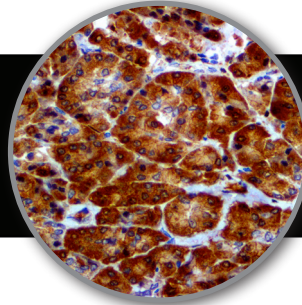


Aldh1A1, RMab
Clone: EP168
 Rabbit Monoclonal



Inset: IHC of Aldh1A1 on a FFPE Pancreas 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 Aldh1A1 antibody, clone EP168, 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 Aldh1A1 protein.

Summary and Explanation

Aldehyde dehydrogenase 1 family member A1, also known as ALDH1A1 is an enzyme that in humans is encoded by the Aldh1A1 gene on chromosome 9. ALDH1A1 belongs to the aldehyde dehydrogenase family, which plays a role in alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver; cytosolic and mitochondrial. The ALDH1A1 gene encodes the cytosolic isozyme, and catalyzes the oxidation of retinaldehyde to retinoic acid. Studies have indicated that ALDH1A1 may also be involved in the regulation of the metabolic responses to high-fat diet.

ALDH1A1 has been a well established marker of hematopoietic stem cells and progenitor cells. Recent studies also show that ALDH1A1 is an important cancer stem marker associated with tumor progression in cancers of the breast, prostate and lung. This antibody labels epithelial cells of the stomach, liver, kidney and thyroid, neural cells and stromal cells including endothelial cells. In tumors, it stains stromal cells as well as tumor cells in many types of cancers. ALDH1A1 can be used with CD34 to aid in the differentiation between solitary fibrous tumors, hemangiopericytoma, meningioma and synovial sarcomas.

Antibody Type	Rabbit Monoclonal	Clone	EP168
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Control	Kidney, Liver, Testis, Colon Cancer, Breast Cancer
Species Reactivity	Human; Predicted: Mouse, Rat		

Presentation

Aldh1A1 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.

Presentations

Catalog Num.	Antibody Type	Dilution	Volume/Qty
BSB 2440	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 2441	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 2442	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 2443	Concentrated	1:100 - 1:500	0.1 mL
BSB 2444	Concentrated	1:100 - 1:500	0.5 mL
BSB 2445	Concentrated	1:100 - 1:500	1.0 mL
BSB 2446	Control Slides	Not Applicable	5 slides

Precautions

1. For professional users only. Ensure results are interpreted by a medical professional.
2. This product contains sodium azide (NaN₃), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.
3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.
6. For complete recommendations for handling biological specimens please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (9).

Storage

Store at 2-8 °C. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

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

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

Staining Procedure

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positive charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate and rehydrate tissues.
4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).
5. Any of three heating methods may be used:

a. TintoRetriever Pressure Cooker or Equivalent

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

b. TintoRetriever PT Module or Water Bath Method

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

c. Conventional Steamer Method

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

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with IHC wash buffer or DI water.
9. Continue IHC staining protocol.

Recommended IHC Protocol

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

Performance Characteristics

Normal Tissues

Positive (+)	
Kidney	10/10 (100%)
Testis	10/10 (100%)
Liver	10/10 (100%)
Negative (-)	
Prostate	0/11 (0%)
Pituitary	0/6 (0%)
Prostate	0/4 (0%)
Abnormal Tissues	
Positive (+)	
Renal Cell Carcinoma	9/10 (90%)
Colon Carcinoma	5/9 (55%)
Breast Cancer	3/11 (27%)
Negative (-)	
Synovial Sarcoma	0/6 (0%)
Hemangioma	0/3 (0%)
Leiomyoma	0/5 (0%)









Product Limitations

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

References

1. Maglott D, et al.: Nucleic Acids Res 2005, 33:D54-58
2. Yoshida A, et al.: Alcohol 1985, 2:103-106
3. Collard F, et al.: Biochimie 2007, 89:369-373
4. Moreb JS: Curr Stem Cell Res Ther 2008, 3:237-246
5. Khoury T, et al.: Mod Pathol 2011,
6. Li T, et al.: Lab Invest 2010, 90:234-244
7. Patel M, et al.: Lung Cancer 2008, 59:340-349
8. Sullivan JP, et al.: Cancer Res 2010, 70:9937-9948
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.

Symbol Key / Légende des symboles/Erläuterung der Symbole

	Emergo Europe Moenstraat 15 2513 BH The Hague, Netherlands		Storage Temperature Limites de température Zulässiger Temperaturbereich		Manufacturer Fabricant Hersteller		Catalog Number Référence du catalogue Bestellnummer
	In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum		Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten		Expiration Date Utiliser jusque Verwendbar bis		Lot Number Code du lot Chargenbezeichnung

Bio SB
BIO SCIENCE FOR THE WORLD

69 Santa Felicia Dr., Santa Barbara, CA 93117, USA
Tel: (805) 692-2768 | Tel: (800) 561-1145 | Fax: (805) 692-2769
E-mail: info@biosb.com | Website: www.biosb.com

