

Bacillus mycoides, Strain CER074

Catalog No. NR-22171

Product Description:

Bacillus mycoides (NR-22171) was deposited to BEI Resources as *Bacillus cereus*, however, digital DNA-DNA hybridization (dDDH) testing, performed at BEI Resources, resulted in reclassification of the species to *Bacillus mycoides* (*B. mycoides*). *Bacillus mycoides* (*B. mycoides*), strain CER074 was isolated in 2005 from a food sample collected in Belgium. *B. mycoides*, strain CER074, was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 30°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% sheep blood kolles, which were grown for 1 day at 30°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Note: Quality control of material is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material. It should not be considered a complete characterization of the deposited organism.

Lot: 63817649

Manufacturing Date: 21OCT2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis ¹ Cellular morphology Colony morphology 1 day at 30°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood Motility (wet mount) Remel™ Motility Test Medium with TTC Indicator for 1 day at 37°C in an aerobic atmosphere Hemolysis Biochemical Tests Production of acid from trehalose ² Production of acid from salicin ² Production of acid from glycerol ² Nitrate reduction Arginine decarboxylase activity ²	Gram-positive rods Report results Report results Report results Report results Report results Report results Report results Report results	Gram-positive rods Irregular, flat, undulate, opaque, rough and gray (Figure 1) Non-Motile β-hemolytic Negative Negative Negative Positive Negative
Presence of Virulence Plasmids ³ pXO1 (four targets) pXO2 (three targets)	Not present Not present	Not present Not present
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs) Digital DNA-DNA hybridization (dDDH) ⁵	≥ 99% sequence identity to <i>B. mycoides</i> , strain CER074 (GenBank: AHDT01000001.1) ≥ 70% for species identification	100% sequence identity to <i>B. mycoides</i> , strain CER074 (GenBank: AHDT01000001.1) ⁴ <i>B. mycoides</i> (89.0%) <i>B. weihenstephanensis</i> (79.8%)
Purity (post-freeze) 7 days at 30°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)	Growth	Growth

¹Presumptive identification of *B. cereus* was performed using phenotypic tests that eliminate other *B. cereus* group (*B. cereus*, *B. thuringiensis* and *B. mycoides*) members.

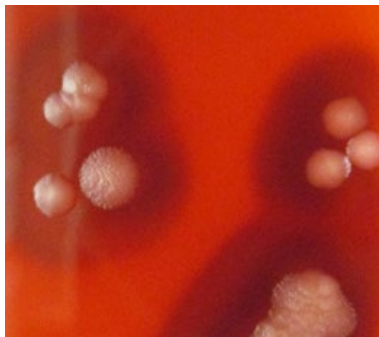
²Negative tests are observed for > 7 days.

³Presence of plasmid targets was determined by *in silico* PCR of the complete genome sequence obtained by BEI Resources.

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

⁵Relatedness 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.

Figure 1: Colony Morphology



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