Recombinant Mouse SLITRK6

Catalog Number: 1812-SK

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse SLITRK6 protein Met1-Ser607, with a C-terminal 6-His tag Accession # Q8C110
N-terminal Sequence Analysis	Ser20
Predicted Molecular Mass	66 kDa

SPECIFICATIONS

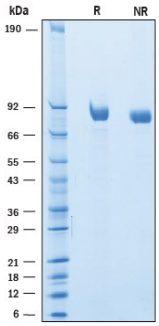
SDS-PAGE	80-90 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE



Recombinant Mouse SLITRK6 Protein SDS-PAGE 2 µg/lane of Recombinant Mouse SLITRK6 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 80-90 kDa.

BACKGROUND

SLITRK6 (Slit and Trk-like family member 6) is a type I transmembrane member of the SLITRK family of proteins which contain a slit-like extracellular region and a Trk-like cytoplasmic region. Mature mouse SLITRK6 consists of a 587 amino acid (aa) extracellular domain (ECD) with 5 leucine rich repeats (LRR) flanked by N-and C-terminal LRR domains, followed by 6 more LRR flanked by another pair of N- and C-terminal LRR domains (1, 2). Within the ECD, mouse SLITRK6 shares 89% and 95% aa sequence identity with human and rat SLITRK6, respectively. SLITRK6 is strongly expressed in the auditory and vestibular sensory epithelia of the ear (3). Its expression in the inner ear promotes innervation and survival of sensory neurons (3, 4). In the brain, SLITRK6 expression is highly restricted in the thalamus, lateral geniculate nucleus, and absent in the cortex (1, 3). SLITRK6 can suppress neurite outgrowth and promote the formation of excitatory and inhibitory presynaptic structures (2, 5). Mice lacking SLITRK6 exhibit delayed retinal synaptogenesis and multiple auditory abnormalities as well as defective auditory sensory innervation, neuronal loss in the vestibular ganglia, and reduced cochlear expression of BDNF, NT-3, TrkB, and TrkC (3, 6, 7). In humans, nonsense mutations of SLITRK6 are associated with myopia and sensorial deafness (6).

References:

1. Aruga, J. *et al.* (2003) Gene **315**:87.
2. Aruga, J. and K. Mikoshiba (2003) Mol. Cell Neurosci. **24**:117.
3. Katayama, K.-I. *et al.* (2009) PLoS ONE **4**:e7786.
4. Morlet, T. *et al.* (2014) Laryngoscope. **124**:95.
5. Takahashi, H. *et al.* (2012) Nat. Neurosci. **15**:389.
6. Tekin, M. *et al.* (2013) J. Clin. Invest. **123**:2094.
7. Matsumoto, Y. *et al.* (2011) PLoS ONE **6**:e16497.

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