Catalog # MM9-H5221



#### Synonym

MMP9,CLG4B,GELB,MANDP2,Gelatinase B

## Source

Human MMP-9, His Tag (MM9-H5221) is expressed from human 293 cells (HEK293). It contains AA Ala 20 - Pro 469 (Accession # <u>AAH06093</u>). It needs to be activated by agents such as APMA in vitro to have hydrolytic activity. Predicted N-terminus: Ala 20

## **Molecular Characterization**

MMP-9(Ala 20 - Pro 469) AAH06093 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 50.8 kDa. The protein migrates as 58-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu g$  by the LAL method / rFC method.

# Purity

>90% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

#### Storage

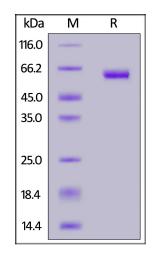
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- $70^{\circ}$ C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**



Human MMP-9, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## **Bioactivity**

Measured by its ability to cleave the fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH2. The specific activity is  $>2,500 \text{ pmol/min/}\mu\text{g}$  (QC tested).





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Matrix metallopeptidase 9 (MMP-9) is also known as 92 kDa type IV collagenase, 92 kDa gelatinase or gelatinase B (GELB), CLG4B, is secreted from neutrophils, macrophages, and a number of transformed cells, and is the most complex family member in terms of domain structure and regulation of its activity. Structurally, MMP9 maybe be divided into five distinct domains: a prodomain which is cleaved upon activation, a gelatinbinding domain consisting of three contiguous fibronectin type II units, a catalytic domain containing the zinc binding site, a prolinerich linker region, and a carboxyl terminal hemopexinlike domain. This enzyme degrades various substrates including gelatin, collagen types IV and V, and elastin. MMP9 is involved in a variety of autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, and multiple sclerosis, and be regarded as a potential therapeutic target.



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