Francisella tularensis subsp. *novicida*, Strain Utah 112

Catalog No. NR-13
(Derived from ATCC® 15482™)

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Francisellaceae, Francisella*
Species: *Francisella tularensis* subsp. *novicida* (Previously referred to as *Francisella novicida,* this species has been reclassified and the species designation on the vial label refers to the old nomenclature.)[1]
Strain: Utah 112 (type strain; also referred to as U112^T)[1]
Original Source: *Francisella tularensis (F. tularensis)* subsp. *novicida*, strain Utah 112 was isolated from the saltwater of Ogden Bay, Utah, in 1950.[2]
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).[3]

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.[4]

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.[4,5,6]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Mueller Hinton 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:
Mueller Hinton broth or Cystine Heart broth with 5% defibrinated rabbit blood or equivalent
Chocolate agar with IsoVitaleX™ Enrichment (BD BBL™ B11875) or Cystine Heart agar with 5% defibrinated rabbit blood or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic with or without 5% CO_2
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 1 to 2 days.

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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:
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References:

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2. Larson, C. L., W. Wicht and W. L. Jellison. "A New Organism Resembling *P. tularensis* Isolated from Water." Public Health Rep. 70 (1955): 253-258. PubMed: 14357545.
3. 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.
4. 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.
5. 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.
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