Recombinant Mouse IGSF9

Catalog Number: 9140-S9

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Arg21-Leu730, with a C-terminal 6-His tag Accession # Q05BQ1
N-terminal Sequence Analysis	Arg21
Predicted Molecular Mass	78 kDa

SPECIFICATIONS

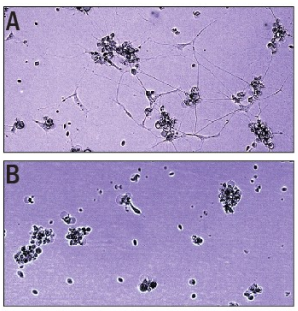
SDS-PAGE	95-110 kDa, reducing conditions
Activity	Measured by its ability to inhibit neurite outgrowth of dissociated E13 chick embryonic dorsal root ganglia (DRG) neurons. Able to significantly inhibit neurite outgrowth when immobilized as a 3 µL droplet containing 150 ng on a nitrocellulose-coated microplate
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 250 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 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Mouse IGSF9 (Catalog # 9140-S9) Inhibits Neurite Outgrowth in E13 Chicken Embryonic Dorsal Root Ganglia (DRG) Neurons. A) Normal Neurite outgrowth is observed in untreated chicken E13 DRG neurons. B) Chicken DRG neurite outgrowth is significantly inhibited when Recombinant Mouse IGSF9 is immobilized as a 3 µL droplet containing 150 ng of IGSF9 protein on a nitrocellulose-coated microplate.

BACKGROUND

IGSF9, also known as Dasm1, is an approximately 130 kDa transmembrane protein that plays a role in neuronal synapse maintenance and function (1). Mature mouse Dasm1 consists of a 714 amino acid (aa) extracellular domain (ECD) with 5 Ig-like domains and 2 fibronectin type-3 domains, a 21 aa transmembrane segment, and a 424 aa cytoplasmic domain (2). Within the ECD, mouse Dasm1 shares 90% and 96% aa sequence identity with human and rat Dasm1, respectively. Alternative splicing generates an additional isoform that is truncated following the fifth Ig-like domain. Dasm1 is expressed in the dorsal root and trigeminal ganglia, forebrain, cortex, dentate gyrus, pyramidal cells, Purkinje cells, and hippocampal CA1 interneurons (2-5). It localizes to dendrites, cell bodies, and post-synaptic densities (3, 6). Dasm1 functions as a homophilic adhesion protein that supports the maintenance of inhibitory synapses as well as inhibitory neurotransmission (5, 6).

References:

1. Hansen, M. and P.S. Walmod (2013) Neurochem. Res. **38**:1236.
2. Doudney, K. *et al.* (2002) Genomics **79**:663.
3. Shi, S.-H. *et al.* (2004) Proc. Natl. Acad. Sci. USA **101**:13341.
4. Mishra, A. *et al.* (2008) Mol. Cell. Biol. **28**:2782.
5. Mishra, A. *et al.* (2014) J. Neurosci. **34**:4187.
6. Shi, S.-H. *et al.* (2004) Proc. Natl. Acad. Sci. USA **101**:13346.

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