

Active Native Human MMP9

Cat. No. MMP9-9810 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Progelatinase B complex is isolated from human blood.
Species	Human
Source	Human Blood
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. 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.
Form	The proenzyme is solubilized in 50 mM Tris-HCl, pH 7.0, 200 mM NaCl, 5 mM CaCl ₂ , 1 μM ZnCl ₂ , 0.05 % Brij-35, 0.05 % NaN ₃ .
Bio-activity	>1400 mU/mg (upon trypsin activation)
Molecular Mass	Gelatinase B displays three bands on SDS-PAGE at 220, 130 and 92 kDa. The 92 and the 220 kDa represent the monomer and the disulfide-bridged homodimer of progelatinase B. The 130 kDa form could be identified as a disulfide bridge complex of the monomer and

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Purity	≥95 % of total protein by SDS-PAGE
Applications	Purified progelatinase B monomer can serve as antigen standard in immunochemical analyses. Active gelatinase B is used to study the degradation of extracellular matrix proteins, to screen inhibitors of matrix metalloproteinases and to characterize inhibitor actions.
GENE INFORMATION	
Gene Name	MMP9 matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) [Homo sapiens]
Official Symbol	MMP9
Synonyms	MMP9; matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase); CLG4B, matrix metalloproteinase 9 (gelatinase B, 92kD gelatinase, 92kD type IV collagenase) , matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa
Gene ID	4318
mRNA Refseq	NM_004994
Protein Refseq	NP_004985
MIM	120361
UniProt ID	P14780
Chromosome Location	20q12-q13

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Pathway

Activation of Matrix Metalloproteinases, organism-specific biosystem; Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; CXCR4-mediated signaling events, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Endochondral Ossification, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem;

Function

collagen binding; fibronectin binding; metal ion binding; metalloendopeptidase activity; peptidase activity; protein binding; protein complex binding; zinc ion binding;

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