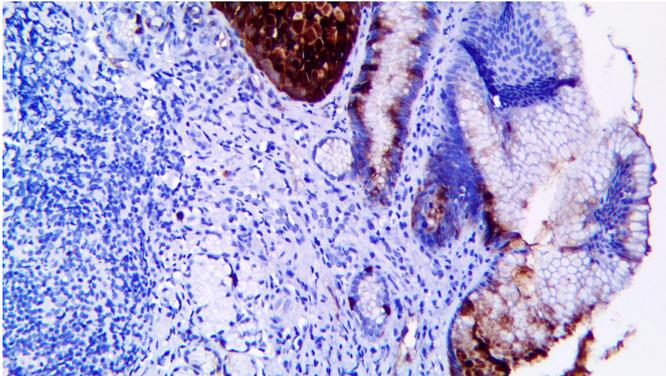


TFF3

Clone: BSB-181
Mouse Monoclonal

RUO



Inset: IHC of TFF3 on a FFPE Stomach Tissue

Intended Use

For Research Use Only.

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

Human recombinant protein fragment corresponding to amino acids 72-130 of human TFF3.

Summary and Explanation

Trefoil factor 3 (TFF3) is a mucin-related secretory molecule produced by goblet cells (mucus-producing cells) in the colon and small intestine to seal areas of tissue damage along the GI tract. TFF3 can increase the rheological properties of mucus and affect inflammation through EGFR regulation to protect against colitis and gastrointestinal parasites. Data suggests that TFFs can induce IL-10, MAPK, and beta catenin activation, and has also been shown to suppress TNF-alpha expression and regulate STAT3, which are major components of cytokine and growth factor signaling pathways.

TFF3 has been identified as an indicator of Barrett's Esophagus, a premalignant condition indicating predisposition to esophageal adenocarcinoma. In cases of acid reflux, TFF3 and p53 can be used to help identify likely cases of dysplasia and chronic inflammation. Overexpression of TFF3 has been found to promote proliferation and invasion in Cervical Cancer cells, through the regulation of E-Cadherin. Expression of TFF3 has also been found to be decreased in Colorectal Cancer, and may be a prognostic indicator, with less TFF3 expression indicating higher pathologic stages of the tumor.

Antibody Type	Mouse Monoclonal	Clone	BSB-181
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Species Reactivity	Human
Control	Stomach, Colon		
Application	Colon & Gi Cancer, Cervical Cancer		

Presentation

Anti-TFF3 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.

<i>Catalog No.</i>	<i>Presentation</i>	<i>Dilution</i>	<i>Volume</i>
BSB-3820-3	Predilute	Ready-to-Use	3.0 mL
BSB-3820-7	Predilute	Ready-to-Use	7.0 mL
BSB-3820-15	Predilute	Ready-to-Use	15.0 mL
BSB-3820-01	Concentrate	1:25-1:100	0.1 mL
BSB-3820-05	Concentrate	1:25-1:100	0.5 mL
BSB-3820-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

<i>Catalog No.</i>	<i>Quantity</i>
BSB-9448-CS	5 slides

Storage Store at 2-8°C (Control Slides: Store at 20-25°C)

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN₃) as a preservative. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
4. Dispose of unused solution with copious amounts 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).

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 Digester (BSB 0108-BSB 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 on acetone-fixed frozen sections and acetone-fixed cell preparations.

IHC Protocol

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 IHC, perform antibody incubation at ambient temperature. For automated IHC methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IHC 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. Aihara E, et al. Trefoil Factor Peptides and Gastrointestinal Function. Annu Rev Physiol. 2017;79:357-380.
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3. Hoellen F. Trefoil factor 3 expression in epithelial ovarian cancer exerts a minor effect on clinicopathological parameters. Mol Clin Oncol. 2016 Oct; 5(4): 422-428.
4. Lau WH, et al. Trefoil Factor-3 (TFF3) Stimulates De Novo Angiogenesis in Mammary Carcinoma both Directly and Indirectly via IL-8/CXCR2. PLoS One. 2015;10(11):e0141947.
5. Patel MR, et al. Trefoil factor 3 immunohistochemical characterization of follicular thyroid lesions from tissue microarray. Arch Otolaryngol Head Neck Surg. 2009;135(6):590-6.
6. Paterson AL, et al. Role of TFF3 as an adjunct in the diagnosis of Barrett's esophagus using a minimally invasive esophageal sampling device-The Cytosponge™. Diagn Cytopathol. 2020;48(3):253-264.
7. Espinoza I, et al. Expression of trefoil factor 3 is decreased in colorectal cancer. Oncol Rep. 2021;45: 254-264.
8. 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. <https://www.cdc.gov/mmwr/pdf/other/su6101.pdf>

Symbol Key/Légende des symboles/Erläuterung der Symbole

 Storage Temperature Limites de température Zulässiger Temperaturbereich	 Manufacturer Fabricant Hersteller	 Catalog Number Référence du catalogue Bestellnummer
 Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	 Expiration Date Utiliser jusque Verwendbar bis	 Lot Number Code du lot Chargenbezeichnung