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## Product Data Sheet

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Product Name: TIMP1 Human, HEK

Cat. No.: GP22297

Batch No.: 1

### Product Data

Purity >98%

Source HEK293 Cells.

Physical  
Appearance solid

Shipping  
Condition Shipped at Room temp.

Synonyms Metalloproteinase inhibitor 1; Tissue inhibitor of metalloproteinases; TIMP-1; Erythroid-potentiating activity; EPA; TIMP1; CLGI; TIMP; EPO; HCl; FLJ90373.

Solubility It is recommended to reconstitute the lyophilized TIMP1 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Formulation The TIMP1 protein was lyophilized after extensive dialysis against PBS.

### Introduction

TIMP1 is a member of the TIMP family. TIMP1 is an inducible glycoprotein produced by various cell types. The TIMP1 glycoprotein is a natural inhibitor of the matrix metalloproteinases, which a group of peptidases involved in degradation of the extracellular matrix. TIMP1 binds in a reversible mode to MMPs, with regions in the N-terminal domain binding to the MMP substrate-binding site. On top of its inhibitory function against most of the known MMPs, TIMP1 is able to promote cell proliferation in a broad range of cell types, and may also have an anti-apoptotic role. Furthermore, TIMP1 has erythroid-potentiating activity via translocation to the nucleus and also inhibits apoptosis in B-cells. The TIMP1 gene is situated within intron 6 of the synapsin I gene and is transcribed in the opposite direction. TIMP1 activity is dependent on the existence of disulfide bonds. TIMP1 transcription is extremely inducible in reaction to many cytokines and hormones. Increased TIMP1 levels are connecte

### Biological Activity

The IC50 of 2.5-4 nM is measured by its ability to inhibit recombinant human MMP-2 cleavage of the colorimetric peptide substrate, Mca-PLGL-DpaAR-NH2.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Stability

Lyophilized TIMP1 although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution TIMP1 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

TIMP1 Human Recombinant produced in HEK-293 cells is a secreted protein with the sequence of Human TIMP-1 (amino acids Cys24-Ala207) and fused to a polyhistidine tag at the C-terminus.

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