

**APA066Ra01 100µg**  
**Active Interleukin 1 Receptor Type I (IL1R1)**  
**Organism Species: Rattus norvegicus (Rat)**  
***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:** Thr119~Tyr217

**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; In vivo assays.

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

**Predicted isoelectric point:** 6.7

**Predicted Molecular Mass:** 12.7kDa

**Accurate Molecular Mass:** 13kDa 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 ]**

```
TY CLKTKITMSV LENDPGLCYN TQASFIQRLH  
VAGDGLVCP YLDFFKDENN ELPKVQWYKN CKPLPLDDGN FFGFKNKLMV  
MNVAAEHRGN YTCRTSY
```

## **[ ACTIVITY ]**

IL1R1 (Interleukin 1 Receptor Type I), also known as CD121a, is an important mediator involved in many cytokine induced immune and inflammatory responses. It belongs to the interleukin-1 receptor family, and is a receptor for interleukin 1 alpha (IL1A), interleukin 1 beta (IL1B), and interleukin 1 receptor antagonist (IL1RA). Besides, mouse IL1B shares 87.0% AA sequence identity with rat IL1B, suggesting the exist of cross-species activity. Thus, a binding ELISA assay was constructed to detect the association of recombinant rat IL1R1 with recombinant mouse IL1B. Briefly, IL1R1 were diluted serially in PBS with 0.1%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to IL1B-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-IL1R1 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 IL1R1 with IL1B was shown in Figure 1 and this effect was in a dose dependent manner.

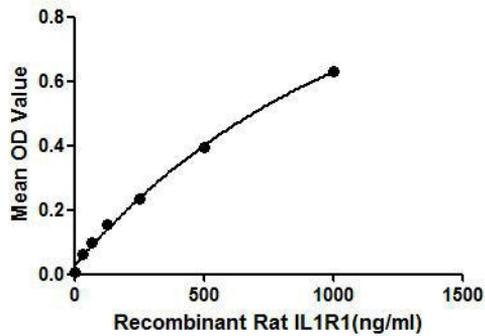


Figure 1. The binding activity of IL1R1 with IL1B.

## [ IDENTIFICATION ]

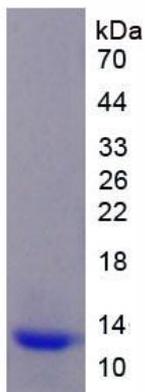
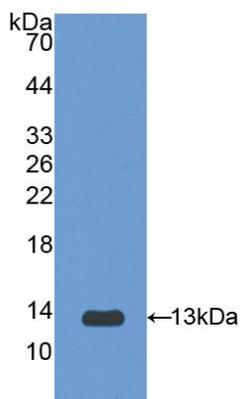


Figure 2. SDS-PAGE

Sample: Active recombinant IL1R1, Rat



**Figure 3. Western Blot**

**Sample: Recombinant IL1R1, Rat;**

**Antibody: Rabbit Anti-Rat IL1R1 Ab (PAA066Ra01)**