

***Helicobacter* sp., Strain Hp CPY6261 (deposited as *Helicobacter pylori*, Strain Hp CPY6261)**

**Catalog No. NR-43640**

**Product Description:**

*Helicobacter pylori* (*H. pylori*), strain Hp CPY6261 (also referred to as CPY6261) was isolated from the gastric biopsy homogenate from a gastric cancer patient in Yamaguchi Prefecture, Japan. NR-43640 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. The designation on the vial label refers to the old nomenclature. **Note: The strain designation on the vial label is incorrect. The correct strain designation is Hp CPY6261.** NR-43640 was produced by the inoculation of BEI Resources seed lot 62910839 into Brucella broth and grown for 4 days at 37°C in a microaerophilic atmosphere (~ 6-16% O<sub>2</sub> and 2-10% CO<sub>2</sub>). 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 and grown for 4 days at 37°C in a microaerophilic atmosphere to produce this lot.

**Lot: 70053509**

**Manufacturing Date: 18JUL2022**

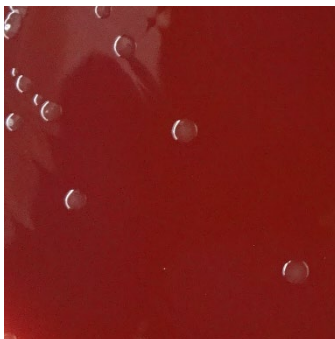
TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology 7 days at 37°C in a microaerophilic atmosphere on Columbia agar with 7% defibrinated horse blood, 5 µg/mL trimethoprim, 5 µg/mL vancomycin, 10 µg/mL cefsulodin and 2.5 µg/mL amphotericin B Motility (wet mount) Analytical profile index (API® CAMPY) Catalase	Gram-negative rods Report results  Report results <i>H. pylori</i> Report results	Gram-negative rods Circular, convex, entire, smooth and gray (Figure 1)  Motile <i>H. pylori</i> (99.9%) Positive
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1400 base pairs)  Digital DNA-DNA hybridization (dDDH)	≥ 99% sequence identity to <i>H. pylori</i> , strain CPY6261 (GenBank: AKNO01000001.1) > 70% dDDH value for identity to <i>Helicobacter pylori</i> type species	99.9% sequence identity to <i>H. pylori</i> , strain CPY6261 (GenBank: AKNO01000001.1) < 70% dDDH value for identity to any <i>Helicobacter pylori</i> type species <sup>1,2</sup>
<b>Purity (post-freeze)</b> Microaerophilic 7 days at 37°C on Tryptic Soy agar with 5% defibrinated sheep blood Aerobic with 5% CO <sub>2</sub> 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 <sup>3</sup>
<b>Viability (post-freeze)</b> 7 days at 37°C in a microaerophilic atmosphere on 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	Growth	Growth

<sup>1</sup>Relatedness 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).

<sup>2</sup>TYGS was unable to identify a matching type strain for this item. The closest matching type strain is *H. pylori* CCUG 17874 with a dDDH value of 55.8%. This result suggests that NR-43640 may represent a new species closely related to *H. pylori*, possibly in the genus *Helicobacter*.

<sup>3</sup>*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.).

Figure 1: Colony Morphology



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