

**APA077Ov01 100µg**

**Active Interleukin 4 (IL4)**

**Organism Species: *Ovis aries*; *Ovine* (Sheep)**

***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:** His25~Cys135

**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:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 9.4

**Predicted Molecular Mass:** 16.3kDa

**Accurate Molecular Mass:** 16kDa 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 ]**

HKCDITLEEIIKTLNILTSRKNSCMELPVADVFAAPKNATEKETFCRAGIELRRIYRSHMCLNK  
FLGGLDRNLSSLASKTCSVNEAKTSTSTLRDLLERLKTIMKEKYSKC

## **[ ACTIVITY ]**

Interleukin 4 (IL4) is a cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells. It plays vital biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of B cells and monocyte. 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. To test the effect of sheep IL4 on cell proliferation, TF-1 cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant sheep IL4. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10  $\mu$ l of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1 hours at 37 °C. Cell viability was assessed by CCK-8 assay after incubation with recombinant sheep IL4 for 72h. The ED50 of recombinant sheep IL4 is 0.077  $\mu$ g/ml.

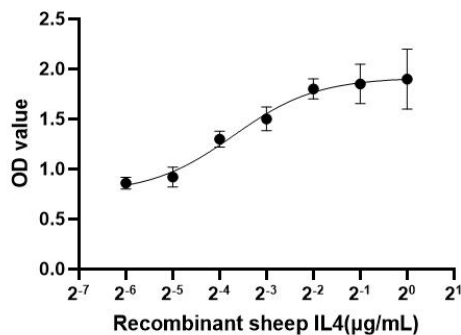


Figure1. The dose-effect curve of recombinant sheep IL4 on TF-1 cells

## [ IDENTIFICATION ]

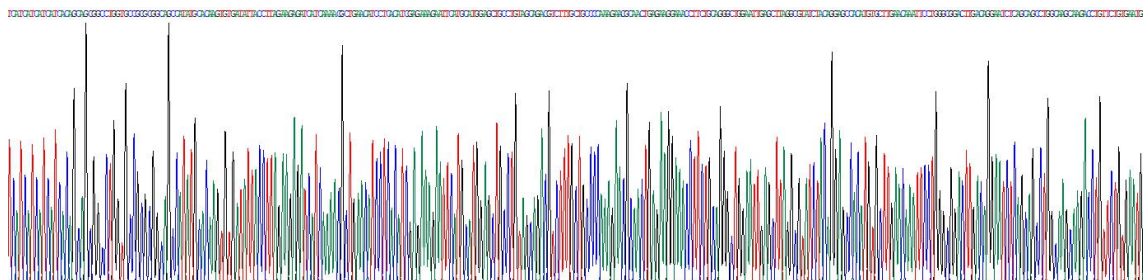


Figure 2. Gene Sequencing (extract)

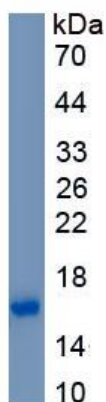


Figure 3. SDS-PAGE

Sample: Active recombinant IL4, Sheep

## [ 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.