

**Table 2. Tunnel-lining residues in StarD4 and MLN64-START**

Amino acid in StarD4	Atoms	Amino acid in MLN64	Atoms	Amino acid in StarD4	Atoms	Amino acid in MLN64	Atoms
Ile-86	CA,C,O,CB,CG2	Val-300	CG1	Cys-148	N,CA,C,O,CB	Ser-363	N,CA,C,O
Arg-87	N,CA,C,O,CB,CG,C D,NE	–	–	Gly-149	N,CA,C,O	Gly-364	N,CA,C,O
Pro-88	N,CA,CB,CG,CD	Pro-304	CA,C,O,CB	Val-150	N,CA,C	Ile-365	N,CA,C,O
Arg-92	CB,CG,CD,NE,CZ, NH1,NH2	Met-307	N,CA,C,CB,CG, SD,CE	Ser-151	–	Ala-366	N
Leu-93	–	Val-308	N,CA,CB,CG2	Asn-166	CB,CG,OD1,ND2	Asn-383	CA,C,CB,CG,OD1, ND2
Asp-96	CB,CG,OD1,OD2	Asn-311	CB,CG,OD1,ND2	His-167	–	Gly-384	N,C,O
Leu-98	N,CA,C,O,CB,CG,C D1,CD2	Thr-313	CA,C,O,CB,OG1, CG2	Pro-168	–	Pro-385	CA,C,O
Met-99	N,CA,C,CB,CG, SD,CE	Val-314	N,CA,CB,CG1, CG2	Cys-169	CA,C,O,CB,SG	Gly-386	N,CA,C,O
Ser-101	–	Ala-316	C,O	Gly-170	N,CA,C,O	Gly-387	N,CA,C,O
Leu-102	CG,CD1,CD2	Cys-317	N,CA,CB,SG	Trp-171	N,CB,CG,CD1, CD2,NE1,CE2, CZ2,CH2	Met-388	N,CA,CB,CG,SD, CE
Met-115	CG,SD,CE	Ser-330	OG	Gly-187	–	Trp-404	CG,CD1,CD2,NE1, CE2,CE3,CZ2,CZ3, CH2
Tyr-117	CB,CG,CD1,CD2, CE1,CE2,CZ,OH	Asp-332	CA,C,O,CB,CG, OD1,OD2	Tyr-188	O	Ile-405	C,O
Thr-118	CA,C,O	Val-333	N,CA,C,O	Ile-189	CA,CB,CG1,CG2, CD1	Leu-406	N,CA,C,CB,CG, CD1,CD2
Thr-119	N,CA,C,CB,OG1, CG2	Ser-334	N,CA,C,CB,OG	Gln-190	–	Asn-407	N,CA,C,O,CB
Ala-120	C,O	Ala-335	N,CA,C,O,CB	Thr-191	CB,OG1,CG2	Thr-408	CB,OG1,CG2
Ser-128	O	Ser-343	C,O	Leu-193	CB,CG,CD1,CD2	Leu-410	CB,CG,CD1,CD2
Pro-129	CA,C	Pro-344	N,CA,C	Val-202	–	Ile-419	O
Arg-130	N,CA,CB,CG,CD,N E,CZ,NH1,NH2	Arg-345	N,CA,CB,CG,CD,N E,CZ,NH1	Ile-197	CD1	Leu-414	–
Phe-132	CG,CD1,CD2,CE1, CE2,CZ	Phe-347	CB,CG,CD1,CD2, CE1,CE2	Ala-205	CA,C,O,CB	Ser-422	CA,C,O,CB,OG
Asp-134	CA,C,O,CB,CG, OD1,OD2	Asn-349	CA,C,CB,CG,OD1, ND2	Met-206	N,CA,CB,CG,SD,C E	Leu-423	N,CA,CB,CG,CD2
Phe-135	N,C,O	Val-350	N,CA,C,O	Thr-209	CA,C,O,CB,OG1,C G2	Thr-426	CB,OG1,CG2
Ser-136	N,CA,C,CB,OG	Arg-351	N,CA,CB,CG,CD,N E,CZ,NH1,NH2	Leu-210	N,CA,CB,CG,CD1	Met-427	–
Tyr-137	N	Arg-352	–	Asn-212	C,CB	Glu-429	–
Thr-138	OG1	Ile-353	–	Phe-213	N,CA,CB,CG,CD1, CD2,CE1,CE2,CZ	Phe-430	CB,CG,CD1,CD2, CE1,CE2,CZ
Ser-147	CA,C,O,CB,OG	Ser-362	CA,C,O,CB,OG				

The atoms shown for each residue are exposed to the inside of the tunnel. The volume of the tunnel was computed with VOIDOO and is defined as the volume occupied by a rolling probe with a radius of 1.4 Å.