MMP-9 Protein, Rat (HEK293, His)

Cat. No.:	HY-P73301
Synonyms:	Matrix metalloproteinase-9; MMP-9; Gelatinase B; GELB; CLG4B
Species:	Rat
Source:	HEK293
Accession:	EDL96479.1 (A20-P708)
Gene ID:	81687
Molecular Weight:	approximately 95 kDa

PROPERTIES

AA Sequence

A P H Q R Q P T Y V V F P R D L K T S N L T D T Q L A E D Y L Y R Y G Y T R A A
Q M M G E K Q S L R P A L L M L Q K Q L S L P Q T G E L D S E T L K A I R S P R
C G V P D V G K F Q T F E G D L K W H H H N I T Y W I Q S Y T E D L P R D V I D
D S F A R A F A V W S A V T P L T F T R V Y G L E A D I V I Q F G V A E H G D G
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 A V V
P T Y F G N A N G A P C H F P F T F E G R S Y L S C T T D G R N D G K P W C G T
T A D Y D T D R K Y G F C P S E N L Y T E H G N G D G K P C V F P F I F E G H S
Y S A C T T K G R S D G Y R W C A T T A N Y D Q D K L Y G F C P T R A D V T V T
G G N S A G E M C V F P F V F L G K Q Y S T C T G E G R S D G R L W C A T T S N
F D A 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
M Y P M Y H Y H E D S P L H E D D I K G I Q H L Y G R G S K P D P R P P A T T A
A E P Q P T A P P T M C P T A P P M A Y P T G G P T V A P T G A P S P G P T G P
P T A G P S E A P T E S S T P V D N P C N V D V F D A I A D I Q G A L H F F K D
G R Y W K F S N H G G S Q L Q G P F L I A R T W P A L P A K L N S A F E D P Q S
K K I F F F S G R K M W V Y T G Q S V L G P R S L D K L G L G S E V T L V T G L
L P R R G G K A L L I S R E R I W K F D L K S Q K V D P Q S V T R L D N E F S G
V P W N S H N V F H Y Q D K A Y F C H D K Y F W R V S F H N R V N Q V D H V A Y
V T Y D L L Q C P

Biological Activity	Measured by its ability to cleave a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH2 and the specific activity is >1000 pmoles/min/μg.(Activation description: The proenzyme needs to be activated by APMA for an activated form)
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM MES, 100 mM NaCl, 1 mM $CaCl_2$, 10% Glycerol, pH 7.4 (Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.) or 50 mM MES, 100 mM NaCl, 1 mM $CaCL_2$, pH 7.4.
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.

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

Background	Matrix metalloproteinase-9 (Mmp9) is a member of the matrix metalloproteinase (MMP) family, which are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, wound repair, and tissue remodeling, as well as in disease processes, such as arthritis, progression of atherosclerosis and tumor invasion. Mmp9 is secreted as inactive proproteins which are activated when cleaved by extracellular proteinases to generate a mature, zinc-dependent endopeptidase enzyme that degrades collagens of type IV, V and XI, and elastin. Mmp9 is also involved in IL-8-induced mobilization of hematopoietic progenitor cells from bone marrow. Mmp9 implicates in several diseases, including Down syndrome; anodontia; artery disease; autoimmune disease; and chronic obstructive pulmonary disease[1][2].

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