

# Active Recombinant Human MMP2 Protein, His-tagged

Cat. No. MMP2-182H Lot. No. (See product label)

## SPECIFICATION

**Product Overview** Recombinant Human MMP2(Met 1-Cys 660) fused with His tag at the N-terminus was produced in HEK293.

**Species** Human

**Source** HEK293

**ProteinLength** Met 1-Cys 660

### Description

Matrix Metalloproteinase-2 (MMP-2) is an enzyme that degrades components of the extracellular matrix and thus plays a pivotal role in cell migration during physiological and pathological processes. MMP-2 expression is dependent on extracellular matrix metalloproteinase inducer (EMMPRIN), Her2/neu, growth factors, cytokines, and hormones. Pro-MMP-2 activation needs MT1-MMP and TIMP-2 contribution. MMP-2 is changed in distribution and increased in amount in the ventral cochlear nucleus after unilateral cochlear ablation. A low level of MMP-2 is linked to favorable prognosis in patients with a hormone receptor-negative tumor, usually associated with high risk. As a zymogen requiring proteolytic activation for catalytic activity, MMP-2 has been implicated broadly in the invasion and metastasis of many cancer model systems, including human breast cancer (HBC). Blocking MMP-2 secretion and activation during breast carcinoma development may decrease metastasis. The detection of active MMP-2 alone or the rate of pro-MMP-2 and active MMP-2 is considered a very sensitive indicator of cancer metastasis. Modulation of MMP-2 expression and activation through specific inhibitors and activators may thus provide

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	a new mechanism for breast cancer treatment.
<b>Predicted N Terminal</b>	Ala 30
<b>Form</b>	<p>Lyophilized from sterile 0.05 % Brij-35, 150 mM NaCl, 5 mM CaCl<sub>2</sub>, 50 mM Tris, pH 7.5.</p> <p>1. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA.</p>
<b>Bio-activity</b>	<p>1. Measured by its ability to cleave the fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH<sub>2</sub>. The specific activity is &gt; 1,000 pmoles/min/μg.</p> <p>2. Measured by its binding ability in a functional ELISA.</p> <p>3. Immobilized human MMP2 at 10 μg/mL (100 μl/well) can bind human TIMP2/Fc. The EC<sub>50</sub> of human TIMP2/Fc is 0.02 μg/mL.</p>
<b>Molecular Mass</b>	The recombinant human MMP2 consists of 631 amino acids and migrates as an 72 kDa band as predicted in SDS-PAGE under reducing conditions.
<b>Endotoxin</b>	< 1.0 EU per μg of the protein as determined by the LAL method
<b>Purity</b>	> (74.7+17.3) % as determined by SDS-PAGE
<b>Stability</b>	Samples are stable for up to twelve months from date of receipt at -70 centigrade
<b>Storage</b>	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
<b>Reconstitution</b>	Reconstitute in PBS or others

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**Shipping**

In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.

Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

**GENE INFORMATION**
**Gene Name**

MMP2 matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase) [ Homo sapiens ]

**Official Symbol**

MMP2

**Synonyms**

MMP2; matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase); CLG4, CLG4A, matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase) , matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase); 72 kDa type IV collagenase; TBE 1; MMP-2; gelatinase A; 72 kDa gelatinase; collagenase type IV-A; neutrophil gelatinase; matrix metalloproteinase-2; matrix metalloproteinase-II; CLG4; MONA; CLG4A; TBE-1; MMP-II;

**Gene ID**

4313

**mRNA Refseq**

NM\_001127891

**Protein Refseq**

NP\_001121363

**MIM**


120360

**UniProt ID**

P08253

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