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Anti-RAB7A / RAB7 Antibody (C-Terminus)

Goat Anti Mouse Polyclonal Antibody
Catalog # ALS17334

Product Information

Application	WB, IHC-P, IF
Primary Accession	P51149
Predicted	Human, Mouse, Rat, Monkey, Dog
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Calculated MW	23490
Concentration (mg/ml)	3 mg/ml

Additional Information

Gene ID	7879
Alias Symbol	RAB7A
Other Names	RAB7A, CMT2B, PRO2706, RAB7, Ras-associated protein RAB7, Ras-related protein Rab-7a, PSN
Target/Specificity	Detects Rab7a protein in the human, rat and mouse whole cell lysates and transfected cells with GFP-Rab7a by Western blot. This Ab is specific for Rab7a.
Reconstitution & Storage	PBS, 20% glycerol, 0.05% sodium azide. Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.
Precautions	Anti-RAB7A / RAB7 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB7A (HGNC:9788)
Synonyms	RAB7
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:38538795). In its active state, RAB7A binds to a variety of effector proteins playing a key role in the regulation of endo-lysosomal trafficking. Governs early-to-late endosomal maturation,

microtubule minus-end as well as plus-end directed endosomal migration and positioning, and endosome- lysosome transport through different protein-protein interaction cascades. Also plays a central role in growth-factor-mediated cell signaling, nutrient-transportor mediated nutrient uptake, neurotrophin transport in the axons of neurons and lipid metabolism. Also involved in regulation of some specialized endosomal membrane trafficking, such as maturation of melanosomes, pathogen-induced phagosomes (or vacuoles) and autophagosomes. Plays a role in the maturation and acidification of phagosomes that engulf pathogens, such as S.aureus and M.tuberculosis. Plays a role in the fusion of phagosomes with lysosomes. In concert with RAC1, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. Controls the endosomal trafficking and neurite outgrowth signaling of NTRK1/TRKA (PubMed:11179213, PubMed:12944476, PubMed:14617358, PubMed:20028791, PubMed:21255211). Regulates the endocytic trafficking of the EGF-EGFR complex by regulating its lysosomal degradation. Involved in the ADRB2-stimulated lipolysis through lipophagy, a cytosolic lipase-independent autophagic pathway (By similarity). Required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). Required for vesicular trafficking and cell surface expression of ACE2 (PubMed:33147445). May play a role in PRPH neuronal intermediate filament assembly (By similarity).

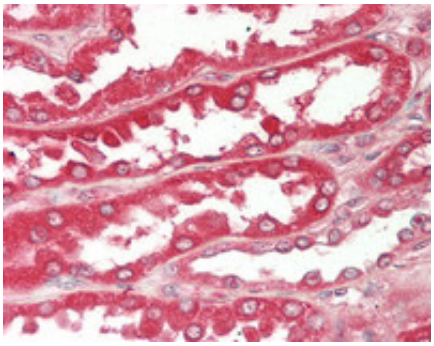
Cellular Location

Cytoplasmic vesicle, phagosome membrane; Peripheral membrane protein; Cytoplasmic side. Late endosome membrane; Peripheral membrane protein; Cytoplasmic side Lysosome membrane; Peripheral membrane protein; Cytoplasmic side Melanosome membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasmic vesicle, autophagosome membrane; Peripheral membrane protein; Cytoplasmic side. Lipid droplet {ECO:0000250|UniProtKB:P51150}. Endosome membrane; Peripheral membrane protein. Cytoplasmic vesicle {ECO:0000250|UniProtKB:P51150} Mitochondrion membrane; Peripheral membrane protein. Note=Colocalizes with OSBPL1A at the late endosome (PubMed:16176980). Found in the ruffled border (a late endosomal-like compartment in the plasma membrane) of bone-resorbing osteoclasts. Recruited to phagosomes containing S.aureus or Mycobacterium (PubMed:21255211). Lipid droplet localization is increased upon ADRB2 stimulation (By similarity). Recruited to damaged mitochondria during mitophagy in a RIMOC1-dependent manner (PubMed:34432599). {ECO:0000250|UniProtKB:P51150, ECO:0000269|PubMed:16176980, ECO:0000269|PubMed:21255211, ECO:0000269|PubMed:34432599}

Tissue Location

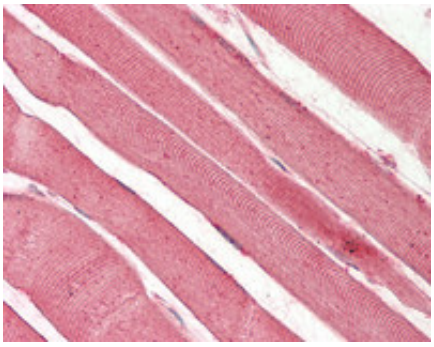
Widely expressed; high expression found in skeletal muscle.

Images



Human Kidney: Formalin-Fixed, Paraffin-Embedded (FFPE)

Human Skeletal Muscle: Formalin-Fixed, Paraffin-Embedded (FFPE)



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