

Product Datasheet

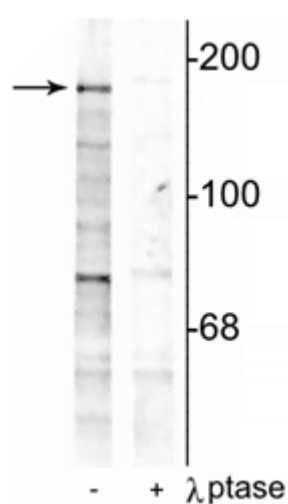
Anti-NMDA NR2B Subunit (Tyr1252)

 **Pooled Serum**

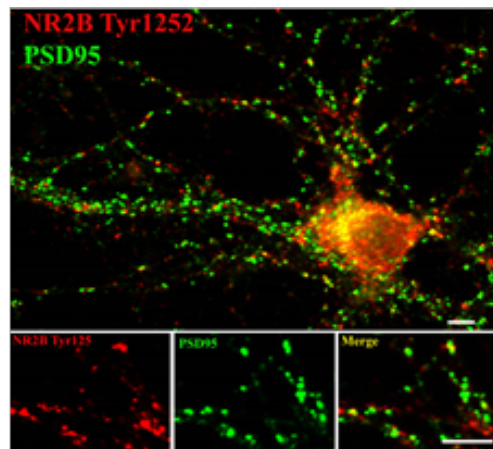
Overview

Catalog #	p1516-1252
Host Species	Rabbit Polyclonal
Format	Antigen Affinity Purified from Pooled Serum
Applications	WB 1:1000 IHC 1:100-1:400
Species Tested	Mouse, Rat
Expected Reactivity	Bovine, Canine, Chicken, Human, Non-Human Primate, Zebrafish
Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Tyr1252 of the NR2B subunit of the rat NMDA receptor, conjugated to keyhole limpet hemocyanin (KLH).
Molecular Weight	180 kDa
Cite this Antibody	PhosphoSolutions Cat# p1516-1252, RRID: AB_2492180

Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180 kDa NR2B subunit phosphorylated at Tyr¹²⁵² in the first lane (-). Phosphospecificity is shown in the second lane (+) where immunolabeling is completely eliminated by blot treatment with λ phosphatase (λ -Ptase, 1200 units for 30 min).



Immunostaining of 14 DIV rat cortical neurons showing NR2B phosphorylated at Tyr¹²⁵² (red, 1:400) and PSD95 (green). Photo courtesy of Gang Liu.

Details

Target Description	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 <i>et al.</i> , 2002; Wenthold <i>et al.</i> , 2003; Carroll and Zukin, 2002). The rat NMDAR1 (NR1) was the first subunit of the NMDAR to be cloned. The NR1 protein can form NMDA activated channels when expressed in <i>Xenopus</i> oocytes but the currents in such channels are much smaller than those seen <i>in situ</i> . Channels with more physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits (Ishii <i>et al.</i> , 1993). Phosphorylation of Tyr-1252 is thought to potentiate NMDA receptor-dependent influx of calcium (Takasu <i>et al.</i> , 2002).
Specificity	Specific for endogenous levels of the ~180 kDa NMDAR NR2B-subunit protein phosphorylated at Tyr1252 . Immunolabeling is completely eliminated by treatment with λ -phosphatase. May also show slight reactivity with Tyr1246 of NR2A.
Production/Purification	Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.
Quality Control	Western blots performed on each lot.
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per ml BSA and 50% glycerol.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

Diab, A., Qi, J., Shahin, I., Milligan, C. and Fawcett, J.P., 2020. NCK1 regulates amygdala activity to control context-dependent stress responses and anxiety in male mice. *Neuroscience*, 448, 107-125 .

Akkuratov, E.E., Westin, L., Vazquez-Juarez, E., de Marothy, M., Melnikova, A.K., Blom, H., Lindskog, M., Brismar, H. and Aperia, A., 2020. Ouabain Modulates the Functional Interaction Between Na, K-ATPase and NMDA Receptor. *Molecular Neurobiology*, pp.1-13.

Knox, R., Brennan-Minnella, A.M., Lu, F., Yang, D., Nakazawa, T., Yamamoto, T., Swanson, R.A., Ferriero, D.M. and Jiang, X., 2014. NR2B phosphorylation at tyrosine 1472 contributes to brain injury in a rodent model of neonatal hypoxia-ischemia. *Stroke*, 45(10), 3040-3047.

Tianna R. Hicklin, Peter H. Wu, Richard A. Radcliffe, Ronald K. Freund, Susan M. Goebel-Goody, Paulo R. Correa, William R. Proctor, Paul J. Lombroso, and Michael D. Browning, 2011. Alcohol inhibition of the NMDA receptor function, long-term potentiation, and fear learning requires striatal-enriched protein tyrosine phosphatase. *PNAS*, 108, 6650 - 6655.

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