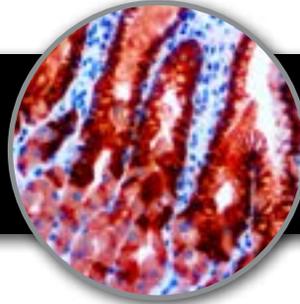


**MUC5AC**  
 Clone: CLH2  
 Mouse Monoclonal



**Bio SB**  
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*Inset: IHC of MUC5AC on a FFPE Stomach Tissue*

### Intended Use

For In Vitro Diagnostic Use.

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

### Immunogen

A synthetic peptide of the human MUC5AC tandem repeat protein.

### Summary and Explanation

Mucin 5AC, also known as MUC5AC, is a human gene. The Mucin 5AC antigen is found in columnar mucous cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in normal colon cells. Mucin genes are expressed in a regulated cell- and tissue-specific manner. MUC1 is detected in mucous cells of the surface epithelium and neck region of the gastric antrum, as well as in pyloric glands and oxyntic glands of the body region. MUC5AC is highly expressed in foveolar epithelium of both body and antrum, whereas MUC6 protein expression is limited to mucous neck cells of the body and pyloric glands of the antrum.

The mucin expression pattern of Gastric Carcinoma is heterogeneous. It includes mucins normally expressed in gastric mucosa (MUC1, MUC5AC and MUC6) and de novo expression of the intestinal mucin MUC2. The heterogeneous pattern of mucin expression, including the expression of the intestinal mucin MUC2, may provide new insights into the differentiation pathways of Gastric Carcinoma. It has been shown that in Gastric Carcinomas evaluated for expression of several mucins (MUC1, MUC2, MUC5AC and MUC6), mucin expression is associated with tumor type (MUC5AC with Diffuse and Infiltrative Carcinomas and MUC2 with Mucinoid Carcinomas) but not with the clinico-biological behavior of the tumors. Mucin expression is associated with tumor location (MUC5AC with Antrum Carcinomas and MUC2 with Cardia Carcinomas), indirectly reflecting differences in tumor differentiation according to tumor location.

<b>Antibody Type</b>	Mouse Monoclonal	<b>Clone</b>	CLH2
<b>Isotype</b>	IgG1	<b>Reactivity</b>	Paraffin, Frozen
<b>Localization</b>	Cytoplasmic	<b>Control</b>	Stomach, Colon, Kidney
<b>Species Reactivity</b>	Human		

### Presentation

MUC5AC is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

### Presentations

Catalog Num.	Antibody Type	Dilution	Volume/Qty
BSB 6163	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 6164	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 6165	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 6166	Concentrated	1:25 - 1:100	0.1 mL
BSB 6167	Concentrated	1:25 - 1:100	0.5 mL
BSB 6168	Concentrated	1:25 - 1:100	1.0 mL
BSB 6169	Control Slides	Not Applicable	5 slides

### Precautions

1. For professional users only. Ensure results are interpreted by a medical professional.
2. This product contains sodium azide (NaN<sub>3</sub>), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.
3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.
6. 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" (3).

### Storage

**Store at 2-8 °C.** 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 to ensure 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 positive 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 epitope retrieval 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 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 IHC wash buffer or DI water.
9. Continue IHC staining protocol.

## Recommended IHC 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	Varies	Varies	Varies

## 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 medical professional.

## References

1. Reis CA, et al. Int J Cancer. 1997;74:112-121
2. Kim GE, et al. Gastroenterology. 2002;123(4):1052-60
3. 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.

## Symbol Key / Légende des symboles/Erläuterung der Symbole

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



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