

APA066Ra03 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

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asp386~Tyr553

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: 6.2

Predicted Molecular Mass: 20.8kDa

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]

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DSCSD FLPRKASDGR
TYDAYVLYPK TYGEGSFAYL DTFVFKLLPE VLEGQFGYKL FICGRDDYVG
EDTIEVTNEN VKRSRRLIII LVRDMGSFSC LGQSSEEQIA IYDALIREGI
KIILLELEKI QDYEKMPESI QFIKQKHGAI CWSGDFKERP QSAKTRFWKN
LRY
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[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.

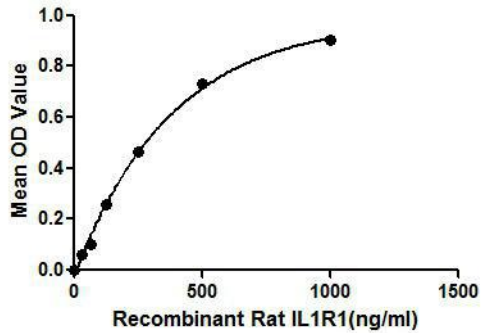


Figure 1. The binding activity of IL1R1 with IL1B.

[IDENTIFICATION]

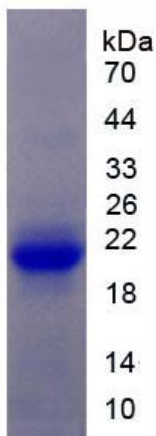


Figure 2. SDS-PAGE

Sample: Active recombinant IL1R1, Rat

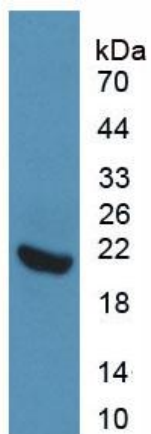


Figure 3. Western Blot

Sample: Recombinant IL1R1, Rat;

Antibody: Rabbit Anti-Rat IL1R1 Ab (PAA066Ra03)