# Helicobacter pylori

Clone: EP279 Rabbit Monoclonal





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Inset: IHC of Helicobacter pylori on FFPE Infected Stomach Tissue

## **Intended** Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalinfixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

#### Immunogen

Helicobacter pylori.

## **Summary and Explanation**

Helicobacter pylori is a helix-shaped Gram-negative bacterium about 3 µm long with a diameter of about 0.5 µm. It is microaerophilic; that is, it requires oxygen, but at lower concentration than is found in the atmosphere. It contains a hydrogenase which can be used to obtain energy by oxidizing molecular hydrogen (H2) produced by intestinal bacteria. It produces oxidase, catalase, and urease. H. pylori has four to six lophotrichous flagella; all gastric and enterohepatic Helicobacter species are highly motile owing to flagella. H. pylori's helical shape (from which the genus name is derived) is thought to have evolved to penetrate the mucoid lining of the stomach. Strains of H. pylori that produce high levels of two proteins, vacuolating toxin A (VacA) and the cytotoxin-associated gene A (CagA), appear to cause greater tissue damage than those that produce lower levels or that lack those genes completely.

Antibody Type	Mouse Monoclonal	Clone	EP279		
lsotype	IgG	Reactivity	Paraffin, Frozen		
Localization	Cell Wall	Control	Helicobacter pylori		
			Infected Stomach		
			Mucosa		
	Species Reactivity	Human			

## Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.

2. This product contains <0.1% sodium azide (NaN<sub>3</sub>) as a preservative. Ensure proper handling procedures are used with this reagent.

3. Always wear personal protective equipment such as laboratory coat, goggles and gloves when handling reagents.

- 4. Dispose of unused solution with copious amount of water.
- 5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
- 6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
- 7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).

8. For additional safety information refer to Safety Data Sheet for this product.

9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

## Presentation

H. pylori is a purified immunoglobulin fraction of rabbit antiserum that is filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Catalog No.	Antibody Type	Dilution	Volume/Qty	
BSB 3279	Tinto Prediluted	Ready-to-Use	3.0 mL	
BSB 3280	Tinto Prediluted	Ready-to-Use	7.0 mL	
BSB 3281	Tinto Prediluted	Ready-to-Use	15.0 mL	
BSB 3282	Concentrated	1:50 - 1:200	0.1 mL	
BSB 3283	Concentrated	1:50 - 1:200	0.5 mL	
BSB 3284	Concentrated	1:50 - 1:200	1.0 mL	

## **Control Slides Available**

Catalog No.	Quantity
BSB 3285	5 slides

Storage Store at 2-8°C

## Stability

This product is stable up to the expiration date on the product label. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

## **Specimen Preparation**

**Paraffin sections:** The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

**Frozen sections and cell preparations:** The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

# **Staining Procedure**

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).

2. Air dry for 2 hours at 58° C.

3. Deparaffinize, dehydrate and rehydrate tissues.

4. Subject tissues to heat induced epitope retrieval (HIER) using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).

5. Any of three heating methods may be used:

#### a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place on trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

#### b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

#### c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a steamer, cover and steam for 30-60 minutes.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.

7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.

8. Wash slides with ImmunoDNA washer or DI water.

9. Continue IHC staining protocol. Wash slides between each step with ImmunoDNA washer solution.

# Abbreviated Immunohistochemical Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP	
Peroxidase/AP Blocker	5 min.	5 min.	5 min	
Primary Antibody	30-60 min.	30-60 min.	30-60 min.	
1st Step Detection	10 min.	30-45 min.	15 min.	
2nd Step Detection	10 min.	Not Applicable	15 min.	
Substrate-Chromogen	5-10 min.	5-10 min.	5-10 min.	
Counterstain / Coverslip	Varies	Varies	Varies	

# **Mounting Protocols**

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent based resin such as PermaMounter (BSB 0094-0097), refer to PI0174 or PI0097.

## **Product Limitations**

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.

## References

1. Brown LM. Helicobacter pylori: epidemiology and routes of transmission Epidemiol Rev. 2000; 22 (2): 283–97.

2. Josenhans C, et al. Switching of Flagellar Motility in Helicobacter pylori by Reversible Length Variation of a Short Homopolymeric Sequence Repeat in fliP, a Gene Encoding a Basal Body Protein. Infect Immun. 2000; 68 (8): 4598–603.

3. Broutet N, et al. cagA Status and Eradication Treatment Outcome of Anti-Helicobacter pylori Triple Therapies in Patients with Nonulcer Dyspepsia J Clin Microbiol. 2001; 39 (4): 1319–22.

4. Hatakeyama M, Higashi H. Helicobacter pylori CagA: A new paradigm for bacterial carcinogenesis. Cancer Science. 2005; 96 (12): 835–43.

5. Kusters JG, et al. Pathogenesis of Helicobacter pylori Infection Clin Microbiol Rev. 2006; 19 (3): 449–90.

6. Jonkers D, et al. Evaluation of immunohistochemistry for the detection of Helicobacter pylori in gastric mucosal biopsies. J Infect. 1997 Sep; 35 (2):149-54.

7. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

# Not for Sale in the USA

# Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REF	EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	2.0	Storage Temperature Limites de température Zulässiger Temperaturbereich		Manufacturer Fabricant Hersteller	REF	Catalog Number Référence du catalogue Bestellnummer
IVD	In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum	(ii	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	$\square$	Expiration Date Utiliser jusque Verwendbar bis	LOT	Lot Number Code du lot Chargenbezeichnung
Bio SB							



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