

Tissue Inhibitors Of Metalloproteinase 2 (TIMP2) Active Protein | TIMP2 active protein

Active Tissue Inhibitors Of Metalloproteinase 2 (TIMP2)

CATALOG # AAA161695	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Tissue Inhibitors Of Metalloproteinase 2 (TIMP2); Active Tissue Inhibitors Of Metalloproteinase 2 (TIMP2); Tissue Inhibitors Of Metalloproteinase 2; CSC-21K; TIMP Metallopeptidase Inhibitor 24; TIMP2 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Cys27~Pro2 20
Applicable Applications for TIMP2 active protein	Activity Assay, Cell Culture
Species	Bovine
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	7.2
Research Area	Tumor immunity
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES



Bioactivity

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 erythroidpotentiating and cell growth promoting activities. The activity of recombinant bovine 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 degree C for 1 hour and rbTIMP2 (MW: 51.75 KD) was diluted to different concentrations with the assay buffer. Mix 8 ul of rhTIMP2 curve dilutions, 12.8 ul of activated rbMMP-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 bovine TIMP2 significantly decreased rhMMP2 activity. The inhibition IC50 was



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for TIMP2 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	75832065
NCBI GeneID	282093
NCBI Accession #	NP_776897.2
NCBI GenBank Nucleotide #	NM_174472.4
UniProt Accession #	P16368; Q3SZU3; Q9TVB1
Molecular Weight	24,355 Da
NCBI Official Full Name	metalloproteinase inhibitor 2
NCBI Official Synonym Full Names	TIMP metallopeptidase inhibitor 2
NCBI Official Symbol	TIMP2
NCBI Protein Information	metalloproteinase inhibitor 2
UniProt Protein Name	Metalloproteinase inhibitor 2
UniProt Gene Name	TIMP2
UniProt Synonym Gene Names	TIMP-2

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.