OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA326379

Rab5 (RAB5A) Rabbit Polyclonal Antibody [Clone ID: N/A]

Product data:

Product Type:	Primary Antibodies
Clone Name:	N/A
Applications:	WB
Recommended Dilution:	WB: 1:1000-2000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	C-terminal peptide from human Rab4
Formulation:	Rabbit antiserum
Concentration:	lot specific
Purification:	Rabbit antiserum
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	RAB5A, member RAS oncogene family
Database Link:	NP_004153 Entrez Gene 64633 RatEntrez Gene 271457 MouseEntrez Gene 5868 Human P20339

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Background: Rab4 is a 25kDa member of the Rab family of small guanosine triphosphatases (GTPases), Ras superfamily. Rab GTPases are central regulators of membrane trafficking in the eukaryotic cell. Their regulatory capacity depends on their ability to cycle between the GDP - bound inactive and GTP-bound active states. This conversion is regulated by GDP/GTP exchange factors (GEPs), GDP dissociation inhibitors (GDIs) and GTPase-activating proteins (GAPs) . Activation of a Rab protein is coupled to its association with intracellular membranes, allowing it to recruit downstream effector proteins to the cytoplasmic surface of a sub-cellular compartment . Through these proteins, Rab GTPases regulate vesicle formation, actin- and tubulin-dependent vesicle movement, and membrane fusion. Rab proteins contain conserved regions involved in guanine-nucleotide binding, and hyper-variable COOH-terminal domains with a cysteine motif implicated in sub-cellular targeting. Post-translational modification of the cysteine motif with one or two geranylgeranyl groups is essential for the membrane association and correct intracellular localization of Rab proteins . Each Rab shows a characteristic sub-cellular distribution . In particular, over-expression of Rab4 causes a redistribution of receptors on plasma membrane versus endocytic compartments. The presence of excessive Rab4 leads to the accumulation of tranferrin receptors in non-acidic, post-endosomal recycling vesicles considered an intermediate compartment between endosomes and plasma membranes. Rab4 also plays a role in the translocation of glucose transporter (Glu4) in adipocytes in response to insulin . Mediating the association of Rab4 with transferring receptor-containing early endosomes takes place through the geranylgeranyl groups at its carboxyl-terminus. Membrane association is also cell cycle dependent, as phosphorylation at its c-terminal cdc2 kinase consensus sequence in mitotic cells leads to dissociation of Rab4 into the cytosol .

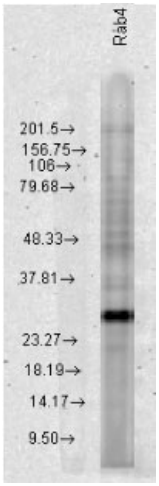
Synonyms: RAB5

Note: Detects ~26kDa.

Protein Families: Druggable Genome

Protein Pathways: Amyotrophic lateral sclerosis (ALS), Endocytosis

Product images:



Western blot analysis of Rab4 in HeLa cell lysates using a 1:1000 dilution of the antibody