

**APA171Mu01 100µg**  
**Active Meprin A Alpha (MEP1a)**  
**Organism Species: *Mus musculus* (Mouse)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Asn219~Gly463

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

**Purity:** >95%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

**Original Concentration:** 200µg/mL

**Applications:** Activity Assays.

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

**Predicted isoelectric point:** 6.9

**Predicted Molecular Mass:** 31.3kDa

**Accurate Molecular Mass:** 33kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 10mM PBS (pH7.4) 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 ]**

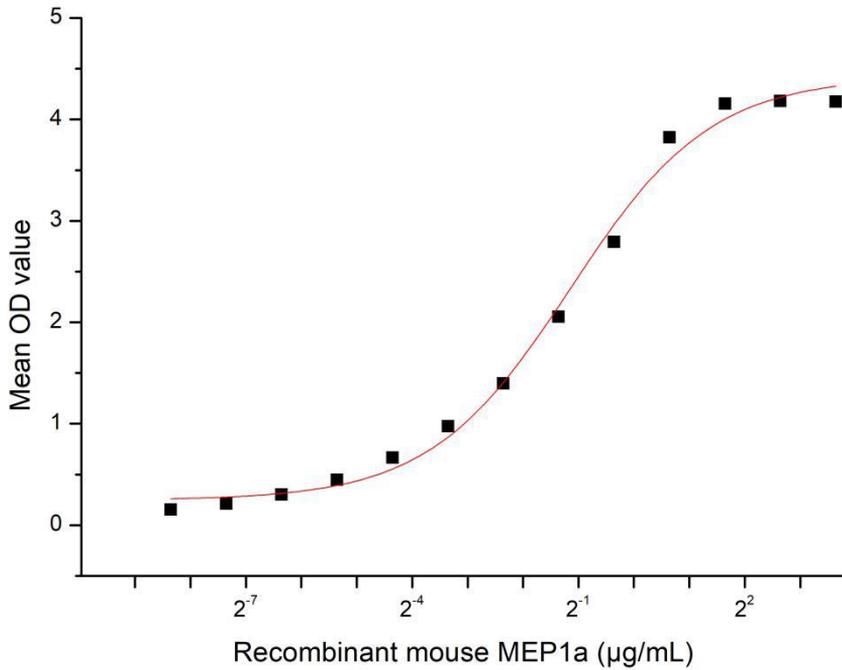
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                                                                 NK NESIPTITTK IPEFNTIIGQ
LPDPSAIDL I RLNRMYNCTA THTLLDHCDF EKTNVCGMIQ GTRDDADWAH GDSSQPEQVD
HTLVGQCKGA GYFMFFNTSL GARGEAALLE SRILYPKRKQ QCLQFFYKMT GSPADRFEVW
VRRDDNAGKV RQLAKIQTFQ GSDSHNWKIA HVTLNEEKKF RYVFLGTKGD PGNSSGGIYL
DDITLTETPC PAGVWTRNI SQILENTVKG DKLVSPRFYN SEG
```

## **[ ACTIVITY ]**

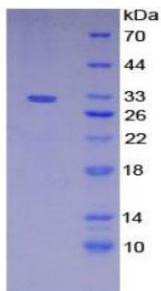
Meprin A Alpha (MEP1a) is a zinc-dependent metalloprotease belonging to the astacin family (M12) and plays a crucial role in extracellular matrix (ECM) remodeling, cell adhesion, and inflammation. It is primarily expressed in the kidney, intestine, and immune cells, where it cleaves substrates such as collagen, fibronectin, and cytokines, influencing tissue repair and disease progression. MEP1A exists in both membrane-bound and secreted forms, regulating processes like fibrosis, cancer metastasis, and inflammatory responses. Besides, Trefoil Factor 2 (TFF2) has been identified as an interactor of MEP1a, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse MEP1a and recombinant mouse TFF2. Briefly, MEP1a was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to TFF2-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-MEP1a pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50  $\mu$ L stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse MEP1a and recombinant mouse TFF2 was

shown in Figure 1, the EC50 for this effect is 0.452µg/mL.



**Figure 1. The binding activity of recombinant mouse MEP1a and recombinant mouse TFF2**

## [ IDENTIFICATION ]



**Figure 2. SDS-PAGE**

**Sample: Active recombinant MEP1a, Mouse**

**[ 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.