

NMDA ϵ 1 (K-18): sc-31541

BACKGROUND

Glutamate receptors mediate most excitatory neurotransmission in the brain and play an important role in neural plasticity, neural development and neurodegeneration. Ionotropic glutamate receptors are categorized into NMDA receptors and kainate/AMPA receptors, both of which contain glutamate-gated, cation-specific ion channels. Kainate/AMPA receptors are co-localized with NMDA receptors in many synapses and consist of seven structurally related subunits designated GluR-1 to -7. The kainate/AMPA receptors are primarily responsible for the fast excitatory neuro-transmission by glutamate, whereas the NMDA receptors exhibit slow kinetics of Ca²⁺ ions and a high permeability for Ca²⁺ ions. The NMDA receptors consist of five subunits: ϵ 1, 2, 3, 4 and one ζ subunit. The ζ subunit is expressed throughout the brainstem whereas the four epsilon subunits display limited distribution.

REFERENCES

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- Bliss, T.V., et al. 1993. A synaptic model of memory: long-term potentiation in the hippocampus. *Nature* 361: 31-39.
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- Hollmann, M., et al. 1994. Cloned glutamate receptors. *Annu. Rev. Neurosci.* 17: 31-108.
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CHROMOSOMAL LOCATION

Genetic locus: GRIN2A (human) mapping to 16p13.2; Grin2a (mouse) mapping to 16 A1.

SOURCE

NMDA ϵ 1 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NMDA ϵ 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31541 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

NMDA ϵ 1 (K-18) is recommended for detection of NMDA ϵ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

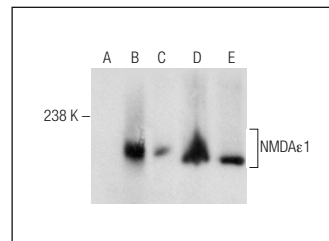
NMDA ϵ 1 (K-18) is also recommended for detection of the NMDA ϵ 1 in additional species, including bovine and porcine.

Suitable for use as control antibody for NMDA ϵ 1 siRNA (h): sc-36083, NMDA ϵ 1 siRNA (m): sc-36084, NMDA ϵ 1 siRNA (r): sc-270157, NMDA ϵ 1 shRNA Plasmid (h): sc-36083-SH, NMDA ϵ 1 shRNA Plasmid (m): sc-36084-SH, NMDA ϵ 1 shRNA Plasmid (r): sc-270157-SH, NMDA ϵ 1 shRNA (h) Lentiviral Particles: sc-36083-V, NMDA ϵ 1 shRNA (m) Lentiviral Particles: sc-36084-V and NMDA ϵ 1 shRNA (r) Lentiviral Particles: sc-270157-V.

Molecular Weight of NMDA ϵ 1: 177 kDa.

Positive Controls: Mouse brain extract: sc-2253, mouse cerebellum extract: sc-2403 or NMDA ϵ 1 (m): 293 Lysate: sc-179014.

DATA



NMDA ϵ 1 (K-18): sc-31541. Western blot analysis of NMDA ϵ 1 expression in non-transfected: sc-110760 (A) and mouse NMDA ϵ 1 transfected: sc-179014 (B) 293 whole cell lysates and rat brain (C), mouse brain (D) and mouse cerebellum (E) tissue extracts.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Satisfaction
Guaranteed

Try **NMDA ϵ 1 (E-4): sc-515148** or **NMDA ϵ 1 (D-8): sc-390094**, our highly recommended monoclonal alternatives to NMDA ϵ 1 (K-18).