

## Product datasheet

# Anti-PMCA1 antibody [EPR12029] ab190355

**KO VALIDATED** Recombinant RabMAB

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### Overview

<b>Product name</b>	Anti-PMCA1 antibody [EPR12029]
<b>Description</b>	Rabbit monoclonal [EPR12029] to PMCA1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: THP-1, HeLa, Neuro-2a, U87-MG, HepG2, C6 cell lysates. IHC-P: Human stomach and Human transitional cell carcinoma of bladder tissues, mouse lung, mouse stomach, rat stomach.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAB<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAB<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR12029
<b>Isotype</b>	IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab190355 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		1/1000 - 1/10000. Detects a band of approximately 130-250 kDa (predicted molecular weight: 139 kDa).
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## Target

### Function

This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the transport of calcium out of the cell.

### Tissue specificity

Isoform B is ubiquitously expressed. Isoform C is found in brain cortex, skeletal muscle and heart muscle. Isoform D has only been found in fetal skeletal muscle. Isoform K has been found in small intestine and liver.

### Sequence similarities

Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIb subfamily.

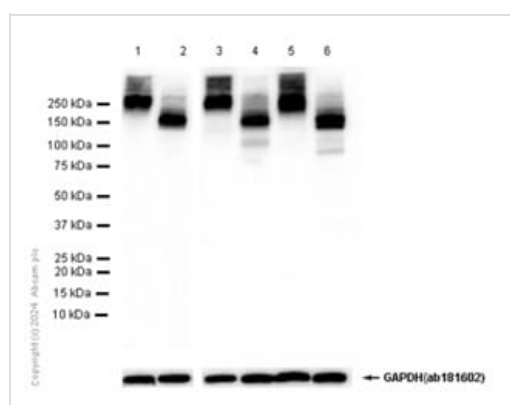
### Domain

The calmodulin-binding subdomain B is different in the different splice variants and shows pH dependent calmodulin binding properties in isoforms A, C, D and E.

### Cellular localization

Cell membrane.

## Images



Western blot - Anti-PMCA1 antibody [EPR12029] (ab190355)

**All lanes** : Anti-PMCA1 antibody [EPR12029] (ab190355) at 1/5000 dilution

**Lane 1** : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate, boiled

**Lane 2** : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate, unboiled

**Lane 3** : Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate, boiled

**Lane 4** : Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate, unboiled

**Lane 5** : C6 (Rat glial tumor glial cell) whole cell lysate, boiled

**Lane 6** : C6 (Rat glial tumor glial cell) whole cell lysate, unboiled

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:** 139 kDa

**Observed band size:** 130-250 kDa

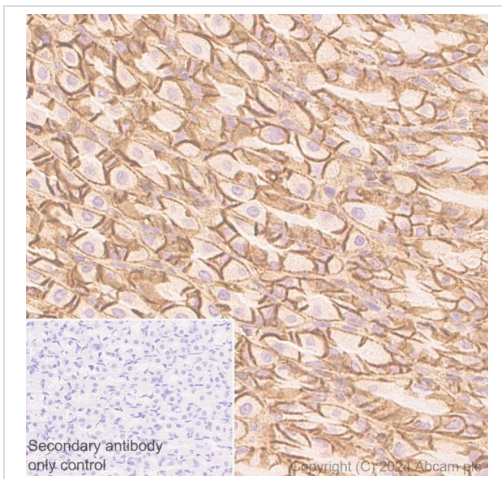
**Blocking/Diluting buffer and concentration:** 5% NFDm/TBST.

### Exposure time:

Lanes 1, 2: 7 seconds

Lanes 3, 4, 5, 6: 3 seconds

**ab181602** is used as a Loading Control at dilution 1/1000000.



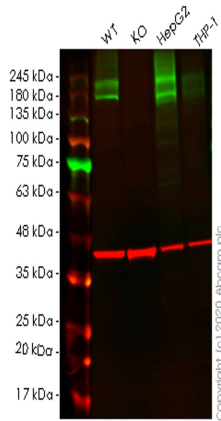
Immunohistochemical analysis of paraffin-embedded rat stomach tissue labelling PMCA1 with ab190355 at 1/2000 dilution, followed by ready-to-use secondary antibody Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) at dilution 1/1. Counterstained with Hematoxylin.

Performed heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

Positive staining mouse lung cancer.

The section was incubated with ab190355 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND<sup>®</sup> RX instrument.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMCA1 antibody [EPR12029] (ab190355)



Western blot - Anti-PMCA1 antibody [EPR12029] (ab190355)

**All lanes** : Anti-PMCA1 antibody [EPR12029] (ab190355) at 1/1000 dilution

**Lane 1** : Wild-type HeLa cell lysate

**Lane 2** : ATP2B1 knockout HeLa cell lysate

**Lane 3** : HepG2 cell lysate

**Lane 4** : THP-1 cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

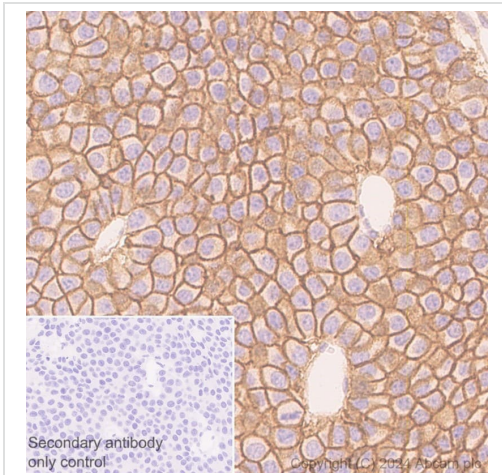
**All lanes** : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

**Predicted band size:** 139 kDa

**Observed band size:** 180-245 kDa

**Lanes 1-4:** Merged signal (red and green). Green - ab190355 observed at 180-245 kDa. Red - loading control **ab8245** observed at 36 kDa.

ab190355 Anti-PMCA1 antibody [EPR12029] was shown to specifically react with PMCA1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265561** (knockout cell lysate **ab257365**) was used. Wild-type and PMCA1 knockout samples were subjected to SDS-PAGE. ab190355 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated at room temperature for 2.5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



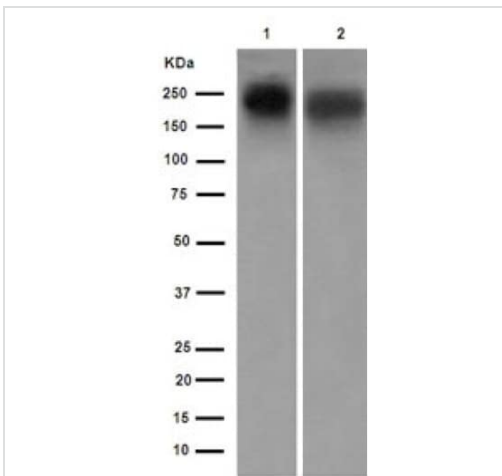
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMCA1 antibody [EPR12029] (ab190355)

Immunohistochemical analysis of paraffin-embedded mouse lung cancer tissue labelling PMCA1 with ab190355 at 1/2000 dilution, followed by ready-to-use secondary antibody Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) at dilution 1/1. Counterstained with Hematoxylin.

Performed heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

Positive staining mouse lung cancer.

The section was incubated with ab190355 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-PMCA1 antibody [EPR12029] (ab190355)

**All lanes :** Anti-PMCA1 antibody [EPR12029] (ab190355) at 1/2000 dilution

**Lane 1 :** U87-MG cell lysate

**Lane 2 :** HepG2 cell lysate

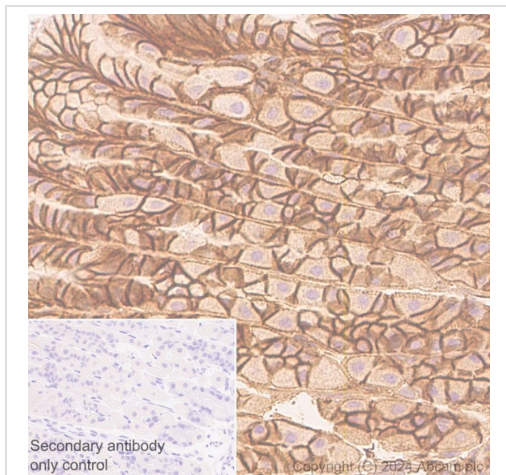
Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 139 kDa

**Observed band size:** 130-250 kDa



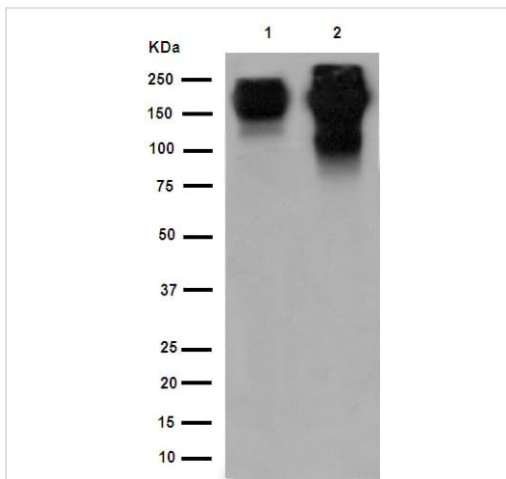
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMCA1 antibody [EPR12029] (ab190355)

Immunohistochemical analysis of paraffin-embedded mouse stomach tissue labelling PMCA1 with ab190355 at 1/2000 dilution, followed by ready-to-use secondary antibody Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) at dilution 1/1. Counterstained with Hematoxylin.

Performed heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

Positive staining mouse stomach.

The section was incubated with ab190355 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND<sup>®</sup> RX instrument.



Western blot - Anti-PMCA1 antibody [EPR12029] (ab190355)

**All lanes** : Anti-PMCA1 antibody [EPR12029] (ab190355) at 1/2000 dilution

**Lane 1** : HepG2 cell lysate

**Lane 2** : Neuro-2a cell lysate

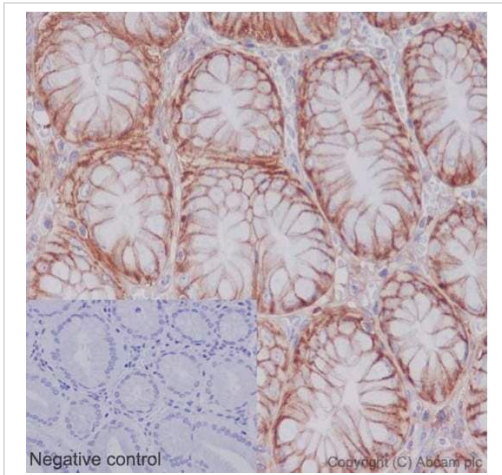
Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes** : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 139 kDa

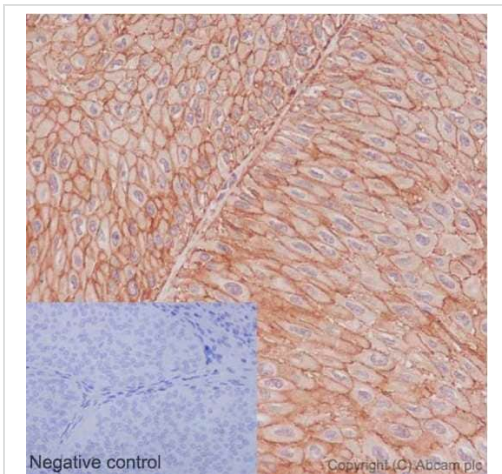
**Observed band size:** 130-250 kDa



Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling PMCA1 with ab190355 at 1/500 dilution. A prediluted HRP Polymer for Rabbit IgG as secondary antibody. Counterstained with Hematoxylin. Negative control also shown.

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-PMCA1 antibody [EPR12029] (ab190355)



Immunohistochemical analysis of paraffin-embedded Human transitional cell carcinoma of bladder tissue labeling PMCA1 with ab190355 at 1/500 dilution. A prediluted HRP Polymer for Rabbit IgG as secondary antibody. Counterstained with Hematoxylin. Negative control also shown.

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-PMCA1 antibody [EPR12029] (ab190355)

### 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-PMCA1 antibody [EPR12029] (ab190355)

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

### Our Abpromise to you: Quality guaranteed and expert technical support

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