

Anti-EAAT1 Picoband Antibody
Catalog # ABO12644**Specification**

Anti-EAAT1 Picoband Antibody - Product Information

Application	WB, IHC
Primary Accession	P43003
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Excitatory amino acid transporter 1(SLC1A3) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-EAAT1 Picoband Antibody - Additional Information

Gene ID 6507

Other Names

Excitatory amino acid transporter 1, Sodium-dependent glutamate/aspartate transporter 1, GLAST-1, Solute carrier family 1 member 3, SLC1A3, EAAT1, GLAST, GLAST1

Calculated MW

59572 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization

Membrane; Multi-pass membrane protein.

Tissue Specificity

Highly expressed in cerebellum, but also found in frontal cortex, hippocampus and basal ganglia.

Protein Name

Excitatory amino acid transporter 1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human EAAT1 (14-42aa RMERFQQGVRKRTLAKKKVQNITKEDVK), different from the related mouse sequence by three amino acids, and identical to the related rat sequence.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-EAAT1 Picoband Antibody - Protein Information

Name SLC1A3 ([HGNC:10941](#))

Function

Sodium-dependent, high-affinity amino acid transporter that mediates the uptake of L-glutamate and also L-aspartate and D-aspartate (PubMed:[7521911](http://www.uniprot.org/citations/7521911), PubMed:[8123008](http://www.uniprot.org/citations/8123008), PubMed:[20477940](http://www.uniprot.org/citations/20477940), PubMed:[26690923](http://www.uniprot.org/citations/26690923), PubMed:[28032905](http://www.uniprot.org/citations/28032905), PubMed:[28424515](http://www.uniprot.org/citations/28424515)). Functions as a symporter that transports one amino acid molecule together with two or three Na(+) ions and one proton, in parallel with the counter-transport of one K(+) ion (PubMed:[20477940](http://www.uniprot.org/citations/20477940)). Mediates Cl(-) flux that is not coupled to amino acid transport; this avoids the accumulation of negative charges due to aspartate and Na(+) symport (PubMed:[20477940](http://www.uniprot.org/citations/20477940)). Plays a redundant role in the rapid removal of released glutamate from the synaptic cleft, which is essential for terminating the postsynaptic action of glutamate (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

Detected in brain (PubMed:8218410, PubMed:7521911, PubMed:8123008). Detected at very much lower levels in heart, lung, placenta and skeletal muscle (PubMed:7521911, PubMed:8123008). Highly expressed in cerebellum, but also found in frontal cortex, hippocampus and basal ganglia (PubMed:7521911).

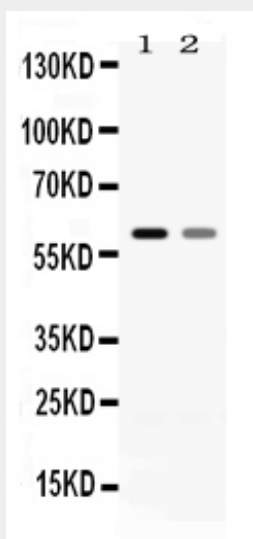
Anti-EAAT1 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

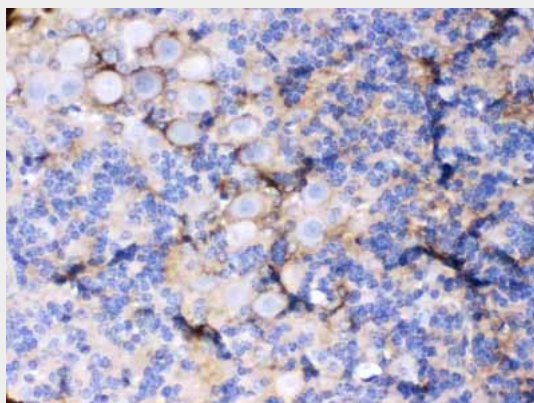
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

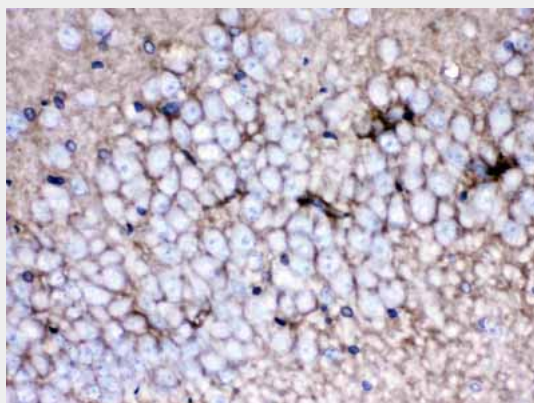
Anti-EAAT1 Picoband Antibody - Images



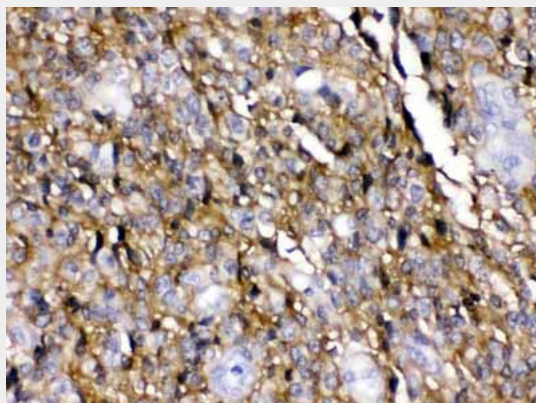
Western blot analysis of EAAT1 expression in rat brain extract (lane 1) and mouse brain extract (lane 2). EAAT1 at 60KD was detected using rabbit anti-EAAT1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12644) at 0.5 μ g/mL. The blot was developed using chemiluminescence (ECL) method .



EAAT1 was detected in paraffin-embedded sections of mouse cerebellum tissues using rabbit anti- EAAT1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12644) at 1 μ g/mL. The immunohistochemical section was developed using SABC method .



EAAT1 was detected in paraffin-embedded sections of rat brain tissues using rabbit anti- EAAT1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12644) at 1 µg/mL. The immunohistochemical section was developed using SABC method .



EAAT1 was detected in paraffin-embedded sections of human glioma tissues using rabbit anti- EAAT1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12644) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

Anti-EAAT1 Picoband Antibody - Background

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. It is mapped to chromosome 5p13.2 by fluorescence in situ hybridization (FISH). And 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. Furthermore, this gene acts as a symport by cotransporting sodium.