Human IGSF4B/SynCAM3 Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 730014

Catalog Number: FAB36781X

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGSF4B/SynCAM3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) IGSF3, 4, 4C, 4D, 8, or recombinant mouse IGSF4 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 730014
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IGSF4B/SynCAM3 Pro21-Tyr329 Accession # Q8N126
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

IGSF4B (immunoglobulin superfamily member 4B), also called CADM3, TSLL1, Necl-1 and SynCAM3, 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 398 amino acid (aa) human IGSF4B contains a 24 aa signal sequence, a 306 aa extracellular domain (ECD), a 21 aa transmembrane domain and a 47 aa cytoplasmic domain. The ECD contains an N-terminal V-type Ig-like domain that is responsible for Ca^{++}-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^{++}-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). We have also shown that IGSF4B promotes *in vitro* outgrowth of cortical neurons. Of two known splice variants, one shows an insertion of 34 aa near the mature N-terminus and probably represents a 60 kDa form. A smaller variant shows deletions of aa 185-231, and 281-398, which includes the first C2-type Ig-like domain and the TM segment. 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.

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