

Anti-PC1/3 antibody [EPR21908] - BSA and Azide free ab233397

Recombinant RabMAb

[1 References](#) [11 Images](#)

Overview

Product name	Anti-PC1/3 antibody [EPR21908] - BSA and Azide free
Description	Rabbit monoclonal [EPR21908] to PC1/3 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, IHC-Fr, ICC/IF, IP, Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-Fr: Rat pancreas tissue.
General notes	<p>ab233397 is the carrier-free version of ab220363.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>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.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <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. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21908
Isotype	IgG

Applications

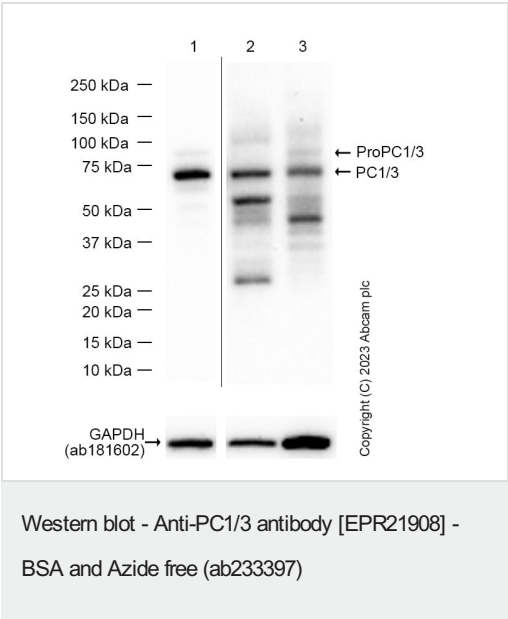
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab233397 in the following tested applications.

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

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 84 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IHC-Fr		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration.

Target

Function	Involved in the processing of hormone and other protein precursors at sites comprised of pairs of basic amino acid residues. Substrates include POMC, renin, enkephalin, dynorphin, somatostatin and insulin.
Involvement in disease	Defects in PCSK1 are the cause of proprotein convertase 1 deficiency (PC1 deficiency) [MIM:600955]. PC1 deficiency is characterized by obesity, hypogonadism, hypoadrenalism, reactive hypoglycemia as well as marked small-intestinal absorptive dysfunction It is due to impaired processing of prohormones.
Sequence similarities	Belongs to the peptidase S8 family. Furin subfamily.
Cellular localization	Cytoplasmic vesicle > secretory vesicle. Localized in the secretion granules.



All lanes : Anti-PC1/3 antibody [EPR21908] ([ab220363](#)) at 1000 cells

Lane 1 : Beta-TC-6 (mouse pancreas insulinoma beta cell) whole cell lysate

Lane 2 : Mouse pancreas lysate

Lane 3 : Mouse brain lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

Predicted band size: 84 kDa

Additional bands at: 66 kDa (possible mature (processed) protein)

Exposure time: 80 seconds

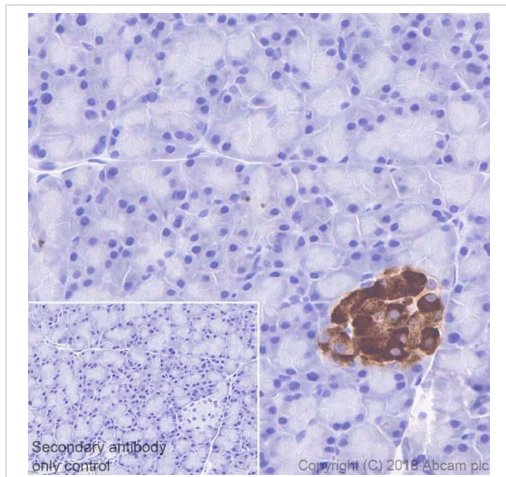
Blocking and Diluting Buffer: 5% NFDM /TBST

87 kDa ProPC1/3; 66 kDa mature form (PMID: 26778167)

Lane1 Expsoure Time: 20 seconds

Lane2 and Lane3 were developed using a high sensitivity ECL substrate.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab220363](#)).



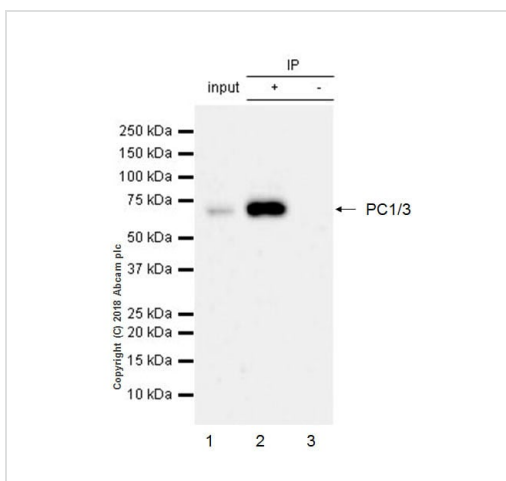
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of paraffin-embedded rat pancreas tissue labeling PC1/3 with [ab220363](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining in rat pancreatic islets (PMID: 7925129; PMID: 21190012) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat-mediated antigen retrieval using [ab93678](#) (citrate buffer, pH 6.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab220363](#)).



Immunoprecipitation - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

PC1/3 was immunoprecipitated from 0.35 mg Beta-TC-6 (mouse pancreas insulinoma beta cell) whole cell lysate with [ab220363](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab220363](#) at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

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

Lane 2: [ab220363](#) IP in Beta-TC-6 whole cell lysate (+).

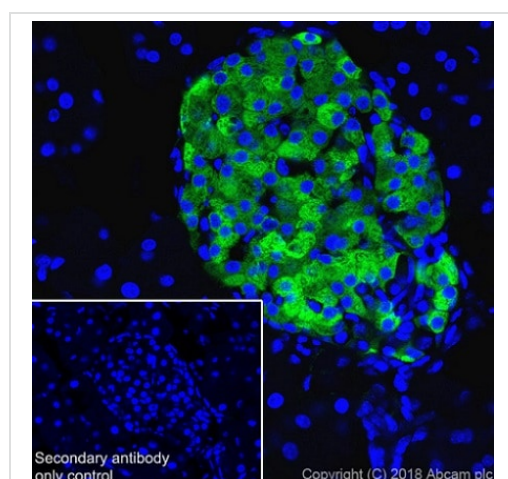
Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab220363](#) in Beta-TC-6 whole cell lysate (-).

Blocking/Dilution buffer and concentration: 5% NFDm/TBST.
Exposure time: 3 minutes.

The PC1/3 protein undergoes multiple intracellular cleavage steps to its 66 kDa mature form (PMID: 26778167).

This data was developed using the same antibody clone in a

different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab220363](#)).

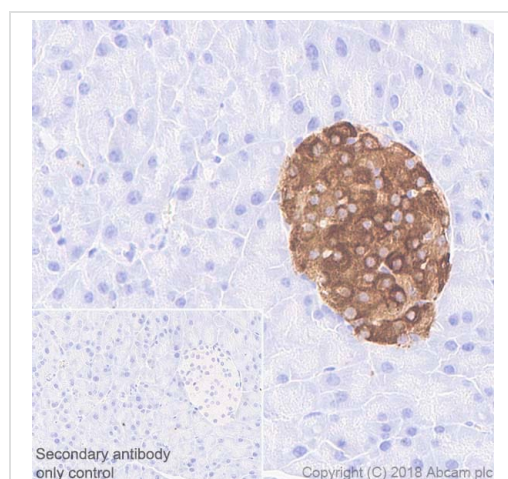


Immunohistochemistry (Frozen sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of frozen mouse pancreas tissue labeling PC1/3 with [ab220363](#) at 1/500 dilution (green), followed by [ab150077](#) AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1000 dilution. Positive cytoplasmic staining in mouse pancreatic islet (PMID: 25976560) is observed. Counter stained with DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab150077](#) AlexaFluor®488 Goat anti-Rabbit used at a 1/1000 dilution.

Perform heat-mediated antigen retrieval by using Tris-EDTA buffer (10mM Tris base pH 9.0, 1mM EDTA, 0.05% Tween 20).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab220363](#)).

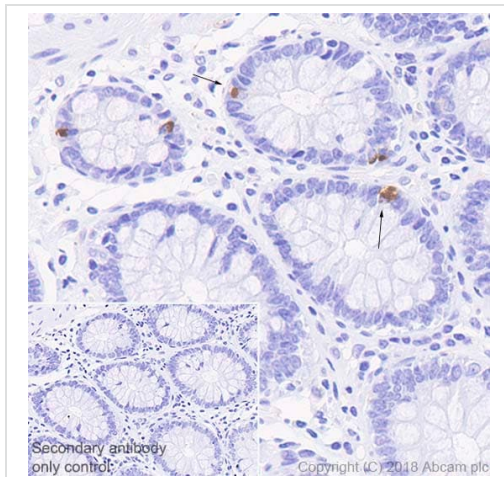


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue labeling PC1/3 with [ab220363](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining in mouse pancreatic islets (PMID: 7925129; PMID: 21190012) is observed. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat-mediated antigen retrieval using [ab93678](#) (citrate buffer, pH 6.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab220363](#)).



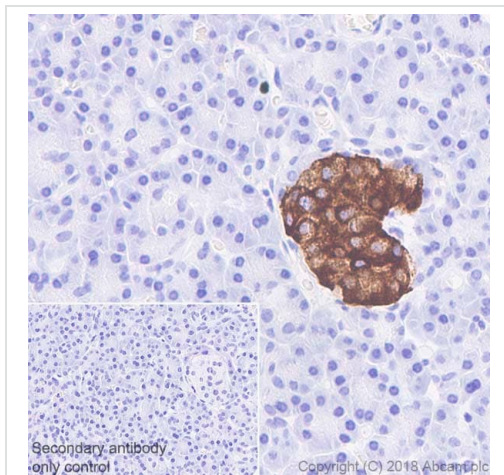
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling PC1/3 with **ab220363** at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Sporadic cytoplasmic staining (arrows) in human colon (PMID: 18706454) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat-mediated antigen retrieval using **ab93678** (citrate buffer, pH 6.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab220363**).



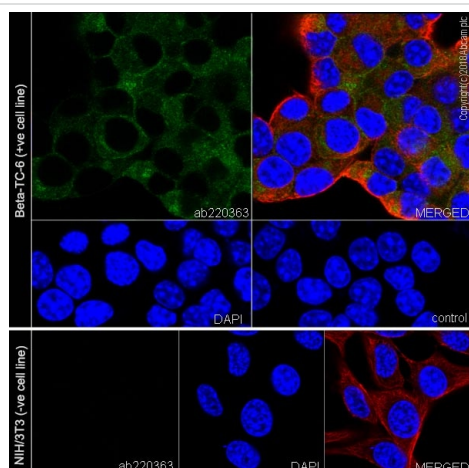
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling PC1/3 with **ab220363** at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining in human pancreatic islets (PMID: 7925129; PMID: 21190012) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat-mediated antigen retrieval using **ab93678** (citrate buffer, pH 6.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab220363**).



Immunocytochemistry/ Immunofluorescence - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

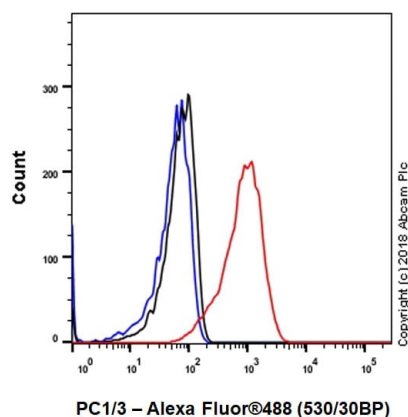
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Beta-TC-6 (mouse pancreas insulinoma beta cell) cells labeling PC1/3 with **ab220363** at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining in Beta-TC-6 cell line.

Negative cell control: NIH/3T3 (PMID: 9405066; PMID:15143067).

Counterstained with **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red). The nuclear counter stain is DAPI (blue). The negative control is the secondary antibody only.

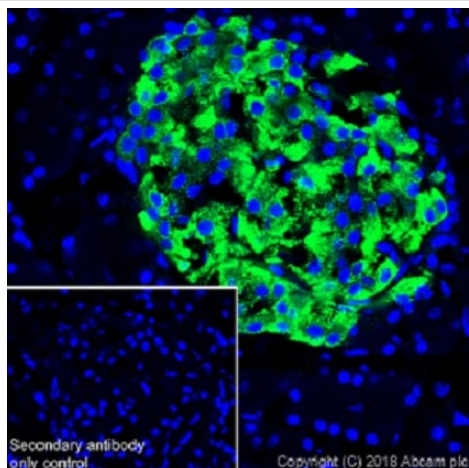
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab220363**).



Flow Cytometry (Intracellular) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized Beta-TC-6 (mouse pancreas insulinoma beta cell) cell line labeling PC1/3 with **ab220363** at 1/50 (red) compared with a Rabbit monoclonal IgG (**ab172730**) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**), at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab220363**).



Immunohistochemistry (Frozen sections) - Anti-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

Immunohistochemical analysis of frozen rat pancreas tissue labeling PC1/3 with **ab220363** at 1/500 dilution (green), followed by **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1000 dilution. Positive cytoplasmic staining in rat pancreatic islet (PMID: 25976560) is observed. Counter stained with DAPI (blue).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab150077** AlexaFluor®488 Goat anti-Rabbit used at a 1/1000 dilution.

Perform heat-mediated antigen retrieval by using Tris-EDTA buffer (10mM Tris base pH 9.0, 1mM EDTA, 0.05% Tween 20).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220363**).**

Why choose a recombinant antibody?



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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-PC1/3 antibody [EPR21908] - BSA and Azide free (ab233397)

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