

**APC007Hu01 2mg**  
**Active Interleukin 34 (IL34)**  
**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:** Met1~Pro242

**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% SKL, 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:** 6.8

**Predicted Molecular Mass:** 31.2kDa

**Accurate Molecular Mass:** 31kDa 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 ]**

```
MPRGFTWLRV LGIFLGVALG NEPLEMWPLT QNEECTVTGF LRDKLQYRSR  
LQYMKHYFPI NYKISVPYEG VFRIANVTRL QRAQVSEREL RYLWVLVLSL  
ATESVQDVLL EGHPSWKYLQ EVETLLLNQV QGLTDVEVSP KVESVLSLLN  
APGPNLKLVR PKALLDNCFR VMELLYCSCC KQSSVLNWQD CEVPSPQSCS  
PEPSLQYAAT QLYPPPPWSP SSPPHSTGSV RPYRAQGEGL LP
```

## **[ ACTIVITY ]**

Interleukin 34 (IL-34) is a protein belonging to a group of cytokines called interleukins. IL-34 increases growth or survival of immune cells known as monocytes; it elicits its activity by binding the Colony stimulating factor 1 receptor. To test the effect of IL-34 on cell proliferation, THP-1 cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well with 2% serum standard 1640 which contains various concentrations of recombinant human IL-34. After incubated for 4 days, 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 450nm was measured using a microplate reader after incubating the plate for 2-4 hours at 37°C. Proliferation of THP-1 cells after incubation with IL-34 for 4 days observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant IL-34 for 4 days. The result was shown in Figure 2. It was obvious that IL-34 significantly increased cell viability of THP-1 cells. The ED50 is 0.54ng/mL.



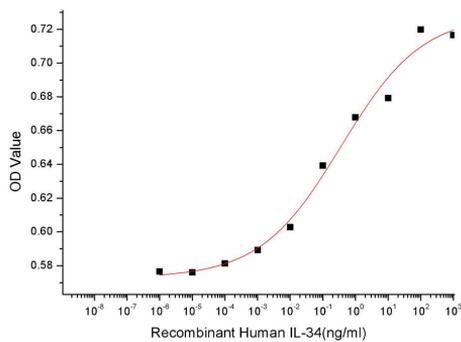
A

B

**Figure 1. Cell proliferation of THP-1 cells after stimulated with IL-34.**

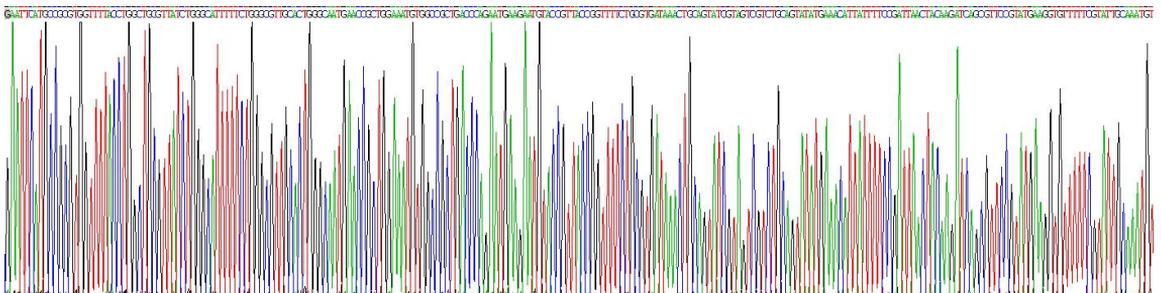
**(A) THP-1 cells cultured in 1640, stimulated with 10ng/mL IL-34 for 4 days;**

**(B) Unstimulated THP-1 cells cultured in 1640 for 4days.**

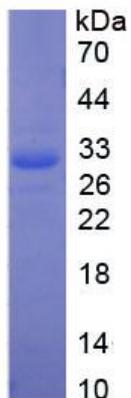


**Figure 2. Cell proliferation of THP-1 cells after stimulated with IL-34.**

## [ IDENTIFICATION ]



**Figure 3. Gene Sequencing (extract)**



**Figure 4. SDS-PAGE**

**Sample: Active recombinant IL34, 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.