APA662Hu01 100μg
Active Interleukin 7 (IL7)
Organism Species: Homo sapiens (Human)
Instruction manual

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

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Asp26~His177
Tags: N-terminal His-tag
Purity: >95%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
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: 8.9
Predicted Molecular Mass: 21.1kDa
Accurate Molecular Mass: 21kDa 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^{o}C for one month.
Aliquot and store at -80^{o}C for 12 months.

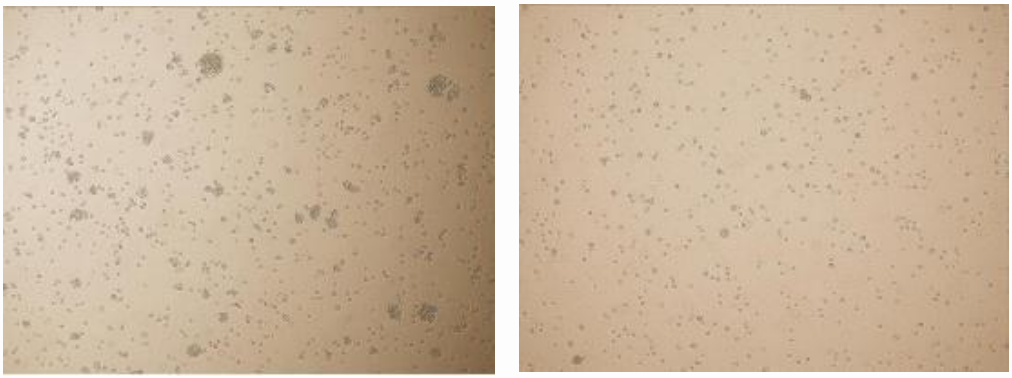
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

DCDIE GKDGKQYESV LMVSIDQLLD
SMKEIGSNCL NNEFNFFKRH ICDANKEGMF LFRAARKLRQ FLKMNSTGDF
DLHLLKVSEG TTILLNCTGQ VKGRKPAALG EAQPTKSLEE NKSLKEQKKL
NDLCFLKRLL QEIKTCWNKI LMGTKEH

[ACTIVITY]

IL7 (Interleukin 7) is a hematopoietic growth factor secreted by stromal cells in the bone marrow and thymus. The interaction between IL17 and the IL7 receptor triggers a cascade of signals important for T-cell development within the thymus and survival within the periphery. It is reported that IL-7 acts on both resting and activated T cells, including Jurkat cells. Thus, a proliferation assay of recombinant human IL7 was conducted 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 IL7. 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°C. Cell proliferation of Jurkat cells after incubation with IL7 for 72h observed by inverted microscope was shown in Figure 1. The CCK-8 data was shown in Figure 2. It was obvious that IL7 significantly promoted cell proliferation of Jurkat cells.



A B

Figure 1. Cell proliferation of Jurkat cells after stimulated with IL7.

(A) Jurkat cells cultured in RPMI-1640, stimulated with 100ng/mL IL7 72h;

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

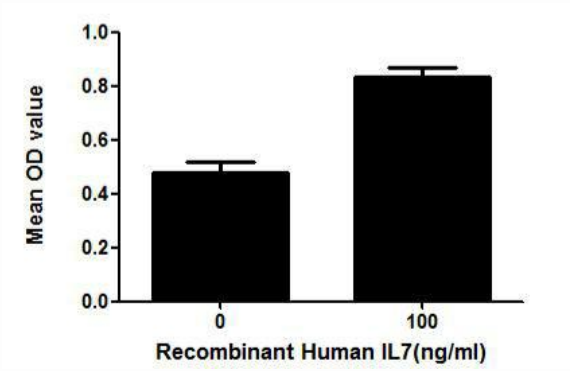


Figure 2. Cell proliferation of Jurkat cells after stimulated with IL7.

[IDENTIFICATION]

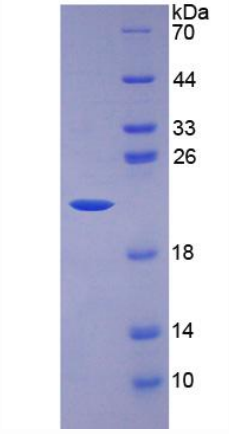


Figure 3. SDS-PAGE

Sample: Active recombinant IL7, Human

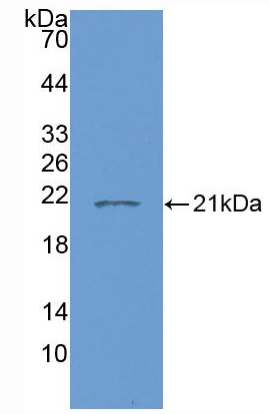


Figure 4. Western Blot

Sample: Recombinant IL7, Human;

Antibody: Rabbit Anti-Human IL7 Ab (PAA662Hu01)