BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-GAD67/GAD1 Antibody Picoband®

Catalog Number: PA1036-1

About GAD1

Glutamic acid decarboxylase (GAD) catalyses the conversion of L-glutamic acid to the inhibitory neurotransmitter gamma-aminobutyric acid (GABA). Two forms of human GAD, GAD65 and GAD67, are encoded by two separate genes. Human GAD65 cDNA encodes a Mr 65,000 polypeptide, with 585 amino acid residues, whereas human GAD67 encodes a Mr 67,000 polypeptide, with 594 amino acid residues. GAD67 gene consists of 16 exons, spread over more than 45 kb of genomic DNA. The GAD67 gene contains an additional exon (exon 0) that together with part of exon 1, specifies the 5' untranslated region of GAD67 mRNA. Human GAD67 shows 65% identity to GAD65 and is located in 2q31. GAD67 may play a role in the stiff man syndrome. Deficiency in this enzyme has been shown to lead to pyridoxine dependency with seizures.

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Overview

Product Name	Anti-GAD67/GAD1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-GAD67/GAD1 Antibody catalog # PA1036-1. Tested in ICC/IF, 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	IF, IHC, ICC, 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	Q99259

Technical Details

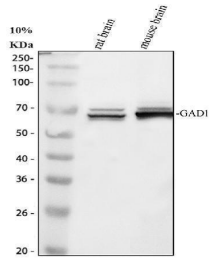
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human GAD67, different from the related mouse and rat sequences by two amino acids.

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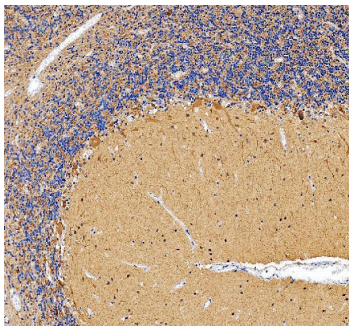
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

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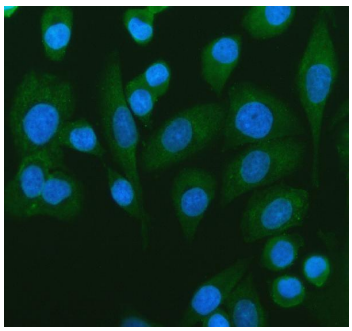
Anti-GAD67/GAD1 Antibody Picoband® (PA1036-1) Images



Western blot analysis of GAD67 using anti-GAD67 antibody (PA1036-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. 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-GAD67 antigen affinity purified polyclonal antibody (PA1036-1) 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 GAD67 at approximately 67 kDa. The expected band size for GAD67 is at 67 kDa.



IHC analysis of GAD67 using anti-GAD67 antibody (PA1036-1). GAD67 was detected in a paraffin-embedded section of human celebellum 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-GAD67 Antibody (PA1036-1) 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.



IF analysis of GAD67 using anti-GAD67 antibody (PA1036-1). GAD67 was detected in an immunocytochemical section of SiHa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-GAD67 Antibody (PA1036-1) overnight at 4°C. Fluoro488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

2 Publications Citing This Product

1. PubMed ID: 26863207, Dietary Restriction Affects Neuronal Response Property and GABA Synthesis in the Primary Visual Cortex

2. PubMed ID: 27630542, Excitatory and inhibitory neurons in the hippocampus exhibit molecularly distinct large dense core vesicles

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Anti-GAD67/GAD1 Antibody

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