

Active Recombinant Human Matrix Metallopeptidase 2

Cat. No. MMP2-808H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MMP2 is expressed in Sf9-insect cells using the baculovirus expression vector system and purified from cell culture supernatant. The full-length recombinant proenzyme consists of 631 amino acids and has an apparent Mr of 72 kDa.
Species	Human
Source	Sf9 Cells
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. However, the protein encoded by this gene is a member of the membrane-type MMP (MT-MMP) subfamily; each member of this subfamily contains a potential transmembrane domain suggesting that these proteins are expressed at the cell surface rather than secreted. This protein activates MMP2 protein, and this activity may be involved in tumor invasion.
Purity	Recombinant progelatinase A appears as a major band of 72 kDa in non-reducing SDS-PAGE (> 95 % of total protein). Due to autoproteolytic activity minor bands of activated gelatinase A (e.g. 62 or 50 kDa) may be visible in the enzyme preparation.

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Activity	The specific activity of gelatinase A after APMA activation is >120 mU/mg. 1 U is the activity that hydrolyzes 1 mmol peptide (7-methoxycoumarin-4-yl)acetyl-Pro-Leu-Gly-Leu-(3-[2,4-dinitrophenyl]-L-2,3-diaminopropionyl)-Ala-Arg-NH ₂ (Mca-Pro-Leu-Gly-L-tyr-D-pa-Ala-Arg) within 1min under assay conditions described below.
Application	Recombinant progelatinase A can serve as antigen standard in immunochemical analyses. Active gelatinase A may be used to study the degradation of extracellular matrix proteins, to screen inhibitors of matrix metalloproteinases and to characterize inhibitor actions.
Storage	Recombinant MT1-MMP prodomain-catalytic domain is stable until the expiry date given on the label if stored at -70°C. It can be kept at -20 °C for several weeks. Repeated freezing and thawing should be avoided.

GENE INFORMATION

Gene Name	MMP2 matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase) [Homo sapiens]
Synonyms	MMP2; matrix metalloproteinase 2; CLG4, CLG4A, MMP-II, MONA, TBE-1; 72 kDa gelatinase; 72 kDa type IV collagenase; MMP-2; collagenase type IV-A; gelatinase A; matrix metalloproteinase-2; matrix metalloproteinase-II; neutrophil gelatinase; EC 3.4.24.24
Gene ID	4313
mRNA Refseq	NM_001127891
Protein Refseq	NP_001121363
MIM	120360

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UniProt ID	P08253
Chromosome Location	16q13-q21
Pathway	Bladder cancer; GnRH signaling pathway; Leukocyte transendothelial migration; Diabetes pathways
Function	metal ion binding; metalloendopeptidase activity; peptidase activator activity; sequence-specific DNA binding transcription factor activity; zinc ion binding
	