APA033Hu 100μg
Active Interferon Alpha (IFNa)
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: Cys24~Leu181
Tags: Two N-terminal Tags, His-tag and GST-tag
Purity: >92%
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: 5.8
Predicted Molecular Mass: 48.2kDa
Accurate Molecular Mass: 48kDa 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]

CDLPETH SLDNRRTLML LAQMSRISPS
SCLMDRHDFG FPQEEFDGNQ FQKAPAISVL HELIQQIFNL FTTKDSSAAW
DEDLLDKFCT ELYQQLNDLE ACVMQEERVG ETPLMNADSI LAVKKYFRRI
TLYLTEKKYS PCAWEVVRAE IMRSLSLSTN L

[ACTIVITY]

Interferon-alpha (IFN-α), also known as leukocyte interferon, represents a group of related but distinct proteins that share over 95% amino acid sequence homology. They are members of the type I interferon family which share a common cell surface receptor composed of two subunits. IFN-α has both anti-viral and immunomodulatory activities on target cells. To test the effect of IFN-α on cell apoptosis, A549 cells were seeded into 96-well plates at a density of 3,000 cells/well with 1% serum standard DMEM including various concentrations of recombinant human IFN-α. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μL 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 2 hours at 37℃. Proliferation of A549 cells after incubation with IFN-α for 48h 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 human IFN-α for 48h. The result was shown in Figure 2. It was

obvious that IFN-α significantly inhibit cell viability of A549 cells. The ED50 is 3.4 μg/mL.

A B

Figure 1. Inhibition of A549 cells proliferation after stimulated with IFN-α

(A) A549 cells cultured in DMEM, stimulated with 10μg/mL IFN-α for 48h;

(B) Unstimulated A549 cells cultured in DMEM for 48h.

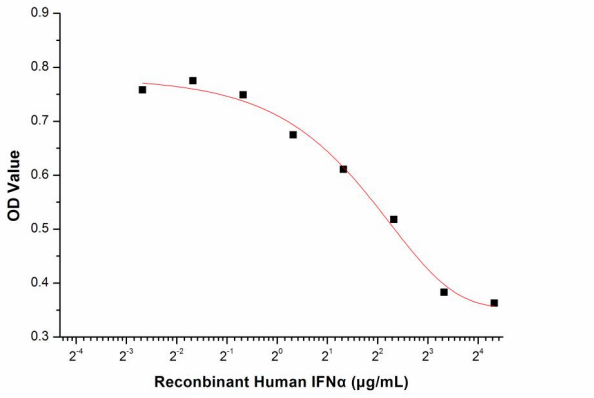

Figure 2. Inhibition of A549 cells proliferation after stimulated with IFN-α .

[IDENTIFICATION]

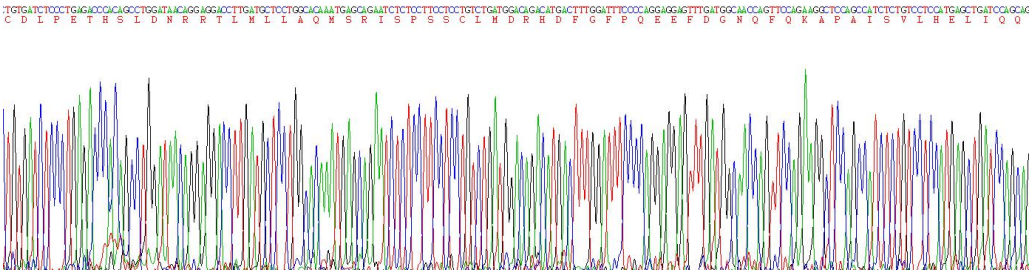

Figure 3. Gene Sequencing (extract)

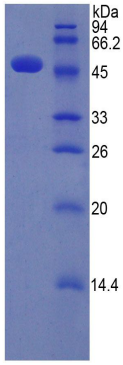

Figure 4. SDS-PAGE

Sample: Active recombinant Human, IFNa

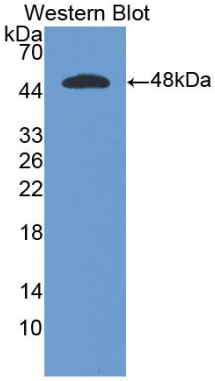

Figure 5. Western Blot

Sample: Recombinant Human, IFNa;

Antibody: Rabbit Anti-IFNa Human Ab (PAA033Hu)

[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.