

***Francisella tularensis* subsp. *novicida*,
Strain Utah 112**

Catalog No. NR-13

(Derived from ATCC® 15482™)

For research use only. Not for human use.

Contributor:
ATCC®

Manufacturer:
BEI Resources

Product Description:

Bacteria Classification: *Francisellaceae*, *Francisella*

Species: *Francisella tularensis* subsp. *novicida*

Strain: Utah 112 (type strain)

Source:¹ *Francisella tularensis* (*F. tularensis*) subsp. *novicida*, strain Utah 112 was obtained from the saltwater of Ogden Bay, Utah, in 1950.¹

Comments: *F. tularensis* subsp. *novicida*, strain Utah 112 was deposited to ATCC® by Dr. W. L. Jellison of the Rocky Mountain Laboratory in Hamilton, Montana, in 1964. The complete genome of *F. tularensis* subsp. *novicida*, strain Utah 112 has been sequenced (GenBank: [CP000439](#)).²

F. tularensis subsp. *novicida*, strain U112 (ATCC® 15482™) is excluded from Select Agent status. Please refer to the [Select Agent Exclusions](#) at the National Select Agent Registry website for more information.

F. tularensis is one of the most infectious bacterial pathogens known and is the causative agent of the febrile zoonotic disease tularemia. The natural reservoir of the bacterium is thought to be rodents, although most human cases result from the bite of a blood-feeding arthropod vector.³

F. tularensis subsp. *novicida* is a Gram-negative, facultative bacterium, which grows predominantly in macrophages when living in mammalian hosts. *F. tularensis* subsp. *novicida* is ideal for studying *F. tularensis* pathogenesis as it is highly virulent in mice but has little to no effect on humans.³⁻⁵

Material Provided:

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

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

Packaging/Storage:

NR-13 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 Conditions:

Media:

Brain Heart Infusion Broth, Mueller Hinton Broth or equivalent Cystine Heart Agar or Broth with 5% defibrinated rabbit blood

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with or without 5% CO₂

Propagation:

1. Keep vial frozen until ready for use; thaw slowly.
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 to 48 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Francisella tularensis* subsp. *novicida*, Strain Utah 112, NR-13."

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. Larson, C. L., W. Wicht and W. L. Jellison. "A New Organism Resembling *P. tularensis* Isolated from Water." Public Health Reports. 70 (1955): 253-258. PubMed: 14357545.
2. Rohmer, L., et al. "Comparison of *Francisella tularensis* Genomes Reveals Evolutionary Events Associated with the Emergence of Human-Pathogenic Strains." Genome Biol. 8 (2007): R102. PubMed: 17550600.
3. McLendon, M. K., M. A. Apicella and L.-A. H. Allen. "*Francisella tularensis*: Taxonomy, Genetics, and Immunopathogenesis of a Potential Agent of Biowarfare." Annu. Rev. Microbiol. 60 (2006): 167-185. PubMed: 16704343.
4. Gray, C. G., et al. "The Identification of Five Genetic Loci of *Francisella novicida* Associated with Intracellular Growth." FEMS Microbiol. Lett. 215 (2002): 53-56. PubMed: 12393200.
5. de Bruin, O. M., J. S. Ludu and F. E. Nano. "The *Francisella* Pathogenicity Island Protein IgIA Localizes to the Bacterial Cytoplasm and Is Needed for Intracellular Growth." BMC Microbiol. 7 (2007): 1-10. PubMed: 17233889.

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