abcam

ab76582

Anti-RKIP antibody [EPR2875Y]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR2875Y
Purification technique	Affinity purification Protein A
Concentration	0.128 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Human
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Species	Mouse
Dilution info	1/1000 - 1/5000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/5000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information PEBP1

Function Binds ATP, opioids and phosphatidylethanolamine. Has lower affinity for phosphatidylinositol and phosphatidylcholine. Serine protease inhibitor which inhibits thrombin, neuropsin and chymotrypsin but not trypsin, tissue type plasminogen activator and elastase (By similarity). Inhibits the kinase activity of RAF1 by inhibiting its activation and by dissociating the RAF1/MEK complex and acting as a competitive inhibitor of MEK phosphorylation. HCNP may be involved in the function of the presynaptic cholinergic neurons of the central nervous system. HCNP increases the production of choline acetyltransferase but not acetylcholinesterase. Seems to be mediated by a specific receptor (By similarity).

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	Raf kinase inhibitory protein (RKIP) also known as phosphatidylethanolamine-binding protein 1 (PEBP1) is a significant regulatory protein weighing around 21 kDa. It inhibits the RAF/MEK/ERK signaling cascade by binding to Raf-1 kinase. RKIP shows expression in diverse tissues including the brain heart and liver reflecting its widespread influence across various physiological systems.
Biological function summary	RKIP interacts with multiple signaling pathways by acting as a suppressor of the mitogen-activated protein kinase (MAPK) pathway. It also plays roles in modulating the signaling of nuclear factor kappa B (NF-κB) and G-protein coupled receptor kinase (GRK) pathways. As part of these pathways RKIP contributes to the regulation of cell proliferation differentiation and apoptosis making it an important player in maintaining cellular homeostasis.

Pathways	RKIP's role centers on the RAF/MEK/ERK and NF-κB signaling pathways. Within the RAF/MEK/ERK pathway RKIP modulates cellular responses by controlling the activation of Raf-1 influencing cell growth and division. In the NF-κB pathway RKIP inhibits phosphorylation of IKK thereby impacting inflammatory responses which links RKIP to proteins like MEK and ERK as well as IKK.
Associated diseases and disorders	RKIP has involvement in cancer and cardiovascular diseases. Reduced RKIP expression associates with increased metastasis in cancers such as prostate and breast cancer indicating its role as a metastasis suppressor. In cardiovascular contexts RKIP affects hypertension pathogenesis through the modulation of GRK pathway involving connections to proteins such as Raf-1 and IKK.

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

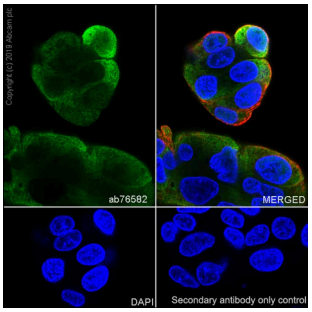
We do not recommend this combination. It is not covered by our product promise.

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.

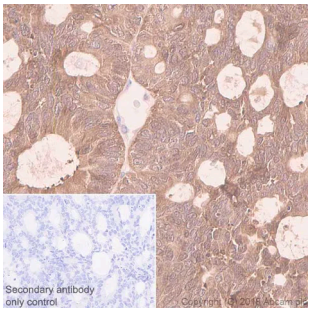
10 product images



Immunocytochemistry/ Immunofluorescence - Anti-RKIP antibody [EPR2875Y] (ab76582)

RKIP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RKIP antibody

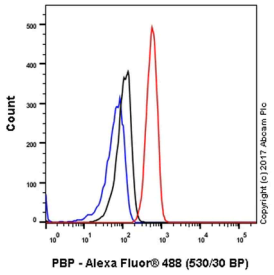
Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling RKIP with purified ab76582 at 1:50 dilution (2.6 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RKIP antibody [EPR2875Y] (ab76582)

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

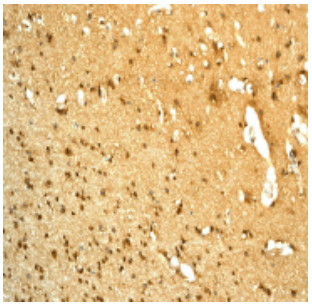
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma tissue sections labeling RKIP with purified ab76582 at 1/500 dilution (0.26 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Flow Cytometry (Intracellular) - Anti-RKIP antibody [EPR2875Y] (ab76582)

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

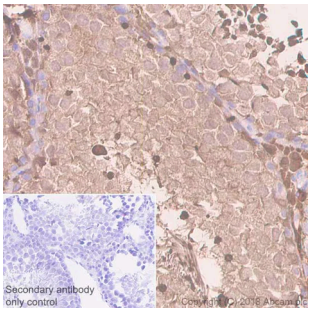
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling RKIP (red) with purified ab76582 at a 1/20 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluorr® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RKIP antibody [EPR2875Y] (ab76582)

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

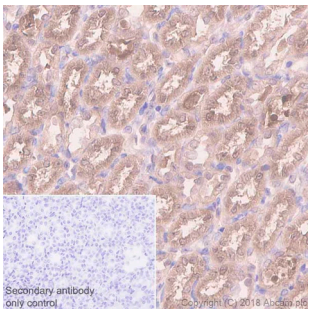
Staining of formalin-fixed, paraffin-embedded human brain tissue using 1/250 ab76582 (unpurified).
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RKIP antibody [EPR2875Y] (ab76582)

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

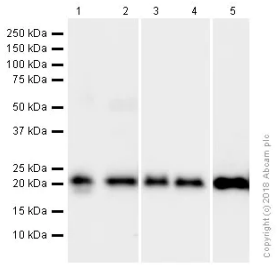
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat testis tissue sections labeling RKIP with purified ab76582 at 1/500 dilution (0.26 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RKIP antibody [EPR2875Y] (ab76582)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling RKIP with purified ab76582 at 1/500 dilution (0.26 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582)

All lanes:
Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
A549 (Human lung carcinoma epithelial cell) whole cell lysates at 20 µg

Lane 3:
Mouse brain lysates at 20 µg

Lane 4:
Mouse testis lysates at 20 µg

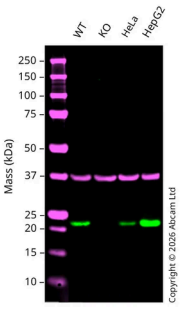
Lane 5:
Rat brain lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa



Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582)

RKIP Western blot staining using rabbit Anti-RKIP antibody

Western blot: Anti-RKIP antibody [EPR2875Y] ab76582 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 21 kDa in Wild-type A549 cell lysates with no signal observed at this size in PEBP1 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 3% 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 and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582) at 1/1000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
Western blot - Human PEBP1 knockout A549 cell line (ab288933) at 20 µg

Lane 3:
HeLa at 20 µg

Lane 4:
HepG2 at 20 µg

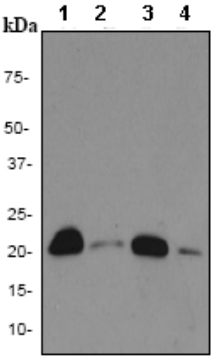
Secondary

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

Performed under reducing conditions.

Predicted band size: 21 kDa

Observed band size: 21 kDa



Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582)

All lanes:
Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582) at 1/5000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
A549 cell lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

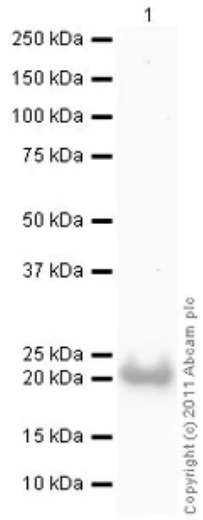
Lane 4:
A431 cell lysate at 10 µg

Secondary

All lanes:
goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa



Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582)

RKIP Western blot staining using rabbit Anti-RKIP antibody

All lanes:
Western blot - Anti-RKIP antibody [EPR2875Y] (ab76582) at 1/5000 dilution

All lanes:
Western blot - Recombinant Human RKIP protein (Tag Free) (ab87892) at 0.1 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 21 kDa

Exposure time: 30s

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