10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MMP3 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6211A

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	P08254
Other Accession	NP_002413
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB02015-02016
Calculated MW	53977
Antigen Region	298-327

Additional Information

Gene ID	4314
Other Names	Stromelysin-1, SL-1, Matrix metalloproteinase-3, MMP-3, Transin-1, MMP3, STMY1
Target/Specificity	This MMP3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 298-327 amino acids from the Central region of human MMP3.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MMP3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MMP3
Synonyms	STMY1

Function	Metalloproteinase with a rather broad substrate specificity that can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and cartilage proteoglycans. Activates different molecules including growth factors, plasminogen or other matrix metalloproteinases such as MMP9 (PubMed:11029580, PubMed:1371271). Once released into the extracellular matrix (ECM), the inactive pro-enzyme is activated by the plasmin cascade signaling pathway (PubMed:2383557). Also acts intracellularly (PubMed:22265821). For example, in dopaminergic neurons, gets activated by the serine protease HTRA2 upon stress and plays a pivotal role in DA neuronal degeneration by mediating microglial activation and alpha- synuclein/SNCA cleavage (PubMed:21330369). In addition, plays a role in immune response and possesses antiviral activity against various viruses such as vesicular stomatitis virus, influenza A virus (H1N1) and human herpes virus 1 (PubMed:35940311). Mechanistically, translocates from the cytoplasm into the cell nucleus upon virus infection to influence NF-kappa-B activities (PubMed:35940311).
Cellular Location	Secreted, extracellular space, extracellular matrix. Nucleus. Cytoplasm

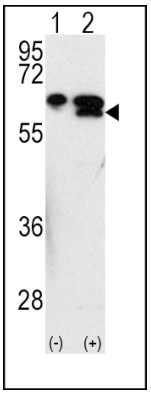
Background

Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMPs are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. MMP3 is an enzyme which degrades fibronectin, laminin, collagens III, IV, IX, and X, and cartilage proteoglycans. The enzyme is thought to be involved in wound repair, progression of atherosclerosis, and tumor initiation.

References

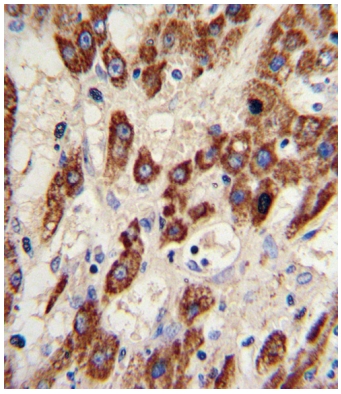
Sage, E.H., et al., J. Biol. Chem. 278(39):37849-37857 (2003).
Matsuyama, A., et al., Circulation 108(12):1469-1473 (2003).
Mercapide, J., et al., Int. J. Cancer 106(5):676-682 (2003).
Bodemer, C., et al., J. Invest. Dermatol. 121(2):273-279 (2003).
Kang, M.K., et al., Exp. Cell Res. 287(2):272-281 (2003).

Images

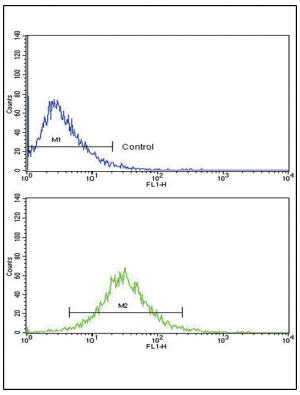


Western blot analysis of MMP3 (arrow) using rabbit polyclonal MMP3 Antibody (Center) (Cat.#AP6211a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the MMP3 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with MMP3 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for



immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of HepG2 cells using MMP3 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.