

Product Data Sheet

Product Name: MMP 9 Human
 Cat. No.: GP21941
 Batch No.: 1

Product Data

Purity >98% Source
 Physical Appearance solid Shipping Condition

Synonyms Matrix metalloproteinase-9; MMP-9; 92 kDa gelatinase; Gelatinase B; GELB; MMP9; CLG4B.

Amino Acid 4.5kDa His Tag-

Sequence DLKWHHHNITYWIQNYSEDLPRVIDDAFARAFALWSAVTPLTFTRVYSRDADIVIQFGVAEHGDGYPFDGKDLLAHAFPPGPGIQGDAHFDDDELW

Formulation MMP-9 protein is supplied in 20mM Tris-HCl pH 8.0 and 50% glycerol.

Introduction

Matrix metalloproteinases are a family of zinc and calcium-dependent endopeptidases that break down extracellular matrix proteins. The MMP9 is secreted as a 92kDa zymogen. Cleavage of ProMMP-9 results in the active enzyme, having a molecular weight of approximately 82kDa. MMP9 is composed of the following domains: a gelatin-binding domain consisting of three fibronectin type II units, a catalytic domain containing the zinc-binding site, a proline-rich type V collagen-homologous domain and a hemopexin-like domain. MMP9 is produced by the several cell types: monocytes, macrophages, neutrophils, keratinocytes, fibroblasts, osteoclasts and endothelial cells. MMP9 is involved in inflammatory responses, tissue remodeling, wound healing, tumor growth and metastasis. MMP9 may also play an important part in local proteolysis of the extracellular matrix and in leukocyte migration, as well as in bone osteoclastic resorption. MMP9 cleaves type IV and type V collagens into large C-terminal three quarter fragments and shorter N-terminal one quarter fragments. MMP9 can also degrade fibronectin but not laminin or Pz-peptide. MMP9 defects may be a cause of susceptibility to intervertebral disc disease (IDD), also known as lumbar disk herniation (LDH).

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. Please avoid freeze thaw cycles.

Background

MMP-9 Human Recombinant produced in E.Coli is single, a non-glycosylated, Polypeptide chain containing 338 amino acids fragment (113-450) corresponding to the catalytic domain of the protein, having a total molecular mass of 42.03kDa and fused with a 4.5kDa amino-terminal hexahistidine tag. The MMP-9 is purified by proprietary chromatographic techniques.

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

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