

SRGAP1 (G-10): sc-390352

BACKGROUND

SRGAPs contain a highly conserved overall primary structure and play an important role in the cell facilitating Slit- robo signaling in cell migration and axon guidance. SRGAP1 (Slit-robo Rho GTPase activating protein 1), also known as ARHGAP13 (Rho GTPase activating protein 13), functions as a GTPase-activating protein for Cdc42 and Rho A. Expressed in kidney, testis, lung and brain, SRGAP1 contains an FCH (Fes/CIP4 homology) domain, a Rho-GAP domain and an SH3 domain. In the presence of Slit, SRGAP1 (via its SH3 domain) binds to the CC3 motif in robo (a protein responsible for mediating the repulsive effect of Slit) with higher affinity and inhibits Cdc42 activity in a robo/SRGAP-dependent manner. More specifically, SRGAP1 increases the intrinsic GTPase activity of Cdc42, thereby converting it to its inactive, GDP-bound form. Inactivation of Cdc42 ultimately leads to a decrease in Actin polymerization.

REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
2. Wong, K., et al. 2001. Signal transduction in neuronal migration: roles of GTPase activating proteins and the small GTPase Cdc42 in the Slit-Robo pathway. Cell 107: 209-221.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606523. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Katoh, M., et al. 2003. FNB2 gene on human chromosome 1q32.1 encodes ARHGAP family protein with FCH, FBH, Rho-GAP and SH3 domains. Int. J. Mol. Med. 11: 791-797.
5. Katoh, M., et al. 2004. Identification and characterization of human FCHO2 and mouse Fcho2 genes in silico. Int. J. Mol. Med. 14: 327-331.

CHROMOSOMAL LOCATION

Genetic locus: SRGAP1 (human) mapping to 12q14.2.

SOURCE

SRGAP1 (G-10) is a mouse monoclonal antibody raised against amino acids 831-910 mapping near the C-terminus of SRGAP1 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.

SRGAP1 (G-10) is available conjugated to agarose (sc-390352 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390352 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390352 PE), fluorescein (sc-390352 FITC), Alexa Fluor® 488 (sc-390352 AF488), Alexa Fluor® 546 (sc-390352 AF546), Alexa Fluor® 594 (sc-390352 AF594) or Alexa Fluor® 647 (sc-390352 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390352 AF680) or Alexa Fluor® 790 (sc-390352 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SRGAP1 (G-10) is recommended for detection of SRGAP1 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 SRGAP1 siRNA (h): sc-95789, SRGAP1 shRNA Plasmid (h): sc-95789-SH and SRGAP1 shRNA (h) Lentiviral Particles: sc-95789-V.

Molecular Weight (predicted) of SRGAP1 isoforms: 124/122 kDa.

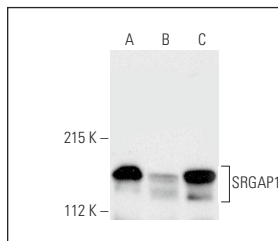
Molecular Weight (observed) of SRGAP1: 144-149 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, WI-38 whole cell lysate: sc-364260 or DU 145 cell lysate: sc-2268.

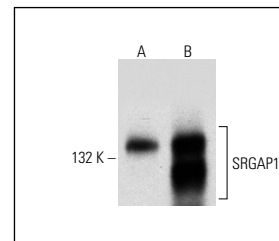
RECOMMENDED SUPPORT REAGENTS

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



SRGAP1 (G-10): sc-390352. Western blot analysis of SRGAP1 expression in DU 145 (A), HEK293 (B) and A549 (C) whole cell lysates.



SRGAP1 (G-10): sc-390352. Western blot analysis of SRGAP1 expression in IMR-32 (A) and WI-38 (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.

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