

Active Recombinant Rat Timp1 protein, His-tagged

Cat. No. Timp1-2790R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Rat Timp1 protein(P30120)(24~217 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Rat
Source	E.coli
ProteinLength	24-217 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 rat TIMP1 was measured by its ability to inhibit rhMMP 2 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 rrTIMP1 (MW: 22.2 KD) was diluted to different concentrations with the assay buffer. Mix 8 µof rrTIMP1 curve dilutions, 12.8 µof activated rhMMP-2, and 59.2 µof assay buffer, including a control containing assay buffer and the diluted rhMMP-2 and

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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 µof 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 rat TIMP1 significantly decreased rhMMP2 activity. The inhibition IC50 was <65 nM.

Molecular Mass 22.8kDa

Endotoxin <1.0EU per 1µg (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 [Timp1 TIMP metalloproteinase inhibitor 1 \[Rattus norvegicus \]](#)

Official Symbol [Timp1](#)

Synonyms TIMP1; TIMP metalloproteinase inhibitor 1; metalloproteinase inhibitor 1; tissue inhibitor of metalloproteinase 1; tissue inhibitor of metalloproteinase 1; tissue inhibitor of metalloproteinases 1; Timp; TIMP-1;

Gene ID [116510](#)

 Tel: 1-631-559-9269 1-516-512-3133

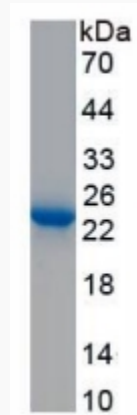
 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

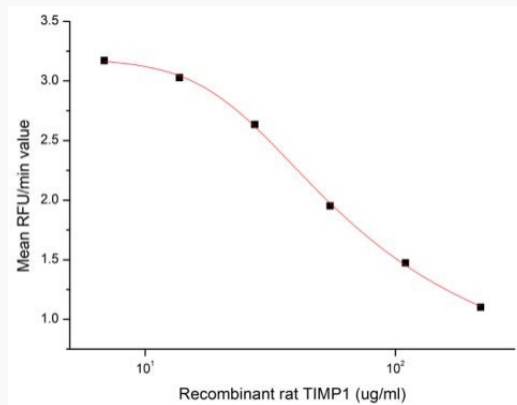
mRNA Refseq [NM_053819](#)

Protein Refseq [NP_446271](#)

SDS-PAGE



Activity



 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA