abcam

ab192882

Anti-PHACTR4 antibody [EP12543]

RabMAb | 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	EP12543
Purification technique	Affinity purification Protein A
Concentration	0.938 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	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/180
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information PHACTR4

Function Regulator of protein phosphatase 1 (PP1) required for neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. Acts as an activator of PP1 by interacting with PPP1CA and preventing phosphorylation of PPP1CA at 'Thr-320'. During neural tube closure, localizes to the ventral neural tube and activates PP1, leading to down-regulate cell proliferation within cranial neural tissue and the neural retina. Also acts as a regulator of migration of enteric neural crest cells (ENCCs) by activating PP1, leading to dephosphorylation and subsequent activation of cofilin (COF1 or COF2) and repression of the integrin signaling through the RHO/ROCK pathway (By similarity).

Storage

Shipped at conditions	Blue Ice
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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PHACTR4 also known as Phosphatase and Actin Regulator 4 is a protein involved in regulating actin and protein phosphatase 1 (PP1). It has a molecular weight of approximately 78 kDa. It is expressed in various tissues including the brain and heart indicating its significant role in these organs. PHACTR4 influences cytoskeletal organization a critical aspect determining cell shape and function.
Biological function summary	PHACTR4 plays a role in cytoskeleton dynamics and neuron development by interacting with actin filaments and PP1. It is not known to be part of a larger protein complex but it still influences cell migration and polarity through its interactions. PHACTR4 also contributes to embryonic development especially in neural tube formation ensuring proper neural development.
Pathways	PHACTR4 is involved in processes related to cytoskeletal reorganization and cell motility regulation. It interacts with the Wnt signaling pathway which is important for embryonic development and cell differentiation. It also engages with proteins like cofilin which further modulates actin dynamics and cell motility indicating its interconnection with cellular structural pathways.
Associated diseases and disorders	PHACTR4 has associations with neural tube defects and specific types of cancers. Its regulation of actin dynamics impacts tumor progression and metastasis. Related proteins such as PP1 show involvement in these conditions as well highlighting the network of interactions PHACTR4 engages in which affect disease progression and cellular malfunction particularly within neural and tumoral environments.

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.

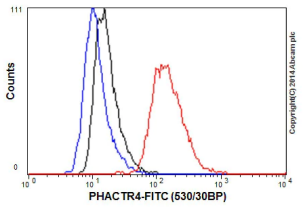
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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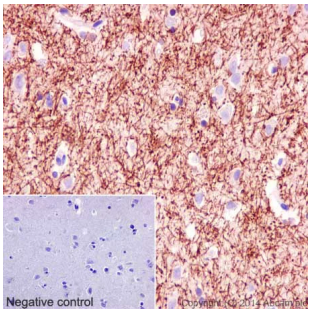
4 product images



Flow Cytometry (Intracellular) - Anti-PHACTR4 antibody [EP12543] (ab192882)

PHACTR4 Flow Cytometry (Intracellular) staining using rabbit Anti-PHACTR4 antibody

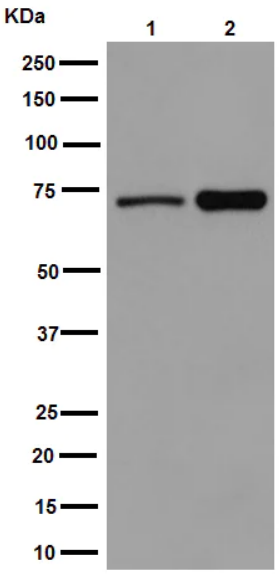
Intracellular flow cytometric analysis of2% paraformaldehydefixedSH-SY5Y cells labeling PHACTR4 usingab192882 at a 1/180 dilution (red). Goat anti rabbit IgG (FITC) was used as the secondary antibody at a 1/150 dilution. Isotype control Rabbit monoclonal IgG (black). Unlabeled control cells without incubation with primary and secondary antibody (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHACTR4 antibody [EP12543] (ab192882)

PHACTR4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PHACTR4 antibody

Immunohistochemical analysis of paraffin-embedded Human brain tissue labeling PHACTR4 with ab192882 at 1/2000 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG as a secondary antibody. Counter stained with Hematoxylin. Negative control also shown.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-PHACTR4 antibody [EP12543] (ab192882)

All lanes:
Western blot - Anti-PHACTR4 antibody [EP12543] (ab192882) at 1/1000 dilution

Lane 1:
MCF7 cell lysate at 20 µg

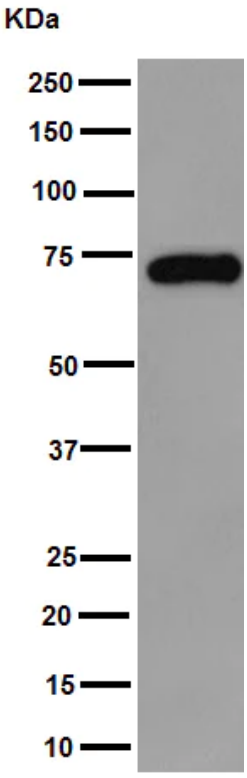
Lane 2:
Y79 cell lysate at 20 µg

Secondary

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

Predicted band size: 78 kDa

Observed band size: 70 kDa



Western blot - Anti-PHACTR4 antibody [EP12543] (ab192882)

All lanes:
Western blot - Anti-PHACTR4 antibody [EP12543] (ab192882) at 1/10000 dilution

All lanes:
SH-SY5Y cell lysate at 20 µg

Secondary

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

Predicted band size: 78 kDa

Observed band size: 70 kDa

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