

***Francisella tularensis* subsp. *novicida*, Strain ΔIglA**

**Catalog No. NR-9707**

**Product Description:** *Francisella tularensis* (*F. tularensis*) subsp. *novicida*, strain ΔIglA is a transposon mutant of the wild-type strain U112, in which the *igIA* gene region has been replaced with a mini-Tn5 insert, rendering it resistant to kanamycin.

**Lot<sup>1</sup>: 58607103**

**Manufacturing Date: 20MAY2009**

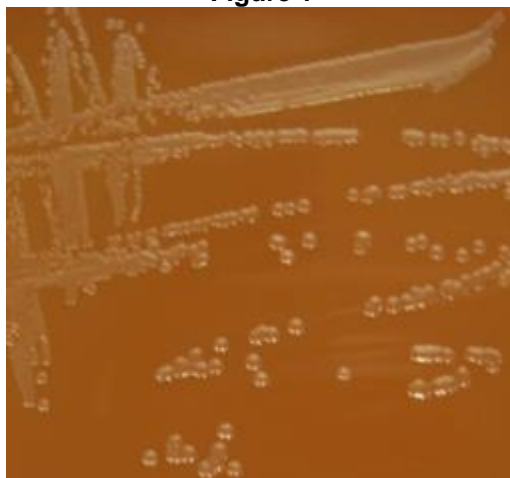
TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Growth in the absence of cysteine Motility β-hemolysis X- and V-factor requirements CO <sub>2</sub> requirement Biochemical tests Catalase Oxidase Urease Nitrate Indole Hydrogen sulfide production Glucose Maltose Sucrose Glycerol	Gram-negative coccobacillus Report results  Growth Non-motile Non-hemolytic Negative Negative  Positive Negative Negative Negative Negative Negative Report results Positive Report results Report results Positive	Gram-negative coccobacillus Circular, low convex, entire, gray and opaque (Figure 1) Growth Non-motile Non-hemolytic Negative Negative  Positive Negative Negative Negative Negative Positive Positive Negative Negative Positive
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (1400 bp)	Consistent with <i>F. tularensis</i>	Consistent with <i>F. tularensis</i>
<b>Molecular Subtyping by PCR Amplification of Subspecies-Specific Sequence from Extracted DNA<sup>3</sup></b>	~ 1500 bp amplicon (subsp. <i>tularensis</i> ) ~ 900 bp amplicon (subsp. <i>holarctica</i> ) ~ 3300 bp amplicon (subsp. <i>novicida</i> )	~ 3300 bp amplicon (subsp. <i>novicida</i> )
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

<sup>1</sup>*F. tularensis* subsp. *novicida*, strain ΔIglA was deposited by Francis E. Nano, Ph.D., Department of Biochemistry and Microbiology, University of Victoria, Victoria, British Columbia, Canada. NR-9707 was produced by inoculation of the deposited material into Brain Heart Infusion Broth and grown 24 hours at 37°C. Broth inoculum was added to Chocolate agar Kolles which were grown 24 hours at 37°C to produce this lot.

<sup>2</sup>48 hours at 37°C on chocolate agar (GC agar)

<sup>3</sup>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.

Figure 1



**Date:** 17 FEB 2011

**Signature:** 

**Title:** Technical Manager, BEI Authentication or designee

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