

Rabbit Rab5 Polyclonal Antibody | anti-RAB5A antibody

Rab5 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA103658	Rabbit	Human, Mouse, Monkey, Bovine, Rat	Immunofluorescence, Western Blot

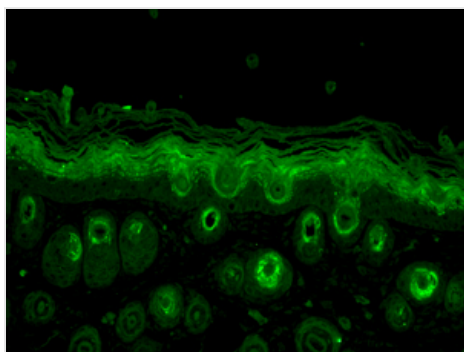
PRODUCT SYNONYMS

Rab5; Polyclonal Antibody; Rab5 Antibody; Rab 5A; RAS associated protein RAB5A; Ras related protein Rab 5 A; anti-RAB5A antibody

PRODUCT SPECIFICATIONS

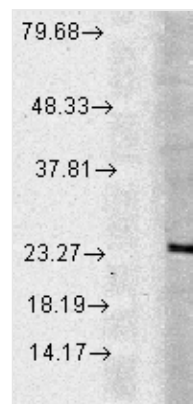
Host	Rabbit
Reactivity	Human, Mouse, Monkey, Bovine, Rat
Clonality	Polyclonal
Form/Format	Affinity Purified
Concentration	1mg/mL (varies by lot)
Sequence Length	215
Applicable Applications for anti-RAB5A antibody	IF (Immunofluorescence), WB (Western Blot)
Certificate of Analysis	1 uL/mL of SPC-168 was sufficient for detection of Rab5 in 15ug of HeLa lysate by ECL immunoblot analysis using Donkey anti-rabbit IgG:HRP as the secondary antibody.
Conjugate	Unconjugated
Storage Buffer	PBS, 50% glycerol, 0.09% sodium azide
Preparation and Storage	-20 degree C

IMAGES



IHC (Immunohistochemistry)

Immunohistochemistry analysis using Rabbit Anti-Rab5 Polyclonal Antibody (SPC-168). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-Rab5 Polyclonal Antibody (SPC-168) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Cytoplasm.



WB (Western Blot)

Western blot analysis of Human Cell line lysates showing detection of Rab5 protein using Rabbit Anti-Rab5 Polyclonal Antibody (SPC-168). Load: 15 ug/protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-Rab5 Polyclonal Antibody (SPC-168) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.

ADDITIONAL INFORMATION

Related Product Information for anti-RAB5A antibody	Background Info: The antibody recognizes 26kDa Rab5 of the above species origins. Scientific Background: Rab5 is a 24kDa member of the Rab family of small guanosine triphosphatases (GTPases), Ras superfamily. Rab GTPases are central regulators of membrane trafficking in the eukaryotic cell. Their regulatory capacity depends on their ability to cycle between the GDP -bound inactive and GTP-bound active states. This conversion is regulated by GDP/GTP exchange factors (GEPs), GDP dissociation inhibitors (GDIs) and GTPase-activating proteins (GAPs) (1, 2). Activation of a Rab protein is coupled to its association with intracellular membranes, allowing it to recruit downstream effector proteins to the cytoplasmic surface of a subcellular compartment (3). Through these proteins, Rab GTPases regulate vesicle formation, actin- and tubulin-dependent vesicle movement, and membrane fusion(1). Rab proteins contain conserved regions involved in guanine-nucleotide binding, and hyper variable COHO-terminal domains with a cysteine motif implicated in subcellular targeting. Post-translational modification of the cysteine motif with one or two geranyl groups is essential for the membrane association and correct intracellular localization of Rab proteins(3). Each Rab shows a characteristic subcellular distribution (4). In particular, Rab5 is ubiquitously expressed in human tissues. It localizes mainly to early endosomes, but is also present on the plasma membrane. It regulates the fusion between endocytic vesicles and early endosomes, as well as the homotypic fusion between early endosomes (5). Among the proteins recruited by the GTP-bound active Rab5 are Rabaptin-5 and EEA1 (6). Anti-Rab5 may be used as an early endosome marker.
Product Categories/Family for anti-RAB5A antibody	Cell Signaling; Neuroscience; Organelle Markers
References	1. Stenmark H., and Olkkonen V.M. (2001) Genome Biol. 2: 3007.1-3007.7. 2. Takai Y., et al. (2001) Physiol. Rev. 8:, 153-208. 3. Ali B.R., et al. (2004) J. Cell Sci. 117: 6401-6412. 4. Zerial M., and McBride H. (2001) Nat. Rev. Mol. Cell Biol. 2: 107-117. 5. Sonnichsen B., et al. (2000) J. Cell Biol. 149: 901-913 6. Woodman P.G. (2000) Traffic. 1: 695-701. 1. Ballmer-Hofer, K., Andersson, A.E., Ratcliffe, L.E. and Berger, P. (2011). Neuropilin-1 promotes VEGFR-2 trafficking through Rab11 vesicles thereby specifying signal output. Blood. 118 (3), 816-826. doi: 10.1182/blood-2011-01-328773.

NCBI AND UNIPROT INFORMATION

NCBI GI #	19923262
NCBI GeneID	5868
NCBI Accession #	NP_004153.2
NCBI GenBank Nucleotide #	NM_004162.4
UniProt Accession #	Q6FI44; B4DJA5; P20339
Molecular Weight	22,178 Da
NCBI Official Full Name	ras-related protein Rab-5A isoform 1
NCBI Official Synonym Full Names	RAB5A, member RAS oncogene family
NCBI Official Symbol	RAB5A
NCBI Official Synonym Symbols	RAB5
NCBI Protein Information	ras-related protein Rab-5A; RAS-associated protein RAB5A
UniProt Protein Name	Ras-related protein Rab-5A
UniProt Gene Name	RAB5A
UniProt Synonym Gene Names	RAB5
UniProt Entry Name	RAB5A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

