# Matrilin 3 (MATN3) ELISA Kit for Porcine

## PRODUCT OVERVIEW

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| **Product Name** | Matrilin 3 (MATN3), ELISA Kit |
| **Full Product Name** | Porcine Matrilin 3 (MATN3) ELISA Kit |
| **Product Gene Name** | MATN3 elisa kit |
| **Species Reactivity** | Porcine |
| **Preparation and Storage** | Store all reagents at 2-8 degree C |
| **Molecular Weight** | 48,317 Da |
| **OMIM** | AJ224741 mRNA |
| **3D Structure** | ModBase 3D Structure for O15232 |
| **Related Product Information for MATN3 elisa kit** | MBS9900223 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Matrilin 3 (MATN3) 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 MATN3. The ELISA analytical biochemical technique of the MBS9900223 kit is based on MATN3 antibody-MATN3 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect MATN3 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, MATN3. 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(%). |
| **Other Notes** | Small volumes of MATN3 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. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MATN3. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 11321565 |
| **NCBI GeneID** | 4148 |
| **NCBI Accession #** | NP_002372.1 |
| **UniProt Primary Accession #** | O15232 |
| **UniProt Secondary Accession #** | Q4ZG02; B2CPU0 |
| **UniProt Related Accession #** | O15232 |
| **GenBank Nucleotide #** | NM_002381.4 |
| **NCBI Official Full Name** | matrilin-3 |
| **NCBI Official Synonym Full Names** | matrilin 3 |
| **NCBI Official Symbol** | MATN3 |
| **NCBI Official Synonym Symbols** | HOA; OS2; EDM5; DIPOA; OADIP |
| **UniProt Protein Name** | Matrilin-3 |
| **Protein Family** | Matrilin |
| **UniProt Gene Name** | MATN3 |

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| **NCBI Protein Information** | matrilin-3 |
| **NCBI Summary for MATN3** | This gene encodes a member of von Willebrand factor A domain containing protein family. This family of proteins is thought to be involved in the formation of filamentous networks in the extracellular matrices of various tissues. This protein contains two von Willebrand factor A domains; it is present in the cartilage extracellular matrix and has a role in the development and homeostasis of cartilage and bone. Mutations in this gene result in multiple epiphyseal dysplasia. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for MATN3** | MATN3: Major component of the extracellular matrix of cartilage and may play a role in the formation of extracellular filamentous networks. Defects in MATN3 are the cause of multiple epiphyseal dysplasia type 5 (EDM5). EDM is a generalized skeletal dysplasia associated with significant morbidity. Joint pain, joint deformity, waddling gait, and short stature are the main clinical signs and symptoms. EDM is broadly categorized into the more severe Fairbank and the milder Ribbing types. EDM5 is relatively mild and clinically variable. It is primarily characterized by delayed and irregular ossification of the epiphyses and early-onset osteoarthritis. Defects in MATN3 are the cause of spondyloepimetaphyseal dysplasia MATN3-related (SEMD-MATN3). A bone disease characterized by disproportionate early-onset dwarfism, bowing of the lower limbs, lumbar lordosis and normal hands. Skeletal abnormalities include short, wide and stocky long bones with severe epiphyseal and metaphyseal changes, hypoplastic iliac bones and flat, ovoid vertebral bodies. Genetic variations in MATN3 are associated with susceptibility to osteoarthritis type 2 (OS2); also called osteoarthritis of distal interphalangeal joints (OADIP) or hand osteoarthritis (HOA). Osteoarthritis is a degenerative disease of the joints characterized by degradation of the hyaline articular cartilage and remodeling of the subchondral bone with sclerosis. Clinical symptoms include pain and joint stiffness often leading to significant disability and joint replacement. In the hand, osteoarthritis can develop in the distal interphalangeal and the first carpometacarpal (base of thumb) and proximal interphalangeal joints. Patients with osteoarthritis may have one, a few, or all of these sites affected.<br><br>Protein type: Secreted; Secreted, signal peptide<br><br>Chromosomal Location of Human Ortholog: 2p24.1<br><br>Cellular Component: endoplasmic reticulum lumen; extracellular region; proteinaceous extracellular matrix<br><br>Molecular Function: calcium ion binding; extracellular matrix structural constituent; protein binding<br><br>Biological Process: cellular protein metabolic process; extracellular matrix organization; post-translational protein modification; skeletal system development<br><br>Disease: Epiphyseal Dysplasia, Multiple, 5; Osteoarthritis Susceptibility 2; Spondyloepimetaphyseal Dysplasia, Matrilin-3 Related |
| **Research Articles on MATN3** | **1.** our results revealed miR-483-5p directly targeted to the cartilage matrix protein matrilin 3 (Matn3) and tissue inhibitor of metalloproteinase 2 (Timp2) to stimulate chondrocyte hypertrophy, extracellular matrix degradation, and cartilage angiogenesis, and it consequently initiated and accelerated the development of OA. |
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