

Rab 7 (H-50): sc-10767

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the Ral/Rec, Rap, R-Ras, and Rho/Rab subfamilies, exhibit 30-60% homology with Ras p21. 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. Several 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: RAB7A (human) mapping to 3q21.3; Rab7 (mouse) mapping to 6 D1.

SOURCE

Rab 7 (H-50) is a rabbit polyclonal antibody raised against amino acids 158-207 mapping at the C-terminus of Rab 7 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rab 7 (H-50) is recommended for detection of Rab 7 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rab 7 (H-50) is also recommended for detection of Rab 7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rab 7 siRNA (h): sc-29460, Rab 7 siRNA (m2): sc-270071, Rab 7 shRNA Plasmid (h): sc-29460-SH, Rab 7 shRNA Plasmid (m2): sc-270071-SH, Rab 7 shRNA (h) Lentiviral Particles: sc-29460-V and Rab 7 shRNA (m2) Lentiviral Particles: sc-270071-V.

Molecular Weight of Rab 7: 22 kDa.

Positive Controls: Rab 7 (m): 293T Lysate: sc-122913, A-431 whole cell lysate: sc-2201 or NIH/3T3 whole cell lysate: sc-2210.

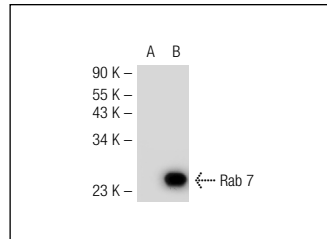
STORAGE

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

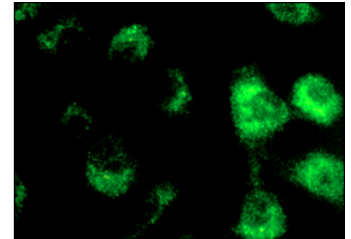
RESEARCH USE

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

DATA



Rab 7 (H-50): sc-10767. Western blot analysis of Rab 7 expression in non-transfected: sc-117752 (A) and mouse Rab 7 transfected: sc-122913 (B) 293T whole cell lysates.



Rab 7 (H-50): sc-10767. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Fukuhara, A., et al. 2003. Involvement of nectin-activated Cdc42 small G protein in organization of adherens and tight junctions in Madin-Darby canine kidney cells. *J. Biol. Chem.* 278: 51885-51893.
2. Arudchelvan, Y., et al. 2003. Identification and characterization of major histocompatibility complex class II compartments in cortical thymic epithelial cells. *Anat. Rec. A Discov. Mol. Cell. Evol. Biol.* 274: 798-806.
3. 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.
4. 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.
5. 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.
6. Leclerc, E.A., et al. 2011. The ubiquitous dermokine δ activates Rab5 function in the early endocytic pathway. *PLoS ONE* 6: e17816.
7. Zemskov, E.A., et al. 2011. Unconventional secretion of tissue transglutaminase involves phospholipid-dependent delivery into recycling endosomes. *PLoS ONE* 6: e19414.
8. Margalef, P., et al. 2012. A truncated form of IKK α is responsible for specific nuclear IKK activity in colorectal cancer. *Cell Rep.* 2: 840-854.
9. Baietti, M., et al. 2012. Syndecan-syntenin-ALIX regulates the biogenesis of exosomes. *Nat. Cell Biol.* 14: 677-685.



Try **Rab 7 (B-3): sc-376362** or **Rab 7 (D-4): sc-271608**, our highly recommended monoclonal alternatives to Rab 7 (H-50). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Rab 7 (B-3): sc-376362**.