

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1204

Specification

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - Product Information

Application	WB
Primary Accession	Q00961
Reactivity	Mouse, Rat
Predicted	Bovine, Monkey
Host	Rabbit
Clonality	polyclonal
Calculated MW	140 KDa

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - Additional Information

Gene ID	24411
Gene Name	GRIN2C

Other Names

Glutamate receptor ionotropic, NMDA 2C, GluN2C, Glutamate [NMDA] receptor subunit epsilon-3, N-methyl D-aspartate receptor subtype 2C, NMDAR2C, NR2C, Grin2c

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser1096 conjugated to KLH.

Dilution

WB~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for the ~140k NR2C subunit of the NMDA receptor phosphorylated at Ser1096. Immunolabeling is blocked by preadsorption of antibody with the phospho-peptide that was used to generate the antibody but not by the corresponding dephospho-peptide.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

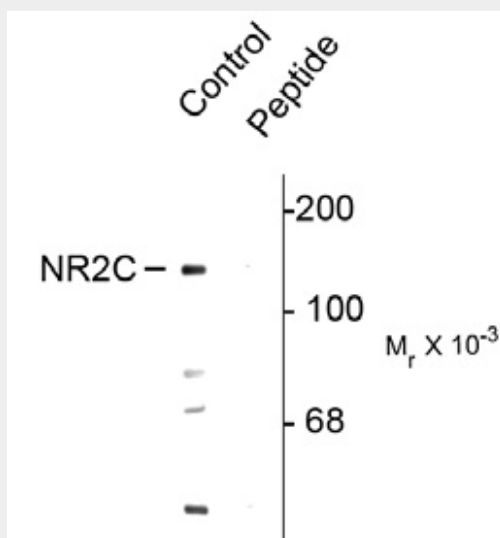
Blue Ice

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - Images



Western blot of mouse brain lysate showing specific immunolabeling of the ~140k NR2C subunit of the NMDA receptor phosphorylated at Ser1096. The phosphospecificity is shown in the second lane where immunoreactivity is blocked by preadsorption with the phospho-peptide (Peptide) used as antigen but not by the dephosphopeptide (not shown).

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - Background

The ion channels activated by glutamate that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR). The NMDAR plays an essential role in memory, neuronal development and it has also been implicated in several disorders of the central nervous system including Alzheimer's, epilepsy and ischemic neuronal cell death (Grosshans et al., 2002; Wenthold et al., 2003; Carroll and Zukin, 2002). The NMDA receptor is also one of the principal molecular targets for alcohol in the CNS (Lovinger et al., 1989; Alvestad et al., 2003; Snell et al., 1996). The NMDAR is also potentiated by protein phosphorylation (Lu et al., 1999). The NR2C subunit of the receptor is thought to influence the NMDAR conductance level (Ebrailidze et al., 1996). Phosphorylation of Ser1096 by PKB on NR2C has been recently demonstrated to regulate NMDA receptor binding to 14-3-3 (Chen & Roche 2009).

Phospho Ser1096 NMDA Receptor, NR2C Subunit Antibody - References

Alvestad RM, Grosshans DR, Coultrap SJ, Nakazawa T, Yamamoto T, Browning MD (2003) Tyrosine dephosphorylation and ethanol inhibition of N-methyl-D-aspartate receptor function. J Biol Chem

278:11020-11025.

Carroll RC, Zukin RS (2002) NMDA-receptor trafficking and targeting: implications for synaptic transmission and plasticity. *Trends Neurosci* 25:571-577.

Ebrilidze AK, Rossi DJ, Tonegawa S, Slater NT (1996) Modification of NMDA receptor channels and synaptic transmission by targeted disruption of the NR2C gene. *J Neurosci* 16:5014-5025.

Grosshans DR, Clayton DA, Coultrap SJ, Browning MD (2002) LTP leads to rapid surface expression of NMDA but not AMPA receptors in adult rat CA1. *Nat Neurosci* 5:27-33.

Lovinger DM, White G, Weight FF (1989) Ethanol inhibits NMDA-activated ion current in hippocampal neurons. *Science* 243:1721-1724.

Lu W-Y, Xiong Z-G, Lei S, Orser BA, Browning MD, MacDonald JF (1999) G-protein coupled receptors act via protein kinase C and Src to regulate NMDA receptors. *Nature Neurosci* 2:331-338.

Snell LD, Nunley KR, Lickteig RL, Browning MD, Tabakoff B, Hoffman PL (1996) Regional and subunit specific changes in NMDA receptor mRNA and immunoreactivity in mouse brain following chronic ethanol ingestion. *Mol Brain Res* 40:71-78.

Wenthold RJ, Prybylowski K, Standley S, Sans N, Petralia RS (2003) Trafficking of NMDA receptors. *Annu Rev Pharmacol Toxicol* 43:335-358.

Chen BS, Roche KW (2009) Growth factor-dependent trafficking of cerebellar NMDA receptors via protein kinase B/Akt phosphorylation of NR2C. *Neuron*;62(4):471-8.