

***Listeria monocytogenes*, Strain FSL N1-017**

**Catalog No. NR-13231**

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

**Contributor:**

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**Product Description:**

Bacteria Classification: *Listeriaceae*, *Listeria*

Species: *Listeria monocytogenes*

Strain: FSL N1-017

Serotype: 4b

Original Source: *Listeria monocytogenes* (*L. monocytogenes*), strain FSL N1-017 was isolated from trout in brine and has a ribotype exclusive to food sources. It is not associated with any human disease cases.<sup>1,2</sup>

Comment: The complete genome of *L. monocytogenes*, strain FSL N1-017 has been drafted (GenBank: AARP00000000).<sup>3</sup> For more sequencing information, refer to the Broad Institute's [Listeria Genome Project](#).

*L. monocytogenes* is a Gram-positive, facultative intracellular bacterium that is extremely tolerant of external stresses (pH 3-12, temperatures ranging from 1 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>4</sup>

**Material Provided:**

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

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

**Packaging/Storage:**

NR-13231 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:

Nutrient or Brain Heart Infusion broth or equivalent

Tryptic Soy Agar with 5% Sheep Blood

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 tubes and plate at 37°C for 24 hours.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Listeria monocytogenes*, Strain FSL N1-017, NR-13231."

**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, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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**References:**

1. [Broad Institute \*Listeria monocytogenes\* Database](#)
2. Gray, M.J., et al. "*Listeria monocytogenes* Isolates from Foods and Humans Form Distinct but Overlapping Populations." *Appl. Environ. Microbiol.* 70 (2004): 5833-5841. PubMed: 15466521.
3. Glaser, P., et al. "Comparative Genomics of *Listeria* Species." *Science* 294 (2001): 849-852. PubMed: 11679669. GenBank: AARP00000000.
4. Liu, D., et al. "Toward an Improved Laboratory Definition of *Listeria monocytogenes* Virulence." *Int. J. Food Microbiol.* 118 (2007): 101-115. PubMed: 17727992.
5. Rocourt, J. and C. Buchrieser. "The Genus *Listeria* and *Listeria monocytogenes*: Phylogenetic Position, Taxonomy, and Identification." In: E. T. Ryser and E. H. Marth, *Listeria, Listeriosis, and Food Safety* (3<sup>rd</sup> ed.) New York: Marcel Dekker, Inc., pp 1-20.
6. Seeliger, H. P. R. *Listeriosis*. 2nd ed. Basel: Karger, 1961.

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