# Product Information Sheet for NR-43653

## *Helicobacter pylori,* Strain Hp A-4

## Catalog No. NR-43653

## For research use only. Not for use in humans.

### Contributor:
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### Manufacturer:
BEI Resources

### Product Description:
Bacteria Classification: *Helicobacteraceae*, *Helicobacter*
Species: *Helicobacter pylori*
Strain: Hp A-4
Original Source: *Helicobacter pylori* (*H. pylori*), strain Hp A-4 was isolated from gastric biopsy homogenate of a patient with a duodenal ulcer in Ohio, USA.[1,2]
Comments: *H. pylori*, strain Hp A-4 is part of a genome sequencing project at the Institute for Genome Sciences at the University of Maryland.[2] The complete genome of *H. pylori*, strain Hp A-4 has been sequenced (GenBank: AKOA00000000).

*H. pylori* is a microaerophilic, Gram-negative, nonsporulating, spiral-shaped and flagellated rod commonly found in the human stomach, present in about half of the world population.[3,4] It is an opportunistic pathogen linked to diseases of the upper gastrointestinal tract including: gastric and duodenal ulcers, chronic gastritis, and stomach cancer.[2] *H. pylori* infections are difficult to cure and successful treatment generally requires the administration of several antibacterial agents simultaneously.[5,6]

### Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Brucella broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

### Packaging/Storage:
NR-43653 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

### Growth Conditions:
Media:
Tryptic Soy broth or Brain Heart Infusion broth or Brucella broth or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or Brucella agar or 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[1] or equivalent

Incubation:
Temperature: 37°C
Atmosphere: Microaerophilic (~ 6-16% $O_2$ and 2-10% $CO_2$)
Propagation:
1. Keep the vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 2 to 3 days.

### Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Helicobacter pylori,* Strain Hp A-4, NR-43653."

### Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

### Disclaimers:
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**References:**

1. Blanchard, T.G., Personal Communication.
2. Blanchard, T.G., et al. "Genome Sequences of 65 *Helicobacter pylori* Strains Isolated from Asymptomatic Individuals and Patients with Gastric Cancer, Peptic Ulcer Disease, or Gastritis." Pathog. Dis. 68 (2013): 39-43. PubMed: 23661595.
3. Cover, T. L. and M. J. Blaser. "*Helicobacter pylori* in Health and Disease." Gastroenterology 136 (2009): 1863-1873. PubMed: 19457415.
4. Tomb, J. F., et al. "The Complete Genome Sequence of the Gastric Pathogen *Helicobacter pylori*." Nature 388 (1997): 539-47. PubMed: 9252185.
5. Graham, D. Y., H. Lu and Y. Yamaoka. "Therapy for *Helicobacter pylori* Infection Can Be Improved: Sequential Therapy and Beyond." Drugs 68 (2008): 725-736. PubMed: 18416582.
6. Graham, D. Y. and L. Fischbach. "*Helicobacter pylori* Treatment in the Era of Increasing Antibiotic Resistance." Gut 59 (2010): 1143-1153. PubMed: 20525969.



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