

**Recombinant Human MMP1 Protein (His tag)**

Cat.NO.: TP08463

3th Edition

**Synonyms:**CLG;CLGN

**Description:**MMP1, also known as MMP-1, contains 4 hemopexin-like domains and is a member of the matrix metalloproteinase (MMP) family. Matrix metalloproteinases, 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 metalloproteinases (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.

**Form:**PBS**Molecular Weight:****Sequences:**Met 1-Asn 469**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.