APA077Ga01 100μg
Active Interleukin 4 (IL4)
Organism Species: *Chicken (Gallus)*
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: Leu26~Lys136
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: 9.1
Predicted Molecular Mass: 16.1kDa
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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

LQLSV PLMESIRIVN DIQGEVSCVK
MNVTDIFADN KTNNKTELLC KASTIVWESQ HCHKNLQGLF LNMRQLLNAS
STSLKAPCPT AAGNTTSMEK FLADLRTFFH QLAKNK

[ACTIVITY]

Interleukin-4 (IL4) is a pivotal pleiotropic cytokine primarily produced by activated T helper 2 (Th2) cells, mast cells, and basophils. It is a central regulator of the adaptive immune response, driving the differentiation of naive T cells into the Th2 lineage. IL4 is renowned for its role in promoting humoral immunity by stimulating B-cell proliferation, class-switching to IgE and IgG1, and antibody production. Furthermore, it induces alternative activation of macrophages, contributing to anti-inflammatory responses and tissue repair. The biological functions of IL4 are initiated by its specific binding to the membrane-bound Interleukin-4 Receptor (IL4R), forming a signaling complex that activates the JAK-STAT pathway.To detect the activity of recombinant IL4 , a functional ELISA assay was performed to evaluate the interaction between recombinant chicken IL4 and recombinant human IL4R.Briefly, IL4R was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IL4-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IL4R pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately.Measured by its binding ability in a functional ELISA. When

Recombinant IL4 is Immobilized at 2 μg/mL(100 uLwell), the concentration of IL4R that produces 50% optimal bindingresponse is found to be approximately 0.256 μg/mL.

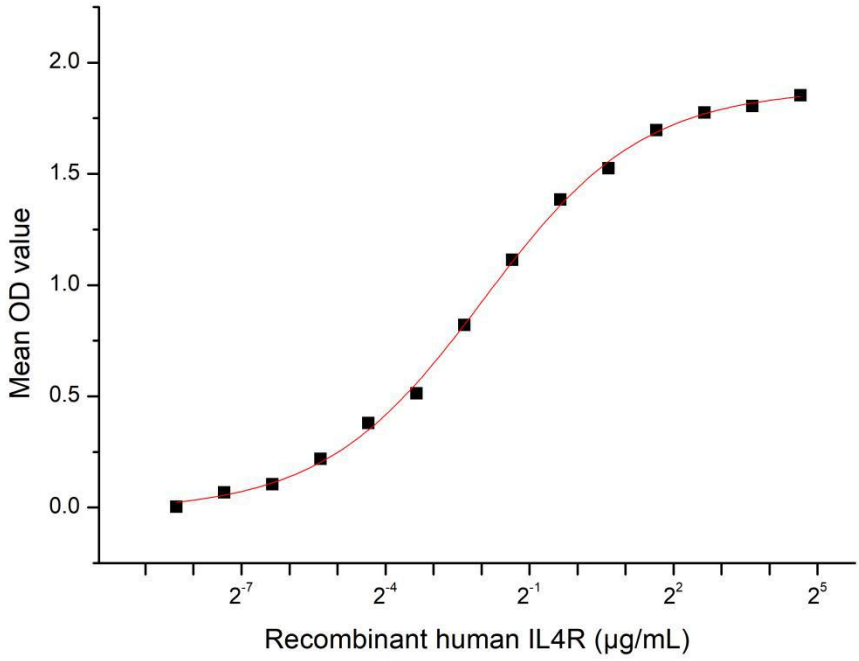


Figure 1. The binding activity of recombinan chicken IL4 and recombinant human IL4R

[IDENTIFICATION]

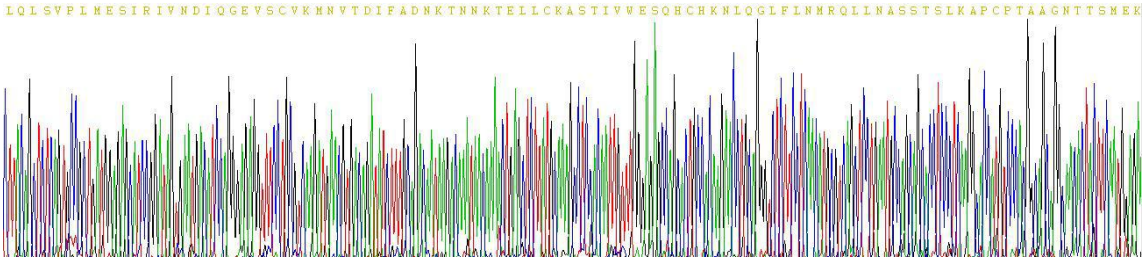


Figure 2. Gene Sequencing (extract)

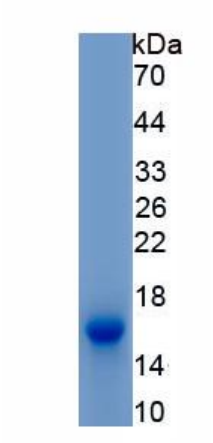


Figure 3. SDS-PAGE

Sample: Active recombinant IL4, Gallus

[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.