

Helicobacter sp., Strain R038b (deposited as Helicobacter pylori, Strain R038b)

Catalog No. NR-43734

Product Description:

Helicobacter sp., strain R038b was isolated from gastric biopsy homogenate of a patient with a gastric ulcer in Ohio, USA. NR-43654 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. NR-43654 was produced by inoculation of the deposited material into Brucella broth. Broth inoculum was added to a 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 plate and both were grown for 4 days at 37°C in a microaerophilic atmosphere (~ 6-16% O₂ and 2-10% CO₂). Colonies from the Columbia agar culture were suspended into the Brucella broth growth, and this biphasic culture 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 2 days at 37°C in a microaerophilic atmosphere to produce this lot.

Lot: 64136577

Manufacturing Date: 07APR2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ¹ Motility (wet mount) Biochemical characterization Catalase Oxidase Urease Nitrate reduction H ₂ S (lead acetate paper) Hippurate hydrolysis Growth with 5% CO ₂ Growth at 25°C Growth at 37°C Growth at 42°C Brucella albimi + 0.16% agar (growth control) Brucella albimi + 0.16% agar with 1% glycine Brucella albimi + 0.16% agar with 3.5% NaCl	Gram-negative rods Report results Report results Positive Positive Positive Negative Report results Negative Growth No growth Growth Report results Growth No growth No growth	Gram-negative rods Circular, low convex, entire, translucent and gray (Figure 1) Motile Positive Positive Positive Negative Report results Negative Growth No growth Growth Report results Growth No growth No growth
Antibiotic Susceptibility Profile BD BBL™ Sensi-Disc™ susceptibility test discs Metronidazole (80 µg) ² Nalidixic acid (30 µg) ³	Report results Report results	48 mm 8 mm
Genotypic Analysis Sequencing of 16S ribosomal RNA (rRNA) gene (~ 1410 base pairs)	≥ 99% sequence identity to <i>H. pylori</i> , strain R038b (GenBank: AMOV01000012.1)	100% sequence identity to <i>H. pylori</i> , strain R038b (GenBank: AMOV01000012.1)
Confirmation of <i>H. pylori</i> by PCR Amplification of Extracted DNA Positive control (16S rRNA gene) Negative control (<i>H. acinonychis</i>) <i>ureA</i> <i>ssaA</i>	Amplicon present No amplicon present Amplicon present Amplicon present	Amplicon present No amplicon present Amplicon present Amplicon present

TEST	SPECIFICATIONS	RESULTS
Purity (post-freeze) Microaerophilic growth ⁵ Aerobic growth ^{6,7}	Consistent with expected colony morphology Consistent with expected colony morphology	Consistent with expected colony morphology Consistent with expected colony morphology
Viability (post-freeze)¹	Growth	Growth

¹3 days 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 at 37°C in a microaerophilic atmosphere

²7 days 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 at 37°C in a microaerophilic atmosphere

³Test performed using metronidazole 80 µg (MET-80, BBL™ 231605)

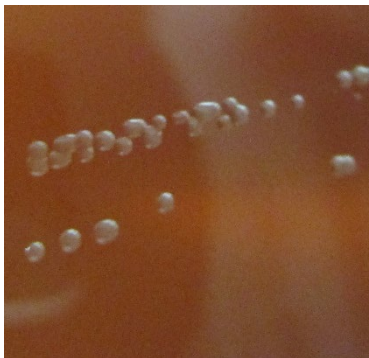
⁴Test performed using nalidixic acid 30 µg (NA-30, BBL™ 231311)

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

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

⁷*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



/Sonia Bjorum Brower/
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Technical Manager or designee, ATCC Federal Solutions

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