

***Faecalibacterium prausnitzii*, Strain KLE1255**

Catalog No. HM-473

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Ruminococcaceae*, *Faecalibacterium*

Species: *Faecalibacterium prausnitzii* (formerly *Fusobacterium prausnitzii*)¹

Strain: KLE1255

Original Source: *Faecalibacterium prausnitzii* (*F. prausnitzii*), strain KLE1255 was isolated in August 2009 from human feces.^{2,3}

Comments: *F. prausnitzii*, strain KLE1255 ([HMP ID 9436](#)) 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 *F. prausnitzii*, strain KLE1255 has been sequenced at [Washington University](#) (GenBank: [AECU00000000](#)).

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.

F. prausnitzii is a non-motile, Gram positive, obligately anaerobic rod that is found in abundance in animal and human feces.^{1,4,5,6} *F. prausnitzii* is one of the predominant butyrate-producing bacteria in the gastrointestinal tract and has shown anti-inflammatory effects in probiotic treatment models.⁷ It is significantly underrepresented in patients with colitis and Crohn's disease, suggesting the importance of *F. prausnitzii* in gut homeostasis.^{8,9}

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Modified Chopped Meat broth with carbohydrates and rumen supplemented with 10% glycerol.

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

Packaging/Storage:

HM-473 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 Chopped Meat medium with carbohydrates and rumen or equivalent

Brain Heart Infusion agar with yeast extract and 0.1% cysteine or equivalent²

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.

Note: If the recommended growth conditions do not produce a viable culture the depositor also recommends co-culturing with *Escherichia coli* (*E. coli*) or growth in spent medium from *E. coli*.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Faecalibacterium prausnitzii*, Strain KLE1255, HM-473."

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.

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References:

1. Duncan, S. H., et al. "Growth Requirements and Fermentation Products of *Fusobacterium prausnitzii* and a Proposal to Reclassify it as *Faecalibacterium prausnitzii* gen. nov., comb. nov." *Int. J. Syst. Evol. Microbiol.* 52 (2002): 2141-2146. PubMed: 12508881.
2. Witt, K., Personal Communication.
3. [HMP ID 9436](#) (*F. prausnitzii*, strain KLE1255)
4. Cato, E. P., C. W. Salmon and W. E. C. Moore. "*Fusobacterium prausnitzii* (Hauduroy et al.) Moore and Holdeman: Emended Description and Designation of Neotype Strain." *Int. J. Syst. Bacteriol.* 24 (1974): 225-229.
5. Foditsch, C. et al. "Isolation and Characterization of *Faecalibacterium prausnitzii* from Calves and Piglets." *PLoS One* 9 (2014): e116465. PubMed: 25551453.
6. Fitzgerald, C. B., et al. "Comparative Analysis of *Faecalibacterium prausnitzii* Genomes shows a High Level of Genome Plasticity and Warrants Separation into New Species-Level Taxa." *BMC Genomics* 19 (2018): 931. Pubmed: 30547746.
7. Sokol, H., et al. "*Faecalibacterium prausnitzii* is an Anti-Inflammatory Commensal Bacterium Identified by Gut Microbiota Analysis of Crohn Disease Patients." *Proc. Natl. Acad. Sci. U. S. A.* 105 (2008): 16731-16736. PubMed: 18936492.
8. Sokol, H., et al. "Low Counts of *Faecalibacterium prausnitzii* in Colitis Microbiota." *Inflamm. Bowel Dis.* 15 (2009): 1183-1189. PubMed: 19235886.
9. Jia, W., et al. "Is the Abundance of *Faecalibacterium prausnitzii* Relevant to Crohn's Disease?" *FEMS Microbiol. Lett.* 310 (2010): 138-144. PubMed: 20695899.

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