

***Bifidobacterium* sp., Strain 12\_1\_47BFAA**

**Catalog No. HM-30**

**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* sp. (also referred to as *Bifidobacterium longum*)

Strain: 12\_1\_47BFAA

Original Source: *Bifidobacterium* sp., strain 12\_1\_47BFAA was isolated from an inflamed sigmoid colon biopsy specimen taken from a 25-year-old female patient with active Crohn's disease in Calgary, Alberta, Canada.<sup>1,2</sup>

Comments: *Bifidobacterium* sp., strain 12\_1\_47BFAA ([HMP ID 0177](#)) is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. *Bifidobacterium* sp., strain 12\_1\_47BFAA is currently being sequenced at the [Broad Institute](#) (GenBank: [ADCN00000000](#)).

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.

*Bifidobacterium* species are anaerobic, non-motile, Gram-positive bacteria commonly found in the normal human gut.<sup>3</sup> They are 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.<sup>4</sup> Not all bifidobacteria are beneficial to their host. However, in general, *Bifidobacterium* species are considered to be beneficial organisms for human health and for this reason are widely used as probiotics.<sup>3,4,5</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in 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-30 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 to 3 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* sp., Strain 12\_1\_47BFAA, HM-30."

**Biosafety Level: 2**

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](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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**References:**

1. Allen-Vercoe, E., Personal Communication.
2. [HMP ID 0177](#) (*Bifidobacterium* sp., strain 12\_1\_47BFAA)
3. Alessandri, G., D. van Sinderen and M. Ventura. "The Genus *Bifidobacterium*: from Genomics to Functionality of an Important Component of the Mammalian Gut Microbiota Running Title: Bifidobacterial Adaptation to and Interaction with the Host." Comput. Struct. Biotechnol. J. 19 (2021): 1472-1487. PubMed: 33777340.
4. Chichlowski, M., et al. "*Bifidobacterium longum* Subspecies *infantis* (*B. infantis*) in Pediatric Nutrition: Current State of Knowledge." Nutrients 12 (2020): 1581. PubMed: 32481558.
5. Lim, H. J., and H. S. Shin. "Antimicrobial and Immunomodulatory Effects of Bifidobacterium Strains: A Review." J. Microbiol. Biotechnol. 30 (2020): 1793-1800. PubMed: 33144551.

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