

Mouse anti-Human GAD1/GAD67 Monoclonal Antibody | anti-GAD1 antibody

GAD1/GAD67 (GABAergic Neuronal Marker)

CATALOG # AAA214649	HOST Mouse	REACTIVITY Human	APPLICATIONS Western Blot, Flow Cytometry, Functional Assay, ELISA
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PRODUCT SYNONYMS

GAD1/GAD67; Monoclonal Antibody; GAD1/GAD67 (GABAergic Neuronal Marker); 67kDa glutamic acid decarboxylase; CPSQ1; DCE1; GAD67; GAD1; Glutamate decarboxylase 1; SCP; anti-GAD1 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG2b, kappa
Clone Number	GAD1/2563
Specificity	This MAb recognizes a protein of 67kDa, which is identified as glutamic acid decarboxylase 1 (GDA1). There are two forms of glutamic acid decarboxylases (GADs) that are found in the brain: GAD65 (also known as GAD2) and GAD67 (also known as GAD1. GAD65 and GAD67 are members of the group II decarboxylase family of proteins and are responsible for catalyzing the rate-limiting step in the production of GABA (gamma-aminobutyric acid) from L-glutamic acid. Although both GADs are found in the brain, GAD65 localizes to synaptic vesicle membranes in nerve terminals, while GAD67 is distributed throughout the cell. GAD67 is responsible for the basal levels of GABA synthesis. In the case of a heightened demand for GABA in neurotransmission, GAD65 will transiently activate to assist in GABA production. The loss of GAD65 is detrimental and can impair GABA neurotransmission, however the loss of GAD67 is lethal.
Form/Format	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0 mg/ml.
Sequence Length	594
Applicable Applications for anti-GAD1 antibody	WB (Western Blot), FCM/FACS (Flow Cytometry), ELISA
Immunogen	Recombinant human GAD1 (GAD67) protein fragment (around aa 72-135)(exact sequence is proprietary)
Cellular Localization	Cytoplasmic
Hu-chromosome Location	2q31.1
Positive Control	T98G or K-562 or HEK293 Cells. Pancreas
Preparation and Storage	Store at -20°C to -80°C. Non hazardous. No MSDSrequired.

IMAGES



FCM/FACS (Flow Cytometry)
Flow Cytometric Analysis of T98G cells using GAD1/GAD67 Mouse Monoclonal Antibody (GAD1/2563) followed by Goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).



Application Data
Analysis of Protein Array containing more than 19, 000 full-length human proteins using GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2563) Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



SDS-PAGE
SDS Page Analysis Purified GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2563).Confirmation of Purity and Integrity of Antibody.

ADDITIONAL INFORMATION

References	Kaufman DL, Erlander MG, Clare-Salzler M, Atkinson MA, Maclaren NK, Tobin AJ. Autoimmunity to two forms of glutamate decarboxylase in insulin-dependent diabetes mellitus. J Clin Invest. 1992 Jan; 89(1):283-92.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	58331246
NCBI GeneID	2571
NCBI Accession #	NP_000808.2
NCBI GenBank Nucleotide #	NM_000817.2
UniProt Accession #	Q99259; Q49AK1; Q53TQ7; Q9BU91; Q9UHH4
Molecular Weight	67kDa
NCBI Official Full Name	glutamate decarboxylase 1 isoform GAD67
NCBI Official Synonym Full Names	glutamate decarboxylase 1
NCBI Official Symbol	GAD1
NCBI Official Synonym Symbols	GAD; SCP; CPSQ1
NCBI Protein Information	glutamate decarboxylase 1
UniProt Protein Name	Glutamate decarboxylase 1
UniProt Gene Name	GAD1
UniProt Synonym Gene Names	GAD; GAD67; GAD-67

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.