Product Information Sheet for HM-634

Clostridium sp., Strain L2-50

Catalog No. HM-634

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Clostridiaceae*, *Clostridium*
Species: *Clostridium* sp. (previously referred to as *Coprococcus* sp., this genus has been reclassified).[1]
Strain: L2-50
Original Source: This isolate was obtained in 1996 from the fecal sample of a healthy two-year-old infant in Aberdeen, Scotland, United Kingdom.[2,3]
Comments: *Clostridium* sp., strain L2-50 (HMP 0221), a butyrate-producing isolate, is a reference genome for The Human Microbiome Project (HMP).[2,3] HMP is an initiative to identify and characterize human microbial flora. The complete genome of *Clostridium* sp., strain L2-50 was sequenced at the Genome Institute at Washington University (GenBank: AAYW00000000).
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.

Clostridium species are Gram-positive, spore-forming, obligate anaerobes that are ubiquitous in virtually all anoxic habitats where organic compounds are found, especially soils, aquatic sediments and the intestinal tracts of animals and humans. A few *Clostridium* species are pathogenic, producing the most potent biological toxins known to affect humans.

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Chopped Meat Carbohydrate broth supplemented with 10% glycerol.

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

Packaging/Storage:
HM-634 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:
Chopped Meat Carbohydrate, or depositor recommended rumen fluid based medium containing soluble starch, glucose and cellobiose (M2GSC medium) or yeast extract-Casitone-fatty acids with glucose (YCFAG) medium[3,4]
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 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: *Clostridium* sp., Strain L2-50, HM-634."

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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:
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References:

1. HMP 0221 (*Clostridium* sp., strain L2-50)
2. Flint, H. J. and S. H. Duncan, Personal Communication.
3. Barcenilla, A., et al. "Phylogenetic Relationships of Butyrate-Producing Bacteria from the Human Gut." Appl. Environ. Microbiol. 66 (2000): 1654-1661. PubMed: 10742256.
4. Duncan, S. H., et al. "Acetate Utilization and Butyryl Coenzyme A (CoA): Acetate-CoA Transferase in Butyrate-Producing Bacteria from the Human Large Intestine." Appl. Environ. Microbiol. 68 (2002): 5186-5190. PubMed: 12324374.
5. Louis, P., et al. "Restricted Distribution of the Butyrate Kinase Pathway among Butyrate-Producing Bacteria from the Human Colon." J. Bacteriol. 186 (2004): 2099-106. PubMed: 15028695.
6. Duncan, S. H., et al. "Contribution of Acetate to Butyrate Formation by Human Faecal Bacteria." Br. J. Nutr. 91 (2004): 915-923. PubMed: 15182395.