

# Anti-GAD67 Antibody [PSH08-30]

HA601370



<b>Product Type:</b>	Recombinant Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	Mouse, Rat
<b>Applications:</b>	WB, IHC-P
<b>Molecular Wt:</b>	Predicted band size: 67 kDa
<b>Clone number:</b>	PSH08-30

**Description:** There are two forms of glutamic acid decarboxylases (GADs) that are found in the brain: GAD-65 (also known as GAD2) and GAD-67 (also known as GAD1, GAD or SCP). GAD-65 and GAD-67 are members of the group II decarboxylase family of proteins and are responsible for catalyzing the rate limiting step in the production of GABA (g-aminobutyric acid) from L-glutamic acid. Although both GADs are found in the brain, GAD-65 localizes to synaptic vesicle membranes in nerve terminals, while GAD-67 is distributed throughout the cell. GAD-67 is responsible for the basal levels of GABA synthesis. In the case of a heightened demand for GABA in neurotransmission, GAD-65 will transiently activate to assist in GABA production. The loss of GAD-65 is detrimental and can impair GABA neurotransmission, however the loss of GAD-67 is lethal. Due to alternative splicing, two isoforms exist for GAD-67, the predominant GAD-67 form and the minor GAD-25 form. GAD-25 is not expressed in brain but can be found in a variety of endocrine tissues.

**Positive control:** Mouse brain tissue lysate, Rat brain tissue lysate, mouse cerebellum tissue, rat cerebellum tissue.

**Subcellular location:** Cytoplasm, Plasma Membrane.

**Database links:** SwissProt: P48318 Mouse | P18088 Rat

**Recommended Dilutions:**

<b>WB</b>	1:10,000
<b>IHC-P</b>	1:500

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

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## Images

**Fig1:** Western blot analysis of GAD67 on different lysates with Mouse anti-GAD67 antibody (HA601370) at 1/10,000 dilution.

Lane 1: Mouse brain tissue lysate

Lane 2: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

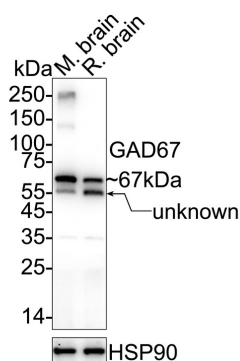
Predicted band size: 67 kDa

Observed band size: 67 kDa

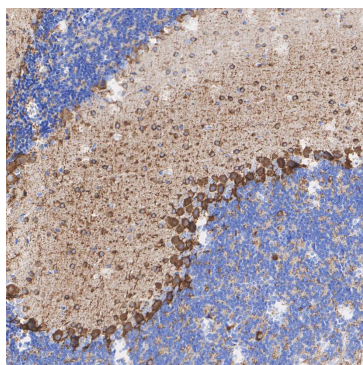
Exposure time: 6 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601370) at 1/10,000 dilution was used in primary antibody dilution at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

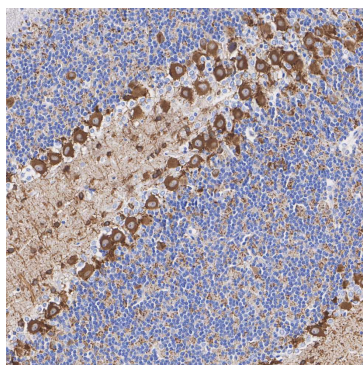


**Fig2:** Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Mouse anti-GAD67 antibody (HA601370) at 1/500 dilution.



The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA601370) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Fig3:** Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Mouse anti-GAD67 antibody (HA601370) at 1/500 dilution.



The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA601370) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

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### Background References

1. Li JT et al. Repeated Blockade of NMDA Receptors During Adolescence Impairs Reversal Learning and Disrupts GABAergic Interneurons in Rat Medial Prefrontal Cortex. *Front Mol Neurosci* 9:17 (2016).
2. Fu Q et al. MHC-I promotes apoptosis of GABAergic interneurons in the spinal dorsal horn and contributes to cancer induced bone pain. *Exp Neurol* 286:12-20 (2016).

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