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Anti-MMP3 Antibody

Catalog # AP51354

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P08254
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	53977

Additional Information

Gene ID	4314
Other Names	STMY1; Stromelysin-1; SL-1; Matrix metalloproteinase-3; MMP-3; Transin-1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human MMP3. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

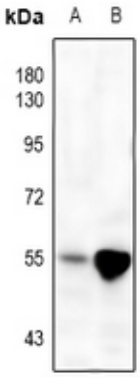
Name	MMP3
Synonyms	STMY1
Function	Metalloproteinase with a rather broad substrate specificity that can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and cartilage proteoglycans. Activates different molecules including growth factors, plasminogen or other 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

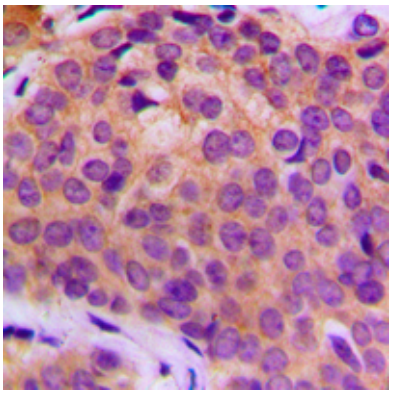
References

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Whitham S.E.,et al.Biochem. J. 240:913-916(1986).
Wilhelm S.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:6725-6729(1987).
Lin D.,et al.Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

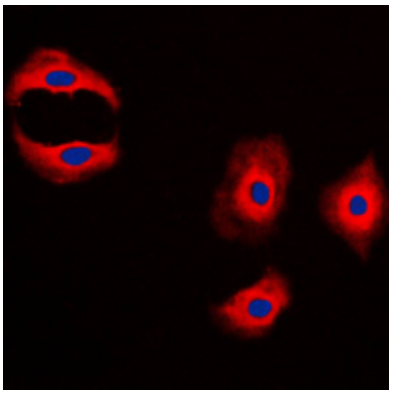
Images



Western blot analysis of MMP3 expression in U87MG (A), SGC7901 (B) whole cell lysates. (Predicted band size: 53 kD; Observed band size: 55 kD)



Immunohistochemical analysis of MMP3 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of MMP3 staining in A431 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Citations

- Nkx2-5 Is Expressed in Atherosclerotic Plaques and Attenuates Development of Atherosclerosis in Apolipoprotein E-Deficient Mice.
- Metalloproteinases 1 and 3 as Potential Biomarkers in Breast Cancer Development

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