Datasheet for ABIN967657

anti-GAD65 antibody

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Overview

Quantity:	0.1 mg
Target:	GAD65 (GAD2)
Reactivity:	Human, Rat, Mouse, Pig
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This GAD65 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Brand:	BD Pharmingen™
Immunogen:	Purified Rat GAD65
Clone:	GAD-6
Isotype:	IgG2a
Cross-Reactivity:	Human, Mouse (Murine), Pig (Porcine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	GAD65 (GAD2)
Alternative Name:	GAD65 (GAD2 Products)
Background:	Gamma-aminobutyric acid (GABA) is an amino acid neurotransmitter that is considered to be the major inhibitory neurotransmitter in the mammalian central nervous system. The highest concentrations of GABA are found in the brain, where it is synthesized from glutamic acid to GABA by an enzyme called glutamic acid decarboxylase (GAD). GAD is also expressed in the insulin-producing beta cells of the islets of Langerhans. Two isoforms of GAD are present in rat brain, GAD65 and GAD67, based on their relative molecular weight in kDa. Both isoforms have significant levels of homology in the catalytic portion of the molecule, but differ greatly in the first 95 amino acids in the N-terminal region. GAD65 migrates at ~65 kDa in SDS/PAGE. The antibody is reported to recognize rat, human, mouse, and pig GAD65. Purified GAD65 from rat brain was used as the immunogen. The specific epitope recognized by this clone is a linear epitope localized in the last 41 amino acids of GAD65.
Molecular Weight:	65 kDa

Application Details

Application Notes:	Rat brain cortex is recommended as a positive control for western blot
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4° C.

Publications

Product cited in:

Kanaani, Lissin, Kash, Baekkeskov: "The hydrophilic isoform of glutamate decarboxylase, GAD67, is targeted to membranes and nerve terminals independent of dimerization with the hydrophobic membrane-anchored isoform, GAD65." in: **The Journal of biological chemistry**, Vol. 274, Issue 52, pp. 37200-9, (2000) (PubMed).

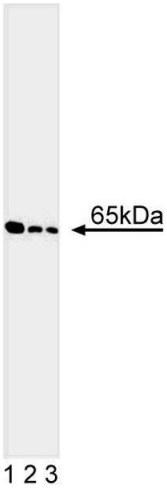
Hsu, Thomas, Chen, Davis, Foos, Chen, Wu, Floor, Schloss, Wu: "Role of synaptic vesicle proton gradient and protein phosphorylation on ATP-mediated activation of membrane-associated brain glutamate decarboxylase." in: **The Journal of biological chemistry**, Vol. 274, Issue 34, pp. 24366-71, (1999) (PubMed).

Esclapez, Tillakaratne, Kaufman, Tobin, Houser: "Comparative localization of two forms of glutamic acid decarboxylase and their mRNAs in rat brain supports the concept of functional differences between the forms." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 14, Issue 3 Pt 2, pp. 1834-55, (1994) (PubMed).

Kim, Richter, Aanstoot, Shi, Fu, Rajotte, Warnock, Baekkeskov: "Differential expression of GAD65 and GAD67 in human, rat, and mouse pancreatic islets." in: **Diabetes**, Vol. 42, Issue 12, pp. 1799-808, (1993) (PubMed).

Bu, Erlander, Hitz, Tillakaratne, Kaufman, Wagner-McPherson, Evans, Tobin: "Two human glutamate decarboxylases, 65-kDa GAD and 67-kDa GAD, are each encoded by a single gene." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 89 , Issue 6, pp. 2115-9, (1992) (PubMed).

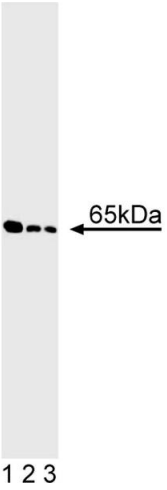
There are more publications referencing this product on: Product page



Western Blotting

Image 1. Western blot analysis of GAD65. Lysates from rat brain cortex were probed with purified anti-GAD65 (clone GAD-6) at a concentration of 5.0 (lane 1), 2.0 (lane 2) or 0.5 µg/ml (lane 3). GAD65 is identified as a protein of ~65 kDa.

Image 2.



Western Blotting

Image 3.