

***Bacillus anthracis*, Strain Sterne ΔGBAA1887-2**

Catalog No. NR-10008

Product Description: *Bacillus anthracis* (*B. anthracis*), strain Sterne ΔGBAA1887-2 is a deletion mutant of the toxigenic acapsulate original Sterne strain (34F2), constructed by replacing codons 10 through 14 with three in-frame stop codons followed by the recognition site for *Bam*HI (to facilitate screening of the correct mutation). The remainder of the putative enterotoxin gene (GBAA1887-2) retains the wild type sequence.

Lot¹: 58441529

Manufacturing Date: 07JAN2009

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Sporulation Motility β-hemolysis Capsule (India ink staining) Tenacious Analytical profile index (API [®] 50 CHB including API [®] 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> and <i>B. cereus</i> group species	Gram-positive rod Circular, flat, entire, ground-glass, opaque and grey (Figure 1) Positive Non-motile Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i> Positive Consistent with <i>B. anthracis</i> and <i>B. cereus</i> group species ³
Genotypic Analysis⁴ Sequencing of 16S ribosomal RNA gene (~ 1390 base pairs)	Consistent with <i>B. anthracis</i> and <i>B. cereus</i> group species	Consistent with <i>B. anthracis</i> and <i>B. cereus</i> group species ^{5,6}
PCR Assay of Extracted DNA⁴ 16S ribosomal RNA gene Presence of virulence plasmids pXO1 (<i>aat</i>) pXO2 (<i>at, capA, capB, capC</i>)	~ 1500 bp amplicon ~ 125 bp amplicon No amplicons	~ 1500 bp amplicon ~ 125 bp amplicon No amplicons
Viability (post-vialing)⁷	Growth	Growth

¹*B. anthracis*, strain Sterne ΔGBAA1887-2 was deposited by Philip C. Hanna, Associate Professor, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Michigan. NR-10008 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.

²24 hours at 37°C on Tryptic Soy Agar with 5% sheep blood

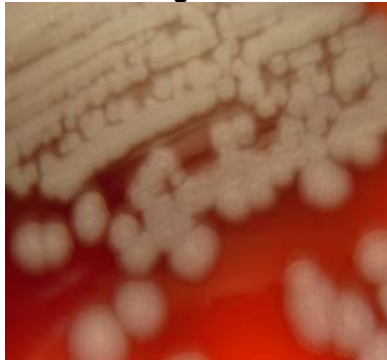
³FAME “*Bacillus cereus* group” includes the species *B. anthracis*, *B. cereus*, *B. mycoides*, *B. pseudomycoides*, *B. thuringiensis* and *B. weihenstephanensis* (Slabbinck, B., et al. “Genus-wide *Bacillus* Species Identification through Proper Artificial Neural Network Experiments on Fatty Acid Profiles.” *Antonie Van Leeuwenhoek* 94 (2008): 187-198. PubMed: 18322819.)

⁴DNA was extracted from a broth culture produced from NR-10008 (Lot: 58441529).

⁵*Bacillus cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycoides*, and *B. anthracis*) cannot be classified based on 16S sequence (Spencer, R. C. “*Bacillus anthracis*.” *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093).

⁶Also consistent with *B. subtilis*

⁷24 hours at 37°C in Tryptic Soy Broth

Figure 1**Date:** 31 JUL 2009**Signature:** Signature on File**Title:** Technical Manager, BEI Authentication or designee

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