Active Recombinant Human MMP13 protein

Cat. No. MMP13-159H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MMP13(Tyr104-Asn274) with a C-terminal purification tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	104-274 a.a.
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. The protein encoded by this gene cleaves type II collagen more efficiently than types I and III. It may be involved in articular cartilage turnover and cartilage pathophysiology associated with osteoarthritis. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.3.
Form	Liquid. In 50mM TRIS, 5mM CaCl2, 300mM NaCl, 20μM ZnCl2, 0.5% Brij-35, and 30% glycerol.
Bio-activity	≥100 U/μg
Molecular Mass	20.4 kDa

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	≥95% (SDS-PAGE)
Unit Definition	One U=100 pmol/min at 37 centigrade using the colorimetric thiopeptolide Ac-Pro-Leu-Gly-S-Leu-Leu-Gly-OEt as substrate.
Applications	Useful tool to study enzyme kinetics, cleave target substrates, and screen for inhibitors.
Storage	Store at –80 centigrade

GENE INFORMATION

Gene Name	MMP13 matrix metallopeptidase 13 (collagenase 3) [Homo sapiens]
Official Symbol	MMP13
Synonyms	MMP13; matrix metallopeptidase 13 (collagenase 3); matrix metalloproteinase 13 (collagenase 3); collagenase 3; CLG3; MMP-13; MANDP1;
Gene ID	4322
mRNA Refseq	NM_002427
Protein Refseq	NP_002418
MIM	600108
UniProt ID	P45452
Chromosome Location	11q22.3

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Pathway	Activation of Matrix Metalloproteinases, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Endochondral Ossification, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem; Matrix Metalloproteinases, organism-specific biosystem;
Function	calcium ion binding; calcium-dependent protein binding; fibronectin binding; low-density lipoprotein particle receptor binding; metalloendopeptidase activity; peptidase activity; zinc ion binding;

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