

Grik1 Antibody

Catalog # ASC10606

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P39086
Other Accession	P39086 , 729597
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	103981
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Grik1 antibody can be used for detection of Grik1 by Western blot at 0.5 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	2897
Other Names	Glutamate receptor ionotropic, kainate 1, GluK1, Excitatory amino acid receptor 3, EAA3, Glutamate receptor 5, GluR-5, GluR5, GRIK1, GLUR5
Target/Specificity	GRIK1;
Reconstitution & Storage	Grik1 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	Grik1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRIK1
Synonyms	GLUR5
Function	Ionotropic glutamate receptor that functions as a cation- permeable ligand-gated ion channel, gated by L-glutamate and the glutamatergic agonist kainic acid. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. Binding of the excitatory neurotransmitter L-glutamate induces a conformation change, leading to the opening of the cation channel, and thereby converts the chemical signal to an electrical impulse. The receptor then desensitizes rapidly and enters a

transient inactive state, characterized by the presence of bound agonist.

Cellular Location

Cell membrane {ECO:0000250 | UniProtKB:P22756}; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250 | UniProtKB:P22756}; Multi-pass membrane protein

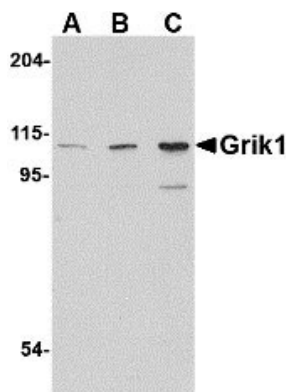
Background

Grik1 Antibody: Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. Grik1, also known as glutamate receptor 5, belongs to the kainate family of glutamate receptors, which are composed of four subunits and function as ligand-activated ion channels. Grik1 is expressed in GABAergic interneurons of the hippocampus and are thought to participate in the formation of various subtypes of kainate receptors with Grik2 and KA2. Stimulation of Grik1 leads to intracellular calcium release and activation of protein kinase C. Excessive activation has been associated with psychiatric, neurological and neurodegenerative diseases. Numerous isoforms of Grik1 are known to exist and may be subject to RNA editing within the second transmembrane domain, which is thought to alter the properties of ion flow.

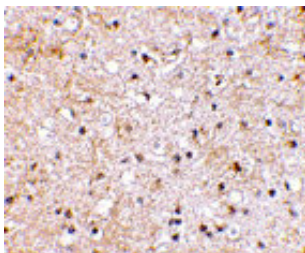
References

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.
Bureau I, Dieudonne S, Coussen F, et al. Kainate receptor-mediated responses in the CA1 field of wild-type and GluR6-deficient mice. *J. Neurosci.*1999; 19:653-63.
Christensen JK, Paternain AV, Selak S, et al. A mosaic of functional kainate receptors in hippocampal interneurons. *J. Neurosci.*2004; 24:8986-93.

Images

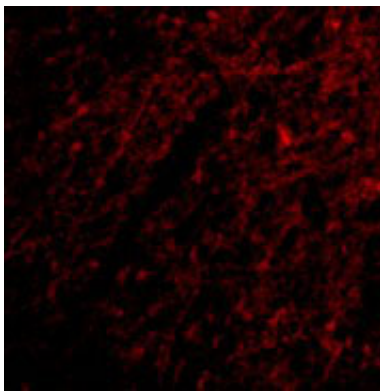


Western blot analysis of Grik1 in P815 cell lysate with Grik1 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemical staining of human brain tissue using Grik1 antibody at 2.5 µg/mL.

Immunofluorescence of Grik1 in Human Brain cells with Grik1 antibody at 20 µg/mL.



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