

APA105Hu61 100µg
Active Nerve Growth Factor (NGF)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Glu19~Arg239

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 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: 9.9

Predicted Molecular Mass: 26.3kDa

Accurate Molecular Mass: 40kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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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EP HSESNVPAGH TIPQAHWTKL QHSLDTALRR  
ARSAPAAAIA ARVAGQTRNI TVDPRLFKKR RLRSPRVLFS TQPPREAADT  
QDLDFEVGGA APFNRTHRSK RSSHPIFHR GEFSVCDSVS VWVGDKTTAT  
DIKGKEVMVL GEVNINNSVF KQYFFETKCR DPNPVDSGCR GIDSKHWNSY  
CTTHTFVKA LTMDGKQAAW RFIRIDTACV CVLSRKAVR
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[ACTIVITY]

Nerve growth factor (NGF) is a neurotrophic factor and neuropeptide primarily involved in the regulation of growth, maintenance, proliferation, and survival of certain target neurons. To test the effect of NGF on cell proliferation, TF-1 cells were seeded into triplicate wells of 96-well plates at a density of 20,000 cells/well with various concentrations of recombinant human NGF. After incubated for 72 hours, 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 1-4 hours at 37 °C . Proliferation of TF-1 cells after incubation with NGF for 72 hours 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 NGF for 72 hours. The result was shown in Figure 2. It was obvious that recombinant human

NGF significantly increased cell viability of TF-1 cells, the EC50 was 0.38 ng/ml.

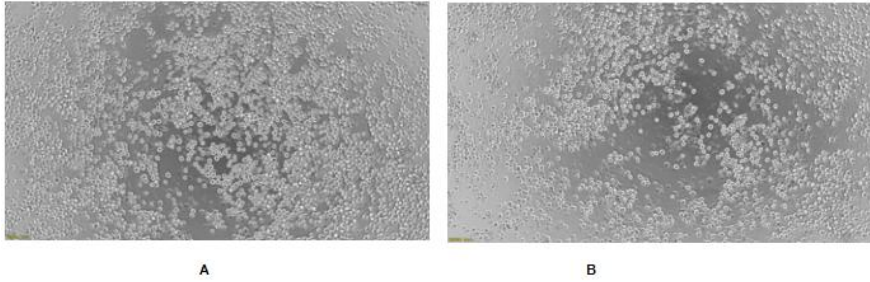


Figure 1. Cell proliferation of TF-1 cells after stimulated with recombinant human NGF.
(A) TF-1 cells cultured in 1640, stimulated with 8 ng/ml NGF for 72 hours;
(B) Unstimulated TF-1 cells cultured in 1640 for 72 hours.

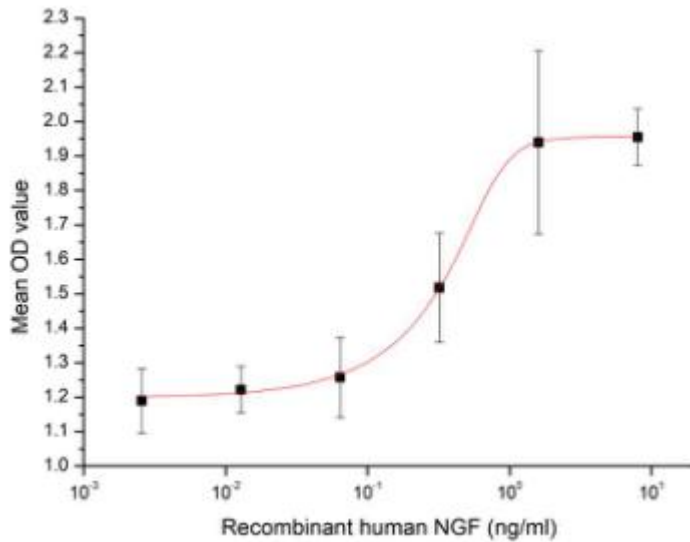


Figure 2. Cell proliferation of TF-1 cells after stimulated with recombinant human NGF.

[IDENTIFICATION]

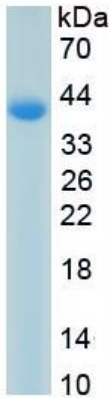


Figure 3. SDS-PAGE

Sample: Active recombinant NGF, 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.