

# Grik4 (CT) antibody (pAb)

Rabbit Anti-Human/Mouse/Rat Grik4 (CT)

## Instruction Manual

Catalog Number	PK-AB718-4391
Synonyms	Grik4 Antibody: Glutamate receptor ionotropic kainate 4 precursor, Glutamate receptor KA-1, Excitatory amino acid receptor 1, EAA1
Description	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. Despite its predicted molecular weight, Grik4 often migrates at a lower molecular weight in SDS-PAGE.
Quantity	100 µg
Source / Host	Rabbit
Immunogen	Grik4 antibody was raised in rabbits against a 19 amino acid peptide near the carboxy terminus of the human Grik4.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human, Mouse, Rat
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C 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.
Applications	E, WB, IHC, IF INote: Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually.  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.
Images	Available upon request.
References	Tanaka K. Functions of glutamate transporters in the brain. <i>Neurosci. Res.</i> 2000; 37:15-9. Pinheiro P and Mulle C. Kainate receptors. <i>Cell Tissue Res.</i> 2006; 326:457-82. Mayer ML. GRIK4 and the Kainate Receptor. <i>Am. J. Psychiatry</i> 2007; 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. <i>Mol. Psychiatry</i> 2006; 11:847-57.
Images	Available upon request.
Related Products	Cat.No. PK-AB718-4391P; Grik4 Peptide Cat.No. PK-AB718-1463; Rat Brain Tissue Lysate

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