abcam

# ab274427

# Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR23578-19 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.99 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## mIHC

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IP

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-Fr

### Not recommended

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information PCSK2

| | |
|---|---|
| **Function** | Serine endopeptidase which is involved in the processing of hormone and other protein precursors at sites comprised of pairs of basic amino acid residues. Responsible for the release of glucagon from proglucagon in pancreatic A cells. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab274427 is the carrier-free version of a274418.

**Patented technology**

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**

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 batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

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.

**Compatibility**
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.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | The protein PCSK2 also known as proprotein convertase 2 is an enzyme with a molecular mass of approximately 75 kDa. It functions by processing various precursor proteins into their active forms. PCSK2 belongs to the family of serine proteases and is mainly expressed in endocrine and neuroendocrine tissues including the pituitary gland kidneys and pancreas. This protein is important in the maturation of peptide hormones and neuropeptides impacting physiological functions. |
| **Biological function summary** | PCSK2 is responsible for activating various prohormones into their active hormone counterparts. It accomplishes this by cleaving specific sites on precursor proteins. PCSK2 does not operate as part of a complex but independently participates in proteolytic processing essential for proper hormone functioning. This enzyme's activity is critical for the synthesis of key hormones like insulin and glucagon which regulate glucose metabolism. |
| **Pathways** | PCSK2 is a significant part of hormone processing pathways. Specifically it contributes to the insulin-processing pathway which is important for energy regulation and homeostasis. PCSK2 works closely with related proteins such as PCSK1 (proprotein convertase 1) in the cleavage of precursor forms of various hormones. The coordinated action of these enzymes ensures the production of bioactive hormones required for normal metabolic functions. |
| **Associated diseases and disorders** | PCSK2 is associated with conditions like diabetes and obesity due to its role in processing hormones that regulate metabolism. Dysregulation or mutations in the PCSK2 gene can disrupt insulin and glucagon maturation leading to imbalances in blood sugar levels. Additionally variations in PCSK2 may influence fat storage and energy expenditure contributing to obesity. The interaction between PCSK2 and insulin-related pathways highlights its importance in maintaining metabolic health. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

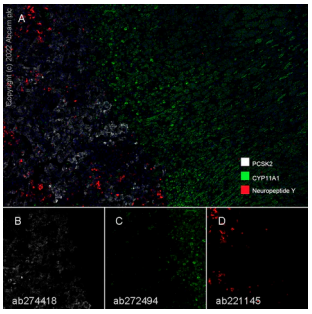
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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## 10 product images

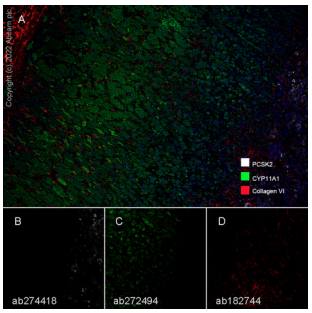
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### Multiplex immunohistochemistry - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

Fluorescence multiplex immunohistochemical analysis of human adrenal gland (formalin-fixed paraffin-embedded section). Panel A shows merged staining of anti-PCSK2 stained on adrenal medulla (ab274418; gray; Opal™690) at 1:2000 (0.263 µg/ml) [Panel B], anti-CYP11A1 stained on adrenal cortex (ab272494; green; Opal™520) at 1:10000 (0.053 µg/ml) [Panel C], and anti-Neuropeptide Y stained on chromaffin cells (ab221145; red; Opal™570) at 1:2000 (0.279 µg/ml) [Panel D] on human adrenal gland. DAPI was used as a nuclear counter stain. Followed by Opal Polymer HRP Ms + Rb secondary antibody. 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. The section was incubated in three rounds of staining: in the order of ab274418, ab272494, and ab221145 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins was used. This data was developed using ab274418, the same antibody clone in a different buffer formulation.

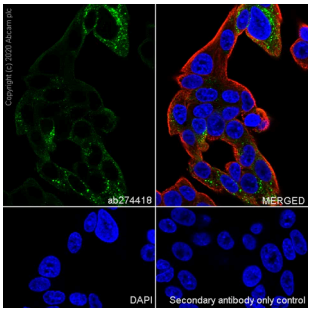
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### Multiplex immunohistochemistry - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

Fluorescence multiplex immunohistochemical analysis of human adrenal gland (formalin-fixed paraffin-embedded section). Panel A shows merged staining of anti-PCSK2 stained on adrenal medulla (ab274418; gray; Opal™690) at 1:2000 (0.263 µg/ml) [Panel B], anti-CYP11A1 stained on adrenal cortex (ab272494; green; Opal™520) at 1:10000 (0.053 µg/ml) [Panel C], and anti-Collagen VI stained on extracellular matrix (ab182744; red; Opal™570) at 1:1000 (1.518 µg/ml) [Panel D] on human adrenal gland. DAPI was used as a nuclear counter stain. Followed by Opal Polymer HRP Ms + Rb secondary antibody. 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. The section was incubated in three rounds of staining: in the order of ab274418, ab272494, and ab182744 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins was used. This data was developed using ab274418, the same antibody clone in a different buffer formulation.

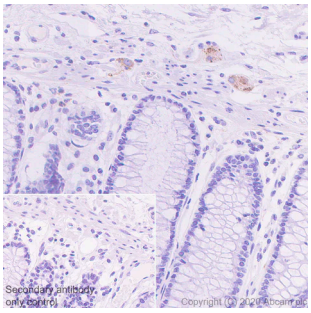



## Immunocytochemistry/ Immunofluorescence - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized TT cells labelling PCSK2 with ab274418 at 1/100 (5.25 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplamic staining in TT cell line. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



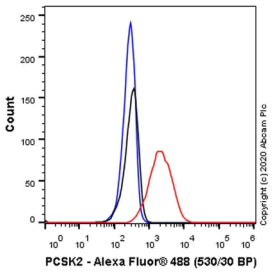

## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling PCSK2 with ab274418 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Postive staining on myenteric neurons of human colon (PMID: 7829629). The section was incubated with ab274418 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



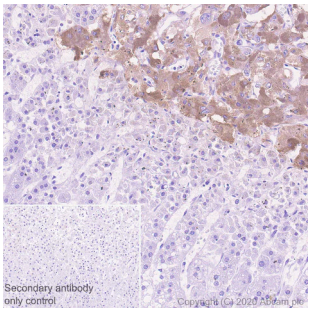

## Flow Cytometry (Intracellular) - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Flow Cytometry (Intracellular) staining using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized TT (Human thyroid carcinoma epithelial cell) cells labelling PCSK2 with ab274418 at 1/500 dilution

(0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor®488, ab150077) at 1/2000 dilution was used as the secondary antibody.



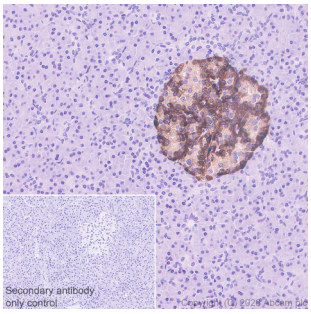

## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human adrenal gland tissue labeling PCSK2 with ab274418 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Postive staining on human adrenal gland. The section was incubated with ab274418 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



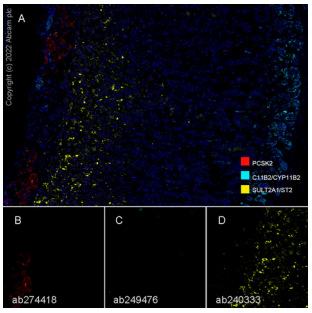

## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling PCSK2 with ab274418 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Postive staining on human pancreatic islets (PMID: 8916141, PMID: 7829629). The section was incubated with ab274418 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND· RX instrument Counterstained with Hematoxylin.

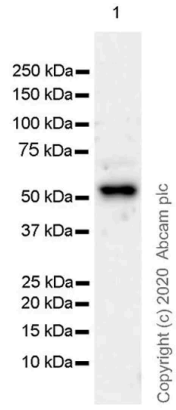
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.




## Multiplex immunohistochemistry - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

Fluorescence multiplex immunohistochemical analysis of human adrenal gland (formalin-fixed paraffin-embedded section). Panel A shows merged staining of anti-PCSK2 stained on adrenal medulla (ab274418; red; Opal™690) at 1:2000 (0.263 µg/ml) [Panel B], anti-C11B2/CYP11B2 stained on zona glomerulosa (ab249476; cyan; Opal™520) at 1:500 (4.478 µg/ml) [Panel C], and anti-SULT2A1 stained on zona reticularis (ab240333; yellow; Opal™570) at 1:500 (4.504 µg/ml) [Panel D] on human adrenal gland. DAPI was used as a nuclear counter stain. Followed by Opal Polymer HRP Ms + Rb secondary antibody. 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. The section was incubated in three rounds of staining: in the order of ab274418, ab249476, and ab240333 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins was used. This data was developed using ab274418, the same antibody clone in a different buffer formulation.




## Western blot - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Western blot staining of Human brain tissue lysate using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.

55-kDa PC2 is observed. The molecular weight observed is consistent with what has been described in the literature (PMID: 8557169, 14693708).
This blot was developed using a higher sensitivity ECL substrate.

All lanes:
Western blot - Anti-PCSK2 antibody [EPR23578-19] (ab274418) at 1/1000 dilution

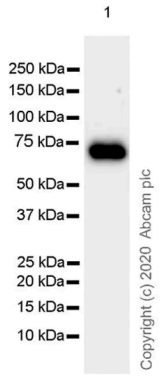
All lanes:
Human brain tissue lysate at 40 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 71 kDa

Observed band size: 55 kDa




# Western blot - Anti-PCSK2 antibody [EPR23578-19] - BSA and Azide free (ab274427)

PCSK2 Western blot staining of TT (human thyroid carcinoma epithelial cell) whole cell lysate using rabbit Anti-PCSK2 antibody

This data was developed using ab274418, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 37 seconds.

70-kDa pro-PC2 is observed. The molecular weight observed is consistent with what has been described in the literature (PMID:8557169, 14693708).

All lanes:
Western blot - Anti-PCSK2 antibody [EPR23578-19] (ab274418) at 1/1000 dilution

All lanes:
TT (human thyroid carcinoma epithelial cell) whole cell lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 71 kDa

Observed band size: 70 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.