abcam

ab175925

Anti-RAB11B antibody [EPR12725]

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	EPR12725
Purification technique	Affinity purification Protein A
Concentration	0.068 - 0.103 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RAB11B

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 set of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion (PubMed:14627637, PubMed:19029296, PubMed:19244346, PubMed:20717956, PubMed:21248079, PubMed:22129970, PubMed:26032412). RAB11B plays a role in endocytic recycling, regulating apical recycling of several transmembrane proteins including cystic fibrosis transmembrane conductance regulator/CFTR, epithelial sodium channel/ENaC, potassium voltage-gated channel, and voltage-dependent L-type calcium channel. May also regulate constitutive and regulated secretion, like insulin granule exocytosis. Required for melanosome transport and release from melanocytes. Also regulates V-ATPase intracellular transport in response to extracellular acidosis (PubMed:14627637, PubMed:19029296, PubMed:19244346, PubMed:20717956, PubMed:21248079, PubMed:22129970). Promotes Rabin8/RAB3IP preciliary vesicular trafficking to mother centriole by forming a ciliary targeting complex containing Rab11, ASAP1, Rabin8/RAB3IP, RAB11FIP3 and ARF4, thereby regulating ciliogenesis initiation (PubMed:25673879). On the contrary, upon LPAR1 receptor signaling pathway activation, interaction with phosphorylated WDR44 prevents Rab11-RAB3IP-RAB11FIP3 complex formation and cilia growth (PubMed:31204173). Also interacts with RABL3 to promote ciliary vesicle formation (PubMed:36052645).

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	RAB11B also known as Ras-related protein Rab-11B is a small GTPase enzyme that belongs to the RAB protein family. RAB11B has a molecular mass of approximately 24 kDa. This protein is expressed in several tissues particularly in brain and testes. It plays a critical role in the regulation of membrane trafficking. As a member of the RAB family RAB11B cycles between an inactive GDP-bound form and an active GTP-bound form which is necessary for its function in vesicular transport.
Biological function summary	Small GTPases like RAB11B govern intracellular vesicle trafficking between different organelles. It resides mainly in recycling endosomes and is important for the recycling of receptors and other cell surface proteins. RAB11B often associates with other proteins like recycling endosome coat proteins to form complexes critical for its function. It maintains the proper localization and recycling of surface proteins which is essential for maintaining cellular function.
Pathways	Regulation of vesicular transport by RAB11B integrates into several cellular pathways particularly the endocytic recycling pathway. This pathway supports the recycling of endocytosed material back to the plasma membrane. RAB11B interacts with other proteins such as RAB11A which has overlapping roles in

	vesicular transport to fine-tune the trafficking of molecules and maintain homeostasis.
Associated diseases and disorders	RAB11B has links to conditions such as cancer and neurodegenerative diseases. Its dysregulation can result in abnormalities in vesicular trafficking which disrupts cellular homeostasis. For example in cancer altered RAB11B activity changes receptor recycling influencing cellular proliferation. In neurodegenerative diseases it may interact with amyloid precursor protein (APP) and facilitate events leading to disease progression. Changes in RAB11B function can associate with altered cell surface protein dynamics impacting disease development.

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

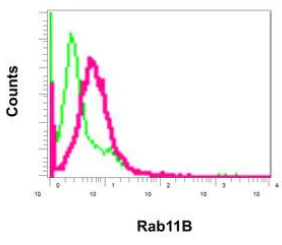
We do not recommend this combination. It is not covered by our product promise.

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.

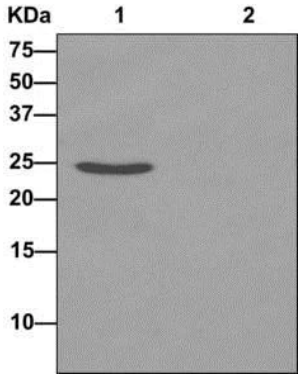
3 product images



Flow Cytometry (Intracellular) - Anti-RAB11B antibody [EPR12725] (ab175925)

RAB11B Flow Cytometry (Intracellular) staining using rabbit Anti-RAB11B antibody

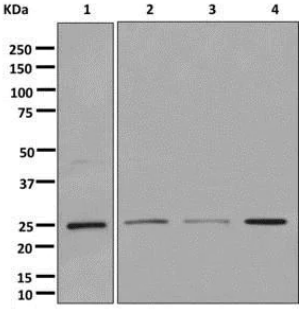
Intracellular flow cytometric analysis of Jurkat cells labeling RAB11B with ab175925 at 1/10 dilution (red) or a rabbit IgG (negative) (green).



Immunoprecipitation - Anti-RAB11B antibody [EPR12725] (ab175925)

Western blot analysis on immunoprecipitation pellet from (1) fetal brain lysate or (2) 1X PBS (negative control) using ab175925 at 1/10 dilution, and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.
All lanes:
Immunoprecipitation - Anti-RAB11B antibody [EPR12725] (ab175925)

Predicted band size: 24 kDa



Western blot - Anti-RAB11B antibody [EPR12725] (ab175925)

All lanes:
Western blot - Anti-RAB11B antibody [EPR12725] (ab175925) at 1/1000 dilution

Lane 1:
Fetal brain tissue lysate at 10 µg

Lane 2:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Lane 3:
U-87 MG (Human glioblastoma-astrocytoma epithelial cell line) cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

Predicted band size: 24 kDa

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