

RP01341

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# Recombinant Human TIMP-1 Protein

Catalog No.: RP01341

Recombinant

## Sequence Information

Species	Gene ID	Swiss Prot
HEK293 cells	7076	P01033

### Tags

C-His

### Synonyms

CLGI; EPA; EPO; HCI; TIMP;  
TIMP-1;TIMP1;EPA;EPO;HCI;TIMP;TIMP  
-1

## Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

### 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 stabilizer (e.g. 0.1% BSA, 5% HSA,  
10% FBS or 5% Trehalose), and aliquot  
the reconstituted protein solution to  
minimize free-thaw cycles.

## Contact



[www.abclonal.com](http://www.abclonal.com)

## Background

TIMP metalloproteinase 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.

### Bio-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

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### Operational Notes

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

### Storage

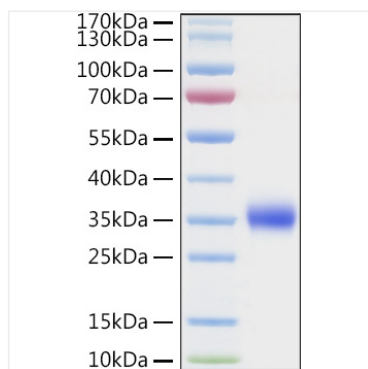
Store at -20°C.Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

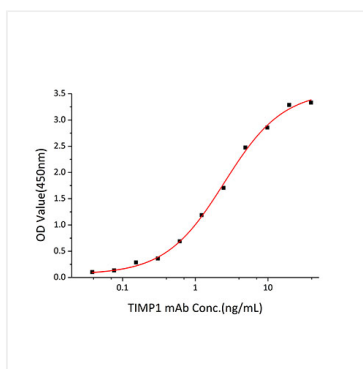
Avoid repeated freeze/thaw cycles.

\* For your safety and health, please wear a lab coat and disposable gloves when handling.

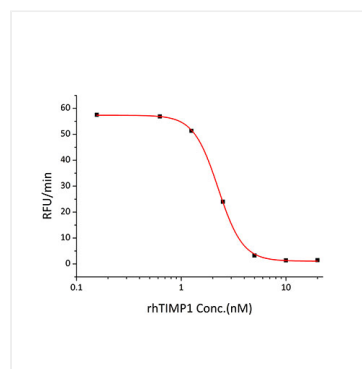
## Validation Data



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



Immobilized recombinant Human TIMP1 Protein at 1 $\mu$ g/mL (100  $\mu$ L/well) can bind TIMP1 Rabbit mAb with a linear range of 0.038-2.5ng/mL.



Recombinant Human TIMP-1 inhibit human MMP-2 cleavage of a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH<sub>2</sub>. The IC<sub>50</sub> value is approximately 2.2 nM.