

EAAT3 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 70	Source/Isotype: Rabbit	UniProt ID: #P43005	Entrez-Gene Id: 6505
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
Specificity/Sensitivity	EAAT3 Antibody recognizes endogenous levels of total EAAT3 protein.	
Species predicted to react based on 100% sequence homology	Monkey	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human EAAT3 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	During neurotransmission, glutamate is released from vesicles of the presynaptic cell, and glutamate receptors (e.g., NMDA Receptor, AMPA Receptor) bind glutamate for activation at the opposing postsynaptic cell. Excitatory amino acid transporters (EAATs) regulate and maintain extracellular glutamate concentrations below excitotoxic levels (1,2). In addition, glutamate transporters may limit the duration of synaptic excitation by an electrogenic process in which the transmitter is cotransported with three sodium ions and one proton, followed by countertransport of a potassium ion (1,2). Five EAATs (EAAT1-5) have been identified. EAAT1 and EAAT2 are expressed mainly in glia, while EAAT3, EAAT4, and EAAT5 are considered to be neuronal transporters (2). EAAT3 is found in the perisynaptic areas and cell bodies of glutamatergic and GABAergic neurons (3). Research studies have implicated abnormal EAAT3 expression in the pathophysiology of Schizophrenia (4,5).	
Background References	<ol style="list-style-type: none"> 1. Danbolt, N.C. (2001) <i>Prog Neurobiol</i> 65, 1-105. 2. Amara, S.G. and Fontana, A.C. (2002) <i>Neurochem Int</i> 41, 313-8. 3. Rothstein, J.D. et al. (1994) <i>Neuron</i> 13, 713-25. 4. Bauer, D. et al. (2008) <i>Schizophr Res</i> 104, 108-20. 5. Horiuchi, Y. et al. (2012) <i>Am J Med Genet B Neuropsychiatr Genet</i> 159B, 30-7. 	
Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.	
Applications Key	W: Western Blotting IP: Immunoprecipitation	
Cross-Reactivity Key	H: Human M: Mouse R: Rat	
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