

Recombinant Human MMP-9 Protein(Fc Tag)

Catalog Number: PDMH100296

Note: Centrifuge before opening to ensure complete recovery of vial contents.

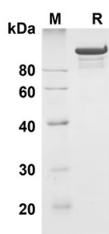
Description

Species	Human
Source	Mammalian-derived Human MMP-9 protein Met1-Asp707, with an C-terminal Fc
Calculated MW	102.6 kDa
Observed MW	100-110 kDa
Accession	P14780
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human MMP-9 proteins , 2µg/lane of
Recombinant Human MMP-9 proteins was resolved with
SDS-PAGE under reducing conditions , showing bands at
100-110 KD

Background

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Matrix metalloproteinases (MMPs) are neutral proteinases that are involved in the breakdown and remodeling of the extracellular matrix (ECM) under a variety of physiological and pathological conditions, such as morphogenesis, differentiation, angiogenesis, and tissue remodeling, as well as pathological processes including inflammation, arthritis, cardiovascular diseases, pulmonary diseases, and tumor invasion. MMP9, also known as 92-kDa gelatinase B/type IV collagenase, is secreted from neutrophils, macrophages, and some transformed cells, and is the most complex family member in terms of domain structure and regulation of its activity. It plays an important role in tissue remodeling in normal and pathological inflammatory processes. MMP-9 is a major secretion product of macrophages and a component of cytoplasmic granules of neutrophils and is particularly important in the pathogenesis of inflammatory, infectious, and neoplastic diseases in many organs including the lung. This enzyme is also secreted by lymphocytes and stromal cells upon stimulation by inflammatory cytokines, or upon delivery of bi-directional activation signals following integrin-mediated cell-cell or cell-extracellular matrix (ECM) contacts. Since the integrity of the tissue architecture is closely dependent on the delicate balance between MMPs and their inhibitors, excessive production of MMP-9 is linked to tissue damage and degenerative inflammatory disorders. As a consequence, regulation of gene transcription and tissue-specific expression of MMP-9 in normal and diseased states are being actively investigated to pave the way for new therapeutic targets. Besides, the dramatic overexpression of MMP-9 in cancer and various inflammatory conditions points to the molecular mechanisms controlling its expression as a potential target for eventual rational therapeutic intervention.