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Slitrk1 Antibody

Catalog # ASC10636

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q96PX8
Other Accession	NP_443142, 40217817
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	77735
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Slitrk1 antibody can be used for detection of Slitrk1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	114798
Other Names	SLIT and NTRK-like protein 1, Leucine-rich repeat-containing protein 12, SLITRK1, KIAA1910, LRRC12
Target/Specificity	SLITRK1; This antibody is predicted to have no cross-reactivity to other Slitrk proteins.
Reconstitution & Storage	Slitrk1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Slitrk1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLITRK1
Synonyms	KIAA1910, LRRC12
Function	It is involved in synaptogenesis and promotes excitatory synapse differentiation (PubMed:27273464, PubMed:27812321). Enhances neuronal dendrite outgrowth (PubMed:16224024, PubMed:19640509).
Cellular Location	Membrane; Single-pass type I membrane protein. Secreted Synapse {ECO:0000250|UniProtKB:Q810C1}

Tissue Location	Expressed predominantly in the frontal lobe of the cerebral cortex of the brain. Also expressed in some astrocytic brain tumors such as astrocytomas, oligodendrogliomas, glioblastomas, gangliogliomas and primitive neuroectodermal tumors

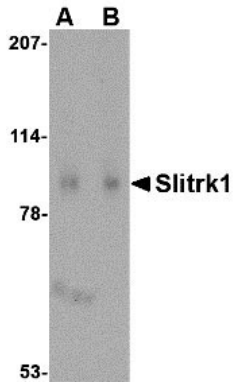
Background

Slitrk1 Antibody: SLIT and NTRK-like family 1 (Slitrk1) is a member a protein family consisting of six homologous transmembrane proteins (Slitrk1-6) that share two conserved leucine-rich repeat domains in the extracellular domain and have significant homology to Slit, a secreted axonal growth-controlling protein. These proteins are also homologous to trk neurotrophin receptors in their intracellular domains. Expression of Slitrk proteins is highly restricted to neural and brain tumor tissues, but varies within the family. For example, Slitrk1 is expressed primarily in mature neurons. Overexpression of Slitrk1 in transfected neuronal cells induced unipolar neurites, while expression of the other Slitrk proteins inhibited neurite outgrowth, suggesting that these proteins are involved in the control of neurite outgrowth. While Slitrk1 variants have been suggested associated with Tourette's Syndrome, it is thought to play only a minor role if at all.

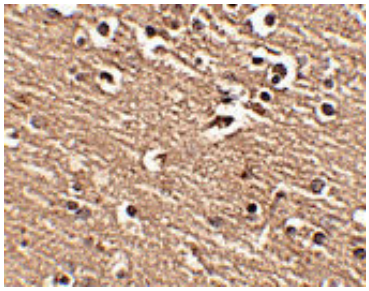
References

Aruga J and Mikoshiba K. Identification and characterization of Slitrk, a novel transmembrane protein family controlling neurite outgrowth. Mol. Cell Neurosci.2003; 24:117-29.
Aruga J, Yokota N, and Mikoshiba K. Human SLITRK family genes: genomic organization and expression profiling in normal and brain tumor tissue. Gene2003; 315:87-94.
Abelson JF, Kwan KY, O'Roak BJ, et al. Sequence variants in SLITRK1 are associated with Tourette's syndrome. Science2005; 310:317-20.
Fabbrini G, Pasquini M, Aurilia C, et al. A large Italian family with Gilles de la Tourette syndrome: clinical study and analysis of the SLITRK1 gene. Mov. Disord.2007; 22:2229-34.

Images

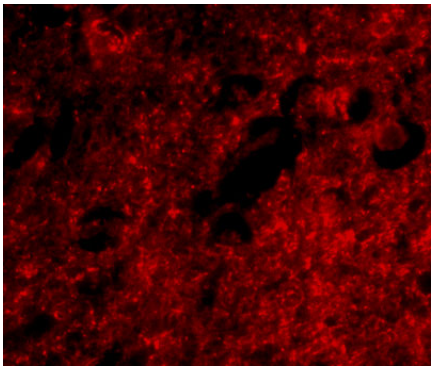


Western blot analysis of Slitrk1 in human brain tissue lysate with Slitrk1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of Slitrk1 in human brain tissue with Slitrk1 antibody at 2.5 µg/mL.

Immunofluorescence of slitrk1 in human brain tissue with slitrk1 antibody at 20 µg/mL.



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