

***Listeria monocytogenes*, Strain FSL N3-165**

Catalog No. NR-13233

For research only. Not for human use.

Contributor and Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Listeriaceae*, *Listeria*

Species: *Listeria monocytogenes*

Strain: FSL N3-165

Serotype: 1/2a

Original Source: *Listeria monocytogenes* (*L. monocytogenes*), serotype 1/2a, strain FSL N3-165 was isolated from a soil sample from a control farm, without diseased animals, in New York in 2002.¹⁻³

Comment: *L. monocytogenes*, strain FSL N3-165 is ribotype DUP-1045A.^{2,3} The complete genome of *L. monocytogenes*, strain FSL N3-165 has been drafted (GenBank: [AARQ02000000](http://www.ncbi.nlm.nih.gov/GenBank/AA02000000)).¹ For more sequencing information, refer to the Broad Institute's [Listeria Genome Project](http://www.broadinstitute.org/listeria).

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.^{4,5}

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Brain Heart Infusion broth supplemented with 10% glycerol.

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

Packaging/Storage:

NR-13233 was packaged aseptically, in screw-capped plastic 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 Condition:

Media:

Brain Heart Infusion broth or equivalent

Tryptic Soy Agar with 5% Sheep Blood 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 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Listeria monocytogenes*, Strain FSL N3-165, NR-13233."

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 <http://www.cdc.gov/biosafety/publications/bmb15/index.htm>.

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References:

1. [Broad Institute *Listeria monocytogenes* Database](#)
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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