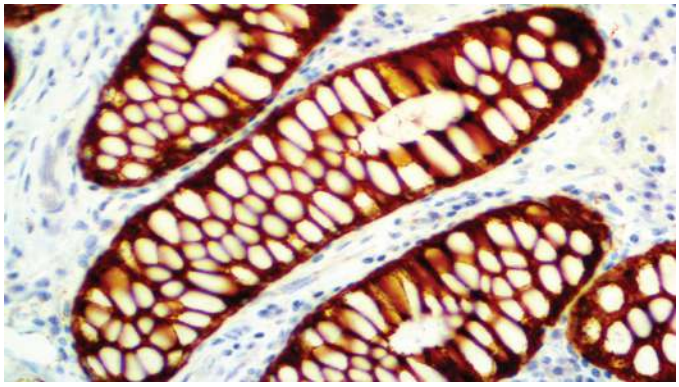
Cytokeratin Cocktail AE1 & AE3

Clone: AE1 & AE3
Mouse Monoclonal

CE IVD



Inset: IHC of Cytokeratin Cocktail AE1 & AE3 on a FFPE Colon Tissue

Antibody Type	Mouse Monoclonal	**Clone**	AE1 & AE3
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat, Mouse, Rat, Monkey, Rabbit, Chicken, Horse
Control	Prostate, Skin, Colon, Stomach, Salivary Gland		
Application	Carcinomas Of Unknown Primary Site, Undifferentiated Tumor, Breast Cancer, Melanoma & Skin Cancer, Lung Cancer, Germ Cell Tumor, Sarcoma & Soft Tissue, Testicular Cancer		

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
Purified human epidermal keratin.

Summary and Explanation
Cytokeratins are intermediate-filament keratins found in the intracytoplasmic cytoskeleton of epithelial tissue. There are two types of cytokeratins: the low-weight, acidic Type I cytokeratins and the high-weight, basic or neutral Type II cytokeratins. Cytokeratins are usually found in pairs comprising a Type I cytokeratin and a Type II cytokeratin. Expression of these cytokeratins is frequently organ or tissue-specific.

Cytokeratin cocktail AE1/AE3 is well suited to distinguish Epithelial Carcinoma from Non-epithelial malignancies and is used to aid Epithelial Tumor classification. This antibody has been used to characterize the source of various neoplasms and to study the distribution of keratin-containing cells in epithelia during normal development and during the development of epithelial neoplasms. This antibody stains cytokeratins present in normal and abnormal human tissues. This antibody has shown high sensitivity and specificity in recognizing epithelial cells of neoplastic origin.

Presentation
Anti-Cytokeratin Cocktail AE1 & AE3 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5428	Predilute	Ready-to-Use	3.0 mL
BSB 5429	Predilute	Ready-to-Use	7.0 mL
BSB 5430	Predilute	Ready-to-Use	15.0 mL
BSB 5431	Concentrate	1:100-1:500	0.1 mL
BSB 5432	Concentrate	1:100-1:500	0.5 mL
BSB 5433	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9153-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 (NaN_3) 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 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 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. Battifora H, Am J Surg Pathol. 1988;12:24
2. Gown AM, et al. Am J Clin Pathol. 1985;84:413
3. Knapp AC, et al. Cell. 1989;59:67-79
4. Sunn TT, et al. J Invest Dermatol. 1983;81:109s-115s
5. Eichner R, et al. J Cell Biol. 1984;98:1388-1396
6. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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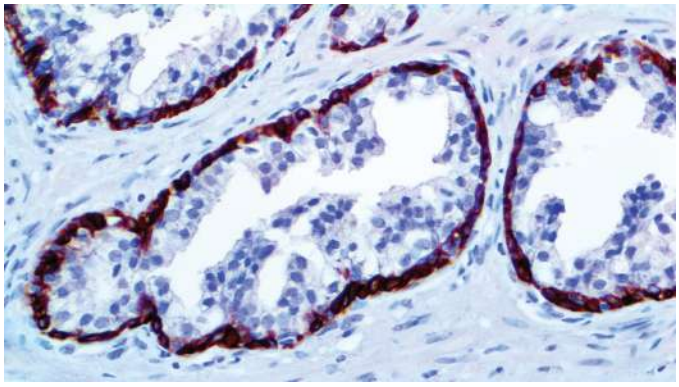
Cytokeratin HMW 34BE12

Clone: 34BetaE12
Mouse Monoclonal

CE IVD



Inset: IHC of Cytokeratin HMW 34BE12 on a FFPE Prostatic Adenocarcinoma 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
Purified keratin from human stratum corneum.

Summary and Explanation
Cytokeratin 34βE12 is a High Molecular Weight cytokeratin that reacts with all squamous and ductal epithelium and stains carcinomas. This antibody recognizes cytokeratins 1, 5, 10, and 14 that are found in complex epithelia. Cytokeratin 34βE12 shows no reactivity with hepatocytes, pancreatic acinar cells, proximal renal tubules or endometrial glands; there has been no reactivity with cells derived from simple epithelia. Nerve cells, glial cells and mesenchymal tissue such as blood vessels containing only non-keratin types of intermediate filaments are not labeled; however, reactivity with smooth-muscle cells has been occasionally observed.

Mesenchymal Tumors, Lymphomas, Melanomas, Neural Tumors and Neuroendocrine Tumors are unreactive with this antibody. Cytokeratin 34βE12 has been shown to be useful in distinguishing Prostatic Adenocarcinoma from Hyperplasia of the Prostate.

Antibody Type	Mouse Monoclonal	**Clone**	34BetaE12
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat, Monkey, Rabbit, Cattle, Horse
Control	Prostate, Cervix		
Application	Prostate Cancer, Liver Cancer, Melanoma & Skin Cancer		

Presentation
Anti-Cytokeratin HMW 34BE12 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5393	Predilute	Ready-to-Use	3.0 mL
BSB 5394	Predilute	Ready-to-Use	7.0 mL
BSB 5395	Predilute	Ready-to-Use	15.0 mL
BSB 5396	Concentrate	1:50-1:200	0.1 mL
BSB 5397	Concentrate	1:50-1:200	0.5 mL
BSB 5398	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9154-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 (NaN_3) 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 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 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. Gown AM, et al. Am J Pathol. 1984;114:309
2. O'Malley FP, et al. Virch Arch A. 1990;417:191
3. Mahul B Amin MD, Arch Pathol Lab. Med. Vol118,March1994:260-264
4. Wojno KJ, Epstein JI, Am J Surg Pathol. 1995Mar;19(3):251-60
5. Norton AJ, et al. Histopathol. 1987;11:487
6. 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

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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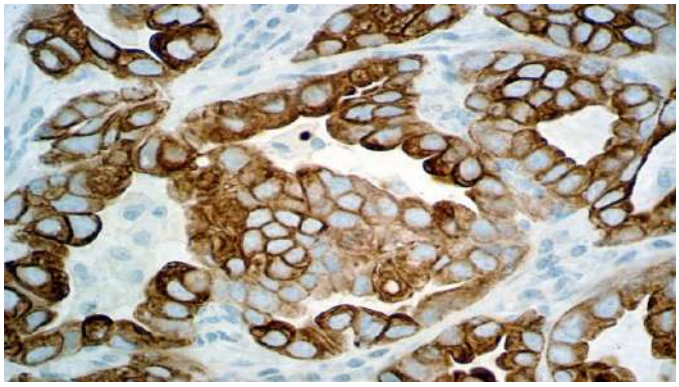
Cytokeratin 7

Clone: OV-TL 12/30
Mouse Monoclonal

CE IVD



Inset: IHC of Cytokeratin 7 on a FFPE Lung Adenocarcinoma 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
OTN II ovarian carcinoma cell line.

Summary and Explanation
Cytokeratin 7 (CK7) reacts with proteins that are found in most ductal, glandular and transitional epithelium of the urinary tract and bile duct epithelial cells. CK7 distinguishes between lung and breast epithelium that stain positive, and colon and prostate epithelial cells that are negative.

This antibody also reacts with many benign and malignant epithelial lesions (e.g., Adenocarcinomas of the ovary, breast and lung). Further, in frozen sections, the antibody has been shown to label the rete epithelium in the testis, epididymis epithelium, and the surface epithelium of the stomach and duodenum. Transitional-cell Carcinomas are positive and Prostate Cancers are negative. This antibody does not recognize intermediate filament proteins, nor does it recognize non-epithelial tissues such as blood vessels, connective tissue, etc.

Antibody Type	Mouse Monoclonal	**Clone**	OV-TL 12/30
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat
Control	Salivary Gland, Placenta, Breast, Thyroid, Cervix, Pancreas, Fallopian Tube, Transitional Cell Carcinoma, Lung Adenocarcinoma		
Application	Carcinomas of Unknown Primary Site, Kidney & Urothelial Cancer, Colon & Gastrointestinal Cancer, Lung Cancer, Breast Cancer, Ovarian Cancer, Mesothelioma, Head & Neck Cancer, Melanoma & Skin Cancer		

Presentation
Anti-Cytokeratin 7 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5407	Predilute	Ready-to-Use	3.0 mL
BSB 5408	Predilute	Ready-to-Use	7.0 mL
BSB 5409	Predilute	Ready-to-Use	15.0 mL
BSB 5410	Concentrate	1:100-1:500	0.1 mL
BSB 5411	Concentrate	1:100-1:500	0.5 mL
BSB 5412	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9149-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 (NaN_3) 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 the 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 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. Van de Molengraft FJJM, et al. Histopathology. 1993;22:35-38
2. Van Niekerk CC, et al. Am J Pathology. 1991;138:455-463
3. Ramaekers F, et al. Exp Cell Res. 1987;170:235-249
4. Nan Ping Wang, et al. Appl Immuno. 1995;3(2):99-107
5. 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

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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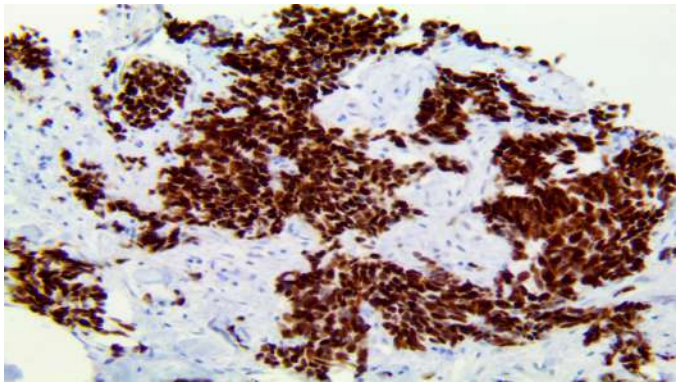
INSM1

Clone: RBT-INSM1
Rabbit Monoclonal

CE IVD



Inset: IHC of INSM1 on a FFPE Lung Neuroendocrine Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-INSM1
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Pancreas, Colon, Tonsil, Neuroendocrine Lung Cancer, Endometrial & Colon Carcinomas		
Application	Lung Cancer, Neural & Neuroendocrine Cancer, Pituitary, Colon & Gastrointestinal Cancer		

Presentation
Anti-INSM1 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3780-3	Predilute	Ready-to-Use	3.0 mL
BSB-3780-7	Predilute	Ready-to-Use	7.0 mL
BSB-3780-15	Predilute	Ready-to-Use	15.0 mL
BSB-3780-01	Concentrate	1:25-1:100	0.1 mL
BSB-3780-05	Concentrate	1:25-1:100	0.5 mL
BSB-3780-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9246-CS	5 slides

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

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 residues from the N-terminal domain of the human INSM1 protein.

Summary and Explanation
Insulinoma-associated 1 (*INSM1*) gene encodes a protein containing both a zinc finger DNA-binding domain and a putative prohormone domain, originally isolated from a human insulinoma-glucagonoma subtraction library.

INSM1 is abundantly expressed in fetal neuroendocrine developmental tissues and expressed in normal adult neuroendocrine (NE) tissues (adrenal medulla, pineal gland, pituitary gland, gastrointestinal enterochromaffin cells, pancreatic islet cells, thyroid C cells) and developing neurons. However there is also a high occurrence of INSM1 found in NE tumors, such as small cell lung cancer (SCLC), pituitary tumors, medullary thyroid carcinoma, Merkel cell carcinoma, olfactory neuroblastoma and pheochromocytoma. It has been reported that INSM1 expresses exclusively in SCLC specimens using immunohistochemistry, and first elucidated that INSM1 regulates the NE differentiation pathway in lung cancer. In addition, it has demonstrated an increased sensitivity and specificity compared to other NE biomarkers (Chromogranin A, Synaptophysin and CD56) in lung cancer specimens. In addition, it's been shown to be involved in NE differentiation in medullary thyroid carcinoma, pheochromocytoma, intestinal NE carcinoma, islet cell tumor, pituitary tumor, and SCLC cell lines.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 the 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). 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. Goto Y, De Silva MG, Toscani A, Prabhakar BS, Notkins AL, Lan MS. A novel human insulinoma-associated cDNA, IA-1, encodes a protein with "zinc-finger" DNA-binding motifs. J Biol Chem. 1992;267(21):15252-15257.
2. Lan MS, Breslin MB. Structure, expression, and biological function of INSM1 transcription factor in neuroendocrine differentiation. FASEB J. 2009;23(7):2024-2033. doi:10.1096/fj.08-125971
3. Rosenbaum JN, Guo Z, Baus RM, Werner H, Rehrauer WM, Lloyd RV. INSM1: A Novel Immunohistochemical and Molecular Marker for Neuroendocrine and Neuroepithelial Neoplasms. Am J Clin Pathol. 2015;144(4):579-591. doi:10.1309/AJCPGZWXXBSNL4VD
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5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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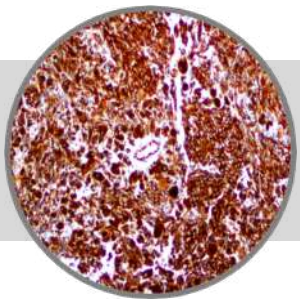
E-mail: sales@biosb.com | Website: www.biosb.com

Vimentin, RMab

Clone: EP21

Rabbit Monoclonal



CE IVD

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Inset: IHC of Vimentin on a FFPE Melanoma 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.

* The Vimentin antibody, clone EP21, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen

A synthetic acetylated peptide corresponding to the C-term of human Vimentin protein was used.

Summary and Explanation

Vimentin is a member of the intermediate filament family of proteins. Intermediate filaments are an important structural feature of eukaryotic cells. Together with microtubules and actin microfilaments, they make up the cytoskeleton.

Expression of vimentin, when used in conjunction with keratin, is helpful in distinguishing melanomas from Undifferentiated Carcinomas and Large-Cell Lymphomas. All Melanomas and Schwannomas react strongly with vimentin. This antibody recognizes a 57 kDa intermediate filament. It labels a variety of mesenchymal cells, including melanocytes, lymph cells, endothelial cells and fibroblasts. Non-reactivity of vimentin antibody is often considered more useful than its presence, since there are a few tumors that do not contain vimentin (e.g., Hepatoma and Seminoma).

Antibody Type	Rabbit Monoclonal	**Clone**	EP21
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Control**	Tonsil, Lymph Node
	Species Reactivity	Human, Predicted: Mouse, Rat, Rhesus Monkey	

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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

Vimentin is a rabbit 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.

Catalog No.	*Antibody Type*	*Dilution*	*Volume/Qty*
BSB 2307	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 2308	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 2309	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 2310	Concentrated	1:50 - 1:200	0.1 mL
BSB 2311	Concentrated	1:50 - 1:200	0.5 mL
BSB 2312	Concentrated	1:50 - 1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB 2313	5 slides

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

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.

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.

Performance Characteristics

Normal Tissues

Positive (+)	
mesencymal cells	fibrocytes
lipocytes	smooth muscle cells
vascular endothelial cells	astrocytes
peripheral nerve	macrophages
Kupffer cells	myoepithelial cells
sweat glands of breast	follicular cells of thyroid
adrenal cortex	renal distal tubules
renal glomeruls	pancreatic acinar cells
retinal epithelial cells	skeletal and cardiac muscle cells
colonic and gastric mucosa	glial cells
Negative (-)	
neurons	

Abnormal Tissues

Positive (+)	
sarcomas 17/20	melanoma 16/18
meningeoma 4/4	schwannoma 3/3
neuroendocrine carcinoma	variable (10-60%)
thyoma	variable (10-60%)
mesotheliomas	variable (10-60%)
papillary carcinoma of thyroid	variable (10-60%)
renal carcinoma	variable (10-60%)
endometrial carcinoma	variable (10-60%)
ovarian carcinoma	variable (10-60%)
lung carcinoma	variable (10-60%)

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2. Davey FR, et al. Am J Pathol. 1987;129:54-63
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4. Leader M, et al. Histopathology. 1987;11:63-72
5. Ben-Ze'ev A, J Cell Biol. 1984;99:1424-1433
6. 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

EC REP EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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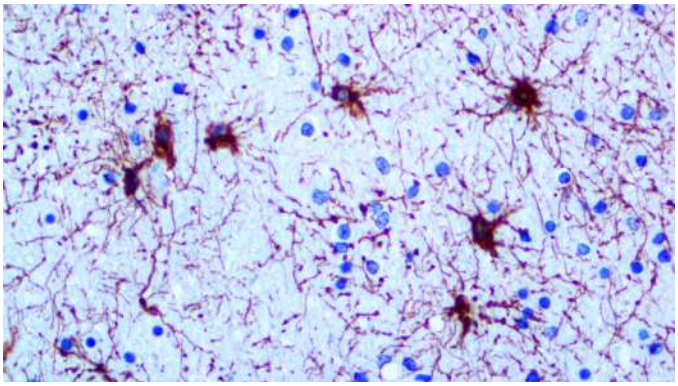
GFAP

Clone: RM246
Rabbit Monoclonal

CE IVD



Inset: IHC of GFAP on a FFPE Brain 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 peptide corresponding to the N-terminus of human GFAP

Summary and Explanation
Glial fibrillary acidic protein or GFAP is a Type III protein of the intermediate filaments principally found in astrocytes in the central nervous system, but can also be found in neurons, hepatic stellate cells, kidney mesangial cells, pancreatic stellate cells, and Leydig cells. It has a role in the cytoskeleton of the astrocyte and possibly many other stellate-shaped cells.

Antibodies to GFAP are very useful as markers of astrocytic cells. In addition, many types of brain tumors, presumably derived from astrocytic cells, heavily express GFAP. This marker is mainly used to distinguish neoplasms of astrocytic origin from other neoplasms in the central nervous system.

Antibody Type	Rabbit Monoclonal	**Clone**	RM246
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Predicted: Rat
Control	Brain		
Application	Head & Neck Cancer, Neural & Neuroendocrine Cancer		

Presentation
Anti-GFAP is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3766-3	Predilute	Ready-to-Use	3.0 mL
BSB-3766-7	Predilute	Ready-to-Use	7.0 mL
BSB-3766-15	Predilute	Ready-to-Use	15.0 mL
BSB-3766-01	Concentrate	1:100-1:500	0.1 mL
BSB-3766-05	Concentrate	1:100-1:500	0.5 mL
BSB-3766-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9194-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 (NaN_3) 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 the 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 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

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5. Kawahara E, et al. Am J Surg Pathol. 1988;12:115-120
6. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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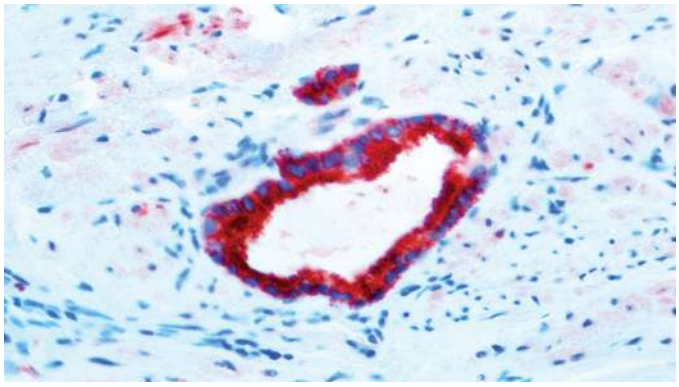
AMACRacemase/P504S

Clone: 13H4
Rabbit Monoclonal

CE IVD



Inset: IHC of AMACRacemase/P504S on a FFPE Prostatic Adenocarcinoma 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 human p504s/AMACR protein.

Summary and Explanation
AMACR (P504S) is an acronym for the protein alpha-methylacyl CoA racemase that helps to metabolize certain fatty acids within the body. AMACR has been recently described as a prostate cancer-specific gene that encodes a protein involved in the beta-oxidation of branched chain fatty acids. Expression of AMACR protein is found in Prostatic Adenocarcinoma but not in benign prostatic tissue. It stains premalignant lesions of the prostate: High-Grade Prostatic Intraepithelial Neoplasia (PIN) and Atypical Adenomatous Hyperplasia. Several studies have suggested that AMACR can be used as a prostate cancer biomarker.

High expression of AMACR (P504S) protein is usually found in Prostatic Adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. Using AMACR as a positive marker along with basal-cell staining (34βE12 or p63) as a negative marker could help to confirm the diagnosis of small foci of Prostate Carcinoma on needle biopsies.

Antibody Type	Rabbit Monoclonal	**Clone**	13H4
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Kidney, Liver, Salivary Gland, Prostate Lesions, Prostatic Adenocarcinoma		
Application	Prostate Cancer, Kidney & Urothelial Cancer		

Presentation
Anti-AMACRacemase/P504S is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5057	Predilute	Ready-to-Use	3.0 mL
BSB 5058	Predilute	Ready-to-Use	7.0 mL
BSB 5059	Predilute	Ready-to-Use	15.0 mL
BSB 5060	Concentrate	1:25-1:100	0.1 mL
BSB 5061	Concentrate	1:25-1:100	0.5 mL
BSB 5062	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9013-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 (NaN_3) 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 the 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 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. Jiang Z, et al. P504S Am J Surg Pathol. 2001;25:1397-1404
2. Rubin MA, et al. JAMA. 2002;287:1662-1670
3. Luo J, et al. Res. 2002; 62:2220-2226
4. Beach R, et al. Am J Surg Pathol. 2002;26:1588-1596
5. 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

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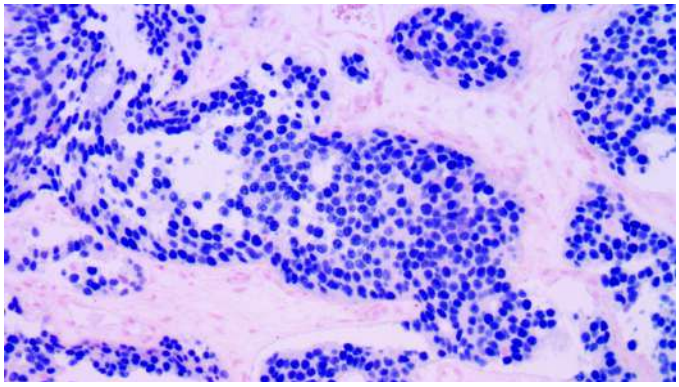
NKX3.1

Clone: RM430
Rabbit Monoclonal

CE IVD



Inset: IHC of NKX3.1 on a FFPE Prostatic Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	RM430
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Prostate, Prostate Carcinoma		
Application	Prostate Cancer, Breast Cancer, Carcinoma of Unknown Primary Site		

Presentation
Anti-NKX3.1 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3785-3	Predilute	Ready-to-Use	3.0 mL
BSB-3785-7	Predilute	Ready-to-Use	7.0 mL
BSB-3785-15	Predilute	Ready-to-Use	15.0 mL
BSB-3785-01	Concentrate	1:100-1:500	0.1 mL
BSB-3785-05	Concentrate	1:100-1:500	0.5 mL
BSB-3785-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9309-CS	5 slides

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

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 corresponding to residues of human NKX3.1 protein.

Summary and Explanation
Homeobox protein NKX3.1, also known as BAPX2 and NKX3A is a protein that in humans is encoded by the *NKX3.1* gene located on chromosome 8p. NKX3.1 is a prostatic tumor suppressor gene, which is an androgen-regulated, prostate-specific homeobox gene whose expression is predominantly localized in the prostate epithelium. It is a negative regulator of epithelial cell growth in prostate tissue. Loss of NKX3A protein expression is a common finding in human prostate carcinomas and prostatic intraepithelial neoplasia. NKX3-1 expression is seen in prostate epithelium, testis, ureter, and pulmonary bronchial mucous glands.

NKX3-1 has been established as a marker for identifying metastatic tumors. In a study the sensitivity for identifying metastatic prostatic adenocarcinomas was 98.6% for NKX3.1, 94.2% for prostate specific antigen and 98.6% for prostatic acid phosphatase and a specificity of 99.7% for NKX3.1. NKX3.1-positive prostate carcinoma cells exhibit nuclear staining. Additionally, most cases of urothelial carcinoma have been found to be negative for NKX3.1 and may be helpful to distinguish between high grade prostate adenocarcinoma and high grade Infiltrating urothelial carcinoma. NKX3.1 has also been found to be expressed in invasive ductal carcinomas (IDC) and invasive lobular carcinomas (ILC) of the breast. NKX3.1 expression is limited to ER, PR, and AR positive carcinomas and is more frequently expressed in ILC than IDC. NKX3.1 has a high specificity and sensitivity for prostate adenocarcinomas and can be used to help distinguish between prostate carcinoma and urothelial carcinomas.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 the 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 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. He WW, Sciavolino PJ, Wing J, et al. A novel human prostate-specific, androgen-regulated homeobox gene (NKX3.1) that maps to 8p21, a region frequently deleted in prostate cancer. Genomics. 1997;43(1):69-77. doi:10.1006/geno.1997.4715
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5. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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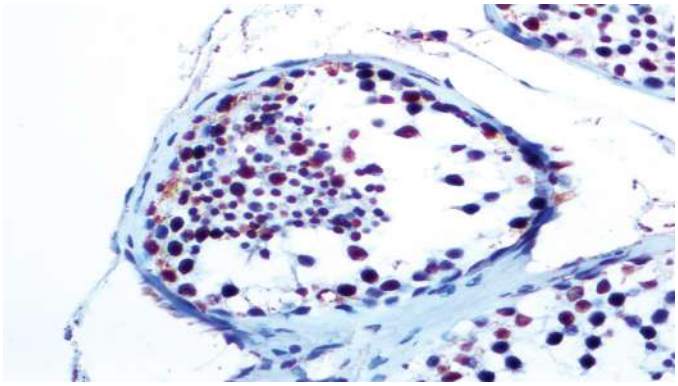
WT1

Clone: 6F-H2
Mouse Monoclonal

CE IVD



Inset: IHC of WT1 on a FFPE Testicular Cancer 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
Recombinant protein corresponding to amino acids 1-181 of human WT1.

Summary and Explanation
Wilms' Tumor Protein (WT1) is a suppressor gene located on Chromosome 11p13. Mutations of the WT1 gene on Chromosome 11 are observed in approximately 20% of Wilms tumors. At least half of the Wilms tumors with mutations in WT1 also carry mutations in CTNNB1, the gene encoding the proto-oncogene beta-catenin.

Wilms' tumor is a neoplasm of the kidneys that typically occurs in children. It is also known as a Nephroblastoma. WT1 has been identified in proliferative mesothelial cells, Malignant Mesothelioma, Ovarian Cystadenocarcinoma, Gonadoblastoma, Nephroblastoma and Desmoplastic Small Round Cell Tumor. Lung Adenocarcinomas rarely stain positive with this antibody.

Antibody Type	Mouse Monoclonal	**Clone**	6F-H2
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Testicle, Fallopian Tube, Kidney, Malignant Mesothelioma		
Application	Lung Cancer, Ovarian Cancer, Kidney & Urotelial Cancer, Mesothelioma, Carcinomas of Unknown Primary Site, Sarcoma and Soft Tissue		

Presentation

Anti-WT1 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6029	Predilute	Ready-to-Use	3.0 mL
BSB 6030	Predilute	Ready-to-Use	7.0 mL
BSB 6031	Predilute	Ready-to-Use	15.0 mL
BSB 6032	Concentrate	1:100-1:500	0.1 mL
BSB 6033	Concentrate	1:100-1:500	0.5 mL
BSB 6034	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9429-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 (NaN_3) 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 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 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. Ordonez NG, Am J Surg Pathol. 2000;24(4):598-606
2. Ordonez NG, Am J Surg Pathol. 1998;22(11):1314-1327
3. Charles AK, Moore IE, Berry PJ, Histopathology. 1997;Apr;30(4):312-4
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6. 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
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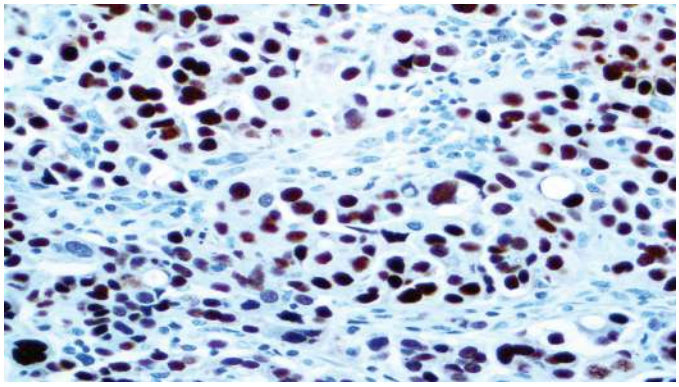
PAX-8

Clone: ZR-1
Rabbit Monoclonal

CE IVD



Inset: IHC of PAX-8 on a FFPE Ovarian 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
A synthetic peptide corresponding to the C-terminus of Human PAX8 protein.

Summary and Explanation
PAX-8 is expressed in the thyroid (and associated carcinomas), non-ciliated mucosal cells of the fallopian tubes and simple ovarian inclusion cysts, but not normal ovarian surface epithelial cells. PAX-8 is expressed in a high percentage of ovarian serous, endometrioid, and clear cell carcinomas, but only rarely in primary ovarian mucinous adenocarcinomas. Studies have also found PAX-8 expression in renal tubules as well as renal carcinoma, nephroblastoma and seminoma. Normal lung and lung carcinomas do not express PAX-8. Similarly, the absence of expression of PAX-8 in breast and other non-GYN carcinomas other than those primary to the thyroid indicates that PAX-8 is an important new marker of ovarian cancer and a useful marker for the differential diagnoses in lung and neck tumors, or tumors at distant sites where primary lung carcinoma or thyroid carcinoma are possibilities.
PAX-8, combined with organ system-specific markers such as uroplakin, mammaglobin, and TTF-1 can be a very useful panel to determine the primary site of invasive micropapillary carcinomas of ovary from bladder, lung, and breast.

Antibody Type	Rabbit Monoclonal	**Clone**	ZR-1
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Ovary, Thyroid		
Application	Kidney & Urothelial Cancer, Ovarian Cancer, Thyroid & Parathyroid Cancer, Carcinomas of Unknown Primary Site		

Presentation
Anti-PAX-8 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2098	Predilute	Ready-to-Use	3.0 mL
BSB 2099	Predilute	Ready-to-Use	7.0 mL
BSB 2100	Predilute	Ready-to-Use	15.0 mL
BSB 2101	Concentrate	1:25-1:100	0.1 mL
BSB 2102	Concentrate	1:25-1:100	0.5 mL
BSB 2103	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9337-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 (NaN_3) 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 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 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. Daisuke Nonaka, et al. Mod Pathol. 2008; 21:192-200
2. Nikiforova MN, et al. Am J Surg Pathol. 2002 Aug; 26(8):3947-52
3. Nonaka D, et al. Am J Surg Pathol. 2008 Oct; 32(10):1566-71
4. Guo-Xia Tong, et al. Modern Pathology. 2009; 22:1218-27
5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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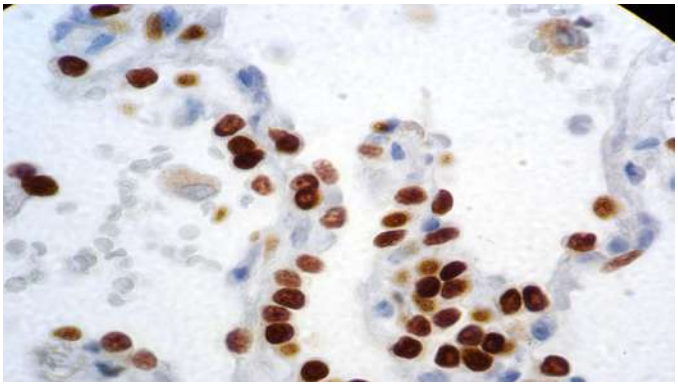
E-mail: sales@biosb.com | Website: www.biosb.com

TTF-1

Clone: 8G7G3\1
Mouse Monoclonal

CE IVD



Inset: IHC of TTF-1 on a FFPE Lung 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
Recombinant rat TTF-1 protein.

Summary and Explanation
Thyroid transcription factor-1 (TTF-1) is a protein that regulates transcription of genes specific to the thyroid, lung and diencephalon. It is also known as thyroid-specific enhancer binding protein and NKX-2. It is used as a marker to determine if a tumor originates in the lung or thyroid. TTF-1 positive cells are found in Type II pneumocytes and Clara cells in the lung. In the thyroid, follicular and parafollicular cells are positive.

TTF-1 is useful in differentiating primary Adenocarcinoma of the Lung from Metastatic Carcinomas of the breast and Malignant Mesothelioma. It can also be used to differentiate Small- Cell Lung Carcinoma from lymphoid infiltrates. For lung cancers, Adenocarcinomas are usually positive, while Squamous Cell Carcinomas and Large Cell Carcinomas are rarely positive. Small-Cell Carcinomas (of any primary site) are usually positive.

Antibody Type	Mouse Monoclonal	**Clone**	8G7G3/1
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Dog
Control	Lung, Thyroid, Adenocarcinoma of Lung		
Application	Lung Cancer, Thyroid & Parathyroid, Mesothelioma, Carcinomas of Unknown Primary Site, Liver Cancer		

Presentation
Anti-TTF-1 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6001	Predilute	Ready-to-Use	3.0 mL
BSB 6002	Predilute	Ready-to-Use	7.0 mL
BSB 6003	Predilute	Ready-to-Use	15.0 mL
BSB 6004	Concentrate	1:250-1:1000	0.1 mL
BSB 6005	Concentrate	1:250-1:1000	0.5 mL
BSB 6006	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9422-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 (NaN_3) 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 the 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 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 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. Bejarano PA,. et al. Mod Pathol. 1996;Apr:9(4):445-52
2. Di Loreto C, et al. Cancer Lett. 1998;Feb13;124(1):73-8
3. Di Loreto C, et al. J Clin Pathol. 1997;Jan;50(1):30-2
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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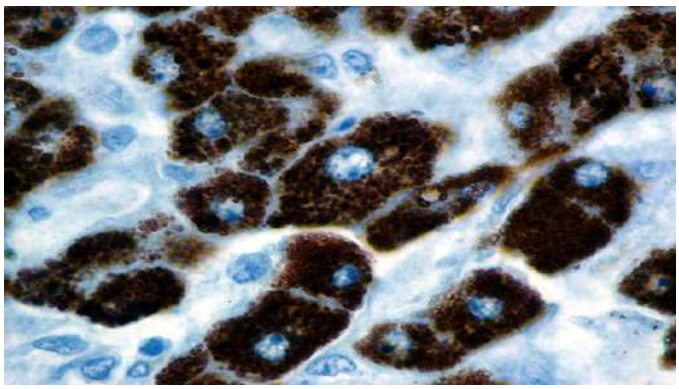
Hepatocyte Specific Antigen\Hep-Par1

Clone: OCH1E5
Mouse Monoclonal

CE IVD



Inset: IHC of Hepatocyte Specific Antigen/ Hep-Par1 on a FFPE Liver 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
Formalin-fixed, failed human allograft liver that was mechanically disrupted.

Summary and Explanation
Hepatocyte Specific Antigen (HSA or Hep Par 1) has been demonstrated consistently in the vast majority of Hepatocellular Carcinomas. Studies have shown the utility of HSA in the differential diagnosis of Hepatocellular Carcinoma, Cholangiocarcinoma and Hepatoblastomas.

HSA recognizes both benign and malignant liver derived tissues including such tumors as Hepatoblastoma, Hepatocellular Carcinoma, and Hepatic Adenoma. It recognizes both normal adult and fetal liver tissue. The typical pattern is a granular cytoplasmic staining. This antibody is useful in differentiating Hepatocellular Carcinomas with adenoid features from Adenocarcinomas, either primary in the liver or metastatic lesions to the liver. In recognizing Hepatoblastoma, it is useful in differentiating this entity from other small round cell tumors.

Antibody Type	Mouse Monoclonal	**Clone**	OCH1E5
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat
Control	Liver, Liver Carcinoma		
Application	Liver Cancer, Carcinoma Of Unknown Primary Site		

Presentation
Anti-Hepatocyte Specific Antigen/ Hep-Par1 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5624	Predilute	Ready-to-Use	3.0 mL
BSB 5625	Predilute	Ready-to-Use	7.0 mL
BSB 5626	Predilute	Ready-to-Use	15.0 mL
BSB 5627	Concentrate	1:100-1:500	0.1 mL
BSB 5628	Concentrate	1:100-1:500	0.5 mL
BSB 5629	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9209-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 (NaN_3) 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 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 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. Minervini MI, et al. Mod Pathol. 1997;10(7):686-692
2. Fasano M, et al. Mod Pathol. 1998;11(10):934-938
3. Tsui WMS, at al. Am J Surg Pathol. 1999;23(1):34-48
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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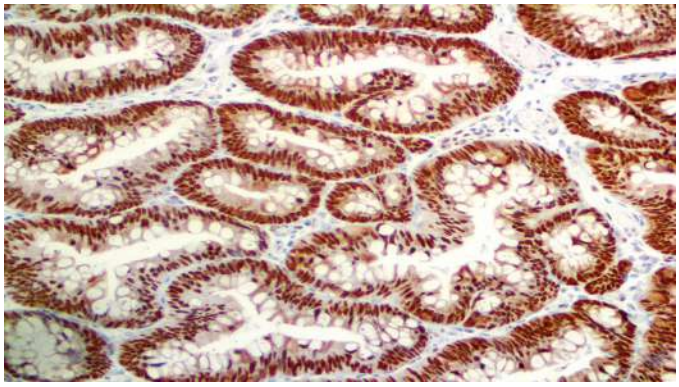
CDX2

Clone: EP25
Rabbit Monoclonal

CE IVD



Inset: IHC of CDX2 on a FFPE Colon Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP25
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted: Rabbit
Control	Normal Colon, Adenocarcinoma Of Colon		
Application	Colon & Gastrointestinal Cancer, Liver Cancer, Lung Cancer, Ovarian Cancer, Gall Bladder & Pancreatic Cancer, Carcinomas Of Unknown Primary Site		

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.

* The CDX2 antibody, clone EP25, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues near the C-terminus of the human CDX-2 protein.

Summary and Explanation
CDX2 is a caudal-type homeobox gene that encodes an intestine-specific transcription factor expressed early in intestinal development and that may be involved in the regulation of proliferation and differentiation of intestinal epithelial cells. It is expressed in the nuclei of epithelial cells throughout the intestine, from duodenum to rectum.

The CDX2 protein is expressed in Primary and Metastatic Colorectal Carcinomas and has also been demonstrated in the intestinal metaplasia of the stomach and intestinal-type gastric cancer. It is not expressed in the normal gastric mucosa. Loss of CDX2 protein expression has been correlated with loss of differentiation in colorectal cancers. Anti-CDX2 antibody has been useful in distinguishing the gastrointestinal origin of Metastatic Adenocarcinomas and carcinoids. Studies have shown that CDX2 is a superior marker compared to CK20. A high percentage of Mucinous Carcinomas of the Ovary also stain positively with this antibody, as well as Carcinomas from the upper gastrointestinal tract.

Presentation
Anti-CDX2 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6057	Predilute	Ready-to-Use	3.0 mL
BSB 6058	Predilute	Ready-to-Use	7.0 mL
BSB 6059	Predilute	Ready-to-Use	15.0 mL
BSB 6060	Concentrate	1:50-1:200	0.1 mL
BSB 6061	Concentrate	1:50-1:200	0.5 mL
BSB 6062	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9116-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 (NaN_3) 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 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 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

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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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP — QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT — Lot Number / Code du lot / Chargenbezeichnung

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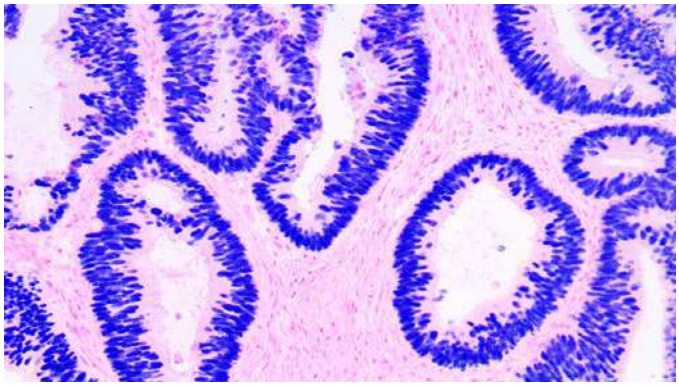
SATB2

Clone: EP281
Rabbit Monoclonal

CE IVD



Inset: IHC of SATB2 on a FFPE Colon Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP281
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Colon, Brain, Colon Carcinoma		
Application	Colon, Brain, Colon Carcinoma		

Presentation
Anti-SATB2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume/Qty*
BSB 3197	Predilute	Ready-to-Use	3.0 mL
BSB 3198	Predilute	Ready-to-Use	7.0 mL
BSB 3199	Predilute	Ready-to-Use	15.0 mL
BSB 3200	Concentrate	1:50-1:200	0.1 mL
BSB 3201	Concentrate	1:50-1:200	0.5 mL
BSB 3202	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9375-CS	5 slides

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

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 corresponding to residues of human SATB2 protein.

Summary and Explanation
Special AT-rich sequence-binding protein 2 (SATB2) also known as DNA-binding protein SATB2 is a protein that in humans is encoded by the SATB2 gene. SATB2 specifically binds nuclear matrix attachment regions and is involved in transcriptional regulation and chromatin remodeling. SATB2 has been implicated as causative in the cleft or high palate of individuals with 2q32q33 microdeletion syndrome.

SATB2 has been identified as a tissue-specific protein when screening protein expression patterns in human and cancerous tissues, with expression restricted to the lower gastrointestinal tract. SATB2 in combination with CK20 and Cadherin 17 could identify almost all colorectal carcinomas, including poorly differentiated colorectal carcinomas. Upper gastrointestinal (GI) carcinomas and pancreatic ductal carcinomas are usually negative for SATB2, and ovarian carcinomas, lung adenocarcinomas, and adenocarcinomas from other origin are rarely positive for SATB2. Therefore, SATB2 is a good marker for identifying a carcinoma of colorectal origin when working on a tumor of unknown primary. Another potential utility of SATB2 is to identify neuroendocrine neoplasms/carcinomas of the colon and rectum because SATB2 is usually negative in other neuroendocrine neoplasms of the GI tract, pancreas, and lung. SATB2 has been also shown to be a sensitive marker of osteoblastic differentiation in benign and malignant mesenchymal tumors.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. Kikuno R, et al. Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. DNA Res. 1999; 6 (3): 197–205.
2. Rosenfeld JA, Ballif BC, Lucas A, et al. (2009). "Small deletions of SATB2 cause some of the clinical features of the 2q33.1 microdeletion syndrome.". PLoS ONE. 2009; 4 (8): e6568.
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5. Conner JR, et al. SATB2 is a novel marker of osteoblastic differentiation in bone and soft tissue tumours. Histopathology. 2013; Jul;63(1):36-49.
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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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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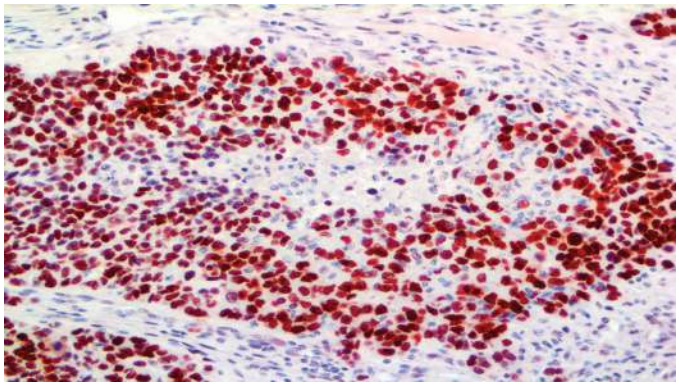
p53

Clone: DO7
Mouse Monoclonal

CE IVD



Inset: IHC of p53 on a FFPE Breast 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
Recombinant human wild-type p53 protein.

Summary and Explanation
p53 (also known as tumor protein 53 [TP53]) is a transcription factor that regulates the cell cycle and, hence, functions as a tumor suppressor. p53 has been described as the "guardian of the genome", referring to its role in conserving stability by preventing genome mutation. p53 has many anti-cancer mechanisms. It can
activate DNA repair proteins when DNA has sustained damage; it can also hold the cell cycle at the G1/S regulation point on DNA damage recognition. It can initiate apoptosis, programmed cell death, if DNA damage proves to be irreparable. p53 is central to many of the cell's anti-cancer mechanisms. It can induce growth arrest, apoptosis and cell senescence.

Mutations involving p53 have been found in a wide variety of malignant tumors, including Breast, Ovarian, Bladder, Colon, Lung, and Melanoma.

Antibody Type	Mouse Monoclonal	**Clone**	DO7
Isotype	IgG2b/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Cat, Cattle, Horse, Sheep
Control	Lung, Breast, Ovarian, Prostate, Colon Carcinoma		
Application	Breast Cancer, Colon & Gastrointestinal Cancer, Endometrial & Genital Cancer, Liver Cancer		

Presentation
Anti-p53 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5841	Predilute	Ready-to-Use	3.0 mL
BSB 5842	Predilute	Ready-to-Use	7.0 mL
BSB 5843	Predilute	Ready-to-Use	15.0 mL
BSB 5844	Concentrate	1:250-1:1000	0.1 mL
BSB 5845	Concentrate	1:250-1:1000	0.5 mL
BSB 5846	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9325-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 (NaN_3) 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 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 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. Stoehlmacker J, Lenz Heinz-Josef, Semin Oncol. 2003;30(3)suppl6(June):10-16
2. Gallo O, et al. Hum Pathol. 33:708-714
3. Sano H, et al. Cancer Res. 1995;Sep1; 55(17):3785-9
4. Denkert C, et al. Cancer. 2003;Jun15; 97(12):2978-87
5. Sheehan KM, et al. Hum Pathol. 34:1242-1246
6. 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

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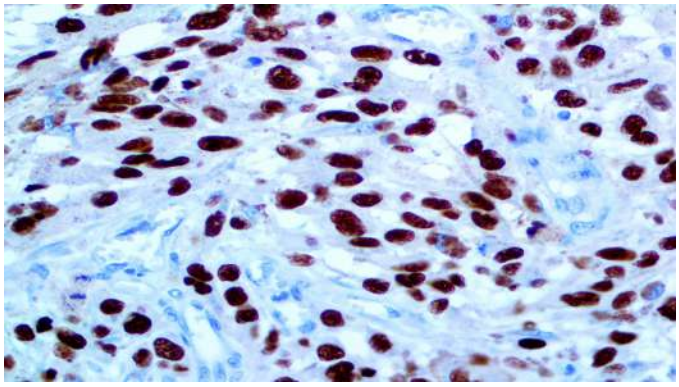
SOX10

Clone: EP268
Rabbit Monoclonal

CE IVD



Inset: IHC of SOX10 on a FFPE Melanoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP268
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted: Mouse, Rat
Control	Breast, Myometrium, Cervix, Fallopian Tube, Breast Carcinoma		
Application	Melanoma & Skin Cancer, Head & Neck Cancer		

Presentation
Anti-SOX10 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2580	Predilute	Ready-to-Use	3.0 mL
BSB 2581	Predilute	Ready-to-Use	7.0 mL
BSB 2582	Predilute	Ready-to-Use	15.0 mL
BSB 2583	Concentrate	1:50-1:200	0.1 mL
BSB 2584	Concentrate	1:50-1:200	0.5 mL
BSB 2585	Concentrate	1:50-1:200	1.0 mL
BSB-2585-T7	TintoStainer Plus	Ready-to-Use	7.0 mL
BSB-2585-T30	TintoStainer Plus	Ready-to-Use	30.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9386-CS	5 slides

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

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 recombinant fragment corresponding to residues in human SOX10 protein.

Summary and Explanation
Transcription factor SOX-10 is a member of the SOX (SRY-related HMG-box) family of transcription factors involved in the regulation of embryonic development and in the determination of the cell fate. The encoded protein may act as a transcriptional activator after forming a protein complex with other proteins. This protein acts as a nucleocytoplasmic shuttle protein and is important for neural crest and peripheral nervous system development. Mutations in this gene are associated with Waardenburg-Shah and Waardenburg-Hirschsprung disease. Anti-SOX-10 has been recently shown to be a sensitive marker of melanoma, including conventional, spindled, and desmoplastic subtypes.

SOX-10 is expressed by metastatic melanomas and nodal capsular nevus in sentinel lymph nodes, but not by other lymph node components such as dendritic cells which usually express S100 protein. In scar specimens, immature fibroblasts, epithelioid granulomas, and histiocytic proliferations can histopathologically mimic residual melanoma and even be positive for MiTF and S100. However, SOX-10 is less likely to be expressed by fibroblasts or histiocytes, especially compared to MiTF and S100. Anti-SOX-10 produces a nuclear stain that provides a clean signal that is much sharper and darker in staining quality when compared to the use of antibodies against MiTF and S100.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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

Autostainer Protocol

Autostainer	Retrieval		IHC Protocol
	Solution	Time	
TintoStainer Plus	Citrate	45	**PolyDetector Plus**

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. Dabbs DJ, et al. Diagnostic Immunohistochemistry. 2002
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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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP — QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT — Lot Number / Code du lot / Chargenbezeichnung

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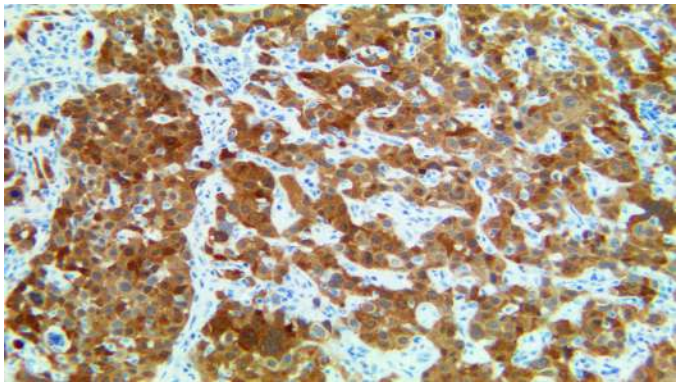
p16

Clone: RBT-p16
Rabbit Monoclonal

CE IVD



Inset: IHC of p16 on a FFPE Lung Squamous Cell 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
Purified human recombinant full length p16 protein.

Summary and Explanation
p16 is a tumor suppressor gene. p16 is an important gene in regulating the cell cycle. p16INK4a regulates the cell cycle by binding and deactivating various cyclin-CDK complexes. p16 is a G1/S-cell cycle regulator that is involved in the pathway that converges in the tumor suppressor protein Rb.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-p16
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Nuclear	**Species Reactivity**	Human
Control	Testis, NSCLC, Transitional Cell Carcinoma		
Application	Cervical Cancer, Breast Cancer, Head & Neck Cancer		

Presentation
Anti-p16 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume/Qty*
BSB 3476	Predilute	Ready-to-Use	3.0 mL
BSB 3477	Predilute	Ready-to-Use	7.0 mL
BSB 3478	Predilute	Ready-to-Use	15.0 mL
BSB 3479	Concentrate	1:25-1:100	0.1 mL
BSB 3480	Concentrate	1:25-1:100	0.5 mL
BSB 3481	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9321-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 (NaN_3) 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 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 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. Fudiger K, et al. Am J Surg Pathol 26(11): 1389-1399, 2002
2. Giovanni N, et al. Am J Surg Pathol 27(2): 187-193, 2003
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6. Klussmann JP, et al. Am J Pathol. 2003 Mar; 162(3): 747-53
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.
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IVD 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 Lot Number Code du lot Chargenbezeichnung

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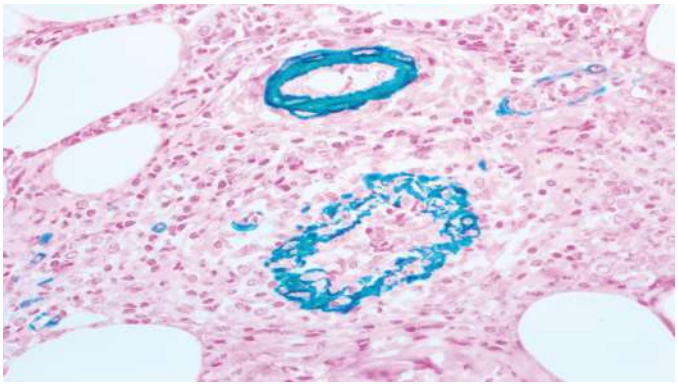
Actin Smooth Muscle

Clone: BSB-15
Mouse Monoclonal

CE IVD



Inset: IHC of Actin Smooth Muscle on a FFPE Appendix 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-terminus of human smooth muscle actin.

Summary and Explanation
Actin is a major component of the cytoskeleton and is present in every cell type. Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. In vertebrates 3 main groups of actin isoforms (alpha, beta and gamma) have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins coexist in most cell types as components of the cytoskeleton and as mediators of internal cell motility.

Smooth-Muscle Actin antibody does not stain cardiac or skeletal muscle; however, it will stain myofibroblasts and myoepithelial cells. This antibody could be used together with Muscle-Specific Actin to distinguish Leiomyosarcoma from Rhabdomyosarcoma. In most cases of Rhabdomyosarcoma, this antibody gives negative results whereas M. S. Actin is positive in the rhabdomyoblasts. Leiomyosarcomas are positive with both M. S. Actin and S. M. Actin antibodies.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-15
Isotype	IgG2a/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Mouse, Rat, Rabbit, Feline
Control	Appendix, Uterus		
Application	Breast Cancer, Colon & Gastrointestinal Cancer, Sarcoma & Soft Tissue		

Presentation
Anti-Actin Smooth Muscle 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5029	Predilute	Ready-to-Use	3.0 mL
BSB 5030	Predilute	Ready-to-Use	7.0 mL
BSB 5031	Predilute	Ready-to-Use	15.0 mL
BSB 5032	Concentrate	1:250-1:1000	0.1 mL
BSB 5033	Concentrate	1:250-1:1000	0.5 mL
BSB 5034	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9005-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 (NaN_3) 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 the 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 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. Cooke PH, J Cell Biol. 1976;68-539-556
2. Skalli O, et al. J Cell Biol. 1986;103:2787-2796
3. Gown AM, et al. J Cell Biol. 1985;100:807-813
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5. Lazarides E, J Histochem Cytochem. 1975;223:507-52
6. 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

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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Desmin

Clone: D33
Mouse Monoclonal

CE IVD

Inset: IHC of Desmin on a FFPE Skeletal Muscle 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
Desmin from human muscle.

Summary and Explanation
Desmin is a type of intermediate filament found near the Z line in sarcomeres. Both vimentin and desmin are characteristics of mesenchymal cells.
Desmin antibody detects a protein that is expressed by cells of normal smooth, skeletal and cardiac muscles. Light microscopy studies of desmin suggests that it is primarily located at or near the periphery of Z lines in striated muscle fibrils. In smooth muscle, Desmin interconnects cytoplasmic dense bodies with membrane bound dense plaques. Desmin antibody reacts with Leiomyomas, Rhabdomyomas, and Perivascular cells of Glomus Tumors of the skin (if they are of myogenic nature). This antibody is used to demonstrate the myogenic components/derivation of tumors.

Antibody Type	Mouse Monoclonal	**Clone**	D33
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Control**	Skeletal Muscle
	Species Reactivity	Human, Canine, Feline, Rat, Mouse, Horse, Chicken, Bovine, Hamster	

Presentation
Anti-Desmin 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5456	Predilute	Ready-to-Use	3.0 mL
BSB 5457	Predilute	Ready-to-Use	7.0 mL
BSB 5458	Predilute	Ready-to-Use	15.0 mL
BSB 5459	Concentrate	1:25-1:100	0.1 mL
BSB 5460	Concentrate	1:25-1:100	0.5 mL
BSB 5461	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9161-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 (NaN_3) 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 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 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. Nadji M, et al. Immunoperoxidase Techniques. 1986;ASCP
2. Altmannsberger M, et al. Am J Pathol. 1985;118:85-95
3. Debus E, et al. EMBO J. 1983;2:2305-2312
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.
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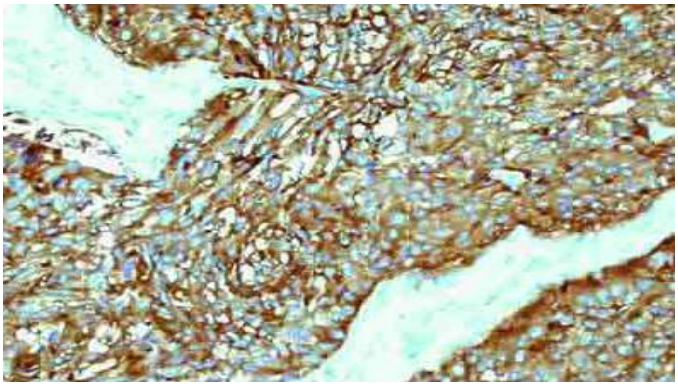
Synaptophysin

Clone: EP158
Rabbit Monoclonal

CE IVD



Inset: IHC of Synaptophysin on a FFPE Neuroendocrine Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP158
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Predicted: Mouse, Rat, Donkey
Control	Pancreas, Brain, Pituitary, Adrenal, Colon		
Application	Lung Cancer, Colon & Gastrointestinal Cancer, Gall Bladder & Pancreatic Cancer, Sarcoma & Soft Tissue, Neural & Neuroendocrine Cancer, Thyroid & Parathyroid Cancer, Undifferentiated Tumor, Carcinomas Of Unknown Primary Site		

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.

* The Synaptophysin antibody, clone EP158, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to residues on the C-terminus (cytoplasmic domain) of human Synaptophysin protein.

Summary and Explanation
Synaptophysin is a synaptic vesicle glycoprotein weighing 38 kDa. It is present in endocrine cells, the brain, spinal cord, and adrenal glands. It acts as a marker for neuroendocrine cells.

Synaptophysin reacts with neuroendocrine cells of human adrenal medulla, carotid body, skin, pituitary, thyroid, lung, pancreas and gastrointestinal mucosa. Positive staining is seen in neurons of the brain, spinal cord, retina, and Paneth's cells in the gastrointestinal tract and gastric parietal cells. This antibody identifies normal neuroendocrine cells and neuroendocrine neoplasms. Diffuse, finely-granular cytoplasmic staining is observed and probably correlates with the distribution of the antigen within neurosecretory vesicles. The expression of Synaptophysin is independent of the presence of NSE or other neuroendocrine markers. Synaptophysin is an independent broad-range marker of neural and neuroendocrine differentiation.

Presentation
Anti-Synaptophysin is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2237	Predilute	Ready-to-Use	3.0 mL
BSB 2238	Predilute	Ready-to-Use	7.0 mL
BSB 2239	Predilute	Ready-to-Use	15.0 mL
BSB 2240	Concentrate	1:100-1:500	0.1 mL
BSB 2241	Concentrate	1:100-1:500	0.5 mL
BSB 2242	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9394-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 (NaN_3) 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 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 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. Navone F, et al. J Cell Biol. 1986;103:2511-2527
2. Wiedenmann B, et al. Cell. 1985;41:1017-1028
3. Kayser K, et al. Path Res Pract. 1988;183:412-417
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
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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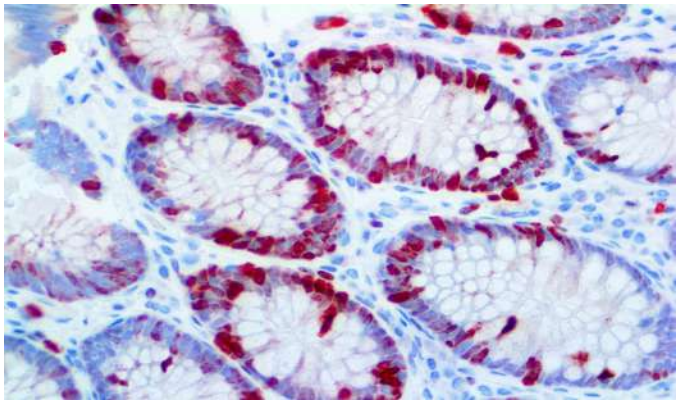
E-mail: sales@biosb.com | Website: www.biosb.com

Ki-67

Clone: EP5
Rabbit Monoclonal

CE IVD



Inset: IHC of Ki-67 on a FFPE Colon 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.

* The Ki-67 antibody, clone EP5, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues of the human Ki-67 protein.

Summary and Explanation
The Ki-67 protein is a cellular marker for proliferation. It is strictly associated with cell proliferation. During the interphase, the Ki-67 antigen can be exclusively detected within the cell nucleus, whereas in mitosis most of the protein is relocated to the surface of the chromosomes. Ki-67 protein is present during all active phases of the cell cycle (G1, S, G2, and mitosis), but is absent from resting cells (G0).
Ki-67 is an excellent marker to determine the growth fraction of a given cell population. The fraction of Ki-67-positive tumor cells (the Ki-67 labeling index) is often correlated with the clinical course of cancer. The best-studied examples in this context are Carcinomas of the Prostate and the Breast.

Antibody Type	Rabbit Monoclonal	**Clone**	EP5
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Testis, Tonsil, Bone Marrow, Placenta, Colon, Fallopian Tube, Astrocytoma, Breast Carcinoma, Colon Carcinoma		
Application	Breast Cancer, Cervical Cancer, Colon & Gastrointestinal Cancer, Lung Cancer, Lymphoma, Melanoma & Skin Cancer, Ovarian Cancer		

Presentation
Anti-Ki-67 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5708	Predilute	Ready-to-Use	3.0 mL
BSB 5709	Predilute	Ready-to-Use	7.0 mL
BSB 5710	Predilute	Ready-to-Use	15.0 mL
BSB 5711	Concentrate	1:50-1:200	0.1 mL
BSB 5712	Concentrate	1:50-1:200	0.5 mL
BSB 5713	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9251-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 (NaN_3) 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).

Stability
This product is stable up to the expiration date on the product label.
Do not use after expiration date listed on the 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 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. Stoehlmacker J, Lenz Heinz-Josef, Semin Oncol. 2003;30(3)suppl6(June):10-16
2. Gallo O, et al. Hum Pathol. 33:708-714
3. Sano H, et al. Cancer Res. 1995;Sep;55(17):3785-9
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5. Sheehan KM, et al. Hum Pathol. 34:1242-1246
6. Birner P, Ritzi MJ, Voigtländer T, et al. Am J Pathol. 2001;158:1991-6
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.

Symbol Key / Légende des symboles/Erläuterung der Symbole

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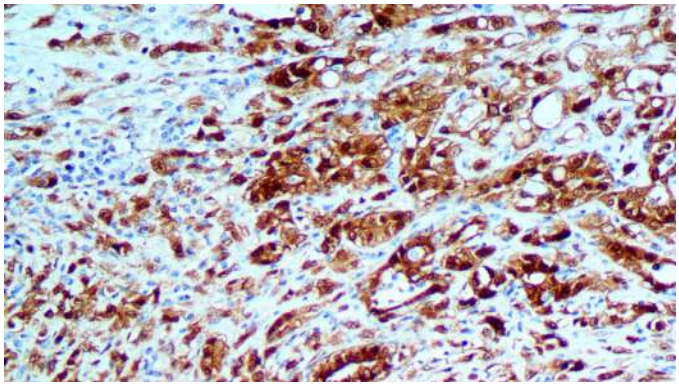
Calretinin

Clone: RM324
Rabbit Monoclonal

CE IVD



Inset: IHC of Calretinin on a FFPE Mesothelioma 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 peptide corresponding to N-terminus of human Calretinin.

Summary and Explanation
Calretinin is a vitamin D-dependent calcium-binding protein involved in calcium signaling. It is expressed in the central and peripheral nervous system and in many normal and pathological tissues. It stains Mesothelioma and can be used to help differentiate lung tumors. Calretinin is also considered an important diagnostic tool in the differential diagnosis of cystic and solid Ameloblastic Tumors.

Anti-calretinin has been shown to be useful in differentiating Mesothelioma from Adenocarcinomas of the lung and other sources. It is also useful in differentiating adrenal-cortical neoplasms from Pheochromocytomas.

Antibody Type	Rabbit Monoclonal	**Clone**	RM324
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Nuclear	**Species Reactivity**	Human, Mouse, Rat
Control	Brain, Testis, Colon, Benign Mesothelial Cells, Malignant Mesothelioma		
Application	Lung Cancer, Mesothelioma, Ovarian Cancer, Cytopathology		

Presentation
Anti-Calretinin is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3757-3	Predilute	Ready-to-Use	3.0 mL
BSB-3757-7	Predilute	Ready-to-Use	7.0 mL
BSB-3757-15	Predilute	Ready-to-Use	15.0 mL
BSB-3757-01	Concentrate	1:100-1:500	0.1 mL
BSB-3757-05	Concentrate	1:100-1:500	0.5 mL
BSB-3757-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9054-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 (NaN_3) 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 the 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 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. Barberis MC, Faleri M, et al. Acta Cytol. 1997; Nov-Dec;41(6):1757-61
2. Doglioni C, et al. Am J Surg Pathol. 1996;Sep;20(9):1037-46
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5. Ordonez NG, Mod Pathol. 1998; Oct;11(10):929-33
6. 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.
7. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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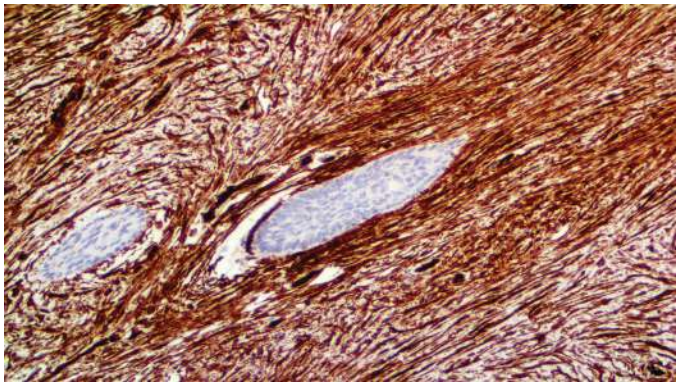
CD34

Clone: EP88
Rabbit Monoclonal

CE IVD



Inset: IHC of CD34 on a FFPE Angiosarcoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP88
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human, Predicted: Mouse, Rat, Sheep, Dog, Pig, Loxodonta Africana
Control	Tonsil, Placenta, Appendix		
Application	Endothelial, Hematopoietic, Leukemia & Histiocytic, Sarcoma & Soft Tissue, Liver Cancer, Gastrointestinal Stromal Tumor, Colon & Gastrointestinal Cancer, Undifferentiated Tumor		

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.

* The CD34 antibody, clone EP88, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to C-terminal of human CD34 protein.

Summary and Explanation
CD34 functions as a cell-cell adhesion factor and cell-surface glycoprotein. It may also mediate the attachment of stem cells to bone marrow extracellular matrixes or directly to stromal cells. Cells expressing CD34 are normally found in the umbilical cord and bone marrow as hematopoletic cells, and in vascular endothelium. In addition to stem cell recognition, CD34 is expressed by vascular endothelium; it appears that proliferating endothelial cells express this molecule in greater amounts than resting cells. In comparison to factor VIII R Antigen, CD34 stains are stronger and appear to be more sensitive in nature.
In tumors, CD34 is found in Alveolar Soft Part Sarcoma, pre B-ALL (positive in 75%), AML(40%), AMLM7 (most), Dermatofibrosarcoma Protuberans, Gastrointestinal Stromal Tumors, Giant Cell Fibroblastoma, Granulocytic Sarcoma, Kaposi's Sarcoma, Liposarcoma, Malignant Fibrous Histiocytoma, Malignant Peripheral Nerve Sheath tumors, Mengingeal Hemangiopericytomas, Meningiomas, Neurofibromas, Schwannomas, and Papillary Thyroid Carcinoma. A negative CD34 may exclude Ewing's Sarcoma/PNET, Myofibrosarcoma of the breast, and Inflammatory Myofibroblastic tumors of the stomach.

Presentation
Anti-CD34 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6485	Predilute	Ready-to-Use	3.0 mL
BSB 6486	Predilute	Ready-to-Use	7.0 mL
BSB 6487	Predilute	Ready-to-Use	15.0 mL
BSB 6488	Concentrate	1:50-1:200	0.1 mL
BSB 6489	Concentrate	1:50-1:200	0.5 mL
BSB 6490	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9087-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 (NaN_3) 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 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 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

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2. Fina L, et al. Blood. 1990;75:2417-2426
3. Ramani P, et al. Histopathology. 1990;17:237-242
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https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

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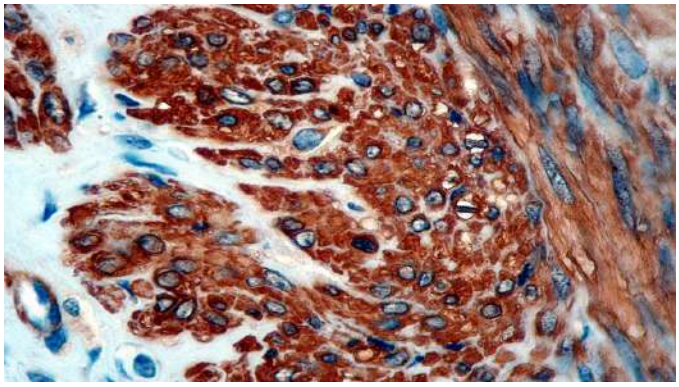
Calponin

Clone: BSB-20
Mouse Monoclonal

CE IVD



Inset: IHC of Calponin on a FFPE Leiomyoma 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 residues of the C-terminus of the human calponin protein.

Summary and Explanation
Calponin is a 34 kDa polypeptide that interacts with actin, tropomyosin, and calmodulin. It is involved in smooth-muscle contraction mechanisms and is restricted exclusively to smooth-muscle tissue. Calponin is a calcium-binding protein. Calponin tonically inhibits the ATPase activity of myosin in smooth muscle. Phosphorylation of calponin by a protein kinase (which is dependent upon calcium binding to calmodulin) releases the calponin's inhibition of the smooth-muscle ATPase.

Calponin has been found to be useful in differentiating benign sclerosing lesions of the breast from Carcinoma. Calponin positivity has also been noted in Malignant Myoepithelioma and Pleomorphic Adenoma of Salivary Gland origin, as well as in Angiomatoid Malignant Fibrous Histiocytoma.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-20
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Canine, Feline
Control	Appendix, Uterus, Breast Ducts, Leiomyoma, Prostate Colon, Breast, Skin		
Application	Breast Cancer, Sarcoma & Soft Tissue, Head & Neck Cancer		

Presentation
Anti-Calponin 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5120	Predilute	Ready-to-Use	3.0 mL
BSB 5121	Predilute	Ready-to-Use	7.0 mL
BSB 5122	Predilute	Ready-to-Use	15.0 mL
BSB 5123	Concentrate	1:50-1:200	0.1 mL
BSB 5124	Concentrate	1:50-1:200	0.5 mL
BSB 5125	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9053-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 (NaN_3) 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 the 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 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. NP, Wan BC, et al. Appl. Immunohistochem. 1997;5(3):141-151
2. Nagao T, Sugano I, Ishida Y, et al. Cancer. 1998;Oct1:83(7):1292-9
3. Savara AT, Gown AM, Zarbo RJ, Mod Pathol. 1997;Nov;10(11):1093-1100
4. Fanburg-Smith JC, Meittinen M, Hum Pathol. 1999;Nov;30(11):1336-43
5. 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

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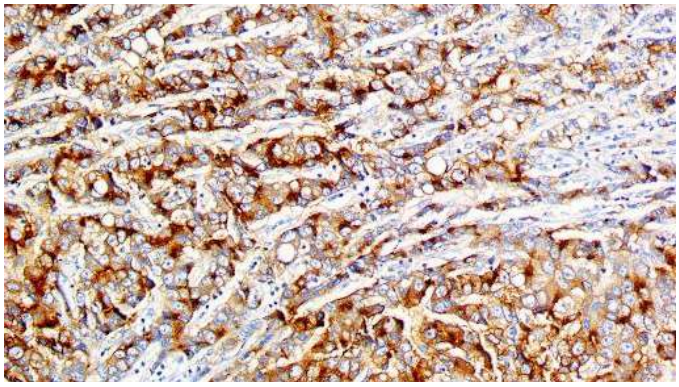
Glypican-3

Clone: 1G12
Mouse Monoclonal

CE IVD



Inset: IHC of Glypican-3 on a FFPE Hepatocellular Carcinoma Tissue

Antibody Type	Mouse Monoclonal	**Clone**	1G12
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	Placenta		
Application	Hepatocellular Carcinoma, Hepatoblastoma, Melanoma, Testicular Germ Cell Tumors, Wilms Tumor		

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
Fragment corresponding to the C-terminal last 70 amino acids of the human Glypican-3 protein.

Summary and Explanation
Glypican 3, also known as GPC3, is a human gene. The protein encoded by this gene is a member of the glypican family. Cell surface heparan sulfate proteoglycans are composed of a membrane-associated protein core substituted with a variable number of heparan sulfate chains. Members of the glypican-related integral membrane proteoglycan family (GRIPS) contain a core protein anchored to the cytoplasmic membrane via a glycosyl-phosphatidylinositol linkage. These proteins may play a role in the control of cell division and growth regulation.

GPC3 has been identified to be a useful tumor marker for the diagnosis of Hepatocellular Carcinoma (HCC), Hepatoblastoma, Melanoma, Testicular Germ Cell Tumors, and Wilms Tumor. In patients with HCC, GPC3 was overexpressed in neoplastic liver tissue and elevated in serum but was undetectable in normal liver, benign liver, and the serum of healthy donors. GPC3 expression was also found to be higher in HCC liver tissue than in cirrhotic liver or liver with focal lesions such as dysplastic nodules and areas of hepatic adenoma (HA) with malignant transformation. In the context of Testicular Germ Cell Tumors, GPC3 expression is up-regulated in certain histologic subtypes, specifically Yolk Sac Tumors and Choriocarcinoma. A high level of GPC3 expression has also been found in some types of embryonal tumors, such as Wilms Tumor and Hepatoblastoma.

Presentation
Anti-Glypican-3 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6240	Predilute	Ready-to-Use	3.0 mL
BSB 6241	Predilute	Ready-to-Use	7.0 mL
BSB 6242	Predilute	Ready-to-Use	15.0 mL
BSB 6243	Concentrate	1:100-1:500	0.1 mL
BSB 6244	Concentrate	1:100-1:500	0.5 mL
BSB 6245	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9200-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 (NaN_3) 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 reagents. If a 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 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 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

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2. Coston WMP, et al. Am J Surg Pathol. 2008;00:1-12
3. Kandil D, et al. Cancer. 2007;111(5):316-22
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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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

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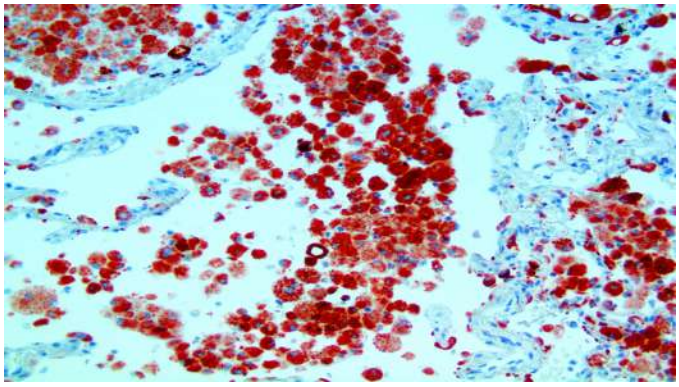
Napsin A

Clone: BSB-112
Mouse Monoclonal

CE IVD



Inset: IHC of Napsin A on a FFPE Lung 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 residues of human Napsin A protein.

Summary and Explanation
The activation peptides of aspartic proteinases play a role as inhibitors of the active site. These peptide segments, or pro-parts, are deemed important for correct folding, targeting, and control of the activation of aspartic proteinase zymogens. The pronapsin A gene is expressed predominantly in lung and kidney. Its translation product is predicted to be a fully functional glycosylated aspartic proteinase precursor containg an RGD motif and an addition 18 residues at its C-terminus.

In normal tissue, anti-Napsin A labels type II pneumocytes in adult lung and epithelial cells in kidney tissues. In abnormal tissues, Napsin A is a useful marker for lung adenocarcinoma.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-112
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Kidney, Lung, Renal Cell Carcinoma, Lung Carcinoma		
Application	Lung Cancer, Carcinoma of Unknow Primary Site, Cytopathology		

Presentation
Anti-Napsin A 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3392	Predilute	Ready-to-Use	3.0 mL
BSB 3393	Predilute	Ready-to-Use	7.0 mL
BSB 3394	Predilute	Ready-to-Use	15.0 mL
BSB 3395	Concentrate	1:100-1:500	0.1 mL
BSB 3396	Concentrate	1:100-1:500	0.5 mL
BSB 3397	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9302-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 (NaN_3) 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 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 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

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2. Ueno T, et al. Br J Cancer. 2003; 88:1229-33
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https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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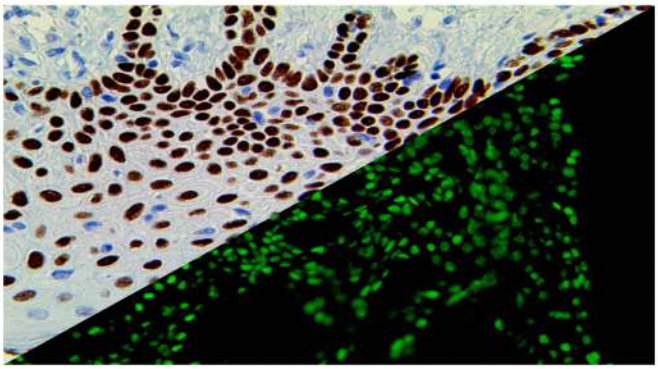
p63

Clone: 4A4
Mouse Monoclonal

CE IVD



Inset: IHC of p63 on a FFPE Basal Cell Carcinoma Tissue, IF on a FFPE Tonsil Tissue

Intended Use
For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical and Immunofluorescence 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
Recombinant fragment corresponding to Human p63 aa 1-205.

Summary and Explanation
In addition to p53, mammalian cells contain two homologous genes, p63 and p73. These genes give rise to the expression of proteins that are highly similar to p53 in structure and function. In particular, p63 and p73 proteins can induce p53-responsive genes and elicit programmed cell death. p73 and p63 are important during development and differentiation. In particular, p63 appears to be primarily implicated in epithelial development.

Anti-p63 to human p63 protein labels an epitope common to all six p63 isotypes (TAp63α, TAp63β, TAp63γ, ΔNp63α, ΔNp63β, ΔNp63γ). p63 labels the nuclei of myoepithelial cells in the prostate gland as well as breast tissue, making it useful in differentiating benign vs. malignant prostate lesions and breast lesions.

Antibody Type	Mouse Monoclonal	**Clone**	4A4
Isotype	IgG2a/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Mouse, Rat, Turtle
Control	Prostate, Breast, Skin, Salivary Gland		
Application	Cervical Cancer, Breast Cancer, Head & Neck Cancer, Kidney & Urothelial Cancer, Lung Cancer, Prostate Cancer, Thyroid & Parathyroid Cancer, Melanoma & Skin Cancer, Carcinomas of Unknown Primary Site		

Presentation
Anti-p63 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3602	Tinto Predilute	Ready-to-Use	3.0 mL
BSB 3603	Tinto Predilute	Ready-to-Use	7.0 mL
BSB 3604	Tinto Predilute	Ready-to-Use	15.0 mL
BSB 3605	Concentrate	1:50 - 1:200	0.1 mL
BSB 3606	Concentrate	1:50 - 1:200	0.5 mL
BSB 3607	Concentrate	1:50 - 1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9327-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 (NaN_3) 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 the 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 on acetone-fixed frozen sections and acetone-fixed cell preparations.

IHC Protocol
Preparation for Frozen Tissues Procedure
1. Embed the specimen in OCT inside the cryostat.
2. Cut sections at 5 microns.
3. Place the section on a positively charged glass slide.
4. Air dry for 30-60 minutes.
5. Fix in acetone 100% for 2-10 minutes.
6. Air dry for another 10 minutes.

Preparation for FFPE Tissues 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 IF\IHC, perform antibody incubation at ambient temperature. For automated IF\IHC methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IF\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

Abbreviated AmpliDetector Plus FITC IF Protocol

Step	Incubation Time
Rinse slides in IF wash buffer	
Drain and wipe excess IF wash buffer off slide	
Peroxidase Blocker	5 min.
Apply Antibody	5 min.
Apply Mouse/Rabbit Link	5 min.
Apply HRP Label	5 min.
Keep FITC reagents and slides in the dark	
Apply AmpliDetector FITC solution	5 min.
Coverslip with IF mounting medium	

Mounting Protocol IHC:

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.

Mounting Protocol IF:

1. Bring FluoroMounter or FluoroMounter with DAPI to room temperature.
2. Rinse slides with distilled or deionized water.
3. Remove excess water from slides before laying them flat in the dark.
4. Turn the media bottle upside down before opening the dropper bottle.
5. Apply 1-3 drops of FluoroMounter to each slide making sure the specimen is covered.
6. Incubate 3-5 minutes at room temperature in the dark.
7. Coverslip.
8. Observe under a fluorescent microscope using the appropriate filters.
9. The slides are recommended to be stored at 2-8 ºC in the dark.

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. Yang A, et al. Mol Cell. 1998;2:305-16
2. Signoretti S, et al. Am J Pathol. 2000;157:1769-75 3.
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6. Rajal B Shah, et al. Am J Surg Pathol. 2002;26(9):1161-1168
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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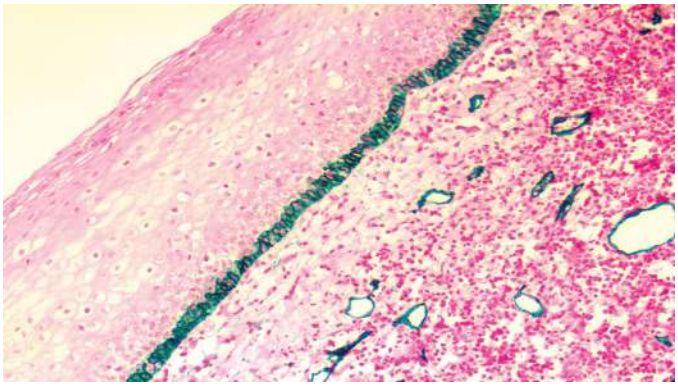
Podoplanin/D2-40

Clone: D2-40
Mouse Monoclonal

CE IVD



Inset: IHC of Podoplanin/D2-40 on a FFPE Tonsil 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
Resected tissue from dysgeminoma of the ovary.

Summary and Explanation
Podoplanin is a transmembrane mucoprotein (38 kDa) recognized by the D2-40 monoclonal antibody. Podoplanin is specifically expressed in the endothelium of lymphatic capillaries but not in the blood vasculature. In normal skin and kidney, podoplanin is co-localized with VEGFR3/FLT4, another marker for lymphatic endothelial cells.

Podoplanin is selectively expressed in lymphatic endothelium as well as Lymphangiomas, Kaposi's Sarcomas and in subset Angiosarcomas with probable lymphatic differentiation. Podoplanin has also been shown to be expressed in Epithelioid Mesotheliomas, Hemangioblastomas and Seminomas.

Antibody Type	Mouse Monoclonal	**Clone**	D2-40
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Rat, Mouse
Control	Tonsil, Lymph Node, Lymphangioma		
Application	Endothelial, Sarcoma & Soft Tissue, Mesothelioma, Lung Cancer		

Presentation
Anti-Podoplanin/D2-40 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6064	Predilute	Ready-to-Use	3.0 mL
BSB 6065	Predilute	Ready-to-Use	7.0 mL
BSB 6066	Predilute	Ready-to-Use	15.0 mL
BSB 6067	Concentrate	1:100-1:500	0.1 mL
BSB 6068	Concentrate	1:100-1:500	0.5 mL
BSB 6069	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9350-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 (NaN_3) 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 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 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. Ordonez N, Adv. Anat Pathol. 2006;Mar;13(2):83-8
2. Ordonez N, Hum Pathol. 2005;Apr;36(4):372-80
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6. Chu AY, et al. Mod Pathol Pathol. 2005;Jan;18(1):105-10
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.
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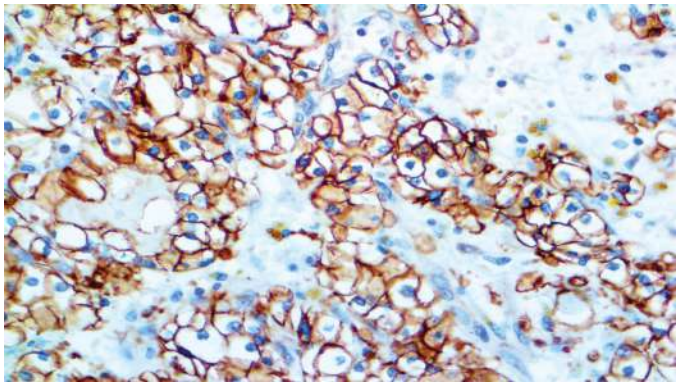
Carbonic Anhydrase 9

Clone: EP161
Rabbit Monoclonal

CE IVD



Inset: IHC of Carbonic Anhydrase 9 on a FFPE Kidney 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.

* The Carbonic Anhydrase 9 antibody, clone EP161, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues in the extracellular domain of the human Carbonic Anhydrase 9 protein

Summary and Explanation
Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization.

CA9 is a transmembrane protein and the only tumor-associated CA isoenzyme known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation. CA9 is considered to be one of the best cellular biomarkers of hypoxic regions in many solid tumors.

Antibody Type	Rabbit Monoclonal	**Clone**	EP161
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	Stomach, Gallbladder, Kidney Carcinoma, Cervix Carcinoma, Lung Carcinoma		
Application	Kidney & Urothelial Cancer, Lung Cancer, Colon Cancer		

Presentation
Anti-Carbonic Anhydrase 9 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6415	Predilute	Ready-to-Use	3.0 mL
BSB 6416	Predilute	Ready-to-Use	7.0 mL
BSB 6417	Predilute	Ready-to-Use	15.0 mL
BSB 6418	Concentrate	1:25-1:100	0.1 mL
BSB 6419	Concentrate	1:25-1:100	0.5 mL
BSB 6420	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9055-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 (NaN_3) 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 the 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 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. Opavsky R, et al. Genomics. 33(3):480-7.
2. Nakagawa Y, et al. Genomics. 53(1):118-9.
3. Kirkpatrick J, et al. Biomark Insights. 3:45-55.
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

Bio SB
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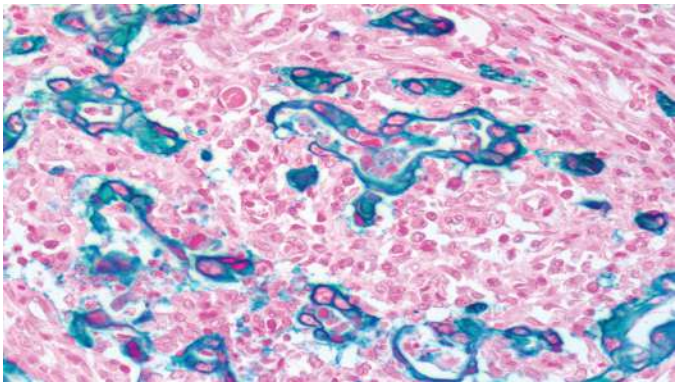
EpCAM\Epithelial Specific Antigen

CE IVD

Clone: Ber-EP4
Mouse Monoclonal



Inset: IHC of EpCAM/Epithelial Specific Antigen on a FFPE Colon Carcinoma Tissue

Antibody Type	Mouse Monoclonal	**Clone**	Ber-EP4
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Colon, Cervix, Salivary Gland, Pancreas, Breast, Thyroid, Liver, Adenocarcinoma		
Application	Mesothelioma, Lung Cancer, Colon & Gastrointestinal Cancer, Cytopathology		

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
MCF-7 human breast carcinoma cell line.

Summary and Explanation
Epithelial Cell Adhesion Molecule (EpCAM) or Epithelial Specific Antigen is a 40kD cell surface antigen that is broadly distributed in epithelial cells and displays a highly conserved expression in carcinomas. These glycoproteins are located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells, with the exception of most squamous epithelia, hepatocytes, renal proximal tubular cells, gastric parietal cells and myoepithelial cells. However, focal positivity may be seen in the basal layer of squamous cell epithelium of endoderm (e.g., palatine tonsils) and mesoderm (e.g., uterine cervix).

EpCAM expression has been reported to be a possible marker of early malignancy, with expression being increased in tumor cells, and de novo expression being seen in dysplastic squamous epithelium. Epithelial specific antigen has been known to play an important role as a tumor-cell marker in lymph nodes from patients with esophageal carcinoma. EpCAM can be used to distinguish among Basal Cell, Basosquamous Carcinomas and Squamous Cell Carcinomas of the skin.

Presentation
Anti-EpCAM/Epithelial Specific Antigen 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6275	Predilute	Ready-to-Use	3.0 mL
BSB 6276	Predilute	Ready-to-Use	7.0 mL
BSB 6277	Predilute	Ready-to-Use	15.0 mL
BSB 6278	Concentrate	1:25-1:100	0.1 mL
BSB 6279	Concentrate	1:25-1:100	0.5 mL
BSB 6280	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9169-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 (NaN_3) 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 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 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. Beer TW, et al. Histopathology. 2000;37:218-223
2. Carella R, et al. Am J Surg Pathol. 2001;25:43-50
3. Hosch S, et al. Cancer Res. 2000; 60:6836-6840
4. Latza U, et al. J Clin Pathol. 1990;43:213-219
5. 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

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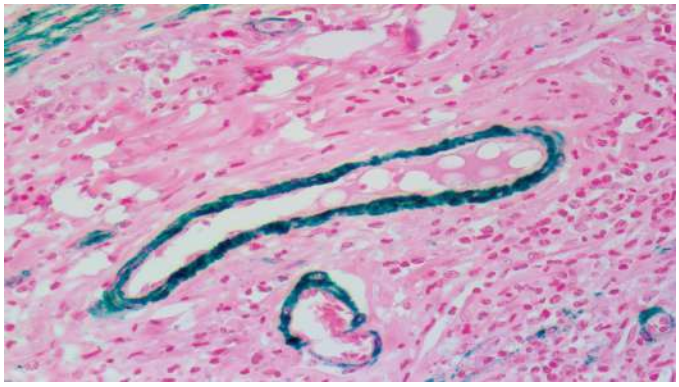
Myosin Smooth Muscle

Clone: BSB-17
Mouse Monoclonal

CE IVD



Inset: IHC of Myosin Smooth Muscle on a FFPE Appendix 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 corresponding to residues on the C-terminus of human myglobin protein.

Summary and Explanation
Myosins are a large family of motor proteins found in eukaryotic tissues. They are responsible for actin-based motility. Smooth Muscle Myosin, Heavy Chain is a cytoplasmic structural protein that is a major component of the contractile apparatus of the smooth muscle cells, as well as a myoepithelium-associated protein.

SMM-H24 is a mouse monoclonal antibody to Smooth Muscle Myosin, Heavy Chain that reacts with human visceral and vascular smooth muscle cells. The antibody also reacts with human myoepithelial cells. It is very helpful in distinguishing between benign sclerosing breast lesions and infiltrating Carcinomas in difficult
cases, since it strongly stains the myoepithelial layer in the benign lesions while it is negative in the infiltrating Carcinomas.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-17
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat
Control	Appendix, Intestine, Breast		
Application	Breast Cancer		

Presentation
Anti-Myosin Smooth Muscle 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5924	Predilute	Ready-to-Use	3.0 mL
BSB 5925	Predilute	Ready-to-Use	7.0 mL
BSB 5926	Predilute	Ready-to-Use	15.0 mL
BSB 5927	Concentrate	1:250-1:1000	0.1 mL
BSB 5928	Concentrate	1:250-1:1000	0.5 mL
BSB 5929	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9300-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 (NaN_3) 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 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 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. Nan Ping Wang, Bing C Wan, et al. Appl Immunohistochem. 5(3):141-151
2. Werling RW, et al. Am J Surg Pathol. 2003;Jan;27(1):82-90
3. Agoff SN, et al. Appl Immunohistochem Mol Morphol. 2001;Jun;9(2):164-169
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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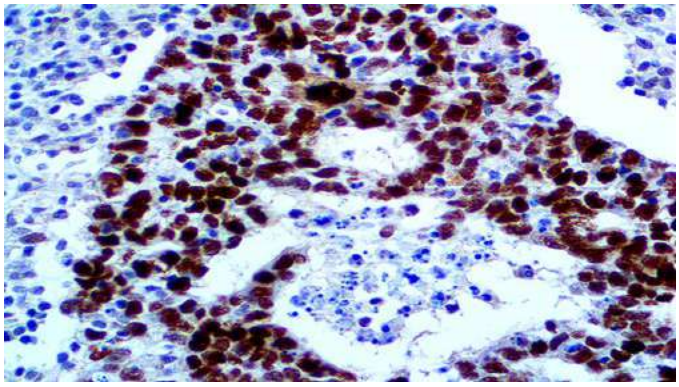
MDM2

Clone: BSB-64
Mouse Monoclonal

CE IVD



Inset: IHC of MDM2 on a FFPE Liposarcoma 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 against the N-terminus of the human MDM2 protein.

Summary and Explanation
MDM2 is a protein that in humans is encoded by the MDM2 gene. MDM2 is an important negative regulator of the p53 tumor suppressor. The MDM2 protein functions both as an E3 ubiquitin ligase that recognizes the N-terminal trans-activation domain (TAD) of the p53 tumor suppressor and an inhibitor of p53 transcriptional activation. The human homologue of this protein is sometimes called HDM2. Further supporting the role of MDM2 as an oncogene, several human tumor types have been shown to have increased levels of MDM2, including soft tissue sarcomas and osteosarcomas as well as breast tumors.

Well Differentiated Liposarcomas (WDLPS), Atypical Lipomatous Tumor/Well-Differentiated Liposarcoma (ALT-WDLPS) and Dedifferentiated Liposarcoma (DDLPS) may be difficult to distinguish from benign Adipose Tumors and from Poorly Differentiated Sarcomas, respectively. Genetically, they are characterized by amplification of MDM2 and CDK4 genes on chromosome 12q13-15. MDM2 and CDK4 protein overexpression have also been identified in these tumors. Detection of MDM2/CDK4 protein overexpression by IHC can be used to diagnose WDLPS and DDLPS. Considering a strong and diffuse immunostaining pattern in most of the neoplastic cells achieves the best results in identifying these tumors. Low-grade Osteosarcoma is a rare malignancy that may be subdivided into two main subgroups on the basis of location in relation to the bone cortex, that is, Parosteal Osteosarcoma and Low-grade Central Osteosarcoma. Their histological appearance is quite similar and characterized by spindle cell stroma with low-to-moderate cellularity and well-differentiated anastomosing bone trabeculae. Immunohistochemical expression of MDM2 and CDK4 is specific and provides sensitive markers for the diagnosis of Low-grade Osteosarcomas, helping to differentiate them from benign fibrous and fibro-osseous lesions, particularly in cases with atypical radio-clinical presentation and/or limited biopsy samples.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-64
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Mouse, Rat
Control	Testis, Tonsil, Cervix, Placenta, Liposarcoma, Testicular Cancer		
Application	Sarcoma & Soft Tissues, Breast Cancer		

Presentation
Anti-MDM2 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2978	Predilute	Ready-to-Use	3.0 mL
BSB 2979	Predilute	Ready-to-Use	7.0 mL
BSB 2980	Predilute	Ready-to-Use	15.0 mL
BSB 2981	Concentrate	1:25-1:100	0.1 mL
BSB 2982	Concentrate	1:25-1:100	0.5 mL
BSB 2983	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9271-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 (NaN_3) 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 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 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. Oliner JD, et al. Amplification of a gene encoding a p53-associated protein in human sarcomas. Nature 1992; 358 (6381): 80–3.
2. Wade M, et al. Hdmx modulates the outcome of p53 activation in human tumor cells. J. Biol. Chem. 2006; 281 (44): 33036–44.
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6. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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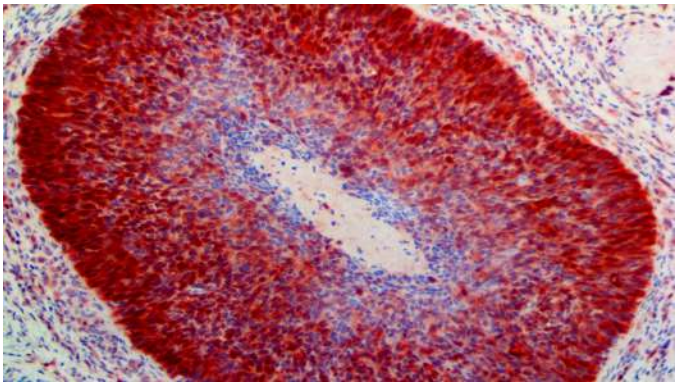
CDK4

Clone: EP180
Rabbit Monoclonal

CE IVD



Inset: IHC of CDK4 on a FFPE Anal 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
A synthetic peptide corresponding to human CDK4 protein.

Summary and Explanation
Cyclin-dependent kinase 4 (CDK4) is a member of the Ser/Thr protein kinase family. It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16 (INK4a).

Overexpression of CDK4 has been observed in many tumor types, including oral squamous cell carcinoma and cancers of the pancreatic (endocrine tumors), lung, breast and colon. The expression of CDK4 is associated with tumor progression.
Binh et al. reported a high expression of CDK4 (92%) in atypical lipomatous tumor, well-differentiated liposarcomas (ALT-WDLPS) and dedifferentiated liposarcomas (DDLPS). CDK4 is useful in differentiating ALT-WDLPS from benign adipose tumors and to separate DDLPS from poorly differentiated sarcomas.

Antibody Type	Rabbit Monoclonal	**Clone**	EP180
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Skin, Colon Carcinoma, Liposarcoma		
Application	Breast Cancer, Sarcoma & Soft Tissue		

Presentation
Anti-CDK4 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2461	Predilute	Ready-to-Use	3.0 mL
BSB 2462	Predilute	Ready-to-Use	7.0 mL
BSB 2463	Predilute	Ready-to-Use	15.0 mL
BSB 2464	Concentrate	1:25-1:100	0.1 mL
BSB 2465	Concentrate	1:25-1:100	0.5 mL
BSB 2466	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9115-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 (NaN_3) 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 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 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. Harbour JW, et al.: Cell 1999, 98:859-869
2. Wikman H, et al.: Genes Chromosomes Cancer 2005, 42:193-199
3. Poomsawat S, et al.: J Oral Pathol Med 2010, 39:793-799
4. Lindberg D, et al.: Neuroendocrinology 2007, 86:112-118
5. Wu A, et al.: J Transl Med 2011, 9:38
6. An HX, et al.: Am J Pathol 1999, 154:113-118
7. Zhao P, et al.: World J Gastroenterol 2003, 9:2202-2206
8. Binh MB, et al.: Am J Surg Pathol 2005, 29:1340-1347
9. 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

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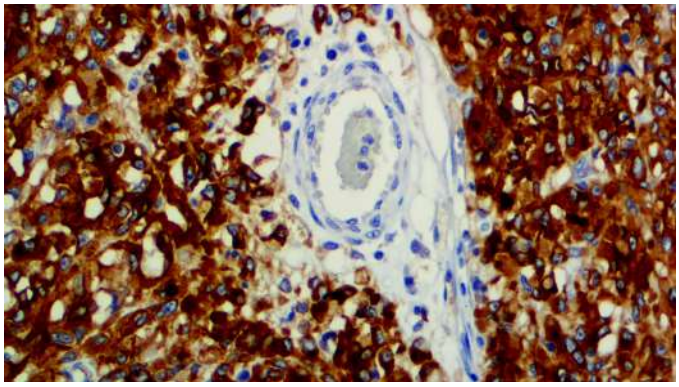
CD117

Clone: RM359
Rabbit Monoclonal

CE IVD



Inset: IHC of CD117 on a FFPE Gastrointestinal Stromal Tumor *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 peptide corresponding to the C-terminus of human CD117/c-Kit.

Summary and Explanation
CD117 is a tyrosine-kinase receptor for stem cell factor (SCF), also known as "steel factor" or "c-kit ligand". C-kit is a polypeptide that activates bone marrow precursors of a number of blood cells, but its receptor is also present in other cells. C-kit mutations in the interstitial cells of Cajal in the digestive tract are probably the key to Gastrointestinal Stromal Tumors (GISTs), and explain the efficacy of imatinib in the management of these rare malignancies.

CD117 is found on interstitial cells of Cajal, germ cells, bone marrow stem cells, melanocytes, breast epithelium and mast cells. This receptor is found on a wide variety of tumor cells (Follicular and Papillary Carcinoma of the Thyroid, Adenocarcinomas from endometrium, lung, ovary, pancreas, breast; Malignant Melanoma, Endodermal Sinus Tumor, Small-cell Carcinoma) but has been particularly useful in differentiating Gastrointestinal Stromal Tumors (GIST) from Kaposi's Sarcoma and tumors of smooth-muscle origin.

Antibody Type	Rabbit Monoclonal	**Clone**	RM359
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous, Nuclear	**Species Reactivity**	Human, Monkey, Predicted: Marmoset
Control	Skin, Testis, Breast, Gastrointestinal Stromal Tumor, Colon, Brain, Tonsil		
Application	Gastrointestinal Stromal Tumor, Cervical Cancer, Colon & Gastrointestinal Cancer, Germ Cell Tumor, Head & Neck Cancer, Kidney & Urothelial Cancer, Leukemia & Histiocytic, Sarcoma & Soft Tissue, Thyroid & Parathyroid Cancer, Undifferentiated Tumor		

Presentation
Anti-CD117 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3758-3	Predilute	Ready-to-Use	3.0 mL
BSB-3758-7	Predilute	Ready-to-Use	7.0 mL
BSB-3758-15	Predilute	Ready-to-Use	15.0 mL
BSB-3758-01	Concentrate	1:100-1:500	0.1 mL
BSB-3758-05	Concentrate	1:100-1:500	0.5 mL
BSB-3758-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9061-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 (NaN_3) 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 the 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 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. Sircar K, et al. AM J Surg Pathol. 1999;23(4):377-389
2. Miettinen M, et al. Am J Surg Pathol. 2000;24(2):211-222
3. Arber DA, Tamayo R, Weiss LM, Hum Pathol. 1998May;29(5):498-504
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.

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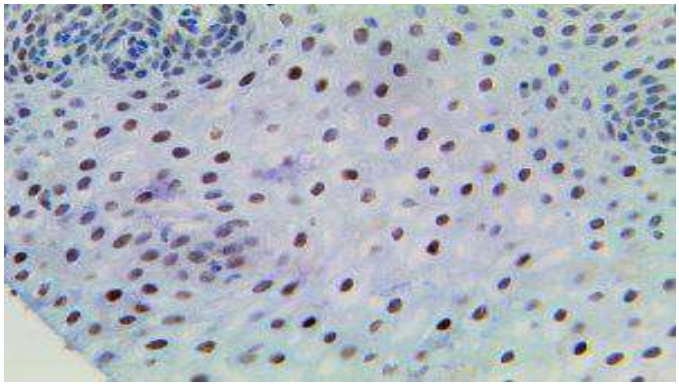
BCOR

Clone: BSB-128
Mouse Monoclonal

CE IVD



Inset: IHC of BCOR on a FFPE Cervix 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 residues of the N-terminus of the human BCOR protein.

Summary and Explanation
BCOR is located on chromosome X, in the Xp11.4 locus, and derives its name from its function as an interacting corepressor of BCL-6 that enhances BCL-6-mediated transcriptional repression. BCOR is a gene that encodes for an epigenetic regulator involved in the specification of cell differentiation and body structure development. Various BCOR aberrations, represent driver elements of various sarcomas such as Clear Cell Sarcoma of the Kidney, Primitive Mesenchymal Myxoid Tumor of infancy, small round blue cell sarcoma, endometrial stromal sarcoma and histologically heterogeneous CNS neoplasms group with similar genomic methylation patterns known as CNS-HGNET-BCOR. Furthermore, other BCOR alterations (often loss of function mutations) recur in a large variety of Mesenchymal, Epithelial, Neural and Hematological Tumors, suggesting a central role in cancer evolution.

Using next-generation sequencing, an increasing number of novel gene fusions and other abnormalities have emerged recently in the spectrum of EWSR1-negative Small Blue Round Cell Tumors (SBRCTs). A subset of SBRCTs harboring either BCOR gene fusions (BCOR-CCNB3, BCOR-MAML3), BCOR internal tandem duplications (ITD), or YWHAENUTM2B share a transcriptional signature including high BCOR mRNA expression, as well as similar histologic features. Furthermore, other tumors such as Clear Cell Sarcoma of Kidney (CCSK) and Primitive Myxoid Mesenchymal Tumor of Infancy (PMMTI) also demonstrate BCOR ITDs and high BCOR gene expression. Recent studies have found the IHC of BCOR to be a highly sensitive marker for SBRCTs and CCSKs with BCOR abnormalities and YWHAE rearrangements and can be used as a useful diagnostic marker in these various molecular subsets.

In another study, Strong diffuse nuclear BCOR staining (defined as >95% of tumor cells) was seen in the round cell component of 20 (100%) classic YWHAE-NUTM2 high-grade Endometrial Stromal Sarcomas and the 3 unusual high-grade Endometrial Stromal Sarcomas. It was concluded that BCOR immunohistochemical staining is a highly sensitive marker for YWHAE-NUTM2 high-grade Endometrial Stromal Sarcomas with both classic and unusual morphology and identifies a subset of high-grade Endometrial Stromal Sarcomas with BCOR alterations, including BCOR rearrangement and internal tandem duplication.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-128
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Testis, Cervix, Prostate, Transitional Cell Carcinoma, Angiosarcoma		
Application	Sarcoma & Soft Tissue		

Presentation
Anti-BCOR 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.

Catalog No.	*Antibody Type*	*Dilution*	*Volume*
BSB-2370-3	Tinto Predilute	Ready-to-Use	3.0 mL
BSB-2370-7	Tinto Predilute	Ready-to-Use	7.0 mL
BSB-2370-15	Tinto Predilute	Ready-to-Use	15.0 mL
BSB-2370-01	Concentrate	1:10 - 1:25	0.1 mL
BSB-2370-05	Concentrate	1:10 - 1:25	0.5 mL
BSB-2370-1	Concentrate	1:10 - 1:25	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9032-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 (NaN_3) 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
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 the 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 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. Huynh KD, et al. BCOR, a novel corepressor involved in BCL-6 repression. Genes Dev. 2000; 14(14), 1810–1823.
2. Astolfe A, et al. BCOR involvement in cancer. Epigenomics. 2019 May; 11(7): 835–855. Yu-Chien K, et al. BCOR Overexpression is a Highly Sensitive Marker in Round Cell Sarcomas with BCOR Genetic Abnormalities. Am J Surg Pathol. 2016 December; 40(12): 1670–1678.
3. Chiang, S., Lee, C., Stewart, C. et al. BCOR is a robust diagnostic immunohistochemical marker of genetically diverse high-grade endometrial stromal sarcoma, including tumors exhibiting variant morphology. Mod Pathol. 2017; 30, 1251–1261.
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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

Bio SB
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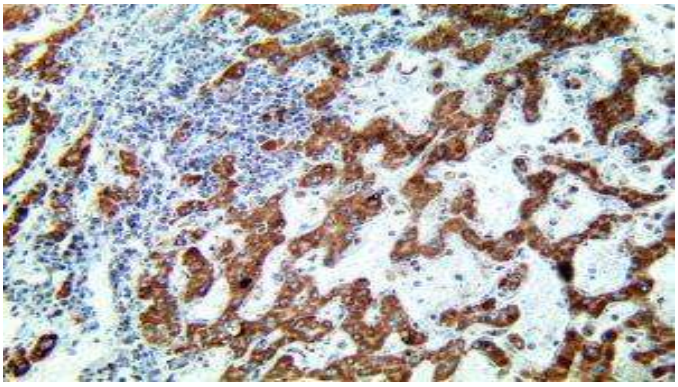
SDHB

Clone: BSB-131
Mouse Monoclonal

CE IVD



Inset: IHC of SDHB on a FFPE Hepatocellular Carcinoma Tissue

Antibody Type	Mouse Monoclonal	**Clone**	BSB-131
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human, Mouse, Rat
Control	Breast, Adrenal, Prostate, Kidney, Spleen, Tonsil, Breast Carcinoma, Hepatocellular Carcinoma, Lung Adenocarcinoma, Prostate Carcinoma, Papillary Thyroid Carcinoma		
Application	Neural & Neuroendocrine Cancer, Pituitary, Kidney & Urothelial Cancer		

Presentation
Anti-SDHB 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-2375-3	Predilute	Ready-to-Use	3.0 mL
BSB-2375-7	Predilute	Ready-to-Use	7.0 mL
BSB-2375-15	Predilute	Ready-to-Use	15.0 mL
BSB-2375-01	Concentrate	1:50-1:200	0.1 mL
BSB-2375-05	Concentrate	1:50-1:200	0.5 mL
BSB-2375-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9376-CS	5 slides

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

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 Recombinant full length of the human succinate dehydrogenase iron-sulfur protein.

Summary and Explanation
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial (SDHB) also known as iron-sulfur subunit of complex II (Ip) is a protein that in humans is encoded by the SDHB gene. The gene that codes for the SDHB protein is nuclear, not mitochondrial DNA. However, the expressed protein is located in the inner membrane of the mitochondria. Four subunits comprise the SDH protein complex: a flavochrome subunit (SDHA), an iron-sulfur protein (SDHB) and two membrane-bound subunits (SDHC and SDHD) anchored to the inner mitochondrial membrane. Mutation in this protein is associated with wide range of diseases such as Renal Cell Carcinoma, Paraganglioma, Gastrointestinal Stromal Tumors (GISTs), Pituitary Adenoma, and many others.

Mutations in the tumor suppressor genes SDHB, SDHC, and SDHD (or collectively SDHx) cause the inherited paraganglioma syndromes, characterized by pheochromocytomas and paragangliomas. The IHC for SDHB is negative in all SDH mutated paragangliomas regardless of whether the B, C or D subunit is involved. However, other tumors have been associated with SDHx mutations, such as Gastrointestinal Stromal Tumors, specifically in the context of Carney-Stratakis syndrome. It has been shown that SDHB immunohistochemistry is a reliable technique for the identification of pheochromocytomas and paragangliomas caused by SDHx mutations. It's been shown that Carney-Stratakis syndrome- and Carney-triad-associated GISTs are negative by immunohistochemistry for SDHB in contrast to KIT- or PDGFRA-mutated GISTs and a majority of sporadic GISTs, and it has been suggested that GISTs of epithelioid cell morphology are tested for SDHB immunohistochemically.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. "Entrez Gene: succinate dehydrogenase complex": https://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=6390
2. Au HC, et al. Structural organization of the gene encoding the human iron-sulfur subunit of succinate dehydrogenase". Gene. 1995; 159 (2): 249–53.
3. Neumann HP, et al. Distinct clinical features of paraganglioma syndromes associated with SDHB and SDHD gene mutations. JAMA. 2004; 292 (8): 943–51.
4. Brouwers FM, et al. High frequency of SDHB germline mutations in patients with malignant catecholamine-producing paragangliomas: implications for genetic testing. J. Clin. Endocrinol. Metab. 2006; 91 (11): 4505–9.
5. AJ Gill. Use of SDHB immunohistochemistry to identify germline mutations of SDH genes. Hered Cancer Clin Pract. 2012; 10(Suppl 2): A7.
6. Van Vranken, JG, et al. Protein-mediated assembly of succinate dehydrogenase and its cofactors. Crit Rev Biochem Mol Biol. 2015 Mar-Apr; 50(2): 168–180.
7. Gaal J et al, SDHB immunohistochemistry: a useful tool in the diagnosis of Carney-Stratakis and Carney triad gastrointestinal stromal tumors. Mod Pathol. 2011 Jan;24(1):147-51.
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

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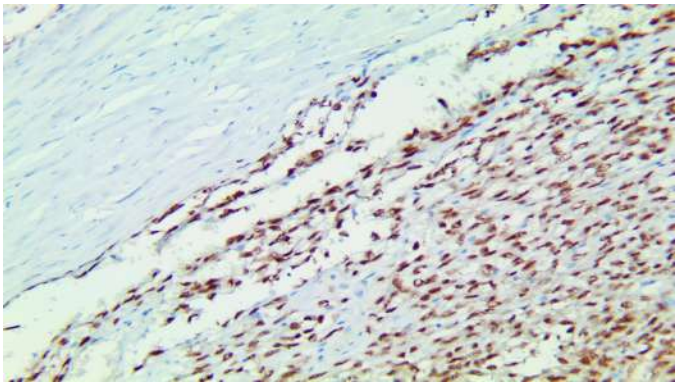
SS18-SSX

Clone: RBT-SS18-SSX
Rabbit Monoclonal

CE IVD



Inset: IHC of SS18-SSX on a FFPE Synovial Sarcoma 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 residues of human SS18-SSX fusion protein.

Summary and Explanation
Expression of SS18-SSX fusion protein is the hallmark of Synovial Sarcoma, a type of soft tissue sarcoma that accounts for 5-10% of all soft tissue sarcoma. SS18-SSX is a fusion oncoprotein created during chromosome translocation in which the SS18 gene on chromosome 18 is fused to the SSX1, SSX2, or SSX4 gene on the X chromosome. In normal cells, SS18 subunit and BAF47 subunit bind to the BAF (mSWI/SNF) complex which produces polycomb-mediated repression of SOX-2 and cessation of proliferation. SS18-SSX fusion renders the BAF chromatin remodeling complex aberrant through the addition of SSX to the SS18 subunit and the loss of the BAF47 subunit from the BAF (mSWI/SNF) complex. The altered complexes reverse the polycomb-mediated repression and result in the activation of SOX-2 and uncontrolled proliferation. Diagnosis of Synovial Sarcoma can be challenging due to histologic overlap with a range of other tumors, therefore, IHC is routinely used in differential diagnosis.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-SS18-SSX
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Synovial Sarcoma with the SS18-SSX Fusion		
Application	Sarcoma		

Presentation
Anti-SS18-SSX is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3796-3	Predilute	Ready-to-Use	3.0 mL
BSB-3796-7	Predilute	Ready-to-Use	7.0 mL
BSB-3796-15	Predilute	Ready-to-Use	15.0 mL
BSB-3796-01	Concentrate	1:50-1:200	0.1 mL
BSB-3796-05	Concentrate	1:50-1:200	0.5 mL
BSB-3796-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9434-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 (NaN_3) 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 the 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 the expiration date listed on the 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 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. Kadoch C, Crabtree GR. Reversible disruption of mSWI/SNF (BAF) complexes by the SS18-SSX oncogenic fusion in synovial sarcoma. Cell. 2013;153(1):71-85.
2. Baranov E, et al. A Novel SS18-SSX Fusion-specific Antibody for the Diagnosis of Synovial Sarcoma. Am J Surg Pathol. 2020;44(7):922-933.
3. McBride M, et al. The SS18-SSX Fusion Oncoprotein Hijacks BAF Complex Targeting and Function to Drive Synovial Sarcoma. Cancer Cell. 2018;33(6):1128-1141.e7.
4. Gazendam A, et al. Synovial Sarcoma: A Clinical Review. Curr Oncol. 2021;28(3):1909-1920.
5. 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

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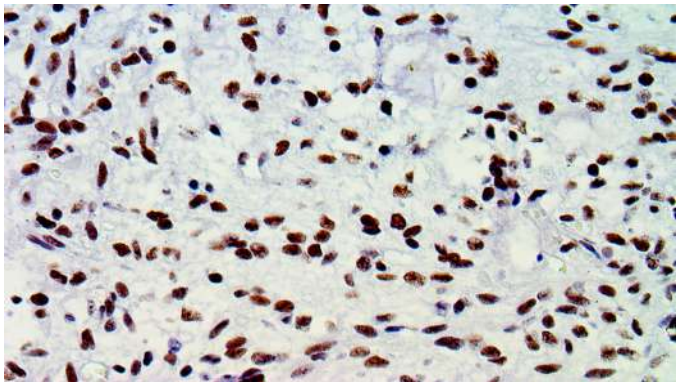
ATRX

Clone: RBT-ATRX
Rabbit Monoclonal

CE IVD



Inset: IHC of ATRX on a FFPE Astrocytoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-ATRX
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Breast, Colon, Fallopian Tube, Brain, Tonsil, Transitional Cell Carcinoma, T Cell Lymphoblastic Lymphoma		
Application	Neural & Neuroendocrine Cancer		

Presentation
Anti-ATRX is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3711-3	Predilute	Ready-to-Use	3.0 mL
BSB-3711-7	Predilute	Ready-to-Use	7.0 mL
BSB-3711-15	Predilute	Ready-to-Use	15.0 mL
BSB-3711-01	Concentrate	1:50-1:200	0.1 mL
BSB-3711-05	Concentrate	1:50-1:200	0.5 mL
BSB-3711-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9022-CS	5 slides

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

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
Recombinant human ATRX protein.

Summary and Explanation
α-thalassemia/mental retardation syndrome X-linked (*ATRX*) gene is located on chromosome Xq21.1. ATRX is involved in many fundamental cellular processes such as transcription, replication, DNA repair and recombination. Germline mutations of *ATRX* have been found to cause the complex genetic disorder called Alpha-Thalassemia mental retardation syndrome. Somatic mutations, deletions, and altered ATRX expression levels were found to be prevalent in several cancer types. A study reported the loss of ATRX expression was found to be a prognostic marker for chromosome instability in pancreatic neuroendocrine tumors. There is also evidence that highlights the role of ATRX as a biomarker in breast cancer in which ATRX expression was significantly associated with tumor grade.

Mutation/loss of ATRX expression has been described in anaplastic gliomas. A study explored the role of ATRX status in the molecular classification of anaplastic gliomas and its impact on survival. Loss of ATRX expression was detected in 45 % of anaplastic astrocytomas (AA), 27 % of anaplastic oligoastrocytomas (AOA) and 10 % of anaplastic oligodendrogliomas (AO). Survival analysis showed a marked separation of IDH mutant astrocytic tumors into two groups based on ATRX status: tumors with ATRX loss had a significantly better prognosis. Another recent study analyzed the use of ATRX, IDH and 1p/19q codeletion in a series of astrocytomas, oligodendrogliomas, oligoastrocytomas and glioblastomas and presented an algorithm based on stepwise analysis with initial immunohistochemistry for ATRX and IDH1-R132H followed by 1p/19q analysis, then by IDH sequencing, which reduces the number of molecular analyses and has a far better association with patient outcome.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 the 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 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.

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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. ATRX chromatin remodeler [Homo sapiens (human)]. https://www.ncbi.nlm.nih.gov/gene/546.
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Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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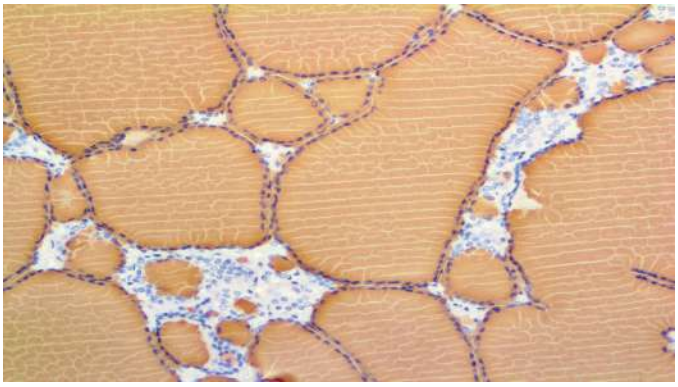
Thyroglobulin

Clone: BSB-49
Mouse Monoclonal

CE IVD



Inset: IHC of Thyroglobulin on a FFPE Thyroid 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
Recombinant human thyroglobulin protein.

Summary and Explanation
Thyroglobulin (Tg) is a 660 kDa, dimeric protein produced by and used entirely within the thyroid gland. Tg is used by the thyroid gland to produce the thyroid hormones thyroxine (T4) and triiodothyronine (T3). The active form of thyroxine, triiodothyronine, is produced both within the thyroid gland and on the periphery by 5'-deiodinase, which has been referred to as Tetraiodothyronine-5-deiodinase.

This antibody reacts with human thyroglobulin as demonstrated by a single band of immunoblotting in a lysate of human thyroid tissue. The vast majority of follicular carcinomas of the thyroid will give positive immunoreactivity for thyroglobulin, sometimes only focally. Poorly-differentiated Carcinomas of the Thyroid are frequently thyroglobulin negative. Adenocarcinomas of non-thyroid origin do not react with this antibody.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-49
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Cat
Control	Thyroid, Thyroid Carcinoma		
Application	Thyroid & Parathyroid Cancer, Head & Neck Cancer		

Presentation
Anti-Thyroglobulin 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5973	Predilute	Ready-to-Use	3.0 mL
BSB 5974	Predilute	Ready-to-Use	7.0 mL
BSB 5975	Predilute	Ready-to-Use	15.0 mL
BSB 5976	Concentrate	1:250-1:1000	0.1 mL
BSB 5977	Concentrate	1:250-1:1000	0.5 mL
BSB 5978	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9407-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 (NaN_3) 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 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 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. Bellet D, et al. J Clin Endocrin Metab. 1983;56:530-533
2. 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.
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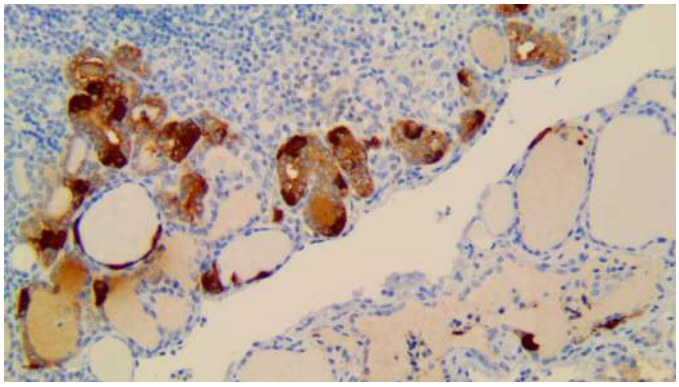
Calcitonin

Clone: RBT-Calcitonin
Rabbit Monoclonal

IVD



Inset: IHC of Calcitonin on a FFPE thyroid with Hashimoto's Thyroiditis.

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 corresponding to human calcitonin.

Summary and Explanation
Calcitonin is a 32-amino acid polypeptide hormone that is produced in humans primarily by C-cells located in the thyroid, and in many other animals in the ultimobranchial gland. It acts to reduce blood calcium (Ca2+), opposing the effects of parathyroid hormone (PTH). Calcitonin can also protect the skeleton from excessive loss of bone during periods of high calcium demand, such as lactation.

Immunohistochemical staining with Calcitonin antibody has proven to be an effective way of demonstrating the existence of Calcitonin-producing cells in the thyroid. Studies of Calcitonin have resulted in the identification of a wide spectrum of C-cell proliferative abnormalities; C-cell Hyperplasia and Medullary Thyroid Carcinomas stain positive for Calcitonin.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-Calcitonin
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Mouse, Rat
Control	Thyroid, Medullary Carcinoma of Thyroid		
Application	Neural & Neuroendocrine Cancer, Thyroid & Parathyroid Cancer, Head & Neck Cancer, Cytopathology		

Presentation
Anti-Calcitonin is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3814-3	Predilute	Ready-to-Use	3.0 mL
BSB-3814-7	Predilute	Ready-to-Use	7.0 mL
BSB-3814-15	Predilute	Ready-to-Use	15.0 mL
BSB-3814-01	Concentrate	1:100-1:500	0.1 mL
BSB-3814-05	Concentrate	1:100-1:500	0.5 mL
BSB-3814-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9051-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 (NaN_3) 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 the 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 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. Cappagli, V., Potes, et al. (2017). Calcitonin receptor expression in medullary thyroid carcinoma. PeerJ, 5, e3778.
2. Copp DH, et al. Evidence for calcitonin--a new hormone from the parathyroid that lowers blood calcium. Endocrinology. 1962;70:638-649.
3. Kameda Y, et al. Development and cytodifferentiation of C cell complexes in dog fetal thyroids. An immunohistochemical study using anti-calcitonin, anti-C-thyroglobulin and anti-19S thyroglobulin antisera. Cell Tissue Res. 1980;206(3):403-415.
4. Coombes RC, et al. Plasma-immunoreactive-calcitonin in patients with non-thyroid tumours. Lancet. 1974;1(7866):1080-1083.
5. Dayal Y, et al. Immunocytochemical localization of calcitonin-producing cells in a strumal carcinoid with amyloid stroma. Cancer. 1979;43(4):1331-1338.
6. DeLellis RA, et al. Calcitonin and carcinoembryonic antigen as tumor markers in medullary thyroid carcinoma. Am J Clin Pathol. 1978;70(4):587-594.
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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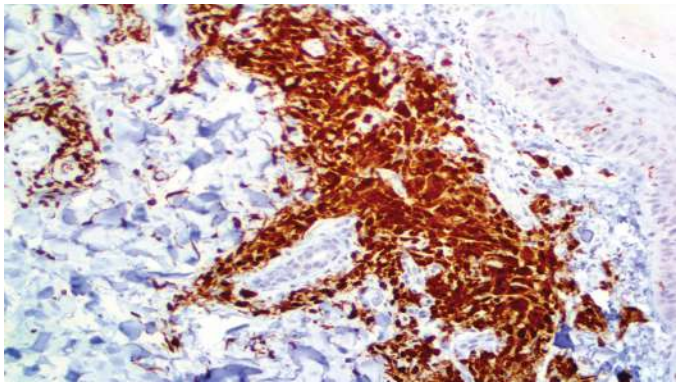
S-100

Clone: 4C4.9
Mouse Monoclonal

CE IVD



Inset: IHC of S-100 on a FFPE Malignant Melanoma 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
Purified bovine brain S100 protein

Summary and Explanation
S-100 protein is a type of low-molecular weight protein found in vertebrates, characterized by two calcium-binding sites of the helix-loop-helix conformation. S-100 is normally present in cells derived from the neural crest (Schwann cells, melanocytes and glial cells), chondrocytes, adipocytes, myoepithelial cells,
macrophages, Langerhans cells, dendritic cells, and keratinocytes. It may be present in some breast epithelial cells. Several members of the S-100 protein family are useful as markers for certain tumors and epidermal differentiation. The S-100 protein can be found in melanomas, 50% of Malignant Peripheral Nerve Sheath
Tumors, and Clear Cell Sarcomas.

Almost all Malignant Melanomas and cases of Histiocytosis X are positive for S-100 protein. Despite the fact that S-100 protein is a ubiquitous substance, its demonstration is of great value in the identification of several neoplasms, particularly Melanomas.

Antibody Type	Mouse Monoclonal	**Clone**	4C4.9
Isotype	IgG2a	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Nuclear	**Species Reactivity**	Human, Dog, Cat, Mouse, Rat, Cattle
Control	Melanoma		
Application	Carcinomas Of Unknown Primary Site, Melanoma & Skin Cancer, Gastrointestinal Stromal Tumor, Undifferentiated Tumor		

Presentation
Anti-S-100 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5917	Predilute	Ready-to-Use	3.0 mL
BSB 5918	Predilute	Ready-to-Use	7.0 mL
BSB 5919	Predilute	Ready-to-Use	15.0 mL
BSB 5920	Concentrate	1:100-1:500	0.1 mL
BSB 5921	Concentrate	1:100-1:500	0.5 mL
BSB 5922	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9366-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 (NaN_3) 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).
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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 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 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. Nakajima, et al. Ad J Surg Path. 1982;6:715-727
2. Kuhn, et al. Am J Clin Path. 1983;79:341-347
3. Monda L, et al. Hum Pathol. 1985;16:287-293
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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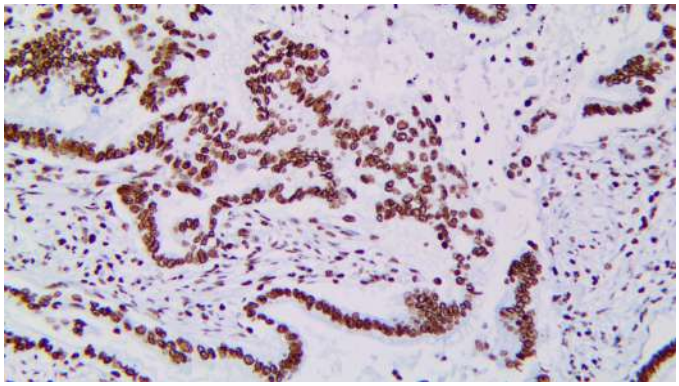
Tri-Methyl-Histone H3(Lys27)/H3K27Me3

Clone: RBT-H3K27Me3
Rabbit Monoclonal

CE IVD



Inset: IHC of Tri-Methyl-Histone H3(Lys27)/H3K27Me3 on a FFPE Pancreatic Adenocarcinoma 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 amino terminus of the tri-methylated Lys27 of the human Histone H3 protein.

Summary and Explanation
H3K27me3 is a downstream target of the polycomb repressive complex 2 (PRC2); PRC2 contains evolutionarily conserved proteins essential for regulating gene expression. Gain- or loss-of-function mutations in EZH2, a component of PRC2, have been found in a variety of cancer types such as Lymphoma, Melanoma, and Myelodysplastic Lymphoma; gain-of-function mutations can result in H3K27Me hyperactivity and chromatin dysregulation. KDMA6A and B demethylases can act on H3K27Me, and loss-of-function mutations in these proteins have been found in solid and non-solid tumors including types of Leukemia, Lymphoma, Melanoma, Renal and Bladder Cancers, Medulloblastoma and Prostate Cancer.
As a gene transcription repressor, H3K27me3 has diverse roles in embryogenesis and neoplasia. Loss of H3K27me3 occurs in a significant subset of Malignant Peripheral Nerve Sheath tumors. Other neoplasms may show loss of H3K27me3 expression, such as Meningioma, Radiation Associated Unclassified Sarcoma, Radiation-Associated Angiosarcoma, Dedifferentiated Chondrosarcoma, Melanoma and Merkel Cell Carcinoma, amongst others. Some tumors may exhibit heterogeneous H3K27me3 expression (mosaic pattern).

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-H3K27Me3
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Mouse, Rat, Monkey
Control	Normal and most tumor tissues contain intact nuclear H3K27me3 expression		
Application	Lymphoma, Leukemia/Histiocytic, Melanoma and Skin Cancer, Sarcoma & Soft Tissue, Kidney and Urothelial Cancer, and Neural & Neuroendocrine Cancer		

Presentation
Anti-Tri-Methyl-Histone H3(Lys27)/H3K27Me3 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3806-3	Predilute	Ready-to-Use	3.0 mL
BSB-3806-7	Predilute	Ready-to-Use	7.0 mL
BSB-3806-15	Predilute	Ready-to-Use	15.0 mL
BSB-3806-01	Concentrate	1:50-1:200	0.1 mL
BSB-3806-05	Concentrate	1:50-1:200	0.5 mL
BSB-3806-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9444-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 (NaN_3) 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 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 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. Laugesen A, et al. Role of the polycomb repressive complex 2 (PRC2) in transcriptional regulation and cancer. Cold Spring Harb Perspect Med. 2016;6.9: a026575
2. Das P, et al. Regulating methylation at H3K27: a trick or treat for cancer cell plasticity." Cancers. 2020;12.10: 2792.
3. Margueron R, et al. The Polycomb complex PRC2 and its mark in life. Nature. 2011;469.7330: 343-349.
4. Zhang M, et al. Somatic mutations of SUZ12 in malignant peripheral nerve sheath tumors. Nat Gen. 2014;46.11: 1170-1172.
5. Le Guellec S, et al. Loss of H3K27 trimethylation is not suitable for distinguishing malignant peripheral nerve sheath tumor from melanoma: a study of 387 cases including mimicking lesions. Modern Pathol. 2017;30.12: 1677-1687.

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	Storage Temperature Limites de température Zulässiger Temperaturbereich	Manufacturer Fabricant Hersteller	REF Catalog Number Référence du catalogue Bestellnummer
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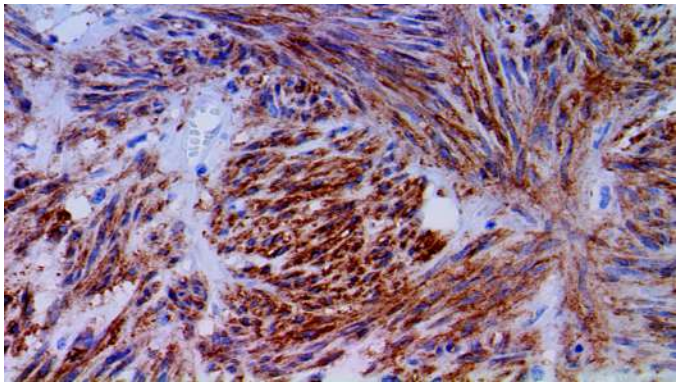
DOG-1

Clone: RBT-DOG1
Rabbit Monoclonal

CE IVD



Inset: IHC of DOG1 on a FFPE GIST 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-terminus of human DOG-1 protein.

Summary and Explanation
DOG1 (discovered on GIST 1), a cell-surface protein of unknown function, is expressed strongly on the cell surface of GISTs and is rarely expressed in other soft tissue tumors. Among GIST cases with c-Kit mutations, the DOG1 antibody identified 11% more cases than a c-Kit antibody.

DOG1 identifies the vast majority of both c-Kit negative and PDGFRA mutated GIST cases that may still benefit from imatinib mesylate (Gleevac), an inhibitor of the kit tyrosine kinase. In addition, DOG1 immunoreactivity is seen in fewer cases of mesenchymal and epithelial tumors, and melanomas when compared with c-Kit. The use of this highly-sensitive and specific novel marker should increase the accuracy of GIST diagnosis.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-DOG1
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	GIST		
Application	Gastrointestinal Stromal Tumor, Head & Neck Cancer, Sarcoma & Soft Tissue, Colon & Gastrointestinal Cancer		

Presentation
Anti-DOG1 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6268	Predilute	Ready-to-Use	3.0 mL
BSB 6269	Predilute	Ready-to-Use	7.0 mL
BSB 6270	Predilute	Ready-to-Use	15.0 mL
BSB 6271	Concentrate	1:100-1:500	0.1 mL
BSB 6272	Concentrate	1:100-1:500	0.5 mL
BSB 6273	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9163-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 (NaN_3) 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 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 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. Espinosa I, et al. Am J Surg Pathol. 2008;Feb;32(2):210-8.
2. Parfitt JR, et al. Histopathology. 2008;Jun;52(7):816-23.
3. West RB, et al. Am J Pathol. 2004;Jul;165(1):107-13.
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP — QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	Storage Temperature / Limites de température / Zulässiger Temperaturbereich	Manufacturer / Fabricant / Hersteller	REF — Catalog Number / Référence du catalogue / Bestellnummer
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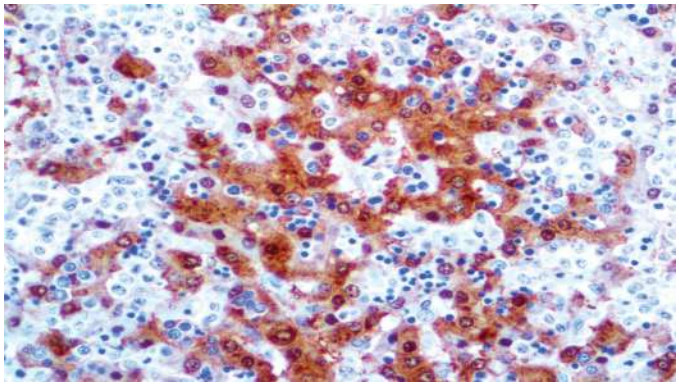
Arginase-1

Clone: EP261
Rabbit Monoclonal

CE IVD



Inset: IHC of Arginase-1 on a FFPE Hepatocellular 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.

* The Anti-Arginase-1, clone EP261, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues of human ARG-1 protein.

Summary and Explanation
Arginase-1 is the catalyst for the fifth and final step in the urea cycle, which is a series of biochemical reactions in mammals during which the body disposes of harmful ammonia. Arginase-1 works to convert L-arginine into L-ornithine and urea. Arginise-1 is located primarily in the cytoplasm of the liver. Arginase-1 consists of three tetramers, and the enzyme requires a two-molecule metal cluster of manganese in order to maintain proper function. These Mn2+ ions coordinate with water, orienting and stabilizing the molecule and allowing water to act as a nucelophile and attack L-arginine, hydrolyzing it into ornithine and urea.

Arginase-1 is abundantly expressed in the liver and it represents a sensitive and specific marker of benign and malignant hepatocytes. In sections of normal liver, anti-arginase 1 produces strong, diffuse cytoplasmic reactivity in all hepatocytes throughout the lobule. In a small percentage of cases, patchy nuclear reactivity is also evident in hepatocytes along with the strong cytoplasmic reactivity. Hepatocellular carcinoma usually shows higher protein expression of ARG1 than normal liver cells.

Antibody Type	Rabbit Monoclonal	**Clone**	EP261
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Nuclear	**Species Reactivity**	Human
Control	Liver, Hepatocellular Carcinoma		
Application	Liver Cancer, Carcinoma of Unknown Primary Site		

Presentation
Anti-Arginase-1 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2447	Predilute	Ready-to-Use	3.0 mL
BSB 2448	Predilute	Ready-to-Use	7.0 mL
BSB 2449	Predilute	Ready-to-Use	15.0 mL
BSB 2450	Concentrate	1:50-1:200	0.1 mL
BSB 2451	Concentrate	1:50-1:200	0.5 mL
BSB 2452	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9019-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 (NaN_3) 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.
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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 the 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 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. Wu G, et al. Biochemical Journal. 1998 Nov.; 336(1):1-17
2. Di Costanzo L, et al. Archives of biochemistry and biophysics. 2007 Sept.; 465(1):82-9
3. Multhaupt H, et al. Histochemistry. 1987; 87:465-70
4. Sekine S, et al. J Pathol. 2009: 219:365-72
5. 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

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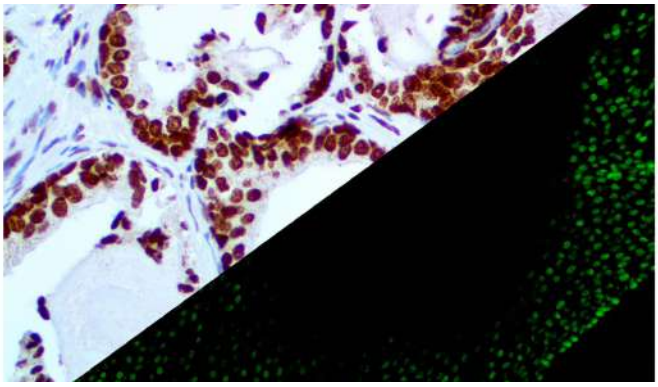
p40

Clone: ZR8
Rabbit Monoclonal

CE IVD



Inset: IHC of p40 on a FFPE Prostate Tissue; IF on a Tonsil Tissue

Intended Use
For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical and Immunofluorescence 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 corresponding to the N-terminal domain of human p63.

Summary and Explanation
p40 is an antibody that recognizes ΔNp63-a p63 isoform and it is highly specific for squamous/basal cells. It may be a valuable marker in detecting Squamous Cell Carcinoma where p63 is currently used. It recognizes the shortest variant of p53. p40 is superior in specificity to p63 because it does not label lung adenocarcinomas like p63 does, which eliminates the potential of misinterpreting a positive adenocarcinoma as a squamous cell carcinoma.

Antibody Type	Rabbit Monoclonal	**Clone**	ZR8
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Normal Prostate, Breast, Skin		
Application	Lung Cancer, Prostate Cancer ,Breast Cancer ,Melanoma & Skin Cancer, Carcinoma Of Unknown Primary Site		

Presentation
Anti-p40 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2070	Predilute	Ready-to-Use	3.0 mL
BSB 2071	Predilute	Ready-to-Use	7.0 mL
BSB 2072	Predilute	Ready-to-Use	15.0 mL
BSB 2073	Concentrate	1:50-1:200	0.1 mL
BSB 2074	Concentrate	1:50-1:200	0.5 mL
BSB 2075	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9324-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 (NaN_3) 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 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 on acetone-fixed frozen sections and acetone-fixed cell preparations.

IHC & IF Protocol
Preparation for Frozen Tissues Procedure
1. Embed the specimen in OCT inside the cryostat.
2. Cut sections at 5 microns.
3. Place the section on a positively charged glass slide.
4. Air dry for 30-60 minutes.
5. Fix in acetone 100% for 2-10 minutes.
6. Air dry for another 10 minutes.

Preparation for FFPE Tissues 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 IF\IHC, perform antibody incubation at ambient temperature. For automated IF\IHC methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IF\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

Abbreviated AmpliDetector Plus FITC IF Protocol

Step	Incubation Time
Rinse slides in IF wash buffer	
Drain and wipe excess IF wash buffer off slide	
Peroxidase Blocker	5 min.
Apply Antibody	15 min.
Apply Mouse/Rabbit Link	15 min.
Apply HRP Label	15 min.
Keep FITC reagents and slides in the dark	
Apply AmpliDetector FITC solution	15 min.
Coverslip with IF mounting medium	

Mounting Protocol IHC:
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.

Mounting Protocol IF:
1. Bring FluoroMounter or FluoroMounter with DAPI to room temperature.
2. Rinse slides with distilled or deionized water.
3. Remove excess water from slides before laying them flat in the dark.
4. Turn the media bottle upside down before opening the dropper bottle.
5. Apply 1-3 drops of FluoroMounter to each slide making sure the specimen is covered.
6. Incubate 3-5 minutes at room temperature in the dark.
7. Coverslip.
8. Observe under a fluorescent microscope using the appropriate filters.
9. The slides are recommended to be stored at 2-8 ºC in the dark.

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. Pelosi G, et al. J Thorac Oncol. 2012 Feb; 7(2):281-90
2. Bishop JA, et al. Mod Pathol. 2011; 173(10):1038
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

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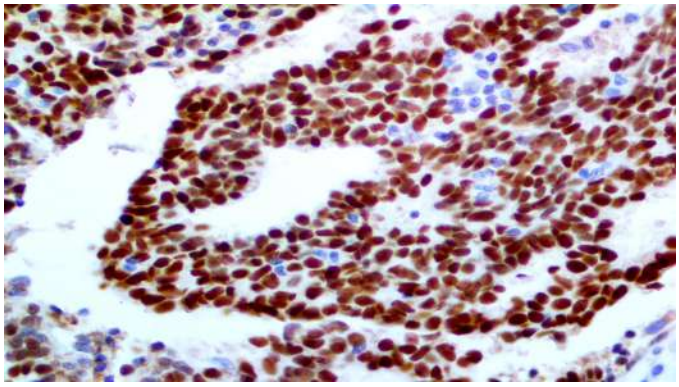
GATA3

Clone: L50-823
Mouse Monoclonal

CE IVD



Inset: IHC of GATA3 on a FFPE Breast 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
Peptide between trans-activation and DNA-binding domains of GATA-3.

Summary and Explanation
Trans-acting T-cell-specific transcription factor, GATA-3 is a protein that in humans is encoded by the GATA3 gene. GATA-3 b regulates luminal epithelial cell differentiation in the mammary gland, is an important regulator of T cell development and plays an important role in endothelial cell biology.

GATA-3 is one of the three genes mutated in >10% of breast cancers. Nuclear expression of GATA-3 in breast cancer is considered a marker of luminal cancer in ER+ cancer and luminal androgen responsive cancer in ER-/AR+ tumors. It is highly coexpressed with FOXA1 and serves as a negative predictor of basal subtype and HER-2 and is also considered a strong predictor of taxane and platinum salts insensitivity.

GATA3 expression is found in urothelial carcinoma, especially in invasive and high grade tumors. Therefore, anti-GATA3 can be used in a panel of antibodies for diagnosis of unknown primary carcinoma, when carcinomas of the breast or bladder are a possibility. Studies have also shown the utility of GATA-3 in differentiating urothelial carcinoma from prostate adenocarcinoma and squamous cell carcinomas of the uterine, cervix, anus and lung.

Antibody Type	Mouse Monoclonal	**Clone**	L50-823
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted: Rat
Control	Breast Carcinoma		
Application	Breast Cancer, Carcinomas of Unknown Primary Site		

Presentation
Anti-GATA3 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2670	Predilute	Ready-to-Use	3.0 mL
BSB 2671	Predilute	Ready-to-Use	7.0 mL
BSB 2672	Predilute	Ready-to-Use	15.0 mL
BSB 2673	Concentrate	1:50-1:200	0.1 mL
BSB 2674	Concentrate	1:50-1:200	0.5 mL
BSB 2675	Concentrate	1:50-1:200	1.0 mL
BSB-2675-T7	TintoStainer Plus	Ready-to-Use	7.0 mL
BSB-2675-T30	TintoStainer Plus	Ready-to-Use	30.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9192-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 (NaN_3) 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 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 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

Autostainer Protocols

Autostainer	Retrieval		IHC Protocol
	Solution	Time	
TintoStainer Plus	EDTA	30	**PolyDetector Plus**
Leica Bond Max	ER2	20	**IHC Protocol F**

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. Yamashita M, et al. . Essential role of GATA3 for the maintenance of type 2 helper T (Th2) cytokine production and chromatin remodeling at the Th2 cytokine gene loci. 2004; J Biol Chem 279 (26): 26983–90.
2. Wilson BJ, Giguere V. Meta-analysis of human cancer microarrays reveals that GATA3 is integral to the estrogen receptor alpha pathway. Mol Cancer 7: 49.
3. Dydensborg AB, et al. GATA3 inhibits breast cancer growth and pulmonary breast cancer metastasis. Oncogene 2009; 28 (29): 2634–42.
4. Sanga S, et al. Gene expression meta-analysis supports existence of molecular apocrine breast cancer with a role for androgen receptor and implies interactions with ErbB family. BMC Medical Genomics 2009; 2: 59.
5. Higgins JP, et al. Placental S100 (S100P) and GATA3: Markers for transitional epithelium and urothelial carcinoma discovered by complementary DNA microarray. Am J Surg Pathol. 2007;31:673–680.
6. Liu, H, et al. Immunohistochemical evaluation of GATA3 expression in tumors and normal tissues: a useful immunomarker for breast and urothelial carcinomas. Am J Clin Pathol 2012;138:57-64.
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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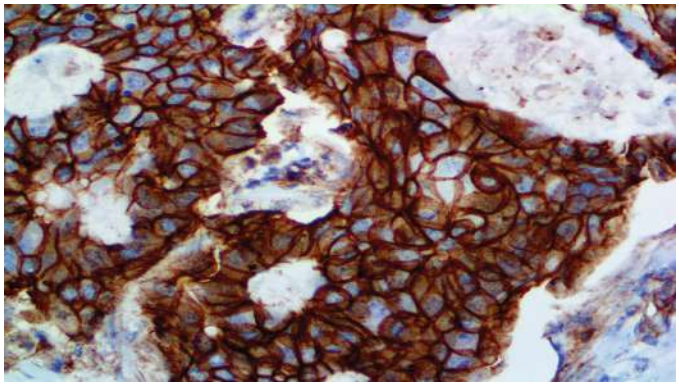
p120 Catenin

Clone: EP66
Rabbit Monoclonal

CE IVD



Inset: IHC of p120 Catenin on a FFPE Breast Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP66
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Breast, Testis, Kidney, Prostate, Pancreas, Tonsil, Salivary Gland, Skin, Cervix, Colon, Malignant, Melanoma, Transitional Cell Carcinoma, Breast Lobular
Control	Breast, Testis, Kidney, Prostate, Pancreas, Tonsil, Salivary Gland, Skin, Cervix, Colon, Malignant Melanoma, Transitional Cell Carcinoma, Breast Lobular Carcinoma		
Application	Breast Cancer		

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.

* The p120 Catenin antibody, clone EP66, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to residues in human p120 Catenin protein.

Summary and Explanation
p120 Catenin is a member of the Armadillo protein family, which function in adhesion between cells and signal transduction. The association of catenins to cadherins produces a complex which is linked to the actin filament network, and which seems to be important for cadherins cell-adhesion properties. Cytoplasmic accumulation of p120 Catenin has been observed in lung cancer, pancreatic cancer, gastric cancer and colon cancers and is associated with poor prognosis in colon cancer patients.

In breast lobular neoplasia, anti-p120 Catenin shows a diffuse cytoplasmic immunostaining pattern, while breast ductal neoplasia retains the membrane immunostaining pattern. p120 Catenin can be useful in differentiating between lobular carcinoma and ductal carcinoma of the breast, and in identifying early lesions of lobular neoplasia.

Presentation
Anti-p120 Catenin is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2077	Predilute	Ready-to-Use	3.0 mL
BSB 2078	Predilute	Ready-to-Use	7.0 mL
BSB 2079	Predilute	Ready-to-Use	15.0 mL
BSB 2080	Concentrate	1:100-1:500	0.1 mL
BSB 2081	Concentrate	1:100-1:500	0.5 mL
BSB 2082	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9319-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 (NaN_3) 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 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 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. Kersebilck A, et al. Genomics. 1998; 50:129-46
2. Aho S, et al. J Cell Sci. 2002; 115:1391-1402
3. Chetty R, et al. Am J Clin Pathol. 2008; 130:71-6
4. Bellovin DI, et al. Cancer Res. 2005; 65:10938-45
5. 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

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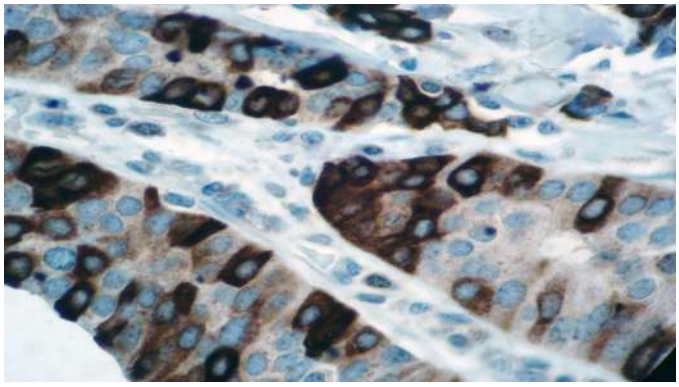
Mammaglobin

Clone: EP249
Rabbit Monoclonal

RUO



Inset: IHC of Mammaglobin on a FFPE Breast Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP249
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Mouse, Monkey, Predicted: Rat
Control	Breast, Skin, Fallopian Tube, Breast Carcinoma		
Application	Breast Cancer, Carcinomas Of Unknown Primary Site		

Presentation
Anti-Mammaglobin is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5743	Predilute	Ready-to-Use	3.0 mL
BSB 5744	Predilute	Ready-to-Use	7.0 mL
BSB 5745	Predilute	Ready-to-Use	15.0 mL
BSB 5746	Concentrate	1:25-1:100	0.1 mL
BSB 5747	Concentrate	1:25-1:100	0.5 mL
BSB 5748	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9265-CS	5 slides

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

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.

* The Mammaglobin antibody, clone EP249, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to residues of human Mammaglobin A protein.

Summary and Explanation
Mammaglobin is a gene that encodes a 10 kDa glycoprotein. In humans, expression of the gene is limited to the adult mammary gland. A correlation between increased expression of the gene and Breast Cancer has been reported. Mammaglobin mRNA is present in high levels in human Breast Cancer cell lines and primary

Breast Cancers. High levels of mRNA have been detected in normal human sweat glands as well, but are absent in Sweat Gland Tumors.

Anti-Mammaglobin (EP249) has been shown to be effective in detecting up to 85% of Breast Carcinomas using immunohistochemical techniques. Studies investigating the detection of mRNA by RT PCR from circulating carcinoma cells in the peripheral blood of Breast Cancer patients have shown that mammaglobin is a highly-specific marker and correlates with several prognostic factors, such as lymph node involvement.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. Leygue E, et al. J Pathol. 1989;(1),pp28-33
2. Watson MA, et al. Cancer Research. 1999;Jul;59,3028-3031
3. Jae-Ho Han, et al. Arch Pathol Lab Med. 2003;127:1330-1334
4. Sjodin A, et al. J Invest Dermatol. 2003;Aug.v.121(2);428-429
5. 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	REF Catalog Number Référence du catalogue Bestellnummer
Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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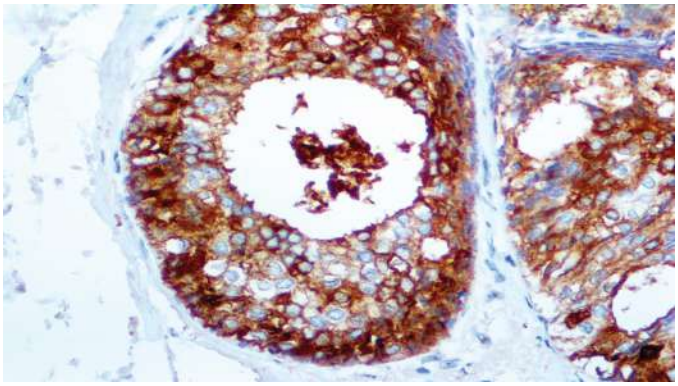
GCDFP-15

Clone: 23A3
Mouse Monoclonal

CE IVD



Inset: IHC of GCDFP-15 on a FFPE Breast 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
Recombinant protein encoding the excreted domain of human GCDFP15.

Summary and Explanation
Gross Cystic Disease is a common premenopausal disorder in which gross cysts are the predominant pathologic lesion. It is characterized by production of a fluid secretion which accumulates in the breast cysts. Gross Cystic Disease fluid is a pathologic secretion from breast composed of several glycoproteins, including a unique 15 kDa monomer protein, GCDFP-15. The cells within the body that produce GCDFP-15 appear to be restricted primarily to those with apocrine function such as breast cysts and in apocrine glands in the axilla, vulva, eyelid, and ear canal.

Studies have found GCDFP-15 to be a highly specific and sensitive marker for breast cancer. Approximately 70% of breast carcinomas stain positive with antibody to GCDFP-15. In contrast, Colorectal Carcinomas, as well as Mesotheliomas, do not stain with this antibody. Lung Adenocarcinomas rarely stain with this antibody.

Antibody Type	Mouse Monoclonal	**Clone**	23A3
Isotype	IgG2a	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Rat
Control	Breast, Salivary Gland, Sweat Glands In Skin, Breast Carcinoma		
Application	Breast Cancer, Germ Cell Tumor		

Presentation
Anti-GCDFP-15 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5554	Predilute	Ready-to-Use	3.0 mL
BSB 5555	Predilute	Ready-to-Use	7.0 mL
BSB 5556	Predilute	Ready-to-Use	15.0 mL
BSB 5557	Concentrate	1:100-1:500	0.1 mL
BSB 5558	Concentrate	1:100-1:500	0.5 mL
BSB 5559	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9193-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 (NaN_3) 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 the 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 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 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. Mazoujian G, Mrgolis R, Am J Dermatopathol. 1988;Feb;10(1):28-35
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3. Mazoujian G, Pinkus GS, Davis S, Haagensen DE Jr, Am J Pathol. 1983;Feb;110(2):105-12
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5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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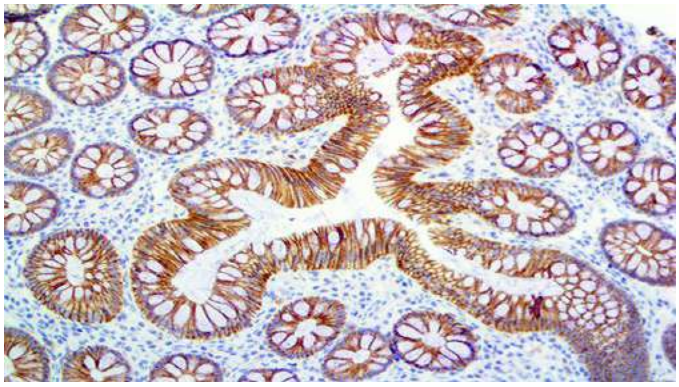
E-Cadherin

Clone: EP6
Rabbit Monoclonal

CE IVD



Inset: IHC of E-Cadherin on a FFPE Colon Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP6
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Membranous	**Species Reactivity**	Human
Control	Breast, Colon, Cervix, Pancreas, Lung, Ovary, GI Tract Adenocarcinoma, Breast Carcinoma		
Application	Breast Cancer, Kidney & Urothelial Cancer, Mesothelioma		

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.

* The E-Cadherin antibody, clone EP6, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues in the 5th cadherin domain of human E-Cadherin protein.

Summary and Explanation
Cadherins are a class of transmembrane proteins. They play an important role in cell adhesion by ensuring cells within tissues are bound together. E-Cadherin is an adhesion protein that is expressed in cells of epithelial lineage. It stains positively in glandular epithelium as well as Adenocarcinomas of the lung and G.I. tract, and ovary. E-Cadherin has been useful in distinguishing Adenocarcinoma from Mesothelioma. It has also been shown to be positive in some Thyroid Carcinomas. It can be used to differentiate Ductal Carcinomas (positive for E-Cadherin) from Lobular Breast Carcinomas.

Loss of E-Cadherin function or expression has been implicated in cancer progression and metastasis. E-Cadherin downregulation decreases the strength of cellular adhesion within a tissue, resulting in an increase in cellular motility. This may then allow cancer cells to cross the basement membrane and invade surrounding tissues. Loss of E-Cadherin expression has been suggested as a poor prognostic sign in Breast Carcinoma and Non-Small Cell Lung Carcinomas.

Presentation
Anti-E-Cadherin is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5463	Predilute	Ready-to-Use	3.0 mL
BSB 5464	Predilute	Ready-to-Use	7.0 mL
BSB 5465	Predilute	Ready-to-Use	15.0 mL
BSB 5466	Concentrate	1:100-1:500	0.1 mL
BSB 5467	Concentrate	1:100-1:500	0.5 mL
BSB 5468	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9164-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 (NaN_3) 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 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 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

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2. Schoss eld K, et al. Cancer. 1997;Oct 25;81(5):293-8
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6. Peralta Soler A, et al. Hum Pathol. 1997;Jun;28(6):734-9
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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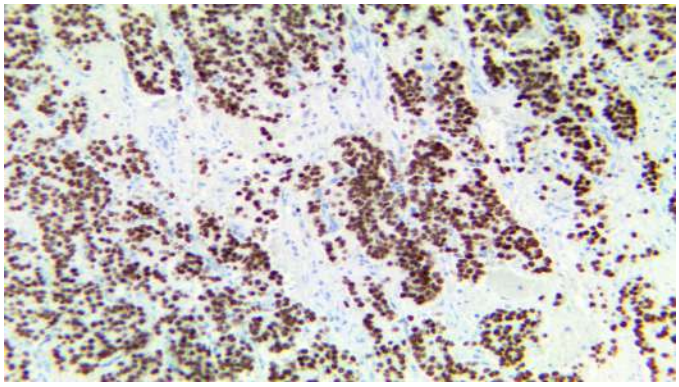
PHOX2B

Clone: EP312
Rabbit Monoclonal

CE IVD



Inset: IHC of PHOX2B on a FFPE Neuroblastoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP312
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Mouse
Control	Adrenal, Neuroblastoma		
Application	Neural & Neuroendocrine Cancer		

Presentation
Anti-PHOX2B is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3609	Predilute	Ready-to-Use	3.0 mL
BSB 3610	Predilute	Ready-to-Use	7.0 mL
BSB 3611	Predilute	Ready-to-Use	15.0 mL
BSB 3612	Concentrate	1:25-1:100	0.1 mL
BSB 3613	Concentrate	1:25-1:100	0.5 mL
BSB 3614	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9345-CS	5 slides

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

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.

* The PHOX2B antibody, clone EP312, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues of human PHOX2B protein.

Summary and Explanation
Paired-like homeobox 2b (PHOX2B), also known as neuroblastoma Phox (NBPhox), is a protein that in humans is encoded by the PHOX2B gene located on chromosome 4. It is expressed exclusively in the nervous system, in most neurons that control the viscera (cardiovascular, digestive and respiratory systems). It is also required for neuron differentiation. Mutations in human PHOX2B cause a rare disease of the autonomic nervous system (dysautonomia): congenital central hypoventilation syndrome (associated with respiratory arrests during sleep and, occasionally, wakefulness), Hirschsprung's disease (partial agenesis of the enteric nervous system), ROHHAD, and tumors of the sympathetic ganglia.

PHOX2 gene over-expression in Neuroblastoma (NB) tumors and cell lines suggests these genes may be widely involved in Neuroblastoma development through either a direct mechanism of up-regulation or a failure in maintaining proper transcript levels after embryonic development. The PHOX2B expression has been observed in all peripheral neuroblastic tumors, paragangliomas, and pheochromocytomas tested but in no other pediatric tumors among the 388 cases studied by expression microarray and the 109 cases studied by immunohistochemical analysis. PHOX2B and CD57 have been found to be useful markers of Neuroblastoma. PHOX2B is specific for Neuroblastoma in its differential diagnosis with other small round cell tumors, and its nuclear staining may be helpful for accurate bone marrow tumor quantification.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. Longo L, et al. PHOX2A and PHOX2B genes are highly co-expressed in human neuroblastoma. Int J Oncol. 2008 Nov;33(5):985-91.
2. Bielle, F, et al. PHOX2B Immunolabeling: A Novel Tool for the Diagnosis of Undifferentiated Neuroblastomas Among Childhood Small Round Blue-cell Tumors. Am J Surgical Pathol 2012; (36) 8: 1141–1149.
3. Hata JL, eta l. Diagnostic utility of PHOX2B in primary and treated neuroblastoma and in neuroblastoma metastatic to the bone marrow. Arch Pathol Lab Med. 2015 Apr;139(4):543-6.
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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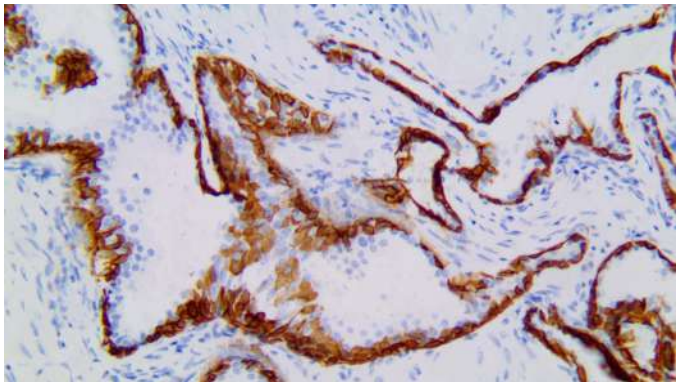
E-mail: sales@biosb.com | Website: www.biosb.com

Cytokeratin 5 & 6

Clone: RM341
Rabbit Monoclonal

IVD



Inset: IHC of Cytokeratin 5 & 6 on a FFPE Prostate 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 peptide corresponding to the C-terminus of Human Cytokeratin 5&6.

Summary and Explanation
Cytokeratin 5 (58 kDa) is a high-molecular weight, basic type of cytokeratin expressed in basal, intermediate and superficial-cell layers of stratified epithelia as well as transitional epithelia, complex epithelia, mesothelial cells and Mesothelioma. Cytokeratin 6 (56 kDa) is also a high-molecular weight, basic type cytokeratin expressed by proliferating squamous epithelium often paired with Cytokeratin 16.
CK 5& 6 are positively seen in nearly 100% of Malignant Mesotheliomas and is rarely seen in Lung Adenocarcinomas. CK 5&6 can positively be seen in undifferentiated Large-cell Carcinoma as well as Squamous Carcinoma.

Cytokeratin 5&6 (CK5/CK6) antibodies are used to identify basal cells or myoepithelial cells for ruling out invasive breast and prostate cancer.

Antibody Type	Rabbit Monoclonal	**Clone**	RM341
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Mesothelioma, Prostate		
Application	Mesothelioma, Lung Cancer, Prostate Cancer, Breast Cancer, Melanoma & Skin Cancer		

Presentation
Anti-Cytokeratin 5 & 6 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3822-3	Predilute	Ready-to-Use	3.0 mL
BSB-3822-7	Predilute	Ready-to-Use	7.0 mL
BSB-3822-15	Predilute	Ready-to-Use	15.0 mL
BSB-3822-01	Concentrate	1:50-1:200	0.1 mL
BSB-3822-05	Concentrate	1:50-1:200	0.5 mL
BSB-3822-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9145-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 (NaN_3) 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 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 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. Ordonez NG, Am J Surg Pathol. Value of cytokeratin 5/6 immunostaining in distinguishing epithelial mesothelioma of the pleura from lung adenocarcinoma 1998;22(10):1215-1221
2. Ordonez NG, Am J Surg Pathol. Role of immunohistochemistry in distinguishing epithelial peritoneal mesotheliomas from peritoneal and ovarian serous carcinomas 1998 22(10):1203-1214
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Symbol Key/Légende des symboles/Erläuterung der Symbole

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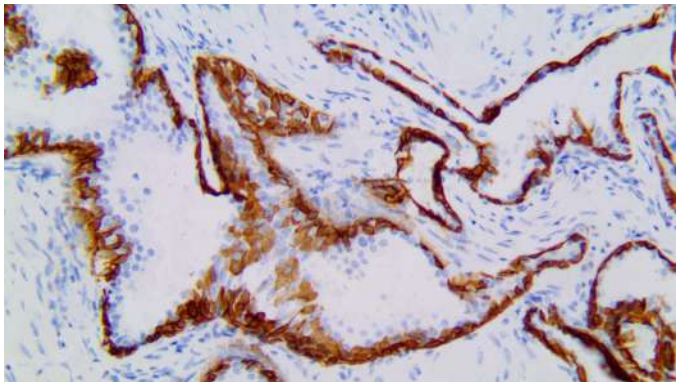
Cytokeratin 5 & 6

Clone: RM341
Rabbit Monoclonal

IVD



Inset: IHC of Cytokeratin 5 & 6 on a FFPE Prostate 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 peptide corresponding to the C-terminus of Human Cytokeratin 5&6.

Summary and Explanation
Cytokeratin 5 (58 kDa) is a high-molecular weight, basic type of cytokeratin expressed in basal, intermediate and superficial-cell layers of stratified epithelia as well as transitional epithelia, complex epithelia, mesothelial cells and Mesothelioma. Cytokeratin 6 (56 kDa) is also a high-molecular weight, basic type cytokeratin expressed by proliferating squamous epithelium often paired with Cytokeratin 16.
CK 5& 6 are positively seen in nearly 100% of Malignant Mesotheliomas and is rarely seen in Lung Adenocarcinomas. CK 5&6 can positively be seen in undifferentiated Large-cell Carcinoma as well as Squamous Carcinoma.

Cytokeratin 5&6 (CK5/CK6) antibodies are used to identify basal cells or myoepithelial cells for ruling out invasive breast and prostate cancer.

Antibody Type	Rabbit Monoclonal	**Clone**	RM341
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Mesothelioma, Prostate		
Application	Mesothelioma, Lung Cancer, Prostate Cancer, Breast Cancer, Melanoma & Skin Cancer		

Presentation
Anti-Cytokeratin 5 & 6 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3822-3	Predilute	Ready-to-Use	3.0 mL
BSB-3822-7	Predilute	Ready-to-Use	7.0 mL
BSB-3822-15	Predilute	Ready-to-Use	15.0 mL
BSB-3822-01	Concentrate	1:50-1:200	0.1 mL
BSB-3822-05	Concentrate	1:50-1:200	0.5 mL
BSB-3822-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9145-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 (NaN_3) 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 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 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. Ordonez NG, Am J Surg Pathol. Value of cytokeratin 5/6 immunostaining in distinguishing epithelial mesothelioma of the pleura from lung adenocarcinoma 1998;22(10):1215-1221
2. Ordonez NG, Am J Surg Pathol. Role of immunohistochemistry in distinguishing epithelial peritoneal mesotheliomas from peritoneal and ovarian serous carcinomas 1998 22(10):1203-1214
3. Cury PM, Butcher DW, et al. Mod Pathol. Value of the mesothelium-associated antibodies thrombomodulin, cytokeratin 5/6, calretinin, and CD44H in distinguishing epithelioid pleural mesothelioma from adenocarcinoma metastatic to the pleura 2000;13(2):107-12
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.
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Symbol Key/Légende des symboles/Erläuterung der Symbole

	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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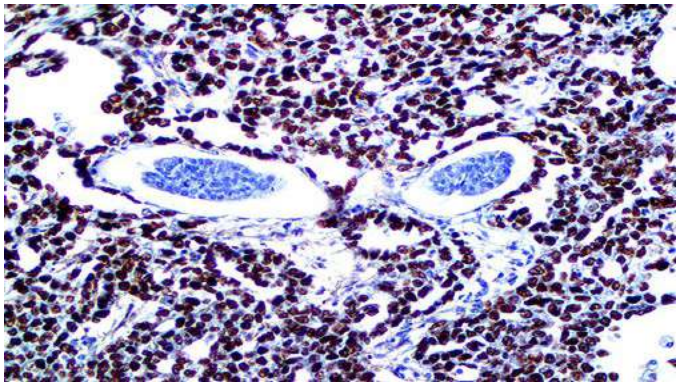
SALL4

Clone: EP299
Rabbit Monoclonal

CE IVD



Inset: IHC of SALL4 on a FFPE Testicular Cancer Metastasis to Liver 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 corresponding to residues of human SALL4 protein.

Summary and Explanation
Spalt-like protein 4 (SALL4) is a transcription factor encoded by a member of the Spalt-like (SALL) gene family, SALL4. There are four human SALL proteins (SALL1, 2, 3, and 4) with structural homology and playing diverse roles in embryonic development, kidney function, and cancer. SALL4 expression is low to undetectable in most adult tissues with the exception of germ cells and human blood progenitor cells. In normal testicular tissue, positive, weak SALL4 staining is observed in spermatogonia. In addition, a few (<5%) primary spermatocytes show dot-like weak SALL4 staining. Secondary spermatocytes, spermatids, spermatozoa, and Sertoli cells are negative for anti-SALL4. Leydig cells, rete testis, epididymis, spermatic cord fibroblasts, blood vessels, and hematopoietic cells are negative for SALL4.

SALL4 is reactivated and misregulated in various cancer, such as acute myeloid leukemia (AML), B-cell acute lymphocytic leukemia (B-ALL), germ cell tumors, gastric cancer, breast cancer, hepatocellular carcinoma (HCC), lung cancer, and glioma. In many of these cancers, SALL4 expression has been compared in tumor cells to the normal tissue counterpart, e.g. it is expressed in nearly half of primary human endometrial cancer samples, but not in normal or hyperplastic endometrial tissue samples. Often, SALL4 expression is correlated with worse survival and poor prognosis such as in HCC, or with metastasis such as in endometrial cancer, colorectal carcinoma, and esophageal squamous cell carcinoma. It is unclear how SALL4 expression is deregulated in malignant cells, but DNA hypomethylation in its intron 1 region has been observed in B-ALL. In solid tumors such as germ cell tumors, SALL4 protein expression has become a standard diagnostic biomarker. SALL4 demonstrates 100% sensitivity and stains more than 90% tumor cells in all intratubular germ cell neoplasia, seminomas, dysgerminomas, embryonal carcinomas, and yolk sac tumor (both pediatric and postpubertal). SALL4 is also positive in most cases of teratoma and the mononucleated trophoblastic cells in choriocarcinomas. Most non-testicular tumors from various organs and sites are negative for SALL4, though an occasional carcinoma or sarcoma may show weak SALL4 staining in less than 25% of tumor cells.

Antibody Type	Rabbit Monoclonal	**Clone**	EP299
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Testis, Seminoma, Yolk Sac Tumor		
Application	Ovarian Cancer, Testicular Cancer, Liver Cancer, Breast Cancer, Endometrial and Genital Cancer, Colon and Gastrointestinal Cancer, Germ Cell Tumors, Undifferentiated Tumor		

Presentation
Anti-SALL4 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3190	Predilute	Ready-to-Use	3.0 mL
BSB 3191	Predilute	Ready-to-Use	7.0 mL
BSB 3192	Predilute	Ready-to-Use	15.0 mL
BSB 3193	Concentrate	1:10-1:50	0.1 mL
BSB 3194	Concentrate	1:10-1:50	0.5 mL
BSB 3195	Concentrate	1:10-1:50	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9373-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 (NaN_3) 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 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 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

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10. 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

EC REP QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT Lot Number / Code du lot / Chargenbezeichnung

Bio SB BIOSCIENCE FOR THE WORLD
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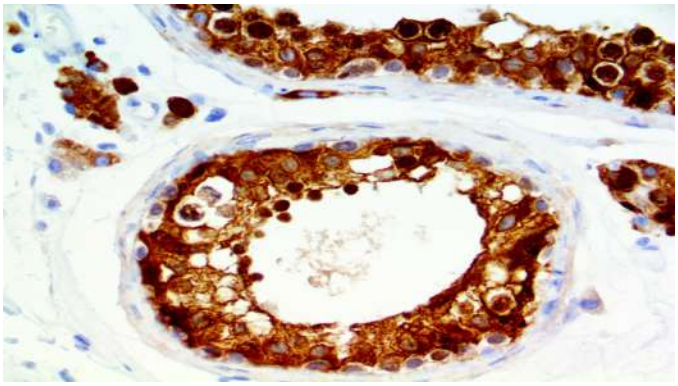
Inhibin alpha

Clone: EP378
Rabbit Monoclonal

CE IVD



Inset: IHC of Inhibin alpha on a FFPE Tonsil 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 residues of human Inhibin alpha chain protein.

Summary and Explanation
Inhibins are peptide hormones produced by the granulosa cells in female follicles and by Sertoli cells in the male seminiferous tubules. They are selectively expressed by cells of sex-cord stromal derivation and inhibit the secretion of follitropin by the pituitary gland. Inhibin contains an alpha and beta subunit linked by disulfide bonds. Two forms of inhibin differ in their beta subunits (A or B), while their alpha subunits are identical. Inhibin belongs to the transforming growth factor-beta (TGF-beta) family.

Anti-Inhibin Alpha has demonstrated utility in differentiation between Adrenal Cortical Tumors and Renal Cell Carcinoma. Sex-Cord Stromal Tumors of the Ovary as well as Trophoblastic Tumors also demonstrate cytoplasmic positivity with this antibody.

Antibody Type	Rabbit Monoclonal	**Clone**	EP378
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Testis, Seminoma, Testicular Carcinoma		
Application	Endometrial & Genital Cancer, Ovarian Cancer, Kidney & Urothelial Cancer		

Presentation
Anti-Inhibin alpha is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3356	Predilute	Ready-to-Use	3.0 mL
BSB 3357	Predilute	Ready-to-Use	7.0 mL
BSB 3358	Predilute	Ready-to-Use	15.0 mL
BSB 3359	Concentrate	1:50-1:200	0.1 mL
BSB 3360	Concentrate	1:50-1:200	0.5 mL
BSB 3361	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9243-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 (NaN_3) 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 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 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. McCluggage WG, et al. Am J Surg Pathol. 1998;May;22(5):615-9
2. Kommoss F, et al. Mod Pathol. 1998;Jul;11(7):656-64
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5. Pelkey TJ, et al. Hum Pathol. 1999;Jan;30(1):26-31
6. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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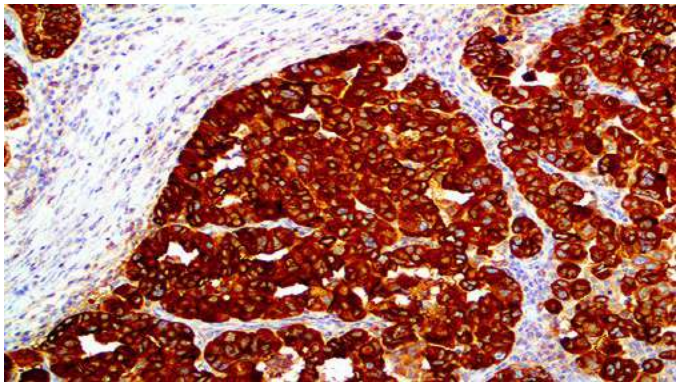
EMA

Clone: E29
Mouse Monoclonal

CE IVD



Inset: IHC of EMA on a FFPE Ovarian Adenocarcinoma 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
Purified human milk fat globule membrane preparation.

Summary and Explanation
Epithelial Membrane Antigen (EMA) antibody is a mucin-like glycoprotein, shown to be useful as a pan-epithelial marker for detecting early metastatic loci of carcinoma in the bone marrow or liver. It stains normal and neoplastic cells from various tissues, including mammary epithelium, sweat glands and squamous epithelium.

Hepatocellular Carcinoma, Adrenal Carcinoma and Embryonal Carcinomas are consistently EMA negative, so keratin positivity with negative EMA favors one of these tumors. EMA is frequently positive in meningioma, which can be useful when distinguishing it from other intracranial neoplasms. The absence of EMA can also be of value since negative EMA is characteristic of some tumors including Adrenal Carcinoma, Seminomas, Paraganglioma and Hepatoma.

Antibody Type	Mouse Monoclonal	**Clone**	E29
Isotype	IgG2a/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Control**	Breast, Skin, Colon, Kidney, Cervix
	Species Reactivity	Human	

Presentation
Anti-EMA 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5477	Predilute	Ready-to-Use	3.0 mL
BSB 5478	Predilute	Ready-to-Use	7.0 mL
BSB 5479	Predilute	Ready-to-Use	15.0 mL
BSB 5480	Concentrate	1:250-1:1000	0.1 mL
BSB 5481	Concentrate	1:250-1:1000	0.5 mL
BSB 5482	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9168-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 (NaN_3) 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 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 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

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2. Pincus GS, et al. Am J Clin Pathol. 1986;77:269-277
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4. Redding WH, et al. Lancet. 1983;1271-1274
5. Cordell J, et al. Brit J Cancer. 1985;52:347-354
6. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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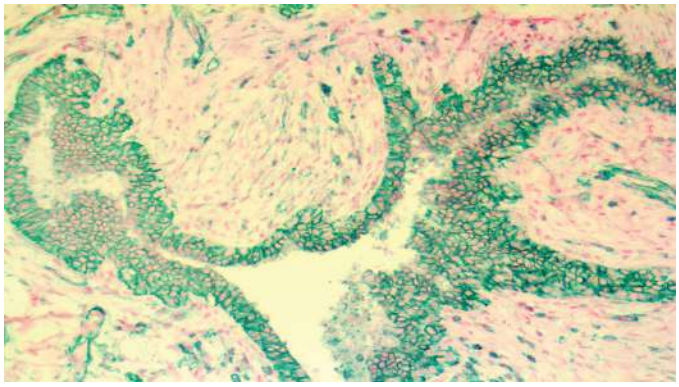
CD44

Clone: BSB-12
Mouse Monoclonal

CE IVD



Inset: IHC of CD44 on a FFPE Breast Fibroadenoma Tissue

Antibody Type	Mouse Monoclonal	**Clone**	BSB-12
Isotype	IgG2a	**Reactivity**	Paraffin, Frozen
Localization	Membranous	**Species Reactivity**	Human
Control	Urothelium, Tonsil, Kidney, Breast, Liver, Skin, Prostate, Thymus, Spleen, Lymph Node, Esophageal Carcinoma		
Application	Kidney & Urothelial Cancer, Breast Cancer, Endometrial & Genital Cancer, Colon & Gastrointestinal Cancer, Melanoma & Skin Cancer		

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
Recombinant human CD44 protein.

Summary and Explanation
The CD44 protein is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. CD44 is also known as Homing-cell adhesion molecule (H-CAM) and Phagocytic glycoprotein-1 (PgP-1). A specialized sialofucosylated glycoform of CD44 called HCELL is found natively on human hematopoietic stem cells and functions as a "bone-homing receptor", directing migration of human hematopoietic stem cells and mesenchymal stem cells to bone marrow.

This protein participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis. Transcripts for this gene undergo complex alternative splicing that results in many functionally distinct isoforms; however, the full-length nature of some of these
variants has not been determined. Splice variants of CD44 on Colon Cancer cells display the HCELL glycoform, which mediates binding to vascular E-selectin under hemodynamic flow conditions, a critical step in Colon Cancer metastasis. In addition, variations in CD44 are reported as cell surface markers for some breast and
prostate cancer stem cells and have been seen as an indicator of increased survival time in Epithelial Ovarian Cancer patients.

Presentation
Anti-CD44 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6233	Predilute	Ready-to-Use	3.0 mL
BSB 6234	Predilute	Ready-to-Use	7.0 mL
BSB 6235	Predilute	Ready-to-Use	15.0 mL
BSB 6236	Concentrate	1:250-1:1000	0.1 mL
BSB 6237	Concentrate	1:250-1:1000	0.5 mL
BSB 6238	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9094-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 (NaN_3) 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 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 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

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2. Sillanpää S, et al. Clin Cancer Res. 2003;9(14):5318-24
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5. 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

EC REP — QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT — Lot Number / Code du lot / Chargenbezeichnung

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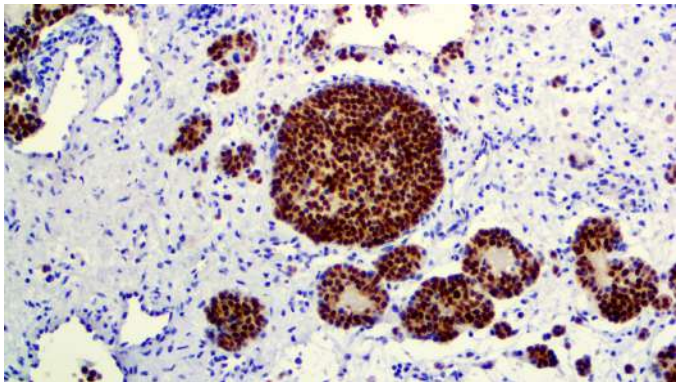
NeuN

Clone: RBT-NeuN
Rabbit Monoclonal

CE IVD



Inset: IHC of NeuN on a FFPE Brain Tumor Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-NeuN
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Brain		
Application	Neural & Neuroendocrine Cancer		

Presentation
Anti-NeuN is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3781-3	Predilute	Ready-to-Use	3.0 mL
BSB-3781-7	Predilute	Ready-to-Use	7.0 mL
BSB-3781-15	Predilute	Ready-to-Use	15.0 mL
BSB-3781-01	Concentrate	1:100-1:500	0.1 mL
BSB-3781-05	Concentrate	1:100-1:500	0.5 mL
BSB-3781-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9304-CS	5 slides

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

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
Recombinant NeuN human protein

Summary and Explanation
NeuN (Feminizing Locus on X-3, Fox-3, or Hexaribonucleotide Binding Protein-3) is a neuron-specific protein that is present in most central nervous system (CNS) and peripheral nervous system (PNS) neuronal cell types. NeuN protein distributions are restricted to neuronal nuclei, perikarya and some proximal neuronal processes in both fetal and adult brains. However, some neurons fail to be recognized by NeuN at all ages, such as inner nuclear layer retinal cells, Cajal-Retzius cells, Purkinje cells, inferior olivary and dentate nucleus neurons, and sympathetic ganglion cells.

NeuN is widely used to label neurons since the vast majority of neurons are strongly positive. NeuN immunoreactivity becomes obvious as neurons mature, typically after they have downregulated expression of doublecortin, a marker seen in the earliest stages of neuronal development. NeuN was detected in most of the amyloid bodies, is considered a marker of neuronal differentiation in brain tumor and has been found in all major subtypes except pilocytic astrocytoma. NeuN IHC have demonstrated NeuN immunoreactivity in 56% of epithelial neuroendocrine carcinomas (ENEC) (19/34): 4 of 7 (57%) grade 1 ENECs (Carcinoid), 4 of 5 (90%) grade 2 ENECs (atypical carcinoid), and 11 of 22 (50%) grade 3 ENECs (small and large cell neuroendocrine carcinoma).

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 the 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 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. Mullen RJ, Buck CR, Smith AM. NeuN, a neuronal specific nuclear protein in vertebrates. Development. 1992;116(1):201-211.
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6. 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

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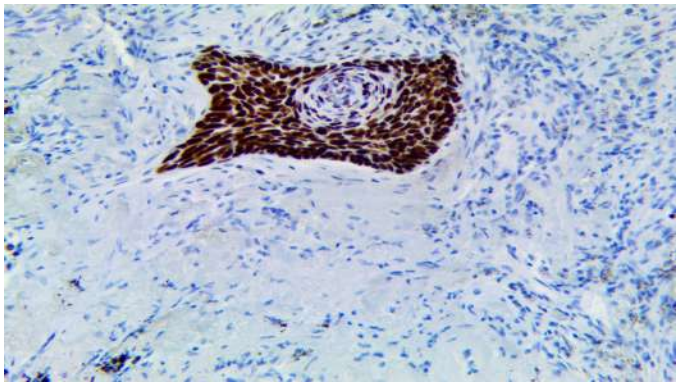
HMGA2

Clone: EP398
Rabbit Monoclonal

CE IVD



Inset: IHC of HMGA2 on a FFPE Lung Squamous Cell Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP398
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Cervix, Lung Squamous Cell Carcinoma, Papillary Thyroid Carcinoma		
Application	Thyroid and Parathyroid Cancer, Pituitary Cancer, Breast Cancer, Lung Cancer, Colon and Gastrointestinal Cancer, Ovarian Cancer, Liver Cancer, Gallbladder and Pancreatic Cancer, Sarcoma and Soft Tissue Tumor		

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.

* The HMGA2 antibody, clone EP398, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to residues of the human HMGA2 protein.

Summary and Explanation
High-mobility group AT-hook 2 (HMGA2) belongs to the architectural transcription factor HMGA family and is encoded by the HMGA2 gene. HMGA2 plays a role in chromosomal organization and transcriptional regulation. HMGA2 has three basic DNA-binding domains (AT-hooks) that bind to AT rich regions of nuclear DNA and alter the structure of DNA to promote the assembly of protein complexes that regulate transcription. With few exceptions, HMGA2 is expressed in humans only during early development, and is reduced to undetectable levels of transcription in adult tissues.
Elevated expression of HMGA2 is found in a variety of human cancers, correlates with metastasis and poor prognosis for patients. High HMGA2 expression have been reported in Pituitary Adenoma, Thyroid Carcinoma, Triple-Negative Breast Carcinoma, Breast Carcinoma, Lung Adenocarcinoma, Colorectal Carcinoma, Hepatoblastoma, Pancreatic Adenocarcinoma, Conventional and Intramuscular Lipoma, Liposarcoma, Gastric, and Ovarian Tumors and other conditions.. HMGA2 is expressed in most conventional and intramuscular lipomas and can aid in differentiating between Lipomas from dedifferentiated Liposarcomas and distinguishing areas of tumor from normal adipose tissue. In Mesenchymal tumors, HMGA2 is expressed in benign Fibrous Histiocytoma, Nodular Fasciitis, and Vulvovaginal Angiomyxoma.. In Thyroid Carcinomas, upregulation of HMGA2 can distinguish between benign and malignant Follicular neoplasias.
HMGA2 overexpression is often found in Non-Small Cell Lung Cancer and could be used as a marker for Lung carcinomas.

Presentation
Anti-HMGA2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3729-3	Predilute	Ready-to-Use	3.0 mL
BSB-3729-7	Predilute	Ready-to-Use	7.0 mL
BSB-3729-15	Predilute	Ready-to-Use	15.0 mL
BSB-3729-01	Concentrate	1:50-1:200	0.1 mL
BSB-3729-05	Concentrate	1:50-1:200	0.5 mL
BSB-3729-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9223-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 (NaN_3) 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 the 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 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. Fedele M, Battista S, Kenyon L, et al. Overexpression of the HMGA2 gene in transgenic mice leads to the onset of pituitary adenomas. Oncogene. 2002;21(20):3190-3198. doi:10.1038/sj.onc.1205428
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4. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices 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

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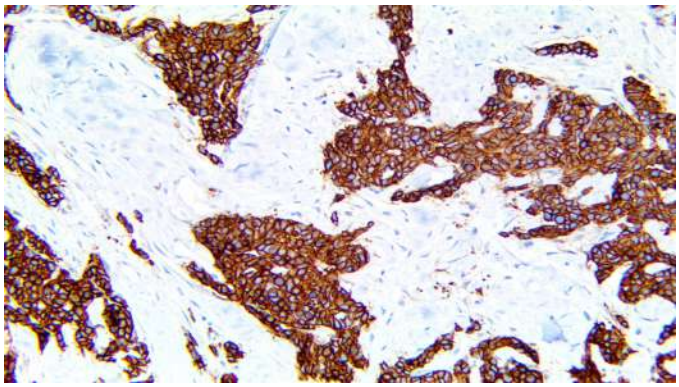
Somatostatin Receptor 2/SSTR2

Clone: EP149
Rabbit Monoclonal

CE IVD



Inset: IHC of Somatostatin Receptor 2/SSTR2 on a FFPE Lung Neuroendocrine Carcinoma Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP149
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear, Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	Placenta, Brain, Testis, Prostate, Papillary Thyroid Carcinoma, Transitional Cell Carcinoma		
Application	Neural & Neuroendocrine Cancer, Lung Cancers, Breast Cancer, Gallbladder and Pancreatic Cancer		

Presentation
Anti-Somatostatin Receptor 2/SSTR2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3748-3	Predilute	Ready-to-Use	3.0 mL
BSB-3748-7	Predilute	Ready-to-Use	7.0 mL
BSB-3748-15	Predilute	Ready-to-Use	15.0 mL
BSB-3748-01	Concentrate	1:25-1:100	0.1 mL
BSB-3748-05	Concentrate	1:25-1:100	0.5 mL
BSB-3748-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9381-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 (NaN_3) 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 the 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).

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.

* The SSTR2 antibody, clone EP149, has been manufactured using Epitomics RabMab® technology covered under Patent No. 's 5,675,063 and 7,402,409.

Immunogen
Synthetic peptide corresponding to residues on the C-terminus of the human SSTR2 protein.

Summary and Explanation
Somatostatin Receptor 2 (SSTR2) is one of five subtypes of the somatostatin receptors, which belong to the superfamily of G protein-coupled receptors (GPCRs). Somatostatin receptor 2 is encoded by the *SSTR2* gene, located on chromosome 17q25.1. SSTR2. SSTR2 becomes activated by the hormone somatostatin (SST), which is an inhibitor of hormone secretion and gastrointestinal function. SST and its receptor subtypes also prevent angiogenesis and have anti-proliferative effects on healthy and cancerous cells.

Somatostatin Receptors have been reported to be highly expressed in a wide variety of human tumors. High SSTR2 expression was found via IHC in neuroblastomas, medulloblastomas, paragangliomas, small cell lung cancers, meningiomas, and breast cancers. One study reported a highly specific and increased expression of SSTR2 in a large series of neural and neuroendocrine tumors. Another study investigating patients with gastroenteropancreatic neuroendocrine neoplasm (GEP-NEN) demonstrated the correlation between decreased immunohistochemical staining and advanced stage of tumors. Additionally, an improved survival of patients with high SSTR2 expression was found, indicating the usefulness of SSTR2 as a potential prognostic marker for GEP-NEN. Using IHC, blood vessels exhibited receptor-specific localization for SSTR2 and SSTR5 expressed in Breast Cancers with significant correlations between mRNA and protein expression along with receptor-specific correlations with histological markers, as well as ER and PR levels.

Stability

This product is stable up to the expiration date on the product label.
Do not use the after expiration date listed on the 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 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

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7. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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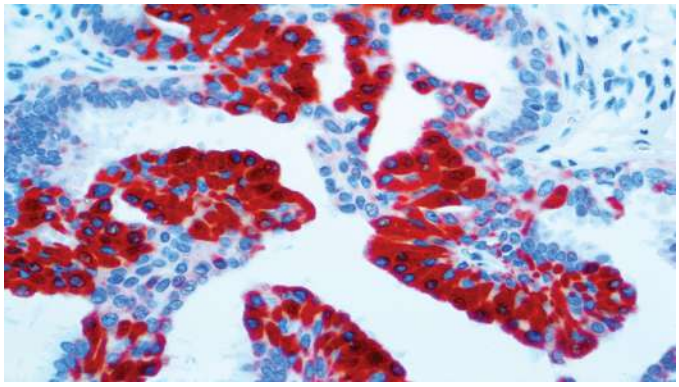
E-mail: sales@biosb.com | Website: www.biosb.com

TAG-72

Clone: BSB-21
Mouse Monoclonal

CE IVD



Inset: IHC of TAG-72 on a FFPE Breast 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
Recombinant TAG-72 human tumor associated glycoprotein.

Summary and Explanation
Tumor-associated glycoprotein (TAG-72) has been shown to be expressed in a wide variety of epithelial malignant tissues. TAG-72 antigen is a high molecular glycoprotein found on the surface of many cancer cells, including breast, colon and pancreatic cells. It is present in human Adenocarcinomas and in lesser amounts,
non-neoplastic tissues. The majority of human Adenocarcinomas including Colorectal, Pancreatic, Gastric, Ovarian, Endometrial, Mammary, and Non-Small Cell Lung Cancer display some cell populations that are positive for TAG-72.

TAG-72 has also been found to be useful for the distinction between Mesothelioma and Adenocarcinoma; however, false positive reactions can occur so results must be interpreted with the utmost caution.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-21
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Breast Carcinoma		
Application	Breast Cancer, Gall Bladder & Pancreatic Cancer, Mesothelioma		

Presentation
Anti-TAG-72 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.

Catalog No.	*Presentation*	*Dilution*	*Volume/Qty*
BSB 5952	Predilute	Ready-to-Use	3.0 mL
BSB 5953	Predilute	Ready-to-Use	7.0 mL
BSB 5954	Predilute	Ready-to-Use	15.0 mL
BSB 5955	Concentrate	1:250-1:1000	0.1 mL
BSB 5956	Concentrate	1:250-1:1000	0.5 mL
BSB 5957	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9396-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 (NaN_3) 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 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 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

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2. Schlom J, et al. Tumormarker Oncology. 1987;2:3
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6. 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

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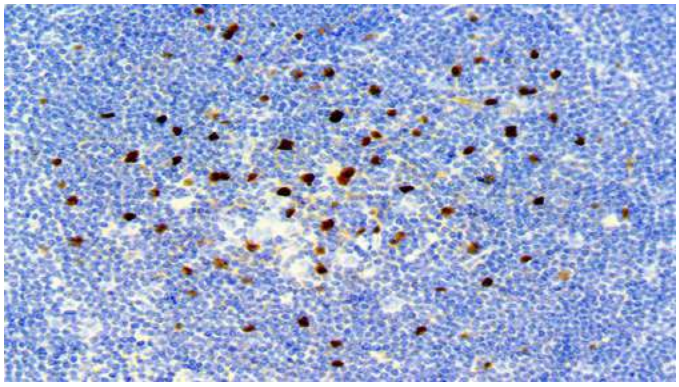
SOX-9

Clone: EP317
Rabbit Monoclonal

CE IVD



Inset: IHC of SOX-9 on a FFPE Lymph Node 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.

* The SOX-9 antibody, clone EP317, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen
A synthetic peptide corresponding to residues of human SOX9 protein.

Summary and Explanation
Transcription factor SOX-9 is a protein that in humans is encoded by the SOX9 gene. SOX9 acts during chondrocyte differentiation and regulates transcription of the anti-Müllerian hormone (AMH) gene. It is expressed during embryogenesis, in the cartilage, neural crest, kidney, and pancreas. SOX-9 plays a pivotal role in male sexual development, interacts with a few other genes to promote the development of male sexual organs and its activity is also required for development, differentiation, and lineage commitment in various tissues including the intestinal epithelium.
SOX9 exhibits several pro-oncogenic properties, including the ability to promote proliferation, inhibit senescence, and collaborate with other oncogenes in neoplastic transformation. Human colorectal cancers show a positive correlation between expression levels of SOX9 and BMI1 and a negative correlation between SOX9 and ARF in clinical samples. In normal colorectal mucosa, SOX9 expression is found predominantly to the lower part of crypts, the proliferative compartment and putative site of stem cells, suggesting SOX9 as a putative stem or progenitor cell biomarker. Recent studies have shown the overexpression of SOX9 in solid tumors. Compared to normal tissues, immunohistochemical analysis revealed staining that is more intense and widespread staining in many cancer types, including but not limited to, Gastric carcinoma, Non-Small Cell Lung Cancer (NSCLC), Lung Adenocarcinoma, Prostate Cancer, Breast Carcinoma, Pancreatic Ductal Adenocarcinoma, Glioma, Colorectal Cancer, Hepatocellular Carcinoma (HCC) and Ovarian Cancer. Amplification of 17q24.3, the chromosomal region of SOX9 has been found in Prostate, Neuroblastoma, Medulloblastoma, Breast and Ovarian Cancer, which all exhibit high SOX9 expression. Although staining is predominantly nuclear, cytoplasmic SOX9 may serve as a valuable prognostic marker for Invasive Ductal Carcinomas and Metastatic Breast Cancer. Additionally, SOX9 upregulation has been associated with higher tumor stage and grade, and overexpression has been recognized as an independent prognostic marker for decreased survival in Colorectal Cancer, NSCLC and HCC patients.

Antibody Type	Rabbit Monoclonal	**Clone**	EP317
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted Mouse and Rat
Control	Colon, Prostate, Skin, Breast, Tonsil, Lymph Node, Colon Carcinoma Squamous Cell Carcinoma		
Application	Colon & Gastrointestinal Cancer, Lung Cancer, Prostate Cancer, Gall Bladder & Pancreatic Cancer, Liver Cancer, Ovarian Cancer		

Presentation
Anti-SOX-9 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3211	Predilute	Ready-to-Use	3.0 mL
BSB 3212	Predilute	Ready-to-Use	7.0 mL
BSB 3213	Predilute	Ready-to-Use	15.0 mL
BSB 3214	Concentrate	1:50-1:200	0.1 mL
BSB 3215	Concentrate	1:50-1:200	0.5 mL
BSB 3216	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB 9385-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 (NaN_3) 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.
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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).

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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.
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5. Any of three heating methods may be used:

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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
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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. Tommerup N, et al. Assignment of an autosomal sex reversal locus (SRA1) and campomelic dysplasia (CMPD1) to 17q24.3-q25.1. Nat Genet. 1993; 4 (2): 170–4.
2. De Santa Barbara P, et al. Direct interaction of SRY-related protein SOX9 and steroidogenic factor 1 regulates transcription of the human anti-Müllerian hormone gene. Mol. Cell. Biol. 1998; 18 (11): 6653–65.
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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.
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abcam

ab256384

Anti-Histone H3 (mutated K36M) antibody [EPR23614-91]

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23614-91
Purification technique	Affinity purification Protein A
Concentration	0.508 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ChIC/CUT&RUN-seq

Tested

Species	Transfected cell line - Human
Dilution info	3 µg
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

IP

Tested

Species	Transfected cell lysate - Human
Dilution info	1/30
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell line - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell line - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/4000
Notes	Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)

Not recommended

Species	Mouse
Dilution info	-
Notes	Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)

Species	Rat
Dilution info	-
Notes	Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)

Species	Transfected cell line - Human
Dilution info	-

Notes	-

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Synthetic peptide - Human
Dilution info	1 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell line - Human, Transfected cell lysate - Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50

Notes	-

Not recommended

Species	Transfected cell line - Human, Transfected cell lysate - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Transfected cell line - Human, Transfected cell lysate - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

ChIP

Not recommended

Species	Human, Transfected cell line - Human, Transfected cell lysate - Human, Mouse, Rat, Synthetic peptide - Human
Dilution info	-
Notes	-

Target data

See full target information H3-3A mutated K36M

Function	Variant histone H3 which replaces conventional H3 in a wide range of nucleosomes in active genes. Constitutes the predominant form of histone H3 in non-dividing cells and is incorporated into chromatin independently of DNA synthesis. Deposited at sites of nucleosomal displacement throughout transcribed genes, suggesting that it represents an epigenetic imprint of transcriptionally active chromatin. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

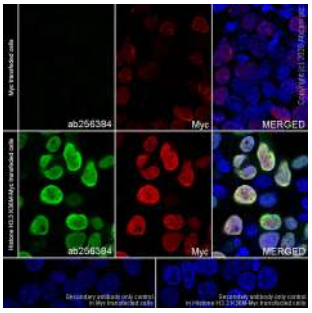
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

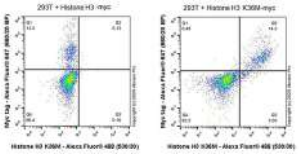
9 product images



Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3 (mutated K36M) antibody

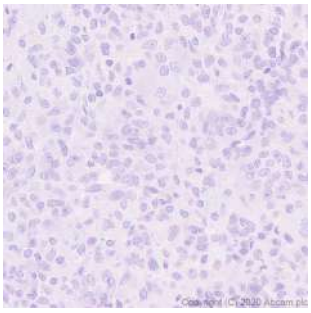
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293 cells labelling Histone H3 (mutated K36 M) with ab256384 at 1/50 dilution, followed by a secondary antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HEK-293 cell line transfected with myc-tagged Histone H3 K36M expression vector. 2233S Myc-Tag (9B11) Mouse mAb (Alexa Fluor® 647 Conjugate) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).



Flow Cytometry (Intracellular) - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H3 (mutated K36M) antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HEK-293T transfected with myc tagged Histone H3 construct (Left) or myc tagged Histone H3 K36M construct (Right) cells labelling Histone H3 (mutated K36 M) with ab256384 at 1/500 compared with a isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 was used as the secondary antibody.

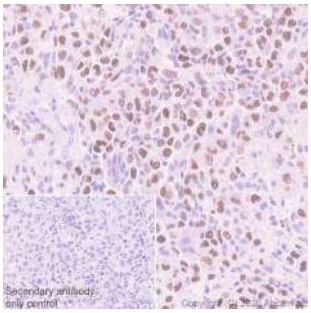


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (mutated K36M) antibody

Immunohistochemical analysis of paraffin-embedded human giant cell tumor of bone tissue labeling Histone H3 (mutated K36 M) with ab256384 at 1/4000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). **Negative control:** No staining in human giant cell tumor of bone (PMID: 29757500). Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)

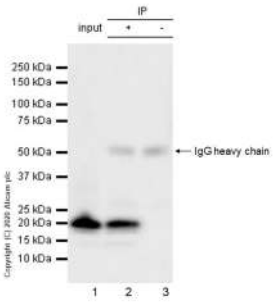


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (mutated K36M) antibody

Immunohistochemical analysis of paraffin-embedded human chondroblastoma tissue labeling Histone H3 (mutated K36 M) with ab256384 at 1/4000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Nuclear staining in human chondroblastoma (PMID: 29757500). Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)



Immunoprecipitation - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3.3 (mutated K36 M) was immunoprecipitated from 0.35 mg HEK-293 transfected with Histone H3.3 K36M (mutate) expression vector containing a myc-His-tag®, whole cell lysate with ab256384 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab256384 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HEK-293 transfected with Histone H3.3 K36M (mutate) expression vector containing a myc-His-tag®, whole cell lysate 10 ug

Lane 2: ab256384 IP in HEK-293 transfected with Histone H3.3 K36M (mutate) expression vector containing a myc-His-tag®, whole cell lysate

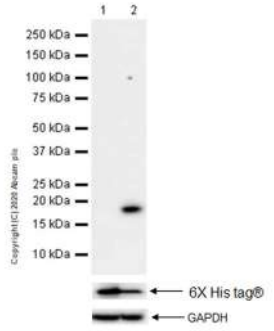
Lane 3:Rabbit monoclonal IgG (ab172730) instead of ab256384 in HEK-293 transfected with Histone H3.3 K36M (mutate) expression vector containing a myc-His-tag®, whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds

All lanes:
Immunoprecipitation - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Predicted band size: 15 kDa



Western blot - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Western blot staining using rabbit Anti-Histone H3 (mutated K36M) antibody

Blocking/Diluting buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384) at 1/1000 dilution

Lane 1:
HEK-293 transfected with Histone H3.1 (WT) expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 2:
HEK-293 transfected with Histone H3.1 K36M (mutant) expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

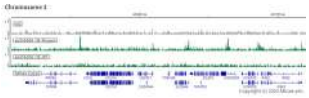
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 15 kDa

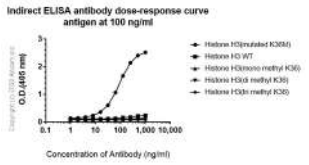
Observed band size: 19 kDa

Exposure time: 62s



ChIC/CUT&RUN sequencing - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2.5 x 10^5 293T cells transfected with a H3.3K36M (Mutant) or H3.3 (WT) plasmid and 3µg of ab256384 [EPR23614-91]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. Additional screenshots of mapped reads can be found in the Protocol booklet in the Product Protocol section. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.

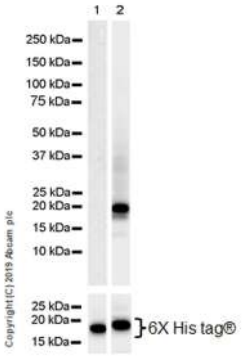


Indirect ELISA - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Indirect ELISA using ab256384 at varying antibody concentrations and antigen concentration at 100 ng/mL. An Alkaline Phosphatase-conjugated Goat Anti-Rabbit IgG (H+L) (1/2500) was used as the secondary antibody.
Binding was seen for Histone H3 (mutated K36M) peptide. Binding to the following peptides was not seen:

Histone H3 WT,
Histone H3 (mono methyl K36),
Histone H3 (di methyl K36),
Histone H3 (tri methyl K36).

This indicates the specificity of ab256384 for mutated K36M of Histone H3.



Western blot - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384)

Histone H3 (mutated K36M) Western blot staining using rabbit Anti-Histone H3 (mutated K36M) antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: 26 seconds

All lanes:
Western blot - Anti-Histone H3 (mutated K36M) antibody [EPR23614-91] (ab256384) at 1/1000 dilution

Lane 1:
HEK-293 transfected with Histone H3.3 (WT) expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Lane 2:
HEK-293 transfected with Histone H3.3 K36M (mutate) expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

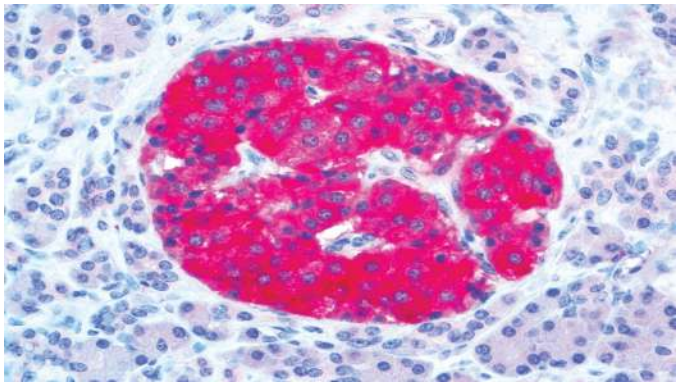
Predicted band size: 15 kDa

Observed band size: 20 kDa

Chromogranin A

Clone: LK2H10
Mouse Monoclonal

CE IVD



Inset: IHC of Chromogranin A on a FFPE Pancreas Tissue

Antibody Type	Mouse Monoclonal	**Clone**	LK2H10
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Dog, Cat, Rat, Rabbit, Porcine
Control	Pancreas, Pituitary, Colon, Brain		
Application	Gall Bladder & Pancreatic Cancer, Lung Cancer, Neural & Neuroendocrine Cancer, Colon & Gastrointestinal Cancer, Carcinomas Of Unknown Primary Site		

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
Purified human pheochromocytoma.

Summary and Explanation
Chromogranin A is a member of the chromogranin/secretogranin family of neuroendocrine secretory proteins. Examples of cells producing chromogranin A are the adrenal medulla, enterochromaffin-like cells and beta cells of the pancreas. The function of chromogranin A is unknown but it is a precursor to 3 functional peptides: vasostatin, pancreastatin and parastatin. These peptides negatively modulate the neuroendocrine function of the releasing cell (autocrine) or nearby cells (paracrine).

Chromogranin A is an excellent marker for Carcinoid Tumors, Pheochromocytomas, Paragangliomas, and other Neuroendocrine Tumors. Coexpression of chromogranin A and neuron-specific enolase (NSE) is common in neuroendocrine neoplasms. It has been identified in a wide variety of endocrine tissues including the pituitary, pancreas, hypothalamus, thymus, thyroid, intestine and parathyroid. It is generally accepted that the coexpression of certain keratins and chromogranin means neuroendocrine lineage. The presence of strong chromogranin staining and absence of keratin staining should raise the possibility of paraganglioma. Most pituitary adenomas and prolactinomas readily express chromogranin.

Presentation
Anti-Chromogranin A 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5344	Predilute	Ready-to-Use	3.0 mL
BSB 5345	Predilute	Ready-to-Use	7.0 mL
BSB 5346	Predilute	Ready-to-Use	15.0 mL
BSB 5347	Concentrate	1:250-1:1000	0.1 mL
BSB 5348	Concentrate	1:250-1:1000	0.5 mL
BSB 5349	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9118-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 (NaN_3) 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 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 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. Fischer-Colbrie R, et al. Neuroscience. 1985;16:547
2. Hearn SA, J Histochem Cytochem. 1987;35:795-801
3. O'Connor DT, et al. Live Sciences. 1986;33:1657-1663
4. Wilson BS, et al. Am J Pathol. 1984;115:458-468
5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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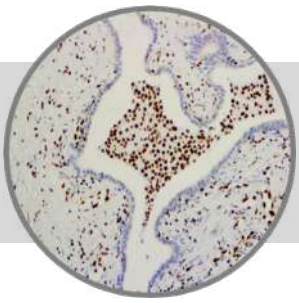
E-mail: sales@biosb.com | Website: www.biosb.com

ERG, RMab

Clone: EP111

Rabbit Monoclonal



CE IVD

Bio SB
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www.biosb.com

Inset: IHC of ERG on a FFPE Prostate 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.

* The ERG antibody, clone EP111, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

Immunogen

A synthetic peptide corresponding to residues on the C-terminus in human ERG protein.

Summary and Explanation

ERG belongs to the ETS family that plays important roles in cell development, differentiation, proliferation, apoptosis and tissue remodeling. The aberrant expression of several ETS proteins is involved in tumor development and progression. ERG is linked to normal processes such as mesoderm formation. TMPRSS2-ERG fusion, which occurs on account of translocations and interstitial deletions, is implicated in aggressive forms of prostate cancer.

ERG overexpression is associated with aggressive tumor behavior and patient survival in prostate cancer. ERG antibody labels endothelial cells, lymophocytes, and prostate cancer cells.

Antibody Type	Rabbit Monoclonal	**Clone**	EP111
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Control**	Prostate, Colon, Kidney, Fallopian Tube, Tonsil, Myometrium, Skin, Brain, Breast
	Species Reactivity	Human, Predicted: Mouse, Rat	

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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

ERG is a rabbit 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.

Catalog No.	*Antibody Type*	*Dilution*	*Volume/Qty*
BSB 6737	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 6738	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 6739	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 6740	Concentrated	1:100 - 1:500	0.1 mL
BSB 6741	Concentrated	1:100 - 1:500	0.5 mL
BSB 6742	Concentrated	1:100 - 1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB 6743	5 slides

Storage Store at 2-8°C (Control Slides: Store at 20-25°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. Reddy ES, et al. Proc Natl Acad Sci USA. 1987; 84:6131-5
2. Iwamoto M, et al. Dev Biol. 2007; 305:40-51
3. Fitzgerald LM, et al. BMC Cancer. 2008; 8:230
4. Mosquera JM, et al. Clin Cancer Res. 2008; 14:3380-5
5. Kumar-Sinha C, et al. Nat Rev Cancer. 2008; 8:497-511
6. 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

EC REP EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

Bio SB
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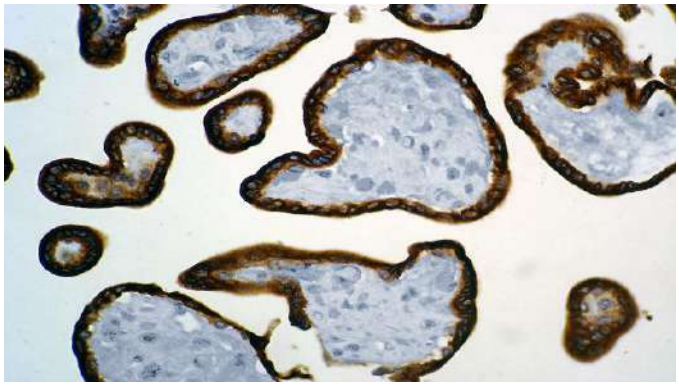
hCG

Clone: BSB-38
Mouse Monoclonal

CE IVD



Inset: IHC of hCG on a FFPE Placenta 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
Recombinant human hCG beta protein.

Summary and Explanation
Human chorionic gonadotropin (hCG) is a peptide hormone produced in pregnancy, made by the embryo soon after conception and later by the syncytiotrophoblast. Its role is to prevent the disintegration of the corpus luteum of the ovary and thereby maintain progesterone production that is critical for a pregnancy in humans. hCG may have additional functions; for instance, it is thought to affect the immune tolerance of the pregnancy. Early pregnancy testing generally is based on the detection or measurement of hCG.

hCG antibody detects cells and tumors of trophoblastic origin such as Choriocarcinomas. Large Cell Carcinoma and Adenocarcinoma of the Lung demonstrate hCG positivity in 90% and 60% of cases respectively. 20% of Squamous Cell Lung Carcinomas are positive for hCG. hCG expression by non-trophoblastic tumors may indicate aggressive behavior since it has been observed that hCG may play a role in the host response to a given tumor.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-38
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Normal Pituitary		
Application	Ovarian Cancer, Testicular Cancer, Germ Cell Tumor, Undifferentiated Tumor		

Presentation
Anti-hCG 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5596	Predilute	Ready-to-Use	3.0 mL
BSB 5597	Predilute	Ready-to-Use	7.0 mL
BSB 5598	Predilute	Ready-to-Use	15.0 mL
BSB 5599	Concentrate	1:250-1:1000	0.1 mL
BSB 5600	Concentrate	1:250-1:1000	0.5 mL
BSB 5601	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9202-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 (NaN_3) 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 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 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. Morrish DW, et al. J Histochem Cytochem. 1987;35:39-101
2. Kurman RJ, et al. Cancer. 1976;38:2404-2419
3. Kurman RJ, et al. Int J Gyn Pathol. 1984;3:101-12
4. Boucher LD, et al. Human Pathol. 1995;Nov;26(11):1201-6
5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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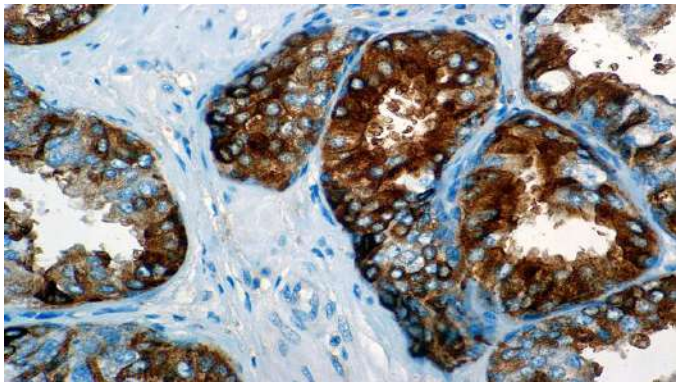
Alpha-Fetoprotein

Clone: BSB-23
Mouse Monoclonal

CE IVD



Inset: IHC of Alpha-Fetoprotein on a FFPE Fetal Liver 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-terminus of the human Alpha-Fetoprotein.

Summary and Explanation
Alpha-fetoprotein (AFP) is a protein which in humans is encoded by the AFP gene. This gene encodes alpha-fetoprotein, a major plasma protein produced by the yolk sac and the liver during fetal life. This protein is thought to be the fetal counterpart of serum albumin, and the alpha-fetoprotein and albumin genes are present in tandem on chromosome 4.

Positive staining with this antibody is seen in hepatocytes of fetal liver and hepatoma. Since only traces of AFP are found in adult serum, elevated levels suggest either a benign or malignant lesion of the liver, a Yolk-Sac Carcinoma, or one of a few other tumors. In conjunction with elevated serum levels, AFP has been immunohistochemically demonstrated in Yolk-Sac Carcinomas in gonadal and extragonadal sites of hepatic malignancies and a few other neoplasms.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-23
Isotype	IgG2a/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Canine
Control	Fetal Liver, Hepatocellular Carcinoma		
Application	Germ Cell Tumor, Liver Cancer, Undifferentiated Tumor		

Presentation
Anti-Alpha-Fetoprotein 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5050	Predilute	Ready-to-Use	3.0 mL
BSB 5051	Predilute	Ready-to-Use	7.0 mL
BSB 5052	Predilute	Ready-to-Use	15.0 mL
BSB 5053	Concentrate	1:100-1:500	0.1 mL
BSB 5054	Concentrate	1:100-1:500	0.5 mL
BSB 5055	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9012-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 (NaN_3) 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 the 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 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. Jacobsen GK, et al. Am J Surg Pathol. 1981;5:257-66
2. Peyrol S, et al. Digestion. 1978;18:351-370
3. Tsung SH, Arch Pathol Lab Med. 1977;101:572-574
4. Goodman ZD, et al. Cancer. 1985;55:124-135
5. Roth LM, et al. Cancer. 1976;37:812-820
6 Leong ASY, et al. Manual of Diagnostic Antibodies for Immunohistology. 1999
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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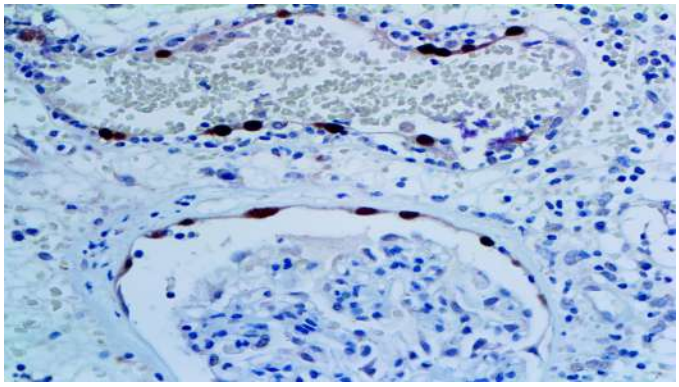
PAX-2

Clone: EP235
Rabbit Monoclonal

CE IVD



Inset: IHC of PAX-2 on a FFPE Kidney 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 recombinant fragment corresponding to residues in human PAX-2 protein.

Summary and Explanation
PAX-2 is a homeogene strongly expressed during kidney development. PAX-2 gene is expressed in the metanephric mesenchyma after ureter bud induction and is a key factor for the mesenchyma-epithelium conversion. Animals transgenic for PAX-2 have severe renal abnormalities and cysts but no solid tumoral features.

Anti-PAX-2 can be used to distinguish Ovarian Serous Papillary Carcinoma (PAX-2 positive) from Primary Breast Carcinoma (PAX-2 negative). It can also be used to distinguish Clear Cell Renal Carcinoma (positive) from Hepatocellular Carcinoma (negative).

Antibody Type	Rabbit Monoclonal	**Clone**	EP235
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Kidney, Fallopian Tube, Clear Cell Renal Carcinoma, Ovarian Serious Papillary Carcinoma		
Application	Kidney & Urothelial Cancer, Ovarian Cancer		

Presentation
Anti-PAX-2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2566	Predilute	Ready-to-Use	3.0 mL
BSB 2567	Predilute	Ready-to-Use	7.0 mL
BSB 2568	Predilute	Ready-to-Use	15.0 mL
BSB 2569	Concentrate	1:50-1:200	0.1 mL
BSB 2570	Concentrate	1:50-1:200	0.5 mL
BSB 2571	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9333-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 (NaN_3) 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 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 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. Daniel L, et al. Hum Pathol. 2001 March; 32(3):282-7
2. Gnarra JR, et al. Cancer Res. 1995 Sept; 55(18):4092-8
3. Mazal PR, et al. Mod Pathol. 2005 April; 18(4):535-40
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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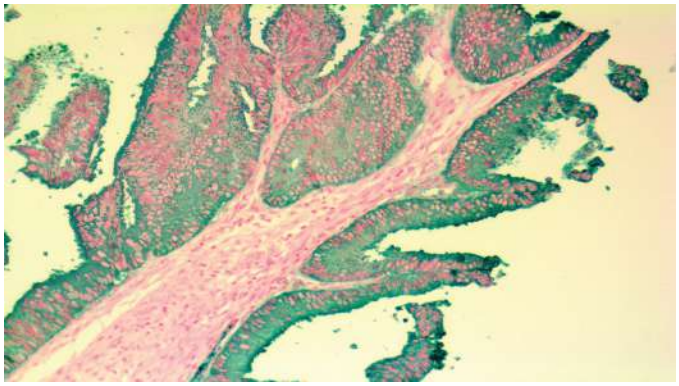
CEA

Clone: BSB-13
Mouse Monoclonal

CE IVD



Inset: IHC of CEA on a FFPE Colon Adenocarcinoma 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
Recombinant human CEA.

Summary and Explanation
Carcinoembryonic antigen (CEA) is a glycoprotein involved in cell adhesion. It is normally produced during fetal development, but the production of CEA stops before birth. Therefore, it is not usually present in the blood of healthy adults, although levels are raised in heavy smokers. CEA is synthesized during development in the fetal gut, and is re-expressed in increased amounts in Intestinal Carcinomas and several other tumors.

CEA is employed essentially as a tool to assist in the distinction between Adenocarcinoma and Malignant Mesotheliomas of the epithelial type, along with other markers for mucosubstances such as Leu M1 and Ber-EP4. Another suggested use of CEA is the immunophenotyping of various Metastatic Adenocarcinomas as a means of identifying their origin.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-13
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Colon, Colon Adenocarcinoma		
Application	Colon & Gastrointestinal Cancer, Liver Cancer, Lung Cancer, Ovarian Cancer, Cervical Cancer, Carcinomas Of Unknown Primary Site Gall Bladder & Pancreatic Cancer, Mesothelioma, Lung Cancer		

Presentation
Anti-CEA 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5337	Predilute	Ready-to-Use	3.0 mL
BSB 5338	Predilute	Ready-to-Use	7.0 mL
BSB 5339	Predilute	Ready-to-Use	15.0 mL
BSB 5340	Concentrate	1:250-1:1000	0.1 mL
BSB 5341	Concentrate	1:250-1:1000	0.5 mL
BSB 5342	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9117-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 (NaN_3) 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 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 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. Go VLW, et al. Cancer. 1976;37:562-566
2. Delellis RA, et al. Am J Clin Pathol. 1978;50:587-594
3. Kamino H, et al. Cancer. 1988;61:1142-1148
4. Tron V, et al. Arch Pathol Lab Med. 1987;111:291-293
5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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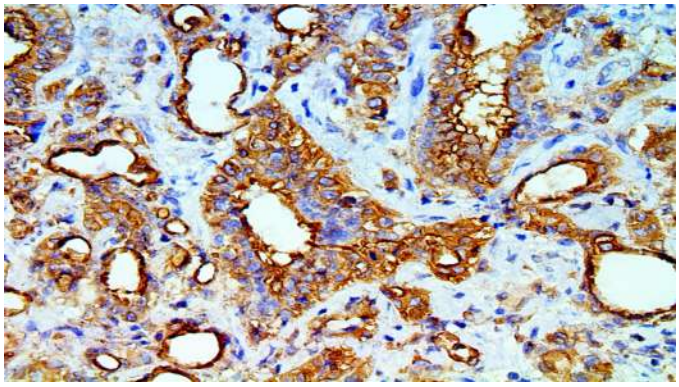
Mesothelial Cell

Clone: HBME-1
Mouse Monoclonal

CE IVD



Inset: IHC of Mesothelial Cell on a FFPE Mesothelioma Tissue

Antibody Type	Mouse Monoclonal	**Clone**	HBME-1
Isotype	IgM/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	Breast, Tonsil, Lung, Salivary Gland, Transitional Cell Carcinoma, Mesothelioma		
Application	Mesothelioma, Lung Cancer, Head & Neck Cancer, Gall Bladder & Pancreatic Cancer, Cytopathology		

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
Human mesothelioma cells from patients with malignant epithelial mesothelioma.

Summary and Explanation
Mesothelial Cell HBME-1 has shown to label mesothelial cells, both benign and malignant (malignant mesothelioma) and thus has been used in distinguishing mesothelioma from adenocarcinomas of various origins. HBME-1 has also been used to distinguish Thyroid carcinomas (both Follicular and Papillary) from benign thyroid lesions.

Mesothelial Cell HBME-1 and MOC-31 have been shown to have a diagnostic efficiency for the distinction between carcinoma and mesothelioma in pleura. HBME-1 staining may be useful for differentiating papillary carcinomas from follicular carcinomas; in papillary lesions it tends to be positive. Several immunohistochemical markers have been used to aid in the diagnosis of follicular-derived lesions of the thyroid (FDLT). HBME-1, ERK, and p16 were found to be more specific for malignancy, whereas CK19 and GAL-3 stained benign lesions with a higher frequency and were not specific for malignant FDLT.

A study of thyroid nodules with cytological atypia with strong/diffuse positivity for both HBME-1 and Galectin-3, two well recognized markers of papillary thyroid carcinomas (PTC), represent a starting phenotypic change towards PTC, for which a benign or borderline counterpart has not yet been defined. The expression of HBME-1 and Galectin-3 in some thyroid nodules is related to the presence of cytological atypia suggestive but not diagnostic of PTC. The phenotypic similarity between this subset of thyroid nodules with cytological atypia and PTC is also confirmed by data according to which Galectin-3 and HBME-1 have been found to be highly sensitive for PTC.

Presentation
Anti-Mesothelial Cell 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3455	Predilute	Ready-to-Use	3.0 mL
BSB 3456	Predilute	Ready-to-Use	7.0 mL
BSB 3457	Predilute	Ready-to-Use	15.0 mL
BSB 3458	Concentrate	1:25-1:100	0.1 mL
BSB 3459	Concentrate	1:25-1:100	0.5 mL
BSB 3460	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9277-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 (NaN_3) 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 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 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. González-Lois C, et al. Combined use of novel epithelial (MOC-31) and mesothelial (HBME-1) immunohistochemical markers for optimal first line diagnostic distinction between mesothelioma and metastatic carcinoma in pleura. Histopathology. 2001 Jun;38(6):528-34.
2. Barroeta JE, et al. Diagnostic value of differential expression of CK19, Galectin-3, HBME-1, ERK, RET, and p16 in benign and malignant follicular-derived lesions of the thyroid: an immunohistochemical tissue microarray analysis. Endocr Pathol. 2006 Fall;17(3):225-34.
3. Papotti M, et al. Galectin-3 and HBME-1 expression in well-differentiated thyroid tumors with follicular architecture of uncertain malignant potential. Mod. Pathol. 2005; 18 (4): 541–46.
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number / Code du lot / Chargenbezeichnung

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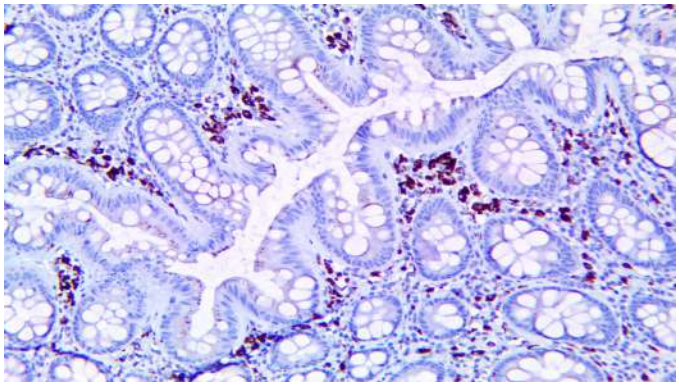
Cathepsin K

Clone: BSB-172
Mouse Monoclonal

CE IVD



Inset: IHC of Cathepsin K on a FFPE normal Colon 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
Recombinant fragment of human Cathepsin K protein.

Summary and Explanation
Cathepsin K is a cysteine protease, which may be secreted as a pro-enzyme and is activated in a low-pH environment such as lysosomes. Cathepsin K accepts Arg and Lys residues at the P1 active site, acting on Proteolytically Activated Receptors (PARs) in an extracellular matrix. Cathepsin K also cleaves collagen and degrades bone matrix, and is involved in the mTOR signaling pathway of cellular autophagy and apoptosis. Cathepsin K has also been shown to induce aggregation in platelets and in the Hedgehog signaling pathway.

As a protease active in the extracellular matrix and lysosomes, Cathepsin K has been implicated in cancer progression and invasiveness. Cathepsin K has been shown to have specific proteolytic activity on PAR-3 and PAR-4, which are expressed in the EMC of epithelial-mesenchymal cells in breast cancer. Proteolytic cleavage of PARs stimulates platelet aggregation and p38 phosphorylation in the MAPK pathway. Cathepsin K-induced proteolytic cleavage induces upregulation of proteins related to metastasis in bone and prostate cancer, and epithelial-mesenchymal-like cells in breast cancer.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-172
Isotype	IgG1, kappa	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Human Liver or Breast Tissue		
Application	Breast Cancer, Prostate Cancer, Bone Cancer, Rejection & Autoimmunity		

Presentation
Anti-Cathepsin K 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3800-3	Predilute	Ready-to-Use	3.0 mL
BSB-3800-7	Predilute	Ready-to-Use	7.0 mL
BSB-3800-15	Predilute	Ready-to-Use	15.0 mL
BSB-3800-01	Concentrate	1:25-1:100	0.1 mL
BSB-3800-05	Concentrate	1:25-1:100	0.5 mL
BSB-3800-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9438-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 (NaN_3) 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 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 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. Andrade S, et al. Cathepsin K induces platelet dysfunction and affects cell signaling in breast cancer - molecularly distinct behavior of cathepsin K in breast cancer. BMC Cancer. 2016;16:173.
2. Yang H, et al. The Potential Role of Cathepsin K in Non-Small Cell Lung Cancer. Molecules. 2020;25(18):4136.
3. Horne, W. C. (2008). Regulating Bone Resorption: Targeting Integrins, Calcitonin Receptor, and Cathepsin K. In Principles of Bone Biology (3rd ed., pp. 221–236). Academic Press.
4. Liang W, et al. Targeting cathepsin K diminishes prostate cancer establishment and growth in murine bone. J Cancer Res Clin Oncol. 2019;145(8):1999-2012.

Symbol Key/Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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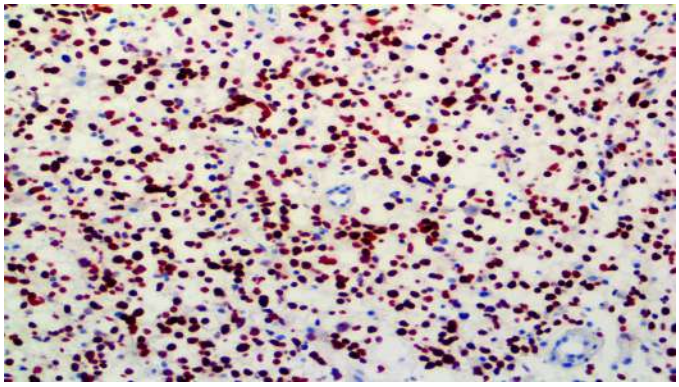
OLIG2

Clone: EP112
Rabbit Monoclonal

CE IVD



Inset: IHC of OLIG2 on a FFPE Brain Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP112
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted: Mouse
Control	Brain Astrocytoma		
Application	Neural & Neuroendocrine Cancer		

Presentation
Anti-OLIG2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2559	Predilute	Ready-to-Use	3.0 mL
BSB 2560	Predilute	Ready-to-Use	7.0 mL
BSB 2561	Predilute	Ready-to-Use	15.0 mL
BSB 2562	Concentrate	1:50-1:200	0.1 mL
BSB 2563	Concentrate	1:50-1:200	0.5 mL
BSB 2564	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9316-CS	5 slides

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

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 corresponding to residues in human OLIG2 protein.

Summary and Explanation
Oligodendrocyte transcription factor (OLIG2) is a basic helix-loop-helix (bHLH) transcription factor encoded by the Olig2 gene. The protein is of 329 amino acids in length, 32kDa in size and contains 1 basic helix-loop-helix DNA-binding domain. It is one of the three members of the bHLH family. The other two members are OLIG1 and OLIG3. The expression of OLIG2 is mostly restricted in the central nervous system, where it acts as both an anti-neurogenic and a neurogenic factor at different stages of development. OLIG2 is well known for determining motor neuron and oligodendrocyte differentiation, as well as its role in sustaining replication in early development.

No OLIG2 expression has been found in the non-glial tumors including neuroepithelial tumors, ependymomas, subependymomas, medulloblastomas, and non-neuroepithelial tumors, such as CNS lymphomas, meningiomas, schwannomas, atypical teratoid/rhabdoid tumor, and hemangioblastomas. Compared to the strong staining seen in glioma samples, a weak expression is observed in non-tumoral brain tissue (gliosis). OLIG2 is universally expressed in glioblastoma and other diffuse gliomas (astrocytomas, oligodendrogliomas and oligoastrocytomas), and is a useful positive diagnostic marker of these brain tumors.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. Mokhtari K,et al. Olig2 expression, GFAP, p53 and1p loss analysis contribute to glioma subclassification. Neuropathol Appl Neurobiol 2005;31:62 – 9.
2. OteroJJ, et al. OLIG2 is differentially expressed in pediatric astrocytic and in ependymal neoplasms. Journal of Neuro-Oncology 2011:104:423-438.
3. Ligon KL1, et al. The oligodendroglial lineage marker OLIG2 is universally expressed in diffuse gliomas. J Neuropathol Exp Neurol. 2004 May;63(5):499-509.
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	Storage Temperature Limites de température Zulässiger Temperaturbereich	Manufacturer Fabricant Hersteller	REF Catalog Number Référence du catalogue Bestellnummer
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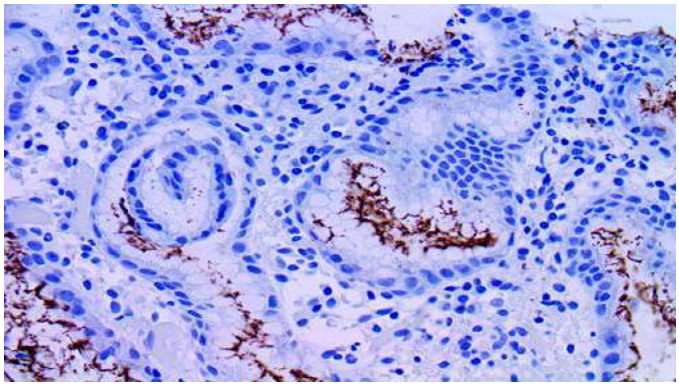
E-mail: sales@biosb.com | Website: www.biosb.com

Helicobacter Pylori

Clone: EP279
Rabbit Monoclonal

CE IVD



Inset: IHC of Helicobacter Pylori on a FFPE Infected 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.

* The Anti-Helicobacter Pylori, clone EP279, has been manufactured using Epitomics RabMab® technology covered under Patent No.'s 5,675,063 and 7,402,409.

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	Rabbit Monoclonal	**Clone**	EP279
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cell Wall	**Species Reactivity**	Human
Control	Helicobacter pylori Infected Stomach Mucosa		
Application	Infectious Diseases, Colon & Gastrointestinal Cancer		

Presentation
Anti-Helicobacter Pylori is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3279	Predilute	Ready-to-Use	3.0 mL
BSB 3280	Predilute	Ready-to-Use	7.0 mL
BSB 3281	Predilute	Ready-to-Use	15.0 mL
BSB 3282	Concentrate	1:50-1:200	0.1 mL
BSB 3283	Concentrate	1:50-1:200	0.5 mL
BSB 3284	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9205-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 (NaN_3) 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 the 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 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. 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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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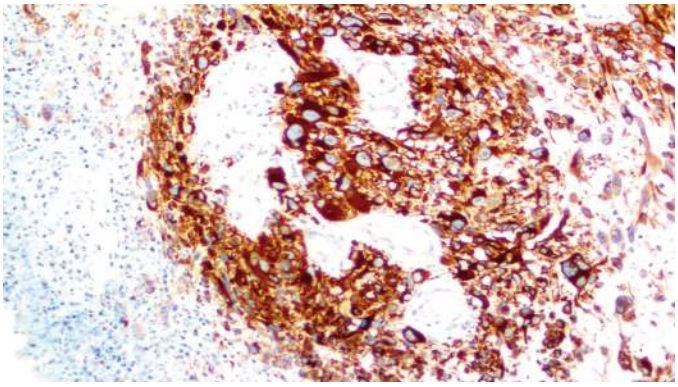
Melanosome HMB45

Clone: HMB-45
Mouse Monoclonal

CE IVD



Inset: IHC of Melanosome HMB45 on a FFPE Melanoma 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
Purified pigmented melanoma metastases from lymph nodes (HMB45).

Summary and Explanation
HMB-45 reacts against an antigen present in immature melanosomes, cutaneous melanocytes, prenatal and infantile retinal pigment epithelium and melanoma cells. This antibody was generated to an extract of Melanoma. It reacted positively against Melanocytic Tumors but not other tumors, thus demonstrating specificity and sensitivity. Moreover, this antibody reacts positively against junctional nevus cells but not intradermal nevi, and against fetal melanocytes but not normal adult melanocytes.

This antibody is very useful to identify Malignant Melanoma. Metastatic Amelanotic Melanoma can often be confused with a variety of poorly differentiated Carcinomas, Large Cell Lymphomas, Sarcomas, Spindle Cell Carcinomas and various types of mesenchymal neoplasms. A keratin-negative, vimentin-rich neoplasm that immunoreacts with antibody to S-100 protein and with this melanoma antibody, is, with rare exception, a Melanoma.

Antibody Type	Mouse Monoclonal	**Clone**	HMB-45
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Melanoma		
Application	Melanoma & Skin Cancer		

Presentation
Anti-Melanosome HMB45 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5757	Predilute	Ready-to-Use	3.0 mL
BSB 5758	Predilute	Ready-to-Use	7.0 mL
BSB 5759	Predilute	Ready-to-Use	15.0 mL
BSB 5760	Concentrate	1:250-1:1000	0.1 mL
BSB 5761	Concentrate	1:250-1:1000	0.5 mL
BSB 5762	Concentrate	1:250-1:1000	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9276-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 (NaN_3) 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
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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 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. Gown AM, et al. A J Path. 1986;123:195
2. Wick MR, et al. Arch Path Lab. 1988;112:616
3. Leong ASY, et al. Surg Path. 1989:2:137
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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IVD — 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 — Lot Number / Code du lot / Chargenbezeichnung

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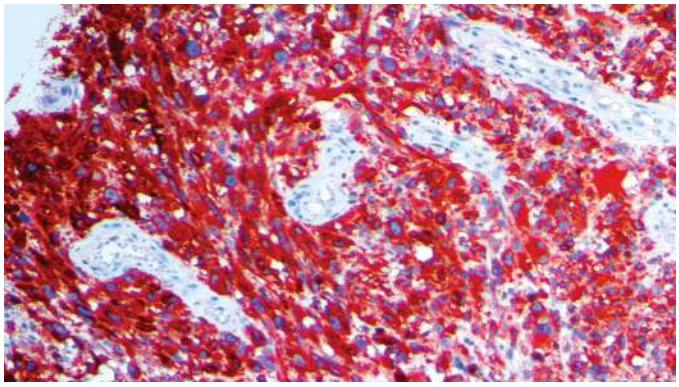
Mart-1\Melan-A

Clone: A103
Mouse Monoclonal

CE IVD



Inset: IHC of Mart-1/Melan-A on a FFPE Melanoma 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
Recombinant human Melan-A protein.

Summary and Explanation
MART-1/Melan-A is a putative 18 kDa transmembrane protein consisting of 118 amino acids. It has a single transmembrane domain. MART-1/Melan-A is a protein antigen found on melanocytes. Antibodies against this antigen are used to recognize cells of melanocytic differentiation, useful for the diagnosis of Melanoma.

The same name is used to refer to the gene which codes for this antigen. The MART-1/Melan-A antigen is specific for the melanocyte lineage found in normal skin, retina, and melanocytes, but not in other normal tissues. It is thus useful as a marker for Melanocytic Tumors, with the caveat that it is normally found in benign nevi as well. This antibody is very useful in establishing the diagnosis of Metastatic Melanomas.

Antibody Type	Mouse Monoclonal	**Clone**	A103
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Normal Skin, Melanoma		
Application	Melanoma & Skin Cancer		

Presentation
Anti-Mart-1/Melan-A 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6870	Predilute	Ready-to-Use	3.0 mL
BSB 6871	Predilute	Ready-to-Use	7.0 mL
BSB 6872	Predilute	Ready-to-Use	15.0 mL
BSB 6873	Concentrate	1:250-1:1000	0.1 mL
BSB 6874	Concentrate	1:250-1:1000	0.5 mL
BSB 6875	Concentrate	1:250-1:1000	1.0 mL
BSB-6875-T7	TintoStainer Plus	Ready-to-Use	7.0 mL
BSB-6875-T30	TintoStainer Plus	Ready-to-Use	30.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9266-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 (NaN_3) 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.
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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 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

Autostainer Protocols

Autostainer	Retrieval		IHC Protocol
	Solution	Time	
TintoStainer Plus	Citrate	30	**PolyDetector Plus**
Leica BOND Max	ER1	20	**IHC Protocol F**

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. Kageshita T, Kawakami Y, et al. J Immunother. 1997;Nov;20(6):460-5
2. Fetsch PA, Marincola FM, et al. Cancer. 1999;Feb25:87(1):37-42
3. Bergman R, Azzam H, et al. J Am Acad Dermatol. 2000;Mar;42(3):496-500
4. Orsz Z, Histopathology. 1999;Jun;34(6):517-25
5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

Bio SB BIOSCIENCE FOR THE WORLD

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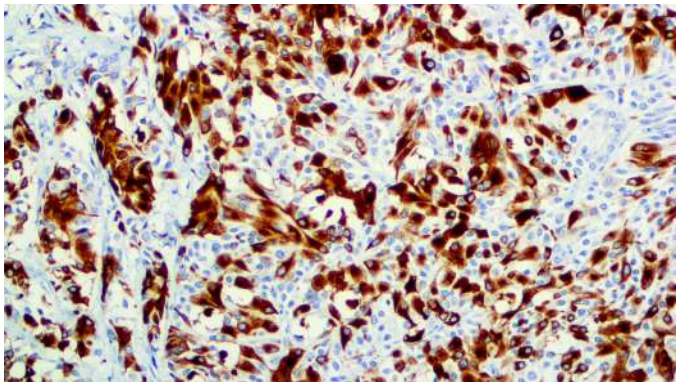
Cytokeratin 19

Clone: RM364
Rabbit Monoclonal

CE IVD



Inset: IHC of Cytokeratin 19 on a FFPE Thyroid 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
A peptide corresponding to the C-terminus of human CK-19 (Cytokeratin-19)

Summary and Explanation
Cytokeratin 19 is a Type I cytokeratin. Unlike its related family members, this smallest-known acidic cytokeratin is not paired with a basic cytokeratin in epithelial cells. It is specifically found in the periderm, the transiently superficial layer that envelops the developing epidermis.

Anti-Cytokeratin 19 reacts with a wide variety of epithelium and epithelial malignancies including Adenocarcinomas of the colon, stomach, pancreas, biliary tract, liver and breast. Perhaps the most useful application is the identification of Thyroid Carcinoma of the papillary type, although Follicular Carcinoma is also labeled by this antibody approximately 50-60% of the time. Cytokeratin 19 is not expressed in hepatocytes; therefore, this antibody is useful in the identification of liver metastasis. The degree of Cytokeratin 19 positivity in Breast Cancer distinguishes malignant from benign tumors. Cytokeratin 19 is often coexpressed with Cytokeratin 7.

Antibody Type	Rabbit Monoclonal	**Clone**	RM364
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human, Predicted: Mouse
Control	Colon, Bladder, Thyroid Carcinoma, Colon Carcinoma		
Application	Colon & Gastrointestinal Cancer, Liver Cancer, Thyroid & Parathyroid Cancer, Breast Cancer		

Presentation
Anti-Cytokeratin 19 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3763-3	Predilute	Ready-to-Use	3.0 mL
BSB-3763-7	Predilute	Ready-to-Use	7.0 mL
BSB-3763-15	Predilute	Ready-to-Use	15.0 mL
BSB-3763-01	Concentrate	1:100-1:500	0.1 mL
BSB-3763-05	Concentrate	1:100-1:500	0.5 mL
BSB-3763-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9139-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 (NaN_3) 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 the 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 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. Zubair W, et al. Hum Pathol. 30:1166-1171.
2. Alexander R, et al. Hum Pathol. 30:1373-1376.
3. Cerilli LA, et al. Am J Clin Pathol. 2002;118:186-193.
4. Nasser SM, et al. Cancer (Cancer Cytopathol). 2000; 90:307-11
5. 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

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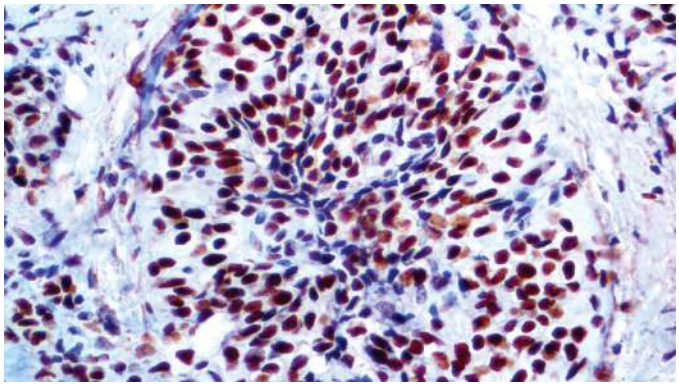
INI-1

Clone: 25
Mouse Monoclonal

CE IVD



Inset: IHC of INI-1 on a FFPE Ewing's Sarcoma 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
Mouse BAF47 aa.257-359.

Summary and Explanation
The INI-1 gene, which encodes a functionally uncharacterized protein component of the hSWI/SNF chromatin remodeling complex, is often mutated or deleted in malignant rhabdoid tumor (MRT). Two isoforms of INI-1, that differ by the variable inclusion of amino acids, potentially are produced by differential RNA splicing.

The morphology of MRTs can present challenges in differential diagnosis. The overall survival of MRTs relative to its potential mimics (medulloblastoma, supratenorial primitive neuroectodermal tumors (sPNETs) is quite low, and thus differentiation from these other tumors is desirable. Lack of nuclear labeling by anti-INI-1 is characteristic of MRT. The majority of medulloblastomas and sPNETs are labeled by anti-INI-1. MRTs also originate from the kidney and soft tissues.

Antibody Type	Mouse Monoclonal	**Clone**	25
Isotype	IgG2a	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Testis, Brain, Breast, Colon, Kidney, Pituitary, Adrenal, Prostate, Thyroid, Lung, Pancreas, Cervix, Salivary Gland, Astrocytoma, Lymphoblastic Lymphoma, Transitional Cell Carcinoma		
Application	Sarcoma & Soft Tissue, Neural & Neuroendocrine Cancer, Kidney & Urothelial Cancer		

Presentation
Anti-INI-1 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6828	Predilute	Ready-to-Use	3.0 mL
BSB 6829	Predilute	Ready-to-Use	7.0 mL
BSB 6830	Predilute	Ready-to-Use	15.0 mL
BSB 6831	Concentrate	1:25-1:100	0.1 mL
BSB 6832	Concentrate	1:25-1:100	0.5 mL
BSB 6833	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9244-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 (NaN_3) 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 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 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. Bourdeaut F, et al. J Pathol. 2007 Feb; 211(3):323-30
2. Fowler DJ, et al. Fetal Pediatr Pathol. 2006; 25(3):159-68
3. Haberler C, et al. Am J Surg Pathol. 2006 Nov.; 30(11):1462-8
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD — 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 — Lot Number / Code du lot / Chargenbezeichnung

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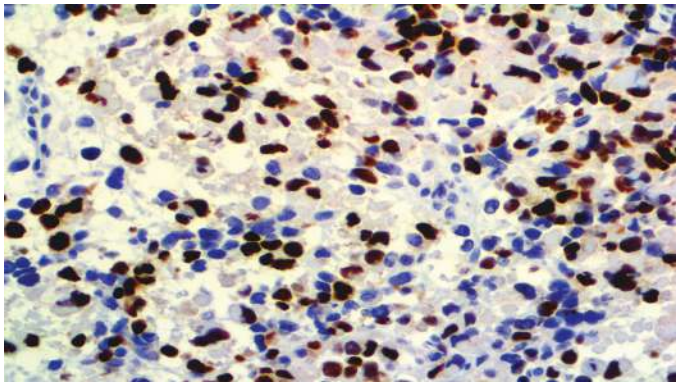
Myogenin

Clone: F5D
Mouse Monoclonal

CE IVD



Inset: IHC of Myogenin on a FFPE Rhabdomyosarcoma 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
Recombinant protein containing rat myogenin aa 30-224.

Summary and Explanation
Myogenin is a transcription factor active in muscles. In particular, it is a myogenic regulatory factor. Myogenin is a member of a family of myogenic regulatory genes, which includes MyoD, myf5 and MRF4. These genes encode a set of transcription factors which are essential for muscle development. Expression of myogenin is restricted to cells of skeletal-muscle origin. It is, therefore, a useful marker for tumors of the muscle lineage, being strongly expressed in Alveolar Rhabdomyosarcomas.

Anti-myogenin labels the nuclei of myoblasts in developing muscle tissue, and is expressed in tumor cell nuclei of Rhabdomyosarcoma and some Leiomyosarcomas. Positive nuclear staining may occur in Wilm's Tumor.

Antibody Type	Mouse Monoclonal	**Clone**	F5D
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Canine, Rat, Mouse
Control	Rhabdomyosarcoma		
Application	Sarcoma & Soft Tissue, Undifferentiated Tumor		

Presentation
Anti-Myogenin 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5792	Predilute	Ready-to-Use	3.0 mL
BSB 5793	Predilute	Ready-to-Use	7.0 mL
BSB 5794	Predilute	Ready-to-Use	15.0 mL
BSB 5795	Concentrate	1:50-1:200	0.1 mL
BSB 5796	Concentrate	1:50-1:200	0.5 mL
BSB 5797	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9298-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 (NaN_3) 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).
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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
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Specimen Preparation
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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.
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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. Miller JB, J Cell Biol. 1990;Sep;111(3):1149-59
2. Wang NP, et al. Am J Pathol. 1995;Dec;147(6):1799-810
3. Cui S, et al. Pathol Int. 1999;Jan;49(1):62-8
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT Lot Number / Code du lot / Chargenbezeichnung

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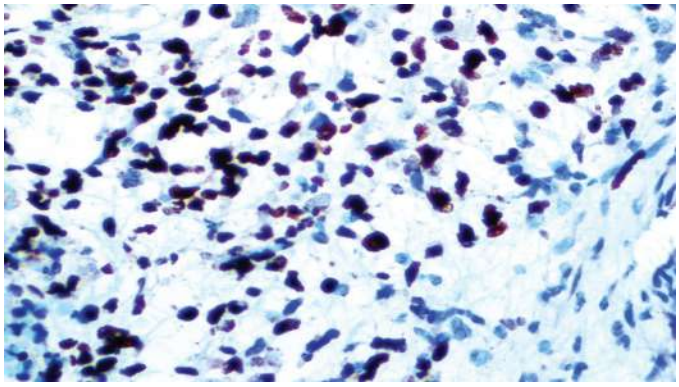
MyoD1

Clone: EP212
Rabbit Monoclonal

CE IVD



Inset: IHC of MyoD1 on a FFPE Rhabdomyosarcoma 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 corresponding to residues of human MyoD1 protein.

Summary and Explanation
MyoD belongs to a family of proteins known as myogenic regulatory factors (MRFs) and has a key role in regulating muscle differentiation. These bHLH (basic helix loop helix) transcription factors act sequentially in myogenic differentiation. MyoD is expressed in activated satellite cells, but not in quiescent satellite cells. In development, MyoD commits mesoderm cells to a skeletal lineage, and then regulates that process. It may also play a role in muscle repair.

In abnormal tissues, MyoD1 labels tumor cells in Rhabdomyosarcoma and is one of the earliest markers of myogenic commitment.

Antibody Type	Rabbit Monoclonal	**Clone**	EP212
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Fetal Muscle, Rhabdomyosarcoma		
Application	Sarcoma & Soft Tissue		

Presentation
Anti-MyoD1 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6974	Predilute	Ready-to-Use	3.0 mL
BSB 6975	Predilute	Ready-to-Use	7.0 mL
BSB 6976	Predilute	Ready-to-Use	15.0 mL
BSB 6977	Concentrate	1:50-1:200	0.1 mL
BSB 6978	Concentrate	1:50-1:200	0.5 mL
BSB 6979	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9297-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 (NaN_3) 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 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 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. "Entrez Gene: MYOD1 myogenic differentiation 1"
2. Sebire NJ, et al. J Clin Pathol. 2003; 56:412-16
3. Tallini G, et al. Am J Pathol. 1994; 144:693-701
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key / Légende des symboles/Erläuterung der Symbole

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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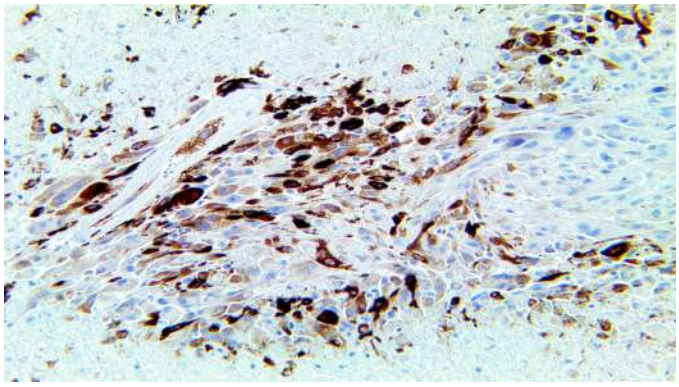
IDH1 R132H

Clone: RBT-IDH1
Rabbit Monoclonal

CE IVD



Inset: IHC of IDH1 R132H on a FFPE Glioblastoma 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 IDH1 R132H mutant

Summary and Explanation
IDH1 is an isocitrate dehydrogenase isozymes and encoded by the gene IDH1. IDH1 is involved in the citric acid cycle during glucose metabolism and catalyzes the oxidation of isocitrate to α-ketoglutarate and reduction of NADP+ to NADPH. Both α-ketoglutarate and NADPH play a role in protecting cells from oxidative stress and mitigating oxidative damage.
Mutation in residue 132 of IDH1 results in loss of enzymatic function, build up of 2-hydroxyglutarate, and change in histone and DNA methylation.
Mutation of IDH1 is implicated in metaphyseal chondromatosis with aciduria as well as diffused gliomas and a number of neoplasms such as acute myeloid leukemia, acute lymphocytic leukemia, myelofibrosis, intrahepatic cholangiocarcinoma, melanoma, chondroid tumors, and certain rare forms of colonic and prostate carcinomas. However studies have shown that IDH1 mutation is not a direct trigger of oncogenesis, but strongly associated with other tumor-promoting mutations.
Screening for IDH1 mutation can provide valuable information on diagnosis and prognosis of glioma. Glioma with IDH1 mutation tend to be less aggressive than glioma without IDH1 mutation.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-IDH1
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Species Reactivity**	Human
Control	Glioma		
Application	Neural & Neuroendocrine Cancer		

Presentation
Anti-IDH1 R132H is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3732-3	Predilute	Ready-to-Use	3.0 mL
BSB-3732-7	Predilute	Ready-to-Use	7.0 mL
BSB-3732-15	Predilute	Ready-to-Use	15.0 mL
BSB-3732-01	Concentrate	1:25-1:100	0.1 mL
BSB-3732-05	Concentrate	1:25-1:100	0.5 mL
BSB-3732-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9230-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 (NaN_3) 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 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 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. IDH1 Gene. https://www.genecards.org/cgi-bin/carddisp.pl?gene=IDH1
2. Horbinski C. What do we know about IDH1/2 mutations so far, and how do we use it?. Acta Neuropathol. 2013;125(5):621-636. doi:10.1007/s00401-013-1106-9
3. Molenaar RJ, Maciejewski JP, Wilmink JW, van Noorden CJF. Wild-type and mutated IDH1/2 enzymes and therapy responses [published correction appears in Oncogene. 2018 Oct;37(43):5810]. Oncogene. 2018;37(15):1949-1960. doi:10.1038/s41388-017-0077-z
4. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices 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

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IVD 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 Lot Number Code du lot Chargenbezeichnung

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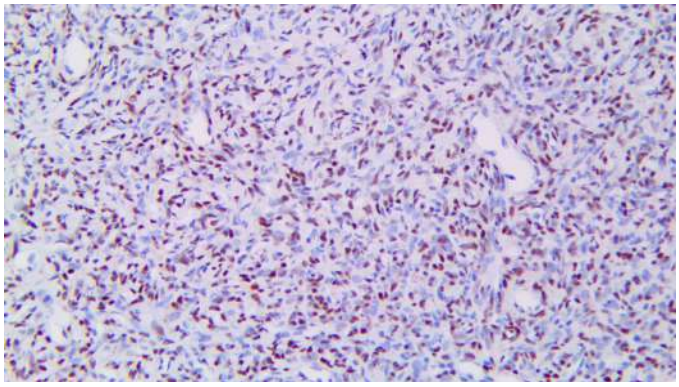
STAT6

Clone: RM473
Rabbit Monoclonal

IVD



Inset: IHC of STAT6 on a FFPE Solitary Fibrous Tumor Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	RM473
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Solitary Fibrous Tumor		
Application	Sarcoma & Soft Tissues, Lung Cancer		

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
Peptide corresponding to residues near the C-terminus of human STAT6 protein.

Summary and Explanation
STAT6 is a human gene. The protein encoded by this gene is a member of the STAT family of transcription factors. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor-associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein plays a central role in exerting IL4 mediated biological responses. It is found to induce the expression of BCL2L1/BCL-X(L), which is responsible for the anti-apoptotic activity of IL4. STAT6 protein expression can be identified by IHC in the cytoplasm and nucleus of several tissues.
Recurrent somatic fusions of the NGFI-A–binding protein 2 (NAB2) gene and STAT6 gene, located at chromosomal region 12q13, have been identified in Solitary Fibrous Tumors (SFT). In one study, Fifty-nine of 60 SFT cases (98%) showed nuclear expression of STAT6, which was usually diffuse and intense. All other tumor types of soft tumor tissues were negative for STAT6, except for three dedifferentiated Liposarcomas and one deep Fibrous Histiocytoma, which showed weak staining. STAT6 is a highly sensitive and specific immunohistochemical marker for SFT and can be helpful to distinguish this tumor type from histologic mimics. STAT6 is amplified in a subset of dedifferentiated Liposarcoma, resulting in STAT6 protein expression that can be detected by immunohistochemistry and may be a potential pitfall in the differential diagnosis of dedifferentiated Liposarcoma and Solitary Fibrous Tumor. These findings suggest a role for STAT6-mediated transcriptional activity in some cases of dedifferentiated Liposarcoma and highlight the genomic complexity and heterogeneity of dedifferentiated Liposarcomas.

Presentation
Anti-STAT6 is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3809-03	Predilute	Ready-to-Use	3.0 mL
BSB-3809-07	Predilute	Ready-to-Use	7.0 mL
BSB-3809-15	Predilute	Ready-to-Use	15.0 mL
BSB-3809-01	Concentrate	1:50-1:200	0.1 mL
BSB-3809-05	Concentrate	1:50-1:200	0.5 mL
BSB-3809-1	Concentrate	1:50-1:200	1.0 mL
BSB-3809-T7	TintoStainer Plus	Ready-to-Use	7.0 mL
BSB-3809-T30	TintoStainer Plus	Ready-to-Use	30.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9389-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 (NaN_3) 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 the 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 the 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 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 the 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 the 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

Protocol

Automated Platform	Retrieval		IHC Protocol
	Solution	Time	
TintoStainer Plus	EDTA	45	**PolyDetector Plus**

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. Leek JP, et al. Assignment of the STAT6 gene (STAT6) to human chromosome band 12q13 by in situ hybridization. Cytogenetics and Cell Genetics. 1997; 79 (3-4): 208–9.
2. Hou J, et al. An interleukin-4-induced transcription factor: IL-4 Stat. Science. 1994; 265 (5179): 1701–6.
3. Kabbinavar FF, et al. Combined analysis of efficacy: the addition of bevacizumab to fluorouracil/leucovorin improves survival for patients with metastatic colorectal cancer". Journal of Clinical Oncology. 2005; 23 (16): 3706–12.
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5. Doyle LA, et al. Nuclear expression of STAT6 distinguishes solitary fibrous tumor from histologic mimics. Mod Pathol. 2014 Mar;27(3):390-5.
6. Cheah AL, et al. STAT6 rabbit monoclonal antibody is a robust diagnostic tool for the distinction of solitary fibrous tumor from its mimics. Pathology. 2014 Aug; 46 (5):389-95.
7. Doyle LA, et al. STAT6 is amplified in a subset of dedifferentiated liposarcoma. Pathology. 2014; 27, 1231–1237.
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	REF Catalog Number Référence du catalogue Bestellnummer
IVD 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 Lot Number Code du lot Chargenbezeichnung

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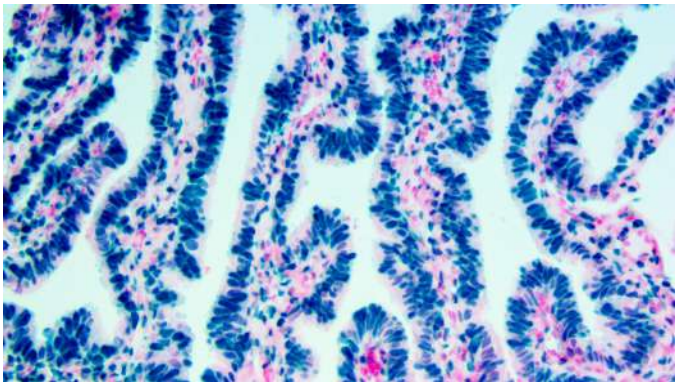
Estrogen Receptor

Clone: RM292
Rabbit Monoclonal

CE IVD



Inset: IHC of Estrogen Receptor on Fallopian Tube

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 peptide corresponding to residues near the N-terminus of human ER-alpha.

Summary and Explanation
Estrogen receptor alpha (ER) is a nuclear receptor for estrogens such as estradiol (the main endogenous human estrogen). The two different estrogen receptor proteins produced from the ESR1 and ESR2 genes are usually called the alpha and beta receptors.
This ER antibody recognizes a protein of 67 kDa, which is identified as estrogen receptor (ER) alpha.

Antibody Type	Rabbit Monoclonal	**Clone**	RM292
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Breast, Myometrium, Cervix, Fallopian Tube, Breast Carcinoma		
Application	Breast Cancer, Carcinomas of Unknown Primary Site, Endometrial Genital Cancer		

Presentation
Anti-Estrogen Receptor is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3765-3	Predilute	Ready-to-Use	3.0 mL
BSB-3765-7	Predilute	Ready-to-Use	7.0 mL
BSB-3765-15	Predilute	Ready-to-Use	15.0 mL
BSB-3765-01	Concentrate	1:100-1:500	0.1 mL
BSB-3765-05	Concentrate	1:100-1:500	0.5 mL
BSB-3765-1	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-3765-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 (NaN_3) 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 the 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 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. Dabbs DJ, et al. Diagnostic Immunohistochemistry. 2002
2. Kell DL, et al. Applied Immunohistochemistry. 1993;1(4):275-81
3. Leong ASY, et al. Applied Immunohistochemistry. 1993;1(4):282-288
4. Tesch M, et al. Am J Clin Pathol. 1993;99:8-12
5. Francesco AM, et al. Applied Immunohistochemistry. 1994;2(3):157-163
6. Silvio M, et al. Applied Immunohistochemistry. 1995;3(2):85-90
7. Bejar J, et al. Arch Pathol Lab Med. 1998;Apr;122(4):346-52
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.

Symbol Key / Légende des symboles/Erläuterung der Symbole

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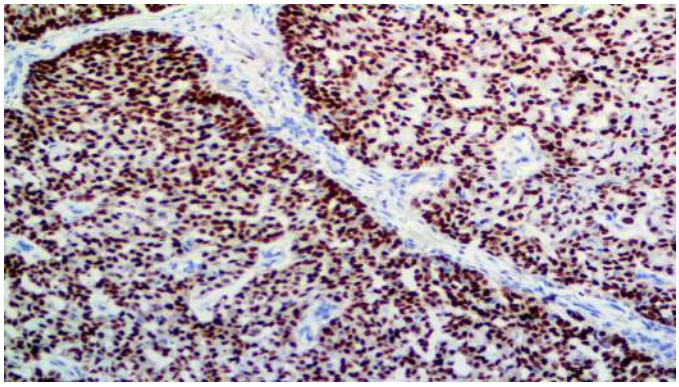
Progesterone Receptor

Clone: RBT-22
Rabbit Monoclonal

CE IVD



Inset: IHC of Progesterone Receptor on a FFPE Breast 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
Recombinant human Progesterone Receptor protein.

Summary and Explanation
The progesterone receptor (PR) also known as NR3C3 (nuclear receptor subfamily 3, group C, member 3), is an intracellular steroid receptor that specifically binds progesterone. PR is encoded by a single gene PGR residing on chromosome 11q22; it has two main forms, A and B, which differ in their molecular weight. Like all steroid receptors, the progesterone receptor has an amino and a carboxyl terminal, and between them the regulatory domain, a DNA binding domain, the hinge section, and the hormone binding domain.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-22
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Breast, Myometrium, Cervix, Breast Carcinoma		
Application	Breast Cancer, Endometrial & Genital Cancer, Carcinomas Of Unknown Primary Site		

Presentation
Anti-Progesterone Receptor is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 5882	Predilute	Ready-to-Use	3.0 mL
BSB 5883	Predilute	Ready-to-Use	7.0 mL
BSB 5884	Predilute	Ready-to-Use	15.0 mL
BSB 5885	Concentrate	1:50-1:200	0.1 mL
BSB 5886	Concentrate	1:50-1:200	0.5 mL
BSB 5887	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9353-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 (NaN_3) 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 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 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. Dabbs DJ, et al. Diagnostic Immunohistochemistry. 2002
2. Kell DL, et al. Applied Immunohistochemistry. 1993;1(4):275-81
3. Leong ASY, et al. Applied Immunohistochemistry. 1993;1(4):282-288
4. Tesch M, et al. Am J Clin Pathol. 1993; 99:8-12
5. Clarke CL, et al. Endocrinology. 1987; 121:1123-32
6. Feil PD, et al. Endocrinology. 1998;123: 2506-13
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. https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

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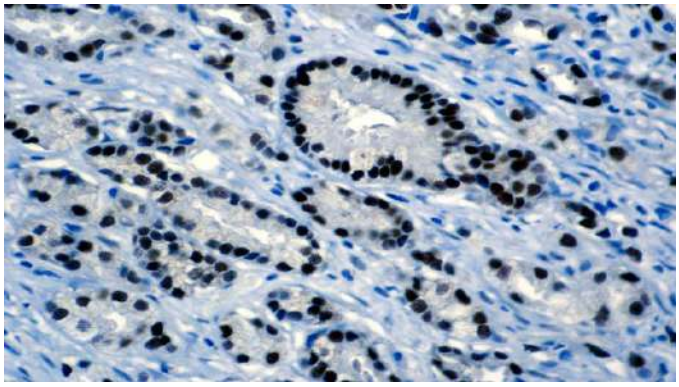
Androgen Receptor

Clone: BSB-4
Mouse Monoclonal

CE IVD



Inset: IHC of Androgen Receptor on a FFPE Prostate 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 corresponding to residues in the N-terminus of human Androgen Receptor protein.

Summary and Explanation
The androgen receptor (AR) is a type of nuclear receptor which is activated by binding of either of the androgenic hormones testosterone or dihydrotestosterone. The main function of the androgen receptor is as a DNA-binding transcription factor which regulates gene expression. However, the androgen receptor has additional functions independent of DNA binding. The AR signaling pathway plays a key role in development and function of male reproductive organs, including the prostate and epididymis. AR also plays a role in nonreproductive organs, such as muscle, hair follicles, and the brain.

This antibody reacts with the androgen receptor and also with the newly-described A form of the receptor. This antibody does not cross-react with estrogen, progesterone or glucocorticoid receptors. Abnormalities in the AR-signaling pathway have been linked to a number of diseases, including Prostate Cancer, Kennedy's Disease and male infertility.

Antibody Type	Mouse Monoclonal	**Clone**	BSB-4
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Prostate, Prostatic Adenocarcinoma		
Application	Prostate Cancer, Breast Cancer, Head & Neck Cancer		

Presentation
Anti-Androgen Receptor 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 6071	Predilute	Ready-to-Use	3.0 mL
BSB 6072	Predilute	Ready-to-Use	7.0 mL
BSB 6073	Predilute	Ready-to-Use	15.0 mL
BSB 6074	Concentrate	1:100-1:500	0.1 mL
BSB 6075	Concentrate	1:100-1:500	0.5 mL
BSB 6076	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9016-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 (NaN_3) 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 the 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 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. Yu Z, et al. J. Clin. Invest. 2006:116(10):2663-72
2. Jänne OA, et al. Ann Med. 1993;25:83
3. Horie K, et al. Hum Reproduct. 1992:7(10):1461
4. Nakada SY, et al. Canc Res. 1993:53:1967
5. 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

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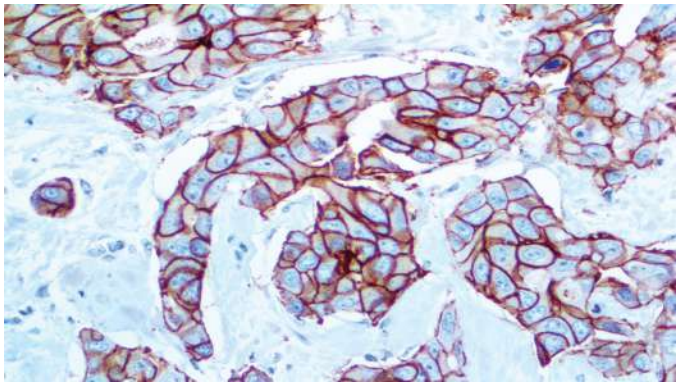
HER-2 neu

Clone: RBT-HER2
Rabbit Monoclonal

CE IVD



Inset: IHC of HER-2 neu on a FFPE Breast 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
Recombinant protein encoding extracellular domain of human HER-2 protein.

Summary and Explanation
HER-2 neu (also known as c-erbB-2) is a member of the epidermal growth factor receptor (EGFR) family and is notable for its role in the pathogenesis of breast cancer and as a target of treatment. It is a cell membrane surface-bound tyrosine kinase and is normally involved in the signal transduction pathways leading to cell
growth and differentiation. HER-2 neu is a proto-oncogene located at the long arm of human chromosome 17(17q11.2-q12).

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-HER2
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Membranous	**Species Reactivity**	Human
Control	Breast Carcinoma		
Application	Breast Cancer, Colon & Gastrointestinal Cancer		

Presentation
Anti-HER-2 neu is a rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 2035	Predilute	Ready-to-Use	3.0 mL
BSB 2036	Predilute	Ready-to-Use	7.0 mL
BSB 2037	Predilute	Ready-to-Use	15.0 mL
BSB 2038	Concentrate	1:100-1:500	0.1 mL
BSB 2039	Concentrate	1:100-1:500	0.5 mL
BSB 2040	Concentrate	1:100-1:500	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9210-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 (NaN_3) 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 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 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

1989;49:2087-90
2. Wright C, et al. British J Cancer. 1992;65:118-121
3. Slamon DJ, et al. Science. 1987;237:177-182
4. Jacobs TW, et al. Am J Clin Pathol. 2000;113:251-258
5. Gorlick R, et al. J Clin Oncol. 1999;17(9):2781-88
6. Keshgegian AA, et al. Am J Clin Pathol. 1997;Oct;108(4):456-63
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.
https://www.cdc.gov/mmwr/pdf/other/su6101.pdf

Symbol Key/Légende des symboles/Erläuterung der Symbole

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

Bio SB BIOSCIENCE FOR THE WORLD
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abcam

ab272691

Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade

Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691) is a rabbit monoclonal antibody detecting Histone H3.3 in **Western Blot, Flow Cytometry (Intra), Flow Cytometry, IP, IHC-P, ICC/IF, ChIP, Dot Blot**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23581-39
Purification technique	Affinity purification Protein A
Concentration	0.506 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ChIP

Tested

Species	Human
Dilution info	2 µg for 25 µg chromatin
Notes	-

Not recommended

Species	Synthetic peptide, Transfected cell lysate, Transfected cell line
Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	1/1000
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate, Transfected cell line
Dilution info	-
Notes	-

WB

Tested

Species	Transfected cell lysate
Dilution info	1/1000

Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Synthetic peptide, Transfected cell line
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

Species	Synthetic peptide, Transfected cell lysate, Transfected cell line
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line
Dilution info	1/50
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Synthetic peptide, Transfected cell lysate
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Synthetic peptide, Transfected cell lysate, Transfected cell line
Dilution info	-
Notes	-

Target data

See full target information H3-3A mutated G34W

Function	Variant histone H3 which replaces conventional H3 in a wide range of nucleosomes in active genes. Constitutes the predominant form of histone H3 in non-dividing cells and is incorporated into chromatin independently of DNA synthesis. Deposited at sites of nucleosomal displacement throughout transcribed genes, suggesting that it represents an epigenetic imprint of transcriptionally active chromatin. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-

translational modifications of histones, also called histone code, and nucleosome remodeling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ChIP, Dot Blot in Human samples.

What is the molecular weight of Histone H3.3?
Anti-Histone H3.3 (mutated G34W) [EPR23581-39] - ChIP Grade (ab272691) specifically detects a band for Histone H3.3 (UniProt: P84243) at a molecular weight of 15kDa.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 10µl. Discover our selection of trial-size antibodies.

Other related products
We have a range of other formats of antibody clone [EPR23581-39] also available for your convenience: ab272691, Carrier free - ab272700, PE - ab318402, APC - ab318505, Alexa Fluor® 488 - ab318608, Alexa Fluor® 647 - ab318711, Alexa Fluor® 594 - ab318814, Alexa Fluor® 555 - ab318914, Alexa Fluor® 750 - ab321540

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

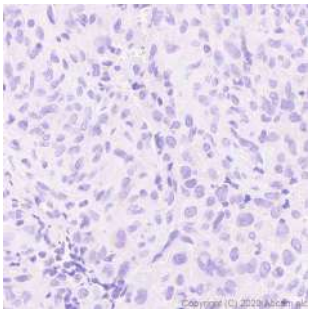
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

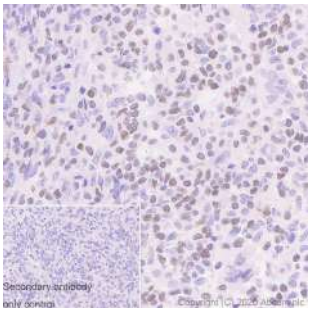
Histone H3.3 (mutated G34W) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Immunohistochemical analysis of paraffin-embedded human chondroblastoma tissue labeling Histone H3.3(mutated G34 W) with ab272691 at 1/250 dilution followed by ready to use Goat Anti-Rabbit IgG H&L (HRP).
Negative control: No staining in human chondroblastoma (PMID: 29757500).

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

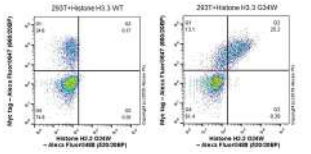


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Histone H3.3 (mutated G34W) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Immunohistochemical analysis of paraffin-embedded human giant cell tumor of bone tissue labeling Histone H3.3(mutated G34 W) with ab272691 at 1/250 dilution followed by ready to use Goat Anti-Rabbit IgG H&L (HRP). Nuclear staining in human giant cell tumor of bone (PMID: 29757500). Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is ready to use Goat Anti-Rabbit IgG H&L (HRP).

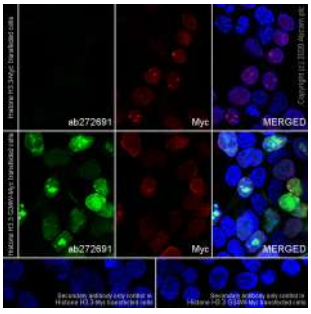
Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Flow Cytometry (Intracellular) - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Histone H3.3 (mutated G34W) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed 90% methanol-permeabilized HEK-293T (Human embryonic kidney epithelial cell) transfected with myc tagged Histone H3.3 WT construct (Left panel) and myc-tagged Histone H3.3 G34W construct (Right panel) cells labelling Histone H3.3 (mutated G34 W) with ab272691 at 1/50 dilution (1µg). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



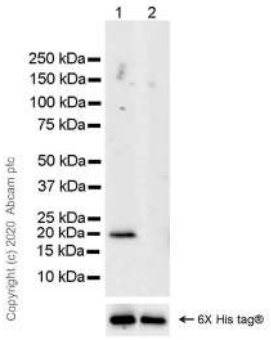
Immunocytochemistry/ Immunofluorescence - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Histone H3.3 (mutated G34W) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T cells labelling Histone H3.3(mutated G34 W) with ab272691 at 1/100 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2 µg/ml dilution (Green). Confocal image showing nuclear staining in HEK-293T cells transfected with Histone H3.3 G34W-Myc plasmid, while no staining in HEK-293T cells transfected with H3.3 WT -Myc plasmid. Myc-Tag Mouse mAb (Alexa Fluor® 647) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 2 µg/ml dilution.

ChIP - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Chromatin was prepared from HEK-293T transfected with myc-His tagged Histone H3.3 mutated G34W and Histone H3.3 WT cells according to the Abcam Dual-X-ChIP protocol. Cells were fixed with formaldehyde for 10min.
The ChIP was performed with 25 µg of chromatin, 2 µg of ab272691 (red), or 2 µg of rabbit normal IgG ab172730 (gray) and 20 µl of Protein A/G sepharose beads. The immunoprecipitated DNA was quantified by real time PCR (Taqman approach for active and inactive loci, Sybr green approach for heterochromatic loci).
Primers and probes are located in the first kb of the transcribed region.



Western blot - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Histone H3.3 (mutated G34W) Western blot staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 minutes.

All lanes:
Western blot - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691) at 1/1000 dilution

Lane 1:
HEK-293T (human embryonic kidney) transfected with Histone H3.3 G34W expression vector containing a myc-His-tag®, whole cell lysate at 40 µg

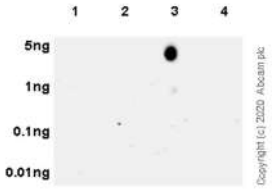
Lane 2:
HEK-293T transfected with Histone H3.3 (WT) expression vector containing a myc-His-tag®, whole cell lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 15 kDa

Observed band size: 20 kDa



Dot Blot - Anti-Histone H3.3 (mutated G34W) antibody [EPR23581-39] - ChIP Grade (ab272691)

Histone H3.3 (mutated G34W) Dot Blot staining using rabbit Anti-Histone H3.3 (mutated G34W) antibody

Dot blot analysis of Histone H3.3 (mutated G34 W) labeled with ab272691 at 1/1000 dilution.
Lane 1: Histone H3.3 H3G34W peptide (aa28-37).
Lane 2: Histone H3.3 H3G34W peptide (aa33-43).
Lane 3: Histone H3.3 H3G34W peptide (aa28-43).
Lane 4: Histone H3.3 WT peptide (aa28-43).

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution was used as secondary antibody.

Blocking and dilution buffer: 5% NFDM/TBST.

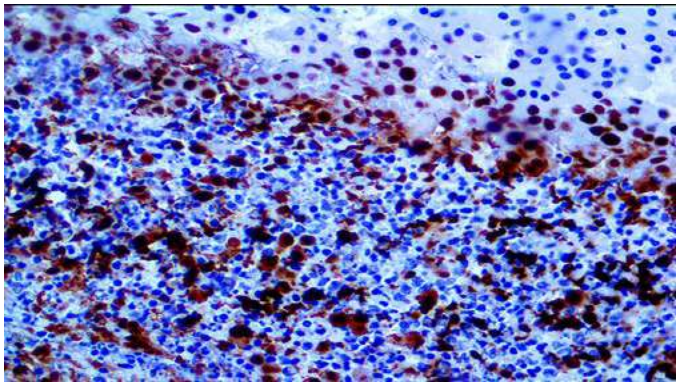
Exposure time: 3 minutes.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.

SMAD4/DPC4

Clone: BSB-63
Mouse Monoclonal

CE IVD



Inset: IHC of SMAD4/DPC4 on a FFPE Pancreatic Cancer Tissue

Antibody Type	Mouse Monoclonal	**Clone**	BSB-63
Isotype	IgG1	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Nuclear	**Species Reactivity**	Human
Control	Pancreas, Thyroid, Placenta, Cervix, Transitional Cell Carcinoma & Lymphoblastic Lymphoma		
Application	Gall Bladder and Pancreatic Cancer, Liver Cancer; Colon & Gastrointestinal Cancer		

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-terminus of the human SMAD4 protein.

Summary and Explanation
SMAD 4, also known as DPC4 or SMAD family member n°4, is a protein involved in cell signaling in mammals. SMAD 4 forms with SMAD 3, a complex which can bind to DNA and modify the expression of several genes related to cellular activities such as proliferation or differentiation. SMAD 4 serves as a mediator between extracellular growth factors from the TGFβ family and genes inside the cell nucleus. The abbreviation coin co-SMAD stands for common mediator. SMAD 4 is also defined as a signal transducer.
SMAD4, is often found mutated in many cancers. The mutation can be inherited or acquired during an individual's lifetime. If inherited, the mutation affects both somatic and sexual cells. If the SMAD 4 mutation is acquired, it will only exist in certain somatic cells. Indeed, SMAD 4 is not synthesized by all cells. The protein is present in skin, pancreatic, colon, uterus and epithelial cells. It is also produced by fibroblasts. The functional SMAD 4 participates in the regulation of the TGF-β signal transduction pathway, which negatively regulates growth of epithelial cells and the extracellular matrix. When the structure of SMAD 4 is altered, expression of the genes involved in cell growth is no longer regulated and cell proliferation can go on without any inhibition. The important number of cell divisions leads to the forming of tumors and then to multiploid colorectal cancer and pancreatic carcinoma. It is found inactivated in at least 50% of pancreatic cancers. SMAD 4 is also found mutated in the autosomal dominant disease juvenile polyposis syndrome (JPS). JPS is characterized by hamartomatous polyps in the gastrointestinal tract. These polyps are usually benign; however, they are at greater risk of developing gastrointestinal cancers, in particular colon cancer.
Approximately 55% of pancreatic cancers bear deletions or mutations in SMAD4/DPC4. In patients undergoing surgical resection of their pancreatic adenocarcinoma, survival of patients whose tumors expressed SMAD4 protein was significantly longer (unadjusted median survival, 19.2 months) as compared with 14.7 months without SMAD4 protein expression (P = 0.03). This SMAD4 survival benefit persisted after adjustment for prognostic factors including tumor size, margin status, lymph node status, pathological stage, blood loss, and use of adjuvant chemoradiotherapy.

Presentation
Anti-SMAD4/DPC4 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3204	Predilute	Ready-to-Use	3.0 mL
BSB 3205	Predilute	Ready-to-Use	7.0 mL
BSB 3206	Predilute	Ready-to-Use	15.0 mL
BSB 3207	Concentrate	1:50-1:200	0.1 mL
BSB 3208	Concentrate	1:50-1:200	0.5 mL
BSB 3209	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9378-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 (NaN_3) 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 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 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. Lin X, et al. "Activation of transforming growth factor-beta signaling by SUMO-1 modification of tumor suppressor Smad4/DPC4". The Journal of Biological Chemistry 2003; 278(21): 18714–18719.
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5. 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

EC REP QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	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	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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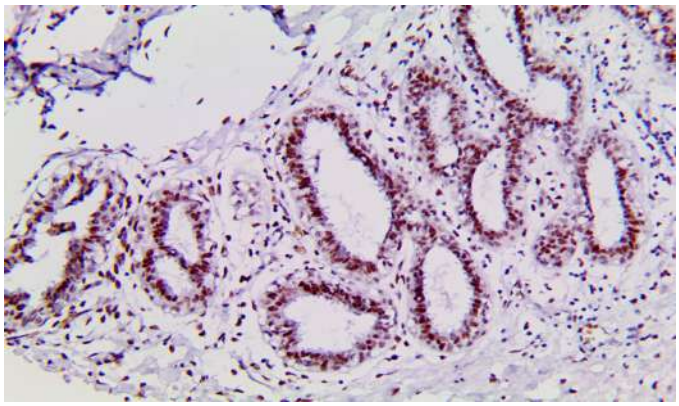
BAP1 (RBT-BAP1)

Rabbit Monoclonal

IVD



IHC of BAP1 on an FFPE Normal Breast tissue

PRODUCT IDENTIFICATION REF

Catalog No.	Presentation	Volume
BSB-3839-3	Predilute Ready-to-Use	3.0 mL
BSB-3839-7	Predilute Ready-to-Use	7.0 mL
BSB-3839-15	Predilute Ready-to-Use	15.0 mL
BSB-3839-01	Concentrate	0.1 mL
BSB-3839-05	Concentrate	0.5 mL
BSB-3839-1	Concentrate	1.0 mL

INTENDED USE

BAP1 (RBT-BAP1), rabbit monoclonal antibody, is a primary antibody intended for laboratory use by trained laboratory personnel in an immunohistochemical (IHC) assay to qualitatively identify the BAP1 protein by light microscopy in normal and/or pathological formalin-fixed, paraffin-embedded (FFPE) human tissue.

The clinical interpretation of any staining or its absence should be performed by a qualified pathologist and complemented by morphological studies using proper controls and evaluated within the context of the patient's clinical history and other diagnostic tests.

SUMMARY AND EXPLANATION

BAP1 or BRCA1 associated protein-1 (ubiquitin carboxy-terminal hydrolase) is a deubiquitinating enzyme that in humans is encoded by the BAP1 gene. In cancer, BAP1 can function both as a tumor suppressor and as a metastasis suppressor. Exome sequencing identified inactivating mutations in BAP1 in 47% of Uveal melanomas, and BAP1 mutation have been found to be strongly associated with metastasis. BAP1 mutations have been identified in aggressive Mesotheliomas with similar mutations as seen in Melanomas. Mutations in the tumor suppressor gene BAP1 occur in approximately 15% of clear cell renal cell carcinoma cases. Sequencing efforts demonstrated worse outcomes in patients with BAP1 mutated clear cell renal cell carcinoma.

PRINCIPLE OF PROCEDURE

In general, immunohistochemical (IHC) staining techniques allow for antigen visualization via the sequential application of a specific antibody to the antigen (primary antibody), a secondary antibody to the primary antibody (link antibody), an enzyme complex, and a chromogenic substrate with interposed washing steps. The enzymatic activation of the chromogen results in a visible reaction product at the antigen site. The specimen may then be counterstained and coverslipped. Results are interpreted using a light microscope.

MATERIALS AND PRESENTATION

This antibody is derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-BAP1
Isotype	IgG	**Reactivity**	Human
Localization	Nuclear	**Source**	Supernatant
Recommended Dilution Range	1:50-1:200		
Immunogen	Synthetic peptide corresponding to residues of the human BAP1 protein		
Diluted In	Tris Buffer, pH 7.3-7.7, 1% BSA and <0.1% Sodium Azide		

MATERIALS REQUIRED BUT NOT PROVIDED

Positive and negative control tissues
Positively charged microscope slides, such as Bio SB Hydrophilic Plus Slides *(BSB 7028)*
Drying oven capable of maintaining a temperature of 53-65°C
Xylene or xylene substitute, such as Tinto Dewaxer *(BSB 7458)*
Ethanol or reagent alcohol
Distilled water
Slide handling equipment, such as staining dishes (*BSB 7009*) and slide holder *(BSB 7010)*
Heating equipment for tissue pretreatment, such as the Bio SB TintoRetriever Pressure Cooker *(BSB 7087)*
Suitable epitope retrieval solution, such as ImmunoDNA Retriever with Citrate (*BSB 0020 through BSB 0023*) or EDTA *(BSB 0030 through BSB 0033)*
IHC Wash Buffer, such as ImmunoDNA Washer *(BSB 0029, BSB 0042, BSB 0149, BSB 0150)*
Antibody diluent, such as ImmunoDetector Protein Blocker/ Antibody Diluent *(BSB 0113 through BSB 0115, BSB 0040, BSB 0041)*
Negative Control Reagent, such as *(BSB 0040A through C, BSB 0041A through C)*
Anti-Rabbit detection system, such as the Bio SB PolyDetector Plus HRP Detection System *(BSB 0257 through 0266)*
Counterstain, such as Bio SB Hematoxylin Counterstainer *(BSB 0024 through BSB 0028)*
Mounting medium, such as PermaMounter *(BSB 0097)* or AquaMounter *(BSB 0090 through BSB 0093)*
Cover glass, such as Tinto Coverslips *(BSB-7100-100, BSB-7100-1000, BSB-7100-20000)*
Timer
Light microscope (40-400x)

WARNINGS AND PRECAUTIONS

1. For *in vitro* diagnostic (IVD) use.
2. For professional users only. Results should be interpreted by a qualified medical professional and complemented by morphological studies using proper controls and evaluated within the context of the patient's clinical history and other diagnostic tests.
3. This product contains <0.1% sodium azide (NaN_3) as a preservative. The following hazard and precautionary statements apply: H303 - May be harmful if swallowed. P301 + P312 - IF SWALLOWED: Call a POISON

CENTER or doctor/physician if you feel unwell. For additional safety information refer to the Safety Data Sheet.
4. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
5. Specimens, before and after fixation, and all materials exposed to them, should be handled as if capable of transmitting infection and disposed of with proper precautions.
6. Materials of human and animal origin should be handled as biohazardous materials and disposed of with proper precautions. 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."
7. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
8. Avoid microbial contamination of reagents as it may cause incorrect results.
9. Accumulated sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing.
10. Dispose of contents and container in accordance with all local, regional, national, and international regulations.
11. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).

REAGENT STORAGE AND STABILITY

1. Store at 2-8°C in original packaging.
2. This product is stable up to the expiration date on the product label when stored according to instructions. Do not use after expiration date listed on the label.
3. Temperature fluctuations should be avoided. Directly following every run, tightly close product and place in refrigerator in an upright position. Avoid prolonged exposure to room temperature conditions.
4. There are no definitive signs to indicate instability of this product. Contact Bio SB Technical Support if there is a suspected indication of reagent instability.

PROCEDURE

Recommended Specimen Preparation

The antibody can be used on FFPE tissue sections. Ensure tissue undergoes appropriate fixation for best results.
1. Cut and mount 3-5 µm FFPE tissues on positively charged slides.
2. Air dry slides for 1 hour at 60° C.
3. Deparaffinize and rehydrate FFPE tissues:
   - Heat slides in a 60° C incubator for 10 min. to partially melt the paraffin.
   - Pass slides through three xylene or xylene alternative baths, 2 min. per bath
   - Pass slides through two 100% ethanol baths, 2 min. per bath
   - Pass slides through one 70% ethanol bath for 2 min.
   - Pass slides through one 30% ethanol bath for 2 min.
   - Pass slides through one distilled water bath for 2 min.
4. Subject tissues to heat-induced epitope retrieval (HIER) using a suitable HIER solution, such as Bio SB ImmunoDNA Retriever with Citrate or ImmunoDNA Retriever with EDTA. Use a heating method such as TintoRetriever Pressure Cooker or equivalent; follow the Instructions for Use for the heating method used.
5. Following retrieval, immediately remove the staining dish with slides from TintoRetriever Pressure Cooker and transfer to room temperature; let cool until the retrieval solution is no longer opaque. Wash slides with Bio SB ImmunoDNA Washer or equivalent and begin IHC protocol. Note: Tissues should remain hydrated via use of a wash buffer.

Recommended Immunohistochemical Protocol

Wash slides between each step in the table below with ImmunoDNA Washer or equivalent at least 3 times, until ImmunoDNA Washer runs evenly on the slide surface.

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP
HRP/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.	N/A	15 min.
Substrate-Chromogen	5-10 min.	5-10 min.	5-10 min.
Counterstain/Coverslip	Varies	Varies	Varies

Preparation of the Working Solution

Prediluted antibody is a ready-to-use product. The concentrated antibody should be diluted and optimized by the user.

Mounting Protocols

For instructions about using a mounting media such as PermaMounter, refer to the Instructions for Use of the product.

QUALITY CONTROL RECOMMENDATIONS

Controls should be fresh autopsy, biopsy, or surgical specimens fixed, processed, and embedded as soon as possible in the same manner as the sample(s). Such a control monitors all steps of the analysis, from tissue preparation through staining. The use of a tissue section fixed or processed differently from the test specimen will act as a control for all reagents and method steps except fixation and tissue processing..

Bio SB Control Slides Available

Catalog No.	Quantity
BSB-9025-CS	5 slides

Positive Tissue Control: A positive tissue control must be run with every test procedure. A tissue with weak positive staining (e.g., low expressor) is optimal for detection of subtle changes in the primary antibody sensitivity from instability or problems with the IHC methodology. Positive tissue control for the antibody may include the following: Mesothelioma, Breast, Fallopian Tube, Salivary Gland tissue.

Known positive tissue controls should only be utilized for monitoring the correct performance of processed tissues and test reagents, rather than as an aid in formulating a specific diagnosis. If the positive tissue controls fail to demonstrate positive staining, results with the test specimens should be considered invalid.

Negative Tissue Control: One tissue may contain both positive and negative staining cells or tissue components and serve as both the positive and negative control tissue. Internal negative control sites should be verified by the user. The components that do not stain should demonstrate the absence of specific staining and provide an indication of non-specific background staining.

Negative Control Reagent: A negative control reagent must be run for every specimen to aid in the interpretation of results. A negative control reagent is used in place of the primary antibody to evaluate nonspecific

staining. The slide should be treated with negative control reagent, matching the host species of the primary antibody, and ideally having the same IgG concentration.
The incubation period for the negative control reagent should equal the primary antibody incubation period.

INTERPRETATION OF RESULTS

Positive Tissue Control Interpretation: The stained positive tissue control should be examined first to ascertain that all reagents are functioning properly. The presence of an appropriately colored reaction product within the target cells/cellular components is indicative of positive reactivity. Refer to the IFU of the detection system used for expected color reactions. If the positive tissue controls fail to demonstrate positive staining, any results with the test specimens should be considered invalid. Depending on the incubation length and potency of the hematoxylin used, counterstaining will result in a pale to dark blue coloration of the cell nuclei. Excessive or incomplete counterstaining may compromise proper interpretation of results.

Negative Tissue Control Interpretation: The negative tissue control should be examined after the positive tissue control to verify the specificity of the labeling of the target antigen by the primary antibody. The absence of specific staining in the negative tissue control confirms the lack of antibody cross-reactivity to cells/cellular components. If specific staining occurs in the negative tissue control, results with the patient specimen should be considered invalid. Nonspecific staining, if present, usually has a diffuse appearance. Sporadic staining of connective tissue may also be observed in sections from excessively formalin-fixed tissues. Use intact cells for interpretation of staining results. Necrotic or degenerated cells often stain nonspecifically.

Patient Tissue Interpretation: Examine stained patient specimens last. Positive staining intensity should be assessed within the context of any nonspecific background staining of the negative reagent control. As with any IHC test, a negative result means that the antigen was not detected, not that the antigen was absent.

LIMITATIONS

1. Immunohistochemistry is a multi-step process that requires specialized training in the selection of the appropriate reagents; tissue selection, fixation, and processing; preparation of the IHC slide; and interpretation of the staining results.
2. Tissue staining is dependent on the handling and processing of the tissue prior to staining. Improper fixation, freezing, thawing, washing, drying, heating, sectioning, or contamination with other tissues or fluids may produce artifacts, antibody trapping, or false negative results. Inconsistent results may be due to variations in fixation and embedding methods, or to inherent irregularities within the tissue.
3. Excessive or incomplete counterstaining may compromise proper interpretation of results.
4. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests. It is the responsibility of a qualified pathologist who is familiar with the proper use of IHC antibodies, reagents, and methods to interpret all of the steps used to prepare and interpret the final IHC preparation.
5. Predilute Ready-to-Use antibodies are provided at optimal dilution for use following the recommended instructions for IHC on prepared tissue sections preparation. Any deviation from recommended test procedures may invalidate declared expected results; appropriate controls must be employed and documented. Users who deviate from recommended test procedures must accept responsibility for interpretation of patient results under these circumstances.
6. This product is not intended for use in flow cytometry. Performance characteristics have not been determined for flow cytometry.
7. Tissues from persons infected with hepatitis B virus and containing hepatitis B surface antigen (HBsAg) may exhibit nonspecific staining with horseradish peroxidase.
8. Reagents may demonstrate unexpected reactions in previously untested tissues. The possibility of unexpected reactions even in tested tissue groups cannot be completely eliminated due to biological variability of antigen expression in neoplasms, or other pathological tissues. Contact Bio SB Technical Support with documented unexpected reaction(s).
9. Normal/non-immune sera from the same animal source as secondary antisera used in blocking steps may cause false-negative or false-positive results due to autoantibodies or natural antibodies.
10. False-positive results may be seen due to non-immunological binding of proteins or substrate reaction products. They may also be caused by pseudoperoxidase activity (erythrocytes), endogenous peroxidase activity (cytochrome C), or endogenous biotin (e.g., liver, breast, brain, kidney) depending on the type of immunostain used.

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2. Gaytán de Ayala Alonso A, Gutiérrez L, et al. A genetic screen identifies novel polycomb group genes in Drosophila. Genetics. 2007 Aug;176(4):2099-108.
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5. Kapur P, Christie A, et al. BAP1 immunohistochemistry predicts outcomes in a multi-institutional cohort with clear cell renal cell carcinoma. J Urol. 2014 Mar;191(3):603-10.
6. Peña-Llopis S, Vega-Rubín-de-Celis S, et al. BAP1 loss defines a new class of renal cell carcinoma. Nat Genet. 2012 Jun 10;44(7):751-9.
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8. Ventii KH, Devi NS, et al. BRCA1-associated protein-1 is a tumor suppressor that requires deubiquitinating activity and nuclear localization. Cancer Res. 2008 Sep 1;68(17):6953-62.
9. 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

SYMBOLS GLOSSARY

The following symbols may be found in this IFU or on the product labeling. Some glossary symbols may not be applicable to this product.

Source	Symbol	Meaning
ISO 15223-1 5.1.1		Manufacturer
ISO 15223-1 5.1.4		Use-by-Date
ISO 15223-1 5.1.5		Batch Code (Lot Number)
ISO 15223-1 5.1.6		Catalog Number
ISO 15223-1 5.1.8		Importer
ISO 15223-1 5.3.7		Temperature Limit
ISO 15223-1 5.4.3		Consult electronic Instructions for Use
ISO 15223-1 5.5.1		In Vitro Diagnostic Medical Device
ISO 15223-1 5.7.10		Unique Device Identifier
(EC) No. 1272/2008 (GHS/CLP) on classification, labelling and packaging of substances and mixtures		Warning

CONTACT INFORMATION

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Printed IFU
Available upon request.

Bio SB, Inc.
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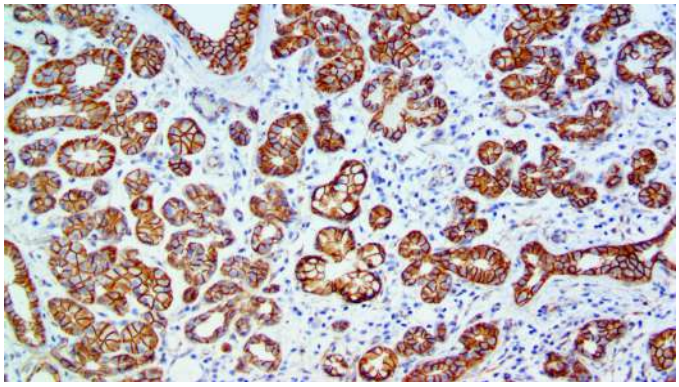
Santa Barbara, CA 93111 USA

Beta-Catenin

Clone: RM276
Rabbit Monoclonal

CE IVD



Inset: IHC of Beta-Catenin on Salivary Gland 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 peptide corresponding to human Beta-Catenin.

Summary and Explanation
Beta-Catenin is a subunit of the Cadherin protein complex. Cadherins are a type of protein normally expressed on the surface of certain cells. Specifically, Beta Catenin is a 92 kDa protein normally found in the cytoplasm of the cell in the sub-membranous location. This protein is associated with E-Cadherin and may be essential for the function of E-Cadherin.

Mutations in the Beta-Catenin gene result in the nuclear accumulation of this protein. Nuclear accumulation of this protein has been demonstrated in Fibromatosis lesions of the breast and abdomen, and therefore is useful in differentiating this lesion from other spindle-cell lesions that may occur in these locations

Antibody Type	Rabbit Monoclonal	**Clone**	RM276
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous, Nuclear	**Species Reactivity**	Human, Predicted: Mouse, Rat, Sheep, Hamster, Cow, Macaque Monkey, African Green Monkey
Control	Fibromatosis of the Breast & Abdomen. Breast, Abdomen, Colon, Testis, Pancreas		
Application	Breast Cancer, Colon & Gastrointestinal Cancer, Liver Cancer, Gall Bladder & Pancreatic Cancer, Sacoma & Soft Tissue		

Presentation
Anti-Beta-Catenin is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3756-3	Predilute	Ready-to-Use	3.0 mL
BSB-3756-7	Predilute	Ready-to-Use	7.0 mL
BSB-3756-15	Predilute	Ready-to-Use	15.0 mL
BSB-3756-01	Concentrate	1:50-1:200	0.1 mL
BSB-3756-05	Concentrate	1:50-1:200	0.5 mL
BSB-3756-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9033-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 (NaN_3) 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 the 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 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

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5. 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

EC REP — QAdvis EAR AB, Ideon Science Park, Scheelevägen 17, SE-223 70 Lund, Sweden	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	Read Instructions for Use / Consulter les instructions d'utilisation / Gebrauchsanweisung beachten	Expiration Date / Utiliser jusque / Verwendbar bis	LOT — Lot Number / Code du lot / Chargenbezeichnung

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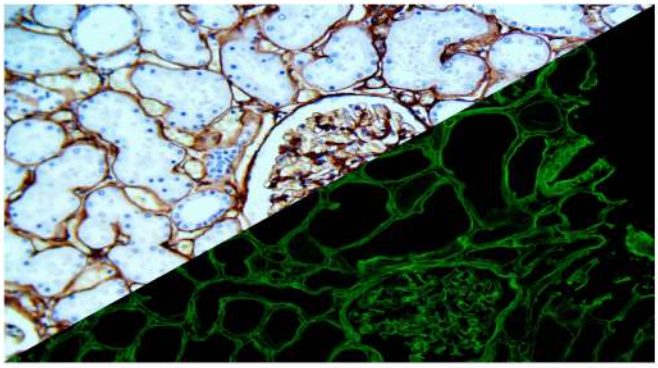
Collagen Type IV

Clone: RBT-COL4A1
Rabbit Monoclonal

CE IVD



Inset: IHC and IF of Collagen IV on a FFPE Kidney Tissue

Catalog No.	Antibody Type	Dilution	Volume
BSB-3777-3	Tinto Predilute	Ready-to-Use	3.0 mL
BSB-3777-7	Tinto Predilute	Ready-to-Use	7.0 mL
BSB-3777-15	Tinto Predilute	Ready-to-Use	15.0 mL
BSB-3777-01	Concentrate	1:50 - 1:200	0.1 mL
BSB-3777-05	Concentrate	1:50 - 1:200	0.5 mL
BSB-3777-1	Concentrate	1:50 - 1:200	1.0 mL

Control Slides Available

Catalog No.	Quantity
BSB-9123-CS	5 slides

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

Intended Use
For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical and Immunofluorescence 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
Purified human placental extract

Summary and Explanation
Collagen is the main protein of connective tissue in animals and the most abundant protein in mammals, making up about 25% of the total protein content. Collagen IV is a major constituent of the basement membranes, along with laminins and enactins. It is composed of the alpha 1 IV chain and alpha 2 IV chain in a 2:1 ratio. It can form insoluble fibers with high tensile strength.

Normal tissue stains with this antibody in a manner consistent with the sites of mesenchymal elements and epithelial basal laminae. Antibody to collagen IV is useful in detecting the loss of parts of the basement membrane in carcinomas. Collagen IV can also be useful in the classification of soft tissue tumors; Schwanomas, Leiomyomas, and their well-differentiated malignant counterparts usually immune react to this antibody. The vascular nature of neoplasms, Hemangiopericytoma, Angiosarcoma and Epithelioid Hemangioendothelioma can be observed with this antibody.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-COL4
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	**Species Reactivity**	Human
Control	Muscle, Lung, Breast, Placenta, Testis, Transitional Cell Carcinoma, T Cell Lymphoblastic Lymphoma		
Application	Breast Cancer, Gall Bladder & Pancreatic Cancer		

Presentation
Anti-Collagen IV is a rabbit 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.

Collagen Type IV antibody requires the use of ImmunoDNA Digestor (Cat.#'s BSB 0108, BSB 0109, BSB 0110, BSB 0111, BSB 0112) or similar Proteinase K based product as antigen retriever or after HIER with Citrate or EDTA.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 the 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 the expiration date listed on the 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 Immune DNA Retrieval with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033), and/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 on acetone-fixed frozen sections and acetone-fixed cell preparations.

Preparation for Frozen Tissues Procedure
1. Embed the specimen in OCT inside the cryostat.
2. Cut sections at 5 microns.
3. Place the section on a positively charged glass slide.
4. Air dry for 30-60 minutes.
5. Fix in acetone 100% for 2-10 minutes.
6. Air dry for another 10 minutes.

Preparation for FFPE Tissues 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. **One of the Epitope Retrieval Methods can be used:**

4a. Pre-warm the ImmunoDNA Digestor solution to room temperature. Incubate tissue sections with the ImmunoDNA Digestor solution for 10 minutes at room temperature or for 5 minutes at 37 ºC.

4b. Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA and place on the trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 10 minutes. Open and immediately transfer slides to room temperature. Let it cool down for 10 min. . Incubate in enzymatic pretreatment with ImmunoDNA Digestor (BSB 0108-0112) or similar Proteinase K enzyme for 1-2 minutes.

IHC/IF protocol.

For manual IF\IHC, perform antibody incubation at ambient temperature. For automated IF\IHC methods, perform antibody incubation according to instrument manufacturer's instructions. Wash slides with ImmunoDNA washer or DI water. Continue IF\IHC protocol. Wash slides between each step with ImmunoDNA washer solution.

Abbreviated Immunohistochemical Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP
ImmunoDNA Digestor (Proteinase K)	Varies	Varies	Varies
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

Abbreviated AmpliDetector Plus FITC IF Protocol

Step	Incubation Time
Rinse slides in wash buffer	
ImmunoDNA Digestor (Proteinase K)	Varies
Peroxidase Blocker	5 min.
Apply Antibody	5 min.
Apply Mouse/Rabbit Link	5 min.
Apply HRP Label	5 min.
Keep FITC reagents and slides in the dark	
Apply AmpliDetector FITC solution	5 min.
Coverslip with IF mounting medium	

Mounting Protocol IHC:

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.

Mounting Protocol IF:

1. Bring FluoroMounter or FluoroMounter with DAPI to room temperature.
2. Rinse slides with distilled or deionized water.
3. Remove excess water from slides before laying them flat in the dark.
4. Turn the media bottle upside down before opening the dropper bottle.
5. Apply 1-3 drops of FluoroMounter to each slide making sure the specimen is covered.
6. Incubate 3-5 minutes at room temperature in the dark.
7. Coverslip.
8. Observe under a fluorescent microscope using the appropriate filters.
9. The slides are recommended to be stored at 2-8 ºC in the dark.

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. Gould VE, et al. Pathol Annual. 1976;11:353-386
2. McArdle JP, et al. Int J Cancer. 1984;34:633-638
3. Sakr WA, et al. Hum Path. 1987;18:1043-1050
4. Barsky SH, et al. Am J Surg Pathol. 1983;7:667-677
5. 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

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IVD — 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 — Lot Number / Code du lot / Chargenbezeichnung

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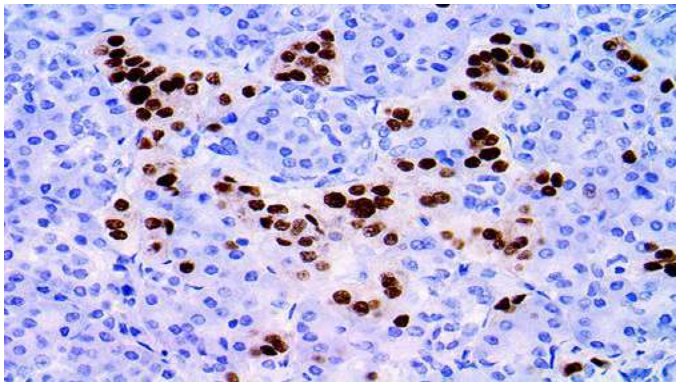
NKX2.2

Clone: EP336
Rabbit Monoclonal

CE IVD



Inset: IHC of NKX2.2 on a FFPE Pancreas Tissue

Antibody Type	Rabbit Monoclonal	**Clone**	EP336
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human, Predicted Mouse and Rat
Control	Pancreas, Brain, Pituitary,		
Application	Sarcoma & Soft Tissue,		

Presentation
Anti-NKX2.2 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB 3106	Predilute	Ready-to-Use	3.0 mL
BSB 3107	Predilute	Ready-to-Use	7.0 mL
BSB 3108	Predilute	Ready-to-Use	15.0 mL
BSB 3109	Concentrate	1:50-1:200	0.1 mL
BSB 3110	Concentrate	1:50-1:200	0.5 mL
BSB 3111	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9308-CS	5 slides

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

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 corresponding to residues of human NKX2.2 protein.

Summary and Explanation
Homeobox protein NKX2.2 is a protein encoded by the NKX2-2 gene. NKX2.2 is a homeodomain-containing transcription factor that plays a critical role in neuroendocrine/glial differentiation. NKX2.2 is expressed in the developing forebrain and spinal cord. Functionally, the transcription factor is thought to be involved with neuronal developing, patterning, and fate specification of neurons and oligodendrocytes.

NKX2.2 was recently reported as a valuable marker for Ewing's sarcoma. The vast majority of Ewing's sarcomas (85%) harbor a chromosomal translocation, most commonly t(11;22)(q24;q12) encoding an aberrant EWS-FLI transcription factor. NKX2.2 expression is tightly correlated with EWS-FLI expression, a critical downstream target that is required for the cancerous behavior of Ewing's sarcoma. While CD99 is the classical marker for Ewing's sarcoma diagnosis, it is relatively nonspecific. In addition to Ewing's sarcoma, CD99 is also expressed on lymphocytes, hematopoietic cells, endothelial cells and a variety of tumors. In contrast, NKX2.2 labels 93% of Ewing's sarcoma and only a small subset (14/130) of non-Ewing tumors, demonstrating a sensitivity of 93% and specificity of 89%. Staining with NKX2.2 can aid in the differential diagnosis of small round cell tumors.

Precautions
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 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 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. Price M, et al. Regional expression of the homeobox gene Nkx-2.2 in the developing mammalian forebrain". Neuron. 1992; 8 (2): 241–55.
2. Tochitani S, Hayashizaki Y. Nkx2.2 antisense RNA overexpression enhanced oligodendrocytic differentiation. Biochemical and Biophysical Research Communications. 2008; 372 (4): 691–6.
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4. Yoshida A, et al. NKX2.2 is a useful immunohistochemical marker for Ewing sarcoma. Am J Surg Pathol. 2012; 36(7):993-9.
5. 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

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IVD — 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 — Lot Number Code du lot Chargenbezeichnung

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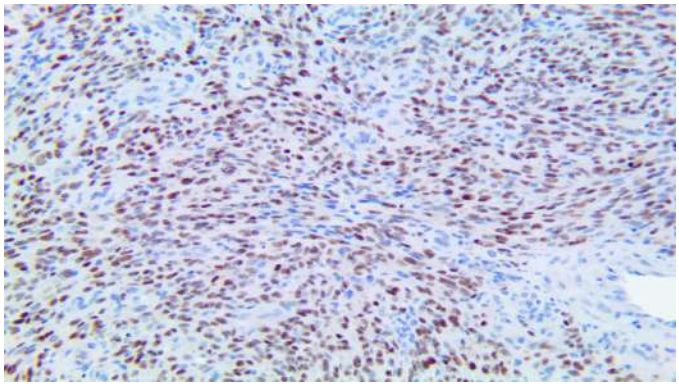
HHV-8

Clone: RBT-HHV8
Rabbit Monoclonal

CE IVD



Inset: IHC of HHV-8 on a FFPE Kaposi's Sarcoma 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
Recombinant protein corresponding to the latent nuclear antigen 1 molecule of HHV8

Summary and Explanation
Kaposi's sarcoma-associated herpesvirus is the eighth human herpes virus; its formal name according to the International Committee on Taxonomy of Viruses is HHV-8. It causes development of cutaneous lesions such as macules, plaques, and nodules, and may invade tissues such as lymph nodes.

It is associated with Kaposi's sarcoma (KS), primary effusion lymphoma, and multicentric Castleman's disease. HHV-8 detects the latent nuclear antigen (LNA) protein in all stages and pathological presentations of KS, which can differentiate KS from HIV-induced tumors or other neoplasia of similar morphology. Immunohistochemical detection of HHV-8 LNA is particularly useful in early detection, where inflammation but not significant tumor formation has occurred.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-HHV8
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Kaposi's Sarcoma		
Application	Sarcoma & Soft Tissue, Lymphoma, Infectious Diseases		

Presentation
Anti-HHV-8 is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3778-3	Predilute	Ready-to-Use	3.0 mL
BSB-3778-7	Predilute	Ready-to-Use	7.0 mL
BSB-3778-15	Predilute	Ready-to-Use	15.0 mL
BSB-3778-01	Concentrate	1:50-1:200	0.1 mL
BSB-3778-05	Concentrate	1:50-1:200	0.5 mL
BSB-3778-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9218-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 (NaN_3) 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 the 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 the 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 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. Corbellino M, Poirel L, Bestetti G, et al. Restricted tissue distribution of extralesional Kaposi's sarcoma-associated herpesvirus-like DNA sequences in AIDS patients with Kaposi's sarcoma. AIDS Res Hum Retroviruses. 1996;12(8):651-657. doi:10.1089/aid.1996.12.651
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3. Kaaya E, Castaños-Vélez E, Heiden T, et al. Proliferation and apoptosis in the evolution of endemic and acquired immunodeficiency syndrome-related Kaposi's sarcoma. Med Oncol. 2000;17(4):325-332. doi:10.1007/BF02782199
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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

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IVD 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 Lot Number Code du lot Chargenbezeichnung

Bio SB
BIOSCIENCE FOR THE WORLD
5385 Hollister Avenue, Bldg. 8, Ste. 108 Santa Barbara, CA 93111, USA
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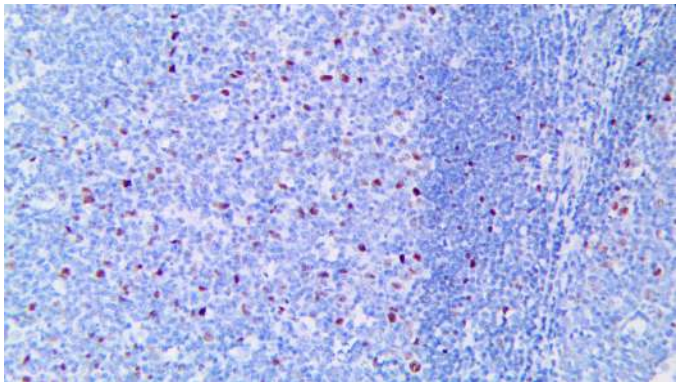
c-Myc

Clone: RBT-CMYC
Rabbit Monoclonal

IVD



Inset: IHC of c-Myc on a FFPE Tonsil 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
Recombinant fragment (around aa1-200) of human MYC protein.

Summary and Explanation
Oncogene-encoded proteins c-Myc, N-Myc, and L-Myc function in cell proliferation, differentiation and neoplastic disease. A mutated version of MYC is found in many cancers, which causes Myc to be constitutively expressed. This leads to the unregulated expression of many genes, some of which are involved in cell proliferation, and results in the formation of cancer. c-Myc is a transcription factor and is a proto-oncogene that is the focal point in cell cycle regulation, metabolism, apoptosis, differentiation, cell adhesion, and tumorigenesis.

A common human translocation involving Myc is t(8; 14) which is critical to the development of most cases of Burkitt's Lymphoma. Malfunctions in Myc have also been found in carcinoma of the cervix, colon, breast, lung, and stomach.

Antibody Type	Rabbit Monoclonal	**Clone**	RBT-CMYC
Isotype	IgG	**Reactivity**	Paraffin, Frozen
Localization	Nuclear	**Species Reactivity**	Human
Control	Burkitt Lymphoma, Lung Cancer, Prostate Cancer		
Application	Leukemia, Lymphoma, Prostate Cancer, Colon cancer		

Presentation
Anti-c-Myc is a Rabbit 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.

Catalog No.	*Presentation*	*Dilution*	*Volume*
BSB-3813-3	Predilute	Ready-to-Use	3.0 mL
BSB-3813-7	Predilute	Ready-to-Use	7.0 mL
BSB-3813-15	Predilute	Ready-to-Use	15.0 mL
BSB-3813-01	Concentrate	1:10-1:50	0.1 mL
BSB-3813-05	Concentrate	1:10-1:50	0.5 mL
BSB-3813-1	Concentrate	1:10-1:50	1.0 mL

Control Slides Available

Catalog No.	*Quantity*
BSB-9040-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 (NaN_3) 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 the 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-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. Dang CV. c-Myc target genes involved in cell growth, apoptosis, and metabolism. Mol Cell Biol. 1999;19(1):1-11. doi:10.1128/MCB.19.1.1
2. Hoffman B et al. The proto-oncogene c-myc in hematopoietic development and leukemogenesis. Oncogene. 2002;21(21):3414-3421.
3. Boxer LM et al. Translocations involving c-myc and c-myc function. Oncogene. 2001;20(40):5595-5610.
4. Schmidt EV. The role of c-myc in cellular growth control. Oncogene. 1999;18(19):2988-2996. doi:10.1038/sj.onc.1202751
5. 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

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IHC Detection Systems

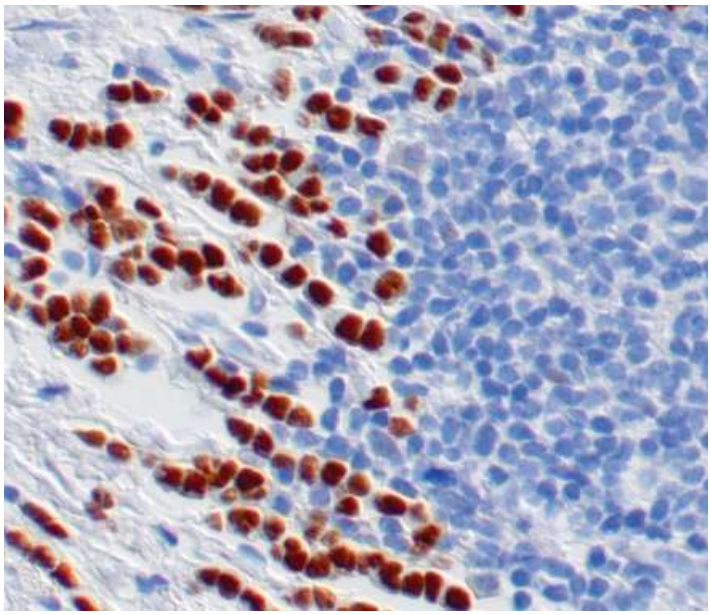
Which detection system is best for your laboratory?

To complement our robust antibody portfolio we offer an array of detection technologies designed to meet the needs of the clinical and research market. The following guide is designed to help you determine the best kit for your application. See the following detection system packages for detailed information on each detection kit. When in doubt you may contact your local representative or our technical service team at lab.reagents@thermofisher.com.

UltraVision Quanto Detection Kit (IVD)

The UltraVision Quanto Detection System utilizes innovative micropolymer technology that enhances sensitivity while reducing costs and turnaround time[2]. This system is optimized for mouse and rabbit antibodies on human specimens and is ideal for routine clinical testing.

Description	REF Num	Use
UltraVision Quanto Detection System AP 60 mL	TL-060-QAL	IVD
UltraVision Quanto Detection System HRP DAB 60 mL	TL-060-QHD	IVD
UltraVision Quanto AP 1 L	TL-999-QAL	IVD
UltraVision Quanto Complete Kit 125 mL	TL-125-QCK	IVD
UltraVision Quanto Complete Kit 60 mL	TL-060-QCK	IVD
UltraVision Quanto Detection System AP 125 mL	TL-125-QAL	IVD
UltraVision Quanto Detection System HRP 125 mL	TL-125-QHL	IVD
UltraVision Quanto Detection System HRP 60 mL	TL-060-QHL	IVD
UltraVision Quanto Detection System HRP DAB 125 mL	TL-125-QHD	IVD
UltraVision Quanto Detection System HRP DAB Sample 15 mL	TL-015-QHD	IVD
UltraVision Quanto HRP 1LTL-999-QPB/QPH and TA-999-PBQ	TL-999-QHL	IVD
UltraVision Quanto HRP DAB 1 L	TL-999-QHD	IVD



[2]NoriQC Review of Technical Test Approach Montreal 2010 http://www.nordiqc.org/seminars/Nielsen-Montreal-08-July-10.pdf

IHC Detection Systems

UltraVision Labeled Polymer (LP) (IVD)

UltraVision LP is the predecessor of UltraVision Quanto. UltraVision LP works well in clinical applications and produces strong, consistent results.

Note: UltraVision LP enhances mouse antibodies but does not enhance rabbit antibodies.

Description	REF Num	Use
Kit PV HRP polymer 1LTL-999-PB/PH and TA-999-PBQ	TL-999-HL	IVD
UltraVision LP HRP Polymer & DAB Chromogen 15 mL	TL-015-HD	IVD
UltraVision LP HRP Polymer & DAB Chromogen 60 mL	TL-060-HD	IVD
UltraVision LP HRP Polymer & DAB Chromogen 125 mL	TL-125-HD	IVD
UltraVision LP Large Vol AP Polymer (RTU) 60 mL	TL-060-AL	IVD
UltraVision LP Large Vol AP Polymer (RTU) 125 mL	TL-125-AL	IVD
UltraVision LP Large Vol HRP Polymer (RTU) 60 mL	TL-060-HL	IVD
UltraVision LP Large Vol HRP Polymer (RTU) 125 mL	TL-125-HL	IVD

IHC Detection Systems

UltraVision ONE (IVD)

UltraVision ONE offers the protocol with the least number of steps and is ideal for clinical applications with frozen section or where few steps are ideal.

Description	REF Num	
UltraVision ONE Large Vol, HRP Polymer (RTU) 125 mL	TL-125-HLJ	IVD
UltraVision ONE Large Vol. AP Polymer (RTU) 125 mL	TL-125-ALJ	IVD
UltraVision ONE, AP Polymer & Fast Red Chromogen 15 mL	TL-015-AFJ	IVD

Multivision (IVD)

The Multivision system is designed for visualizing two antigens on a single slide.

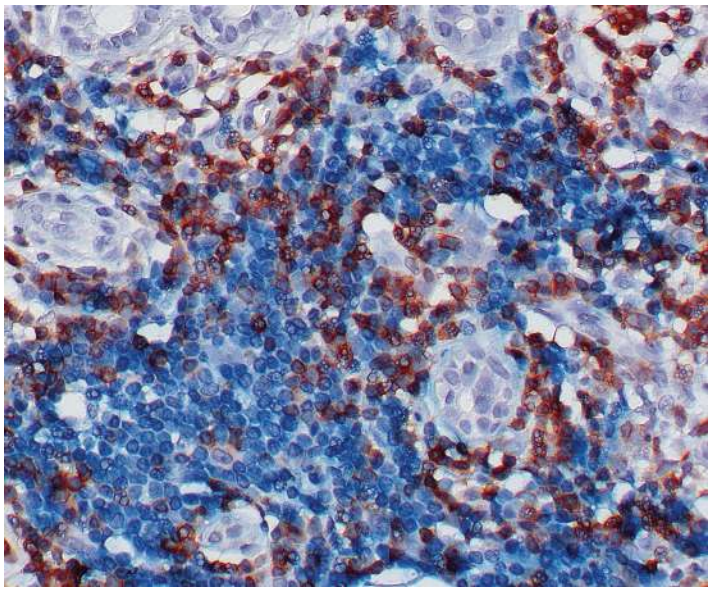
Epredia UltraVision and UltraVision Plus (IVD)

Robust Biotin and Streptavadin System

Epredia UltraVision LP Value (IVD)

Similar technology to UltraVision LP at a more affordable price

Description	REF Num	
MV Polymer/ anti-mouse/ AP+anti Rabbit/HRP 12 mL	TL-012-MARH	IVD
MV Polymer/ anti-mouse/ HRP+anti Rabbit/AP 12 mL	TL-012-MHRA	IVD



IHC Ancillary Products

Description	REF Num	
Antibody Diluent OP Quanto	TA-125-ADQ	IVD
Tween 20 (Polyoxyethelenesorbitan Monolaurate) 125 mL	TA-125-TW	RUO
UltraVision DAB Away 250 mL	TA-250-DA	IVD
UltraVision Protein Blk 125 ml	TA-125-PBQ	IVD
UltraVision Protein Block 60 ml	TA-060-PBQ	IVD
UV Hydrogen Peroxide Block 1 L	TA-999-H2O2Q	IVD
UV Hydrogen Peroxide Block 125 ml	TA-125-H2O2Q	IVD
UV Hydrogen Peroxide Block 60 ml	TA-060-H2O2Q	IVD
FITC Protein Blocking Agent (PBA) 6 mL	TA-006-PBA	IVD
Phosphate Buffered Saline (10X) 10 mL	AP-9009-10	IVD
Phosphate Buffered Saline and Tween 20 Large Vol (20X)	TA-999-PT	IVD
Tris Buffer Saline and Tween 20 Large Vol (20X) 999 mL	TA-999-TT	IVD

Description	REF Num	
Large Vol Phosphate Buffered Saline (25X) 125 mL	TA-125-PB	IVD
Large Vol Phosphate Buffered Saline and Tween 20 (20X) 125 mL	TA-125-PT	IVD
Large Vol Tris Buffer Saline and Tween 20 (20X) 125 mL	TA-125-TT	IVD
Large Vol Tris Buffered Saline (25X) 125 mL	TA-125-TB	IVD
Mayer's Hematoxylin 125 mL	TA-125-MH	IVD
Mayer's Hematoxylin 60 mL	TA-060-MH	IVD
PermaFluor Aqueous Mounting Medium 30 mL	TA-030-FM	IVD
PermaFluor Aqueous Mounting Medium 6 mL	TA-006-FM	IVD
SI Prep, Aqua-Mount 125 mL	TA-125-AM	IVD

Slide clarity – **pure** and **simple**

When conducting immunohistochemistry (IHC) assays, it can be frustrating when pretreated slides come out murky. Incomplete dewaxing can make it feel like you're looking through a dirty window, and can interfere with diagnostics, decrease laboratory efficiency, and drive up operating costs.

Dewax and HIER buffers by Epredia achieve all-in-one epitope retrieval and deparaffinization in the PT Module ahead of IHC. Dewax and HIER buffers demonstrate superior dewaxing performance over other PTM buffers. Unlike other processes, slides are not recoated with molten paraffin, resulting in enhanced clarity in imaging.

Dewax and HIER buffers are color-coded into three pH groups, allowing you to easily differentiate between tanks. All dewax and HIER buffers come pre-measured for ease of use in the PT Module.

For more information on achieving better clarity in your immunohistochemical assays, please contact your local Epredia representative today.

Dewax and HIER buffers come in three pH ranges:

L Dewax and HIER buffer L is a low pH (~6.0) buffer and is citrate-based (orange coloration).

M Dewax and HIER buffer M is a mid pH (~8.0) buffer and is EDTA-based (purple coloration).

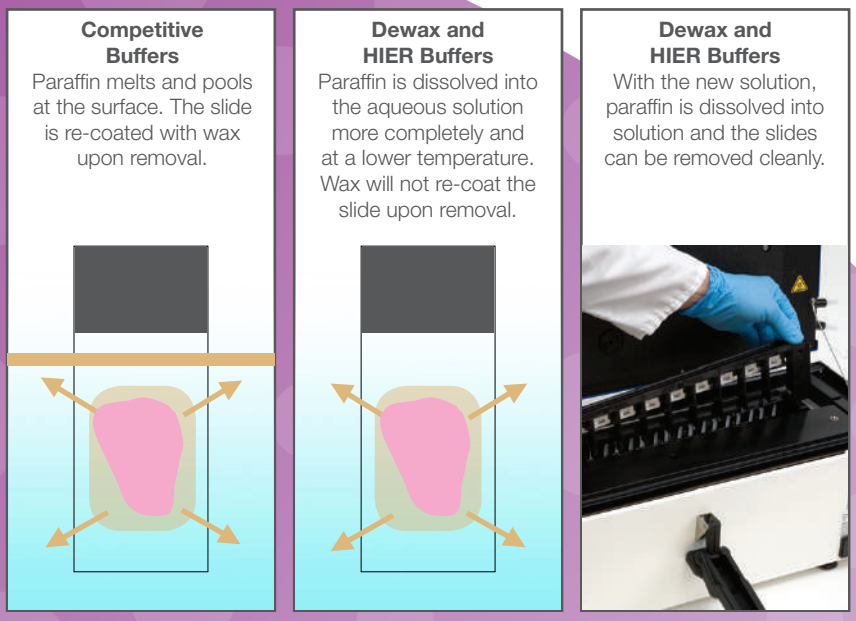
H Dewax and HIER buffer H is a high pH (~9.0) buffer and is Tris-EDTA-based (blue coloration).

Clarity doesn't have to come at a big cost.

Epredia Dewax and HIER Buffers deliver high quality at a competitive cost per slide. Get a clearer picture of how you may be able to save 40% or more per test. Contact your Epredia representative today.

See the difference for yourself.
Contact your Epredia representative today and ask about Dewax and HIER buffers.

Item	Use	REF Num
Dewax and HIER buffer (H, M, L) variety pack	IVD	TA-999-DHBVP
Dewax and HIER buffer H (15x concentrate) 10 x 100 mL	IVD	TA-999-DHBH
Dewax and HIER buffer L (15x concentrate) 10 x 100 mL	IVD	TA-999-DHBL
Dewax and HIER buffer M (15x concentrate) 10 x 100 mL	IVD	TA-999-DHBM



Find out more at **www.epredia.com**

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epredia
Enhancing precision cancer diagnostics

ImmunoDetector Protein Blocker / Antibody Diluent

IVD

Bio SB
BIOSCIENCE FOR THE WORLD

www.biosb.com

Intended Use
For In Vitro Diagnostic Use.

Summary and Explanation
ImmunoDetector Protein Blocker/Antibody Diluent is used to dilute ascites, supernatants, purified antibodies, and polyclonal antibodies. The reagent is designed to minimize the non-specific reaction that may be caused by non-specific antibody interactions and encourages specific antigen-antibody binding.

Presentation
ImmunoDetector Protein Blocker/Antibody Diluent contains TBST, pH 7.6, with bovine serum albumin, and preserved with sodium azide as an anti-microbial. It is provided in liquid form ready-to-use.

Catalog No.	*Concentration*	*Volume*
BSB 0113	Ready-to-use	15 mL
BSB 0040	Ready-to-use	50 mL
BSB 0041	Ready-to-use	100 mL
BSB 0114	Ready-to-use	200 mL
BSB 0115	Ready-to-use	1000 mL

Storage Store at 2-8^{0}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.

Precautions
1 For professional users only. Results should be interpreted by a medical professional.
2. This product contains <0.1% sodium azide (NaN_3) 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 according to local and federal regulations.
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. 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” (1).

Preparation of Working Solution
The ImmunoDetector Protein Blocker/Antibody Diluent is a ready-to-use working solution and requires no further preparation.

Recommended Protocol

When diluting antibodies, add antibody to the diluent, not diluent to the antibody. Addition of the antibody to the mixing vessel before the diluent can cause contamination of the diluent if multiple dispenses are necessary.

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

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. 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.

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Il vostro partner ospedaliero
your best hospital partner

TECHNICAL SHEET

P3322ST

PAP PEN – LIQUID BLOCKER

MANUFACTURER: DAIDO SANGYO CO. LTD - JAPAN

COD. 3322 FINE TIP
COD. 3525 THICK TIP

INTEDED USE:

The PAP-PEN is designed for immunohistochemical staining (PAP method, ABC method, etc.) and the fluorescent antibody method. The pen deposits a water-repellent waxy film useful for delimiting the coloring area.
Before use, hold the pen in a vertical position and press lightly, avoiding excessive liquid leakage, but making sure it flows to the tip.
In the case of paraffin sections, deparaffinize as usual, bring the sections to water and then dry the part of the slide surrounding the section; apply the waxy film with the pen and leave to dry at room temperature.
In the case of cryostat sections, wash the slides beforehand with xylene and alcohol or treat them with glycerinated albumin or polylysine.

- It is insoluble in alcohol and acetone and is easily removable with acetone. It is not affected by temperature.
- Writes directly on the wet slide;
- The waxy film resists 120°C;
- It can also be used with colors that require the use of microwave and hybridization in situ.
- PAP Pen does not contain bromopropane and complies with the REACH regulation.

MATERIAL	:	metal body, plastic cap, felt tip	
APPLICATION	:	fine tip ref. 3322	n. 800
		thick tip ref. 3525	n. 400
TIP THICKNESS	:	fine tip ref. 3322	0,3 cm
		thick tip ref. 3525	0,4 cm
EXPIRATION DATE	:	not applicable	

The product is not classified as a medical device.

epredia Enhancing precision cancer diagnostics

Lame de microscop, adezive
Instrucțiuni de utilizare

Pentru diagnostic in vitro.

Pentru utilizare numai de către profesioniști instruiți.

Utilizarea prevăzută

Lamele adezive atrag electrostatic secțiuni de țesut încorporate în parafină proaspete, congelate și fixate cu formol, legându-le de lama destinată utilizării diagnostice

Informații generale

- Lamele de microscop sunt potrivite pentru prepararea eșantioanelor de celule și țesut
- Lamele de microscop trebuie aduse la temperatura camerei înainte de a fi utilizate
- Lamele de microscop sunt de unică folosință
- Lamele de microscop trebuie folosite pe suprafața de lucru
- Dacă din orice motiv considerați că rezultatul testului dumneavoastră este echivoc, ar trebui să urmați procedurile standard de operare ale laboratorului dumneavoastră
- Când utilizați lamele de microscop în instrumente, trebuie respectate instrucțiunile de utilizare oferite de producător privind utilizarea în siguranță a instrumentului, coloranților și substanțelor chimice ale acestuia

Instrucțiuni

- Plutiți secțiunile de țesut cu grosimea de 2 până la 5 microni pe o baie de flotație preîncălzită, care este umplută cu apă distilată. NU adăugați adeziv sau soluție de acoperire în baia de flotație. Pretratarea lamelor adezive elimină necesitatea utilizării acestor componente
- Montați secțiunile cu atenție prima dată, deoarece legarea țesuturilor începe rapid
- Uscați lamele complet la temperatura camerei, scurgându-le pe verticală înainte de a le încălzi în cuptor sau pe o plită
- Puteți înlocui apa distilată cu apă de la robinet în baia de flotație, dar dacă începeți să pierdeți secțiuni de țesut, utilizați apă distilată

Avertismente și precauții

- Fiți conștienți de posibilitatea de rupere atunci când aveți de-a face cu lamele de microscop și luați măsurile de siguranță adecvate, de exemplu putați mănuși și protecție pentru ochi
- Nu utilizați lamele de microscop dacă termenul de valabilitate al acestora a expirat
- Nu utilizați lamele de microscop dacă produsul este deteriorat

Atenție

⚠ Probele umane pot prezenta un risc biologic. Urmați procedurile standard pentru manipularea, depozitarea și eliminarea probelor umane

Depozitare, arhivare și eliminare

- Păstrați produsul în condiții curate și uscate la temperatura ambiantă (15-30 °C)
- Produsul trebuie ținut departe de podea, uși și conducte de încălzire/aer condiționat pentru a minimiza schimbările de temperatură și umiditate
- Evitați variațiile mari de temperatură atât în timpul depozitării, cât și în timpul utilizării. Răcirea lamelor de microscop poate duce la formarea condensului între bucățile de sticlă, ceea ce poate afecta performanța
- Lamele de microscop trebuie lăsate să ajungă la temperatura camerei în laborator înainte de a fi deschise
- Stocul de produse trebuie rotit. Rotația este prima linie de apărare împotriva schimbărilor de temperatură și umiditate care au ca rezultat contaminarea cu umezeală. Utilizați mai întâi produsele mai vechi aflate în depozit, folosind principiul FIFO (primul intrat, primul ieșit)
- Arhivați, depozitați și eliminați lamele de microscop conform protocoalelor de laborator stabilite
- Perioada de depozitare a lamelor: consultați data de expirare

Notă:

Orice incident grav care a avut loc în legătură cu dispozitivul trebuie raportat producătorului și autorității competente a statului membru în care este stabilit utilizatorul și/sau pacientul.

Anexă: Articole aplicabile

Numărul de articol	Denumirea produsului
REF J1810AMNZTR	Superfrost Plus™ blue
REF J1860ARLX	Superfrost Plus™ violet
REF J7840AMNZ	Superfrost Plus™ green CC
REF J1800AMNZ	Superfrost Plus™ white
REF J1800ABDH	Superfrost Plus™ white
REF J1800ARLX	Superfrost Plus™ white
REF J2800AMNZ	Polysine™ white
REF J1830AMNZ	Superfrost Plus™ yellow
REF J1810AMNZ	Superfrost Plus™ blue
REF J1800AAUT	Superfrost Plus™ white
REF J1820AMNZ	Superfrost Plus™ pink
REF J1800AHTX	Superfrost Plus™ white
REF J1840AMNZ	Superfrost Plus™ green
REF J7800AMNZ	Superfrost Plus™ white CC
REF J2800ABDH	Polysine™ white
REF J1800AMNZTR	Superfrost Plus™ white
REF J1810ABDH	Superfrost Plus™ blue
REF J5800AMNZ	Superfrost™ Excell white
REF J1820ABDH	Superfrost Plus™ pink
REF J1830ABDH	Superfrost Plus™ yellow
REF J1840ABDH	Superfrost Plus™ green
REF J7850AMNZ	Superfrost Plus™ orange CC
REF J2800ARLX	Polysine™ white
REF J1810ARLX	Superfrost Plus™ blue
REF J1850AMNZ	Superfrost Plus™ orange
REF J1800BMNZ	Superfrost Plus™ 51 x 75 mm
REF J1830ARLX	Superfrost Plus™ yellow
REF J7840ARLX	Superfrost Plus™ green CC
REF J2800AHTX	Polysine™ white
REF J1840ARLX	Superfrost Plus™ green
REF J1820ARLX	Superfrost Plus™ pink
REF J1800CMNZ	Superfrost Plus™ 38 x 75 mm
REF J1850ARLX	Superfrost Plus™ orange
REF J1860AMNZ	Superfrost Plus™ violet
REF J6409741WGYPLUS	Capillary-gap Slides gray 75 µm
REF J6815741WPLUS	Capillary-gap Slides blue 100 µm
REF K5800AMNZ72	Superfrost Plus™ GOLD white
REF X5ES2030LAD1	Diagnostic Specialty Slides
REF X5ES2115BAD1	Diagnostic Specialty Slides
REF X5ES2165BAD1	Diagnostic Specialty Slides
REF X5ES242BAD1	Diagnostic Specialty Slides
REF X5ES248BAD1	Diagnostic Specialty Slides
REF X5XER201BAD1	Diagnostic Specialty Slides
REF X5XER202LCC2	Diagnostic Specialty Slides
REF X5XER202WAD1	Diagnostic Specialty Slides
REF X5XER203BAD1	Diagnostic Specialty Slides
REF X5XMZ231LCC2	Diagnostic Specialty Slides
REF 5991055	Double Cytoslide
REF 5991056	Cytoslide
REF 6776214	Superfrost Plus™ Slides
REF 9991000	Superfrost Plus™ Slides
REF 9991001	Colorfrost Plus™ Slides
REF 9991002	Colorfrost Plus™ Slides
REF 9991003	Colorfrost Plus™ Slides

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Olanda

CE IVD 15 °C (59 °F) 30 °C (86 °F)

IFU-EPRADCE_RO-0723 DATA 07/2023

epredia

Numărul de articol	Denumirea produsului
REF 9991004	Colorfrost Plus™ Slides
REF 9991009	Colorfrost Plus™ Slides
REF 9991011	Colorfrost Plus™ Slides
REF 9991012	Colorfrost Plus™ Slides
REF 9991013	Colorfrost Plus™ Slides
REF 9991014	Colorfrost Plus™ Slides
REF 9991015	Colorfrost Plus™ Slides
REF 6776215	Polysine™ Slides
REF 6776216	Polysine™ Slides
REF B9992010	Colormark™ Plus Slides
REF B9992010AQ	Colormark™ Plus Slides
REF B9992010BL	Colormark™ Plus Slides
REF B9992010BO	Colormark™ Plus Slides
REF B9992010GL	Colormark™ Plus Slides
REF B9992010GR	Colormark™ Plus Slides
REF B9992010LV	Colormark™ Plus Slides
REF B9992010PK	Colormark™ Plus Slides
REF B9992010PKSUNC	Colormark™ Plus Slides
REF B9992010RD	Colormark™ Plus Slides
REF B9992010TN	Colormark™ Plus Slides
REF B9992010YW	Colormark™ Plus Slides
REF TT-40418218-PS-W	SlideMate™ Plus Adhesion Microscope Slides White Tab
REF TT-50418218-PS-B	SlideMate™ Plus Adhesion Microscope Slides Blue Tab
REF TT-60418218-PS-G	SlideMate™ Plus Adhesion Microscope Slides Green Tab
REF TT-70418218-PS-P	SlideMate™ Plus Adhesion Microscope Slides Pink Tab
REF TT-80418218-PS-Y	SlideMate™ Plus Adhesion Microscope Slides Yellow Tab
REF LS-4041IPS8523-1CE	SlideMate™ Laser Plus Microscope Slides White Tab
REF LS-5041IPS8523-1CE	SlideMate™ Laser Plus Microscope Slides Blue Tab
REF LS-6041IPS8523-1CE	SlideMate™ Laser Plus Microscope Slides Green Tab
REF LS-7041IPS8523-1CE	SlideMate™ Laser Plus Microscope Slides Pink Tab
REF LS-8041IPS8523-1CE	SlideMate™ Laser Plus Microscope Slides Yellow Tab