abcam

**ab181208**

# Anti-PCTAIRE1 antibody [EPR13210]

Recombinant | RabMAb | KO Validated

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR13210 |
| **Purity** | Tissue culture supernatant |

## Reactivity data

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 - 1/2000 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse |

| | |
|---|---|
| **Dilution info** | 1/1000 - 1/2000 |
| **Notes** | - |

### Predicted

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

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/20 |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/20 |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Predicted

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

## Target data

See full target information CDK16

| | |
|---|---|
| **Function** | Protein kinase that plays a role in vesicle-mediated transport processes and exocytosis. Regulates GH1 release by brain neurons. Phosphorylates NSF, and thereby regulates NSF oligomerization. Required for normal spermatogenesis. |

Regulates neuron differentiation and dendrite development (By similarity). Plays a role in the regulation of insulin secretion in response to changes in blood glucose levels. Can phosphorylate CCNY at 'Ser-336' (in vitro).

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**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.

## Supplementary info

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

| | |
|---|---|
| **Activity summary** | PCTAIRE1 also known as Cyclin-dependent kinase 16 (CDK16) plays a significant mechanical role as a serine/threonine kinase. This protein with a molecular weight of approximately 45 kDa participates in various intracellular processes. It shows expression in multiple tissues including prominently in the brain and testis. PCTAIRE1 regulates cellular events by phosphorylating target proteins thereby influencing their function. |

| | |
|---|---|
| **Biological function summary** | PCTAIRE1 influences certain cellular functions such as signal transduction and neuron differentiation. It exists as part of complexes that include cyclins which modulate its kinase activity. In neurons PCTAIRE1 contributes to processes like neurite outgrowth and synaptic function. Research indicates a role in the transport of synaptic vesicles hinting at its involvement in neurotransmitter release and communication between neurons. |
| **Pathways** | PCTAIRE1 serves as a component of pathways such as the Wnt signaling pathway and the cell cycle. Its function aligns with several other proteins including CDK16 in modulating processes like cell proliferation and neural development. PCTAIRE1 interacts closely with proteins like Cyclin Y which help guide its role in these pathways ensuring proper progression of related biological events. |
| **Associated diseases and disorders** | PCTAIRE1 has associations with neurological disorders and certain cancers. Abnormal expression or activity of PCTAIRE1 may relate to conditions like schizophrenia or glioblastoma. The protein's interaction with Cyclin Y is key in the context of cancer where dysregulation of these interactions can contribute to tumor progression. Alterations in PCTAIRE1 function and its pathways highlight its potential as a target for therapeutic strategies in these diseases. |

## 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**

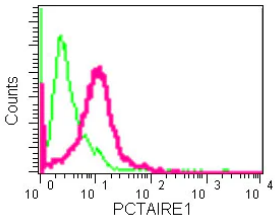
We do not recommend this combination. It is not covered by our product promise.

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.

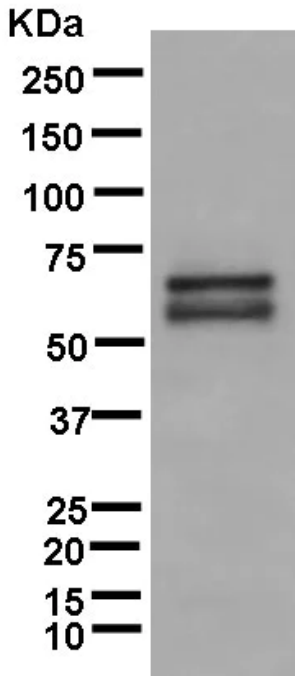
## 4 product images




## Flow Cytometry (Intracellular) - Anti-PCTAIRE1 antibody [EPR13210] (ab181208)

PCTAIRE1 Flow Cytometry (Intracellular) staining using rabbit Anti-PCTAIRE1 antibody

Intracellular flow cytometric analysis of BxPC-3cells (2% paraformaldehyde-fixed) labeling PCTAIRE1with ab181208 at 1/20 dilution (red) or a rabbit IgG isotype control (green). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as a secondary antibody.




## Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208)

PCTAIRE1 Western blot staining of BxPC-3 cell lysate using rabbit Anti-PCTAIRE1 antibody

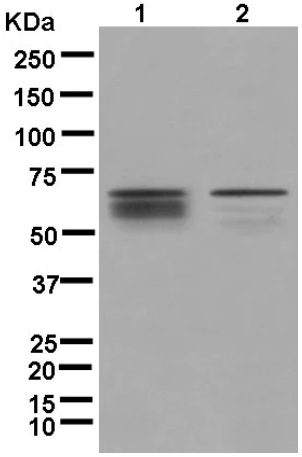
These two bands may be the longer form of PCTAIRE1 and the alternatively spliced form.
All lanes:
Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208) at 1/1000 dilution

All lanes:
BxPC-3 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab136636) at 1/500 dilution

Predicted band size: 56 kDa




## Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208)

PCTAIRE1 Western blot staining using rabbit Anti-PCTAIRE1 antibody

These two bands may be the longer form of PCTAIRE1 and the alternatively spliced form.
All lanes:
Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208) at 1/1000 dilution

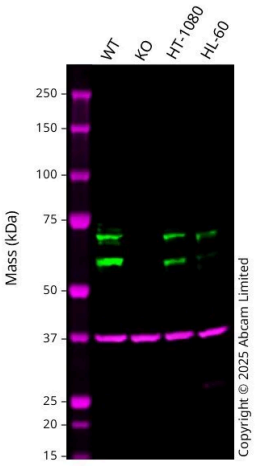
Lane 1:
Human testis cell lysate at 10 µg

Lane 2:
Human fetal heart cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab136636) at 1/500 dilution

Predicted band size: 56 kDa




# Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208)

PCTAIRE1 Western blot staining using rabbit Anti-PCTAIRE1 antibody

Western blot: Rabbit Monoclonal [EPR13210] to PCTAIRE1 ab181208 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH (ab8245) loading control staining at 1/20,000 dilution, shown in magenta.
A band was observed at 55 kDa in Wild-type A549 cell lysates with no signal observed at this size in CDK16 knockout A549 cell line.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.

Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.

All lanes:
Western blot - Anti-PCTAIRE1 antibody [EPR13210] (ab181208) at 1/1000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
CDK16 knockout A549 at 20 µg

Lane 3:
HT-1080 at 20 µg

Lane 4:
HL-60 at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 55 kDa

Observed band size: 55 kDa

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