

Anti-GAD67/GAD1 Antibody

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.

Overview

Product Name	Anti-GAD67/GAD1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-GAD67/GAD1 Antibody catalog # PA1036-1. Tested in ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
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.
Predicted Reactive Species	Chicken
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 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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Rat, Mouse</p> <p>Immunocytochemistry , 0.5-1ug/ml, Human</p>

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

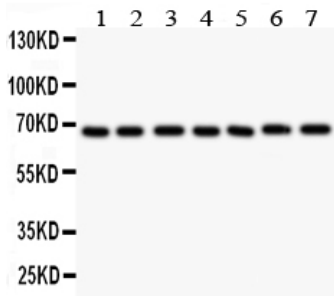


Figure 1. Western blot analysis of GAD67 using anti-GAD67 antibody (PA1036-1).

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 Lysate,
Lane 2: Rat Testis Tissue Lysate,
Lane 3: MCF-7 Whole Cell Lysate,
Lane 4: MM231 Whole Cell Lysate,
Lane 5: HELA Whole Cell Lysate,
Lane 6: SMMC Whole Cell Lysate,
Lane 7: COLO320 Whole Cell 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-GAD67 antigen affinity purified polyclonal antibody (Catalog # 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 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 GAD67 at approximately 67KD. The expected band size for GAD67 is at 67KD.

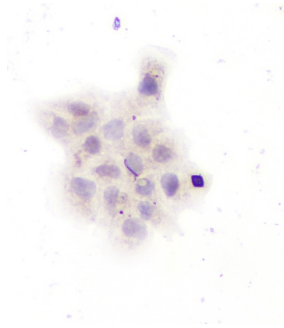


Figure 2. IHC analysis of GAD67 using anti-GAD67 antibody (PA1036-1).

GAD67 was detected in immunocytochemical section of A431 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 3ug/ml rabbit anti-GAD67 Antibody (PA1036-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

2 Publications Citing This Product

1. PubMed ID: 27630542, Excitatory and inhibitory neurons in the hippocampus exhibit molecularly distinct large dense core vesicles
2. PubMed ID: 26863207, Dietary Restriction Affects Neuronal Response Property and GABA Synthesis in the Primary Visual Cortex

Visit bosterbio.com/anti-gad67-antibody-pa1036-1-boster.html to see all 2 publications.

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