BOSTER BIOLOGICAL TECHNOLOGY
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Anti-GAP43 Antibody Picoband®

Catalog Number: A01868-1

About Gap43

Growth Associated Protein 43 (GAP43) is a protein encoded by the GAP43 gene in humans. It is mapped to 3q13.31. The protein encoded by this gene has been termed a 'growth' or 'plasticity' protein because it is expressed at high levels in neuronal growth cones during development and axonal regeneration. This protein is considered a crucial component of an effective regenerative response in the nervous system. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.

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Overview

Product Name	Anti-GAP43 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-GAP43 Antibody Picoband® catalog # A01868-1. Tested in ELISA, Flow Cytometry, 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg 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	P06837

Technical Details

Immunogen	E.coli-derived mouse GAP43 recombinant protein (Position: M1-A227).
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).

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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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Rat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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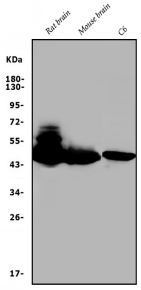
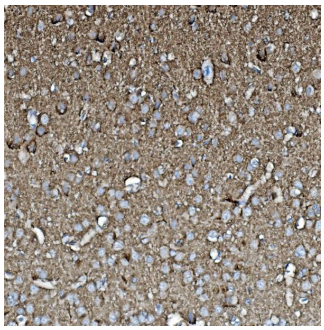
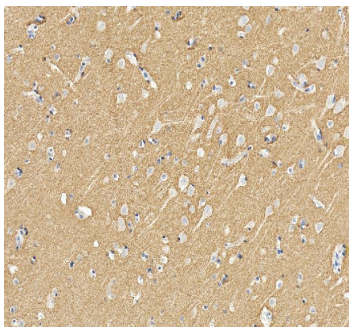
Anti-GAP43 Antibody Picoband® (A01868-1) Images



Western blot analysis of GAP43 using anti-GAP43 antibody (A01868-1). 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 lysates, Lane 2: mouse brain tissue lysates, Lane 3: mouse C6 whole cell lysates. 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-GAP43 antigen affinity purified polyclonal antibody (Catalog # A01868-1) at 0.25 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 GAP43 at approximately 45KD. The expected band size for GAP43 is at 24KD.



IHC analysis of GAP43 using anti-GAP43 antibody (A01868-1). GAP43 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GAP43 Antibody (A01868-1) 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.



IHC analysis of GAP43 using anti-GAP43 antibody (A01868-1). GAP43 was detected in paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GAP43 Antibody (A01868-1) 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.

Flow Cytometry analysis of Raji cells using anti-GAP43 antibody (A01868-1). Overlay histogram showing Raji cells stained with A01868-1 (Blue line).The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-GAP43 Antibody (A01868-1,1ug/1x106 cells) for 30 min at 20°C.

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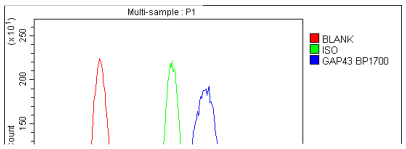

DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

5 Publications Citing This Product

1. PubMed ID: 10.1007/s10571-016-0374-z, Minocycline Promotes Neurite Outgrowth of PC12 Cells Exposed to Oxygen-Glucose Deprivation and Reoxygenation Through Regulation of MLCP/MLC Signaling Pathways

2. PubMed ID: 10.1007/s12035-015-9394-9, Regulation of Intracellular Structural Tension by Talin in the Axon Growth and Regeneration

3. PubMed ID: 10.1016/j.brainres.2006.09.058, Catalpol increases hippocampal neuroplasticity and up-regulates PKC and BDNF in the aged rats

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Anti-GAP43 Antibody

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