Active Recombinant Human TIMP1 protein, His-tagged

Cat. No. TIMP1-3188H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human TIMP1 protein(P01033)(25~207 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	25-207 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 matri x metalloproteinases (MMPs). TIMP-1 is a glycoprotein with a molecular mass of 28 k Da produced by a wide range of cell types. TIMP-1 inhibits active MMP-mediated prot eolysis by forming an N-terminal, non-covalent binary complex with the MMP active si te. The activity of recombinant human TIMP1 was measured by its ability to inhibit rh MMP2 cleavage of a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DPA-Ala-Ar g-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 rhTIMP1 (MW: 22.2 KD) was diluted to different concentrations with th e assay buffer. Mix 8 µof rhTIMP1 curve dilutions, 12.8 µof activated rhMMP-2, and 5 9.2 µof assay buffer, including a control containing assay buffer and the diluted rhMM

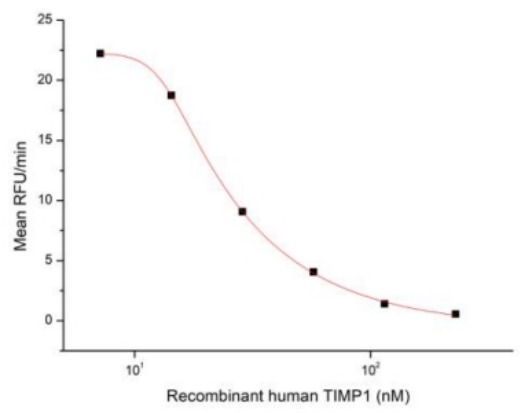
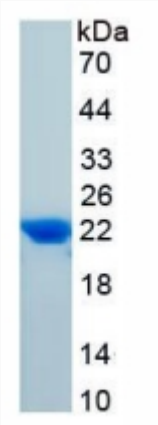
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	P-2 and incubate the reactions for 2 hours at 37°C. Loading 50 µof the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 µof 20 µM substrate. Include a substrate blank 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 human TIMP1 significantly decreased rhMMP2 activity. The inhibition IC50 was <24 nM.
Molecular Mass	21.9kDa
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 metallopeptidase inhibitor 1 [Homo sapiens]
Official Symbol	TIMP1
Synonyms	TIMP1; TIMP metallopeptidase inhibitor 1; CLGI, TIMP, tissue inhibitor of metalloproteinase 1 (erythroid potentiating activity, collagenase inhibitor); metalloproteinase inhibitor 1; EPO; TIMP-1; collagenase inhibitor; erythroid potentiating activity; erythroid-potentiating activity; fibroblast collagenase inhibitor; tissue inhibitor of metalloproteinases 1; EPA; HCI; CLGI; TIMP; FLJ90373;

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Gene ID	7076
mRNA Refseq	NM_003254
Protein Refseq	NP_003245
MIM	305370
UniProt ID	P01033
Activity	
SDS-PAGE	

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