

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human RGM-B in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant mouse RGM-B, recombinant human (rh) RGM-A, or rhRGM-C is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 398528
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human RGM-B isoform 1 Gly46-Ser411 Accession # Q6NW40
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

Western Blot 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 45 amino acid (aa) signal sequence, a 368 aa mature region, and a 24 aa C-terminal prosegment (3). RGM-B contains an RGD motif, two potential N-linked glycosylation sites, and an abbreviated von Willebrand factor domain. There is a potential proteolytic cleavage site within the VWF domain (4). Alternative splicing may generate isoforms of RGM-B with N-terminal extensions or truncation following the VWF domain. Mature human RGM-B shares 52% and 36% aa sequence identity with the comparable regions of RGM-A and RGM-C, respectively. It shares 98%, 92%, 92%, and 78% aa sequence identity with macaque, mouse, bovine, and chicken 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 RIIIB) receptors and enhances BMP signaling (7).

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.