APA057Hu01 100μg
Active Interleukin 11 (IL11)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Pro22~Leu199
Tags: N-terminal His-tag
Purity: >92%
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: 11.3
Predicted Molecular Mass: 25.4kDa
Accurate Molecular Mass: 27kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

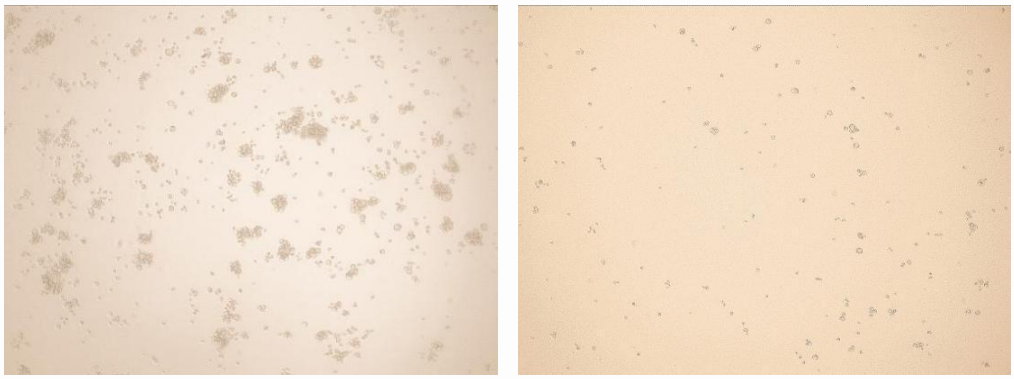
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

PGPPPGPPR VSPDPRAELD STVLLTRSLL
ADTRQLAAQL RDKFPADGDH NLDSLPTLAM SAGALGALQL PGVLTRLRAD
LLSYLRHVQW LRRAGGSSLK TLEPELGTLQ ARLDRLLRRL QLLMSRLALP
QPPPDPPAPP LAPPSSAWGG IRAAHAILGG LHLTLDWAVR GLLLLKTRL

[ACTIVITY]

IL11 (Interleukin-11) is a multifunctional cytokine first isolated from bone marrow-derived stromal cells. It stimulates the proliferation of hematopoietic stem cells and megakaryocyte progenitor cells and induces megakaryocyte maturation resulting in increased platelet production. Besides, IL11 is reported to induce the proliferation of human T-cells, thus, a proliferation assay was conducted to detect the bioactivity of human recombinant IL11 using Jurkat cells. Briefly, Jurkat cells were seeded into triplicate wells of 96-well plates at a density of 10, 000 cells/well in RPMI-1640 with the addition of various concentrations of IL11. 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℃. Cell proliferation of Jurkat cells after incubation with IL11 for 72h observed by inverted microscope was shown in Figure 1. The CCK-8 data was shown in Figure 2. It was obvious that IL11 significantly promoted cell proliferation of Jurkat cells.



A B

Figure 1. Cell proliferation of Jurkat cells after stimulated with IL11.

(A) Jurkat cells cultured in RPMI-1640, stimulated with 100ng/mL IL11 for 72h;

(B) Unstimulated Jurkat cells cultured in RPMI-1640 for 72h.

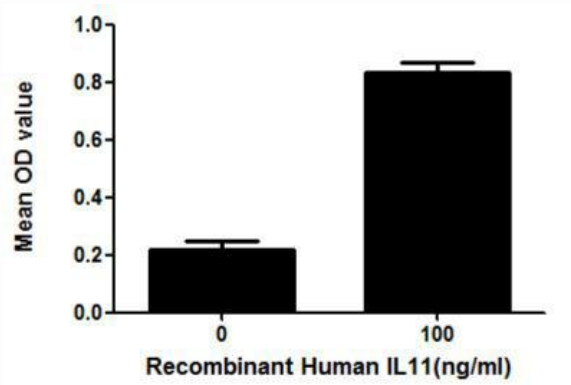


Figure 2. Cell proliferation of Jurkat cells after stimulated with IL11.

[IDENTIFICATION]

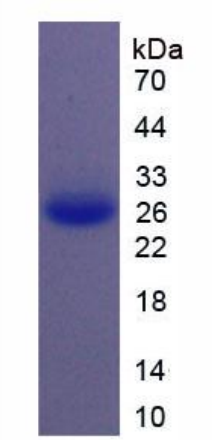


Figure 3. SDS-PAGE

Sample: Active recombinant IL11, Human

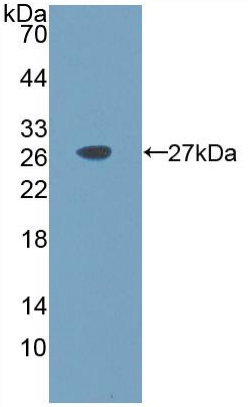


Figure 4. Western Blot

Sample: Recombinant IL11, Human;

Antibody: Rabbit Anti-Human IL11 Ab (PAA057Hu01)