abcam

ab302621

Anti-MUPP1 antibody [EPR26317-59]

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	EPR26317-59
Purification technique	Affinity purification Protein A
Concentration	0.546 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Rat
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Rat
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

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

IHC-P

Tested

Species	Rat
Dilution info	1/800
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/800
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Human
Dilution info	-
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 MPDZ

Function	Member of the NMDAR signaling complex that may play a role in control of AMPAR potentiation and synaptic plasticity in excitatory synapses (PubMed:11150294, PubMed:15312654). Promotes clustering of HT2RC at the cell surface (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

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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	MUPP1 also known as multi-PDZ domain protein 1 or MPDZ functions as a scaffolding protein that contains multiple PDZ domains. This protein features a mass of about 200 kDa. It gets expressed mainly in epithelial tissues including the brain and kidney. MUPP1 localizes to cell junctions where it interacts with various membrane proteins to organize cellular complexes.
Biological function summary	MUPP1 plays a role in cellular signaling and maintaining integrity of tight junctions. It participates in forming multi-protein complexes that help regulate processes like cell polarity and signal transduction. The protein binds with other PDZ domain-containing proteins influencing ion channels and receptors' function and stability in cells.

Pathways	MUPP1 interacts with several proteins that are part of the epithelial cell signaling pathway. It connects with proteins such as claudins and occludins playing a role in tight junction assembly and maintenance. Additionally its interaction with receptors like serotonin receptors suggests involvement in signaling pathways associated with neurotransmitter transport and cellular response.
Associated diseases and disorders	MUPP1 has been linked to conditions like ischemic stroke and hearing loss. Alterations in MUPP1 expression or function affect the stability and integrity of tight junctions impacting conditions where barrier function is essential. Disruption in associated proteins like claudins can lead to compromised barrier function in ischemic strokes while interactions with synaptic proteins might contribute to auditory system disorders.

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

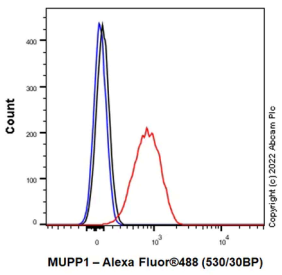
We do not recommend this combination. It is not covered by our product promise.

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.

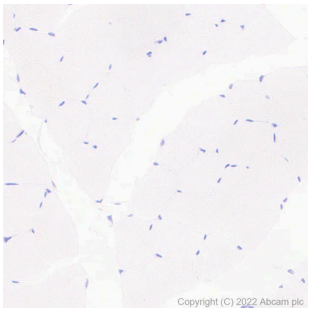
Full details and terms and conditions can be found here:
Terms & Conditions.

13 product images



Flow Cytometry (Intracellular) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

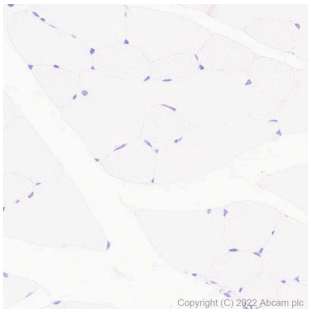
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized A549 (human lung carcinoma epithelial cell) cells labelling MUPP1 with ab302621 at 1/500 dilution (0.1ug) (Red) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

MUPP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat skeletal muscle using rabbit Anti-MUPP1 antibody

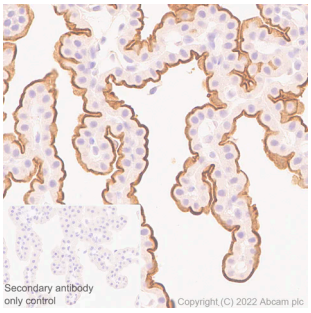
Immunohistochemical analysis of paraffin-embedded Rat skeletal muscle tissue labeling MUPP1 with ab302621 at 1/800 (0.683 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: no staining in rat skeletal muscle (PMID: 12706259). The section was incubated with ab302621 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

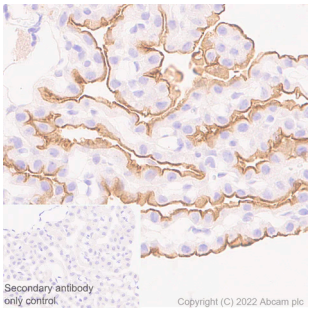
MUPP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse skeletal muscl using rabbit Anti-MUPP1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscl tissue labeling MUPP1 with ab302621 at 1/800 (0.683 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: no staining in mouse skeletal muscle (PMID: 12706259). The section was incubated with ab302621 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



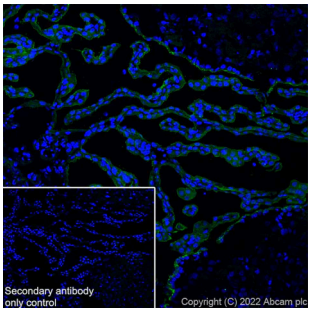
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

Immunohistochemical analysis of paraffin-embedded Rat choroid plexus tissue labeling MUPP1 with ab302621 at 1/800 (0.683 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining in rat choroid plexus (PMID: 30518636, PMID: 12706259). The section was incubated with ab302621 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

Immunohistochemical analysis of paraffin-embedded Mouse choroid plexus tissue labeling MUPP1 with ab302621 at 1/800 (0.683 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining in mouse choroid plexus (PMID: 30518636, PMID: 12706259). The section was incubated with ab302621 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



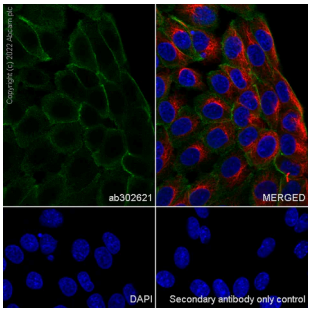
Immunohistochemistry (Frozen sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

MUPP1 Immunohistochemistry (Frozen sections) staining of Rat choroid plexus using rabbit Anti-MUPP1 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat choroid plexus tissue labeling MUPP1 with ab302621 at 1/50 (10.92 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution (Green). Positive staining on rat choroid plexus is observed. The nuclear counterstain was DAPI (Blue).

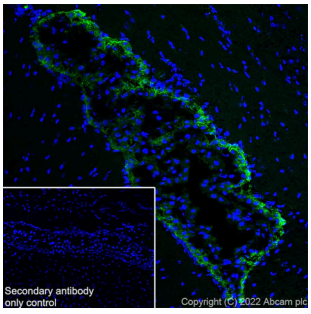
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 2 ug/mL dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



Immunocytochemistry/ Immunofluorescence - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mIMCD3 (mouse inner medullary collecting duct epithelial cell) cells labelling MUPP1 with ab302621 at 1/50 (10.92 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing membranous and cytoplasmic staining in mIMCD3 cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Immunohistochemistry (Frozen sections) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

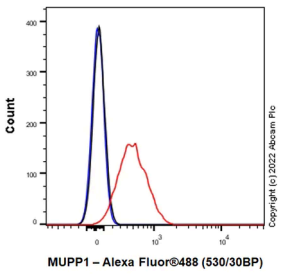
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(Green). Positive staining on mouse choroid plexus is observed. The nuclear counterstain was DAPI (Blue).

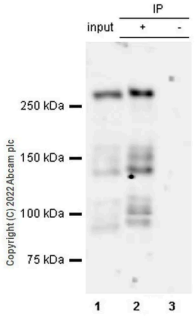
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Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



Flow Cytometry (Intracellular) - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized mIMCD3 (mouse inner medullary collecting duct epithelial cell) cells labelling MUPP1 with ab302621 at 1/500 dilution (0.1ug) (Red) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

MUPP1 was immunoprecipitated from 0.35 mg C6 (rat glial tumor glial cell), whole cell lysate 10 µg with ab302621 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab302621 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: C6 (rat glial tumor glial cell), whole cell lysate 10 µg

Lane 2: ab302621 IP in C6 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab302621 in C6 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

The bands beneath the target band are likely to be degraded target fragments.

All lanes:
Immunoprecipitation - Anti-MUPP1 antibody [EPR26317-59] (ab302621) at 1/30 dilution

All lanes:
C6 (rat glial tumor glial cell), whole cell lysate

Secondary

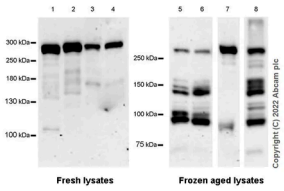
All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Developed using the ECL technique.

Predicted band size: 219 kDa

Exposure time: 58s

Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621)



Blocking and diluting buffer and concentration: 5% NFDM/TBST The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 12403818). Lysates in lane1-4 were freshly made and used for Western blotting immediately to minimize protein degradation. The bands beneath the target band are likely to be degraded target fragments. Samples are non-boiled as boiling may cause protein aggregates. Exposure time: Lane 1-7: 3 minutes Lane 8: 26 seconds
All lanes:
Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621) at 1/1000 dilution

Lane 1:
C6 (rat glial tumor glial cell), whole cell fresh lysate 20 µg

Lane 2:
Neuro-2a (mouse neuroblastoma neuroblast), whole cell fresh lysate 20 µg

Lane 3:
U-87 MG (human glioblastoma-astrocytoma epithelial cell), whole cell fresh lysate 20 µg

Lane 4:
SH-SY5Y (human neuroblastoma epithelial cell), whole cell fresh lysate 20 µg

Lane 5:
C6 (rat glial tumor glial cell), whole cell lysate 40 µg

Lane 6:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate 40 µg

Lane 7:
human cerebellum tissue lysate 40 µg

Lane 8:
mIMCD3 (mouse inner medlary collecting duct epithelial cell), whole cell lysate 40 µg

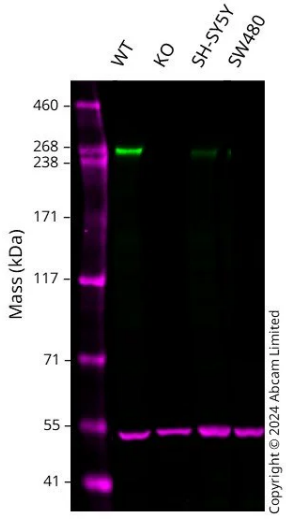
Secondary

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

Observed band size: 280 kDa

Exposure time: 3min

Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621)



MUPP1 Western blot staining using rabbit Anti-MUPP1 antibody

Western blot: Anti-MPDZ antibody [EPR26317-59] (ab302621) staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab302621 was shown to bind specifically to MPDZ. A band was observed at 268 kDa in wild-type A549 cell lysates with no signal observed at this size in MPDZ knockout cell line. To generate this image, wild-type and MPDZ knockout A549 cell lysates were analysed. First, 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 IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:

Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
Western blot - Human MPDZ Knockout A549 cell line (ab324213) at 20 µg

Lane 3:
SH-SY5Y cell lysate at 20 µg

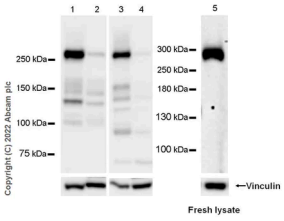
Lane 4:
SW480 cell lysate at 20 µg

Secondary

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

Performed under reducing conditions.

Observed band size: 268 kDa



Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621)

Blocking and diluting buffer and concentration: 5% NFDM/TBST The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 12403818). Low expression: skeletal muscle (PMID: 12706259) Lysate in lane 5 was freshly made and used for Western blotting immediately to minimize protein degradation. The bands beneath the target band are likely to be degraded target fragments. Samples are non-boiled as boiling may cause protein aggregates. Exposure time: Lane 1-4: 26 seconds Lane 5: 3 minutes
All lanes:
Western blot - Anti-MUPP1 antibody [EPR26317-59] (ab302621) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate 40 µg

Lane 2:
Mouse skeletal muscle tissue lysate 40 µg

Lane 3:
Rat brain tissue lysate 40 µg

Lane 4:
Rat skeletal muscle tissue lysate 40 µg

Lane 5:
Mouse testis tissue lysate 20 µg

Secondary

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

Observed band size: 280 kDa, 278 kDa

Exposure time: 26s

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