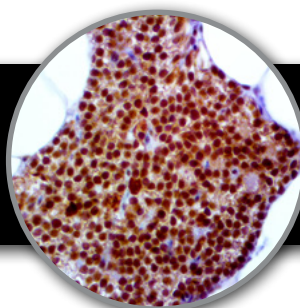


# Parafibromin

Clone: BSB-50

Mouse Monoclonal



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*Inset: IHC of Parafibromin on a FFPE Parathyroid Carcinoma 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

Synthetic peptide corresponding to the N-residues of human parafibromin.

## Summary and Explanation

Cell division cycle 73, Paf1/RNA polymerase II complex component, homolog (S. cerevisiae), also known as CDC73 and parafibromin, is a protein which in humans is encoded by the CDC73 gene. Mutations in the CDC73 gene are associated with hyperparathyroidism-jaw tumor syndrome (HPT-JT) and parathyroid carcinomas.

The proposed role of HRPT2 as a tumor suppressor was supported by mutation screening in parathyroid adenomas with cystic features, which identified three somatic inactivating mutations, all located in exon 1. None of these mutations were detected in normal controls, and all were predicted to cause deficient or impaired protein function. Sporadic parathyroid carcinomas frequently have HRPT2 mutations that are likely to be of pathogenetic importance. Certain patients with apparently sporadic parathyroid carcinoma carry germ-line mutations in HRPT2 and may have the HPT-JT syndrome or a phenotypic variant.

<b>Antibody Type</b>	Mouse Monoclonal	<b>Clone</b>	BSB-50
<b>Isotype</b>	IgG1	<b>Reactivity</b>	Paraffin, Frozen
<b>Localization</b>	Nuclear	<b>Control</b>	Parathyroid, Colon, Testis, Adrenal, Breast, Cervix, Lymphoblastic Lymphoma, Bladder TCC
<b>Species Reactivity</b>	Human, Mouse		

## Presentation

Parafibromin 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 2747	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 2748	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 2749	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 2750	Concentrated	1:25 - 1:100	0.1 mL
BSB 2751	Concentrated	1:25 - 1:100	0.5 mL
BSB 2752	Concentrated	1:25 - 1:100	1.0 mL
BSB 2753	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" (4).

## 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

## Performance Characteristics

### Normal Tissues

Positive (+)	
Colon	10/10 (100%)
Testis	7/10 (70%)
Negative (-)	
Tonsil	0/5 (0%)
Liver	0/5 (0%)

### Abnormal Tissues

Positive (+)	
Parathyroid Carcinomas	10/15 (66%)
Colon Carcinoma	3/5 (60%)
Lymphoblastic Lymphoma	3/5 (60%)





## 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. Carpten JD, et al. "HRPT2, encoding parafibromin, is mutated in hyperparathyroidism-jaw tumor syndrome". Nat. Genet. 2002; 32 (4): 676-80
2. Shattuck TM, et al. "Somatic and germ-line mutations of the HRPT2 gene in sporadic parathyroid carcinoma". N. Engl. J. Med. 2003; 349 (18): 1722-9.
3. Howell VM, et al. "HRPT2 mutations are associated with malignancy in sporadic parathyroid tumours". J. Med. Genet. 2003; 40 (9): 657-63.
4. 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

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



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