

***Helicobacter* sp., Strain Hp CPY6081 (deposited as *Helicobacter pylori*, Strain Hp CPY6081)**

Catalog No. NR-43639

Product Description:

Helicobacter sp., strain Hp CPY6081 (also referred to as CPY6081) was isolated from gastric biopsy homogenate from a gastric cancer patient in Yamaguchi Prefecture, Japan. NR-43639 was deposited to BEI Resources as *Helicobacter pylori*; however, digital DNA-DNA hybridization (dDDH) analysis performed at BEI Resources resulted in reclassification to *Helicobacter* sp. NR-43639 was produced by the inoculation of BEI Resources seed lot 63734557 into Brucella broth and grown for 3 days at 37°C in a microaerophilic atmosphere (~ 6-16% O₂ and 2-10% CO₂). Broth inoculum was added to Columbia agar with 7% defibrinated horse blood, 5 µg/mL trimethoprim, 5 µg/mL vancomycin, 10 µg/mL cefsulodin and 2.5 µg/mL amphotericin B kolles, which were grown for 3 days at 37°C in a microaerophilic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70053916

Manufacturing Date: 14JUL2022

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® MS (MALDI-TOF)	Gram-negative rods Report results Report results <i>H. pylori</i>	Gram-negative rods Circular, convex, entire, smooth and gray Motile <i>H. pylori</i> (99.9%)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1400 base pairs) Digital DNA-DNA hybridization (dDDH) ¹	≥ 99% sequence identity to <i>H. pylori</i> , strain CPY6081 (GenBank: AKNN01000009.1) > 70% dDDH value for identity to <i>Helicobacter pylori</i> type species	99.9% sequence identity to <i>H. pylori</i> , strain CPY6081 (GenBank: AKNN01000009.1) < 70% dDDH value for identity to any <i>Helicobacter pylori</i> type species ^{1,2}
Purity (post-freeze) Microaerophilic 7 days at 37°C on Tryptic Soy agar with 5% defibrinated sheep blood Aerobic with 5% CO ₂ 7 days at 37°C on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology Growth consistent with expected colony morphology	Growth consistent with expected colony morphology Growth consistent with expected colony morphology ³
Viability (post-freeze)	Growth	Growth

¹Relatedness 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. dDDH analysis was performed using the Type (Strain) Genome Server (TYGS).

²TYGS was unable to identify a matching type strain for this item. The closest match is to *Mangrovihabitans endophyticus* CGMCC 4.7299 with a dDDH value of 69.1. This suggests NR-43639 may belong to a novel species closely related to *Mangrovihabitans endophyticus* likely in the genus *Mangrovihabitans*.

³*H. pylori* is known to show weak growth under aerobic conditions (Bury-Moné, S., et al. "Is *Helicobacter pylori* a True Microaerophile?" *Helicobacter* 11 (2006): 296-303. PubMed: 16882333.).

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