

**APA060Hu01 10µg**  
**Active Interleukin 13 (IL13)**  
**Organism Species: *Homo sapiens (Human)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Leu25~Asn146

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

**Purity:** >95%

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

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl, 5%Trehalose.

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

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

**Predicted isoelectric point:**9.0

**Predicted Molecular Mass:** 17kDa

**Accurate Molecular Mass:** 15kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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 ]**

```
LTCLGG FASPGPVPPS TALRELIEEL  
VNITQNQKAP LCNGSMVWSI NLTAGMYCAA LESLINVSGC SAIKTRQML  
SGFCPHKVSA GQFSSLHVRD TKIEVAQFVK DLLLHLKRLF REGRFN
```

## **[ ACTIVITY ]**

Interleukin 13 (IL13) is cytokine secreted by many cell types, but especially T helper type 2 (Th2) cells. IL13 has effects on immune cells that are similar to those of the closely related cytokine IL4. Although IL13 is associated primarily with the induction of airway disease, it also has anti-inflammatory properties. IL13 induces a class of protein-degrading enzymes, known as matrix metalloproteinases (MMPs), in the airways. Furthermore, IL-13 can induce immunoglobulin E (IgE) secretion from activated human B cells. Besides, Interleukin 13 Receptor Alpha 1 (IL13Ra1) has been identified as an interactor of IL13, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human IL13 and recombinant mouse IL13Ra1. Briefly, biotin-linked IL13 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to IL13Ra1-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 µl stop solution to the wells and read at 450 nm immediately. The binding activity of IL13 and IL13Ra1 was shown in Figure 1, the EC50 for this effect is 0.018 ug/mL.

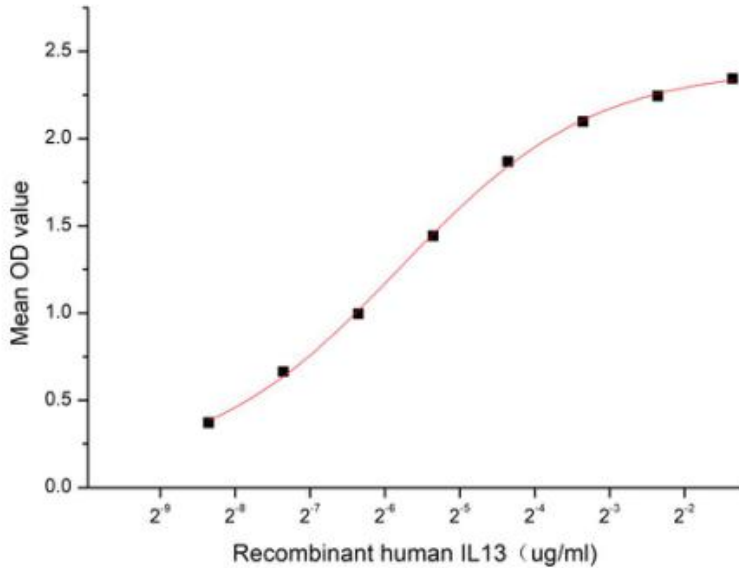


Figure 1. The binding activity of recombinant human IL13 with recombinant mouse IL13Ra1

## [ IDENTIFICATION ]

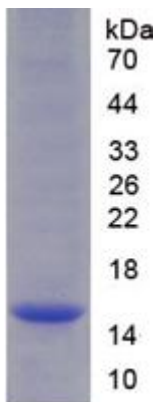


Figure 2. SDS-PAGE

Sample: Active Interleukin 13, 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.