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Anti-NMDAR2B Antibody

Rabbit polyclonal antibody to NMDAR2B
Catalog # AP61409

Product Information

Application	WB
Primary Accession	Q13224
Other Accession	Q01097
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	166367

Additional Information

Gene ID	2904
Other Names	NMDAR2B; Glutamate receptor ionotropic, NMDA 2B; GluN2B; Glutamate [NMDA] receptor subunit epsilon-2; N-methyl D-aspartate receptor subtype 2B; NMDAR2B; NR2B; N-methyl-D-aspartate receptor subunit 3; NR3; hNR3
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human NMDAR2B. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	GRIN2B {ECO:0000303|Ref.3, ECO:0000312|HGNC:HGNC:4586}
Function	Component of N-methyl-D-aspartate (NMDA) receptors (NMDARs) that function as heterotetrameric, ligand-gated cation channels with high calcium permeability and voltage-dependent block by Mg(2+) (PubMed:24272827, PubMed:24863970, PubMed:26875626, PubMed:26919761, PubMed:27839871, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). Participates in synaptic plasticity for learning and memory formation by contributing to the long-term depression (LTD) of hippocampus membrane currents (By similarity). Channel activation requires binding of the neurotransmitter L-glutamate to the GluN2 subunit, glycine or D-serine binding to the GluN1 subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:24272827, PubMed:24863970, PubMed:26875626, PubMed:26919761,

PubMed:27839871, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). NMDARs mediate simultaneously the potasium efflux and the influx of calcium and sodium (By similarity). Each GluN2 subunit confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, Ca2(+) permeability, and binding to allosteric modulators (PubMed:26875626, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). In concert with DAPK1 at extrasynaptic sites, acts as a central mediator for stroke damage. Its phosphorylation at Ser-1303 by DAPK1 enhances synaptic NMDA receptor channel activity inducing injurious Ca2+ influx through them, resulting in an irreversible neuronal death (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q00960}; Multi-pass membrane protein. Cell projection, dendrite. Late endosome {ECO:0000250|UniProtKB:Q01097}. Lysosome {ECO:0000250|UniProtKB:Q01097}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q01097}. Note=Co-localizes with the motor protein KIF17 along microtubules. {ECO:0000250|UniProtKB:Q01097}

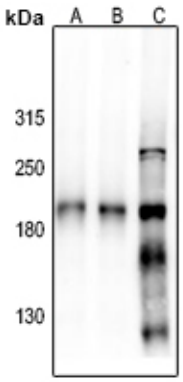
Tissue Location

Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia.

Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human NMDAR2B. The exact sequence is proprietary.

Images



Western blot analysis of NMDAR2B expression in rat brain (A), mouse brain (B), U87MG (C) whole cell lysates.