

Rab 3A (Q-12): sc-26552

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 Rab 3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.
4. Chen, Y., et al. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab 8 and Rab 10, by epitope tag. *Proc. Natl. Acad. Sci. USA* 90: 6508-6512.
5. Karniguian, A., et al. 1993. Identification of small GTP-binding Rab proteins in human platelets: Thrombin-induced phosphorylation of Rab 3B, Rab 6, and Rab 8 proteins. *Proc. Natl. Acad. Sci. USA* 90: 7647-7651.
6. Novick, P. and Brennwald, P. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.

CHROMOSOMAL LOCATION

Genetic locus: RAB3A (human) mapping to 19p13.11; Rab3a (mouse) mapping to 8 B3.3.

SOURCE

Rab 3A (Q-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rab 3A 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-26552 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

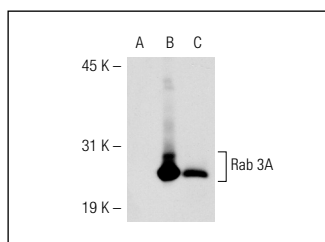
Rab 3A (Q-12) is recommended for detection of Rab 3A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rab 3A siRNA (h): sc-36342, Rab 3A siRNA (m): sc-36343, Rab 3A shRNA Plasmid (h): sc-36342-SH, Rab 3A shRNA Plasmid (m): sc-36343-SH, Rab 3A shRNA (h) Lentiviral Particles: sc-36342-V and Rab 3A shRNA (m) Lentiviral Particles: sc-36343-V.

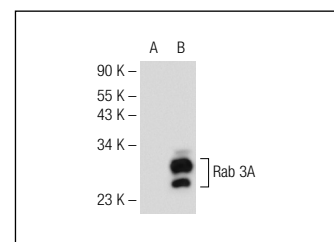
Molecular Weight of Rab 3A: 31 kDa.

Positive Controls: Rab 3A (h): 293T Lysate: sc-177816, Rab 3A (m): 293T Lysate: sc-122905 or mouse brain extract: sc-2253.

DATA



Rab 3A (Q-12): sc-26552. Western blot analysis of Rab 3A expression in non-transfected: sc-117752 (A) and mouse Rab 3A transfected: sc-122905 (B) 293T whole cell lysate and mouse brain tissue extract (C).



Rab 3A (Q-12): sc-26552. Western blot analysis of Rab 3A expression in non-transfected: sc-117752 (A) and human Rab 3A transfected: sc-177816 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hong, M.C., et al. 2009. Ap Rab 3, a biosynthetic Rab protein, accumulates on the maturing phagosomes and symbiosomes in the tropical sea anemone, *Aiptasia pulchella*. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 152: 249-259.

RESEARCH USE

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

PROTOCOLS

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

MONOS
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Guaranteed

Try **Rab 3A (C-7): sc-365069** or **Rab 3A (D-1): sc-271735**, our highly recommended monoclonal alternatives to Rab 3A (Q-12).