

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 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 human TIMP1 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 rhTIMP1 (MW: 22.2 KD) was diluted to different concentrations with the assay buffer. Mix 8 μl of rhTIMP1 curve dilutions, 12.8 μl of activated rhMMP-2, and 59.2 μl of assay buffer, including a control containing assay buffer and the diluted rhMMP

 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 incubate the reactions for 2 hours at 37°C. Loading 50 µl 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 µl of 20 µM substrate. Include a substrate blank containing 50 µl of assay buffer and 50 µl of 20 µM 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 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 metalloproteinase inhibitor 1 [Homo sapiens]
Official Symbol	TIMP1
Synonyms	TIMP1; TIMP metalloproteinase 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

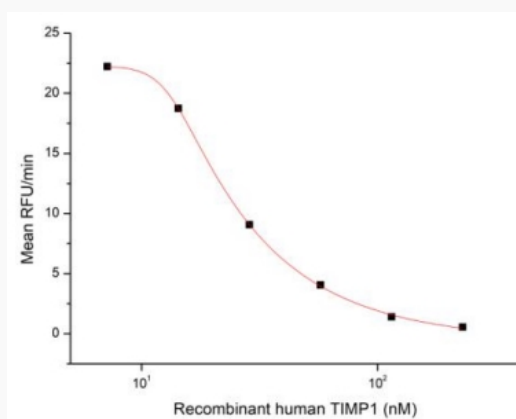
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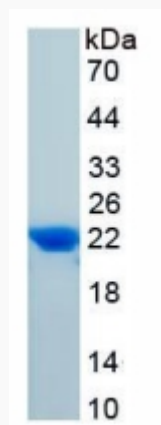
MIM 305370

UniProt ID P01033

Activity



SDS-PAGE



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