

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	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.
<b>Source</b>	Monoclonal Rat IgG <sub>1</sub> Clone # 404619
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IGSF4C/SynCAM4 Gln25-Tyr323 Accession # Q8NFZ8
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	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.

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

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### 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 Ca<sup>2+</sup>-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.
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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.

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