

Genomic DNA from *Francisella tularensis* subsp. *tularensis*, Strain SCHU S4 (FSC237)

Catalog No. NR-3015

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Contributor:

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Product Description:

Genomic DNA was isolated from a preparation of *Francisella tularensis* (*F. tularensis*) subsp. *tularensis*, strain SCHU S4 (FSC237).

F. tularensis subsp. *tularensis* is a small, non-motile, aerobic, pleomorphic, Gram-negative coccobacillus which displays the highest degree of human virulence among *F. tularensis* subspecies. Pathogenesis of *F. tularensis* is poorly understood, but it is known that this organism is able to survive and replicate within macrophages. The *Francisella* Pathogenicity Island (FPI) genes are required for intramacrophage growth and virulence, and appear to encode a protein secretion system, but the exact function of individual FPI proteins remains to be determined. Additional regulatory factors required for virulence have recently been discovered, and the role of surface components, including LPS, pili, and capsule, in *F. tularensis* virulence is also beginning to be illuminated.^{1,2}

F. tularensis subsp. *tularensis* SCHU S4 was derived from an isolate from a human case of tularemia in Ohio.³ It consists of a 1.9-megabase pair circular chromosome; the complete genome sequence and a phylogenetic analysis has been reported (GenBank: AJ749949).⁴ The pOM1 and pNFL10 plasmids, identified in low virulence strains of *F. tularensis*, are absent in the highly virulent SCHU S4 strain.⁵

NR-3015 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*).⁶

Material Provided:

Each vial contains approximately 4 to 6 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-3015 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 SCHU S4 (FSC237), NR-3015."

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.

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