

Anti-RAB7A Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

Catalog # M900003

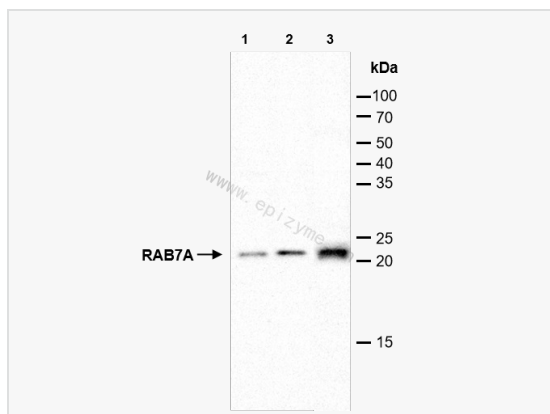
Product Information

Application	WB, IF (Cell), ELISA
Reactivity	Human, Rat
Dilution	WB 1:1,000~1:5,000; IF 1:100
Host	Mouse
Clonality	Monoclonal
Clone No.	24D164D1
Isotype	IgG
Target / Specificity	This RAB7A antibody is generated from mice immunized with a SHC (Shrimp Hemocyanin) conjugated synthetic peptide between 187-201 amino acids from human RAB7A.
Format	Purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3. This antibody is purified through a protein G column.
Storage	Shipped at 4°C. Upon delivery aliquot. Store at 4°C short term (1~2 weeks). Store at -20°C for 2 years. Avoid freeze / thaw cycles.
Precautions	Anti-RAB7A Mouse mAb is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Other Names	RAB7A_HUMAN; Ras-related protein Rab-7a; EC:3.6.5.2; RAB7
Calculated MW	Calculated MW: 23 kDa; Observed MW: 23 kDa
Primary Accession	P51149
Other Accession	NP_004628.4
Gene ID	7879
Antigen Region	187-201 aa
Background	<p>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 <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 (PubMed:11179213, PubMed:12944476, PubMed:14617358, PubMed:20028791, PubMed:21255211).</p>
Cellular Location	Cytoplasmic vesicle; Endosome; Lipid droplet; Lysosome; Membrane; Mitochondrion.

Validation Images



Western Blot - Anti-RAB7A Mouse mAb [24D164D1]

All lanes: M900003 at 1:5,000 dilution

Lane 1: T24 (Human bladder cancer epithelial cell) whole cell lysates

Lane 2: Caco-2 (Human colon cancer tumor cell) whole cell lysates

Lane 3: Rat muscle whole tissue lysates

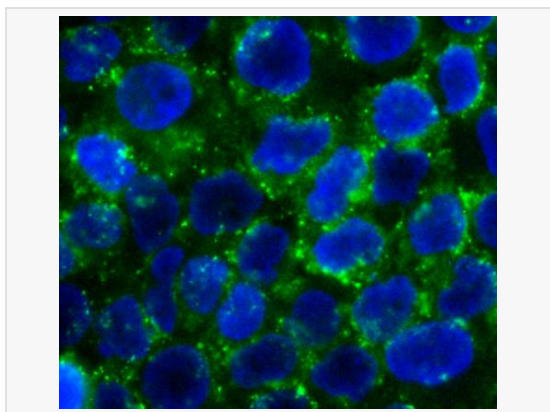
Lysates/proteins at 10 μ g per lane.

Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP Conjugated (Cat. No. LF101) at 1:5,000 dilution

Predicted band size: 23 kDa

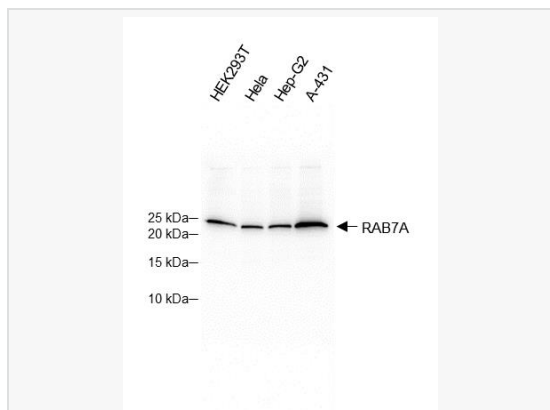
Observed band size: 23 kDa

Developed using the ECL technique (Cat. No. SQ201).



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.01% Saponin

permeabilized A-431 cells labeling anti-RAB7A at 1:100 dilution, followed by Goat Anti-mouse IgG H+L secondary antibody at 1:1,000 dilution (green). The nuclear counter stain is DAPI (blue).



Western Blot analysis of RAB7A expression in cell lines of HEK293T, HeLa, Hep-G2,

and A-431. Lysates at 20 μ g per lane. Anti-RAB7A Mouse mAb was used as the

primary antibody (1:1,000) and goat anti-mouse IgG-HRP (LF101) was used as the

secondary antibody (1:5,000). Chemiluminescent detection was performed using Omni-ECL™ Femto Light Chemiluminescence Kit (SQ201).