GAD65 Recombinant Antibody [PSH06-80] - Rat IgG1 (Chimeric)

HA601389

Product Type:	Recombinant Chimeric Antibody IgG1, primary antibodies
Species reactivity:	Mouse, Rat, Human, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, WB
Molecular Wt:	Predicted band size: 65 kDa
Clone number:	PSH06-80

Description: This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes. The enzyme encoded is responsible for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. A pathogenic role for this enzyme has been identified in the human pancreas since it has been identified as an autoantibody and an autoreactive T cell target in insulin-dependent diabetes. This gene may also play a role in the stiff man syndrome. Alternative splicing results in multiple transcript variants that encode the same protein.

Immunogen: Recombinant protein.

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

Subcellular location: Cytoplasm, cytosol, Cytoplasmic vesicle, Presynaptic cell membrane, Golgi apparatus membrane.

Database links: SwissProt: P48320 Mouse | Q05683 Rat

Recommended Dilutions:

IHC-Fr	1:2,000
IHC-P	1:1,000
WB	1:2,000

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

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

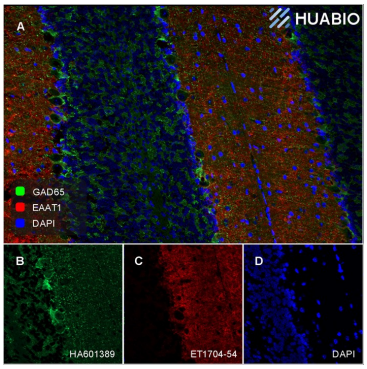

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1: 2,000 (GAD65, HA601389, green); 1:2,000 (EAAT1, ET1704-54, red)

Antigen retrieval: Not required

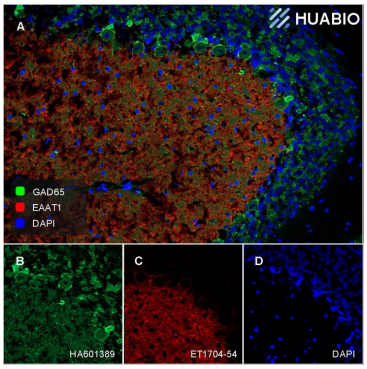

Fig2: Application: IHC-Fr

Species: Rat

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1: 2,000 (GAD65, HA601389, green); 1:2,000 (EAAT1, ET1704-54, red)

Antigen retrieval: Not required

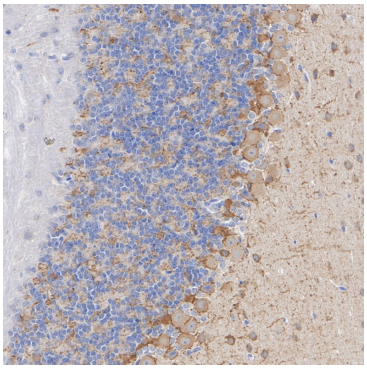

Fig3: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rat anti-GAD65 antibody (HA601389) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601389) at 1/1,000 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.

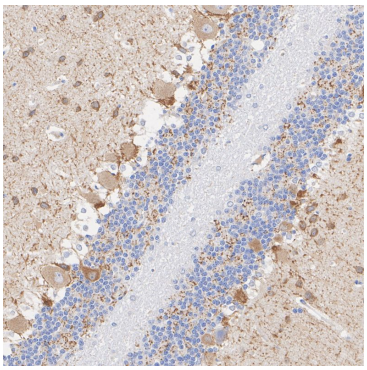

Fig4: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rat anti-GAD65 antibody (HA601389) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601389) at 1/1,000 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.

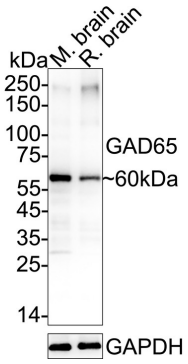

Fig5: Western blot analysis of GAD65 on different lysates with Rat anti-GAD65 antibody (HA601389) at 1/2,000 dilution.

Lane 1: Mouse brain tissue lysate
Lane 2: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 65 kDa
Observed band size: 60 kDa

Exposure time: 3 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 (HA601389) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/5,000 dilution was used for 1 hour at room temperature.

Background References

1. Budhram A et al. Clinical spectrum of high-titre GAD65 antibodies. J Neurol Neurosurg Psychiatry. 2021 Feb
2. Budhram A et al. Positive Predictive Value of Anti-GAD65 ELISA Cut-Offs for Neurological Autoimmunity. Can J Neurol Sci. 2023 Sep