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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 IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat

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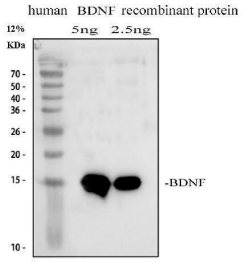
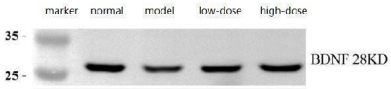
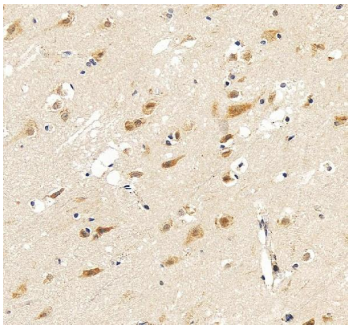
Anti-BDNF Antibody Picoband® (PB9075) Images



Western blot analysis of BDNF using anti-BDNF antibody (PB9075). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: recombinant human BDNF protein 5 ng, Lane 2: recombinant human BDNF protein 2.5 ng. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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 (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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for BDNF at approximately 14 kDa.



Western blot analysis of BDNF using anti-BDNF antibody (PB9075). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: normal group-Hippocampal tissue lysates from normal mouse tissue lysates, Lane 2: model group-Hippocampal tissue lysates from depressed mouse, Lane 3: low-dose group-Hippocampal tissue lysates from depressed mouse treated with an in-house drug, Lane 4: high-dose group-Hippocampal tissue lysates from depressed mouse treated with an in-house drug. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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 (PB9075) at 1:2000 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 (Catalog # BA1054) at a dilution of 1:10000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for BDNF at approximately 28 kDa.



IHC analysis of BDNF using anti-BDNF antibody (PB9075). BDNF was detected in a paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-BDNF Antibody (PB9075) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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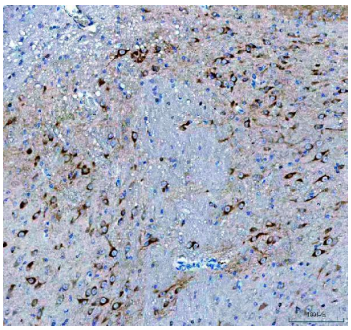
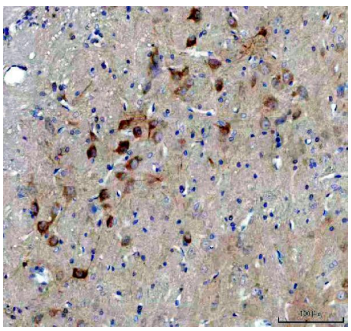
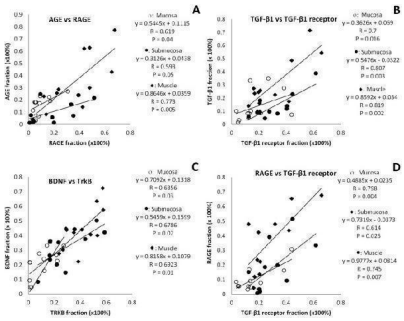


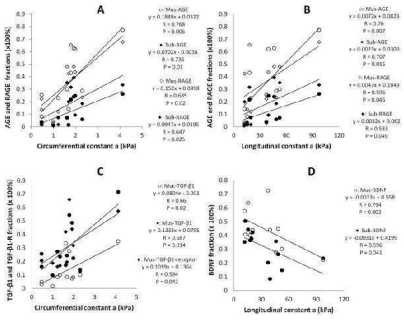
IHC analysis of BDNF using anti-BDNF antibody (PB9075). BDNF was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-BDNF Antibody (PB9075) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of BDNF using anti-BDNF antibody (PB9075). BDNF was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-BDNF Antibody (PB9075) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

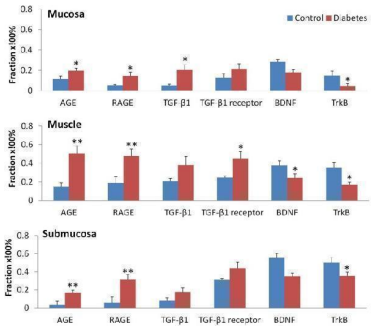


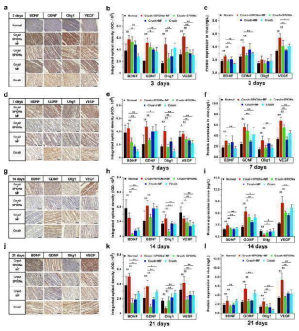
(A) Correlation between AGE and RAGE in different layers; (B) Correlation between TGF-beta1 and TGF-beta1receptor in different layers; (C) Correlation between BDNF and TrkB in different layers; (D) Correlation between RAGE and TGF-beta1receptor in different layers. Index in PubMed under a CC BY license. PMID: 29930382



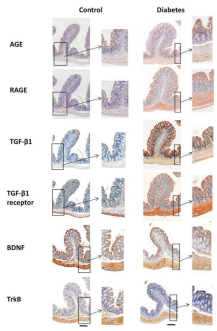
(A) Correlation between AGE and RAGE in muscle layer and submucosa layer with circumferential constant a; (B) Correlation between AGE and RAGE in muscle layer and submucosa layer with longitudinal constant a; (C) Correlation between TGF-beta1 and TGF-beta1 receptor in mucosa layer and TGF-beta1 muscle layer with circumferential and longitudinal material constant a; (D) Correlation between BDNF in muscle and submucosa layers with longitudinal constant a. Index in PubMed under a CC BY license. PMID: 29930382

The fraction of AGE, RAGE, TGF-beta1, TGF- beta1 receptor, BDNF and TrkB in the different layers of the colon between two groups. In the different layers, the fraction of AGE, RAGE, TGF-beta1 and TGF- beta1 receptor was bigger whereas the fraction of BDNF and TrkB was smaller in the Diabetes group than in Control group. Compared with Control group: *P<0.05, **P<0.01. Index in PubMed under a





SPION-mediated magnetic actuation upregulates the expression of neurotrophic factors associated with repair phenotypes in Schwann cells. The protein expression of repair phenotype-related neurotrophic factors BDNF, GDNF, Olig1 and VEVF in different experimental groups was detected by immunohistochemical staining at 3 (a) , 7 (d) , 14 (g) and 21 days (j) after crush injury, and the protein expression levels were quantitatively analyzed (b , e , h , k). c , f , i , l The protein expression levels of such neurotrophic factors at the above time points were detected by ELISA, and the results were consistent with the immunohistochemical analysis. Each experiment was carried out in triplicate. The values are represented as the mean ± SD. Scale bar = 50 μm in panels a , d , g , j . * P



The representative samples of immunohistochemical staining for AGE, RAGE, TGF-beta1, TGF- beta1 receptor, BDNF and TrkB in the colon wall of two groups. The microscopy with high magnification have been inserted in each single histological photo (arrow) in order to display the localization of markers. The staining of all proteins was stronger in the muscle layer than other layers. In the different layers, the staining of AGE, RAGE, TGF-beta1 and TGF- beta1 receptor was stronger whereas the staining of BDNF and TrkB was weaker in the Diabetes group than in Control group. Bar = 100 um. Index in PubMed under a CC BY license. PMID: 29930382

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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