

MMP-1 Protein, Human (HEK293, His)

Cat. No.:	HY-P70250
Synonyms:	rHuInterstitial collagenase/MMP-1, His; Interstitial Collagenase; Fibroblast Collagenase; Matrix Metalloproteinase-1; MMP-1; MMP1; CLG
Species:	Human
Source:	HEK293
Accession:	P03956 (F20-N469)
Gene ID:	4312
Molecular Weight:	49-61 kDa

PROPERTIES

AA Sequence	<pre> F P A T L E T Q E Q D V D L V Q K Y L E K Y Y N L K N D G R Q V E K R R N S G P V V E K L K Q M Q E F F G L K V T G K P D A E T L K V M K Q P R C G V P D V A Q F V L T E G N P R W E Q T H L T Y R I E N Y T P D L P R A D V D H A I E K A F Q L W S N V T P L T F T K V S E G Q A D I M I S F V R G D H R D N S P F D G P G G N L A H A F Q P G P G I G G D A H F D E D E R W T N N F R E Y N L H R V A A H E L G H S L G L S H S T D I G A L M Y P S Y T F S G D V Q L A Q D D I D G I Q A I Y G R S Q N P V Q P I G P Q T P K A C D S K L T F D A I T T I R G E V M F F K D R F Y M R T N P F Y P E V E L N F I S V F W P Q L P N G L E A A Y E F A D R D E V R F F K G N K Y W A V Q G Q N V L H G Y P K D I Y S S F G F P R T V K H I D A A L S E E N T G K T Y F F V A N K Y W R Y D E Y K R S M D P G Y P K M I A H D F P G I G H K V D A V F M K D G F F Y F F H G T R Q Y K F D P K T K R I L T L Q K A N S W F N C R K N </pre>
Biological Activity	Measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH ₂ . Read at excitation and emission wavelengths of 360 nm and 405 nm. The specific activity is 4879.964 pmol/min/μg, as measured under the described conditions. (Activation description: The proenzyme needs to be activated by APMA for an activated form).
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM MES, 150 mM NaCl, 2 mM CaCl ₂ , 1 mM DTT, 0.05% Brij35, 10% Glycerol, pH 5.0 or 20 mM MES, 150 mM NaCl, 2 mM CaCl ₂ , 1 mM DTT, 10% Glycerol, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background

Matrix metalloproteinase-1 (MMP-1) is a proteolytic enzyme known for its role in extracellular matrix remodeling. It exhibits a broad substrate specificity, cleaving collagens of types I, II, and III at a specific site within the helical domain. Additionally, MMP-1 demonstrates activity against collagens of types VII and X. Notably, in the context of HIV infection, MMP-1 interacts with and cleaves the secreted viral Tat protein, resulting in a decrease in neuronal Tat-mediated neurotoxicity. This interaction underscores the diverse functions of MMP-1 beyond its canonical role in extracellular matrix degradation, implicating it in processes associated with viral infection and neuroprotection (

Caution: Product has not been fully validated for medical applications. For research use only.

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