

Human MMP-9 (20-707) Protein, His Tag (active enzyme, MALS verified)

Catalog # MM9-H52H9



BIOSYSTEMS
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Surprise Inside!

Synonym

MMP9, CLG4B, GELB, MANDP2, Gelatinase B

Source

Human MMP-9 (20-707), His Tag (MM9-H52H9) is expressed from human 293 cells (HEK293). It contains AA Ala 20 - Asp 707 (Accession # [P14780-1](#)). 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 - Asp 707)
P14780-1 Poly-his

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

The protein has a calculated MW of 78.2 kDa. The protein migrates as 85-95 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 25 mM Tris, 150 mM NaCl, pH7.3 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

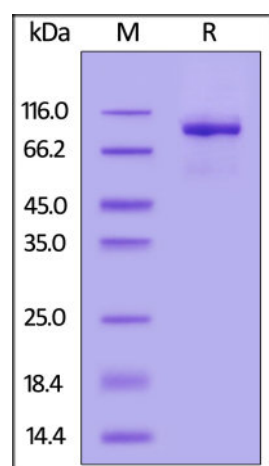
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

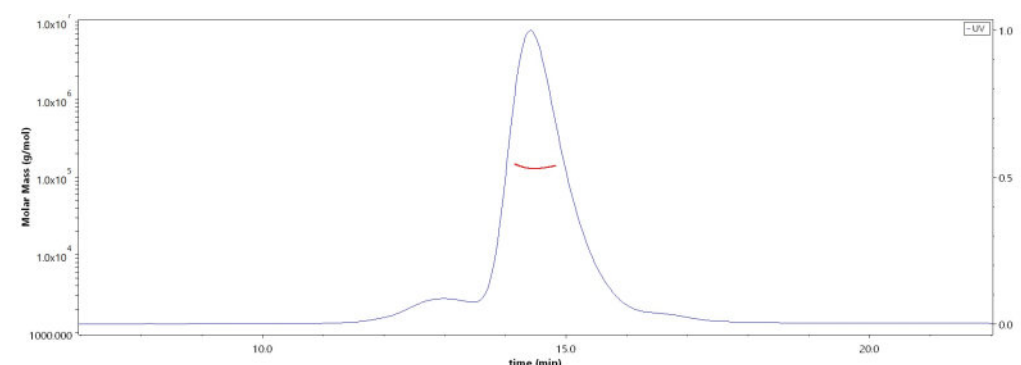


Human MMP-9 (20-707), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity

Measured by its ability to cleave the fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH₂. The specific activity is >1,500 pmol/min/ μg (QC tested).

SEC-MALS



The purity of Human MMP-9 (20-707), His Tag (Cat. No. MM9-H52H9) is more than 85% and the molecular weight of this protein is around 95-135 kDa verified by SEC-MALS.

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Background

Matrix metalloproteinase 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.

Clinical and Translational Updates

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