

Product datasheet

Anti-PDX1 antibody [EPR22002] - BSA and Azide free ab234633

Recombinant RabMAb

6 Images

Overview

Product name	Anti-PDX1 antibody [EPR22002] - BSA and Azide free
Description	Rabbit monoclonal [EPR22002] to PDX1 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, IP, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant full length protein within Mouse PDX1 aa 1 to the C-terminus. The exact sequence is proprietary. Database link: P52946
Positive control	IHC-P: Mouse pancreas tissue.
General notes	Ab234633 is the carrier-free version of ab219207 . This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.

Our [carrier-free formats](#) are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.

Use our [conjugation kits](#) for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

ab234633 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.

Maxpar® is a trademark of Fluidigm Canada Inc.

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](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next

breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22002
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab234633** in the following tested applications.

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

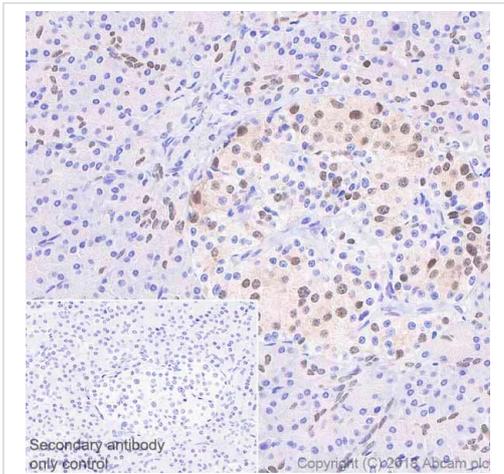
Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Perform heat-mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 46 kDa (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	Belongs to the Antp homeobox family. IPF1/XIHbox-8 subfamily. Contains 1 homeobox DNA-binding domain.
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 [EPR22002] - BSA and Azide free (ab234633)

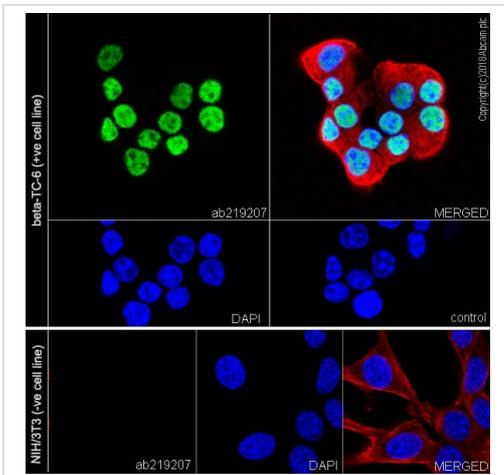
Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling PDX1 with [ab219207](#) at 1/500 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use. Nuclear and weak cytoplasmic staining on human pancreatic islet and pancreatic acini (PMID: 1847781, PMID: 22688334) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use.

Performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219207](#)).

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-PDX1 antibody [EPR22002] - BSA and Azide free (ab234633)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Beta-TC-6 (mouse pancreas insulinoma beta cell line) and NIH/3T3 (mouse embryo fibroblast cell line) cells labeling PDX1 with [ab219207](#) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

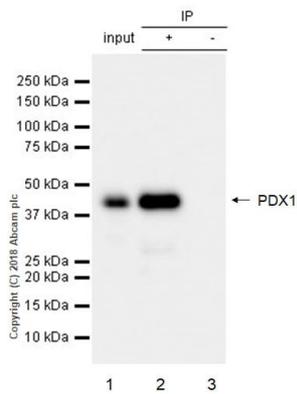
Confocal image showing nuclear staining in Beta-TC-6 cells.

Negative control: NIH/3T3 (PMID: 25271154).

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) ([ab195889](#)) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219207](#)).



Immunoprecipitation - Anti-PDX1 antibody
[EPR22002] - BSA and Azide free (ab234633)

PDX1 was immunoprecipitated from 0.35 mg of Beta-TC-6 (mouse pancreas insulinoma beta cell line) whole cell lysate with [ab219207](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab219207](#) at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/5000 dilution.

Lane 1: Beta-TC-6 whole cell lysate 10 µg (Input).

Lane 2: [ab219207](#) IP in Beta-TC-6 whole cell lysate.

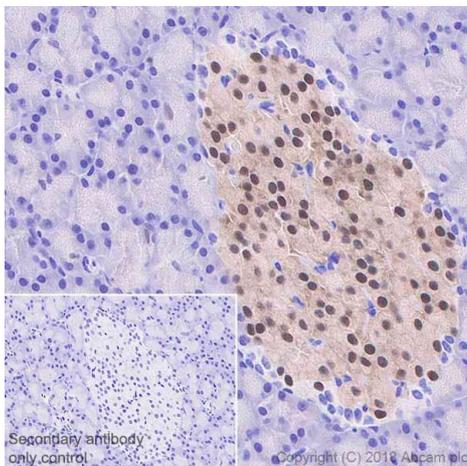
Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab219207](#) in Beta-TC-6 whole cell lysate.

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: 3 seconds.

The molecular mass observed is consistent with what has been described in the literature (PMID: 12488243).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219207](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody
[EPR22002] - BSA and Azide free (ab234633)

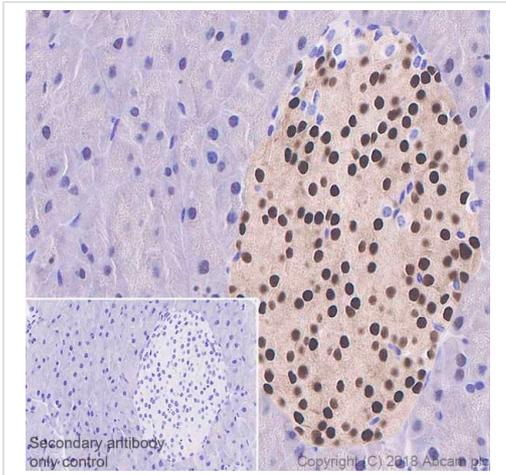
Immunohistochemical analysis of paraffin-embedded rat pancreas tissue labeling PDX1 with [ab219207](#) at 1/500 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use. Nuclear and weak cytoplasmic staining in rat pancreatic islet (PMID: 1847781, PMID: 22688334) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use.

Performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219207](#)).

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDX1 antibody [EPR22002] - BSA and Azide free (ab234633)

Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue labeling PDX1 with [ab219207](#) at 1/500 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use. Nuclear and weak cytoplasmic staining in mouse pancreatic islet (PMID: 1847781, PMID: 22688334) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) ready to use.

Performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219207](#)).

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.

Why choose a recombinant antibody?

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

Anti-PDX1 antibody [EPR22002] - BSA and Azide free (ab234633)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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