abcam

ab194827

Anti-RAB45 antibody [EPR16349]

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	EPR16349
Purification technique	Affinity purification Protein A
Concentration	0.92 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Species	Rat

Dilution info	1/1000 - 1/10000
Notes	-

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information RASEF

Function	Isoform 1. Rab GTPase that acts as a dynein adapter protein, thereby activating dynein-mediated transport and dynein-dynactin motility on microtubules (PubMed:30814157). RASEF-mediated dynein motility is Ca(2+)-independent (PubMed:30814157). Also regulates the formation and sorting of zymogen granules and secretion of digestive enzymes by pancreatic acinar cells (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

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	RAB45 also known as RASEF is a member of the Ras superfamily of small GTPases. This protein has a molecular mass of approximately 83 kDa. It regulates various cellular processes by cycling between inactive GDP-bound and active GTP-bound states. RAB45 primarily localizes to intracellular membranes including endosomes and lysosomes. It is highly expressed in tissues such as the brain and pancreas indicating its role in specific cellular functions.
Biological function summary	RAB45 participates in intracellular trafficking ensuring proper vesicle flow and cargo delivery in the cell. It may associate with various effector proteins forming complexes needed for its function. Its role in membrane trafficking links it to pathways involving cellular signaling and homeostasis. RAB45 helps maintain cellular organization by managing membrane-bound compartments which is important for the effective function of endosomal and lysosomal pathways.
Pathways	RAB45 plays roles in vesicular transport and endocytic recycling processes. It interacts within the Rab family pathways that facilitate membrane trafficking. RAB45 is closely related to other Rab family proteins such as RAB7 and RAB9 which also regulate endosomal and lysosomal pathways. These interactions ensure coordination of intracellular transport and recycling processes necessary for cellular maintenance and function.
Associated diseases and disorders	RAB45 shows associations with certain neurological disorders and cancer types. Altered expression levels of RAB45 have been reported in glioblastoma suggesting its potential role in tumor progression. Additionally RAB45 might influence Alzheimer's disease by impacting vesicular pathways tied to APP processing. Connections with proteins such as tau in neurodegenerative pathways highlight the possible implications of RAB45 dysregulation in disease states.

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

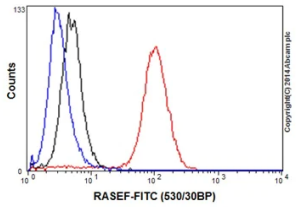
We do not recommend this combination. It is not covered by our product promise.

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.

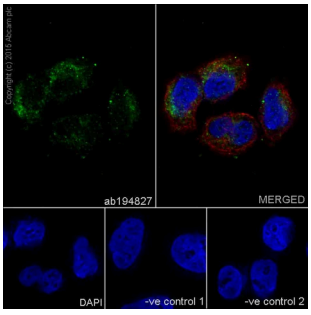
5 product images



Flow Cytometry (Intracellular) - Anti-RAB45 antibody [EPR16349] (ab194827)

RAB45 Flow Cytometry (Intracellular) staining using rabbit Anti-RAB45 antibody

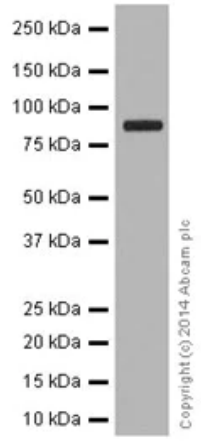
Intracellular Flow Cytometry analysis of K562 cells labeling RAB45 using ab194827 at 1/50 dilution (Red). A Goat anti rabbit IgG (FITC) at 1/150 dilution was used as secondary antibody. Cells were fixed with 2% paraformaldehyde. Cells without incubation with primary antibody and secondary antibody: Blue. Rabbit monoclonal IgG was used as isotype control (Black).



Immunocytochemistry/ Immunofluorescence - Anti-RAB45 antibody [EPR16349] (ab194827)

RAB45 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RAB45 antibody

Immunofluorescent analysis of HeLa cells labeling RAB45 with ab194827 at 1/50 dilution. A Goat anti rabbit IgG (Alexa Fluor488) at 1/400 dilution (ab150077) was used as secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% triton X-100. Counterstain: DAPI. Cytoplasm staining on HeLa cell line was observed.



Western blot - Anti-RAB45 antibody [EPR16349] (ab194827)

RAB45 Western blot staining of K562 cell lysate using rabbit Anti-RAB45 antibody

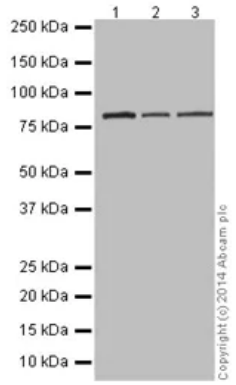
All lanes:
Western blot - Anti-RAB45 antibody [EPR16349] (ab194827) at 1/10000 dilution

All lanes:
K562 cell lysate at 20 µg

Secondary

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

Predicted band size: 83 kDa



Western blot - Anti-RAB45 antibody [EPR16349] (ab194827)

All lanes:
Western blot - Anti-RAB45 antibody [EPR16349] (ab194827) at 1/1000 dilution

Lane 1:
A549 cell lysate at 20 µg

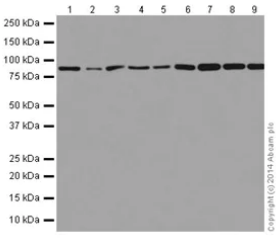
Lane 2:
A431 cell lysate at 20 µg

Lane 3:
Human testis lysate at 20 µg

Secondary

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

Predicted band size: 38 kDa, 83 kDa



Western blot - Anti-RAB45 antibody [EPR16349] (ab194827)

All lanes:
Western blot - Anti-RAB45 antibody [EPR16349] (ab194827) at 1/10000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Mouse spleen lysate at 10 µg

Lane 4:
Rat brain lysate at 10 µg

Lane 5:
Rat heart lysate at 10 µg

Lane 6:
C6 cell lysate at 10 µg

Lane 7:
RAW 264.7 cell lysate at 10 µg

Lane 8:
PC-12 cell lysate at 10 µg

Lane 9:
NIH 3T3 cell lysate at 10 µg

Secondary

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

Predicted band size: 83 kDa

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