

Product Name: Cleaved-MMP-1 22k (F100) Rabbit Polyclonal Antibody
Catalog #: APRab09008

Summary

Production Name	Cleaved-MMP-1 22k (F100) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Rat,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	MMP1
Alternative Names	MMP1; CLG; Interstitial collagenase; Fibroblast collagenase; Matrix metalloproteinase-1; MMP-1
Gene ID	4312.0
SwissProt ID	P03956.The antiserum was produced against synthesized peptide derived from human MMP1. AA range:81-130

Application

Dilution Ratio	WB 1:500 - 1:2000. ELISA: 1:10000
Molecular Weight	19kD

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Background

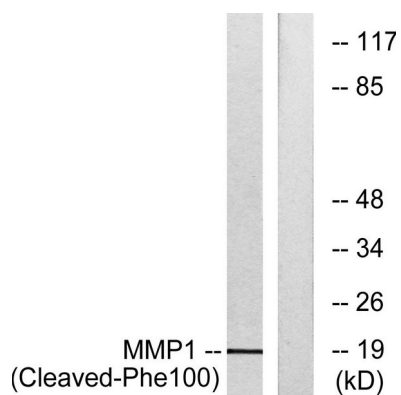
matrix metalloproteinase 1(MMP1) Homo sapiens This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This secreted protease breaks down the interstitial collagens, including types I, II, and III. The gene is part of a cluster of MMP genes on chromosome 11. Mutations in this gene are associated with chronic obstructive pulmonary disease (COPD). Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. [provided by RefSeq, Jan 2016],catalytic activity:Cleavage of the triple helix of collagen at about three-quarters of the length of the molecule from the N-terminus, at 775-Gly-|-Ile-776 in the alpha-1(I) chain. Cleaves synthetic substrates and alpha-macroglobulins at bonds where P1' is a hydrophobic residue.,cofactor:Binds 2 zinc ions per subunit.,cofactor:Binds 4 calcium ions per subunit.,domain:The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.,domain:There are two distinct domains in this protein; the catalytic N-terminal, and the C-terminal which is involved in substrate specificity and in binding TIMP (tissue inhibitor of metalloproteinases),enzyme regulation:Can be activated without removal of the activation peptide.,function:Cleaves collagens of types I, II, and III at one site in the helical domain. Also cleaves collagens of types VII and X. In case of HIV infection, interacts and cleaves the secreted viral Tat protein, leading to a decrease in neuronal Tat's mediated neurotoxicity.,online information:Collagenase entry,PTM:Undergoes autolytic cleavage to two major forms (22 kDa and 27 kDa). A minor form (25 kDa) is the glycosylated form of the 22 kDa form. The 27 kDa form has no activity while the 22/25 kDa form can act as activator for collagenase.,similarity:Belongs to the peptidase M10A family.,similarity:Contains 4 hemopexin-like domains.,subunit:Interacts with HIV-1 Tat.,

Research Area

PPAR;Pathways in cancer;Bladder cancer;

Image Data

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Western blot analysis of lysates from A549 cells, treated with etoposide 25uM 24h, using MMP1 (Cleaved-Phe100) Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using Cleaved-MMP-1 22k (F100) Polyclonal Antibody

Note

For research use only.