Helicobacter pullorum, Strain MIT 98-5489

Catalog No. HM-124

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Helicobacteraceae*, *Helicobacter*
Species: *Helicobacter pullorum*
Strain: MIT 98-5489 (also referred to as LCDC 15115)
Original Source: *Helicobacter pullorum* (*H. pullorum*), strain MIT 98-5489 was isolated in the 1990s from the stool of a human with gastroenteritis in Canada.[1,2]
Comments: *H. pullorum*, strain MIT 98-5489 (HMP ID 0460) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *H. pullorum*, strain MIT 98-5489 is currently being sequenced at the Broad Institute (GenBank: ABQU00000000).
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

H. pullorum is a microaerophilic, Gram-negative, nonsporulating, flagellated rod that resides in the intestinal tract of birds as well as humans with gastrointestinal disease.[3] With the ability to invade the liver and cause hepatitis in some hosts, *H. pullorum* is considered an emerging, zoonotic human pathogen.[4]

H. pullorum, strain MIT 98-5489 has been shown to have cytolethal distending toxin (CDT) activity and is known to be resistant to cephalothin.[5,6] Other relevant phenotypes for this strain include: negative urease activity, the inability to hydrolyze hippurate or indoxylacetate and the ability to reduce nitrate.[6]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Brucella Broth supplemented with 20% glycerol.

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

Packaging/Storage:
HM-124 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:
Brucella Albimi Broth (ATCC medium 1115) or equivalent
Brucella Agar supplemented with 5% defibrinated sheep blood, 5% inactivated horse serum, 1% IsoVitalex, 1% haemin and 0.1% activated charcoal or equivalent[6]
Incubation:
Temperature: 37°C
Atmosphere: Microaerophilic (~ 80% N_2, 7.5% H_2, 7.5% CO_2 and 5% O_2) Note: This organism will not grow under aerobic or anaerobic conditions.
Propagation:
1. Keep 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 7 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Helicobacter pullorum*, Strain MIT 98-5489, HM-124."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Gibson, J. R., et al. "Genetic Diversity in *Helicobacter pullorum* from Human and Poultry Sources Identified by an Amplified Fragment Length Polymorphism Technique and Pulsed-field Gel Electrophoresis." J. Appl. Microbiol. 87 (1999): 602-610. PubMed: 10583689.
2. HMP ID 0460 (*Helicobacter pullorum*, strain MIT 98-5489)
3. Stanley, J., et al. "*Helicobacter pullorum* sp. nov.-Genotype and Phenotype of a New Species Isolated from Poultry and from Human Patients with Gastroenteritis." Microbiology 140 (1994): 3441-3449. PubMed: 7533595.
4. Turk, M. L., et al. "Persistent *Helicobacter pullorum* Colonization in C57BL/6NTac Mice: A New Mouse Model for an Emerging Zoonosis." J. Med. Microbiol. (2012): Feb. 2 (epub ahead of print). PubMed: 22301616.
5. Young, V. B., et al. "Cytolethal Distending Toxin in Avian and Human Isolates of *Helicobacter pullorum*." J. Infect. Dis. 182 (2000): 620-623. PubMed: 10915100.
6. Professor James G. Fox, personal communication