136 (12%)	59 (5%)	2	11
5	M	1117/1119 (100%)	919 (82%)	137 (12%)	61 (6%)	2	10
6	D	1308/1524 (86%)	1104 (84%)	145 (11%)	59 (4%)	2	14
6	N	1308/1524 (86%)	1099 (84%)	158 (12%)	51 (4%)	3	17
7	E	93/99 (94%)	73 (78%)	13 (14%)	7 (8%)	1	5
7	O	93/99 (94%)	73 (78%)	12 (13%)	8 (9%)	1	3
All	All	5944/6744 (88%)	5020 (84%)	666 (11%)	258 (4%)	2	15

All (258) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	29	GLU
4	B	29	GLU
4	B	187	GLY
5	C	152	PRO
5	C	156	GLY
5	C	170	PRO
5	C	223	ASP
5	C	231	PRO
5	C	244	PRO
5	C	288	ARG
5	C	290	LEU
5	C	369	PRO
5	C	465	GLY
5	C	680	ASP
5	C	698	ASP
5	C	727	PRO
5	C	908	GLY
5	C	1005	MET
5	C	1033	GLY
6	D	40	GLU

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Mol	Chain	Res	Type
6	D	43	GLY
6	D	55	ASP
6	D	96	ALA
6	D	137	PRO
6	D	448	GLU
6	D	610	LYS
6	D	705	ALA
6	D	832	ARG
6	D	844	ALA
6	D	1028	ALA
6	D	1129	THR
6	D	1252	ILE
6	D	1389	LEU
6	D	1441	GLN
7	E	42	PRO
4	K	29	GLU
4	K	187	GLY
4	L	29	GLU
4	L	187	GLY
5	M	59	LYS
5	M	152	PRO
5	M	156	GLY
5	M	170	PRO
5	M	231	PRO
5	M	244	PRO
5	M	288	ARG
5	M	290	LEU
5	M	369	PRO
5	M	465	GLY
5	M	627	ARG
5	M	680	ASP
5	M	698	ASP
5	M	727	PRO
5	M	908	GLY
5	M	1005	MET
5	M	1033	GLY
6	N	40	GLU
6	N	43	GLY
6	N	55	ASP
6	N	137	PRO
6	N	705	ALA
6	N	803	GLY

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Mol	Chain	Res	Type
6	N	832	ARG
6	N	844	ALA
6	N	1028	ALA
6	N	1129	THR
6	N	1252	ILE
6	N	1441	GLN
7	O	42	PRO
4	A	187	GLY
5	C	40	GLU
5	C	59	LYS
5	C	144	PRO
5	C	164	PRO
5	C	251	ASP
5	C	363	SER
5	C	442	GLU
5	C	457	ALA
5	C	529	VAL
5	C	548	PRO
5	C	626	ARG
5	C	627	ARG
5	C	808	ARG
5	C	864	GLY
5	C	1097	LEU
6	D	31	THR
6	D	37	LEU
6	D	82	LYS
6	D	397	LYS
6	D	451	ASP
6	D	594	PRO
6	D	620	GLY
6	D	766	ALA
6	D	803	GLY
6	D	822	ALA
6	D	869	MET
6	D	1208	ASP
6	D	1287	GLU
6	D	1288	GLU
6	D	1315	ASP
6	D	1385	GLY
6	D	1454	GLY
7	E	5	GLY
7	E	53	GLY

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Mol	Chain	Res	Type
7	E	58	PRO
5	M	40	GLU
5	M	144	PRO
5	M	164	PRO
5	M	178	PRO
5	M	223	ASP
5	M	251	ASP
5	M	363	SER
5	M	424	GLY
5	M	457	ALA
5	M	548	PRO
5	M	626	ARG
5	M	808	ARG
5	M	864	GLY
5	M	1106	ASP
6	N	31	THR
6	N	37	LEU
6	N	96	ALA
6	N	594	PRO
6	N	620	GLY
6	N	822	ALA
6	N	1269	LYS
6	N	1287	GLU
6	N	1288	GLU
6	N	1385	GLY
6	N	1389	LEU
6	N	1454	GLY
7	O	5	GLY
7	O	53	GLY
7	O	58	PRO
5	C	74	GLY
5	C	178	PRO
5	C	262	ALA
5	C	462	ASP
5	C	517	ARG
5	C	1106	ASP
6	D	98	PRO
6	D	120	ALA
6	D	136	ASP
6	D	140	ALA
6	D	507	ASN
6	D	1125	PRO

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Mol	Chain	Res	Type
6	D	1220	ALA
6	D	1269	LYS
5	M	262	ALA
5	M	292	ARG
5	M	390	GLN
5	M	462	ASP
5	M	517	ARG
5	M	1004	LYS
5	M	1059	ASP
6	N	98	PRO
6	N	120	ALA
6	N	507	ASN
6	N	737	ASN
6	N	869	MET
6	N	1125	PRO
6	N	1208	ASP
6	N	1342	GLU
7	O	43	GLU
5	C	180	GLY
5	C	188	LYS
5	C	292	ARG
5	C	424	GLY
5	C	1059	ASP
6	D	601	ARG
6	D	737	ASN
6	D	1004	THR
6	D	1111	ASP
7	E	32	ARG
5	M	74	GLY
5	M	180	GLY
5	M	188	LYS
5	M	272	ALA
5	M	282	GLY
5	M	366	SER
5	M	447	ALA
5	M	529	VAL
5	M	783	ARG
5	M	1024	LYS
6	N	83	SER
6	N	696	HIS
6	N	830	ALA
6	N	1446	VAL

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Mol	Chain	Res	Type
4	B	133	GLU
5	C	44	ILE
5	C	80	GLN
5	C	268	ASP
5	C	272	ALA
5	C	740	GLU
5	C	1024	LYS
6	D	500	ARG
6	D	808	THR
6	D	830	ALA
6	D	1066	THR
6	D	1349	VAL
5	M	10	ARG
5	M	53	PRO
5	M	277	ALA
5	M	767	PRO
5	M	1097	LEU
6	N	136	ASP
6	N	448	GLU
6	N	451	ASP
6	N	500	ARG
6	N	808	THR
6	N	1004	THR
6	N	1306	PRO
6	N	1349	VAL
7	O	32	ARG
7	O	37	ASN
7	O	81	PRO
5	C	11	GLU
5	C	282	GLY
5	C	767	PRO
6	D	525	ARG
6	D	530	VAL
6	D	1027	GLY
6	D	1446	VAL
7	E	43	GLU
5	M	268	ASP
6	N	530	VAL
6	N	601	ARG
5	C	53	PRO
5	C	561	GLY
6	D	595	GLY

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Mol	Chain	Res	Type
6	D	1306	PRO
7	E	81	PRO
4	L	125	PRO
6	N	595	GLY
5	C	129	ILE
5	C	415	PRO
5	C	1114	GLY
5	M	35	PRO
5	M	44	ILE
5	M	561	GLY
5	M	1114	GLY
6	N	521	PRO
6	N	1027	GLY
4	A	125	PRO
5	C	779	GLY
5	C	844	GLY
5	M	415	PRO
5	M	844	GLY
4	B	125	PRO
5	C	16	PRO
6	D	1050	GLY
6	D	1155	VAL
4	K	125	PRO
5	M	779	GLY
6	N	1050	GLY
6	D	521	PRO
6	D	1452	ILE
6	N	1155	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	A	202/273 (74%)	159 (79%)	43 (21%)	1 5
4	B	202/273 (74%)	162 (80%)	40 (20%)	1 7
4	K	202/273 (74%)	155 (77%)	47 (23%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	L	202/273 (74%)	153 (76%)	49 (24%)	0 3
5	C	941/941 (100%)	723 (77%)	218 (23%)	1 4
5	M	941/941 (100%)	714 (76%)	227 (24%)	0 3
6	D	1111/1279 (87%)	875 (79%)	236 (21%)	1 5
6	N	1111/1279 (87%)	863 (78%)	248 (22%)	1 4
7	E	84/88 (96%)	66 (79%)	18 (21%)	1 5
7	O	84/88 (96%)	67 (80%)	17 (20%)	1 6
All	All	5080/5708 (89%)	3937 (78%)	1143 (22%)	1 4

All (1143) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	2	LEU
4	A	3	ASP
4	A	4	SER
4	A	5	LYS
4	A	9	PRO
4	A	12	THR
4	A	18	ARG
4	A	20	TYR
4	A	26	GLU
4	A	29	GLU
4	A	30	ARG
4	A	35	THR
4	A	41	ARG
4	A	47	SER
4	A	60	ASP
4	A	62	LEU
4	A	66	SER
4	A	67	THR
4	A	73	GLU
4	A	84	GLU
4	A	87	VAL
4	A	89	PHE
4	A	92	PRO
4	A	97	VAL
4	A	115	LEU
4	A	126	ASP
4	A	127	LEU
4	A	138	LEU

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Mol	Chain	Res	Type
4	A	143	ARG
4	A	145	ASP
4	A	155	LYS
4	A	156	HIS
4	A	161	ARG
4	A	175	ARG
4	A	180	GLN
4	A	183	ASP
4	A	184	THR
4	A	185	ARG
4	A	190	THR
4	A	193	ASP
4	A	197	LEU
4	A	208	LEU
4	A	227	ASN
4	B	4	SER
4	B	7	LYS
4	B	9	PRO
4	B	11	PHE
4	B	25	LEU
4	B	26	GLU
4	B	30	ARG
4	B	35	THR
4	B	62	LEU
4	B	64	GLU
4	B	73	GLU
4	B	81	ASN
4	B	89	PHE
4	B	95	GLN
4	B	99	LEU
4	B	104	GLU
4	B	107	LYS
4	B	117	VAL
4	B	119	ASP
4	B	123	MET
4	B	128	HIS
4	B	138	LEU
4	B	143	ARG
4	B	145	ASP
4	B	152	PRO
4	B	154	GLU
4	B	159	LYS

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Mol	Chain	Res	Type
4	B	162	ILE
4	B	163	ASN
4	B	167	VAL
4	B	172	SER
4	B	176	ARG
4	B	177	VAL
4	B	186	LEU
4	B	193	ASP
4	B	194	LYS
4	B	197	LEU
4	B	201	THR
4	B	209	GLU
4	B	213	GLN
5	C	8	ARG
5	C	9	ILE
5	C	18	LEU
5	C	19	THR
5	C	21	ILE
5	C	22	GLN
5	C	26	TYR
5	C	27	ARG
5	C	30	LEU
5	C	31	GLN
5	C	34	VAL
5	C	35	PRO
5	C	48	PHE
5	C	51	THR
5	C	56	GLU
5	C	65	VAL
5	C	75	GLU
5	C	88	LEU
5	C	95	TYR
5	C	98	LEU
5	C	103	LYS
5	C	104	ASP
5	C	107	LEU
5	C	110	GLU
5	C	114	PHE
5	C	115	LEU
5	C	120	LEU
5	C	133	ASP
5	C	148	PHE

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Mol	Chain	Res	Type
5	C	149	THR
5	C	150	PRO
5	C	152	PRO
5	C	158	TYR
5	C	161	SER
5	C	163	ILE
5	C	170	PRO
5	C	177	GLU
5	C	178	PRO
5	C	183	SER
5	C	184	MET
5	C	186	VAL
5	C	189	ARG
5	C	195	LEU
5	C	196	LEU
5	C	198	ARG
5	C	200	LEU
5	C	203	ASP
5	C	205	GLU
5	C	216	GLU
5	C	217	LEU
5	C	221	LEU
5	C	230	ARG
5	C	233	GLU
5	C	237	ARG
5	C	239	PHE
5	C	243	ARG
5	C	251	ASP
5	C	260	LEU
5	C	261	ILE
5	C	264	PRO
5	C	267	TYR
5	C	268	ASP
5	C	271	GLU
5	C	274	ARG
5	C	275	TYR
5	C	279	GLU
5	C	280	LYS
5	C	285	LEU
5	C	289	THR
5	C	290	LEU
5	C	293	PHE

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Mol	Chain	Res	Type
5	C	297	GLU
5	C	303	PHE
5	C	304	LEU
5	C	309	TYR
5	C	322	VAL
5	C	324	ASP
5	C	339	LEU
5	C	358	ARG
5	C	359	MET
5	C	360	LEU
5	C	365	ASP
5	C	367	LEU
5	C	379	GLU
5	C	383	ARG
5	C	388	ARG
5	C	393	GLN
5	C	394	PHE
5	C	396	ASP
5	C	399	ASN
5	C	400	PRO
5	C	415	PRO
5	C	432	ARG
5	C	433	THR
5	C	442	GLU
5	C	443	THR
5	C	445	GLU
5	C	452	ILE
5	C	453	THR
5	C	463	GLU
5	C	467	ILE
5	C	469	THR
5	C	472	ARG
5	C	483	VAL
5	C	484	VAL
5	C	500	ASN
5	C	502	PRO
5	C	503	LEU
5	C	507	ARG
5	C	511	GLU
5	C	513	VAL
5	C	517	ARG
5	C	527	GLU

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Mol	Chain	Res	Type
5	C	548	PRO
5	C	565	GLN
5	C	567	GLN
5	C	585	GLU
5	C	586	ARG
5	C	595	LEU
5	C	599	GLU
5	C	602	GLU
5	C	607	ASP
5	C	609	ASN
5	C	617	ASP
5	C	620	LEU
5	C	625	LEU
5	C	632	ASN
5	C	637	LEU
5	C	638	ASP
5	C	639	GLN
5	C	644	VAL
5	C	645	VAL
5	C	648	ARG
5	C	649	VAL
5	C	650	ARG
5	C	654	LEU
5	C	668	LEU
5	C	670	GLN
5	C	672	VAL
5	C	673	LEU
5	C	676	ILE
5	C	679	PHE
5	C	685	GLU
5	C	690	ILE
5	C	693	GLU
5	C	698	ASP
5	C	699	PHE
5	C	701	THR
5	C	703	ILE
5	C	704	HIS
5	C	709	GLU
5	C	713	ARG
5	C	722	ILE
5	C	725	ASP
5	C	727	PRO

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Mol	Chain	Res	Type
5	C	729	LEU
5	C	744	ARG
5	C	774	LEU
5	C	780	GLU
5	C	784	ASP
5	C	785	VAL
5	C	799	ILE
5	C	805	ARG
5	C	807	ARG
5	C	813	VAL
5	C	814	GLU
5	C	823	VAL
5	C	834	GLN
5	C	839	LEU
5	C	841	ASN
5	C	845	ASN
5	C	852	ILE
5	C	853	LEU
5	C	858	MET
5	C	859	PRO
5	C	860	HIS
5	C	862	PRO
5	C	881	ASN
5	C	884	GLN
5	C	904	PRO
5	C	907	ASP
5	C	913	GLU
5	C	920	GLN
5	C	923	GLU
5	C	938	LYS
5	C	950	LEU
5	C	952	LEU
5	C	953	VAL
5	C	958	THR
5	C	962	GLN
5	C	963	LEU
5	C	964	LYS
5	C	965	GLU
5	C	978	ARG
5	C	981	GLU
5	C	995	MET
5	C	999	HIS

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Mol	Chain	Res	Type
5	C	1000	MET
5	C	1003	ASP
5	C	1005	MET
5	C	1006	HIS
5	C	1008	ARG
5	C	1010	THR
5	C	1016	ILE
5	C	1017	THR
5	C	1018	GLN
5	C	1035	MET
5	C	1052	MET
5	C	1063	ARG
5	C	1074	GLU
5	C	1084	SER
5	C	1088	LEU
5	C	1097	LEU
5	C	1098	ASP
5	C	1101	THR
5	C	1108	PRO
5	C	1113	GLU
5	C	1117	SER
6	D	3	LYS
6	D	4	GLU
6	D	5	VAL
6	D	12	LEU
6	D	15	PRO
6	D	16	GLU
6	D	21	TRP
6	D	25	GLU
6	D	31	THR
6	D	34	TYR
6	D	35	ARG
6	D	36	THR
6	D	41	ARG
6	D	42	ASP
6	D	48	ARG
6	D	56	TYR
6	D	66	GLN
6	D	68	PHE
6	D	69	GLU
6	D	76	CYS
6	D	80	VAL

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Mol	Chain	Res	Type
6	D	82	LYS
6	D	85	VAL
6	D	87	ARG
6	D	90	MET
6	D	101	HIS
6	D	111	LYS
6	D	112	ILE
6	D	116	LEU
6	D	118	LEU
6	D	123	LEU
6	D	125	GLN
6	D	127	LEU
6	D	141	ILE
6	D	142	LEU
6	D	143	ASN
6	D	145	VAL
6	D	152	LEU
6	D	153	LEU
6	D	157	GLU
6	D	161	LEU
6	D	162	ARG
6	D	163	TYR
6	D	181	ASP
6	D	197	SER
6	D	199	LEU
6	D	200	ASP
6	D	204	LEU
6	D	207	PHE
6	D	395	VAL
6	D	404	GLU
6	D	407	VAL
6	D	419	ASP
6	D	423	ASP
6	D	434	ARG
6	D	439	LEU
6	D	445	ARG
6	D	451	ASP
6	D	453	ASP
6	D	456	MET
6	D	481	MET
6	D	493	ARG
6	D	505	SER

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Mol	Chain	Res	Type
6	D	513	ILE
6	D	517	VAL
6	D	521	PRO
6	D	525	ARG
6	D	529	GLN
6	D	531	ASP
6	D	549	ASN
6	D	552	ASN
6	D	553	ARG
6	D	565	ILE
6	D	566	ILE
6	D	569	ASN
6	D	571	LYS
6	D	573	MET
6	D	574	LEU
6	D	576	GLU
6	D	581	LEU
6	D	590	PRO
6	D	594	PRO
6	D	597	ASP
6	D	598	ARG
6	D	605	ASP
6	D	607	LEU
6	D	608	SER
6	D	611	GLN
6	D	614	PHE
6	D	615	ARG
6	D	618	LEU
6	D	619	LEU
6	D	624	ASP
6	D	628	ARG
6	D	636	GLN
6	D	639	LEU
6	D	641	GLN
6	D	647	ARG
6	D	659	LYS
6	D	666	ILE
6	D	670	VAL
6	D	676	MET
6	D	678	GLU
6	D	682	ASP
6	D	703	ASN

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Mol	Chain	Res	Type
6	D	707	THR
6	D	709	HIS
6	D	711	LEU
6	D	724	GLN
6	D	725	SER
6	D	727	GLN
6	D	731	LEU
6	D	734	GLU
6	D	739	ASP
6	D	743	ASP
6	D	752	SER
6	D	754	PHE
6	D	760	ARG
6	D	767	HIS
6	D	784	ASP
6	D	792	ILE
6	D	804	LEU
6	D	813	LEU
6	D	824	ASN
6	D	833	GLU
6	D	835	SER
6	D	851	LEU
6	D	860	LEU
6	D	863	VAL
6	D	872	ARG
6	D	879	ARG
6	D	880	ILE
6	D	910	SER
6	D	914	LEU
6	D	920	LEU
6	D	921	ARG
6	D	925	GLU
6	D	930	LEU
6	D	932	ASP
6	D	940	THR
6	D	947	ILE
6	D	951	ILE
6	D	952	ASP
6	D	959	GLU
6	D	960	LYS
6	D	965	GLU
6	D	966	GLU

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Mol	Chain	Res	Type
6	D	971	LEU
6	D	972	LEU
6	D	975	GLU
6	D	983	LEU
6	D	985	ASP
6	D	988	ARG
6	D	990	ASP
6	D	991	GLN
6	D	995	LEU
6	D	1010	ASN
6	D	1012	GLU
6	D	1019	PRO
6	D	1025	GLN
6	D	1032	PRO
6	D	1042	ARG
6	D	1062	ARG
6	D	1068	LEU
6	D	1070	TYR
6	D	1086	LEU
6	D	1087	ARG
6	D	1088	THR
6	D	1090	ASP
6	D	1100	ASP
6	D	1109	GLU
6	D	1111	ASP
6	D	1114	THR
6	D	1124	GLN
6	D	1127	GLU
6	D	1134	LEU
6	D	1151	ARG
6	D	1155	VAL
6	D	1156	LEU
6	D	1159	ARG
6	D	1164	ARG
6	D	1174	LEU
6	D	1176	LYS
6	D	1182	GLU
6	D	1190	SER
6	D	1195	GLN
6	D	1207	TYR
6	D	1210	SER
6	D	1217	ILE

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Mol	Chain	Res	Type
6	D	1228	SER
6	D	1231	GLU
6	D	1237	THR
6	D	1238	MET
6	D	1239	ARG
6	D	1242	HIS
6	D	1251	ASP
6	D	1252	ILE
6	D	1253	THR
6	D	1264	GLU
6	D	1266	ARG
6	D	1275	SER
6	D	1278	ASP
6	D	1282	ARG
6	D	1283	ILE
6	D	1284	GLU
6	D	1292	VAL
6	D	1294	VAL
6	D	1299	PHE
6	D	1306	PRO
6	D	1311	LEU
6	D	1312	LEU
6	D	1315	ASP
6	D	1319	VAL
6	D	1323	GLN
6	D	1325	LEU
6	D	1335	LEU
6	D	1345	GLU
6	D	1346	ARG
6	D	1353	GLN
6	D	1359	GLN
6	D	1388	ARG
6	D	1389	LEU
6	D	1391	GLU
6	D	1393	GLN
6	D	1399	ASP
6	D	1401	GLU
6	D	1440	PHE
6	D	1441	GLN
6	D	1448	THR
6	D	1449	GLU
6	D	1462	LEU

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Mol	Chain	Res	Type
6	D	1465	ASN
6	D	1476	THR
6	D	1485	GLN
6	D	1488	ASP
6	D	1496	GLU
7	E	29	GLN
7	E	30	LEU
7	E	40	LEU
7	E	41	GLU
7	E	42	PRO
7	E	46	PRO
7	E	51	LEU
7	E	57	ASP
7	E	58	PRO
7	E	59	ASN
7	E	68	LEU
7	E	69	LEU
7	E	70	THR
7	E	74	VAL
7	E	81	PRO
7	E	83	ASP
7	E	85	LEU
7	E	94	PRO
4	K	1	MET
4	K	4	SER
4	K	9	PRO
4	K	19	GLU
4	K	26	GLU
4	K	30	ARG
4	K	41	ARG
4	K	44	LEU
4	K	47	SER
4	K	62	LEU
4	K	63	HIS
4	K	65	PHE
4	K	74	ASP
4	K	77	GLU
4	K	84	GLU
4	K	88	ARG
4	K	89	PHE
4	K	92	PRO
4	K	96	THR

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Mol	Chain	Res	Type
4	K	101	LEU
4	K	104	GLU
4	K	113	ASP
4	K	115	LEU
4	K	119	ASP
4	K	127	LEU
4	K	143	ARG
4	K	144	VAL
4	K	146	ARG
4	K	161	ARG
4	K	163	ASN
4	K	165	ILE
4	K	167	VAL
4	K	180	GLN
4	K	188	GLN
4	K	189	ARG
4	K	192	LEU
4	K	197	LEU
4	K	198	ARG
4	K	200	TRP
4	K	201	THR
4	K	206	THR
4	K	208	LEU
4	K	212	ASN
4	K	215	VAL
4	K	216	GLU
4	K	219	ARG
4	K	227	ASN
4	L	1	MET
4	L	5	LYS
4	L	7	LYS
4	L	12	THR
4	L	16	GLN
4	L	24	VAL
4	L	25	LEU
4	L	26	GLU
4	L	29	GLU
4	L	41	ARG
4	L	45	LEU
4	L	59	GLU
4	L	62	LEU
4	L	66	SER

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Mol	Chain	Res	Type
4	L	72	LYS
4	L	81	ASN
4	L	89	PHE
4	L	92	PRO
4	L	95	GLN
4	L	96	THR
4	L	107	LYS
4	L	112	ARG
4	L	115	LEU
4	L	119	ASP
4	L	122	ILE
4	L	126	ASP
4	L	128	HIS
4	L	133	GLU
4	L	134	GLU
4	L	137	ARG
4	L	138	LEU
4	L	140	MET
4	L	159	LYS
4	L	162	ILE
4	L	163	ASN
4	L	175	ARG
4	L	177	VAL
4	L	181	VAL
4	L	184	THR
4	L	188	GLN
4	L	191	ASP
4	L	196	THR
4	L	197	LEU
4	L	202	ASP
4	L	206	THR
4	L	209	GLU
4	L	213	GLN
4	L	223	THR
4	L	226	SER
5	M	5	ARG
5	M	9	ILE
5	M	10	ARG
5	M	13	ILE
5	M	20	GLU
5	M	22	GLN
5	M	26	TYR

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Mol	Chain	Res	Type
5	M	31	GLN
5	M	41	ASN
5	M	48	PHE
5	M	49	ARG
5	M	51	THR
5	M	59	LYS
5	M	65	VAL
5	M	69	LEU
5	M	89	THR
5	M	91	GLN
5	M	94	LEU
5	M	95	TYR
5	M	98	LEU
5	M	100	LEU
5	M	104	ASP
5	M	105	THR
5	M	108	ILE
5	M	110	GLU
5	M	114	PHE
5	M	115	LEU
5	M	117	HIS
5	M	124	ASP
5	M	133	ASP
5	M	141	HIS
5	M	144	PRO
5	M	148	PHE
5	M	152	PRO
5	M	158	TYR
5	M	163	ILE
5	M	168	ARG
5	M	171	TRP
5	M	173	ASP
5	M	176	VAL
5	M	178	PRO
5	M	187	ASN
5	M	189	ARG
5	M	190	LYS
5	M	191	PHE
5	M	195	LEU
5	M	196	LEU
5	M	198	ARG
5	M	205	GLU

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Mol	Chain	Res	Type
5	M	207	LEU
5	M	211	LEU
5	M	218	VAL
5	M	221	LEU
5	M	222	MET
5	M	223	ASP
5	M	224	GLU
5	M	225	SER
5	M	230	ARG
5	M	233	GLU
5	M	235	LEU
5	M	237	ARG
5	M	242	LEU
5	M	243	ARG
5	M	251	ASP
5	M	252	LYS
5	M	263	ASP
5	M	267	TYR
5	M	271	GLU
5	M	275	TYR
5	M	278	GLU
5	M	279	GLU
5	M	281	LEU
5	M	285	LEU
5	M	290	LEU
5	M	293	PHE
5	M	303	PHE
5	M	308	ARG
5	M	309	TYR
5	M	321	GLU
5	M	327	HIS
5	M	331	ARG
5	M	335	THR
5	M	342	ASP
5	M	343	GLN
5	M	359	MET
5	M	365	ASP
5	M	367	LEU
5	M	374	ASN
5	M	376	ARG
5	M	379	GLU
5	M	383	ARG

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Mol	Chain	Res	Type
5	M	388	ARG
5	M	391	LEU
5	M	392	SER
5	M	393	GLN
5	M	394	PHE
5	M	400	PRO
5	M	407	LYS
5	M	409	ARG
5	M	413	LEU
5	M	425	PHE
5	M	426	ASP
5	M	428	ARG
5	M	429	ASP
5	M	432	ARG
5	M	433	THR
5	M	438	ILE
5	M	443	THR
5	M	452	ILE
5	M	453	THR
5	M	461	VAL
5	M	469	THR
5	M	480	THR
5	M	482	GLU
5	M	491	GLU
5	M	500	ASN
5	M	503	LEU
5	M	504	GLU
5	M	517	ARG
5	M	518	LYS
5	M	524	VAL
5	M	525	SER
5	M	532	MET
5	M	533	ASP
5	M	535	SER
5	M	537	LYS
5	M	548	PRO
5	M	560	MET
5	M	562	SER
5	M	564	MET
5	M	572	ILE
5	M	584	GLU
5	M	586	ARG

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Mol	Chain	Res	Type
5	M	607	ASP
5	M	623	TYR
5	M	627	ARG
5	M	637	LEU
5	M	640	ARG
5	M	642	ARG
5	M	644	VAL
5	M	645	VAL
5	M	648	ARG
5	M	654	LEU
5	M	655	LEU
5	M	666	LEU
5	M	668	LEU
5	M	672	VAL
5	M	673	LEU
5	M	676	ILE
5	M	679	PHE
5	M	680	ASP
5	M	689	VAL
5	M	691	SER
5	M	693	GLU
5	M	699	PHE
5	M	701	THR
5	M	703	ILE
5	M	705	ILE
5	M	715	THR
5	M	722	ILE
5	M	724	ARG
5	M	725	ASP
5	M	727	PRO
5	M	737	LEU
5	M	739	GLU
5	M	740	GLU
5	M	744	ARG
5	M	750	LYS
5	M	753	ASP
5	M	766	GLU
5	M	770	GLU
5	M	773	LEU
5	M	780	GLU
5	M	783	ARG
5	M	785	VAL

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Mol	Chain	Res	Type
5	M	799	ILE
5	M	806	LEU
5	M	807	ARG
5	M	814	GLU
5	M	821	GLU
5	M	838	LYS
5	M	839	LEU
5	M	841	ASN
5	M	853	LEU
5	M	857	ASP
5	M	858	MET
5	M	862	PRO
5	M	865	THR
5	M	868	ASP
5	M	870	ILE
5	M	881	ASN
5	M	886	LEU
5	M	888	THR
5	M	899	GLN
5	M	904	PRO
5	M	907	ASP
5	M	926	PHE
5	M	937	ASP
5	M	938	LYS
5	M	950	LEU
5	M	953	VAL
5	M	959	PRO
5	M	960	GLU
5	M	963	LEU
5	M	969	GLN
5	M	976	ASP
5	M	981	GLU
5	M	999	HIS
5	M	1002	GLU
5	M	1003	ASP
5	M	1008	ARG
5	M	1009	SER
5	M	1015	LEU
5	M	1017	THR
5	M	1026	GLN
5	M	1035	MET
5	M	1051	GLU

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Mol	Chain	Res	Type
5	M	1056	LYS
5	M	1057	SER
5	M	1060	ILE
5	M	1075	ASP
5	M	1085	PHE
5	M	1092	LEU
5	M	1095	LEU
5	M	1099	VAL
5	M	1115	LEU
5	M	1118	LYS
6	N	3	LYS
6	N	9	ARG
6	N	10	ILE
6	N	14	SER
6	N	19	ARG
6	N	21	TRP
6	N	25	GLU
6	N	34	TYR
6	N	35	ARG
6	N	41	ARG
6	N	44	LEU
6	N	47	GLU
6	N	55	ASP
6	N	56	TYR
6	N	62	LYS
6	N	71	LYS
6	N	73	CYS
6	N	76	CYS
6	N	79	GLU
6	N	80	VAL
6	N	85	VAL
6	N	86	ARG
6	N	95	LEU
6	N	97	THR
6	N	103	TRP
6	N	106	LYS
6	N	111	LYS
6	N	112	ILE
6	N	116	LEU
6	N	117	ASP
6	N	121	THR
6	N	131	LYS

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Mol	Chain	Res	Type
6	N	132	TYR
6	N	135	LEU
6	N	142	LEU
6	N	145	VAL
6	N	149	LYS
6	N	151	GLN
6	N	152	LEU
6	N	153	LEU
6	N	160	GLU
6	N	161	LEU
6	N	163	TYR
6	N	166	GLN
6	N	167	GLU
6	N	181	ASP
6	N	186	VAL
6	N	200	ASP
6	N	394	LEU
6	N	399	ARG
6	N	413	ASP
6	N	419	ASP
6	N	423	ASP
6	N	430	ASP
6	N	453	ASP
6	N	455	ARG
6	N	459	GLU
6	N	465	LEU
6	N	470	LEU
6	N	481	MET
6	N	483	HIS
6	N	488	ARG
6	N	489	ARG
6	N	491	LYS
6	N	493	ARG
6	N	498	VAL
6	N	503	LEU
6	N	520	LEU
6	N	524	LEU
6	N	525	ARG
6	N	529	GLN
6	N	537	THR
6	N	539	ASP
6	N	542	ASP

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Mol	Chain	Res	Type
6	N	547	LEU
6	N	549	ASN
6	N	574	LEU
6	N	575	GLN
6	N	576	GLU
6	N	581	LEU
6	N	586	ARG
6	N	593	ASN
6	N	594	PRO
6	N	596	SER
6	N	597	ASP
6	N	600	LEU
6	N	614	PHE
6	N	615	ARG
6	N	616	GLN
6	N	618	LEU
6	N	619	LEU
6	N	639	LEU
6	N	641	GLN
6	N	644	LEU
6	N	650	LEU
6	N	652	LEU
6	N	660	LYS
6	N	666	ILE
6	N	671	LYS
6	N	676	MET
6	N	678	GLU
6	N	698	LYS
6	N	703	ASN
6	N	709	HIS
6	N	710	ARG
6	N	728	LEU
6	N	732	VAL
6	N	736	PHE
6	N	737	ASN
6	N	739	ASP
6	N	749	VAL
6	N	754	PHE
6	N	760	ARG
6	N	762	GLN
6	N	765	SER
6	N	780	LYS

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Mol	Chain	Res	Type
6	N	782	SER
6	N	786	ILE
6	N	792	ILE
6	N	796	ARG
6	N	805	GLU
6	N	808	THR
6	N	810	GLU
6	N	811	GLU
6	N	820	GLU
6	N	823	LEU
6	N	824	ASN
6	N	826	PRO
6	N	828	LYS
6	N	832	ARG
6	N	833	GLU
6	N	834	THR
6	N	846	PRO
6	N	847	ASP
6	N	863	VAL
6	N	867	ARG
6	N	897	TRP
6	N	899	LEU
6	N	903	ASP
6	N	913	ASP
6	N	919	PHE
6	N	921	ARG
6	N	929	ARG
6	N	935	LYS
6	N	951	ILE
6	N	952	ASP
6	N	964	LEU
6	N	972	LEU
6	N	983	LEU
6	N	986	ARG
6	N	990	ASP
6	N	999	THR
6	N	1012	GLU
6	N	1031	ASN
6	N	1033	GLN
6	N	1038	LEU
6	N	1041	LEU
6	N	1052	THR

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Mol	Chain	Res	Type
6	N	1054	GLU
6	N	1062	ARG
6	N	1068	LEU
6	N	1070	TYR
6	N	1071	PHE
6	N	1086	LEU
6	N	1087	ARG
6	N	1093	TYR
6	N	1098	LEU
6	N	1101	VAL
6	N	1108	ARG
6	N	1109	GLU
6	N	1112	CYS
6	N	1116	ASN
6	N	1122	LEU
6	N	1125	PRO
6	N	1127	GLU
6	N	1130	ARG
6	N	1131	SER
6	N	1151	ARG
6	N	1156	LEU
6	N	1160	LEU
6	N	1161	GLU
6	N	1166	LEU
6	N	1167	SER
6	N	1170	ASP
6	N	1191	PRO
6	N	1195	GLN
6	N	1207	TYR
6	N	1210	SER
6	N	1211	MET
6	N	1213	ARG
6	N	1214	PRO
6	N	1224	VAL
6	N	1228	SER
6	N	1231	GLU
6	N	1234	THR
6	N	1235	GLN
6	N	1236	LEU
6	N	1237	THR
6	N	1238	MET
6	N	1241	PHE

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Mol	Chain	Res	Type
6	N	1257	PRO
6	N	1264	GLU
6	N	1266	ARG
6	N	1275	SER
6	N	1282	ARG
6	N	1284	GLU
6	N	1285	GLU
6	N	1286	THR
6	N	1294	VAL
6	N	1296	SER
6	N	1297	GLU
6	N	1299	PHE
6	N	1307	LYS
6	N	1310	ARG
6	N	1311	LEU
6	N	1312	LEU
6	N	1315	ASP
6	N	1317	ASP
6	N	1320	GLU
6	N	1323	GLN
6	N	1327	ARG
6	N	1337	GLU
6	N	1342	GLU
6	N	1344	VAL
6	N	1346	ARG
6	N	1350	GLU
6	N	1359	GLN
6	N	1369	GLU
6	N	1383	ASP
6	N	1387	SER
6	N	1388	ARG
6	N	1389	LEU
6	N	1390	LEU
6	N	1407	LEU
6	N	1429	LEU
6	N	1431	THR
6	N	1441	GLN
6	N	1462	LEU
6	N	1464	GLU
6	N	1465	ASN
6	N	1468	LEU
6	N	1483	PHE

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Mol	Chain	Res	Type
6	N	1488	ASP
6	N	1490	LYS
6	N	1491	THR
6	N	1496	GLU
6	N	1499	ARG
6	N	1501	GLU
7	O	14	ASP
7	O	20	THR
7	O	28	GLN
7	O	30	LEU
7	O	40	LEU
7	O	42	PRO
7	O	46	PRO
7	O	51	LEU
7	O	57	ASP
7	O	58	PRO
7	O	59	ASN
7	O	74	VAL
7	O	78	ASN
7	O	81	PRO
7	O	83	ASP
7	O	85	LEU
7	O	94	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (151) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	81	ASN
4	A	124	ASN
4	A	128	HIS
4	A	139	ASN
4	A	156	HIS
4	A	163	ASN
4	A	180	GLN
4	A	188	GLN
4	A	227	ASN
4	A	229	GLN
4	B	16	GLN
4	B	63	HIS
4	B	81	ASN
4	B	95	GLN
4	B	212	ASN

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Mol	Chain	Res	Type
4	B	213	GLN
4	B	227	ASN
5	C	22	GLN
5	C	31	GLN
5	C	91	GLN
5	C	102	HIS
5	C	141	HIS
5	C	320	HIS
5	C	390	GLN
5	C	393	GLN
5	C	431	HIS
5	C	538	GLN
5	C	545	ASN
5	C	552	HIS
5	C	609	ASN
5	C	633	GLN
5	C	670	GLN
5	C	671	ASN
5	C	834	GLN
5	C	841	ASN
5	C	845	ASN
5	C	881	ASN
5	C	889	HIS
5	C	969	GLN
5	C	1093	GLN
5	C	1100	GLN
5	C	1107	ASN
6	D	125	GLN
6	D	143	ASN
6	D	151	GLN
6	D	189	GLN
6	D	507	ASN
6	D	541	ASN
6	D	549	ASN
6	D	569	ASN
6	D	611	GLN
6	D	703	ASN
6	D	714	GLN
6	D	724	GLN
6	D	737	ASN
6	D	762	GLN
6	D	824	ASN

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Mol	Chain	Res	Type
6	D	917	GLN
6	D	991	GLN
6	D	994	GLN
6	D	1025	GLN
6	D	1116	ASN
6	D	1195	GLN
6	D	1202	GLN
6	D	1235	GLN
6	D	1333	HIS
6	D	1353	GLN
6	D	1359	GLN
6	D	1441	GLN
6	D	1485	GLN
7	E	29	GLN
7	E	59	ASN
4	K	128	HIS
4	K	180	GLN
4	K	212	ASN
4	K	227	ASN
4	L	16	GLN
4	L	38	ASN
4	L	95	GLN
4	L	139	ASN
4	L	188	GLN
4	L	212	ASN
4	L	213	GLN
5	M	31	GLN
5	M	91	GLN
5	M	117	HIS
5	M	130	ASN
5	M	179	ASN
5	M	204	GLN
5	M	343	GLN
5	M	399	ASN
5	M	431	HIS
5	M	538	GLN
5	M	545	ASN
5	M	552	HIS
5	M	565	GLN
5	M	567	GLN
5	M	609	ASN
5	M	639	GLN

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Mol	Chain	Res	Type
5	M	671	ASN
5	M	704	HIS
5	M	834	GLN
5	M	841	ASN
5	M	881	ASN
5	M	889	HIS
5	M	969	GLN
5	M	1026	GLN
5	M	1050	GLN
5	M	1093	GLN
5	M	1100	GLN
5	M	1107	ASN
6	N	33	ASN
6	N	125	GLN
6	N	143	ASN
6	N	151	GLN
6	N	166	GLN
6	N	507	ASN
6	N	529	GLN
6	N	549	ASN
6	N	616	GLN
6	N	703	ASN
6	N	724	GLN
6	N	737	ASN
6	N	744	GLN
6	N	756	GLN
6	N	767	HIS
6	N	768	ASN
6	N	816	HIS
6	N	824	ASN
6	N	855	HIS
6	N	861	GLN
6	N	917	GLN
6	N	973	GLN
6	N	994	GLN
6	N	1005	GLN
6	N	1033	GLN
6	N	1046	GLN
6	N	1103	HIS
6	N	1116	ASN
6	N	1124	GLN
6	N	1323	GLN

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Mol	Chain	Res	Type
6	N	1334	GLN
6	N	1353	GLN
6	N	1441	GLN
7	O	28	GLN
7	O	29	GLN
7	O	33	HIS
7	O	37	ASN
7	O	59	ASN
7	O	78	ASN
7	O	86	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	H	16/16 (100%)	11 (68%)	6 (37%)
2	Y	16/16 (100%)	11 (68%)	7 (43%)
All	All	32/32 (100%)	22 (68%)	13 (40%)

All (22) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	H	2	A
2	H	3	G
2	H	6	U
2	H	7	G
2	H	8	C
2	H	9	G
2	H	10	G
2	H	11	C
2	H	12	G
2	H	13	C
2	H	15	C
2	Y	2	A
2	Y	3	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G
2	Y	10	G
2	Y	11	C
2	Y	12	G

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Mol	Chain	Res	Type
2	Y	13	C
2	Y	15	C

All (13) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	H	1	G
2	H	6	U
2	H	7	G
2	H	8	C
2	H	9	G
2	H	12	G
2	Y	1	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G
2	Y	12	G
2	Y	13	C

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)

Of 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
8	STD	D	7001	-	42,47,47	7.04	27 (64%)	47,73,73	2.30	13 (27%)
11	APC	M	6999	10	27,33,33	1.28	4 (14%)	31,52,52	1.67	6 (19%)
11	APC	D	5999	10	27,33,33	1.41	4 (14%)	31,52,52	1.68	6 (19%)
8	STD	N	8001	-	42,47,47	6.88	26 (61%)	47,73,73	2.32	11 (23%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	STD	D	7001	-	-	12/31/101/101	0/6/5/5
11	APC	M	6999	10	-	4/15/38/38	0/3/3/3
11	APC	D	5999	10	-	4/15/38/38	0/3/3/3
8	STD	N	8001	-	-	12/31/101/101	0/6/5/5

All (61) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	D	7001	STD	O5-C19	-27.18	1.19	1.43
8	N	8001	STD	O5-C19	-26.52	1.19	1.43
8	D	7001	STD	C23-C21	-16.00	1.18	1.53
8	N	8001	STD	C23-C21	-15.34	1.20	1.53
8	N	8001	STD	C18-C16	-13.28	1.25	1.53
8	D	7001	STD	C18-C16	-13.07	1.26	1.53
8	N	8001	STD	C15-C12	-13.06	1.20	1.52
8	D	7001	STD	C15-C12	-12.82	1.21	1.52
8	N	8001	STD	O5-C13	10.66	1.60	1.44
8	D	7001	STD	O5-C13	9.92	1.59	1.44
8	D	7001	STD	C17-C30	9.65	1.65	1.49
8	D	7001	STD	O8-C19	9.41	1.51	1.43
8	N	8001	STD	C17-C30	9.18	1.64	1.49
8	N	8001	STD	O8-C19	8.53	1.50	1.43
8	D	7001	STD	C22-N2	8.30	1.44	1.33
8	D	7001	STD	C16-C13	7.96	1.70	1.53
8	N	8001	STD	C22-N2	7.46	1.43	1.33
8	N	8001	STD	C16-C13	7.32	1.68	1.53
8	D	7001	STD	O8-C17	6.84	1.52	1.44
8	N	8001	STD	C15-C26	6.78	1.62	1.52
8	D	7001	STD	C15-C26	6.76	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	N	8001	STD	O8-C17	6.56	1.51	1.44
8	D	7001	STD	C21-C22	6.32	1.62	1.52
8	D	7001	STD	C26-C25	5.59	1.62	1.52
8	D	7001	STD	C20-C3	5.46	1.60	1.53
8	N	8001	STD	C20-C3	5.23	1.59	1.53
8	N	8001	STD	C6-C5	-5.00	1.37	1.45
8	N	8001	STD	C26-C25	4.70	1.60	1.52
8	N	8001	STD	O4-C4	4.42	1.47	1.42
8	N	8001	STD	C30-C32	4.42	1.39	1.32
8	D	7001	STD	C6-C5	-4.37	1.38	1.45
11	D	5999	APC	PB-O3B	4.36	1.63	1.58
8	D	7001	STD	C4-N1	4.32	1.51	1.45
8	D	7001	STD	C30-C32	4.17	1.38	1.32
8	N	8001	STD	C4-N1	4.12	1.51	1.45
8	N	8001	STD	C21-C22	4.10	1.59	1.52
8	D	7001	STD	C7-C8	-3.86	1.37	1.45
8	N	8001	STD	C7-C8	-3.74	1.37	1.45
11	M	6999	APC	PB-O3B	3.62	1.62	1.58
8	D	7001	STD	O4-C4	3.40	1.46	1.42
8	D	7001	STD	C12-C4	3.27	1.63	1.50
8	D	7001	STD	O9-C31	3.16	1.52	1.44
11	M	6999	APC	PA-O2A	-3.13	1.49	1.56
8	N	8001	STD	O9-C31	3.12	1.52	1.44
8	N	8001	STD	C29-C19	3.04	1.56	1.51
8	N	8001	STD	C12-C4	2.90	1.62	1.50
11	D	5999	APC	PA-O2A	-2.76	1.49	1.56
11	D	5999	APC	PB-O2B	-2.74	1.49	1.56
8	N	8001	STD	C28-C32	2.71	1.54	1.50
11	M	6999	APC	PB-O2B	-2.68	1.50	1.56
8	N	8001	STD	C1-C2	-2.61	1.38	1.46
8	D	7001	STD	C11-C8	2.42	1.55	1.50
11	D	5999	APC	PA-O5'	2.16	1.60	1.57
8	N	8001	STD	C11-C8	2.15	1.55	1.50
8	D	7001	STD	C1-C2	-2.14	1.40	1.46
11	M	6999	APC	PA-O5'	2.09	1.60	1.57
8	N	8001	STD	O4-C25	2.08	1.49	1.44
8	D	7001	STD	O7-C26	2.06	1.47	1.43
8	D	7001	STD	O4-C25	2.02	1.49	1.44
8	D	7001	STD	C29-C19	2.01	1.54	1.51
8	D	7001	STD	O3-C5	2.00	1.39	1.34

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	D	7001	STD	C19-O5-C13	9.00	122.53	112.80
8	N	8001	STD	C19-O5-C13	8.66	122.15	112.80
8	N	8001	STD	C2-C1-C3	-5.91	101.57	107.80
8	N	8001	STD	O8-C17-C30	-5.82	105.96	111.68
8	D	7001	STD	O8-C17-C30	-5.63	106.15	111.68
8	D	7001	STD	C2-C1-C3	-4.78	102.76	107.80
11	M	6999	APC	C1'-N9-C4	-4.34	119.01	126.64
11	D	5999	APC	C1'-N9-C4	-4.21	119.24	126.64
11	M	6999	APC	PB-O3B-PG	-4.10	118.17	132.62
11	D	5999	APC	PB-O3B-PG	-3.99	118.56	132.62
8	N	8001	STD	O4-C4-N1	3.72	109.97	105.92
8	D	7001	STD	O2-C2-C1	-3.55	121.78	130.61
8	N	8001	STD	O2-C2-N1	-3.52	118.73	126.47
8	D	7001	STD	O2-C2-N1	-3.47	118.83	126.47
8	N	8001	STD	C7-C6-C5	3.46	128.23	122.45
8	D	7001	STD	C10-C13-C16	3.43	121.19	115.55
8	D	7001	STD	C11-C8-C7	3.31	123.29	118.08
11	M	6999	APC	C5-C6-N6	3.29	125.35	120.35
8	N	8001	STD	O2-C2-C1	-3.28	122.45	130.61
11	D	5999	APC	C5-C6-N6	3.25	125.30	120.35
8	N	8001	STD	C10-C13-C16	3.13	120.69	115.55
11	D	5999	APC	O2B-PB-O1B	3.10	120.41	110.07
8	D	7001	STD	O4-C4-N1	3.05	109.24	105.92
11	M	6999	APC	O2B-PB-O1B	2.97	119.97	110.07
8	N	8001	STD	C11-C8-C7	2.96	122.74	118.08
11	D	5999	APC	O2A-PA-O1A	2.95	119.92	110.07
8	N	8001	STD	C12-C15-C26	2.85	115.93	111.76
8	D	7001	STD	C12-C15-C26	2.79	115.84	111.76
11	M	6999	APC	O2A-PA-O1A	2.77	119.33	110.07
8	D	7001	STD	C21-C22-N2	2.76	120.42	116.33
11	D	5999	APC	C2'-C3'-C4'	2.47	107.44	102.64
8	D	7001	STD	O3-C5-C6	2.37	119.06	115.75
8	D	7001	STD	C7-C6-C5	2.22	126.16	122.45
11	M	6999	APC	C2'-C3'-C4'	2.20	106.91	102.64
8	N	8001	STD	C21-C22-N2	2.16	119.54	116.33
8	D	7001	STD	O1-C3-C20	-2.11	122.52	124.60

There are no chirality outliers.

All (32) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	D	7001	STD	O4-C4-N1-C20
8	D	7001	STD	C6-C7-C8-C9

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Mol	Chain	Res	Type	Atoms
8	D	7001	STD	C6-C7-C8-C11
8	D	7001	STD	C9-C10-C13-O5
8	D	7001	STD	N1-C20-C21-C23
8	D	7001	STD	C3-C20-C21-C22
8	D	7001	STD	C3-C20-C21-C23
8	D	7001	STD	C21-C22-N2-C24
8	D	7001	STD	O6-C22-N2-C24
8	N	8001	STD	O4-C4-N1-C20
8	N	8001	STD	C6-C7-C8-C9
8	N	8001	STD	C6-C7-C8-C11
8	N	8001	STD	C3-C20-C21-C22
8	N	8001	STD	C21-C22-N2-C24
8	N	8001	STD	O6-C22-N2-C24
11	D	5999	APC	C5'-O5'-PA-O2A
11	M	6999	APC	PA-C3A-PB-O1B
11	M	6999	APC	C5'-O5'-PA-O2A
11	D	5999	APC	O4'-C4'-C5'-O5'
11	M	6999	APC	O4'-C4'-C5'-O5'
8	N	8001	STD	N1-C20-C21-C23
8	N	8001	STD	C3-C20-C21-C23
11	D	5999	APC	C4'-C5'-O5'-PA
11	M	6999	APC	C4'-C5'-O5'-PA
8	D	7001	STD	C9-C10-C13-C16
8	D	7001	STD	C14-C10-C13-O5
11	D	5999	APC	PA-C3A-PB-O1B
8	N	8001	STD	C23-C21-C22-O6
8	N	8001	STD	C12-C4-N1-C20
8	D	7001	STD	O4-C4-N1-C2
8	N	8001	STD	O4-C4-N1-C2
8	N	8001	STD	C9-C10-C13-C16

There are no ring outliers.

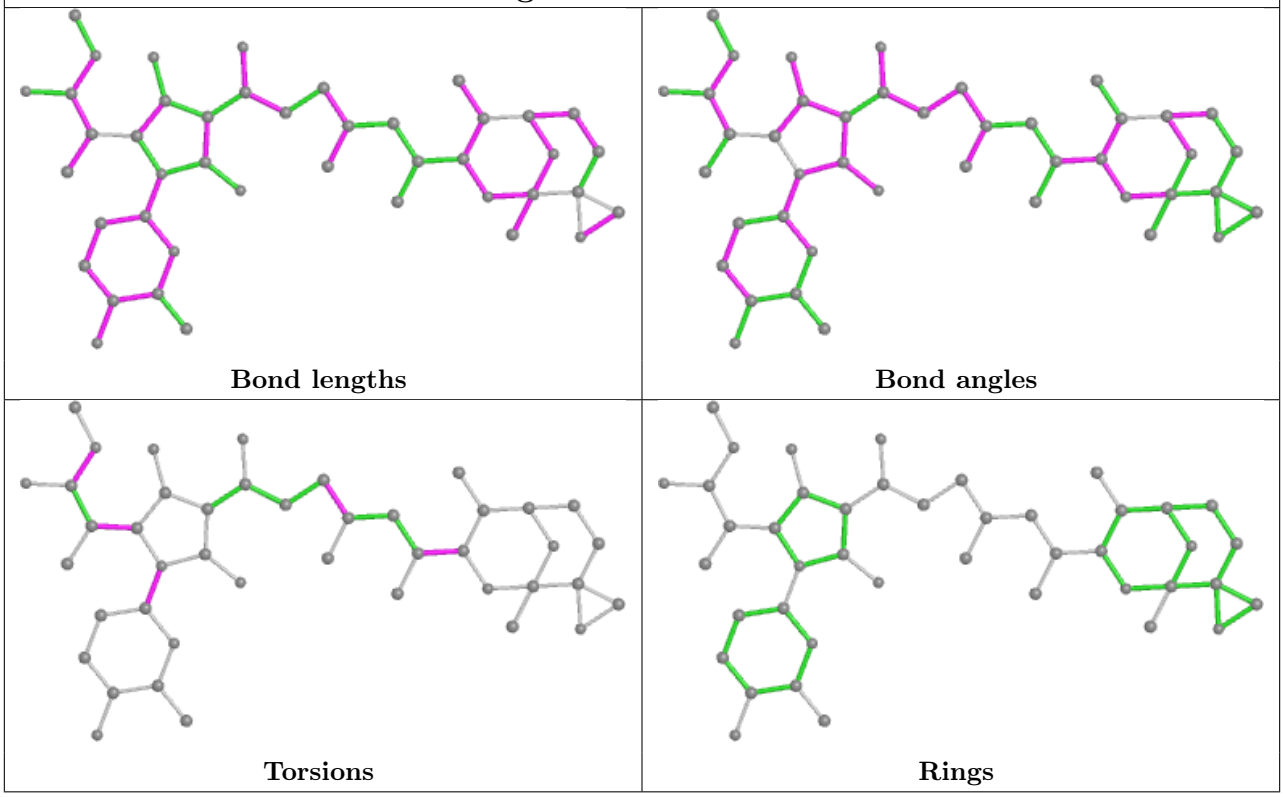
4 monomers are involved in 19 short contacts:

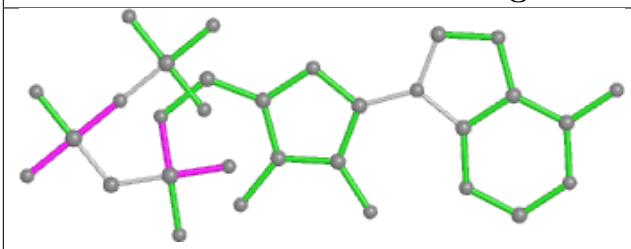
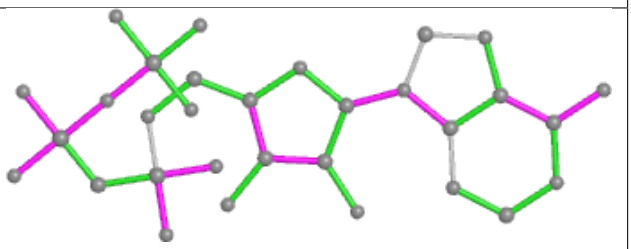
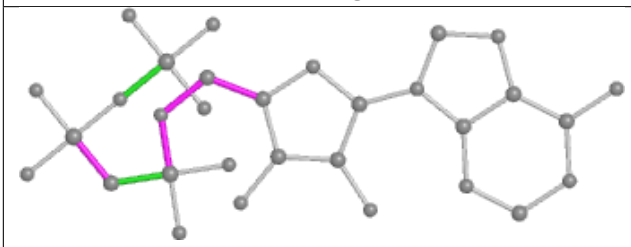
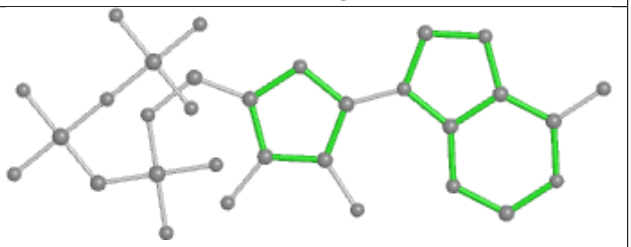
Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	D	7001	STD	6	0
11	M	6999	APC	2	0
11	D	5999	APC	5	0
8	N	8001	STD	6	0

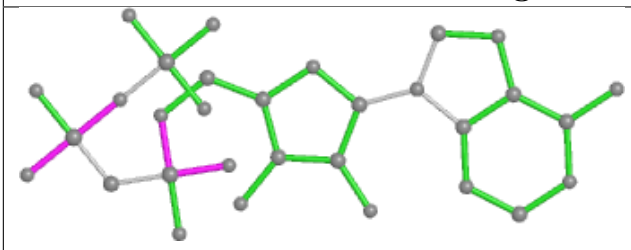
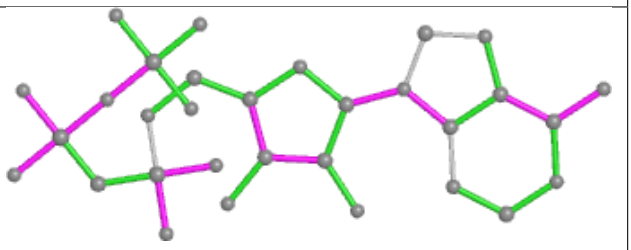
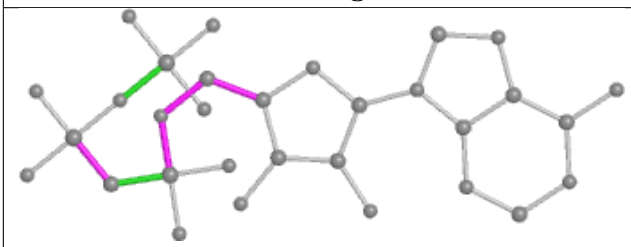
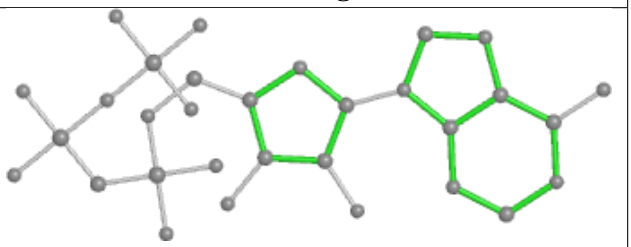
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In

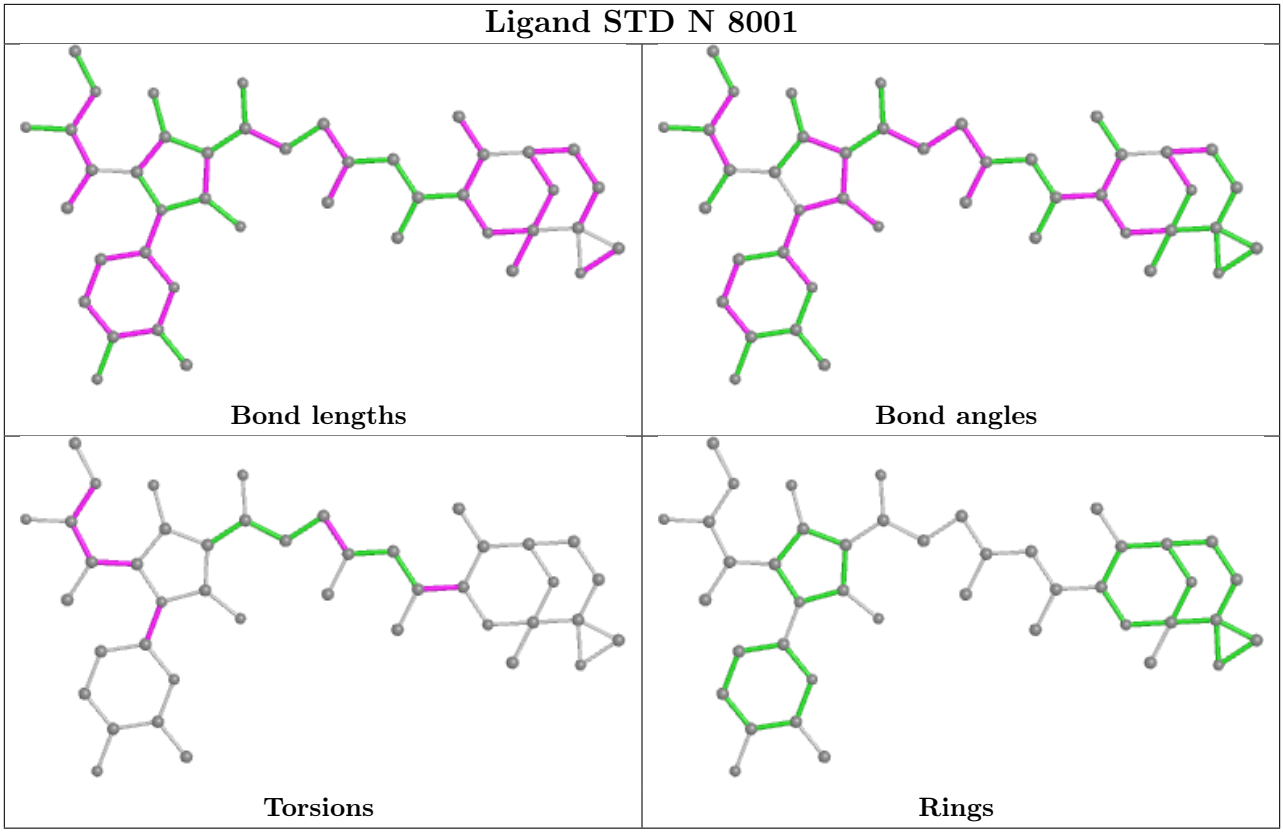
addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.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

Ligand STD D 7001



Ligand APC M 6999	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand APC D 5999	
 Bond lengths	 Bond angles
 Torsions	 Rings



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	G	23/23 (100%)	-0.74	0	100	100	23, 43, 66, 69	0
1	X	23/23 (100%)	-0.73	0	100	100	9, 37, 77, 92	0
2	H	16/16 (100%)	-0.49	0	100	100	24, 52, 92, 93	0
2	Y	16/16 (100%)	-0.49	0	100	100	25, 43, 96, 99	0
3	I	13/14 (92%)	-0.79	0	100	100	39, 55, 76, 77	0
3	Z	13/14 (92%)	-0.87	0	100	100	50, 61, 75, 79	0
4	A	229/315 (72%)	-0.57	0	100	100	31, 58, 73, 77	0
4	B	229/315 (72%)	-0.57	1 (0%)	92	79	34, 62, 75, 82	0
4	K	229/315 (72%)	-0.57	0	100	100	30, 57, 71, 76	0
4	L	229/315 (72%)	-0.49	0	100	100	37, 62, 76, 87	0
5	C	1119/1119 (100%)	-0.62	1 (0%)	95	89	7, 54, 77, 90	0
5	M	1119/1119 (100%)	-0.61	2 (0%)	95	87	18, 54, 76, 90	0
6	D	1314/1524 (86%)	-0.56	5 (0%)	92	79	11, 56, 79, 89	0
6	N	1314/1524 (86%)	-0.57	3 (0%)	95	87	8, 56, 76, 91	0
7	E	95/99 (95%)	-0.68	0	100	100	42, 58, 67, 71	0
7	O	95/99 (95%)	-0.59	0	100	100	33, 59, 75, 80	0
All	All	6076/6850 (88%)	-0.58	12 (0%)	95	87	7, 56, 77, 99	0

All (12) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
6	N	416	ALA	4.2
5	C	1025	ALA	3.8
6	D	188	GLY	3.1
6	N	429	SER	2.9
6	D	391	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
5	M	419	THR	2.6
5	M	174	LEU	2.3
6	N	174	GLY	2.2
6	D	134	VAL	2.1
4	B	164	ALA	2.0
6	D	1278	ASP	2.0
6	D	429	SER	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

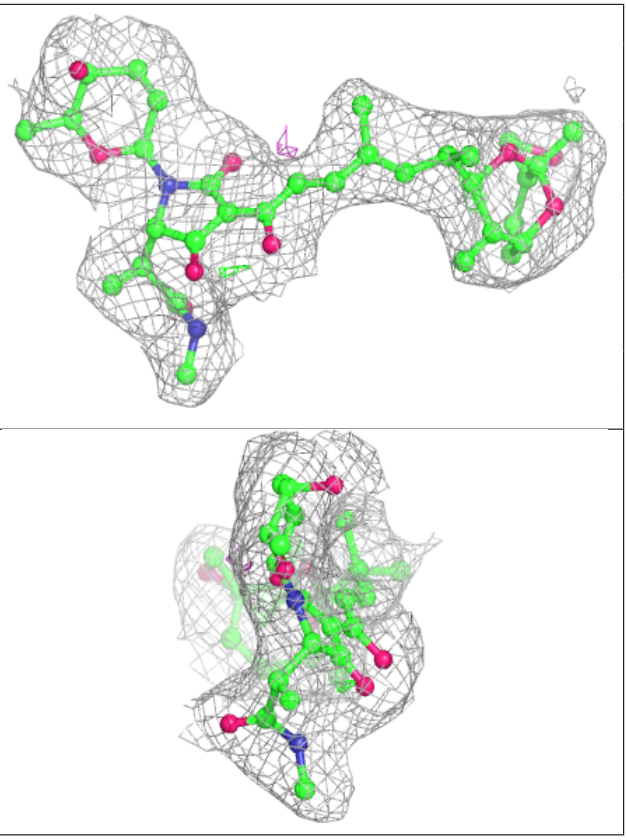
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

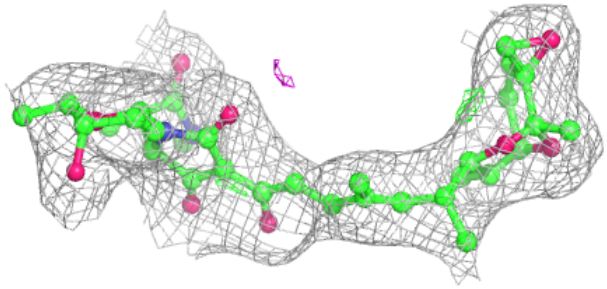
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
8	STD	D	7001	43/43	0.96	0.17	11,24,27,28	0
8	STD	N	8001	43/43	0.96	0.17	14,32,53,55	0
9	ZN	D	7058	1/1	0.97	0.08	87,87,87,87	0
9	ZN	N	7158	1/1	0.97	0.06	70,70,70,70	0
11	APC	D	5999	31/31	0.97	0.15	30,38,64,65	0
10	MG	D	9001	1/1	0.98	0.08	22,22,22,22	0
11	APC	M	6999	31/31	0.98	0.14	35,45,57,58	0
10	MG	D	9002	1/1	0.99	0.16	25,25,25,25	0
10	MG	N	9003	1/1	0.99	0.09	21,21,21,21	0
10	MG	N	9004	1/1	0.99	0.09	27,27,27,27	0
9	ZN	N	8212	1/1	0.99	0.10	54,54,54,54	0
9	ZN	D	8112	1/1	0.99	0.07	58,58,58,58	0

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

Electron density around STD D 7001:

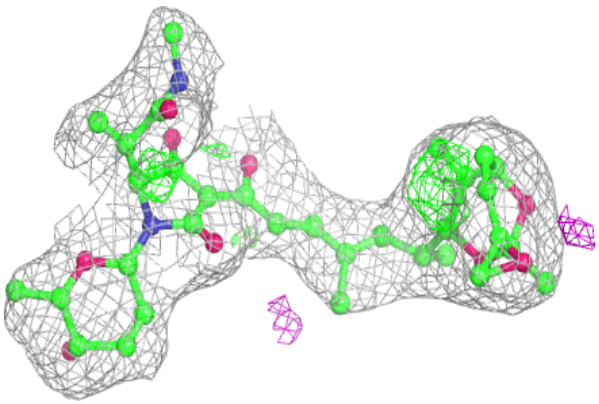
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

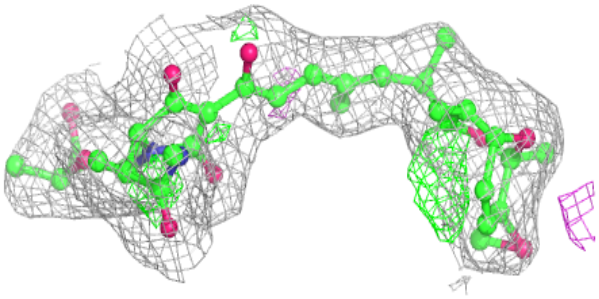


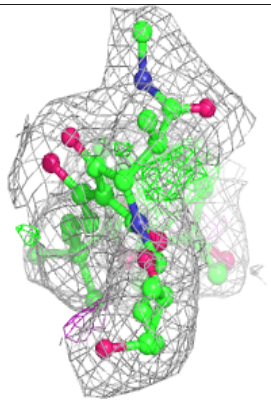


Electron density around STD N 8001:

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







Electron density around APC D 5999:

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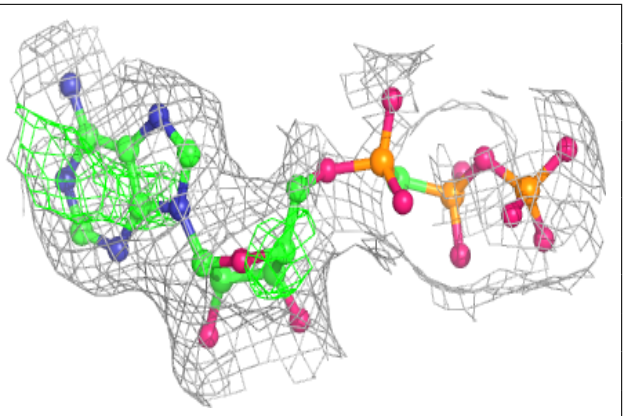
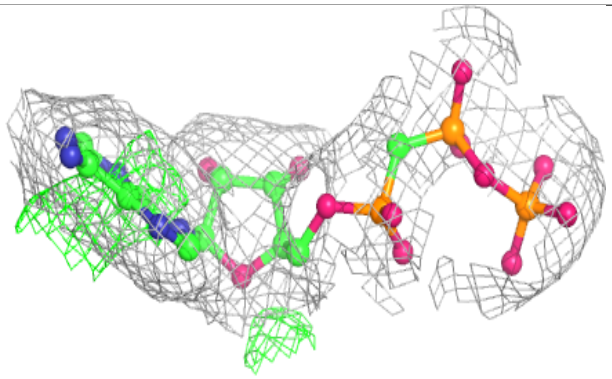
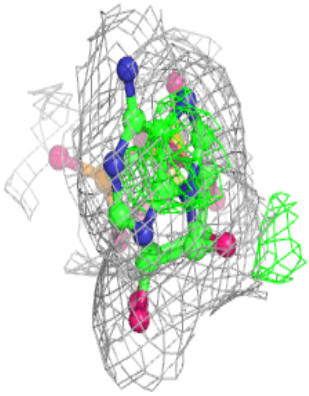
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

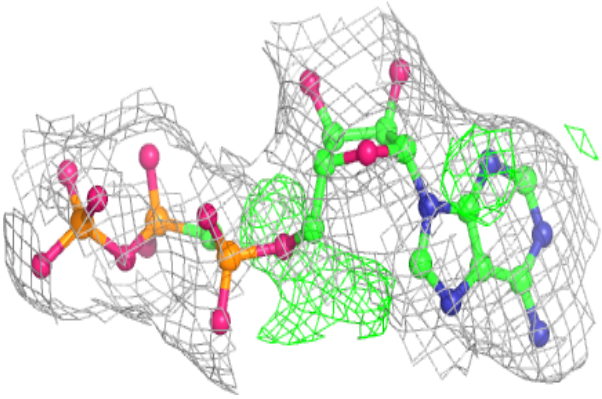


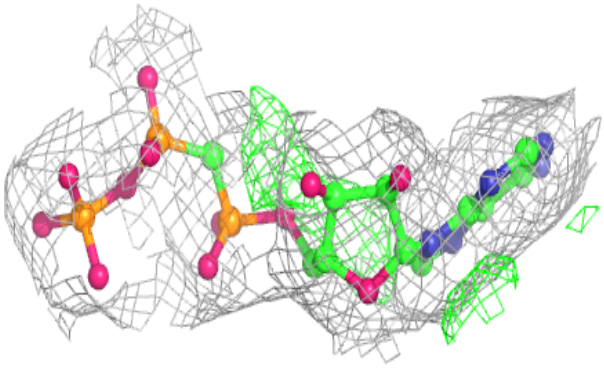


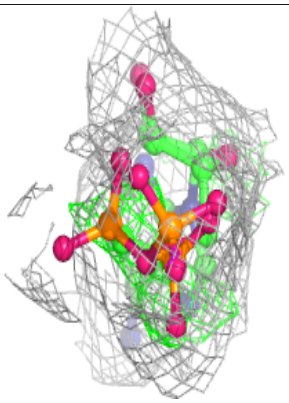


Electron density around APC M 6999:

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







6.5 Other polymers (i)

There are no such residues in this entry.