



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 15, 2017 – 01:11 am GMT

PDB ID : 2XQA
Title : PENTAMERIC LIGAND GATED ION CHANNEL GLIC IN COMPLEX
WITH TETRABUTYLANTIMONY (TBSB)
Authors : Hilf, R.J.C.; Bertozzi, C.; Zimmermann, I.; Reiter, A.; Trauner, D.; Dutzler,
R.
Deposited on : 2010-09-01
Resolution : 3.70 Å(reported)

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

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

A user guide is available at

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.9-1692
EDS	:	trunk28620
Percentile statistics	:	20161228.v01 (using entries in the PDB archive December 28th 2016)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	recalc28949

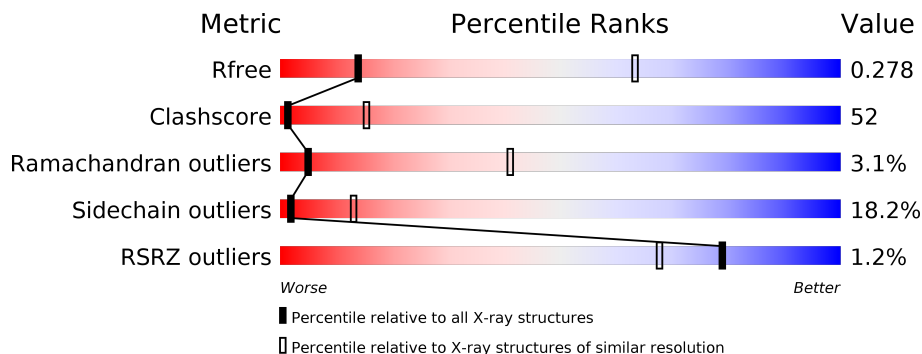
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.70 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	100719	1234 (3.90-3.50)
Clashscore	112137	1377 (3.90-3.50)
Ramachandran outliers	110173	1323 (3.90-3.50)
Sidechain outliers	110143	1320 (3.90-3.50)
RSRZ outliers	101464	1262 (3.90-3.50)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	317	<div> <div>2%</div> <div>32% 53% 12%</div> </div>
1	B	317	<div> <div>31% 55% 12%</div> </div>
1	C	317	<div> <div>% 33% 52% 12%</div> </div>
1	D	317	<div> <div>% 32% 53% 12%</div> </div>
1	E	317	<div> <div>2% 33% 53% 12%</div> </div>

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 12606 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 GLR4197 PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	310	Total	C	N	O	S	0	0	0
			2521	1662	403	452	4			
1	B	310	Total	C	N	O	S	0	0	0
			2521	1662	403	452	4			
1	C	310	Total	C	N	O	S	0	0	0
			2521	1662	403	452	4			
1	D	310	Total	C	N	O	S	0	0	0
			2521	1662	403	452	4			
1	E	310	Total	C	N	O	S	0	0	0
			2521	1662	403	452	4			

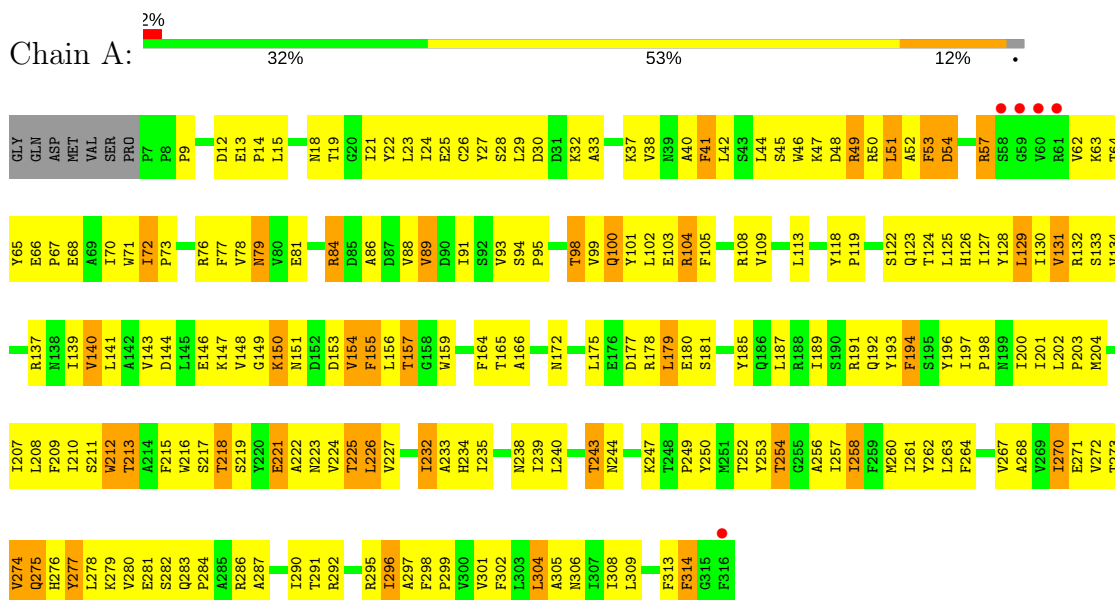
- Molecule 2 is ANTIMONY (III) ION (three-letter code: SB) (formula: Sb).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	E	1	Total	Sb	0	0
			1	1		

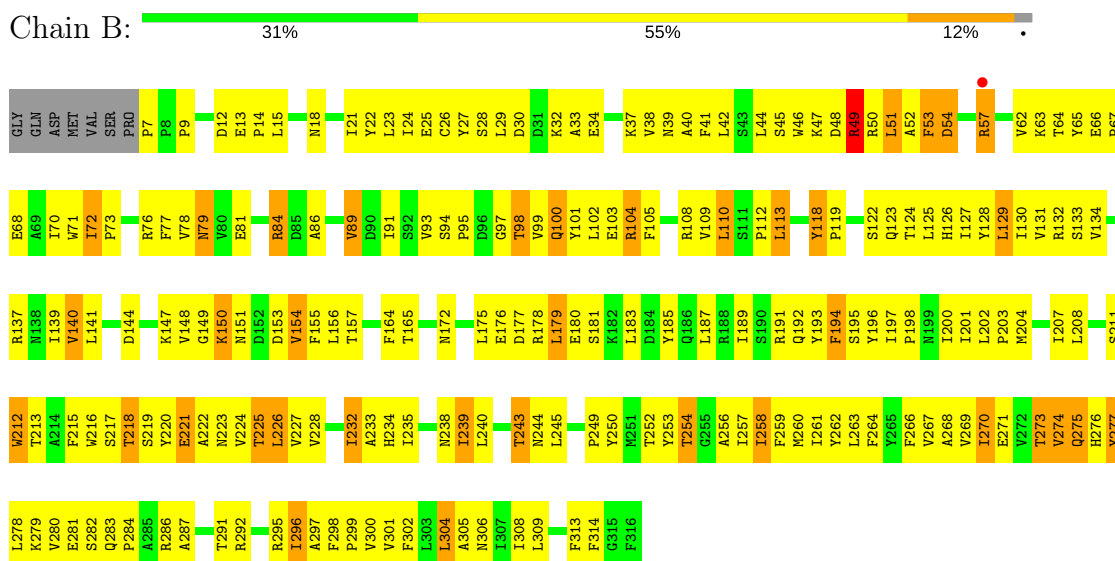
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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.

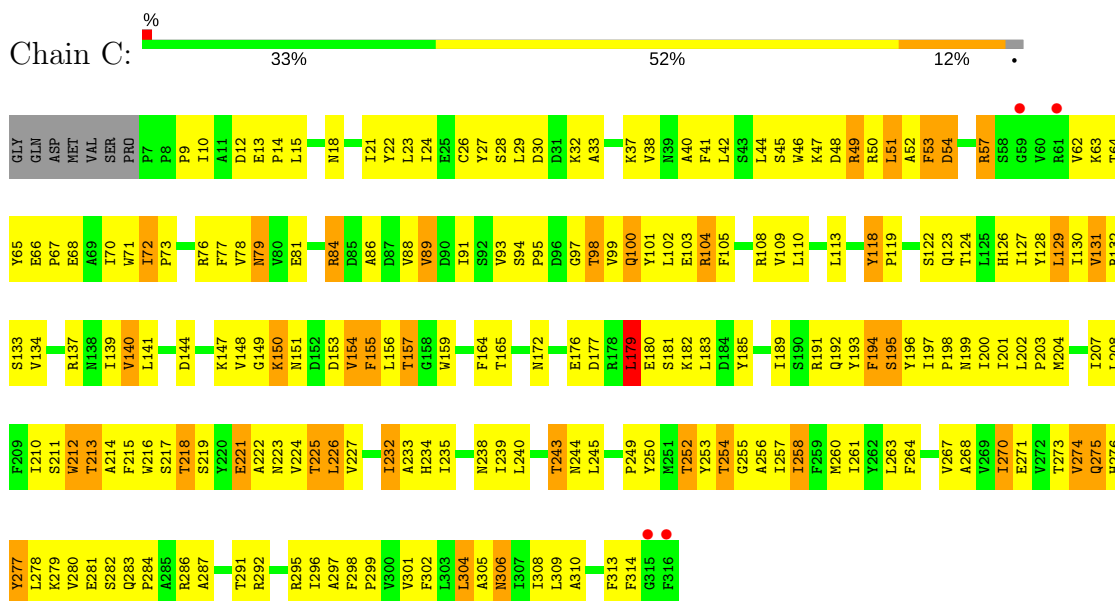
• Molecule 1: GLR4197 PROTEIN



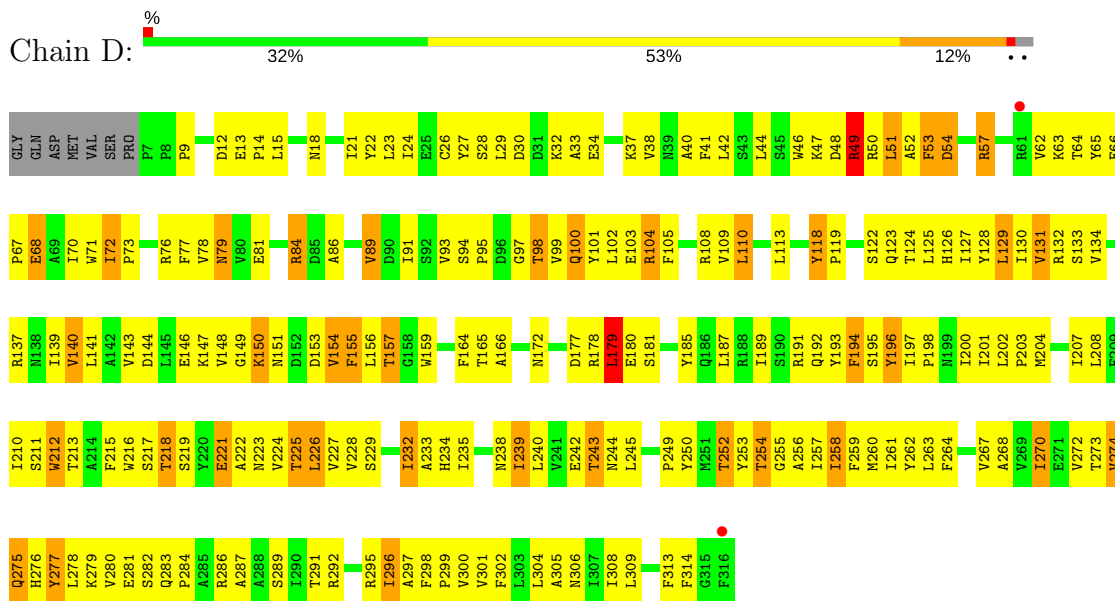
• Molecule 1: GLR4197 PROTEIN



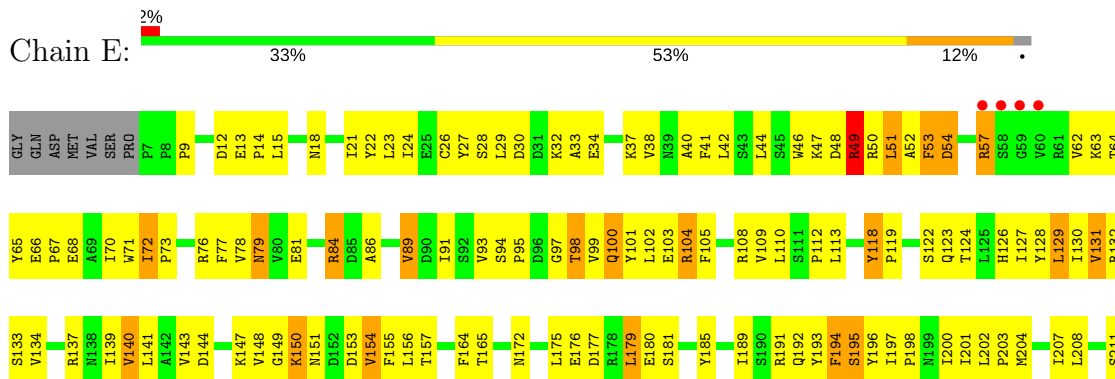
• Molecule 1: GLR4197 PROTEIN



- Molecule 1: GLR4197 PROTEIN



- Molecule 1: GLR4197 PROTEIN



L278	K279	V280	E281	S282	Q283	T284	A285	R286	A287	T288	A289	R290	T291	R292	R293	T294	A295	R296	A297	T298	T299	V300	V301	F302	L303	L304	A305	N306	L307	L308	L309	F310	F311	F312	F313	F314	G315	F316	F317	F318	F319	F320	F321	F322	F323	F324	F325	F326	F327	F328	F329	F330	F331	F332	F333	F334	F335	F336	F337	F338	F339	F340	F341	F342	F343	F344	F345	F346	F347	F348	F349	F350	F351	F352	F353	F354	F355	F356	F357	F358	F359	F360	F361	F362	F363	F364	F365	F366	F367	F368	F369	F370	F371	F372	F373	F374	F375	F376	F377	F378	F379	F380	F381	F382	F383	F384	F385	F386	F387	F388	F389	F390	F391	F392	F393	F394	F395	F396	F397	F398	F399	F400	F401	F402	F403	F404	F405	F406	F407	F408	F409	F410	F411	F412	F413	F414	F415	F416	F417	F418	F419	F420	F421	F422	F423	F424	F425	F426	F427	F428	F429	F430	F431	F432	F433	F434	F435	F436	F437	F438	F439	F440	F441	F442	F443	F444	F445	F446	F447	F448	F449	F450	F451	F452	F453	F454	F455	F456	F457	F458	F459	F460	F461	F462	F463	F464	F465	F466	F467	F468	F469	F470	F471	F472	F473	F474	F475	F476	F477	F478	F479	F480	F481	F482	F483	F484	F485	F486	F487	F488	F489	F490	F491	F492	F493	F494	F495	F496	F497	F498	F499	F500	F501	F502	F503	F504	F505	F506	F507	F508	F509	F510	F511	F512	F513	F514	F515	F516	F517	F518	F519	F520	F521	F522	F523	F524	F525	F526	F527	F528	F529	F530	F531	F532	F533	F534	F535	F536	F537	F538	F539	F540	F541	F542	F543	F544	F545	F546	F547	F548	F549	F550	F551	F552	F553	F554	F555	F556	F557	F558	F559	F560	F561	F562	F563	F564	F565	F566	F567	F568	F569	F570	F571	F572	F573	F574	F575	F576	F577	F578	F579	F580	F581	F582	F583	F584	F585	F586	F587	F588	F589	F590	F591	F592	F593	F594	F595	F596	F597	F598	F599	F600	F601	F602	F603	F604	F605	F606	F607	F608	F609	F610	F611	F612	F613	F614	F615	F616	F617	F618	F619	F620	F621	F622	F623	F624	F625	F626	F627	F628	F629	F630	F631	F632	F633	F634	F635	F636	F637	F638	F639	F640	F641	F642	F643	F644	F645	F646	F647	F648	F649	F650	F651	F652	F653	F654	F655	F656	F657	F658	F659	F660	F661	F662	F663	F664	F665	F666	F667	F668	F669	F670	F671	F672	F673	F674	F675	F676	F677	F678	F679	F680	F681	F682	F683	F684	F685	F686	F687	F688	F689	F690	F691	F692	F693	F694	F695	F696	F697	F698	F699	F700	F701	F702	F703	F704	F705	F706	F707	F708	F709	F710	F711	F712	F713	F714	F715	F716	F717	F718	F719	F720	F721	F722	F723	F724	F725	F726	F727	F728	F729	F730	F731	F732	F733	F734	F735	F736	F737	F738	F739	F740	F741	F742	F743	F744	F745	F746	F747	F748	F749	F750	F751	F752	F753	F754	F755	F756	F757	F758	F759	F760	F761	F762	F763	F764	F765	F766	F767	F768	F769	F770	F771	F772	F773	F774	F775	F776	F777	F778	F779	F780	F781	F782	F783	F784	F785	F786	F787	F788	F789	F790	F791	F792	F793	F794	F795	F796	F797	F798	F799	F800	F801	F802	F803	F804	F805	F806	F807	F808	F809	F810	F811	F812	F813	F814	F815	F816	F817	F818	F819	F820	F821	F822	F823	F824	F825	F826	F827	F828	F829	F830	F831	F832	F833	F834	F835	F836	F837	F838	F839	F840	F841	F842	F843	F844	F845	F846	F847	F848	F849	F850	F851	F852	F853	F854	F855	F856	F857	F858	F859	F860	F861	F862	F863	F864	F865	F866	F867	F868	F869	F870	F871	F872	F873	F874	F875	F876	F877	F878	F879	F880	F881	F882	F883	F884	F885	F886	F887	F888	F889	F890	F891	F892	F893	F894	F895	F896	F897	F898	F899	F900	F901	F902	F903	F904	F905	F906	F907	F908	F909	F910	F911	F912	F913	F914	F915	F916	F917	F918	F919	F920	F921	F922	F923	F924	F925	F926	F927	F928	F929	F930	F931	F932	F933	F934	F935	F936	F937	F938	F939	F940	F941	F942	F943	F944	F945	F946	F947	F948	F949	F950	F951	F952	F953	F954	F955	F956	F957	F958	F959	F960	F961	F962	F963	F964	F965	F966	F967	F968	F969	F970	F971	F972	F973	F974	F975	F976	F977	F978	F979	F980	F981	F982	F983	F984	F985	F986	F987	F988	F989	F990	F991	F992	F993	F994	F995	F996	F997	F998	F999	F1000
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4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	183.31Å 128.31Å 164.37Å 90.00° 104.04° 90.00°	Depositor
Resolution (Å)	40.20 – 3.70 40.20 – 3.60	Depositor EDS
% Data completeness (in resolution range)	95.7 (40.20-3.70) 92.4 (40.20-3.60)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.94 (at 3.57Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.256 , 0.274 0.254 , 0.278	Depositor DCC
R_{free} test set	1904 reflections (5.03%)	DCC
Wilson B-factor (Å ²)	94.3	Xtriage
Anisotropy	0.399	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 100.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	12606	wwPDB-VP
Average B, all atoms (Å ²)	103.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.79% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.51	0/2589	0.73	2/3535 (0.1%)
1	B	0.53	0/2589	0.73	2/3535 (0.1%)
1	C	0.52	0/2589	0.74	3/3535 (0.1%)
1	D	0.53	0/2589	0.73	3/3535 (0.1%)
1	E	0.53	0/2589	0.73	2/3535 (0.1%)
All	All	0.53	0/12945	0.73	12/17675 (0.1%)

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	E	129	LEU	CA-CB-CG	5.54	128.04	115.30
1	A	129	LEU	CA-CB-CG	5.53	128.02	115.30
1	C	129	LEU	CA-CB-CG	5.53	128.01	115.30
1	D	129	LEU	CA-CB-CG	5.53	128.01	115.30
1	B	129	LEU	CA-CB-CG	5.53	128.01	115.30
1	B	134	VAL	CB-CA-C	5.02	120.94	111.40
1	D	134	VAL	CB-CA-C	5.02	120.93	111.40
1	E	134	VAL	CB-CA-C	5.01	120.92	111.40
1	A	134	VAL	CB-CA-C	5.01	120.92	111.40
1	C	179	LEU	CA-CB-CG	5.01	126.82	115.30
1	C	134	VAL	CB-CA-C	5.01	120.91	111.40
1	D	179	LEU	CA-CB-CG	5.01	126.81	115.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2521	0	2537	314	0
1	B	2521	0	2537	316	0
1	C	2521	0	2537	270	0
1	D	2521	0	2537	287	0
1	E	2521	0	2537	264	0
2	E	1	0	0	0	0
All	All	12606	0	12685	1319	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 52.

All (1319) 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)
1:A:155:PHE:CE1	1:B:112:PRO:HB3	1.83	1.12
1:B:76:ARG:NH2	1:B:130:ILE:HD12	1.68	1.08
1:D:76:ARG:NH2	1:D:130:ILE:HD12	1.70	1.06
1:A:76:ARG:NH2	1:A:130:ILE:HD12	1.73	1.03
1:A:104:ARG:HH22	1:B:78:VAL:HA	1.20	1.03
1:A:222:ALA:HB2	1:B:221:GLU:HA	1.38	1.02
1:C:76:ARG:NH2	1:C:130:ILE:HD12	1.76	1.01
1:E:76:ARG:NH2	1:E:130:ILE:HD12	1.76	1.01
1:C:22:TYR:HA	1:C:149:GLY:HA3	1.42	0.99
1:D:22:TYR:HA	1:D:149:GLY:HA3	1.46	0.98
1:B:257:ILE:O	1:B:261:ILE:HG12	1.63	0.97
1:B:22:TYR:HA	1:B:149:GLY:HA3	1.46	0.97
1:D:257:ILE:O	1:D:261:ILE:HG12	1.65	0.97
1:A:257:ILE:O	1:A:261:ILE:HG12	1.63	0.96
1:D:155:PHE:CE1	1:E:112:PRO:HB3	1.99	0.96
1:E:257:ILE:O	1:E:261:ILE:HG12	1.65	0.96
1:A:104:ARG:NH2	1:B:78:VAL:HA	1.80	0.95
1:A:22:TYR:HA	1:A:149:GLY:HA3	1.47	0.95
1:C:257:ILE:O	1:C:261:ILE:HG12	1.66	0.94
1:D:104:ARG:HH22	1:E:78:VAL:HA	1.29	0.94
1:D:76:ARG:HH22	1:D:130:ILE:HD12	1.32	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:225:THR:CG2	1:E:224:VAL:HG23	1.98	0.93
1:E:22:TYR:HA	1:E:149:GLY:HA3	1.49	0.93
1:C:200:ILE:HD11	1:C:240:LEU:HD23	1.51	0.93
1:D:253:TYR:HA	1:D:313:PHE:CE2	2.03	0.93
1:A:253:TYR:HA	1:A:313:PHE:CE2	2.04	0.91
1:A:226:LEU:CD2	1:B:224:VAL:HB	2.00	0.91
1:A:253:TYR:HA	1:A:313:PHE:HE2	1.36	0.91
1:C:253:TYR:HA	1:C:313:PHE:CE2	2.06	0.90
1:E:253:TYR:HA	1:E:313:PHE:CE2	2.07	0.90
1:A:297:ALA:O	1:A:301:VAL:HG23	1.71	0.90
1:B:76:ARG:HH22	1:B:130:ILE:HD12	1.29	0.90
1:D:210:ILE:HG23	1:E:269:VAL:HG11	1.54	0.89
1:C:22:TYR:HA	1:C:149:GLY:CA	2.02	0.89
1:C:297:ALA:O	1:C:301:VAL:HG23	1.72	0.88
1:A:253:TYR:HD1	1:A:313:PHE:HD2	1.20	0.88
1:D:253:TYR:HA	1:D:313:PHE:HE2	1.36	0.88
1:B:253:TYR:HA	1:B:313:PHE:CE2	2.08	0.88
1:D:253:TYR:HD1	1:D:313:PHE:HD2	1.17	0.88
1:C:197:ILE:HB	1:C:198:PRO:HD3	1.55	0.87
1:E:200:ILE:HD11	1:E:240:LEU:HD23	1.56	0.87
1:C:139:ILE:HG12	1:C:172:ASN:HD21	1.37	0.87
1:D:304:LEU:O	1:D:308:ILE:HG12	1.74	0.87
1:E:139:ILE:HG12	1:E:172:ASN:HD21	1.36	0.87
1:C:253:TYR:HA	1:C:313:PHE:HE2	1.37	0.87
1:A:139:ILE:HG12	1:A:172:ASN:HD21	1.38	0.86
1:B:22:TYR:HA	1:B:149:GLY:CA	2.06	0.86
1:E:197:ILE:HB	1:E:198:PRO:HD3	1.58	0.86
1:D:22:TYR:HA	1:D:149:GLY:CA	2.06	0.85
1:E:253:TYR:HA	1:E:313:PHE:HE2	1.40	0.85
1:E:76:ARG:HH22	1:E:130:ILE:HD12	1.41	0.85
1:B:139:ILE:HG12	1:B:172:ASN:HD21	1.41	0.85
1:B:253:TYR:HA	1:B:313:PHE:HE2	1.40	0.85
1:D:139:ILE:HG12	1:D:172:ASN:HD21	1.41	0.85
1:B:79:ASN:H	1:B:79:ASN:HD22	1.24	0.84
1:A:22:TYR:HA	1:A:149:GLY:CA	2.07	0.84
1:A:221:GLU:HB3	1:B:221:GLU:HG2	1.59	0.84
1:E:253:TYR:HD1	1:E:313:PHE:HD2	1.25	0.84
1:A:197:ILE:HB	1:A:198:PRO:HD3	1.60	0.83
1:B:253:TYR:HD1	1:B:313:PHE:HD2	1.27	0.83
1:C:76:ARG:HH22	1:C:130:ILE:HD12	1.42	0.83
1:C:234:HIS:CE1	1:C:261:ILE:HG21	2.14	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:297:ALA:O	1:E:301:VAL:HG23	1.78	0.83
1:A:155:PHE:CZ	1:B:112:PRO:HB3	2.13	0.82
1:A:76:ARG:HH22	1:A:130:ILE:HD12	1.39	0.82
1:C:253:TYR:HD1	1:C:313:PHE:HD2	1.26	0.82
1:D:225:THR:HG21	1:E:224:VAL:HG23	1.59	0.82
1:A:27:TYR:CB	1:B:110:LEU:HD11	2.10	0.81
1:B:297:ALA:O	1:B:301:VAL:HG23	1.81	0.81
1:E:22:TYR:HA	1:E:149:GLY:CA	2.09	0.81
1:B:66:GLU:HG3	1:B:67:PRO:HD2	1.62	0.80
1:B:197:ILE:HB	1:B:198:PRO:HD3	1.64	0.80
1:E:66:GLU:HG3	1:E:67:PRO:HD2	1.64	0.80
1:A:260:MET:HE2	1:A:309:LEU:HD22	1.63	0.80
1:D:41:PHE:HE2	1:E:175:LEU:HD23	1.45	0.80
1:E:304:LEU:O	1:E:308:ILE:HG12	1.83	0.79
1:B:304:LEU:O	1:B:308:ILE:HG12	1.82	0.79
1:D:297:ALA:O	1:D:301:VAL:HG23	1.83	0.79
1:E:89:VAL:HG11	1:E:102:LEU:HD23	1.64	0.79
1:A:283:GLN:N	1:A:284:PRO:HD3	1.98	0.79
1:C:199:ASN:HB3	1:D:242:GLU:CD	2.03	0.79
1:D:197:ILE:HB	1:D:198:PRO:HD3	1.64	0.79
1:A:22:TYR:HB3	1:A:41:PHE:HB2	1.64	0.79
1:B:260:MET:HE2	1:B:309:LEU:HD22	1.64	0.79
1:C:78:VAL:HG22	1:C:130:ILE:HG12	1.64	0.79
1:E:147:LYS:O	1:E:147:LYS:HG2	1.83	0.79
1:E:79:ASN:HD22	1:E:79:ASN:H	1.31	0.79
1:A:226:LEU:HD23	1:B:224:VAL:HB	1.64	0.78
1:C:147:LYS:O	1:C:147:LYS:HG2	1.83	0.78
1:C:149:GLY:O	1:C:164:PHE:HD1	1.67	0.78
1:B:22:TYR:CD1	1:B:149:GLY:HA2	2.19	0.78
1:D:22:TYR:CD1	1:D:149:GLY:HA2	2.19	0.77
1:D:66:GLU:HG3	1:D:67:PRO:HD2	1.67	0.77
1:A:147:LYS:O	1:A:147:LYS:HG2	1.83	0.77
1:D:283:GLN:N	1:D:284:PRO:HD3	2.00	0.77
1:E:149:GLY:O	1:E:164:PHE:HD1	1.68	0.77
1:B:254:THR:O	1:B:258:ILE:HB	1.84	0.77
1:B:197:ILE:HA	1:B:201:ILE:HB	1.67	0.77
1:E:78:VAL:HG22	1:E:130:ILE:HG12	1.66	0.77
1:B:200:ILE:HD11	1:B:240:LEU:HD23	1.66	0.77
1:B:283:GLN:N	1:B:284:PRO:HD3	2.00	0.77
1:A:89:VAL:HG11	1:A:102:LEU:HD23	1.67	0.76
1:A:217:SER:OG	1:B:220:TYR:HE2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:283:GLN:N	1:C:284:PRO:HD3	1.99	0.76
1:A:234:HIS:CE1	1:A:261:ILE:HG21	2.20	0.76
1:A:254:THR:O	1:A:258:ILE:HB	1.86	0.76
1:D:147:LYS:O	1:D:147:LYS:HG2	1.83	0.76
1:D:225:THR:HG22	1:E:224:VAL:HG23	1.66	0.76
1:E:234:HIS:CE1	1:E:261:ILE:HG21	2.20	0.76
1:A:79:ASN:HD22	1:A:79:ASN:H	1.34	0.76
1:B:147:LYS:HG2	1:B:147:LYS:O	1.83	0.76
1:E:283:GLN:N	1:E:284:PRO:HD3	2.00	0.76
1:A:226:LEU:HD21	1:B:224:VAL:HB	1.66	0.76
1:C:260:MET:HE2	1:C:309:LEU:HD22	1.66	0.76
1:B:234:HIS:CE1	1:B:261:ILE:HG21	2.22	0.75
1:B:78:VAL:HG22	1:B:130:ILE:HG12	1.66	0.75
1:D:89:VAL:HG11	1:D:102:LEU:HD23	1.68	0.75
1:C:22:TYR:CD1	1:C:149:GLY:HA2	2.21	0.75
1:A:66:GLU:HG3	1:A:67:PRO:HD2	1.69	0.75
1:D:200:ILE:HD11	1:D:240:LEU:HD23	1.67	0.75
1:D:197:ILE:HA	1:D:201:ILE:HB	1.69	0.75
1:D:78:VAL:HG22	1:D:130:ILE:HG12	1.69	0.75
1:D:234:HIS:CE1	1:D:261:ILE:HG21	2.22	0.75
1:E:260:MET:HE2	1:E:309:LEU:HD22	1.68	0.74
1:D:254:THR:O	1:D:258:ILE:HB	1.87	0.74
1:A:200:ILE:HD11	1:A:240:LEU:HD23	1.69	0.74
1:E:254:THR:O	1:E:258:ILE:HB	1.87	0.74
1:D:104:ARG:NH2	1:E:78:VAL:HA	2.01	0.74
1:D:253:TYR:HD1	1:D:313:PHE:CD2	2.04	0.74
1:C:66:GLU:HG3	1:C:67:PRO:HD2	1.68	0.74
1:E:147:LYS:CG	1:E:147:LYS:O	2.35	0.74
1:A:217:SER:OG	1:B:220:TYR:CE2	2.39	0.74
1:B:149:GLY:O	1:B:164:PHE:HD1	1.70	0.74
1:C:226:LEU:HD21	1:D:224:VAL:HB	1.69	0.74
1:D:147:LYS:CG	1:D:147:LYS:O	2.35	0.74
1:B:147:LYS:O	1:B:147:LYS:CG	2.35	0.73
1:A:22:TYR:CD1	1:A:149:GLY:HA2	2.23	0.73
1:E:22:TYR:CD1	1:E:149:GLY:HA2	2.22	0.73
1:C:27:TYR:HB3	1:D:110:LEU:HD11	1.70	0.73
1:D:253:TYR:CD1	1:D:313:PHE:HD2	2.04	0.73
1:A:155:PHE:CE1	1:B:112:PRO:CB	2.69	0.73
1:B:100:GLN:HA	1:B:100:GLN:HE21	1.54	0.73
1:D:22:TYR:HB3	1:D:41:PHE:HB2	1.71	0.73
1:C:147:LYS:CG	1:C:147:LYS:O	2.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:100:GLN:HE21	1:D:100:GLN:HA	1.54	0.72
1:A:146:GLU:HG3	1:B:176:GLU:HG2	1.71	0.72
1:C:254:THR:O	1:C:258:ILE:HB	1.89	0.72
1:E:22:TYR:HB3	1:E:41:PHE:HB2	1.70	0.72
1:A:100:GLN:HE21	1:A:100:GLN:HA	1.54	0.72
1:C:22:TYR:HB3	1:C:41:PHE:HB2	1.71	0.72
1:A:149:GLY:O	1:A:164:PHE:HD1	1.73	0.72
1:A:253:TYR:CD1	1:A:313:PHE:HD2	2.06	0.72
1:C:304:LEU:O	1:C:308:ILE:HG12	1.89	0.72
1:B:238:ASN:HA	1:B:258:ILE:CD1	2.20	0.71
1:A:147:LYS:O	1:A:147:LYS:CG	2.35	0.71
1:B:54:ASP:HB2	1:B:57:ARG:HB2	1.72	0.71
1:A:104:ARG:HH22	1:B:78:VAL:CA	2.01	0.71
1:A:304:LEU:O	1:A:308:ILE:HG12	1.90	0.71
1:A:78:VAL:HG22	1:A:130:ILE:HG12	1.71	0.71
1:B:22:TYR:HB3	1:B:41:PHE:HB2	1.71	0.71
1:D:54:ASP:HB2	1:D:57:ARG:HG3	1.72	0.71
1:A:146:GLU:HG3	1:B:176:GLU:CG	2.20	0.71
1:B:89:VAL:HG11	1:B:102:LEU:HD23	1.73	0.71
1:D:79:ASN:HD22	1:D:79:ASN:H	1.36	0.71
1:D:149:GLY:O	1:D:164:PHE:HD1	1.73	0.71
1:D:146:GLU:HG3	1:E:176:GLU:HG2	1.73	0.71
1:B:15:LEU:HD11	1:B:46:TRP:HB2	1.73	0.70
1:D:54:ASP:HB2	1:D:57:ARG:HB2	1.73	0.70
1:D:260:MET:HE2	1:D:309:LEU:HD22	1.73	0.70
1:C:157:THR:HG21	1:D:34:GLU:HG3	1.73	0.70
1:E:100:GLN:HE21	1:E:100:GLN:HA	1.55	0.70
1:A:202:LEU:HD12	1:B:259:PHE:CZ	2.26	0.70
1:A:253:TYR:HD1	1:A:313:PHE:CD2	2.06	0.70
1:E:54:ASP:HB2	1:E:57:ARG:HG3	1.74	0.70
1:A:27:TYR:CG	1:B:110:LEU:CD1	2.75	0.70
1:A:51:LEU:CD1	1:A:70:ILE:HD12	2.22	0.70
1:E:238:ASN:HA	1:E:258:ILE:CD1	2.22	0.70
1:C:79:ASN:HD22	1:C:79:ASN:H	1.39	0.70
1:E:15:LEU:HD11	1:E:46:TRP:HB2	1.74	0.69
1:B:54:ASP:HB2	1:B:57:ARG:HG3	1.74	0.69
1:C:54:ASP:HB2	1:C:57:ARG:HB2	1.74	0.69
1:B:51:LEU:CD1	1:B:70:ILE:HD12	2.22	0.69
1:E:84:ARG:HB2	1:E:84:ARG:NH1	2.07	0.69
1:C:193:TYR:O	1:C:194:PHE:HB2	1.92	0.69
1:B:253:TYR:HD1	1:B:313:PHE:CD2	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:197:ILE:HA	1:E:201:ILE:HB	1.75	0.69
1:B:29:LEU:HB2	1:B:156:LEU:HD11	1.74	0.69
1:E:267:VAL:HA	1:E:270:ILE:HB	1.74	0.69
1:D:238:ASN:HA	1:D:258:ILE:CD1	2.23	0.69
1:B:253:TYR:CD1	1:B:313:PHE:HD2	2.11	0.68
1:C:223:ASN:O	1:C:227:VAL:HG23	1.93	0.68
1:D:15:LEU:HD11	1:D:46:TRP:HB2	1.75	0.68
1:B:223:ASN:O	1:B:227:VAL:HG23	1.92	0.68
1:E:54:ASP:HB2	1:E:57:ARG:HB2	1.74	0.68
1:A:238:ASN:HA	1:A:258:ILE:CD1	2.23	0.68
1:C:238:ASN:HA	1:C:258:ILE:CD1	2.23	0.68
1:A:197:ILE:HA	1:A:201:ILE:HB	1.76	0.68
1:A:54:ASP:HB2	1:A:57:ARG:HG3	1.75	0.68
1:D:53:PHE:CE1	1:D:95:PRO:HA	2.29	0.68
1:C:132:ARG:HA	1:C:180:GLU:HG2	1.76	0.68
1:E:84:ARG:HB2	1:E:84:ARG:HH11	1.58	0.68
1:B:216:TRP:HA	1:B:295:ARG:HH21	1.59	0.68
1:C:118:TYR:CE1	1:C:245:LEU:HD11	2.29	0.68
1:C:216:TRP:HA	1:C:295:ARG:HH21	1.57	0.68
1:D:216:TRP:HA	1:D:295:ARG:HH21	1.57	0.68
1:D:218:THR:HG22	1:D:279:LYS:HE2	1.76	0.68
1:D:94:SER:OG	1:D:95:PRO:HD2	1.94	0.68
1:C:54:ASP:HB2	1:C:57:ARG:HG3	1.75	0.67
1:A:157:THR:CG2	1:B:34:GLU:OE1	2.42	0.67
1:A:194:PHE:HE2	1:B:250:TYR:O	1.77	0.67
1:C:197:ILE:HA	1:C:201:ILE:HB	1.75	0.67
1:E:218:THR:HG22	1:E:279:LYS:HE2	1.74	0.67
1:A:27:TYR:CG	1:B:110:LEU:HD11	2.29	0.67
1:E:53:PHE:CE1	1:E:95:PRO:HA	2.29	0.67
1:B:218:THR:HG22	1:B:279:LYS:HE2	1.77	0.67
1:C:94:SER:OG	1:C:95:PRO:HD2	1.95	0.67
1:D:65:TYR:CD1	1:D:70:ILE:HD11	2.30	0.67
1:A:41:PHE:HE2	1:B:175:LEU:HD23	1.58	0.67
1:D:225:THR:CG2	1:E:224:VAL:CG2	2.71	0.67
1:D:155:PHE:HE1	1:E:112:PRO:HB3	1.52	0.67
1:A:94:SER:OG	1:A:95:PRO:HD2	1.95	0.67
1:D:51:LEU:CD1	1:D:70:ILE:HD12	2.25	0.67
1:A:132:ARG:HA	1:A:180:GLU:HG2	1.77	0.67
1:A:202:LEU:HD12	1:B:259:PHE:CE1	2.30	0.67
1:C:29:LEU:HB2	1:C:156:LEU:HD11	1.77	0.67
1:A:218:THR:HG22	1:A:279:LYS:HE2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:ASP:HB2	1:A:57:ARG:HB2	1.76	0.67
1:C:216:TRP:HA	1:C:295:ARG:NH2	2.09	0.67
1:C:89:VAL:HG11	1:C:102:LEU:HD23	1.75	0.67
1:E:193:TYR:O	1:E:194:PHE:HB2	1.94	0.67
1:E:29:LEU:HB2	1:E:156:LEU:HD11	1.76	0.67
1:C:267:VAL:HA	1:C:270:ILE:HB	1.77	0.66
1:E:253:TYR:HD1	1:E:313:PHE:CD2	2.10	0.66
1:A:223:ASN:O	1:A:227:VAL:HG23	1.94	0.66
1:A:216:TRP:HA	1:A:295:ARG:HH21	1.60	0.66
1:B:267:VAL:HA	1:B:270:ILE:HB	1.77	0.66
1:C:218:THR:HG22	1:C:279:LYS:HE2	1.76	0.66
1:D:132:ARG:HA	1:D:180:GLU:HG2	1.77	0.66
1:D:24:ILE:HD13	1:D:104:ARG:HE	1.60	0.66
1:A:15:LEU:HD11	1:A:46:TRP:HB2	1.76	0.66
1:C:118:TYR:CE1	1:C:245:LEU:CD1	2.78	0.66
1:C:53:PHE:CE1	1:C:95:PRO:HA	2.31	0.66
1:B:13:GLU:HB3	1:B:14:PRO:HD2	1.78	0.66
1:A:225:THR:HG21	1:B:225:THR:OG1	1.96	0.66
1:E:223:ASN:O	1:E:227:VAL:HG23	1.95	0.66
1:C:100:GLN:HE21	1:C:100:GLN:HA	1.61	0.66
1:B:118:TYR:CE1	1:B:245:LEU:CD1	2.79	0.66
1:A:137:ARG:HD2	1:A:179:LEU:HG	1.78	0.66
1:A:77:PHE:CD1	1:A:84:ARG:HD2	2.30	0.66
1:B:21:ILE:O	1:B:149:GLY:HA3	1.96	0.66
1:C:147:LYS:C	1:C:149:GLY:H	1.99	0.66
1:E:118:TYR:CE1	1:E:245:LEU:CD1	2.79	0.66
1:E:253:TYR:CD1	1:E:313:PHE:HD2	2.10	0.66
1:C:199:ASN:HB3	1:D:242:GLU:OE1	1.96	0.66
1:C:202:LEU:HD12	1:D:259:PHE:HE1	1.60	0.66
1:D:118:TYR:CE1	1:D:245:LEU:CD1	2.79	0.66
1:B:53:PHE:CE1	1:B:95:PRO:HA	2.31	0.66
1:B:84:ARG:NH1	1:B:84:ARG:HB2	2.11	0.66
1:E:47:LYS:HD3	1:E:49:ARG:NH2	2.10	0.66
1:E:84:ARG:CB	1:E:84:ARG:HH11	2.08	0.66
1:C:253:TYR:HD1	1:C:313:PHE:CD2	2.10	0.65
1:C:48:ASP:O	1:C:51:LEU:HD23	1.96	0.65
1:A:77:PHE:H	1:A:84:ARG:HD3	1.60	0.65
1:C:253:TYR:CD1	1:C:313:PHE:HD2	2.10	0.65
1:D:147:LYS:C	1:D:149:GLY:H	1.99	0.65
1:E:216:TRP:HA	1:E:295:ARG:HH21	1.61	0.65
1:A:84:ARG:HB2	1:A:84:ARG:NH1	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:15:LEU:HD11	1:C:46:TRP:HB2	1.77	0.65
1:D:21:ILE:O	1:D:149:GLY:HA3	1.97	0.65
1:A:21:ILE:O	1:A:149:GLY:HA3	1.97	0.65
1:B:53:PHE:HE2	1:B:63:LYS:HB3	1.61	0.65
1:B:216:TRP:HA	1:B:295:ARG:NH2	2.11	0.65
1:E:147:LYS:C	1:E:149:GLY:H	1.99	0.65
1:E:137:ARG:HD2	1:E:179:LEU:HG	1.79	0.65
1:C:84:ARG:NH1	1:C:84:ARG:HB2	2.11	0.65
1:A:93:VAL:HG22	1:A:99:VAL:HG22	1.78	0.65
1:B:147:LYS:C	1:B:149:GLY:H	1.99	0.65
1:C:53:PHE:HE2	1:C:63:LYS:HB3	1.62	0.65
1:D:41:PHE:HE2	1:E:175:LEU:CD2	2.09	0.65
1:E:132:ARG:HA	1:E:180:GLU:HG2	1.79	0.65
1:C:222:ALA:HB2	1:D:221:GLU:OE1	1.97	0.65
1:E:118:TYR:CE1	1:E:245:LEU:HD11	2.31	0.65
1:A:216:TRP:HA	1:A:295:ARG:NH2	2.12	0.64
1:C:137:ARG:HD2	1:C:179:LEU:HG	1.79	0.64
1:C:51:LEU:CD1	1:C:70:ILE:HD12	2.27	0.64
1:D:84:ARG:NH1	1:D:84:ARG:HB2	2.12	0.64
1:E:249:PRO:HD2	1:E:250:TYR:CD1	2.31	0.64
1:C:21:ILE:O	1:C:149:GLY:HA3	1.98	0.64
1:A:29:LEU:HB2	1:A:156:LEU:HD11	1.80	0.64
1:C:128:TYR:O	1:C:129:LEU:HB2	1.98	0.64
1:E:89:VAL:CG1	1:E:102:LEU:HD23	2.28	0.64
1:A:219:SER:OG	1:A:222:ALA:HB3	1.98	0.64
1:A:147:LYS:C	1:A:149:GLY:H	1.99	0.64
1:A:203:PRO:HB3	1:B:262:TYR:CZ	2.33	0.64
1:D:192:GLN:OE1	1:E:249:PRO:HB3	1.98	0.64
1:D:223:ASN:O	1:D:227:VAL:HG23	1.96	0.64
1:E:128:TYR:O	1:E:129:LEU:HB2	1.98	0.64
1:E:51:LEU:CD1	1:E:70:ILE:HD12	2.28	0.64
1:A:193:TYR:O	1:A:194:PHE:HB2	1.96	0.64
1:A:221:GLU:HB3	1:B:221:GLU:CG	2.27	0.64
1:A:232:ILE:HG22	1:A:233:ALA:N	2.12	0.64
1:A:283:GLN:N	1:A:284:PRO:CD	2.60	0.64
1:A:53:PHE:CE1	1:A:95:PRO:HA	2.32	0.64
1:C:24:ILE:HD13	1:C:104:ARG:HE	1.63	0.64
1:D:47:LYS:HD3	1:D:49:ARG:NH2	2.13	0.64
1:A:53:PHE:HE2	1:A:63:LYS:HB3	1.63	0.64
1:B:132:ARG:HA	1:B:180:GLU:HG2	1.79	0.64
1:E:48:ASP:O	1:E:51:LEU:HD23	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:139:ILE:HG12	1:E:172:ASN:ND2	2.12	0.64
1:C:65:TYR:CG	1:C:70:ILE:HD11	2.33	0.63
1:C:222:ALA:HB2	1:D:221:GLU:HA	1.80	0.63
1:D:274:VAL:C	1:D:276:HIS:H	2.02	0.63
1:A:128:TYR:O	1:A:129:LEU:HB2	1.98	0.63
1:B:47:LYS:HD3	1:B:49:ARG:NH2	2.13	0.63
1:E:216:TRP:HA	1:E:295:ARG:NH2	2.13	0.63
1:B:276:HIS:O	1:B:280:VAL:HG22	1.98	0.63
1:A:104:ARG:NH1	1:B:77:PHE:O	2.29	0.63
1:D:13:GLU:HB3	1:D:14:PRO:HD2	1.80	0.63
1:B:84:ARG:HH11	1:B:84:ARG:HB2	1.64	0.63
1:C:274:VAL:C	1:C:276:HIS:H	2.02	0.63
1:D:118:TYR:CE1	1:D:245:LEU:HD11	2.32	0.63
1:A:267:VAL:HA	1:A:270:ILE:HB	1.80	0.63
1:B:274:VAL:C	1:B:276:HIS:H	2.02	0.63
1:C:149:GLY:O	1:C:164:PHE:CD1	2.51	0.63
1:D:51:LEU:HD11	1:D:70:ILE:HD12	1.79	0.63
1:D:77:PHE:H	1:D:84:ARG:HD3	1.62	0.63
1:B:193:TYR:O	1:B:194:PHE:HB2	1.97	0.63
1:C:47:LYS:HD3	1:C:49:ARG:NH2	2.14	0.63
1:C:65:TYR:CD1	1:C:70:ILE:HD11	2.34	0.63
1:C:77:PHE:H	1:C:84:ARG:HD3	1.62	0.63
1:D:232:ILE:HG22	1:D:233:ALA:N	2.13	0.63
1:D:53:PHE:HE2	1:D:63:LYS:HB3	1.64	0.63
1:E:53:PHE:HE2	1:E:63:LYS:HB3	1.61	0.63
1:A:48:ASP:O	1:A:51:LEU:HD23	1.99	0.62
1:E:144:ASP:HA	1:E:147:LYS:HB3	1.82	0.62
1:B:128:TYR:O	1:B:129:LEU:HB2	1.98	0.62
1:D:216:TRP:HA	1:D:295:ARG:NH2	2.13	0.62
1:A:192:GLN:CD	1:B:249:PRO:HB3	2.19	0.62
1:B:118:TYR:CE1	1:B:245:LEU:HD11	2.33	0.62
1:B:283:GLN:N	1:B:284:PRO:CD	2.63	0.62
1:A:274:VAL:C	1:A:276:HIS:H	2.02	0.62
1:A:194:PHE:HE2	1:B:250:TYR:C	2.03	0.62
1:D:267:VAL:HA	1:D:270:ILE:HB	1.80	0.62
1:E:21:ILE:O	1:E:149:GLY:HA3	1.98	0.62
1:C:193:TYR:O	1:C:194:PHE:CB	2.46	0.62
1:D:84:ARG:CB	1:D:84:ARG:HH11	2.12	0.62
1:C:283:GLN:N	1:C:284:PRO:CD	2.62	0.62
1:A:13:GLU:HB3	1:A:14:PRO:HD2	1.81	0.62
1:B:249:PRO:HD2	1:B:250:TYR:CD1	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:249:PRO:HD2	1:D:250:TYR:CD1	2.35	0.62
1:C:202:LEU:HD12	1:D:259:PHE:CE1	2.35	0.61
1:D:65:TYR:CG	1:D:70:ILE:HD11	2.35	0.61
1:E:283:GLN:N	1:E:284:PRO:CD	2.62	0.61
1:B:48:ASP:O	1:B:51:LEU:HD23	2.00	0.61
1:B:84:ARG:CB	1:B:84:ARG:HH11	2.13	0.61
1:D:128:TYR:O	1:D:129:LEU:HB2	1.98	0.61
1:D:283:GLN:N	1:D:284:PRO:CD	2.62	0.61
1:C:219:SER:OG	1:C:222:ALA:HB3	1.99	0.61
1:C:84:ARG:HB2	1:C:84:ARG:HH11	1.65	0.61
1:D:29:LEU:HB2	1:D:156:LEU:HD11	1.81	0.61
1:A:89:VAL:CG1	1:A:102:LEU:HD23	2.30	0.61
1:C:13:GLU:HB3	1:C:14:PRO:HD2	1.82	0.61
1:C:93:VAL:HG22	1:C:99:VAL:HG22	1.83	0.61
1:D:77:PHE:CD1	1:D:84:ARG:HD2	2.36	0.61
1:E:274:VAL:C	1:E:276:HIS:H	2.02	0.61
1:A:131:VAL:HG11	1:A:140:VAL:HG13	1.83	0.61
1:B:77:PHE:H	1:B:84:ARG:HD3	1.66	0.61
1:D:193:TYR:O	1:D:194:PHE:HB2	1.98	0.61
1:D:131:VAL:HG11	1:D:140:VAL:HG13	1.82	0.61
1:B:238:ASN:HA	1:B:258:ILE:HD11	1.81	0.61
1:B:51:LEU:HD11	1:B:70:ILE:HD12	1.82	0.61
1:D:137:ARG:HD2	1:D:179:LEU:HG	1.82	0.61
1:E:200:ILE:O	1:E:204:MET:HB2	2.01	0.61
1:B:131:VAL:HG11	1:B:140:VAL:HG13	1.81	0.61
1:B:281:GLU:O	1:B:283:GLN:N	2.34	0.61
1:C:77:PHE:CD1	1:C:84:ARG:HD2	2.35	0.61
1:D:215:PHE:HZ	1:D:298:PHE:CD1	2.18	0.61
1:E:94:SER:OG	1:E:95:PRO:HD2	2.01	0.61
1:A:149:GLY:O	1:A:164:PHE:CD1	2.54	0.60
1:A:24:ILE:HD13	1:A:104:ARG:HE	1.64	0.60
1:B:144:ASP:HA	1:B:147:LYS:HB3	1.83	0.60
1:C:215:PHE:HZ	1:C:298:PHE:CD1	2.17	0.60
1:C:86:ALA:HB2	1:C:105:PHE:HB3	1.83	0.60
1:D:89:VAL:CG1	1:D:102:LEU:HD23	2.31	0.60
1:A:157:THR:HG21	1:B:34:GLU:HG3	1.84	0.60
1:B:232:ILE:HG22	1:B:233:ALA:N	2.16	0.60
1:C:84:ARG:CB	1:C:84:ARG:HH11	2.14	0.60
1:A:84:ARG:HH11	1:A:84:ARG:HB2	1.67	0.60
1:B:193:TYR:O	1:B:194:PHE:CB	2.48	0.60
1:E:193:TYR:O	1:E:194:PHE:CB	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:249:PRO:HD2	1:A:250:TYR:CD1	2.37	0.60
1:B:137:ARG:HD2	1:B:179:LEU:HG	1.83	0.60
1:B:94:SER:OG	1:B:95:PRO:HD2	2.02	0.60
1:A:225:THR:HG22	1:B:224:VAL:HG23	1.83	0.60
1:B:77:PHE:CD1	1:B:84:ARG:HD2	2.36	0.60
1:A:51:LEU:HD11	1:A:70:ILE:HD12	1.84	0.60
1:D:76:ARG:HH22	1:D:130:ILE:CD1	2.10	0.60
1:C:144:ASP:HA	1:C:147:LYS:HB3	1.84	0.59
1:C:194:PHE:HA	1:C:197:ILE:HD12	1.84	0.59
1:D:281:GLU:O	1:D:283:GLN:N	2.35	0.59
1:E:13:GLU:HB3	1:E:14:PRO:HD2	1.83	0.59
1:E:65:TYR:CD1	1:E:70:ILE:HD11	2.37	0.59
1:E:86:ALA:HB2	1:E:105:PHE:HB3	1.84	0.59
1:C:194:PHE:C	1:C:196:TYR:N	2.54	0.59
1:A:224:VAL:C	1:A:226:LEU:N	2.56	0.59
1:B:76:ARG:NH2	1:B:130:ILE:CD1	2.55	0.59
1:C:27:TYR:CB	1:D:110:LEU:HD11	2.31	0.59
1:A:238:ASN:HA	1:A:258:ILE:HD11	1.84	0.59
1:C:200:ILE:CD1	1:C:240:LEU:HD23	2.30	0.59
1:E:224:VAL:C	1:E:226:LEU:H	2.05	0.59
1:A:193:TYR:O	1:A:194:PHE:CB	2.49	0.59
1:B:221:GLU:OE2	1:C:221:GLU:CD	2.40	0.59
1:E:65:TYR:CG	1:E:70:ILE:HD11	2.36	0.59
1:B:200:ILE:O	1:B:204:MET:HB2	2.02	0.59
1:E:24:ILE:HD13	1:E:104:ARG:HE	1.67	0.59
1:A:84:ARG:HH11	1:A:84:ARG:CB	2.14	0.59
1:B:215:PHE:HZ	1:B:298:PHE:CD1	2.20	0.59
1:A:215:PHE:HZ	1:A:298:PHE:CD1	2.20	0.59
1:A:226:LEU:HD23	1:B:224:VAL:CB	2.32	0.59
1:C:194:PHE:HE2	1:D:250:TYR:O	1.86	0.59
1:C:281:GLU:O	1:C:283:GLN:N	2.36	0.59
1:B:93:VAL:HG22	1:B:99:VAL:HG22	1.85	0.59
1:C:249:PRO:HD2	1:C:250:TYR:CD1	2.37	0.59
1:C:139:ILE:HG12	1:C:172:ASN:ND2	2.14	0.59
1:D:54:ASP:HB2	1:D:57:ARG:CG	2.32	0.59
1:B:139:ILE:HG12	1:B:172:ASN:ND2	2.16	0.58
1:C:234:HIS:CE1	1:C:261:ILE:CG2	2.85	0.58
1:E:276:HIS:O	1:E:280:VAL:HG22	2.03	0.58
1:A:86:ALA:HB2	1:A:105:PHE:HB3	1.85	0.58
1:B:54:ASP:HB2	1:B:57:ARG:CG	2.33	0.58
1:B:65:TYR:CD1	1:B:70:ILE:HD11	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:225:THR:HG22	1:E:224:VAL:CG2	2.30	0.58
1:E:194:PHE:HA	1:E:197:ILE:HD12	1.85	0.58
1:E:232:ILE:HG22	1:E:233:ALA:N	2.18	0.58
1:C:131:VAL:HG11	1:C:140:VAL:HG13	1.84	0.58
1:E:131:VAL:HG11	1:E:140:VAL:HG13	1.86	0.58
1:A:275:GLN:HG2	1:A:275:GLN:O	2.04	0.58
1:C:275:GLN:HG2	1:C:275:GLN:O	2.04	0.58
1:C:276:HIS:O	1:C:280:VAL:HG22	2.03	0.58
1:E:281:GLU:O	1:E:283:GLN:N	2.37	0.58
1:E:215:PHE:HZ	1:E:298:PHE:CD1	2.21	0.58
1:D:139:ILE:HG12	1:D:172:ASN:ND2	2.17	0.58
1:A:65:TYR:CG	1:A:70:ILE:HD11	2.38	0.58
1:D:76:ARG:NH2	1:D:130:ILE:CD1	2.56	0.58
1:B:65:TYR:CG	1:B:70:ILE:HD11	2.38	0.58
1:D:140:VAL:HG22	1:D:181:SER:HB3	1.86	0.58
1:E:149:GLY:O	1:E:164:PHE:CD1	2.53	0.58
1:E:298:PHE:HB2	1:E:299:PRO:HD3	1.85	0.58
1:B:86:ALA:HB2	1:B:105:PHE:HB3	1.86	0.58
1:C:200:ILE:O	1:C:204:MET:HB2	2.04	0.58
1:D:48:ASP:O	1:D:51:LEU:HD23	2.04	0.58
1:E:219:SER:OG	1:E:222:ALA:HB3	2.04	0.58
1:C:194:PHE:C	1:C:196:TYR:H	2.06	0.58
1:E:224:VAL:C	1:E:226:LEU:N	2.56	0.58
1:E:77:PHE:H	1:E:84:ARG:HD3	1.68	0.58
1:A:224:VAL:C	1:A:226:LEU:H	2.05	0.58
1:D:86:ALA:HB2	1:D:105:PHE:HB3	1.85	0.57
1:D:193:TYR:O	1:D:194:PHE:CB	2.51	0.57
1:E:215:PHE:HZ	1:E:298:PHE:CE1	2.21	0.57
1:E:275:GLN:O	1:E:275:GLN:HG2	2.04	0.57
1:E:47:LYS:CD	1:E:49:ARG:HH21	2.17	0.57
1:A:281:GLU:O	1:A:283:GLN:N	2.37	0.57
1:C:215:PHE:HZ	1:C:298:PHE:CE1	2.22	0.57
1:C:118:TYR:CD1	1:C:245:LEU:HD11	2.39	0.57
1:E:194:PHE:C	1:E:196:TYR:N	2.56	0.57
1:E:54:ASP:HB2	1:E:57:ARG:CG	2.34	0.57
1:A:140:VAL:HG22	1:A:181:SER:HB3	1.86	0.57
1:A:65:TYR:CD1	1:A:70:ILE:HD11	2.39	0.57
1:B:275:GLN:HG2	1:B:275:GLN:O	2.04	0.57
1:E:264:PHE:CE2	1:E:302:PHE:HB2	2.39	0.57
1:B:194:PHE:C	1:B:196:TYR:N	2.57	0.57
1:A:41:PHE:HZ	1:B:76:ARG:NH2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:44:LEU:HD12	1:C:101:TYR:CD2	2.40	0.57
1:A:47:LYS:HD3	1:A:49:ARG:NH2	2.19	0.57
1:E:93:VAL:HG22	1:E:99:VAL:HG22	1.86	0.57
1:B:224:VAL:C	1:B:226:LEU:H	2.07	0.57
1:B:47:LYS:CD	1:B:49:ARG:HH21	2.18	0.57
1:C:54:ASP:HB2	1:C:57:ARG:CG	2.34	0.57
1:E:62:VAL:HG13	1:E:93:VAL:O	2.05	0.57
1:B:149:GLY:O	1:B:164:PHE:CD1	2.56	0.57
1:B:76:ARG:HH22	1:B:130:ILE:CD1	2.09	0.57
1:C:86:ALA:HB2	1:C:105:PHE:CB	2.35	0.57
1:D:192:GLN:CD	1:E:249:PRO:HB3	2.26	0.56
1:D:276:HIS:O	1:D:280:VAL:HG22	2.05	0.56
1:E:29:LEU:C	1:E:29:LEU:HD23	2.25	0.56
1:B:276:HIS:C	1:B:278:LEU:H	2.09	0.56
1:C:147:LYS:HE2	1:C:165:THR:HA	1.87	0.56
1:C:76:ARG:NH2	1:C:130:ILE:CD1	2.62	0.56
1:C:89:VAL:CG1	1:C:102:LEU:HD23	2.35	0.56
1:A:139:ILE:HG12	1:A:172:ASN:ND2	2.14	0.56
1:B:194:PHE:HA	1:B:197:ILE:HD12	1.86	0.56
1:D:215:PHE:HZ	1:D:298:PHE:CE1	2.23	0.56
1:D:53:PHE:CD1	1:D:95:PRO:HA	2.41	0.56
1:E:77:PHE:CD1	1:E:84:ARG:HD2	2.40	0.56
1:D:194:PHE:HA	1:D:197:ILE:HD12	1.86	0.56
1:A:215:PHE:HZ	1:A:298:PHE:CE1	2.23	0.56
1:A:222:ALA:O	1:A:226:LEU:HB2	2.06	0.56
1:C:224:VAL:C	1:C:226:LEU:H	2.08	0.56
1:D:238:ASN:HA	1:D:258:ILE:HD11	1.86	0.56
1:D:37:LYS:HG2	1:D:108:ARG:HB3	1.88	0.56
1:D:149:GLY:O	1:D:164:PHE:CD1	2.57	0.56
1:D:48:ASP:O	1:D:50:ARG:N	2.39	0.56
1:E:238:ASN:HA	1:E:258:ILE:HD11	1.86	0.56
1:A:147:LYS:O	1:A:147:LYS:HD3	2.06	0.56
1:B:147:LYS:HD3	1:B:147:LYS:O	2.06	0.56
1:B:215:PHE:HZ	1:B:298:PHE:CE1	2.24	0.56
1:D:275:GLN:O	1:D:275:GLN:HG2	2.04	0.56
1:A:147:LYS:HE2	1:A:165:THR:HA	1.86	0.56
1:A:76:ARG:NH2	1:A:130:ILE:CD1	2.60	0.56
1:C:276:HIS:C	1:C:278:LEU:H	2.09	0.56
1:E:70:ILE:HD13	1:E:70:ILE:N	2.21	0.56
1:A:194:PHE:C	1:A:196:TYR:N	2.58	0.56
1:A:25:GLU:HG3	1:B:79:ASN:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:298:PHE:HB2	1:B:299:PRO:HD3	1.88	0.56
1:A:253:TYR:O	1:A:256:ALA:HB3	2.06	0.56
1:A:54:ASP:HB2	1:A:57:ARG:CG	2.35	0.56
1:B:54:ASP:HB2	1:B:57:ARG:CB	2.36	0.56
1:E:305:ALA:O	1:E:309:LEU:HB2	2.06	0.56
1:E:51:LEU:HD11	1:E:70:ILE:HD12	1.88	0.56
1:B:23:LEU:HA	1:B:40:ALA:HB2	1.87	0.55
1:B:24:ILE:HD13	1:B:104:ARG:HE	1.71	0.55
1:B:140:VAL:HG22	1:B:181:SER:HB3	1.88	0.55
1:E:147:LYS:O	1:E:147:LYS:HD3	2.06	0.55
1:A:23:LEU:HA	1:A:40:ALA:HB2	1.87	0.55
1:B:253:TYR:O	1:B:256:ALA:HB3	2.06	0.55
1:C:147:LYS:O	1:C:147:LYS:HD3	2.06	0.55
1:C:238:ASN:HA	1:C:258:ILE:HD11	1.88	0.55
1:D:147:LYS:O	1:D:147:LYS:HD3	2.06	0.55
1:D:276:HIS:C	1:D:278:LEU:H	2.09	0.55
1:D:23:LEU:HA	1:D:40:ALA:HB2	1.88	0.55
1:C:47:LYS:CD	1:C:49:ARG:HH21	2.20	0.55
1:A:42:LEU:HD23	1:A:103:GLU:OE1	2.06	0.55
1:B:89:VAL:CG1	1:B:102:LEU:HD23	2.35	0.55
1:C:215:PHE:CZ	1:C:298:PHE:CD1	2.94	0.55
1:D:123:GLN:NE2	1:D:123:GLN:HA	2.21	0.55
1:D:118:TYR:CE2	1:D:196:TYR:HE2	2.25	0.55
1:D:298:PHE:HB2	1:D:299:PRO:HD3	1.88	0.55
1:E:200:ILE:CD1	1:E:240:LEU:HD23	2.32	0.55
1:A:86:ALA:HB2	1:A:105:PHE:CB	2.37	0.55
1:A:276:HIS:C	1:A:278:LEU:H	2.09	0.55
1:A:240:LEU:HD13	1:B:239:ILE:CG1	2.37	0.55
1:D:84:ARG:HB2	1:D:84:ARG:HH11	1.70	0.55
1:B:118:TYR:CE2	1:B:196:TYR:HE2	2.25	0.55
1:C:298:PHE:HB2	1:C:299:PRO:HD3	1.88	0.55
1:C:29:LEU:C	1:C:29:LEU:HD23	2.27	0.55
1:A:194:PHE:HA	1:A:197:ILE:HD12	1.88	0.55
1:A:44:LEU:HD12	1:A:101:TYR:CD2	2.42	0.55
1:B:224:VAL:C	1:B:226:LEU:N	2.57	0.55
1:B:118:TYR:CE1	1:B:245:LEU:HD13	2.41	0.55
1:D:194:PHE:C	1:D:196:TYR:N	2.57	0.55
1:D:215:PHE:CZ	1:D:298:PHE:CD1	2.95	0.55
1:D:278:LEU:HD23	1:D:287:ALA:HA	1.88	0.55
1:A:276:HIS:O	1:A:280:VAL:HG22	2.06	0.55
1:D:41:PHE:CE2	1:E:175:LEU:CD2	2.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:276:HIS:C	1:E:278:LEU:H	2.09	0.55
1:E:53:PHE:CD1	1:E:95:PRO:HA	2.42	0.55
1:A:157:THR:HG21	1:B:34:GLU:OE1	2.05	0.54
1:A:278:LEU:HD23	1:A:287:ALA:HA	1.89	0.54
1:B:62:VAL:HG13	1:B:93:VAL:O	2.07	0.54
1:A:200:ILE:O	1:A:204:MET:HB2	2.07	0.54
1:B:53:PHE:CD1	1:B:95:PRO:HA	2.42	0.54
1:C:118:TYR:CE2	1:C:196:TYR:HE2	2.25	0.54
1:E:194:PHE:C	1:E:196:TYR:H	2.10	0.54
1:C:42:LEU:HD23	1:C:103:GLU:OE1	2.06	0.54
1:C:23:LEU:CD2	1:C:38:VAL:HG21	2.37	0.54
1:D:118:TYR:CE1	1:D:245:LEU:HD13	2.41	0.54
1:E:98:THR:HG22	1:E:98:THR:O	2.07	0.54
1:C:224:VAL:C	1:C:226:LEU:N	2.60	0.54
1:D:93:VAL:HG22	1:D:99:VAL:HG22	1.88	0.54
1:A:194:PHE:CE2	1:B:250:TYR:C	2.80	0.54
1:C:215:PHE:O	1:C:291:THR:HG22	2.08	0.54
1:A:298:PHE:HB2	1:A:299:PRO:HD3	1.88	0.54
1:B:305:ALA:O	1:B:309:LEU:HB2	2.08	0.54
1:C:264:PHE:CE2	1:C:302:PHE:HB2	2.43	0.54
1:D:18:ASN:O	1:D:44:LEU:HA	2.08	0.54
1:D:222:ALA:O	1:D:226:LEU:HB2	2.08	0.54
1:E:86:ALA:HB2	1:E:105:PHE:CB	2.37	0.54
1:A:37:LYS:HG2	1:A:108:ARG:HB3	1.89	0.54
1:B:23:LEU:CD2	1:B:38:VAL:HG21	2.38	0.54
1:D:144:ASP:HA	1:D:147:LYS:HB3	1.89	0.54
1:C:41:PHE:HZ	1:D:76:ARG:NH2	2.06	0.54
1:E:278:LEU:HD23	1:E:287:ALA:HA	1.89	0.54
1:B:123:GLN:HA	1:B:123:GLN:NE2	2.22	0.54
1:B:278:LEU:HD23	1:B:287:ALA:HA	1.89	0.54
1:B:267:VAL:HG23	1:B:298:PHE:CZ	2.42	0.54
1:E:54:ASP:HB2	1:E:57:ARG:CB	2.37	0.54
1:A:18:ASN:O	1:A:44:LEU:HA	2.07	0.53
1:C:232:ILE:HG22	1:C:233:ALA:N	2.22	0.53
1:C:155:PHE:HD1	1:D:110:LEU:CD2	2.22	0.53
1:D:86:ALA:HB2	1:D:105:PHE:CB	2.38	0.53
1:E:118:TYR:CD1	1:E:245:LEU:HD11	2.43	0.53
1:A:234:HIS:CE1	1:A:261:ILE:CG2	2.92	0.53
1:B:118:TYR:CD1	1:B:245:LEU:HD11	2.43	0.53
1:D:47:LYS:CD	1:D:49:ARG:HH21	2.21	0.53
1:C:51:LEU:HD11	1:C:70:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:224:VAL:C	1:D:226:LEU:H	2.11	0.53
1:A:240:LEU:HD13	1:B:239:ILE:HG12	1.91	0.53
1:B:119:PRO:O	1:B:193:TYR:HB3	2.09	0.53
1:B:219:SER:OG	1:B:222:ALA:HB3	2.09	0.53
1:B:70:ILE:HG22	1:B:71:TRP:N	2.24	0.53
1:C:226:LEU:CD2	1:D:224:VAL:HB	2.37	0.53
1:C:62:VAL:HG13	1:C:93:VAL:O	2.08	0.53
1:D:118:TYR:CD1	1:D:245:LEU:HD11	2.43	0.53
1:D:54:ASP:HB2	1:D:57:ARG:CB	2.37	0.53
1:E:215:PHE:CZ	1:E:298:PHE:CD1	2.96	0.53
1:A:215:PHE:CZ	1:A:298:PHE:CD1	2.96	0.53
1:A:23:LEU:CD2	1:A:38:VAL:HG21	2.38	0.53
1:B:86:ALA:HB2	1:B:105:PHE:CB	2.39	0.53
1:C:76:ARG:HH22	1:C:130:ILE:CD1	2.17	0.53
1:D:119:PRO:O	1:D:193:TYR:HB3	2.09	0.53
1:D:98:THR:HG22	1:D:98:THR:O	2.09	0.53
1:C:225:THR:HG21	1:D:225:THR:OG1	2.09	0.53
1:D:264:PHE:CE2	1:D:302:PHE:HB2	2.44	0.53
1:B:147:LYS:HE2	1:B:165:THR:HA	1.90	0.53
1:C:22:TYR:HA	1:C:149:GLY:HA2	1.91	0.53
1:A:54:ASP:HB2	1:A:57:ARG:CB	2.39	0.52
1:B:194:PHE:C	1:B:196:TYR:H	2.12	0.52
1:B:215:PHE:O	1:B:291:THR:HG22	2.09	0.52
1:C:118:TYR:CE1	1:C:245:LEU:HD13	2.43	0.52
1:C:267:VAL:HG23	1:C:298:PHE:CZ	2.44	0.52
1:C:54:ASP:HB2	1:C:57:ARG:CB	2.38	0.52
1:E:118:TYR:CE2	1:E:196:TYR:HE2	2.27	0.52
1:A:144:ASP:HA	1:A:147:LYS:HB3	1.90	0.52
1:B:249:PRO:HD2	1:B:250:TYR:CE1	2.44	0.52
1:B:29:LEU:HD23	1:B:29:LEU:C	2.30	0.52
1:C:140:VAL:HG22	1:C:181:SER:HB3	1.91	0.52
1:C:278:LEU:HD23	1:C:287:ALA:HA	1.90	0.52
1:D:146:GLU:HG3	1:E:176:GLU:CG	2.39	0.52
1:D:225:THR:HG21	1:E:224:VAL:CG2	2.33	0.52
1:D:23:LEU:CD2	1:D:38:VAL:HG21	2.39	0.52
1:E:118:TYR:CE1	1:E:245:LEU:HD13	2.44	0.52
1:E:47:LYS:HD3	1:E:49:ARG:HH21	1.73	0.52
1:C:226:LEU:HD23	1:D:224:VAL:HG21	1.92	0.52
1:D:219:SER:OG	1:D:222:ALA:HB3	2.08	0.52
1:D:29:LEU:HD23	1:D:29:LEU:C	2.29	0.52
1:E:23:LEU:CD2	1:E:38:VAL:HG21	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:194:PHE:C	1:A:196:TYR:H	2.12	0.52
1:B:215:PHE:CZ	1:B:298:PHE:CD1	2.96	0.52
1:D:215:PHE:O	1:D:291:THR:HG22	2.09	0.52
1:D:77:PHE:CE2	1:D:127:ILE:HG23	2.45	0.52
1:E:147:LYS:HE2	1:E:165:THR:HA	1.91	0.52
1:E:234:HIS:CE1	1:E:261:ILE:CG2	2.92	0.52
1:A:210:ILE:HG23	1:B:269:VAL:HG11	1.92	0.52
1:D:224:VAL:C	1:D:226:LEU:N	2.61	0.52
1:A:119:PRO:O	1:A:193:TYR:HB3	2.10	0.52
1:D:253:TYR:O	1:D:256:ALA:HB3	2.10	0.52
1:E:109:VAL:HG11	1:E:126:HIS:O	2.10	0.52
1:E:215:PHE:O	1:E:291:THR:HG22	2.09	0.52
1:E:70:ILE:HG22	1:E:71:TRP:N	2.25	0.52
1:A:305:ALA:O	1:A:309:LEU:HB2	2.09	0.51
1:B:222:ALA:O	1:B:226:LEU:HB2	2.10	0.51
1:E:140:VAL:HG22	1:E:181:SER:HB3	1.91	0.51
1:B:215:PHE:O	1:B:291:THR:CG2	2.58	0.51
1:C:109:VAL:HG11	1:C:126:HIS:O	2.11	0.51
1:D:123:GLN:HB2	1:D:189:ILE:HG13	1.92	0.51
1:E:212:TRP:CZ3	1:E:298:PHE:HB3	2.45	0.51
1:A:29:LEU:C	1:A:29:LEU:HD23	2.29	0.51
1:A:256:ALA:HB1	1:A:309:LEU:HD21	1.92	0.51
1:E:222:ALA:O	1:E:226:LEU:HB2	2.11	0.51
1:B:77:PHE:CE2	1:B:127:ILE:HG23	2.46	0.51
1:C:155:PHE:CD1	1:D:110:LEU:CD2	2.93	0.51
1:C:222:ALA:CB	1:D:221:GLU:OE1	2.59	0.51
1:E:23:LEU:HA	1:E:40:ALA:HB2	1.93	0.51
1:B:191:ARG:HG3	1:B:192:GLN:N	2.26	0.51
1:C:53:PHE:CD1	1:C:95:PRO:HA	2.45	0.51
1:D:249:PRO:HD2	1:D:250:TYR:CE1	2.46	0.51
1:A:9:PRO:HD3	1:A:71:TRP:CE3	2.45	0.51
1:B:81:GLU:HG3	1:B:108:ARG:HG3	1.93	0.51
1:B:264:PHE:CE2	1:B:302:PHE:HB2	2.45	0.51
1:A:215:PHE:O	1:A:291:THR:HG22	2.09	0.51
1:C:256:ALA:HB1	1:C:309:LEU:HD21	1.92	0.51
1:E:37:LYS:HG2	1:E:108:ARG:HB3	1.91	0.51
1:A:147:LYS:O	1:A:147:LYS:CD	2.59	0.51
1:A:53:PHE:CD1	1:A:95:PRO:HA	2.46	0.51
1:E:133:SER:HB2	1:E:137:ARG:NH1	2.25	0.51
1:A:62:VAL:HG13	1:A:93:VAL:O	2.10	0.51
1:B:147:LYS:CD	1:B:147:LYS:O	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:37:LYS:HG2	1:C:108:ARG:HB3	1.92	0.51
1:C:77:PHE:CE2	1:C:127:ILE:HG23	2.46	0.51
1:D:305:ALA:O	1:D:309:LEU:HB2	2.10	0.51
1:E:77:PHE:CE2	1:E:127:ILE:HG23	2.46	0.51
1:A:18:ASN:HB2	1:A:45:SER:OG	2.11	0.51
1:A:215:PHE:O	1:A:291:THR:CG2	2.59	0.51
1:B:119:PRO:HB3	1:B:196:TYR:CD2	2.46	0.51
1:B:44:LEU:HD12	1:B:101:TYR:CD2	2.46	0.51
1:D:119:PRO:HB3	1:D:196:TYR:CD2	2.46	0.51
1:D:215:PHE:O	1:D:291:THR:CG2	2.58	0.51
1:E:147:LYS:CD	1:E:147:LYS:O	2.59	0.51
1:A:119:PRO:HB3	1:A:196:TYR:CD2	2.45	0.50
1:A:226:LEU:HD23	1:B:224:VAL:CG2	2.42	0.50
1:A:217:SER:CB	1:B:220:TYR:HE2	2.23	0.50
1:C:240:LEU:HD22	1:D:239:ILE:HD11	1.92	0.50
1:C:305:ALA:O	1:C:309:LEU:HB2	2.10	0.50
1:A:27:TYR:HB3	1:B:110:LEU:HD11	1.90	0.50
1:B:70:ILE:HG22	1:B:71:TRP:O	2.11	0.50
1:E:253:TYR:HA	1:E:313:PHE:CD2	2.46	0.50
1:B:197:ILE:CG2	1:B:202:LEU:HG	2.41	0.50
1:C:215:PHE:O	1:C:291:THR:CG2	2.59	0.50
1:C:98:THR:HG22	1:C:98:THR:O	2.10	0.50
1:B:48:ASP:O	1:B:50:ARG:N	2.44	0.50
1:D:253:TYR:HA	1:D:313:PHE:CD2	2.46	0.50
1:A:209:PHE:HB2	1:B:266:PHE:HE1	1.76	0.50
1:C:18:ASN:O	1:C:44:LEU:HA	2.12	0.50
1:D:42:LEU:HD23	1:D:103:GLU:OE1	2.11	0.50
1:E:44:LEU:HD12	1:E:101:TYR:CD2	2.47	0.50
1:E:249:PRO:HD2	1:E:250:TYR:CE1	2.46	0.50
1:C:123:GLN:NE2	1:C:123:GLN:HA	2.26	0.50
1:C:253:TYR:HA	1:C:313:PHE:CD2	2.47	0.50
1:D:194:PHE:C	1:D:196:TYR:H	2.14	0.50
1:A:22:TYR:HA	1:A:149:GLY:HA2	1.94	0.50
1:B:79:ASN:H	1:B:79:ASN:ND2	2.02	0.50
1:C:215:PHE:HB2	1:C:216:TRP:CE3	2.47	0.50
1:C:226:LEU:HD23	1:D:224:VAL:CG2	2.42	0.50
1:D:234:HIS:CE1	1:D:261:ILE:CG2	2.93	0.50
1:A:253:TYR:HA	1:A:313:PHE:CD2	2.47	0.50
1:D:256:ALA:HB1	1:D:309:LEU:HD21	1.94	0.50
1:D:44:LEU:HD12	1:D:101:TYR:CD2	2.46	0.50
1:D:52:ALA:HA	1:D:95:PRO:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:267:VAL:HG23	1:A:298:PHE:CZ	2.46	0.50
1:A:76:ARG:HH22	1:A:130:ILE:CD1	2.16	0.50
1:D:197:ILE:CG2	1:D:202:LEU:HG	2.42	0.49
1:D:147:LYS:O	1:D:147:LYS:CD	2.59	0.49
1:E:268:ALA:HA	1:E:298:PHE:HE1	1.77	0.49
1:C:253:TYR:O	1:C:256:ALA:HB3	2.12	0.49
1:D:78:VAL:HB	1:D:128:TYR:HB2	1.94	0.49
1:E:215:PHE:O	1:E:291:THR:CG2	2.60	0.49
1:B:217:SER:HB3	1:B:223:ASN:OD1	2.12	0.49
1:C:78:VAL:CG2	1:C:130:ILE:HG12	2.39	0.49
1:D:78:VAL:CG2	1:D:130:ILE:HG12	2.41	0.49
1:D:200:ILE:O	1:D:204:MET:HB2	2.11	0.49
1:C:238:ASN:HA	1:C:258:ILE:HD13	1.95	0.49
1:D:153:ASP:O	1:D:154:VAL:C	2.51	0.49
1:A:77:PHE:CE2	1:A:127:ILE:HG23	2.47	0.49
1:B:13:GLU:HB3	1:B:14:PRO:CD	2.42	0.49
1:C:27:TYR:CD1	1:D:81:GLU:OE2	2.65	0.49
1:D:147:LYS:HE2	1:D:165:THR:HA	1.94	0.49
1:E:127:ILE:HB	1:E:185:TYR:HB2	1.95	0.49
1:C:119:PRO:HB3	1:C:196:TYR:CD2	2.48	0.49
1:E:196:TYR:O	1:E:200:ILE:HB	2.13	0.49
1:A:283:GLN:H	1:A:284:PRO:HD3	1.78	0.49
1:A:240:LEU:HD22	1:B:239:ILE:HD11	1.94	0.49
1:C:119:PRO:O	1:C:193:TYR:HB3	2.13	0.49
1:C:147:LYS:CD	1:C:147:LYS:O	2.59	0.49
1:C:153:ASP:O	1:C:154:VAL:C	2.51	0.49
1:E:238:ASN:HA	1:E:258:ILE:HD13	1.93	0.49
1:A:274:VAL:C	1:A:276:HIS:N	2.66	0.49
1:B:42:LEU:HD23	1:B:103:GLU:OE1	2.13	0.49
1:B:47:LYS:HD2	1:B:49:ARG:HH21	1.77	0.49
1:C:53:PHE:CE2	1:C:63:LYS:HB3	2.47	0.49
1:E:217:SER:HB3	1:E:223:ASN:OD1	2.12	0.49
1:E:274:VAL:C	1:E:276:HIS:N	2.66	0.49
1:E:76:ARG:HH22	1:E:130:ILE:CD1	2.18	0.49
1:A:155:PHE:HE1	1:B:112:PRO:CA	2.26	0.49
1:A:27:TYR:HB2	1:B:110:LEU:HD11	1.94	0.49
1:B:212:TRP:CZ3	1:B:298:PHE:HB3	2.48	0.49
1:B:253:TYR:HA	1:B:313:PHE:CD2	2.48	0.49
1:D:217:SER:HB3	1:D:223:ASN:OD1	2.12	0.49
1:D:274:VAL:C	1:D:276:HIS:N	2.66	0.49
1:D:196:TYR:N	1:D:196:TYR:HD1	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:70:ILE:N	1:B:70:ILE:HD13	2.27	0.48
1:B:52:ALA:HA	1:B:95:PRO:O	2.14	0.48
1:C:207:ILE:HG13	1:C:208:LEU:N	2.28	0.48
1:C:217:SER:HB3	1:C:223:ASN:OD1	2.13	0.48
1:D:196:TYR:N	1:D:196:TYR:CD1	2.80	0.48
1:D:53:PHE:HE2	1:D:63:LYS:CB	2.26	0.48
1:B:119:PRO:HB3	1:B:196:TYR:HD2	1.78	0.48
1:D:81:GLU:HG3	1:D:108:ARG:HG3	1.95	0.48
1:E:207:ILE:HG13	1:E:208:LEU:N	2.28	0.48
1:A:48:ASP:O	1:A:50:ARG:N	2.46	0.48
1:A:202:LEU:CD1	1:B:259:PHE:CZ	2.97	0.48
1:C:194:PHE:O	1:C:196:TYR:N	2.46	0.48
1:D:66:GLU:HG3	1:D:67:PRO:CD	2.40	0.48
1:E:226:LEU:HD22	1:E:226:LEU:HA	1.67	0.48
1:A:137:ARG:HD3	1:A:137:ARG:HA	1.53	0.48
1:A:19:THR:HG22	1:A:44:LEU:CD2	2.44	0.48
1:D:215:PHE:HB2	1:D:216:TRP:CE3	2.48	0.48
1:A:123:GLN:HB2	1:A:189:ILE:HG13	1.96	0.48
1:A:47:LYS:CD	1:A:49:ARG:HH21	2.27	0.48
1:C:133:SER:HB2	1:C:137:ARG:NH1	2.29	0.48
1:D:261:ILE:O	1:D:262:TYR:C	2.52	0.48
1:A:198:PRO:HA	1:B:259:PHE:CD1	2.49	0.48
1:B:238:ASN:HA	1:B:258:ILE:HD13	1.94	0.48
1:D:194:PHE:O	1:D:198:PRO:HD2	2.13	0.48
1:D:226:LEU:HD22	1:D:226:LEU:HA	1.63	0.48
1:D:296:ILE:HD13	1:D:296:ILE:HA	1.76	0.48
1:D:48:ASP:C	1:D:50:ARG:N	2.67	0.48
1:E:119:PRO:O	1:E:193:TYR:HB3	2.13	0.48
1:E:224:VAL:O	1:E:226:LEU:N	2.47	0.48
1:E:42:LEU:HD23	1:E:103:GLU:OE1	2.14	0.48
1:A:197:ILE:CG2	1:A:202:LEU:HG	2.44	0.48
1:A:215:PHE:HB2	1:A:216:TRP:CE3	2.49	0.48
1:A:264:PHE:CE2	1:A:302:PHE:HB2	2.49	0.48
1:B:215:PHE:HB2	1:B:216:TRP:CE3	2.48	0.48
1:C:27:TYR:CE1	1:D:81:GLU:CD	2.87	0.48
1:E:70:ILE:HG22	1:E:71:TRP:O	2.13	0.48
1:B:37:LYS:HG2	1:B:108:ARG:HB3	1.96	0.48
1:D:48:ASP:C	1:D:50:ARG:H	2.17	0.48
1:D:221:GLU:OE2	1:E:221:GLU:CD	2.52	0.48
1:A:70:ILE:HG22	1:A:71:TRP:O	2.14	0.48
1:B:200:ILE:O	1:B:204:MET:CB	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:197:ILE:HB	1:C:198:PRO:CD	2.37	0.48
1:C:70:ILE:HG22	1:C:71:TRP:N	2.29	0.48
1:B:18:ASN:O	1:B:44:LEU:HA	2.13	0.47
1:B:79:ASN:N	1:B:79:ASN:HD22	2.01	0.47
1:D:261:ILE:HD13	1:D:302:PHE:HE1	1.79	0.47
1:E:261:ILE:HD13	1:E:302:PHE:HE1	1.79	0.47
1:B:274:VAL:C	1:B:276:HIS:N	2.66	0.47
1:B:261:ILE:HD13	1:B:302:PHE:HE1	1.79	0.47
1:B:48:ASP:C	1:B:50:ARG:N	2.68	0.47
1:C:28:SER:HB2	1:C:37:LYS:HD2	1.97	0.47
1:A:119:PRO:HB3	1:A:196:TYR:HD2	1.79	0.47
1:A:221:GLU:OE2	1:B:221:GLU:CD	2.53	0.47
1:A:226:LEU:HA	1:A:226:LEU:HD22	1.59	0.47
1:A:224:VAL:O	1:A:226:LEU:N	2.47	0.47
1:B:133:SER:HB2	1:B:137:ARG:NH1	2.29	0.47
1:B:278:LEU:HD21	1:B:286:ARG:HB3	1.96	0.47
1:B:76:ARG:HH12	1:B:130:ILE:HD11	1.80	0.47
1:B:98:THR:O	1:B:98:THR:HG22	2.14	0.47
1:C:268:ALA:HA	1:C:298:PHE:HE1	1.77	0.47
1:A:217:SER:HB3	1:A:223:ASN:OD1	2.14	0.47
1:A:225:THR:CG2	1:B:224:VAL:HG23	2.43	0.47
1:B:234:HIS:CE1	1:B:261:ILE:CG2	2.93	0.47
1:B:296:ILE:O	1:B:300:VAL:HG23	2.13	0.47
1:C:202:LEU:HD23	1:C:202:LEU:HA	1.56	0.47
1:D:62:VAL:HG13	1:D:93:VAL:O	2.14	0.47
1:A:53:PHE:HE2	1:A:63:LYS:CB	2.26	0.47
1:B:78:VAL:CG2	1:B:130:ILE:HG12	2.38	0.47
1:A:221:GLU:OE2	1:B:221:GLU:OE2	2.33	0.47
1:B:22:TYR:HA	1:B:149:GLY:HA2	1.93	0.47
1:B:254:THR:HA	1:B:257:ILE:HG12	1.97	0.47
1:B:270:ILE:HD13	1:B:270:ILE:HA	1.67	0.47
1:C:222:ALA:O	1:C:226:LEU:HB2	2.14	0.47
1:C:270:ILE:HA	1:C:270:ILE:HD13	1.64	0.47
1:C:53:PHE:HE2	1:C:63:LYS:CB	2.26	0.47
1:B:207:ILE:HG13	1:B:208:LEU:N	2.29	0.47
1:B:9:PRO:HD3	1:B:71:TRP:CE3	2.49	0.47
1:C:123:GLN:HB2	1:C:189:ILE:HG13	1.97	0.47
1:C:23:LEU:HA	1:C:40:ALA:HB2	1.95	0.47
1:C:278:LEU:HD21	1:C:286:ARG:HB3	1.96	0.47
1:C:46:TRP:HH2	1:C:72:ILE:HG23	1.79	0.47
1:D:261:ILE:CD1	1:D:302:PHE:HE1	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:67:PRO:HG3	1:D:91:ILE:HD11	1.95	0.47
1:E:123:GLN:NE2	1:E:123:GLN:HA	2.30	0.47
1:E:264:PHE:HE2	1:E:302:PHE:HB2	1.79	0.47
1:A:13:GLU:HB3	1:A:14:PRO:CD	2.45	0.47
1:A:70:ILE:HG22	1:A:71:TRP:N	2.29	0.47
1:D:119:PRO:HB3	1:D:196:TYR:HD2	1.78	0.47
1:D:238:ASN:HA	1:D:258:ILE:HD13	1.95	0.47
1:D:89:VAL:CG1	1:E:132:ARG:HD3	2.45	0.47
1:B:123:GLN:HB2	1:B:189:ILE:HG13	1.95	0.47
1:B:196:TYR:N	1:B:196:TYR:CD1	2.83	0.47
1:B:67:PRO:HG3	1:B:91:ILE:HD11	1.95	0.47
1:E:278:LEU:HD21	1:E:286:ARG:HB3	1.97	0.47
1:E:76:ARG:NH2	1:E:130:ILE:CD1	2.62	0.47
1:A:254:THR:HA	1:A:257:ILE:HG12	1.97	0.47
1:A:278:LEU:HD21	1:A:286:ARG:HB3	1.96	0.47
1:B:53:PHE:CE2	1:B:63:LYS:HB3	2.46	0.47
1:C:274:VAL:C	1:C:276:HIS:N	2.66	0.47
1:D:70:ILE:HG22	1:D:71:TRP:N	2.30	0.47
1:E:253:TYR:O	1:E:256:ALA:HB3	2.15	0.47
1:E:9:PRO:HD3	1:E:71:TRP:CE3	2.50	0.47
1:B:153:ASP:O	1:B:154:VAL:C	2.53	0.47
1:B:18:ASN:HB2	1:B:45:SER:OG	2.15	0.47
1:B:202:LEU:HD23	1:B:202:LEU:HA	1.65	0.47
1:D:191:ARG:HG3	1:D:192:GLN:N	2.29	0.47
1:D:278:LEU:HD21	1:D:286:ARG:HB3	1.96	0.47
1:E:147:LYS:C	1:E:149:GLY:N	2.68	0.47
1:E:53:PHE:CE2	1:E:63:LYS:HB3	2.46	0.47
1:A:70:ILE:N	1:A:70:ILE:HD13	2.29	0.47
1:C:21:ILE:HA	1:C:41:PHE:O	2.15	0.47
1:E:48:ASP:O	1:E:50:ARG:N	2.48	0.47
1:E:81:GLU:HG3	1:E:108:ARG:HG3	1.97	0.47
1:A:76:ARG:CZ	1:A:130:ILE:HD12	2.44	0.46
1:A:194:PHE:O	1:A:198:PRO:HD2	2.14	0.46
1:B:194:PHE:O	1:B:196:TYR:N	2.49	0.46
1:E:196:TYR:CD1	1:E:196:TYR:N	2.84	0.46
1:E:261:ILE:CD1	1:E:302:PHE:HE1	2.27	0.46
1:A:143:VAL:O	1:A:143:VAL:HG12	2.15	0.46
1:A:196:TYR:CD1	1:A:196:TYR:N	2.82	0.46
1:A:207:ILE:HG13	1:A:208:LEU:N	2.30	0.46
1:E:153:ASP:O	1:E:154:VAL:C	2.53	0.46
1:E:194:PHE:O	1:E:196:TYR:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:78:VAL:CG2	1:A:130:ILE:HG12	2.42	0.46
1:A:277:TYR:O	1:A:281:GLU:HG3	2.16	0.46
1:A:268:ALA:HA	1:A:298:PHE:HE1	1.80	0.46
1:C:261:ILE:HD13	1:C:302:PHE:HE1	1.80	0.46
1:E:137:ARG:HA	1:E:137:ARG:HD3	1.58	0.46
1:E:215:PHE:HB2	1:E:216:TRP:CE3	2.50	0.46
1:A:202:LEU:HD23	1:A:202:LEU:HA	1.62	0.46
1:A:249:PRO:HD2	1:A:250:TYR:CE1	2.50	0.46
1:A:41:PHE:CZ	1:B:76:ARG:NH2	2.82	0.46
1:C:13:GLU:HB3	1:C:14:PRO:CD	2.46	0.46
1:C:197:ILE:CB	1:C:198:PRO:HD3	2.36	0.46
1:C:249:PRO:HD2	1:C:250:TYR:CE1	2.51	0.46
1:C:252:THR:HB	1:C:255:GLY:H	1.79	0.46
1:D:207:ILE:HG13	1:D:208:LEU:N	2.31	0.46
1:D:277:TYR:O	1:D:281:GLU:HG3	2.16	0.46
1:D:76:ARG:HH12	1:D:130:ILE:HD11	1.79	0.46
1:D:95:PRO:C	1:D:97:GLY:H	2.17	0.46
1:E:256:ALA:HB1	1:E:309:LEU:HD21	1.96	0.46
1:A:153:ASP:O	1:A:154:VAL:C	2.51	0.46
1:A:196:TYR:HD1	1:A:196:TYR:N	2.14	0.46
1:A:202:LEU:HD12	1:B:259:PHE:HZ	1.78	0.46
1:A:194:PHE:CE2	1:B:250:TYR:O	2.63	0.46
1:B:277:TYR:O	1:B:281:GLU:HG3	2.16	0.46
1:B:268:ALA:HA	1:B:298:PHE:HE1	1.80	0.46
1:C:277:TYR:O	1:C:281:GLU:HG3	2.16	0.46
1:D:267:VAL:HG23	1:D:298:PHE:CZ	2.50	0.46
1:C:104:ARG:NH2	1:D:77:PHE:O	2.40	0.46
1:E:67:PRO:HG3	1:E:91:ILE:HD11	1.97	0.46
1:A:98:THR:HG22	1:A:98:THR:O	2.14	0.46
1:B:9:PRO:HB3	1:B:48:ASP:OD1	2.15	0.46
1:A:123:GLN:HA	1:A:123:GLN:NE2	2.31	0.46
1:C:48:ASP:O	1:C:50:ARG:N	2.48	0.46
1:D:119:PRO:HD3	1:D:254:THR:OG1	2.15	0.46
1:E:78:VAL:CG2	1:E:130:ILE:HG12	2.42	0.46
1:B:48:ASP:C	1:B:50:ARG:H	2.18	0.46
1:C:191:ARG:HG3	1:C:192:GLN:N	2.31	0.46
1:C:306:ASN:O	1:C:310:ALA:N	2.44	0.46
1:D:70:ILE:HG22	1:D:71:TRP:O	2.16	0.46
1:E:123:GLN:HB2	1:E:189:ILE:HG13	1.97	0.46
1:E:47:LYS:HD2	1:E:49:ARG:HH21	1.81	0.46
1:A:78:VAL:HB	1:A:128:TYR:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:137:ARG:HA	1:B:137:ARG:HD3	1.59	0.46
1:B:196:TYR:HD1	1:B:196:TYR:N	2.13	0.46
1:C:254:THR:HA	1:C:257:ILE:HG12	1.98	0.46
1:D:222:ALA:HA	1:D:225:THR:HB	1.97	0.46
1:D:84:ARG:NH1	1:D:84:ARG:CB	2.76	0.46
1:E:202:LEU:HB2	1:E:203:PRO:HD3	1.97	0.46
1:D:13:GLU:HB3	1:D:14:PRO:CD	2.44	0.46
1:E:119:PRO:HB3	1:E:196:TYR:CD2	2.51	0.46
1:A:48:ASP:C	1:A:50:ARG:N	2.70	0.45
1:B:245:LEU:HD12	1:B:245:LEU:HA	1.83	0.45
1:C:70:ILE:N	1:C:70:ILE:HD13	2.31	0.45
1:D:30:ASP:HB3	1:D:33:ALA:HB3	1.98	0.45
1:D:77:PHE:CE2	1:D:127:ILE:CG2	2.99	0.45
1:A:155:PHE:HE1	1:B:112:PRO:CB	2.23	0.45
1:D:275:GLN:HG3	1:D:291:THR:OG1	2.16	0.45
1:D:268:ALA:HA	1:D:298:PHE:HE1	1.80	0.45
1:A:19:THR:HG22	1:A:44:LEU:HD23	1.99	0.45
1:A:202:LEU:CD1	1:B:259:PHE:HZ	2.30	0.45
1:A:243:THR:HG22	1:A:244:ASN:N	2.32	0.45
1:A:88:VAL:HG12	1:A:89:VAL:N	2.31	0.45
1:C:196:TYR:O	1:C:200:ILE:HB	2.17	0.45
1:C:261:ILE:CD1	1:C:302:PHE:HE1	2.30	0.45
1:C:52:ALA:HA	1:C:95:PRO:O	2.16	0.45
1:A:175:LEU:HA	1:A:175:LEU:HD12	1.67	0.45
1:A:261:ILE:O	1:A:262:TYR:C	2.54	0.45
1:B:28:SER:HB2	1:B:37:LYS:HD2	1.99	0.45
1:C:197:ILE:CG2	1:C:202:LEU:HG	2.47	0.45
1:E:77:PHE:CE2	1:E:127:ILE:CG2	3.00	0.45
1:E:252:THR:HB	1:E:255:GLY:H	1.82	0.45
1:E:270:ILE:HA	1:E:270:ILE:HD13	1.65	0.45
1:A:28:SER:HB2	1:A:37:LYS:HD2	1.99	0.45
1:A:21:ILE:HA	1:A:41:PHE:O	2.17	0.45
1:A:67:PRO:HG3	1:A:91:ILE:HD11	1.98	0.45
1:E:76:ARG:CZ	1:E:130:ILE:HD12	2.45	0.45
1:E:243:THR:HG22	1:E:244:ASN:N	2.31	0.45
1:E:27:TYR:CE1	1:E:37:LYS:HB2	2.52	0.45
1:E:66:GLU:HG3	1:E:67:PRO:CD	2.41	0.45
1:A:223:ASN:HD22	1:A:272:VAL:HG12	1.82	0.45
1:A:30:ASP:HB3	1:A:33:ALA:HB3	1.99	0.45
1:B:127:ILE:HB	1:B:185:TYR:HB2	1.99	0.45
1:B:256:ALA:HB1	1:B:309:LEU:HD21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:212:TRP:CZ3	1:C:298:PHE:HB3	2.51	0.45
1:C:47:LYS:HD2	1:C:49:ARG:HH21	1.82	0.45
1:A:240:LEU:HD22	1:B:239:ILE:CD1	2.47	0.45
1:A:27:TYR:CB	1:B:110:LEU:CD1	2.90	0.45
1:A:53:PHE:CE2	1:A:63:LYS:HB3	2.47	0.45
1:E:277:TYR:O	1:E:281:GLU:HG3	2.16	0.45
1:E:52:ALA:HA	1:E:95:PRO:O	2.17	0.45
1:A:191:ARG:HG3	1:A:192:GLN:N	2.31	0.45
1:C:147:LYS:C	1:C:149:GLY:N	2.68	0.45
1:C:179:LEU:C	1:C:179:LEU:HD12	2.38	0.45
1:E:298:PHE:CB	1:E:299:PRO:HD3	2.46	0.45
1:A:27:TYR:CD1	1:B:81:GLU:OE2	2.70	0.45
1:A:275:GLN:HG3	1:A:291:THR:OG1	2.17	0.45
1:C:119:PRO:HB3	1:C:196:TYR:HD2	1.82	0.45
1:E:197:ILE:CG2	1:E:202:LEU:HG	2.47	0.45
1:D:229:SER:HB3	1:E:228:VAL:HG11	1.98	0.45
1:A:179:LEU:HD12	1:A:179:LEU:C	2.38	0.44
1:A:260:MET:CE	1:A:309:LEU:HD22	2.41	0.44
1:A:89:VAL:CG1	1:B:132:ARG:HD3	2.47	0.44
1:B:147:LYS:C	1:B:149:GLY:N	2.68	0.44
1:B:78:VAL:HB	1:B:128:TYR:HB2	1.99	0.44
1:C:215:PHE:HB2	1:C:216:TRP:CZ3	2.52	0.44
1:C:216:TRP:H	1:C:216:TRP:HE3	1.65	0.44
1:C:44:LEU:HD12	1:C:101:TYR:CE2	2.51	0.44
1:D:104:ARG:HH22	1:E:78:VAL:CA	2.15	0.44
1:D:198:PRO:O	1:E:259:PHE:HD1	2.00	0.44
1:E:243:THR:HG22	1:E:244:ASN:HD22	1.82	0.44
1:C:79:ASN:OD1	1:C:109:VAL:HG12	2.18	0.44
1:C:70:ILE:HG22	1:C:71:TRP:O	2.17	0.44
1:D:254:THR:HA	1:D:257:ILE:HG12	1.99	0.44
1:D:53:PHE:CE2	1:D:63:LYS:HB3	2.49	0.44
1:E:18:ASN:O	1:E:44:LEU:HA	2.17	0.44
1:A:147:LYS:C	1:A:149:GLY:N	2.68	0.44
1:A:261:ILE:CD1	1:A:302:PHE:HE1	2.30	0.44
1:C:213:THR:HG22	1:C:226:LEU:CD1	2.48	0.44
1:D:22:TYR:HA	1:D:149:GLY:HA2	1.94	0.44
1:E:118:TYR:CD1	1:E:245:LEU:HD21	2.53	0.44
1:E:133:SER:HB3	1:E:137:ARG:HA	1.98	0.44
1:E:179:LEU:HD12	1:E:179:LEU:C	2.38	0.44
1:B:179:LEU:C	1:B:179:LEU:HD12	2.38	0.44
1:B:53:PHE:HE2	1:B:63:LYS:CB	2.27	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:21:ILE:HA	1:E:41:PHE:O	2.16	0.44
1:E:53:PHE:HE2	1:E:63:LYS:CB	2.29	0.44
1:A:109:VAL:HG11	1:A:126:HIS:O	2.17	0.44
1:A:127:ILE:HB	1:A:185:TYR:HB2	1.99	0.44
1:A:217:SER:CB	1:B:220:TYR:CE2	3.00	0.44
1:A:270:ILE:HG22	1:A:271:GLU:N	2.31	0.44
1:A:212:TRP:CZ3	1:A:298:PHE:HB3	2.52	0.44
1:B:125:LEU:HB2	1:B:187:LEU:HB3	2.00	0.44
1:C:76:ARG:CZ	1:C:130:ILE:HD12	2.46	0.44
1:C:196:TYR:N	1:C:196:TYR:CD1	2.86	0.44
1:C:9:PRO:HD3	1:C:71:TRP:CE3	2.52	0.44
1:E:197:ILE:CB	1:E:198:PRO:HD3	2.40	0.44
1:A:23:LEU:HA	1:A:40:ALA:CB	2.48	0.44
1:B:261:ILE:CD1	1:B:302:PHE:HE1	2.31	0.44
1:B:314:PHE:N	1:B:314:PHE:CD1	2.85	0.44
1:C:27:TYR:CE1	1:D:81:GLU:OE1	2.71	0.44
1:C:203:PRO:HB3	1:D:262:TYR:CZ	2.53	0.44
1:D:212:TRP:CZ3	1:D:298:PHE:HB3	2.52	0.44
1:C:274:VAL:O	1:C:278:LEU:HB3	2.18	0.44
1:D:147:LYS:C	1:D:149:GLY:N	2.68	0.44
1:C:240:LEU:HD22	1:D:239:ILE:CG1	2.48	0.44
1:D:210:ILE:CG2	1:E:269:VAL:HG11	2.37	0.44
1:E:274:VAL:O	1:E:278:LEU:HB3	2.18	0.44
1:E:276:HIS:C	1:E:278:LEU:N	2.71	0.44
1:E:9:PRO:HB3	1:E:48:ASP:OD1	2.18	0.44
1:A:290:ILE:HG22	1:A:291:THR:N	2.31	0.44
1:B:77:PHE:CE2	1:B:127:ILE:CG2	3.00	0.44
1:C:264:PHE:HE2	1:C:302:PHE:HB2	1.83	0.44
1:D:296:ILE:O	1:D:300:VAL:HG23	2.17	0.44
1:A:296:ILE:HD13	1:A:296:ILE:HA	1.78	0.44
1:A:46:TRP:HH2	1:A:72:ILE:HG23	1.82	0.44
1:B:150:LYS:HG3	1:B:154:VAL:HG21	2.00	0.44
1:B:274:VAL:O	1:B:278:LEU:HB3	2.18	0.44
1:B:95:PRO:C	1:B:97:GLY:H	2.21	0.44
1:D:150:LYS:HG3	1:D:154:VAL:HG21	2.00	0.44
1:D:179:LEU:C	1:D:179:LEU:HD12	2.38	0.44
1:E:13:GLU:HB3	1:E:14:PRO:CD	2.47	0.44
1:E:275:GLN:HG3	1:E:291:THR:OG1	2.18	0.44
1:A:133:SER:HB2	1:A:137:ARG:NH1	2.33	0.43
1:A:119:PRO:HD3	1:A:254:THR:OG1	2.18	0.43
1:A:52:ALA:HA	1:A:95:PRO:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:109:VAL:HG11	1:B:126:HIS:O	2.17	0.43
1:C:132:ARG:CA	1:C:180:GLU:HG2	2.48	0.43
1:C:200:ILE:O	1:C:204:MET:CB	2.64	0.43
1:C:77:PHE:CE2	1:C:127:ILE:CG2	3.01	0.43
1:D:9:PRO:HB3	1:D:48:ASP:OD1	2.18	0.43
1:D:49:ARG:NH1	1:D:49:ARG:HB3	2.33	0.43
1:E:150:LYS:HG3	1:E:154:VAL:HG21	2.00	0.43
1:E:194:PHE:O	1:E:198:PRO:HD2	2.17	0.43
1:E:200:ILE:O	1:E:204:MET:CB	2.66	0.43
1:E:216:TRP:H	1:E:216:TRP:HE3	1.66	0.43
1:A:150:LYS:HG3	1:A:154:VAL:HG21	2.00	0.43
1:A:197:ILE:CB	1:A:198:PRO:HD3	2.39	0.43
1:B:66:GLU:HG3	1:B:67:PRO:CD	2.41	0.43
1:B:76:ARG:NH1	1:B:130:ILE:HD11	2.33	0.43
1:C:150:LYS:HG3	1:C:154:VAL:HG21	2.00	0.43
1:C:195:SER:O	1:C:199:ASN:HB2	2.19	0.43
1:D:53:PHE:CE1	1:D:95:PRO:CA	3.01	0.43
1:D:76:ARG:NH1	1:D:130:ILE:HD11	2.33	0.43
1:A:81:GLU:HG3	1:A:108:ARG:HG3	2.00	0.43
1:A:155:PHE:CZ	1:B:112:PRO:CB	2.95	0.43
1:D:157:THR:HG21	1:E:34:GLU:OE1	2.18	0.43
1:B:132:ARG:NH2	1:B:178:ARG:HB2	2.33	0.43
1:C:76:ARG:HH12	1:C:130:ILE:HD11	1.84	0.43
1:C:23:LEU:HB2	1:C:150:LYS:HA	2.00	0.43
1:E:196:TYR:N	1:E:196:TYR:HD1	2.16	0.43
1:E:223:ASN:HD22	1:E:272:VAL:HG12	1.83	0.43
1:E:72:ILE:HA	1:E:73:PRO:HD3	1.87	0.43
1:A:200:ILE:CD1	1:A:240:LEU:HD23	2.45	0.43
1:A:27:TYR:CD2	1:B:110:LEU:HD13	2.54	0.43
1:B:224:VAL:O	1:B:228:VAL:HB	2.19	0.43
1:A:233:ALA:HB2	1:B:232:ILE:HG12	2.01	0.43
1:B:275:GLN:HG3	1:B:291:THR:OG1	2.18	0.43
1:C:275:GLN:HG3	1:C:291:THR:OG1	2.17	0.43
1:C:81:GLU:HG3	1:C:108:ARG:HG3	1.99	0.43
1:E:212:TRP:HB2	1:E:215:PHE:CE1	2.53	0.43
1:E:46:TRP:HH2	1:E:72:ILE:HG23	1.83	0.43
1:A:125:LEU:HB2	1:A:187:LEU:HB3	2.00	0.43
1:A:225:THR:HG22	1:A:225:THR:O	2.18	0.43
1:B:76:ARG:CZ	1:B:130:ILE:HD12	2.40	0.43
1:B:232:ILE:O	1:B:235:ILE:HB	2.19	0.43
1:C:119:PRO:HD3	1:C:254:THR:OG1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:194:PHE:O	1:D:196:TYR:N	2.51	0.43
1:D:201:ILE:HA	1:D:201:ILE:HD13	1.86	0.43
1:D:298:PHE:CB	1:D:299:PRO:HD3	2.48	0.43
1:E:283:GLN:H	1:E:284:PRO:HD3	1.82	0.43
1:E:48:ASP:C	1:E:50:ARG:N	2.71	0.43
1:A:274:VAL:O	1:A:278:LEU:HB3	2.18	0.43
1:A:276:HIS:C	1:A:278:LEU:N	2.71	0.43
1:B:212:TRP:HB2	1:B:215:PHE:CE1	2.53	0.43
1:C:194:PHE:O	1:C:198:PRO:HD2	2.19	0.43
1:C:88:VAL:HG12	1:C:89:VAL:N	2.34	0.43
1:E:225:THR:O	1:E:225:THR:HG22	2.18	0.43
1:A:194:PHE:O	1:A:196:TYR:N	2.51	0.43
1:A:298:PHE:CB	1:A:299:PRO:HD3	2.49	0.43
1:A:261:ILE:HD13	1:A:302:PHE:HE1	1.83	0.43
1:A:44:LEU:HD12	1:A:101:TYR:CE2	2.54	0.43
1:A:192:GLN:OE1	1:B:249:PRO:HB3	2.19	0.43
1:C:226:LEU:HA	1:C:226:LEU:HD22	1.64	0.43
1:C:283:GLN:H	1:C:284:PRO:HD3	1.80	0.43
1:D:274:VAL:O	1:D:278:LEU:HB3	2.18	0.43
1:D:296:ILE:HG22	1:D:297:ALA:N	2.33	0.43
1:D:28:SER:HB2	1:D:37:LYS:HD2	2.01	0.43
1:A:314:PHE:CD1	1:A:314:PHE:N	2.87	0.43
1:A:48:ASP:HB3	1:A:51:LEU:CD2	2.49	0.43
1:C:72:ILE:HG22	1:C:73:PRO:HD2	2.00	0.43
1:D:127:ILE:HB	1:D:185:TYR:HB2	2.01	0.43
1:D:155:PHE:CZ	1:E:112:PRO:HB3	2.50	0.43
1:E:76:ARG:HH12	1:E:130:ILE:HD11	1.84	0.43
1:B:215:PHE:HB2	1:B:216:TRP:CZ3	2.54	0.43
1:B:276:HIS:C	1:B:278:LEU:N	2.71	0.43
1:C:118:TYR:CD1	1:C:245:LEU:HD21	2.53	0.43
1:C:127:ILE:HB	1:C:185:TYR:HB2	2.01	0.43
1:C:243:THR:HG22	1:C:244:ASN:HD22	1.84	0.43
1:C:194:PHE:CE2	1:D:250:TYR:O	2.70	0.43
1:D:27:TYR:CE1	1:D:37:LYS:HB2	2.54	0.43
1:D:68:GLU:H	1:D:68:GLU:CD	2.22	0.43
1:E:179:LEU:O	1:E:179:LEU:HD12	2.19	0.43
1:E:270:ILE:HG22	1:E:271:GLU:N	2.34	0.43
1:A:202:LEU:HB2	1:A:203:PRO:HD3	2.01	0.42
1:B:119:PRO:HD3	1:B:254:THR:OG1	2.19	0.42
1:B:23:LEU:HA	1:B:40:ALA:CB	2.49	0.42
1:A:192:GLN:CG	1:B:249:PRO:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:243:THR:HG22	1:C:244:ASN:N	2.34	0.42
1:C:66:GLU:HG3	1:C:67:PRO:CD	2.45	0.42
1:E:48:ASP:C	1:E:50:ARG:H	2.22	0.42
1:A:238:ASN:HA	1:A:258:ILE:HD13	1.97	0.42
1:A:247:LYS:HA	1:A:247:LYS:HD3	1.80	0.42
1:A:53:PHE:O	1:A:54:ASP:C	2.58	0.42
1:B:225:THR:O	1:B:225:THR:HG22	2.18	0.42
1:B:27:TYR:CE1	1:B:37:LYS:HB2	2.54	0.42
1:B:30:ASP:HB3	1:B:33:ALA:HB3	2.01	0.42
1:D:276:HIS:C	1:D:278:LEU:N	2.71	0.42
1:E:119:PRO:HD3	1:E:254:THR:OG1	2.19	0.42
1:E:22:TYR:HA	1:E:149:GLY:HA2	1.95	0.42
1:A:179:LEU:HD12	1:A:179:LEU:O	2.19	0.42
1:A:76:ARG:HH12	1:A:130:ILE:HD11	1.84	0.42
1:C:212:TRP:HB2	1:C:215:PHE:CE1	2.54	0.42
1:C:298:PHE:CB	1:C:299:PRO:HD3	2.48	0.42
1:C:67:PRO:HG3	1:C:91:ILE:HD11	2.00	0.42
1:D:260:MET:CE	1:D:309:LEU:HD22	2.45	0.42
1:E:133:SER:HB2	1:E:137:ARG:HH11	1.82	0.42
1:E:291:THR:O	1:E:295:ARG:HG3	2.19	0.42
1:A:212:TRP:HB2	1:A:215:PHE:CE1	2.54	0.42
1:A:155:PHE:HE1	1:B:112:PRO:HB3	1.63	0.42
1:B:232:ILE:HA	1:B:235:ILE:HD12	2.01	0.42
1:B:243:THR:HG22	1:B:244:ASN:HD22	1.84	0.42
1:C:133:SER:HB3	1:C:137:ARG:HA	2.01	0.42
1:C:210:ILE:HG21	1:D:228:VAL:HG22	2.00	0.42
1:C:225:THR:O	1:C:225:THR:HG22	2.18	0.42
1:D:286:ARG:O	1:D:289:SER:N	2.45	0.42
1:E:143:VAL:HG12	1:E:143:VAL:O	2.20	0.42
1:E:191:ARG:HG3	1:E:192:GLN:N	2.34	0.42
1:A:159:TRP:CE3	1:A:189:ILE:HD12	2.55	0.42
1:B:202:LEU:HB2	1:B:203:PRO:HD3	2.01	0.42
1:C:183:LEU:HA	1:C:183:LEU:HD23	1.88	0.42
1:E:197:ILE:HB	1:E:198:PRO:CD	2.40	0.42
1:E:267:VAL:HG23	1:E:298:PHE:CZ	2.54	0.42
1:E:28:SER:HB2	1:E:37:LYS:HD2	2.02	0.42
1:E:53:PHE:O	1:E:53:PHE:CD1	2.72	0.42
1:E:53:PHE:O	1:E:54:ASP:C	2.58	0.42
1:A:53:PHE:CD1	1:A:53:PHE:O	2.72	0.42
1:B:226:LEU:HA	1:B:226:LEU:HD22	1.74	0.42
1:B:53:PHE:O	1:B:54:ASP:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:225:THR:O	1:D:225:THR:HG22	2.19	0.42
1:D:53:PHE:O	1:D:54:ASP:C	2.58	0.42
1:E:243:THR:CG2	1:E:244:ASN:N	2.81	0.42
1:A:240:LEU:HD13	1:B:239:ILE:HG13	2.00	0.42
1:C:156:LEU:HA	1:C:156:LEU:HD12	1.73	0.42
1:C:53:PHE:CD1	1:C:53:PHE:O	2.72	0.42
1:C:95:PRO:C	1:C:97:GLY:H	2.23	0.42
1:D:212:TRP:HB2	1:D:215:PHE:CE1	2.55	0.42
1:D:78:VAL:HB	1:D:128:TYR:CB	2.48	0.42
1:E:95:PRO:C	1:E:97:GLY:H	2.23	0.42
1:B:13:GLU:OE1	1:B:14:PRO:HD3	2.20	0.42
1:B:197:ILE:CB	1:B:198:PRO:HD3	2.44	0.42
1:B:21:ILE:HA	1:B:41:PHE:O	2.20	0.42
1:B:7:PRO:O	1:B:50:ARG:NH1	2.50	0.42
1:C:201:ILE:HA	1:C:201:ILE:HD13	1.91	0.42
1:C:30:ASP:HB3	1:C:33:ALA:HB3	2.01	0.42
1:D:143:VAL:O	1:D:143:VAL:HG12	2.19	0.42
1:D:243:THR:HG22	1:D:244:ASN:N	2.35	0.42
1:D:53:PHE:O	1:D:53:PHE:CD1	2.72	0.42
1:E:254:THR:HA	1:E:257:ILE:HG12	2.01	0.42
1:A:23:LEU:HB2	1:A:150:LYS:HA	2.01	0.42
1:B:179:LEU:O	1:B:179:LEU:HD12	2.19	0.42
1:B:53:PHE:CD1	1:B:53:PHE:O	2.72	0.42
1:D:21:ILE:HA	1:D:41:PHE:O	2.20	0.42
1:A:42:LEU:HB3	1:A:103:GLU:HG3	2.02	0.42
1:A:213:THR:HG22	1:A:226:LEU:CD1	2.49	0.42
1:A:27:TYR:CE1	1:A:37:LYS:HB2	2.55	0.42
1:B:270:ILE:HG22	1:B:271:GLU:N	2.35	0.42
1:C:132:ARG:HH22	1:C:176:GLU:HB2	1.85	0.42
1:C:133:SER:HB2	1:C:137:ARG:HH11	1.85	0.42
1:C:314:PHE:CD1	1:C:314:PHE:N	2.87	0.42
1:D:179:LEU:O	1:D:179:LEU:HD12	2.19	0.42
1:D:202:LEU:HB2	1:D:203:PRO:HD3	2.02	0.42
1:D:72:ILE:HA	1:D:73:PRO:HD3	1.91	0.42
1:D:77:PHE:HE2	1:D:127:ILE:CG2	2.33	0.42
1:A:233:ALA:HB1	1:B:235:ILE:HD13	2.02	0.41
1:D:76:ARG:CZ	1:D:130:ILE:HD12	2.43	0.41
1:D:159:TRP:CE3	1:D:189:ILE:HD12	2.54	0.41
1:D:95:PRO:O	1:D:97:GLY:N	2.53	0.41
1:E:30:ASP:HB3	1:E:33:ALA:HB3	2.02	0.41
1:A:47:LYS:HD3	1:A:49:ARG:HH21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:46:TRP:HH2	1:B:72:ILE:HG23	1.86	0.41
1:B:49:ARG:HB3	1:B:49:ARG:NH1	2.35	0.41
1:C:53:PHE:O	1:C:54:ASP:C	2.58	0.41
1:D:232:ILE:HA	1:D:235:ILE:HD12	2.01	0.41
1:E:222:ALA:HA	1:E:225:THR:HB	2.02	0.41
1:B:243:THR:HG22	1:B:244:ASN:N	2.35	0.41
1:B:34:GLU:OE2	1:B:113:LEU:N	2.49	0.41
1:B:78:VAL:HB	1:B:128:TYR:CB	2.51	0.41
1:C:179:LEU:O	1:C:179:LEU:HD12	2.19	0.41
1:C:232:ILE:HA	1:C:235:ILE:HD12	2.02	0.41
1:C:276:HIS:C	1:C:278:LEU:N	2.71	0.41
1:C:48:ASP:C	1:C:50:ARG:N	2.72	0.41
1:D:77:PHE:HE2	1:D:127:ILE:HG23	1.85	0.41
1:D:223:ASN:HD22	1:D:272:VAL:HG12	1.85	0.41
1:E:42:LEU:HB3	1:E:103:GLU:HG3	2.01	0.41
1:A:166:ALA:HB2	1:A:185:TYR:CD2	2.55	0.41
1:A:201:ILE:HA	1:A:201:ILE:HD13	1.88	0.41
1:A:232:ILE:CG2	1:A:233:ALA:N	2.81	0.41
1:B:222:ALA:HA	1:B:225:THR:HB	2.02	0.41
1:B:298:PHE:CB	1:B:299:PRO:HD3	2.50	0.41
1:C:270:ILE:HG22	1:C:271:GLU:N	2.35	0.41
1:D:232:ILE:O	1:D:235:ILE:HB	2.21	0.41
1:D:264:PHE:HE2	1:D:302:PHE:HB2	1.84	0.41
1:E:300:VAL:O	1:E:304:LEU:HB2	2.20	0.41
1:A:232:ILE:HA	1:A:235:ILE:HD12	2.02	0.41
1:A:79:ASN:ND2	1:A:79:ASN:H	2.10	0.41
1:A:88:VAL:CG1	1:A:89:VAL:N	2.83	0.41
1:B:175:LEU:HA	1:B:175:LEU:HD12	1.67	0.41
1:A:41:PHE:CE2	1:B:175:LEU:HD23	2.46	0.41
1:C:194:PHE:O	1:C:197:ILE:N	2.43	0.41
1:D:41:PHE:CE2	1:E:175:LEU:HD23	2.36	0.41
1:E:296:ILE:HG22	1:E:297:ALA:N	2.35	0.41
1:A:78:VAL:HB	1:A:128:TYR:CB	2.51	0.41
1:A:77:PHE:CE2	1:A:127:ILE:CG2	3.03	0.41
1:C:224:VAL:O	1:C:226:LEU:N	2.53	0.41
1:D:109:VAL:HG11	1:D:126:HIS:O	2.20	0.41
1:D:215:PHE:HB2	1:D:216:TRP:CZ3	2.56	0.41
1:D:252:THR:HB	1:D:255:GLY:H	1.85	0.41
1:E:314:PHE:CD1	1:E:314:PHE:N	2.89	0.41
1:A:133:SER:HB3	1:A:137:ARG:HA	2.01	0.41
1:B:183:LEU:HD23	1:B:183:LEU:HA	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:194:PHE:O	1:B:198:PRO:HD2	2.21	0.41
1:B:224:VAL:O	1:B:226:LEU:N	2.53	0.41
1:B:72:ILE:HA	1:B:73:PRO:HD3	1.85	0.41
1:D:132:ARG:NH2	1:D:178:ARG:HB2	2.35	0.41
1:E:119:PRO:HB3	1:E:196:TYR:HD2	1.84	0.41
1:E:296:ILE:HA	1:E:296:ILE:HD13	1.83	0.41
1:A:216:TRP:HE3	1:A:216:TRP:H	1.68	0.41
1:A:240:LEU:HD22	1:B:239:ILE:HG13	2.02	0.41
1:A:48:ASP:C	1:A:50:ARG:H	2.22	0.41
1:B:243:THR:CG2	1:B:244:ASN:N	2.84	0.41
1:E:221:GLU:O	1:E:221:GLU:OE1	2.39	0.41
1:E:261:ILE:O	1:E:262:TYR:C	2.59	0.41
1:C:10:ILE:HG13	1:C:10:ILE:H	1.70	0.41
1:C:137:ARG:HA	1:C:137:ARG:HD3	1.54	0.41
1:C:222:ALA:HA	1:C:225:THR:HB	2.02	0.41
1:C:48:ASP:C	1:C:50:ARG:H	2.24	0.41
1:D:132:ARG:CA	1:D:180:GLU:HG2	2.48	0.41
1:D:278:LEU:HD23	1:D:287:ALA:CA	2.51	0.41
1:A:140:VAL:HG22	1:A:181:SER:CB	2.51	0.41
1:A:157:THR:HG21	1:B:34:GLU:CG	2.49	0.41
1:A:200:ILE:O	1:A:204:MET:CB	2.68	0.41
1:A:226:LEU:HD22	1:B:228:VAL:HG21	2.01	0.41
1:A:9:PRO:HB3	1:A:48:ASP:OD1	2.20	0.41
1:B:278:LEU:HD23	1:B:287:ALA:CA	2.51	0.41
1:B:314:PHE:N	1:B:314:PHE:HD1	2.19	0.41
1:B:25:GLU:HB2	1:B:39:ASN:HB3	2.03	0.41
1:C:159:TRP:CE3	1:C:189:ILE:HD12	2.56	0.41
1:C:72:ILE:HA	1:C:73:PRO:HD3	1.85	0.41
1:E:72:ILE:HG22	1:E:73:PRO:HD2	2.03	0.41
1:E:79:ASN:ND2	1:E:79:ASN:H	2.08	0.41
1:A:147:LYS:CE	1:A:165:THR:HA	2.51	0.41
1:A:48:ASP:HB3	1:A:51:LEU:HD21	2.02	0.41
1:A:76:ARG:NH1	1:A:130:ILE:HD11	2.35	0.41
1:B:260:MET:CE	1:B:309:LEU:HD22	2.43	0.41
1:B:44:LEU:HD12	1:B:101:TYR:CE2	2.56	0.41
1:B:48:ASP:HB3	1:B:51:LEU:HD21	2.03	0.41
1:A:27:TYR:CE1	1:B:81:GLU:CD	2.95	0.41
1:D:229:SER:CB	1:E:228:VAL:HG11	2.51	0.41
1:A:132:ARG:NH2	1:A:178:ARG:HB2	2.36	0.40
1:B:301:VAL:HG12	1:B:301:VAL:O	2.21	0.40
1:C:130:ILE:CG2	1:C:182:LYS:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:78:VAL:HB	1:C:128:TYR:HB2	2.03	0.40
1:D:125:LEU:HB2	1:D:187:LEU:HB3	2.03	0.40
1:D:41:PHE:HD1	1:D:41:PHE:HA	1.80	0.40
1:D:47:LYS:HD2	1:D:49:ARG:HH21	1.84	0.40
1:A:72:ILE:HG22	1:A:73:PRO:HD2	2.03	0.40
1:B:269:VAL:O	1:B:273:THR:HB	2.21	0.40
1:C:76:ARG:NH1	1:C:130:ILE:HD11	2.36	0.40
1:C:18:ASN:HB2	1:C:45:SER:OG	2.21	0.40
1:C:27:TYR:CE1	1:C:37:LYS:HB2	2.56	0.40
1:D:166:ALA:HB2	1:D:185:TYR:CD2	2.56	0.40
1:D:314:PHE:N	1:D:314:PHE:CD1	2.89	0.40
1:D:9:PRO:HD3	1:D:71:TRP:CE3	2.57	0.40
1:E:202:LEU:HD23	1:E:202:LEU:HA	1.59	0.40
1:E:215:PHE:HB2	1:E:216:TRP:CZ3	2.56	0.40
1:E:247:LYS:HA	1:E:247:LYS:HD3	1.89	0.40
1:E:76:ARG:NH1	1:E:130:ILE:HD11	2.36	0.40
1:A:215:PHE:HB2	1:A:216:TRP:CZ3	2.55	0.40
1:B:77:PHE:HE2	1:B:127:ILE:HG23	1.87	0.40
1:C:202:LEU:HB2	1:C:203:PRO:HD3	2.02	0.40
1:C:23:LEU:HD23	1:C:38:VAL:HG21	2.02	0.40
1:A:243:THR:CG2	1:A:244:ASN:N	2.84	0.40
1:A:94:SER:HB3	1:A:98:THR:HB	2.02	0.40
1:C:218:THR:HA	1:C:275:GLN:HE22	1.86	0.40
1:E:175:LEU:HA	1:E:175:LEU:HD12	1.67	0.40
1:A:27:TYR:OH	1:B:81:GLU:HA	2.22	0.40
1:D:133:SER:HB2	1:D:137:ARG:NH1	2.37	0.40
1:D:243:THR:CG2	1:D:244:ASN:N	2.83	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	308/317 (97%)	244 (79%)	55 (18%)	9 (3%)	5	42
1	B	308/317 (97%)	245 (80%)	55 (18%)	8 (3%)	6	44
1	C	308/317 (97%)	246 (80%)	51 (17%)	11 (4%)	4	37
1	D	308/317 (97%)	248 (80%)	51 (17%)	9 (3%)	5	42
1	E	308/317 (97%)	243 (79%)	54 (18%)	11 (4%)	4	37
All	All	1540/1585 (97%)	1226 (80%)	266 (17%)	48 (3%)	5	41

All (48) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	194	PHE
1	B	118	TYR
1	B	194	PHE
1	C	118	TYR
1	C	194	PHE
1	D	118	TYR
1	D	194	PHE
1	E	118	TYR
1	E	194	PHE
1	A	118	TYR
1	A	150	LYS
1	B	150	LYS
1	C	150	LYS
1	D	49	ARG
1	D	150	LYS
1	E	150	LYS
1	A	49	ARG
1	A	225	THR
1	A	275	GLN
1	A	277	TYR
1	B	49	ARG
1	B	225	THR
1	B	275	GLN
1	B	277	TYR
1	C	49	ARG
1	C	195	SER
1	C	225	THR
1	C	275	GLN
1	C	277	TYR
1	D	275	GLN
1	D	277	TYR

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Mol	Chain	Res	Type
1	E	195	SER
1	E	225	THR
1	E	275	GLN
1	E	277	TYR
1	A	148	VAL
1	B	148	VAL
1	C	148	VAL
1	D	148	VAL
1	D	225	THR
1	E	49	ARG
1	E	148	VAL
1	E	214	ALA
1	C	131	VAL
1	C	214	ALA
1	E	131	VAL
1	D	131	VAL
1	A	131	VAL

5.3.2 Protein sidechains ⓘ

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	278/284 (98%)	228 (82%)	50 (18%)	2	14
1	B	278/284 (98%)	227 (82%)	51 (18%)	2	13
1	C	278/284 (98%)	229 (82%)	49 (18%)	2	15
1	D	278/284 (98%)	227 (82%)	51 (18%)	2	13
1	E	278/284 (98%)	226 (81%)	52 (19%)	2	12
All	All	1390/1420 (98%)	1137 (82%)	253 (18%)	2	13

All (253) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	12	ASP
1	A	26	CYS

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Mol	Chain	Res	Type
1	A	32	LYS
1	A	41	PHE
1	A	51	LEU
1	A	53	PHE
1	A	54	ASP
1	A	57	ARG
1	A	64	THR
1	A	68	GLU
1	A	72	ILE
1	A	79	ASN
1	A	84	ARG
1	A	89	VAL
1	A	98	THR
1	A	100	GLN
1	A	104	ARG
1	A	113	LEU
1	A	122	SER
1	A	124	THR
1	A	140	VAL
1	A	141	LEU
1	A	151	ASN
1	A	154	VAL
1	A	155	PHE
1	A	157	THR
1	A	177	ASP
1	A	179	LEU
1	A	211	SER
1	A	212	TRP
1	A	213	THR
1	A	218	THR
1	A	221	GLU
1	A	226	LEU
1	A	232	ILE
1	A	239	ILE
1	A	243	THR
1	A	252	THR
1	A	254	THR
1	A	258	ILE
1	A	263	LEU
1	A	270	ILE
1	A	273	THR
1	A	274	VAL

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Mol	Chain	Res	Type
1	A	282	SER
1	A	292	ARG
1	A	296	ILE
1	A	304	LEU
1	A	306	ASN
1	A	314	PHE
1	B	12	ASP
1	B	26	CYS
1	B	32	LYS
1	B	49	ARG
1	B	51	LEU
1	B	53	PHE
1	B	54	ASP
1	B	57	ARG
1	B	64	THR
1	B	68	GLU
1	B	72	ILE
1	B	79	ASN
1	B	84	ARG
1	B	89	VAL
1	B	98	THR
1	B	100	GLN
1	B	104	ARG
1	B	110	LEU
1	B	113	LEU
1	B	122	SER
1	B	124	THR
1	B	140	VAL
1	B	141	LEU
1	B	151	ASN
1	B	154	VAL
1	B	155	PHE
1	B	157	THR
1	B	177	ASP
1	B	179	LEU
1	B	195	SER
1	B	211	SER
1	B	212	TRP
1	B	213	THR
1	B	218	THR
1	B	221	GLU
1	B	226	LEU

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Mol	Chain	Res	Type
1	B	232	ILE
1	B	239	ILE
1	B	243	THR
1	B	252	THR
1	B	254	THR
1	B	258	ILE
1	B	263	LEU
1	B	270	ILE
1	B	273	THR
1	B	274	VAL
1	B	282	SER
1	B	292	ARG
1	B	296	ILE
1	B	304	LEU
1	B	306	ASN
1	C	12	ASP
1	C	26	CYS
1	C	32	LYS
1	C	51	LEU
1	C	53	PHE
1	C	54	ASP
1	C	57	ARG
1	C	64	THR
1	C	68	GLU
1	C	72	ILE
1	C	79	ASN
1	C	84	ARG
1	C	89	VAL
1	C	98	THR
1	C	100	GLN
1	C	104	ARG
1	C	110	LEU
1	C	113	LEU
1	C	122	SER
1	C	124	THR
1	C	140	VAL
1	C	141	LEU
1	C	151	ASN
1	C	154	VAL
1	C	155	PHE
1	C	157	THR
1	C	177	ASP

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Mol	Chain	Res	Type
1	C	179	LEU
1	C	211	SER
1	C	212	TRP
1	C	213	THR
1	C	218	THR
1	C	221	GLU
1	C	226	LEU
1	C	232	ILE
1	C	239	ILE
1	C	243	THR
1	C	252	THR
1	C	254	THR
1	C	258	ILE
1	C	263	LEU
1	C	270	ILE
1	C	273	THR
1	C	274	VAL
1	C	282	SER
1	C	292	ARG
1	C	296	ILE
1	C	304	LEU
1	C	306	ASN
1	D	12	ASP
1	D	26	CYS
1	D	32	LYS
1	D	49	ARG
1	D	51	LEU
1	D	53	PHE
1	D	54	ASP
1	D	57	ARG
1	D	64	THR
1	D	68	GLU
1	D	72	ILE
1	D	79	ASN
1	D	84	ARG
1	D	89	VAL
1	D	98	THR
1	D	100	GLN
1	D	104	ARG
1	D	110	LEU
1	D	113	LEU
1	D	122	SER

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Mol	Chain	Res	Type
1	D	124	THR
1	D	140	VAL
1	D	141	LEU
1	D	151	ASN
1	D	154	VAL
1	D	155	PHE
1	D	157	THR
1	D	177	ASP
1	D	179	LEU
1	D	195	SER
1	D	196	TYR
1	D	211	SER
1	D	212	TRP
1	D	213	THR
1	D	218	THR
1	D	221	GLU
1	D	226	LEU
1	D	232	ILE
1	D	239	ILE
1	D	243	THR
1	D	252	THR
1	D	254	THR
1	D	258	ILE
1	D	263	LEU
1	D	270	ILE
1	D	273	THR
1	D	274	VAL
1	D	282	SER
1	D	292	ARG
1	D	296	ILE
1	D	306	ASN
1	E	12	ASP
1	E	26	CYS
1	E	32	LYS
1	E	49	ARG
1	E	51	LEU
1	E	53	PHE
1	E	54	ASP
1	E	57	ARG
1	E	64	THR
1	E	68	GLU
1	E	72	ILE

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Mol	Chain	Res	Type
1	E	79	ASN
1	E	84	ARG
1	E	89	VAL
1	E	98	THR
1	E	100	GLN
1	E	104	ARG
1	E	110	LEU
1	E	113	LEU
1	E	122	SER
1	E	124	THR
1	E	140	VAL
1	E	141	LEU
1	E	151	ASN
1	E	154	VAL
1	E	155	PHE
1	E	157	THR
1	E	177	ASP
1	E	179	LEU
1	E	195	SER
1	E	211	SER
1	E	212	TRP
1	E	213	THR
1	E	218	THR
1	E	221	GLU
1	E	226	LEU
1	E	232	ILE
1	E	239	ILE
1	E	243	THR
1	E	252	THR
1	E	254	THR
1	E	258	ILE
1	E	260	MET
1	E	263	LEU
1	E	270	ILE
1	E	273	THR
1	E	274	VAL
1	E	282	SER
1	E	292	ARG
1	E	296	ILE
1	E	304	LEU
1	E	306	ASN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such

sidechains are listed below:

Mol	Chain	Res	Type
1	A	79	ASN
1	A	100	GLN
1	A	151	ASN
1	A	172	ASN
1	A	244	ASN
1	B	79	ASN
1	B	100	GLN
1	B	151	ASN
1	B	172	ASN
1	B	244	ASN
1	B	275	GLN
1	C	79	ASN
1	C	100	GLN
1	C	151	ASN
1	C	172	ASN
1	C	244	ASN
1	C	275	GLN
1	D	79	ASN
1	D	100	GLN
1	D	123	GLN
1	D	151	ASN
1	D	172	ASN
1	D	244	ASN
1	D	275	GLN
1	E	79	ASN
1	E	100	GLN
1	E	151	ASN
1	E	172	ASN
1	E	244	ASN
1	E	275	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 1 ligands modelled in this entry, 1 is 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	310/317 (97%)	-0.25	5 (1%) 72 60	57, 98, 154, 227	0
1	B	310/317 (97%)	-0.37	1 (0%) 93 90	59, 98, 154, 227	0
1	C	310/317 (97%)	-0.26	4 (1%) 77 65	58, 98, 154, 227	0
1	D	310/317 (97%)	-0.36	2 (0%) 89 83	59, 98, 154, 227	0
1	E	310/317 (97%)	-0.31	6 (1%) 67 55	58, 99, 154, 227	0
All	All	1550/1585 (97%)	-0.31	18 (1%) 79 68	57, 98, 154, 227	0

All (18) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	316	PHE	4.3
1	A	316	PHE	4.1
1	E	59	GLY	3.9
1	A	59	GLY	3.0
1	C	315	GLY	2.8
1	E	315	GLY	2.8
1	E	316	PHE	2.7
1	A	61	ARG	2.6
1	A	58	SER	2.6
1	E	58	SER	2.5
1	D	316	PHE	2.5
1	C	59	GLY	2.3
1	D	61	ARG	2.2
1	E	57	ARG	2.2
1	E	60	VAL	2.2
1	B	57	ARG	2.1
1	A	60	VAL	2.1
1	C	61	ARG	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 carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(\AA^2)	Q<0.9
2	SB	E	1316	1/1	0.95	0.44	-	151,151,151,151	0

6.5 Other polymers [i](#)

There are no such residues in this entry.