Mouse Mimecan Antibody

Monoclonal Rat IgG_{2A} Clone # 329939

Catalog Number: MAB2949

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Mimecan in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Mimecan is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 329939
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Mimecan Ala20-Phe298 Accession # Q62000
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
Western Blot	1 µg/mL	Recombinant Mouse Mimecan (Catalog # 2949-MC)

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	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Mimecan is a 34 kDa secreted monomeric glycoprotein that belongs to the SLRP, or small leucine-rich proteoglycan family of matrix molecules (1, 2). All SLRP family members contain multiple leucine rich repeats, of which there are two types; a 21 amino acid (aa) proline-containing S-type, and a 26 aa phenylalanine-containing T-type (2, 3). Mimecan is a class III SLRP subfamily member, which means it contains an S-T (vs. S-T-T) repeating motif. Mouse Mimecan is synthesized as a 298 aa precursor that contains a 19 aa signal sequence and a 279 aa mature region (3, 4). The mature region contains a 75 aa N-terminus followed by a 13 aa cysteine-rich region and seven consecutive LRR repeats. There is one (presumably occupied) C-terminal N-linked glycosylation site and a potential keratan sulfate attachment point in LRR #4 (aa 161-180) (3). Nomenclature for the Mimecan molecule is confusing. Mimecan is best thought of as being the full-length, 279 aa glycoprotein (5). Proteolytic removal of the first 56 aa by BMP-1/Tolloid-like proteinases generates the 25 kDa KSPG form (aa 57-279) (3). The 17 kDa, 56 aa mature N-terminus has been referred to as the minecam prosegment (3). When the prosegment is removed, mature mouse KSPG (aa 57-279) is 98%, 91%, 90% and 91% aa identical to rat, bovine, human and canine KSPG, respectively. A 12 kDa form (aa 175-279) consisting of the 105 aa of the C-terminus (OIF/osteoglycan) has also been observed (6). Noncoding alternate splice forms for mouse are believed to exist and should be expressed in a tissue specific fashion (7, 8). No splice forms are known that impact the coding region. Mimecan seems to exist as proteoglycan (PG) and non-PG forms. In cornea, keratan sulfate is present, although the exact function of the PG is unknown. The corneal extracellular matrix is normally transparent. While Mimecan is reported to inhibit fibrillogenesis, possibly by limiting lateral accretion of collagen monomers, it is unclear if the mimican PG actually contributes to transparency (3, 9). In other tissues, Mimecan and its derivatives can exist as simple glycoproteins, absent of any PG adduct (6). The uncertain nature of Mimecan's structure and function gives rise to its name: *Mime* is a Norse-legend dwarf that was notoriously deceitful and misleading (6).

References:

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