

Product datasheet for **TA328827**

Grik1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KASGEVSKHLYKVVKK, corresponding to amino acid residues 402-417 of rat Kainate Receptor GluR5. 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, 0.025% 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 1
Database Link:	NP_058937 Entrez Gene 29559 Rat P22756

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Background:

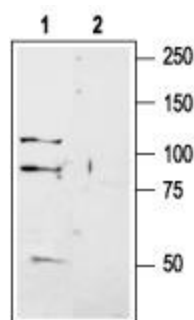
L-Glutamate, the major excitatory neurotransmitter in the central nervous system (CNS), operates through several receptors that are categorized as ionotropic (ligand-gated cation channels) or metabotropic (G-protein-coupled receptors). The ligand-gated ion channel family consists of fifteen members that have been subdivided into three families based upon their pharmacological profile: the α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA)-preferring receptors, the N-methyl-D-aspartate (NMDA)-preferring receptors, and the kainate-preferring receptors. The kainate receptor subfamily consists of five members that have been further subdivided into two classes based upon structural homology and functional characteristics. GluR5, GluR6, and GluR7 receptor subunits share a high degree of homology and are able to form functional channels when expressed in heterologous systems. The KA-1 and KA-2 receptors are unable to form functional channels on their own, but when coexpressed with GluR5-7 receptor subunits, they form channels with high affinity for kainate. Like AMPA receptors, the functional unit of endogenous kainate receptors is believed to be a tetramer, which can be either homomeric or heteromeric. Kainate receptors GluR5 and GluR6 (but not GluR7, KA-1, or KA-2) can undergo RNA editing; as in the AMPA receptor GluR2, a glutamine (Q) residue in the channel pore is edited to encode arginine (R) in the mature protein. Substitution of Q with R modulates the properties of the channel, producing channels with reduced single channel conductance and lower permeability to Ca^{2+} . GluR5 is highly expressed in dorsal root ganglion (DRG) neurons of the peripheral nervous system (PNS) as well as in several structures of the CNS including the amygdala, the hippocampus, and Purkinje cells of the cerebellum. GluR5 has been implicated in the modulation of synaptic transmission and synaptic plasticity in both the CNS and PNS, but the exact physiological function of GluR5 is not well understood. Nevertheless, an involvement in persistent pain and some types of learning has been proposed.

Synonyms:

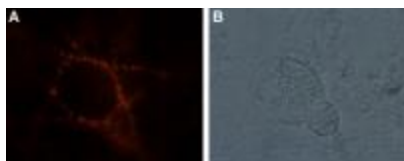
EAA3; EEA3; GLR5; GluR-5; GLUR5

Note:

This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

Product images:


Western blot analysis of rat brain membranes: 1. Anti-Kainate Receptor GluK1 (extracellular) antibody, (1:200). 2. Anti-Kainate Receptor GluK1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Kainate Receptor GluK1 in rat DRG neurons. Immunocytochemical staining of living rat dorsal root ganglion (DRG). A. Extracellular staining of cells using Anti-Kainate Receptor GluK1 (extracellular) antibody, (1:50) followed by goat anti-rabbit-AlexaFluor-555 secondary antibody (red). B. Live view of the same field.