

Rab 1A (G-19): sc-26543

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec 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. 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.

REFERENCES

1. Zahraoui, A., et al. 1989. The human Rab genes encode a family of GTP-binding proteins related to yeast YPT1 and SEC4 products involved in secretion. *J. Biol. Chem.* 264: 12394-12401.
2. Chavrier, P., et al. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. *Gene* 112: 261-264.
3. Baldini, G., et al. 1992. Cloning of a Rab3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.
4. Karniguian, A., et al. 1993. Identification of small GTP-binding rab proteins in human platelets: Thrombin-induced phosphorylation of rab3B, rab6, and rab8 proteins. *Proc. Natl. Acad. Sci. USA* 90: 7647-7651.
5. Chen, Y., et al. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab8 and Rab10, by epitope tag. *Proc. Natl. Acad. Sci. USA* 90: 6508-6512.
6. Torti, M., et al. 1993. Association of the low molecular weight GTP-binding protein rap2B with the cytoskeleton during platelet aggregation. *Proc. Natl. Acad. Sci. USA* 90: 7553-7557.

CHROMOSOMAL LOCATION

Genetic locus: RAB1A (human) mapping to 2p14; Rab1 (mouse) mapping to 11 A3.1.

SOURCE

Rab 1A (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rab 1A 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.

Blocking peptide available for competition studies, sc-26543 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Rab 1A (G-19) is recommended for detection of Rab 1A 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).

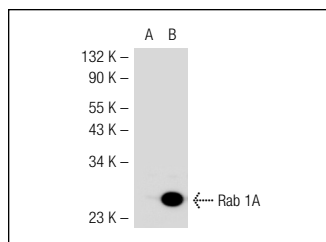
Rab 1A (G-19) is also recommended for detection of Rab 1A in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rab 1A siRNA (h): sc-41808, Rab 1A siRNA (m): sc-41809, Rab 1A shRNA Plasmid (h): sc-41808-SH, Rab 1A shRNA Plasmid (m): sc-41809-SH, Rab 1A shRNA (h) Lentiviral Particles: sc-41808-V and Rab 1A shRNA (m) Lentiviral Particles: sc-41809-V.

Molecular Weight of Rab 1A: 23 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Rab 1A (m): 293T lysate: sc-125876.

DATA



Rab 1A (G-19): sc-26543. Western blot analysis of Rab 1A expression in non-transfected: sc-117752 (A) and mouse Rab 1A transfected: sc-125876 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Rab 1 (E-8): sc-515308** or **Rab 1A (G-10): sc-377201**, our highly recommended monoclonal alternatives to Rab 1A (G-19).