

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 # [AAH06093](#)). 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
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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 µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm 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.

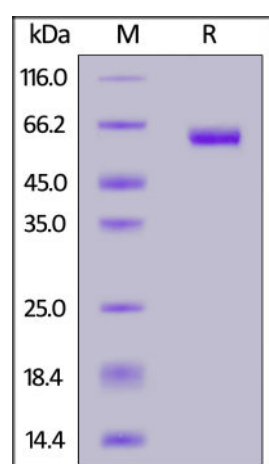
Storage

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°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 pmol/min/µg (QC tested).

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

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.