



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet Recombinant Human Matrix Metalloproteinase-9

Catalog No.
228-11132

Source
Escherichia Coli.

Synonyms

Matrix metalloproteinase-9, MMP-9, 92 kDa type IV collagenase, 92 kDa gelatinase, Gelatinase B, GELB, MMP9, CLG4B.

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).

Description

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.

Physical Appearance

Sterile Filtered clear solution.

Formulation

MMP-9 protein is supplied in 1x PBS and 50% glycerol.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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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.

Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

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