

TECHNICAL DATA SHEET

Recombinant Human TIMP-1 (Carrier-free)

Catalog Number: 21-7085

RPx-Pro™ Recombinant Protein
PRODUCT INFORMATION

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Recombinant Human TIMP-1 (Carrier-free)

DESCRIPTION

Tissue Inhibitors of Metalloproteinase-1 (TIMP-1) is one of four TIMP proteins that functions as an endogenous inhibitor for the matrix metalloproteinases (MMPs). An imbalance between MMPs and their respective TIMPs can lead to various disease states. TIMP-1 is widely expressed in many mammalian tissues, notably in the reproductive organs. It has a wide variety of roles, participating in functions including wound healing, angiogenesis, inflammatory responses and tumor metastasis. TIMP -1 appears to be the only of the four proteins that inhibit some MMPs less well than others – it is a poor inhibitor of MMP-19 and several MT-MMPs.

MOLECULAR MASS

Recombinant human TIMP-1 is a 20.6 kDa protein containing 184 amino acid residues.

AMINO ACID SEQUENCE

CTCVPPHPQT AFCNSDLVIR AKFVGTPEVN QTTLYQRYEI KMTKMYKGFQ ALGDAADIRF VYTPAMESVC GYFHRSHNRS
EEFLIAGKLQ DGLLHITTCV FVAPWNSLSL AQRRTGFTKY TVGCEECTVF PCLSIPCKLQ SGTCLWTDQ LLQGSEKGFQ
SRHLACLPRE PGLCTWQSLR SQIA

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

95 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

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

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

BIOACTIVITY

TIMP1 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.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Inflammation; Proliferation; Stem Cells & Differentiation

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Murphy G. 2011. Genome Biol. 12(11): 233. Maskos K and Bode W. 2003. Mol Biotechnol. 25(3): 241-266. Bode W, Fernandez-Catalan C, Grams F, Gomis-Ruth FX, Nagase H, Tschesche H and Maskos K. 1999. Ann NY Acad Sci. 878: 73-91. Gardner J and Ghorpade A. 2003. J Neurosci Res. 74(6): 801-806. Baker AH, Edwards DR and Murphy G. 2002. J Cell Sci. 115: 3719-3727.

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