

**Listeria monocytogenes, Strain CC70B**

**Catalog No. HM-1048**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Listeriaceae, Listeria*

Species: *Listeria monocytogenes*

Strain: CC70B

Original Source: *Listeria monocytogenes* (*L. monocytogenes*), strain CC70B was isolated in October 2010 from colonic biopsy tissue of a human subject in Victoria, British Columbia, Canada.<sup>1</sup>

Comments: *L. monocytogenes*, strain CC70B ([HMP ID 1309](#)) 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. monocytogenes*, strain CC70B is currently being sequenced at the [Broad Institute](#).

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. monocytogenes* is a Gram-positive, facultative intracellular bacterium that is extremely tolerant of external stresses (pH 3-12, temperatures ranging from 1°C to 45°C, and high salt). *L. monocytogenes* encompasses a diversity of strains with varied virulence and pathogenic potential. There are 13 serotypes (1/2a, 1/2b, 1/2c, 3a, 3b, 3c, 4a, 4b, 4c, 4d, 4e, 5 and 7) that have been isolated from mammalian, bird, fish and shellfish species as well as environmental sources. Of these, only 3 serotypes (1/2a, 1/2b, and 4b) are frequently isolated from outbreaks of human listeriosis. The most common cause of infection is through ingestion of contaminated foods, in particular milk, meat or vegetable products. The infective dose is unknown and varies with species.<sup>2-5</sup>

**Material Provided:**

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

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

**Packaging/Storage:**

HM-1048 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:

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

Incubation:

Temperature: 37°C  
Atmosphere: Aerobic

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: *Listeria monocytogenes*, Strain CC70B, HM-1048."

**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/bmbli5/index.htm](http://www.cdc.gov/biosafety/publications/bmbli5/index.htm).

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**References:**

1. Allen-Vercoe, E., Personal Communication.
2. Nightingale, K. K., et al. "Ecology and Transmission of *Listeria monocytogenes* Infecting Ruminants and in the Farm Environment." *Appl. Environ. Microbiol.* 70 (2004): 4458-4467. PubMed: 15294773.
3. Yildirim, S., et al. "Conservation of Genomic Localization and Sequence Content of Sau3AI-Like Restriction-Modification Gene Cassettes among *Listeria monocytogenes* Epidemic Clone I and Selected Strains of Serotype 1/2a." *Appl. Environ. Microbiol.* 76 (2010): 5577-5584. PubMed: 20581194.
4. Edman, D. C., M. B. Pollock and E. R. Hall. "*Listeria monocytogenes* L Forms: I. Induction Maintenance and Biological Characteristics." *J. Bacteriol.* 96 (1968): 352-357. PubMed: 4970647.
5. Angelakopoulos, H., et al. "Safety and Shedding of an Attenuated Strain of *Listeria monocytogenes* with a Deletion of *actA/plcB* in Adult Volunteers: A Dose Escalation Study of Oral Inoculation." *Infect. Immun.* 70 (2002): 3592-35601. PubMed: 12065500.

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