

Product datasheet

Anti-Insulin antibody [EPR17359] ab181547

Recombinant RabMAb

★★★★★ [11 Abreviews](#) [76 References](#) [11 Images](#)

Overview

Product name	Anti-Insulin antibody [EPR17359]
Description	Rabbit monoclonal [EPR17359] to Insulin
Host species	Rabbit
Specificity	The human recommendation is based on the IHC-P results. We do not guarantee WB for human.
Tested applications	Suitable for: IHC-FoFr, WB, IHC-P, ICC/IF, mlHC
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human, mouse and rat pancreas tissue. ICC/IF: BxPC-3 cells. IHC-FoFr: Mouse pancreas tissue. WB: Mouse & Rat pancreas lysate. mlHC: Human pancreas tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</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	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17359
Isotype	IgG

Applications

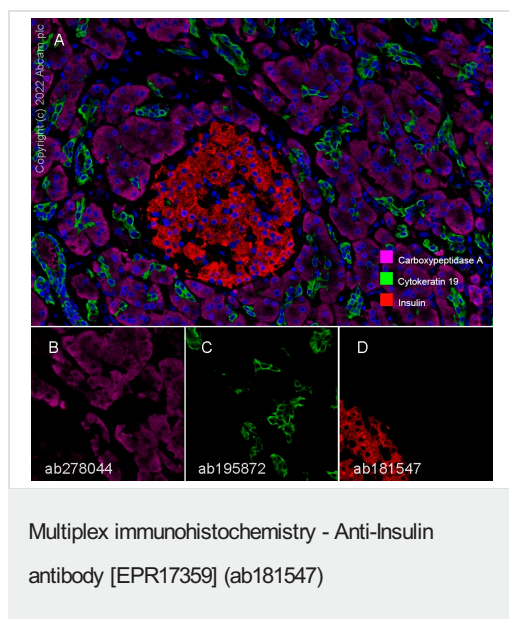
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab181547 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-FoFr		1/1000.
WB	★★★★★ (1)	Use at an assay dependent concentration. Predicted molecular weight: 12 kDa.
IHC-P	★★★★★ (7)	1/64000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/200.
mlHC		1/20000.

Target

Function	Insulin decreases blood glucose concentration. It increases cell permeability to monosaccharides, amino acids and fatty acids. It accelerates glycolysis, the pentose phosphate cycle, and glycogen synthesis in liver.
Involvement in disease	<p>Defects in INS are the cause of familial hyperproinsulinemia (FHPRI) [MIM:176730].</p> <p>Defects in INS are a cause of diabetes mellitus insulin-dependent type 2 (IDDM2) [MIM:125852]. IDDM2 is a multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical features are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels.</p> <p>Defects in INS are a cause of diabetes mellitus permanent neonatal (PNDM) [MIM:606176]. PNDM is a rare form of diabetes distinct from childhood-onset autoimmune diabetes mellitus type 1. It is characterized by insulin-requiring hyperglycemia that is diagnosed within the first months of life. Permanent neonatal diabetes requires lifelong therapy.</p> <p>Defects in INS are a cause of maturity-onset diabetes of the young type 10 (MODY10) [MIM:613370]. MODY10 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 insulin family.
Cellular localization	Secreted.

Images



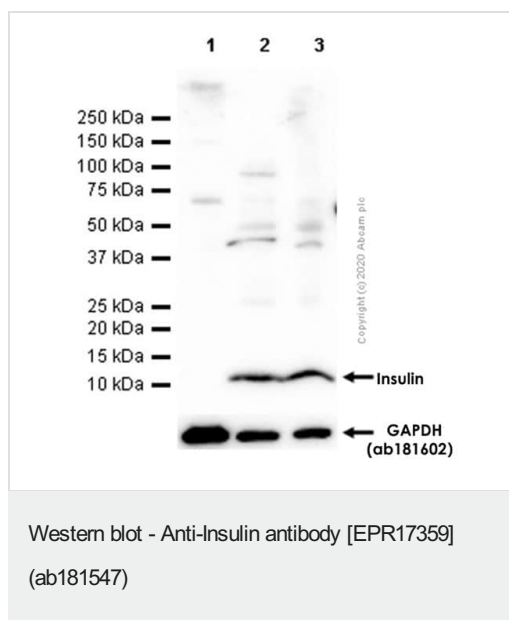
Fluorescence multiplex immunohistochemical analysis of the human pancreas (Formalin/PFA-fixed paraffin-embedded sections).

Panel A: merged staining of anti-Carboxypeptidase A ([ab278044](#), magenta; Opal™690), anti-Cytokeratin 19 ([ab195872](#), green; Opal™520) and anti-Insulin (ab181547, red; Opal™570) on human pancreas. Panel B: anti-Carboxypeptidase A stained on acinar cells. Panel C: anti-Cytokeratin 19 stained on centroacinar cells and ducts. Panel D: anti-Insulin stained on beta cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

The section was incubated in three rounds of staining: in the order of [ab278044](#) at 1/4000 dilution (0.135 µg/ml), [ab195872](#) at 1/8000 dilution (0.127 µg/ml), and ab181547 at 1/20000 dilution (0.053 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain.



All lanes : Anti-Insulin antibody [EPR17359] (ab181547) at 1/1000 dilution

Lane 1 : Human pancreas

Lane 2 : Mouse pancreas

Lane 3 : Rat pancreas

Lysates/proteins at 20 µg per lane.

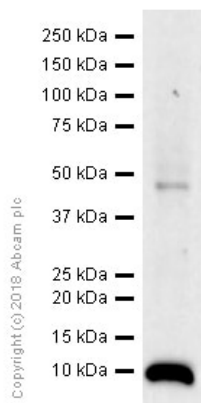
Secondary

All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 2000 µg/ml

Predicted band size: 12 kDa

Blocking/Diluting buffer and concentration: 5% NFDM/TBST

Observed MW: 12KDa



Western blot - Anti-Insulin antibody [EPR17359]
(ab181547)

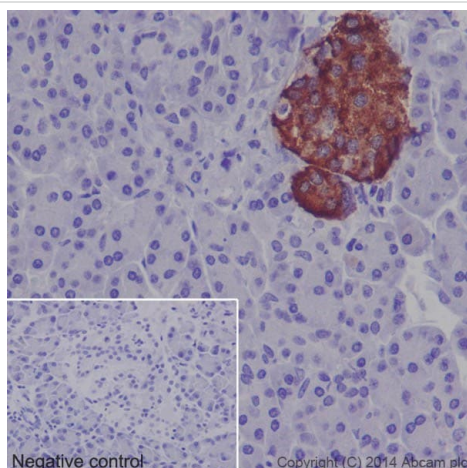
Anti-Insulin antibody [EPR17359] (ab181547) at 1/1000 dilution +
Mouse pancreas lysate 20 µg at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 12 kDa

Observed band size: 12 kDa



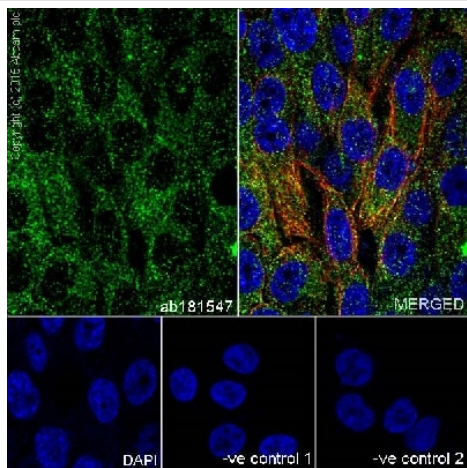
Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-Insulin antibody
[EPR17359] (ab181547)

Immunohistochemical analysis of paraffin-embedded human
pancreas tissue labeling Insulin with ab181547 at 1/64000 dilution,
followed by Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution.

Cytoplasm staining on islet cells of human pancreas is
observed. Counterstained with hematoxylin.

Negative control: PBS instead of primary antibody; secondary
antibody is Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH
9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Insulin antibody [EPR17359] (ab181547)

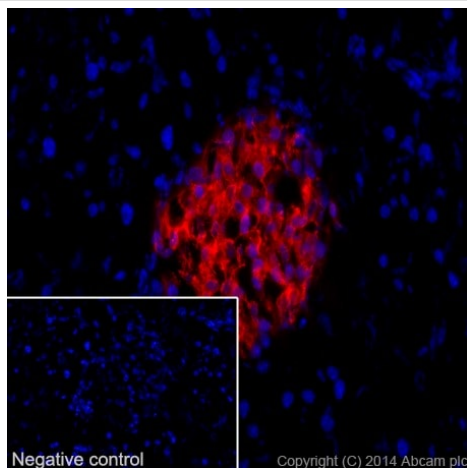
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized BxPC-3 (Human pancreas adenocarcinoma cells) cells labeling Insulin with ab181547 at 1/200 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 dilution (green).

Confocal image shows cytoplasmic staining on BxPC-3 cells. The nuclear counterstain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows:-

-ve control 1: - ab181547 at 1/200 dilution followed by **ab150120** (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/500 dilution.

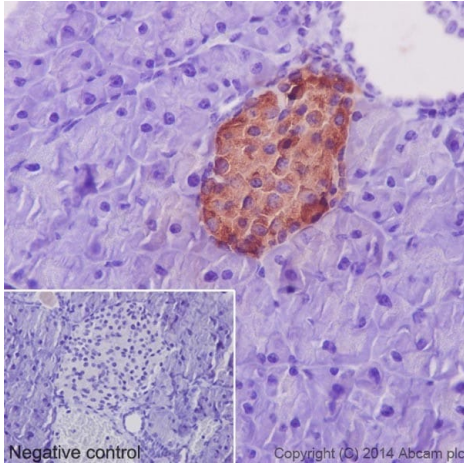
-ve control 2: - **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor® 488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Insulin antibody [EPR17359] (ab181547)

Immunohistochemical analysis of 4% paraformaldehyde perfusion fixed, frozen section of mouse pancreas tissue labeling Insulin with ab181547 at 1/1000 dilution, followed by Donkey anti-rabbit Alexa Fluor® 594 at 1/1000 dilution. Cytoplasm staining on islet cells of mouse pancreas is observed. Counter stained with DAPI.

Negative control: PBS instead of primary antibody; secondary antibody is Donkey anti-rabbit Alexa Fluor® 594 at 1/1000 dilution.

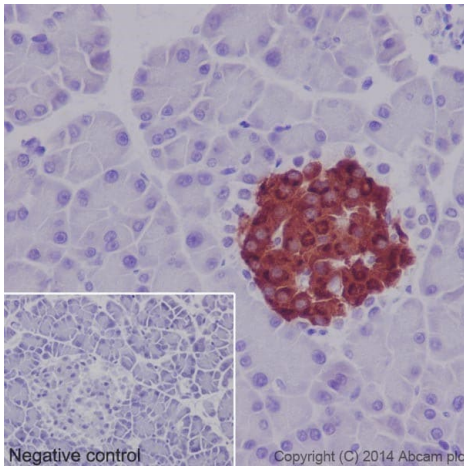


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin antibody [EPR17359] (ab181547)

Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue labeling Insulin with ab181547 at 1/64000 dilution, followed by Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution. Cytoplasm staining on islet cells of mouse pancreas is observed. Counterstained with hematoxylin.

Negative control: PBS instead of primary antibody; secondary antibody is Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

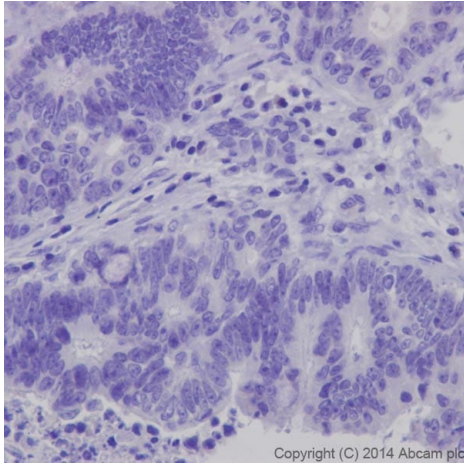


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin antibody [EPR17359] (ab181547)

Immunohistochemical analysis of paraffin-embedded rat pancreas tissue labeling Insulin with ab181547 at 1/64000 dilution, followed by Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution. Cytoplasm staining on islet cells of rat pancreas is observed. Counterstained with hematoxylin.

Negative control: PBS instead of primary antibody; secondary antibody is Anti-Rabbit HRP ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

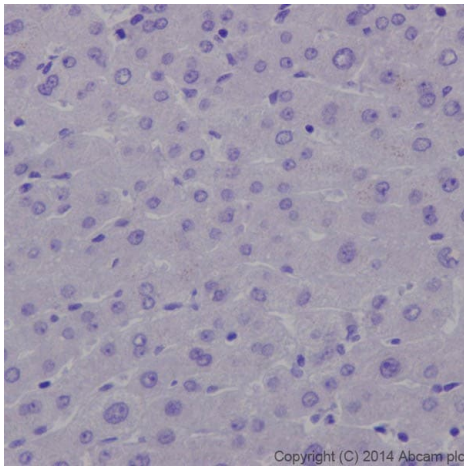


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin antibody [EPR17359] (ab181547)

Immunohistochemical analysis of paraffin-embedded human adenocarcinoma of colon tissue with ab181547 at 1/64000 dilution, followed by Anti-Rabbit HRP (**ab97051**) at 1/500 dilution.

Negative staining on human colonic adenocarcinoma is observed. Counterstained with hematoxylin.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



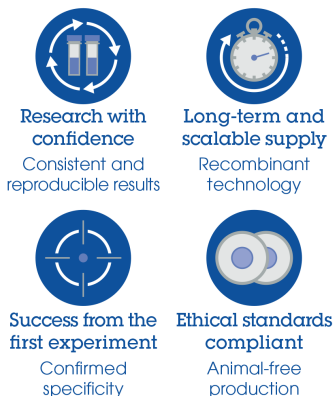
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin antibody [EPR17359] (ab181547)

Immunohistochemical analysis of paraffin-embedded human liver tissue with ab181547 at 1/64000 dilution, followed by Anti-Rabbit HRP (**ab97051**) at 1/500 dilution.

Negative staining on human liver tissue is observed. Counterstained with hematoxylin.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Anti-Insulin antibody [EPR17359] (ab181547)

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