Datasheet for ABIN968626

anti-SLC1A2 antibody (AA 562-574)

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Overview

Quantity:	50 µg
Target:	SLC1A2
Binding Specificity:	AA 562-574
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This SLC1A2 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	Human EAAT2 aa. 562-574
Clone:	20-EAAT2
Isotype:	IgG1
Cross-Reactivity:	Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	SLC1A2
Alternative Name:	EAAT2 (SLC1A2 Products)
Background:	Electrogenic-coupled (Na+ and K+) glutamate transporters in nerve terminals and glial cells are essential for maintaining subtoxic levels of extracellular excitatory amino acid neurotransmitters (e.g. glutamate and aspartate). They are also important for modifying synaptic transmission through the cotransport of ions and neurotransmitters. Excitatory amino acid transporter 2 (EAAT2) has 8 alpha-helical transmembrane domains and two reentrant pore-loop-like structures whose conformation is altered during ion neurotransmitter transport. EAAT2 is primarily expressed in astrocytes in adult brain and spinal cord, however it is also found in axons during fetal development. Mice deficient in EAAT2 exhibit lethal epileptic seizures with destruction of hippocampal neurons and an increased susceptibility to cold-induced cortical injury. Such defects in glutamine transporters have also been implicated in stroke, brain trauma, Alzheimer's disease, amyotrophic lateral sclerosis, and Huntington's disease. Thus, glutamine transporters, such as EAAT2, are critical for prevention of neurotoxic brain injury and may regulate glutamatergic synaptic transmission. This antibody is routinely tested by western blot analysis. Synonyms: Excitatory amino acid transporter 2, Glutamate transporter 1, GLT1
Molecular Weight:	66 kDa
Pathways:	Dicarboxylic Acid Transport

Application Details

Comment:	Related Products: ABIN968545, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide

Handling

Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

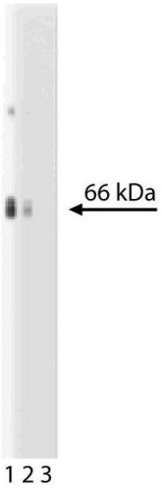
Product cited in:

Grunewald, Kanner: "The accessibility of a novel reentrant loop of the glutamate transporter GLT-1 is restricted by its substrate." in: **The Journal of biological chemistry**, Vol. 275, Issue 13, pp. 9684-9, (2000) (PubMed).

Yamada, Watanabe, Shibata, Nagashima, Tanaka, Inoue: "Glutamate transporter GLT-1 is transiently localized on growing axons of the mouse spinal cord before establishing astrocytic expression." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 18, Issue 15, pp. 5706-13, (1998) (PubMed).

Tanaka, Watase, Manabe, Yamada, Watanabe, Takahashi, Iwama, Nishikawa, Ichihara, Kikuchi, Okuyama, Kawashima, Hori, Takimoto, Wada: "Epilepsy and exacerbation of brain injury in mice lacking the glutamate transporter GLT-1." in: **Science (New York, N.Y.)**, Vol. 276, Issue 5319, pp. 1699-702, (1997) (PubMed).

Kirschner, Copeland, Gilbert, Jenkins, Amara: "Mouse excitatory amino acid transporter EAAT2: isolation, characterization, and proximity to neuroexcitability loci on mouse chromosome 2." in: **Genomics**, Vol. 24, Issue 2, pp. 218-24, (1995) (PubMed).



Western Blotting

Image 1. Western blot analysis of EAAT2 on a rat cerebrum lysate. Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the anti- rat EAAT2 antibody.

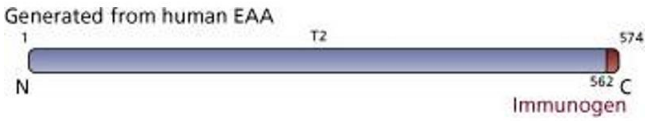


Image 2.