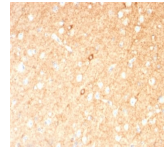


# GAD1 / GAD67 Monoclonal Mouse Antibody (GAD1/2391)



## Product Description

This MAb recognizes a protein of 67 kDa, which is identified as glutamic acid decarboxylase 1 (GAD1). 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. Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors. **Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

## Product attributes

Antibody number	#2391
Antibody reactivity (target)	GAD1, GAD67
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	GAD1/2391
Isotype	IgG1, kappa
Molecular weight	67 kDa
Synonyms	67kDa glutamic acid decarboxylase; CPSQ1; DCE1; GAD67; GAD1; Glutamate decarboxylase 1; SCP
Human gene symbol	GAD1
Entrez gene ID	2571
SwissProt	Q99259
Unigene	420036
Immunogen	Recombinant human GAD1 (GAD67) protein fragment (around aa 72-135) (exact sequence is proprietary)
Verified antibody applications	IHC (FFPE) (verified), WB (verified)
Antibody target cellular localization	Cytoplasmic, Plasma membrane, Vesicular
Species reactivity	Human
Antibody application notes	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody, ELISA: For coating order antibody without BSA, Immunohistology (formalin): 1-2 ug/mL for 30 minutes at RT, Western: 0.5-1 ug/mL. Staining of formalin-fixed tissues requires boiling tissue sections in 10 mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at RT for 20 minutes. Optimal dilution for a specific application should be determined by user
Positive control	K-562 or HEK293 Cells. Pancreas
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Validated in protein	Monospecific
Antibody research areas	Neuroscience
Cell/tissue expression	Brain