

# Recombinant Human TIMP-2 Protein

Catalog No.: RP01370 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	7077	P16035

### Tags

C-His

### Synonyms

TIMP2;CSC-21K;DDC8

## Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

### Endotoxin

<0.1EU/ $\mu$ g

### Formulation

Lyophilized from a 0.22  $\mu$ m 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 freeze-thaw cycles.

## Contact

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## Background

Tissue inhibitors of metalloproteinases (TIMP) family are natural inhibitors of the matrix metalloproteinases (MMPs), the zinc enzymes involved in extracellular matrix maintenance and remodeling. The TIMP family encompasses four members (TIMP1-4), and they inhibit most MMPs by forming non-covalent binary complex. TIMP2 is a 22 kDa non N-glycosylated protein expressed by a variety of cell types, and plays a unique role among TIMP family members owing to its functions to regulate cellular responses to growth factors. Findings establish an unexpected, MMP-independent mechanism for TIMP2 inhibition of endothelial cell proliferation in vitro and reveal an important component of the antiangiogenic effect of TIMP2 in vivo. TIMP-2 thus is critical to the maintenance of tissue homeostasis and is involved in the regulation of tumor microenvironment.

## Basic Information

### Description

Recombinant Human TIMP-2 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys27-Pro220) of human TIMP2/CSC-21K (Accession #NP\_003246.1.) fused with a 6xHis tag at the C-terminus.

### Bio-Activity

1. Measured by its ability to 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 2.5 nM.

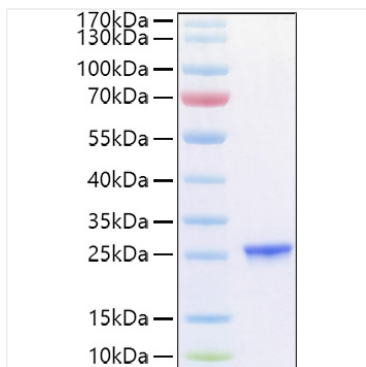
### Storage

Store the lyophilized protein at -20°C to -80°C for long term.

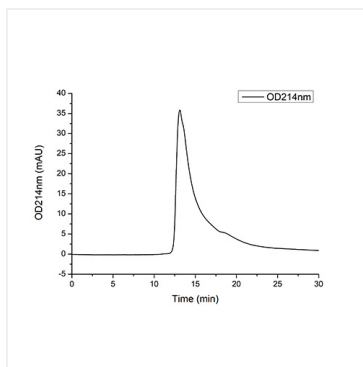
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

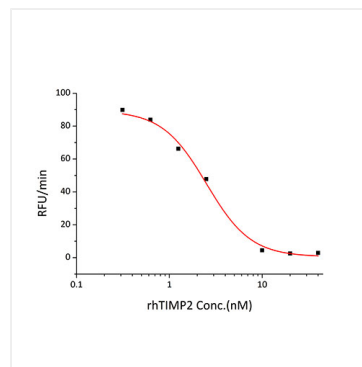
## Validation Data



Recombinant Human TIMP-2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 25-27kDa.



The purity of Human TIMP2/CSC-21K Protein (Cat.RP01370) was greater than 95% as determined by SEC-HPLC.



Recombinant Human TIMP-2 inhibit human MMP-2 cleavage of a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH2. The IC50 value is approximately 2.5 nM.