

Active Recombinant Human MMP1

Cat. No. MMP1-1713H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human MMP-1 is a 42.7 kDa protein containing the entire catalytic N-terminal domain and the C-terminal domain which is involved in substrate specificity and in binding TIMP-1.
Species	Human
Source	E.coli
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. This gene encodes a secreted enzyme which breaks down the interstitial collagens, types I, II, and III. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.3. Alternative splicing results in multiple transcript variants.
Bio-activity	MMP-1 activity was measured by its ability to cleave a chromogenic peptide MMP-1 substrate at room temperature. At an MMP-1 concentration of 2.5 µg/ml, 50% cleavage was achieved at an incubation time of approximately 25 minutes
Molecular Mass	42.7 kDa
AA Sequence	MFVLTEGNPR WEQTHLYRI ENYTPDLPRA DVDHAIEKAF QLWSNVTPLT FTKVSEGGAD IMISFVRGDH RDNSPFDGPG GNLAHAFQPG PGIGGDAHFD

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EDERWTNNFR EYNLHRVAAH ELGHSGLSLH STDIGALMYP SYTFSGDVQL
 AQDDIDGIQA IYGRSQNPVQ PIGPQTPKAC DSKLTFDAIT TIRGEVMFFK
 DRFYMRTNPF YPEVELNFIS VFWPQLPNGL EAAYEFADRD EVRFFKGNKY
 WAVQGQNVLH GYPKDIYSSF GFPRTVKHID AALSEENTGK TYFFVANKYW
 RYDEYKRSMD PGYPKMAIHD FPGIGHKVDA VFMKDGFFYF FHGTRQYKFD
 PKTKRILTLQ KANSWFNCRK N

Purity Greater than 90% by SDS-PAGE gel and HPLC analyses.

GENE INFORMATION

Gene Name [MMP1 matrix metalloproteinase 1 \(interstitial collagenase\) \[Homo sapiens\(human\) \]](#)

Official Symbol MMP1

Synonyms MMP1; CLG; CLGN; matrix metalloproteinase 1 (interstitial collagenase); interstitial collagenase; fibroblast collagenase; matrix metalloproteinase 1; matrix metalloproteinase 1; EC 3.4.24.7

Gene ID [4312](#)

mRNA Refseq [NM_002421](#)

Protein Refseq [NP_002412](#)

MIM [4312](#)

UniProt ID P03956

Chromosome Location 11q22.3

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Pathway	Activation of Matrix Metalloproteinases; Basigin interactions; Bladder cancer
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Function	calcium ion binding; metalloendopeptidase activity; zinc ion binding
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