abcam

ab251195

Anti-RAB45 antibody [EPR16349] - BSA and Azide free

Recombinant | RabMAb

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	EPR16349
Purification technique	Affinity purification Protein A

Reactivity data

WB

Tested

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

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

Notes

ab251195 is the carrier-free version of ab194827.

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.

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	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

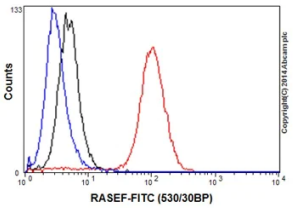
We do not recommend this combination. It is not covered by our product promise.

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.

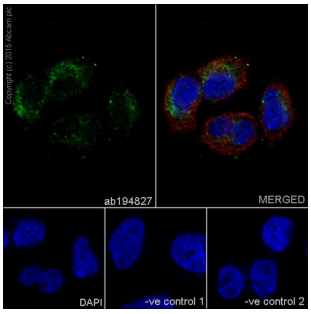
5 product images



Flow Cytometry (Intracellular) - Anti-RAB45 antibody [EPR16349] - BSA and Azide free (ab251195)

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

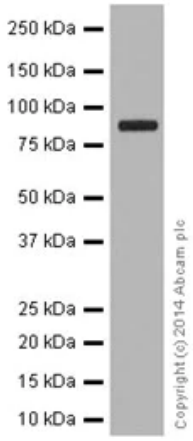
This data was developed using ab194827, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of K562 cells labeling RAB45 using ab194827 at 1/50 dilution (Red). A Goat anti rabbit IgG (FITC) at 1/150 dilution was used as secondary antibody. Cells were fixed 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] - BSA and Azide free (ab251195)

RAB45 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RAB45 antibody

This data was developed using ab194827, the same antibody clone in a different buffer formulation.
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] - BSA and Azide free (ab251195)

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

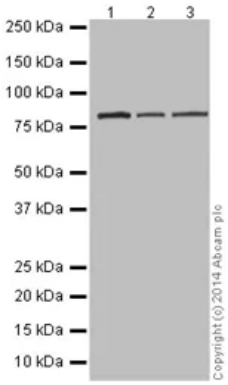
This data was developed using ab194827, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-RAB45 antibody [EPR16349] (ab194827) at 1/10000 dilution

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] - BSA and Azide free (ab251195)

This data was developed using ab194827, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-RAB45 antibody [EPR16349] (ab194827) at 1/1000 dilution

Lane 1:
A549 cell lysate at 20 µg

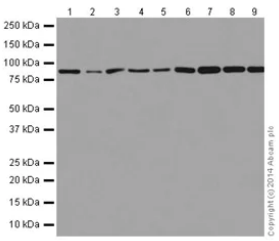
Lane 2:
A431 cell lysate at 20 µg

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] - BSA and Azide free (ab251195)

This data was developed using ab194827, the same antibody clone in a different buffer formulation.
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'.