
Lab Dept: Microbiology/Virology

Test Name: HELICOBACTER PYLORI ANTIGEN IN STOOL

General Information

Lab Order Codes: HPA

Synonyms: H. pylori antigen; Stool for H. Pylori antigen; Feces for H. pylori antigen

CPT Codes: 87338 - Infectious agent antigen detection by enzyme immunoassay technique. Qualitative or semiquantitative multiple step method; Helicobacter pylori, stool

Test Includes: Screening for the presence of *Helicobacter pylori* antigen.

Logistics

Lab Testing Sections: Microbiology

Phone Numbers: MIN Lab: 612-813-5866

STP Lab: 651-220-6555

Test Availability: Daily, 24 hours

Turnaround Time: 1 day

Special Instructions: **Specimen site** and **date/time of collection** are required for processing.

Specimen

Specimen Type: Fresh, random stool

Note: Watery, diarrheal stools are inappropriate for testing.

Container: Plastic, leakproof container

Volume: 1 gram stool

Collection:

1. Collect stool in a clean, dry bedpan or on a newspaper over the toilet. Avoid urine and toilet water in specimens, which may cause a dilution factor.
2. Transfer specimen to a plastic, leakproof container. Do not overfill or contaminate the outside of the container.
3. Transport to the laboratory within 2 hours of collection. Refrigerate specimen if a delay >2 hours is anticipated.

Transport/Storage:	<p>Onsite collections: Transport to the Microbiology Laboratory immediately.</p> <p>Offsite collections: Refrigerate specimen. Specimens must be promptly transported to the laboratory, with the next available courier, not to exceed 24 hours from the time of collection. However, delayed transport causes a delay of test results.</p> <ul style="list-style-type: none"> • If testing cannot be performed within 72 hours, freeze specimen immediately upon receipt and store at -20° to -80°C. Frozen specimens may be thawed twice.
Patient Preparation:	False-negative results may occur on patients receiving antimicrobials, proton pump inhibitors, and bismuth preparations. If a negative result is obtained on a patient receiving these compounds, the test should be repeated on a new specimen obtained two weeks after discontinued treatment.
Sample Rejection:	Unrefrigerated specimen with a transit time exceeding 2 hours after collection; watery, diarrheal stool; specimen not submitted in appropriate transport container; improperly labeled specimen; insufficient volume; external contamination; stools received in transport media, on swabs or mixed with preservatives. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

Interpretive

Reference Range:	No <i>Helicobacter pylori</i> antigen detected
Limitations:	<ul style="list-style-type: none"> • Test results should be used in conjunction with information available from the patient clinical evaluation and other diagnostic procedures. • Antimicrobials, proton pump inhibitors, and bismuth preparations are known to suppress H. pylori, and ingestion of these prior to testing may give false-negative results. A positive result from patients receiving these compounds should be considered accurate. • Performance characteristics have not been established for watery, diarrheal stools. • H₂ Blockers do not interfere with positive results. • Laxatives should not adversely affect test results because by the time they pass through the patient they are very dilute. • Urine does not have an adverse affect, but can dilute the specimen causing a false negative reaction.
Methodology:	Lateral flow immunoassay antigen capture

Additional Information:

Helicobacter pylori infection has been linked to gastritis, duodenal ulcer, gastric cancer, and mucosa-associated lymphoid tissue lymphoma. Most *H. pylori* infections are acquired during childhood or adolescence in developing countries and developed countries. *H. pylori* infection was found in 90% of children with gastric ulcers. Acquisition of *H. pylori* at an early stage might increase the risk of the development of gastric cancer. The route of transmission is unclear; however, the presence of *H. pylori* in saliva, dental plaque and feces suggests both oral to oral and fecal to oral transmission.

References:

Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Baron, Ellen, and R Thompson (2011) Specimen Collection, Transport, and Storage In J Versalovic et al, (ed), Manual of Clinical Microbiology, 10th edition, American Society for Microbiology, Washington DC, pp 228-263

Updates:

9/30/13: Method previously listed as EIA (enzyme immunoassay) antigen capture. Updated references. Updated rejection criteria.
11/20/14: Offsite information added.