

RAB7 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP8665b**Specification**

RAB7 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P51149](#)**RAB7 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 7879**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8665b](#) was selected from the C-term region of human RAB7. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

RAB7 Antibody (C-term) Blocking Peptide - Protein Information**Name** RAB7A ([HGNC:9788](#))**Synonyms** RAB7**Function**

Small GTPase which cycles between active GTP-bound and inactive GDP-bound states. In its active state, 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. 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 (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.

RAB7 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RAB7 Antibody (C-term) Blocking Peptide - Images

RAB7 Antibody (C-term) Blocking Peptide - Background

RAB family members are small, RAS-related GTP-binding proteins that are important regulators of vesicular transport. Each RAB protein targets multiple proteins that act in exocytic / endocytic pathways. RAB7 is a RAB family member that regulates vesicle traffic in the late endosomes and also from late endosomes to lysosomes. This protein is also involved in the cellular vacuolation of the VacA cytotoxin of Helicobacter pylori.

RAB7 Antibody (C-term) Blocking Peptide - References

Davies,J.P., et.al., Genomics 41 (1), 131-134 (1997) Vitelli,R., et.al., Biochem. Biophys. Res. Commun. 229 (3), 887-890 (1996)