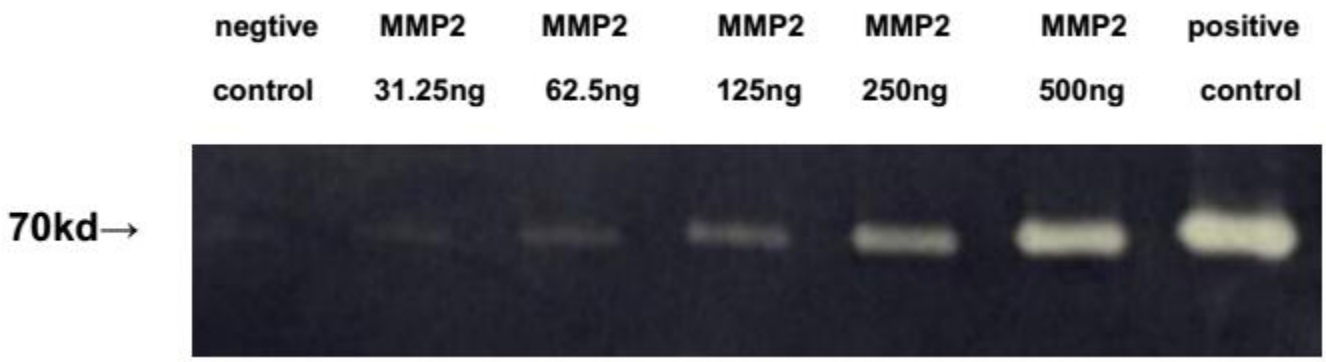
Active Matrix Metalloproteinase 2 (MMP2) Instruction Manual

SBPA067Mu01

Mus musculus (Mouse)

Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Traits	Freeze-dried powder
Purity	> 95%
Isoelectric Point	5.2
Applications	Cell culture; Activity Assays.

ACTIVITY TEST



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.

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         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
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USAGE

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Image

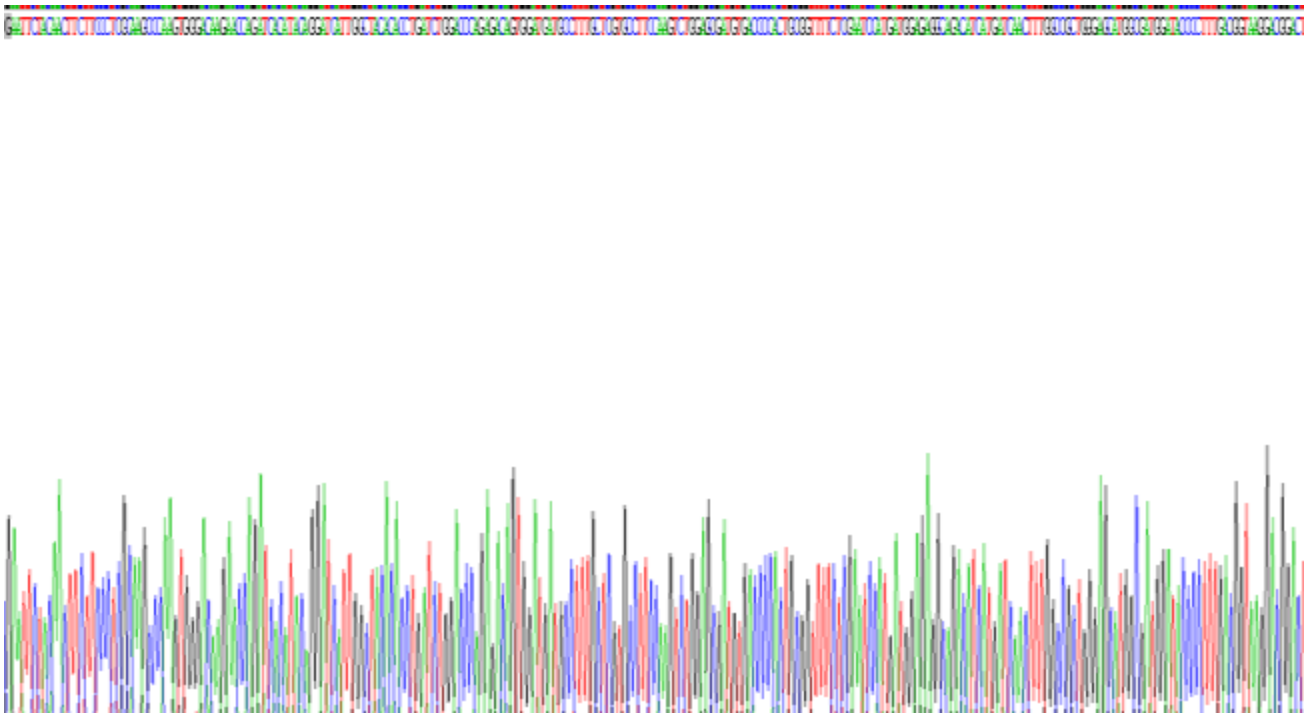

Figure. SDS-PAGE

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.