

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human (rh) IGSF4C/SynCAM4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) IGSF4A, rhIGSF4B, rhIGSF4D, or rhIGSF8 is observed.
Source	Monoclonal Rat IgG ₁ Clone # 404619
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IGSF4C/SynCAM4 Gln25-Tyr323 Accession # Q8NFZ8
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	A172 human glioblastoma cell line

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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 (TSL-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 Ca²⁺-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:

1. Fukuhara, H. *et al.* (2001) *Oncogene* **20**:5401.
2. Biederer, T. *et al.* (2006) *Genomics* **87**:139.
3. Takai, Y. *et al.* (2008) *Nat. Rev. Mol. Cell Biol.* **9**:603.
4. Thomas, L. A. *et al.* (2008) *J. Comp. Neurol.* **510**:47.
5. Williams, Y. N. *et al.* (2005) *Oncogene* **25**:1446.
6. Fogel, A. I. *et al.* (2007) *J. Neurosci.* **27**:12516.
7. Spiegel, I. *et al.* (2007) *Nat. Neurosci.* **10**:861.
8. Maurel, P. *et al.* (2007) *J. Cell Biol.* **178**:861.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.