

Active Recombinant Human MMP10 protein, No Activation Required

Cat. No. MMP10-156H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human matrix metalloproteinase-10 (MMP-10, stromelysin-2, transin 2) cloned from human cDNA was expressed in <i>E.coli</i> . It consists of the catalytic domain of human MMP-10 (residues 99-263 swissprot accession P09238). The protein has been mutated to increase its stability, as the mutation drastically reduces the enzyme's rate of autoprolysis. The catalytic activity rates are not affected by the mutation. MW=18.5kDa.
Species	Human
Source	E.coli
ProteinLength	99-263 a.a.
Description	Stromelysin-2 is a protein that in humans is encoded by the MMP10 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. The enzyme encoded by this gene degrades proteoglycans and fibronectin.
Purity	> 95% by SDS-PAGE. The enzyme was observed as a single band migrating at a molecular weight of < 20kDa.

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Specific Activity	>10U/μg. Activity described as U=100pmol/min at 25°C using a colorimetric assay with thiopeptolide Ac-Pro-Leu-Gly-[2-mercapto-4-methyl-pentanoyl]-Leu-Gly-OC ₂ H ₅ (Biomol) as substrate.
Usage	Enzyme kinetic studies, cleavage of target substrates and screening of inhibitors.
Supplied As	0.2mg/ml in 20mM Tris, pH7.2, 10mM CaCl ₂ , 0.1mM ZnCl ₂ , 0.3M NaCl, 0.5M Acetohydroxamic Acid (AHA). The concentration is calculated from the absorbance at 280nm (ε ₂₈₀ =28590M ⁻¹ cm ⁻¹).
Note	Under the above described conditions, to avoid precipitation or protein dimerization, the product can be concentrated to a maximum of 0.15mM.
Storage	-80°C. The enzyme is stable at 4°C for at least 6 days and at 25°C for at least several hours. However, it is recommended that thawing and dilution of the enzyme be done within a short time before the start of the assay. After initial defrost, aliquot enzyme into individual tubes and refreeze at -80°C. Avoid repeated freeze/defrost cycles.

GENE INFORMATION

Gene Name	MMP10 matrix metalloproteinase 10 (stromelysin 2) [Homo sapiens]
Synonyms	MMP10; matrix metalloproteinase 10 (stromelysin 2); SL-2; STMY2; transin 2; stromelysin 2; matrix metalloproteinase 10; matrix metalloproteinase 10 (stromelysin 2; Stromelysin-2; EC 3.4.24.22; Matrix metalloproteinase-10; MMP-10; Transin-2; stromelysin 2; matrix metalloproteinase 10
Gene ID	4319
mRNA Refseq	NM_002425

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Protein Refseq	NP_002416
MIM	185260
UniProt ID	P09238
Chromosome Location	11q22.3
Function	calcium ion binding; metalloendopeptidase activity; peptidase activity; zinc ion binding

PDB rendering based on 1q3a.



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