Recombinant Mouse IGSF4B/SynCAM3 His-tag

Catalog Number: 9988-S4

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse IGSF4B/SynCAM3 protein Asn23-His328, with a C-terminal 6-His tag Accession # Q99N28
N-terminal Sequence Analysis	Asn23
Predicted Molecular Mass	34 kDa

SPECIFICATIONS

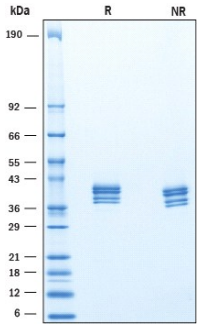
SDS-PAGE	35-44 kDa, reducing conditions
Activity	Measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons. Recombinant Mouse IGSF4B/SynCAM3, immobilized at 1.25-2.5 µg/mL on a 96-well plate, is able to significantly enhance neurite outgrowth.
Endotoxin Level	<0.10 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 1 mg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	• 12 months from date of receipt, ≤ -20 °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



2 µg/lane of Recombinant Mouse IGSF4B/SynCAM3 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 35-44 kDa.

BACKGROUND

IGSF4B (immunoglobulin superfamily member 4B), also called CADM3, TSLL1, Necl-1 and SynCAM-3, is a neural tissue-specific member of the nectin-like family of immunoglobulin superfamily (1, 2). It is a 48-50 kDa type I transmembrane (TM) glycoprotein that is concentrated at non-junctional contact sites of neuronal axons and glial processes (2, 3). In myelinated peripheral nerve fibers, IGSF4B is concentrated at nodes of Ranvier in contact sites of Schwann cells (2). The 396 amino acid (aa) mouse IGSF4B contains a 22 aa signal sequence, a 306 aa extracellular domain (ECD), a 21 aa transmembrane domain and a 47 aa cytoplasmic domain. The IGSF4B ECD is highly conserved, sharing 95-96% aa identity between human, mouse, rat, canine and bovine sequences. The ECD of IGSF4A, B, C and D proteins share 35-50% aa identity. The ECD contains an N-terminal V-type Ig-like domain that is responsible for Ca^{2+}-independent homophilic and heterophilic interactions with Nectin-1, Nectin-3 or Necl-2 (IGSF-4) in trans. It also contains two C2-type Ig-like domains that are responsible for Ca^{2+}-independent homophilic dimerization in cis that is thought to precede trans interaction (2, 4, 5). The cytoplasmic domain binds members of the MAGUK guanylate kinase subfamily, such as Dlg3, Pals2 and CASK (2). These activities are thought to play roles in adhesion and architecture at the synapse (2). IGSF-4B was also identified as a tumor-suppressor gene and it inhibits migration, invasion, and induces differentiation of glioma cells (6). It also suppresses growth and tumorigenic ability of colon cancer cells (7). We have also shown that IGSF4B promotes in vitro outgrowth of cortical neurons.

References:

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