

**APA077Mu01 10µg**  
**Active Interleukin 4 (IL4)**  
**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:** His21~Ser140

**Tags:** Two N-terminal Tags, His-tag and GST-tag

**Purity:** >98%

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

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

**Original Concentration:** 150µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 6.8

**Predicted Molecular Mass:** 43.6kDa

**Accurate Molecular Mass:** 44kDa 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 ]**

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HIHGCDKNHL REIIGILNEV TEGGTPCTEM  
DVPNVL TATK N TTESELVCR ASKVL RIFYL KHGKTPCLKK NSSVLMELQR  
LFRAFRC LDS SISCTMNESK STSLKDFLES LKSIMQMDYS
```

## **[ ACTIVITY ]**

The interleukin 4 (IL4) is a cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells. Upon activation by IL4, Th2 cells subsequently produce additional IL4 in a positive feedback loop. IL4 has many biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of B cells into plasma cells. It is a key regulator in humoral and adaptive immunity. IL4 induces B-cell class switching to IgE, and up-regulates MHC class II production. IL4 decreases the production of Th1 cells, macrophages, IFN-gamma, and dendritic cell IL12. Besides, Interleukin 2 Receptor Gamma (IL2Rg) has been identified as an interactor of IL4, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse IL4 and recombinant mouse IL2Rg. Briefly, IL4 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to IL2Rg-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-IL4 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 IL4 and IL2Rg was shown in Figure 1, and this effect was in a dose dependent manner.

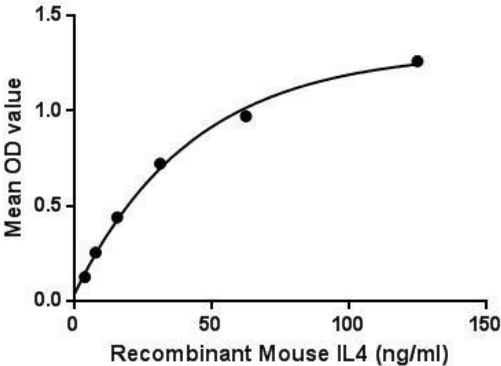


Figure 1. The binding activity of IL4 with IL2Rg.

[ IDENTIFICATION ]

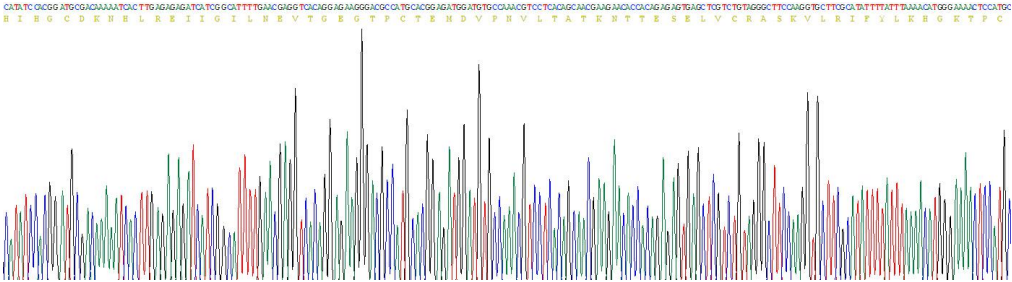


Figure 2. Gene Sequencing (extract)

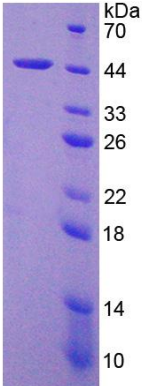
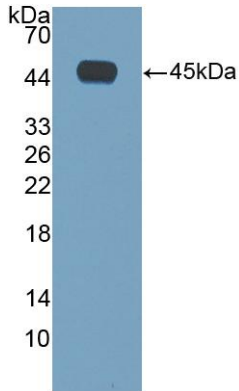


Figure 3. SDS-PAGE

Sample: Active recombinant IL4, Mouse



**Figure 4. Western Blot**

**Sample: Recombinant IL4, Mouse;**

**Antibody: Rabbit Anti-Mouse IL4 Ab (PAA077Mu01)**

**[ 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.