



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

NATIVE HUMAN PRO-MMP-9

Catalog No.
DS-01-0369

Source:
Purified Protein

Species:
Human

Quality:
5 µg

Background :

The matrix metalloproteinases (MMP) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including Collagen, gelatin, Fibronectin, Laminin and proteoglycan. Transcription of MMP genes is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin B (SEB). MMP catalysis requires both calcium and zinc. MMP-9 (also designated 92 kDa Type IV Collagenase or gelatinase B) has been shown to degrade bone collagens in concert with MMP-1 (also designated interstitial collagenase, fibroblast collagenase or Collagenase-1) and cysteine proteases and may play a role in bone osteoclastic resorption. MMP-1 is downregulated by p53, and abnormality of p53 expression may contribute to joint degradation in rheumatoid arthritis by regulating MMP-1 expression.

Preparation:

Purified native protein from human blood – liquid by proprietary chromatographic techniques.

Buffer Solution:

TRIS buffered saline

Protein Concentrations:

Approx. 0.2 mg/ml

Specificity:

It is pro-MMP9. It was confirmed by immunological and functional assays.

Purity:

SDS PAGE: >95% This preparation is free from gelatinase B dimers and from complexes of gelatinase B with TIMP-1 or lipocalin.

The products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.



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Molecular Weight: A singlet of 92 kDa which upon activation exhibits a relatively stable band at 84 kDa. Lower bands are observed with increased activation.

Activity: 350-450 mU/mg after trypsin activation. 1 U is defined as the amount needed to hydrolyze 1 μ mol of the peptide, Mca-Pro-Leu-Gly-Leu-Dpa-Ala-Arg per minute.

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Application:

Applications	Yes	No	Not Determined	Suggested Dilution
ELISA	+			
Functional Assays	+			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using the appropriate negative/positive controls.

Shelf Life: 12 months from date of despatch if stored at -70°C. 3 weeks at -20°C.
Store at -20°C or for long term storage at -70°C.

Storage: Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Should this product contain a precipitate we recommend microcentrifugation before use.
Please avoid freeze-thaw cycles.

Reference: Templeton, N.S., et al. 1990. Cloning and characterization of human tumor cell interstitial collagenase. Cancer Res. 50: 5431-5437.
Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
Reponen, P., et al. 1994. High expression of 92 kDa Type IV Collagenase (gelatinase B) in the osteoclast lineage during mouse development. J. Cell. Biol. 124: 1091-1102.

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