PRODUCT INFORMATION

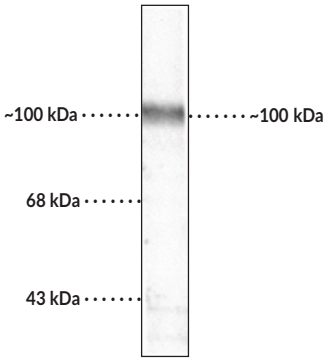
GluR2 Polyclonal Antibody

Item No. 29278

Overview and Properties

Contents:	This vial contains 100 µl of affinity-purified polyclonal antibody from pooled serum.
Synonyms:	AMPA 2, AMPA-selective Glutamate Receptor 2, GluA2, Glutamate Ionotropic Receptor AMPA Type Subunit 2, GRIA2
Immunogen:	Peptide corresponding to amino acid residues from rat GluR2, conjugated to keyhole limpet hemocyanin (KLH)
Molecular Weight:	~100 kDa
Species Reactivity:	(+) Rat
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 µg/ml BSA, and 50% glycerol
Host:	Rabbit
Applications:	WB; the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



WB of a rat hippocampal lysate showing the specific immunolabeling of the ~100 kDa GluR2 protein.

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Description

AMPA receptors are ionotropic glutamate receptors that mediate excitatory synaptic transmission.[1,2] They are tetrameric protein complexes expressed throughout the CNS in both neurons and glia that are assembled from combinations of GluR1, GluR2, GluR3, and GluR4, also known as GluR-A-D, subunits, each of which has extracellular N-terminal and ligand-binding domains, a channel domain consisting of three membrane-spanning helices and a channel pore loop, and an intracellular C-terminus.[1,3-5] GluR1 and GluR2 are predominantly expressed in the forebrain with low levels of GluR3 and GluR4, and pyramidal neurons express AMPA receptors primarily comprised of heterotetramers of GluR1 and GluR2 subunits. GluR2 is encoded by *GRIA2* and regulates AMPA receptor calcium permeability, assembly, trafficking, and single channel conductance.[1,6] It undergoes RNA editing at position 586, the Q/R site, to introduce an arginine residue that renders GluR2 subunit-containing AMPA receptors impermeable to calcium.[1,6,7] Motor neurons isolated from *Gria2*-deficient mouse embryos exhibit increased calcium influx and increased susceptibility to AMPA receptor-mediated excitotoxicity.[7] Heterozygous knockdown of *Gria2* accelerates motor neuron degradation and decreases lifespan in the SOD1G93A transgenic mouse model of amyotrophic lateral sclerosis. *GRIA2* expression is reduced in postmortem hippocampus from patients with chronic schizophrenia.[8] Cayman's GluR2 Polyclonal Antibody can be used for Western blot (WB) applications. The antibody detects GluR2 at approximately 100 kDa from rat samples.

References

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