

Grik3 Antibody

Grik3: Glutamate receptor ionotropic kainate 3, glutamate receptor 7, gluR7, excitatory amino acid receptor 5, eea5

CATALOG No.:4389

BACKGROUND:

Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes (1). Grik3, also known as glutamate receptor 7, belongs to the kainate family of glutamate receptors, which are composed of four subunits and function as ligand-activated ion channels (2,3). Grik3 is highly homologous to the related ionotropic glutamate receptors Grik2 and Grik1. Grik3 has recently been shown to be an essential subunit of presynaptic kainate autoreceptors at hippocampal mossy fiber synapses as grik3-null mice show significantly reduced short- and long-term synaptic potentiation (4). Other reports have suggested that different polymorphisms in the Grik3 protein may be associated with neurological defects such as recurrent major depressive disorder and schizophrenia (5,6). This Grik3 antibody does not cross-react with Grik2.

SOURCE:

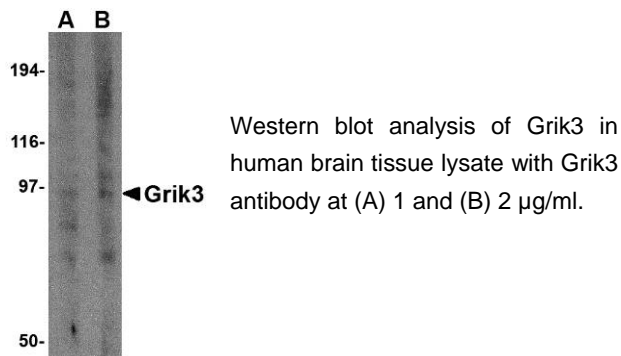
Rabbit polyclonal Grik3 antibody was raised against a 13 amino acid peptide near the amino terminus of the human Grik3 (GenBank accession no. CAI19119).

APPLICATION:

Grik3 antibody can be used for detection of Grik3 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) Human brain tissue lysate can be used as a positive control. Grik3 antibody is human, mouse and rat reactive. **For research use only.**

STORAGE:

Grik3 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4389P**.
Human Brain Tissue Lysate, Catalog No. **1303**.
Grik1 Antibody (CT), Catalog No. **4381**.
Grik1 Antibody (IN), Catalog No. **4383**.
Grik2 Antibody (C2), Catalog No. **4387**.

REFERENCES:

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3. Puranam RS, Eubanks JH, Heinemann SF, et al. Chromosomal localization of gene for human glutamate receptor subunit-7. *Somat. Cell Mol. Genet.* 1993; 19:581-8.
4. Pinheiro PS, Perrais D, Coussen F, et al. GluR7 is an essential subunit of presynaptic kainate autoreceptors at hippocampal mossy fiber synapses. *Proc. Natl. Acad. Sci. USA* 2007; 104:12181-6.
5. Schiffer HH and Heinemann SF. Association of the human kainate receptor GluR7 gene (GRIK3) with recurrent major depressive disorder. *Am. J. Genet. B. Neuropsychiatr. Genet.* 2007; 144:20-6.
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