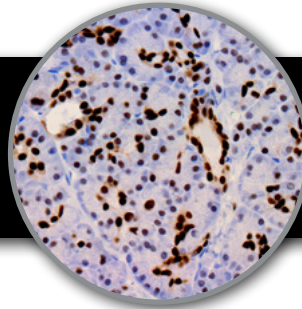


**PDX1, RMab**  
**Clone: EP139**  
 Rabbit Monoclonal



*Inset: IHC of PDX1 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 PDX1 antibody, clone EP139, 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 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  $\beta$ -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+  $\beta$ -cells and somatostatin+ $\Delta$ -cells rather than glucagon+  $\alpha$ -cells. In addition to roles in beta-cell differentiation, PDX1 is required for  $\beta$ -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.

<b>Antibody Type</b>	Rabbit Monoclonal	<b>Clone</b>	EP139
<b>Isotype</b>	IgG	<b>Reactivity</b>	Paraffin, Frozen
<b>Localization</b>	Nuclear	<b>Control</b>	Pancreas, Colon, Liver, Pancreatic Cancer
<b>Species Reactivity</b>	Human		

**Presentation**

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.

**Presentations**

Catalog Num.	Antibody Type	Dilution	Volume/Qty
BSB 3155	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 3156	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 3157	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 3158	Concentrated	1:50 - 1:200	0.1 mL
BSB 3159	Concentrated	1:50 - 1:200	0.5 mL
BSB 3160	Concentrated	1:50 - 1:200	1.0 mL
BSB 3161	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 (Na<sub>3</sub>), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.
3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.
6. For complete recommendations for handling biological specimens please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (7).

**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

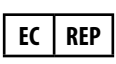
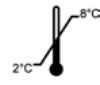






## Product Limitations

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

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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.
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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.

## Symbol Key / Légende des symboles/Erläuterung der Symbole

	EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The 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  
BIOSCIENCE 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

