10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-NMDAR2B Antibody

Catalog # ABO10545

Product Information

Application	WB
Primary Accession	Q13224
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Glutamate receptor ionotropic, NMDA 2B(GRIN2B) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2904
Other Names	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, GRIN2B, NMDAR2B
Calculated MW	166367
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Rat, Human
Subcellular Localization	Cell membrane; Multi-pass membrane protein. Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein.
Tissue Specificity	Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia. .
Source	Eukaryota
Protein Name	Glutamate receptor ionotropic, NMDA 2B
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human NMDAR2B(1131-1146aa, DFYLDQFRTKENSPHW), identical to the related mouse and rat sequence.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

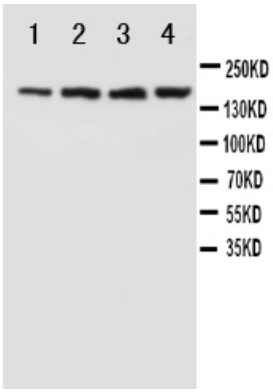
Protein Information

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 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 (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

The N-methyl-D-aspartate receptor 2B, also names as GRIN2B. The sequence of the predicted 1,484-amino acid human protein is 98% and 96% identical to the sequences of the rat and mouse Nmdar2b proteins, respectively. Nmdar2B gene is located on mouse chromosome 6 between Rho and Ly49 centromerically and Glb telomerically. Mapping of the human NMDAR2B receptor subunit gene(GRIN2B) to chromosome 12p12 overexpression of NMDA receptor 2B(NR2B) in the forebrains of transgenic mice leads to enhanced activation of NMDA receptors, facilitating synaptic potentiation in response to stimulation at 10-100 Hz.

Images



Anti-NMDAR2B antibody, ABO10545, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Brain Tissue LysateLane 3: Mouse Brain Tissue LysateLane 4: Mouse Brain Tissue Lysate

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