APA085Hu01 100μg
Active Leukemia Inhibitory Factor (LIF)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Lys2~Ala201
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 0.05% sarcosyl and 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: 9.5
Predicted Molecular Mass: 25.4kDa
Accurate Molecular Mass: 26kDa 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.

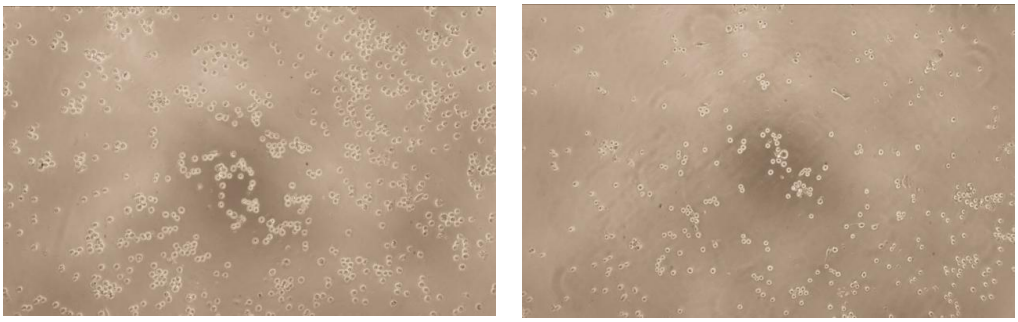
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

KVLAAGVVP LLLVLHWKHG AGSPLPITPV NATCAIRHPC HNNLMNQIRS QLAQLNGSAN ALFILYYTAQ GEPFPNNLDK LCGPNVTDFP PFHANGTEKA KLVELYRIVV YLGTSLGNIT RDQKILNPSA LSLHSKLNAT ADILRGLLSN VLCRLCSKYH VGHVDVTYGP DTSGKDVFQK KKLGCQLLGK YKQIIAVLAQ A

[ACTIVITY]

Leukemia Inhibitory Factor (LIF), is an interleukin 6 class cytokine that affects cell growth by inhibiting differentiation. Other properties attributed to the cytokine include: the growth promotion and cell differentiation of different types of target cells, influence on bone metabolism, cachexia, neural development, embryogenesis and inflammation. p53 regulated LIF has been shown to facilitate implantation in the mouse model and possibly in humans. To test the effect of LIF on cell proliferation, TF-1 cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well with 1% serum standard 1640 including various concentrations of recombinant human LIF. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL 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 1-4 hours at 37℃. Proliferation of TF-1 cells after incubation with LIF for 72h 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 LIF for 72h. The result was shown in Figure 2. It was obvious that LIF significantly increased cell viability of TF-1 cells.



A B

Figure 1. Cell proliferation of TF-1 cells after stimulated with LIF.

(A) TF-1 cells cultured in 1640, stimulated with 0.5ng/mL LIF for 72h;

(B) Unstimulated TF-1 cells cultured in 1640 for 72h.

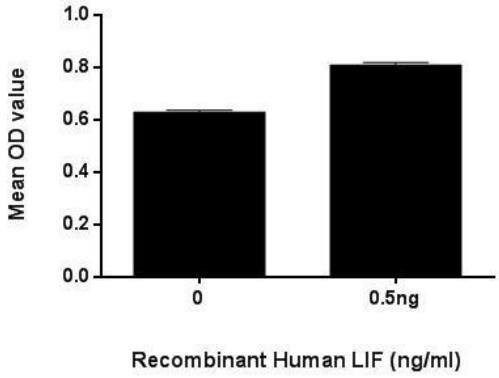


Figure 2. Cell proliferation of TF-1 cells after stimulated with LIF.

[IDENTIFICATION]

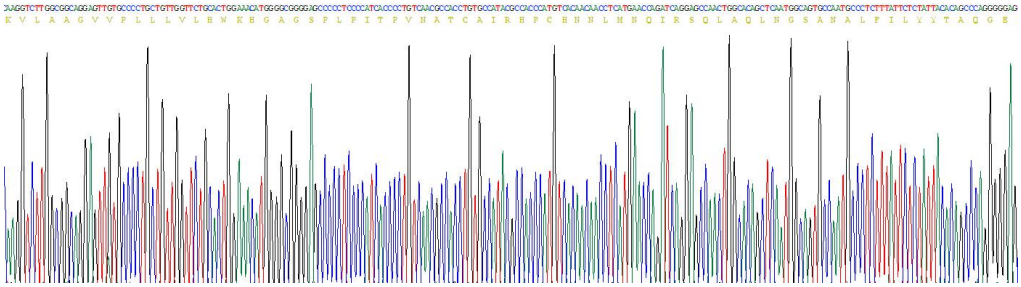


Figure 3. Gene Sequencing (extract)

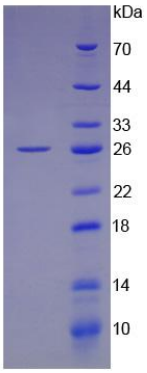


Figure 4. SDS-PAGE

Sample: Active recombinant LIF, Human

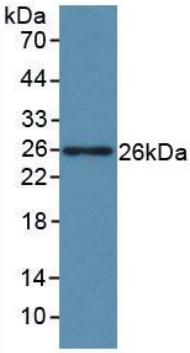


Figure 5. Western Blot

Sample: Recombinant LIF, Human;

Antibody: Rabbit Anti-Human LIF Ab (PAA085Hu01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.