SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 22A (G-7): sc-390726

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Rab 22A, also known as MGC16770, is a 194 amino acid protein that acts as a lipid anchor at endosomal and cellular membranes. Rab 22A binds early-endosomal antigen 1 (EEA1), and likely assists in trafficking between endosomes and the Golgi apparatus. The gene encoding Rab 22A maps to human chromosome 20q13.32.

CHROMOSOMAL LOCATION

Genetic locus: RAB22A (human) mapping to 20q13.32; Rab22a (mouse) mapping to 2 H4.

SOURCE

Rab 22A (G-7) is a mouse monoclonal antibody raised against amino acids 153-194 mapping at the C-terminus of Rab 22A of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 22A (G-7) is available conjugated to agarose (sc-390726 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390726 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390726 PE), fluorescein (sc-390726 FITC), Alexa Fluor® 488 (sc-390726 AF488), Alexa Fluor® 546 (sc-390726 AF546), Alexa Fluor® 594 (sc-390726 AF594) or Alexa Fluor® 647 (sc-390726 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390726 AF680) or Alexa Fluor® 790 (sc-390726 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Rab 22A (G-7) is recommended for detection of Rab 22A 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 22A siRNA (h): sc-76324, Rab 22A siRNA (m): sc-152629, Rab 22A shRNA Plasmid (h): sc-76324-SH, Rab 22A shRNA Plasmid (m): sc-152629-SH, Rab 22A shRNA (h) Lentiviral Particles: sc-76324-V and Rab 22A shRNA (m) Lentiviral Particles: sc-152629-V.

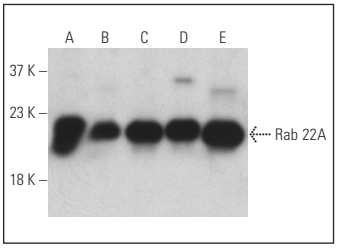
Molecular Weight of Rab 22A: 21 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, Jurkat whole cell lysate: sc-2204 or PC-12 cell lysate: sc-2250.

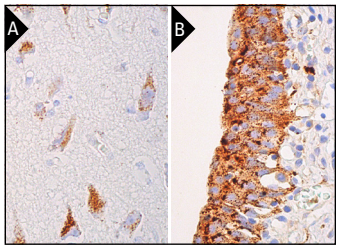
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rab 22A (G-7): sc-390726. Western blot analysis of Rab 22A expression in Jurkat (**A**), AMJ2-C8 (**B**), PC-12 (**C**), WI-38 (**D**) and I-11.15 (**E**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



Rab 22A (G-7): sc-390726. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Zhou, Y., et al. 2017. Rab 22A enhances CD147 recycling and is required for lung cancer cell migration and invasion. Exp. Cell Res. 357: 9-16.
2. Ye, Y., et al. 2019. MicroRNA-373 exerts anti-tumor functions in human liver cancer by targeting Rab 22A. Mol. Med. Rep. 20: 3874-3882.
3. Cao, P., et al. 2024. Genomic amplification of TBC1D31 promotes hepatocellular carcinoma through reducing the Rab 22A-mediated endolysosomal trafficking and degradation of EGFR. Adv. Sci. 11: e2405459.

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.