

***Bacillus anthracis*, Strain Sterne ΔGBAA1975-76**

**Catalog No. NR-10004**

**Product Description:** *Bacillus anthracis* (*B. anthracis*), strain Sterne ΔGBAA1975-76 is a markerless, nonpolar, double deletion mutant of the response regulator/histidine kinase genes from the toxigenic acapsulate original Sterne strain (34F2). The mutant retains the wild type sequence for the first six codons of GBAA1975, including the start codon, and the last six codons of GBAA1976. The restriction endonuclease recognition site for *Sma*I was inserted between GBAA1975 and GBAA1976.

**Lot<sup>1</sup>: 58441525**

**Manufacturing Date: 18DEC2008**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Sporulation Motility β-hemolysis Capsule (India ink staining) Tenacious Analytical profile index (API <sup>®</sup> 50 CHB including API <sup>®</sup> 20E; ONPG to GEL only) Nitrate reduction FAME analysis	Gram-positive rod Report results  Positive Non-motile Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  Positive Consistent with <i>B. anthracis</i>	Gram-positive rod Circular, flat, ground-glass, grey, opaque (Figure 1) Positive Non-motile Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  Positive Consistent with <i>B. anthracis</i>
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1440 base pairs)	Consistent with <i>Bacillus cereus</i> group	Consistent with <i>Bacillus cereus</i> group <sup>3</sup>
<b>PCR Assay of Extracted DNA</b> 16S ribosomal RNA gene Presence of virulence plasmids pXO1 ( <i>aat</i> ) pXO2 ( <i>at</i> , <i>capA</i> , <i>capB</i> , <i>capC</i> )	~ 1500 bp amplicon  ~ 125 bp amplicon No amplicons	~ 1500 bp amplicon  ~ 125 bp amplicon No amplicons
<b>Viability (post-vialing)<sup>4</sup></b>	Growth	Growth

<sup>1</sup>*B. anthracis*, strain Sterne ΔGBAA1975-76 was deposited by Philip C. Hanna, Associate Professor, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Michigan. NR-10004 was produced by inoculation of the deposited material into Tryptic Soy Broth and grown 24 hours at 37°C. Broth inoculum was added to Kolles which were grown 24 hours at 37°C to produce this lot.

<sup>2</sup>24 hours at 37°C on Tryptic Soy Agar with 5% sheep blood

<sup>3</sup>*Bacillus cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycooides*, and *B. anthracis*) cannot be classified based on 16S sequence (Spencer, R. C. "Bacillus anthracis." *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093).

<sup>4</sup>24 hours at 37°C in Tryptic Soy Broth

**Figure 1**



**Date:** 24 AUG 2009

**Signature:** Signature on File

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

ATCC<sup>®</sup>, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC<sup>®</sup>'s knowledge.

ATCC<sup>®</sup> is a trademark of the American Type Culture Collection.

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

