


Product datasheet

Anti-PDX1 antibody ab227586

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. |

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 Constituents: PBS, 20% Glycerol |
| Purity | Immunogen affinity purified |
| Clonality | Polyclonal |
| Isotype | IgG |

Applications

Our [Abpromise guarantee](#) covers the use of **ab227586** in the following tested applications.

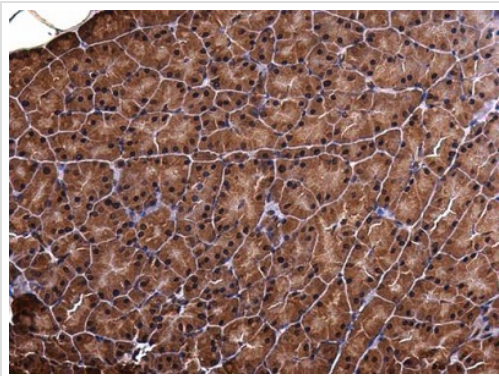
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|---|
| IHC-P | | 1/100 - 1/1000. |
| WB | | 1/500 - 1/3000. Predicted molecular weight: 31 kDa. |

Target

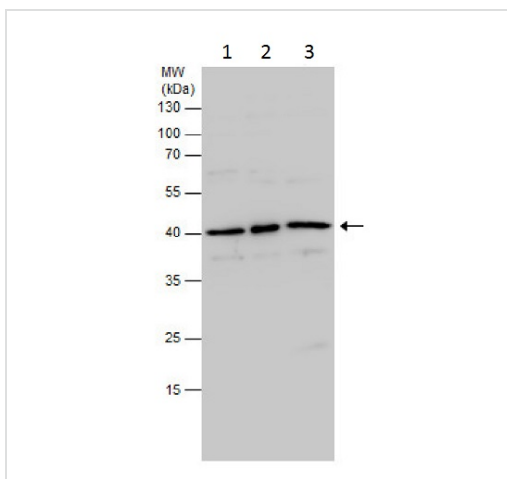
| | |
|---|--|
| Function | Activates insulin, somatostatin, glucokinase, islet amyloid polypeptide and glucose transporter type 2 gene transcription. Particularly involved in glucose-dependent regulation of insulin gene transcription. Binds preferentially the DNA motif 5'-[CT]TAAT[TG]-3'. During development, 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 | <p>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.</p> <p>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.</p> <p>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.</p> |
| Sequence similarities | <p>Belongs to the Antp homeobox family. IPF1/XIHbox-8 subfamily.</p> <p>Contains 1 homeobox DNA-binding domain.</p> |
| Domain | <p>The Antp-type hexapeptide mediates heterodimerization with PBX on a regulatory element of the somatostatin promoter.</p> <p>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).</p> |
| 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

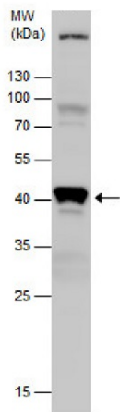
Lane 2 : Raji (human Burkitt's lymphoma cell line) whole cell extract

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.

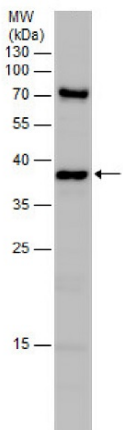


Western blot - Anti-PDX1 antibody (ab227586)

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

Predicted band size: 31 kDa

12% SDS-PAGE gel.

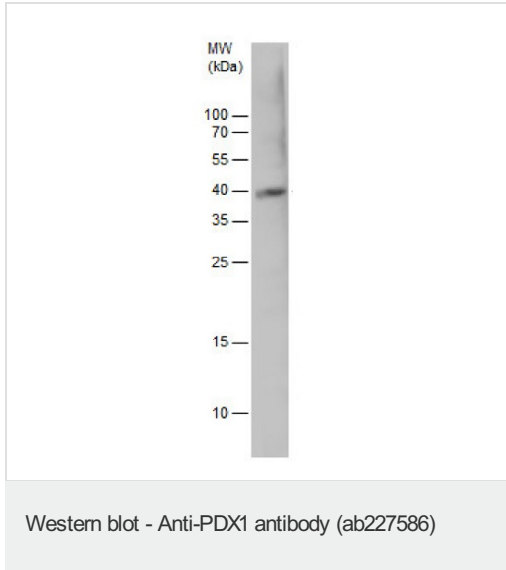


Western blot - Anti-PDX1 antibody (ab227586)

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

Predicted band size: 31 kDa

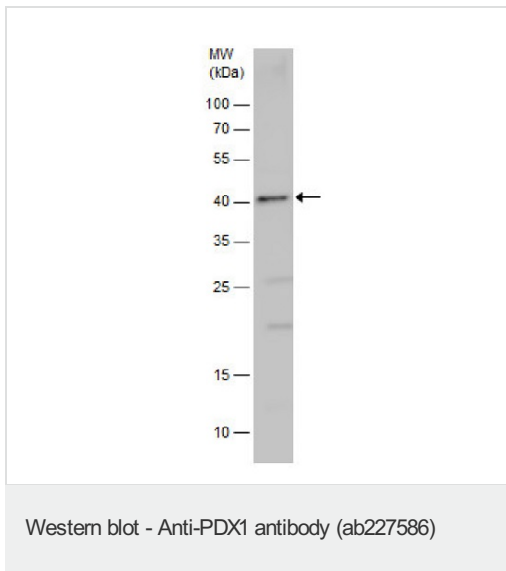
12% SDS-PAGE gel.



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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