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% Sarcosyl, 5% Trehalose.
Original Concentration: 550μg/mL
Applications: 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 2-8ºC for one month.
Aliquot and store at -80ºC 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
CTTTHTFVKA LTTDDKQAAW RFIRIDTACV CVLSRKAARR G

[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.NGF selectively binds NTRK1, triggering receptor dimerization, autophosphorylation, and activation of downstream pathways (e.g., MAPK, PI3K-Akt), promoting neuronal survival and differentiation.Thus a functional ELISA assay was conducted to detect the interaction of recombinant rat NGF and recombinant human NTRK1. Briefly, NGF was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to NTRK1-coated microtiter wells and incubated for 1h at 37℃. 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℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant rat NGF and recombinant human NTRK1 was shown in Figure 1,and this effect was in a dose dependent manner.

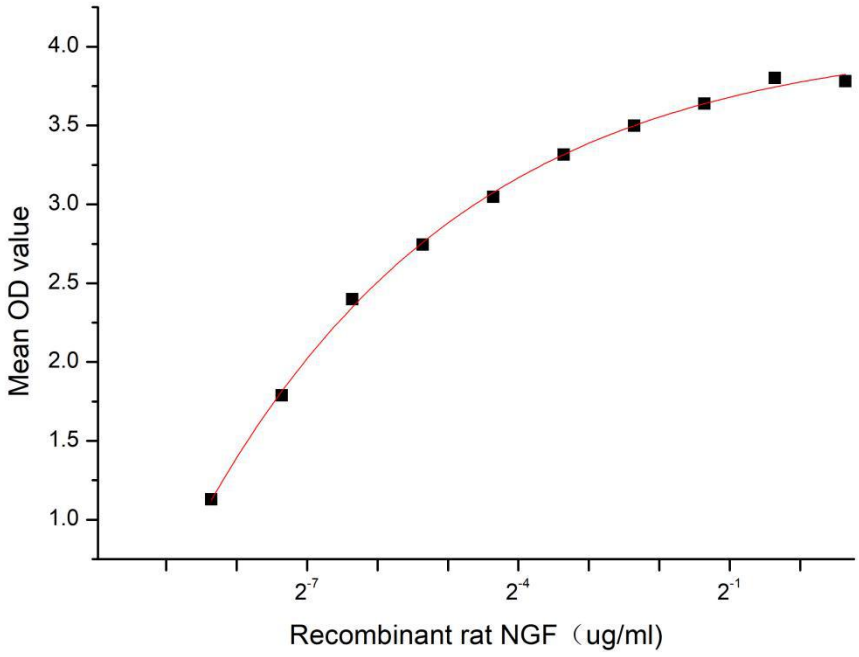

Figure 1. The binding activity of recombinant rat NGF and recombinant human NTRK1

[IDENTIFICATION]

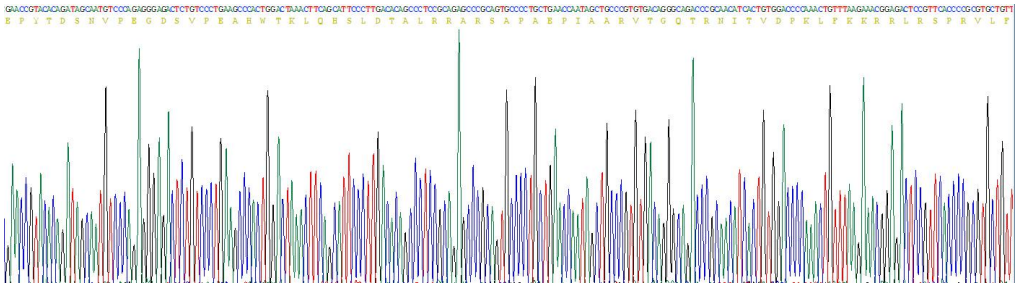

Figure 2. Gene Sequencing (extract)

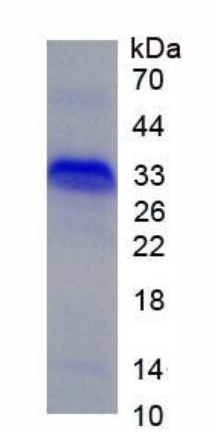

Figure 3. SDS-PAGE

Sample: Active recombinant NGF, Rat

[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.