



**APA105Ra01 10µg**

**Active Active Nerve Growth Factor (NGF)**

**Organism Species: *Rattus norvegicus* (Rat)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Glu19~Gly241

**Tags:** N-terminal His-tag

**Purity:** >92%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

**Original Concentration:** 550µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 9.4

**Predicted Molecular Mass:** 29.8kDa

**Accurate Molecular Mass:** 33kDa as determined by SDS-PAGE reducing conditions.

## **[ 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 ]**

```
EP YTDSNVPEGD SVPEAHWTKL QHSLDTALRR
ARSAPAEPIA ARVTGQTRNI TVDPKLFKKR RLRSPRVLFS TQPPPTSSDT
LDLDFQAHGT ISFNRTHRSK RSSTHPVFHM GEFSVCDSVS VWVGDKTTAT
DIKGKEVTVL GEVNINNSVF KQYFFETKCR APNPVESGCR GIDSKHWNSY
CTTHTFVKA LTTDDKQAAW RFIRIDTACV CVLSRKAARR G
```

## **[ 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. NGF is also involved in pathways besides those regulating the life cycle of neurons. a nerve growth factor (NGF)-dependent TF-1 subclone cell line suitable for determination of bioactivity of recombinant NGF(rhNGF), then TF-1 cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well with 1% serum standard 1640 contain various concentrations of recombinant rat NGF. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm 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 TF-1 for 72h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant NGF for 72h. The result was shown in Figure 2. It was obvious that NGF significantly increased cell viability of TF-1 cells.



A



B

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

(A) TF-1 cells cultured in 1640, stimulated with 0.1ng/mL NGF for 72h;

(B) Unstimulated TF-1 cells cultured in 1640 for 72h.

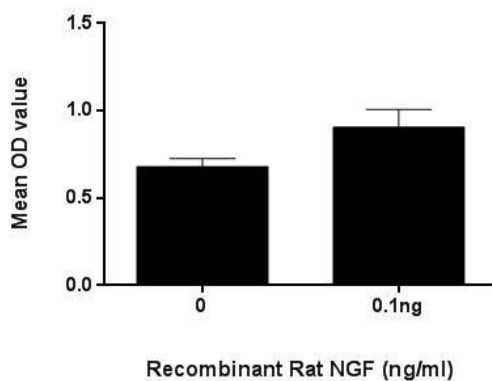


Figure 2. Cell proliferation of TF-1 cells after stimulated with NGF.

## [ IDENTIFICATION ]

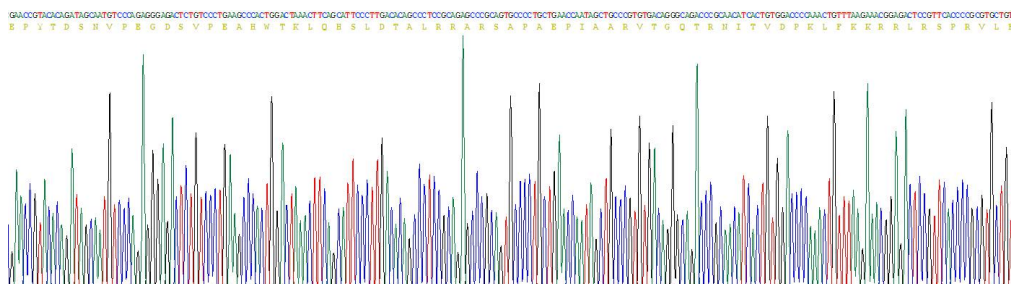
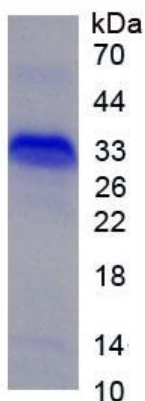
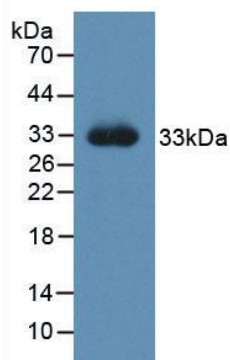


Figure 3. Gene Sequencing (extract)



**Figure 4. SDS-PAGE**

**Sample: Active recombinant NGF, Rat**



**Figure 5. Western Blot**

**Sample: Recombinant NGF, Rat;**

**Antibody: Rabbit Anti-Rat NGF Ab (PAA105Ra01)**

## **[ 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.