# Recombinant Human MMP1 Protein (His Tag)

**Catalog Number: PDEH100891**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

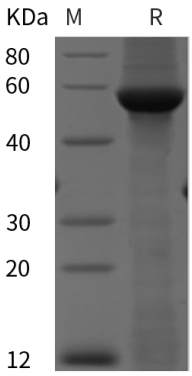
## Description

| | |
|---|---|
| **Species** | Human |
| **Source** | E.coli-derived Human MMP1 protein Phe20-Asn469, with an N-terminal His |
| **Calculated MW** | 49.4 kDa |
| **Observed MW** | 58 kDa |
| **Accession** | P03956 |
| **Bio-activity** | Not validated for activity |

## Properties

| | |
|---|---|
| **Purity** | > 95% as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 10 EU/mg of the protein as determined by the LAL method |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol. |
| **Reconstitution** | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis. |

## Data




SDS-PAGE analysis of Human MMP1 proteins, 2 μg/lane of Recombinant Human MMP1 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 58 kDa.

## Background


Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com

MMP1, also known as MMP-1, contains 4 hemopexin-like domains and is a member of the matrix metalloproteinase ( MMP) family. Matrix metalloproteases, also called matrixins, are zinc-dependent endopeptidases that are the major proteases involved in ECM degradation. MMPs are capable of degrading a wide range of extracellular molecules and a number of bioactive molecules. MMP activity is regulated by two major endogenous inhibitors: alpha2-macroglobulin and tissue inhibitors of metalloproteases (TIMPs). MMPs play a central role in cell proliferation, migration, differentiation, angiogenesis, apoptosis and host defences. Dysregulatoin of MMPs has been implicated in many diseases including arthritis, chronic ulcers, encephalomyelitis and cancer. Tumour metastasis is a multistep process involving the dessemination of tumor cells from the primary tumor to secondarys at a distant organ or tissue. One of the first steps in metastasis is the degradation of the basement membrane, a process in which MMPs have been implicated. MMPs are secreted by tumor cells themselves or by surrounding stromal cells stimulated by the nearby tumor. MMP-1,-2,-3,-7,-9,-13 and-14 all have elevated expression in primary tumors and/or metastases. MMP-1 cleaves collagens of types I, II, and III at one site in the helical domain. It also cleaves collagens of types VII and X. In case of HIV infection, MMP1 interacts and cleaves the secreted viral Tat protein, leading to a decrease in neuronal Tat' s mediated neurotoxicity.


Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com