# Recombinant Human TIMP-1 Protein

## Catalog No.: RP01341



## Sequence Information

**Species**
Human

**Gene ID**
7076

**Swiss Prot**
P01033

**Tags**
C-His

**Synonyms**
CLGI, EPA, EPO, HCI, TIMP, TIMP-1, TIMP1,EPA,EPO,HCI,TIMP,TIMP-1

## Product Information

**Source**
HEK293 cells

**Purification**
≥ 95 % as determined by SDS-PAGE.

**Calculated MW**
21.54 kDa

**Observed MW**
35 kDa

**Endotoxin**
< 1 EU/μg of the protein by LAL method.

**Formulation**
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

**Reconstitution**
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Background

TIMP metallopeptidase inhibitor 1, also known as TIMP-1/TIMP1, Collagenase inhibitor 16C8 fibroblast Erythroid-potentiating activity, TPA-S1TPA-induced proteinTissue inhibitor of metalloproteinases 1, is a natural inhibitors of the matrix metalloproteinases (MMPs), a group of peptidases involved in degradation of the extracellular matrix. TIMP-1/TIMP1 is found in fetal and adult tissues. Highest levels are found in bone, lung, ovary and uterus. Complexes with metalloproteinases and irreversibly inactivates them by binding to their catalytic zinc cofactor. TIMP-1/TIMP1 mediates erythropoiesis in vitro; but, unlike IL-3, it is species-specific, stimulating the growth and differentiation of only human and murine erythroid progenitors. In addition to its inhibitory role against most of the known MMPs, the protein is able to promote cell proliferation in a wide range of cell types, and may also have an anti-apoptotic function. Transcription of this protein encoding gene is highly inducible in response to many cytokines and hormones. In addition, the expression from some but not all inactive X chromosomes suggests that this gene inactivation is polymorphic in human females. This encoding gene is located within intron 6 of the synapsin I gene and is transcribed in the opposite direction. Complexes with metalloproteinases and irreversibly inactivates them by binding to their catalytic zinc cofactor. TIMP-1 /TIMP1 is Known to act on MMP-1, MMP-2, MMP-3, MMP-7, MMP-8, MMP-9, MMP-10, MMP-11, MMP-12, MMP-13 and MMP-16.

## Basic Information

**Description**
Recombinant Human TIMP-1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys24-Ala207) of human TIMP-1/CLGI (Accession #NP_003245.1) fused with 6×His tag at the C-terminus.

**Activity**
1.Measured by its binding ability in a functional ELISA. Immobilized Human TIMP1 Protein at 1 μg/mL (100 μL/well) can bind TIMP1 Rabbit mAb with a linear range of 0.038-2.5 ng/mL.
2.Measured by its ability to inhibit human MMP-2 cleavage of a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH2. The IC50 value is approximately 2.2 nM.

**Shipping**
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

**Storage**
Store at -20℃

**Operational Notes**
For your safety and health, please wear a lab coat and disposable gloves for handling.

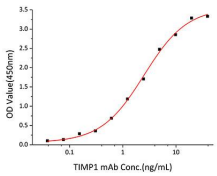
**Contact**

400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

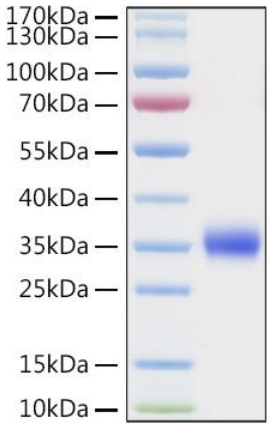


For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

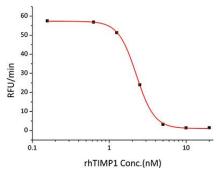
## Validation Data




Immobilized recombinant Human TIMP1 Protein at 1μg/mL (100 μL/well) can bind TIMP1 Rabbit mAb with a linear range of 0.038-2.5ng/mL.




Recombinant Human TIMP-1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.




Recombinant Human TIMP-1 inhibit human MMP-2 cleavage of a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH2. The IC50 value is approximately 2.2 nM.