abcam

ab188323

Anti-PPP2R5D antibody [EPR15617]

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	EPR15617
Purification technique	Affinity purification Protein A
Concentration	0.233 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40 - 1/60
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/40
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit delta isoform

Function	The B regulatory subunit might modulate substrate selectivity and catalytic activity, and might also direct the localization of the catalytic enzyme to a particular subcellular compartment.

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	PPP2R5D also known as B56δ forms part of the regulatory subunit of protein phosphatase 2A (PP2A). Protein phosphatase 2A is an important enzyme in cellular signaling that dephosphorylates target proteins. The approximate molecular mass of PPP2R5D is 72 kDa. It is found expressed in various tissues throughout the human body but its levels can vary between different cell types.
Biological function summary	PPP2R5D plays an essential role in the regulation of cell growth and division. This protein is part of the PP2A holoenzyme complex which assembles with catalytic and scaffolding subunits. Through its regulatory influence PPP2R5D affects the phosphorylation state of several substrates thereby impacting cellular processes like cell cycle progression and apoptosis.
Pathways	PPP2R5D significantly contributes to the MAPK signaling pathway and the Wnt pathway. It modulates phosphorylation states affecting signal transduction mechanisms. In the MAPK pathway PPP2R5D interacts with proteins like ERK1/2 by influencing their activity. Similarly in the Wnt pathway it acts on components important for maintaining cellular balance and signaling fidelity.
Associated diseases and disorders	PPP2R5D mutations and dysregulation have been linked to intellectual disabilities and cancer. Changes in its function are associated with Autism Spectrum Disorder where it potentially interacts with other proteins involved in neuronal development. In cancer altered PPP2R5D activity may disrupt normal cellular growth control often involving proteins like c-Myc that are critical for proliferation and survival.

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

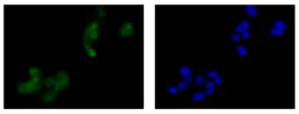
We do not recommend this combination. It is not covered by our product promise.

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.

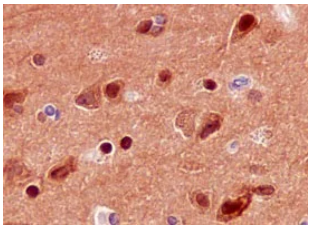
9 product images



Immunocytochemistry/ Immunofluorescence - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPP2R5D antibody

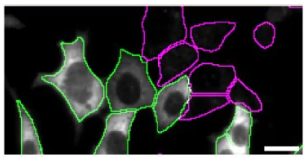
Immunofluorescence analysis of HepG2 cells labeling PPP2R5D using ab188323 at 1/250 dilution. A Goat anti rabbit IgG (Alexa Fluor488) at 1/200 dilution was used as secondary antibody. Cells were fixed with 4% Paraformaldehyde. Counterstain: DAPI.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PPP2R5D antibody

Immunohistochemical analysis of paraffin-embedded Human brain tissue labeling PPP2R5D using ab188323 at 1/100 dilution. A Ready to use HRP Polymer for Rabbit IgG (prediluted) was used as secondary. Counterstain: Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

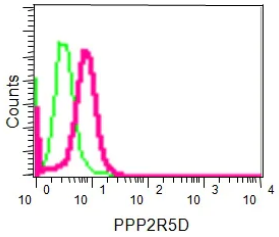


Immunocytochemistry/ Immunofluorescence - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPP2R5D antibody

ab188323 was shown to react with PPP2R5D in wild-type HAP1 cells in immunocytochemistry with loss of signal observed in a PPP2R5D knockout cell line. Wild-type and knockout cells were mixed and pelleted at a 1:1 ratio on coverslips. The cells were fixed with 4% paraformaldehyde (15 min) then permeabilized with 0.1% Triton X-100 (10min) and then blocked with 1x PBS, 0.01% Triton X-100, 5% BSA, 5% NGS. The cells were then incubated with ab188323 at dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat anti-rabbit secondary antibody to (Alexa Fluor® 555) at 0.5 µg/ml. Acquisition of the green (wild-type), red (antibody staining) and far-red (knockout) channels was performed. Representative grayscale images of the red channel are shown. Wild-type and knockout cells are outlined with yellow and magenta dashed line, respectively. Schematic representation of the mosaic strategy used is shown on the bottom-right panel. Image was acquired with a Zeiss(LSM-880).

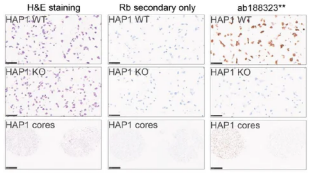
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Flow Cytometry (Intracellular) - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Flow Cytometry (Intracellular) staining using rabbit Anti-PPP2R5D antibody

Intracellular Flow Cytometry analysis of HeLa cells labeling PPP2R5D using ab188323 at 1/40 dilution (pink). A Goat anti rabbit IgG (FITC) at 1/150 dilution was used as secondary antibody. Cells were fixed with 2% paraformaldehyde. Isotype control: Rabbit monoclonal IgG (green).

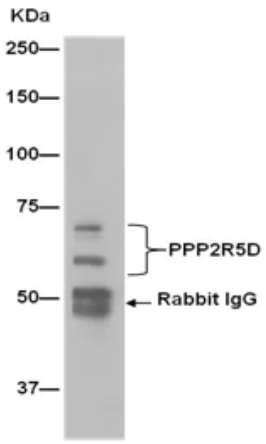


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of wild-type HAP1 cells using rabbit Anti-PPP2R5D antibody

ab188323 was shown to react with PPP2R5D in wild-type HAP1 cells in immunohistochemistry with loss of signal observed in a PPP2R5D knockout cell line. HAP1 WT and PPP2R5D KO cell pellets were fixed and paraffin embedded. TMA sections of WT and KO cells were mounted onto slides and stained with ab188323 antibodies followed by the corresponding multimer HRP secondary. Chromogen image acquisition was performed, and representative images of each core are shown. Core images of WT and KO cells captured in the same field of view are shown. Scale bar = 50 µm.

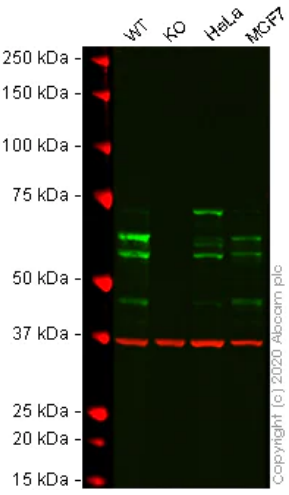
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Immunoprecipitation - Anti-PPP2R5D antibody [EPR15617] (ab188323)

Immunoprecipitation analysis of 293T cell lysate labeling PPP2R5D using ab188323 at 1/50 dilution. A Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1500 was used as secondary antibody.
All lanes:
Immunoprecipitation - Anti-PPP2R5D antibody [EPR15617] (ab188323)

Predicted band size: 70 kDa



Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Western blot staining using rabbit Anti-PPP2R5D antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab188323 observed at 60-65 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.
ab188323 was shown to react with PPP2R5D in wild-type A431 cells in western blot with loss of signal observed in PPP2R5D knockout sample. Wild-type and PPP2R5D knockout A431 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab188323 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 10000 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.

All lanes:
Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323) at 1/10000 dilution

Lane 1:
Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate at 20 µg

Lane 2:
PPP2R5D knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate at 20 µg

Lane 2:
Western blot - Human PPP2R5D knockout A-431 cell line (ab270476)

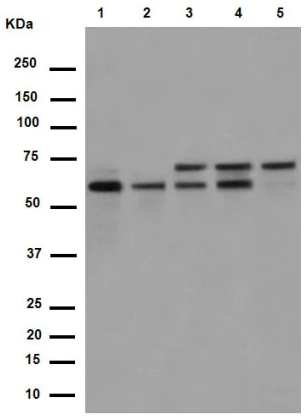
Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 4:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 70 kDa

Observed band size: 60-65 kDa



Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323)

PPP2R5D Western blot staining using rabbit Anti-PPP2R5D antibody

Based on the sequence analysis, ab188323 recognizes 3 isoforms with the predicted MWs of 58KDa, 66KDa and 70KDa, respectively.
All lanes:
Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323) at 1/100000 dilution

Lane 1:
C6 cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

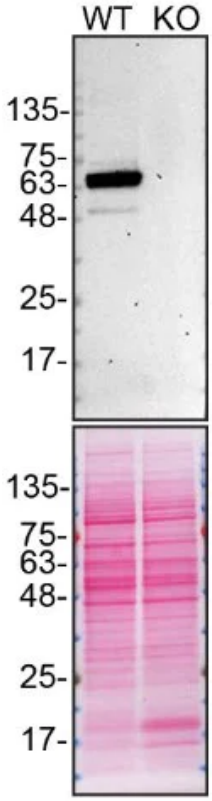
Lane 5:
Jurkat cell lysate at 10 µg

Secondary

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

Predicted band size: 70 kDa

Observed band size: 70 kDa



Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323)

ab188323 was shown to react with PPP2R5D in wild-type HAP1 cells in Western blot with loss of signal observed in a PPP2R5D knockout cell line. Wild-type HAP1 and PPP2R5D knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab188323 overnight at 4 °C at a 1/10000 dilution. Blots were incubated with secondary antibodies at 0.2ug/mL before imaging.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Western blot - Anti-PPP2R5D antibody [EPR15617] (ab188323) at 1/10000 dilution

Lane 1:
Wild-type HAP1 lysate at 20 µg

Lane 2:
PPP2R5D knock-out HAP1 lysate at 20 µg

Observed band size: 70 kDa

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