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Anti-EAAT3 Antibody
Catalog # ABO11475

Specification

Anti-EAAT3 Antibody - Product Information

Application	**WB**
Primary Accession	P43005
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Excitatory amino acid transporter 3(SLC1A1) detection. Tested with WB in Human.

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

Anti-EAAT3 Antibody - Additional Information

Gene ID 6505

Other Names
Excitatory amino acid transporter 3, Excitatory amino-acid carrier 1, Neuronal and epithelial glutamate transporter, Sodium-dependent glutamate/aspartate transporter 3, Solute carrier family 1 member 1, SLC1A1, EAAC1, EAAT3

Calculated MW
57100 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cell membrane ; Multi-pass membrane protein. Apical cell membrane ; Multi-pass membrane protein. Membrane; Multi-pass membrane protein.

Tissue Specificity
Expressed in all tissues tested including liver, muscle, testis, ovary, retinoblastoma cell line, neurons and brain (in which there was dense expression in substantia nigra, red nucleus, hippocampus and in cerebral cortical layers). .

Protein Name
Excitatory amino acid transporter 3

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 N-terminus of human EAAT3(10-27aa EWKRFLKNNWVLLSTVAA).

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.**

Anti-EAAT3 Antibody - Protein Information

Name SLC1A1 (HGNC:10939)

Function
Sodium-dependent, high-affinity amino acid transporter that mediates the uptake of L-glutamate and also L-aspartate and D-aspartate (PubMed:7914198, PubMed:7521911, PubMed:8857541, PubMed:26690923, PubMed:21123949, PubMed:33658209). Can also transport L-cysteine (PubMed:21123949). 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:7521911, PubMed:8857541, PubMed:26690923, PubMed:33658209). 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:8857541, PubMed:26690923). Plays an important role in L- glutamate and L-aspartate reabsorption in renal tubuli (PubMed:21123949). 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). Contributes to glutathione biosynthesis and protection against oxidative stress via its role in L-glutamate and L-cysteine transport (By similarity). Negatively regulated by ARL6IP5 (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P43003}. Apical cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P43003}. Synapse, synaptosome {ECO:0000250|UniProtKB:P51906}. Early endosome membrane {ECO:0000250|UniProtKB:P51906}. Late endosome membrane {ECO:0000250|UniProtKB:P51906}. Recycling endosome membrane {ECO:0000250|UniProtKB:P51906}

Tissue Location
Expressed in all tissues tested including liver, muscle, testis, ovary, retinoblastoma cell line,

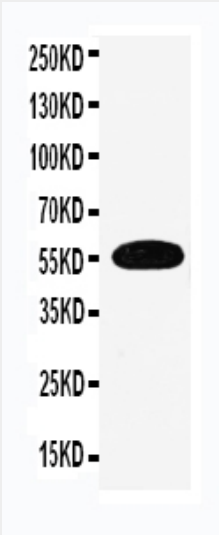
neurons and brain (in which there was dense expression in substantia nigra, red nucleus, hippocampus and in cerebral cortical layers)

Anti-EAAT3 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 Cytomety
- Cell Culture

Anti-EAAT3 Antibody - Images



Anti-EAAT3 antibody, ABO11475, Western blottingWB: Human Placenta Tissue Lysate

Anti-EAAT3 Antibody - Background

Solute carrier family 1 member 1, also called SLC1A1, is a protein that in humans is encoded by the SLC1A1 gene. By Southern analysis of a panel of human/rodent somatic cell hybrids and by fluorescence in situ hybridization(FISH), this gene is mapped to 9p24.2. This gene encodes a member of the high-affinity glutamate transporters that play an essential role in transporting glutamate across plasma membranes. In brain, these transporters are crucial in terminating the postsynaptic action of the neurotransmitter glutamate, and in maintaining extracellular glutamate concentrations below neurotoxic levels. This transporter also transports aspartate, and mutations in this gene are though to cause dicarboxylicamino aciduria, also known as glutamate-aspartate transport defect.