

Product name:	MMP-9 Rabbit Polyclonal Antibody
Cat number:	ABN14000
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human MMP-9. AA range:651-700
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:100-1:300,ELISA 1:10000-1:20000
Molecular Weight:	78kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

matrix metalloproteinase 9(MMP9) Homo sapiens 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. The enzyme encoded by this gene degrades type IV and V collagens. Studies in rhesus monkeys suggest that the enzyme is involved in IL-8-induced mobilization of hematopoietic progenitor cells from bone marrow, and murine studies suggest a role in tumor-associated tissue remodeling. [provided by RefSeq, Jul 2008],catalytic activity:Cleavage of gelatin types I and V and collagen types IV and V.,cofactor:Binds 2 zinc ions per subunit.,cofactor:Binds 3 calcium ions per subunit.,disease:Defects in MMP9 may be a cause of susceptibility to lumbar disk herniation (LDH) [MIM:603932]. LDH is the predominant cause of low-back pain and unilateral leg pain.,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.,enzyme regulation:Inhibited by histatin-3 1/24 (histatin-5),function:May play an essential role in local proteolysis of the extracellular matrix and in leukocyte migration. Could play a role in bone osteoclastic resorption. Cleaves KISS1 at a Gly-|-Leu bond. Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N-terminal one quarter fragments. Degrades fibronectin but not laminin or Pz-peptide.,induction:Activated by 4-aminophenylmercuric acetate and phorbol ester.,miscellaneous:In the arthritis patient this enzyme might contribute to the pathogenesis of joint destruction and might constitute a useful marker of disease status.,PTM:N- and O-glycosylated.,PTM:Processing of the precursor yields different active forms of 64, 67 and 82 kDa. Sequentially processing by MMP3 yields the 82 kDa matrix metalloproteinase-9.,similarity:Belongs to the peptidase M10A family.,similarity:Contains 3 fibronectin type-II domains.,similarity:Contains 4 hemopexin-like domains.,subunit:Exists as monomer, disulfide-linked homodimer, and as a heterodimer with a 25 kDa protein. Macrophages and transformed cell lines produce only the monomeric form.,tissue specificity:Produced by normal alveolar macrophages and granulocytes.,