

APB592Ra01 100µg

Active Caspase 1 (CASP1)

Organism Species: Rattus norvegicus (Rat)

Instruction manual

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

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asn119~Asp296

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: 7.7

Predicted Molecular Mass: 21.2kDa

Accurate Molecular Mass: 21kDa 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]

NK EGGAFPGPSG SLKFCPLEIA QKLWKENHSE
IYPIMKTPTR TRLALIICNT DFQHLRRVG ADVDLREMKL LLQDLGYTVK
VKENLTALEM TKELKEFAAC PEHKTS DSTF LVFMSHGLQE GICGITYSNE
VADILKVDTI FQMMNTLKCP SLKDKPKVII IQACRGEKQG VLLK D

[ACTIVITY]

Caspase 1 (CASP1) cleaves IL-1 beta between an Asp and an Ala, releasing the mature cytokine which is involved in a variety of inflammatory processes. It also has lots of other function, such as defenses against pathogens, cleaves and activates sterol regulatory element binding proteins (SREBPs), promotes apoptosis. Besides, Interleukin 1 Alpha (IL1a) has been identified as an interactor of CASP1, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat CASP1 and recombinant rat IL1a. Briefly, CASP1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to IL1a-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CASP1 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 of CASP1 and IL1a was shown in Figure 1, and this effect was in a dose dependent manner.

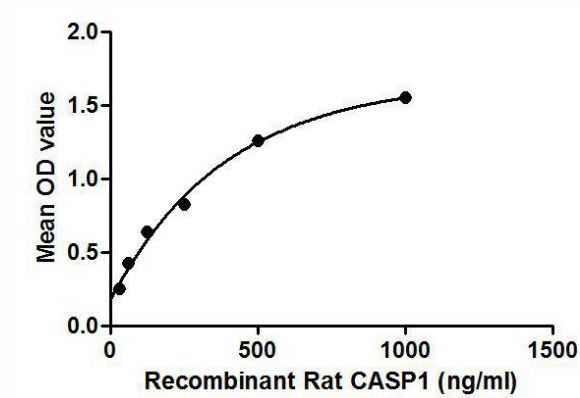


Figure 1. The binding activity of CASP1 with IL1a.

[IDENTIFICATION]

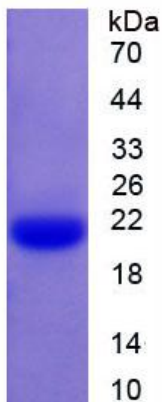


Figure 2. SDS-PAGE

Sample: Active recombinant CASP1, Rat

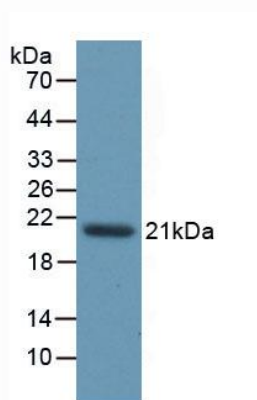


Figure 3. Western Blot

Sample: Recombinant CASP1, Rat;

Antibody: Rabbit Anti-Rat CASP1 Ab (PAB592Ra01)