



**APB120Mu01 100µg  
Active Arginase (Arg)**

**Organism Species: *Mus musculus* (Mouse)**  
***Instruction manual***

FOR IN VITRO USE AND RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Met1~Lys323

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

**Purity:** >95%

**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:** 6.6

**Predicted Molecular Mass:** 36.1kDa

**Accurate Molecular Mass:** 37kDa 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 ]**

```
MSSKPKSLEI IGAPFSKGQP RGGVEKGPAA LRKAGLLEKL KETEYDVRDH
GDLAFVDVNP DSSFQIVKNP RSVGKANEEL AGVVAEVQKN GRVSVVLGGD
HSLAVGSISG HARVHPDLCV IWVDAHTDIN TPLTTSSGNL HGQPVSFLLK
ELKGGKFPDVP GFSWVTPCIS AKDIVYIGLR DVDPGEHYII KTLGIKYFSM
TEVDKLGIGK VMEETFSYLL GRKKRPIHLS FDVDGLDPAF TPATGTPVLG
GLSYREGLYI TEEIYKTGLL SGLDIMEVNP TLGKTAEEVK STVNTAVALT
LACFGTQREG NHKPGTDYLK PPK
```

## **[ ACTIVITY ]**

Arginase (Arg) is an enzyme that catalyzes the degradation of arginine to produce urea and ornithine, which is crucial in the urea cycle. In most mammals, two isozymes of this enzyme exist; the first, Arginase I, functions in the urea cycle, and is located primarily in the cytoplasm of the liver. The second isozyme, Arginase II, has been implicated in the regulation of the arginine/ornithine concentrations in the cell. Besides, Ubiquitin Carboxyl Terminal Hydrolase L5 (UCHL5) has been identified as an interactor of Arg, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse Arg and recombinant mouse UCHL5. Briefly, Arg were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to UCHL5-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-Arg pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding

activity of Arg and UCHL5 was shown in Figure 1, and this effect was in a dose dependent manner.

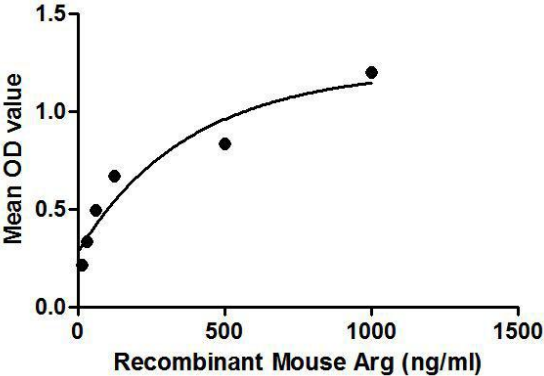


Figure 1. The binding activity of Arg with UCHL5.

[ IDENTIFICATION ]

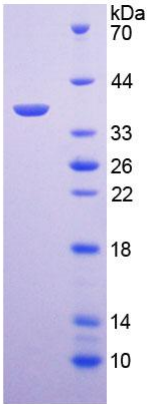
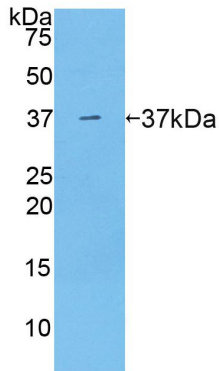


Figure 2. SDS-PAGE

Sample: Active recombinant Arg, Mouse



**Figure 3. Western Blot**

**Sample: Recombinant Arg, Mouse;**

**Antibody: Rabbit Anti-Mouse Arg Ab (PAB120Mu01)**

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