

SLITRK2 (K-14): sc-169357

BACKGROUND

SLITRK family proteins are integral membrane proteins that have a C-terminal domain that is partially similar to TRK neurotrophin receptor proteins and two leucine-rich repeat (LRR) domains that are similar to those of SLIT proteins. SLITRK2 (SLIT and NTRK-like protein 2) is a 845 amino acid single-pass type I membrane protein that contains 14 LRR (leucine-rich) repeats and is expressed in neural tissues, with highest levels found in adult cerebral cortex. Overexpression of SLITRK2 leads to inhibition of unipolar neurites in cultured cells, suggesting that it suppresses neurite outgrowth. Inhibitory activity of SLITRK2 is localized to its C-terminal intracellular domain and without this region the protein induces neurite outgrowth. Variants in the gene encoding SLITRK2 may contribute to the development of bipolar disorder, autism spectrum disorder and schizophrenia. There are two isoforms of SLITRK2 that are produced as a result of alternative splicing events.

REFERENCES

1. Aruga, J., et al. 2003. Human SLITRK family genes: genomic organization and expression profiling in normal brain and brain tumor tissue. *Gene* 315: 87-94.
2. Aruga, J., et al. 2003. Identification and characterization of Slitrk, a novel neuronal transmembrane protein family controlling neurite outgrowth. *Mol. Cell. Neurosci.* 24: 117-129.
3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 300561. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Milde, T., et al. 2007. A novel family of slitrk genes is expressed on hematopoietic stem cells and leukemias. *Leukemia* 21: 824-827.
5. Imami, K., et al. 2008. Automated phosphoproteome analysis for cultured cancer cells by two-dimensional nanoLC-MS using a calcined titania/C18 biphasic column. *Anal. Sci.* 24: 161-166.
6. Beaubien, F., et al. 2009. Differential expression of Slitrk family members in the mouse nervous system. *Dev. Dyn.* 238: 3285-3296.

CHROMOSOMAL LOCATION

Genetic locus: SLITRK2 (human) mapping to Xq27.3; Slitrk2 (mouse) mapping to X A7.1.

SOURCE

SLITRK2 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of SLITRK2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169357 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SLITRK2 (K-14) is recommended for detection of SLITRK2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other SLITRK family members.

SLITRK2 (K-14) is also recommended for detection of SLITRK2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SLITRK2 siRNA (h): sc-91358, SLITRK2 siRNA (m): sc-153595, SLITRK2 shRNA Plasmid (h): sc-91358-SH, SLITRK2 shRNA Plasmid (m): sc-153595-SH, SLITRK2 shRNA (h) Lentiviral Particles: sc-91358-V and SLITRK2 shRNA (m) Lentiviral Particles: sc-153595-V.

Molecular Weight of SLITRK2 isoform 1: 95 kDa.

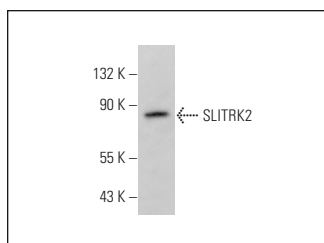
Molecular Weight of SLITRK2 isoform 2: 83 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SLITRK2 (K-14): sc-169357. Western blot analysis of SLITRK2 expression in RAW 264.7 whole cell lysate.

STORAGE

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