



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 16, 2023 – 04:50 AM JST

PDB ID : 6KON
Title : Mycobacterium tuberculosis initial transcription complex comprising sigma H and 5'-OH RNA of 5 nt
Authors : Li, L.; Zhang, Y.
Deposited on : 2019-08-12
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 ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

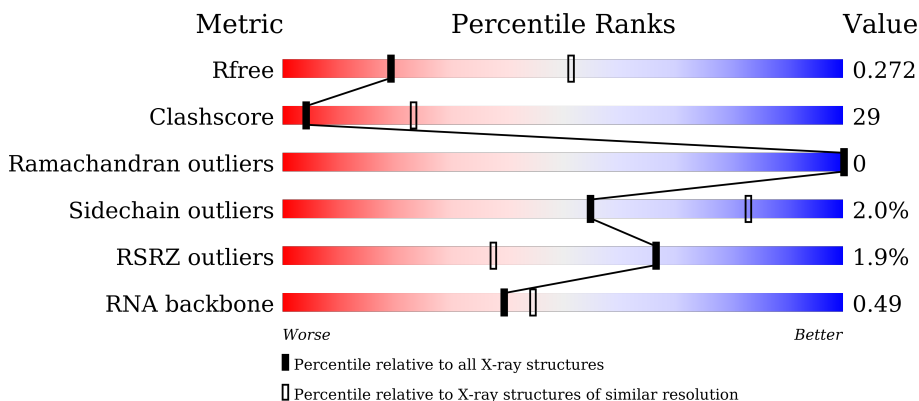
1 Overall quality at a glance i

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.



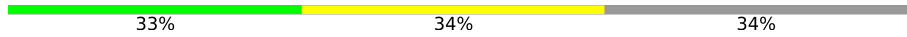


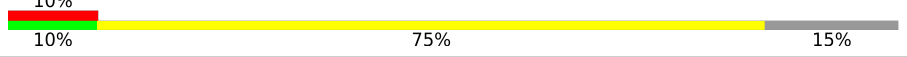

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	368	
1	B	368	
2	C	1174	
3	D	1317	

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Mol	Chain	Length	Quality of chain
4	E	110	
5	F	218	
6	G	23	
7	H	20	
8	I	5	

2 Entry composition i

There are 11 unique types of molecules in this entry. The entry contains 24039 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	216	1617	1020	275	320	2	0	0	0
1	B	233	1700	1074	286	337	3	0	0	0

There are 42 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-20	MET	-	initiating methionine	UNP P9WGZ1
A	-19	GLY	-	expression tag	UNP P9WGZ1
A	-18	HIS	-	expression tag	UNP P9WGZ1
A	-17	HIS	-	expression tag	UNP P9WGZ1
A	-16	HIS	-	expression tag	UNP P9WGZ1
A	-15	HIS	-	expression tag	UNP P9WGZ1
A	-14	HIS	-	expression tag	UNP P9WGZ1
A	-13	HIS	-	expression tag	UNP P9WGZ1
A	-12	HIS	-	expression tag	UNP P9WGZ1
A	-11	HIS	-	expression tag	UNP P9WGZ1
A	-10	HIS	-	expression tag	UNP P9WGZ1
A	-9	HIS	-	expression tag	UNP P9WGZ1
A	-8	SER	-	expression tag	UNP P9WGZ1
A	-7	SER	-	expression tag	UNP P9WGZ1
A	-6	GLY	-	expression tag	UNP P9WGZ1
A	-5	HIS	-	expression tag	UNP P9WGZ1
A	-4	ILE	-	expression tag	UNP P9WGZ1
A	-3	GLU	-	expression tag	UNP P9WGZ1
A	-2	GLY	-	expression tag	UNP P9WGZ1
A	-1	ARG	-	expression tag	UNP P9WGZ1
A	0	HIS	-	expression tag	UNP P9WGZ1
B	-20	MET	-	initiating methionine	UNP P9WGZ1
B	-19	GLY	-	expression tag	UNP P9WGZ1
B	-18	HIS	-	expression tag	UNP P9WGZ1
B	-17	HIS	-	expression tag	UNP P9WGZ1

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-16	HIS	-	expression tag	UNP P9WGZ1
B	-15	HIS	-	expression tag	UNP P9WGZ1
B	-14	HIS	-	expression tag	UNP P9WGZ1
B	-13	HIS	-	expression tag	UNP P9WGZ1
B	-12	HIS	-	expression tag	UNP P9WGZ1
B	-11	HIS	-	expression tag	UNP P9WGZ1
B	-10	HIS	-	expression tag	UNP P9WGZ1
B	-9	HIS	-	expression tag	UNP P9WGZ1
B	-8	SER	-	expression tag	UNP P9WGZ1
B	-7	SER	-	expression tag	UNP P9WGZ1
B	-6	GLY	-	expression tag	UNP P9WGZ1
B	-5	HIS	-	expression tag	UNP P9WGZ1
B	-4	ILE	-	expression tag	UNP P9WGZ1
B	-3	GLU	-	expression tag	UNP P9WGZ1
B	-2	GLY	-	expression tag	UNP P9WGZ1
B	-1	ARG	-	expression tag	UNP P9WGZ1
B	0	HIS	-	expression tag	UNP P9WGZ1

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	C	1092	8237	5153	1442	1604	38	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-1	MET	-	initiating methionine	UNP P9WGY9
C	0	VAL	-	expression tag	UNP P9WGY9

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	D	1252	9622	6037	1731	1814	40	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	0	MET	-	initiating methionine	UNP P9WGY7
D	1	VAL	-	expression tag	UNP P9WGY7

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
4	E	73	582	373	97	112	0	0	0

- Molecule 5 is a protein called ECF RNA polymerase sigma factor SigH.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	F	180	1356	845	234	273	4	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	-1	GLY	-	expression tag	UNP P9WGH9
F	0	ALA	-	expression tag	UNP P9WGH9

- Molecule 6 is a DNA chain called DNA (5'-D(P*GP*TP*TP*GP*TP*GP*GP*GP*AP*G P*CP*TP*GP*TP*CP*AP*CP*GP*GP*AP*TP*GP*C)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
6	G	23	442	207	76	136	23	0	0	0

- Molecule 7 is a DNA chain called DNA (5'-D(P*GP*CP*AP*TP*CP*CP*GP*TP*GP*AP *GP*TP*CP*GP*AP*GP*GP*GP*TP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
7	H	17	353	166	68	102	17	0	0	0

- Molecule 8 is a RNA chain called RNA (5'-R(*CP*UP*CP*GP*A)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
8	I	5	102	47	18	33	4	0	0	0

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
10	D	1	Total 1	Mg 1	0	0

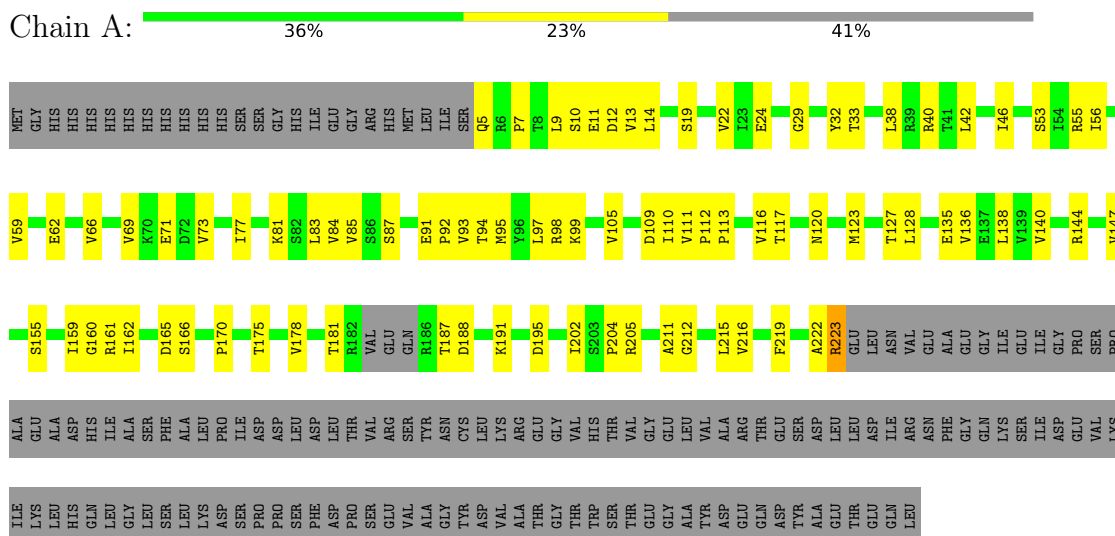
- Molecule 11 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	C	12	Total 12	O 12	0	0
11	D	9	Total 9	O 9	0	0
11	F	1	Total 1	O 1	0	0
11	G	1	Total 1	O 1	0	0
11	H	2	Total 2	O 2	0	0

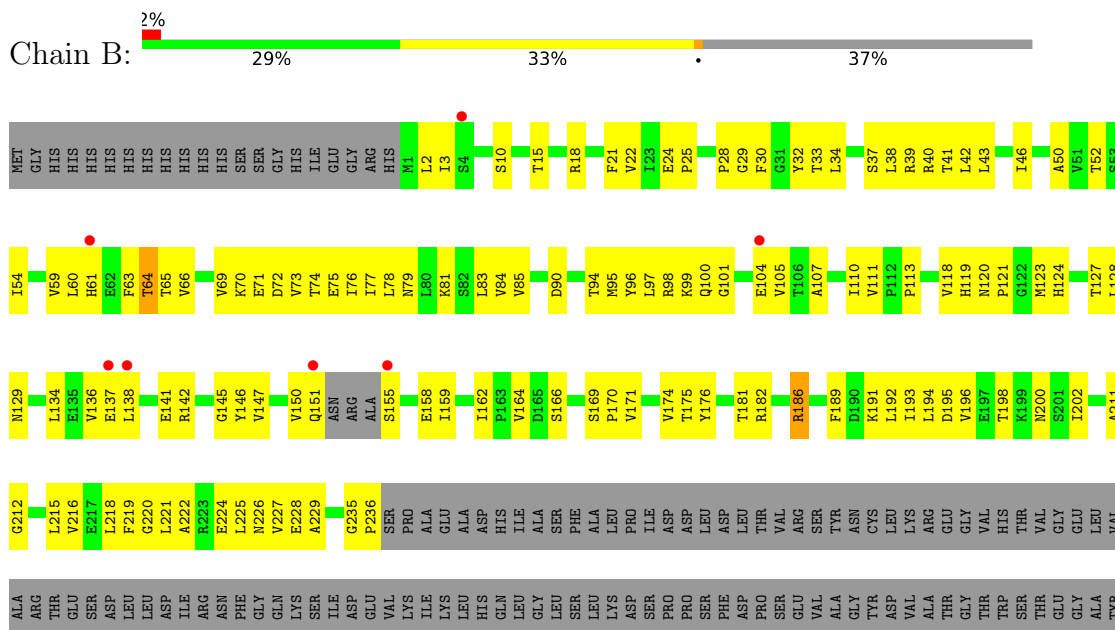
3 Residue-property plots

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

- Molecule 1: DNA-directed RNA polymerase subunit alpha



- Molecule 1: DNA-directed RNA polymerase subunit alpha

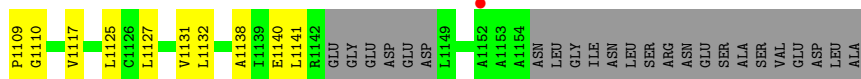


ASP	GLU	GLN	ASP	TYR	ALA	GLU	THR	GLN	LEU
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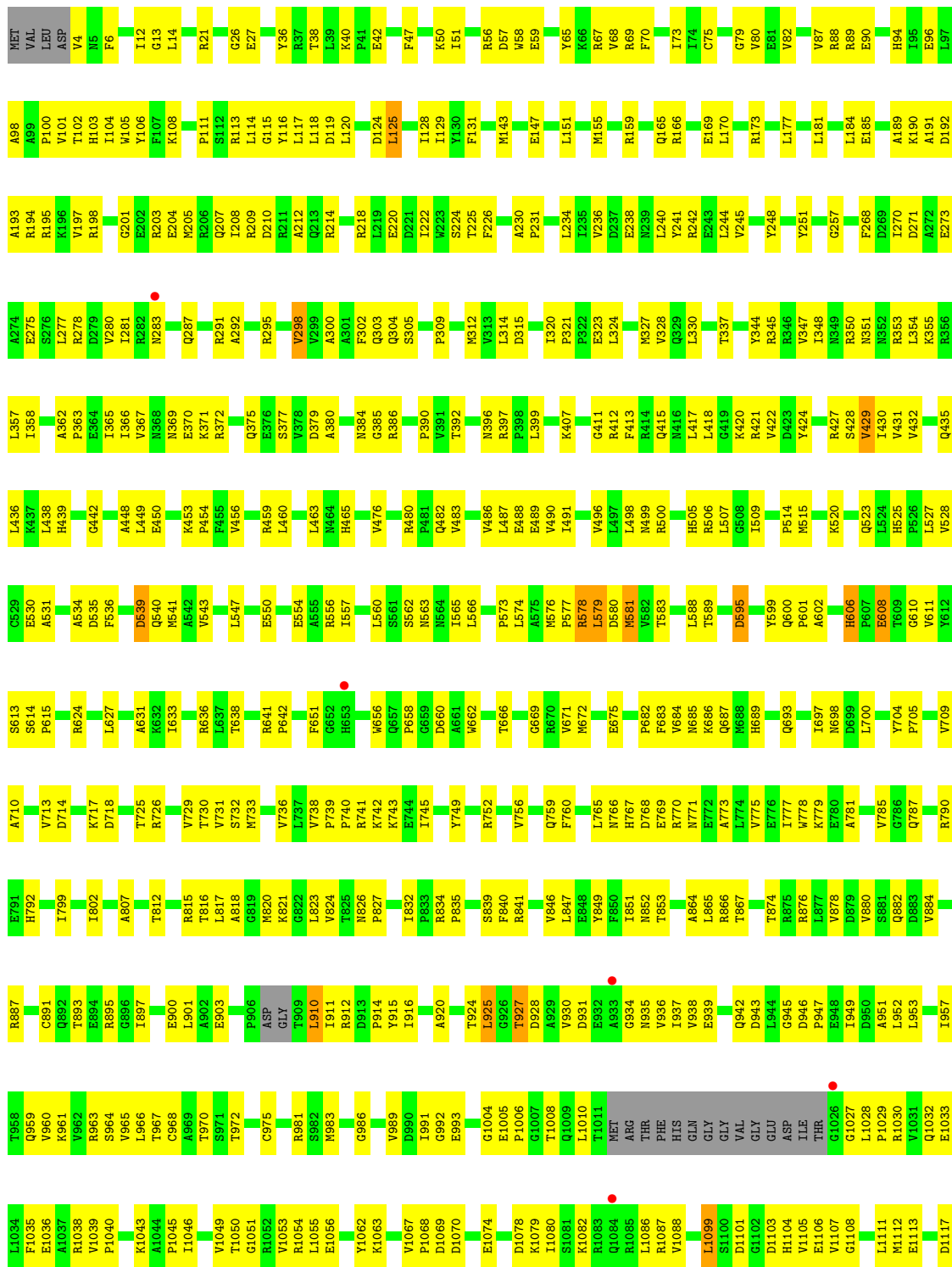
● Molecule 2: DNA-directed RNA polymerase subunit beta

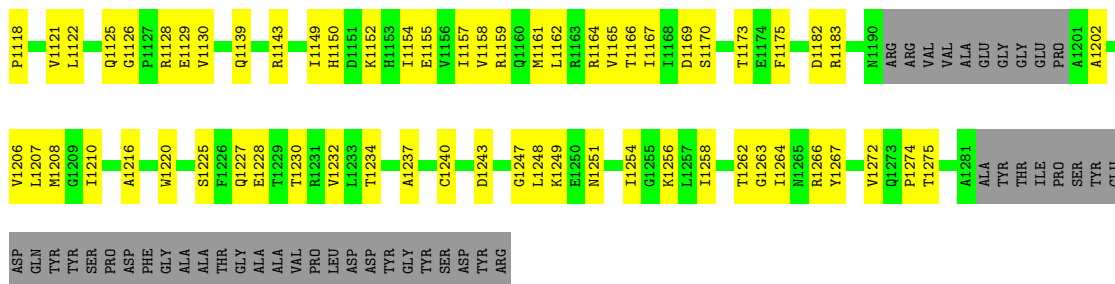


MET	VAL	LEU	ALA	ASP	TYR	ALA	GLU	THR	GLN	LEU																																													
V63	L84	L87	S88	P89	I90	E91	D92	F93	M97	S98	L99	S100	P104	R105	SER	R106	S21	S25	R32	F35	A36	K37	L38	R39	G39	P41	L42	E43	V44	L48	F45	L58	S61	P62	G63	T64	R63	W64	D73	V74	N75	P76	V77	R67	V68	G78	G79	L80	E81	Q172	L173				
S176	P177	G178	V179	D182	I185	D186	T189	K191	T192	S195	V198	L199	P200	S201	R202	G203	A204	W205	L206	F208	I134	M135	VAL	ASP	LYS	THR	ARG	ASP	THR	VAL	GLY	V218	R219	I220	D221	R224	R225	Q226	P227	V228	T229	V230	L231	L232	LYS	ALA	LEU	GLY	TRP	K309	V310	N311	SER	GLU	
GLN	I1E	VAL	GLU	ARG	PHE	GLY	F248	S249	M252	T255	LEU	GLU	R258	D259	D260	T261	W262	G263	A267	L268	L269	B270	I271	V272	R273	F208	L275	R276	F277	G278	E279	P280	P281	T282	K283	E284	S285	A286	Q287	T288	L289	E291	D301	L302	A303	R304	V305	G306	R307	Y308	K309	V310	N311	SER	GLU
K313	H317	VAL	GLY	GLY	PRO	I1E	THR	SER	SER	THR	LEU	T328	D331	R258	V332	D259	A334	T335	L336	E337	Y338	L339	V346	R341	Q346	K349	R274	R275	R276	R277	V357	P358	V359	I364	G368	R371	L372	R373	I374	V375	A462	L378	L379	Q382	I383	K387	S388	R389	K390	E391	R392	V393			
V394	M398	V403	E404	A405	I406	T407	P408	Q409	T410	L411	I412	M413	R414	R415	P416	A419	A420	I421	K422	E423	F424	Q429	L430	S431	K349	D435	Q436	G442	L443	T444	H445	K446	R447	R448	L449	G453	L457	A462	L464	E465	V466	R467	H470	P471	M477	E484	G485								
I488	G489	I491	N501	F502	P503	I506	E507	T508	P509	Y510	R511	L512	R513	V514	D515	G516	V517	M601	M605	Q606	V610	P611	L612	R613	R614	S615	P618	L619	V620	G621	T622	G623	M624	E625	L626	R627	G633	V636	V637	A638	G642	V643	L644	I645	G646	P647	V648	M655	D570	V571	E572				
V575	S576	R577	R578	Q579	M580	V581	S582	V583	A584	T585	A586	F590	R689	V690	G793	H696	G699	P700	C701	T702	G705	F706	M707	L708	R709	G710	K711	L714	V715	A716	I717	M718	P719	W720	E726	D727	L731	S732	D739	V740	L741	H745	I746	G923	Q924	S848	D853	E854	L855	P856					
D755	R765	L775	A776	D777	L778	I783	A678	P882	A886	R790	V791	D792	G793	D794	I795	L796	M885	K886	G887	V888	I889	L893	D897	M898	P899	F900	L901	A902	I818	G904	T905	P906	V907	D908	I909	L910	N911	N912	T913	H914	G915	V916	P917	M920	N921	I922	G923	Q924	I925	L926	T927	E928			
H932	S936	G937	V940	H949	A950	L953	P954	L957	L958	Q961	P962	P965	V966	S967	T968	P969	F971	D972	G973	A974	Q975	E976	L979	Q980	G981	T986	L987	P988	H989	D991	L991	G992	L1004	F1006	G1007	R1008	P1014	Y1015	P1016	I1017	T1018	Y1019	G1020	Y1021	M1022	Y1023									
I1024	M1025	K1026	L1027	H1028	H1029	L1030	V1031	D1032	L1033	K1034	I1035	H1036	A1037	S1038	S1039	T1040	S1044	H1045	L1046	T1047	Q1048	Q1049	P1050	K1054	R1061	F1062	C1067	W1068	A1069	M1070	Y1073	L1079	Q1080	E1081	L1082	L1083	T1084	I1085	K1086	D1089	V1091	G1092	R1093	V1094	K1095	V1096	Y1097	I1100	E1108						

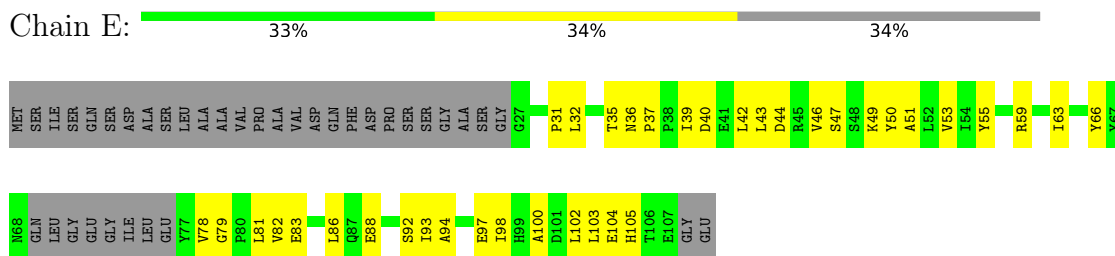


Molecule 3: DNA-directed RNA polymerase subunit beta'

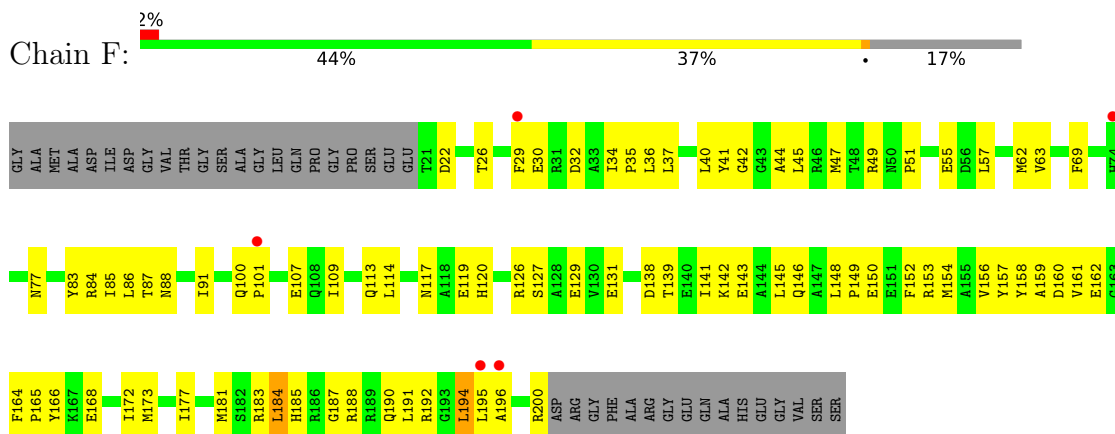




- Molecule 4: DNA-directed RNA polymerase subunit omega



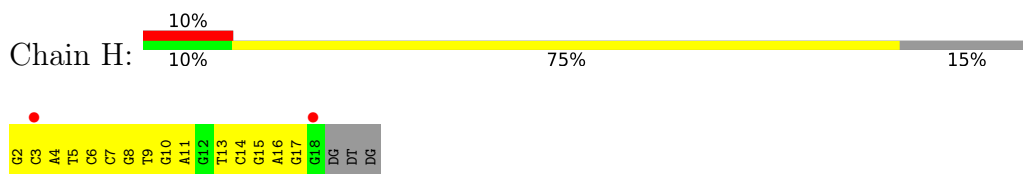
- Molecule 5: ECF RNA polymerase sigma factor SigH



- Molecule 6: DNA (5'-D(P*GP*TP*TP*GP*TP*GP*GP*GP*AP*GP*CP*TP*GP*TP*CP*A P*CP*GP*GP*AP*TP*GP*C)-3')



- Molecule 7: DNA (5'-D(P*GP*CP*AP*TP*CP*CP*GP*TP*GP*AP*GP*TP*CP*GP*AP*G P*GP*GP*TP*G)-3')



- Molecule 8: RNA (5'-R(*CP*UP*CP*GP*A)-3')

Chain I:

40%

60%



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	129.33Å 161.22Å 129.47Å 90.00° 117.78° 90.00°	Depositor
Resolution (Å)	48.65 – 3.00 48.65 – 3.00	Depositor EDS
% Data completeness (in resolution range)	97.2 (48.65-3.00) 97.3 (48.65-3.00)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.75 (at 3.01Å)	Xtriage
Refinement program	PHENIX 1.14 3260	Depositor
R, R_{free}	0.220 , 0.271 0.221 , 0.272	Depositor DCC
R_{free} test set	2008 reflections (2.20%)	wwPDB-VP
Wilson B-factor (Å ²)	84.6	Xtriage
Anisotropy	0.438	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 50.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.000 for -h-l,k,h 0.000 for l,k,-h-l 0.015 for h,-k,-h-l 0.020 for -h-l,-k,l 0.016 for l,-k,h	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	24039	wwPDB-VP
Average B, all atoms (Å ²)	95.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.48% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.25	0/1642	0.46	0/2237
1	B	0.24	0/1725	0.46	0/2355
2	C	0.26	0/8380	0.45	0/11387
3	D	0.26	0/9782	0.43	0/13250
4	E	0.23	0/594	0.40	0/809
5	F	0.24	0/1382	0.40	0/1887
6	G	0.59	0/494	0.93	0/761
7	H	0.61	0/396	0.88	0/610
8	I	0.28	0/113	0.92	0/174
All	All	0.28	0/24508	0.47	0/33470

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	A	1617	0	1629	94	0
1	B	1700	0	1692	141	0
2	C	8237	0	8007	500	0
3	D	9622	0	9556	532	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	E	582	0	579	56	0
5	F	1356	0	1231	110	0
6	G	442	0	241	41	0
7	H	353	0	191	26	0
8	I	102	0	55	3	0
9	D	2	0	0	0	0
10	D	1	0	0	0	0
11	C	12	0	0	3	0
11	D	9	0	0	0	0
11	F	1	0	0	0	0
11	G	1	0	0	0	0
11	H	2	0	0	0	0
All	All	24039	0	23181	1390	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 29.

All (1390) 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)
2:C:201:SER:HB2	2:C:303:ALA:HB2	1.27	1.10
6:G:19:DA:H2''	6:G:20:DT:H5''	1.26	1.09
3:D:1164:ARG:HB2	3:D:1208:MET:HE2	1.31	1.08
7:H:14:DC:H2'	7:H:15:DG:H5''	1.34	1.08
3:D:930:VAL:HG12	3:D:936:VAL:HA	1.35	1.06
2:C:714:LEU:HD23	2:C:907:VAL:HA	1.38	1.06
1:A:83:LEU:HA	1:A:123:MET:HE1	1.38	1.05
1:B:24:GLU:HB2	1:B:191:LYS:HG3	1.35	1.05
2:C:464:LEU:HD11	3:D:865:LEU:HD11	1.40	1.01
5:F:109:ILE:HD13	5:F:114:LEU:HD21	1.38	1.01
2:C:1040:THR:HG22	5:F:127:SER:HB3	1.40	0.99
2:C:1046:ILE:HD11	5:F:109:ILE:HD11	1.42	0.98
2:C:179:VAL:HG22	2:C:198:VAL:HG22	1.48	0.95
3:D:1050:THR:HG22	3:D:1106:GLU:HA	1.49	0.94
6:G:8:DA:H2'	6:G:9:DG:H5''	1.48	0.93
5:F:138:ASP:HB3	5:F:141:ILE:HD11	1.49	0.93
2:C:176:SER:HB3	2:C:371:ARG:HD2	1.51	0.92
3:D:581:MET:HE1	3:D:717:LYS:HG3	1.51	0.92
2:C:961:GLN:HG3	2:C:962:PRO:HD2	1.52	0.91
1:B:54:ILE:HD11	1:B:162:ILE:HD11	1.51	0.91
2:C:151:PHE:HE2	2:C:383:ILE:HD11	1.34	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1274:PRO:HG3	4:E:78:VAL:HG11	1.53	0.90
6:G:12:DG:H5''	6:G:12:DG:H8	1.34	0.90
3:D:270:ILE:HG22	3:D:303:GLN:HG2	1.54	0.90
3:D:98:ALA:HB3	3:D:354:LEU:HD23	1.52	0.89
3:D:823:LEU:HD23	3:D:835:PRO:HB3	1.52	0.89
3:D:601:PRO:HA	3:D:608:GLU:HB3	1.53	0.89
5:F:150:GLU:HA	5:F:153:ARG:HG2	1.55	0.89
2:C:583:VAL:HG22	2:C:624:MET:HE1	1.56	0.88
7:H:5:DT:H2''	7:H:6:DC:C6	2.08	0.88
2:C:201:SER:HB2	2:C:303:ALA:CB	2.04	0.88
1:A:98:ARG:HG3	1:A:135:GLU:HG3	1.56	0.87
2:C:135:ASN:HB3	2:C:138:THR:HG22	1.56	0.87
2:C:135:ASN:ND2	2:C:403:VAL:HG21	1.90	0.87
3:D:12:ILE:HD11	3:D:1220:TRP:CZ3	2.10	0.87
3:D:581:MET:HE2	3:D:717:LYS:HA	1.57	0.87
1:A:56:ILE:HB	1:A:59:VAL:HG22	1.57	0.86
2:C:32:ARG:HA	2:C:965:ILE:HG22	1.57	0.86
2:C:138:THR:HG23	2:C:140:GLU:H	1.40	0.86
3:D:1055:LEU:HD21	3:D:1099:LEU:HD21	1.58	0.85
6:G:12:DG:H5''	6:G:12:DG:C8	2.10	0.85
3:D:241:TYR:O	3:D:245:VAL:HG13	1.76	0.85
3:D:242:ARG:O	3:D:245:VAL:HG22	1.77	0.85
2:C:799:LYS:HZ2	2:C:829:THR:HB	1.43	0.84
7:H:14:DC:C2'	7:H:15:DG:H5''	2.06	0.84
2:C:276:ARG:NH1	2:C:277:PRO:O	2.10	0.84
2:C:177:PRO:HB2	2:C:306:GLY:HA3	1.61	0.83
3:D:70:PHE:HB2	3:D:73:ILE:HG13	1.58	0.83
1:B:107:ALA:HB3	1:B:121:PRO:HA	1.58	0.83
3:D:114:LEU:HB3	3:D:125:LEU:HD21	1.57	0.83
3:D:104:ILE:HD12	3:D:379:ASP:HB3	1.61	0.83
3:D:891:CYS:HB3	3:D:970:THR:HG22	1.59	0.82
2:C:231:LEU:HA	2:C:267:ALA:HB1	1.58	0.82
3:D:989:VAL:HG23	3:D:993:GLU:HG3	1.60	0.82
2:C:312:LYS:HA	2:C:312:LYS:HE3	1.60	0.82
1:A:112:PRO:HB2	1:A:116:VAL:HG23	1.60	0.82
3:D:430:ILE:HG21	3:D:541:MET:HG3	1.62	0.82
1:B:218:LEU:O	1:B:221:LEU:HB2	1.78	0.82
3:D:577:PRO:HB3	3:D:581:MET:HB2	1.60	0.81
2:C:467:ARG:HB3	2:C:489:GLY:HA3	1.60	0.81
2:C:1018:THR:H	3:D:730:THR:HG21	1.44	0.81
2:C:793:GLY:H	2:C:833:VAL:HG13	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:856:PRO:HG2	2:C:859:VAL:HG21	1.61	0.81
2:C:601:MET:O	2:C:605:MET:HG3	1.81	0.80
2:C:1081:GLU:HG3	2:C:1085:ILE:HD11	1.63	0.80
2:C:90:ILE:HD12	2:C:391:GLU:HG3	1.62	0.80
2:C:1040:THR:CG2	5:F:127:SER:HB3	2.10	0.80
5:F:191:LEU:HA	5:F:194:LEU:HD12	1.63	0.80
3:D:847:LEU:O	3:D:851:ILE:HG12	1.82	0.80
1:B:97:LEU:HB2	1:B:110:ILE:HG22	1.64	0.79
2:C:606:GLN:HG2	2:C:1025:MET:CE	2.13	0.79
3:D:190:LYS:HD2	3:D:192:ASP:HB3	1.64	0.79
4:E:59:ARG:HH22	4:E:79:GLY:HA3	1.45	0.79
1:B:74:THR:HG21	3:D:608:GLU:OE2	1.83	0.79
3:D:435:GLN:N	3:D:435:GLN:OE1	2.16	0.79
3:D:1050:THR:HG23	3:D:1107:VAL:HG13	1.65	0.79
3:D:785:VAL:HG21	3:D:820:MET:HG2	1.64	0.79
2:C:526:THR:HG22	2:C:529:GLU:HG3	1.62	0.79
2:C:177:PRO:HA	2:C:199:ILE:HG23	1.65	0.79
4:E:31:PRO:HB2	4:E:35:THR:HG23	1.63	0.79
1:B:43:LEU:HD11	1:B:174:VAL:HB	1.64	0.78
2:C:338:TYR:HA	2:C:349:MET:HE1	1.64	0.78
3:D:1169:ASP:H	3:D:1202:ALA:HB3	1.48	0.78
5:F:148:LEU:HD11	5:F:187:GLY:HA2	1.65	0.78
1:A:55:ARG:CZ	1:A:160:GLY:HA3	2.14	0.78
2:C:715:VAL:HG23	2:C:909:ILE:HG23	1.66	0.78
2:C:786:ILE:HD12	2:C:786:ILE:H	1.49	0.78
3:D:1049:VAL:HA	3:D:1107:VAL:HG12	1.66	0.78
2:C:382:GLN:HG2	2:C:424:PHE:HB2	1.63	0.78
4:E:55:TYR:CE2	4:E:98:ILE:HD12	2.19	0.77
3:D:937:ILE:HD11	3:D:951:ALA:HB1	1.65	0.77
1:A:216:VAL:HG13	1:B:216:VAL:HG13	1.65	0.77
2:C:338:TYR:HA	2:C:349:MET:CE	2.14	0.77
5:F:148:LEU:HD21	5:F:152:PHE:CB	2.14	0.77
1:A:40:ARG:HE	1:B:33:THR:HG22	1.49	0.77
3:D:1158:VAL:HA	3:D:1161:MET:CE	2.15	0.76
3:D:365:ILE:HD12	3:D:365:ILE:H	1.51	0.76
3:D:1158:VAL:HA	3:D:1161:MET:HE3	1.69	0.75
3:D:278:ARG:O	3:D:281:ILE:HG22	1.86	0.75
3:D:970:THR:HG21	3:D:975:CYS:HB3	1.68	0.75
4:E:94:ALA:O	4:E:98:ILE:HG12	1.87	0.74
1:B:69:VAL:HG12	1:B:128:LEU:HD23	1.69	0.74
5:F:83:TYR:O	5:F:86:LEU:HG	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:83:LEU:CA	1:A:123:MET:HE1	2.17	0.74
2:C:605:MET:CE	2:C:886:LYS:HB3	2.17	0.74
2:C:901:LEU:HD23	2:C:1004:LEU:CD2	2.17	0.74
1:B:226:ASN:OD1	1:B:227:VAL:N	2.20	0.74
2:C:208:PHE:HE1	2:C:218:VAL:HG13	1.52	0.74
3:D:613:SER:O	3:D:636:ARG:HB3	1.87	0.74
3:D:928:ASP:OD1	3:D:939:GLU:HA	1.87	0.74
4:E:37:PRO:HG2	4:E:42:LEU:HD11	1.70	0.74
1:B:79:ASN:O	1:B:123:MET:HE1	1.87	0.74
2:C:972:ASP:OD1	2:C:973:GLY:N	2.20	0.74
3:D:666:THR:HG21	3:D:683:PHE:CE1	2.22	0.74
5:F:145:LEU:HD23	5:F:191:LEU:HD21	1.69	0.74
4:E:55:TYR:HE2	4:E:98:ILE:HG23	1.53	0.74
2:C:457:LEU:HD21	2:C:466:VAL:HG11	1.71	0.73
6:G:20:DT:H2"	6:G:21:DG:C8	2.23	0.73
2:C:577:PRO:O	2:C:578:ARG:HG2	1.88	0.73
2:C:652:ILE:HD11	2:C:682:PRO:HB3	1.68	0.73
1:A:113:PRO:O	1:A:116:VAL:HG22	1.89	0.73
2:C:901:LEU:HD23	2:C:1004:LEU:HD21	1.70	0.73
5:F:148:LEU:HD11	5:F:187:GLY:CA	2.18	0.73
2:C:1117:VAL:HG13	3:D:324:LEU:HD13	1.70	0.73
2:C:44:VAL:O	2:C:627:ARG:NH2	2.22	0.73
2:C:48:LEU:HD22	2:C:446:LYS:HD2	1.70	0.73
3:D:847:LEU:HD12	3:D:847:LEU:H	1.54	0.73
3:D:439:HIS:HB3	3:D:562:SER:OG	1.89	0.72
3:D:992:GLY:HA2	3:D:1264:ILE:HD11	1.69	0.72
3:D:1166:THR:HB	3:D:1206:VAL:HG11	1.71	0.72
1:B:104:GLU:HG3	1:B:127:THR:HG22	1.70	0.72
2:C:419:ALA:O	2:C:423:GLU:HG2	1.89	0.72
3:D:666:THR:HG22	3:D:685:ASN:OD1	1.90	0.72
2:C:517:VAL:HA	2:C:546:GLY:O	1.89	0.72
7:H:5:DT:H2"	7:H:6:DC:C5	2.23	0.72
3:D:210:ASP:O	3:D:214:ARG:HG3	1.89	0.72
5:F:139:THR:O	5:F:143:GLU:HG2	1.88	0.72
1:B:97:LEU:HD13	1:B:110:ILE:HG22	1.70	0.72
3:D:1078:ASP:OD1	3:D:1079:LYS:N	2.23	0.72
2:C:176:SER:CB	2:C:371:ARG:HD2	2.20	0.72
2:C:305:VAL:HG22	2:C:503:PHE:CD2	2.25	0.72
2:C:592:GLU:OE1	2:C:592:GLU:N	2.20	0.72
2:C:842:ILE:CD1	2:C:868:ALA:HB2	2.18	0.72
3:D:759:GLN:HB3	3:D:765:LEU:HD12	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:109:ILE:HD12	5:F:109:ILE:O	1.90	0.72
3:D:1275:THR:HG22	4:E:104:GLU:OE2	1.89	0.72
2:C:302:LEU:HD22	2:C:307:ARG:HH21	1.54	0.71
2:C:554:LEU:HD22	2:C:563:GLU:O	1.90	0.71
2:C:621:GLY:O	2:C:967:SER:HA	1.90	0.71
6:G:18:DG:H2''	6:G:19:DA:C8	2.25	0.71
3:D:602:ALA:HB3	3:D:606:HIS:O	1.89	0.71
2:C:219:ARG:HG2	2:C:224:ARG:HA	1.72	0.71
2:C:920:MET:HE1	3:D:840:PHE:HB2	1.72	0.71
3:D:70:PHE:HB2	3:D:73:ILE:CG1	2.20	0.71
3:D:240:LEU:HD23	3:D:244:LEU:HD13	1.72	0.71
2:C:336:ILE:HA	11:C:1208:HOH:O	1.90	0.71
2:C:341:ARG:HD2	2:C:349:MET:HG3	1.73	0.71
2:C:797:VAL:HG11	2:C:863:VAL:HG11	1.73	0.71
2:C:466:VAL:HG22	6:G:12:DG:C2	2.26	0.71
3:D:327:MET:HG3	3:D:337:THR:HG22	1.73	0.71
3:D:500:ARG:NH2	8:I:10:A:O2'	2.23	0.70
3:D:740:PRO:HD3	3:D:792:HIS:ND1	2.05	0.70
3:D:1122:LEU:HA	3:D:1130:VAL:CG2	2.21	0.70
4:E:55:TYR:CE1	4:E:105:HIS:HB3	2.26	0.70
1:B:2:LEU:HG	1:B:3:ILE:H	1.55	0.70
2:C:605:MET:HB3	2:C:1027:LEU:HD21	1.73	0.70
3:D:218:ARG:O	3:D:222:ILE:HG13	1.90	0.70
1:A:56:ILE:HB	1:A:59:VAL:CG2	2.22	0.70
2:C:84:LEU:CD1	2:C:104:PRO:HG3	2.21	0.70
3:D:816:THR:HG22	3:D:821:LYS:HA	1.73	0.70
3:D:498:LEU:CD2	3:D:543:VAL:HG22	2.21	0.70
2:C:372:LEU:HD23	2:C:506:ILE:HD11	1.72	0.70
2:C:622:THR:HG23	2:C:969:PRO:HA	1.74	0.70
3:D:1170:SER:O	3:D:1173:THR:HG22	1.91	0.70
3:D:271:ASP:O	3:D:275:GLU:HG2	1.91	0.70
2:C:172:GLN:HB2	2:C:430:LEU:CD2	2.22	0.70
2:C:392:ARG:HH21	5:F:47:MET:HG2	1.55	0.69
3:D:1062:TYR:O	3:D:1079:LYS:HA	1.91	0.69
5:F:141:ILE:HD12	5:F:142:LYS:N	2.07	0.69
3:D:1167:ILE:HD12	3:D:1175:PHE:HB3	1.74	0.69
2:C:879:LEU:HD11	2:C:889:ILE:HD11	1.74	0.69
2:C:1083:LEU:HD22	3:D:420:LYS:HZ1	1.56	0.69
2:C:1097:TYR:CE1	3:D:454:PRO:HG3	2.27	0.69
2:C:169:VAL:HG11	2:C:375:VAL:HG23	1.74	0.69
1:B:59:VAL:HG21	1:B:65:THR:O	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:84:VAL:HG11	1:B:200:ASN:OD1	1.93	0.69
2:C:218:VAL:HG23	2:C:228:VAL:HA	1.73	0.69
2:C:287:GLN:O	2:C:291:GLU:HG2	1.93	0.69
3:D:204:GLU:O	3:D:208:ILE:HG13	1.93	0.69
6:G:10:DC:H2'	6:G:11:DT:C1'	2.21	0.69
3:D:583:THR:HG23	3:D:807:ALA:HB2	1.74	0.69
2:C:172:GLN:OE1	2:C:373:ARG:NH2	2.26	0.68
3:D:897:ILE:HD11	3:D:966:LEU:HD12	1.75	0.68
3:D:1230:THR:O	3:D:1234:THR:HG23	1.93	0.68
5:F:85:ILE:HA	6:G:1:DT:C2	2.27	0.68
1:B:75:GLU:O	1:B:79:ASN:ND2	2.26	0.68
3:D:465:HIS:CD2	3:D:482:GLN:HB3	2.28	0.68
3:D:671:VAL:O	3:D:675:GLU:HG3	1.93	0.68
7:H:2:DG:H2''	7:H:3:DC:O4'	1.93	0.68
3:D:915:TYR:HB3	3:D:1143:ARG:HH11	1.58	0.68
6:G:8:DA:C2'	6:G:9:DG:H5''	2.23	0.68
2:C:32:ARG:CD	2:C:967:SER:HB3	2.24	0.68
2:C:172:GLN:HB2	2:C:430:LEU:HD21	1.76	0.68
2:C:593:HIS:HB3	2:C:922:ILE:CD1	2.24	0.68
1:B:128:LEU:HD21	1:B:134:LEU:HB2	1.75	0.68
2:C:202:ARG:HB3	2:C:301:ASP:CB	2.24	0.68
2:C:732:SER:HA	2:C:898:MET:CE	2.24	0.68
3:D:1122:LEU:HD13	3:D:1130:VAL:HG21	1.75	0.68
2:C:855:LEU:HB3	2:C:856:PRO:HD2	1.76	0.68
4:E:39:ILE:HD12	4:E:40:ASP:N	2.09	0.68
4:E:98:ILE:CD1	4:E:103:LEU:HD12	2.23	0.68
3:D:357:LEU:HD21	5:F:63:VAL:HG22	1.76	0.67
5:F:84:ARG:O	5:F:88:ASN:ND2	2.20	0.67
7:H:10:DG:H8	7:H:10:DG:H5''	1.59	0.67
2:C:35:PHE:O	2:C:37:LYS:HD2	1.94	0.67
3:D:12:ILE:HD11	3:D:1220:TRP:CH2	2.29	0.67
3:D:328:VAL:HB	5:F:117:ASN:HD22	1.59	0.67
3:D:1068:PRO:HB2	3:D:1070:ASP:OD1	1.95	0.67
3:D:601:PRO:HA	3:D:608:GLU:CB	2.24	0.67
3:D:824:VAL:HG11	3:D:852:ASN:HA	1.77	0.67
2:C:622:THR:HG22	2:C:623:GLY:H	1.59	0.67
5:F:109:ILE:HD13	5:F:114:LEU:CD2	2.20	0.67
5:F:138:ASP:HB3	5:F:141:ILE:CD1	2.23	0.67
2:C:583:VAL:HG13	2:C:624:MET:CE	2.25	0.67
3:D:65:TYR:HB3	3:D:70:PHE:CE1	2.30	0.67
2:C:776:ALA:O	2:C:785:ARG:NH2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:107:ALA:O	1:B:110:ILE:HG12	1.95	0.67
3:D:525:HIS:O	3:D:528:VAL:HG22	1.95	0.67
1:B:159:ILE:HD12	1:B:159:ILE:H	1.60	0.66
3:D:900:GLU:HA	3:D:959:GLN:HG2	1.77	0.66
2:C:92:ASP:OD1	2:C:93:PHE:N	2.28	0.66
3:D:230:ALA:HB1	3:D:231:PRO:HD2	1.75	0.66
3:D:1053:VAL:HG12	3:D:1103:ASP:O	1.95	0.66
6:G:19:DA:H2'	6:G:20:DT:C7	2.25	0.66
1:A:73:VAL:O	1:A:77:ILE:HG13	1.95	0.66
2:C:642:GLY:O	2:C:689:ARG:HD2	1.95	0.66
3:D:581:MET:CE	3:D:717:LYS:HG3	2.23	0.66
3:D:583:THR:HG23	3:D:807:ALA:CB	2.26	0.66
3:D:1088:VAL:HG23	3:D:1113:GLU:OE2	1.94	0.66
3:D:190:LYS:O	3:D:194:ARG:HG2	1.95	0.66
1:B:124:HIS:HE1	1:B:127:THR:HG23	1.59	0.66
2:C:79:GLY:O	2:C:83:VAL:HG23	1.95	0.66
2:C:341:ARG:HD3	2:C:346:GLN:OE1	1.95	0.66
2:C:565:VAL:HG13	2:C:566:PRO:HD2	1.78	0.66
2:C:457:LEU:HD13	2:C:462:ALA:HB2	1.75	0.66
2:C:940:VAL:HG12	2:C:958:LEU:O	1.95	0.66
3:D:27:GLU:HB2	3:D:94:HIS:CE1	2.31	0.66
1:A:83:LEU:HD23	1:A:123:MET:CE	2.26	0.66
2:C:140:GLU:OE1	2:C:404:GLU:HA	1.96	0.66
3:D:642:PRO:HB3	3:D:662:TRP:CE2	2.31	0.66
5:F:148:LEU:HG	5:F:149:PRO:HD2	1.76	0.66
2:C:231:LEU:HA	2:C:267:ALA:CB	2.26	0.65
3:D:530:GLU:HB2	3:D:578:ARG:HD3	1.78	0.65
3:D:1251:ASN:OD1	3:D:1256:LYS:HD2	1.95	0.65
4:E:59:ARG:NH2	4:E:79:GLY:HA3	2.11	0.65
2:C:331:ASP:O	2:C:335:THR:HG23	1.95	0.65
2:C:928:THR:HG22	2:C:1020:GLY:HA3	1.78	0.65
2:C:534:VAL:HG11	2:C:569:GLU:O	1.95	0.65
3:D:965:VAL:O	3:D:1159:ARG:NH1	2.29	0.65
3:D:1248:LEU:HD12	3:D:1249:LYS:N	2.12	0.65
1:A:9:LEU:HD21	1:B:225:LEU:HD21	1.78	0.65
1:B:71:GLU:HB2	1:B:76:ILE:HD11	1.77	0.65
3:D:599:TYR:HA	3:D:610:GLY:HA3	1.79	0.65
3:D:1104:HIS:NE2	3:D:1106:GLU:OE2	2.29	0.65
5:F:148:LEU:HD12	5:F:191:LEU:HD13	1.78	0.65
1:A:40:ARG:NH1	1:B:29:GLY:O	2.30	0.65
2:C:219:ARG:HA	2:C:226:GLN:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:876:GLY:HA3	2:C:1031:VAL:HG13	1.79	0.65
1:B:72:ASP:O	1:B:76:ILE:HG12	1.97	0.65
2:C:208:PHE:CE1	2:C:218:VAL:HG13	2.32	0.65
2:C:302:LEU:HD12	2:C:302:LEU:O	1.97	0.65
2:C:1082:LEU:HD22	3:D:422:VAL:HG11	1.79	0.65
3:D:65:TYR:HB3	3:D:70:PHE:HE1	1.60	0.65
3:D:874:THR:OG1	3:D:1004:GLY:HA3	1.97	0.65
3:D:166:ARG:HD3	3:D:212:ALA:HB3	1.79	0.65
3:D:866:ARG:HD3	3:D:1010:LEU:O	1.97	0.65
3:D:1062:TYR:CE1	3:D:1082:LYS:HA	2.33	0.65
5:F:148:LEU:HD23	5:F:149:PRO:N	2.12	0.65
2:C:876:GLY:HA3	2:C:1031:VAL:CG1	2.27	0.64
5:F:165:PRO:HG2	5:F:168:GLU:HG3	1.79	0.64
3:D:1010:LEU:HD22	3:D:1028:LEU:HD13	1.77	0.64
3:D:1050:THR:HG22	3:D:1106:GLU:CA	2.26	0.64
5:F:37:LEU:HA	5:F:40:LEU:HD12	1.79	0.64
2:C:341:ARG:HB2	2:C:349:MET:CE	2.27	0.64
1:A:95:MET:HG2	1:A:113:PRO:HD2	1.79	0.64
3:D:191:ALA:HA	3:D:194:ARG:HD3	1.80	0.64
1:B:228:GLU:HG2	1:B:229:ALA:H	1.63	0.64
6:G:19:DA:H2'	6:G:20:DT:H72	1.79	0.64
4:E:55:TYR:CE2	4:E:98:ILE:HG23	2.32	0.64
3:D:935:ASN:OD1	3:D:936:VAL:N	2.29	0.64
3:D:1126:GLY:O	3:D:1130:VAL:HG23	1.96	0.64
7:H:9:DT:C2'	7:H:10:DG:H5''	2.28	0.64
2:C:842:ILE:HD11	2:C:868:ALA:HB2	1.78	0.64
3:D:302:PHE:CE1	3:D:309:PRO:HA	2.33	0.64
3:D:449:LEU:HD11	3:D:476:VAL:HG13	1.80	0.64
2:C:765:ARG:O	2:C:765:ARG:HG2	1.96	0.64
3:D:970:THR:CG2	3:D:975:CYS:HB3	2.27	0.64
1:B:220:GLY:O	1:B:224:GLU:HG3	1.97	0.63
2:C:39:ARG:O	2:C:41:PRO:HD3	1.98	0.63
3:D:895:ARG:HH21	3:D:1128:ARG:HD3	1.64	0.63
5:F:153:ARG:HA	5:F:156:VAL:HG22	1.81	0.63
3:D:601:PRO:CA	3:D:608:GLU:HB3	2.27	0.63
3:D:773:ALA:O	3:D:777:ILE:HG13	1.97	0.63
1:A:71:GLU:N	1:A:71:GLU:OE1	2.31	0.63
2:C:268:LEU:CD1	2:C:290:LEU:HD12	2.29	0.63
3:D:277:LEU:HD21	3:D:292:ALA:HA	1.81	0.63
3:D:599:TYR:CE2	3:D:601:PRO:HD3	2.33	0.63
5:F:36:LEU:O	5:F:40:LEU:HG	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:270:ILE:CG2	3:D:303:GLN:HG2	2.27	0.63
2:C:307:ARG:HH22	2:C:328:THR:HG23	1.62	0.63
2:C:407:THR:CG2	2:C:410:THR:HG23	2.28	0.63
3:D:103:HIS:ND1	3:D:105:TRP:HB2	2.13	0.63
5:F:177:ILE:HD12	5:F:177:ILE:H	1.63	0.63
3:D:103:HIS:HB3	3:D:106:TYR:HD2	1.63	0.63
3:D:114:LEU:HD23	3:D:312:MET:HE1	1.80	0.63
2:C:856:PRO:HG2	2:C:859:VAL:CG2	2.28	0.63
2:C:1040:THR:HG21	5:F:129:GLU:H	1.62	0.63
1:A:40:ARG:NE	1:B:33:THR:HG22	2.14	0.62
1:A:105:VAL:HG23	1:A:128:LEU:HD13	1.80	0.62
2:C:793:GLY:N	2:C:833:VAL:HG13	2.14	0.62
3:D:1118:PRO:HA	3:D:1121:VAL:HG12	1.81	0.62
3:D:499:ASN:HB2	3:D:509:ILE:HG12	1.81	0.62
2:C:268:LEU:HD11	2:C:287:GLN:HA	1.81	0.62
5:F:159:ALA:CB	5:F:184:LEU:HD11	2.29	0.62
2:C:559:ALA:HB3	2:C:561:GLU:HG2	1.80	0.62
1:A:40:ARG:HD3	2:C:1007:GLY:O	2.00	0.62
1:A:95:MET:HE1	1:A:110:ILE:HG21	1.80	0.62
2:C:84:LEU:HD11	2:C:104:PRO:HG3	1.80	0.62
2:C:644:ILE:HG22	2:C:686:ALA:HA	1.82	0.62
3:D:900:GLU:OE1	3:D:959:GLN:NE2	2.33	0.62
3:D:968:CYS:SG	3:D:970:THR:HG23	2.39	0.62
2:C:718:MET:HG2	2:C:1017:VAL:HG11	1.80	0.62
2:C:1083:LEU:HD22	3:D:420:LYS:NZ	2.14	0.62
6:G:14:DC:H2''	6:G:15:DA:C8	2.35	0.62
6:G:16:DC:H2''	6:G:17:DG:C8	2.34	0.62
4:E:31:PRO:HG2	4:E:36:ASN:HB2	1.82	0.62
1:A:29:GLY:O	1:B:40:ARG:NH1	2.33	0.61
3:D:190:LYS:CD	3:D:192:ASP:HB3	2.30	0.61
3:D:826:ASN:OD1	3:D:827:PRO:HD2	2.00	0.61
4:E:55:TYR:HE1	4:E:105:HIS:HB3	1.66	0.61
5:F:150:GLU:HA	5:F:153:ARG:CG	2.29	0.61
2:C:538:ALA:HB1	2:C:577:PRO:HD3	1.81	0.61
2:C:606:GLN:HG2	2:C:1025:MET:HE3	1.81	0.61
3:D:891:CYS:HB3	3:D:970:THR:CG2	2.30	0.61
1:A:112:PRO:CB	1:A:116:VAL:HG23	2.29	0.61
1:A:113:PRO:HD2	1:A:116:VAL:HG21	1.83	0.61
1:B:60:LEU:HB3	1:B:159:ILE:HG22	1.81	0.61
2:C:526:THR:CG2	2:C:529:GLU:HG3	2.29	0.61
3:D:1122:LEU:CD1	3:D:1130:VAL:HG21	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:34:ILE:O	5:F:37:LEU:HG	2.01	0.61
1:A:33:THR:HG21	1:B:37:SER:HA	1.81	0.61
2:C:411:LEU:HD12	2:C:412:ILE:HG13	1.83	0.61
3:D:26:GLY:HA3	3:D:51:ILE:CG2	2.31	0.61
3:D:351:ASN:HD21	3:D:355:LYS:HE3	1.65	0.61
3:D:576:MET:HG3	3:D:577:PRO:HD2	1.83	0.61
3:D:771:ASN:O	3:D:775:VAL:HG23	2.00	0.61
5:F:192:ARG:O	5:F:196:ALA:HB2	2.01	0.61
2:C:605:MET:HE1	2:C:886:LYS:HB3	1.81	0.61
3:D:614:SER:HB2	3:D:615:PRO:HD2	1.82	0.61
3:D:1033:GLU:OE2	3:D:1040:PRO:HA	2.00	0.61
6:G:13:DT:H2''	6:G:14:DC:H5'	1.82	0.61
2:C:77:VAL:HG13	2:C:81:GLU:HB2	1.82	0.61
2:C:515:ASP:O	2:C:517:VAL:HG23	2.00	0.61
2:C:751:ILE:HB	2:C:831:LEU:HD22	1.81	0.60
3:D:1055:LEU:HD21	3:D:1099:LEU:CD2	2.29	0.60
1:B:202:ILE:HD12	1:B:202:ILE:O	2.01	0.60
2:C:799:LYS:NZ	2:C:829:THR:HB	2.14	0.60
2:C:940:VAL:HG11	2:C:958:LEU:HD22	1.82	0.60
3:D:36:TYR:HA	5:F:101:PRO:HG3	1.82	0.60
3:D:177:LEU:O	3:D:177:LEU:HD23	2.01	0.60
1:A:93:VAL:HG22	1:A:113:PRO:HG3	1.84	0.60
3:D:463:LEU:HD23	3:D:465:HIS:HE1	1.66	0.60
3:D:602:ALA:HB1	3:D:606:HIS:CD2	2.37	0.60
3:D:651:PHE:CE2	3:D:660:ASP:HB3	2.36	0.60
2:C:55:PHE:HB2	2:C:154:MET:HE1	1.84	0.60
1:A:42:LEU:HD23	1:A:211:ALA:HB2	1.84	0.60
3:D:436:LEU:O	3:D:717:LYS:NZ	2.34	0.60
1:A:93:VAL:HG11	1:A:116:VAL:HG11	1.83	0.60
3:D:101:VAL:HG13	3:D:375:GLN:OE1	2.02	0.60
4:E:98:ILE:HD13	4:E:103:LEU:HD12	1.81	0.60
1:A:127:THR:C	1:A:128:LEU:HD12	2.22	0.60
2:C:167:ARG:NH1	2:C:431:SER:O	2.35	0.60
2:C:443:LEU:O	2:C:447:ARG:HG3	2.02	0.60
2:C:745:HIS:ND1	2:C:871:ARG:HG3	2.15	0.60
5:F:168:GLU:O	5:F:172:ILE:HG13	2.01	0.60
2:C:548:PHE:CD1	2:C:553:VAL:HG21	2.37	0.60
2:C:305:VAL:HG22	2:C:503:PHE:HD2	1.65	0.60
2:C:1080:GLN:CD	2:C:1109:PRO:HG2	2.22	0.60
4:E:81:LEU:HB3	4:E:102:LEU:HD23	1.83	0.60
2:C:626:LEU:HD12	2:C:705:GLY:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:12:ILE:HG22	3:D:13:GLY:N	2.17	0.59
3:D:105:TRP:CE3	3:D:1234:THR:HG22	2.37	0.59
3:D:287:GLN:O	3:D:291:ARG:HG2	2.02	0.59
3:D:367:VAL:HG12	3:D:371:LYS:HE3	1.84	0.59
3:D:766:ASN:O	3:D:770:ARG:N	2.30	0.59
1:A:40:ARG:NH2	2:C:897:ASP:HB3	2.16	0.59
3:D:248:TYR:HA	3:D:251:TYR:CD2	2.37	0.59
7:H:7:DC:H2''	7:H:8:DG:C8	2.36	0.59
1:B:70:LYS:HE3	1:B:129:ASN:OD1	2.02	0.59
1:B:97:LEU:CB	1:B:110:ILE:HG22	2.31	0.59
1:B:151:GLN:OE1	1:B:151:GLN:N	2.35	0.59
2:C:581:VAL:CG1	2:C:585:THR:HB	2.32	0.59
1:A:66:VAL:O	1:A:69:VAL:HG22	2.02	0.59
2:C:206:LEU:HB2	2:C:220:ILE:HG12	1.83	0.59
2:C:268:LEU:HD13	2:C:290:LEU:HD12	1.85	0.59
3:D:248:TYR:HA	3:D:251:TYR:HD2	1.68	0.59
3:D:448:ALA:HB1	3:D:491:ILE:HD11	1.85	0.59
1:A:62:GLU:O	1:A:73:VAL:HB	2.03	0.59
2:C:269:LEU:HD23	2:C:269:LEU:O	2.03	0.59
2:C:275:LEU:O	2:C:277:PRO:HD3	2.02	0.59
3:D:832:ILE:HG22	3:D:834:ARG:H	1.68	0.59
7:H:9:DT:H2''	7:H:10:DG:H5''	1.84	0.59
1:A:144:ARG:HH12	1:B:2:LEU:HB3	1.68	0.59
2:C:1080:GLN:O	2:C:1084:THR:HG23	2.03	0.59
3:D:191:ALA:HA	3:D:194:ARG:CG	2.33	0.59
3:D:705:PRO:HB3	4:E:40:ASP:OD2	2.02	0.59
1:B:147:VAL:CG1	1:B:166:SER:HB2	2.32	0.59
2:C:97:MET:HE3	2:C:398:MET:HB3	1.85	0.59
2:C:390:MET:O	2:C:393:VAL:HG12	2.03	0.59
2:C:926:LEU:HD22	2:C:979:LEU:CD1	2.33	0.59
3:D:330:LEU:HD22	5:F:113:GLN:HG2	1.83	0.59
3:D:550:GLU:O	3:D:554:GLU:HG3	2.02	0.59
7:H:10:DG:H8	7:H:10:DG:C5'	2.15	0.59
1:B:65:THR:HG22	1:B:66:VAL:H	1.68	0.59
2:C:99:LEU:HD23	2:C:100:SER:N	2.17	0.59
2:C:249:SER:HB2	2:C:252:MET:CB	2.33	0.59
3:D:432:VAL:HB	3:D:536:PHE:CE2	2.38	0.59
6:G:10:DC:H2''	6:G:11:DT:H5'	1.85	0.58
3:D:487:LEU:O	3:D:490:VAL:HG22	2.03	0.58
4:E:32:LEU:O	4:E:35:THR:HG22	2.03	0.58
4:E:100:ALA:CB	4:E:102:LEU:HD13	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:48:LEU:CD2	2:C:446:LYS:HD2	2.33	0.58
1:B:42:LEU:HD23	1:B:211:ALA:HB2	1.85	0.58
2:C:90:ILE:HD12	2:C:391:GLU:CG	2.33	0.58
2:C:565:VAL:HG12	2:C:569:GLU:HB2	1.83	0.58
2:C:611:PRO:HD2	2:C:676:THR:HB	1.85	0.58
4:E:78:VAL:HG22	4:E:79:GLY:H	1.66	0.58
7:H:16:DA:H2'	7:H:17:DG:C8	2.39	0.58
1:A:91:GLU:HG3	1:A:92:PRO:HD2	1.84	0.58
1:B:182:ARG:HH21	3:D:488:GLU:CD	2.07	0.58
2:C:128:PHE:HE1	2:C:147:PHE:HB2	1.69	0.58
2:C:151:PHE:CE2	2:C:383:ILE:HD11	2.26	0.58
2:C:341:ARG:HB2	2:C:349:MET:HE2	1.86	0.58
2:C:606:GLN:HG2	2:C:1025:MET:HE1	1.84	0.58
3:D:75:CYS:O	3:D:79:GLY:HA2	2.03	0.58
2:C:1108:GLU:HG3	2:C:1109:PRO:HD2	1.84	0.58
6:G:19:DA:C2'	6:G:20:DT:H5''	2.17	0.58
1:A:93:VAL:HG22	1:A:94:THR:H	1.69	0.58
1:A:87:SER:HB2	1:A:116:VAL:HG12	1.85	0.58
2:C:652:ILE:HD11	2:C:682:PRO:CB	2.34	0.58
2:C:899:PRO:O	2:C:907:VAL:HG22	2.03	0.58
3:D:925:LEU:HD21	3:D:960:VAL:HG13	1.85	0.58
1:A:147:VAL:CG1	1:A:166:SER:HB2	2.33	0.58
3:D:226:PHE:CE1	3:D:248:TYR:HB3	2.39	0.58
5:F:157:TYR:HD1	5:F:161:VAL:HB	1.68	0.58
1:B:97:LEU:HD13	1:B:110:ILE:CG2	2.34	0.57
2:C:1100:ILE:HG21	3:D:454:PRO:HB2	1.85	0.57
3:D:1164:ARG:CB	3:D:1208:MET:HE2	2.22	0.57
5:F:162:GLU:HG2	5:F:164:PHE:CE2	2.38	0.57
1:A:175:THR:HG22	1:A:195:ASP:HB3	1.85	0.57
2:C:128:PHE:CE1	2:C:147:PHE:HB2	2.38	0.57
2:C:893:LEU:HB2	2:C:898:MET:CE	2.34	0.57
2:C:1046:ILE:CD1	5:F:109:ILE:HD11	2.25	0.57
5:F:22:ASP:O	5:F:26:THR:HG23	2.03	0.57
2:C:392:ARG:NH2	5:F:47:MET:HG2	2.19	0.57
2:C:928:THR:CG2	2:C:1020:GLY:HA3	2.35	0.57
2:C:230:VAL:O	2:C:231:LEU:HD23	2.04	0.57
3:D:111:PRO:HA	6:G:20:DT:OP1	2.04	0.57
3:D:430:ILE:CG2	3:D:541:MET:HG3	2.33	0.57
3:D:277:LEU:HD21	3:D:292:ALA:CA	2.33	0.57
3:D:1056:GLU:HB2	3:D:1063:LYS:HB3	1.85	0.57
7:H:13:DT:H2'	7:H:14:DC:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:135:ASN:OD1	2:C:138:THR:N	2.38	0.57
2:C:575:VAL:HG22	2:C:579:GLN:NE2	2.19	0.57
2:C:1131:VAL:O	2:C:1138:ALA:HA	2.05	0.57
3:D:327:MET:HG3	3:D:337:THR:CG2	2.35	0.57
3:D:741:ARG:O	3:D:745:ILE:HG13	2.04	0.57
1:B:145:GLY:HA2	1:B:169:SER:HB2	1.86	0.57
2:C:652:ILE:CD1	2:C:682:PRO:HB3	2.35	0.57
3:D:912:ARG:HD2	3:D:953:LEU:HD21	1.86	0.57
5:F:150:GLU:CA	5:F:153:ARG:HG2	2.33	0.57
3:D:104:ILE:HB	3:D:379:ASP:OD1	2.05	0.57
3:D:170:LEU:HD21	3:D:209:ARG:HG3	1.85	0.57
5:F:87:THR:O	5:F:91:ILE:HG12	2.05	0.57
1:B:10:SER:HB2	1:B:22:VAL:CG2	2.35	0.57
2:C:719:PRO:O	3:D:725:THR:HA	2.05	0.57
3:D:424:TYR:CD2	3:D:547:LEU:HD11	2.40	0.57
7:H:2:DG:H2''	7:H:3:DC:C4'	2.35	0.57
2:C:271:ILE:HD12	2:C:272:TYR:N	2.20	0.57
2:C:1062:PHE:CZ	2:C:1070:MET:HE3	2.39	0.57
3:D:931:ASP:HB3	3:D:957:ILE:HD11	1.87	0.56
3:D:1006:PRO:HG3	3:D:1149:ILE:HD11	1.86	0.56
1:A:62:GLU:HG2	1:A:162:ILE:HG23	1.87	0.56
1:A:147:VAL:HG12	1:A:166:SER:HB2	1.86	0.56
2:C:97:MET:CE	2:C:398:MET:HB3	2.35	0.56
2:C:1108:GLU:HG3	2:C:1109:PRO:CD	2.36	0.56
4:E:46:VAL:HG12	4:E:47:SER:H	1.70	0.56
1:A:38:LEU:O	1:A:42:LEU:HG	2.06	0.56
2:C:97:MET:HE1	2:C:398:MET:O	2.05	0.56
3:D:12:ILE:HG22	3:D:13:GLY:H	1.70	0.56
3:D:328:VAL:HB	5:F:117:ASN:ND2	2.20	0.56
3:D:599:TYR:HB2	3:D:610:GLY:HA3	1.87	0.56
3:D:656:TRP:CH2	3:D:658:PRO:HA	2.40	0.56
3:D:897:ILE:CD1	3:D:966:LEU:HD12	2.35	0.56
6:G:14:DC:H2''	6:G:15:DA:H8	1.69	0.56
2:C:565:VAL:CG1	2:C:566:PRO:HD2	2.35	0.56
3:D:812:THR:HG23	3:D:815:ARG:HH21	1.71	0.56
2:C:32:ARG:CZ	2:C:965:ILE:HG23	2.35	0.56
2:C:466:VAL:HG22	6:G:12:DG:N2	2.21	0.56
3:D:324:LEU:HD23	3:D:324:LEU:N	2.19	0.56
3:D:573:PRO:HG2	3:D:576:MET:CE	2.36	0.56
3:D:937:ILE:HG13	3:D:938:VAL:HG23	1.86	0.56
2:C:466:VAL:HG13	6:G:12:DG:N1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:366:ILE:HD11	5:F:62:MET:HG2	1.88	0.56
3:D:1086:LEU:HA	3:D:1112:MET:HG2	1.88	0.56
5:F:152:PHE:O	5:F:156:VAL:HG13	2.05	0.56
2:C:227:PRO:HB2	2:C:230:VAL:HG13	1.86	0.56
3:D:170:LEU:HD11	3:D:209:ARG:HG2	1.86	0.56
3:D:1054:ARG:HA	3:D:1101:ASP:OD1	2.04	0.56
1:B:64:THR:HG23	1:B:65:THR:H	1.70	0.56
1:B:99:LYS:HD3	1:B:105:VAL:HG22	1.86	0.56
5:F:146:GLN:HA	5:F:153:ARG:NH1	2.21	0.56
1:B:83:LEU:HD12	1:B:84:VAL:H	1.71	0.56
3:D:952:LEU:O	3:D:957:ILE:HG12	2.06	0.56
5:F:44:ALA:HB1	5:F:57:LEU:HD12	1.86	0.56
5:F:190:GLN:O	5:F:194:LEU:HD12	2.06	0.56
7:H:13:DT:H2'	7:H:14:DC:H6	1.71	0.56
2:C:32:ARG:HD3	2:C:967:SER:HB3	1.88	0.55
2:C:807:GLU:OE2	3:D:56:ARG:NH2	2.38	0.55
3:D:353:ARG:HB3	3:D:370:GLU:OE2	2.07	0.55
2:C:364:ILE:HD12	2:C:364:ILE:N	2.21	0.55
2:C:185:ILE:CG2	2:C:190:ASP:HA	2.36	0.55
2:C:227:PRO:O	2:C:230:VAL:HG22	2.06	0.55
2:C:678:ALA:HA	2:C:700:PRO:HG3	1.88	0.55
3:D:576:MET:O	3:D:578:ARG:HG2	2.07	0.55
2:C:272:TYR:CE1	2:C:276:ARG:HG2	2.41	0.55
2:C:484:GLU:OE2	2:C:601:MET:HG2	2.06	0.55
2:C:575:VAL:H	2:C:579:GLN:HE22	1.52	0.55
3:D:981:ARG:HD3	3:D:986:GLY:HA2	1.88	0.55
4:E:37:PRO:HG2	4:E:42:LEU:CD1	2.36	0.55
1:B:50:ALA:HA	1:B:85:VAL:CG1	2.36	0.55
2:C:448:ARG:HD3	2:C:491:ILE:CG2	2.37	0.55
2:C:791:ARG:O	2:C:833:VAL:HG11	2.06	0.55
2:C:1046:ILE:HD11	5:F:109:ILE:CD1	2.27	0.55
3:D:56:ARG:HD3	3:D:59:GLU:OE1	2.07	0.55
3:D:177:LEU:HD12	3:D:201:GLY:HA3	1.87	0.55
3:D:893:THR:HG22	3:D:963:ARG:HH21	1.70	0.55
6:G:0:DG:H2''	6:G:1:DT:O5'	2.05	0.55
2:C:84:LEU:HD12	2:C:104:PRO:HG3	1.89	0.55
2:C:565:VAL:CG1	2:C:569:GLU:HB2	2.37	0.55
2:C:798:GLY:HA2	2:C:830:SER:OG	2.07	0.55
3:D:193:ALA:O	3:D:197:VAL:HG23	2.07	0.55
3:D:300:ALA:O	3:D:304:GLN:HG2	2.07	0.55
4:E:31:PRO:CB	4:E:35:THR:HG23	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:177:PRO:HB2	2:C:306:GLY:CA	2.36	0.55
3:D:124:ASP:HB3	3:D:234:LEU:CD2	2.37	0.55
3:D:225:THR:HG22	3:D:244:LEU:HD21	1.89	0.55
3:D:505:HIS:CE1	3:D:507:LEU:HB2	2.42	0.55
4:E:100:ALA:HB3	4:E:102:LEU:HD13	1.88	0.55
2:C:172:GLN:O	2:C:372:LEU:HA	2.07	0.55
1:A:144:ARG:NH1	1:B:2:LEU:HB3	2.22	0.55
2:C:120:ASP:HA	2:C:164:GLY:HA3	1.89	0.55
2:C:638:ALA:CA	2:C:696:ILE:HD11	2.37	0.55
3:D:47:PHE:O	3:D:88:ARG:NH2	2.40	0.55
3:D:119:ASP:HB2	3:D:295:ARG:NH1	2.21	0.55
3:D:320:ILE:HG12	3:D:321:PRO:HD2	1.88	0.55
3:D:936:VAL:HG13	3:D:936:VAL:O	2.06	0.55
4:E:59:ARG:HG2	4:E:103:LEU:HD11	1.88	0.54
5:F:153:ARG:O	5:F:156:VAL:HG22	2.07	0.54
5:F:191:LEU:HA	5:F:194:LEU:CD1	2.35	0.54
5:F:191:LEU:O	5:F:195:LEU:HB2	2.07	0.54
2:C:32:ARG:HG2	2:C:967:SER:HB3	1.90	0.54
2:C:720:TRP:HA	3:D:725:THR:HG23	1.89	0.54
2:C:739:ASP:OD1	2:C:872:LYS:HE2	2.07	0.54
3:D:1050:THR:HA	3:D:1105:VAL:O	2.07	0.54
1:B:69:VAL:CG1	1:B:128:LEU:HD23	2.36	0.54
1:B:228:GLU:HG2	1:B:229:ALA:N	2.21	0.54
2:C:372:LEU:CD2	2:C:506:ILE:HD11	2.38	0.54
3:D:642:PRO:HB3	3:D:662:TRP:CZ2	2.43	0.54
5:F:148:LEU:HD12	5:F:191:LEU:CD1	2.37	0.54
1:A:7:PRO:O	1:B:221:LEU:HD21	2.07	0.54
3:D:104:ILE:HD12	3:D:379:ASP:CB	2.36	0.54
3:D:689:HIS:O	3:D:693:GLN:HG3	2.08	0.54
5:F:159:ALA:HB1	5:F:184:LEU:HD11	1.90	0.54
1:B:95:MET:HG2	1:B:113:PRO:HD2	1.88	0.54
2:C:208:PHE:CE1	2:C:218:VAL:HG22	2.43	0.54
2:C:1036:HIS:CD2	2:C:1054:LYS:HA	2.43	0.54
3:D:191:ALA:HA	3:D:194:ARG:CD	2.38	0.54
7:H:3:DC:H2"	7:H:4:DA:N7	2.21	0.54
2:C:279:GLU:HG3	2:C:280:PRO:HD2	1.88	0.54
2:C:394:VAL:HG22	2:C:411:LEU:O	2.07	0.54
2:C:435:ASP:HA	2:C:674:HIS:NE2	2.23	0.54
3:D:4:VAL:HG12	3:D:6:PHE:HD2	1.72	0.54
3:D:155:MET:O	3:D:159:ARG:HG3	2.07	0.54
3:D:424:TYR:CE2	3:D:547:LEU:HD11	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:693:GLN:O	3:D:697:ILE:HG13	2.08	0.54
3:D:1122:LEU:HA	3:D:1130:VAL:HG21	1.88	0.54
2:C:135:ASN:CB	2:C:138:THR:HG22	2.32	0.54
2:C:581:VAL:HG12	2:C:585:THR:HB	1.89	0.54
2:C:732:SER:HA	2:C:898:MET:HE1	1.89	0.54
2:C:792:ASP:OD1	2:C:792:ASP:N	2.40	0.54
2:C:922:ILE:HD11	3:D:840:PHE:O	2.08	0.54
3:D:912:ARG:HD2	3:D:953:LEU:CD2	2.38	0.54
3:D:925:LEU:HD23	3:D:961:LYS:O	2.07	0.54
2:C:372:LEU:HD12	2:C:372:LEU:O	2.08	0.54
5:F:45:LEU:O	5:F:45:LEU:HD23	2.08	0.54
1:A:159:ILE:HD12	1:A:159:ILE:N	2.23	0.53
2:C:514:VAL:O	2:C:517:VAL:HB	2.09	0.53
2:C:707:MET:HE1	2:C:709:LEU:HD21	1.89	0.53
2:C:732:SER:HA	2:C:898:MET:HE3	1.90	0.53
5:F:148:LEU:HD23	5:F:149:PRO:CD	2.38	0.53
1:A:212:GLY:O	1:A:216:VAL:HG23	2.08	0.53
1:B:97:LEU:CD1	1:B:110:ILE:HG22	2.37	0.53
2:C:74:VAL:O	2:C:76:PRO:HD3	2.07	0.53
3:D:573:PRO:HG2	3:D:576:MET:HE1	1.90	0.53
3:D:577:PRO:HA	3:D:581:MET:SD	2.48	0.53
5:F:172:ILE:HD12	5:F:173:MET:N	2.22	0.53
2:C:949:TRP:CZ3	2:C:981:GLY:HA3	2.43	0.53
3:D:327:MET:CG	3:D:337:THR:HG22	2.36	0.53
3:D:407:LYS:O	3:D:411:GLY:HA3	2.08	0.53
3:D:766:ASN:HB3	3:D:769:GLU:CB	2.38	0.53
3:D:903:GLU:O	3:D:911:ILE:HG13	2.07	0.53
3:D:1086:LEU:HD13	3:D:1099:LEU:HD23	1.90	0.53
1:A:138:LEU:HD12	1:A:138:LEU:N	2.23	0.53
1:B:54:ILE:HD11	1:B:162:ILE:CD1	2.31	0.53
3:D:118:LEU:O	3:D:120:LEU:HD13	2.08	0.53
3:D:507:LEU:HB3	3:D:531:ALA:HB1	1.90	0.53
1:A:97:LEU:HD12	1:A:110:ILE:HG12	1.91	0.53
2:C:201:SER:HB2	2:C:303:ALA:CA	2.39	0.53
2:C:272:TYR:HB2	2:C:286:ALA:HB2	1.88	0.53
2:C:618:PRO:HB3	2:C:1023:TYR:CD2	2.43	0.53
3:D:366:ILE:CD1	5:F:62:MET:HG2	2.38	0.53
3:D:725:THR:HB	3:D:726:ARG:NH1	2.24	0.53
2:C:268:LEU:HD11	2:C:287:GLN:CA	2.38	0.53
3:D:362:ALA:HB1	3:D:363:PRO:HD2	1.90	0.53
2:C:284:GLU:O	2:C:288:THR:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:383:ILE:HG12	2:C:421:ILE:HD11	1.89	0.53
2:C:444:THR:HG22	11:C:1209:HOH:O	2.08	0.53
3:D:1088:VAL:HG12	3:D:1088:VAL:O	2.08	0.53
1:B:94:THR:O	1:B:113:PRO:HG3	2.08	0.53
1:B:196:VAL:HG22	1:B:198:THR:HG23	1.90	0.53
2:C:279:GLU:CG	2:C:280:PRO:HD2	2.38	0.53
2:C:375:VAL:HA	2:C:378:LEU:HD12	1.90	0.53
2:C:383:ILE:O	2:C:387:MET:HG2	2.09	0.53
2:C:403:VAL:HG22	2:C:404:GLU:N	2.24	0.53
2:C:854:GLU:C	2:C:855:LEU:HD12	2.29	0.53
2:C:916:VAL:HB	2:C:917:PRO:HD3	1.91	0.53
3:D:89:ARG:HG2	3:D:323:GLU:CB	2.37	0.53
3:D:581:MET:HE2	3:D:717:LYS:CA	2.35	0.53
3:D:1051:GLY:HA2	3:D:1069:ASP:OD1	2.08	0.53
3:D:1139:GLN:O	3:D:1143:ARG:HG3	2.08	0.53
6:G:0:DG:OP1	6:G:0:DG:H3'	2.09	0.53
3:D:143:MET:HG2	3:D:251:TYR:CE1	2.44	0.53
1:B:176:TYR:HB3	1:B:194:LEU:HD23	1.91	0.53
2:C:368:GLY:HA3	2:C:528:ASP:OD1	2.09	0.53
2:C:1082:LEU:HD23	2:C:1086:LYS:HD2	1.91	0.53
3:D:983:MET:HE1	3:D:1150:HIS:CD2	2.44	0.53
5:F:148:LEU:HD22	5:F:153:ARG:N	2.23	0.53
1:A:33:THR:HG22	1:B:37:SER:OG	2.08	0.52
2:C:55:PHE:HB2	2:C:154:MET:CE	2.39	0.52
2:C:618:PRO:HB3	2:C:1023:TYR:CE2	2.44	0.52
3:D:1162:LEU:HD21	3:D:1207:LEU:HD13	1.90	0.52
1:B:182:ARG:HA	1:B:186:ARG:O	2.10	0.52
2:C:283:LYS:O	2:C:283:LYS:HD3	2.10	0.52
2:C:803:LYS:HB3	2:C:825:GLU:O	2.09	0.52
2:C:975:GLN:NE2	11:C:1201:HOH:O	2.23	0.52
3:D:12:ILE:HD11	3:D:1220:TRP:CE3	2.44	0.52
3:D:14:LEU:HD12	3:D:14:LEU:H	1.73	0.52
3:D:539:ASP:OD1	3:D:539:ASP:N	2.42	0.52
3:D:901:LEU:O	3:D:953:LEU:HD11	2.09	0.52
6:G:4:DT:H2''	6:G:5:DG:OP1	2.07	0.52
2:C:950:ALA:O	2:C:954:PRO:HD2	2.10	0.52
3:D:817:LEU:O	3:D:839:SER:HB2	2.08	0.52
5:F:150:GLU:HA	5:F:153:ARG:NE	2.24	0.52
2:C:80:LEU:O	2:C:84:LEU:HG	2.09	0.52
3:D:1107:VAL:HG23	3:D:1108:GLY:H	1.74	0.52
3:D:1167:ILE:CD1	3:D:1175:PHE:HB3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1272:VAL:HG22	4:E:105:HIS:HB3	1.91	0.52
5:F:77:ASN:ND2	6:G:4:DT:OP1	2.43	0.52
7:H:9:DT:H2'	7:H:10:DG:C8	2.44	0.52
1:B:39:ARG:HG3	1:B:174:VAL:HG12	1.90	0.52
2:C:638:ALA:HB2	2:C:696:ILE:HD11	1.91	0.52
3:D:749:TYR:CG	3:D:781:ALA:HB2	2.44	0.52
3:D:864:ALA:O	3:D:867:THR:HG22	2.08	0.52
3:D:930:VAL:HG12	3:D:936:VAL:CA	2.24	0.52
2:C:903:ASP:OD2	2:C:905:THR:OG1	2.22	0.52
2:C:913:THR:HG23	3:D:731:VAL:HG23	1.91	0.52
3:D:412:ARG:HG3	3:D:417:LEU:CD2	2.39	0.52
2:C:134:ILE:HG12	2:C:141:ILE:HG12	1.91	0.52
2:C:413:ASN:OD1	2:C:415:ARG:HG3	2.09	0.52
2:C:797:VAL:HG11	2:C:863:VAL:CG1	2.39	0.52
3:D:240:LEU:CD2	3:D:244:LEU:HD13	2.40	0.52
3:D:759:GLN:HB3	3:D:765:LEU:CD1	2.38	0.52
2:C:921:ASN:O	2:C:924:GLN:HG2	2.10	0.52
3:D:87:VAL:HA	3:D:90:GLU:CG	2.40	0.52
3:D:600:GLN:O	3:D:608:GLU:HA	2.10	0.52
4:E:86:LEU:HD12	4:E:86:LEU:H	1.74	0.52
5:F:148:LEU:CG	5:F:149:PRO:HD2	2.40	0.52
2:C:765:ARG:NH1	2:C:778:LEU:O	2.43	0.52
2:C:783:ILE:HG22	2:C:844:ILE:HD13	1.92	0.52
3:D:588:LEU:O	3:D:669:GLY:HA3	2.09	0.52
3:D:736:VAL:HG12	3:D:841:ARG:HD2	1.91	0.52
3:D:945:GLY:O	3:D:949:ILE:HG12	2.10	0.52
3:D:960:VAL:HG12	3:D:961:LYS:N	2.25	0.52
5:F:32:ASP:O	5:F:35:PRO:HD2	2.09	0.52
6:G:18:DG:H2''	6:G:19:DA:N7	2.24	0.52
2:C:775:LEU:HD12	2:C:775:LEU:N	2.25	0.52
2:C:791:ARG:N	2:C:794:ASP:OD2	2.41	0.52
3:D:278:ARG:HA	3:D:281:ILE:HG22	1.91	0.52
3:D:465:HIS:HD2	3:D:482:GLN:HB3	1.74	0.52
3:D:730:THR:HG22	3:D:731:VAL:N	2.24	0.52
1:B:124:HIS:CE1	1:B:127:THR:HG23	2.41	0.51
3:D:505:HIS:CD2	3:D:1005:GLU:HG3	2.46	0.51
1:B:38:LEU:HD23	1:B:215:LEU:CD1	2.39	0.51
1:B:65:THR:HG22	1:B:66:VAL:N	2.24	0.51
1:B:74:THR:O	1:B:78:LEU:HG	2.10	0.51
1:B:119:HIS:C	1:B:121:PRO:HD3	2.31	0.51
2:C:534:VAL:HG13	2:C:571:ASP:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:101:VAL:HG13	3:D:375:GLN:CD	2.30	0.51
2:C:804:GLY:N	2:C:807:GLU:OE1	2.41	0.51
3:D:710:ALA:O	3:D:713:VAL:HG22	2.10	0.51
5:F:154:MET:HG3	5:F:158:TYR:CE2	2.45	0.51
1:B:175:THR:CG2	1:B:195:ASP:HB3	2.41	0.51
2:C:638:ALA:HA	2:C:696:ILE:HD11	1.91	0.51
2:C:888:VAL:HG22	3:D:536:PHE:O	2.10	0.51
2:C:898:MET:HG2	2:C:907:VAL:O	2.10	0.51
3:D:456:VAL:HG13	3:D:476:VAL:HG21	1.92	0.51
1:B:21:PHE:HE1	1:B:196:VAL:HG11	1.76	0.51
3:D:717:LYS:HE3	3:D:718:ASP:OD1	2.11	0.51
2:C:968:THR:HG23	2:C:968:THR:O	2.11	0.51
2:C:1073:TYR:CE2	3:D:506:ARG:HB2	2.46	0.51
1:B:218:LEU:HA	1:B:221:LEU:HD13	1.93	0.51
3:D:181:LEU:HD13	3:D:198:ARG:HH21	1.76	0.51
6:G:13:DT:H2'	6:G:14:DC:C6	2.46	0.51
1:A:110:ILE:O	1:A:112:PRO:HD3	2.11	0.51
3:D:925:LEU:HD22	3:D:927:THR:O	2.11	0.51
8:I:7:U:H2'	8:I:8:C:O4'	2.10	0.51
1:B:97:LEU:CG	1:B:110:ILE:HG22	2.41	0.51
2:C:268:LEU:HD11	2:C:287:GLN:N	2.26	0.51
2:C:312:LYS:HE3	2:C:312:LYS:CA	2.36	0.51
2:C:465:GLU:HG2	6:G:12:DG:H21	1.76	0.51
3:D:119:ASP:HB2	3:D:295:ARG:CZ	2.41	0.51
3:D:599:TYR:OH	3:D:601:PRO:HB3	2.10	0.51
3:D:1062:TYR:CE2	3:D:1086:LEU:HD21	2.46	0.51
5:F:85:ILE:HA	6:G:1:DT:O2	2.11	0.51
5:F:86:LEU:HD12	5:F:87:THR:N	2.26	0.51
2:C:644:ILE:HD12	2:C:654:VAL:HG12	1.92	0.50
2:C:885:ASN:HD21	2:C:1022:MET:CE	2.24	0.50
3:D:82:VAL:O	3:D:82:VAL:HG13	2.11	0.50
3:D:87:VAL:HA	3:D:90:GLU:HG2	1.92	0.50
3:D:351:ASN:ND2	3:D:355:LYS:HE3	2.26	0.50
3:D:849:TYR:O	3:D:853:THR:HG23	2.11	0.50
1:A:99:LYS:HE3	1:A:109:ASP:OD2	2.10	0.50
2:C:129:VAL:HG21	2:C:148:MET:HE3	1.93	0.50
2:C:897:ASP:HB2	2:C:1008:ARG:HG3	1.93	0.50
2:C:937:GLY:C	2:C:987:LEU:HG	2.32	0.50
2:C:971:PHE:CE1	3:D:846:VAL:HA	2.46	0.50
3:D:760:PHE:HE2	3:D:767:HIS:HA	1.77	0.50
3:D:983:MET:CE	3:D:1152:LYS:HE3	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1087:ARG:N	3:D:1112:MET:HA	2.25	0.50
7:H:10:DG:H5''	7:H:10:DG:C8	2.44	0.50
1:B:96:TYR:O	1:B:111:VAL:HG12	2.12	0.50
2:C:554:LEU:HD13	2:C:555:VAL:N	2.26	0.50
5:F:49:ARG:HG3	5:F:49:ARG:O	2.11	0.50
2:C:271:ILE:HG12	2:C:290:LEU:HD11	1.93	0.50
2:C:510:TYR:HB3	2:C:572:TYR:HB3	1.93	0.50
2:C:871:ARG:HD3	2:C:1032:ASP:OD2	2.11	0.50
3:D:641:ARG:HG2	3:D:682:PRO:HA	1.93	0.50
1:A:32:TYR:CE1	1:A:178:VAL:HG22	2.46	0.50
3:D:392:THR:HB	3:D:396:ASN:HA	1.94	0.50
3:D:1158:VAL:HA	3:D:1161:MET:HE2	1.93	0.50
1:A:111:VAL:HG23	1:A:111:VAL:O	2.12	0.50
2:C:275:LEU:O	2:C:275:LEU:HD23	2.12	0.50
3:D:627:LEU:HD11	3:D:633:ILE:HG21	1.93	0.50
3:D:880:VAL:HG21	3:D:1210:ILE:HA	1.94	0.50
1:B:43:LEU:HD11	1:B:174:VAL:CB	2.39	0.50
2:C:341:ARG:HB2	2:C:349:MET:HE1	1.92	0.50
3:D:756:VAL:HG21	3:D:777:ILE:HD11	1.93	0.50
3:D:823:LEU:CD2	3:D:835:PRO:HB3	2.35	0.50
3:D:874:THR:O	3:D:878:VAL:HG23	2.12	0.50
3:D:887:ARG:NH1	3:D:972:THR:OG1	2.45	0.50
3:D:1274:PRO:HB3	4:E:81:LEU:HD11	1.93	0.50
5:F:148:LEU:HD11	5:F:187:GLY:HA3	1.94	0.49
1:A:219:PHE:HE1	1:B:38:LEU:HG	1.77	0.49
5:F:29:PHE:HB2	5:F:69:PHE:CZ	2.48	0.49
1:A:159:ILE:O	1:A:159:ILE:HG22	2.12	0.49
1:A:181:THR:O	1:A:188:ASP:HA	2.12	0.49
1:B:192:LEU:HD12	1:B:193:ILE:N	2.27	0.49
2:C:783:ILE:CG2	2:C:844:ILE:HD13	2.42	0.49
3:D:57:ASP:HB3	3:D:58:TRP:CD1	2.48	0.49
2:C:615:SER:OG	2:C:702:THR:O	2.30	0.49
3:D:778:TRP:CD2	3:D:835:PRO:HG3	2.47	0.49
3:D:1062:TYR:HE1	3:D:1082:LYS:HA	1.76	0.49
2:C:901:LEU:HD23	2:C:1004:LEU:HD23	1.91	0.49
3:D:1087:ARG:H	3:D:1112:MET:HA	1.76	0.49
1:A:84:VAL:HG12	1:A:120:ASN:ND2	2.28	0.49
2:C:36:ALA:HA	2:C:972:ASP:OD1	2.13	0.49
2:C:536:ALA:HA	2:C:555:VAL:HG12	1.93	0.49
2:C:605:MET:HE3	2:C:886:LYS:HB3	1.95	0.49
2:C:1100:ILE:CG2	3:D:454:PRO:HB2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:88:ARG:O	3:D:321:PRO:HB3	2.13	0.49
3:D:1251:ASN:HA	3:D:1254:ILE:HG12	1.94	0.49
4:E:43:LEU:HD12	4:E:44:ASP:N	2.27	0.49
3:D:826:ASN:CG	3:D:827:PRO:HD2	2.33	0.49
2:C:610:VAL:HG12	2:C:1028:HIS:HB2	1.95	0.49
2:C:829:THR:HG21	5:F:119:GLU:O	2.13	0.49
3:D:347:VAL:HG22	3:D:377:SER:OG	2.12	0.49
3:D:357:LEU:CD2	5:F:63:VAL:HG22	2.41	0.49
1:A:42:LEU:CD2	1:A:211:ALA:HB2	2.43	0.49
2:C:372:LEU:HD22	2:C:449:LEU:HD22	1.95	0.49
2:C:790:VAL:HG22	2:C:839:GLY:O	2.13	0.49
3:D:397:ARG:NH1	5:F:107:GLU:HG2	2.28	0.49
3:D:463:LEU:N	3:D:463:LEU:HD12	2.28	0.49
3:D:893:THR:HG22	3:D:963:ARG:NH2	2.28	0.49
3:D:914:PRO:HG2	3:D:915:TYR:CD1	2.48	0.49
1:A:85:VAL:HG23	1:A:117:THR:O	2.12	0.48
1:A:159:ILE:HD13	2:C:785:ARG:HH12	1.77	0.48
2:C:731:LEU:HD11	2:C:879:LEU:HD11	1.95	0.48
2:C:1039:SER:HB3	3:D:450:GLU:O	2.13	0.48
3:D:367:VAL:O	3:D:371:LYS:HG3	2.12	0.48
1:A:93:VAL:HG22	1:A:94:THR:N	2.28	0.48
2:C:341:ARG:CD	2:C:349:MET:HG3	2.41	0.48
3:D:790:ARG:HG3	3:D:790:ARG:NH1	2.27	0.48
4:E:93:ILE:O	4:E:97:GLU:HG3	2.12	0.48
5:F:148:LEU:CD1	5:F:187:GLY:HA2	2.39	0.48
1:B:42:LEU:O	1:B:171:VAL:HG21	2.13	0.48
2:C:583:VAL:HG13	2:C:624:MET:HE3	1.93	0.48
2:C:611:PRO:HA	2:C:701:CYS:SG	2.53	0.48
2:C:1097:TYR:CE2	5:F:129:GLU:HG3	2.48	0.48
3:D:480:ARG:O	3:D:483:VAL:HG22	2.13	0.48
4:E:82:VAL:HG12	4:E:83:GLU:N	2.29	0.48
5:F:177:ILE:HD12	5:F:177:ILE:N	2.28	0.48
1:A:147:VAL:HG13	1:A:147:VAL:O	2.13	0.48
1:B:158:GLU:OE1	1:B:158:GLU:HA	2.13	0.48
2:C:90:ILE:HG21	2:C:394:VAL:CG1	2.43	0.48
2:C:332:VAL:O	2:C:336:ILE:HG12	2.13	0.48
2:C:430:LEU:N	2:C:430:LEU:HD12	2.28	0.48
2:C:534:VAL:HG13	2:C:534:VAL:O	2.13	0.48
3:D:104:ILE:CD1	3:D:379:ASP:HB3	2.39	0.48
3:D:114:LEU:CD2	3:D:312:MET:HE1	2.43	0.48
3:D:114:LEU:CB	3:D:125:LEU:HD21	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:599:TYR:CA	3:D:610:GLY:HA3	2.43	0.48
1:B:146:TYR:O	3:D:624:ARG:NE	2.46	0.48
2:C:536:ALA:HB2	2:C:570:VAL:HG11	1.95	0.48
2:C:754:ARG:HG2	5:F:120:HIS:HD2	1.79	0.48
3:D:102:THR:OG1	3:D:375:GLN:NE2	2.46	0.48
2:C:206:LEU:CB	2:C:220:ILE:HG12	2.43	0.48
2:C:1083:LEU:CD2	3:D:420:LYS:HZ1	2.26	0.48
3:D:280:VAL:HA	3:D:283:ASN:HB2	1.96	0.48
3:D:1027:GLY:O	3:D:1030:ARG:N	2.45	0.48
5:F:100:GLN:N	5:F:101:PRO:HA	2.28	0.48
5:F:145:LEU:CD2	5:F:191:LEU:HD21	2.43	0.48
1:A:219:PHE:CE1	1:B:215:LEU:HD13	2.48	0.48
1:B:77:ILE:HG22	1:B:81:LYS:HE2	1.94	0.48
2:C:1044:SER:O	2:C:1048:GLN:HA	2.14	0.48
3:D:1035:PHE:CE1	3:D:1157:ILE:HG21	2.49	0.48
2:C:282:THR:HG22	2:C:283:LYS:N	2.28	0.48
3:D:185:GLU:HG2	3:D:194:ARG:NH1	2.29	0.48
3:D:460:LEU:HD12	3:D:486:VAL:HG21	1.95	0.48
3:D:525:HIS:CE1	3:D:527:LEU:HB2	2.49	0.48
3:D:1164:ARG:HD2	3:D:1208:MET:HE1	1.96	0.48
1:B:171:VAL:HG12	1:B:198:THR:HG22	1.96	0.48
2:C:364:ILE:HD12	2:C:364:ILE:H	1.78	0.48
2:C:622:THR:N	2:C:625:GLU:OE2	2.46	0.48
3:D:67:ARG:HG3	3:D:69:ARG:H	1.79	0.48
1:B:97:LEU:HB3	1:B:136:VAL:CG1	2.43	0.48
2:C:671:ARG:HE	2:C:747:GLU:HA	1.79	0.48
2:C:897:ASP:HB2	2:C:1008:ARG:CG	2.44	0.48
3:D:115:GLY:O	3:D:119:ASP:N	2.46	0.48
1:B:111:VAL:O	1:B:111:VAL:HG13	2.14	0.47
2:C:448:ARG:O	2:C:449:LEU:HD23	2.14	0.47
2:C:644:ILE:HD13	2:C:690:VAL:HG13	1.96	0.47
2:C:900:PHE:CZ	2:C:1005:PHE:HB2	2.48	0.47
2:C:940:VAL:HG11	2:C:958:LEU:CD2	2.44	0.47
2:C:1062:PHE:HZ	2:C:1070:MET:HE3	1.79	0.47
2:C:1091:VAL:O	2:C:1095:LYS:HG3	2.13	0.47
3:D:108:LYS:HG3	3:D:108:LYS:O	2.14	0.47
3:D:116:TYR:HB3	3:D:298:VAL:HG11	1.95	0.47
3:D:453:LYS:O	3:D:456:VAL:HG12	2.14	0.47
3:D:911:ILE:C	3:D:911:ILE:HD12	2.35	0.47
3:D:916:ILE:HG23	3:D:920:ALA:HB3	1.96	0.47
3:D:1248:LEU:HD12	3:D:1249:LYS:H	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:40:ARG:NH1	1:B:32:TYR:HB2	2.30	0.47
1:A:83:LEU:HD23	1:A:123:MET:HE1	1.94	0.47
1:A:215:LEU:HD13	1:B:219:PHE:CE1	2.48	0.47
2:C:218:VAL:HG12	2:C:220:ILE:HD11	1.96	0.47
2:C:313:LYS:O	2:C:313:LYS:HG3	2.14	0.47
3:D:26:GLY:HA3	3:D:51:ILE:HG22	1.94	0.47
5:F:157:TYR:CD1	5:F:161:VAL:HB	2.47	0.47
2:C:339:LEU:O	2:C:339:LEU:HD23	2.14	0.47
2:C:893:LEU:HB2	2:C:898:MET:HE1	1.97	0.47
3:D:73:ILE:O	3:D:82:VAL:HG12	2.14	0.47
3:D:365:ILE:HD12	3:D:365:ILE:N	2.26	0.47
3:D:790:ARG:HG3	3:D:790:ARG:HH11	1.79	0.47
3:D:912:ARG:HG3	3:D:916:ILE:HD12	1.97	0.47
5:F:165:PRO:HG2	5:F:168:GLU:CG	2.44	0.47
2:C:105:ARG:HH11	2:C:105:ARG:HB2	1.78	0.47
2:C:307:ARG:HA	2:C:310:VAL:HG22	1.97	0.47
2:C:586:ALA:O	2:C:622:THR:HG21	2.14	0.47
3:D:684:VAL:HG12	3:D:686:LYS:HG3	1.96	0.47
6:G:19:DA:O5'	6:G:19:DA:H8	1.97	0.47
2:C:268:LEU:O	2:C:271:ILE:HG13	2.15	0.47
2:C:429:GLN:OE1	2:C:453:GLY:HA2	2.13	0.47
2:C:436:GLN:H	2:C:674:HIS:CD2	2.32	0.47
3:D:4:VAL:HG12	3:D:6:PHE:CD2	2.48	0.47
3:D:173:ARG:NH2	3:D:201:GLY:HA2	2.30	0.47
3:D:891:CYS:SG	3:D:893:THR:HG22	2.54	0.47
3:D:1182:ASP:OD1	3:D:1183:ARG:N	2.48	0.47
5:F:85:ILE:HA	6:G:1:DT:N3	2.28	0.47
6:G:10:DC:H2'	6:G:11:DT:O4'	2.13	0.47
2:C:271:ILE:HG12	2:C:290:LEU:HD21	1.96	0.47
3:D:556:ARG:O	3:D:560:LEU:HB2	2.13	0.47
3:D:815:ARG:HH11	3:D:815:ARG:HG2	1.79	0.47
1:A:13:VAL:O	1:A:14:LEU:HD23	2.15	0.47
1:A:46:ILE:O	1:A:170:PRO:HD3	2.13	0.47
1:B:41:THR:OG1	1:B:215:LEU:HD21	2.14	0.47
1:B:137:GLU:C	1:B:138:LEU:HD12	2.35	0.47
1:B:222:ALA:O	1:B:225:LEU:HD23	2.14	0.47
2:C:161:ILE:O	2:C:162:ILE:HD13	2.15	0.47
2:C:748:GLU:OE2	2:C:866:TYR:OH	2.20	0.47
3:D:117:LEU:O	3:D:117:LEU:HD13	2.14	0.47
3:D:515:MET:HB3	3:D:515:MET:HE2	1.72	0.47
3:D:595:ASP:HB3	3:D:631:ALA:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:83:LEU:HD11	1:B:118:VAL:HG13	1.97	0.47
3:D:189:ALA:HB1	3:D:194:ARG:HD2	1.97	0.47
3:D:380:ALA:HA	3:D:384:ASN:HA	1.96	0.47
3:D:924:THR:HA	3:D:942:GLN:O	2.15	0.47
2:C:389:ARG:NH1	5:F:49:ARG:HH11	2.13	0.47
2:C:625:GLU:OE1	2:C:625:GLU:N	2.32	0.47
2:C:1097:TYR:CZ	5:F:129:GLU:HG3	2.49	0.47
3:D:159:ARG:HH12	3:D:220:GLU:HB2	1.80	0.47
3:D:1043:LYS:O	3:D:1045:PRO:HD3	2.14	0.47
1:B:150:VAL:O	1:B:150:VAL:HG13	2.15	0.47
2:C:778:LEU:HD23	2:C:784:VAL:HA	1.96	0.47
3:D:181:LEU:HD13	3:D:198:ARG:NH2	2.29	0.47
3:D:236:VAL:HG12	3:D:236:VAL:O	2.14	0.47
5:F:148:LEU:CD1	5:F:191:LEU:HD13	2.44	0.47
1:A:222:ALA:HB2	1:B:212:GLY:HA3	1.96	0.46
1:B:38:LEU:HD23	1:B:215:LEU:HD11	1.97	0.46
2:C:227:PRO:HD2	2:C:230:VAL:HG21	1.97	0.46
2:C:512:LYS:HA	2:C:572:TYR:CD1	2.49	0.46
2:C:755:ASP:N	2:C:858:GLY:O	2.47	0.46
2:C:914:HIS:ND1	3:D:580:ASP:OD1	2.48	0.46
3:D:27:GLU:HA	3:D:94:HIS:O	2.15	0.46
2:C:268:LEU:HD12	2:C:290:LEU:HD12	1.95	0.46
2:C:407:THR:HG22	2:C:410:THR:HG23	1.97	0.46
2:C:775:LEU:HD12	2:C:775:LEU:H	1.80	0.46
3:D:1164:ARG:HD2	3:D:1208:MET:CE	2.45	0.46
1:A:13:VAL:C	1:A:14:LEU:HD23	2.36	0.46
2:C:32:ARG:CG	2:C:967:SER:HB3	2.44	0.46
2:C:135:ASN:OD1	2:C:138:THR:HG22	2.15	0.46
2:C:218:VAL:HG23	2:C:228:VAL:HG12	1.98	0.46
3:D:21:ARG:NE	3:D:96:GLU:OE2	2.27	0.46
3:D:124:ASP:HB3	3:D:234:LEU:HD21	1.97	0.46
3:D:205:MET:HA	3:D:208:ILE:HD12	1.97	0.46
1:B:54:ILE:HD12	1:B:54:ILE:O	2.16	0.46
2:C:157:LYS:HD2	2:C:633:GLY:HA3	1.97	0.46
3:D:345:ARG:HA	3:D:348:ILE:HG22	1.97	0.46
3:D:1010:LEU:HD23	3:D:1028:LEU:HA	1.97	0.46
4:E:59:ARG:HH22	4:E:79:GLY:CA	2.24	0.46
2:C:159:THR:CG2	2:C:446:LYS:HZ2	2.28	0.46
2:C:219:ARG:HA	2:C:226:GLN:CG	2.45	0.46
2:C:508:THR:OG1	2:C:509:PRO:HD2	2.15	0.46
6:G:10:DC:H2'	6:G:11:DT:C2'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:24:GLU:OE1	1:A:191:LYS:HD3	2.16	0.46
2:C:77:VAL:HG13	2:C:81:GLU:CB	2.45	0.46
2:C:1083:LEU:HB3	3:D:420:LYS:HZ1	1.80	0.46
2:C:1092:GLY:O	2:C:1096:VAL:HG23	2.16	0.46
3:D:124:ASP:HB3	3:D:234:LEU:HD22	1.98	0.46
3:D:320:ILE:CG1	3:D:321:PRO:HD2	2.45	0.46
3:D:882:GLN:OE1	3:D:1249:LYS:HE2	2.16	0.46
3:D:1067:VAL:HG22	3:D:1074:GLU:CD	2.35	0.46
3:D:1125:GLN:OE1	3:D:1129:GLU:HG2	2.16	0.46
2:C:965:ILE:HG22	2:C:965:ILE:O	2.15	0.46
3:D:1028:LEU:HB3	3:D:1029:PRO:HD3	1.97	0.46
3:D:1139:GLN:OE1	3:D:1154:ILE:HD12	2.16	0.46
5:F:148:LEU:HD23	5:F:149:PRO:O	2.15	0.46
1:A:222:ALA:CB	1:B:212:GLY:HA3	2.46	0.46
2:C:636:VAL:HG21	2:C:666:MET:CE	2.46	0.46
3:D:344:TYR:O	3:D:348:ILE:HG22	2.16	0.46
3:D:736:VAL:HG22	3:D:799:ILE:HD11	1.96	0.46
3:D:983:MET:HE2	3:D:1152:LYS:HE3	1.96	0.46
2:C:309:LYS:HE3	2:C:309:LYS:HB3	1.80	0.46
2:C:638:ALA:CB	2:C:696:ILE:HD11	2.46	0.46
3:D:876:ARG:HH12	3:D:1032:GLN:NE2	2.14	0.46
2:C:566:PRO:HG2	2:C:569:GLU:HG3	1.98	0.46
2:C:581:VAL:HG12	2:C:582:SER:N	2.31	0.46
2:C:622:THR:HG22	2:C:623:GLY:N	2.30	0.46
3:D:413:PHE:CD2	3:D:1225:SER:HB3	2.51	0.46
3:D:847:LEU:HD12	3:D:847:LEU:N	2.27	0.46
4:E:59:ARG:HG2	4:E:103:LEU:CD1	2.46	0.46
7:H:10:DG:C5'	7:H:10:DG:C8	2.98	0.46
1:B:46:ILE:CG2	1:B:170:PRO:HG2	2.46	0.45
2:C:717:ILE:O	3:D:730:THR:HG23	2.16	0.45
2:C:990:ARG:H	2:C:990:ARG:HG3	1.49	0.45
3:D:365:ILE:H	3:D:365:ILE:CD1	2.26	0.45
3:D:573:PRO:HD3	3:D:698:ASN:OD1	2.16	0.45
5:F:126:ARG:HH21	5:F:131:GLU:CD	2.19	0.45
2:C:341:ARG:HD2	2:C:349:MET:CG	2.45	0.45
2:C:1023:TYR:O	2:C:1024:ILE:HD13	2.15	0.45
3:D:124:ASP:O	3:D:128:ILE:HG13	2.16	0.45
3:D:733:MET:HE2	3:D:733:MET:HB3	1.82	0.45
1:A:136:VAL:HG12	1:A:138:LEU:CD1	2.46	0.45
1:B:159:ILE:HD12	1:B:159:ILE:N	2.30	0.45
2:C:1127:LEU:HD22	3:D:1237:ALA:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:177:LEU:HD23	3:D:177:LEU:C	2.37	0.45
4:E:78:VAL:HG22	4:E:79:GLY:N	2.31	0.45
5:F:141:ILE:HD12	5:F:142:LYS:H	1.81	0.45
1:B:30:PHE:O	1:B:34:LEU:HG	2.16	0.45
1:B:175:THR:HG22	1:B:195:ASP:HB3	1.96	0.45
2:C:129:VAL:HG21	2:C:148:MET:CE	2.47	0.45
2:C:477:MET:HB3	2:C:477:MET:HE2	1.88	0.45
3:D:131:PHE:HB2	3:D:372:ARG:NH1	2.32	0.45
3:D:203:ARG:O	3:D:207:GLN:HG3	2.15	0.45
3:D:430:ILE:HD13	3:D:541:MET:HG3	1.98	0.45
3:D:1228:GLU:O	3:D:1232:VAL:HG23	2.15	0.45
1:B:43:LEU:CD1	1:B:174:VAL:HB	2.42	0.45
1:B:78:LEU:HD21	3:D:611:VAL:HB	1.99	0.45
2:C:231:LEU:CA	2:C:267:ALA:HB1	2.39	0.45
2:C:509:PRO:O	2:C:575:VAL:HG13	2.17	0.45
2:C:600:LEU:C	2:C:600:LEU:HD23	2.37	0.45
3:D:482:GLN:OE1	3:D:482:GLN:N	2.31	0.45
7:H:10:DG:H2''	7:H:11:DA:H5'	1.99	0.45
2:C:720:TRP:CZ3	2:C:893:LEU:HD11	2.51	0.45
2:C:726:GLU:O	2:C:727:ASP:HB2	2.17	0.45
3:D:1258:ILE:O	3:D:1263:GLY:HA3	2.16	0.45
4:E:46:VAL:HG12	4:E:47:SER:N	2.31	0.45
1:B:97:LEU:HD22	1:B:110:ILE:HG22	1.99	0.45
1:B:110:ILE:HD11	1:B:118:VAL:HG21	1.98	0.45
2:C:666:MET:HE2	2:C:666:MET:HA	1.99	0.45
3:D:651:PHE:CZ	3:D:660:ASP:HB3	2.52	0.45
3:D:768:ASP:N	3:D:768:ASP:OD1	2.48	0.45
5:F:146:GLN:HA	5:F:153:ARG:HH11	1.80	0.45
1:B:61:HIS:CD2	1:B:159:ILE:HG21	2.51	0.45
1:B:97:LEU:HD12	1:B:98:ARG:N	2.32	0.45
2:C:535:VAL:HG11	2:C:556:ARG:NH2	2.32	0.45
2:C:656:HIS:CD2	2:C:660:THR:HB	2.52	0.45
3:D:685:ASN:O	3:D:685:ASN:ND2	2.50	0.45
1:A:91:GLU:CG	1:A:92:PRO:HD2	2.46	0.45
3:D:427:ARG:O	3:D:428:SER:HB2	2.16	0.45
3:D:964:SER:HB2	3:D:1155:GLU:OE1	2.17	0.45
3:D:1164:ARG:NH2	3:D:1216:ALA:O	2.50	0.45
6:G:17:DG:H2''	6:G:18:DG:C8	2.52	0.45
7:H:7:DC:H2''	7:H:8:DG:H8	1.79	0.45
1:B:97:LEU:HB2	1:B:110:ILE:CG2	2.42	0.45
3:D:397:ARG:HH11	5:F:107:GLU:HG2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1080:ILE:HD12	3:D:1080:ILE:N	2.31	0.45
4:E:86:LEU:HD12	4:E:86:LEU:N	2.32	0.45
1:A:9:LEU:CD2	1:B:222:ALA:HA	2.47	0.44
1:B:212:GLY:O	1:B:216:VAL:HG23	2.17	0.44
2:C:538:ALA:CB	2:C:577:PRO:HD3	2.47	0.44
2:C:699:GLY:N	2:C:702:THR:OG1	2.50	0.44
3:D:369:ASN:OD1	3:D:372:ARG:NH2	2.50	0.44
1:A:19:SER:HB2	1:A:204:PRO:HB2	1.98	0.44
2:C:208:PHE:CD1	2:C:218:VAL:HG22	2.52	0.44
2:C:273:ARG:O	2:C:273:ARG:HG2	2.18	0.44
3:D:131:PHE:HB2	3:D:372:ARG:HH11	1.82	0.44
3:D:165:GLN:OE1	3:D:169:GLU:HG3	2.17	0.44
3:D:1010:LEU:HD22	3:D:1028:LEU:CD1	2.46	0.44
4:E:59:ARG:HH21	4:E:81:LEU:HG	1.83	0.44
4:E:79:GLY:HA2	4:E:81:LEU:HD23	1.99	0.44
1:A:81:LYS:NZ	1:A:165:ASP:HB2	2.33	0.44
1:B:39:ARG:HG3	1:B:174:VAL:CG1	2.46	0.44
2:C:87:LEU:HD11	2:C:90:ILE:HD11	1.99	0.44
2:C:382:GLN:HG2	2:C:424:PHE:CB	2.42	0.44
2:C:900:PHE:CD2	2:C:904:GLY:HA2	2.51	0.44
2:C:986:THR:HG22	2:C:987:LEU:O	2.17	0.44
3:D:358:ILE:HD11	3:D:367:VAL:HG11	1.99	0.44
3:D:418:LEU:HD21	3:D:1249:LYS:HD2	1.99	0.44
3:D:683:PHE:CE1	3:D:685:ASN:HB2	2.52	0.44
3:D:705:PRO:O	3:D:709:VAL:HG23	2.18	0.44
3:D:1272:VAL:HG21	4:E:55:TYR:HD1	1.83	0.44
4:E:102:LEU:O	4:E:103:LEU:HD23	2.17	0.44
1:A:33:THR:HG21	1:B:37:SER:CA	2.47	0.44
1:A:56:ILE:O	1:A:59:VAL:HG22	2.17	0.44
1:A:99:LYS:HG2	1:A:105:VAL:HG22	1.99	0.44
1:B:192:LEU:HD12	1:B:193:ILE:H	1.82	0.44
2:C:109:VAL:HG11	2:C:123:TYR:CE1	2.53	0.44
2:C:307:ARG:NH2	2:C:328:THR:HG23	2.31	0.44
2:C:404:GLU:O	2:C:404:GLU:HG2	2.18	0.44
2:C:514:VAL:O	2:C:514:VAL:HG23	2.17	0.44
1:B:54:ILE:HD12	1:B:54:ILE:C	2.38	0.44
2:C:92:ASP:HB2	2:C:97:MET:HG3	1.99	0.44
2:C:357:VAL:O	2:C:357:VAL:HG23	2.18	0.44
2:C:885:ASN:HD21	2:C:1022:MET:HE2	1.82	0.44
3:D:111:PRO:O	3:D:113:ARG:NH2	2.51	0.44
3:D:459:ARG:NE	3:D:489:GLU:OE2	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:10:DC:H3'	6:G:11:DT:H2'	1.98	0.44
1:B:151:GLN:HB2	1:B:155:SER:HA	1.99	0.44
3:D:125:LEU:O	3:D:129:ILE:HG13	2.17	0.44
3:D:147:GLU:O	3:D:151:LEU:HG	2.16	0.44
3:D:989:VAL:CG2	3:D:993:GLU:HG3	2.40	0.44
3:D:1262:THR:HG22	4:E:50:TYR:HB3	1.99	0.44
5:F:30:GLU:HG3	5:F:34:ILE:HD11	1.98	0.44
5:F:160:ASP:OD1	5:F:188:ARG:NH1	2.50	0.44
1:A:95:MET:SD	1:A:140:VAL:HG21	2.57	0.44
2:C:448:ARG:HD3	2:C:491:ILE:HG21	2.00	0.44
2:C:920:MET:HE1	3:D:840:PHE:CB	2.45	0.44
2:C:926:LEU:HD22	2:C:979:LEU:HD13	2.00	0.44
2:C:961:GLN:HG3	2:C:962:PRO:CD	2.35	0.44
3:D:166:ARG:HD3	3:D:212:ALA:CB	2.45	0.44
3:D:1227:GLN:OE1	7:H:10:DG:H4'	2.17	0.44
2:C:105:ARG:HB2	2:C:105:ARG:NH1	2.33	0.44
2:C:485:GLY:O	2:C:488:ILE:HG22	2.18	0.44
2:C:542:ILE:O	2:C:542:ILE:HG13	2.17	0.44
2:C:949:TRP:CE3	2:C:981:GLY:HA3	2.53	0.44
2:C:1050:PRO:HD2	3:D:421:ARG:O	2.18	0.44
3:D:155:MET:O	3:D:155:MET:HE2	2.17	0.44
1:A:11:GLU:HG2	1:A:12:ASP:N	2.32	0.44
3:D:669:GLY:HA2	3:D:672:MET:HE2	2.00	0.44
5:F:141:ILE:H	5:F:141:ILE:HG13	1.66	0.44
6:G:10:DC:H2''	6:G:11:DT:C5'	2.48	0.44
1:B:196:VAL:HG13	1:B:196:VAL:O	2.18	0.43
2:C:873:ILE:HD12	2:C:873:ILE:HA	1.82	0.43
2:C:1018:THR:N	3:D:730:THR:HG21	2.24	0.43
3:D:385:GLY:HA2	3:D:390:PRO:HG3	1.99	0.43
3:D:738:VAL:CG2	3:D:739:PRO:HD2	2.48	0.43
3:D:760:PHE:CE2	3:D:767:HIS:HA	2.51	0.43
3:D:1036:GLU:HG2	3:D:1038:ARG:CZ	2.48	0.43
3:D:1247:GLY:O	3:D:1251:ASN:ND2	2.51	0.43
4:E:40:ASP:O	4:E:43:LEU:HG	2.17	0.43
5:F:138:ASP:HB3	5:F:141:ILE:CG1	2.47	0.43
1:B:15:THR:OG1	1:B:18:ARG:HB3	2.18	0.43
1:B:22:VAL:HG23	1:B:22:VAL:O	2.18	0.43
2:C:178:GLY:HA2	2:C:310:VAL:CG1	2.48	0.43
2:C:218:VAL:HG12	2:C:218:VAL:O	2.18	0.43
2:C:269:LEU:HD21	2:C:281:PRO:HB3	1.99	0.43
2:C:407:THR:HG23	2:C:410:THR:HG23	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:500:ARG:NH2	8:I:10:A:HO2'	2.15	0.43
2:C:177:PRO:HG2	2:C:303:ALA:CB	2.48	0.43
2:C:403:VAL:HG22	2:C:404:GLU:H	1.84	0.43
2:C:644:ILE:CG2	2:C:686:ALA:HA	2.47	0.43
2:C:936:SER:OG	2:C:986:THR:HG23	2.17	0.43
2:C:1068:TRP:CE2	3:D:878:VAL:HG11	2.54	0.43
3:D:442:GLY:HA3	3:D:523:GLN:HB2	1.99	0.43
3:D:867:THR:HA	3:D:1008:THR:HG22	2.00	0.43
1:A:159:ILE:O	1:A:159:ILE:CG2	2.67	0.43
1:B:24:GLU:HA	1:B:25:PRO:HA	1.80	0.43
1:B:120:ASN:OD1	1:B:120:ASN:N	2.51	0.43
2:C:35:PHE:CD1	2:C:957:LEU:HD13	2.54	0.43
2:C:848:SER:O	2:C:853:ASP:HB2	2.19	0.43
2:C:1038:ARG:CZ	2:C:1050:PRO:HB3	2.49	0.43
3:D:557:ILE:HD12	4:E:53:VAL:HG22	2.00	0.43
4:E:40:ASP:HA	4:E:43:LEU:HG	2.00	0.43
4:E:86:LEU:H	4:E:86:LEU:CD1	2.31	0.43
5:F:37:LEU:C	5:F:37:LEU:HD12	2.38	0.43
1:B:60:LEU:N	1:B:60:LEU:HD12	2.33	0.43
1:B:97:LEU:HD22	1:B:110:ILE:CG2	2.48	0.43
2:C:173:LEU:HD23	2:C:372:LEU:HB3	1.99	0.43
2:C:406:ILE:HG13	2:C:406:ILE:O	2.18	0.43
2:C:726:GLU:HG3	3:D:535:ASP:HB2	2.01	0.43
2:C:750:GLU:OE1	2:C:864:ARG:HD3	2.19	0.43
2:C:1034:LYS:HD3	3:D:540:GLN:NE2	2.34	0.43
3:D:574:LEU:O	3:D:576:MET:N	2.51	0.43
5:F:148:LEU:HD22	5:F:153:ARG:HB3	2.00	0.43
1:B:107:ALA:HB3	1:B:121:PRO:CA	2.40	0.43
2:C:42:LEU:HD12	2:C:43:GLU:N	2.33	0.43
2:C:829:THR:O	2:C:829:THR:HG22	2.19	0.43
3:D:38:THR:OG1	3:D:40:LYS:HG3	2.19	0.43
3:D:305:SER:HB2	3:D:1240:CYS:HB2	2.01	0.43
3:D:362:ALA:HB1	3:D:363:PRO:CD	2.48	0.43
3:D:606:HIS:CD2	3:D:606:HIS:H	2.35	0.43
3:D:991:ILE:HD12	3:D:1266:ARG:NH1	2.34	0.43
5:F:45:LEU:HD23	5:F:45:LEU:C	2.39	0.43
5:F:166:TYR:HE2	5:F:184:LEU:HD12	1.84	0.43
2:C:64:TRP:CH2	2:C:76:PRO:HB2	2.54	0.43
2:C:199:ILE:HG23	2:C:199:ILE:O	2.18	0.43
3:D:330:LEU:CD2	5:F:113:GLN:HG2	2.46	0.43
3:D:589:THR:O	3:D:687:GLN:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:46:VAL:HG11	4:E:51:ALA:HB3	1.99	0.43
5:F:150:GLU:HA	5:F:153:ARG:CD	2.48	0.43
2:C:37:LYS:HE3	2:C:953:LEU:CB	2.49	0.43
2:C:442:GLY:O	2:C:446:LYS:HG3	2.19	0.43
3:D:268:PHE:CZ	3:D:273:GLU:HG3	2.54	0.43
1:B:74:THR:HG21	3:D:608:GLU:CD	2.39	0.43
2:C:543:ASP:OD1	2:C:544:ALA:N	2.52	0.43
2:C:613:VAL:HG23	2:C:614:ARG:N	2.34	0.43
2:C:1089:ASP:O	2:C:1093:ARG:HG2	2.18	0.43
2:C:1089:ASP:OD2	2:C:1110:GLY:N	2.46	0.43
3:D:4:VAL:HG12	3:D:4:VAL:O	2.18	0.43
3:D:666:THR:HG21	3:D:683:PHE:HE1	1.81	0.43
3:D:895:ARG:HB2	3:D:967:THR:HB	2.01	0.43
1:A:223:ARG:HE	1:A:223:ARG:C	2.20	0.43
2:C:563:GLU:HG3	2:C:564:TYR:H	1.83	0.43
2:C:644:ILE:HD13	2:C:690:VAL:CG1	2.48	0.43
2:C:652:ILE:HD11	2:C:682:PRO:HG3	2.01	0.43
3:D:131:PHE:CE1	3:D:257:GLY:HA2	2.54	0.43
3:D:785:VAL:HG21	3:D:820:MET:CG	2.42	0.43
3:D:895:ARG:NH2	3:D:1128:ARG:HD3	2.30	0.43
5:F:57:LEU:C	5:F:57:LEU:HD13	2.39	0.43
2:C:58:LEU:HD21	2:C:379:ILE:CG2	2.49	0.42
2:C:371:ARG:HH21	2:C:503:PHE:C	2.20	0.42
2:C:465:GLU:OE1	2:C:465:GLU:N	2.35	0.42
3:D:50:LYS:HA	3:D:80:VAL:HG22	2.01	0.42
3:D:760:PHE:CG	3:D:770:ARG:HD3	2.54	0.42
3:D:880:VAL:HG11	3:D:1210:ILE:HG22	2.01	0.42
3:D:1272:VAL:HG21	4:E:55:TYR:CD1	2.53	0.42
1:A:87:SER:CB	1:A:116:VAL:HG12	2.48	0.42
1:B:52:THR:HG21	1:B:141:GLU:OE2	2.18	0.42
1:B:97:LEU:HB3	1:B:136:VAL:HG12	2.02	0.42
2:C:77:VAL:CG1	2:C:81:GLU:HB2	2.47	0.42
2:C:218:VAL:N	2:C:226:GLN:O	2.52	0.42
2:C:389:ARG:HH11	5:F:49:ARG:HH11	1.65	0.42
3:D:114:LEU:HG	3:D:312:MET:CE	2.49	0.42
3:D:525:HIS:HE1	3:D:527:LEU:HG	1.83	0.42
3:D:563:ASN:HD21	4:E:39:ILE:HG21	1.84	0.42
3:D:991:ILE:O	3:D:991:ILE:HG22	2.19	0.42
1:A:55:ARG:NH2	1:A:160:GLY:HA3	2.34	0.42
1:B:71:GLU:CB	1:B:76:ILE:HD11	2.46	0.42
1:B:83:LEU:HD12	1:B:84:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:103:HIS:HD2	3:D:314:LEU:HD11	1.84	0.42
3:D:463:LEU:HD12	3:D:463:LEU:H	1.84	0.42
1:B:84:VAL:HG12	1:B:119:HIS:CD2	2.54	0.42
2:C:268:LEU:O	2:C:286:ALA:HB1	2.20	0.42
2:C:470:HIS:ND1	2:C:471:PRO:HD2	2.34	0.42
2:C:470:HIS:CG	2:C:471:PRO:HD2	2.54	0.42
2:C:813:ARG:HD2	3:D:67:ARG:NH2	2.34	0.42
3:D:579:LEU:HD12	3:D:579:LEU:H	1.85	0.42
5:F:51:PRO:O	5:F:55:GLU:HG3	2.20	0.42
1:A:9:LEU:HD23	1:B:221:LEU:O	2.19	0.42
2:C:346:GLN:O	2:C:359:VAL:HB	2.19	0.42
2:C:794:ASP:O	2:C:833:VAL:HG12	2.19	0.42
2:C:1081:GLU:HG3	2:C:1085:ILE:CD1	2.41	0.42
3:D:656:TRP:CZ3	3:D:658:PRO:HA	2.55	0.42
3:D:736:VAL:HG22	3:D:799:ILE:CD1	2.50	0.42
3:D:752:ARG:O	3:D:756:VAL:HG23	2.19	0.42
3:D:946:ASP:N	3:D:947:PRO:HD2	2.34	0.42
5:F:29:PHE:HB2	5:F:69:PHE:CE2	2.54	0.42
7:H:8:DG:C2'	7:H:9:DT:H72	2.50	0.42
1:B:59:VAL:C	1:B:60:LEU:HD12	2.40	0.42
1:B:90:ASP:HA	1:B:142:ARG:HG3	2.00	0.42
2:C:465:GLU:HG2	6:G:12:DG:N2	2.34	0.42
2:C:1032:ASP:OD1	3:D:520:LYS:HD2	2.19	0.42
3:D:184:LEU:O	3:D:189:ALA:HB2	2.19	0.42
4:E:32:LEU:HD12	4:E:32:LEU:N	2.34	0.42
4:E:49:LYS:H	4:E:49:LYS:HG2	1.71	0.42
1:B:97:LEU:HD21	1:B:105:VAL:HG11	2.01	0.42
1:B:138:LEU:HD12	1:B:138:LEU:N	2.35	0.42
3:D:431:VAL:HA	3:D:536:PHE:CD1	2.55	0.42
3:D:566:LEU:HD23	3:D:573:PRO:HA	2.02	0.42
3:D:895:ARG:CB	3:D:967:THR:HB	2.49	0.42
2:C:287:GLN:HG3	2:C:291:GLU:OE2	2.20	0.42
2:C:303:ALA:HB3	2:C:306:GLY:HA3	2.00	0.42
2:C:652:ILE:HD13	2:C:696:ILE:HG22	2.01	0.42
2:C:707:MET:CE	2:C:709:LEU:HG	2.50	0.42
2:C:876:GLY:HA3	2:C:1031:VAL:HG11	2.00	0.42
3:D:579:LEU:HD12	3:D:579:LEU:N	2.34	0.42
3:D:683:PHE:HE1	3:D:685:ASN:HB2	1.85	0.42
3:D:943:ASP:OD2	3:D:981:ARG:NH2	2.31	0.42
3:D:1046:ILE:HA	3:D:1111:LEU:HD13	2.02	0.42
3:D:1228:GLU:N	7:H:10:DG:OP1	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:162:ILE:HG22	1:A:162:ILE:O	2.19	0.42
1:B:147:VAL:HG13	1:B:166:SER:HB2	2.01	0.42
2:C:816:ARG:HA	2:C:821:GLU:CB	2.50	0.42
2:C:1061:ARG:HB3	7:H:15:DG:OP1	2.20	0.42
3:D:910:LEU:HD12	3:D:910:LEU:O	2.20	0.42
3:D:925:LEU:HD21	3:D:960:VAL:CG1	2.48	0.42
3:D:1122:LEU:HA	3:D:1130:VAL:HG22	1.99	0.42
7:H:10:DG:C2'	7:H:11:DA:H5'	2.49	0.42
1:B:28:PRO:HD3	1:B:189:PHE:CD2	2.55	0.42
2:C:169:VAL:HA	2:C:430:LEU:O	2.20	0.42
2:C:283:LYS:HD3	2:C:283:LYS:C	2.40	0.42
2:C:415:ARG:N	2:C:416:PRO:HD2	2.35	0.42
2:C:741:LEU:HB2	2:C:873:ILE:HB	2.01	0.42
2:C:1029:HIS:C	2:C:1030:LEU:HD23	2.40	0.42
2:C:1125:LEU:HD13	3:D:105:TRP:CH2	2.54	0.42
3:D:438:LEU:HD21	3:D:565:ILE:CD1	2.50	0.42
3:D:815:ARG:O	3:D:818:ALA:O	2.38	0.42
3:D:931:ASP:OD2	3:D:934:GLY:HA3	2.19	0.42
2:C:204:ALA:HB1	2:C:221:ASP:OD1	2.19	0.41
2:C:795:ILE:HD12	2:C:795:ILE:N	2.35	0.41
2:C:893:LEU:HB2	2:C:898:MET:HE2	2.02	0.41
3:D:459:ARG:NH2	3:D:489:GLU:OE2	2.51	0.41
1:B:50:ALA:HA	1:B:85:VAL:HG12	2.00	0.41
2:C:37:LYS:CE	2:C:953:LEU:CB	2.98	0.41
2:C:87:LEU:CD1	2:C:90:ILE:HD11	2.51	0.41
2:C:555:VAL:HG11	2:C:570:VAL:HG22	2.02	0.41
2:C:1067:CYS:SG	2:C:1079:LEU:HD11	2.60	0.41
3:D:42:GLU:HA	3:D:42:GLU:OE1	2.20	0.41
3:D:588:LEU:HD21	3:D:672:MET:HE3	2.01	0.41
3:D:611:VAL:HG23	3:D:611:VAL:O	2.20	0.41
5:F:41:TYR:O	5:F:42:GLY:C	2.58	0.41
1:A:187:THR:O	1:A:187:THR:HG23	2.21	0.41
3:D:100:PRO:HG3	3:D:315:ASP:OD2	2.20	0.41
3:D:581:MET:CE	3:D:717:LYS:CG	2.97	0.41
3:D:1005:GLU:HB3	3:D:1006:PRO:HD3	2.02	0.41
3:D:1055:LEU:H	3:D:1101:ASP:CG	2.23	0.41
2:C:88:SER:HA	2:C:89:PRO:HA	1.73	0.41
2:C:605:MET:HE3	2:C:886:LYS:HD3	2.02	0.41
2:C:900:PHE:CE1	2:C:1005:PHE:HB2	2.55	0.41
3:D:26:GLY:HA3	3:D:51:ILE:HG21	2.02	0.41
3:D:386:ARG:NH2	3:D:1230:THR:HG21	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:411:GLY:O	3:D:415:GLN:HB3	2.20	0.41
3:D:739:PRO:HG2	3:D:742:LYS:HB2	2.01	0.41
1:A:10:SER:O	1:A:22:VAL:HG12	2.21	0.41
1:A:95:MET:CE	1:A:110:ILE:HG21	2.49	0.41
2:C:590:PHE:HE1	2:C:974:ALA:HB3	1.86	0.41
2:C:922:ILE:HD12	2:C:923:GLY:N	2.36	0.41
2:C:988:PRO:HB2	2:C:992:GLY:HA2	2.02	0.41
3:D:14:LEU:HD12	3:D:14:LEU:N	2.35	0.41
3:D:195:ARG:HD3	3:D:195:ARG:HA	1.77	0.41
3:D:270:ILE:HB	3:D:303:GLN:OE1	2.20	0.41
6:G:8:DA:C3'	6:G:9:DG:H5''	2.51	0.41
2:C:61:SER:HB3	2:C:62:PRO:HD2	2.02	0.41
2:C:282:THR:HG22	2:C:283:LYS:H	1.85	0.41
2:C:1014:PRO:HG2	2:C:1015:TYR:CD1	2.56	0.41
2:C:1132:LEU:HD23	2:C:1138:ALA:HA	2.03	0.41
3:D:496:VAL:HG13	3:D:514:PRO:HG3	2.03	0.41
3:D:1053:VAL:CG1	3:D:1103:ASP:H	2.34	0.41
4:E:36:ASN:OD1	4:E:37:PRO:HA	2.21	0.41
5:F:44:ALA:CB	5:F:57:LEU:HD12	2.50	0.41
1:A:5:GLN:OE1	1:A:5:GLN:HA	2.20	0.41
1:B:100:GLN:HG2	1:B:101:GLY:N	2.36	0.41
1:B:159:ILE:H	1:B:159:ILE:CD1	2.32	0.41
2:C:717:ILE:CD1	2:C:925:ILE:CD1	2.99	0.41
2:C:909:ILE:HD11	2:C:911:LEU:HD21	2.01	0.41
3:D:350:ARG:HH11	3:D:377:SER:HB3	1.85	0.41
3:D:960:VAL:CG1	3:D:961:LYS:N	2.83	0.41
6:G:10:DC:H2'	6:G:11:DT:H2'	2.03	0.41
1:B:123:MET:HG2	1:B:124:HIS:N	2.35	0.41
1:B:235:GLY:HA2	1:B:236:PRO:HD3	1.84	0.41
2:C:227:PRO:HB2	2:C:230:VAL:HG22	2.02	0.41
2:C:275:LEU:C	2:C:277:PRO:HD3	2.41	0.41
2:C:383:ILE:CG1	2:C:421:ILE:HD11	2.50	0.41
3:D:38:THR:O	3:D:40:LYS:HG2	2.20	0.41
3:D:277:LEU:CD2	3:D:292:ALA:HB1	2.51	0.41
3:D:357:LEU:HD13	3:D:366:ILE:HG22	2.01	0.41
3:D:500:ARG:HD2	3:D:534:ALA:HB2	2.03	0.41
3:D:1220:TRP:CD1	3:D:1243:ASP:HB2	2.55	0.41
6:G:12:DG:OP2	6:G:12:DG:C4'	2.68	0.41
1:A:161:ARG:HD3	1:A:161:ARG:HA	1.86	0.41
2:C:221:ASP:HB2	2:C:275:LEU:HD11	2.02	0.41
2:C:272:TYR:HB2	2:C:286:ALA:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:407:THR:OG1	2:C:408:PRO:HD2	2.20	0.41
2:C:671:ARG:NE	2:C:746:ILE:O	2.54	0.41
2:C:716:ALA:HB2	2:C:907:VAL:HG11	2.02	0.41
2:C:1031:VAL:HG12	3:D:429:VAL:HG13	2.03	0.41
2:C:1062:PHE:CD1	2:C:1082:LEU:HD13	2.56	0.41
3:D:277:LEU:O	3:D:277:LEU:HD23	2.21	0.41
3:D:581:MET:H	3:D:581:MET:HG2	1.48	0.41
3:D:631:ALA:O	3:D:633:ILE:HG23	2.21	0.41
3:D:884:VAL:O	3:D:884:VAL:HG12	2.20	0.41
3:D:1272:VAL:HG22	4:E:105:HIS:CB	2.49	0.41
5:F:181:MET:O	5:F:185:HIS:ND1	2.44	0.41
1:A:205:ARG:CZ	1:A:205:ARG:HB3	2.51	0.41
1:B:63:PHE:O	1:B:73:VAL:HG21	2.21	0.41
3:D:238:GLU:OE2	3:D:242:ARG:NH2	2.28	0.41
3:D:749:TYR:CD2	3:D:781:ALA:HB2	2.56	0.41
3:D:1039:VAL:HG23	3:D:1117:ASP:OD2	2.21	0.41
3:D:1063:LYS:HB2	3:D:1063:LYS:HE3	1.80	0.41
7:H:3:DC:H2"	7:H:4:DA:C8	2.56	0.41
2:C:924:GLN:HB2	2:C:1022:MET:HE1	2.03	0.40
3:D:226:PHE:CD1	3:D:248:TYR:HB3	2.57	0.40
3:D:893:THR:OG1	3:D:895:ARG:HG3	2.21	0.40
2:C:349:MET:HE2	2:C:349:MET:HB2	1.95	0.40
2:C:612:LEU:HD12	2:C:711:LYS:HE3	2.03	0.40
2:C:842:ILE:HD11	2:C:868:ALA:CB	2.50	0.40
3:D:58:TRP:CD1	3:D:68:VAL:HG22	2.57	0.40
3:D:278:ARG:HA	3:D:281:ILE:CG2	2.52	0.40
3:D:931:ASP:CG	3:D:934:GLY:HA3	2.42	0.40
3:D:1165:VAL:HA	3:D:1206:VAL:HG22	2.02	0.40
2:C:122:THR:HG23	2:C:162:ILE:HD13	2.04	0.40
2:C:644:ILE:HG22	2:C:644:ILE:O	2.20	0.40
2:C:1062:PHE:HD2	2:C:1067:CYS:HG	1.63	0.40
3:D:453:LYS:HB3	3:D:454:PRO:HD3	2.04	0.40
3:D:599:TYR:CB	3:D:610:GLY:HA3	2.49	0.40
3:D:700:LEU:O	3:D:704:TYR:HB2	2.20	0.40
4:E:63:ILE:O	4:E:66:TYR:HB3	2.21	0.40
5:F:148:LEU:HB2	5:F:191:LEU:HD11	2.03	0.40
1:B:77:ILE:HG23	1:B:164:VAL:CG1	2.52	0.40
1:B:95:MET:HG2	1:B:113:PRO:CD	2.49	0.40
1:B:181:THR:HG22	1:B:182:ARG:N	2.37	0.40
2:C:271:ILE:HD12	2:C:271:ILE:C	2.42	0.40
2:C:501:ASN:HB2	2:C:502:PRO:CD	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:501:ASN:HB2	2:C:502:PRO:HD2	2.04	0.40
2:C:652:ILE:HD11	2:C:682:PRO:CG	2.52	0.40
2:C:932:TRP:HB2	2:C:1020:GLY:HA2	2.03	0.40
3:D:1266:ARG:HG3	3:D:1267:TYR:N	2.36	0.40
4:E:81:LEU:CB	4:E:102:LEU:HD23	2.49	0.40
4:E:88:GLU:HG2	4:E:92:SER:HB3	2.03	0.40
6:G:13:DT:H2'	6:G:14:DC:H6	1.83	0.40
1:A:22:VAL:O	1:A:22:VAL:HG13	2.22	0.40
1:A:98:ARG:CG	1:A:135:GLU:HG3	2.39	0.40
2:C:155:THR:HG21	2:C:161:ILE:HD11	2.04	0.40
2:C:179:VAL:HG22	2:C:198:VAL:CG2	2.34	0.40
2:C:219:ARG:C	2:C:220:ILE:HG13	2.42	0.40
2:C:937:GLY:O	2:C:987:LEU:HG	2.22	0.40
3:D:399:LEU:HD12	3:D:399:LEU:N	2.37	0.40
3:D:710:ALA:HA	3:D:713:VAL:HG22	2.02	0.40
3:D:812:THR:HG23	3:D:815:ARG:NH2	2.34	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	212/368 (58%)	202 (95%)	10 (5%)	0	100	100
1	B	229/368 (62%)	219 (96%)	10 (4%)	0	100	100
2	C	1080/1174 (92%)	1006 (93%)	74 (7%)	0	100	100
3	D	1244/1317 (94%)	1183 (95%)	61 (5%)	0	100	100
4	E	69/110 (63%)	65 (94%)	4 (6%)	0	100	100
5	F	178/218 (82%)	173 (97%)	5 (3%)	0	100	100
All	All	3012/3555 (85%)	2848 (95%)	164 (5%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	179/315 (57%)	175 (98%)	4 (2%)	52	81
1	B	183/315 (58%)	181 (99%)	2 (1%)	73	90
2	C	868/995 (87%)	853 (98%)	15 (2%)	60	85
3	D	998/1096 (91%)	975 (98%)	23 (2%)	50	80
4	E	63/90 (70%)	63 (100%)	0	100	100
5	F	128/175 (73%)	124 (97%)	4 (3%)	40	75
All	All	2419/2986 (81%)	2371 (98%)	48 (2%)	55	83

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	53	SER
1	A	155	SER
1	A	202	ILE
1	A	223	ARG
1	B	64	THR
1	B	186	ARG
2	C	25	SER
2	C	37	LYS
2	C	73	ASP
2	C	312	LYS
2	C	411	LEU
2	C	543	ASP
2	C	545	ASP
2	C	620	VAL
2	C	860	ASN
2	C	976	GLU
2	C	979	LEU
2	C	1031	VAL
2	C	1036	HIS

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Mol	Chain	Res	Type
2	C	1140	GLU
2	C	1141	LEU
3	D	125	LEU
3	D	224	SER
3	D	298	VAL
3	D	429	VAL
3	D	539	ASP
3	D	578	ARG
3	D	579	LEU
3	D	581	MET
3	D	595	ASP
3	D	606	HIS
3	D	608	GLU
3	D	638	THR
3	D	714	ASP
3	D	729	VAL
3	D	732	SER
3	D	743	LYS
3	D	779	LYS
3	D	787	GLN
3	D	802	ILE
3	D	910	LEU
3	D	925	LEU
3	D	927	THR
3	D	1099	LEU
5	F	183	ARG
5	F	184	LEU
5	F	194	LEU
5	F	200	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	124	HIS
2	C	473	HIS
2	C	579	GLN
2	C	656	HIS
3	D	465	HIS
3	D	606	HIS
3	D	959	GLN
3	D	1032	GLN
5	F	117	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
8	I	4/5 (80%)	0	0

There are no RNA backbone outliers to report.

There are no RNA pucker outliers to report.

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 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	216/368 (58%)	-0.45	0 100 100	53, 76, 116, 128	0
1	B	233/368 (63%)	-0.07	7 (3%) 50 22	85, 118, 151, 158	0
2	C	1092/1174 (93%)	-0.14	36 (3%) 46 20	45, 76, 171, 200	0
3	D	1252/1317 (95%)	-0.29	5 (0%) 92 79	51, 87, 135, 157	0
4	E	73/110 (66%)	-0.17	0 100 100	92, 113, 132, 143	0
5	F	180/218 (82%)	0.11	5 (2%) 53 25	71, 131, 155, 174	0
6	G	23/23 (100%)	1.02	5 (21%) 0 0	119, 156, 181, 185	0
7	H	17/20 (85%)	0.34	2 (11%) 4 1	84, 102, 169, 172	0
8	I	5/5 (100%)	-0.38	0 100 100	75, 77, 84, 96	0
All	All	3091/3603 (85%)	-0.19	60 (1%) 66 37	45, 88, 150, 200	0

All (60) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	C	225	ARG	7.8
2	C	281	PRO	6.2
2	C	224	ARG	4.7
1	B	155	SER	4.7
2	C	185	ILE	4.4
2	C	280	PRO	4.3
2	C	261	THR	4.1
6	G	0	DG	4.1
2	C	290	LEU	4.0
2	C	286	ALA	3.8
6	G	1	DT	3.7
2	C	1152	ALA	3.6
2	C	275	LEU	3.6
2	C	189	THR	3.5
2	C	282	THR	3.5

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Mol	Chain	Res	Type	RSRZ
1	B	4	SER	3.5
2	C	229	THR	3.4
6	G	9	DG	3.4
2	C	285	SER	3.4
2	C	228	VAL	3.2
2	C	192	THR	3.1
2	C	352	PRO	3.1
2	C	227	PRO	3.0
1	B	138	LEU	3.0
2	C	230	VAL	2.9
2	C	219	ARG	2.9
5	F	101	PRO	2.8
2	C	182	ASP	2.7
2	C	333	VAL	2.7
5	F	196	ALA	2.7
1	B	61	HIS	2.6
1	B	151	GLN	2.6
2	C	278	GLY	2.5
2	C	259	ASP	2.5
3	D	283	ASN	2.5
3	D	1084	GLN	2.5
5	F	195	LEU	2.5
2	C	818	ILE	2.5
2	C	277	PRO	2.5
2	C	823	ALA	2.4
3	D	653	HIS	2.4
2	C	195	SER	2.4
7	H	3	DC	2.4
2	C	226	GLN	2.3
5	F	29	PHE	2.3
3	D	1026	GLY	2.3
3	D	933	ALA	2.2
2	C	334	ALA	2.2
2	C	186	ASP	2.2
1	B	104	GLU	2.2
7	H	18	DG	2.2
6	G	22	DC	2.1
2	C	289	LEU	2.1
2	C	263	GLY	2.1
2	C	821	GLU	2.1
6	G	4	DT	2.1
2	C	340	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
5	F	74	HIS	2.1
2	C	267	ALA	2.0
1	B	137	GLU	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
10	MG	D	2003	1/1	0.91	0.18	58,58,58,58	0
9	ZN	D	2002	1/1	0.96	0.15	89,89,89,89	0
9	ZN	D	2001	1/1	0.99	0.11	109,109,109,109	0

6.5 Other polymers [i](#)

There are no such residues in this entry.