

37-1236: Human MMP1 Recombinant Protein (His Tag)(Discontinued)

Reactivity : Human
Alternative Name : CLG Protein, CLGN Protein,

Description

Source : HEK293 Cells

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. Dysregulation of MMPs has been implicated in many diseases including arthritis, chronic ulcers, encephalomyelitis and cancer. Tumour metastasis is a multistep process involving the dissemination of tumor cells from the primary tumor to secondaries 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. Numerous studies have linked altered MMP expression in different human cancers with poor disease prognosis. 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.

Product Info

Amount : Human MMP1 Recombinant Protein (His Tag)(Discontinued) / 20 µg
Purification : > 96 % as determined by SDS-PAGE
Content : Formulation Lyophilized from sterile PBS, pH 7.4
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Storage condition : Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Amino Acid : Met1-Asn469

Application Note

Measured by its ability to cleave the fluorogenic peptide substrate, McaPLGL-Dpa-AR-NH₂. The specific activity is >400 pmoles/min/Åµg (Activation description: The proenzyme needs to be activated by APMA for an activated form)
Endotoxin :< 1.0 EU per Åµg of the protein as determined by the LAL method.
Other pack size also available.

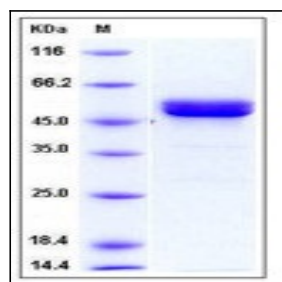


Fig 1: Human MMP1 Recombinant Protein (His Tag)