APA071Hu02 100μg
Active Active Interleukin 1 Alpha (IL1a)
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: Glu98~Ala271
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: 4.9
Predicted Molecular Mass: 23.4kDa
Accurate Molecular Mass: 23kDa 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.

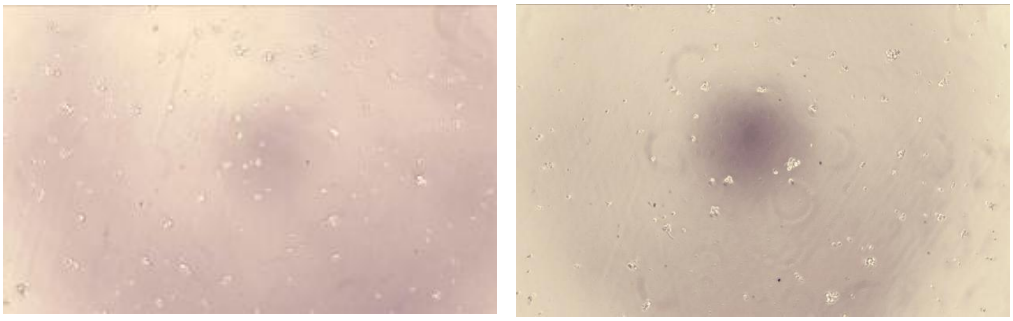
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

EAI
ANDSEEEIIK PRSAPFSFLS NVKYNFMRII KYEFILNDAL NQSIIRANDQ
YLTAAALHNL DEAVKFDMGA YKSSKDDAKI TVILRISKTQ LYVTAQDEDQ
PVLLKEMPEI PKTITGSETN LLFFWETHGT KNYFTSVAHP NLFIATKQDY
WVCLAGGPPS ITDFQILENQ A

[ACTIVITY]

Interleukin 1 alpha (IL1α) also known as hematopoietin 1 is a cytokine of the interleukin 1 family that in humans is encoded by the IL1A gene. IL1α is produced mainly by activated macrophages, as well as neutrophils, epithelial cells, and endothelial cells. It possesses metabolic, physiological, haematopoietic activities, and plays one of the central roles in the regulation of the immune responses. It binds to the interleukin-1 receptor. It is on the pathway that activates tumor necrosis factor-alpha. To test the effect of IL1a on cell proliferation, Jurkat cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well with 2% serum standard 1640 including various concentrations of recombinant human IL1a. 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 Jurkat cells after incubation with IL1a for 96h 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 IL1a for 96h. The result was shown in Figure 2. It was obvious that IL1a significantly increased cell viability of Jurkat cells.



A B

Figure 1. Cell proliferation of Jurkat cells after stimulated with IL1a.

(A) Jurkat cells cultured in 1640, stimulated with 10ng/mL IL1a for 96h;

(B) Unstimulated Jurkat cells cultured in1640 for 96h.

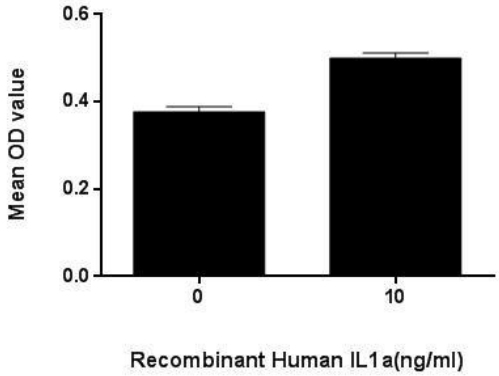


Figure 2. Cell proliferation of Jurkat cells after stimulated with IL1a.

[IDENTIFICATION]

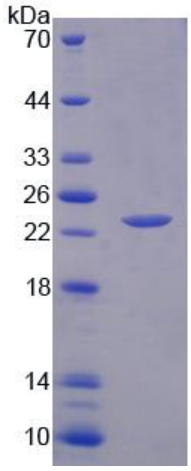


Figure 3. SDS-PAGE

Sample: Active recombinant IL1a, Human

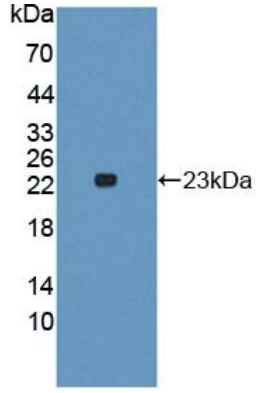


Figure 4. Western Blot

Sample: Recombinant IL1a, Human;

Antibody: Rabbit Anti-Human IL1a Ab (PAA071Hu02)

[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.