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-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 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

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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 µM substrate. Include a substrate blank containing 50 µof assay buffer and 50 µof 20 µM substrate. Then read at excitiation 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 metallopeptidase inhibitor 2 [Rattus norvegicus]
Official Symbol	Timp2
Synonyms	TIMP2; TIMP metallopeptidase inhibitor 2; metalloproteinase inhibitor 2; TIMP-2; tissue inhibitor of metalloproteinase 2; tissue inhibitor of metalloproteinases 2; MGC105282;

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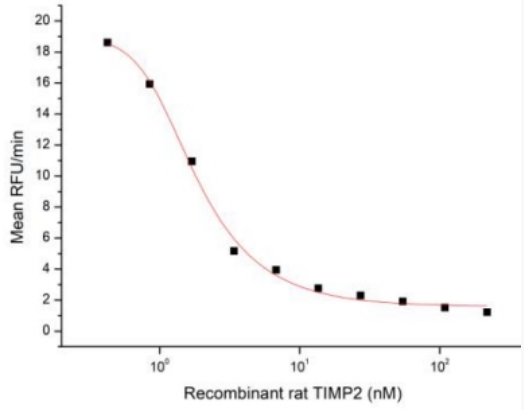
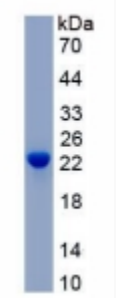
Gene ID	29543
mRNA Refseq	NM_021989
Protein Refseq	NP_068824
Activity	
SDS-PAGE	

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