APA073Hu01 10μg
Active Interleukin 2 (IL2)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala21~Thr153

Tags: N-terminal His-tag

Purity: >80%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5% Trehalose.

Original Concentration: 400μg/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: 16.7kDa

Accurate Molecular Mass: 17kDa 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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                    APTSSSTKKT QLQLEHLLLD LQMILNGINN
YKNPKLTRML TFKFYMPKKA TELKHLQCLE EELKPLEEVL NLAQSKNFHL
RPRDLISNIN VIVLELKGSE TTFMCEYADE TATIVEFLNR WITFCQSIIS
TLT
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[ACTIVITY]

Interleukin-2 (IL-2) is an interleukin, a type of cytokine signaling molecule in the immune system. IL-2 has essential roles in key functions of the immune system, tolerance and immunity, primarily via its direct effects on T cells. In the thymus, where T cells mature, it prevents autoimmune diseases by promoting the differentiation of certain immature T cells into regulatory T cells, which suppress other T cells that are otherwise primed to attack normal healthy cells in the body. IL-2 also promotes the differentiation of T cells into effector T cells and into memory T cells when the initial T cell is also stimulated by an antigen, thus helping the body fight off infections. To measure the effect of IL-2 on cell proliferation, CTLL-2 cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well with 2% serum standard 1640 contain various concentrations of recombinant human IL-2. After incubated for 96h, 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 CTLL-2 cells after incubation with IL-2 for 96h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant IL-2 for 96h. The result was shown in Figure 1. It was obvious that IL-2 significantly increased cell viability of CTLL-2 cells.
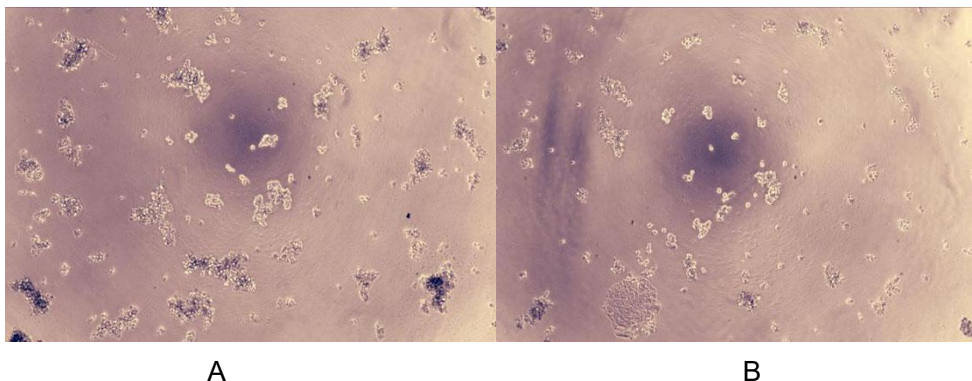
A   B

Figure 1. Cell proliferation of CTLL-2 cells after stimulated with IL-2.

(A) CTLL-2 cells cultured in 1640, stimulated with 10ng/mL IL-2 for 96h;

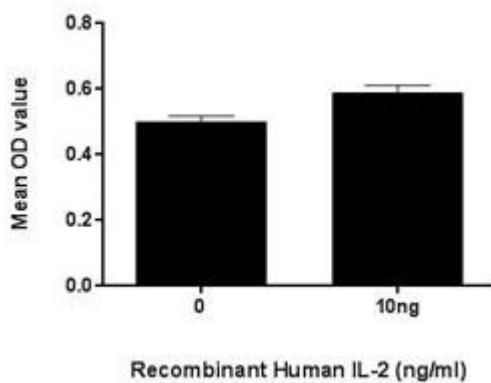**(B) Unstimulated CTLL-2 cells cultured in 1640 for 96h.**

Figure 2. Cell proliferation of CTLL-2 cells after stimulated with IL-2.
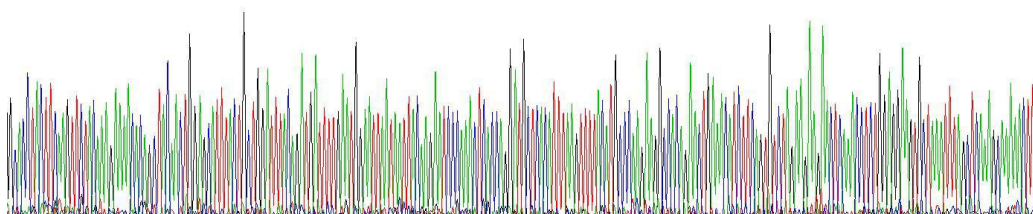
[IDENTIFICATION]

GCGCCTACTTCAGTCTCTACAAGAAAACCAGCTACAACTGGACCATTTACTCCTCGATTTGCAGATGATTTTGAATGGAATTGAATTATTATTCCAGAATCCCAAACTCACCAGGATGCTCACTTTGAGTTTTCATGCCCAGAAGGGCCCAGAGCTGAAACATCTTCAGTGTCTAGAAGAAGAGCTCAAACCTCTGGAGGAAGTGCTAAATTTAAGCTCAAAGCAAAACTT
A P T S S S T K K T Q L Q L E H L L L D L Q M I L N G I N N Y K N P K L T R M L T F K F Y M P K K A T E L K H L Q C L E E E L K P L E E V L N L A Q S K N F

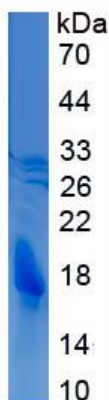**Figure 3. Gene Sequencing (extract)**

Figure 4. SDS-PAGE

Sample: Active recombinant IL2, 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.