Product Information Sheet for HM-780

Lachnoanaerobaculum sp., Strain OBRC5-5

Catalog No. HM-780

For research use only. Not for human use.

Contributors:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Lachnospiraceae*; *Lachnoanaerobaculum*

Species: *Lachnoanaerobaculum* sp. (Recently classified as *Lachnoanaerobaculum* sp., within the order Clostridiales)[1,2]

Strain: OBRC5-5

Original Source: *Lachnoanaerobaculum* sp., strain OBRC5-5 was isolated in April 2010 from subgingival dental plaque of a 21-year-old American female.[2,3]

Comments: *Lachnoanaerobaculum* sp., strain OBRC5-5 (HMP ID 1135) 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 *Lachnoanaerobaculum* sp., strain OBRC5-5 was sequenced at the Broad Institute (GenBank: ALOA00000000).

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.

Lachnoanaerobaculum is a relatively new genus within the order Clostridiales.[4] Clostridiales bacteria are generally Gram-positive, rod-shaped, 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.[3,5] *Lachnoanaerobaculum* species have a Gram-positive cell wall but may stain Gram-variable or Gram-negative.[3,4] Most species have the ability to form spores[4-6] and a few are pathogenic, producing very potent biological toxins known to affect humans.[6]

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 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-780 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 or Brain Heart Infusion broth or equivalent

Tryptic Soy agar with 5% sheep blood or Brain Heart Infusion agar or equivalent

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.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Lachnoanaerobaculum* sp., Strain OBRC5-5, HM-780."

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.

Disclaimers:

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References:

1. Sizova, M. V., Personal Communication.
2. HMP ID 1135 (*Lachnoanaerobaculum* sp., strain OBRC5-5)
3. Sizova, M. V., et al. "New Approaches for Isolation of Previously Uncultivated Oral Bacteria." Appl. Environ. Microbiol. 78 (2012): 194-203. PubMed: 22057871.
4. Hedberg, M. E., et al. "*Lachnoanaerobaculum* gen. nov., a New Genus in the *Lachnospiraceae*: Characterization of *Lachnoanaerobaculum umeaense* gen. nov., sp. nov., Isolated from the Human Small Intestine, and *Lachnoanaerobaculum orale* sp. nov., Isolated from Saliva, and Reclassification of *Eubacterium saburreum* (Prevot 1966) Holdeman and Moore 1970 as *Lachnoanaerobaculum saburreum* comb. nov." Int. J. Syst. Evol. Microbiol. 62 (2012): 2685-2690. PubMed: 22228654.
5. Lawson, P. A., et al. "Anaerobes: A Piece in the Puzzle for Alternative Biofuels." Anaerobe 17 (2011): 206-210. PubMed: 21699990.
6. Mallozzi, M., V. K. Viswanathan and G. Vedantam. "Spore-forming Bacilli and Clostridia in Human Disease." Future Microbiol. 5 (2010): 1109-1123. PubMed: 20632809.
7. Paredes-Sabja, D., P. Setlow and M. R. Sarker. "Germination of Spores of Bacillales and Clostridiales Species: Mechanisms and Proteins Involved." Trends Microbiol. 19 (2011): 85-94. PubMed: 21112786.
8. Popoff, M. R. and P. Bouvet. "Clostridial Toxins." Future Microbiol. 4 (2009): 1021-1064. PubMed: 19824793.

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