

APA071Cp01 100µg
Active Interleukin 1 Alpha (IL1a)
Organism Species: *Capra hircus*; *Caprine* (Goat)
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: Gln90~Lys268

Tags: N-terminal His-tag

Purity: >90%

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

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

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 4.5

Predicted Molecular Mass: 21.8kDa

Accurate Molecular Mass: 24kDa 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.

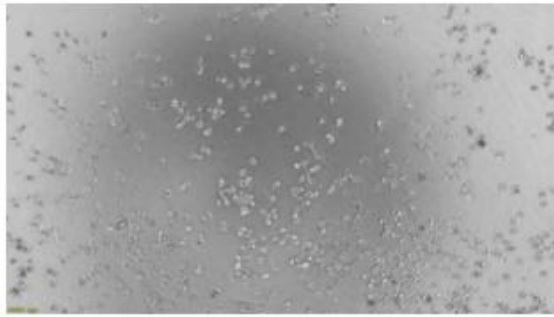
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

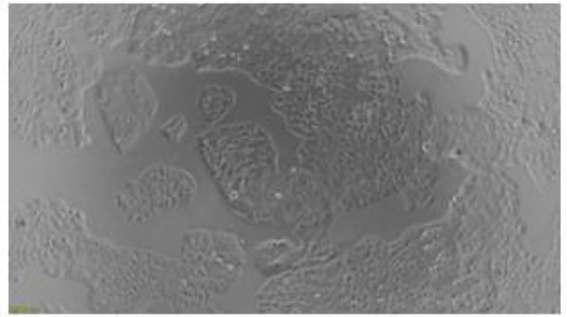
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WEKHGSMDFYFKSVAHPKLF IATKQEKLVHMASGPPSITDFQILEK

[ACTIVITY]

Interleukin 1 alpha (IL-1 α) also known as hematopoietin 1 is a cytokine of the interleukin 1 family that in humans is encoded by the IL1A gene. IL-1 α 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. To test the effect of IL-1 α on cell apoptosis, MCF7 cells were seeded into 96-well plates at a density of 4,000 cells/well with 5% serum standard DMEM including various concentrations of recombinant goat IL-1 α . After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μ l of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-2 hours at 37 $^{\circ}$ C. Proliferation of MCF7 cells after incubation with IL-1 α for 72h 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 goat IL-1 α for 72h. The result was shown in Figure 2. It was obvious that IL-1 α significantly inhibit cell viability of MCF7cells. The ED50 is 2.13 μ g/ml.



A



B

Figure 1. Inhibition of MCF7 cells proliferation after stimulated with IL-1α

- (A) MCF7 cells cultured in DMEM, stimulated with 2.5 µg/ml IL-1α for 72h;
- (B) Unstimulated MCF7 cells cultured in DMEM for 48h.

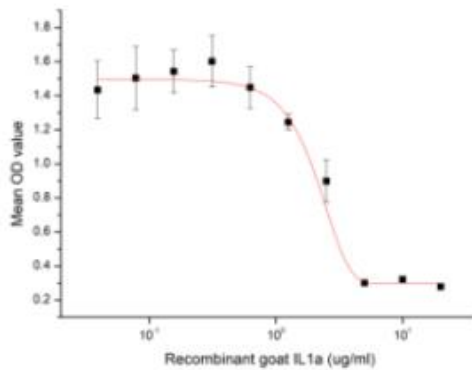


Figure 2. Inhibition of MCF7 cells proliferation after stimulated with IL-1α.

[IDENTIFICATION]

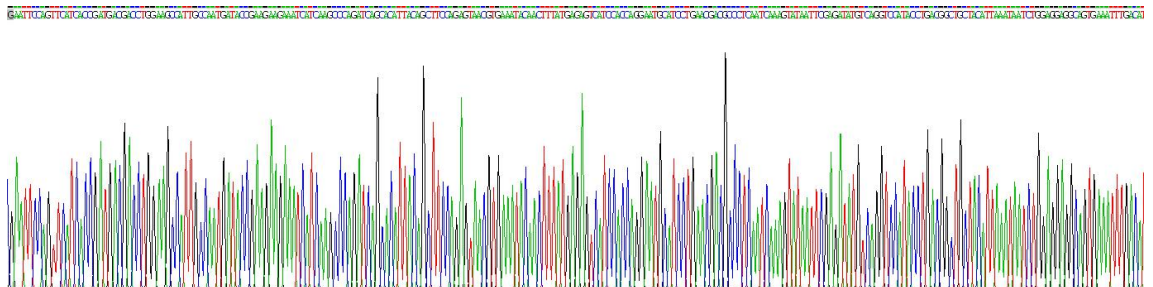


Figure 3. Gene Sequencing (extract)

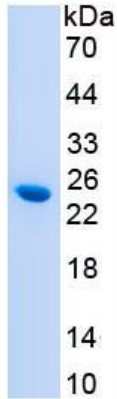


Figure 4. SDS-PAGE

Sample: Active recombinant IL1a, Goat

[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.