

PRODUCT INFORMATION

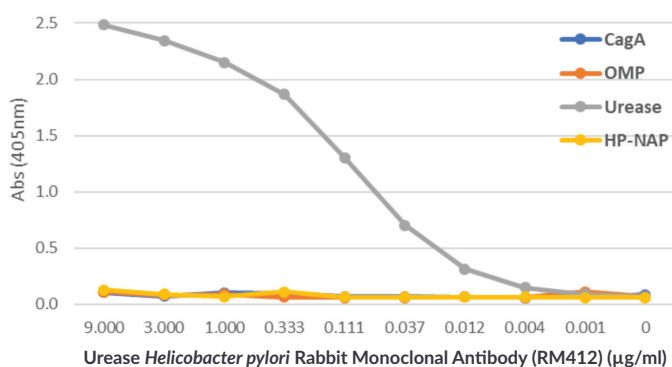


Urease *Helicobacter pylori* Rabbit Monoclonal Antibody (RM412) Item No. 32343

Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Urease <i>H. pylori</i>
Immunogen:	Proteins purified from <i>H. pylori</i>
Cross Reactivity:	(+) <i>H. pylori</i> urease
Species Reactivity:	(+) <i>H. pylori</i>
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1 mg/ml
Clone:	RM412
Host:	Rabbit
Isotype:	IgG
Application:	ELISA; the recommended starting concentration is 0.05-5 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



A Titer ELISA using Urease *Helicobacter pylori* (*H. pylori*) Rabbit Monoclonal Antibody (RM412). The plate was coated with 1 µg/ml of CagA, OMP, Urease, or HP-NAP of *H. pylori*. A serial dilution of Urease *H. pylori* Rabbit Monoclonal Antibody (RM412) was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Helicobacter pylori (*H. pylori*) is a Gram-negative bacterium that can infect and colonize the stomach, leading to chronic gastritis, stomach inflammation and oxidative stress, peptic ulcer disease, and gastric cancer.¹ *H. pylori* urease is a nickel-dependent enzyme that catalyzes the hydrolysis of urea to produce ammonia and bicarbonate, an effect that protects *H. pylori* by neutralizing stomach acid and contributes to the pathogenesis of *H. pylori* infection.^{2,3} It exists as a dodecamer of four $\alpha\beta$ heterotrimers composed of UreB and UreA subunits, which contain the catalytic active sites and mediate subunit association, respectively.^{3,4} *H. pylori* urease is expressed predominantly in the cytoplasm but is also present on the cell surface.³ The activity of *H. pylori* urease has been used as a biomarker for *H. pylori* infection.⁵ Cayman's Urease *Helicobacter pylori* Rabbit Monoclonal Antibody (RM412) can be used for ELISA.

References

1. Chang, A.H. and Parsonnet, J. Role of bacteria in oncogenesis. *Clin. Microbiol. Rev.* **23**(4), 837-857 (2010).
2. Haley, K.P. and Gaddy, J.A. Metalloregulation of *Helicobacter pylori* physiology and pathogenesis. *Front. Microbiol.* **6**, 911 (2015).
3. Ha, N.-C., Oh, S.-T., Sung, J.Y., *et al.* Supramolecular assembly and acid resistance of *Helicobacter pylori* urease. *Nat. Struct. Biol.* **8**(6), 505-509 (2001).
4. Schoep, T.D., Fulurija, A., Good, F., *et al.* Surface properties of *Helicobacter pylori* urease complex are essential for persistence. *PLoS One* **5**(11), e15042 (2010).
5. Graham, D.Y. and Miftahussurur, M. *Helicobacter pylori* urease for diagnosis of *Helicobacter pylori* infection: A mini review. *J. Adv. Res.* **13**, 51-57 (2018).

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