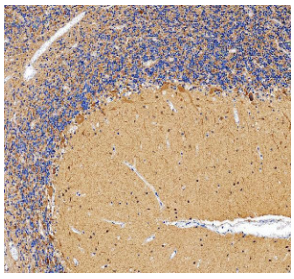
GAD67 Antibody (R30213)

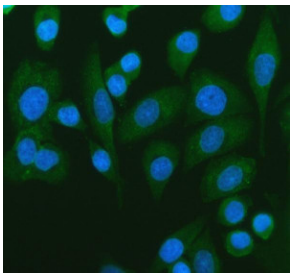
Catalog No.	Formulation	Size
R30213	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

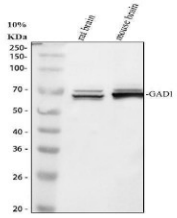
Availability	Discontinued
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q99259
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This GAD67 antibody is available for research use only.



GAD67 Antibody Human Cerebellum IHC. Immunohistochemistry analysis of FFPE human cerebellum tissue using GAD67 Antibody. Heat induced antigen retrieval was performed in pH 8.0 EDTA buffer prior to overnight incubation with primary antibody (2 ug/mL) at 4Â°C. Peroxidase-conjugated goat anti-rabbit IgG and DAB chromogen were used for visualization. Strong cytoplasmic staining is observed throughout the cerebellar cortex, highlighting GABAergic neurons consistent with the expression of GAD67 (glutamate decarboxylase 67), the enzyme responsible for gamma-aminobutyric acid (GABA) synthesis. These results support the use of GAD67 Antibody for studying GAD67 expression, GABAergic neurotransmission and inhibitory neuronal biology.



GAD67 Antibody Rodent Brain WB. Western blot analysis using GAD67 Antibody. Lane 1: rat brain tissue lysate; Lane 2: mouse brain tissue lysate. A specific band is detected at approximately 67 kDa in both samples, consistent with the expected molecular weight of GAD67 (GAD1). The strong expression observed in rodent brain tissue is consistent with the abundant presence of GAD67 in GABAergic neurons, where it catalyzes the conversion of glutamate to gamma-aminobutyric acid (GABA). These results support the use of GAD67 Antibody for studying GAD67 expression, GABA synthesis and inhibitory neurotransmission.



GAD67 Antibody SiHa Cell IF. Immunofluorescence analysis of SiHa cells using GAD67 Antibody. Cells were treated with enzyme antigen retrieval reagent for 15 minutes prior to blocking with goat serum and overnight incubation with primary antibody (5 ug/mL) at 4Â°C. Fluoro488-conjugated secondary antibody was used for detection, and DAPI (blue) was used as a nuclear counterstain. Diffuse cytoplasmic staining is observed throughout the cells, consistent with the intracellular localization of GAD67 (glutamate decarboxylase 67), the enzyme responsible for gamma-aminobutyric acid (GABA) synthesis. These results support the use of GAD67 Antibody for studying GAD67 expression, GABA biosynthesis and neuronal marker biology.

Description

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.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the GAD67 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids PQRREKLHKVAPKIK were used as the immunogen for this GAD67 antibody.

Storage

After reconstitution, the GAD67 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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