

APA011Ra01 100µg
Active Brain Derived Neurotrophic Factor (BDNF)
Organism Species: *Rattus norvegicus* (Rat)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asn117~Gly248

Tags: N-terminal His-tag

Purity: >98%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 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: 9.6

Predicted Molecular Mass: 16.3kDa

Accurate Molecular Mass: 17kDa 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]

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NYLD AANMSMRVRR HSDPARRGEL SVCDSISEWV  
TAADKKTAVD MSGGTVTVLE KVPVSKGQLK QYFYETKCNP MGYTKEGCRG  
IDKRHWNSQC RTTQSYVRAL TMSKKRIGW RFIRIDTSCV CTLTIKRG
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[ACTIVITY]

Brain-derived neurotrophic factor, also known as BDNF is a member of the neurotrophin family of growth factors, which are related to the canonical Nerve Growth Factor. BDNF acts on certain neurons of the central nervous system and the peripheral nervous system, helping to support the survival of existing neurons, and encourage the growth and differentiation of new neurons and synapses. Besides, Amyloid Precursor Protein (APP) has been identified as an interactor of BDNF, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat BDNF and recombinant rat APP. Briefly, BDNF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to APP-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-BDNF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of BDNF and APP was shown in Figure 1, and this effect was in a dose dependent manner.

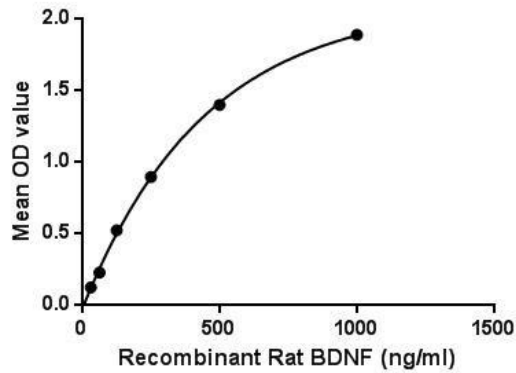


Figure 1. The binding activity of BDNF with APP.

[IDENTIFICATION]

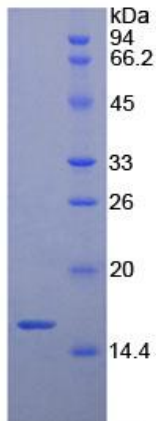


Figure 2. SDS-PAGE

Sample: Active recombinant BDNF, Rat

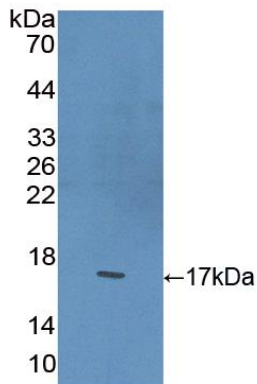


Figure 3. Western Blot

Sample: Recombinant BDNF, Rat;

Antibody: Rabbit Anti-Rat BDNF Ab (PAA011Ra01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.