

Genomic DNA from *Francisella tularensis* subsp. *tularensis*, Strain WY96-3418

Catalog No. NR-3016

This reagent is the property of the U.S. Government.

For research use only. Not for human use.

Contributor:

Martin E. Schriefer, Ph.D., Chief, Diagnostic and Reference Laboratory, Bacterial Zoonoses Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Disease, Centers for Disease Control and Prevention, Fort Collins, Colorado

Product Description:

Genomic DNA was isolated from a preparation of *Francisella tularensis* (*F. tularensis*) subsp. *tularensis*, strain WY96-3418.

F. tularensis is a small, non-motile, aerobic, pleomorphic, gram-negative coccobacillus. Very little is known about the virulence mechanisms of *F. tularensis*, but growth in macrophages is central to the bacterium's ability to cause disease.¹

F. tularensis subsp. *tularensis* WY96-3418 is a human isolate from Wyoming (1996). The complete genome of *F. tularensis* subsp. *tularensis*, strain WY96-3418 has been sequenced (GenBank: CP000608).²

NR-3016 has been qualified for PCR applications by amplification of approximately 1500 bp of the 16S ribosomal RNA gene as well as amplification of a subspecies-specific sequence of approximately 390 bp (Type A; subsp. *tularensis*).^{3,4}

Material Provided:

Each vial contains approximately 5 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 7.4). The concentration, expressed as µg per µL, is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-3016 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID,

NIH: Genomic DNA from *Francisella tularensis* subsp. *tularensis*, Strain WY96-3418, NR-3016."

Biosafety Level: 1

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.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government make any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Larsson, P., et al. "The Complete Genome Sequence of *Francisella tularensis*, the Causative Agent of Tularemia." Nature Genet. 37 (2005): 153-159. PubMed: 15640799.
2. Beckstrom-Sternberg, S. M., et al. "Complete Genomic Characterization of a Pathogenic A.II Strain of *Francisella*

- tularensis* subspecies *tularensis*." PLoS ONE 2 (2007): e947. PubMed: 17895988.
3. Petersen, J. M., et al. "Laboratory Analysis of Tularemia in Wild-Trapped, Commercially Traded Prairie Dogs, Texas, 2002." Emerg. Infect. Dis. 10 (2004): 419-425. PubMed: 15109407.
 4. Kugeler, K. J., et al. "Real-time PCR for *Francisella tularensis* Types A and B." Emerg. Infect. Dis. 12 (2006): 1799-1801. PubMed: 17283646.
 5. 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.
 6. Farlow, J., et al. "*Francisella tularensis* in the United States." Emerg. Infect. Dis. 11 (2005): 1835-1841. PubMed: 16485467.
 7. Petersen, J. M. and M. E. Schriefer. "Tularemia: Emergence/Re-emergence." Vet. Res. 36 (2005): 455-467. PubMed: 15845234.
 8. Svensson, K., et al. "Evolution of Subspecies of *Francisella tularensis*." J. Bacteriol. 187 (2005): 3903-3908. PubMed: 15901721.
 9. Johansson, A., et al. "Worldwide Genetic Relationships among *Francisella tularensis* Isolates Determined by Multiple-Locus Variable-Number Tandem Repeat Analysis." J. Bacteriol. 186 (2004): 5808-5818. PubMed: 15317786.
 10. Titball, R. W., A. Johansson, and M. Forsman. "Will the Enigma of *Francisella tularensis* Virulence Soon Be Solved?" Trends Microbiol. 11 (2003): 118-123. PubMed: 12648943.
 11. Broekhuijsen, M., et al. "Genome-Wide DNA Microarray Analysis of *Francisella tularensis* Strains Demonstrates Extensive Genetic Conservation within the Species but Identifies Regions That Are Unique to the Highly Virulent *F. tularensis* subsp. *tularensis*." J. Clin. Microbiol. 41 (2003): 2924-2931. PubMed: 12843022.
 12. Ellis, J., P. C. Oyston, M. Green, and R. W. Titball. "Tularemia." Clin. Microbiol. Rev. 15 (2002): 631-646. PubMed: 12364373.

ATCC® is a trademark of the American Type Culture Collection.