

Rab 2A (H-5): sc-515612

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. Rab 2A (Ras-related protein Rab-2A) and Rab 2B (Ras-related protein Rab-2B) are 212 and 216 amino acid proteins, respectively, that belong to the Ras-related GTPase superfamily. While both Rab 2A and Rab 2B are required for protein transport from the ER to the Golgi, Rab 2A is lipid-anchored to the ER-Golgi intermediate compartment membrane while Rab 2B is lipid anchored to the cytoplasmic side of the cell membrane.

REFERENCES

- Opdam, F.J., et al. 2000. Expression of Rab small GTPases in epithelial Caco-2 cells: Rab21 is an apically located GTP-binding protein in polarised intestinal epithelial cells. *Eur. J. Cell Biol.* 79: 308-316.
- Ni, X., et al. 2002. Molecular cloning and characterization of a novel human Rab (Rab2B) gene. *J. Hum. Genet.* 47: 548-551.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 179509. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ali, B.R., et al. 2004. Multiple regions contribute to membrane targeting of Rab GTPases. *J. Cell Sci.* 117: 6401-6412.

CHROMOSOMAL LOCATION

Genetic locus: RAB2A (human) mapping to 8q12.1.

SOURCE

Rab 2A (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 185-202 near the C-terminus of Rab 2A of human origin.

PRODUCT

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

Rab 2A (H-5) is available conjugated to agarose (sc-515612 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515612 PE), fluorescein (sc-515612 FITC), Alexa Fluor® 488 (sc-515612 AF488), Alexa Fluor® 546 (sc-515612 AF546), Alexa Fluor® 594 (sc-515612 AF594) or Alexa Fluor® 647 (sc-515612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515612 AF680) or Alexa Fluor® 790 (sc-515612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Rab 2A (H-5) is recommended for detection of Rab 2A of 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 2A siRNA (h): sc-41810, Rab 2A shRNA Plasmid (h): sc-41810-SH and Rab 2A shRNA (h) Lentiviral Particles: sc-41810-V.

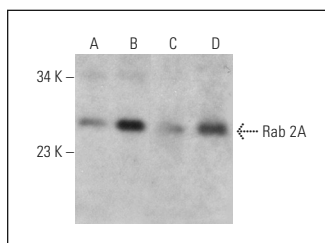
Molecular Weight of Rab 2A: 24 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, human heart extract: sc-363763 or MDA-MB-231 cell lysate: sc-2232.

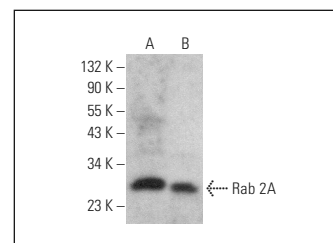
RECOMMENDED SUPPORT REAGENTS

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 2A (H-5): sc-515612. Western blot analysis of Rab 2A expression in MDA-MB-231 (A) and MCF7 (B) whole cell lysates and human rectum (C) and human heart (D) tissue extracts.



Rab 2A (H-5): sc-515612. Western blot analysis of Rab 2A expression in MCF7 (A) and Ca Ski (B) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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