

Propionibacterium* sp., Strain 5_U_42AFAA*Catalog No. HM-184****For research use only. Not for human use.****Contributor:**

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Propionibacteriaceae*,
Propionibacterium

Species: *Propionibacterium* sp.

Strain: 5_U_42AFAA

Original Source: *Propionibacterium* sp., strain 5_U_42AFAA was isolated in 2007 from inflamed biopsy tissue taken from the duodenum of a 48-year-old female patient with microscopic colitis in Calgary, Alberta, Canada.^{1,2}

Comments: *Propionibacterium* sp., strain 5_U_42AFAA (HMP ID 1003) 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 *Propionibacterium* sp., strain 5_U_42AFAA was sequenced at the [Broad Institute](#) (GenBank: [ACUE00000000](#)).

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.

Propionibacterium species are typically anaerobic-aerotolerant, non-motile, non-sporeforming, Gram-positive rods that are members of the normal microflora of human skin and mucosa; some species are found in dairy products.³ *Propionibacterium* species are usually nonpathogenic but in rare cases can cause serious conditions, such as acne, dental and postoperative-joint infections, and endocarditis.⁴⁻⁷

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X 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-184 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:**

Modified Reinforced Clostridial Broth ([ATCC medium 2107](#)) or equivalent

Tryptic Soy Agar with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Anaerobic (80% N₂:10% CO₂:10% H₂)

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 24 to 48 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Propionibacterium* sp., Strain 5_U_42AFAA, HM-184."

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](#). 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Emma Allen-Vercoe, personal communication.
2. [HMP ID 1003](#) (*Propionibacterium* sp., strain 5_U_42AFAA)
3. Meile, L., G. Le Blay, and A. Thierry. "Safety Assessment of Dairy Microorganisms: *Propionibacterium* and *Bifidobacterium*." *Int. J. Food Microbiol.* 126 (2008): 316-320. PubMed: 17889391.
4. Jakab, E., et al. "Severe Infections Caused by *Propionibacterium acnes*: an Underestimated Pathogen in Late Postoperative Infections." *Yale J. Biol. Med.* 69 (1996): 477-482. PubMed: 9436290.
5. Kanafani, Z. A., et al. "Postoperative Joint Infections Due to *Propionibacterium* Species: A Case-Control Study." *Clin. Infect. Dis.* 49 (2009): 1083-1085. PubMed: 19725786.
6. Sohail, M. R., et al. "Infective Endocarditis Due to *Propionibacterium* Species." *Clin. Microbiol. Infect.* 15 (2009): 387-394. PubMed: 19260876.
7. Clayton, J. J., et al. "Endocarditis Caused by *Propionibacterium* Species: a Report of Three Cases and a Review of Clinical Features and Diagnostic Difficulties." *J. Med. Microbiol.* 55 (2006): 981-987. PubMed: 16849716.

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