APA078Hu61 10μg
Active Interleukin 5 (IL5)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Ile20~Ser134

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 5% Trehalose.

Original Concentration: 50μg/mL

Applications: Cell culture; Activity Assays; In vivo assays.

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

Predicted isoelectric point: 7.0

Predicted Molecular Mass: 14.8kDa

Accurate Molecular Mass: 20kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in ddH_2O to a concentration of 0.1-0.2 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.

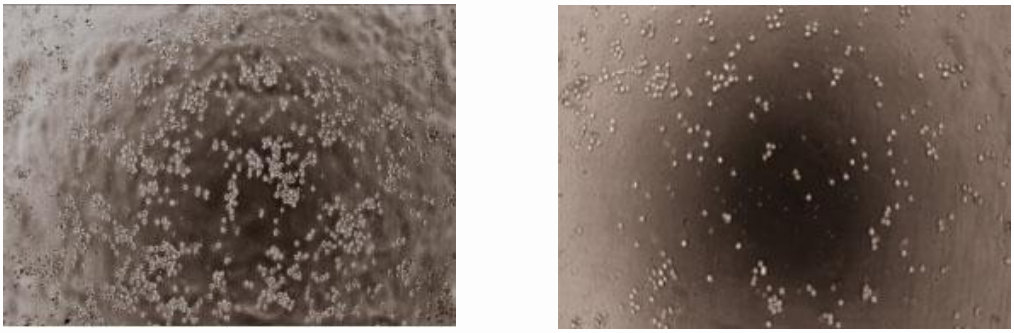
[SEQUENCE]

I PTEIPTSALV KETLALLSTH RTLLIANETL
RIPVPVHKNH QLCTEEIFQG IGTLESQTVQ GGTVERLFKN LSLIKKYIDG
QKKKCGEERR RVNQFLDYLQ EFLGVMNTEW IIES

[ACTIVITY]

Interleukin-5 (IL-5), a secreted glycoprotein, is a member of the hematopoietic family. Interleukin 5 has been shown to stimulate the proliferation of TF-1 cells. To test this effect, TF-1 cells were seeded into triplicate wells of 96-well plates at a density of $1x10^4$cells/well and incubated for 48h in the presence or absence of various concentrations of IL-5 at 37°C. The growth of 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 measure the absorbance at 450nm using a microplate reader after incubating the plate for 1-4 hours at 37°C.

Cell proliferation of TF-1 cells after incubation with IL-5 for 48h observed by inverted microscope was shown in Figure 1.



A B

Figure 1. Cell proliferation of TF-1 cells after stimulated with IL-5.

(A) TF-1 cells cultured in RPMI-1640, stimulated with 10ng/mL IL-5 for 48h;

(B) Unstimulated TF-1 cells cultured in RPMI-1640 for 48h.

The dose-effect curve of IL-5 was shown in Figure 2. It was obvious that it significantly promoted cell proliferation of TF-1 cells. The ED50 for this effect is typically 0.18 to 7.675ng/mL.

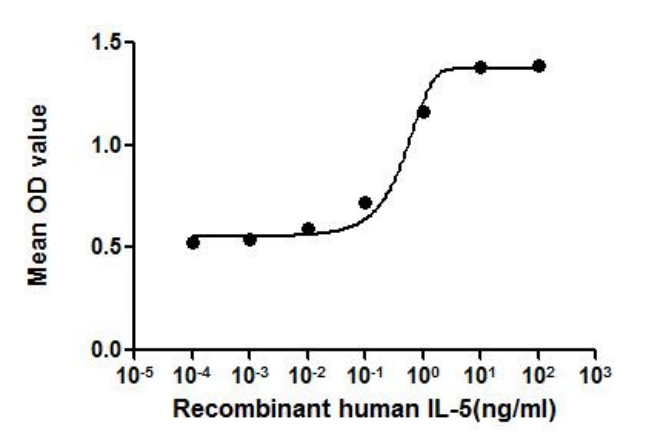


Figure 2. The dose-effect curve of IL-5 on TF-1 cells.

[IDENTIFICATION]

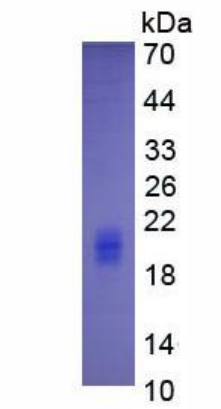


Figure 3. SDS-PAGE

Sample: Active recombinant IL5, 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.