TIMP-1 Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Tissue inhibitor of metalloproteinases, EPA

Cat. No.:	
RBG10319002	(2 µg)
RBG10319010	(10 µg)
RBG10319100	(100 µg)

Description

TIMP-1 is an extracellular inhibitor of MMPs, including MMP-1, -2, -3, -7, -8, -9, -10, -11, -12, -13, and -16. It belongs to the I35 (TIMP) family of irreversible protease inhibitors that function as key modulators of extracellular matrix degradation during tissue development and remodeling. TIMP-1 can also act through an MMP-independent mechanism to promote erythropoiesis by stimulating proliferation and differentiation of erythroid progenitors. Recombinant Human TIMP-1 is a 20.6 kDa protein containing 184 amino acid residues.

Introduction to the Molecule

This gene belongs to the TIMP gene family. The proteins encoded by this gene family are natural inhibitors 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.

Research topic

Others

Amino Acid Sequence

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CTCVPPHPQT AFCNSDLVIR AKFVGTPEVN QTTLYQRYEI KMTKMYKGFQ ALGDAADIRF VYTPAMESVC GYFHRSHNRS
EEFLIAGKLQ DGLLHITTCS FVAPWNSLSL AQRRGFTKTY TVGCEECTVF PCLSIPCKLQ SGTHCLWTDQ LLQGSEKGFQ
SRHLACLPRE PGLCTWQSLR SQIA
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Source

E. coli

Purity

95%

Biological Activity

TIMP-1 activity was measured by its ability to inhibit human MMP-1-induced hydrolysis of a chromogenic peptide substrate at room temperature. Half maximal inhibition was obtained at a TIMP-1 concentration of approximately 0.5 µg/ml, when using an MMP-1 concentration of 1.6 µg/ml.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at-20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

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