

**APA105Mu01 50µg**  
**Active Active Nerve Growth Factor (NGF)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Glu85~Gly307

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

**Purity:** >92%

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

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl, 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:** 9.4

**Predicted Molecular Mass:** 29.8kDa

**Accurate Molecular Mass:** 33kDa 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°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 ]

```
EPYTDS NVPEGDSVPE
AHWTKLQHSL DTALRRARSA PTAPIAARVT GQTRNITVDP RLFKKRRLHS
PRVLFSTQPP PTSSDTLDD FQAHGTIPFN RTHRSKRSST HPVFHMGEFS
VCDSVSVWVG DKTTATDIKG KEVTVLAEVN INNSVFRQYF FETKCRASNP
VESGCRGIDS KHWNSYCTTT HTFVKALTTD EKQAAWRFIR IDTACVCVLS
RKATRRG
```

## [ ACTIVITY ]

Nerve Growth Factor (NGF) is the archetypal neurotrophin of a family of polypeptides. It has long occupied a critical role in developmental and adult neurobiology for its many important regulatory functions on the survival, growth and differentiation of nerve cells in the peripheral and central nervous system. The Caspase 3 (CASP3) is high affinity receptor for Nerve Growth Factor, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse NGF and recombinant human CASP3. Briefly, NGF was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to CASP3-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-NGF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50  $\mu$ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant mouse NGF and recombinant human CASP3 was shown in Figure 1, the EC<sub>50</sub> for this effect is 0.86  $\mu$ g/mL.

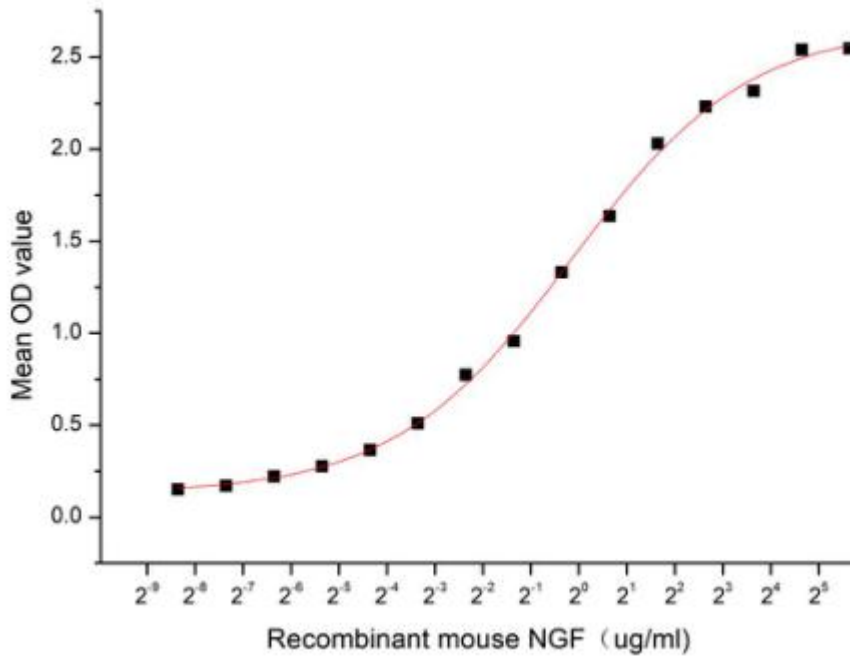


Figure 1. The binding activity of recombinant mouse NGF and recombinant human CASP3

## [ IDENTIFICATION ]

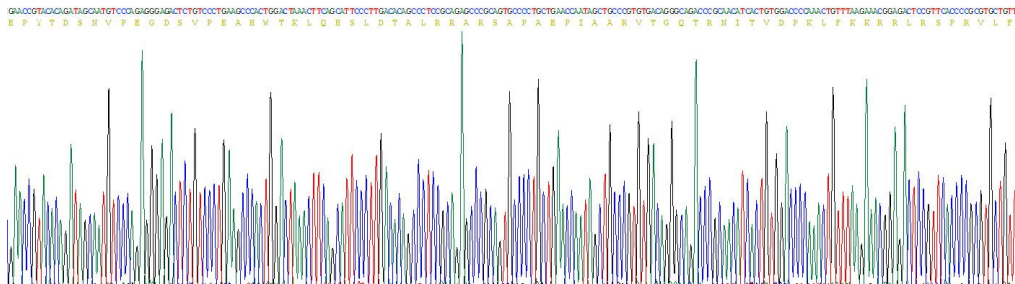
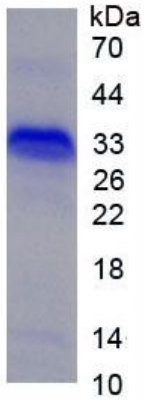
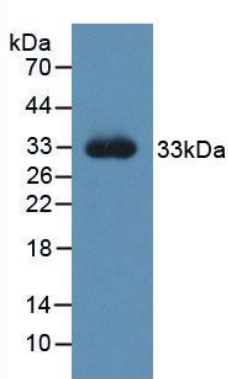


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant NGF, Mu**



**Figure 4. Western Blot**

**Sample: Recombinant NGF, Mu;**

**Antibody: Rabbit Anti-Mu NGF Ab (PAA105Mu01)**

### **[ 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.