

Recombinant Human MMP3

Cat. No. MMP3-39H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Matrix Metalloproteinase-3 Human Recombinant produced in <i>E. Coli</i> is a single, non-glycosylated, polypeptide chain containing 230 amino acids and having a molecular mass of 22 kDa. The MMP-3 is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	MMP-3 enzyme is also known as Stromelysin-1 or as Transin-1 which hydrolyzes natural collagen at physiological pH and temperature. It dissolves the intervertebral nucleus pulposus and annulus fibrosus of Herniated Lumbar Intervertebral Disk . MMP-3 hydrolyzes components of the extracellular matrix like proteoglycan, laminin, fibronectin, gelatin and collagen types III, IV and IX. It also activates pro-MMP-9 and pro-MMP-8 and superactivates plasmin activated MMP-1. MMP-3 is secreted as a latent proenzyme and is activated by a variety of proteinases, e.g. plasmin, trypsin, chymotrypsin, cathepsin G or human neutrophil elastase. MMP-3 was found to be capable of activating the precursor of IL1-beta.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein was lyophilized from a concentrated (1 mg/ml) solution with no additives.

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Biological Activity	The specific activity was found to be $\geq 1,250$ mU/mg protein (H. Nagase, et al; J. Biol. Chem. 269, 20952, 1994). One unit is defined as the amount of enzyme that hydrolyzes 1μ mol of MCA-Arg-Pro-Lys-Pro-Val-Glu-Nva-Trp-Arg-Lys(DNP)-NH ₂ per min. at 37°C, pH 7.0.
Solubility	It is recommended to reconstitute the lyophilized Stromelysin-1 in sterile 18 MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Stability	Lyophilized Matrix Metalloproteinase-3 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MMP-3 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.
GENE INFORMATION	
Gene Name	MMP3 matrix metalloproteinase 3 (stromelysin 1, progelatinase) [Homo sapiens]
Synonyms	matrix metalloproteinase 3 (stromelysin 1, progelatinase); SL-1; STMY; STR1; CHDS6; MMP-3; STMY1; MGC126102; transin-1; MMP3; MGC126103; matrix metalloproteinase 3; CHDS6; Transin-1; proteoglycanase; MGC126104; Matrix metalloproteinase-3; EC 3.4.24.17
Gene ID	4314
mRNA Refseq	NM_002422
Protein Refseq	NP_002413
MIM	185250

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UniProt ID	P08254
Chromosome Location	11q22.3
Function	calcium ion binding; metalloendopeptidase activity; peptidase activity; zinc ion binding

PDB rendering based on 1b3d.

