

***Peptoclostridium difficile*, Strain CD18**

Catalog No. NR-43537

Product Description: *Peptoclostridium difficile* (*P. difficile*; also referred to as *Clostridium difficile*), strain CD18 is a toxigenic strain isolated in January 2010 from the stool of a patient with an acute *Clostridium difficile* infection (CDI) in Ann Arbor, Michigan, USA.

Lot¹: 64463690

Manufacturing Date: 11AUG2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Hemolysis ² Motility (wet mount) Biochemical tests Esculin hydrolysis Gelatin hydrolysis VITEK [®] MS (MALDI-TOF)	Gram-positive rods Report results Report results Report results Positive Positive <i>P. difficile</i>	Gram-positive rods Irregular, flat, undulate, opaque and gray (Figure 1) Non-hemolytic Motile Positive Positive <i>P. difficile</i> (99.9%)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 370 base pairs) (~ 810 base pairs)	≥ 99% sequence identity to <i>P. difficile</i> , strain CD18 (GenBank: AVGN01000041.1) Consistent with <i>P. difficile</i>	99.7% sequence identity to <i>P. difficile</i> , strain CD18 (GenBank: AVGN01000041.1) Consistent with <i>P. difficile</i>
PCR Assay of Extracted DNA Presence of <i>P. difficile</i> -specific genes ³ Triose phosphate isomerase (<i>tpi</i>) Presence of toxin genes ^{3,4} <i>cdtB</i> <i>tcdA</i> (wild type) <i>tcdA</i> (partial deletion) <i>tcdB</i>	~ 230 base pair amplicon ~ 510 base pair amplicon No amplicon No amplicon ~ 160 base pair amplicon	~ 230 base pair amplicon ~ 510 base pair amplicon No amplicon No amplicon ~ 160 base pair amplicon
Purity (post-freeze) Anaerobic growth ⁵ Aerobic growth ⁶	Growth consistent with expected colony morphology No growth	Growth consistent with expected colony morphology No growth
Viability (post-freeze)²	Growth	Growth

¹NR-43537 was produced by inoculation of the deposited material into Modified Reinforced Clostridial medium and incubated for 2 days at 37°C in an anaerobic atmosphere (< 0.5% O₂; Remel™ Anaero Pack-Anaero™ R681001). The material from the initial growth was passaged once in Modified Reinforced Clostridial medium for 1 day at 37°C in an anaerobic atmosphere to produce this lot.

²2 days at 37°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

³Lemee, L., et al. "Multiplex PCR Targeting *tpi* (Triose Phosphate Isomerase), *tcdA* (Toxin A), and *tcdB* (Toxin B) Genes for Toxigenic Culture of *Clostridium difficile*." *J. Clin. Microbiol.* 42 (2004): 5710-5714. PubMed: 15583303

⁴Antikainen, J., et al. "Detection of Virulence Genes of *Clostridium difficile* by Multiplex PCR." *APMIS*, 117 (2009): 607-613. PubMed: 19664132

⁵Purity of this lot was assessed for 7 days at 37°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

⁶Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 15 DEC 2016

Signature: 

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