

## TIMP-1 Protein, Mouse (HEK293)

<b>Cat. No.:</b>	HY-P71110
<b>Synonyms:</b>	Metalloproteinase Inhibitor 1; Erythroid-Potentiating Activity; EPA; Fibroblast collagenase Inhibitor; Collagenase Inhibitor; Tissue Inhibitor of Metalloproteinases 1; TIMP-1; TIMP1; CLGI; TIMP
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	P12032 (C25-R205)
<b>Gene ID:</b>	21857
<b>Molecular Weight:</b>	Approximately 26.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>C S C A P P H P Q T    A F C N S D L V I R    A K F M G S P E I N    E T T L Y Q R Y K I</p> <p>K M T K M L K G F K    A V G N A A D I R Y    A Y T P V M E S L C    G Y A H K S Q N R S</p> <p>E E F L I T G R L R    N G N L H I S A C S    F L V P W R T L S P    A Q Q R A F S K T Y</p> <p>S A G C G V C T V F    P C L S I P C K L E    S D T H C L W T D Q    V L V G S E D Y Q S</p> <p>R H F A C L P R N P    G L C T W R S L G A    R</p>
<b>Biological Activity</b>	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 0.131 nM, as measured under the described conditions.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 150 mM NaCl, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	TIMP-1, a metalloproteinase inhibitor, exerts its regulatory function by forming one-to-one complexes with target metalloproteinases, such as collagenases, leading to the irreversible inactivation of these enzymes by binding to their catalytic zinc cofactor. This inhibitory action encompasses a spectrum of metalloproteinases, including MMP1, MMP2, MMP3, MMP7, MMP8, MMP9, MMP10, MMP11, MMP12, MMP13, and MMP16, with no observed effect on MMP14. Beyond its
-------------------	---

---

role as an enzyme inhibitor, TIMP-1 serves as a growth factor, influencing diverse cellular processes like differentiation, migration, and cell death. It activates signaling cascades through interactions with CD63 and ITGB1, implicating its involvement in integrin signaling. TIMP-1 also engages in protein-protein interactions with MMP1, MMP3, MMP10, and MMP13, demonstrating its regulatory influence on these metalloproteinases. Furthermore, it forms a complex with CD63 and ITGB1, indicating its participation in intricate cellular signaling networks.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA