Human/Mouse Matrilin-4 Antibody

Monoclonal Mouse IgG_1 Clone # 401127

Catalog Number: MAB4205

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Matrilin-4 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 401127
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Matrilin-4 Gln20-Asp499 (predicted) Accession # NP_085095
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 Human Matrilin-4 Recombinant Mouse Matrilin-4 (Catalog # 3380-MN)

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

Matrilin-4 is a 73 kDa secreted glycoprotein that is a member of the matrilin family of the von Willebrand Factor-A (vWA) domain-containing superfamily (1). Matrilins are modular extracellular matrix proteins that serve as adaptors and linkers for other matrix proteins. Matrilin-4, like Matrilin-2, has a broad distribution in both cartilage and in loose connective tissue such as dermis, lung and kidney, while matrilins 1 and 3 are limited to cartilage. Matrilin-4 is present in nervous tissue and is abundant in the brain (2, 3). Mature mouse Matrilin-4 shares 98%, 90%, 89% and 66% amino acid (aa) identity with rat, human, canine and chicken Matrilin-4, respectively. The 624 aa mouse Matrilin-4 contains a 22 aa signal sequence, two potential glycosylation sites, and four cysteine-rich EGF-like domains placed between two vWA domains. A short isoform lacks the N-terminal vWA domain (aa 28-217). A C-terminal α-helix/coiled-coil region (aa 590-623) by which multimers are formed is often proteolytically removed so that Matrilin-4 is found as a mixture of monomers with homo- or hetero- dimers and trimers. Matrilin-4 forms multimers with Matrilins 1 and 2 but not with Matrilin-3 (3, 4). The N-terminal vWA domains of Matrilins associate with collagen IV microfibrils via the proteoglycans biglycan and decorin, linking the fibrils with other matrix constituents aggrecan and collagen II (5, 6). Matrilins also show calcium-dependent binding to the cartilage oligomeric matrix protein (COMP); this interaction is of high affinity for oligomeric Matrilin-4 and somewhat lower affinity for monomeric Matrilin-4 (6). Functions and distributions of Matrilins overlap enough so that knockouts of Matrilins 1, 2 and 3 lack obvious phenotypes (1).

References:

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