

TECHNICAL DATA SHEET

Recombinant Human MMP-3 (Carrier-free)

Catalog Number: 21-7073

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human MMP-3 (Carrier-free)

DESCRIPTION

Matrix Metalloproteinase-3 (MMP-3) belongs to the matrix metalloproteinase family of endoproteases that function in the breakdown of extracellular matrix (ECM) in various normal and disease processes. MMP-3 targets fibronectin, laminin, collagens III, IV, and X, and cartilage proteoglycans. MMP-3 has been shown to be associated with fibroblasts, chondrocytes, osteoblasts, endothelial cells, smooth muscle cells, and macrophages. MMP expression and activity are tightly regulated, both through the need to activate the inactive zymogen, and control through tissue inhibitors of matrix metalloproteinases (TIMPs).

MOLECULAR MASS

Recombinant human MMP-3 is a 42.8 kDa protein containing the entire catalytic N-terminal domain and the C-terminal domain (378 amino acids).

AMINO ACID SEQUENCE

MRTFPGIPKW RKTHLYRIV NYTPDLPKDA VSAVEKALK VWEEVPLTF SRLYEGEADI MISFAVREHG DFYFPDGPNG
VLAHAYAPGP GINGDAHFDDEQWTKDTTG TNLFLVAAHE IGHSLGLFHS ANTEALMYPL YHSLDLTRF RLSQDDINGI
QSLYGPPDS PETPLVPTPEP VPPEPGTPAN CDPALSFDAV STLARGEILIF KDRHFWRKSL RKLEPELHLI SSFWPSLPSG VDAAYEVTSK
DLVFIFKGNQ FWAIRGNEVR AGYPRGIHTL GFPPTVRKID AAISDKEKNK TYFFVEDKYW RFDEKRNSME PGFPKQIAED FPGIDSKIDA
VFEFGFFYF FTGSSQLEFD PNAKKVTHTL KSNSWLNC

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

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

Mouse

BIOACTIVITY

MMP-3 activity was measured by its ability to cleave a chromogenic peptide MMP-3 substrate at room temperature. At a MMP-3 concentration of 2.5 μg/ml, 50% cleavage was achieved at an incubation time of approximately 75 minutes.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Bone, Skeletal, Cartilage; Cancer; Wound Healing

RECONSTITUTION

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

REFERENCES

Seizer P and May AE. 2013. Thromb Haemost. 110(5): 903-909. Nagase H and Woessner JF Jr. 1999. J Biol Chem. 274(31): 21491-21494. Dternlicht MD and Werb Z. 2001. Annu Rev Cell Dev Biol. 17: 463-516. Bourboulia D and Stetler-Stevenson WG. 2010. Semin Cancer Biol. 20(3): 161-168. Matrisian LM.

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