Human SLITRK1 Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 327829

Catalog Number: FAB30091T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SLITRK1 in direct ELISAs. In direct ELISAs, no cross-reactivity with reactivity with SLITRK2, 3, 4, or 5 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 327829
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human SLITRK1 Ala16-Ser616 Accession # Q96PX8
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

SLITRK1 (Slit and Trk-like family member 1) is a charter member of the SLITRK family of proteins (1, 2). This family includes six members, all of which contain a slit-like extracellular region, and all of which (save for SLITRK1) contain a Trk-like cytoplasmic region (3). Human SLITRK1 is a type I transmembrane protein 696 amino acids (aa) in length. It contains a 17 aa signal sequence, a 605 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 53 aa cytoplasmic region. The ECD is characterized by the presence of two leucine-rich domains (LRD) that resemble those found in slit. Each LRD (aa 57-200; aa 374-517) contains six leucine-rich repeats (LRRs), followed by a Cys-rich, C-terminal LRR (aa 212-262; aa 529-579). The exact function of the LRRs is not known. Based on other LRRs, it might be assumed that they mediate protein-protein-interaction (4). There are multiple, single aa mutations in the ECD. Their significance is unclear (5). One truncating frameshift mutation is known that shows a unique 27 aa substitution after Arg 421 (6). This 448 aa form is associated with Tourette's Syndrome. As noted, the cytoplasmic region is unique among SLITRK family members. It contains no known signaling motifs, which is in contrast to SLITRK2-6 which show TrkA-like tyrosine phosphorylation sites. This difference is reflected in their function. SLITRK1 is a protein that is found in adult neurons of the cerebrum, thalamus and hippocampus. It induces neurite outgrowth whereas SLITRK2-6 block neurite extension (3). Human SLITRK1 shares 99%, 98% and 99% aa sequence identity with canine, mouse and bovine SLITRK1, respectively.

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