

MMP-1 Human E. coli

Product Data Sheet

Type: Recombinant	Cat. No.:	
Source: E. coli	RBG10231002	(2 µg)
Species: Human	RBG10231010	(10 µg)
Other names: Matrix metalloproteinase-1; Fibroblast collagenase; interstitial collagenase	RBG10231100	(100 µg)

Description

Matrix metalloproteinases (MMPs) are a family of endoproteases that require zinc and calcium for expressing catalytic activity. These enzymes play a central role in the maintenance and remodeling of the extracellular matrix. Elevated expression of their activity, caused either by up-regulation of their expression or down-regulation of their cognate inhibitors, has been implicated in various degenerative disorders, including arthritis, cardiovascular disease, skeletal growth-plate disorders, and cancer metastasis. MMP-1 is a secreted collagenase with specificity toward Type I, II, III, VII, and X collagens. Recombinant Human MMP-1 is a 42.7 kDa protein containing the entire catalytic N-terminal domain and the C-terminal domain, which is involved in substrate specificity, and in binding TIMP-1.

Research topic

Bone and cartilage metabolism, Cardiovascular disease, Coronary artery disease, Oncology

Amino Acid Sequence

MFVLTEGNPR WEQTHLTYRI ENYTPDLPRD DVDHAIEKAF QLWSNVTPLT FTKVSEGQAD IMISFVRGDH RDNSPFDGPG
GNLAHAFQPG PGIGGDAHFD EDERWTNNFR EYNLHRVAAH ELGHSLGLSH STDIGALMYP SYTFSGDVQL AQDDIDGIQA
IYGRSQNPVQ PIGPQTPKAC DSKLTFDAIT TIRGEVMFFK DRFYMRTNPF YPEVELNFIS VFWPQLPNGL EAAYEFADRD
EVRFFKGNKY WAVQGQNVLH GYPKDIYSSF GFPRTVKHID AALSEENTGK TYFFVANKYW RYDEYKRSMG PGYPKMIAMD
FPGIGHKVDA VFMKDGFFYF FHGTRQYKFD PKTKRILTLQ KANSWFNCRK N

Source

E. coli

Purity

90%

Biological Activity

MMP-1 activity was measured by its ability to cleave a chromogenic peptide MMP-1 substrate at room temperature. At an MMP-1 concentration of 2.5 µg/ml, 50% cleavage was achieved at an incubation time of approximately 25 minutes.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.5-1.0 mg/ml. Note: Slow to dissolve. Gently shake the solution for about 10 minutes for better solubility. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

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