

# Recombinant Rat TIMP-1 protein (rFc Tag)

Catalog Number: Eg3212

## Basic Information

**Species:**  
Rat**Purity:**  
>90 %, SDS-PAGE**Tag:**  
rFc Tag

## Technical Specifications

**Purity:**

&gt;90 %, SDS-PAGE

**Endotoxin Level:**

&lt;0.1 EU/ µg protein, LAL method

**Source:**

HEK293-derived Rat TIMP-1 protein Cys24-Ala217 (Accession# P30120) with a rabbit IgG Fc tag at the C-terminus.

**GeneID:**

116510

**Accession:**

P30120

**Predicted Molecular Mass:**

47.8 kDa

**SDS-PAGE:**

50-60 kDa, reducing (R) conditions

**Formulation:**

Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

## Biological Activity

Not tested

## Storage and Shipping

**Storage:**

It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

**Shipping:**

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

## Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

## Background

Tissue Inhibitor of Metalloproteases 1 (TIMP1) is named for its well established function of inhibiting the proteolytic activity of matrix metalloproteases (MMPs). The balance between the activities of MMPs and TIMPs is essential for extracellular matrix maintenance, remodeling, and turnover in physiological events. TIMP1 inhibits extracellular matrix (ECM) degradation mediated by MMPs. TIMP1 plays a crucial role in remodeling the ECM associated with ovulation, luteinization, and degeneration. TIMP1 has several MMP-independent functions such as promotion of cell proliferation and inhibition of apoptosis. As a soluble protein secreted into the extracellular environment, TIMP1 is found in most tissues and body fluids. TIMP1 expression can be induced in several cell types, mainly due to external stimuli, such as growth factors (β-FGF, PDGF, EGF), phorbol esters, serum, and cytokines (IL-6 and IL-1).

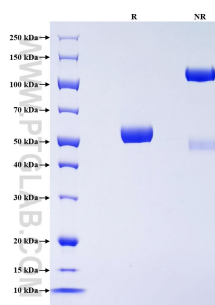
## References

1. Justo BL and Jasiulionis MG. (2021) Int J Mol Sci. 22(17):9319.
2. Schoeps B. et al. (2021) Cancer Res. 81(13):3568-3579.
3. Tan Y. et al. (2021) Biochem Pharmacol. 189:114085.
4. Hong L. et al. (2022) Arch Anim Breed. 65(1):105-111.

## Synonyms

Metalloproteinase inhibitor 1, TIMP-1, Tissue inhibitor of metalloproteinases 1

## Selected Validation Data



Purity of Recombinant Rat TIMP-1 was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.

For technical support and original validation data for this product please contact

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