Active Matrix Metalloproteinase 2 (MMP2)

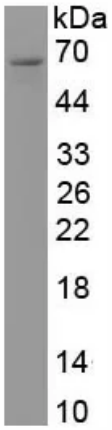
Catalog#:PXM12181

概述（Summary）

别称（Alternative Names）	CLG4; CLG4A; MMP-II; MONA; TBE-1; PEX; Gelatinase A; 72kDa Gelatinase; 72kDa Type IV Collagenase
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Tyr110-Cys662】
Accession #	P33434
表达宿主（Host）	-
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	63.5 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Ubiquitinous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, and atherosclerotic plaque rupture. As well as degrading extracellular matrix proteins, can also act on several nonmatrix proteins such as big endothelial 1 and beta-type CGRP promoting vasoconstriction. Also cleaves KISS at a Gly-|-Leu bond. Appears to have a role in myocardial cell death pathways. Contributes to myocardial oxidative stress by regulating the activity of GSK3beta. Cleaves GSK3beta in vitro. Involved in the formation of the

fibrovascular tissues.; PEX, the C-terminal non-catalytic fragment of MMP2, posseses anti-angiogenic and anti-tumor properties and inhibits cell migration and cell adhesion to FGF2 and vitronectin. Ligand for integrin alpha-v/beta-3 on the surface of blood vessels.; Mediates the proteolysis of CHUK/IKKA and initiates a primary innate immune response by inducing mitochondrial-nuclear stress signaling with activation of the pro-inflammatory NF-kappaB, NFAT and IRF transcriptional pathways.

电泳图（SDS-PAGE image）



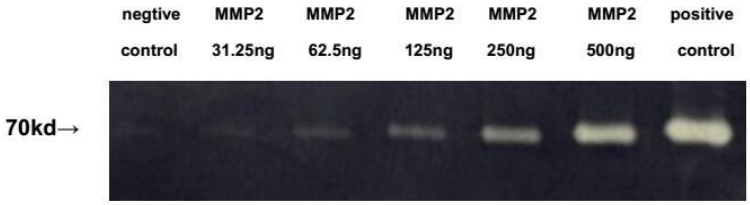
Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Y NFFPRKPKWD KNQITYRIIG YTPDLDPETV DDAFARALKV
WSDVTPLRFS RIHDGEADIM INFGRWEHGD GYPFDGKDGL LAHAFAPGTG
VGGDSHFDDD ELWTLGEGQV VRVKYGNADG EYCKFPFLFN GREYSSCTDT
GRSDGFLWCS TTYNFEKDGK YGFCPHEALF TMGGNADGQP CKFPFRFQGT
SYNSCTTEGR TDGYRWCGTT EDYDRDKKYG FCPETAMSTV GGNSEGAPCV
FPFTFLGNKY ESCTSAGRND GKVWCATTTN YDDDRKWGFC PDQGYSLFLV
AAHEFGHAMG LEHSQDPGAL MAPIYTYTKN FRLSHDDIKG IQELYGPSPD
ADTDTGTGPT PTLGPVTPEI CKQDIVFDGI AQIRGEIFFF KDRFIWRTVT
PRDKPTGPLL VATFWPELPE KIDAVYEAPQ EEKAVFFAGN EYWVYSASTL
ERGYPKPLTS LGLPPDVQQV DAAFNWSKNK KTYIFAGDKF WRYNEVKKKM
DPGFPKLIAD SWNAIPDNLD AVVDLQGGGH SYFFKGAYYL KLENQSLKSV
KFGSIKSDWL GC

Mechanism: MMP2 is a zinc-dependent enzymes capable of cleaving components of the extracellular matrix, which belongs to the matrix metalloproteinase (MMP) family .It is a gelatinase A, 72kDa type IV collagenase which can hydrolyze gelatin under certain conditions. Gelatin zymography is mainly used for the detection of the gelatinases, MMP-2 and MMP-9 and It is extremely sensitive because levels of 10pg of MMP-2 can already be detected. Briefly, various concentrations of MMP2 were denatured by SDS loading buffer, electrophoresed through sodium dodecylsulphate–polyacrylamide gel (SDS–PAGE; 10% gels) containing gelatin (1 mg/mL) with nonreducing conditions. After renaturation, incubation and CCB-stained, active MMP2 would hydrolyze gelatin nearby, which was indicated by the white binds on the gel. In this experiment we use heat-denatured MMP2

protein as negative control, and blood sample as positive control . Result: Gelatin hydrolysis by recombinant mouse MMP2 was shown in figure 1. Figure 1. Hydrolysis of gelatin by recombinant mouse MMP2.



注意事项（Note）

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