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RAB11A Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8496b

Product Information

Application	WB, IHC-P, E
Primary Accession	P62491
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,κ
Clone Names	1565CT164.36.80
Calculated MW	24394

Additional Information

Gene ID	8766
Other Names	Ras-related protein Rab-11A, Rab-11, YL8, RAB11A, RAB11
Target/Specificity	This RAB11A antibody is generated from a mouse immunized with a purified recombinant protein of human RAB11A.
Dilution	WB~~1:4000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RAB11A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB11A (HGNC:9760)
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:15601896, PubMed:15689490,

PubMed:17462998, PubMed:19542231, PubMed:20026645, PubMed:20890297, PubMed:21282656, PubMed:26032412). RAB11A regulates endocytic recycling (PubMed:20026645). Forms a functional Rab11/RAB11FIP3/dynein complex that regulates the movement of peripheral sorting endosomes (SE) along microtubule tracks toward the microtubule organizing center/centrosome, generating the endosomal recycling compartment (ERC) (PubMed:20026645). Acts as a major regulator of membrane delivery during cytokinesis (PubMed:15601896). Together with MYO5B and RAB8A participates in epithelial cell polarization (PubMed:21282656). Together with Rabin8/RAB3IP, RAB8A, 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). Together with MYO5B participates in CFTR trafficking to the plasma membrane and TF (Transferrin) recycling in nonpolarized cells (PubMed:17462998). Required in a complex with MYO5B and RAB11FIP2 for the transport of NPC1L1 to the plasma membrane (PubMed:19542231). Participates in the sorting and basolateral transport of CDH1 from the Golgi apparatus to the plasma membrane (PubMed:15689490). Regulates the recycling of FCGRT (receptor of Fc region of monomeric IgG) to basolateral membranes (By similarity). May also play a role in melanosome transport and release from melanocytes (By similarity). 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, PubMed:31204173). On the contrary, upon LPAR1 receptor signaling pathway activation, interaction with phosphorylated WDR44 prevents Rab11-RAB3IP-RAB11FIP3 complex formation and cilia growth (PubMed:31204173). Participates in the export of a subset of neosynthesized proteins through a Rab8-Rab10-Rab11-endososomal dependent export route via interaction with WDR44 (PubMed:32344433). Also interacts with RABL3 to promote ciliary vesicle formation (PubMed:36052645).

Cellular Location

Cell membrane; Lipid-anchor. Endosome membrane; Lipid-anchor. Recycling endosome membrane; Lipid-anchor. Cleavage furrow. Cytoplasmic vesicle, phagosome membrane; Lipid-anchor. Golgi apparatus membrane; Lipid-anchor. Golgi apparatus, trans-Golgi network. Cytoplasmic vesicle membrane; Lipid- anchor. Cell projection, cilium. Note=Localized to WDR44-positive endosomes and tubules (PubMed:32344433). Translocates with RAB11FIP2 from the vesicles of the endocytic recycling compartment (ERC) to the plasma membrane (PubMed:11994279). During interphase, localized in vesicles continuously moving from peripheral sorting endosomes towards the pericentrosomal ERC (PubMed:20026645). Localizes to the cleavage furrow (PubMed:15601896). Colocalizes with PARD3, PRKCI, EXOC5, OCLN, PODXL and RAB8A in apical membrane initiation sites (AMIS) during the generation of apical surface and lumenogenesis (PubMed:20890297) Recruited to phagosomes containing S.aureus or M.tuberculosis (PubMed:21255211). Localized to rhodopsin transport carriers when interacting with RAB11AFIP3 and ASAP1 in photoreceptors (PubMed:25673879). Colocalizes with RAB11AFIP1 on punctate vesicles (PubMed:26032412).

Background

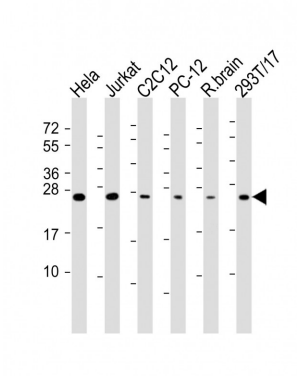
The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different set of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion. That Rab regulates endocytic recycling. Acts as a major regulator of membrane delivery during cytokinesis. Together with MYO5B and RAB8A participates in epithelial cell polarization. Together with RAB3IP, RAB8A, 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. Together with MYO5B participates in CFTR trafficking to the plasma membrane and TF (Transferrin) recycling in nonpolarized cells. Required in a complex with MYO5B and RAB11FIP2 for the transport of NPC1L1 to the plasma membrane. Participates in the sorting and basolateral transport of CDH1 from the Golgi apparatus to the plasma membrane. Regulates the recycling of FCGRT (receptor of Fc region of monomeric Ig G) to basolateral membranes. May also play a role in melanosome transport and release from melanocytes.

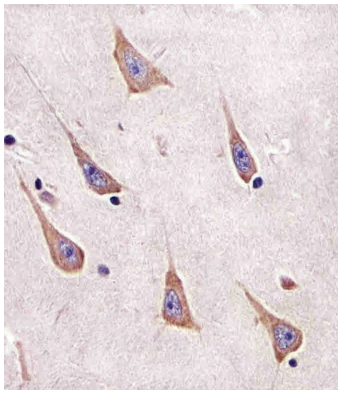
References

Drivas G.T.,et al.Oncogene 6:3-9(1991).
Zahraoui A.,et al.Submitted (NOV-1990) to the EMBL/GenBank/DDBJ databases.
Gromov P.S.,et al.FEBS Lett. 429:359-364(1998).
Puhl H.L. III,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

Images



All lanes : Anti-RAB11A Antibody at 1:4000 dilution Lane 1: Hela whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: C2C12 whole cell lysate Lane 4: PC-12 whole cell lysate Lane 5: rat brain lysate Lane 6: 293T/17 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 24 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AM8496b staining RAB11A in human brain sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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