

## Product datasheet

# Anti-Acid phosphatase antibody [EPR21791] $\alpha$ b235449

**KO VALIDATED** Recombinant RabMAB

8 Images

### Overview

<b>Product name</b>	Anti-Acid phosphatase antibody [EPR21791]
<b>Description</b>	Rabbit monoclonal [EPR21791] to Acid phosphatase
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF, IHC-P, Flow Cyt (Intra)
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HEK-293, K562, HeLa, HCT 116, Jurkat and HepG2 whole cell lysate; Human placenta tissue lysate. IHC-P: Human colon cancer and prostatic hyperplasia tissue. ICC/IF: HeLa and HepG2 cells. Flow Cyt (intra): HeLa cells.
<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: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21791

Isotype

IgG

## Applications

### The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab235449 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.
ICC/IF		1/100.
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/600.

## Target

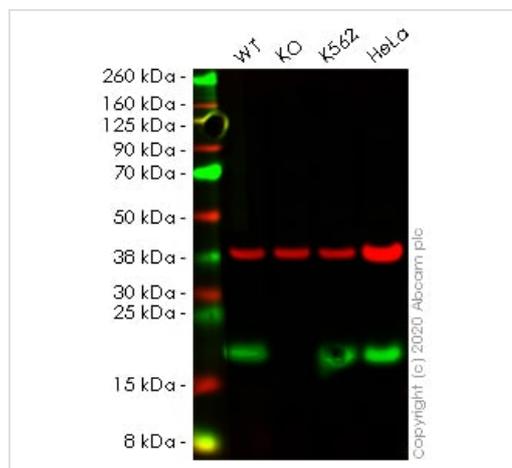
### Relevance

Acid phosphatases (AP) dephosphorylate phosphate groups from phosphate esters under acid conditions. Different acid phosphatase isozymes are found in different organs, and their serum levels are used as a diagnostic for disease in the corresponding organs. Elevated prostatic acid phosphatase levels may indicate the presence of prostate cancer and elevated tartrate-resistant acid phosphatase levels may indicate bone disease.

### Cellular localization

ACP1: Cytoplasm. ACP2: Lysosome membrane; Single-pass membrane protein. ACP5: Lysosome. ACP6: Isoform 1: Secreted. Isoform 2: Lysosome membrane; Single-pass type I membrane protein.

## Images



Western blot - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

**All lanes :** Anti-Acid phosphatase antibody [EPR21791] (ab235449) at 1/1000 dilution

**Lane 1 :** Wild-type HEK-293 cell lysate

**Lane 2 :** ACP1 knockout HEK-293 cell lysate

**Lane 3 :** K562 cell lysate

**Lane 4 :** HeLa cell lysate

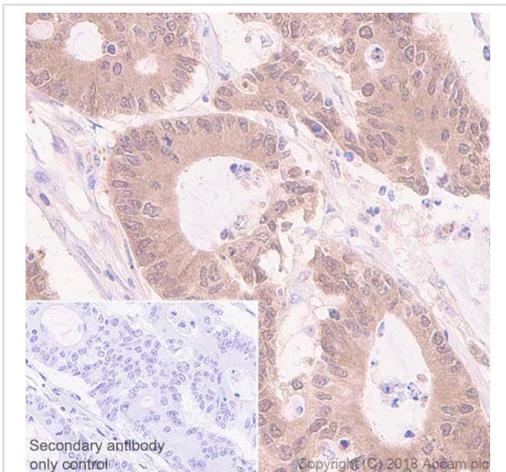
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Observed band size:** 18 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab235449 observed at 18 kDa. Red - loading control [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab235449 was shown to react with Acid phosphatase in wild-type HEK-293 cells in western blot with loss of signal observed in ACP1 knockout sample. Wild-type and ACP1 knockout HEK-293 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween<sup>®</sup>) before incubation with ab235449 and [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye<sup>®</sup> 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye<sup>®</sup> 680RD) preabsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

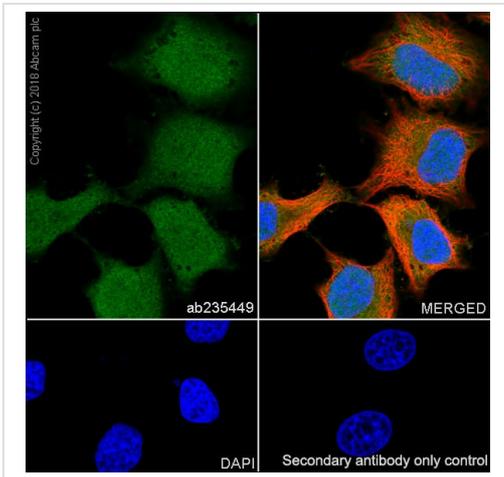


Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Acid Phosphatase with ab235449 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining in human colon cancer (PMID: 25811796) is observed. Counterstained with hematoxylin.

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

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

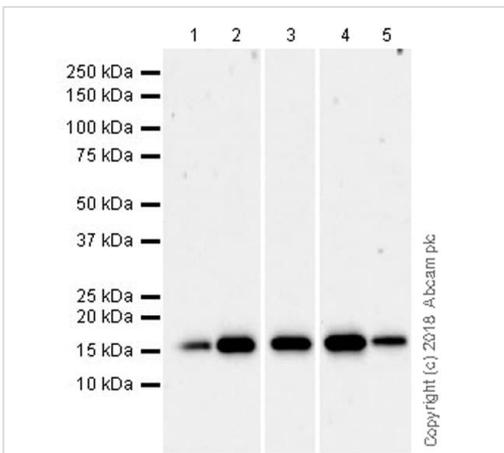
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acid phosphatase antibody [EPR21791] (ab235449)



Immunocytochemistry/ Immunofluorescence - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Acid Phosphatase with ab235449 at 1/100 dilution, followed by ab150077 Alexa-Fluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). Confocal image showing cytoplasmic and nuclear staining in HeLa cell line (PMID 26159288) is observed. Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used as the counterstain (Red). The nuclear counterstain is DAPI (Blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Alexa-Fluor®488 Goat anti-Rabbit secondary (ab150077) at 1/1000 dilution.



Western blot - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

**All lanes** : Anti-Acid phosphatase antibody [EPR21791] (ab235449) at 1/1000 dilution

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

**Lane 2** : HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate

**Lane 3** : HCT116 (human colorectal carcinoma epithelial cell), whole cell lysate

**Lane 4** : Jurkat (human T cell leukemia T lymphocyte), whole cell lysate

**Lane 5** : Human placenta tissue lysate

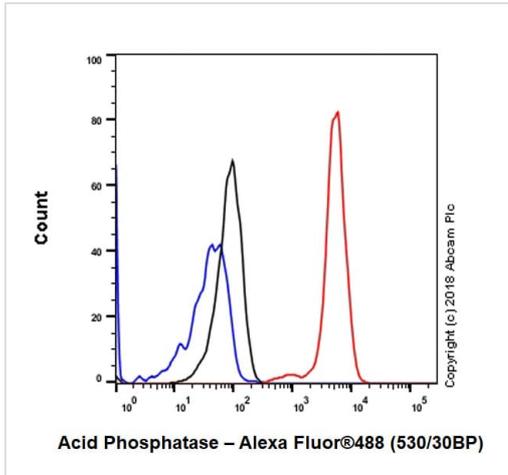
Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

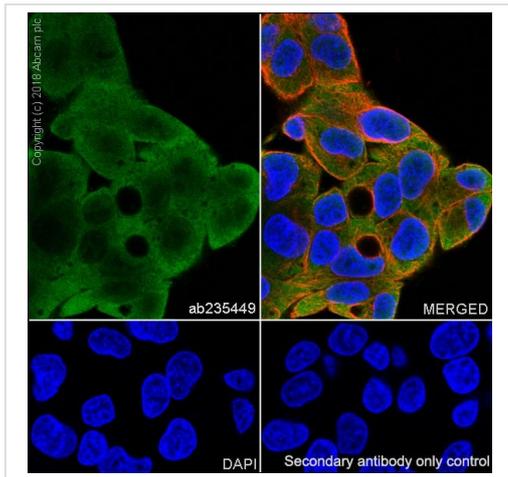
Blocking/Diluting buffer and concentration: 5% NFDM/TBST  
Exposure time: 3 minutes.

The molecular mass observed is consistent with what has been described in the literature (PMID: 25811796).



Flow Cytometry (Intracellular) - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

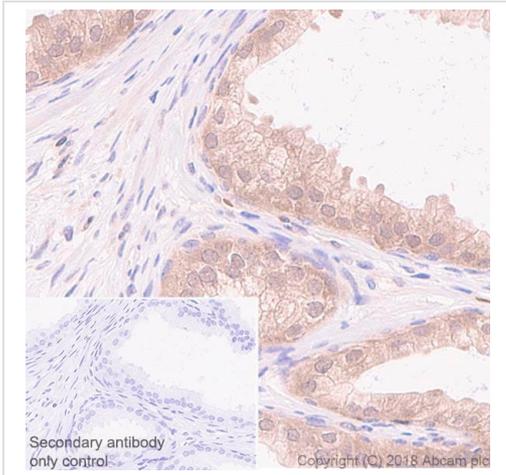
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cell line labeling Acid Phosphatase with ab235449 at 1/600 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control, and an 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.



Immunocytochemistry/ Immunofluorescence - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Acid Phosphatase with ab235449 at 1/100 dilution, followed by ab150077 Alexa-Fluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). Confocal image showing cytoplasmic and nuclear staining in HepG2 cell line (PMID 26159288) is observed. Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used as the counterstain (Red). The nuclear counterstain is DAPI (Blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Alexa-Fluor®488 Goat anti-Rabbit secondary (ab150077) at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acid phosphatase antibody [EPR21791] (ab235449)

Immunohistochemical analysis of paraffin-embedded human prostatic hyperplasia tissue labeling Acid Phosphatase with ab235449 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining in human prostatic hyperplasia (PMID: 26159288) is observed. Counterstained with hematoxylin.

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

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-Acid phosphatase antibody [EPR21791] (ab235449)

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

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- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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