10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-EAAT1 Antibody

Catalog # ABO11495

Product Information

Application	WB, IHC-P, IHC-F
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, IHC-F in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Rat, Human, By Heat Immunohistochemistry(Frozen Section), 0.5-1 □g/ml, Rat, Human Western blot, 0.1-0.5 □g/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.
Source	Eukaryota
Protein Name	Excitatory amino acid transporter 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human EAAT1(519-537aa MKKPYQLIAQDNETEKPID), different from the related rat and mouse sequences by three amino acids.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, 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.

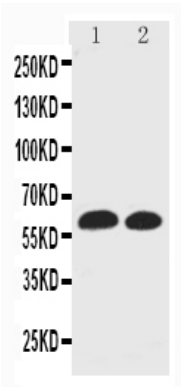
Protein Information

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:20477940, PubMed:26690923, PubMed:28032905, PubMed:28424515, PubMed:7521911, PubMed:8123008). 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). 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). 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:7521911, PubMed:8123008, PubMed:8218410). 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).

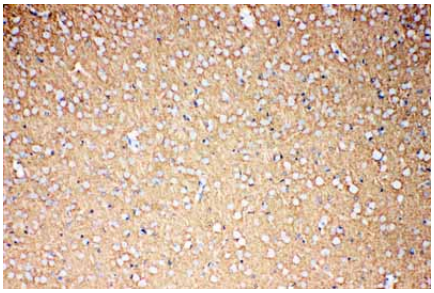
Background

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. 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.

Images



Anti-EAAT1 antibody, ABO11495, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Mouse Brain Tissue Lysate



Anti-EAAT1 antibody, ABO11495, IHC(P)IHC(P): Rat Brain Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.