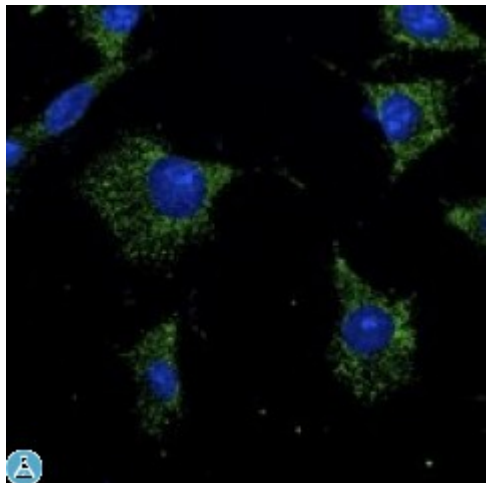


Anti-Rab7a antibody



Description

Goat polyclonal antibody to mouse Rab7. Rab7 belongs to the small GTPase superfamily, Rab family. It has been localized to late endosomes, regulates vesicle traffic in the late endosomes and also from late endosomes to lysosomes. Rab7 also contributes to the maturation of phagosomes (acidification).

Model

STJ140063

Host

Goat

Reactivity

Avian, Bovine, Canine, Donkey, Feline, Goat, Guinea Pig, Hamster, Horse, Human, Mouse, Other, Porcine, Rabbit, Rat, Sheep, Simian

Applications

IF, WB

Immunogen

Purified recombinant peptide derived from within residues 110 aa to the C-terminus of mouse Rab7a produced in *E. coli*.

Immunogen Region

C-Term

Gene ID

[7879](#)

Gene Symbol

[RAB7A](#)

Dilution range

Western blot 1:250-1:2,000 Immunofluorescence 1:50-1:250
Immunohistochemistry (paraffin) ND Immunohistochemistry (frozen) ND

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.

Tissue Specificity

Widely expressed; high expression found in skeletal muscle.

Purification

This antibody is epitope-affinity purified from goat antiserum.

Note	For research use only (RUO).
Protein Name	Ras-related protein Rab-7a
Molecular Weight	24 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS, 20% glycerol and 0.05% sodium azide.
Concentration	3 mg/mL
Storage Instruction	Store at -20°, and avoid repeated freeze-thaw cycles.
Database Links	HGNC:9788OMIM:600882
Alternative Names	Ras-related protein Rab-7a
Function	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 <i>S.aureus</i> and <i>M.tuberculosis</i>. 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. <i>Salmonella</i>) and sometimes by excluding RAB7A function (e.g. <i>Mycobacterium</i>). 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. Involved in the ADRB2-stimulated lipolysis through lipophagy, a cytosolic lipase-independent autophagic pathway . Required for the exosomal release of SDCBP, CD63 and syndecan .
Cellular Localization	Cytoplasmic vesicle, phagosome membrane Late endosome membrane Lysosome membrane Melanosome membrane Cytoplasmic vesicle, autophagosome membrane Lipid droplet Endosome membrane. Colocalizes with OSBPL1A at the late endosome . Found in the ruffled border (a late endosomal-like compartment in the plasma membrane) of bone-resorbing osteoclasts. Recruited to phagosomes containing <i>S.aureus</i> or <i>Mycobacterium</i> . Lipid droplet localization is increased upon ADRB2 stimulation .