Active Recombinant Human MMP9 Protein, T7 tagged, No Activation Required

Cat. No. MMP9-28H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Matrix Metalloproteinase-9 (MMP-9, 92 kDa type IV collagenase, 92 kDa gelatinase, Gelatinase B, GELB) catalytic domain with fibronectin domains cloned from human cDNA, expressed in E. coli. The recombinant enzyme consists of the catalytic domain of human MMP-9 (residues 112-445, UniProtKB accession P14780) with a N-term T7 tag.
Species	Human
Source	E.coli
ProteinLength	112-445 aa
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.
Bio-activity	> 10 U/μg. Activity described as U=100 pmol/min at 25 centigrade using a colorimetri

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	c assay with thiopeptide Ac-Pro-Leu-Gly-[2-mercapto-4-methyl-pentanoyl]-Leu-Gly-O C2H5 (Biomol) as substrate.
Molecular Mass	37.7 kDa
AASequence	MGRGSEF-GDLKWHHHNITYWIQNYSEDLPRAVIDDAFARAFALWSA160170180190200VTPLTFTRVYSRDADIVIQFGVAEHGDGYPFDGKDGLLAHAFPPGPGIQG2102202302402 50DAHFDDDELWSLGKGVVVPTRFGNADGAACHFPFIFEGRSYSACTTDGRS260270280290300DGLPWCSTTANYDTDDRFGFCPSERLYTQDGNADGKPCQFPFIFQGQSYS310320330340350ACTTDGRSDGYRWCATTANYDRDKLFGFCPTRADSTVMGGNSAGELCVFP360370380390400FTFLGKEYSTCTSEGRGDGRLWCATTSNFDSDKKWGFCPDQGYSLFLVAA410420430440HEFGHALGLDHSSVPEALMYPMYRFTEGPPLHKDDVNGIRHLYGP
Purity	> 95% by SDS-PAGE. The protein is observed, in denaturing conditions, as a single band migrating at a molecular weight between 35.0 and 45.0 kDa.
Applications	Enzyme kinetic studies, cleavage of target substrates and screening of inhibitors.
Storage	At -80 centigrade. After initial defrost, aliquot the product into individual tubes and refreeze at -80 centigrade. Avoid repeated freeze/thaw cycles.
Concentration	0.15 mg/mL. The concentration is calculated by the analysis of the absorbance at 280 nm (ε280 = 67100 M-1cm-1 calculated).
Shipping	Dry Ice
Storage Buffer	Tris 20 mM pH 7.2, CaCl2 5 mM, ZnCl2 0.1 mM, NaCl 0.3 M, acetohydroxamic acid (AHA) 0.5 M, glycerol 10%, Brij35 0.05%.

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GENE INFORMATION

Gene Name	MMP9 matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) [Homo sapiens (human)]
Official Symbol	MMP9
Synonyms	MMP9; matrix metallopeptidase 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 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); GELB; CLG4B; MMP-9; MANDP2;
Gene ID	4318
mRNA Refseq	NM_004994
Protein Refseq	NP_004985
MIM	120361
UniProt ID	P14780

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