

Rab 34 (C-5): sc-376710

BACKGROUND

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

CHROMOSOMAL LOCATION

Genetic locus: RAB34 (human) mapping to 17q11.2; Rab34 (mouse) mapping to 11 B5.

SOURCE

Rab 34 (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-47 at the N-terminus of Rab 34 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 34 (C-5) is available conjugated to agarose (sc-376710 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376710 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376710 PE), fluorescein (sc-376710 FITC), Alexa Fluor® 488 (sc-376710 AF488), Alexa Fluor® 546 (sc-376710 AF546), Alexa Fluor® 594 (sc-376710 AF594) or Alexa Fluor® 647 (sc-376710 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376710 AF680) or Alexa Fluor® 790 (sc-376710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376710 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

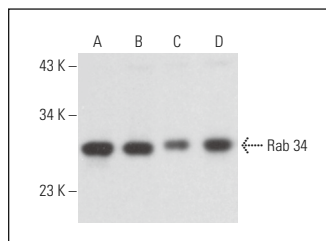
Rab 34 (C-5) is recommended for detection of Rab 34 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Suitable for use as control antibody for Rab 34 siRNA (h): sc-45812, Rab 34 siRNA (m): sc-45813, Rab 34 shRNA Plasmid (h): sc-45812-SH, Rab 34 shRNA Plasmid (m): sc-45813-SH, Rab 34 shRNA (h) Lentiviral Particles: sc-45812-V and Rab 34 shRNA (m) Lentiviral Particles: sc-45813-V.

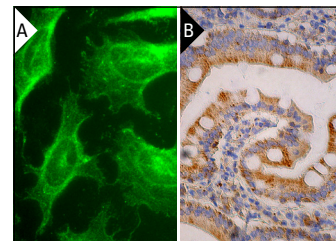
Molecular Weight of Rab 34: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 3T3-L1 cell lysate: sc-2243 or A-431 whole cell lysate: sc-2201.

DATA



Rab 34 (C-5): sc-376710. Western blot analysis of Rab 34 expression in HeLa (A), A-431 (B), 3T3-L1 (C) and RPE-J (D) whole cell lysates.



Rab 34 (C-5): sc-376710. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Starling, G.P., et al. 2016. Folliculin directs the formation of a Rab 34-RILP complex to control the nutrient-dependent dynamic distribution of lysosomes. *EMBO Rep.* 17: 823-841.
2. Ganga, A.K., et al. 2021. Rab 34 GTPase mediates ciliary membrane formation in the intracellular ciliogenesis pathway. *Curr. Biol.* 31: 2895-2905.e7.
3. Kumar, R., et al. 2024. DENND6A links Arl8b to a Rab 34/RILP/dynein complex, regulating lysosomal positioning and autophagy. *Nat. Commun.* 15: 919.
4. Yamaguchi, H., et al. 2024. Ciliary and non-ciliary functions of Rab34 during craniofacial bone development. *Biochem. Biophys. Res. Commun.* 724: 150174.

STORAGE

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

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