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Diagnostik & molekulare Diagnostik



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### Zuschläge

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- Expressversand

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# EAAT3 (h): 293T Lysate: sc-173052

## BACKGROUND

Excitatory amino acid transporter 1 (EAAT1) is one of the two glial glutamate transporters that clear the extracellular glutamate generated during neuronal signal transmission. 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.

## REFERENCES

1. Arriza, J.L., Fairman, W.A., Wadiche, J.I., Murdoch, G.H., Kavanaugh, M.P. and Amara, S.G. 1994. Functional comparisons of three glutamate transporter subtypes cloned from human motor cortex. *J. Neurosci.* 14: 5559-5569.
2. Kirschner, M.A., Copeland, N.G., Gilbert, D.J., Jenkins, N.A. and Amara, S.G. 1994. Mouse excitatory amino acid transporter EAAT2: isolation, characterization, and proximity to neuroexcitability loci on mouse chromosome 2. *Genomics* 24: 218-224.
3. Sutherland, M.L., et al. 1996. Glutamate transporter mRNA expression in proliferative zones of the developing and adult murine CNS. *J. Neurosci.* 16: 2191-2207.
4. Stoffel, W., Sasse, J., Duker, M., Muller, R., Hofmann, K., Fink, T. and Lichter, P. 1996. Human high affinity, Na<sup>+</sup>-dependent L-glutamate/L-aspartate transporter GLAST-1 (EAAT1): gene structure and localization to chromosome 5p11-p12. *FEBS Lett.* 386: 189-193.
5. Ikeda, J., Terakawa, S., Murota, S., Morita, I. and Hirakawa, K. 1996. Nuclear disintegration as a leading step of glutamate excitotoxicity in brain neurons. *J. Neurosci. Res.* 43: 613-622.
6. Rauen, T., Taylor, W.R., Kuhlbrodt, K. and Wiessner, M. 1998. High-affinity glutamate transporters in the rat retina: a major role of the glial glutamate transporter GLAST-1 in transmitter clearance. *Cell Tissue Res.* 291: 19-31.
7. Scott, H.L., Pow, D.V., Tannenber, A.E. and Dodd, P.R. 2002. Aberrant expression of the glutamate transporter excitatory amino acid transporter 1 (EAAT1) in Alzheimer's disease. *J. Neurosci.* 22: RC206.
8. Boehmer, C., Henke, G., Schniepp, R., Palmada, M., Rothstein, J.D., Bröer, S. and Lang, F. 2003. Regulation of the glutamate transporter EAAT1 by the ubiquitin ligase NEDD4-2 and the serum and glucocorticoid-inducible kinase isoforms SGK1/3 and protein kinase B. *J. Neurochem.* 86: 1181-1188.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: SLC1A1 (human) mapping to 9p24.2.

## PRODUCT

EAAT3 (h): 293T Lysate represents a lysate of human EAAT3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

EAAT3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive EAAT3 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.