

Active Recombinant Sheep TIMP1 protein, His-tagged

Cat. No. TIMP1-2789S Lot. No. (See product label)

SPECIFICATION

Product Overview	Active Recombinant Sheep TIMP1 protein(P50122)(24~197 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Sheep
Source	E.coli
ProteinLength	24-197 aa
Form	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Tissue inhibitors of metalloproteinase 1 (TIMP1) is a member of the family of proteins that regulate the activation and proteolytic activity of the zinc enzymes known as matrix metalloproteinases (MMPs). TIMP-1 is a glycoprotein with a molecular mass of 28 kDa produced by a wide range of cell types. TIMP-1 inhibits active MMP-mediated proteolysis by forming an N-terminal, non-covalent binary complex with the MMP active site. The activity of recombinant sheep TIMP1 was measured by its ability to inhibit rhMMP2 cleavage of a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DPA-Ala-Arg-NH ₂ in the assay buffer 50 mM Tris, 10 mM CaCl ₂ , 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. rhMMP2 was diluted to 100 ug/ml and activated with 1 mM APMA at 37°C for 1 hour and roTIMP1 (MW: 23.2 KD) was diluted to different concentrations with the assay buffer. Mix 8 μof roTIMP1 curve dilutions, 12.8 μof activated rhMMP-2, and 59.2 μof assay buffer, including a control containing assay buffer and the diluted rhMMP-

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2 and incubate the reactions for 2 hours at 37°C. Loading 50 µof the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 µof 20 M substrate. Include a substrate blank containing 50 µ of assay buffer and 50 µof 20 M substrate. Then read at excitation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The result was shown and it was obvious that recombinant sheep TIMP1 significantly decreased rhMMP2 activity. The inhibition IC50 was <23 nM.

Molecular Mass	23.2kDa
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	TIMP1 TIMP metalloproteinase inhibitor 1 [<i>Ovis aries</i>]
Official Symbol	TIMP1
Synonyms	TIMP1; TIMP metalloproteinase inhibitor 1; metalloproteinase inhibitor 1; metalloproteinase tissue inhibitor; tissue inhibitor of metalloproteinases 1; TIMP-1;
Gene ID	443331

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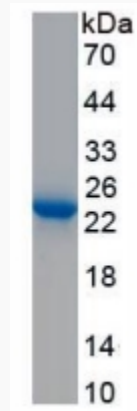
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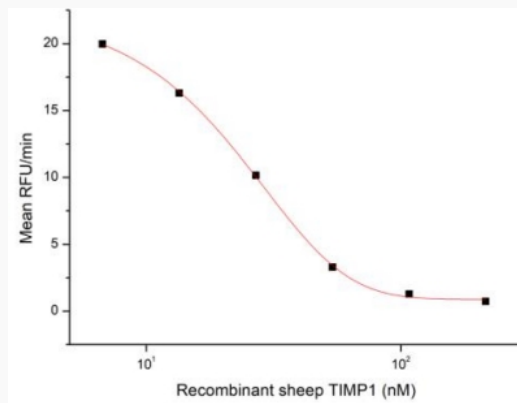
mRNA Refseq [NM_001009319](#)

Protein Refseq [NP_001009319](#)

SDS-PAGE



Activity



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