

Anti-EAAT1/SLC1A3 Antibody Picoband®

Catalog Number: PA2185

About SLC1A3

Solute carrier family 1 (glial high-affinity glutamate transporter), member 3, also known as SLC1A3, EAAT1 or GLAST, is a protein that in humans is encoded by the SLC1A3 gene. This gene is a member of high affinity glutamate transporter family. SLC1A3 is mapped to chromosome 5p13.2 by fluorescence in situ hybridization (FISH). This gene transports L-glutamate and also L- and D-aspartate. It is essential for terminating the postsynaptic action of glutamate by rapidly removing released glutamate from the synaptic cleft. This gene acts as a symport by cotransporting sodium.

Overview

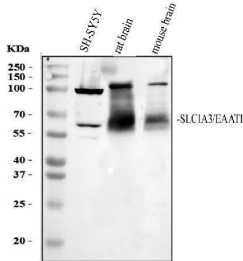
Product Name	Anti-EAAT1/SLC1A3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-EAAT1/SLC1A3 Antibody catalog # PA2185. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	P43003

Technical Details

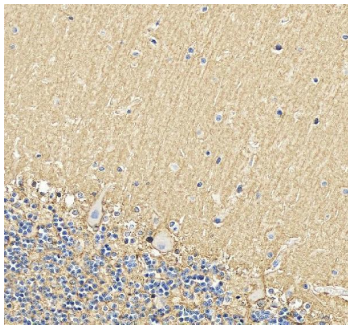
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human EAAT1, different from the related rat and mouse sequences by three amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F).
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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Rat, Human

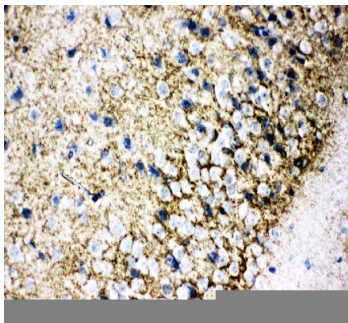
Anti-EAAT1/SLC1A3 Antibody Picoband® (PA2185) Images



Western blot analysis of GLAST/SLC1A3 using anti-GLAST/SLC1A3 antibody (PA2185). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: rat kidney tissue lysates, Lane 3: mouse kidney 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-GLAST/SLC1A3 antigen affinity purified polyclonal antibody (PA2185) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for GLAST/SLC1A3 at approximately 60 kDa. The expected band size for GLAST/SLC1A3 is at 60 kDa.

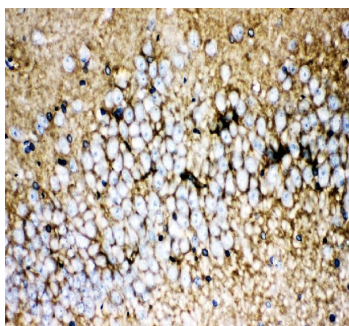


IHC analysis of GLAST/SLC1A3 using anti-GLAST/SLC1A3 antibody (PA2185). GLAST/SLC1A3 was detected in a paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GLAST/SLC1A3 Antibody (PA2185) 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.



IHC analysis of GLAST/SLC1A3 using anti-GLAST/SLC1A3 antibody (PA2185). GLAST/SLC1A3 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-GLAST/SLC1A3 Antibody (PA2185) 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.

IHC analysis of GLAST/SLC1A3 using anti-GLAST/SLC1A3 antibody (PA2185). GLAST/SLC1A3 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-GLAST/SLC1A3 Antibody (PA2185) 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.

3 Publications Citing This Product

1. PubMed ID: 10.1038/s41467-021-25344-6, Improved modeling of human AD with an automated culturing platform for iPSC neurons, astrocytes and microglia
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...
3. PubMed ID: 28757163, Ho, S.M., Hartley, B.J., Flaherty, E., Rajarajan, P., Abdelaal, R., Obiorah, I.,..., & Brennand, K.J. (2017). Evaluating Synthetic Activation and Repression of Neuropsychiatric-Related Genes in hiPSC-Derived NPCs, Neurons, and Astrocytes. Stem Cel...

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Anti-EAAT1/SLC1A3 Antibody

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