

## GAD1 / GAD67 (GABAergic Neuronal Marker) Antibody

Mouse Monoclonal Antibody [Clone GAD1/2391]

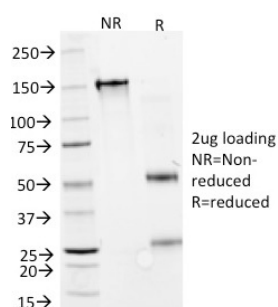
Catalog No	Format	Size
2571-MSM1-P0	Purified Ab with BSA and Azide	200ug/ml
2571-MSM1-P1	Purified Ab with BSA and Azide	200ug/ml
2571-MSM1-P1ABX	Purified Ab WITHOUT BSA and Azide	1.0mg/ml

Applications	Tested Dillution
Immunohistochemistry (IHC)	1-2ug/ml
Western Blot (WB)	2-4ug/ml

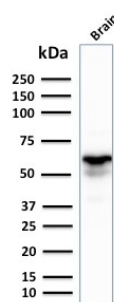
Product Details	
Clone	GAD1/2391
Gene Name	GAD1
Immunogen	Recombinant human GAD1 (GAD67) protein fragment (around aa 72-135) (exact sequence is proprietary)
Host	Mouse
Clonality	Monoclonal
Isotype / Light Chain	IgG1 / Kappa
Mol. Weight of Antigen	~67kDa
Species Reactivity	Human
Positive Control	K-562 or HEK293 cells. Pancreas.

*\*Optimal dilution for a specific application should be determined.*

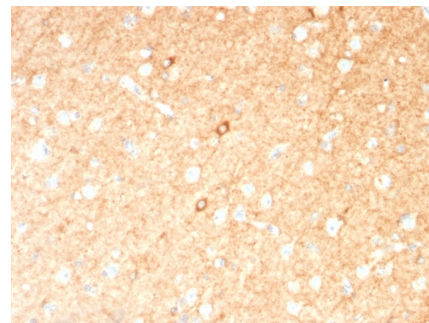
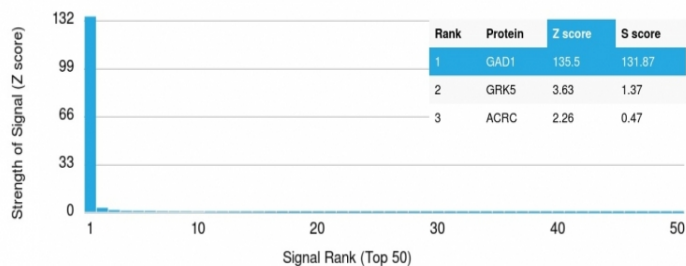
### Product Images for GAD1 / GAD67 (GABAergic Neuronal Marker) Antibody



SDS-PAGE Analysis of Purified GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2391). Confirmation of Integrity and Purity of Antibody.



Western Blot Analysis of human Brain tissue lysate using GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2391).



Formalin-fixed, paraffin-embedded human Brain stained with GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2391).

Analysis of Protein Array containing more than 19,000 full-length human proteins using GAD1 (GAD67) Mouse Monoclonal Antibody (GAD1/2391) 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,  $\sigma$ 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,  $\sigma$ 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 be 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.

### Specificity & Comments

This MAb recognizes a protein of 67kDa, 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 (-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.

### Research Areas

Cardiovascular, Neuroscience, Neural Stem Cells, Transcription Factors

### Known Applications & Suggested Dilutions

ELISA (For coating, order antibody without BSA) | Western Blot (1-2  $\mu$ g/ml) | Immunohistochemistry (Formalin-fixed) (1-2  $\mu$ g/ml for 30 minutes at RT), (Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes) | Optimal dilution for a specific application should be determined.

### Limitations and Warranty

This antibody is available for research use only and is not approved for use in diagnosis.

There are no warranties, expressed or implied, which extend beyond this description. Company is not liable for any personal injury or economic loss resulting from this product.

### Supplied As

200  $\mu$ g/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 1.0mg/ml.

### Storage and Stability

Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.