Active Insulin Like Growth Factor 1 (IGF1) Instruction Manual

SBPA031Hu61

Homo sapiens (Human)

Buffer Formulation	PBS, pH7.4, containing 5% Trehalose.
Traits	Freeze-dried powder
Purity	> 95%
Isoelectric Point	7.8
Applications	Cell culture; Activity Assays.

ACTIVITY TEST

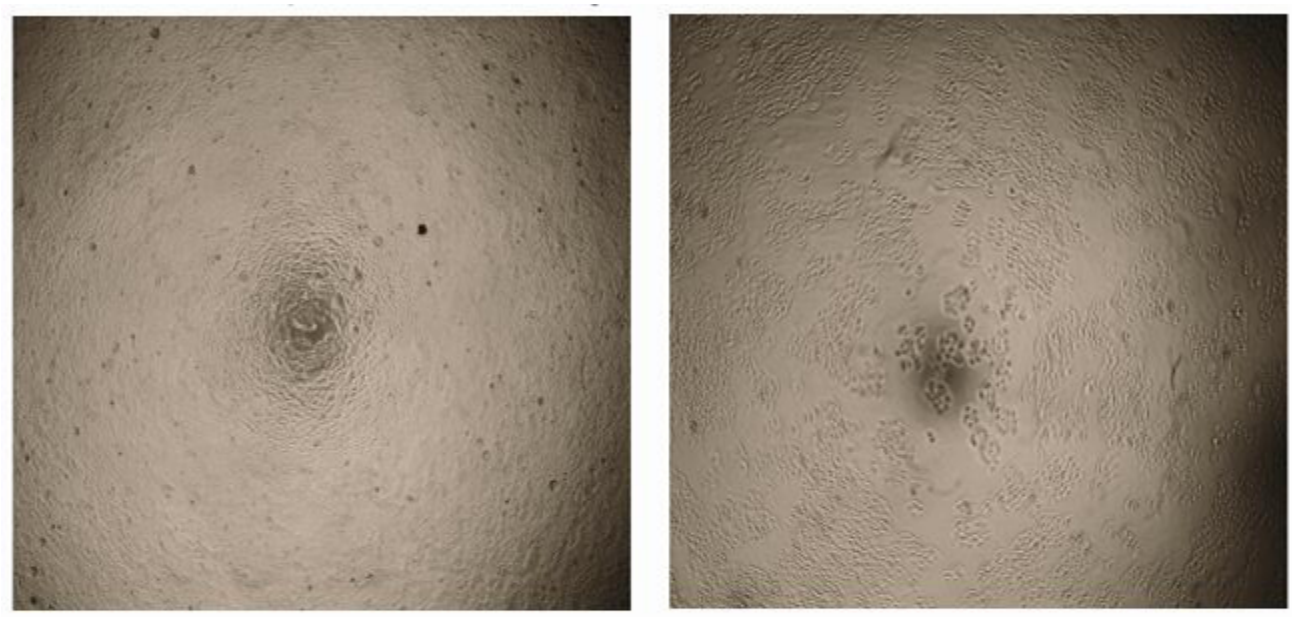

Figure 1. Cell proliferation of MCF-7 cells after stimulated with IGF1.

(A) MCF-7 cells cultured in serum-free DMEM, stimulated with 10ng/mL IGF1 for 72h;

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

Insulin-like growth factor I (IGF1), is a hormone similar in molecular structure to insulin but have a much higher growth-promoting activity, it belongs to a family of proteins

involved in mediating growth and development. It is reported that IGF1 induces the proliferation, migration, differentiation of a large types of cells including the MCF-7 breast cancer cell line. To test the effect of growth factors on proliferation, MCF-7 cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well and allowed to attach overnight, then the medium was replaced with serum-free standard DMEM prior to the addition of various concentrations of IGF-1. After incubated for 72h, 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 measure the absorbance at 450nm using a microplate reader after incubating the plate for 1-4 hours at 37°C.
Cell proliferation of MCF-7 cells after incubation with IGF1 for 72h observed by inverted microscope was shown in Figure 1.

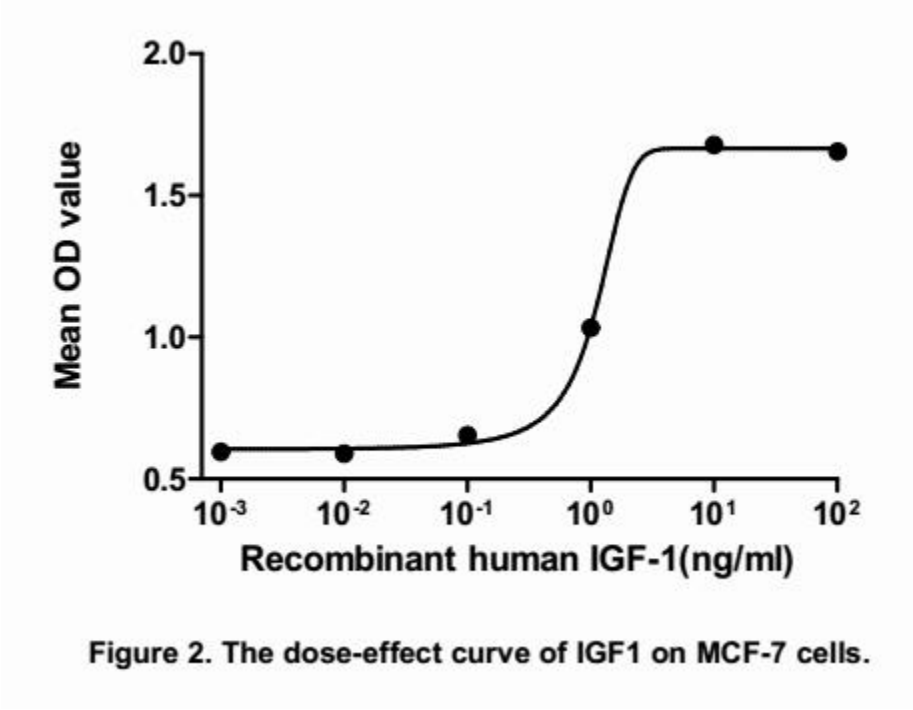

Figure 2. The dose-effect curve of IGF1 on MCF-7 cells.

The dose-effect curve of IGF1 was shown in Figure2. It was obvious that IGF1 significantly promoted cell proliferation of MCF-7 cells. The ED50 for this effect is typically 8.66~17.19 ng/mL.

USAGE

Reconstitute in 10mM PBS (pH7.4) 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

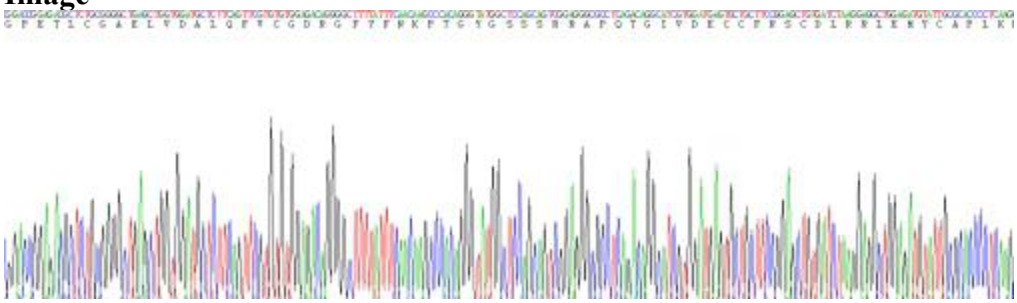

Figure. SDS-PAGE

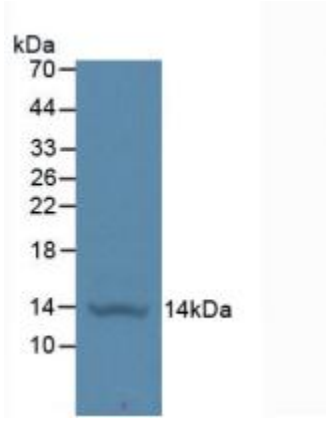

Figure. SDS-PAGE; Sample: Active recombinant IGF1, Human.

[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.