

# Recombinant Rat Timp1 protein, His-tagged

**Cat. No.** Timp1-61R    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant rat TIMP1, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | TIMP1, also known as metalloproteinase inhibitor 1, a tissue inhibitor of metalloproteinases, is a glycoprotein that is expressed from the several tissues of organisms. The glycoprotein is a natural inhibitor of the matrix metalloproteinases (MMPs), a group of peptidases involved in degradation of the extracellular matrix. In addition to its inhibitory role against most of the known MMPs, the encoded protein is able to promote cell proliferation in a wide range of cell types, and may also have an anti-apoptotic function. MMP1 functions as a growth factor that regulates cell differentiation, migration and cell death and activates cellular signaling cascades via CD63 and ITGB1. It plays a role in integrin signaling. |
| <b>Form</b>             | Liquid. In Phosphate Buffered Saline (pH 7.4) containing 10% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Molecular Mass</b>   | 22.3kDa (200aa)18-28KDa (SDS-PAGE under reducing conditions.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>AA Sequence</b>      | CSCAPTHPQT AFCNSDLVIR AKFMGSPEII ETTLYQRYEI KMTKMLKGFD<br>AVGNATGFRF AYTPAMESLC GYVHKSQNRS EEFLIAGRRLR NGNLHITACS<br>FLVPWHNLSP AQQKAFVKTY SAGCGVCTVF PCSAIPCKLE SDSHCLWTDQ<br>ILMGSEKGYQ SDHFACLPRN PDLCTWQYLG VSMTRSLPLA KAEAHHHHHH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                      |                                                                                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>     | < 1.0 EU per 1 microgram of protein (determined by LAL method)                                                                                                                   |
| <b>Purity</b>        | >90% by SDS – PAGE                                                                                                                                                               |
| <b>Storage</b>       | Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles. |
| <b>Concentration</b> | 0.5mg/ml (determined by Absorbance at 280nm)                                                                                                                                     |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                     |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">Timp1</a> <a href="#">TIMP metalloproteinase inhibitor 1</a> [ <a href="#">Rattus norvegicus</a> ]                                                                                                      |
| <b>Official Symbol</b> | <a href="#">Timp1</a>                                                                                                                                                                                               |
| <b>Synonyms</b>        | TIMP1; TIMP metalloproteinase inhibitor 1; metalloproteinase inhibitor 1; tissue inhibitor of metalloproteinase 1; tissue inhibitor of metalloproteinase 1; tissue inhibitor of metalloproteinases 1; Timp; TIMP-1; |
| <b>Gene ID</b>         | <a href="#">116510</a>                                                                                                                                                                                              |
| <b>mRNA Refseq</b>     | <a href="#">NM_053819</a>                                                                                                                                                                                           |
| <b>Protein Refseq</b>  | <a href="#">NP_446271</a>                                                                                                                                                                                           |
| <b>MIM</b>             |                                                                                                                                                                                                                     |
| <b>UniProt ID</b>      |                                                                                                                                                                                                                     |
| <b>Pathway</b>         | Hemostasis, organism-specific biosystem; Matrix Metalloproteinases, organism-specific biosystem; Platelet activation, signaling and aggregation, organism-specific                                                  |

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biosystem; Platelet degranulation, organism-specific biosystem; Response to elevated platelet cytosolic Ca<sup>2+</sup>, organism-specific biosystem;

**Function**

enzyme inhibitor activity; metal ion binding; metalloendopeptidase inhibitor activity; metalloendopeptidase inhibitor activity;

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