

***Bacillus anthracis*, Strain Sterne 7702, Derivative BDT101**

Catalog No. NR-13673

Product Description: *Bacillus anthracis* (*B. anthracis*), strain Sterne 7702, derivative BDT101, was deposited as an anthrolysin O (ALO) deletion mutant where the *aloA* gene was replaced with a kanamycin resistance (Km^r) cassette.

Lot¹: 63831078

Manufacturing Date: 19NOV2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility ³ Hemolysis ² Tenacious Biochemical characterization: Nitrate reduction Arginine dihydrolase Production of acid from trehalose Production of acid from salicin Production of acid from glycerol	Gram-positive rods Report results Non-motile Non-hemolytic Positive Positive Negative Positive Negative Negative	Gram-positive rods Irregular, low convex, undulate, ground-glass and gray (Figure 1) Non-motile Non-hemolytic Positive Positive Negative Positive Negative Negative
Genotypic Analysis Sequencing of 16S ribosomal RNA (rRNA) gene (~ 1370 base pairs)	> 99% identical to <i>B. anthracis</i> , strain Sterne (GenBank: AE017225)	100% identical to <i>B. anthracis</i> , strain Sterne (GenBank: AE017225) ⁴
PCR Amplification of <i>B. anthracis</i> specific chromosomal region⁵	~ 200 base pair amplicon	~ 200 base pair amplicon
Presence of Plasmids Confirmed by PCR Amplification^{6,7} 16S rRNA gene pXO1 (four targets) pXO2 (three targets)	Amplicon present Amplicons present No amplicons	Amplicon present Amplicons present No amplicons
Confirmation of Kanamycin Resistance⁸	Growth	Growth
Purity (post-freeze)⁹	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

¹NR-13673 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 1 day at 37°C in an aerobic atmosphere with 5% CO₂. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles which were grown 1 day at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

²1 day at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood

³Motility test was performed on TTC media (Remel RO61414) for 7 days at 37°C in an aerobic atmosphere. In the *B. cereus* group, *B. cereus* and *B. thuringiensis* are motile, whereas *B. anthracis* and *B. mycoides* are non-motile.

⁴Also consistent with *B. cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycoides*, and *B. anthracis*) which 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 PCR-based assay to a *B. anthracis*-specific genetic mutation capable of differentiating *B. anthracis* from the remainder of the *B. cereus* group.

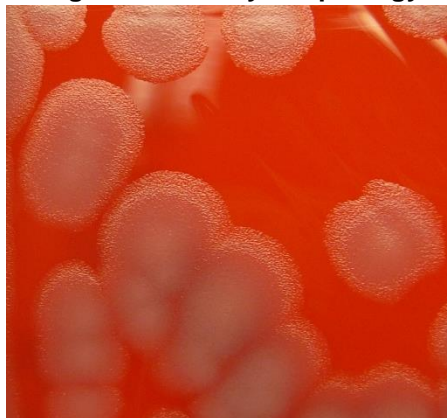
⁶For PCR primers used in these assays, refer to Riojas, M. A., et al. "Multiplex PCR for Species-Level Identification of *Bacillus anthracis* and Detection of pXO1, pXO2, and Related Plasmids." *Health Security* 13 (2015): 122-129. PubMed: 25813976.

⁷Plasmids were verified using a PCR-based assay to *B. anthracis*-plasmids pXO1 and pXO2.

⁸1 day at 37°C in an aerobic atmosphere on Luria-Bertani agar with 50 µg/mL kanamycin

⁹Purity of this lot was assessed for 14 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 19 JAN 2017

Signature: 

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