

Recombinant Human MMP-7 Protein

Catalog No.: RP01928 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	4316	P09237

Tags

C-His

Synonyms

MMP7; MPLS1; PUMP1; Matrilysin; 3.4.24.23; Matrin; Matrix metalloproteinase-7; MMP-7; Pump-1 protease; Uterine metalloproteinase

Product Information

Source	Purification
CHO Cells	≥ 85 % as determined by SDS-PAGE.

Calculated MW	Observed MW
30.52 kDa	30-40 kDa

Endotoxin

< 0.01 EU/μg of the protein by LAL method

Formulation

Lyophilized from 0.22 μm filtered solution in 10mM HEPES□5mM CaCl₂,150mM NaCl (pH 7.5). Normally 8% trehalose is added as protectant before lyophilization.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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Background

MMP-7, Degrades casein, gelatins of types I, III, IV, and V, and fibronectin. Activates procollagenase. Matrix metalloproteinases (MMPs) are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix. MMP-7 (matrilysin) is expressed in epithelial cells of normal and diseased tissues, and is capable of digesting a large series of proteins of the extracellular matrix including collagen IV and X, gelatin, casein, laminin, aggrecan, entactin, elastin and versican. MMP-7 is implicated in the activation of other proteinases such as plasminogen, MMP-1, MMP-2, and MMP-9. In addition to its roles in connective tissue remodeling and cancer, MMP-7 also regulates intestinal alpha-defensin activation in innate host defense, releases tumor necrosis factor-alpha in a model of herniated disc resorption, and cleaves FasL to generate a soluble form in a model of prostate involution. Structurally, MMP-7 is the smallest of the MMPs and consists of two domains: a pro-domain that is cleaved upon activation and a catalytic domain containing the zinc-binding site.

Basic Information

Description

Recombinant Recombinant Human MMP-7 Protein is produced by CHO Cells expression system. The target protein is expressed with sequence (Met1-Lys267) of Human MMP-7 (Accession #NP_002414.1) fused with a His tag at the C-terminus.

Bio-Activity

Measured by its ability to cleave the fluorogenic peptide substrate, Mca-PLGL-Dpa-AR-NH₂ (RD, Catalog # E5001). The specific activity is >812 pmol/min/μg, as measured under the described conditions.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

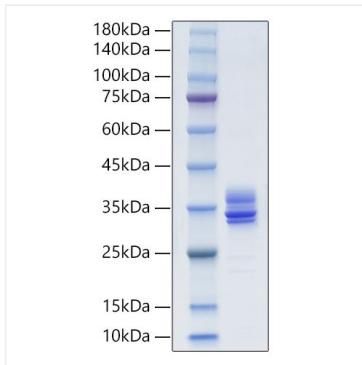
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

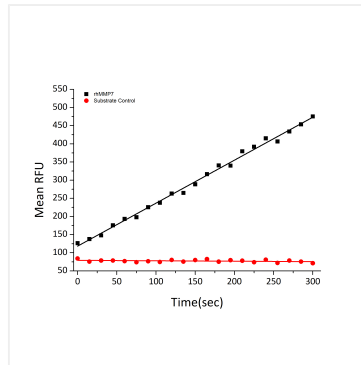
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

Validation Data



Recombinant Human MMP-7 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Human MMP-7 cleave the fluorogenic peptide substrate, Mca-PLGL-Dpa-AR-NH₂ (RD,Catalog # ES001). The specific activity is >812 pmol/min/μg, as measured under the described conditions.