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Rab5a Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2187a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P20339
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2E8B11
Isotype	IgG1
Calculated MW	23659
Description	RAB5A (RAB5A, Member RAS Oncogene Family) is a Protein Coding gene. Diseases associated with RAB5A include borna disease and choroideremia. Among its related pathways are Ras signaling pathway and Endocytosis. GO annotations related to this gene include GTP binding and GDP binding. An important paralog of this gene is RAB5C.
Immunogen	Purified recombinant fragment of human Rab5a (AA: 1-215) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5868
Other Names	Ras-related protein Rab-5A, RAB5A, RAB5
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 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	Rab5a Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB5A (HGNC:9783)
Synonyms	RAB5

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. RAB5A is required for the fusion of plasma membranes and early endosomes and involved in early endocytic trafficking (PubMed:10818110, PubMed:14617813, PubMed:15378032, PubMed:16086013, PubMed:16410077, PubMed:17562788). Required for EEA1 recruitment to early endosomes (PubMed:16086013, PubMed:17562788). Recruits FERRY complex to early endosomes, where FERRY links early endosomes with a subgroup of mRNAs to enable mRNA intracellular distribution (PubMed:37267906). Recruits RABEP1/Rabaptin- 5 effector to early endosomes, thereby promoting endocytic membrane fusion (By similarity). Required for EGF and transferrin endocytosis and trafficking through early endosomes (PubMed:16086013, PubMed:17562788). Contributes to the regulation of filopodia extension (PubMed:14978216). Required for the exosomal release of SDCBP, CD63, PDCD6IP and syndecan (PubMed:22660413). Regulates maturation of apoptotic cell-containing phagosomes, probably downstream of DYN2 and PIK3C3 (By similarity).
Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side. Early endosome membrane; Lipid-anchor. Melanosome Cytoplasmic vesicle. Cell projection, ruffle {ECO:0000250|UniProtKB:P18066}. Membrane. Cytoplasm, cytosol. Cytoplasmic vesicle, phagosome membrane {ECO:0000250|UniProtKB:Q9CQD1}. Endosome membrane Note=Enriched in stage I melanosomes (PubMed:17081065). Alternates between membrane-bound and cytosolic forms (Probable) {ECO:0000269|PubMed:17081065, ECO:0000305}

References

1.Cancer Sci. 2011 Dec;102(12):2172-8.2.Cell Mol Life Sci. 2011 Aug;68(16):2785-95.

Images

