

Tissue Inhibitors Of Metalloproteinase 1 (TIMP1) Active Protein | TIMP1 active protein

Active Tissue Inhibitors Of Metalloproteinase 1 (TIMP1)

CATALOG # AAA161742	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Tissue Inhibitors Of Metalloproteinase 1 (TIMP1); Active Tissue Inhibitors Of Metalloproteinase 1 (TIMP1); Tissue Inhibitors Of Metalloproteinase 1; EPO; CLGI; EPA; HCl; Erythroid Potentiating Activity; Collagenase Inhibitor; Metalloproteinase inhibitor 1; Fibroblast collagenase inhibitor4; TIMP1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Gln32~Ala2 07
Applicable Applications for TIMP1 active protein	Activity Assay, Cell Culture
Species	Dog
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.7
Research Area	Tumor immunity, Infection immunity, Cardiovascular biology, Hepatology, Hormone metabolism
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES



Bioactivity

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 dog 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 degree C for 1 hour and TIMP1 (MW: 20.86 KD) was diluted to different concentrations with the assay buffer. Mix 8 ul of TIMP1 curve dilutions, 12.8 ul of activated rhMMP-2, and 59.2 ul of assay buffer, including a control containing assay buffer and the diluted rhMMP-2 and incubate the reactions for 2 hours at 37 degree C. Loading 50 ul 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 ul of 20 uM substrate. Include a substrate blank containing 50 ul of assay buffer and 50 ul of 20 uM 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 in Figure 1 and it was obvious that recombinant dog TIMP1 significantly decreased rhMMP2 activity. The inhibition IC50 was



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for TIMP1 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	50978922
NCBI GeneID	403816
NCBI Accession #	NP_001003182.1
NCBI GenBank Nucleotide #	NM_001003182.1
UniProt Accession #	P81546; Q9TQS5
Molecular Weight	22,852 Da
NCBI Official Full Name	metalloproteinase inhibitor 1
NCBI Official Symbol	TIMP1
NCBI Official Synonym Symbols	TIMP-1
NCBI Protein Information	metalloproteinase inhibitor 1
UniProt Protein Name	Metalloproteinase inhibitor 1
UniProt Gene Name	TIMP1
UniProt Synonym Gene Names	TIMP-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.