

# Grik5 Antibody

Catalog # ASC10612

## Product Information

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| <b>Application</b>           | WB, IF, E, IHC-P                                                                                                                                                                                                       |
| <b>Primary Accession</b>     | <a href="#">Q16478</a>                                                                                                                                                                                                 |
| <b>Other Accession</b>       | <a href="#">NP_002079</a> , <a href="#">29029597</a>                                                                                                                                                                   |
| <b>Reactivity</b>            | Human, Mouse, Rat                                                                                                                                                                                                      |
| <b>Host</b>                  | Rabbit                                                                                                                                                                                                                 |
| <b>Clonality</b>             | Polyclonal                                                                                                                                                                                                             |
| <b>Isotype</b>               | IgG                                                                                                                                                                                                                    |
| <b>Calculated MW</b>         | 109265                                                                                                                                                                                                                 |
| <b>Concentration (mg/ml)</b> | 1 mg/mL                                                                                                                                                                                                                |
| <b>Conjugate</b>             | Unconjugated                                                                                                                                                                                                           |
| <b>Application Notes</b>     | Grik5 antibody can be used for detection of Grik5 by Western blot at 0.5 - 2 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 $\mu$ g/mL. For immunofluorescence start at 20 $\mu$ g/mL. |

## Additional Information

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| <b>Gene ID</b>                      | 2901                                                                                                                                                                                                                                          |
| <b>Other Names</b>                  | Glutamate receptor ionotropic, kainate 5, GluK5, Excitatory amino acid receptor 2, EAA2, Glutamate receptor KA-2, KA2, GRIK5, GRIK2                                                                                                           |
| <b>Target/Specificity</b>           | GRIK5; This Grik5 antibody does not cross-react with Grik4.                                                                                                                                                                                   |
| <b>Reconstitution &amp; Storage</b> | Grik5 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. |
| <b>Precautions</b>                  | Grik5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| <b>Name</b>     | GRIK5                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Synonyms</b> | GRIK2                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Function</b> | Ionotropic glutamate receptor that functions as a cation- permeable ligand-gated ion channel, gated by L-glutamate and the glutamatergic agonist kainic acid. Cannot form functional channels on its own and produces channel activity only in heteromeric assembly with GRIK1 and GRIK2 subunits (PubMed: <a href="#">1321949</a> , PubMed: <a href="#">14511640</a> , PubMed: <a href="#">8730589</a> ). Can form functional heteromeric receptors with GRIK3 (By similarity). |

## Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q61626}; Multi-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q61626}; Multi-pass membrane protein. Note=Association with GRIK2 is required for its cell membrane localization and channel activity

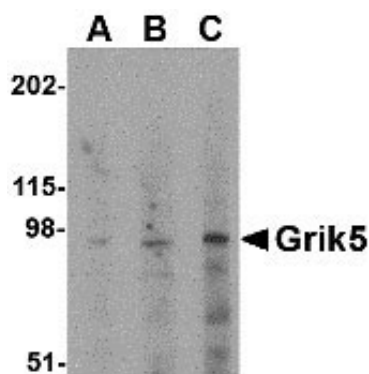
## Background

**Grik5 Antibody:** Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. Grik5, also known as kainate-preferring glutamate receptor subunit KA2, belongs to the kainate family of glutamate receptors, which are composed of four subunits and function as ligand-activated ion channels. Grik5 is highly homologous to the related ionotropic glutamate receptor Grik4 (also known as KA1). Like Grik4, Grik5 does not form homomeric channels, but instead forms heteromers with Grik2. In Grik2- but not Grik1-null mice, Grik5 surface expression is greatly reduced in neurons, indicating that Grik2/Grik5 heteromers are required for exit from the endoplasmic reticulum to the cell surface.

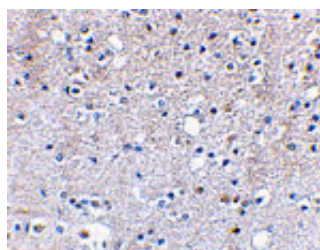
## References

Tanaka K. Functions of glutamate transports in the brain. *Neurosci. Res.*2000; 37:15-9.  
Herb A, Burnashev N, Werner P, et al. The KA-2 subunit of excitatory amino acid receptors shows widespread expression in brain and forms ion channels with distantly related subunits. *Neuron*1992; 8:775-85.  
Pinheiro P and Mulle C. Kainate receptors. *Cell Tissue Res.*2006; 326:457-82.  
Nasu-Nishimura Y, Hurtado D, Braud S, et al. Tification of an endoplasmic reticulum-retention motif in an intracellular loop of the kainate receptor subunit KA2. *J. Neurosci.*2006; 26:7014-21.

## Images

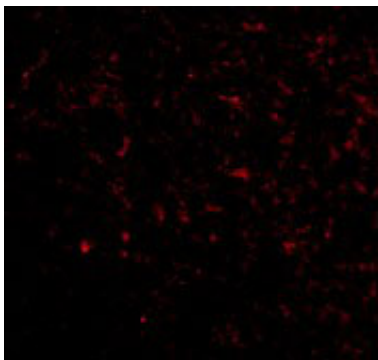


Western blot analysis of Grik5 in human brain tissue lysate with Grik5 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemical staining of human brain tissue using Grik5 antibody at 2.5 µg/mL.

Immunofluorescence of Grik5 in Human Brain cells with Grik5 antibody at 20 µg/mL.



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