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MMP3 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6211a

Specification

MMP3 Antibody (Center) - Product Information

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

MMP3 Antibody (Center) - 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
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

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.

MMP3 Antibody (Center) - 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). Acts also 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).

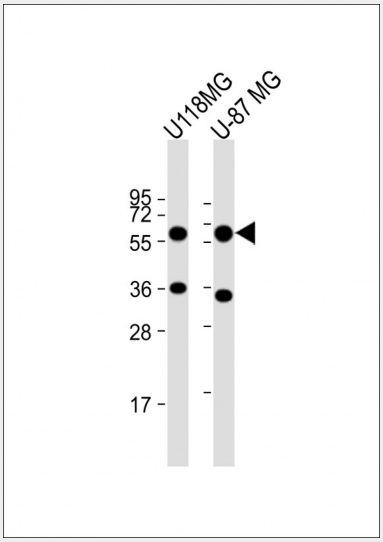
Cellular Location
Secreted, extracellular space, extracellular matrix. Nucleus. Cytoplasm

MMP3 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

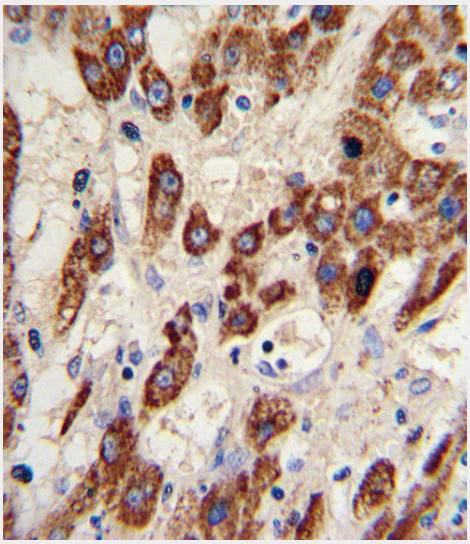
MMP3 Antibody (Center) - Images



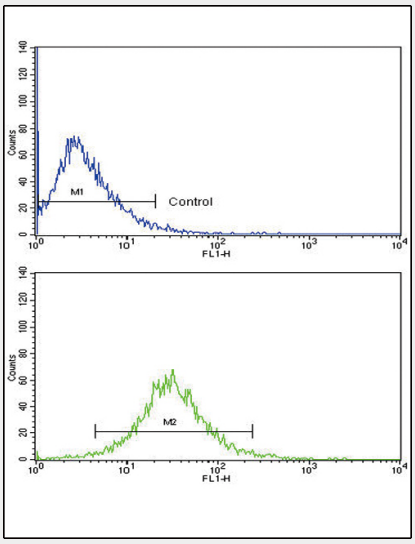
All lanes : Anti-MMP3 Antibody (H313) at 1:1000 dilution Lane 1: U118MG whole cell lysate Lane 2: U-87 MG whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution

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buffer: 5% NFDM/TBST.



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.

MMP3 Antibody (Center) - 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.

MMP3 Antibody (Center) - 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).