Anti-EAAT2 Antibody [PSH07-43] - BSA and Azide free

HA751164

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IHC-Fr
Molecular Wt:	Predicted band size: 62 kDa
Clone number:	PSH07-43

Description: Excitatory amino acid transporter 2 (EAAT2) also known as solute carrier family 1 member 2 (SLC1A2) and glutamate transporter 1 (GLT-1) is a protein that in humans is encoded by the SLC1A2 gene. Alternatively spliced transcript variants of this gene have been described, but their full-length nature is not known. SLC1A2 / EAAT2 is a member of a family of the solute carrier family of proteins. The membrane-bound protein is the principal transporter that clears the excitatory neurotransmitter glutamate from the extracellular space at synapses in the central nervous system. Glutamate clearance is necessary for proper synaptic activation and to prevent neuronal damage from excessive activation of glutamate receptors. EAAT2 is responsible for over 90% of glutamate reuptake within the brain.

Immunogen: Recombinant protein within human EAAT2.

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

Subcellular location: Cell membrane.

Database links: SwissProt: P43004 Human | P43006 Mouse | P31596 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IHC-Fr	1:200

Storage Buffer: PBS (pH7.4).

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

Purity: Protein A affinity purified.

Images

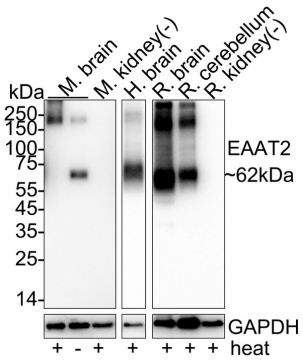

Fig1: Western blot analysis of EAAT2 on different lysates with Rabbit anti-EAAT2 antibody (HA751164) at 1/1,000 dilution.

Lane 1: Mouse brain tissue lysate
Lane 2: Mouse brain tissue lysate (no heat)
Lane 3: Mouse kidney tissue lysate (negative)
Lane 4: Human brain tissue lysate
Lane 5: Rat brain tissue lysate
Lane 6: Rat cerebellum tissue lysate
Lane 7: Rat kidney tissue lysate (negative)

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 40 µg/Lane.

Predicted band size: 62 kDa
Observed band size: 62/200 kDa

Exposure time: Lane 1-3: 46 seconds; Lane 4-7: 8 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 (HA751164) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

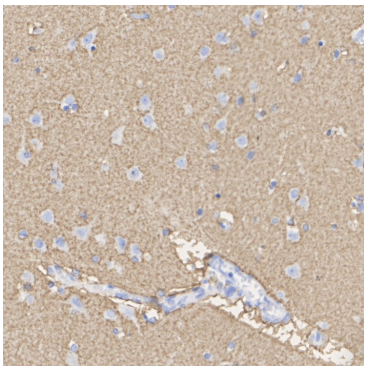

Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-EAAT2 antibody (HA751164) at 1/1,000 dilution.

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 (HA751164) 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.

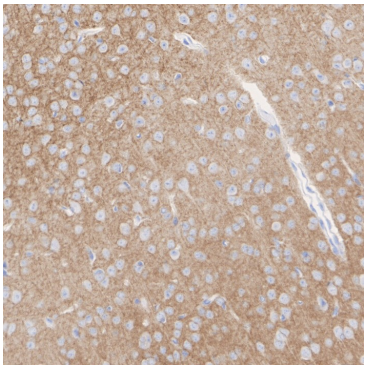

Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-EAAT2 antibody (HA751164) at 1/1,000 dilution.

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 (HA751164) 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.

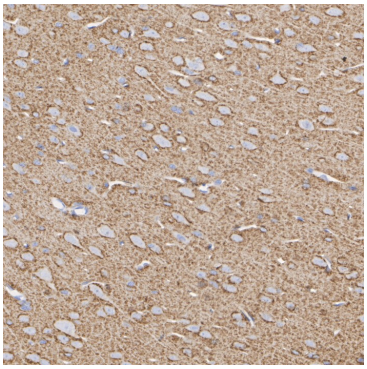

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-EAAT2 antibody (HA751164) at 1/1,000 dilution.

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 (HA751164) 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.

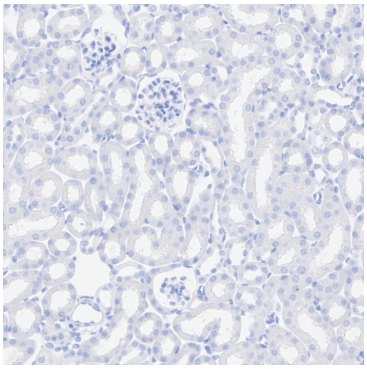

Fig5: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue (negative) with Rabbit anti-EAAT2 antibody (HA751164) at 1/1,000 dilution.

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 (HA751164) 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.

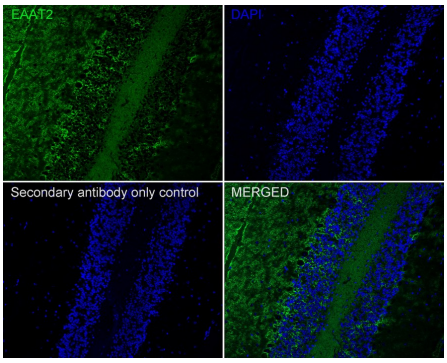

Fig6: Immunofluorescence analysis of frozen mouse cerebellum tissue with Rabbit anti-EAAT2 antibody (HA751164) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA751164, green) at 1/200 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

Background References

1. Green JL et al. Role of glutamate excitotoxicity and glutamate transporter EAAT2 in epilepsy: Opportunities for novel therapeutics development. Biochem Pharmacol. 2021 Nov
2. Alijanpour S et al. The role of excitatory amino acid transporter 2 (EAAT2) in epilepsy and other neurological disorders. Metab Brain Dis. 2023 Jan