

**APA085Mu01 10µg**  
**Active Leukemia Inhibitory Factor (LIF)**  
**Organism Species: *Mus musculus (Mouse)***  
***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:** Pro25~Phe203

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

**Purity:** >95%

**Buffer Formulation:** 10mM PBS, pH7.4, containing 1mM DTT, 5% trehalose  
0.01% sarcosyl and Proclin300..

**Applications:** Cell culture; 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:** 21.0kDa

**Accurate Molecular Mass:** 21kDa 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.

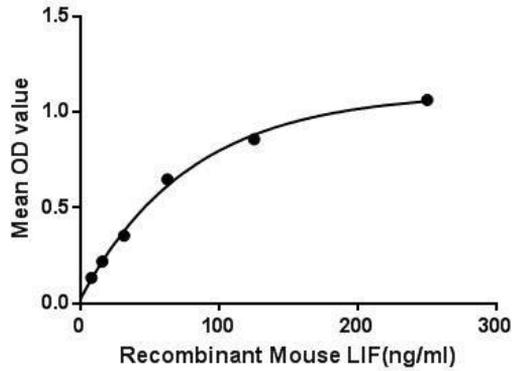
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

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PLPITP VNATCAIRHP CHGNLMNQIK
NQLAQLNGSA NALFISYYTA QGEPFPNVE KLCAPNMTDF PSFHGNGTEK
TKLVELYRMV AYLSASLTNI TRDQKVLNPT AVSLQVKLNA TIDVMRGLLS
NVLCLCNKY RVGHVDVPPV PDHSDKEAFQ RKKLGCQLLG TYKQVISVVV
QAF
```

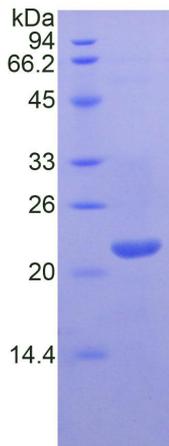
## **[ ACTIVITY ]**

Leukemia inhibitory factor (LIF), is an interleukin 6 class cytokine that affects cell growth by inhibiting differentiation. LIF as a cytokine also has another function including: the growth promotion and cell differentiation of different types of target cells, influence on bone metabolism, cachexia, neural development, embryogenesis and inflammation. Besides, Colony Stimulating Factor Receptor, Granulocyte (GCSFR) has been identified as an interactor of LIF, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse LIF and recombinant mouse GCSFR. Briefly, LIF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to GCSFR-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-LIF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of LIF and GCSFR was shown in Figure 1, and this effect was in a dose dependent manner.



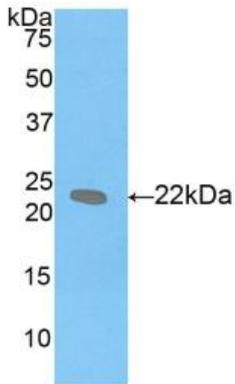
**Figure 1. The binding activity of LIF with GCSFR.**

## **[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant LIF, Mouse**



**Figure 3. Western Blot**

**Sample: Recombinant LIF, Mouse;**

**Antibody: Rabbit Anti-Mouse LIF Ab (PAA085Mu01)**

**[ 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.