

## 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>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

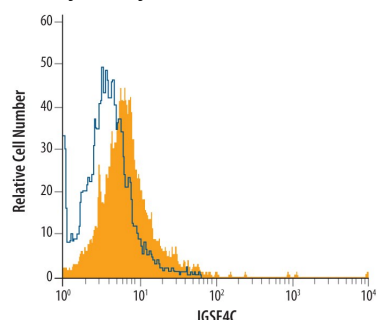
## APPLICATIONS

**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
<b>Western Blot</b>	1 µg/mL	Recombinant Human IGSF4C/SynCAM4 (Catalog # <a href="#">4164-S4</a> ) under non-reducing conditions only
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	Immersion fixed WM-115 human malignant melanoma cell line
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

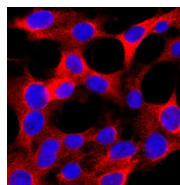
## DATA

### Flow Cytometry

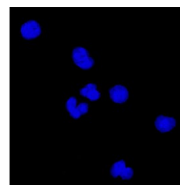


**Detection of IGSF4C/SynCAM4 in A172 Human Cell Line by Flow Cytometry.** A172 human glioblastoma cell line was stained with Rat Anti-Human IGSF4C/SynCAM4 Monoclonal Antibody (Catalog # MAB4164, filled histogram) or isotype control antibody (Catalog # Catalog # [MAB005](#), open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG F(ab')<sub>2</sub> Secondary Antibody (Catalog # Catalog # [F0113](#)).

### Immunocytochemistry



Positive (WM-115 cells)



Negative (Daudi cells)

**IGSF4C/SynCAM4 in WM-115 Human Cell Line.** IGSF4C/SynCAM4 was detected in immersion fixed WM-115 human malignant melanoma cell line (positive staining) and Daudi human Burkitt's lymphoma cell line (negative staining) using Rat Anti-Human IGSF4C/SynCAM4 Monoclonal Antibody (Catalog # MAB4164) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # [NL013](#)) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

IGSF4C is an immunoglobulin superfamily member that is also known as Nectin-like protein 4 (Nect-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>++</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 (Nect-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 (Nect-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.