10320 Camino Santa Fe, Suite G
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Grik4 Antibody
Catalog # ASC10611

Specification

Grik4 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q16099
Other Accession	Q16099, 209572625
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**Grik4 antibody can be used for detection of Grik4 by Western blot at 0.5 - 2 µg/mL. Despite its predicted molecular weight, Grik4 often migrates at a lower molecular weight in SDS-PAGE. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.**

Grik4 Antibody - Additional Information

Gene ID	**2900**

Target/Specificity
GRIK4;

Reconstitution & Storage
Grik4 antibody can be stored at 4℃ for three months and -20℃, 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
Grik4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Grik4 Antibody - Protein Information

Name GRIK4

Synonyms GRIK

Function
Ionotropic glutamate receptor that functions as a cation- permeable ligand-gated ion channel. Cannot form functional channels on its own (PubMed:8263508). Shows channel activity only in heteromeric assembly with GRIK1, GRIK2 and GRIK3 subunits (By similarity).

Cellular Location

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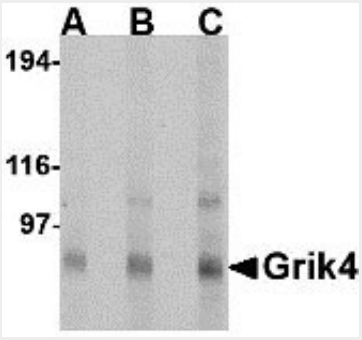
Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q8BMF5}; Multi-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q8BMF5}; Multi-pass membrane protein

Grik4 Antibody - Protocols

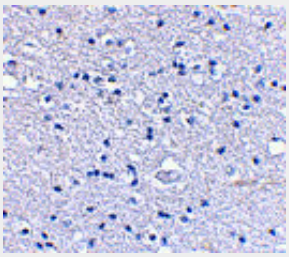
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

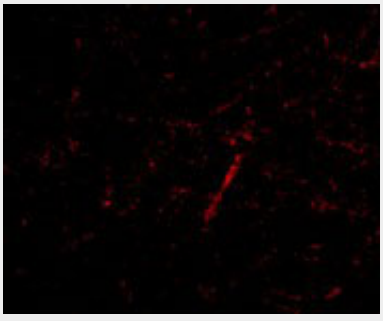
Grik4 Antibody - Images



Western blot analysis of Grik4 in Rat brain tissue lysate with Grik4 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemical staining of human brain tissue using Grik4 antibody at 2.5 µg/mL.



Immunofluorescence of Grik4 in Human Brain cells with Grik4 antibody at 20 µg/mL.

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Grik4 Antibody - Background

Grik4 Antibody: Grik4 codes for the KA1 subunit of kainate-type ionotropic glutamate receptors which are critical regulators of network activity that act by modifying neuronal excitability, directly and indirectly, through GABAergic interneurons. Five subunits can assemble to form kainate receptors (KARs): GluR5 (coded by Grik1), GluR6 (coded by Grik2), and GluR7 (coded by Grik3) are the low-affinity subunits, and KA1 and KA2 are the high-affinity subunits. In the adult brain, KARs are located pre- and postsynaptically on pyramidal cells and on interneurons. Kainate receptors on GABA-containing interneurons enhance GABA release and thereby downregulate glutamatergic signaling. KARs have been implicated in numerous psychiatric disorders. Case control studies show significant association of Grik4 with both schizophrenia and bipolar disorder.

Grik4 Antibody - References

Tanaka K. Functions of glutamate transporters in the brain. Neurosci. Res.2000; 37:15-9.
Pinheiro P and Mulle C. Kainate receptors. Cell Tissue Res.2006; 326:457-82.
Mayer ML. GRIK4 and the Kainate Receptor. Am. J. Psychiatry2007; 164:1148.
Pickard BS, Malloy MP, Christoforou A, et al. Cytogenetic and genetic evidence supports a role for the kainate-type glutamate receptor gene, GRIK4, in schizophrenia and bipolar disorder. Mol. Psychiatry2006; 11:847-57.