

# Rab 5A (S-19): sc-309

## BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, exhibits 30-60% homology with Ras21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The transport of newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves at each stage the movement of carrier vesicles, a process that appears to involve Rab protein function. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the Sec4 protein, which is 40% homologous to Rab proteins, is associated with secretory vesicles. At least eight members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

## CHROMOSOMAL LOCATION

Genetic locus: RAB5A (human) mapping to 3p24.3; Rab5a (mouse) mapping to 17 C.

## SOURCE

Rab 5A (S-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the C-terminus of Rab 5A of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-309 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rab 5A (S-19) is recommended for detection of Rab 5A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rab 5A (S-19) is also recommended for detection of Rab 5A in additional species, including equine and canine.

Suitable for use as control antibody for Rab 5A siRNA (h): sc-36344, Rab 5A siRNA (m): sc-36345, Rab 5A shRNA Plasmid (h): sc-36344-SH, Rab 5A shRNA Plasmid (m): sc-36345-SH, Rab 5A shRNA (h) Lentiviral Particles: sc-36344-V and Rab 5A shRNA (m) Lentiviral Particles: sc-36345-V.

Molecular Weight of Rab 5A: 25 kDa.

Positive Controls: Rab 5A (m): 293T Lysate: sc-122910 or HL-60 whole cell lysate: sc-2209.

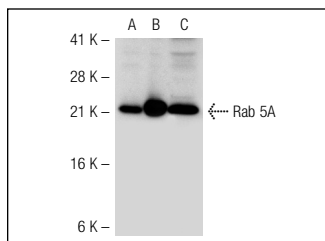
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

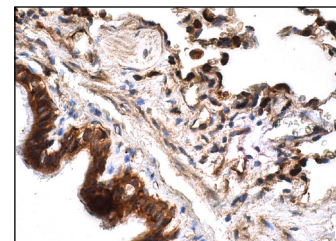
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Rab 5A (S-19): sc-309. Western blot analysis of Rab 5A expression in non-transfected 293T: sc-117752 (A), mouse Rab 5A transfected 293T: sc-122910 (B) and HL-60 (C) whole cell lysates.



Rab 5A (S-19): sc-309. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of respiratory epithelial cells.

## SELECT PRODUCT CITATIONS

1. Fish, K.N., et al. 1996. A novel mechanism for persistence of human cytomegalovirus in macrophages. *J. Virol.* 70: 1855-1862.
2. Pan, X., et al. 2010. Modulation of iron homeostasis in macrophages by bacterial intracellular pathogens. *BMC Microbiol.* 10: 64.
3. Ginsberg, S.D., et al. 2010. Regional selectivity of rab5 and rab7 protein upregulation in mild cognitive impairment and Alzheimer's disease. *J. Alzheimers Dis.* 22: 631-639.
4. Ginsberg, S.D., et al. 2010. Microarray analysis of hippocampal CA1 neurons implicates early endosomal dysfunction during Alzheimer's disease progression. *Biol. Psychiatry* 68: 885-893.
5. Steuble, M., et al. 2010. Molecular characterization of a trafficking organelle: dissecting the axonal paths of calyntenin-1 transport vesicles. *Proteomics* 10: 3775-3788.
6. Halaas, O., et al. 2010. Intracellular Mycobacterium avium intersect transferrin in the Rab11+ recycling endocytic pathway and avoid lipocalin 2 trafficking to the lysosomal pathway. *J. Infect. Dis.* 201: 783-792.
7. Lecat, S., et al. 2011. Contribution of a tyrosine-based motif to cellular trafficking of wild-type and truncated NPY Y<sub>1</sub> receptors. *Cell. Signal.* 23: 228-238.
8. Olvera-Sanchez, S., et al. 2011. Mitochondrial heat shock protein participates in placental steroidogenesis. *Placenta* 32: 222-229.
9. Gardner, L.A., et al. 2011. Rab11a and its binding partners regulate the recycling of the β<sub>1</sub>-adrenergic receptor. *Cell. Signal.* 23: 46-57.



Try **Rab 5A (C-3): sc-515401** or **Rab 5A (E-11): sc-166600**, our highly recommended monoclonal alternatives to Rab 5A (S-19).