

***Bacteroides fragilis*, Strain CL07T00C01**

Catalog No. HM-709

Product Description:

Bacteroides fragilis (*B. fragilis*), strain CL07T00C01 was isolated from healthy adult feces in Massachusetts, USA.

Lot: 70002698^{1,2}

Manufacturing Date: 02MAR2017

| TEST | SPECIFICATIONS | RESULTS |
|--|--|---|
| Phenotypic Analysis Cellular morphology Colony morphology ³ Motility VITEK® MS (MALDI-TOF) | Gram-negative rods Report results Report results <i>B. fragilis</i> | Gram-negative rods Circular, convex, entire, smooth, translucent and grey (Figure 1) Motile ⁴ <i>B. fragilis</i> (99.9%) |
| Antibiotic Susceptibility Profile Sensititre™ System ^{5,6} Amoxicillin/Clavulanic Acid Ampicillin/Sulbactam Cefotetan Cefoxitin Chloramphenicol Clindamycin Imipenem Meropenem Metronidazole Mezlocillin Piperacillin Piperacillin/Tazobactam Tetracycline | Report results Report results Report results Report results Report results Report results Report results Report results Report results Report results Report results Report results Report results Report results | Sensitive (≤ 1 µg/mL) Sensitive (2 µg/mL) Sensitive (≤ 4 µg/mL) Sensitive (2 to 4 µg/mL) Sensitive (≤ 4 µg/mL) Resistant (> 8 µg/mL) Sensitive (≤ 0.12 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (2 µg/mL) 32 to 64 µg/mL Sensitive (16 to 32 µg/mL) Sensitive (≤ 0.25 µg/mL) > 8 µg/mL ⁷ |
| Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 820 base pairs) | ≥ 99% sequence identity to <i>B. fragilis</i> , strain CL07T00C01 (GenBank: AGXM01000020.1) | 99.8% sequence identity to <i>B. fragilis</i> , strain CL07T00C01 (GenBank: AGXM01000020.1) |
| Purity (post-freeze) Anaerobic growth ⁸ Aerobic growth ⁹ | Consistent with expected colony morphology No growth | Consistent with expected colony morphology Growth ¹⁰ |
| Viability (post-freeze)³ | 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.

²*B. fragilis*, strain CL07T00C01 was deposited by Laurie E. Comstock, Ph.D., Associate Microbiologist, Department of Medicine, Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA. Lot 70002698 of HM-709 was produced by the inoculation of BEI Resources HM-709 lot 61554745 into Modified Reinforced Clostridial broth. Broth inoculum was added to a Tryptic Soy agar with 5% defibrinated sheep blood plate and both were grown for 1 day at 37°C in an anaerobic atmosphere (< 5% O₂; Remel™ Pack-Anaero™). Colonies from the agar growth were suspended into the Modified Reinforced Clostridial broth growth and this biphasic culture was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an anaerobic atmosphere to produce this lot.

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

⁴*B. fragilis* is a non-motile organism. Motility observations by wet mount were performed twice and motile bacteria were observed both times. Motility test media did not support the growth of this strain and could not be used to confirm motility. It has been reported that *B. fragilis* has a putative homolog of *gldH*, a gene required for gliding motion in *Flavobacterium johnsoniae*. For additional information, please refer to McBride, M. J., T. F. Braun and J. L. Brust. "Flavobacterium johnsoniae GldH is a Lipoprotein that is Required for Gliding Motility and Chitin Utilization." *J. Bacteriol.* 185 (2003): 6648-6657. PubMed: 14594839.

⁵Sensititre™ System Anaerobe MIC Plate, Thermo Scientific™, catalog number ANO2B

⁶Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

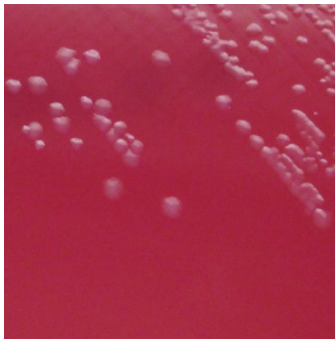
⁷Susceptibility results for this antibiotic cannot be determined since the maximum concentration of antibiotic tested is 8 µg/mL, which is interpreted as intermediate.

⁸Purity of this lot was assessed for 8 days at 37°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

⁹Purity of this lot was assessed for 8 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

¹⁰*B. fragilis* is an anaerobic organism. Colonies from the aerobic growth were sequenced and were found to have ≥ 99% sequence identity to colonies from the anaerobic growth and to *B. fragilis*, strain CL07T00C01 (GenBank: AGXM01000020.1). *B. fragilis* has been shown to grow in low concentrations of oxygen and has genes encoding for a homolog of cytochrome *bd* oxidase that is necessary for oxygen consumption. For additional information, please refer to Baughn, A. D. and M. H. Malmay. "The Strict Anaerobe *Bacteroides fragilis* Grows in and Benefits from Nanomolar Concentrations of Oxygen." *Nature* 427 (2004): 441-444. PubMed: 14749831.

Figure 1: Colony Morphology



/Heather Couch/
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Program Manager or designee, ATCC Federal Solutions

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