

SRGAP1 (SQ-6): sc-81939

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.

CHROMOSOMAL LOCATION

Genetic locus: SRGAP1 (human) mapping to 12q14.2; Srgap1 (mouse) mapping to 10 D2.

SOURCE

SRGAP1 (SQ-6) is a mouse monoclonal antibody raised against recombinant SRGAP1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SRGAP1 (SQ-6) is recommended for detection of SRGAP1 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), 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 SRGAP1 siRNA (h): sc-95789, SRGAP1 siRNA (m): sc-153820, SRGAP1 shRNA Plasmid (h): sc-95789-SH, SRGAP1 shRNA Plasmid (m): sc-153820-SH, SRGAP1 shRNA (h) Lentiviral Particles: sc-95789-V and SRGAP1 shRNA (m) Lentiviral Particles: sc-153820-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.

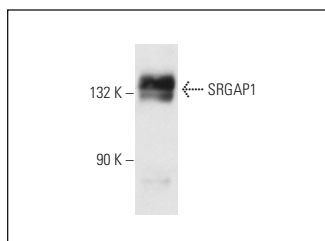
STORAGE

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

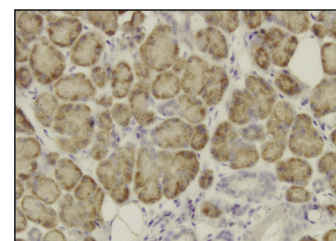
RESEARCH USE

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

DATA



SRGAP1 (SQ-6): sc-81939. Western blot analysis of SRGAP1 expression in IMR-32 whole cell lysate.



SRGAP1 (SQ-6): sc-81939. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic localization

SELECT PRODUCT CITATIONS

1. Yamazaki, D., et al. 2013. srGAP1 regulates lamellipodial dynamics and cell migratory behavior by modulating Rac1 activity. *Mol. Biol. Cell* 24: 3393-3405.
2. Hwang, D.Y., et al. 2015. Mutations of the SLIT2-ROBO2 pathway genes SLIT2 and SRGAP1 confer risk for congenital anomalies of the kidney and urinary tract. *Hum. Genet.* 134: 905-916.
3. Fan, X., et al. 2016. SLIT2/ROBO2 signaling pathway inhibits nonmuscle myosin IIA activity and destabilizes kidney podocyte adhesion. *JCI Insight* 1: e86934.
4. Liang, X., et al. 2017. Tyrosine dephosphorylated cortactin downregulates contractility at the epithelial zonula adherens through SRGAP1. *Nat. Commun.* 8: 790.
5. Liang, X., et al. 2018. Regulated recruitment of SRGAP1 modulates RhoA signaling for contractility during epithelial junction maturation. *Cytoskeleton* 75: 61-69.
6. Huang, T., et al. 2018. SRGAP1, a crucial target of miR-340 and miR-124, functions as a potential oncogene in gastric tumorigenesis. *Oncogene* 37: 1159-1174.
7. Kandilya, D., et al. 2020. High glucose alters the DNA methylation pattern of neurodevelopment associated genes in human neural progenitor cells *in vitro*. *Sci. Rep.* 10: 15676.

PROTOCOLS

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