


Anti-PDX1 antibody ab227586

[1 References](#) [6 Images](#)

Overview

Product name	Anti-PDX1 antibody
Description	Rabbit polyclonal to PDX1
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Dog, Pig 
Immunogen	Synthetic peptide within Human PDX1 (internal sequence). The exact sequence is proprietary. Carrier-protein conjugated. Database link: P52945
Positive control	WB: Jurkat, Raji, NCI-H929 and AsPC-1 whole cell extracts; Mouse liver and pancreas liver tissue extracts; Rat liver tissue extract. IHC-P: Rat pancreas tissue.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab227586 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
IHC-P		1/100 - 1/1000.
WB		1/500 - 1/3000. Predicted molecular weight: 31 kDa.

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/XI Hbox-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).

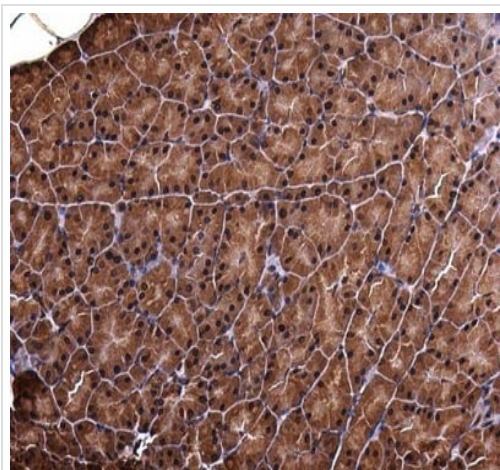
Post-translational modifications

Phosphorylated by the SAPK2 pathway at high intracellular glucose concentration.

Cellular localization

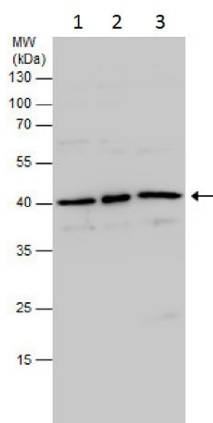
Nucleus.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody (ab227586)

Paraffin-embedded rat pancreas tissue stained for PDX1 using ab227586 at 1/500 dilution in immunohistochemical analysis.



Western blot - Anti-PDX1 antibody (ab227586)

All lanes : Anti-PDX1 antibody (ab227586) at 1/1000 dilution

Lane 1 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell extract

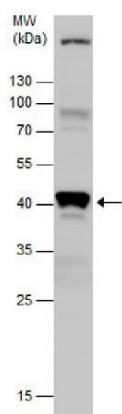
Lane 2 : Raji (human Burkitt's lymphoma cell line) whole cell extract

Lane 3 : NCI-H929 (human bone marrow lymphoblast cell line) whole cell extract

Lysates/proteins at 30 µg per lane.

Predicted band size: 31 kDa

12% SDS-PAGE gel.

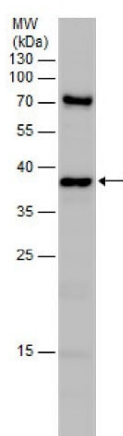


Western blot - Anti-PDX1 antibody (ab227586)

Anti-PDX1 antibody (ab227586) at 1/1000 dilution + Mouse pancreas tissue extract at 50 µg

Predicted band size: 31 kDa

12% SDS-PAGE gel.

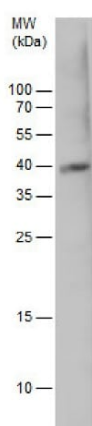


Western blot - Anti-PDX1 antibody (ab227586)

Anti-PDX1 antibody (ab227586) at 1/1000 dilution + AsPC-1 whole cell extract at 30 µg

Predicted band size: 31 kDa

12% SDS-PAGE gel.

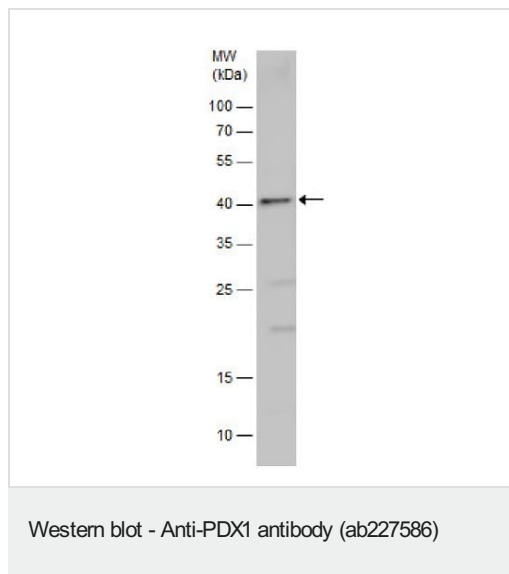


Western blot - Anti-PDX1 antibody (ab227586)

Anti-PDX1 antibody (ab227586) at 1/1000 dilution + Rat liver tissue extract at 50 µg

Predicted band size: 31 kDa

12% SDS-PAGE gel.



Anti-PDX1 antibody (ab227586) at 1/1000 dilution + Mouse liver tissue extract at 50 µg

Predicted band size: 31 kDa

12% SDS-PAGE gel.

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