

Active Recombinant Rat Timp2 protein, His-tagged

Cat. No. Timp2-543R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Rat Timp2 protein(P30121)(27~220 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Rat
Source	E.coli
ProteinLength	27-220 aa
Form	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Tissue inhibitors of metalloproteinases or TIMPs are a family of proteins that regulate the activation and proteolytic activity of the zinc enzymes known as matrix metalloproteinases (MMPs). There are four members of the family, TIMP-1, TIMP-2, TIMP-3, and TIMP-4. TIMP-2 is a non N-glycosylated protein with a molecular mass of 22 kDa produced by a wide range of cell types, which inhibits MMPs non-covalently by the formation of binary complexes. TIMP-2 also has erythroid potentiating and cell growth promoting activities. The activity of recombinant rat TIMP2 was measured by its ability to inhibit rhMMP2 cleavage of a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DP A-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 APM A at 37°C for 1 hour and rrTIMP2 (MW: 22.98 KD) was diluted to different concentrations with the assay buffer. Mix 8 μof rrTIMP2 curve dilutions, 12.8 μof activated rhMM

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

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

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P-2, and 59.2 µof 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 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 TIMP2 significantly decreased rhMMP2 activity. The inhibition IC50 was <1.7 nM.

Molecular Mass	23.0kDa
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.

GENE INFORMATION

Gene Name	Timp2 TIMP metalloproteinase inhibitor 2 [<i>Rattus norvegicus</i>]
Official Symbol	Timp2
Synonyms	TIMP2; TIMP metalloproteinase inhibitor 2; metalloproteinase inhibitor 2; TIMP-2; tissue inhibitor of metalloproteinase 2; tissue inhibitor of metalloproteinases 2; MGC105282;

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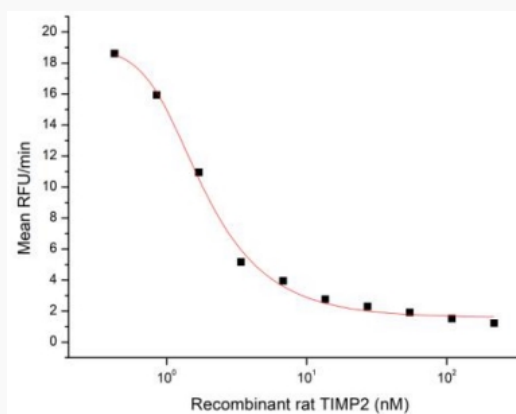
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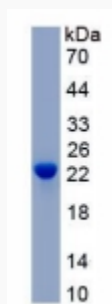
mRNA Refseq NM_021989

Protein Refseq NP_068824

Activity



SDS-PAGE



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