
Product Data Sheet

Product Name: MMP 3 Human, HEK
Cat. No.: GP21934
Batch No.: 1

Product Data

Purity	>98%	Source	HEK293 cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Stromelysin-1; EC 3.4.24.17; Matrix metalloproteinase-3; MMP-3; Transin-1; SL-1; STMY; STR1; STMY1; MGC126102; MGC126103; MGC126104.		
Formulation	The MMP-3 is supplied as a 0.2µm filtered solution in 20mM Tris-HCl, 150mM NaCl and 0.05% Brij35, pH 7.5.		

Introduction

MMP-3 enzyme is also known as Stromelysin-1 or as Transin-1 which hydrolyzes natural collagen at physiological pH and temperature. It dissolves the intervertebral nucleus pulposus and annulus fibrosus of Herniated Lumbar Intervertebral Disk . MMP-3 hydrolyzes components of the extracellular matrix like proteoglycan, laminin, fibronectin, gelatin and collagen types III, IV and IX. It also activates pro-MMP-9 and pro-MMP-8 and superactivates plasmin activated MMP-1. MMP-3 is secreted as a latent proenzyme and is activated by a variety of proteinases, e.g. plasmin, trypsin, chymotrypsin, cathepsin G or human neutrophil elastase. MMP-3 was found to be capable of activating the precursor of IL1-beta.

Biological Activity

The activity was measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH₂. The specific activity is > 150 pmoles/min/?g. Recombinant Human MMP-3 protein pro form needs to be activated with Chymotrypsin. Activation Protocol: 1. Dilute MMP3 to 20µg/ml in the Assay Buffer: 50mM Tris, 10mM CaCl₂, 150mM NaCl, 0.05% (w/v) and Brij 35, pH 7.5. 2. Activate MMP3 by adding Chymotrypsin (Sigma, Catalog# C3142, 1mg/ml stock in 1mM HCl) to a final concentration of 5ug/ml. 3. Incubate at 37°C for 30 minutes. 4. Stop activation with 2mM PMSF. Pre-warm the PMSF to 37°C prior to adding to sample.

Caution: Product has not been fully validated for medical applications. For research use only.

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.

Background

MMP-3 Human Recombinant produced in HEK293 cells is a proform of the Human MMP3 [Tyr18-Cys477 (Lys45Glu)] and fused with a polyhistidine tag at the C-terminus, having an Mw of 52kDa. MMP-3 is purified by proprietary chromatographic techniques.

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