SUPPORTING INFECTIOUS DISEASE RESEARCH

Bacillus anthracis, Strain Sterne BA723 (Alef243)

Catalog No. NR-9397

This reagent is the tangible property of the U.S. Government.

Product Description: Bacillus anthracis (B. anthracis), strain Sterne BA723 (Δ *lef243*) is a 2,424 base pair deletion mutant of the toxigenic acapsulate Sterne 7702 strain. The designation BA723 refers to the numbering system used in the Stibitz laboratory. The presence of pXO1 (but absence of the *lef* gene) and the absence of pXO2 in NR-9397 have been confirmed by PCR amplification of plasmid-specific sequences from extracted DNA (see Table below).

Lot¹: 57969324

Manufacturing Date: 30NOV2007

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rod	Gram-positive rod
Colony morphology ²	Report results	Circular, entire, low convex, ground- glass, grey (Figure 1)
Sporulation	Positive	Positive
Motility	Non-motile	Non-motile
β-hemolysis	Non-hemolytic	Non-hemolytic
Capsule (India ink staining) ³	Negative	Negative
Tenacious	Positive	Positive
Analytical profile index (API [®] 50 CHB/API [®] 20E) Nitrate reduction	Consistent with <i>B. anthracis</i> Positive	Consistent with <i>B. anthracis</i> Positive
FAME analysis	Consistent with B. anthracis	Consistent with B. anthracis
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	Consistent with <i>Bacillus cereus</i> group ⁴	Consistent with <i>Bacillus cereus</i> group ⁴
PCR Assay of Extracted DNA		
16S ribosomal RNA gene	~ 555 bp amplicon	~ 555 bp amplicon
Specific chromosomal marker ⁵	Amplicon present	Amplicon present
Presence of virulence plasmids ⁶		
pXO1 (three targets)	Amplicons present	Amplicons present
pXO2 (three targets)	No amplicons	No amplicons
Verification of △lef	No amplicon	No amplicon
Viability (post-vialing) ²	Growth	Growth

¹B. anthracis, strain Sterne BA723 (△*lef243*) was deposited by E. Scott Stibitz, Division of Bacterial, Parasitic, and Allergenic Products, Center for Biologics Evaluation and Research, Food and Drug Administration, Bethesda, Maryland. NR-9397 was produced by inoculation of the deposited material into Tryptic Soy Broth and grown 24 hours at 37°C and 5% CO2. Broth inoculum was added to Kolles which were grown 24 hours at 37°C and 5% CO2 to produce this lot.

²24 hours at 35°C and 5% CO₂ on Tryptic Soy Agar with 5% sheep blood

³Virulent strains are positive for encapsulation.

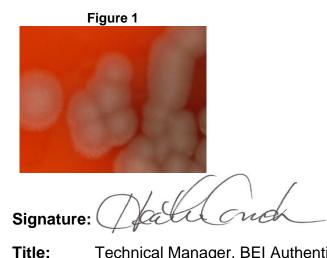
⁴Bacillus cereus group species (*B. cereus, B. thuringiensis, B. mycoides*, and *B. anthracis*) cannot be classified based on 16S sequence (Spencer, R. C. "Bacillus anthracis." J. Clin. Pathol. 56 (2003): 182–187. PubMed: 12610093).

⁵This product was verified to a species level using a proprietary (Patent Pending) PCR-based assay to a *Bacillus anthracis*-specific genetic mutation capable of differentiating *B. anthracis* from the remainder of the *B. cereus* group.

⁶Plasmids were verified using a proprietary (Patent Pending) PCR-based assay to a *Bacillus anthracis*-plasmids pXO1 and pXO2.

DICIÍ RESOURCES

SUPPORTING INFECTIOUS DISEASE RESEARCH



Date: 04 SEP 2012

Technical Manager, BEI Authentication or designee

ATCC®, 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®'s knowledge.

ATCC[®] 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.

