

#3838 Store at -20°C

EAAT2 Antibody

✓ 100 µl
(10 Western mini-blots)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-F Endogenous	M, R, (H)	65 kDa	Rabbit**

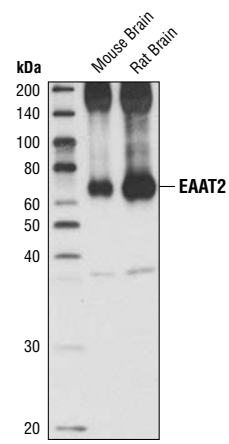
Background: Glutamate is the major excitatory neurotransmitter in the mammalian central nervous system. During neurotransmission, glutamate is released from vesicles of the pre-synaptic cell, and glutamate receptors (e.g. NMDA Receptor, AMPA Receptor) bind glutamate for activation at the opposing post-synaptic cell. Excitatory amino acid transporters (EAATs) regulate and maintain extracellular glutamate concentrations below excitotoxic levels. 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. Five EAATs (EAAT1-5) are characterized: EAAT2 (GLT-1) is primarily expressed in astrocytes but is also expressed in neurons of the retina and during fetal development (1). Homozygous EAAT2 knockout mice have spontaneous, lethal seizures and an increased predisposition to acute cortical injury (2). PKC phosphorylates Ser113 of EAAT2 and coincides with glutamate transport (3).

Specificity/Sensitivity: EAAT2 Antibody detects endogenous levels of total EAAT2 protein.

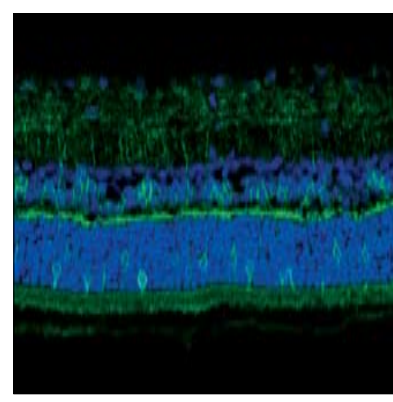
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to human EAAT2. Antibodies are purified by peptide affinity chromatography.

Background References:

- (1) Amara, S.G. and Fontana, A.C. (2002) *Neurochem Int* 41, 313–8.
- (2) Tanaka, K. et al. (1997) *Science* 276, 1699–702.
- (3) Casado, M. et al. (1993) *J Biol Chem* 268, 27313–7.



Western blot analysis of extracts from mouse and rat brain using EAAT2 Antibody.



Confocal immunofluorescent analysis of rat retina using EAAT2 Antibody (green). Blue pseudocolor = DRAQ5™ (fluorescent DNA dye).

Entrez-Gene ID #6506
Swiss-Prot Acc. #P43004

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.

***Species cross-reactivity is determined by Western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunofluorescence (IF-F)	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

- AMPA Receptor (GluR 2/3/4) Antibody #2460
- Phospho-NMDAR1 (Ser890) Antibody #3381
- NMDAR1 Antibody #4204
- NMDAR2A Antibody #4205
- PSD95 Antibody #2507
- Phospho-(Ser) PKC Substrate Antibody #2261
- Phospho-PKC Antibody Sampler Kit #9921
- Tris Buffered Saline with Tween 20 (TBST - 10X) #9997
- BSA #9998
- Nonfat Dry Milk #9999
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E—ELISA
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.