# Certificate of Analysis for NR-10310

## Genomic DNA from *Bacillus anthracis*, Strain Sterne Δ*pagA*

## Catalog No. NR-10310

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

**Product Description:** Genomic DNA was extracted from a preparation of *Bacillus anthracis (B. anthracis)*, strain Sterne Δ*pagA*, a markerless nonpolar deletion mutant of the toxigenic acapsulate original Sterne strain (34F2).

**Lot[1]: 70006805** **Manufacturing Date: 17AUG2017**

| TEST | SPECIFICATIONS | RESULTS |
|---|---|---|
| **Genotypic Analysis**<br>Sequencing of 16S ribosomal RNA gene (~ 1060 base pairs) | ≥ 99% sequence identity to *B. anthracis,* strain Sterne 34F2 (GenBank: NRIV01000037.1) | 100% sequence identity to *B. anthracis,* strain Sterne 34F2 (GenBank: NRIV01000037.1)[2] |
| **Presence or Absence of Plasmids Confirmed by PCR Amplification**<br>pXO1<br>pXO2 | <br>Positive<br>Negative | <br>Positive<br>Negative |
| **Agarose Gel Electrophoresis** | High molecular weight chromosomal DNA | High molecular weight chromosomal DNA (Figure 1) |
| **Concentration by PicoGreen® Measurement** | 0.7 to 1.5 µg in 25 to 100 µL per vial | 1.0 µg in 27 µL per vial (37 µg/mL) |
| **Amount per vial** | 0.7 to 1.5 µg | 1.0 µg |
| **Functional Activity by PCR Amplification**<br>16S ribosomal RNA gene | ~ 1500 base pair amplicon | ~ 1500 base pair amplicon |
| **$OD_{260}/OD_{280}$ Ratio** | 1.7 to 2.1 | 1.8 |
| **Bacterial Inactivation**<br>10% of total yield plated on agar[3,4] | No viable bacteria detected | No viable bacteria detected |

[1]The bacterial preparation used for extraction of genomic DNA was produced by culture of NR-10006 lot 58441527. Genomic DNA was extracted using proprietary technology.
[2]*Bacillus cereus* group species cannot be classified based on 16S sequence (Maughan, H. and G. Van der Auwera. "*Bacillus* Taxonomy in the Genomic Era Finds Phenotypes to be Essential Though Often Misleading." Infect. Genet. Evol. 11 (2011): 789-97. PubMed: 21334463.
[3]14 days at 37°C in an aerobic atmosphere on Tryptic Soy agar
[4]An extraction procedure was used that has been shown to consistently inactivate 100% of Gram-positive and Gram-negative bacteria

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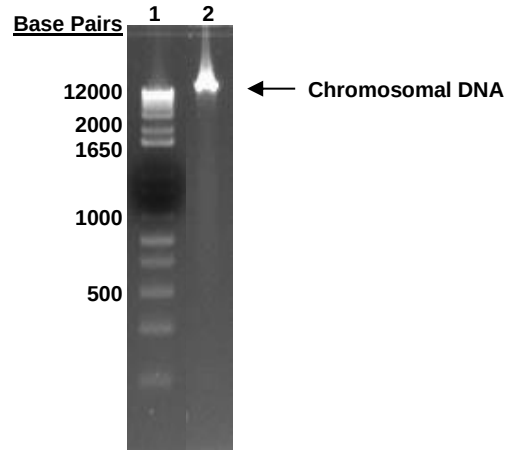
**Figure 1: Agarose Gel Electrophoresis**




**Lane 1: Invitrogen™ TrackIt 1 Kb Plus DNA Ladder™**
**Lane 2: ~ 200 ng of NR-10310**

/Heather Couch/
Heather Couch 13 AUG 2018
Program Manager or designee, ATCC Federal Solutions

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.



Support Provided by NIAID

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