ARG51606
anti-NMDAR1 phospho (Ser896) antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes NMDAR1 phospho (Ser896)
Tested Reactivity	Hu, Ms, Rat
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	NMDAR1
Species	Human
Immunogen	Peptide sequence around phosphorylation site of serine 896 (R-R-S(p)-S-K) derived from Human NMDAR1.
Conjugation	Un-conjugated
Alternate Names	NMDA1; GluN1; MRD8; NMD-R1; Glutamate receptor ionotropic, NMDA 1; Glutamate [NMDA] receptor subunit zeta-1; N-methyl-D-aspartate receptor subunit NR1; NR1; NMDAR1

Application Instructions

Application table

Application	Dilution
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

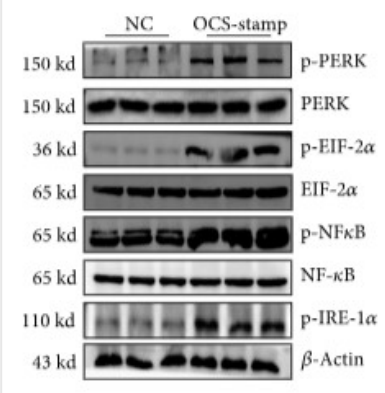
Properties

Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatogramphy using non-phosphopeptide.
Buffer	PBS (without Mg2+ and Ca2+, pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	GRIN1
Gene Full Name	glutamate receptor, ionotropic, N-methyl D-aspartate 1
Background	NMDA receptors are members of the ionotropic class of glutamate receptors, which also includes Kainate and AMPA receptors. NMDA receptors consist of NR1 subunits combined with one or more NR2 (A-D) or NR3 (A-B) subunits. The ligand-gated channel is permeable to cations including Ca2+, and at resting membrane potentials NMDA receptors are inactive due to a voltage-dependent blockade of the channel pore by Mg2+. NMDA receptor activation, which requires binding of glutamate and glycine, leads to an influx of Ca2+ into the postsynaptic region where it activates several signaling cascades, including pathways leading to the induction of long-term potentiation (LTP) and depression (LTD). NMDA receptors have a critical role in excitatory synaptic transmission and plasticity in the CNS. They govern a range of physiological conditions including neurological disorders caused by excitotoxic neuronal injury, psychiatric disorders and neuropathic pain syndromes.
Function	NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine. This protein plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. It mediates neuronal functions in glutamate neurotransmission. Is involved in the cell surface targeting of NMDA receptors (By similarity). [UniProt]
Research Area	Neuroscience antibody
Calculated Mw	105 kDa
PTM	NMDA is probably regulated by C-terminal phosphorylation of an isoform of NR1 by PKC. Dephosphorylated on Ser-897 probably by protein phosphatase 2A (PPP2CB). Its phosphorylated state is influenced by the formation of the NMDAR-PPP2CB complex and the NMDAR channel activity.

Images



ARG51606 anti-NMDAR1 phospho (Ser896) antibody WB image

Western blot: Rat Spinal cord stained with ARG51606 anti-NMDAR1 phospho (Ser896) antibody.

From Yu Zhang et al. Pharm Biol. (2022), doi: 10.1080/13880209.2022.2136207, Fig. 6. E.

ARG51606 anti-NMDAR1 phospho (Ser896) antibody WB image

Western blot: Extracts from Mouse Brain tissue stained with ARG51606 anti-NMDAR1 phospho (Ser896) antibody.