

VGLUT1 Recombinant Antibody [PSH10-53] - Mouse IgG1 (Chimeric)

HA601450



Product Type:	Recombinant Chimeric, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	IHC-Fr, IHC-P, WB, mlHC
Molecular Wt:	Predicted band size: 62 kDa
Clone number:	PSH10-53

Description: Vesicular glutamate transporter 1 (VGLUT1) is a protein that in humans is encoded by the SLC17A7 gene. The protein encoded by this gene is a vesicle-bound, sodium-dependent phosphate transporter that is specifically expressed in the neuron-rich regions of the brain. It is preferentially associated with the membranes of synaptic vesicles and functions in glutamate transport. The protein shares 82% identity with the differentiation-associated Na-dependent inorganic phosphate cotransporter and they appear to form a distinct class within the Na⁺/Pi cotransporter family.

Immunogen: Recombinant protein within Mouse VGLUT1 aa 1-560.

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

Subcellular location: Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane, Cell membrane, Synapse, synaptosome.

Database links: SwissProt: Q3TXX4 Mouse | Q62634 Rat

Recommended Dilutions:

IHC-Fr	1:500
IHC-P	1:2,000
WB	1:5,000
mlHC	1:2,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

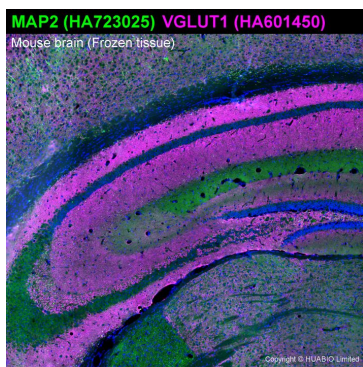


Fig1: mIHC analysis of mouse brain tissue (Frozen section) with VGLUT1 (HA601450, 1/2,000) and antibody MAP2 (HA723025, 1/20,000).

The immunostaining was performed with the IRISKitCmTSA Kit (900802). Blocking with 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

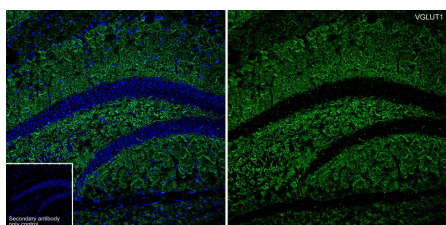


Fig2: Application: IHC-Fr

Species: Mouse

Site: hippocampus

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

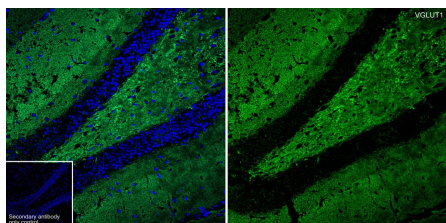


Fig3: Application: IHC-Fr

Species: Rat

Site: hippocampus

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

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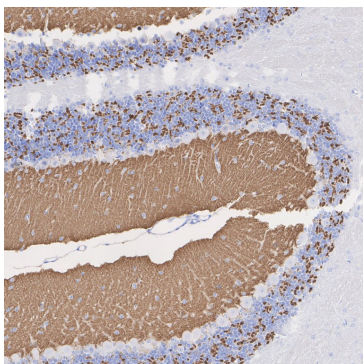


Fig4: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Mouse anti-VGLUT1 antibody (HA601450) at 1/2,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA601450) at 1/2,000 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.

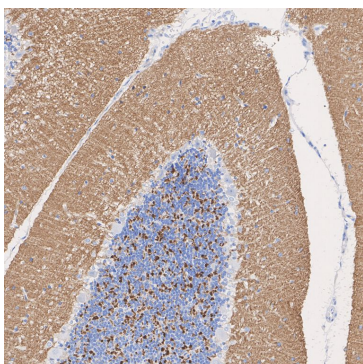


Fig5: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Mouse anti-VGLUT1 antibody (HA601450) at 1/2,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA601450) at 1/2,000 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.

Fig6: Western blot analysis of VGLUT1 on different lysates with Mouse anti-VGLUT1 antibody (HA601450) at 1/5,000 dilution.

Lane 1: Mouse brain tissue lysate (no heat)
Lane 2: Mouse lung tissue lysate (no heat) (negative)

Notice: no heat means the lysate is not boiled.

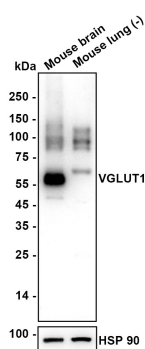
Lysates/proteins at 20 µg/Lane.

Predicted band size: 62 kDa

Observed band size: 62 kDa

Exposure time: 42 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 (HA601450) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used

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Background References

1. Souter EA et al. Disruption of VGLUT1 in Cholinergic Medial Habenula Projections Increases Nicotine Self-Administration. *eNeuro*. 2022 Jan
2. Jin S et al. Molecular Profiling of VGluT1 AND VGluT2 Ventral Subiculum to Nucleus Accumbens Shell Projections. *Neurochem Res*. 2023 Aug