

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse RGM-B in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant mouse (rm) RGM-A and rmRGM-C is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse RGM-B Gly49-Ser414 Accession # Q7TQ33
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	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

RGM-B, also known as DRAGON, is a 40 kDa member of the repulsive guidance molecule (RGM) family of GPI-linked neuronal and muscle membrane proteins (1, 2). It is synthesized as a preproprotein that consists of a 48 amino acid (aa) signal sequence, a 367 aa mature region, and a 21 aa C-terminal prosegment (3). RGM-B contains two potential N-linked glycosylation sites and an abbreviated von Willebrand factor domain. Potential proteolytic cleavage within the VWF domain is supported by R&D Systems' in house data (4). Within the region following the VWF domain, mouse RGM-B shares 49% and 43% aa sequence identity with RGM-A and RGM-C, respectively. It shares 90%, 79%, 92%, and 93% aa sequence identity with bovine, chicken, human, and rhesus macaque RGM-B, respectively. RGM-B is expressed in the developing and adult nervous system, particularly in the dorsal root ganglia and mantle layer of the spinal cord (3-5). In mouse, it shows a complementary, non-overlapping distribution with RGM-A (2-5). RGM-B is also expressed in fetal and adult enteric ganglia and in postnatal intestinal epithelium (6). RGM-B expression has been detected in neuronal cell bodies and proximal axonal segments (4) but is also present on the cell surface, where it interacts homophilically and mediates neuronal adhesion (3). RGM-B additionally functions as a BMP coreceptor. It directly binds BMP-2 and -4 but not other TGF-β family proteins (7). RGM-B associates with BMP type I (ALK-2, -3, -6) and type II (Activin RIIA, Activin RIIb) receptors and enhances BMP signaling (7).

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