EAAT2 Recombinant Antibody [PS01-62] - Rat IgG1 (Chimeric)

HA601403

Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Mouse, Rat, Cynomolgus monkey, Pig
Applications:	IHC-Fr, IHC-P, WB
Molecular Wt:	Predicted band size: 62 kDa
Clone number:	PS01-62

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: Synthetic peptide within Human EAAT2

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

Subcellular location: Cell membrane.

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

Recommended Dilutions:

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

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

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

Purity: Protein A affinity purified.

Images

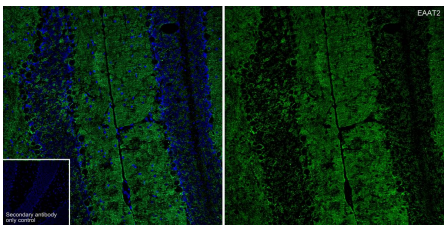

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

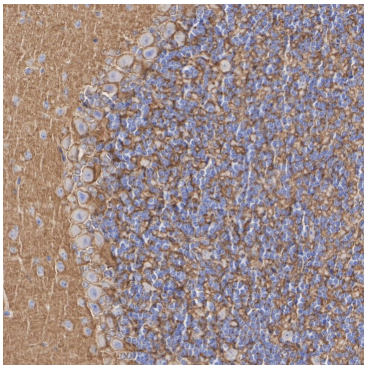

Fig2: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rat anti-EAAT2 antibody (HA601403) at 1/1,000 dilution.

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 (HA601403) 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.

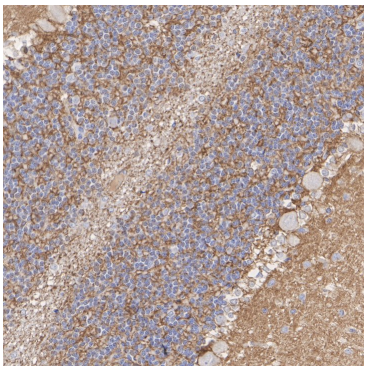

Fig3: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rat anti-EAAT2 antibody (HA601403) at 1/1,000 dilution.

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 (HA601403) 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.

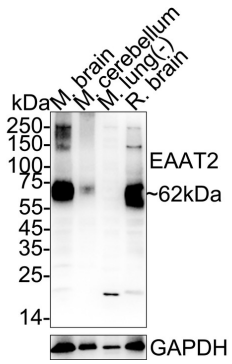

Fig4: Western blot analysis of EAAT2 on different lysates with Rat anti-EAAT2 antibody (HA601403) at 1/2,000 dilution.

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

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: 4 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 (HA601403) 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.

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

Background References

1. Blacker CJ et al. EAAT2 as a Research Target in Bipolar Disorder and Unipolar Depression: A Systematic Review. Mol Neuropsychiatry. 2020 Apr
2. Green JL et al. Role of glutamate excitotoxicity and glutamate transporter EAAT2 in epilepsy: Opportunities for novel therapeutics development. Biochem Pharmacol. 2021 Nov