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

MMP12 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6196a

Product Information

Application	WB, IF, IHC-P, E
Primary Accession	P39900
Other Accession	NP_002417
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	54002
Antigen Region	391-420

Additional Information

Gene ID	4321
Other Names	Macrophage metalloelastase, MME, Macrophage elastase, ME, hME, Matrix metalloproteinase-12, MMP-12, MMP12, HME
Target/Specificity	This MMP12 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 391-420 amino acids from the C-terminal region of human MMP12.
Dilution	WB~~1:1000 IF~~1:10~50 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	MMP12 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MMP12
Synonyms	HME
Function	May be involved in tissue injury and remodeling. Has significant elastolytic

	activity. Can accept large and small amino acids at the P1' site, but has a preference for leucine. Aromatic or hydrophobic residues are preferred at the P1 site, with small hydrophobic residues (preferably alanine) occupying P3.
Cellular Location	Secreted, extracellular space, extracellular matrix
Tissue Location	Found in alveolar macrophages but not in peripheral blood monocytes

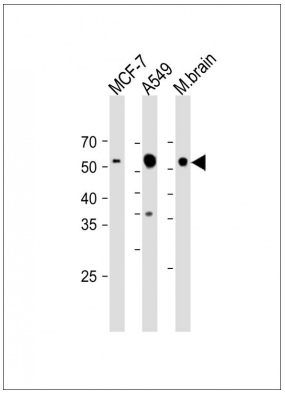
Background

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. MMP12 may be involved in tissue injury and remodeling. This protein has significant elastolytic activity. MMP12 can accept large and small amino acids at the P1' site, but has a preference for leucine. Aromatic or hydrophobic residues are preferred at the P1 site, wtih small hydrophobic residues (prefereably alanine) occupying P3. The protein is found in alveolar macrophages but not in peripheral blood monocytes. MMP12 can be induced by exposure to lypopolysaccharide, and is inhibited by dexamethasone.

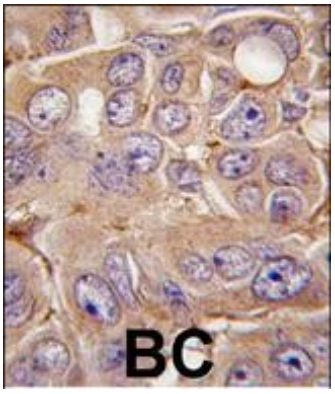
References

Nar, H., et al., J. Mol. Biol. 312(4):743-751 (2001).
Lang, R., et al., J. Mol. Biol. 312(4):731-742 (2001).
Gronski, T.J. Jr., et al., J. Biol. Chem. 272(18):12189-12194 (1997).
Shapiro, S.D., et al., J. Biol. Chem. 268(32):23824-23829 (1993).

Images

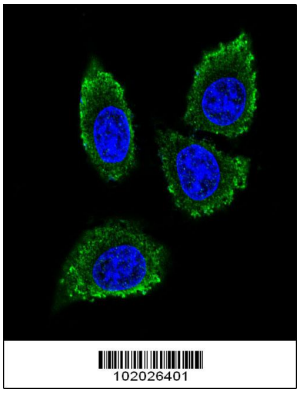


All lanes: Anti-MMP12 Antibody (C-term) at 1:1000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: A549 whole cell lysate Lane 3: Mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 54 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with MMP12 antibody (C-term), 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.

Confocal immunofluorescent analysis of MMP12 Antibody



(C-term) (Cat. #AP6196a) with 293 cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).

Citations

- Nkx2-5 Is Expressed in Atherosclerotic Plaques and Attenuates Development of Atherosclerosis in Apolipoprotein E-Deficient Mice.
- Optimization of total protein and activity assays for the detection of MMP-12 in induced human sputum.
- Blockade of the c-Jun amino terminal kinase prevents crescent formation and halts established anti-GBM glomerulonephritis in the rat.