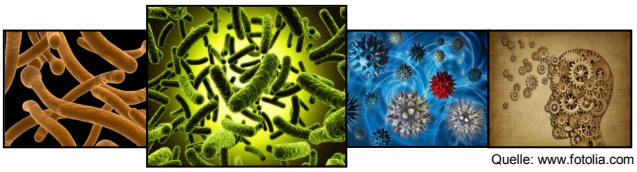


Quelle: www.fotolia.com

Helicobacter pylori

A variety of tests exists to detect a *Helicobacter (H.) pylori* infection. While methods like histology, culture, rapid urease test or PCR detect the bacterium itself or its metabolites, the serological determination is done via detecting serum antibodies (IgG and IgA). All tests have advantages and disadvantages and are not absolutely accurate on their own. The method should therefore be selected according to the query[1].

Serology is used:

- as an initial test in patients who have not been previously treated[2]
- in long-term monitoring of therapy [3]
- in seroepidemiological investigations[4]

Serology is indicated in cases with a reduced number of bacteria e.g. in:

- marked atrophy of the gastric mucosa
- gastric haemorrhage
- use of proton pump inhibitors

While all other methods can give false-negative results in these cases, detection of specific *H. pylori* antibodies with maintained sensitivity is possible[2].

Helicobacter pylori ELISA

The antigens used for ELISA come from the strong expressing CagA and VacA Typ I strain. CagA and VacA are highly specific antigens.

	Specificity	Sensitivity	Prevalence*
IgG	**>99,9 %**	**>99,9 %**	**27,5 %**
IgA	**90,2 %**	**92,5 %**	**22,5 %**

* German blood donor population

Order No.:		
	Helicobacter pylori Testkit IgG	**EC143G00**
	Helicobacter pylori Testkit IgA	**EC143A00**

Helicobacter pylori LINE

Advantages of the Helicobacter pylori LINE:

- 6 highly specific antigens in defined positions

CagA (**C**ytotoxin-**a**ssociated-**g**ene **A**) **[Typ I]**

Highly immunogen and characteristic for virulent strains of type I

VacA (**Va**cuolating **C**ytotoxin **A**) **[Typ I]**

Less regular antibody response compared to CagA

Recombinant

p30 [Typ I + II]

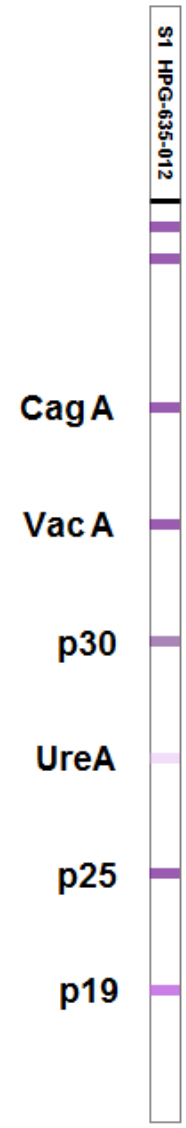
UreA (**Ure**ase **A** sub-unit) **[Typ I+II]**

Shows no similarity to other ureases of other organisms → high specific marker for *H. pylori* infections

p25 [Typ I+II]

Membrane protein, mediates the binding to epithelial cells of the stomach[5]

p19 [Typ I+II]



- Precise, easy reading – clear interpretation of the pathogenic marker
- Detection of CagA / VacA positive strains (type I)
- Discrimination of virulent (type I) and less virulent (type II) strains

Order No.:			
	Helicobacter pylori IgG	32 or 96 IgG-strips	WE243G32 or WE243G96
		IgG pos. control	WE243P60
	Helicobacter pylori IgA	32 or 96 IgA-strips	WE243A32 or WE243A96
		IgA pos. control	WE243P40
	IgG/IgA neg. control		WE243N20

Literature:

[1] *Helicobacter-pylori* und gastroduodenale Ulkuskrankheit, AWMF-Leitlinien-Register, Nr. 021/001, 2008
[2] Homepage, Nationales Referenzzentrum für Helicobacter pylori; Institut für Medizinische Mikrobiologie und Hygiene der Universität Freiburg (2010)
[3] Helicobacter pylori – Von der Grundlage zur Therapie (1996) Herausgeber P. Malfertheiner, Thieme Verlag
[4] Zöller et al (1993) Nachweis der Helicobacter pylori-Infektion: Rolle der Immundiagnostik. *Klin. Lab.* 39: 45-54
[5] Moran Anthony P. et al., In vivo expression of the 25-kDa laminin-binding protein of *Helicobacter* pylori, FEMS Immunology and Medical Microbiology 43 (2005) 331-337

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