Recombinant Protein Technical Manual

Recombinant Human MMP12/MMP2/HME Protein (catalytic domain)(Active)

RPES4883

Product Data:

Product SKU: RPES4883

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: NP_002417.2

Protein Information:

Molecular Mass: 18.2 kDa

AP Molecular Mass: 18 kDa

Tag:

Bio-activity: Measured by its ability to cleave the fluorogenic peptide substrate, Mca-PLGL-Dpa-AR-NH2 (AnaSpec, Catalog # 27076). The specific activity is > 800 pmoles/min/¦Ìg

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: 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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 10 mM Hepes, 2 mM CaCl2, 250 mM NaCl, pH 7.0

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: HME;ME;MME;MMP2

Immunogen Information:

Sequence: Gly106-Asn268

Background:

Matrix metalloproteinases (MMPs) are a family of zinc-dependent endopeptidases that degrade components of the extracellular matrix (ECM) and play essential roles in various physiological processes such as morphogenesis, differentiation, angiogenesis and tissue remodeling, as well as pathological processes including inflammation, arthritis, cardiovascular diseases, pulmonary diseases and tumor invasion. Macrophage metalloelastase, also known as Matrix metalloproteinase2, Macrophage elastase, MMP12, and MMP2, is a secreted protein which belongs to the peptidase M10A family. MMP12 is a macrophage-secreted elastase that is highly induced in the liver and lung in response to S. mansoni eggs and contains four hemopexin-like domains. MMP12 is a proteolytic enzyme responsible for cleavage of plasminogen to angiotensin, which has an angiostatic effect. It may be involved in tissue injury and remodeling and has significant elastolytic activity. It may be related to prognosis in breast cancer patients. MMP12 promotes fibrosis by limiting the expression of specific ECM-degrading MMPs. Like MMP12, MMP13 expression is highly dependent on IL3 and type I I-IL-4 receptor signaling. MMP12 is a potent proinflammatory and oncogenic molecule. MMP12 up-regulation plays a critical role in emphysema to lung cancer transition that is facilitated by inflammation.