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GAD2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11118C

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q05329
Other Accession	Q05683, P48321, P48320, NP_001127838.1, NP_000809.1
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Pig
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19330
Calculated MW	65411
Antigen Region	109-138

Additional Information

Gene ID	2572
Other Names	Glutamate decarboxylase 2, 65 kDa glutamic acid decarboxylase, GAD-65, Glutamate decarboxylase 65 kDa isoform, GAD2, GAD65
Target/Specificity	This GAD2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 109-138 amino acids from the Central region of human GAD2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GAD2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GAD2 (HGNC:4093)
Synonyms	GAD65

Function	Catalyzes the production of GABA.
Cellular Location	Cytoplasm, cytosol. Cytoplasmic vesicle. Presynaptic cell membrane; Lipid-anchor. Golgi apparatus membrane; Peripheral membrane protein; Cytoplasmic side. Note=Associated to cytoplasmic vesicles In neurons, cytosolic leaflet of Golgi membranes and presynaptic clusters

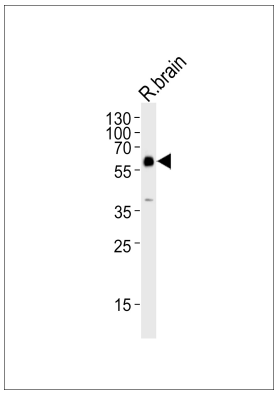
Background

This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes. The enzyme encoded is responsible for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. A pathogenic role for this enzyme has been identified in the human pancreas since it has been identified as an autoantibody and an autoreactive T cell target in insulin-dependent diabetes. This gene may also play a role in the stiff man syndrome. Alternative splicing results in multiple transcript variants that encode the same protein.

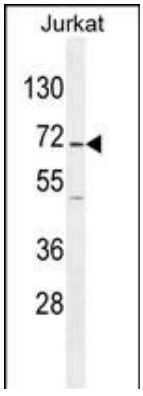
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Jia, P., et al. Schizophr. Res. 122 (1-3), 38-42 (2010) :
Ruano, G., et al. Pharmacogenomics 11(7):959-971(2010)
Pinheiro, A.P., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (5), 1070-1080 (2010) :
Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :

Images

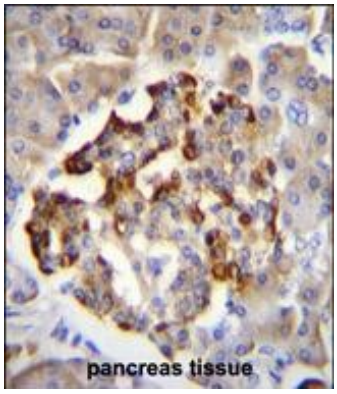


Western blot analysis of lysate from rat brain tissue lysate, using GAD2 Antibody (Center)(Cat. #AP11118c). AP11118c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

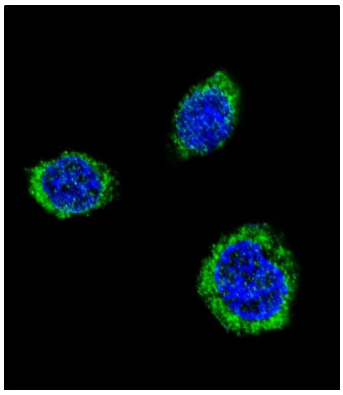


GAD2 Antibody (Center) (Cat. #AP11118c) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the GAD2 antibody detected the GAD2 protein (arrow).

GAD2 Antibody (Center) (Cat. #AP11118c)immunohistochemistry analysis in formalin fixed and paraffin embedded human pancreas tissue followed by peroxidase conjugation of the secondary



antibody and DAB staining.This data demonstrates the use of GAD2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of GAD2 Antibody (Center)(Cat. #AP11118c) with 293 cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

Citations

- Feedback modulation of neural network synchrony and seizure susceptibility by Mdm2-p53-Nedd4-2 signaling.