

APA073Cp01 100µg

Active Interleukin 2 (IL2)

Organism Species: *Capra hircus*; *Caprine* (Goat)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala21~Thr155

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

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

Predicted isoelectric point: 6.5

Predicted Molecular Mass: 19.2kDa

Accurate Molecular Mass: 18kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) 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]

APTSSSTGNTMKEVKSLLLDLQLLLEKVKNLENLKL SRMHTFNFYMP
KVNDTELKHLKCLLEELKLLEDVLDLAPSKNRNTREIKDYMASLKG I
VLELQGSETRFTCEYDDATVKA VEFQNKWTTFCQSIYSTLT

[ACTIVITY]

Interleukin-2 (IL-2) is a critical cytokine primarily produced by activated T cells that plays a fundamental role in regulating immune responses. It stimulates the proliferation and differentiation of T cells, B cells, and natural killer (NK) cells, making it essential for both innate and adaptive immunity. IL-2 exerts its effects by binding to the IL-2 receptor (IL-2R), which consists of three subunits, triggering downstream signaling pathways such as JAK-STAT, PI3K, and MAPK. Besides, Interleukin 1 Beta (IL1b) has been identified as an interactor of IL-2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant goat IL-2 and recombinant rat IL1b. Briefly, IL-2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to IL1b-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-IL-2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 μ L stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant goat IL-2 and recombinant rat IL1b was shown in Figure 1, and this effect was in a dose dependent manner.

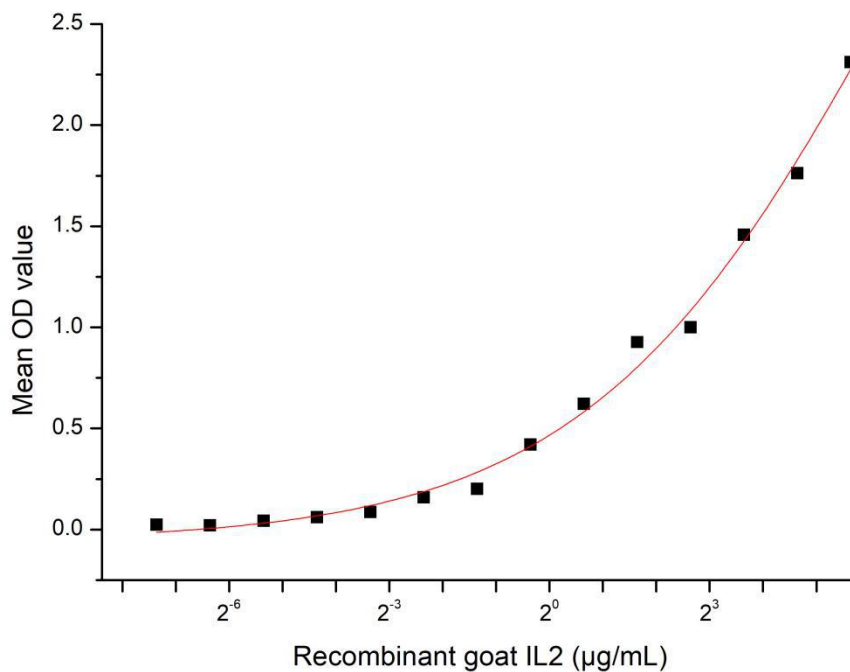


Figure 1. The binding activity of recombinant goat IL-2 and recombinant rat IL1b

[IDENTIFICATION]

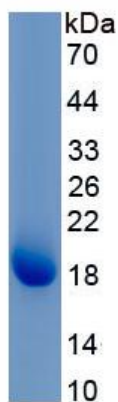


Figure 2. SDS-PAGE

Sample: Active recombinant IL2, Goat

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.