

## **Certificate of Analysis for NR-9990**

## Bacillus anthracis, Strain Sterne BA852 (∆asbB)

## Catalog No. NR-9990

**Product Description:** Bacillus anthracis (B. anthracis), strain Sterne BA852 is a markerless, nonpolar, 1713 bp deletion mutant of the petrobactin biosynthetic gene ( $\triangle asbB$ ) of the toxigenic acapsulate original Sterne strain (34F2).

Lot<sup>1</sup>: 58394745 Manufacturing Date: 12NOV2008

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rod	Gram-positive rod
Colony morphology <sup>2</sup>	Report results	Circular, low convex, entire, ground-glass, grey and opaque (Figure 1)
Sporulation	Positive	Positive
Motility	Non-motile	Non-motile
β-hemolysis	Non-hemolytic	Non-hemolytic
Capsule (India ink staining)	Negative	Negative
Tenacious	Positive	Positive
Analytical profile index (API <sup>®</sup> 50 CHB including API <sup>®</sup> 20E; ONPG to GEL only)	Consistent with <i>B. anthracis</i>	Consistent with B. anthracis
Nitrate reduction	Positive	Positive
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1410 base pairs)	Consistent with Bacillus cereus group	Consistent with <i>Bacillus cereus</i> group <sup>3</sup>
PCR Assay of Extracted DNA 16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon
Presence of virulence plasmids		
pXO1 (aat)	~ 125 bp amplicon	~ 125 bp amplicon
pXO2 (at, capA, capB, capC)	No amplicons	No amplicons
Viability (post-vialing) <sup>2</sup>	Growth	Growth

<sup>&</sup>lt;sup>1</sup>B. anthracis, strain Sterne BA851 (ΔasbB) was deposited by Philip C. Hanna, Associate Professor, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Michigan. NR-9990 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

Figure 1



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<sup>&</sup>lt;sup>3</sup>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).



## **Certificate of Analysis for NR-9990**

Date: 09 MAY 2011 Signature:

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

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