

***Bacillus anthracis*, Strain Sterne BA855 ( $\Delta asbE$ )**

**Catalog No. NR-9993**

**Product Description:** *Bacillus anthracis* (*B. anthracis*), strain Sterne BA855 is a markerless, nonpolar, 945 bp deletion mutant of the petrobactin biosynthetic gene ( $\Delta asbE$ ) of the toxigenic acapsulate original Sterne strain (34F2).

**Lot<sup>1</sup>: 58394749**

**Manufacturing Date: 07NOV2008**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology Tryptic Soy Agar, 5% sheep blood <sup>2</sup> PLET Agar <sup>2,3</sup> Sporulation Motility $\beta$ -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	Gram-positive rod  Report results  Report results  Positive Non-motile Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  Positive	Gram-positive rod  Circular, flat, erose, ground-glass, opaque and grey (Figure 1) Circular, flat, lobate, ground-glass, opaque and cream (Figure 2) Positive Non-motile Non-hemolytic Negative Positive Consistent with <i>B. anthracis</i>  Positive
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (1420 base pairs)	Consistent with <i>Bacillus cereus</i> group	Consistent with <i>Bacillus cereus</i> group <sup>4</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>5</sup></b>	Growth	Growth

<sup>1</sup>*B. anthracis*, strain Sterne BA851 ( $\Delta asbA$ ) was deposited by Philip C. Hanna, Associate Professor, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Michigan. NR-9993 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.

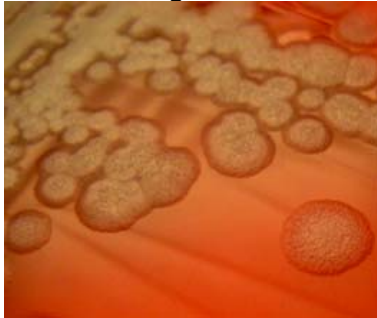
<sup>2</sup>24 hours at 37°C

<sup>3</sup>Growth on PLET [polymyxin-lysozyme-EDTA-thallous acetate] Agar (Hardy Diagnostics, Cat. No. G153) differentiates *B. anthracis* from other *Bacillus* species, including *B. cereus*, *B. thuringiensis* and *B. mycooides*, whose growth is inhibited by the combination of EDTA and thallium cations. Dragon, D. C. and R. P. Rennie. "Evaluation of Spore Extraction and Purification Methods for Selective Recovery of Viable *Bacillus anthracis* Spores." *Lett. Appl. Microbiol.* 33 (2001): 100-105. PubMed: 11472515.

<sup>4</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>5</sup>24 hours at 37°C in Tryptic Soy Broth

**Figure 1**



**Figure 2**



**Date:** 23 JUN 2009

**Signature:** Signature on File

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

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