

MMP-2 Protein, Human, Recombinant (His)

General Information

Synonyms:	72 kDa Gelatinase;TBE-1;Gelatinase A;Matrix Metalloproteinase-2;MMP2;72 kDa Type IV Collagenase;MMP-2;CLG4A
Protein Construction:	Ala30-Cys660. The proenzyme needs to be activated by APMA for an activated form.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P08253
Molecular Weight:	72 KDa (reducing condition)
AA Sequence:	Ala30-Cys660

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris-HCl, 150 mM NaCl, pH 7.5.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

72 kDa type IV collagenase also known as matrix metalloproteinase-2 (MMP-2) and gelatinase A is an enzyme that in humans is encoded by the MMP2 gene. It belongs to the matrix metalloproteinase (MMP) family. Matrix metalloproteinases (MMPs) are a family of zinc-dependent endopeptidases that degrade components of the extracellular matrix (ECM) and play essential roles in various physiological processes such as morphogenesis,

differentiation, angiogenesis and tissue remodeling, as well as pathological processes including inflammation, arthritis, cardiovascular diseases, pulmonary diseases and tumor invasion. MMP-2 is ubiquitous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, atherosclerotic plaque rupture, as well as degrading extracellular matrix proteins. MMP-2 can also act on several nonmatrix proteins such as big endothelial 1 and beta-type CGRP promoting vasoconstriction. MMP-2 cleaves KISS at a Gly-I-Leu bond and appears to have a role in myocardial cell death pathways.

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