



Recombinant Protein Technical Manual

Recombinant Human MMP-3 Protein (Active)

RPES2942

Product Data:

Product SKU: RPES2942

Size: 5 μ g

Species: Human

Expression host: E. coli

Uniprot: AAA36321.1

Protein Information:

Molecular Mass: 29 kDa

AP Molecular Mass: 34 kDa

Tag:

Bio-activity: Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nva-WR-K(Dnp)-NH₂, AnaSpec, Catalog # 27114. The specific activity is >300 pmoles/min/ μ g. (Activation description: The proenzyme needs to be activated by Chymotrypsin for an activated form)

Purity: > 97 % 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°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 CaCl₂, 1 μ M ZnCl₂, 50mM NaCl, 0.5% Brij35, pH 7.0

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

Application:

Synonyms: Stromelysin; SL; Matrix metalloproteinase-3;Transin; MMP3; STMY1;CHDS6;MMP-3;SL;STMY;STR1

Immunogen Information:

Sequence: Tyr 18-Thr 272

Background:

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 metalloproteinases (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.