Active Interleukin 1 Alpha (IL1a)

Catalog No.: TP09509 50μg

Sequence Information

Species：Human **Gene ID:**3552

Swiss Prot:P01583 **Synonyms:**IL1-A; IL-1 α ; IL1F1; Preinterleukin 1 Alpha; Hematopoietin-1; Pro-Interleukin-1-Alpha; Interleukin-1 Family Member 1

Residues: Ser113~Ala271

SAPFSFLSNVKYNFMRIIKYEFILNDALNQSIIRANDQYLTAAALHNLDEAVKF

DMGAYKSSKDDAKITVILRISKTQLYVTAQDEDQPVLLKEMPEIPKTITGSETN

LLFFWETHGTKNYFTSVAHPNLFIATKQDYWVCLAGGPPSITDFQILENQA

Product Information

Source: Prokaryotic expression.

Host: *E. coli*

Tags:N-terminal His Tag

Subcellular Location: Secreted.

Purity: >97%

Traits: Freeze-dried powder

Buffer formulation:PBS, pH7.4, containing 0.1% SKL, 5% Trehalose.

Original Concentration: 350μg/mL

Applications: Positive Control; Immunogen; SDS-PAGE; WB.

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

Predicted isoelectric point: 6.5

Predicted Molecular Mass: 21.2kDa

Accurate Molecular Mass: 21kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in ddH_2O to a concentration of 0.1-0.5 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.

[ACTIVITY]

IL1α (Interleukin-1 alpha) is a member of the interleukin 1 cytokine family. Thiscytokine is produced by monocytes and macrophages as a proprotein, whichisproteolytically processed and released in response to cell injury, and thusinducescell apoptosis. It is reported that exposure of MCF-7 cells to certain concentrationof IL1α results in inhibition of cell growth. Thus, an cell proliferationassayofMCF-7 was conducted with the addition of IL1α. MCF-7 cells wereseededovernight at a density of 5,000 cells/well, and then treated with or without variousconcentrations of IL1α for 72h, then cells were observed by inverted microscopeand cell viability was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μLofCCK-8 solution was added to each well of the plate, then measure the absorbanceat 450nm using a microplate reader after incubating the plate for 1-4 hoursinat37° C.Inhibition of MCF-7 cell proliferation after incubation with IL1α for 72h observedbyinverted microscope was shown in Figure 1.

Figure 1. Inhibitory effect of IL1α on cell proliferation of MCF-7 cells.

(A) MCF-7 cells cultured in DMEM, stimulated with 1ng/mL IL1α for 72h;

(B) Unstimulated MCF-7 cells cultured in DMEM for 72h.

Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubationwith various concentrations of IL1α for 72h. The mean ODvalue of MCF-7assessed by CCK-8 was shown in Figure 2. It was obvious that IL1α significantlydecreased cell viability of MCF-7 cells.

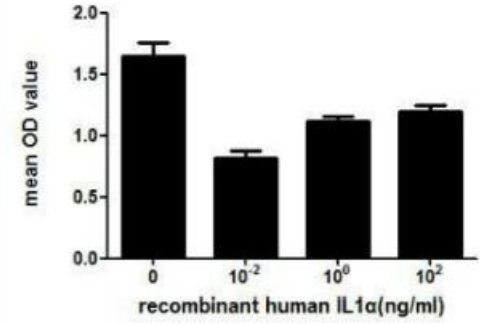

Figure 2. Inhibitory effect of IL1α on cell proliferation of MCF-7 cells.

[IDENTIFICATION]

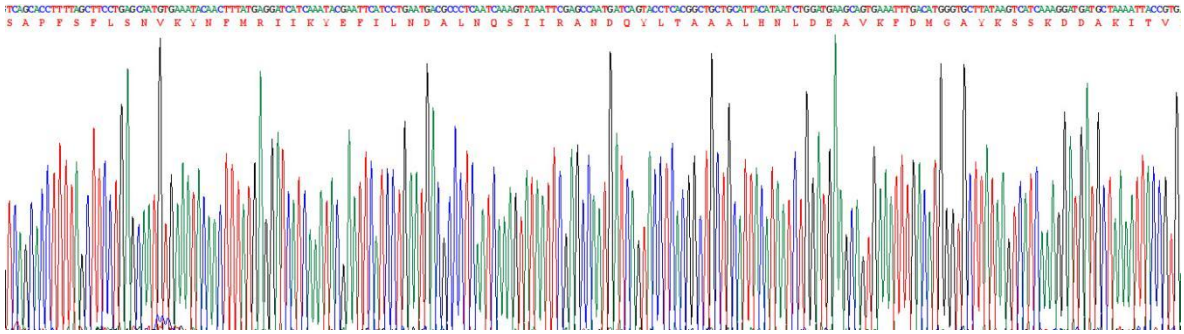

Figure 3. Gene Sequencing (Extract)

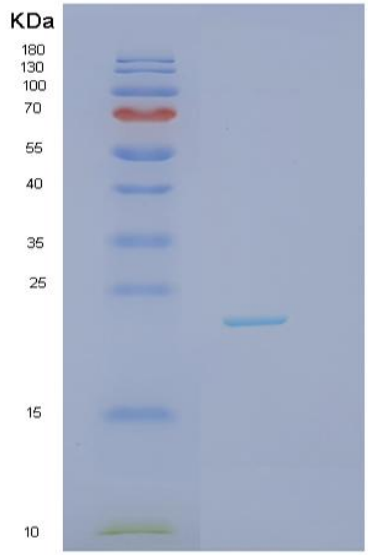

Figure 4. SDS-PAGE

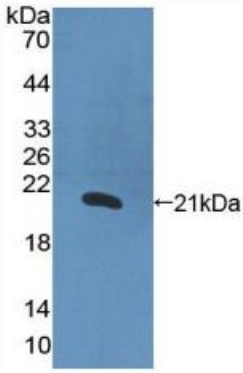

Figure 5. Western Blot

Sample: Recombinant IL1a, Human;

Antibody: Rabbit Anti-Human IL1a Ab (PAA071Hu01)

[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.