APA011Hu61 10μg
Active Brain Derived Neurotrophic Factor (BDNF)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: His129~Arg247
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 10mM PBS, pH7.6, containing 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: 14.6kDa
Accurate Molecular Mass: 33kDa 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 (pH7.6) 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]

HS DPARRGELSV CDSISEWVTA
ADKKTAVDMS GGTVTVLEKV PVSKGQLKQY FYETKCNPMG YTKEGCRGID
KRHWNSQCRT TQSYVRALTM DSKKRIGWRF IRIDTSCVCT LTIKRGR

[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, Neurotrophic Tyrosine Kinase Receptor Type 2 (NTRK2) has been identified as an interactor of BDNF, thus a binding ELISA assay was conducted to detect the interaction of recombinant human BDNF and recombinant human NTRK2. Briefly, BDNF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to NTRK2-coated microtiter wells and incubated for 2h at 37℃. 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℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of BDNF and NTRK2 was shown in Figure 1, and this effect was in a dose dependent manner.

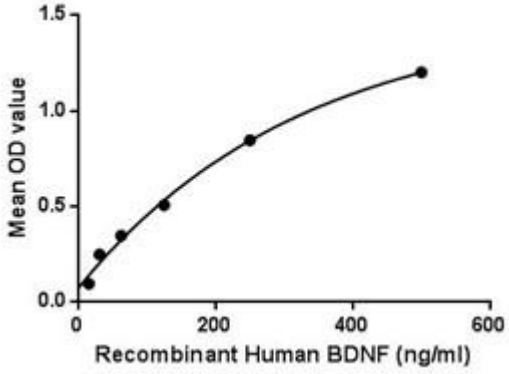

Figure 1. The binding activity of BDNF with NTRK2

[IDENTIFICATION]

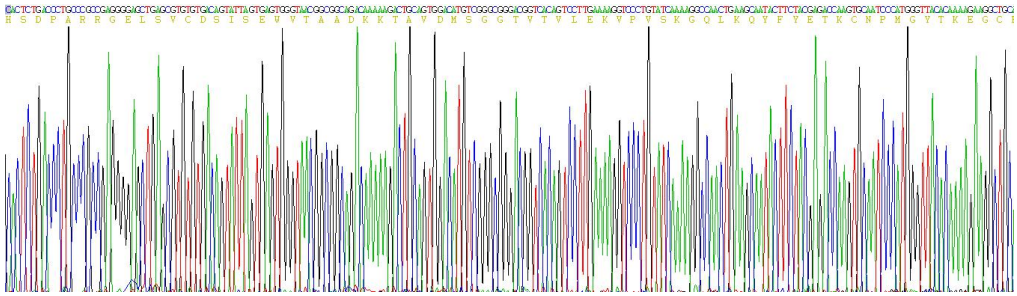

Figure 2. Gene Sequencing (extract)

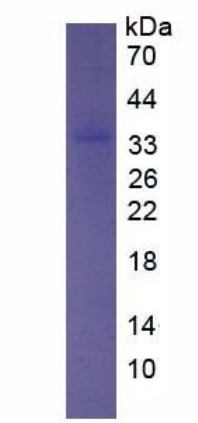

Figure 3. SDS-PAGE

Sample: Active recombinant BDNF, Human

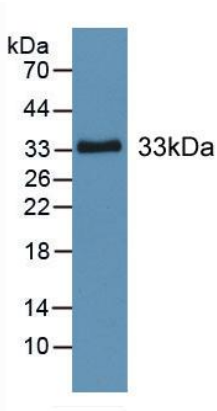

Figure 4. Western Blot

Sample: Recombinant BDNF, Human;

Antibody: Rabbit Anti-Human BDNF Ab (PAA011Hu06)

[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.