

Product datasheet for **TA328846**

Grik4 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KNRINRAPERLGK, corresponding to amino acid residues 49-61 of rat GluK4. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	glutamate ionotropic receptor kainate type subunit 4
Database Link:	NP_036704 Entrez Gene 2900 Human Entrez Gene 110637 Mouse Entrez Gene 24406 Rat Q01812



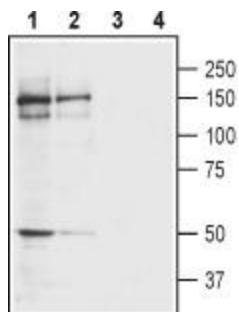
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Background:

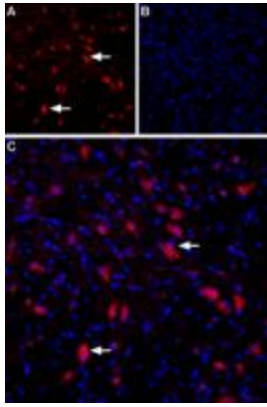
Glutamate is the principal excitatory neurotransmitter in the central nervous system (CNS). Glutamate is involved in cognitive functions like learning and memory in the brain. Imbalances in glutamatergic transmission have profound physiological and behavioral consequences. Ionotropic glutamate receptors are classified functionally and by molecular homology into three receptor classes: N-methyl-D-aspartate (NMDA), amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), and kainate (KA). KA receptors assemble as tetramers from five subunit types, GluK1, GluK2, GluK3, GluK4 and GluK5. The GluK1-GluK3 subunits have low glutamate affinity and are capable of forming functional homomeric channels. GluK4 and GluK5 are high-affinity kainate receptor subunits that bind glutamate but require coassembly with one or more GluK1-GluK3 subunits to form functional channels. The heteromultimeric assembly of kainate receptors like many other ion channels leads to the formation of receptors with unique pharmacological and functional properties. Unlike the other KA receptor subunits, which are expressed throughout the CNS, GluK4 expression is limited to only a few regions of the brain, and expression is highest in the CA3 region of the hippocampus and dentate gyrus. The GluK4 receptor subunit gene, GRIK4, is located near the tip of the long arm of chromosome 11. Genetic variants in the GRIK4 gene have been demonstrated to associate with several psychiatric disorders. GRIK4 has been identified as a susceptibility gene in schizophrenia and bipolar disorder. GluK4 may also play a role in excitotoxic Neurodegeneration.

Synonyms:

EAA1; GRIK; KA1

Product images:

Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain membranes: 1, 2. Anti-Kainate Receptor GluK4 (extracellular) antibody, (1:400). 3, 4. Anti-Kainate Receptor GluK4 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Kainate receptor GluK4 in rat cerebellar deep nuclei. Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-Kainate Receptor GluK4 (extracellular) antibody, (1:100). A. GluK4 staining (red) appears in neurons (arrows) of deep cerebellar nuclei. B. Cell nuclei in the same section are visualized with DAPI (blue). C. Merge of the two images.