

**Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody**  
Affinity purified rabbit polyclonal antibody  
Catalog # AN1224

## Specification

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### Phospho-Ser1166 NMDA Receptor NR2B Subunit Antibody - Product Information

Application	WB
Primary Accession	<a href="#">Q00960</a>
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

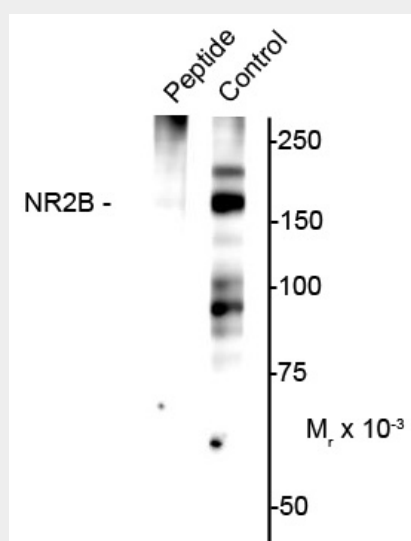
Blue Ice

## 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 Cytometry](#)
- [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.

J Neurosci 22:3628-3637

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