
Product Data Sheet

Product Name: TIMP1 Rat
 Cat. No.: GP22300
 Batch No.: 1

Product Data

Purity	>98%	Source	Sf9, Baculovirus cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Metalloproteinase inhibitor 1; Tissue inhibitor of metalloproteinases 1; TIMP-1; TIMP1.		
Amino Acid Sequence	CSCAPTHPQT AFCNSDLVIR AKFMGSPEII ETTLYQRYEI KMTKMLKGF DAVGNATGFRF AYTAMESLC GYVHKSQNRSE EFLIAGRLLR NGNLHITACS FLVPWHNLSP AQQKAFVKTY SAGCGVCTVF PCSAIPCKLE SDSHCLWTDQ ILMGSEKGYQ SDHFACLPRN PDLCTWQYLG VSMTRSLPLA KAEAHHHHHH		
Formulation	TIMP1 Ligand protein solution (0.5mg/ml) contains Phosphate buffered saline (pH7.4) and 10% glycerol.		

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 connected with squamous cell laryngeal carcinoma. TIMP1 overexpression is linked to gastric cancer.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store frozen at -20°C for longer

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

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

TIMP1 produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain (24-217 a.a.) and fused to a 6 aa His Tag at C-terminus containing a total of 200 amino acids and having a molecular mass of 22.3kDa. TIMP1 Ligand shows multiple bands between 18-28kDa on SDS-PAGE, reducing conditions and purified by proprietary chromatographic techniques.

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