

Recombinant Human MMP-3 Protein

Catalog Number: PKSH031588

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

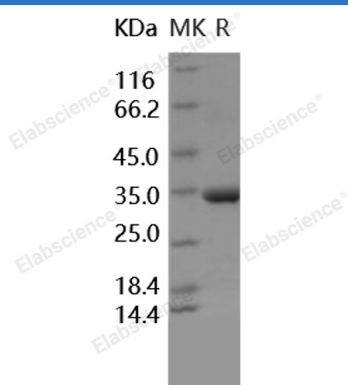
Description

Species	Human
Source	E.coli-derived Human MMP-3 protein Tyr 18-Thr 272
Calculated MW	29 kDa
Observed MW	34 kDa
Accession	AAA36321.1
Bio-activity	Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nva-WR-K(Dnp)-NH ₂ , AnaSpec, Catalog # 27114. The specific activity is > 300 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by Chymotrypsin for an activated form)

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
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 sterile 50mM Tris, 10mM CaCL ₂ , 1uM ZnCL ₂ , 50mM NaCl, 0.5% Brij35, pH 7.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % as determined by reducing SDS-PAGE.

Background

For Research Use Only

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Matrix metalloproteinase 3 (abbreviated as MMP3) is also known as stromelysin 1 and progelatinase. MMP3 is a member of the matrix metalloproteinase (MMP) family whose members are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, tissue remodeling, and disease processes including arthritis and metastasis. As a secreted zinc-dependent endopeptidase, MMP3 exerts its functions mainly in extracellular matrix. This protein is activated by two major endogenous inhibitors: alpha2-macroglobulin and tissue inhibitors of metalloproteases (TIMPs). MMP3 plays a central role in degrading collagen types II, III, IV, IX, and X, proteoglycans, fibronectin, laminin, and elastin. In addition, MMP3 can also activate other MMPs such as MMP1, MMP7, and MMP9, rendering MMP3 crucial in connective tissue remodeling. Dysregulation of MMPs has been implicated in many diseases including arthritis, chronic ulcers, encephalomyelitis and cancer. Synthetic or natural inhibitors of MMPs result in inhibition of metastasis, while up-regulation of MMPs led to enhanced cancer cell invasion.