abcam

Product datasheet

Anti-PDX1 antibody [EPR3358(2)] ab134150

Recombinant RabMAb

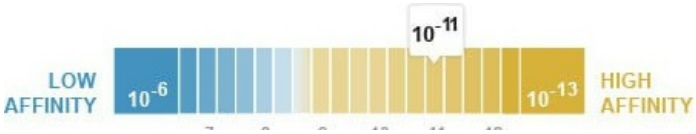
★★★★★ 1 Abreviews 12 References 11 Images

Overview

Product name	Anti-PDX1 antibody [EPR3358(2)]
Description	Rabbit monoclonal [EPR3358(2)] to PDX1
Host species	Rabbit
Specificity	The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse.
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide within Human PDX1 (C terminal). The exact sequence is proprietary. Database link: **P52945**
Positive control	CACO-2 and Beta-TC-6 cell lysates, Human pancreas & duodenum tissue
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Dissociation constant (K_D)	$K_D = 4.60 \times 10^{-11}$ M



Learn more about K_D

Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 0.05% BSA, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR3358(2)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab134150 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

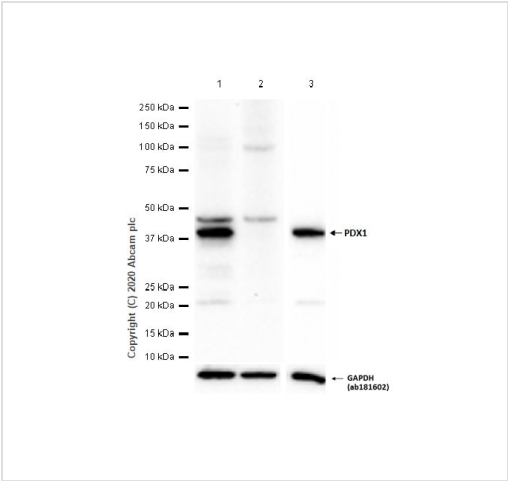
Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 30 kDa.
IHC-P	★★★★★ (1)	1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. **For unpurified use at 1/350.**
ICC/IF		Use at an assay dependent concentration.

Target

Function	Activates insulin, somatostatin, glucokinase, islet amyloid polypeptide and glucose transporter type 2 gene transcription. Particularly involved in glucose-dependent regulation of insulin gene transcription. Binds preferentially the DNA motif 5'-[CT]TAAT[TG]-3'. During development, specifies the early pancreatic epithelium, permitting its proliferation, branching and subsequent differentiation. At adult stage, required for maintaining the hormone-producing phenotype of the beta-cell.
Tissue specificity	Duodenum and pancreas (Langerhans islet beta cells and small subsets of endocrine non-beta-cells, at low levels in acinar cells).
Involvement in disease	Defects in PDX1 are a cause of pancreatic agenesis (PAC) [MIM:260370]. This autosomal recessive disorder is characterized by absence or hypoplasia of pancreas, leading to early-onset insulin-dependent diabetes mellitus. This was found in a frameshift mutation that produces a truncated protein and results in a second initiation that produces a second protein that act as a dominant negative mutant. Defects in PDX1 are a cause of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance. Defects in PDX1 are the cause of maturity-onset diabetes of the young type 4 (MODY4) [MIM:606392]; also symbolized MODY-4. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25

	years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.
Sequence similarities	Belongs to the Antp homeobox family. IPF1/XlHbox-8 subfamily. Contains 1 homeobox DNA-binding domain.
Domain	The Antp-type hexapeptide mediates heterodimerization with PBX on a regulatory element of the somatostatin promoter. The homeodomain, which contains the nuclear localization signal, not only mediates DNA-binding, but also acts as a protein-protein interaction domain for TCF3(E47), NEUROD1 and HMG-I(Y).
Post-translational modifications	Phosphorylated by the SAPK2 pathway at high intracellular glucose concentration.
Cellular localization	Nucleus.

Images



Western blot - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

All lanes : Anti-PDX1 antibody [EPR3358(2)] (ab134150) at 1/1000 dilution

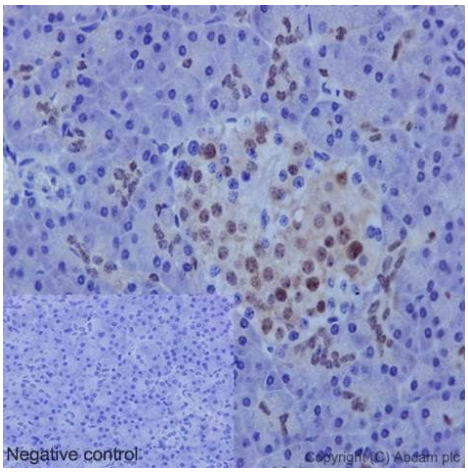
Lane 1 : Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : BxPC-3 (Human pancreas adenocarcinoma epithelial cell) whole cell lysate
Lane 3 : Beta-TC-6 (Mouse pancreas insulinoma beta cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

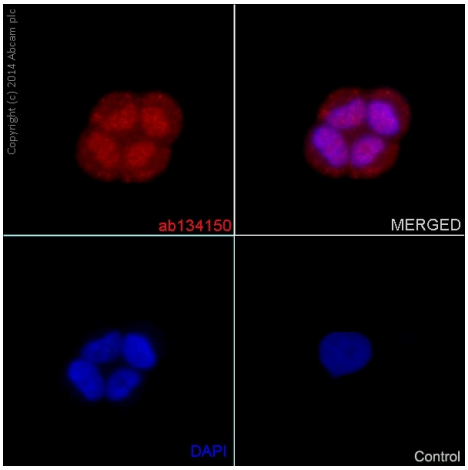
Predicted band size: 30 kDa
Observed band size: 40 kDa

The expression profile observed in BxPC-3 is consistent with the literature (PMID: 12947327). Negative control: BxPC-3 (PMID: 12947327)



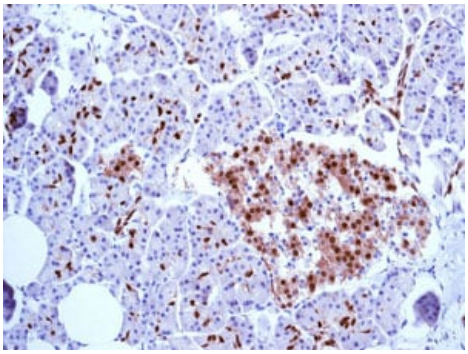
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

ab134150 staining PDX1 in Human pancreas tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed and paraffin-embedded, antigen retrieval was by heat mediation in Tris/EDTA buffer pH9. Samples were incubated with primary antibody (1/500). An undiluted HRP-conjugated anti-rabbit IgG was used as the secondary antibody. Tissue counterstained with Hematoxylin. PBS was used in the negative control rather than the Primary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

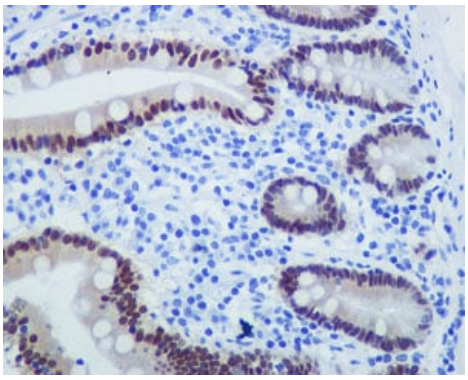
ab134150 staining PDX1 in the BXPC-3 cell line by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde. Samples were incubated with primary antibody (1/150). An Alexa Fluor®555-conjugated Goat anti-rabbit IgG (1/500) was used as the secondary antibody. Nuclei were counterstained with DAPI.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Immunohistochemical analysis of paraffin embedded Human pancreas tissue labelled with ab134150, unpurified, at 1/1000 dilution.

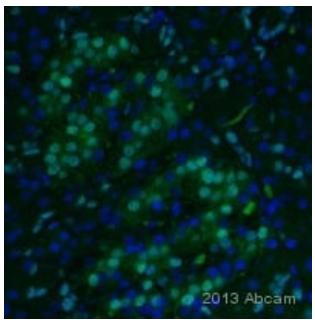
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Immunohistochemical analysis of paraffin embedded Human duodenum tissue labelled with ab134150, unpurified, at 1/1000 dilution.

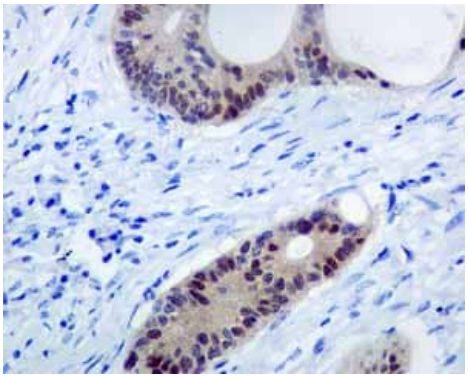
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

This image is courtesy of an anonymous Abreview

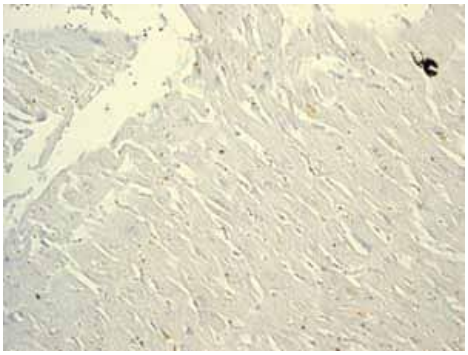
ab134150, unpurified, staining PDX1 in Human pancreas tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 5% serum for 1 hour at 24°C; antigen retrieval was by heat mediation in 10mM sodium citrate, pH 6.0. Samples were incubated with primary antibody (1/1000 in 2% BSA) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated Donkey anti-rabbit IgG polyclonal (1/400) was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Immunohistochemical analysis of paraffin embedded Human Colonic adenocarcinoma tissue using ab134150, unpurified, showing +ve staining.

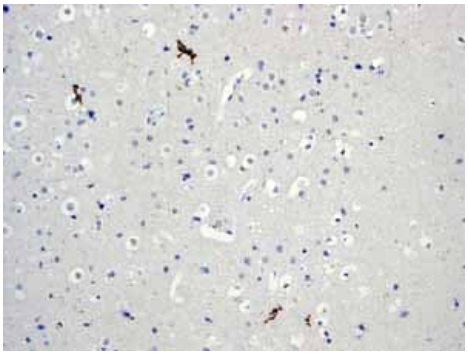
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Immunohistochemical analysis of paraffin embedded Human Heart muscles tissue using ab134150, unpurified, showing -ve staining.

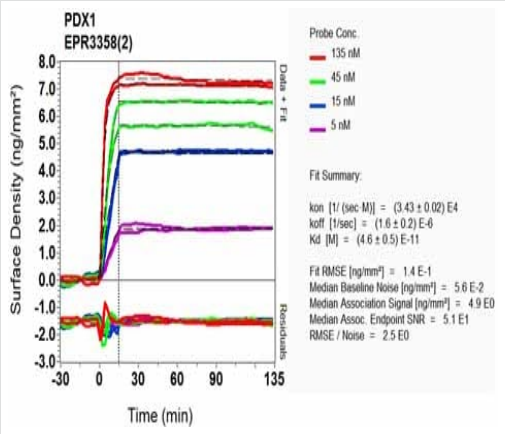
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Immunohistochemical analysis of paraffin embedded normal Human Normal brain tissue using ab134150, unpurified, showing -ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

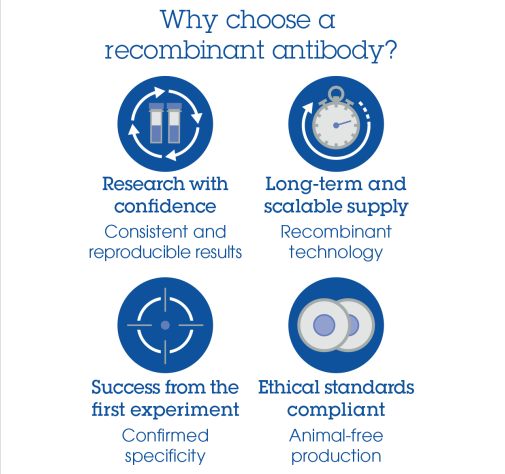


OI-RD Scanning - Anti-PDX1 antibody [EPR3358(2)] (ab134150)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D



Anti-PDX1 antibody [EPR3358(2)] (ab134150)

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