Recombinant Human IGSF4C/SynCAM4 Fc Chimera

Catalog Number: 9905-S4

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human IGSF4C/SynCAM4 protein

N-terminal Sequence Analysis	No results obtained. Gln25 inferred from enzymatic pyroglutamate treatment revealing Glu26.
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	60 kDa

SPECIFICATIONS

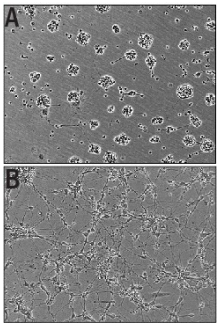
SDS-PAGE	74-97 kDa, reducing conditions
Activity	Measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons. Recombinant Human IGSF4C/SynCAM4 Fc Chimera, immobilized at 0.5-1 µg/mL on a 96-well plate, is able to significantly enhance neurite outgrowth.
Endotoxin Level	<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.

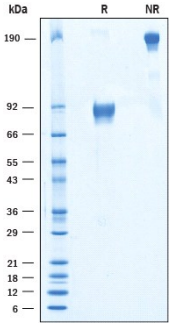
DATA

Bioactivity



Recombinant Human IGSF4C/SynCAM4 Fc Chimera (Catalog # 9905-S4) Induces Cortical Neurite Outgrowth. A) Untreated E16-18 embryonic rat cortical neurons. B) Neurite outgrowth in E16-18 embryonic rat cortical neurons treated with 0.5 µg/mL of Recombinant Human IGSF4C/SynCAM4 Fc Chimera.

SDS-PAGE



2 µg/lane of Recombinant Human IGSF4C was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 74-97 kDa and 150-200 kDa, respectively.

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BACKGROUND

IGSF4C is an immunoglobulin superfamily member that is also known as Nectin-like protein 4 (Necl-4), synaptic cell adhesion molecule 4 (SynCAM4), or tumor suppressor in lung cancer-like 2 (TSLL-2) (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 (Necl-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 (Necl-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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