Human KA2/GRIK5 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2916E
Catalog Number: MAB113341

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human KA2/GRIK5 in direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2916E
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide sequence Accession # Q16478
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

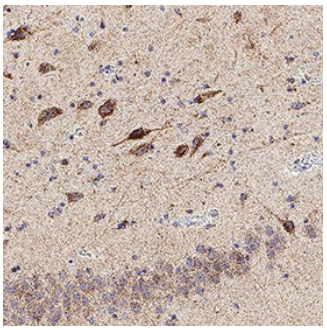
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of Human Brain Hippocampus

DATA

Immunohistochemistry



Detection of KA2/GRIK5 in Human Brain Hippocampus. KA2/GRIK5 was detected in immersion fixed paraffin-embedded sections of Human Brain Hippocampus using Rabbit Anti-Human KA2/GRIK5 Monoclonal Antibody (Catalog # MAB113341) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

GRIK5 (Glutamate receptor, ionotropic kainate 5) is a receptor for glutamate and is one of the 5 types of kainate receptor subunits. L-Glutamate acts as an excitatory neurotransmitter at many synapses in the CNS. The GRIK5 protein forms functional heteromic kainate-preferring ionic channels with the subunits encoded by related gene family members. Kainate receptors have both presynaptic and postsynaptic actions and a limited distribution in the brain. Kainate receptors have been shown to have connections with several neurological diseases and conditions. There is linkage to schizophrenia, depression, autism, Huntington's, bipolar disorder, and epilepsy among others. KA2 is relatively abundant in all areas of the brain, most notably in dentate gyrus, pyramidal neurons of CA3, cerebellar granule cells, as well as being present in superficial and deep laminae of the neocortex.

References:

1. Entrez Gene: GRIK5 glutamate receptor, ionotropic, kainate 5.
2. Szpirer C, Molne M, Antonacci R, Jenkins NA, Finelli P, Szpirer J, Riviere M, Gilbert DJ, Copeland NG, *et al.* "The Genese Encoding the Glutamate Receptor Subunits Ka1 and KA2 (GRIK4 and GRIK5) are located on separate chromosomes in Human, Mouse and Rat". Proc Natl Acad Sci U.S.A. 1995 Jan; **91(25)**:11849.
3. Contractor A, Mulle C, Swanson GT. "Kainate Receptors Coming of Age: Milestones of Two Decades of Research". Trends in Neurosciences. 2011 Mar; **34(3):**154.
4. Matute C. "Therapeutic Potential of Kainate Receptors". CNS Neuroscience & Therapeutics. 2011 Dec; **17(6):**661.

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