Genomic DNA from *Bacillus cereus*, Strain G9241

Catalog No. NR-10050

For research use only. Not for human use.

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Product Description:
Genomic DNA was isolated from a preparation of *Bacillus cereus*, strain G9241.

Bacillus cereus (*B. cereus*), strain G9241 was isolated from the sputum and blood of a welder with life-threatening pneumonia in Louisiana in 1994. A draft of the complete genome of this strain has been completed (GenBank: AAEK000000).[1]

B. cereus, strain G9241 contains 2 large plasmids known as pBCXO1 and pBC218. pBCXO1 has significant homology to *B. anthracis* pXO1 and harbors the entire anthrax toxin biosynthetic complex.[1] pBC218 contains genes capable of capsule production, however they are not homologous to the *B. anthracis* capsule genes found on pXO2.[2] *B. cereus*, strain G9241 contains genes that may provide resistance to β-lactam, chloramphenicol, and macrolide antibiotics.[1]

NR-10050 has been qualified for PCR applications by amplification of approximately 1500 bp of the 16S ribosomal RNA gene.

Material Provided:
Each vial contains 4 to 6 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH 7.4). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:
NR-10050 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Genomic DNA from *Bacillus cereus*, Strain G9241, NR-10050."

Biosafety Level: 1
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:
1. Hoffmaster, A. R., et al. "Identification of Anthrax Toxin Genes in a *Bacillus cereus* Associated with an Illness Resembling Inhalation Anthrax." Proc. Natl. Acad. Sci. U. S. A. 101 (2004): 8449-8454. PubMed: 15155910.
2. Sue, D., et al. "Capsule Production in *Bacillus cereus* Strains Associated with Severe Pneumonia." J. Clin. Microbiol. 44 (2006): 3426-3428. PubMed: 16954292.
3. Hoffmaster, A. R., et al. "Characterization of *Bacillus cereus* Isolates Associated with Fatal Pneumonias: Strains are Closely Related to *Bacillus anthracis* and Harbor *B. anthracis* Virulence Genes." J. Clin. Microbiol. 44 (2006): 3352-3360. PubMed: 16954272.
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Strains from the *Bacillus cereus* Group of Species Correlate with Phylogenetic Relatedness." J. Bacteriol. 190 (2008): 112-121. PubMed: 17981984.

5. Priest, F. G., et al. "Population Structure and Evolution of the *Bacillus cereus* Group." J. Bacteriol. 186 (2004): 7959–7970. PubMed: 15547268.

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