
Product Data Sheet

Product Name: MMP 1 Human, HEK
 Cat. No.: GP21928
 Batch No.: 1

Product Data

Purity	>98%	Source	HEK293 cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Interstitial collagenase; Fibroblast collagenase; Matrix metalloproteinase-1; MMP-1; MMP1; CLG; CLGN.		
Formulation	The MMP-1 is supplied as a 0.2µm filtered solution in MES, NaCl, Glycerol and Brij35.		

Introduction

MMP-1 (interstitial collagenase) can break down a wide range of substrates including types I, II, III, VII, VIII, and X collagens as well as L-Selectin, pro-TNF, IL-1?, IGFBP-3, IGFBP-5, casein, gelatin, ?1 antitrypsin, myelin basic protein, pro-MMP2 and pro-MMP9. A significant function of MMP-1 is the degradation of fibrillar collagens in extracellular matrix remodeling. MMP-1 is expressed in fibroblasts, keratinocytes, endothelial cells, monocytes and macrophages. MMP1 can be divided into a number of distinct domains: a prodomain which is cleaved on activation, a catalytic domain containing the zinc binding site and a short hinge region with a carboxyl terminal domain. MMP1 is part of a cluster of MMP genes which localize to chromosome 11q22.3.

Biological Activity

The activity was measured by its ability to cleave fluorogenic peptide substrate, Mca-KPLGL-Dpa-AR-NH₂, The specific activity is > 400 pmoles/min/?g. Recombinant Human MMP-1 protein pro form needs to be activated with p-aminophenylmercuric acetate (APMA). Activation Protocol: 1. Dilute MMP1 to 50µg/ml in the Assay Buffer: 50mM Tris, 10mM CaCl₂, 150mM NaCl, 0.05% (w/v) and Brij 35, pH 7.5. 2. Activate MMP1 by adding APMA to a final concentration of 1mM. (Sigma, Catalog # A9563) and 100mM stock in DMSO. 3. Incubate at 37°C for 2 hours.

Stability

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

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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-1 Human Recombinant produced in HEK293 cells is a proform of the Human MMP1 (Met1-Asn469) and fused with a polyhistidine tag at the C-terminus, having an Mw of 52kDa. MMP-1 is purified by proprietary chromatographic techniques.

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