abcam

ab154815

Anti-PPP2R1B antibody [EPR10158]

Recombinant | RabMAb | KO Validated

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	EPR10158
Purification technique	Affinity purification Protein A
Concentration	0.721 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
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	-
Notes	-

Expected

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

Target data

See full target information Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A beta isoform

Function	The PR65 subunit of protein phosphatase 2A serves as a scaffolding molecule to coordinate the assembly of the catalytic subunit and a variable regulatory B subunit.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

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	The protein PPP2R1B also known as Protein Phosphatase 2 Scaffold Subunit A beta isoform acts as a scaffold for the assembly of PP2A complexes. PPP2R1B has a molecular mass of approximately 66 kDa. The protein expresses widely across various tissues with notable presence in the brain heart and skeletal muscle. As a scaffold subunit PPP2R1B coordinates the structural integrity necessary for phosphatase activity by recruiting regulatory and catalytic subunits important to its function.
Biological function summary	PPP2R1B integrates into the PP2A holoenzyme complex a major serine/threonine phosphatase. This complex regulates numerous cellular processes including cell growth division and signal transduction. PPP2R1B plays a role in maintaining cellular homeostasis through its regulatory activities. By doing so it links to various signaling events some of which control oncogenes and tumor suppressors demonstrating the protein's influence over cell cycle regulation and apoptosis.
Pathways	PPP2R1B plays a significant role in the Raf/MEK/ERK signaling pathway and the PI3K/AKT pathway. Through these pathways PPP2R1B interacts with PDPK1 and AKT1 modulating their phosphorylation status and thereby affecting cell proliferation and survival. By influencing such pathways PPP2R1B helps determine cellular responses to external stimuli impacting processes like differentiation and metabolism that are vital for organismal function.
Associated diseases and disorders	PPP2R1B links to cancer and Alzheimer's disease. Mutations or downregulation in PPP2R1B have been implicated in colorectal cancer where it alters the PP2A activity and allows unregulated cellular proliferation. In Alzheimer's disease PPP2R1B's interaction with tau protein goes awry contributing to neurofibrillary tangle formation. These connections highlight the importance of PPP2R1B in understanding the molecular basis of these diseases and potential therapeutic targets.

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.

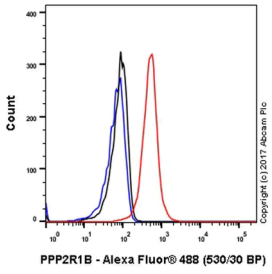
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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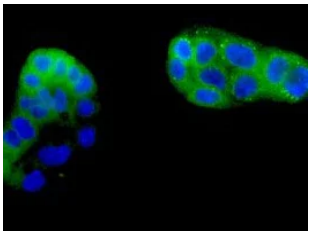
6 product images



Flow Cytometry (Intracellular) - Anti-PPP2R1B antibody [EPR10158] (ab154815)

PPP2R1B Flow Cytometry (Intracellular) staining using rabbit Anti-PPP2R1B antibody

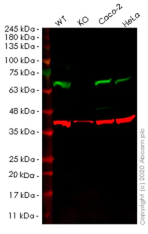
Intracellular Flow Cytometry analysis of Caco-2 (human colorectal adenocarcinoma) cells labeling PPP2R1B with unpurified ab154815 at 1/40 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as the isotype control, Cell without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-PPP2R1B antibody [EPR10158] (ab154815)

PPP2R1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPP2R1B antibody

Immunofluorescence analysis of Caco 2 cells, labeling PPP2R1B using ab154815 at 1/50 dilution.



Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815)

PPP2R1B Western blot staining using rabbit Anti-PPP2R1B antibody

Lanes 1-4: Merged signal (red and green). Green - ab154815 observed at 66 kDa. Red - loading control ab8245 observed at 36 kDa.
ab154815 Anti-PPP2R1B antibody [EPR10158] was shown to specifically react with PPP2R1B in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266729 (knockout cell lysate ab258133) was used. Wild-type and PPP2R1B knockout samples were subjected to SDS-PAGE. ab154815 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.
All lanes:
Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815) at 1/1000 dilution

Lane 1:
Wild-type HEK293T cell lysate at 20 µg

Lane 2:
Western blot - Human PPP2R1B knockout HEK-293T cell lysate (ab258133) at 20 µg

Lane 3:
Caco-2 cell lysate at 20 µg

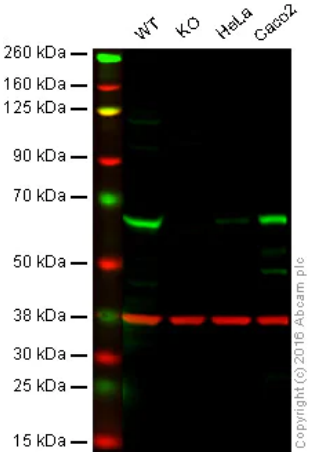
Lane 4:
HeLa cell lysate at 20 µg

Secondary

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

Predicted band size: 66 kDa

Observed band size: 66 kDa



Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815)

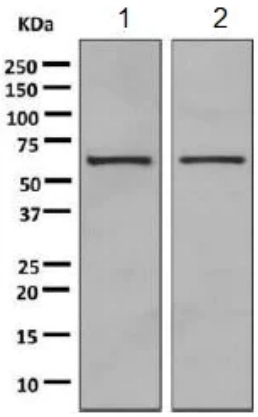
PPP2R1B Western blot staining using rabbit Anti-PPP2R1B antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: PPP2R1B knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: Caco2 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab154815 observed at 67 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab154815 was shown to specifically react with PPP2R1B when PPP2R1B knockout samples were used. Wild-type and PPP2R1B knockout samples were subjected to SDS-PAGE. ab154815 and ab8245 (loading control to GAPDH) were diluted at 1/1000 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with goat anti-rabbit IgG (H + L) and goat anti-mouse IgG (H + L) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815)

Predicted band size: 66 kDa



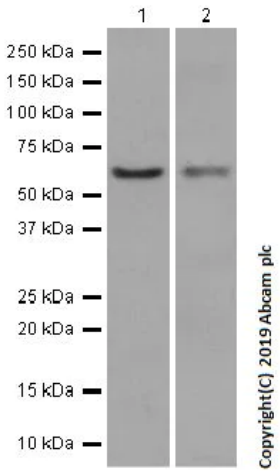
Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815)

All lanes:
Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
Caco 2 cell lysate at 10 µg

Predicted band size: 66 kDa



Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815)

All lanes:
Western blot - Anti-PPP2R1B antibody [EPR10158] (ab154815) at 1/1000 dilution

Lane 1:
Mouse spleen tissue lysate at 20 µg

Lane 2:
Rat spleen tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG) at 1/2000 dilution

Predicted band size: 66 kDa

Observed band size: 66 kDa

Exposure time: 3min

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