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Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1224

Specification

Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Product Information

Application	**WB**
Primary Accession	Q00960
Reactivity	**Mouse, Rat**
Predicted	**Human, Monkey, Xenopus**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**180 KDa**

Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Additional Information

Gene ID	**24410**
Gene Name	**GRIN2B**

Other Names
Glutamate receptor ionotropic, NMDA 2B, GluN2B, Glutamate [NMDA] receptor subunit epsilon-2, N-methyl D-aspartate receptor subtype 2B, NMDAR2B, NR2B, Grin2b

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser1166 conjugated to KLH.

Dilution
WB~~ 1:250

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

Antibody Specificity
Specific for the ~180k NMDAR NR2B subunit phosphorylated at Ser1166. Immunolabeling of the NMDA NR2B subunit band is blocked by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide.

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-Ser1166 NMDA Receptor NR2B Subunit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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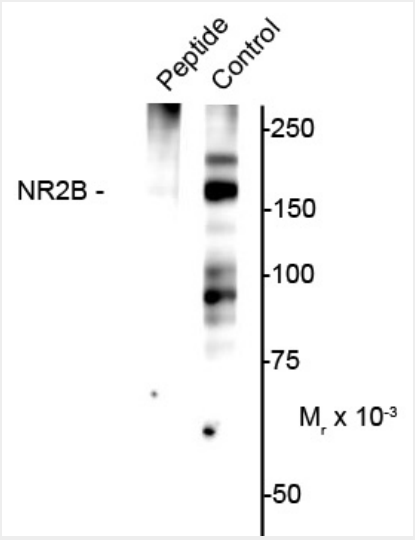
Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180k NR2B subunit of the NMDAR phosphorylated at Ser1166 (Control). Immunolabeling is blocked by preadsorption with the phospho-peptide used as antigen (Peptide), but not by the corresponding dephospho-peptide (not shown).

Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Background

The NMDA receptor (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). Overexpression of the NR2B-subunit of the NMDA Receptor has been associated with increases in learning and memory while aged, memory impaired animals have deficiencies in NR2B expression (Clayton et al., 2002a; Clayton et al., 2002b). Phosphorylation of Ser1166 is thought to play an essential role in memory and neuronal development.

Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - References

Carroll RC, Zukin RS (2002) NMDA-receptor trafficking and targeting: implications for synaptic transmission and plasticity. Trends Neurosci 25:571-577
Clayton DA, Grosshans DR, Browning MD (2002a) Aging and surface expression of hippocampal NMDA receptors. J Biol Chem 277:14367-14369.
Clayton DA, Mesches MH, Alvarez E, Bickford PC, Browning MD (2002b) A hippocampal NR2B deficit can mimic age-related changes in long-term potentiation and spatial learning in the Fischer 344 rat.

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