abcam

ab271954

Anti-RAB8A antibody [EPR14873] - 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	EPR14873
Purification technique	Affinity purification Protein A
Concentration	1.032 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RAB8A

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. RAB8A is involved in polarized vesicular trafficking and neurotransmitter release. Together with RAB11A, RAB3IP, the exocyst complex, PARD3, PRKCI, ANXA2, CDC42 and DNMBP promotes transcytosis of PODXL to the apical membrane initiation sites (AMIS), apical surface formation and lumenogenesis (PubMed:20890297). Regulates the compacted morphology of the Golgi (PubMed:26209634). Together with MYO5B and RAB11A participates in epithelial cell polarization (PubMed:21282656). Also involved in membrane trafficking to the cilium and ciliogenesis (PubMed:21844891, PubMed:30398148, PubMed:20631154). Together with MICALL2, may also regulate adherens junction assembly (By similarity). May play a role in insulin-induced transport to the plasma membrane of the glucose transporter GLUT4 and therefore play a role in glucose homeostasis (By similarity). Involved in autophagy (PubMed:27103069). Participates in the export of a subset of neosynthesized proteins through a Rab8-Rab10-Rab11-dependent endososomal export route (PubMed:32344433). Targeted to and stabilized on stressed lysosomes through LRRK2 phosphorylation (PubMed:30209220). Suppresses stress-induced lysosomal enlargement through EHBP1 and EHNP1L1 effector proteins (PubMed:30209220).

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

ab271954 is the carrier-free version of ab188574.

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	RAB8A is a small GTPase also referred to as Ras-related protein Rab-8A involved in intracellular membrane trafficking. It plays a critical role in the regulation of exocytosis the process by which cells release substances to the extracellular space. RAB8A mainly functions by cycling between an inactive GDP-bound form and an active GTP-bound form facilitating vesicle budding transport and fusion with target membranes. This protein is expressed in various tissues including the brain and pancreas where it assists in important cellular functions. RAB8A has a molecular mass of approximately 24 kDa.

Biological function summary	The small GTPase RAB8A contributes to the biosynthetic transport from the trans-Golgi network to the plasma membrane. It performs this activity in coordination with other proteins as part of a larger complex. RAB8A also plays an essential role in cilia formation and maintenance affecting cell polarity and signaling functions. The protein's ability to regulate vesicle movement makes it important for cellular homeostasis and communication.
Pathways	The regulatory function of RAB8A is significant in the ciliary membrane trafficking pathway and the insulin signaling pathway. Within these pathways RAB8A interacts closely with other proteins like Rab11 and Rabin8 which help support its roles in directing vesicle transport. These interactions are essential for proper cellular signaling and the maintenance of polarized cellular structures further supporting the function of various cellular pathways.
Associated diseases and disorders	The dysfunction of RAB8A has associations with certain ciliopathies notably Bardet-Biedl syndrome. This condition involves abnormalities in cilia structure and function leading to symptoms like kidney disease vision impairment and obesity. Moreover disruptions in RAB8A have connections with insulin resistance implicating it in metabolic disorders. In the context of these diseases proteins such as BBS proteins and Rab11 play a role in mediating the effects of dysfunctional RAB8A-related pathways.

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

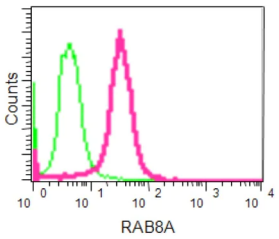
We do not recommend this combination. It is not covered by our product promise.

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.

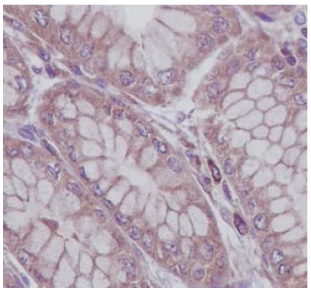
4 product images



Flow Cytometry (Intracellular) - Anti-RAB8A antibody [EPR14873] - BSA and Azide free (ab271954)

RAB8A Flow Cytometry (Intracellular) staining using rabbit Anti-RAB8A antibody

Intracellular flow cytometrical analysis of HeLa cells labeling RAB8A with ab188574 at 1/260 (pink) compared to a Isotype control (green). FITC-conjugated goat-anti-rabbit secondary antibody at 1/150 were used for the analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab188574).

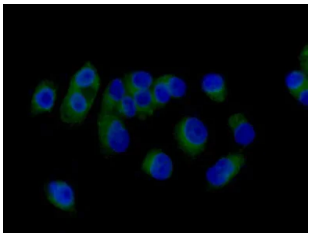


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB8A antibody [EPR14873] - BSA and Azide free (ab271954)

RAB8A Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RAB8A antibody

Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling RAB8A with ab188574 at 1/500. A prediluted HRP Polymer for Rabbit IgG was used as the secondary antibody. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab188574).

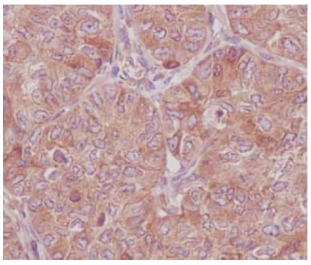


Immunocytochemistry/ Immunofluorescence - Anti-RAB8A antibody [EPR14873] - BSA and Azide free (ab271954)

RAB8A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RAB8A antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed HepG2 cells labelling RAB8A with ab188574 at 1/500 followed by Goat anti rabbit IgG (Alexa Fluor® 488) and DAPI staining.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab188574).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAB8A antibody [EPR14873] - BSA and Azide free (ab271954)

RAB8A Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RAB8A antibody

Immunohistochemical analysis of paraffin-embedded Human adenocarcinoma of colon tissue labelling RAB8A with ab188574 at 1/500. A prediluted HRP Polymer for Rabbit IgG was used as the secondary antibody. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab188574).

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