

PRODUCT INFORMATION

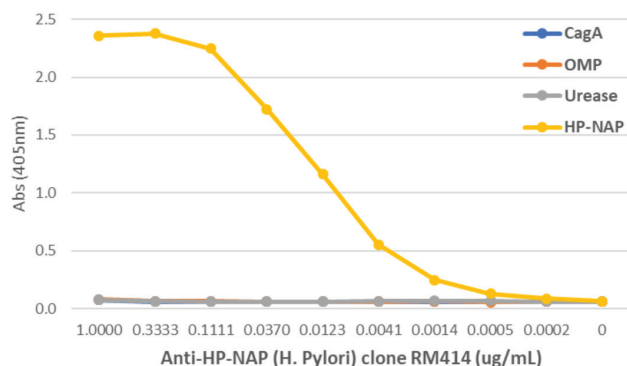


Helicobacter pylori NAP Rabbit Monoclonal Antibody (Clone RM414) Item No. 32345

Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym:	<i>H. pylori</i> Neutrophil-activating Protein
Immunogen:	Proteins purified from <i>H. pylori</i>
Cross Reactivity:	(+) HP-NAP
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:	RM414
Host:	Rabbit
Isotype:	IgG
Application:	ELISA; the recommended starting concentration is 0.01-0.2 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



ELISA of *Helicobacter pylori* proteins using *Helicobacter pylori* NAP Rabbit Monoclonal Antibody (Clone RM414). The plate was coated with 1 µg/ml of CagA, OMP, urease, or HP-NAP of *H. pylori*. *Helicobacter pylori* NAP Rabbit Monoclonal Antibody (Clone RM414) 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* neutrophil-activating protein (HP-NAP) is a virulence factor and member of the DNA-protecting proteins from starved cells (Dps) family.² It is composed of 12 identical monomers each containing four α -helices.³ It activates neutrophils and increases their infiltration into the gastric mucosa by increasing the production of reactive oxygen species (ROS), secretion of myeloperoxidase (MPO), and release of cytokines from a variety of host immune cells.² HP-NAP protects *H. pylori* from bacterial DNA damage induced by this oxidative stress. It also induces a cytotoxic Th1 response in T cells *in vitro* and is a toll-like receptor 2 (TLR2) agonist that activates NF- κ B in HEK293 cells.⁴ HP-NAP is an iron-binding protein, and *H. pylori* strains isolated from patients with iron-deficiency anemia have a SNP in *napA*, the gene encoding HP-NAP, and an increase in iron uptake compared with strains not containing the SNP.^{3,5} HP-NAP is immunogenic in humans, and oral recombinant HP-NAP administration is protective against *H. pylori* infection in mice.⁶ Cayman's *Helicobacter pylori* NAP Rabbit Monoclonal Antibody (Clone RM414) 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. Fu, H.-W. *Helicobacter pylori* neutrophil-activating protein: from molecular pathogenesis to clinical applications. *World J. Gastroenterol.* **20(18)**, 5294-5301 (2014).
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4. Amedei, A., Cappon, A., Codolo, G., *et al.* The neutrophil-activating protein of *Helicobacter pylori* promotes Th1 immune responses. *J. Clin. Invest.* **116(4)**, 1092-1101 (2006).
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