

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human RGM-A in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human RGM-A Cys48-Gly422 Accession # Q96B86
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.
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

Human Repulsive Guidance molecule (RGM) is a 33 kDa GPI-linked member of an expanding RGM-related family of neuronal and muscle-expressed membrane proteins (1). It is synthesized as a 450 amino acid (aa) preproprotein that contains a 47 aa signal sequence, a 121 aa N-terminal prosegment, a 256 mature region and a 26 aa C-terminal prosegment (2). The N-terminal prosegment contains an RGD tripeptide and the molecule's only two potential N-linked glycosylation sites. The mature segment shows an abbreviated von Willebrand factor domain. Proteolytic processing occurs at an aspartic acid-proline bond, creating a predicted 32 kDa mature region (2). The mature region of human RGM-A has 88% and 93% aa identity to the chick and mouse mature region of RGM-A, respectively. When compared to human RGMb and c, the mature region of human RGM-A shows 58% and 54% aa identity, respectively. Recombinant chick RGM-A has been reported to induce collapse of temporal but not nasal growth cones, and to repel temporal retinal axons *in vitro*. This suggests a role in the development of the retina-superior colliculus connection. In mammals, however, this activity is not so evident, and thus its function in this system is uncertain (3). Alternatively, in mice, RGM-A is said to be needed for neural tube closure, and may play a role in entorhinal-hippocampal connections (3, 4). The receptor for RGM-A is reported to be neogenin (5, 6). RGM-A has also been shown to be a bone morphogenic protein co-receptor, able to bind both BMP-2 and BMP-4 (7).

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