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MMP3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1661a

Product Information

Application	WB, FC, E
Primary Accession	P08254
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4F10
Isotype	IgG1
Calculated MW	53977
Description	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 MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. This gene encodes 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. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.3.
Immunogen	Purified recombinant fragment of human MMP3 expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	4314
Other Names	Stromelysin-1, SL-1, 3.4.24.17, Matrix metalloproteinase-3, MMP-3, Transin-1, MMP3, STMY1
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MMP3 Antibody 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

References

1. Int J Cancer. 2009 May 1;124(9):2172-8. 2. Cancer Epidemiol Biomarkers Prev. 2008 Dec;17(12):3551-7.

Images

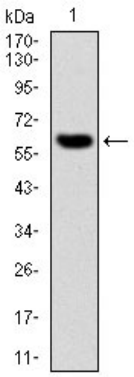


Figure 1: Western blot analysis using MMP3 mAb against human MMP3 (AA: 189-441) recombinant protein. (Expected MW is 54 kDa)

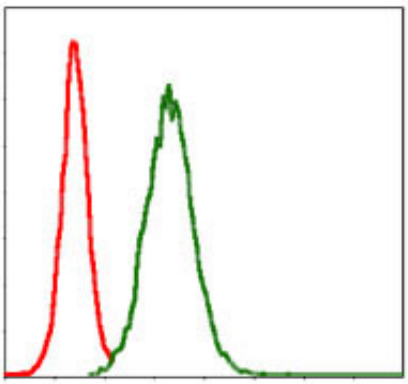


Figure 2: Flow cytometric analysis of NIH/3T3 cells using MMP3 mouse mAb (green) and negative control (red).

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