10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RAB27A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1951a

Product Information

Application	WB, E
Primary Accession	P51159
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4D3F11
Isotype	IgG2b
Calculated MW	24868
Description	The protein encoded by this gene belongs to the small GTPase superfamily, Rab family. The protein is membrane-bound and may be involved in protein transport and small GTPase mediated signal transduction. Mutations in this gene are associated with Griscelli syndrome type 2. Alternative splicing occurs at this locus and four transcript variants encoding the same protein have been identified.
Immunogen	Purified recombinant fragment of human RAB27A (AA: FULL(1-221)) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	5873
Other Names	Ras-related protein Rab-27A, Rab-27, GTP-binding protein Ram, RAB27A, RAB27
Dilution	WB~~1/500 - 1/2000 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	RAB27A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB27A (HGNC:9766)
Synonyms	RAB27

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 (PubMed:30771381). RAB27A regulates homeostasis of late endocytic pathway, including endosomal positioning, maturation and secretion (PubMed:30771381). Plays a role in cytotoxic granule exocytosis in lymphocytes. Required for both granule maturation and granule docking and priming at the immunologic synapse (PubMed:18812475).
Cellular Location	Membrane; Lipid-anchor. Melanosome. Late endosome. Lysosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:12643545, PubMed:17081065). Localizes to endosomal exocytic vesicles (PubMed:17237785).
Tissue Location	Found in all the examined tissues except in brain. Low expression was found in thymus, kidney, muscle and placenta Detected in melanocytes, and in most tumor cell lines examined Expressed in cytotoxic T-lymphocytes (CTL) and mast cells

Background

The protein encoded by this gene belongs to the cyclic nucleotide phosphodiesterase (PDE) family, and PDE1 subfamily. Members of the PDE1 family are calmodulin-dependent PDEs that are stimulated by a calcium-calmodulin complex. This PDE has dual-specificity for the second messengers, cAMP and cGMP, with a preference for cGMP as a substrate. cAMP and cGMP function as key regulators of many important physiological processes. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. ; ;

References

1. PLoS One. 2012;7(7):e41160.2. J Biol Chem. 2011 Feb 18;286(7):5375-82.

Images

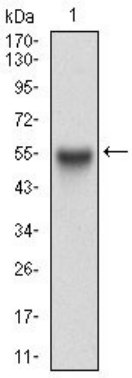
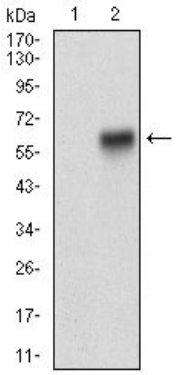


Figure 1: Western blot analysis using RAB27A mAb against human RAB27A (AA: FULL(1-221)) recombinant protein. (Expected MW is 50.8 kDa)

Figure 2: Western blot analysis using RAB27A mAb against HEK293 (1) and RAB27A (AA: FULL(1-221))-hIgGFc transfected HEK293 (2) cell lysate.



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