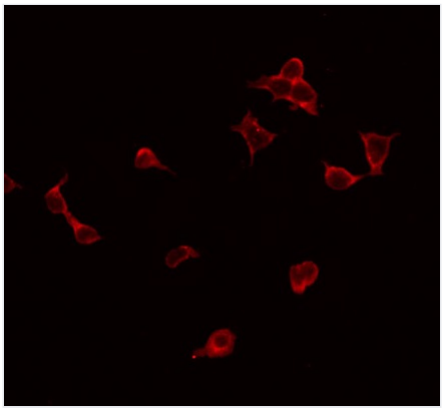
NMDAR2B Antibody – Rabbit Polyclonal

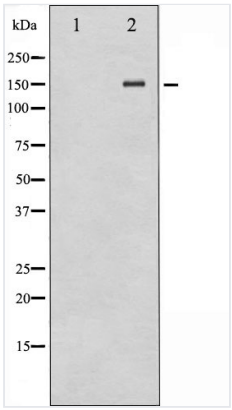
PRODUCT OVERVIEW

Product Name	NMDAR2B, Polyclonal Antibody
Full Product Name	NMDAR2B Antibody
Product Gene Name	anti-NMDAR2B antibody
Product Synonym Gene Name	GRIN2B
Product Synonym Names	AW490526; EIEE27; Glutamate [NMDA] receptor subunit epsilon 2; Glutamate [NMDA] receptor subunit epsilon-2; Glutamate Receptor Ionotropic N Methyl D Aspartate 2B; Glutamate Receptor Ionotropic N Methyl D Aspartate subunit 2B; Glutamate receptor ionotropic NMDA2B; Glutamate receptor subunit epsilon 2; Glutamate receptor, ionotropic, NMDA2B (epsilon 2); GRIN 2B; GRIN2B; hNR 3; hNR3; MGC142178; MGC142180; MRD6; N methyl D asparate receptor channel subunit epsilon 2; N methyl D aspartate receptor subtype 2B; N methyl D aspartate receptor subunit 2B; N methyl D aspartate receptor subunit 3; N-methyl D-aspartate receptor subtype 2B; N-methyl-D-aspartate receptor subunit 3; NMDA NR2B; NMDA R2B; NMDAR2B; NMDE2; NMDE2_HUMAN; NME2; NR2B; NR3
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Concentration	1mg/ml (lot specific)
Specificity	NMDAR2B antibody detects endogenous levels of total NMDAR2B
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	NMDAR2B peptide (MBS9617533) is used for blocking the activity of NMDAR2B antibody (MBS9601976)
Molecular Weight	Observed: 140 kDa Predicted: 167 kDa
3D Structure	ModBase 3D Structure for Q13224
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human NMDAR2B
Subcellular Location	Cell Membrane. Cell Junction > Synapse > Postsynaptic Cell Membrane.
Tissue Specificity	Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia.
Predicted Cross Reactivity	**Pig, Bovine, Horse, Rabbit, Dog, Xenopus**
Similarity	Pig (91%), Bovine (91%), Horse (91%), Rabbit (91%), Dog (91%), Xenopus (91%)
Conjugation	Unconjugated
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.

Applications Tested/Suitable for anti-NMDAR2B antibody	Western Blot (WB), Immunofluorescence (IF), Immunocytochemistry (ICC), ELISA (EIA)
Application Notes for anti-NMDAR2B antibody	WB: 1:500-1:2000 IF/ICC: 1:100-1:500
Related Product Information for anti-NMDAR2B antibody	Description: N-methyl-D-aspartate (NMDA) receptors are a class of ionotropic glutamate receptors. NMDA receptor channel has been shown to be involved in long-term potentiation, an activity-dependent increase in the efficiency of synaptic transmission thought to underlie certain kinds of memory and learning. Function: Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg2+ (PubMed:8768735, PubMed:26919761, PubMed:26875626, PubMed:28126851). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:8768735, PubMed:26875626). 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. Contributes to neural pattern formation in the developing brain. Plays a role in long-term depression (LTD) of hippocampus membrane currents and in synaptic plasticity (By similarity). Subunit Structure: Heterotetramer. Forms heterotetrameric channels composed of two zeta subunits (GRIN1), and two epsilon subunits (GRIN2A, GRIN2B, GRIN2C or GRIN2D) (in vitro) (PubMed:8768735, PubMed:26919761, PubMed:26875626, PubMed:28126851, PubMed:26912815). Can also form heterotetrameric channels that contain at least one zeta subunit (GRIN1), at least one epsilon subunit, plus GRIN3A or GRIN3B (By similarity). In vivo, the subunit composition may depend on the expression levels of the different subunits (Probable). Found in a complex with GRIN1 and GRIN3B. Found in a complex with GRIN1, GRIN3A and PPP2CB. Interacts with PDZ domains of PATJ, DLG3 and DLG4. Interacts with HIP1 and NETO1 (By similarity). Interacts with MAGI3 (PubMed:10748157). Interacts with DAPK1 (By similarity). Found in a complex with GRIN1 and PRR7 (PubMed:27458189). Interacts with PRR7 (PubMed:27458189). Post-translational Modifications: Phosphorylated on tyrosine residues (By similarity). Phosphorylation at Ser-1303 by DAPK1 enhances synaptic NMDA receptor channel activity (By similarity). Similarity: A hydrophobic region that gives rise to the prediction of a transmembrane span does not cross the membrane, but is part of a discontinuously helical region that dips into the membrane and is probably part of the pore and of the selectivity filter. Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR2B/GRIN2B subfamily.
Product References and Citations for anti-NMDAR2B antibody	Sun H, Xu S, Yi L, Chen Y, Wu P, Cao Z, Zhou L, Jiang Y, Zhang D; Journal: Neurogastroenterol Motil. Role of 5-HT1A receptor in insular cortex mediating stress-induced visceral sensory dysfunction.
Other Notes	Small volumes of anti-NMDAR2B antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NMDAR2B purchase	MBS9601976 is an antibody targeting NMDAR2B. Also known as NMDAR2B Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Immunofluorescence (IF) of anti-NMDAR2B antibody
MBS9601976 staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



Western Blot (WB) of anti-NMDAR2B antibody
Western blot analysis of NMDAR2B expression in A549 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NMDAR2B. It may not necessarily be applicable to this product.

NCBI GI #	167003331
NCBI GeneID	2904
NCBI Accession #	NP_000825.2
UniProt Primary Accession #	Q13224
UniProt Secondary Accession #	Q12919; Q13220; Q13225; Q14CU4; Q9UM56
UniProt Related Accession #	Q13224
GenBank Nucleotide #	NM_000834.4
NCBI Official Full Name	glutamate receptor ionotropic, NMDA 2B
NCBI Official Synonym Full Names	glutamate ionotropic receptor NMDA type subunit 2B
NCBI Official Symbol	GRIN2B
NCBI Official Synonym Symbols	NR3; MRD6; NR2B; hNR3; EIEE27; GluN2B; NMDAR2B
UniProt Protein Name	Glutamate receptor ionotropic, NMDA 2B
UniProt Synonym Protein Names	Glutamate [NMDA] receptor subunit epsilon-2; N-methyl D-aspartate receptor subtype 2B; NMDAR2B
Protein Family	Glutamate receptor ionotropic
UniProt Gene Name	GRIN2B
UniProt Synonym Gene Names	NMDAR2B; NR2B; NR3; hNR31 PublicationManual assertion based on opinion iniRef.1
NCBI Protein Information	glutamate receptor ionotropic, NMDA 2B
NCBI Summary for NMDAR2B	This gene encodes a member of the N-methyl-D-aspartate (NMDA) receptor family within the ionotropic glutamate receptor superfamily. The encoded protein is a subunit of the NMDA receptor ion channel which acts as an agonist binding site for glutamate. The NMDA receptors mediate a slow calcium-permeable component of excitatory synaptic transmission in the central nervous system. The NMDA receptors are heterotetramers of seven genetically encoded, differentially expressed subunits including NR1 (GRIN1), NR2 (GRIN2A, GRIN2B, GRIN2C, or GRIN2D) and NR3 (GRIN3A or GRIN3B). The early expression of this gene in development suggests a role in brain development, circuit formation, synaptic plasticity, and cellular migration and differentiation. Naturally occurring mutations within this gene are associated with neurodevelopmental disorders including autism spectrum disorder, attention deficit hyperactivity disorder, epilepsy, and schizophrenia. [provided by RefSeq, Aug 2017]
UniProt Comments for NMDAR2B	Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg2+ (PubMed:8768735, PubMed:26919761, PubMed:26875626, PubMed:28126851). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:8768735, PubMed:26875626). 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. Contributes to neural pattern formation in the developing brain. Plays a role in long-term depression (LTD) of hippocampus membrane currents and in synaptic plasticity ().
Research Articles on NMDAR2B	**1.** There was no significant association between selected GRIN2B polymorphisms and personality traits.
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