

## Active Recombinant Human MMP9

Cat. No. MMP9-166H Lot. No. (See product label)

### SPECIFICATION

**Product Overview**

Active recombinant matrix metalloproteinase-9 (MMP-9, gelatinase B, 92 kDa type IV collagenase) cloned from human cDNA. The enzyme consists of residues Phe107-Pro449 (NM\_004994), which comprises the catalytic/fibronectin domain of human MMP-9, with a C-terminal purification tag. This represents a naturally-occurring active form of MMP-9 which lacks the C-terminal hemopexin domain. Activity toward its targets, such as gelatin, casein, or peptide substrates, is unaffected.

**Species** Human

**Source** E.coli

**ProteinLength** 107-449 a.a.

**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** Liquid. In 50mM TRIS, pH 7.5, containing 5mM calcium chloride, 300mM sodium

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chloride, 20M zinc chloride, 0.5% Brij-35 and 30% glycerol.

**Bio-activity**

XX U/g. One U=100pmol/min at 37°C using the colorimetric thiopeptolide Ac-Pro-Leu-Gly-S-Leu-Leu-Gly-OEt as substrate. Preincubation of MMP-9 catalytic domain at 1.3 nM with the broad-spectrum inhibitor GM6001 at 30nM for 1 hour inhibits enzymatic activity by 97%.

**Molecular Mass**

39 kDa

**Purity**

≥95% (SDS-PAGE)

**Applications**

Study enzyme kinetics, cleave target substrates, and screen for inhibitors.

**Storage**

-80°C

**Concentration**

0.5g/μ

## GENE INFORMATION

**Gene Name**

MMP9 matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) [ Homo sapiens (human) ]

**Official Symbol**

MMP9

**Synonyms**

MMP9; GELB; CLG4B; MMP-9; MANDP2; matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase); matrix metalloproteinase-9; 92 kDa gelatinase; type V collagenase; macrophage gelatinase; 92 kDa type IV collagenase; matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase); EC 3.4.24.35

**Gene ID**

4318

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<b>mRNA Refseq</b>	NM_004994
<b>Protein Refseq</b>	NP_004985
<b>MIM</b>	120361
<b>UniProt ID</b>	P14780
<b>Chromosome Location</b>	20q11.2-q13.1
<b>Pathway</b>	AGE/RAGE pathway; Angiogenesis; Bladder cancer
<b>Function</b>	collagen binding; metalloendopeptidase activity; protein binding

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