

Tissue Inhibitors Of Metalloproteinase 4 (TIMP4) Active Protein | TIMP4 active protein

Active Tissue Inhibitors Of Metalloproteinase 4 (TIMP4)

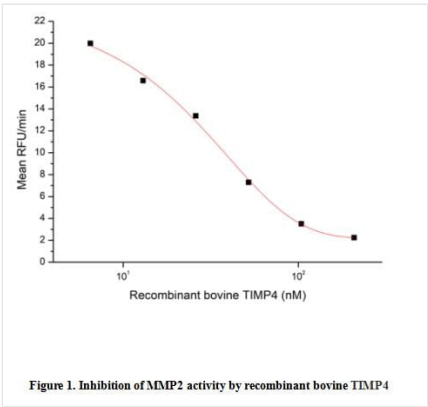
CATALOG # AAA161701	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Tissue Inhibitors Of Metalloproteinase 4 (TIMP4); Active Tissue Inhibitors Of Metalloproteinase 4 (TIMP4); Tissue Inhibitors Of Metalloproteinase 4; TIMP Metallopeptidase Inhibitor 4; Tissue Inhibitor of Metalloproteinases 44; TIMP4 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	Ala50~Pro224
Applicable Applications for TIMP4 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	8.1
Research Area	Tumor immunity, Cardiovascular biology
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

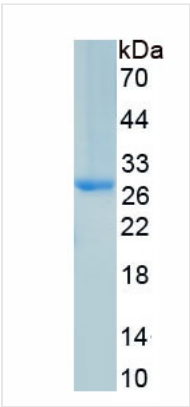


Bioactivity

Tissue Inhibitors of Metalloproteinase 4 (TIMP4) is an enzyme that in humans is encoded by the TIMP4 gene. This gene belongs to the tissue inhibitor of metalloproteinases gene family. The proteins encoded by this gene family are inhibitors of the matrix metalloproteinases, a group of peptidases involved in degradation of the extracellular matrix. The secreted, netrin domain-containing protein encoded by this gene is involved in regulation of platelet aggregation and recruitment and may play role in hormonal regulation and endometrial tissue remodeling. The activity of recombinant bovine TIMP4 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 rbTIMP4 (MW: 24.05 KD) was diluted to different concentrations with the assay buffer. Mix 8 ul of rbTIMP4 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 bovine TIMP4 significantly decreased rhMMP2 activity. The inhibition IC50 was

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for TIMP4 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	114052755
NCBI GeneID	317694
NCBI Accession #	NP_001039336.1
NCBI GenBank Nucleotide #	NM_001045871.2
UniProt Accession #	O97563; Q2KHW6
Molecular Weight	25,593 Da
NCBI Official Full Name	metalloproteinase inhibitor 4
NCBI Official Symbol	TIMP4
NCBI Protein Information	metalloproteinase inhibitor 4
UniProt Protein Name	Metalloproteinase inhibitor 4
UniProt Gene Name	TIMP4
UniProt Synonym Gene Names	TIMP-4

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.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/tissue-inhibitors-of-metalloproteinase-4-timp4/161701>