

EAAT2 (H-85): sc-15317

BACKGROUND

Excitatory amino acid transporters (EAATs) are membrane-bound proteins that are localized in glial cells and pre-synaptic glutamatergic nerve endings. EAATs transport the excitatory neurotransmitters L-glutamate and D-aspartate, a process that is essential for terminating the postsynaptic action of glutamate. The reuptake of amino acid neurotransmitters by EAAT proteins has been shown to protect neurons from excitotoxicity, which is caused by the accumulation of amino acid neurotransmitters. Three glutamate transporters have been identified in human brain, designated EAAT1-3. EAAT1 and EAAT3 are also expressed in various non-nervous tissues, while EAAT2 expression appears to be restricted to the brain. Surface expression of the glial glutamate transporter EAAT1 is stimulated by Insulin-like growth factor 1 through activation of phosphatidylinositol-3-kinase.

CHROMOSOMAL LOCATION

Genetic locus: SLC1A2 (human) mapping to 11p13; Slc1a2 (mouse) mapping to 2 E2.

SOURCE

EAAT2 (H-85) is a rabbit polyclonal antibody raised against amino acids 1-85 mapping near the N-terminus of EAAT2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EAAT2 (H-85) is recommended for detection of EAAT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EAAT2 (H-85) is also recommended for detection of EAAT2 in additional species, including porcine.

Suitable for use as control antibody for EAAT2 siRNA (h): sc-35255, EAAT2 siRNA (m): sc-35256, EAAT2 siRNA (r): sc-270106, EAAT2 shRNA Plasmid (h): sc-35255-SH, EAAT2 shRNA Plasmid (m): sc-35256-SH, EAAT2 shRNA Plasmid (r): sc-270106-SH, EAAT2 shRNA (h) Lentiviral Particles: sc-35255-V, EAAT2 shRNA (m) Lentiviral Particles: sc-35256-V and EAAT2 shRNA (r) Lentiviral Particles: sc-270106-V.

Molecular Weight of EAAT2: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

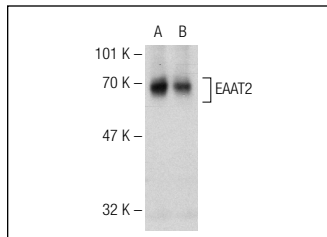
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

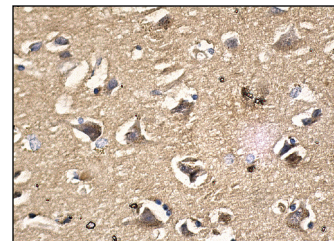
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



EAAT2 (H-85): sc-15317. Western blot analysis of EAAT2 expression in mouse brain (A) and rat brain (B) tissue extracts.



EAAT2 (H-85): sc-15317. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

- Rodriguez-Kern, A., et al. 2003. β -amyloid and brain-derived neuro-trophic factor, BDNF, up-regulate the expression of glutamate transporter GLT-1/EAAT2 via different signaling pathways utilizing transcription factor NF κ B. *Neurochem. Int.* 43: 363-370.
- Langley, R.R., et al. 2009. Generation of an immortalized astrocyte cell line from H-2Kb-tsA58 mice to study the role of astrocytes in brain metastasis. *Int. J. Oncol.* 35: 665-672.
- Bauer, D., et al. 2010. Abnormal glycosylation of EAAT1 and EAAT2 in prefrontal cortex of elderly patients with schizophrenia. *Schizophr. Res.* 117: 92-98.
- Liu, A.Y., et al. 2011. Neuroprotective drug riluzole amplifies the heat shock factor 1 (HSF1)- and glutamate transporter 1 (GLT1)-dependent cytoprotective mechanisms for neuronal survival. *J. Biol. Chem.* 286: 2785-2794.
- Varini, K., et al. 2012. Mislocalization of the excitatory amino-acid transporters (EAATs) in human astrocytoma and non-astrocytoma cancer cells: effect of the cell confluence. *J. Biomed. Sci.* 19: 10.


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Try **EAAT2 (E-1): sc-365634** or **EAAT2 (20): sc-135892**, our highly recommended monoclonal alternatives to EAAT2 (H-85). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EAAT2 (E-1): sc-365634**.