

Rab 5A (A-12): sc-166622

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, exhibits 30-60% homology with Ras21. 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.

CHROMOSOMAL LOCATION

Genetic locus: RAB5A (human) mapping to 3p24.3; Rab5a (mouse) mapping to 17 C.

SOURCE

Rab 5A (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 177-211 within the C-terminus of Rab 5A 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-166622 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 5A (A-12) is recommended for detection of Rab 5A 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).

Suitable for use as control antibody for Rab 5A siRNA (h): sc-36344, Rab 5A siRNA (m): sc-36345, Rab 5A siRNA (r): sc-156057, Rab 5A shRNA Plasmid (h): sc-36344-SH, Rab 5A shRNA Plasmid (m): sc-36345-SH, Rab 5A shRNA Plasmid (r): sc-156057-SH, Rab 5A shRNA (h) Lentiviral Particles: sc-36344-V, Rab 5A shRNA (m) Lentiviral Particles: sc-36345-V and Rab 5A shRNA (r) Lentiviral Particles: sc-156057-V.

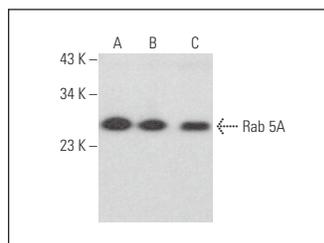
Molecular Weight of Rab 5A: 25 kDa.

Positive Controls: Rab 5A (h2): 293 Lysate: sc-112278, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

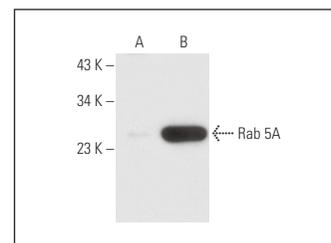
RECOMMENDED SUPPORT REAGENTS

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 5A (A-12): sc-166622. Western blot analysis of Rab 5A expression in HeLa (A), Caki-1 (B) and K-562 (C) whole cell lysates.



Rab 5A (A-12): sc-166622. Western blot analysis of Rab 5A expression in non-transfected: sc-110760 (A) and human Rab 5A transfected: sc-112278 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Paggetti, J., et al. 2015. Exosomes released by chronic lymphocytic leukemia cells induce the transition of stromal cells into cancer-associated fibroblasts. *Blood* 126: 1106-1117.
2. Wierz, M., et al. 2019. Purification of leukemia-derived exosomes to study microenvironment modulation. *Methods Mol. Biol.* 1884: 231-245.
3. Wu, P.S., et al. 2023. EGFR-T790M mutation derived interactome rerouted EGFR translocation contributing to gefitinib resistance in non-small cell lung cancer. *Mol. Cell. Proteomics* 22: 100624.

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.



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.