abcam

Product datasheet

Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free ab238913

KO VALIDATED Recombinant RabMAb

7 Images

Overview

Product name	Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free
Description	Rabbit monoclonal [EPR21791] to Acid phosphatase - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	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.
General notes	ab238913 is the carrier-free version of **ab235449**. 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. 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. 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. 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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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	EPR21791
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab238913 in the following tested applications.

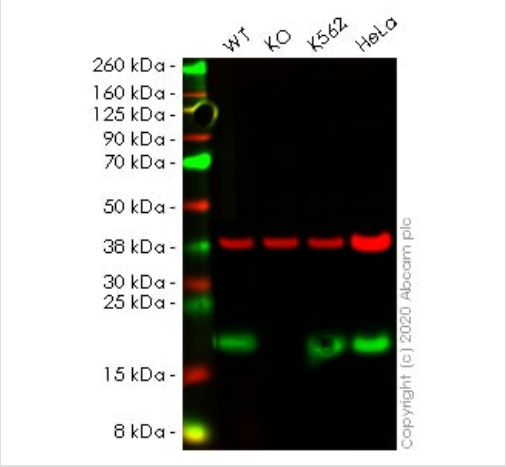
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

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. ACPP: Isoform 1: Secreted. Isoform 2: Lysosome membrane; Single-pass type I membrane protein.

Images



Western blot - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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

Lane 1 : Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 2 : ACP1 knockout HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 3 : K562 (Human chronic myelogenous leukemia lymphoblast cell line) whole cell lysate
Lane 4 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

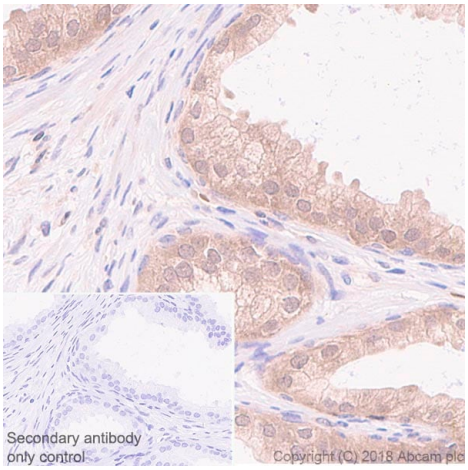
Performed under reducing conditions.

Observed band size: 18 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab235449**).

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®) 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® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



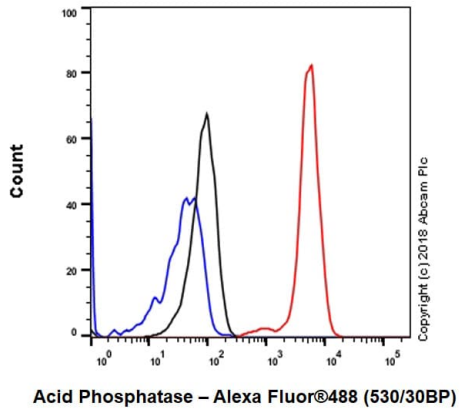
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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).

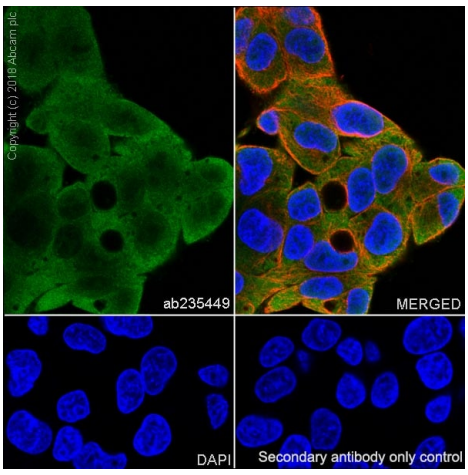
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab235449**).



Flow Cytometry (Intracellular) - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab235449**).

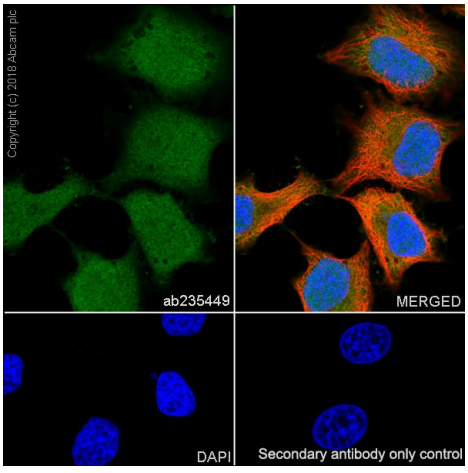


Immunocytochemistry/ Immunofluorescence - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab235449**).



Immunocytochemistry/ Immunofluorescence - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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).

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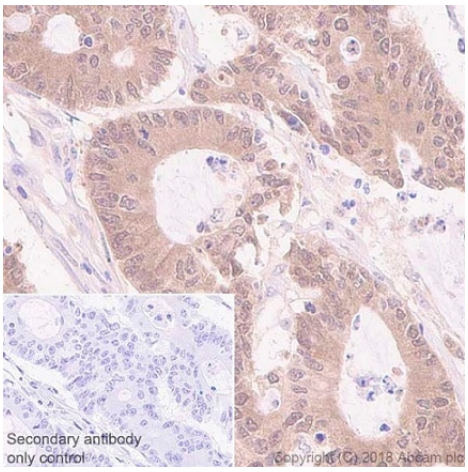


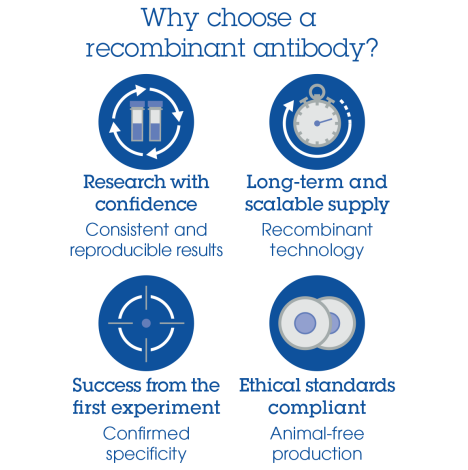
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (**ab235449**).



Anti-Acid phosphatase antibody [EPR21791] - BSA and Azide free (ab238913)

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