Product Information Sheet for HM-106

Lacticaseibacillus rhamnosus, Strain LMS2-1 (Deposited as *Lactobacillus rhamnosus*, LMS2-1)

Catalog No. HM-106

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Lactobacillaceae*, *Lactobacillus*
Species: *Lacticaseibacillus rhamnosus* (Previously referred to as *Lactobacillus rhamnosus*, this family has been reclassified and the family designation on the vial label refers to the old nomenclature.)[1]
Strain: LMS2-1
Original Source: *Lacticaseibacillus rhamnosus (L. rhamnosus)*, strain LMS2-1 is a human gastrointestinal isolate.[2,3]
Comments: *L. rhamnosus*, strain LMS2-1 (HMP ID 0539) 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 *L. rhamnosus,* strain LMS2-1 was sequenced at Baylor College of Medicine (GenBank: ACIZ00000000).
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. rhamnosus is a Gram-positive, mesophilic, non-motile facultative anaerobe bacterium that is commonly found in the normal human gastrointestinal tract. It is commonly used in the production of cheese and other dairy products and is also known to stimulate the immune system and have antibacterial activity.[4,5,6]

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-106 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:
Lactobacilli MRS broth and/or agar
Incubation:
Temperature: 35°C to 37°C
Atmosphere: Aerobic or Microaerophilic (CO_2 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 day.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Lacticaseibacillus rhamnosus*, Strain LMS2-1 (Deposited as *Lactobacillus rhamnosus*, LMS2-1), HM-106."

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

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. Zheng, J., et al. "A Taxonomic Note on the Genus *Lactobacillus*: Description of 23 novel Genera, Amended Description of the Genus *Lactobacillus* Beijerinck 1901, and Union of *Lactobacillaceae* and *Leuconostocaceae*." Int. J. Syst. Evol. Microbiol. 70 (2020): 2782-2858. PubMed: 32293557.
2. Lewis, A., Personal Communication.
3. HMP ID 0539 (*Lactobacillus rhamnosus*, strain LMS2-1)
4. Bottari, B., et al. "How the Fewest Become the Greatest. *L. casei's* Impact on Long Ripened Cheeses." Front Microbiol. 9 (2018):02866. PubMed: 30524419.
5. Villena, J., and H. Kitazawa. "The Modulation of Mucosal Antiviral Immunity by Immunobiotics: Could They Offer Any Benefit in the SARS-CoV-2 Pandemic?." Front Physiol. 11(2020): 00699. PubMed: 32670091.
6. Hill, D., et al. "The *Lactobacillus casei* Group: History and Health Related Applications." Front. Microbiol. 9 (2018): 02107. PubMed: 30298055.

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