SANTA CRUZ BIOTECHNOLOGY, INC.

SLITRK4 (T-16): sc-169361

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. SLITRK4 (SLIT and NTRK-like protein 4) is a 837 amino acid single-pass type I membrane protein that contains 18 LRR (leucine-rich) repeats and is expressed in neural tissues, specifically in the thalamus, hypothalamus, subventricular zone, CA3 region of the hippocampus and cortical plate. SLITRK4 may be upregulated in some astrocytic brain tumors such as glioblastomas, astrocytomas and primitive neuroectodermal tumors. As compared with its family member SLITRK2, SLITRK4 only weakly suppresses neurite outgrowth. A study using genome-wide transcriptional profiling suggested that the gene encoding SLITRK4, as well as the ARL5B and PLA2G7 genes, may be involved in the pathogenesis of preeclampsia.

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: 300562. 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. Beaubien, F., et al. 2009. Differential expression of Slitrk family members in the mouse nervous system. Dev. Dyn. 238: 3285-3296.
6. Stillman, A.A., et al. 2009. Developmentally regulated and evolutionarily conserved expression of SLITRK1 in brain circuits implicated in Tourette syndrome. J. Comp. Neurol. 513: 21-37.
7. Løset, M., et al. 2010. A transcriptional profile of the decidua in preeclampsia. Am. J. Obstet. Gynecol. 204: 84.
8. Katayama, K., et al. 2010. Slitrk1-deficient mice display elevated anxiety-like behavior and noradrenergic abnormalities. Mol. Psychiatry 15: 177-184.

CHROMOSOMAL LOCATION

Genetic locus: SLITRK4 (human) mapping to Xq27.3; Slitrk4 (mouse) mapping to X A7.1.

SOURCE

SLITRK4 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of SLITRK4 of human origin.

STORAGE

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

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-169361 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLITRK4 (T-16) is recommended for detection of SLITRK4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

SLITRK4 (T-16) is also recommended for detection of SLITRK4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SLITRK4 siRNA (h): sc-91284, SLITRK4 siRNA (m): sc-153597, SLITRK4 shRNA Plasmid (h): sc-91284-SH, SLITRK4 shRNA Plasmid (m): sc-153597-SH, SLITRK4 shRNA (h) Lentiviral Particles: sc-91284-V and SLITRK4 shRNA (m) Lentiviral Particles: sc-153597-V.

Molecular Weight of SLITRK4: 94 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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