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antibody and ELISA experts

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Anti-BDNF Antibody Picoband™

Catalog Number: PB9075

About Bdnf

Brain-derived neurotrophic factor, also known as BDNF, is a secreted protein that, in humans, is encoded by the BDNF gene. BDNF is a member of the neurotrophin family of growth factors, which are related to the canonical nerve growth factor. It is mapped to 11p14.1. BDNF is a prosurvival factor induced by cortical neurons that is necessary for survival of striatal neurons in the brain. It is expressed within peripheral ganglia and is not restricted to neuronal target fields. BDNF has been purified and shown to reduce the amount of naturally occurring neuronal cell death in portions of the peripheral nervous system.

Overview

Product Name	Anti-BDNF Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-BDNF Antibody Picoband™ catalog # PB9075. Tested in Flow Cytometry, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P21237

Technical Details

Immunogen	Anti-BDNF Picoband™ Antibody (PB9075) was raised against E.coli-derived human BDNF recombinant protein (Position: H129-R247). Human BDNF shares 100% amino acid (aa) sequence identity with both mouse and rat BDNF.
Predicted Reactive Species	Bovine, Canine, Horse, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, Human, By Heat Western blot, 0.1-0.5ug/ml, Mouse, Rat, Human Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human Immunocytochemistry, 0.5-1ug/ml, Human Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-BDNF Antibody Picoband™ (PB9075) Images

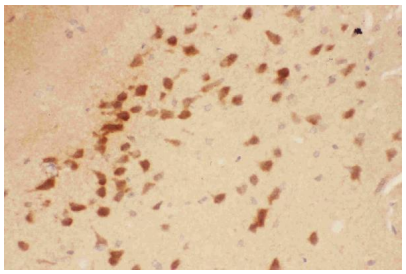

Figure 1. IHC analysis of BDNF using anti-BDNF antibody (PB9075).
BDNF was detected in paraffin-embedded section of Rat Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BDNF Antibody (PB9075) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

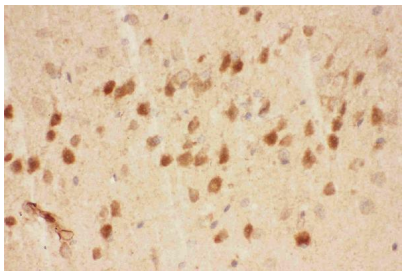

Figure 2. IHC analysis of BDNF using anti-BDNF antibody (PB9075).
BDNF was detected in paraffin-embedded section of Mouse Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BDNF Antibody (PB9075) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

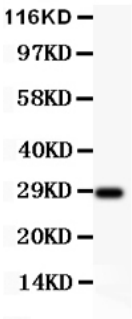

Figure 3. Western blot analysis of BDNF using anti-BDNF antibody (PB9075).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: Rat Brain Tissue Lysate
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-BDNF antigen affinity purified polyclonal antibody (Catalog # PB9075) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for BDNF at approximately 28KD. The expected band size for BDNF is at 28KD.

Figure 4. Flow Cytometry analysis of U-87 cells using anti-BDNF antibody (PB9075).
Overlay histogram showing U-87 cells stained with PB9075 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-BDNF Antibody

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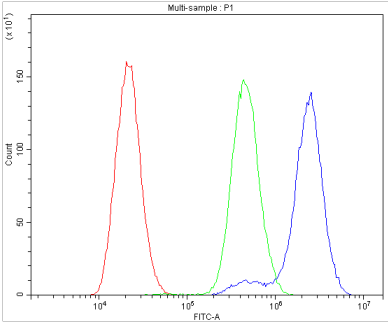

(PB9075,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

37 Publications Citing This Product

1. PubMed ID: 10.3892/mmr.2017.7539, Effect of hippocampal L□NBP on BDNF and TrkB expression and neurological function of vascular dementia rats

2. PubMed ID: 10.3349/ymj.2010.51.5.661, Acute Stress and Chronic Stress Change Brain-Derived Neurotrophic Factor (BDNF) and Tyrosine Kinase-Coupled Receptor (TrkB) Expression in Both Young and Aged Rat Hippocampus

3. PubMed ID: 10.3969/j.issn.1673-5374.2013.03.005, Changes in compressed neurons from dogs with acute and severe cauda equina constrictions following intrathecal injection of brain-derived neurotrophic factor-conjugated polymer nanoparticles

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