

**RAB7A / RAB7 Antibody (aa90-140)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS11920****Specification**

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**RAB7A / RAB7 Antibody (aa90-140) - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P51149</a>
Reactivity	Human, Rat, Zebrafish, Monkey, Chicken, Xenopus, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	23kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A

**RAB7A / RAB7 Antibody (aa90-140) - Additional Information****Gene ID** 7879**Other Names**

Ras-related protein Rab-7a, RAB7A, RAB7

**Target/Specificity**

A portion of amino acids 90-140 of human Rab7 protein

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

**Precautions**

RAB7A / RAB7 Antibody (aa90-140) is for research use only and not for use in diagnostic or therapeutic procedures.

**RAB7A / RAB7 Antibody (aa90-140) - 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:<a href="http://www.uniprot.org/citations/38538795" target="\_blank">38538795</a>). 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-transporter 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:<a href="http://www.uniprot.org/citations/11179213" target="\_blank">11179213</a>, PubMed:<a href="http://www.uniprot.org/citations/12944476" target="\_blank">12944476</a>, PubMed:<a href="http://www.uniprot.org/citations/14617358" target="\_blank">14617358</a>, PubMed:<a href="http://www.uniprot.org/citations/20028791" target="\_blank">20028791</a>, PubMed:<a href="http://www.uniprot.org/citations/21255211" target="\_blank">21255211</a>). 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:<a href="http://www.uniprot.org/citations/22660413" target="\_blank">22660413</a>). Required for vesicular trafficking and cell surface expression of ACE2 (PubMed:<a href="http://www.uniprot.org/citations/33147445" target="\_blank">33147445</a>). 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

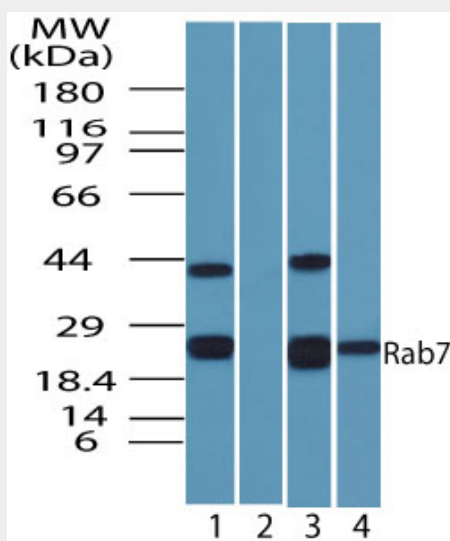
Widely expressed; high expression found in skeletal muscle.

#### RAB7A / RAB7 Antibody (aa90-140) - Protocols

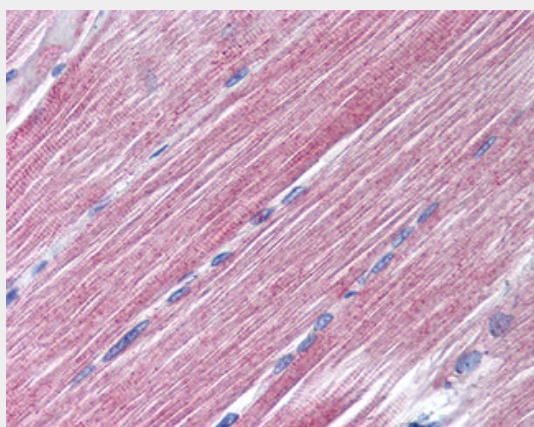
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### RAB7A / RAB7 Antibody (aa90-140) - Images



Western blot of human Rab7 in HeLa cell lysate in the 1) absence and 2) presence of immunizing...



Anti-RAB7 antibody IHC of human skeletal muscle.

#### **RAB7A / RAB7 Antibody (aa90-140) - Background**

Key regulator in 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. Plays a central role, not only in endosomal traffic, but also in many other cellular and physiological events, such as growth-factor-mediated cell signaling, nutrient-transporter 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. Plays important roles in microbial pathogen infection and survival, as well as in participating in the life cycle of viruses. Microbial pathogens possess survival strategies governed by RAB7A, sometimes by employing RAB7A function (e.g. *Salmonella*) and sometimes by excluding RAB7A function (e.g. *Mycobacterium*). 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. Regulates the endocytic trafficking of the EGF-EGFR complex by regulating its lysosomal degradation.

**RAB7A / RAB7 Antibody (aa90-140) - References**

Vitelli R.,et al.Biochem. Biophys. Res. Commun. 229:887-890(1996).  
Davies J.P.,et al.Genomics 41:131-134(1997).  
Kim J.Y.,et al.Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.  
Puhl H.L. III,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).