

Rab 5C (D-6): sc-374041

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

- 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.
- 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.
- Baldini, G., et al. 1992. Cloning of a Rab 3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.
- 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.
- 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: RAB5C (human) mapping to 17q21.2; Rab5c (mouse) mapping to 11 D.

SOURCE

Rab 5C (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 186-216 at the C-terminus of Rab 5C of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-374041 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Rab 5C (D-6) is recommended for detection of Rab 5C 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 5C (D-6) is also recommended for detection of Rab 5C in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Rab 5C siRNA (h): sc-37157, Rab 5C siRNA (m): sc-37158, Rab 5C shRNA Plasmid (h): sc-37157-SH, Rab 5C shRNA Plasmid (m): sc-37158-SH, Rab 5C shRNA (h) Lentiviral Particles: sc-37157-V and Rab 5C shRNA (m) Lentiviral Particles: sc-37158-V.

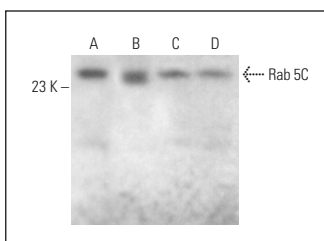
Molecular Weight of Rab 5C: 24 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, ARPE-19 whole cell lysate: sc-364357 or Rab 5C (m): 293T Lysate: sc-125879.

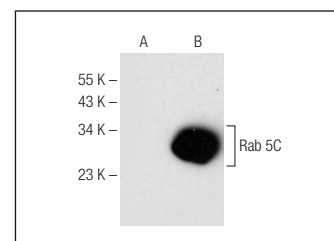
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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 5C (D-6): sc-374041. Western blot analysis of Rab 5C expression in BT-20 (A), ARPE-19 (B), T-47D (C) and J774.A1 (D) whole cell lysates.



Rab 5C (D-6): sc-374041. Western blot analysis of Rab 5C expression in non-transfected: sc-117752 (A) and mouse Rab 5C transfected: sc-125879 (B) 293T whole cell lysates.

RESEARCH USE

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



See **Rab 5 (D-11): sc-46692** for Rab 5 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.