

## Active Recombinant Bovine MMP1 protein, His-tagged

Cat. No. MMP1-4644B Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Active Recombinant Bovine MMP1 protein(P28053)(19~469 aa), fused with N-terminal His tag, was expressed in HEK293.
<b>Species</b>	Bovine
<b>Source</b>	HEK293
<b>ProteinLength</b>	19-469 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 bovine 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 rbMMP1 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 rbMMP-1 is diluted to 1 ug/mL in assay buffer. Loading into a black well plate 50 μ of 1 ug/mL rbMMP-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 rbMMP-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 bovine MMP1 is > 600 pmol/min/g.

**Molecular Mass** 53.0kDa

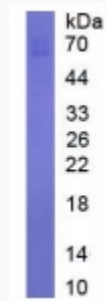
**Endotoxin** <1.0EU per 1μg (determined by the LAL method).

**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.

**SDS-PAGE**



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