APB120Ra01 100μg
Active Arginase (Arg)
Organism Species: Rattus norvegicus (Rat)
Instruction manual

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

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Lys323
Tags: N-terminal His-tag
Purity: >98%
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: 6.7
Predicted Molecular Mass: 36.2kDa
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 2-8ºC 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]

MSSKPKPIEI IGAPFSKGQP RGGVEKGPAA LRKAGLVEKL KETEYNVRDH
GDLAFVDVPN DSPFQIVKNP RSVGKANEQL AAVVAETQKN GTISVVLGGD
HSMAIGSISG HARVHPDLCV IWVDAHTDIN TPLTTSSGNL HGQPVAFLLK
ELKGKFPDVP GFSWVTPCIS AKDIVYIGLR DVDPGEHYII KTLGIKYFSM
TEVDKLGIGK VMEETFSYLL GRKKRPIHLS FDVDGLDPVF TPATGTPVVG
GLSYREGLYI TEEIYKTGLL SGLDIMEVNP TLGKTPEEVT RTVNTAVALT
LSCFGTKREG NHKPETDYLK PPK

[ACTIVITY]

Arginase (Arg) is an enzyme that catalyzes the degradation of arginine to produce urea and omithine, 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, Estrogen Receptor Alpha (ERa) has been identified as an interactor of, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat Arginase(Arg) and recombinant rat ERa. Briefly, Arg were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to ERa-coated microtiter wells and incubated for 2h at 37℃. 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℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of of Arg and ERa was shown in Figure 1, and this effect was in a dose dependent manner.

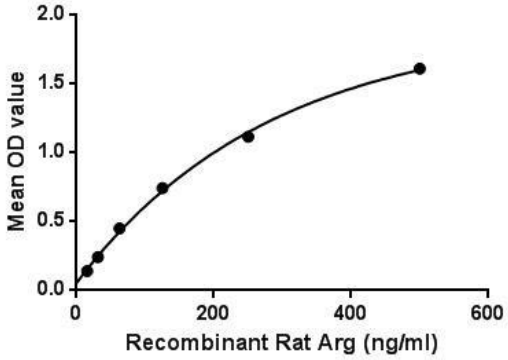

Figure 1. The binding activity of Arg with ERa.

[IDENTIFICATION]

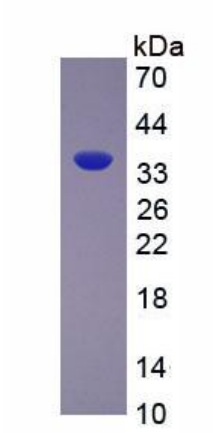

Figure 2. SDS-PAGE

Sample: Active recombinant Arg, Rat

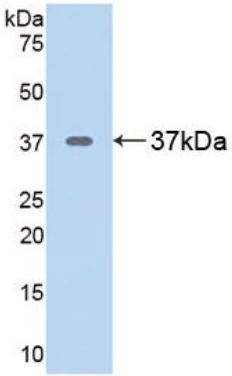

Figure 3. Western Blot

Sample: Recombinant Arg, Rat;

Antibody: Rabbit Anti-Rat Arg Ab (PAB120Ra01)