VGluT1 Recombinant Antibody [PSH10-53] - Rat IgG1 (Chimeric)

HA601392

Product Type:	Recombinant Chimeric Antibody IgG1, primary antibodies
Species reactivity:	Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, WB
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.

Positive control: Mouse brain tissue, mouse hippocampus tissue, mouse cerebellum tissue, Rat brain tissue, rat hippocampus tissue, rat cerebellum tissue, Mouse brain tissue lysate, Rat 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	1:500
WB	1:2,000

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

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

Purity: Protein A affinity purified.

Images

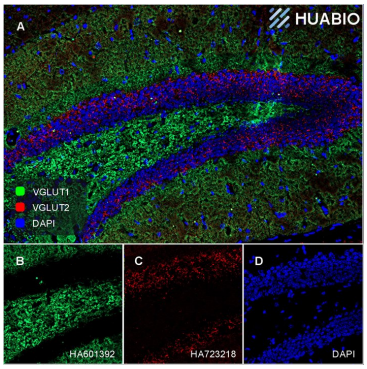

Fig1: Application: IHC-Fr

Species: Mouse

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1:500 (VGluT1, HA601392, green); 1:500 (VGluT2, HA723218, red)

Antigen retrieval: Not required

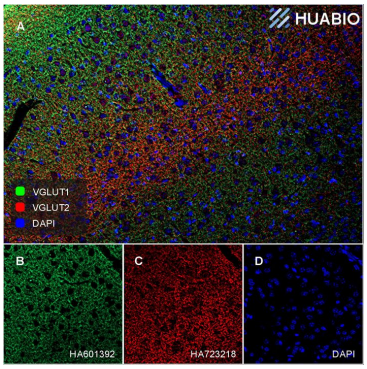

Fig2: Application: IHC-Fr

Species: Mouse

Site: Cerebral cortex

Sample: Frozen section

Antibody concentration: 1:500 (VGluT1, HA601392, green); 1:500 (VGluT2, HA723218, red)

Antigen retrieval: Not required

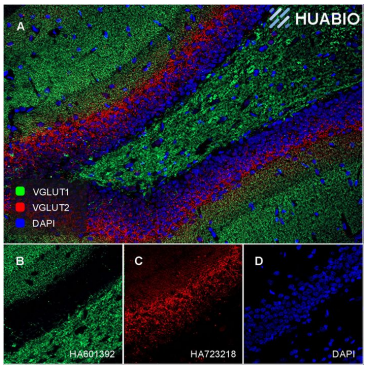

Fig3: Application: IHC-Fr

Species: Rat

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1:500 (VGluT1, HA601392, green); 1:500 (VGluT2, HA723218, red)

Antigen retrieval: Not required

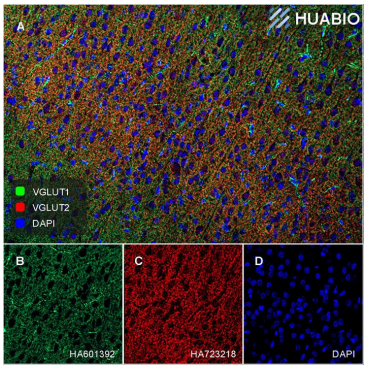

Fig4: Application: IHC-Fr

Species: Rat

Site: Cerebral cortex

Sample: Frozen section

Antibody concentration: 1:500 (VGluT1, HA601392, green); 1:500 (VGluT2, HA723218, red)

Antigen retrieval: Not required

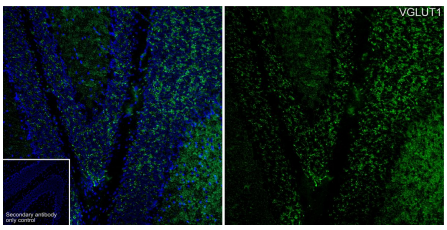

Fig5: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

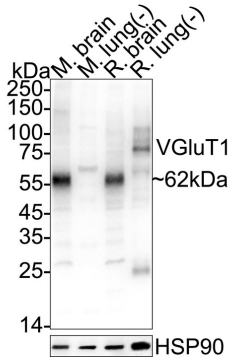

Fig6: Western blot analysis of VGluT1 on different lysates with Rat anti-VGluT1 antibody (HA601392) at 1/2,000 dilution.

Lane 1: Mouse brain tissue lysate (no heat)
Lane 2: Mouse lung tissue lysate (no heat) (negative)
Lane 3: Rat brain tissue lysate (no heat)
Lane 4: Rat 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: 2 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 (HA601392) 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.

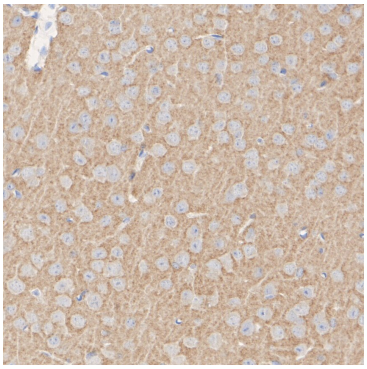

Fig7: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

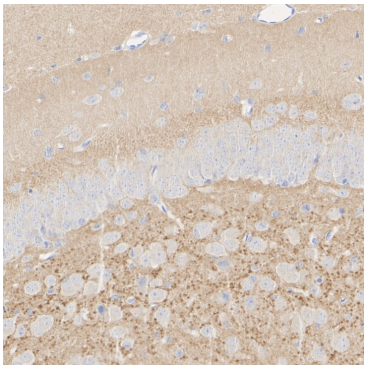

Fig8: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

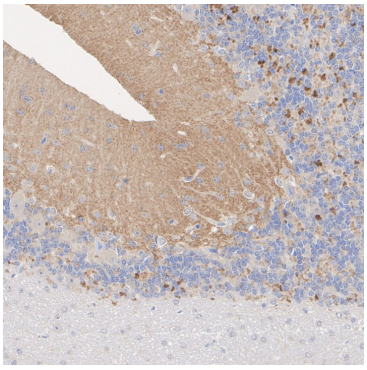

Fig9: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

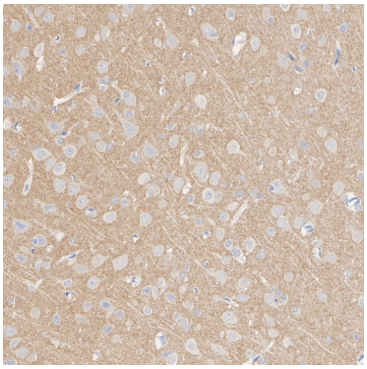

Fig10: Immunohistochemical analysis of paraffin-embedded Rat brain tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

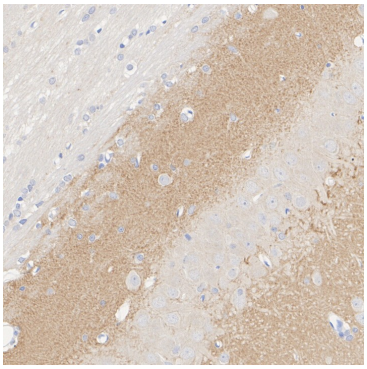

Fig11: Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

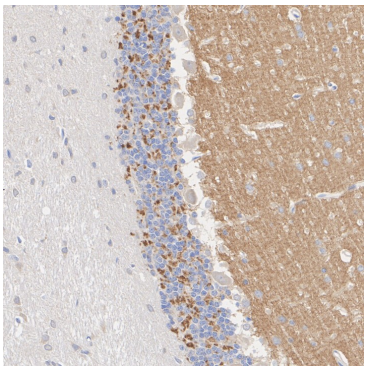

Fig12: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rat anti-VGluT1 antibody (HA601392) at 1/500 dilution.

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 (HA601392) 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.

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