

Active Interferon Beta (IFN β) Instruction Manual

SBPA102Hu01

Homo sapiens (Human)

Buffer Formulation

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

Traits

Freeze-dried powder

Purity

> 97%

Isoelectric Point

8.9

Applications

Cell culture; Activity Assays.

ACTIVITY TEST

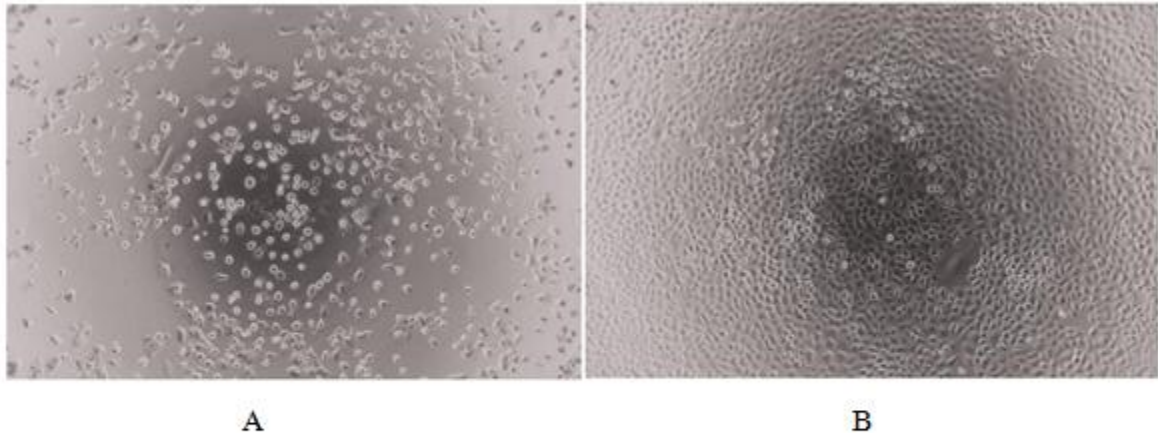


Figure 1. Cell apoptosis of A549 cells after stimulated with IFN β .

(A) A549 cells cultured in DMEM, stimulated with 5ug/ml IFN β for 48h;

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

Interferon Beta (IFN β) belongs to type I interferons (IFNs) family which a large subgroup of interferon proteins that help regulate the activity of the immune system. The IFN β proteins are produced in large quantities by fibroblasts. They have antiviral activity that is involved mainly in innate immune response. Two types of IFN β have been described, IFN β 1 (IFNB1) and IFN β 3 (IFNB3). IFN β 1 is used as a treatment for multiple sclerosis as it reduces the relapse rate. To test the effect of IFN β on cell apoptosis, A549 cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well and allowed to attach, replaced with serum-free overnight, then the medium was replaced with 5% serum standard DMEM prior to the addition of various concentrations of recombinant human IFN β . After incubated for 48h, 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 1-4 hours at 37 °C. Apoptosis of A549 cells after incubation with IFN β for 48h observed by inverted microscope was shown in Figure1. Cell viability was assessed by CCK-8(Cell Counting Kit-8) assay after incubation with recombinant IFN β for 48h. The result was shown in Figure2. It was obvious that IFN β significantly decreased cell viability of A549 cells. The ED50 of recombinant human IFN β is 6.4 μ g/mL.

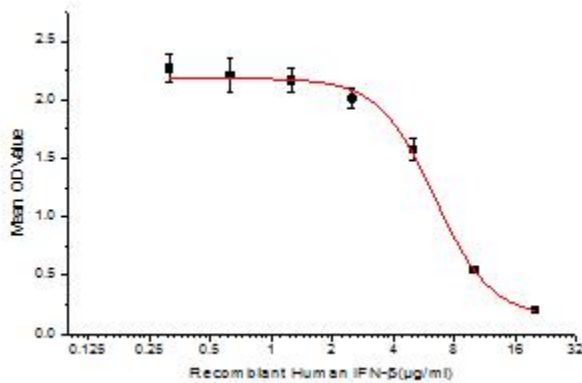


Figure 2. Cell apoptosis of A549 cells after stimulated with IFN β .

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

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.

Image

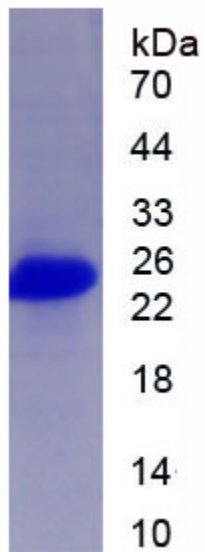


Figure. SDS-PAGE

[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.