Matrilin 4 (MATN4) ELISA Kit for Mouse

PRODUCT OVERVIEW

Product Name	Matrilin 4 (Matn4), ELISA Kit
Full Product Name	Mouse Matrilin 4 ELISA Kit
Product Gene Name	Matn4 elisa kit
Species Reactivity	Mouse
Assay Type	sandwich
Samples	cell culture supernates, serum and plasma (heparin, EDTA)
Detection Range	31.2pg/ml-2000pg/ml
Sensitivity	<50pg/ml
Preparation and Storage	Store at 4 degree C for 6 months, at -20 degree C for 12 months. Avoid multiple freeze-thaw cycles. (Shipped with wet ice)
Molecular Weight	68,918 Da
3D Structure	ModBase 3D Structure for O89029
Detection Target	Matrilin 4
Immunogen Sequence	369
Cross-Reactivity	There is no detectable cross-reactivity with other relevant proteins.
Related Product Information for Matn4 elisa kit	This Mouse Matrilin 4 ELISA Kit is intended for quantitative detection of mouse Matrilin-4 in cell culture supernates, serum and plasma (heparin, EDTA). Strip well format. Reagents for up to 96 tests. This mouse Matrilin-4 ELISA Kit is based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for Matrilin-4 has been precoated onto 96-well plates. Standards (Expression system for standard: NSO, Immunogen sequence: Q22-K624) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Matrilin-4 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB are used to visualize HRP enzymatic reaction. TMB is catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse Matrilin-4 amount of sample captured in plate. The capture antibody is a monoclonal antibody from rat, the detection antibody is a biotinylated polyclonal antibody from goat. Expression system for standard: 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. This gene is mapped to 2 H3; 2 85.16 cM. 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. 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 alpha-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. 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. 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. Functions and distributions of Matrilins overlap enough so that knockouts of Matrilins 1, 2 and 3 lack obvious phenotypes.

Other Notes	Small volumes of Matn4 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Matn4 purchase	MBS8420746 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Matrilin 4 (Matn4) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing Matn4. The ELISA analytical biochemical technique of the MBS8420746 kit is based on Matn4 antibody-Matn4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect Matn4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, Matn4. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Matn4. It may not necessarily be applicable to this product.

NCBI GI #	357588410
NCBI GeneID	17183
NCBI Accession #	NP_001239492.1
UniProt Primary Accession #	O89029
UniProt Secondary Accession #	O89030; Q9QWS3
UniProt Related Accession #	O89029
GenBank Nucleotide #	NM_001252563.1
NCBI Official Full Name	matrilin-4
NCBI Official Synonym Full Names	matrilin 4
NCBI Official Symbol	Matn4
NCBI Official Synonym Symbols	matrilin-4
UniProt Protein Name	Matrilin-4
Protein Family	Matrilin
UniProt Gene Name	Matn4
UniProt Synonym Gene Names	MAT-4
UniProt Entry Name	MATN4_MOUSE
NCBI Protein Information	matrilin-4; MAT-4
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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