

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human IGSF4C/SynCAM4 protein Gln25-Tyr323, with a C-terminal 6-His tag Accession # Q8NFX8
N-terminal Sequence Analysis	No results obtained: Gln25 predicted
Predicted Molecular Mass	34 kDa

SPECIFICATIONS

SDS-PAGE	50-65 kDa, reducing conditions
Activity	Measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons. Optimal neurite outgrowth was observed when neurons were plated on nitrocellulose coated 96-well culture plates that had been pre-coated with 50 µL/well of Recombinant Human IGSF4C/SynCAM4 at 6-24 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in sterile 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. <ul style="list-style-type: none"> ● 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.

BACKGROUND

IGSF4C is an immunoglobulin superfamily member that is also known as Nectin-like protein 4 (Nectin-4), synaptic cell adhesion molecule 4 (SynCAM4), or tumor suppressor in lung cancer-like 2 (TSL2) (1, 2). The four IGSF4 proteins, designated A, B, C and D, are type I transmembrane glycoproteins expressed mainly in neurons, but also in lung, kidney, bladder, prostate and testis (1-5). Their extracellular domains (ECD) share 35-50% amino acid (aa) identity and each contain one V-type Ig-like and two C2-type Ig-like domains. These domains are responsible for Ca⁺⁺-independent homophilic and heterophilic interactions. The 388 aa human IGSF4C contains a 20 aa signal sequence, a 304 aa ECD that shares 98-99% amino acid identity with mouse, rat, canine and bovine IGSF4C, a 21 aa transmembrane sequence, and a 43 aa cytoplasmic domain. The apparent size of mouse or human IGSF4C may be variably reported as 48-67 kDa, probably due to differences in glycosylation (2, 5, 8). In the peripheral nervous system, IGSF4C is expressed on Schwann cells, and its internodal interaction with IGSF4A (Nectin-1, SynCAM-3) on axons is critical for adhesion and myelination (6-8). In the brain, all IGSF4 family members are expressed at high levels concurrent with synapse formation (4). In the cerebellum, IGSF4C is expressed on Purkinje cells, with complementary expression of IGSF4 on granule cells (4). Heterophilic interaction with IGSF4D (Nectin-3, SynCAM2) has also been identified, but homophilic interaction is unlikely (4, 6). IGSF4C is also proposed as a tumor suppressor that is downregulated in many prostate cancers and gliomas (1, 5).

References:

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