Anti-Helicobacter pylori

Reliable IgA and IgG antibody determination

sebia

The new language of life

Infections with *H. pylori*
Gastritis and more ...

Pathogen

Helicobacter pylori is a human pathogenic, motile rod-shaped bacterium that can colonize the human stomach and duodenum. The pathogen is one of the most common causes of chronic bacterial infections and can cause gastritis, ulcers and even carcinoma.

Epidemiology

Helicobacter pylori is widespread worldwide with a seroprevalence of approximately 50 %. About 10 % of the world's population will develop a stomach ulcer during their lifetime. Some of them develop stomach cancer, which claims around 500,000 victims worldwide every year.

Pathogenesis

By integrating into the gastric mucosa, *Helicobacter pylori* protects itself from destruction by stomach acid. *H. pylori* type I strains produce additional pathogenicity factors such as the vacuolating cytotoxin A (VacA) and the oncoprotein CagA (cytotoxin-associated gene A). *H. pylori* type II strains are less pathogenic and lack the cag and vacA genes.

Clinical Symptoms

Infections with *Helicobacter pylori* can cause various diseases of the stomach and the duodenum, e. g. type B gastritis, peptic and duodenal ulcer, stomach cancer as well as MALT (Mucosa Associated Lymphoid Tissue) lymphoma. In addition, *Helicobacter pylori* is associated with various autoimmune diseases.

Diagnosis

The diagnosis is based on the clinical symptoms and confirmed by laboratory analyses. For laboratory confirmation, a range of different invasive (e. g. endoscopy, biopsy, microscopy) and non-invasive methods (urea breath test, antigen and antibody detection by ELISA, CLIA or immunoblot) are available.

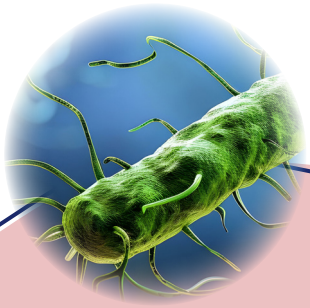
Anti-Helicobacter pylori IgA / IgG
Reliable antibody determination

Antigen

The Alegria Anti-Helicobacter pylori IgA and IgG Monotests are based on a preparation of *Helicobacter pylori* enriched with recombinant CagA for a sensitive determination of IgA and IgG antibodies.

Calibration

The Alegria Anti-Helicobacter pylori IgA and IgG Monotests are calibrated using internal reference samples. Results are expressed in U/mL.



Sensitivity and Specificity

	Sensitivity	Specificity	Diagnostic Efficiency
Anti-Helicobacter pylori IgA	87.3%	> 99 %	97.3%
Anti-Helicobacter pylori IgG	98.5%	96.2%	96.7%

Precision Anti-Helicobacter pylori IgA

	Intraassay Repeatability		Interassay Reproducibility	
	Antibody Activity (U/mL)	Coeffcient of Variation (CV)	Antibody Activity (U/mL)	Coeffcient of Variation (CV)
Sample 1	13.5 U/mL	9.7%	15.2 U/mL	8.5%
Sample 2	29.0 U/mL	4.9%	29.1 U/mL	6.8%
Sample 3	53.7 U/mL	7.9%	55.6 U/mL	6.8%

Precision Anti-Helicobacter pylori IgG

	Intraassay Repeatability		Interassay Reproducibility	
	Antibody Activity (U/mL)	Coeffcient of Variation (CV)	Antibody Activity (U/mL)	Coeffcient of Variation (CV)
Sample 1	14.5 U/mL	5.1%	16.4 U/mL	7.2%
Sample 2	23.8 U/mL	4.7%	25.0 U/mL	6.8%
Sample 3	126.0 U/mL	6.8%	155.8 U/mL	10.0%

Product Highlights

- ELISA-based random access determination of IgA and IgG antibodies against *H. pylori*
- Full automation and complete traceability with Alegria 2
- Lab-on-a-Strip: ready-to-use test-specific reagents in individually sealed and barcoded Alegria Monotest strips
- Reliable determination of antibodies by use of an *H. pylori* preparation enriched with recombinant CagA
- Excellent diagnostic efficiency
- High reproducibility for reliable test results
- Economical all-in-one Alegria Monotests, particularly suited for small series
- Flexible combination of Alegria Monotests for optimal workflow efficiency

Ordering *information*

- Anti-Helicobacter pylori IgA ..... **ORG 917A**
- Anti-Helicobacter pylori IgG ..... **ORG 917G**

Scan here **for more information** about Alegria Anti-Helicobacter pylori Monotests

Literature

Wang, L. *et al.* (2022) Helicobacter Pylori and Autoimmune Diseases: Involving Multiple Systems. Front. Immunol. *13*, 833424.

Bordin, D.S. *et al.* (2021) Current Helicobacter pylori Diagnostics. Diagnostics (Basel) *11*, 1458.

Santos, M.L.C. *et al.* (2020) Helicobacter pylori infection: Beyond gastric manifestations. World J. Gastroenterol. *26*, 4076 - 93.

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