

Active Recombinant Pig MMP1 protein, His-tagged

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

SPECIFICATION

Product Overview	Active Recombinant Pig MMP1 protein(P21692)(100~469 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Pig
Source	E.coli
ProteinLength	100-469 aa
Form	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	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-NH₂ in the assay buffer 50 mM Tris, 10 mM CaCl₂, 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

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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 M 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.

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

GENE INFORMATION

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

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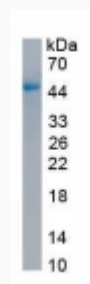
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mRNA Refseq NM_001166229

Protein Refseq NP_001159701

SDS-PAGE



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