Product Information Sheet for HM-846

Bifidobacterium longum subsp. *longum*, Strain 1-6B

Catalog No. HM-846

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Bifidobacteriaceae, Bifidobacterium*
Species: *Bifidobacterium longum* subsp. *longum*[1,2]
Strain: 1-6B
Original Source: *Bifidobacterium longum* (*B. longum*) subsp. *longum*, strain 1-6B was isolated in 2006 from feces of a six-year-old healthy human child in Russia.[2,3,4]
Comments: *B. longum* subsp. *longum*, strain 1-6B (HMP ID 1313) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *B. longum* subsp. *longum*, strain 1-6B was sequenced at the J. Craig Venter Institute (GenBank: AJTF00000000).
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

B. longum subsp. *longum* is an anaerobic, non-motile, Gram-positive, rod-shaped bacterium commonly found in the normal human intestinal microflora. It contains several plasmids, many of which have been sequenced.[5,6] *B. longum* subsp. *longum* is among the first colonizers of the essentially sterile gastrointestinal tract of newborns and one of the dominant genera of the microbiota of healthy breastfed infants. It is considered to be a beneficial organism for human health and for this reason, is widely used in probiotics.[7]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Modified Reinforced Clostridial broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
HM-846 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Reinforced Clostridial broth or equivalent
Tryptic Soy agar with 5% defibrinated sheep blood or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Anaerobic
Propagation:
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 2 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Bifidobacterium longum* subsp. *longum*, Strain 1-6B, HM-846."

Biosafety Level: 1
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

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References:

1. Mattarelli, P., et al. "Proposal to Reclassify the Three Biotypes of *Bifidobacterium longum* as Three Subspecies: *Bifidobacterium longum* subsp. *longum* Subsp. Nov., *Bifidobacterium longum* subsp. *infantis* Comb. Nov. and *Bifidobacterium longum* subsp. *suis* Comb. Nov." Int. J. Syst. Evol. Microbiol. 58 (2008): 767-772. PubMed: 18398167.
2. HMP ID 1313 (*B. longum* subsp. *longum*, strain 1-6B)
3. Shkoporov, A., Personal Communication.
4. Shkoporov, A. N., et al. "Draft Genome Sequences of Two Pairs of Human Intestinal *Bifidobacterium longum* subsp. *longum* Strains, 44B and 1-6B and 35B and 2-2B, Consecutively Isolated from Two Children after a 5-Year Time Period." Genome Announc. 1 (2013). PubMed: 23682142.
5. Lee, J. H. and D. J. O'Sullivan. "Genomic Insights into Bifidobacteria." Microbiol. Mol. Biol. Rev. 74 (2010): 378-416. PubMed: 20805404.
6. Cronin, M., et al. "Progress in Genomics, Metabolism and Biotechnology of Bifidobacteria." Int. J. Food Microbiol. 149 (2011): 4-18. PubMed: 21320731.
7. Leahy, S. C., et al. "Getting Better with Bifidobacteria." J. Appl. Microbiol. 98 (2005): 1303-1315. PubMed: 15916644.

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