

## Active Recombinant Pig MMP1 protein, His-tagged

Cat. No. MMP1-1116P Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Active Recombinant Pig MMP1 protein(P21692)(100~469 aa), fused with N-terminal His tag, was expressed in E.coli.
<b>Species</b>	Pig
<b>Source</b>	E.coli
<b>ProteinLength</b>	100-469 aa
<b>Form</b>	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
<b>Bio-activity</b>	<p>MMP1 is a zinc-dependent enzymes capable of cleaving components of the extracellular matrix, which belongs to the matrix metalloproteinase (MMP) family. MMP-1 (interstitial collagenase), can degrade a broad range of substrates including types I, II, III, VII, VIII, and X collagens as well as casein, gelatin and so on. MMP-1 is expressed by fibroblasts, keratinocytes, endothelial cells, monocytes and macrophages. Structurally, MMP-1 may be divided into several distinct domains; a pro-domain which is cleaved upon activation; a catalytic domain containing the zinc binding site; a short hinge region and a carboxyl terminal (hemopexin-like) domain. The activity of recombinant pig MMP1 is measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH<sub>2</sub> in the assay buffer 50 mM Tris, 10 mM CaCl<sub>2</sub>, 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. The rpMMP1 is diluted to 50 ug/ml in assay buffer, then activated by p-aminophenylmercuric acetate</p>

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(APMA) in a final concentration of 1 mM incubated at 37°C for 2 hours. The activated rpMMP-1 is diluted to 1 ug/mL in assay buffer. Loading into a black well plate 50 μ of 1 ug/mL rpMMP-1 and start the reaction by adding 50 μ of 20 μM substrate, with a substrate blank containing 50 μ assay buffer, 50 μ substrate, and no rpMMP-1. Then read at excitation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The specific activity of recombinant pig MMP1 is > 10 pmol/min/g.

<b>Molecular Mass</b>	46.3kDa
<b>Endotoxin</b>	<1.0EU per 1μg (determined by the LAL method).
<b>Purity</b>	> 90% as determined by SDS-PAGE.
<b>Storage</b>	Avoid repeated freeze/thaw cycles. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
<b>Reconstitution</b>	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## GENE INFORMATION

<b>Gene Name</b>	MMP1 matrix metalloproteinase 1 (interstitial collagenase) [ <i>Sus scrofa</i> ]
<b>Official Symbol</b>	MMP1
<b>Synonyms</b>	MMP1; matrix metalloproteinase 1 (interstitial collagenase); interstitial collagenase; MMP-1; matrix metalloproteinase-1; matrix metalloproteinase 1 (type I collagenase); Mmp1a;
<b>Gene ID</b>	397320

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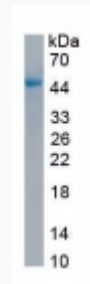
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mRNA Refseq [NM\\_001166229](#)

Protein Refseq [NP\\_001159701](#)

### SDS-PAGE



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