

Clostridiales bacterium, Strain 4_1_37FAA

Catalog No. HM-182

Product Description: Clostridiales bacterium, strain 4_1_37FAA was isolated in 2007 from noninflamed biopsy tissue taken from the ascending colon of a 71-year-old female patient with indeterminate colitis in Alberta, Canada. [HM-182 was deposited to BEI Resources as unclassified *Lachnospiraceae*; digital DNA-DNA hybridization (dDDH) analysis, performed at BEI Resources, could not confirm the species-level classification.]

Lot^{1,2}: 62323790

Manufacturing Date: 24JAN2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology ³ Colony morphology ⁴ Motility (wet mount)	Report results Report results Report results	Gram-negative rods Irregular, low convex, opaque and gray (Figure 1) Motile
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 840 base pairs) Digital DNA-DNA hybridization (dDDH) ⁵	≥ 99% identical to depositor's sequence ≥ 70% for species identification	≥ 99% identical to depositor's sequence <i>Faecalicatena fissicatena</i> (21.1%) ⁶ <i>Faecalicatena contorta</i> (21.9%) ⁶
Viability (post-freeze)⁴	Growth	Growth

¹Quality control of HMP 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.

²Clostridiales bacterium, strain 4_1_37FAA was deposited by Professor Emma Allen-Vercoe, Department of Molecular and Cellular Biology, University of Guelph, Guelph, Ontario, Canada. HM-182 was produced by inoculation of the deposited material into Modified Reinforced Clostridial broth and incubated for 2 days at 37°C in an anaerobic atmosphere (< 5% O₂; Remel™ Pack-Anaero™ R681001). The material from the initial growth was passaged once in Modified Reinforced Clostridial broth for 2 days at 37°C in an anaerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.

³Bacteria of the order Clostridiales have a Gram-positive cell wall but may stain Gram-variable or Gram-negative; see Lawson, P. A., et al. "Anaerobes: A Piece in the Puzzle for Alternative Biofuels." *Anaerobe* 17 (2011): 206-210. PubMed: 21699990.

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

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.

⁶The required whole genome sequence for the type strain of these species are not available. *Faecalicatena fissicatena*, strain KCTC 15010 (GenBank: LDAQ00000000.1) and *F. contorta*, strain NLAE-zl-C134 (GeneBank: LDAQ00000000.1) were used for dDDH analysis. Because these strains are not the type strains and therefore, may be identified incorrectly, it does not rule out that Clostridiales bacterium, strain 4_1_37FAA belongs to one of these species.

Figure 1: Colony Morphology



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