

**APA100Mu01 100µg**  
**Active Matrix Metalloproteinase 2 (MMP2)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1th Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Tyr110~Cys662

**Tags:** N-terminal His-tag

**Purity:** >95%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

**Applications:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 5.2

**Predicted Molecular Mass:** 63.5kDa

**Accurate Molecular Mass:** 63kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

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

## **[ STORAGE AND STABILITY ]**

**Storage:** Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

**Stability Test:** 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.

## **[ SEQUENCE ]**

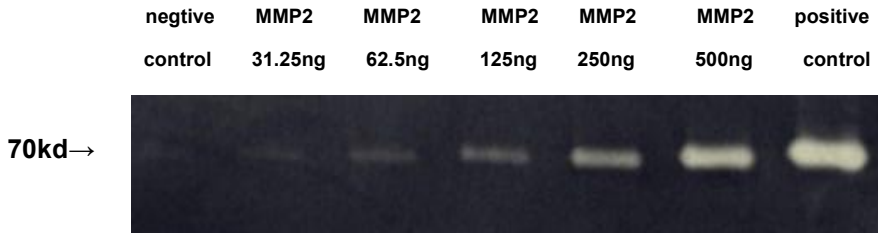
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Y NFFPRKPKWD KNQITYRIIG YTPDLDPETV DDAFARALKV
WSDVTPLRFS RIHDGEADIM INFGRWEHGD GYPFDGKDGL LAHAFAPGTG
VGGDSHFDDD ELWTLGEGQV VRVKYGNADG EYCKFPFLFN GREYSSCTDT
GRSDGFLWCS TTYNFEKD GK YGFCPHEALF TMGGNADGQP CKFPFRFQGT
SYNSCTTEGR TDGYRWC GTT EDYDRDKKYG FCPETAMSTV GGNSEGAPCV
FPFTFLGNKY ESCTSAGRND GK VWCATTTN YDDDRKWGFC PDQGYSFLV
AAHEFGHAMG LEHSQDPGAL MAPIYTYTKN FRLSHDDIKG IQELYGSPD
ADTDGTGTGPT PTLGPVTPEI CKQDIVFDGI AQIRGEIFFF KDRFIWRTVT
PRDKPTGPLL VATFWPELPE KIDAVYEAPQ EEKAVFFAGN EYVWVSASTL
ERGYPKPLTS LGLPPDVQV DAAFNWSKNK KTYIFAGDKF WRYNEVKKKM
DPGFPKLIAD SWNAIPDNL D AVVDLQGGGH SYFFKGAYYL KLENQSLKSV
KFGSIKSDWL GC
```

## **[ ACTIVITY ]**

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

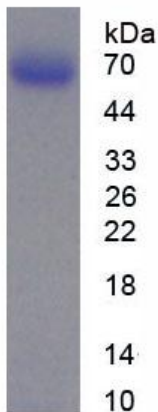
by the white binds on the gel. In this experiment we use heat-denatured MMP2 protein as negative control, and blood sample as positive control .

Result: Gelatin hydrolysis by recombinant mouse MMP2 was shown in figure 1.



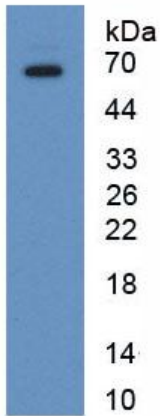
**Figure 1. Hydrolysis of gelatin by recombinant mouse MMP2.**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant MMP2, Mouse**



**Figure 3. Western Blot**

**Sample: Recombinant MMP2, Mouse;**

**Antibody: Rabbit Anti-Mouse MMP2 Ab (PAA100Mu01)**

**[ IMPORTANT NOTE ]**

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