

# PRODUCT INFORMATION

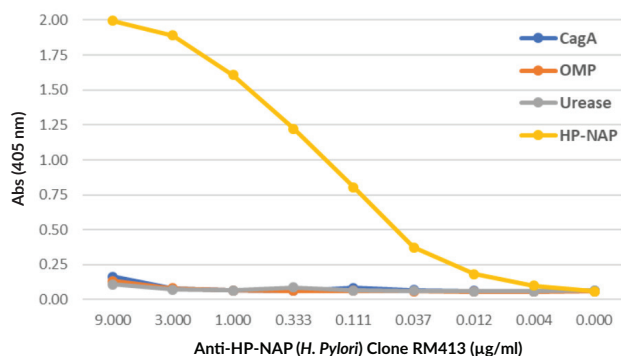


## *Helicobacter pylori* NAP Rabbit Monoclonal Antibody (Clone RM413) Item No. 32344

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	<i>H. pylori</i> Neutrophil-activating Protein
<b>Immunogen:</b>	Proteins purified from <i>H. pylori</i>
<b>Cross Reactivity:</b>	(+) HP-NAP
<b>Species Reactivity:</b>	(+) <i>H. pylori</i>
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM413
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA; the recommended starting concentration is 0.1–5 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 RM413). 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 RM413) 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.

Copyright Cayman Chemical Company, 03/18/2021

**CAYMAN CHEMICAL**  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## 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.<sup>1</sup> *H. pylori* neutrophil-activating protein (HP-NAP) is a virulence factor and member of the DNA-protecting proteins from starved cells (Dps) family.<sup>2</sup> It is composed of 12 identical monomers each containing four  $\alpha$ -helices.<sup>3</sup> 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.<sup>2</sup> HP-NAP protects *H. pylori* from DNA damage caused by *H. pylori*-induced 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- $\kappa$ B in HEK293 cells.<sup>4</sup> HP-NAP is an iron-binding protein, and *H. pylori* strains isolated from patients with iron-deficiency anemia contain a SNP in *napA*, the gene encoding HP-NAP, and show an increase in iron uptake compared with strains not containing the SNP.<sup>3,5</sup> HP-NAP is immunogenic in humans, and oral recombinant HP-NAP administration is protective against *H. pylori* infection in mice.<sup>6</sup> Cayman's *Helicobacter pylori* NAP Rabbit Monoclonal Antibody (Clone RM413) 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).
3. Tonello, F., Dundon, W.G., Satin, B., *et al.* The *Helicobacter pylori* neutrophil-activating protein is an iron-binding protein with dodecameric structure. *Mol. Microbiol.* **34**(2), 238-246 (1999).
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).
5. Yokota, S.-I., Toita, N., Yamamoto, S., *et al.* Positive relationship between a polymorphism in *Helicobacter pylori* neutrophil-activating protein a gene and iron-deficiency anemia. *Helicobacter* **18**(2), 112-116 (2013).
6. Satin, B., Del Giudice, G., Della Bianca, V., *et al.* The neutrophil-activating protein (HP-NAP) of *Helicobacter pylori* is a protective antigen and a major virulence factor. *J. Exp. Med.* **191**(9), 1467-1476 (2000).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM