

Active Recombinant Human MMP7 Protein, Tag Free, No Activation Required

Cat. No. MMP7-27H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Matrix Metalloproteinase-7 (MMP-7, Matrilysin, Uterine metalloproteinase) cloned from human cDNA, expressed in *E. coli*. The enzyme consists of the catalytic domain of human MMP-7 (residues 95-267, UniProtKB accession P09237).

Species

Human

Source

E. coli

ProteinLength

95-267 aa

Description

This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this 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. The encoded preproprotein is proteolytically processed to generate the mature protease. This secreted protease breaks down proteoglycans, fibronectin, elastin and casein and differs from most MMP family members in that it lacks a conserved C-terminal hemopexin domain. The enzyme is involved in wound healing, and studies in mice suggest that it regulates the activity of defensins in intestinal mucosa. The gene is part of a cluster of MMP genes on chromosome 11. This gene exhibits elevated expression levels in multiple human cancers.

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Bio-activity	> 8 U/μg. Activity described as U=100 pmol/min at 25 centigrade using a colorimetric assay with thiopeptide Ac-Pro-Leu-Gly-[2- mercapto-4-methyl-pentanoyl]-Leu-Gly-OC 2H5 (Biomol) as substrate.
Molecular Mass	19.3 kDa
AASequence	M-YSLFPNSPKWTSKVVITYRIVSYTRDLPHITVDRLVSKALNMWGKEI150160170180 190PLHFRKVVWGTADIMIGFARGAHGDSYPFDGPGNTLAHAFAPGTGLGGDA2002 10220230240HFDEDERWTDGSSLGINFLYAATHELGHSLGMGHSSDPNAVMYPTY GNGD250260PQNFKLSQDDIKIGIQKLYGKRSNSRKK
Purity	> 95% by SDS-PAGE. The protein is observed, in denaturing conditions, as a single band migrating at a molecular weight between 18.8 kDa and 25.0 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	0.1 mg/mL. The concentration is calculated by the analysis of the absorbance at 280 nm ($\epsilon_{280} = 33920 \text{ M}^{-1}\text{cm}^{-1}$ calculated).
Shipping	Dry Ice
Storage Buffer	Tris 20 mM pH 7.2, CaCl ₂ 10 mM, ZnCl ₂ 0.1 mM, NaCl 0.3 M, acetohydroxamic acid (AHA) 0.5 M.

GENE INFORMATION

Gene Name **MMP7 matrix metalloproteinase 7 (matrilysin, uterine) [Homo sapiens (human)]**

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Official Symbol	MMP7
Synonyms	MMP7; matrix metallopeptidase 7 (matrilysin, uterine); matrix metalloproteinase 7 (matrilysin, uterine) , MPSL1; matrilysin; PUMP 1; matrin; pump-1 protease; uterine matrilysin; uterine metalloproteinase; matrix metalloproteinase-7; matrix metalloproteinase 7 (matrilysin, uterine); MMP-7; MPSL1; PUMP-1;
Gene ID	4316
mRNA Refseq	NM_002423
Protein Refseq	NP_002414
MIM	178990
UniProt ID	P09237

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