

***Lactobacillus crispatus*, Strain
EX849587VC02**

Catalog No. HM-371

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Lactobacillaceae*, *Lactobacillus*

Species: *Lactobacillus crispatus*

Strain: EX849587VC02

Original Source: *Lactobacillus crispatus* (*L. crispatus*), strain EX849587VC02 was isolated in 2010 from a human mid-vaginal wall in Richmond, Virginia.^{1,2}

Comments: *L. crispatus*, strain EX849587VC02 ([HMP ID 9632](#)) is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. *L. crispatus*, strain EX849587VC02 is currently being sequenced at [Virginia Commonwealth University](#).

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.

L. crispatus is a Gram-positive, facultative anaerobic, mesophilic, non-motile bacterium comprising the normal vaginal microbiota of human females. Its role in the regulation of pH through lactic acid production by anaerobic metabolism of glycogen helps promote a healthy ecosystem within the female lower vaginal tract.^{3,4} The dominance of *L. crispatus* has been reported to correlate with better vaginal health, with a lower incidence of preterm delivery, bacterial vaginosis and viral (including human papillomavirus) infection.^{3,5,6}

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Lactobacilli MRS broth supplemented with 10% glycerol.

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

Packaging/Storage:

HM-371 was packaged aseptically, in screw-capped plastic 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:

Lactobacilli MRS broth or equivalent

Lactobacilli MRS agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic or Microaerophilic (CO₂ is not required for growth)

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 1 to 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: *Lactobacillus crispatus*, Strain EX849587VC02, HM-371."

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. Buck, G.A., Personal Communication.
2. [HMP ID 9632](#) (*L. crispatus*, strain EX849587VC02)
3. Srinivasan, S. and D. N. Fredricks. "The Human Vaginal Bacterial Biota and Bacterial Vaginosis." Interdiscip. Perspect. Infect. Dis. 2008 (2008): 750479. PubMed: 19282975.
4. Boskey, E. R., et al. "Acid Production by Vaginal Flora *In Vitro* Is Consistent with the Rate and Extent of Vaginal Acidification." Infect. Immun. 67 (1999): 5170-5175. PubMed: 10496892.
5. Di Pierro, F., et al. "Oral Administration of *Lactobacillus crispatus* M247 to Papillomavirus-Infected Women: Results of a Preliminary, Uncontrolled, Open Trial." Minerva Obstet. Gynecol. (73) 2021: 621-631. PubMed: 33876901.
6. Tabatabaei, N., et al. "Vaginal Microbiome in Early Pregnancy and Subsequent Risk of Spontaneous Preterm Birth: A Case-Control Study." BJOG (126) 2019: 349-358. PubMed: 29791775.

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