Product Information Sheet for NR-28593

Bacillus cereus, Strain BAG6O-1

Catalog No. NR-28593

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Bacillaceae*, *Bacillus*
Species: *Bacillus cereus*
Strain: BAG6O-1 (previously referred to as BES1O-1)[1]
Original Source: *Bacillus cereus* (*B. cereus*), strain BAG6O-1 was isolated in 2007 from a soil sample collected in Boston, Massachusetts, USA.[1]
Comments: *B. cereus*, strain BAG6O-1 is part of a *Bacillus cereus* Database Sequencing Project at the Broad Institute. The complete genome shotgun sequence of *B. cereus*, strain BAG6O-1 is available (GenBank: AHDM00000000).

B. cereus is a Gram-positive, spore-forming, facultative aerobe. This organism is a ubiquitous opportunistic pathogen that can cause food poisoning in infected individuals. There are two forms of food poisoning that occur. The early onset (emetic) disease is caused by a small, stable dodecadepsipeptide cerulide[2] whereas the late onset (diarrheal) disease is caused by heat-labile enterotoxins.[3] Genetic and genomic analyses have revealed that the chromosome of *B. cereus* is very similar to *B. anthracis.*[4]

Clinical and environmental isolates of *B. cereus* containing large plasmids that share a common backbone with *B. anthracis* pXO1 and pXO2, have been identified.[5,6] The pXO1-like plasmid has demonstrated significant homology to *B. anthracis* pXO1 and harbors the entire anthrax toxin biosynthetic complex.[6] The pXO2-like plasmid contains genes capable of capsule production, however, they are not homologous to the *B. anthracis* capsule genes found on pXO2.[7]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-28593 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Tryptic Soy broth or Nutrient broth or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% sheep blood or Nutrient agar or equivalent
Incubation:
Temperature: 28°C to 37°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 28°C to 37°C for 24 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Bacillus cereus*, Strain BAG6O-1, NR-28593."

Biosafety Level: 2
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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. R. Kolter, Personal Communication.
2. Agata, N., et al. "A Novel Dodecadepsipeptide, Cereulide, Is an Emetic Toxin of *Bacillus cereus*." FEMS Microbiol. Lett. 129 (1995): 17-20. PubMed: 7781985.
3. Drobniewski, F. A. "*Bacillus cereus* and Related Species." Clin. Microbiol. Rev. 6 (1993): 324-338. PubMed: 8269390.
4. Ash, C., et al. "Comparative Analysis of *Bacillus anthracis*, *Bacillus cereus*, and Related Species on the Basis of Reverse Transcriptase Sequencing of 16S rRNA." Int. J. Syst. Bacteriol. 41 (1991): 343-346. PubMed: 1715736.
5. Van der Auwera, G. A. and M. Feldgarden. "The Pathogenomics and Evolution of Anthrax-like *Bacillus cereus* Isolates and Plasmids." Broad Institute. <http://www.broadinstitute.org/annotation/genome/bacillus_cereus/MultiHome.html>
6. 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. USA 101 (2004): 8449-8454. PubMed: 15155910.
7. Sue, D., et al. "Capsule Production in *Bacillus cereus* Strains Associated with Severe Pneumonia." J. Clin. Microbiol. 44 (2006): 3426-3428. PubMed: 16954292.
8. Rasko, D. A., et al. "Genomics of the *Bacillus cereus* Group of Organisms." FEMS Microbiol. Rev. 29 (2005): 303-329. PubMed: 15808746.
9. Priest, F. G., et al. "Population Structure and Evolution of the *Bacillus cereus* Group." J. Bacteriol. 186 (2004): 7959-7970. PubMed: 15547268.
10. Park, S.-H. et al. "Simultaneous Detection and Identification of *Bacillus cereus* Group Bacteria Using Multiplex PCR." J. Microbiol. Biotechnol. 17 (2007): 1177-1182. PubMed: 18051330.

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