abcam

ab249132

Anti-RAB39B antibody [EPR9651] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR9651
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Expected

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

Target data

See full target information RAB39B

Function	The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different sets of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion (PubMed:27103069). RAB39B is involved in autophagy and may function in autophagosome formation (PubMed:27103069, PubMed:37821429). Binds downstream effector PICK1 to ensure selectively GRIA2 exit from the endoplasmic reticulum to the Golgi and to regulate AMPAR composition at the post-synapses and thus synaptic transmission (By similarity). May regulate the homeostasis of SNCA/alpha-synuclein (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab249132 is the carrier-free version of ab154826.

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.

Species reactivity

Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes,

oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	RAB39B also known as Ras-related protein Rab-39B is a member of the Rab family of small GTPases which has a molecular mass of approximately 26 kDa. RAB39B is expressed in several tissues but it shows higher expression levels in the brain. Mechanically RAB39B is involved in the regulation of intracellular vesicle trafficking specifically linked to endosome dynamics. This protein functions by switching between active GTP-bound and inactive GDP-bound states influencing membrane trafficking along actin and tubulin networks.
Biological function summary	RAB39B plays a role in synapse function and maintenance. This protein associates with cellular membranes and is involved in the trafficking of AMPA receptors to the neuronal surface which impacts synaptic plasticity and neurotransmission. Although not typically described as part of a large complex RAB39B works in close association with other synaptic proteins to ensure proper synaptic function. Its function in neurons highlights the importance of precise vesicular trafficking in neurotransmitter release and synaptic strength.
Pathways	RAB39B is integral to the endocytic trafficking and recycling pathways. It collaborates with key proteins like Rab7 and Rab5 in these cellular processes ensuring the proper sorting and recycling of synaptic vesicles. This precise control contributes to cellular homeostasis and efficient signal transmission at synapses which is critical for neuronal communication and overall brain function.
Associated diseases and disorders	RAB39B is linked to neurodevelopmental disorders and has a significant connection to Parkinson's disease. Mutations in RAB39B can lead to intellectual disabilities and autism spectrum disorders. In the context of Parkinson's disease altered RAB39B function has been associated with the pathogenesis where it interacts with alpha-synuclein a protein significantly implicated in the disorder. These connections highlight the importance of RAB39B in maintaining neurological health and its potential as a therapeutic target.

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.

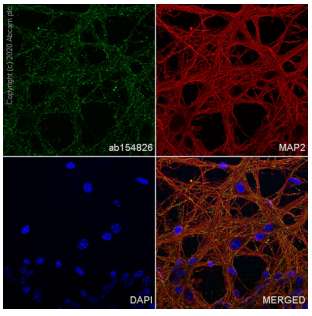
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

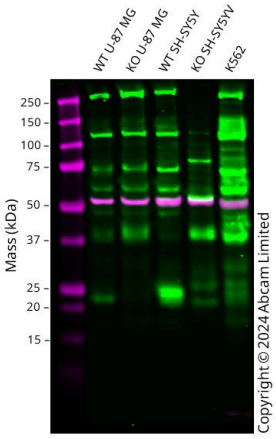
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-RAB39B antibody [EPR9651] - BSA and Azide free (ab249132)

RAB39B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RAB39B antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neuron cells labelling RAB39B with ab154826 at 1/100 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (2 µg/mL) (Green). Confocal image showing positive staining in mouse primary neuron cell.Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 dilution (4 µg/mL) followed by ab150120 Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution (2 µg/mL) (Red). The nuclear counterstain was DAPI (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154826).



Western blot - Anti-RAB39B antibody [EPR9651] - BSA and Azide free (ab249132)

RAB39B Western blot staining using rabbit Anti-RAB39B antibody

This data was developed using the same antibody clone in a different buffer formulation (ab154826).

Western blot: Rabbit Monoclonal[EPR9651] to RAB39B ab154826 staining at 1/1000 dilution, shown in green; Mouse anti alpha Tubulin (ab7291) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 25 kDa in Wild-type U-87 MG UNBOILED cell lysates with no signal observed at this size in RAB39B knockout U-87 MG UNBOILED cell line. To generate this image, 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 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.

All lanes:
Western blot - Anti-RAB39B antibody [EPR9651] (ab154826) at 1/1000 dilution

Lane 1:
Wild-type U-87 MG UNBOILED at 20 µg

Lane 2:
Western blot - Human RAB39B knockout U-87 MG cell line (ab306767) at 20 µg

Lane 3:
SH-SY5Y UNBOILED at 20 µg

Lane 4:
Human Brain UNBOILED at 20 µg

Lane 5:
K562 UNBOILED at 20 µg

Secondary

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

Performed under reducing conditions.

Predicted band size: 25 kDa

Observed band size: 25 kDa

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