abcam

ab131335

Anti-PPP6C/Ppv antibody [EPR8764]

Recombinant | RabMAb

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	EPR8764
Purification technique	Affinity purification Protein A
Dissociation constant	5×10^{-11} M
Concentration	0.116 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Expected

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

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/280
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PPP6C

Function	Catalytic subunit of protein phosphatase 6 (PP6) (PubMed:17079228, PubMed:29053956, PubMed:32474700). PP6 is a component of a signaling pathway regulating cell cycle progression in response to IL2 receptor stimulation (PubMed:10227379). N-terminal domain restricts G1 to S phase progression in cancer cells, in part through control of cyclin D1 (PubMed:17568194). During mitosis, regulates spindle positioning (PubMed:27335426). Down-regulates MAP3K7 kinase activation of the IL1 signaling pathway by dephosphorylation of MAP3K7 (PubMed:17079228). Also participates in the innate immune defense against viruses by desphosphorylating RIGI, an essential step that triggers RIGI-mediated signaling activation (PubMed:29053956). Also regulates innate immunity by acting as a negative regulator of the cGAS-STING pathway: mediates dephosphorylation and inactivation of CGAS and STING1 (PubMed:32474700, PubMed:32753499). CGAS dephosphorylation at 'Ser-435' impairs its ability to bind GTP, thereby inactivating it (PubMed:32474700).

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	Stable for 12 months at -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	PPP6C also known as Protein Phosphatase 6 Catalytic Subunit is a protein phosphatase which participates in dephosphorylation processes. It has a molecular mass of approximately 35 kDa. PPP6C locates mainly in the cytoplasm but has also been found in the nucleus. Its expression is widespread across various tissues including the brain heart and skeletal muscle. PPP6C is important in controlling cellular functions by removing phosphate groups from target molecules influencing their activity state.
Biological function summary	The protein influences cell cycle regulation cell proliferation and apoptosis. This protein typically functions as part of a larger enzymatic complex that includes regulatory and scaffold subunits. By associating with these proteins PPP6C gains specificity towards its substrates and ensures precise cellular responses. Its activity helps maintain cellular homeostasis and proper cell growth and it also modulates immune response pathways by controlling phosphatase activity which is especially critical for immune system functioning.
Pathways	PPP6C interacts with key cellular signaling pathways such as the NF-kB and AKT pathways. During the regulation of these pathways PPP6C associates with proteins like IKK and PDK1 respectively which are important in mediating responses to external stimuli and regulating cell survival. Inhibition or dysregulation of PPP6C can impact these pathways leading to aberrant signaling and altered cellular outcomes. PPP6C's influence on these pathways highlights its role in fine-tuning cellular responses to diverse signals.
Associated diseases and disorders	PPP6C has connections to melanoma and multiple myeloma. Mutations affecting PPP6C may lead to abnormal protein function contributing to the development of these cancers. For example in melanoma alterations in PPP6C can disrupt cellular signaling pathways often in coordination with related proteins like BRAF and NRAS. Understanding these interactions and their effects on disease progression can provide insights into cancer therapeutics and the development of targeted treatments.

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

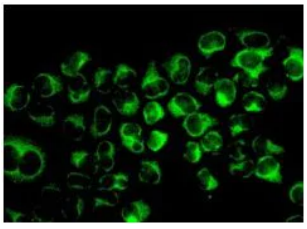
We do not recommend this combination. It is not covered by our product promise.

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.

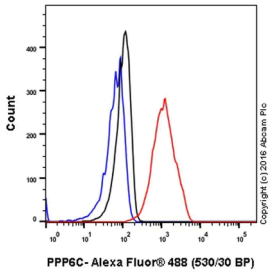
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335)

PPP6C/Ppv Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PPP6C/Ppv antibody

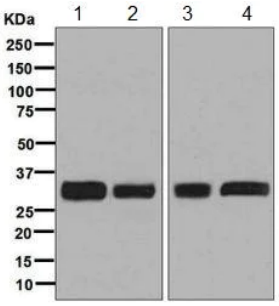
Immunofluorescent analysis of HeLa cells labelling PPP6C/Ppv with ab131335 at 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335)

PPP6C/Ppv Flow Cytometry (Intracellular) staining using rabbit Anti-PPP6C/Ppv antibody

Intracellular Flow Cytometry analysis ofHeLa cells labelling PPP6C/Ppv with purified ab131335 at a dilution of 1/280 (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. An Alexa Flour® 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Western blot - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335)

All lanes:
Western blot - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
Fetal thymus tissue lysate at 10 µg

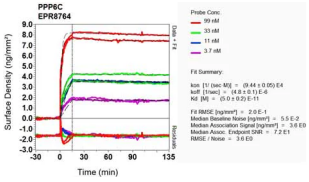
Lane 3:
293T cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

Secondary

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

Predicted band size: 35 kDa



OI-RD Scanning - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

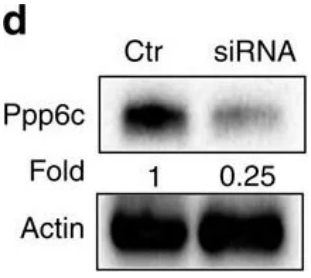


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Western blot - Anti-PPP6C/Ppv antibody [EPR8764] (ab131335)

PPP6C/Ppv Western blot staining using rabbit Anti-PPP6C/Ppv antibody

Western Blotting using Anti-PPP6C/Ppv antibody [EPR8764], ab131335. Publication image from Bai, J. et al., 2015, Nat Commun, 26138368. Legend direct from paper.

Inhibition of ppp6c is functionally important for the biological effects of miR-31 in epidermal hyperplasia.(a,b) Western blotting of ppp6c expression in the epidermis of normal skin derived from four healthy individuals (Ctr-1 to 4) or in psoriatic lesions derived from four patients with psoriasis (Pso-1 to 4). (c) Immunohistochemical staining of ppp6c in skin sections derived from healthy or psoriatic skin. Scale bar, 100 µm. (d) Primary mouse keratinocytes were transfected with scramble siRNA (Ctr) or with ppp6c siRNA (siRNA). Cell lysates were immunoblotted with anti-ppp6c or anti-actin. (e) Cell cycle analysis of mouse primary keratinocytes transfected with scrambled siRNA or ppp6c siRNA. (f) Western blotting of ppp6c expression in epidermis derived from lentiviral shRNA-control (LV-Ctr) or lentiviral shRNA-ppp6c (LV-shRNA) treated mice. (g) H&E staining of the back skin injected with LV-Ctr or LV-shRNA in mice applied with IMQ. Dotted line indicates the border between the epidermis and dermis. Scale bar, 100 µm. (h) Acanthosis of the back skin injected with LV-Ctr or LV-shRNA in mice applied with IMQ. (i) Immunohistochemical staining of Ki67 in skin sections derived from mice injected with LV-Ctr or LV-shRNA prior to IMQ painting. Dotted line indicates the border between the epidermis and dermis. Scale bar, 50 µm. Values (a,d,f) were expressed as fold changes relative to Ctr-1 (a), to scramble siRNA (d), or to lentiviral shRNA-control (f), and normalized to β-actin. *P<0.05, **P<0.01, two-tailed Student's t-test. Data (c–i) are representative of two independent experiments with three to five samples per group.

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