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Rab13 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2093a

Product Information

Application	WB, FC, ICC, E
Primary Accession	P51153
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	8E8E2
Isotype	IgG1
Calculated MW	22774
Description	This gene is a member of the Rab family of small G proteins and plays a role in regulating membrane trafficking between trans-Golgi network (TGN) and recycling endosomes (RE). The encoded protein is involved in the assembly of tight junctions, which are components of the apical junctional complex (AJC) of epithelial cells. The AJC plays a role in forming a barrier between luminal contents and the underlying tissue. Additional functions associated with the protein include endocytic recycling of occludin, regulation of epithelial cell scattering, neuronal regeneration and regulation of neurite outgrowth. Alternately spliced transcript variants have been observed for this gene. A pseudogene associated with this gene is located on chromosome 12.
Immunogen	Purified recombinant fragment of human Rab13 (AA: 66-200) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5872
Other Names	Ras-related protein Rab-13, Cell growth-inhibiting gene 4 protein, RAB13
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Rab13 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB13 (HGNC:9762)
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. RAB13 is involved in endocytic recycling and regulates the transport to the plasma membrane of transmembrane proteins like the tight junction protein OCLN/occludin. Thereby, it regulates the assembly and the activity of tight junctions. Moreover, it may also regulate tight junction assembly by activating the PKA signaling pathway and by reorganizing the actin cytoskeleton through the activation of the downstream effectors PRKACA and MICALL2 respectively. Through its role in tight junction assembly, may play a role in the establishment of Sertoli cell barrier. Plays also a role in angiogenesis through regulation of endothelial cells chemotaxis. Also involved in neurite outgrowth. Has also been proposed to play a role in post-Golgi membrane trafficking from the TGN to the recycling endosome. Finally, it has been involved in insulin-induced transport to the plasma membrane of the glucose transporter GLUT4 and therefore may play a role in glucose homeostasis.
Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasmic vesicle membrane; Lipid-anchor; Cytoplasmic side. Cell junction, tight junction. Golgi apparatus, trans-Golgi network membrane Recycling endosome membrane. Cell projection, lamellipodium {ECO:0000250|UniProtKB:Q9DD03}. Note=Tight junctions or associated with vesicles scattered throughout the cytoplasm in cells lacking tight junctions (PubMed:8294494) Relocalizes to the leading edge of lamellipodia in migrating endothelial cells (By similarity). {ECO:0000250|UniProtKB:Q9DD03, ECO:0000269|PubMed:8294494}
Tissue Location	Detected in several types of epithelia, including intestine, kidney, liver and in endothelial cells

References

1.J Histochem Cytochem. 2012 Jul;60(7):537-49.2.J Cell Biol. 2008 Sep 8;182(5):845-53.

Images

