TIMP-1 Protein, Rat (HEK293)

Cat. No.:	HY-P73441
Synonyms:	Metalloproteinase Inhibitor 1; EPA; TIMP-1; CLGI; TIMP
Species:	Rat
Source:	HEK293
Accession:	P30120/NP_446271.1 (C24-A217)
Gene ID:	116510
Molecular Weight:	Approximately 28 kDa

PROPERTIES

AA Sequence	A S T K G P S V F P L A P C S R S T S G G T A A L G C L V K D Y F P E P V T V S W N S G A L T S G V H T F P A V L Q S S G L Y S L S S V V T V P S S S L G T Q T Y T C N V N H K P S N T K V D K R V E L K T P L G D T T H T C P R C P E P K S C D T P P P C P R C P E P K S C D T P P P C P R C P E P K S C D T P P P C P R C P A P E L L G G P S V F L F P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V Q F K W Y V D G V E V H N A
Biological Activity	Measured by its ability to inhibit human MMP2 cleavage of a fluorogenic peptide substrate MCA-PLGLDPA-AR-NH2 and the IC_{50} value is approximately <4 nM.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, 100 mM NaCl, pH 7.0. 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_2O.
Storage & Stability	Stored at -20°C for 2 years from date of receipt. 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	The constant region of immunoglobulin heavy chains, known as antibodies, represents membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, these membrane-bound

immunoglobulins act as receptors that, upon binding a specific antigen, trigger the clonal expansion and differentiation of B lymphocytes into immunoglobulin-secreting plasma cells. Secreted immunoglobulins play a pivotal role in the effector phase of humoral immunity, leading to the elimination of bound antigens. The antigen binding site is formed by the variable domain of one heavy chain, together with that of its associated light chain, resulting in each immunoglobulin having two antigen binding sites with remarkable affinity for a particular antigen. The variable domains undergo a V-(D)-J rearrangement and subsequent somatic hypermutations, enabling affinity maturation for a specific antigen after exposure and selection. Immunoglobulins are comprised of two identical heavy chains and two identical light chains, held together by disulfide linkages.

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

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