

NMDAR2B (5P4) Rabbit Monoclonal Antibody

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Catalog # AP93834

Product Information

Application	WB
Primary Accession	Q01097
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Calculated MW	165959

Additional Information

Gene ID	14812
Other Names	Glutamate receptor ionotropic, NMDA 2B, GluN2B, Glutamate [NMDA] receptor subunit epsilon-2, N-methyl D-aspartate receptor subtype 2B, NMDAR2B, NR2B, Grin2b {ECO:0000312 MGI:MGI:95821}
Dilution	WB~~1:1000
Storage Conditions	-20°C

Protein Information

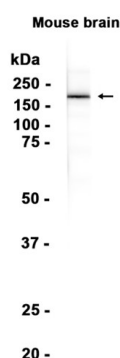
Name	Grin2b {ECO:0000312 MGI:MGI:95821}
Function	Component of N-methyl-D-aspartate (NMDA) receptors (NMDARs) that function as heterotetrameric, ligand-gated cation channels with high calcium permeability and voltage-dependent block by Mg(2+) (PubMed:26912815). Participates in synaptic plasticity for learning and memory formation by contributing to the long-term depression (LTD) of hippocampus membrane currents (PubMed:8789948). 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+) (Probable) (PubMed:1377365, PubMed:20141836, PubMed:7790891). NMDARs mediate simultaneously the potassium 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 (By similarity). In concert with DAPK1 at extrasynaptic sites, acts as a central mediator for stroke damage (PubMed:20141836). 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 (PubMed:20141836).

Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250 UniProtKB:Q00960}. Postsynaptic cell membrane {ECO:0000250 UniProtKB:Q00960}; Multi-pass membrane protein {ECO:0000250 UniProtKB:Q00960}. Cell projection, dendrite {ECO:0000250 UniProtKB:Q13224}. Late endosome. Lysosome Cytoplasm, cytoskeleton. Note=Co- localizes with the motor protein KIF17 along microtubules
Tissue Location	Detected in brain (at protein level) (PubMed:8789948). Detected throughout the brain, and in brain stem trigeminal nucleus (PubMed:8789948). Detected in forebrain (PubMed:1377365).

Background

NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine. 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.

Images



Western blot analysis of extracts from Mouse brain tissue using AP93834 at 1:1000.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.