



# Matrillin Detection Set

Cat. No.: PSI-1830



## Ψ Specifications

<b>SPECIES REACTIVITY:</b>	Human
<b>IMMUNOGEN:</b>	Rabbit polyclonal antibodies were raised against peptides corresponding to amino acid sequences from each of the corresponding proteins.
<b>TESTED APPLICATIONS:</b>	ELISA, IF, WB
<b>APPLICATIONS:</b>	These polyclonal antibodies can be used for detection of MATN1 - 4 by immunoblot at 1 - 2 µg/mL and Immunofluorescence.
<b>POSITIVE CONTROL:</b>	1) MATN1 Antibody: Rat Liver Tissue Lysate, Catalog No. 1464 MATN2 Antibody: Human Liver Tissue Lysate, Catalog No. 1304 MATN3 Antibody: 3T3 Cell Lysate, Catalog No. 1282 MATN4 Antibody: Rat Brain Tissue Lysate, Catalog No. 1210.

## Ψ Properties

<b>PURIFICATION:</b>	Antibodies are supplied as affinity chromatography purified IgG.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	PBS containing 0.02% sodium azide.

<b>CONCENTRATION:</b>	Antibody 1 mg/mL
<b>STORAGE CONDITIONS:</b>	Stable at 4 °C for three months, store at -20 °C for up to one year.

## Ψ Additional Info

<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
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## Ψ Background and References

<b>BACKGROUND:</b>	<p>Matrilins (MATNs) are a family of non-collagenous extra-cellular matrix (ECM) proteins consisting of four known members that have been proposed to play key roles in modulating cellular phenotypes during chondrogenesis of mesenchymal stem cells (MSCs). MATN1 and MATN3 are expressed specifically in cartilage and are among the most up-regulated ECM proteins during chondrogenesis. MATN1 is composed of two Willebrand Factor A (vWFA) domains separated by one EGF-like domain, whereas MATN3 is composed of a single N-terminal vWFA domain followed by four epidermal growth factor (EGF) repeats and a coiled-coil domain. MATN1 or MATN3 may play a role in modulating chondrogenesis during the chondrocyte differentiation process. Mutations of MATN1 have been associated with variety of inherited chondrodysplasias, while aberrant expression and processing of MATN3 are hallmarks of conventional cartilaginous neoplasms. The MATN1 promoter region has also been shown to be associated with both susceptibility and disease progression in Adolescent idiopathic scoliosis. Other studies indicate that MATN2 is a permissive substrate for axonal growth and cell migration, and it is required for successful nerve regeneration, while MATN4 could serve as an odontoblast differentiation marker, e.g. in odontoblast stem cell research.</p> <p><b>For images please see PDF data sheet</b></p>
<b>REFERENCES:</b>	<p>1) Pei M, Luo J, and Chen Q. Enhancing and maintaining chondrogenesis of synovial fibroblasts by cartilage extracellular matrix protein matrilins. <i>Osteoarthritis Cartilage</i> 2008; 16:1110-7.</p> <p>2) Frank S, Schulthess T, Landwehr R, et al. Characterization of the matrilin coiled-coil domains reveals seven novel isoforms. <i>J. Biol. Chem.</i> 2002; 277:19071-9.</p> <p>3) Chen Q, Johnson DM, Haudenschild DR, et al. Progression and recapitulation of the chondrocyte differentiation program: cartilage matrix protein is a marker for cartilage maturation. <i>Dev. Biol.</i> 1995; 172:293-306.</p> <p>4) Stokes DG, Liu G, Coimbra IB, et al. Assessment of the gene expression profile of differentiated and dedifferentiated human fetal chondrocytes by microarray analysis. <i>Arthritis Rheum</i> 2002; 46:404-19.</p>

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