

**Table S8. Catabolic genes predicted in HMO utilization by *B. longum* subsp. *infantis* ATCC15697**

Pathway <sup>1</sup>	Gene name	Gene symbol	Locus tag
Leloir pathway genes			
	galactokinase	<i>galK</i>	Blon_2062
	UDP-glucose 4-epimerase	<i>galE</i>	Blon_2171
	galactose-1-phosphate uridylyltransferase	<i>galT</i>	Blon_2172
	phosphoglucomutase	<i>pgm</i>	Blon_2184
Central fermentative pathway genes			
1	glucokinase	<i>glkA</i>	Blon_0565
1	glucose-6-phosphate isomerase	<i>gpi</i>	Blon_0417
2	fructose-6-phosphate phosphoketolase	<i>xfp</i>	Blon_1722
3	transaldolase	<i>tal</i>	Blon_1095
4	transketolase	<i>tkt</i>	Blon_1096
5	ribose 5-phosphate isomerase	<i>rpiA</i>	Blon_2191
6	ribulose 5-phosphate epimerase	<i>rpe</i>	Blon_1368
7	xylulose-5-phosphate phosphoketolase	<i>xfp</i>	Blon_1722
8	acetate kinase	<i>ackA</i>	Blon_1731
9	glyceraldehyde-3-phosphate dehydrogenase	<i>gap</i>	Blon_0900
10	phosphoglycerate kinase	<i>pgk</i>	Blon_1087
11	phosphoglycerate mutase	<i>pmg</i>	Blon_2152
12	enolase	<i>eno</i>	Blon_1836
13	pyruvate kinase	<i>pyk</i>	Blon_1745
14	lactate dehydrogenase	<i>ldh</i>	Blon_0840
Sialic acid genes			
15	N-acetylneuraminate lyase	<i>nanA</i>	Blon_2349
16	N-acetylmannosamine kinase	<i>nanK</i>	Blon_0644
17	N-acetylmannosamine-6-phosphate 2-epimerase	<i>nanE</i>	Blon_0645
N-acetylglucosamine genes			
18	N-acetylhexosamine 1-kinase	<i>nahK</i>	Blon_2173
19	phosphoglucoamine mutase	<i>glmM</i>	Blon_2031
20	N-acetylglucosamine-6-phosphate deacetylase	<i>nagA</i>	Blon_0882
21	glucosamine-6-phosphate isomerase	<i>nagB</i>	Blon_0881
Fucose genes			
?	fucose isomerase	<i>fucI</i>	NOT FOUND
?	fuculose kinase	<i>fucK</i>	NOT FOUND
?	L-fuculose phosphate aldolase	<i>fucA</i>	NOT FOUND
22	lactaldehyde reductase	<i>fucO</i>	Blon_0540
23	triose-phosphate isomerase	<i>tpiA</i>	Blon_1088

<sup>1</sup> Number refers to representation in figure 2.