

**APC031Hu01 100µg**

**Active Interleukin 4 Receptor (IL4R)**

**Organism Species: *Homo sapiens* (Human)**

***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:** Met26~His232

**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:** 6.1

**Predicted Molecular Mass:** 27.4kDa

**Accurate Molecular Mass:** 27kDa 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.

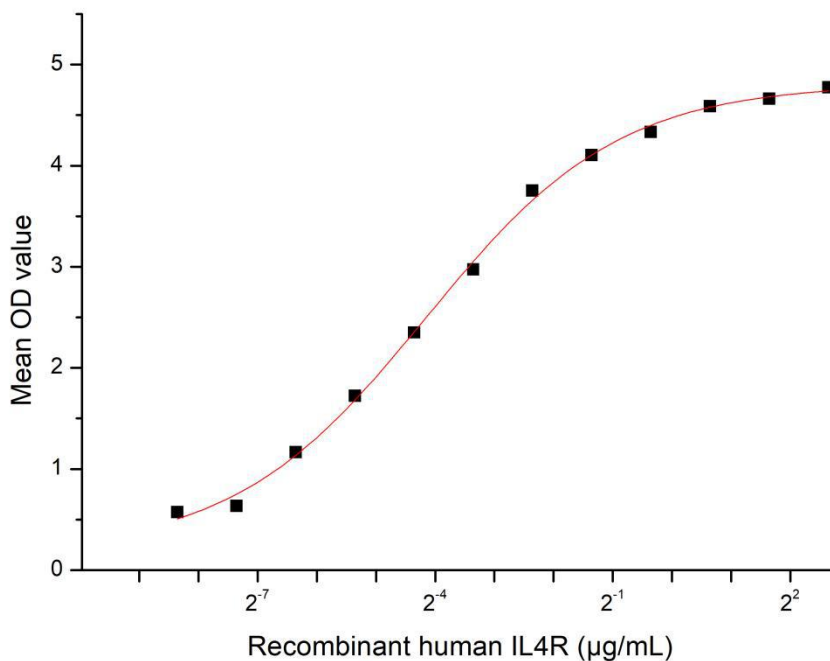
## **[ SEQUENCE ]**

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SFKPSEHVKPRAPGNLTVHTNVSDTLTLLTWSNPYPDPNYLYNHLT  
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AQCYNNTTWSEWSPSTKWHNSYREPFEQH

## **[ ACTIVITY ]**

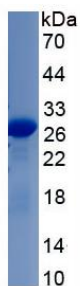
Interleukin 4 Receptor (IL4R) is a transmembrane protein that plays a pivotal role in the immune system, particularly in mediating type 2 immune responses. Signaling through IL4R promotes B-cell activation, antibody class switching to IgE, and differentiation of Th2 cells, while also contributing to anti-inflammatory responses and alternative macrophage activation. Dysregulation of IL4R signaling is associated with allergic diseases, asthma, and certain parasitic infections. IL4R binds its cognate ligand Interleukin 4 (IL4) with high affinity, initiating dimerization of receptor subunits and subsequent activation of the JAK-STAT signaling pathway. To detect the activity of recombinant IL4R, a functional ELISA assay was performed to evaluate the interaction between recombinant human IL4R and recombinant rabbit IL4. Briefly, IL4R was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to IL4-coated microtiter wells and incubated for 1h at 37 °C. 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 °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  $\mu$ L stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human IL4R

and recombinant rabbit IL4 was shown in Figure 1, the EC<sub>50</sub> for this effect is 0.056µg/mL.



**Figure 1. The binding activity of recombinant recombinant human IL4R and recombinant rabbit IL4**

## **[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant IL4R, Human**

**[ 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.