

TIMP-2 Protein, Human (HEK293)

Cat. No.:	HY-P73442
Synonyms:	TIMP-2; Metalloproteinase inhibitor 2; CSC-21K; TIMP2
Species:	Human
Source:	HEK293
Accession:	P16035 (C27-P220)
Gene ID:	7077
Molecular Weight:	Approximately 20 kDa

PROPERTIES

AA Sequence	<p>C S C S P V H P Q Q A F C N A D V V I R A K A V S E K E V D S G N D I Y G N P I</p> <p>K R I Q Y E I K Q I K M F K G P E K D I E F I Y T A P S S A V C G V S L D V G G</p> <p>K K E Y L I A G K A E G D G K M H I T L C D F I V P W D T L S T T Q K K S L N H</p> <p>R Y Q M G C E C K I T R C P M I P C Y I S S P D E C L W M D W V T E K N I N G H</p> <p>Q A K F F A C I K R S D G S C A W Y R G A A P P K Q E F L D I E D P</p>
Biological Activity	Measured by its ability to inhibit human MMP-2 cleavage of a fluorogenic peptide substrate MCA-PLGL-DPA-AR-NH2 and the IC ₅₀ value is < 4 nM.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TIMP-2, a tissue inhibitor of metalloproteinases, forms stable complexes with various metalloproteinases, particularly collagenases, and exerts irreversible inactivation by binding to their catalytic zinc cofactor. This regulatory action encompasses a spectrum of metalloproteinases, including MMP-1, MMP-2, MMP-3, MMP-7, MMP-8, MMP-9, MMP-10, MMP-13, MMP-14, MMP-15, MMP-16, and MMP-19. Notably, TIMP-2's intricate interactions extend to MMP2, where binding occurs via
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the C-terminal region, specifically interacting with the C-terminal PEX domain of MMP2, resulting in the inhibition of MMP2 activity. This dynamic interplay underscores TIMP-2's role as a versatile modulator in regulating the activity of metalloproteinases critical for extracellular matrix remodeling and tissue homeostasis.

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

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