

Active Recombinant Rat Timp4 protein, His-tagged

Cat. No. Timp4-552R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Rat Timp4 protein(P81556)(40~224 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Rat
Source	E.coli
ProteinLength	40-224 aa
Form	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Tissue Inhibitors of Metalloproteinase 4 (TIMP4) is an enzyme that in humans is encoded by the TIMP4 gene. This gene belongs to the tissue inhibitor of metalloproteinases gene family. The proteins encoded by this gene family are inhibitors of the matrix metalloproteinases, a group of peptidases involved in degradation of the extracellular matrix. The secreted, netrin domain-containing protein encoded by this gene is involved in regulation of platelet aggregation and recruitment and may play role in hormonal regulation and endometrial tissue remodeling. The activity of recombinant rat TIMP4 was measured by its ability to inhibit rhMMP2 cleavage of a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DPA-Ala-Arg-NH₂ in the assay buffer 50 mM Tris, 10 mM CaCl₂, 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 rrTIMP4 (MW: 22.79 KD) was diluted to different concentrations with the assay buffer. Mix 8 µl of rrTIMP4 curve dilution

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s, 12.8 μ of activated rhMMP-2, and 59.2 μ of assay buffer, including a control containing assay buffer and the diluted rhMMP-2 and incubate the reactions for 2 hours at 37°C. Loading 50 μ of the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 μ of 20 μ M substrate. Include a substrate blank containing 50 μ of assay buffer and 50 μ of 20 μ 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 rat TIMP4 significantly decreased rhMMP2 activity. The inhibition IC50 was <14 nM.

Molecular Mass	22.8kDa
Endotoxin	<1.0EU per 1 μ g (determined by the LAL method).
Purity	> 95% 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	Timp4 tissue inhibitor of metalloproteinase 4 [<i>Rattus norvegicus</i>]
Official Symbol	Timp4
Synonyms	TIMP4; tissue inhibitor of metalloproteinase 4; metalloproteinase inhibitor 4; TIMP-4; tissue inhibitor of metalloproteinases 4;
Gene ID	680130

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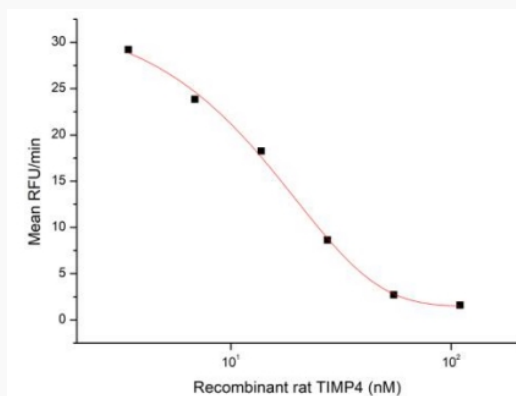
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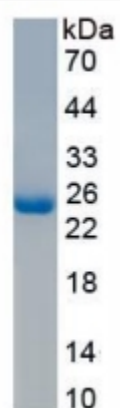
mRNA Refseq [NM_001109393](#)

Protein Refseq [NP_001102863](#)

Activity



SDS-PAGE



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