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antibody and ELISA experts

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Anti-EAAT2/GLT-1/SLC1A2 Antibody

Catalog Number: RP1065

About SLC1A2

SLC1A2 is also known as EAAT2 or GLT-1. This gene encodes a member of a family of solute transporter 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. Mutations in and decreased expression of this protein are associated with amyotrophic lateral sclerosis. Alternatively spliced transcript variants of this gene have been identified.

Overview

Product Name	Anti-EAAT2/GLT-1/SLC1A2 Antibody
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-EAAT2/GLT-1/SLC1A2 Antibody catalog # RP1065. Tested in IF, IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2mg Na2HPO4, 0.05 mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P43004

Technical Details

Immunogen	E.coli-derived human EAAT2 recombinant protein (Position: T461-K574). Human EAAT2 shares 96% amino acid (aa) sequence identity with both mouse and rat EAAT2.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Mouse, Rat Immunofluorescence, 5 ug/ml, Mouse, Rat

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Anti-EAAT2/GLT-1/SLC1A2 Antibody (RP1065) Images

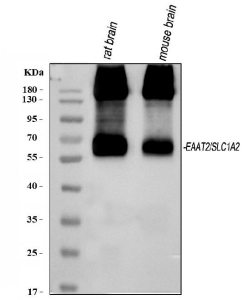

Figure 1. Western blot analysis of EAAT2/GLT-1/SLC1A2 using anti-EAAT2/GLT-1/SLC1A2 antibody (RP1065). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat brain tissue lysates,
Lane 2: mouse brain tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-EAAT2/GLT-1/SLC1A2 antigen affinity purified polyclonal antibody (Catalog # RP1065) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for EAAT2/GLT-1/SLC1A2 at approximately 65 kDa. The expected band size for EAAT2/GLT-1/SLC1A2 is at 62 kDa.

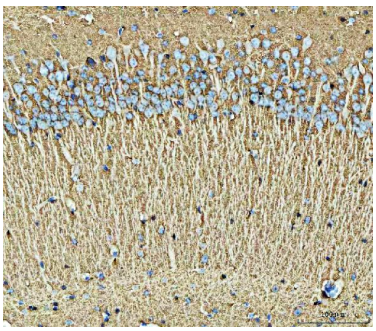

Figure 2. IHC analysis of EAAT2/GLT-1/SLC1A2 using anti-EAAT2/GLT-1/SLC1A2 antibody (RP1065).
EAAT2/GLT-1/SLC1A2 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-EAAT2/GLT-1/SLC1A2 Antibody (RP1065) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

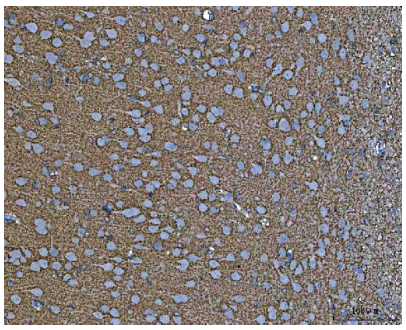

Figure 3. IHC analysis of EAAT2/GLT-1/SLC1A2 using anti-EAAT2/GLT-1/SLC1A2 antibody (RP1065).
EAAT2/GLT-1/SLC1A2 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-EAAT2/GLT-1/SLC1A2 Antibody (RP1065) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 4. IF analysis of EAAT2/GLT-1/SLC1A2 using anti-

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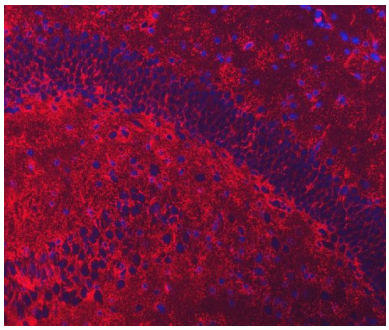

EAAT2/GLT-1/SLC1A2 antibody (RP1065).
EAAT2/GLT-1/SLC1A2 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-EAAT2/GLT-1/SLC1A2 Antibody (RP1065) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

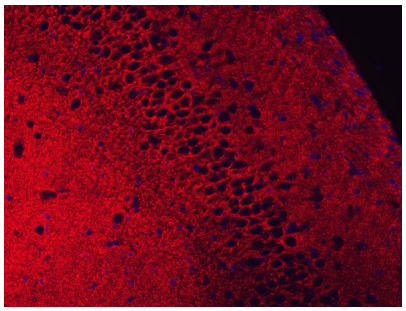

Figure 5. IF analysis of EAAT2/GLT-1/SLC1A2 using anti-EAAT2/GLT-1/SLC1A2 antibody (RP1065).
EAAT2/GLT-1/SLC1A2 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-EAAT2/GLT-1/SLC1A2 Antibody (RP1065) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

2 Publications Citing This Product

1. PubMed ID: 33484756, Song T,Chen W,Chen X,Zhang H,Zou Y,Wu H,Lin F,Ren L,Kang Y,Lei H.Repeated fluoxetine treatment induces transient and long-term astrocytic plasticity in the medial prefrontal cortex of normal adult rats.Prog Neuropsychopharmacol Biol Psychiatry.2021 Jan 20

2. PubMed ID: 25371754, Ding Y, Zhang K, Liu S, Zhang Q, Ma C, Bruce Ic, Zhang X. Exp Ther Med. 2014 Dec;8(6):1909-1913. Epub 2014 Oct 15. Tumor Necrosis Factor-?? Promotes The Expression Of Excitatory Amino-Acid Transporter 2 In Astrocytes: Optimal Concentration And Inc...

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