

Genomic DNA from *Bacillus* sp., Strain 1180

Catalog No. NR-52279

Product Description:

Genomic DNA was extracted from a preparation of *Bacillus* sp., Strain 1180. The bacterial preparation used for extraction of genomic DNA was produced by culture of BEI Resources NR-52266 lot 70033120. Genomic DNA was extracted using proprietary technology and is provided in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH 8).

Lot: 70033341

Manufacturing Date: 30MAR2020

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis Digital DNA-DNA hybridization (dDDH) ¹ Presence of <i>B. anthracis</i> virulence plasmids pXO1 pXO2	≥ 70% dDDH value for identity to <i>B. sp.</i> Absence of sequence confirmed Absence of sequence confirmed	< 70% dDDH value for identity to any <i>Bacillus</i> type species ^{2,3} Absence of sequence confirmed Absence of sequence confirmed
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	1.1 µg in 28 µL per vial (38.4 µg per mL)
Amount per Vial	0.7 to 1.5 µg	1.1 µg
Functional Activity by PCR Amplification 16S ribosomal RNA gene	~ 1500 base pair amplicon	~ 1500 base pair amplicon
OD₂₆₀/OD₂₈₀ Ratio	1.7 to 2.1	1.8
Bacterial Inactivation 10% of total yield plated on agar for 14 days ^{4,5}	No viable bacteria detected	No viable bacteria detected

¹Relatedness between bacterial strains has traditionally been determined using DDH. For additional information, refer to Auch, A. F., et al. "Digital DNA-DNA Hybridization for Microbial Species Delineation by Means of Genome-to-Genome Sequence Comparison." *Stand. Genomic Sci.* 2 (2010): 117-134. PubMed: 21304684. dDDH analysis was performed using the Type (Strain) Genome Server.

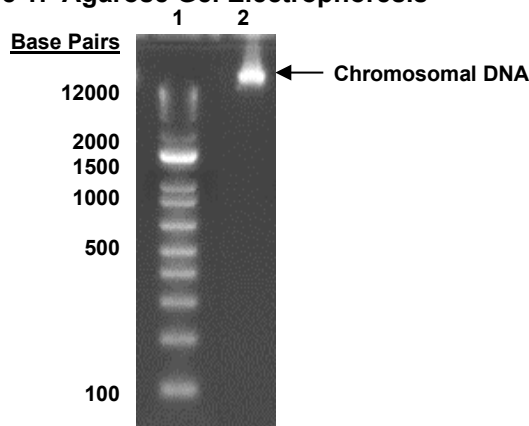
²The whole genome of *Bacillus* sp., strain 1180 was sequenced using the Illumina® MiSeq® system. *De novo* contig sequences were generated using Unicycler v0.4.8-beta.

³The closest matching type strain is *B. thuringiensis* ATCC 10792, with a dDDH value of 69.2%. This result suggests that NR-52279 may represent a new *Bacillus* species.

⁴14 days under propagation conditions

⁵An extraction procedure was used that has been shown to consistently inactivate 100% of Gram-negative and Gram-positive bacteria.

Figure 1: Agarose Gel Electrophoresis



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder
Lane 2: ~ 200 ng of NR-52279

/Heather Couch/

Heather Couch

08 JUL 2021

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.

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.

