

**APA056Mu61 100µg**

**Active Interleukin 10 (IL10)**

**Organism Species: *Mus musculus (Mouse)***

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ser19~Ser178

**Tags:** N-terminal His-tag

**Purity:** >90%

**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:** 8.2

**Predicted Molecular Mass:** 20.4kDa

**Accurate Molecular Mass:** 22kDa 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 ]**

```
SR GQYSREDNNC THFPVGQSHM LLELRTAFSQ
VKTFQTKDQ LDNILLTDSL MQDFKGYLGC QALSEMIQFY LVEVMPQAEK
HGPEIKEHLN SLGEKLTLR MRLRRCHRFL PCENKSKAVE QVKSDFNKLQ
DQGVYKAMNE FDIFINCIEA YMMIKMKS
```

## **[ ACTIVITY ]**

Interleukin 10 (IL10) is an anti-inflammatory cytokine primarily produced by immune cells, including macrophages, T cells, and B cells. It plays a crucial role in limiting excessive immune responses, preventing tissue damage, and maintaining immune homeostasis. IL10 suppresses pro-inflammatory cytokine production and antigen presentation, making it vital in controlling autoimmune diseases, infections, and chronic inflammation. Its signaling through the IL10 receptor (IL10R) activates the JAK-STAT pathway, modulating immune cell function. Dysregulation of IL10 is associated with inflammatory disorders and cancer. Besides, Interleukin 6 (IL6) has been identified as an interactor of IL10, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse IL10 and recombinant horse IL6. Briefly, biotin-linked IL10 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to IL6-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 $\mu$ l stop solution to the wells and read at 450nm immediately. The binding activity of IL10 and IL6 was shown in Figure 1, the EC50 for this effect is 0.56 $\mu$ g/mL.

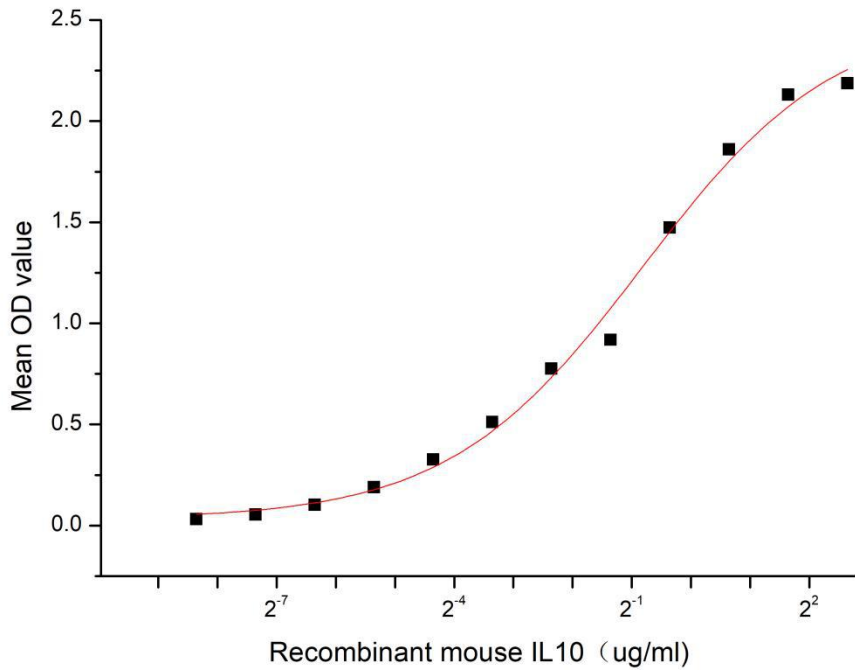


Figure 1. The binding activity of recombinant mouse IL10 and recombinant horse IL6

**[ IDENTIFICATION ]**

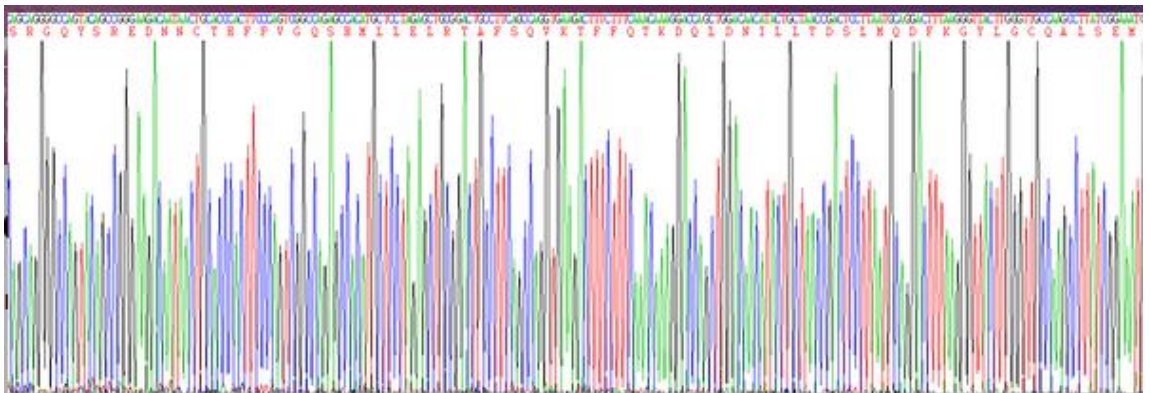
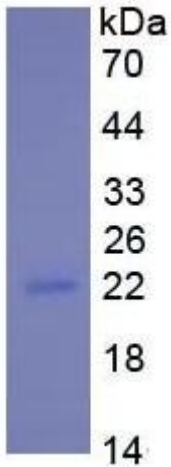


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant IL10, Mouse**

**[ 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.