

**Grik3 Antibody**  
**Catalog # ASC10609****Specification**

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**Grik3 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q13003</a>
Other Accession	<a href="#">CAI19119</a> , <a href="#">56205347</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	Grik3 antibody can be used for detection of Grik3 by Western blot at 1 - 2 µg/mL.

**Grik3 Antibody - Additional Information**

Gene ID	2899
Target/Specificity	
GRIK3;	

**Reconstitution & Storage**

Grik3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

Grik3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Grik3 Antibody - Protein Information**

**Name** GRIK3

**Synonyms** GLUR7

**Function**

Receptor for glutamate that functions as a ligand-gated ion channel in the central nervous system and plays an important role in excitatory synaptic transmission. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. The postsynaptic actions of Glu are mediated by a variety of receptors that are named according to their selective agonists. This receptor binds domoate > kainate >> L-glutamate = quisqualate >> AMPA = NMDA.

**Cellular Location**

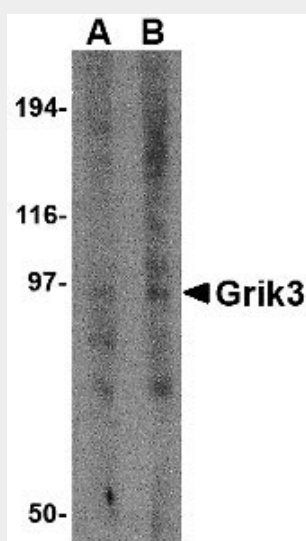
Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane; Multi-pass membrane protein

## Grik3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Grik3 Antibody - Images



Western blot analysis of Grik3 in human brain tissue lysate with Grik3 antibody at (A) 1 and (B) 2  $\mu\text{g/mL}$ .

## Grik3 Antibody - Background

**Grik3 Antibody:** Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. 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. 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. 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. This Grik3 antibody does not cross-react with Grik2.

## Grik3 Antibody - References

Tanaka K. Functions of glutamate transports in the brain. *Neurosci. Res.*2000; 37:15-9.  
Pinheiro P and Mulle C. Kainate receptors. *Cell Tissue Res.*2006; 326:457-82.  
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.  
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.