

MATN1 Antibody

Catalog # ASC10886

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P21941
Other Accession	NP_002370 , 4505111
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	53701
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MATN1 antibody can be used for detection of MATN1 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	4146
Other Names	Cartilage matrix protein, Matrilin-1, MATN1, CMP, CRTM
Target/Specificity	MATN1;
Reconstitution & Storage	MATN1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	MATN1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MATN1 (HGNC:6907)
Function	A major component of the extracellular matrix of non- articular cartilage (By similarity). Binds to type 2 collagens and forms long concatenated protein networks as part of the extracellular matrix (By similarity). Required for the network-like organization and bundling of collagen fibrils surrounding chondrocytes in the zones of maturation and hypertrophy (By similarity). Required for mechanotransduction and adaption to mechanical loading in cartilage chondrocytes, resulting in an increase in expression of the extracellular matrix components ACAN and COL2A1 (By similarity). Acts as a moderator of angiogenesis in response to injury (By similarity).

Cellular Location

Secreted, extracellular space, extracellular matrix
{ECO:0000250|UniProtKB:P05099}

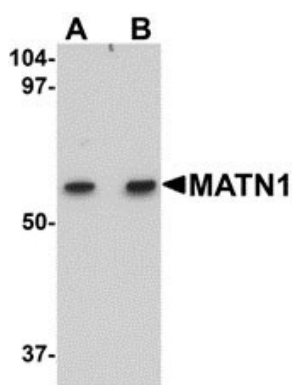
Background

MATN1 Antibody: 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 this gene have been associated with variety of inherited chondrodysplasias. Recent studies show that the MATN1 promoter region was associated with both susceptibility and disease progression in Adolescent idiopathic scoliosis.

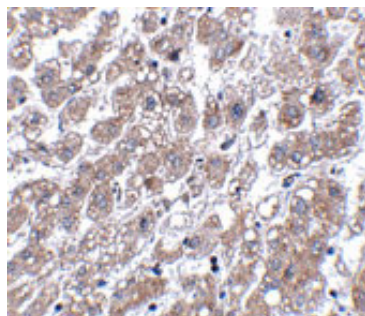
References

Pei M, Luo J, and Chen Q. Enhancing and maintaining matrilins. *Osteoarthritis Cartilage* 2008; 16:1110-7.
Frank S, Schulthess T, Landwehr R, et al. Characterization of the matrilin coiled-coil domains reveals seven novel isoforms. *J. Biol. Chem.* 2002; 277:19071-9.
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. *Dev. Biol.* 1995; 172:293-306.
Stokes DG, Liu G, Coimbra IB, et al. Assessment of the gene expression profile of differentiated and dedifferentiated human fetal chondrocytes by microarray analysis. *Arthritis Rheum* 2002; 46:404-19.

Images

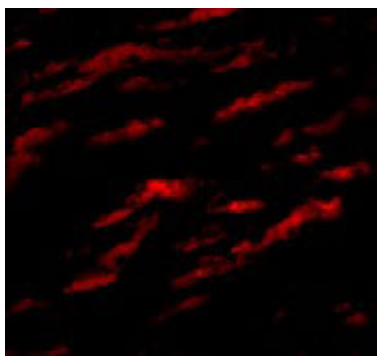


Western blot analysis of MATN1 in rat liver tissue lysate with MATN1 antibody at (A) 1 and (B) 2 $\mu\text{g/mL}$.



Immunohistochemistry of MATN1 in human liver tissue with MATN1 antibody at 5 $\mu\text{g/mL}$.

Immunofluorescence of MATN1 in Human Liver cells with MATN1 antibody at 20 $\mu\text{g/mL}$.



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