

Certificate of Analysis for NR-10352

Bacillus anthracis, Strain UM23-1

Catalog No. NR-10352

Product Description: Bacillus anthracis (B. anthracis), strain UM23-1 is a uracil minus (Ura-), streptomycin-resistant (str^R) derivative of strain UM23, which contains the toxigenic pXO1 plasmid and lacks the pXO2 capsule plasmid.

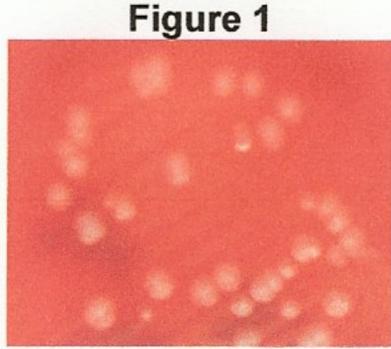
Lot1: 58485553

Manufacturing Date: 25FEB2009

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rod	Gram-positive rod
Colony morphology ²	Report results	Circular, flat, entire, ground-glass, opaque and gray (Figure 1)
Sporulation	Positive	Positive
Motility	Non-motile	Non-motile
β-hemolysis	Non-hemolytic	Non-hemolytic
Capsule (India ink staining)	Negative	Negative
Tenacious Analytical profile index (API® 50 CHB	Positive	Positive
including API® 20E; ONPG to GEL only)	Consistent with B. anthracis	Consistent with B. anthracis
Nitrate reduction	Positive	Positive
FAME analysis	Consistent with B. anthracis and B. cereus group species	Consistent with B. anthracis and B. cereus group species ³
Genotypic Analysis ⁴		
Sequencing of 16S ribosomal RNA gene (~ 750 base pairs)	Consistent with B. cereus group	Consistent with B. cereus group ⁵
PCR Assay of Extracted DNA ⁴		
16S ribosomal RNA gene Presence of virulence plasmids	~ 1500 bp amplicon	~ 1500 bp amplicon
pXO1 (aat)	~ 125 bp amplicon	~ 125 bp amplicon
pXO2 (at, capA, capB, capC)	No amplicons	No amplicons
Viability (post-vialing) ⁶	Growth	Growth

¹B. anthracis, strain UM23-1 was deposited by Stephen Leppla, Laboratory of Bacterial Diseases, NIH/NIAID. NR-10352 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.

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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-10352 (Lot: 58485553).

⁵Bacillus 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).

⁶24 hours at 37°C in Tryptic Soy Broth



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Date: 24 February 2010

Signature:

Title:

Technical Manager, BEI Authentication or designee

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