

Bacillus cereus, Strain Tor 16585

Catalog No. NR-12151

Product Description: *Bacillus cereus* (*B. cereus*), strain Tor 16585 was isolated from left arm tissue of a patient from Long Island, New York with an open fracture on August 12, 2005.

Lot¹: 58893068

Manufacturing Date: 29OCT2009

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Sporulation Motility β-hemolysis Capsule (India ink staining) Tenacious Analytical profile index (API [®] 50 CHB/API [®] 20E) Nitrate reduction	Gram-positive rod Report results Positive Motile Hemolytic Negative Report results Consistent with <i>Bacillus cereus</i> Positive	Gram-positive rod Slightly irregular, raised, opaque and grey (Figure 1) Positive Motile Hemolytic Negative Positive Consistent with <i>Bacillus</i> sp. ³ Positive
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1400 base pairs)	Consistent with <i>B. cereus</i> group	Consistent with <i>B. cereus</i> group ⁴
PCR Assay of Extracted DNA⁵ <i>gyrB</i> ⁶ <i>groEL</i> <i>sspE</i> ⁷	~ 475 bp amplicon (<i>B. cereus</i>) ~ 400 bp amplicon (<i>B. cereus</i> group) ~ 70 bp amplicon (<i>B. cereus</i> group)	~ 475 bp amplicon (<i>B. cereus</i>) ~ 400 bp amplicon (<i>B. cereus</i> group) ~ 70 bp amplicon (<i>B. cereus</i> group)
Viability (post-freeze)²	Growth	Growth

¹NR-12151 was produced by inoculation of Tryptic Soy Broth with the deposited material and grown 24 hours at 37°C. Broth inoculum was added to Kolles which were grown 24 hours at 37°C to produce this lot.

²24 hours at 37°C and aerobic atmosphere on Tryptic Soy Agar with 5% sheep blood

³The API[®] 50 CHB/API[®] 20E results could only determine that NR-12151 was from the genus *Bacillus*. Additional PCR analysis was completed to verify NR-12151 as *B. cereus*.

⁴*Bacillus cereus* group species (*B. cereus*, *B. thuringiensis*, *B. mycooides*, and *B. anthracis*) cannot be classified based on 16S sequence (Spencer, R. C. "Bacillus anthracis." *J. Clin. Pathol.* 56 (2003): 182-187. PubMed: 12610093).

⁵All genes assayed were chromosomally located

⁶PCR amplification of the *gyrB* gene yields a 253 bp amplicon for *B. anthracis*, a 604 bp amplicon for *B. mycooides* and a 737 bp amplicon for *B. thuringiensis*. For additional PCR information see 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.

⁷PCR amplification of the *sspE* gene yields two amplicons for *B. anthracis* that are a 188 bp and 70 bp. Other *B. cereus* group species show only the 70 bp amplicon and non-*B. cereus* group species show no amplicons.

Figure 1



Date: 03 JUN 2011

Signature:



Title: Technical Manager, BEI Authentication or designee

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