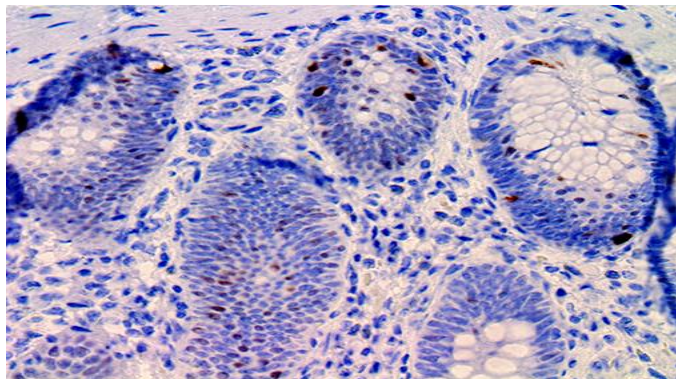


PDX1

Clone: EP139
Rabbit Monoclonal



Inset: IHC of PDX1 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.

Immunogen

A synthetic peptide corresponding to residues of human PDX1 protein.

Summary and Explanation

PDX1 (Pancreatic and duodenal homeobox 1), also known as insulin promoter factor 1, is a transcription factor necessary for pancreatic development, including β -cell maturation, and duodenal differentiation. PDX1 appears to also play a role in the fating of endocrine cells, encoding for insulin and somatostatin, two pancreatic endocrine products, while repressing glucagon. Thus, PDX1 expression apparently favors the production of insulin+ β -cells and somatostatin+ Δ -cells rather than glucagon+ α -cells. In addition to roles in beta-cell differentiation, PDX1 is required for β -cell survival. Cells with reduced PDX1 expression have an increased rate of apoptotic programmed cell death. Mutations in the PDX1 gene may be involved in several pancreatic pathologies, including diabetes mellitus and pancreatic cancer.

Among normal pancreatic tissues, PDX1 nuclear protein is expressed in islet cells, cells of the centroacinar cell compartment, ductal epithelium and is selectively expressed in adult Brunner's glands of the duodenum and pyloric endocrine cells of the stomach. PDX1 expression has been identified in Pancreatic Ductal Adenocarcinomas and endocrine neoplasms. No expression of PDX1 is seen in non-neoplastic acinar cells. Among pancreatic neoplasms, PDX1 consistently labeled >50% of the tumor cells. PDX1 expression is variable in invasive ductal adenocarcinoma and precursor lesions of ductal adenocarcinomas. Solid pseudopapillary neoplasms do not express PDX1. Besides increased expression of PDX1 in Pancreatic cancer, it also has also been reported in tumors of the colon and prostate, indicating that PDX1 may serve as a biomarker in patients with these malignancies.

Antibody Type	Rabbit Monoclonal	Clone	EP139
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Nuclear	Species Reactivity	Human
Control	Pancreas, Colon, Liver, Pancreatic Cancer		
Application	Gall Bladder & Pancreatic Cancer, Colon & Gastrointestinal Cancer, Prostate Cancer		

Presentation

Anti-PDX1 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 3155	Predilute	Ready-to-Use	3.0 mL
BSB 3156	Predilute	Ready-to-Use	7.0 mL
BSB 3157	Predilute	Ready-to-Use	15.0 mL
BSB 3158	Concentrate	1:50-1:200	0.1 mL
BSB 3159	Concentrate	1:50-1:200	0.5 mL
BSB 3160	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

Catalog No.	Quantity
BSB-9341-CS	5 slides

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

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN₃) as a preservative. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
4. Dispose of unused solution with copious amounts of water.
5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
8. For additional safety information refer to Safety Data Sheet for this product.
9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

Stability

This product is stable up to the expiration date on the product label.

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

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033), or ImmunoDNA 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. Stoffel M, et al. Localization of human homeodomain transcription factor insulin promoter factor 1 (IPF1) to chromosome band 13q12.1". Genomics 1995; 28 (1): 125-6.
2. D'Amour KA, et al. Production of pancreatic hormone-expressing endocrine cells from human embryonic stem cells". Nat. Biotechnol. 2006; 24 (11): 1392-401.
3. Johnson JD, et al. Insulin protects islets from apoptosis via Pdx1 and specific changes in the human islet proteome. Proc. Natl. Acad. Sci. U.S.A. 2006; 103 (51): 19575-80.
4. Fajans SS, et al. Molecular mechanisms and clinical pathophysiology of maturity-onset diabetes of the young. N. Engl. J. Med. 2001; 345 (13): 971-80.
5. Ma J, et al. Pancreatic duodenal homeobox-1 (PDX1) functions as a tumor suppressor in gastric cancer. Carcinogenesis 2008; 29 (7): 1327-33.
6. Park JY, et al. Pdx1 expression in pancreatic precursor lesions and neoplasms. Appl Immunohistochem Mol Morphol. 2011 Oct; 19(5):444-9.
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

	QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	 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