APA100Hu02 10μg
Active Matrix Metalloproteinase 2 (MMP2)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Tyr110~Cys660
Tags: N-terminal His-tag
Purity: >98%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl, 5% trehalose.
Applications: Cell culture; Activity Assays; In vivo assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.2
Predicted Molecular Mass: 63.3kDa
Accurate Molecular Mass: 64kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

Y NFFPRKPKWD KNQITYRIIG YTPDLDPETV DDAFARAFQV
WSDVTPLRFS RIHDGEADIM INFGRWEHGD GYPFDGKDGL LAHAFAPGTG
VGGDSHFDDD ELWTLGEGQV VRVKYGNADG EYCKFPFLFN GKEYNSCTDT
GRSDGFLWCS TTYNFEKDGK YGFCPHEALF TMGGNAEGQP CKFPFRFQGT
SYDSCTTEGR TDGYRWCGTT EDYDRDKKYG FCPETAMSTV GGNSEGAPCV
FPFTFLGNKY ESCTSAGRSD GKMWCATTAN YDDDRKWGFC PDQGYSLFLV
AAHEFGHAMG LEHSQDPGAL MAPIYTYTKN FRLSQDDIKG IQELYGASPD
IDLGTGPTPT LGPVTPEICK QDIVFDGIAQ IRGEIFFFKD RFIWRTVTPR
DKPMGPLLVA TFWPELPEKI DAVYEAPQEE KAVFFAGNEY WIYSASTLER
GYPKPLTSLG LPPDVQRVDA AFNWSKNKKT YIFAGDKFWR YNEVKKKMDP
GFPKLIADAW NAIPDNLDAV VDLQGGGHSY FFKGAYYLKL ENQSLKSVKF
GSIKSDWLGC

[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 (500ng, 125ng, 63ng, 32ng, 16ng) were denatured by SDS loading buffer, electrophoresed through sodium dodecylsulphate-polyacrylamide gel (SDS-PAGE; 10% gels) containing gelatin (1mg/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 1: Gelatin hydrolysis by recombinant human MMP2 was shown in figure 1.

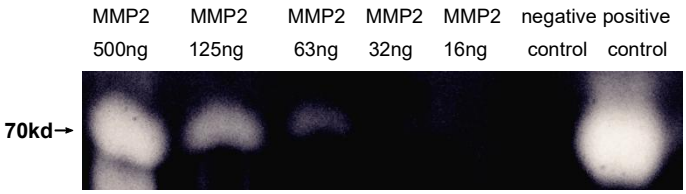

Figure 1. Hydrolysis of gelatin by MMP2.

[IDENTIFICATION]

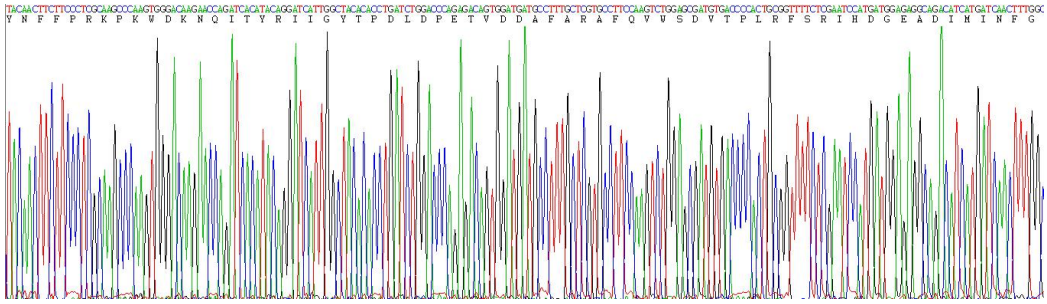

Figure 2. Gene Sequencing (extract)

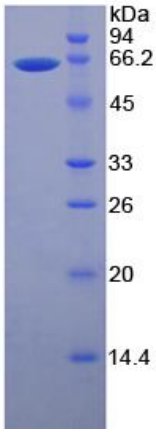

Figure 3. SDS-PAGE

Sample: Active recombinant MMP2, Human

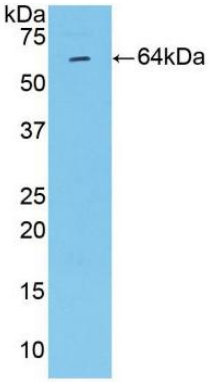

Figure 4. Western Blot

Sample: Recombinant MMP2, Human;

Antibody: Rabbit Anti-Human MMP2 Ab (PAA100Hu02)

[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.