

***Lachnospiraceae* sp., Strain 3-1**

Catalog No. NR-36443

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Clostridiales*, *Lachnospiraceae*

Species: *Lachnospiraceae* sp.

Strain: 3-1

Original Source: *Lachnospiraceae* sp., strain 3-1 was isolated in January 2005 from the cecal content of mouse cecum in Birmingham, Alabama, USA.^{1,2}

Comment: The complete genome of *Lachnospiraceae* sp., strain 3-1 has been sequenced (GenBank: [ASST00000000](#)).

Lachnospiraceae are a robust group of organisms that commonly occur in the digestive tract of humans and other animals.^{3,4} *Lachnospiraceae* species are usually strictly anaerobic, non-spore-forming, non-motile, rod-shaped bacteria. *Lachnospiraceae* species have a Gram-positive cell wall but some strains have been reported to stain Gram-variable or Gram-negative depending on the duration of growth.⁵

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X M2GSC medium supplemented with 10% glycerol.

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

Packaging/Storage:

NR-36443 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:

Note: *Lachnospiraceae* sp., strain 3-1 demonstrates poor growth on agar.

M2GSC broth^{1,6} or equivalent

Tryptic Soy Agar with 5% sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Anaerobic (90% N₂:5% CO₂:5% H₂)

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 72 to 96 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Lachnospiraceae* sp., Strain 3-1, NR-36443."

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.

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References:

1. Duck, L. W., et al. "Isolation of Flagellated Bacteria Implicated in Crohn's Disease." Inflamm. Bowel Dis. 13 (2007): 1191-1201. PubMed: 17712838.
2. C. O. Elson III, Personal Communication.
3. Nava, G. M. and T. S. Stappenbeck. "Diversity of the Autochthonous Colonic Microbiota." Gut Microbes 2 (2011): 99-104. PubMed: 21694499.
4. McLellan, S. L., et al. "Sewage Reflects the Distribution of Human Faecal *Lachnospiraceae*." Environ. Microbiol. 15 (2013): 2213-2227. PubMed: 23438335.
5. Lawson, P. A., et al. "Anaerobes: A Piece in the Puzzle for Alternative Biofuels." Anaerobe 17 (2011): 206-210. PubMed: 21699990.
6. Miyazaki, K., et al. "Degradation and Utilization of Xylans by the Rumen Anaerobe *Prevotella bryantii* (Formerly *P. ruminicola* subsp. *brevis*) B(1)4." Anaerobe 3 (1997): 373-381. PubMed: 16887612.

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