

## Recombinant Human MMP3 (Stromelysin 1, Progelatinase), Inactive, Catalytic Domain

Cat. No. MMP3-163H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human matrix metalloproteinase-3 (MMP-3, stromelysin-1, transin) cloned from human cDNA was expressed in <i>E.coli</i> . It consists of the catalytic domain of human MMP-3 (residues 105-265 swissprot accession P08254), and has been inactivated by mutagenesis (E219A). MW=18kDa.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	105-265 a.a.
<b>Description</b>	<p>Stromelysin-1 is a protein that in humans is encoded by the MMP3 gene. 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 an enzyme which degrades fibronectin, laminin, collagens III, IV, IX, and X, and cartilage proteoglycans. The enzyme is thought to be involved in wound repair, progression of atherosclerosis, and tumor initiation.</p>
<b>Purity</b>	> 95% by SDS-PAGE. The enzyme was observed as a single band migrating at a molecular weight of < 20kDa.

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<b>Specific Activity</b>	Not detected. Activity described as U=100pmol/min at 37°C using a colorimetric assay with thiopeptolide Ac-Pro-Leu-Gly-[2-mercapto-4-methyl-pentanoyl]-Leu-Gly-OC <sub>2</sub> H <sub>5</sub> (Biomol) as substrate.
<b>Usage</b>	Enzyme kinetic studies, cleavage of target substrates and screening of inhibitors.
<b>Supplied As</b>	0.2mg/ml in 20mM Tris, pH7.2, 10mM CaCl <sub>2</sub> , 0.1mM ZnCl <sub>2</sub> , 0.3M NaCl, 0.2M Acetohydroxamic Acid (AHA). The concentration is calculated from the absorbance at 280nm, (e <sub>280</sub> =27310M <sup>-1</sup> cm <sup>-1</sup> ).
<b>Note</b>	Under the above described conditions, to avoid precipitation or protein dimerization, the product can be concentrated to a maximum of 0.5mM.
<b>Storage</b>	-80°C. The enzyme is stable at -20°C for at least 1 week. After initial defrost, aliquot enzyme into individual tubes and refreeze at -80°C. Avoid repeated freeze/defrost cycles.

## GENE INFORMATION

<b>Gene Name</b>	MMP3 matrix metalloproteinase 3 (stromelysin 1, progelatinase) [ Homo sapiens ]
<b>Synonyms</b>	MMP3; matrix metalloproteinase 3 (stromelysin 1, progelatinase); matrix metalloproteinase 3 (stromelysin 1, progelatinase); SL-1; STMY; STR1; CHDS6; MMP-3; STMY1; MGC126102; MGC126103; MGC126104; matrix metalloproteinase 3; Matrix metalloproteinase-3; transin-1; Stromelysin-1; proteoglycanase; EC 3.4.24.17; Transin-1
<b>Gene ID</b>	4314
<b>mRNA Refseq</b>	NM_002422

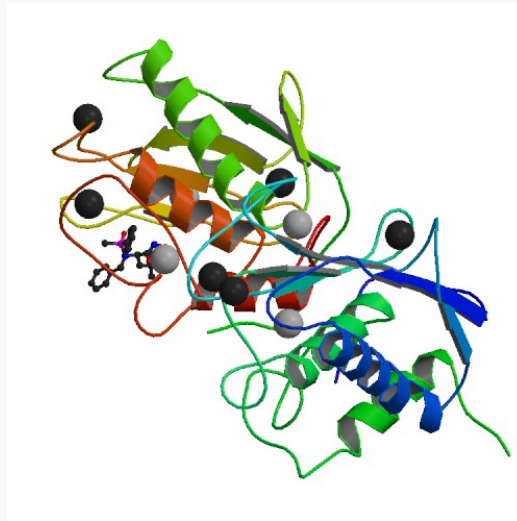
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<b>Protein Refseq</b>	NP_002413
<b>MIM</b>	185250
<b>UniProt ID</b>	P08254
<b>Chromosome Location</b>	11q22.3
<b>Function</b>	calcium ion binding; metalloendopeptidase activity; peptidase activity; zinc ion binding

PDB rendering based on 1b3d.



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