

Table S1. tblastn analysis of ten esterases from *B. animalis* subsp. *lactis* DSM 10140 against other *Bifidobacterium* species. For each query, the top-scoring match from each species is reported.

Query	Species	Max score	Query coverage	Max identity	Accession
Balat_0183	<i>B. bifidum</i>	249	98	42	WP_003819218.1
	<i>B. breve</i>	238	94	43	WP_003828717.1
	<i>B. catenulatum</i>	240	94	42	WP_003834207.1
	<i>B. longum</i> subsp. <i>infantis</i>	241	94	44	YP_004209323.1
	<i>B. longum</i> subsp. <i>longum</i>	241	94	44	YP_005586887.1
	<i>B. pseudocatenulatum</i>	241	94	42	WP_004220784.1
Balat_0519	<i>B. bifidum</i>	40	33	28	YP_003970982.1
	<i>B. breve</i>	56	32	35	YP_005583272.1
	<i>B. catenulatum</i>	446	91	61	WP_003836035.1
	<i>B. longum</i> subsp. <i>infantis</i>	56	32	35	YP_004209468.1
	<i>B. longum</i> subsp. <i>longum</i>	412	91	57	YP_003661869.1
	<i>B. pseudocatenulatum</i>	445	91	61	WP_004220040.1
Balat_0593	<i>B. bifidum</i>	432	95	49	WP_003821849.1
	<i>B. breve</i>	399	94	47	WP_016462045.1
	<i>B. catenulatum</i>	338	99	39	WP_003835320.1
	<i>B. longum</i> subsp. <i>infantis</i>	419	94	48	YP_004207988.1
	<i>B. longum</i> subsp. <i>longum</i>	424	95	48	EIJ24166.1
	<i>B. pseudocatenulatum</i>	162	39	43	WP_004221494.1
Balat_0669	<i>B. bifidum</i>	31	23	34	WP_003821651.1
	<i>B. breve</i>	30	43	25	WP_019727705.1
	<i>B. catenulatum</i>	29	22	33	WP_003836509.1
	<i>B. longum</i> subsp. <i>infantis</i>	30	23	31	EEQ56135.1
	<i>B. longum</i> subsp. <i>longum</i>	30	23	31	YP_003999647.1
	<i>B. pseudocatenulatum</i>	29	43	25	EEG70556.1
Balat_0859	<i>B. bifidum</i>	164	96	48	YP_006394573.1
	<i>B. breve</i>	184	91	45	YP_005582750.1
	<i>B. catenulatum</i>	167	90	48	WP_003834200.1
	<i>B. longum</i> subsp. <i>infantis</i>	183	92	48	YP_004208853.1
	<i>B. longum</i> subsp. <i>longum</i>	186	92	48	EIJ22703.1
	<i>B. pseudocatenulatum</i>	171	95	47	WP_004220797.1
Balat_0899	<i>B. bifidum</i>	278	96	42	WP_003812916.1
	<i>B. breve</i>	32	67	26	WP_021649292.1
	<i>B. catenulatum</i>	286	95	46	WP_003835048.1
	<i>B. longum</i> subsp. <i>infantis</i>	281	89	47	YP_002323033.1
	<i>B. longum</i> subsp. <i>longum</i>	276	89	45	EIJ24322.1
	<i>B. pseudocatenulatum</i>	279	95	46	EEG70556.1
Balat_1050	<i>B. bifidum</i>	38	30	25	YP_003970982.1
	<i>B. breve</i>	180	90	34	WP_003831575.1
	<i>B. catenulatum</i>	333	92	51	WP_003833915.1
	<i>B. longum</i> subsp. <i>infantis</i>	139	86	31	YP_002323832.1
	<i>B. longum</i> subsp. <i>longum</i>	243	90	41	YP_005586728.1
	<i>B. pseudocatenulatum</i>	298	92	51	WP_004223447.1

Query	Species	Max score	Query coverage	Max identity	Accession
Balat_1264	<i>B. bifidum</i>	419	97	70	YP_003970608.1
	<i>B. breve</i>	398	96	66	WP_003832590.1
	<i>B. catenulatum</i>	435	99	62	WP_003834207.1
	<i>B. longum</i> subsp. <i>infantis</i>	400	96	67	YP_002322248.1
	<i>B. longum</i> subsp. <i>longum</i>	404	98	68	YP_003661660.1
	<i>B. pseudocatenulatum</i>	436	99	71	WP_004220784.1
Balat_1547	<i>B. bifidum</i>	337	99	59	WP_021647798.1
	<i>B. breve</i>	45	67	26	WP_016463038.1
	<i>B. catenulatum</i>	30	37	27	WP_003833915.1
	<i>B. longum</i> subsp. <i>infantis</i>	374	99	66	YP_002321557.1
	<i>B. longum</i> subsp. <i>longum</i>	339	99	61	EIJ23907.1
	<i>B. pseudocatenulatum</i>	383	100	68	WP_004223450.1
Balat_1604	<i>B. bifidum</i>	315	77	63	YP_003939530.1
	<i>B. breve</i>	310	81	61	YP_005583710.1
	<i>B. catenulatum</i>	340	77	67	WP_003835361.1
	<i>B. longum</i> subsp. <i>infantis</i>	299	80	60	YP_004209856.1
	<i>B. longum</i> subsp. <i>longum</i>	299	80	60	EEI80347.1
	<i>B. pseudocatenulatum</i>	340	77	68	WP_004223872.1