

Product Information

ANTI-EXCITATORY AMINO ACID TRANSPORTER 2 (EAAT-2, GLT-1)

Developed in Rabbit, IgG Fraction of Antiserum

Product Number **E 1401**

Product Description

Anti-Excitatory Amino Acid Transporter 2 (EAAT-2, GLT-1) is developed in rabbit using a synthetic peptide conjugated to KLH via an N-terminal cysteine as immunogen. This peptide corresponds to amino acids 16-31 (RMHDSHLSSEEPKHR) of the rat excitatory amino acid transporter 2 (EAAT-2) protein.

Anti-Excitatory Amino Acid Transporter 2 detects native EAAT2 (50 kDA) in mouse and rat brain extracts by immunoblotting. The signal was completely removed by preincubation with 25 µg/ml of the immunizing peptide. It is not recommended for immunohistochemistry.

Excitatory Amino Acid Transporters (EAATs) play critical roles in the re-uptake of amino acid neurotransmitters and may help modulate the termination of synaptic signaling. Precise regulation of excitatory amino acids such as glutamate is essential, as glutamate is not only the major excitatory neurotransmitter, but also a potent excitotoxin. Several glutamate transport subtypes have been identified in mammals, including EAAT1 (GLAST),¹ EAAT2 (GLT-1),² EAAT3 (EAAC1),^{3,4} EAAT4⁵ and EAAT5.⁶ Neuronal glutamate transport is primarily mediated by the EAAT3, EAAT4 and EAAT 5 transporters, while EAAT1 and EAAT2 are predominately expressed in astroglial cells. Defects in functional glutamate transport have been identified in the amyotrophic lateral sclerosis (ALS) brain and spinal cord,⁷ suggesting that defective glutamate transport may contribute to motor neuron degeneration.⁸ Recent data demonstrate that aberrant splicing of the EAAT2 mRNA transcript occurs in many ALS patients.⁹

Reagents

Anti-Excitatory Amino Acid Transporter 2 is supplied at 0.1 mg/ml in 0.05 M sodium phosphate buffer containing 0.1% sodium azide and 0.2% gelatin.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

Store product at 2-8 °C. Do not freeze. If slight turbidity occurs upon prolonged storage, clarify solution by centrifugation.

Product Profile

The recommended dilution is 2 µg/ml for immunoblotting using mouse or rat brain extract and chemiluminescent detection.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilution by titration test.

References

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