# MMP-9 Protein, Human (HEK293, C-His)

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| **Cat. No.:** | HY-P70145A |
| **Synonyms:** | rHuMatrix metalloproteinase-9/MMP-9, His; Matrix metalloproteinase-9; 92 kDa gelatinase; 92 kDa type IV collagenase; Gelatinase B; MMP9 |
| **Species:** | Human |
| **Source:** | HEK293 |
| **Accession:** | P14780 (A19-D707) |
| **Gene ID:** | 4318 |
| **Molecular Weight:** | Approximately 82.5 kDa |

## PROPERTIES

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| **AA Sequence** | A A P R Q R Q S T L V L F P G D L R T N L T D R Q L A E E Y L Y R Y G Y T R V A<br>E M R G E S K S L G P A L L L L Q K Q L S L P E T G E L D S A T L K A M R T P R<br>C G V P D L G R F Q T F E G D L K W H H H N I T Y W I Q N Y S E D L P R A V I D<br>D A F A R A F A L W S A V T P L T F T R V Y S R D A D I V I Q F G V A E H G D G<br>Y P F D G K D G L L A H A F P P G P G I Q G D A H F D D D E L W S L G K G V V V<br>P T R F G N A D G A A C H F P F I F E G R S Y S A C T T D G R S D G L P W C S T<br>T A N Y D T D D R F G F C P S E R L Y T Q D G N A D G K P C Q F P F I F Q G Q S<br>Y S A C T T D G R S D G Y R W C A T T A N Y D R D K L F G F C P T R A D S T V M<br>G G N S A G E L C V F P F T F L G K E Y S T C T S E G R G D G R L W C A T T S N<br>F D S D K K W G F C P D Q G Y S L F L V A A H E F G H A L G L D H S S V P E A L<br>M Y P M Y R F T E G P P L H K D D V N G I R H L Y G P R P E P E P R P P T T T T<br>P Q P T A P P T V C P T G P P T V H P S E R P T A G P T G P P S A G P T G P P T<br>A G P S T A T T V P L S P V D D A C N V N I F D A I A E I G N Q L Y L F K D G K<br>Y W R F S E G R G S R P Q G P F L I A D K W P A L P R K L D S V F E E R L S K K<br>L F F F S G R Q V W V Y T G A S V L G P R R L D K L G L G A D V A Q V T G A L R<br>S G R G K M L L F S G R R L W R F D V K A Q M V D P R S A S E V D R M F P G V P<br>L D T H D V F Q Y R E K A Y F C Q D R F Y W R V S S R S E L N Q V D Q V G Y V T<br>Y D I L Q C P E D |
| **Biological Activity** | Measured by its ability to cleave the fluorogenic peptide substrate, Mca-PLGL-Dpa-AR-NH2. The specific activity is 16371.30 pmol/min/μg, as measured under the described conditions. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of 20 mM Tris-HCl, 2 mM $CaCl_2$, 150 mM NaCl, 0.05% Brij35(w/v), pH 7.5 or 20 mM Tris-HCl, 150 mM NaCl, 2 mM CaCl2, pH 7.5. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). |

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| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | MMP-9 protein, a matrix metalloproteinase, plays a crucial role in the localized breakdown of the extracellular matrix and facilitates leukocyte migration. It has been suggested that MMP-9 may also be involved in bone osteoclastic resorption. Additionally, MMP-9 cleaves KiSS1 at a Gly-\|-Leu bond and NINJ1 to generate the secreted form of ninjurin-1. Furthermore, it is known to cleave type IV and type V collagen, resulting in the production of large C-terminal three quarter fragments and shorter N-terminal one quarter fragments. While MMP-9 degrades fibronectin, it does not have an impact on laminin or Pz-peptide. |



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