# RD SYSTEMS a biotechne brand

Monoclonal Rat IgG<sub>2B</sub> Clone # 993107 Catalog Number: MAB9140

DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse IGSF9 in direct ELISAs.
Source	Monoclonal Rat IgG <sub>2B</sub> Clone # 993107
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IGSF9 Arg21-Leu730 Accession # Q05BQ1
Formulation	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
Flow Cytometry	0.25 μg/10 <sup>6</sup> cells	See Below
CyTOF-ready	Ready to be labeled using established on conjugation.	conjugation methods. No BSA or other carrier proteins that could interfere wit

#### DATA

Flo	w Cytometry
10 <sup>5</sup>	
, IGSF	0 10 <sup>3</sup> 10 <sup>4</sup> 10 <sup>5</sup> 10 <sup>6</sup>
10 <sup>6</sup>	
lesF9	
	0 10 <sup>3</sup> 10 <sup>4</sup> 10 <sup>5</sup> 10 <sup>6</sup> eGFP

Detection of IGSF9 in HEK293 Human Cell Line Transfected with Mouse IGSF9 and eGFP by Flow Cytometry. HEK293 human cell line transfected with (A) Mouse IGSF9 or (B) irrelevant protein, and eGFP was stained with Rat Anti-Mouse IGSF9 Monoclonal Antibody (Catalog # MAB9140) followed by APC-conjugated Goat anti-Rat IgG Secondary Antibody (Catalog # Catalog # F0113). Quadrant markers were set based on Rat IgG2B Isotype Control Antibody (Catalog # Catalog # MAB0061). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE		
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	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	
Stability & Storage	<ul> <li>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</li> <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> </ul>	

6 months, -20 to -70 °C under sterile conditions after reconstitution.

## BACKGROUND

IGSF9, also known as Dasm1, is an approximately 130 kDa transmembrane protein that plays a role in neuronal synapse maintenance and function (1). Mature mouse Dasm1 consists of a 714 amino acid (aa) extracellular domain (ECD) with 5 Ig-like domains and 2 fibronectin type-3 domains, a 21 aa transmembrane segment, and a 424 aa cytoplasmic domain (2). Within the ECD, mouse Dasm1 shares 90% and 96% aa sequence identity with human and rat Dasm1, respectively. Alternative splicing generates an additional isoform that is truncated following the fifth Ig-like domain. Dasm1 is expressed in the dorsal root and trigeminal ganglia, forebrain, cortex, dentate gyrus, pyramidal cells, Purkinje cells, and hippocampal CA1 interneurons (2-5). It localizes to dendrites, cell bodies, and post-synaptic densities (3, 6). Dasm1 functions as a homophilic adhesion protein that supports the maintenance of inhibitory synapses as well as inhibitory neurotransmission (5, 6).

#### References:

- 1. Hansen, M. and P.S. Walmod (2013) Neurochem. Res. 38:1236.
- 2. Doudney, K. et al. (2002) Genomics 79:663.
- 3. Shi, S.-H. et al. (2004) Proc. Natl. Acad. Sci. USA 101:13341.
- 4. Mishra, A. et al. (2008) Mol. Cell. Biol. 28:2782.
- 5. Mishra, A. et al. (2014) J. Neurosci. 34:4187.
- 6. Shi, S.-H. et al. (2004) Proc. Natl. Acad. Sci. USA 101:13346.

## Rev. 3/4/2021 Page 1 of 1



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