

Rab 4B (C-3): sc-271982

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab superfamilies, exhibits 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 family have been identified, each of which is found at a particular stage of a membrane transport pathway.

CHROMOSOMAL LOCATION

Genetic locus: RAB4B (human) mapping to 19q13.2; Rab4b (mouse) mapping to 7 A3.

SOURCE

Rab 4B (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 197-213 at the C-terminus of Rab 4B of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271982 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Rab 4B (C-3) is recommended for detection of Rab 4B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 4B (C-3) is also recommended for detection of Rab 4B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rab 4B siRNA (h): sc-106471, Rab 4B siRNA (m): sc-152667, Rab 4B shRNA Plasmid (h): sc-106471-SH, Rab 4B shRNA Plasmid (m): sc-152667-SH, Rab 4B shRNA (h) Lentiviral Particles: sc-106471-V and Rab 4B shRNA (m) Lentiviral Particles: sc-152667-V.

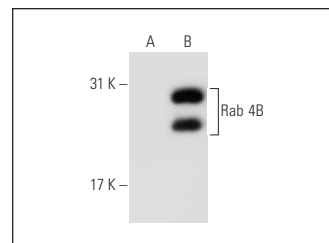
Molecular Weight of Rab 4B isoforms: 24/28 kDa.

Positive Controls: Rab 4B (h): 293T Lysate: sc-177818.

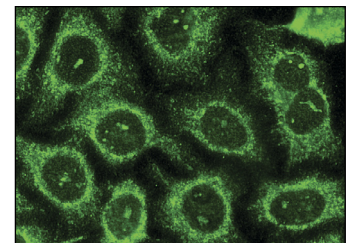
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Rab 4B (C-3): sc-271982. Western blot analysis of Rab 4B expression in non-transfected: sc-117752 (A) and human Rab 4B transfected: sc-177818 (B) 293T whole cell lysates.



Rab 4B (C-3): sc-271982. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Chichger, H., et al. 2015. Neovascularization in the pulmonary endothelium is regulated by the endosome: Rab4-mediated trafficking and p18-dependent signaling. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 309: L700-L709.
- McCormick, D., et al. 2018. Identification of host factors involved in human cytomegalovirus replication, assembly, and egress using a two-step small interfering RNA screen. *MBio* 9: e00716-e00718.
- Sharoar, M.G., et al. 2021. Accumulation of saposin in dystrophic neurites is linked to impaired lysosomal functions in Alzheimer's disease brains. *Mol. Neurodegener.* 16: 45.
- Tavares, S., et al. 2022. FER regulates endosomal recycling and is a predictor for adjuvant taxane benefit in breast cancer. *Cell Rep.* 39: 110584.

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 for detailed protocols and support products.