

**Anti-RAB7 RAB7A Rabbit Monoclonal Antibody**  
**Catalog # ABO13447****Specification****Anti-RAB7 RAB7A Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, FC
Primary Accession	<a href="#">P51149</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-RAB7 RAB7A Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

**Anti-RAB7 RAB7A Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 7879

**Other Names**

Ras-related protein Rab-7a, 3.6.5.2, RAB7A ([http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?hgnc\\_id=9788](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=9788)), RAB7

**Calculated MW**

23490 MW KDa

**Application Details**

WB 1:1000-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>FC 1:50

**Subcellular Localization**

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. 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)..

**Tissue Specificity**

Widely expressed; high expression found in skeletal muscle..

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human RAB7

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-RAB7 RAB7A Rabbit Monoclonal Antibody - 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](http://www.uniprot.org/citations/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-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: [11179213](http://www.uniprot.org/citations/11179213), PubMed: [12944476](http://www.uniprot.org/citations/12944476), PubMed: [14617358](http://www.uniprot.org/citations/14617358), PubMed: [20028791](http://www.uniprot.org/citations/20028791), PubMed: [21255211](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/22660413)). Required for vesicular trafficking and cell surface expression of ACE2 (PubMed: [33147445](http://www.uniprot.org/citations/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.

### Anti-RAB7 RAB7A Rabbit Monoclonal Antibody - 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](#)

### Anti-RAB7 RAB7A Rabbit Monoclonal Antibody - Images

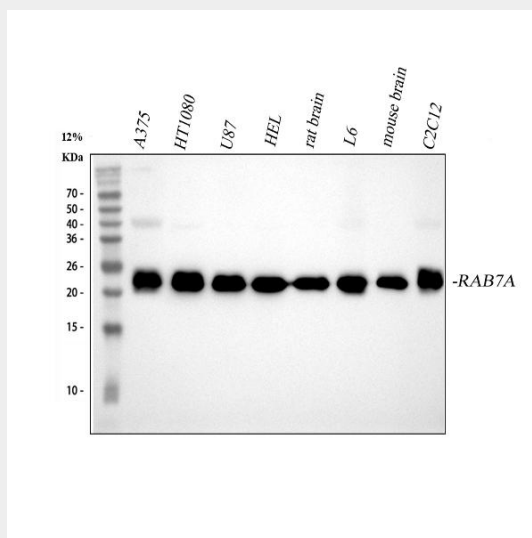


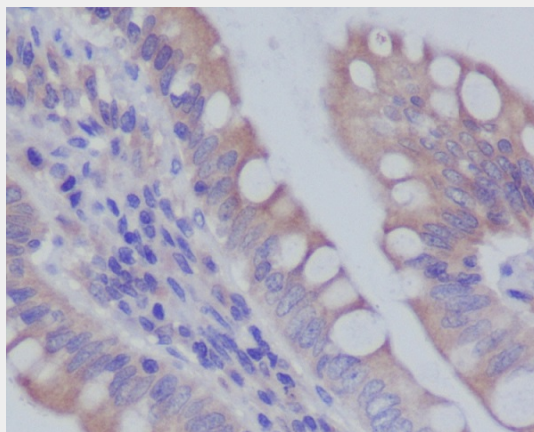
Figure 1. Western blot analysis of RAB7 using anti-RAB7 antibody (M02409).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

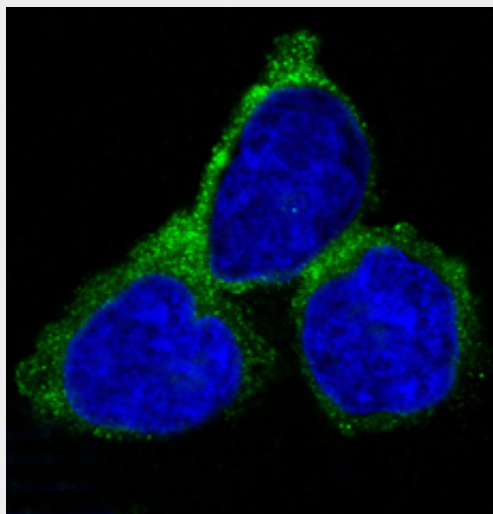
Lane 1: human A375 whole cell lysates,  
Lane 2: human HT1080 whole cell lysates,  
Lane 3: human U87 whole cell lysates,  
Lane 4: human HEL whole cell lysates,  
Lane 5: rat brain tissue lysates,  
Lane 6: rat L6 whole cell lysates,

Lane 7: mouse brain tissue lysates,  
Lane 8: mouse C2C12 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-RAB7 antigen affinity purified monoclonal antibody (Catalog # M02409) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for RAB7 at approximately 23 kDa. The expected band size for RAB7 is at 23 kDa.



Immunohistochemical analysis of paraffin-embedded human colon, using RAB7 Antibody.



Immunofluorescent analysis of Hela cells, using RAB7 Antibody.