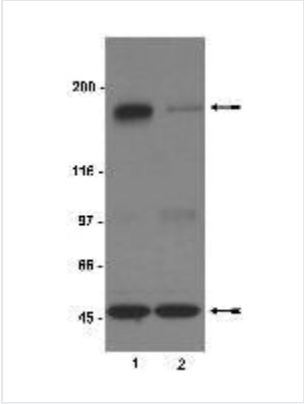
NMDA 2b Receptor (NR2B) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	NMDA 2b Receptor (NR2B), Polyclonal Antibody
Full Product Name	NMDA 2b Receptor, Phosphorylated (Ser1303) (NMDA R2b, N-methyl-D-aspartate, GRIN2B, Glutamate receptor ionotropic N-methyl D-aspartate 2B, HGNC:4586, NR2B, hNR3, N-methyl-D-aspartate receptor subunit 2B) (MaxLight 490)
Product Gene Name	anti-NR2B antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes phospho-NR2B, Mr 180kD. A non-specific protein was also detected, Mr 46kD, which can serve as a loading control. Species Crossreactivity: Human and rat. Species sequence homology: human, rat, and mouse 100%
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	166,367 Da
Chromosome Location	Chromosome: 12; NC_000012.11 (13714410..14133022, complement). Location: 12p12
OMIM	138252
3D Structure	ModBase 3D Structure for Q13224
Immunogen	Synthetic peptide corresponding to aa1297-1309 (CKLRRQH(pS)YDTFVD) of human phospho-NR2B with an N-terminal cysteine added for conjugation (KLH).
Conjugate	MaxLight490
Antigen Modification	Phosphorylated
Note	Preservative Free
Product Categories/Family for anti-NR2B antibody	Antibodies; Ion Channel
Applications Tested/Suitable for anti-NR2B antibody	Immunoblot (IB), Western Blot (WB)
Application Notes for anti-NR2B antibody	IB: 0.5-2.0ug/ml of this lot detected phospho-NR2B in a rat brain microsomal protein preparation. Applications are based on unconjugated antibody.
Related Product Information for anti-NR2B antibody	MBS6490513 is an antibody targeting NR2B. Also known as NMDA 2b Receptor, Phosphorylated (Ser1303) (NMDA R2b, N-methyl-D-aspartate, GRIN2B, Glutamate receptor ionotropic N-methyl D-aspartate 2B, HGNC:4586, NR2B, hNR3, N-methyl-D-aspartate receptor subunit 2B) (MaxLight 490). Reactive in Human, Rat. Host: Rabbit.
Product References and Citations for anti-NR2B antibody	1. Strack, S., et al., J. Biol. Chem. 275: 23798-23806, 2000. 2. Strack, S., et al., J. Biol. Chem. 273: 20689-20692, 1998.

Other Notes	Small volumes of anti-NR2B 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.



Testing Data of anti-NR2B antibody
Representative blot from a previous lot. Rat brain microsomal protein preparation treated without (lane 1) or with lambda phosphatase treatment (lane 2), was resolved by electrophoresis, transferred to nitrocellulose and probed with antiphospho-NR2B (2ug/ml). Proteins were visualized using a goat anti-rabbit secondary antibody conjugated to HRP and a chemiluminescence detection system. Arrows indicate phospho-NR2B (~180kD) and non-specific protein (~46kD).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NR2B. 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
NCBI Official Full Name	glutamate receptor ionotropic, NMDA 2B
NCBI Official Synonym Full Names	glutamate receptor, ionotropic, N-methyl D-aspartate 2B
NCBI Official Symbol	GRIN2B
NCBI Official Synonym Symbols	MRD6; NR2B; hNR3; 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; NR2B; N-methyl-D-aspartate receptor subunit 3
UniProt Gene Name	GRIN2B
UniProt Synonym Gene Names	NMDAR2B; GluN2B; NMDAR2B; NR2B; NR3; hNR3
UniProt Entry Name	NMDE2_HUMAN
NCBI Protein Information	glutamate receptor ionotropic, NMDA 2B; NR3; glutamate receptor subunit epsilon-2; N-methyl-D-aspartate receptor subunit 3; N-methyl D-aspartate receptor subtype 2B; glutamate [NMDA] receptor subunit epsilon-2

NCBI Summary for NR2B	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. NMDA receptor channels are heteromers composed of three different subunits: NR1 (GRIN1), NR2 (GRIN2A, GRIN2B, GRIN2C, or GRIN2D) and NR3 (GRIN3A or GRIN3B). The NR2 subunit acts as the agonist binding site for glutamate. This receptor is the predominant excitatory neurotransmitter receptor in the mammalian brain. [provided by RefSeq, Jul 2008]
UniProt Comments for NR2B	NMDAR2B: an NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine. Plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. Mediates neuronal functions in glutamate neurotransmission. 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. Protein type: Channel, calcium; Membrane protein, integral; Channel, ligand-gated; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 12p12 Cellular Component: postsynaptic membrane; synaptic vesicle; neuron projection; cell surface; integral to plasma membrane; dendrite; plasma membrane; cell junction; N-methyl-D-aspartate selective glutamate receptor complex Molecular Function: protein binding; extracellular-glutamate-gated ion channel activity; zinc ion binding; glycine binding; calcium channel activity; N-methyl-D-aspartate selective glutamate receptor activity Biological Process: axon guidance; synaptic transmission, glutamatergic; behavioral fear response; startle response; in utero embryonic development; glutamate signaling pathway; regulation of synaptic plasticity; learning; memory; detection of mechanical stimulus involved in sensory perception of pain; synaptic transmission; behavioral response to pain; response to ethanol; sensory organ development; learning and/or memory; suckling behavior; transport; ionotropic glutamate receptor signaling pathway; ephrin receptor signaling pathway; regulation of excitatory postsynaptic membrane potential Disease: Epileptic Encephalopathy, Early Infantile, 27; Mental Retardation, Autosomal Dominant 6
Research Articles on NR2B	**1.** There was a statistically significant associations between autism spectrum disorders and haplotypes in GRIN2B.
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