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 fast excitatory neurotransmission by glutamate, whereas the NMDA receptors exhibit slow kinesis of Ca$^{2+}$ ions and a high permeability for Ca$^{2+}$ ions. The NMDA receptors consist of five subunits: ε₁, 2, 3, 4 and one ζ subunit. The ζ subunit is expressed throughout the brainstem whereas the four ε subunits display limited distribution.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: Grin2a (mouse) mapping to 16 A1.

SOURCE

NMDAε1 (5) is a mouse monoclonal antibody raised against amino acids 1093-1214 of NMDAε1 of mouse origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

NMDAε1 (5) is recommended for detection of NMDAε1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NMDAε1 siRNA (m): sc-36084, NMDAε1 siRNA (r): sc-270157, NMDAε1 shRNA Plasmid (m): sc-36084-SH, NMDAε1 shRNA Plasmid (r): sc-270157-SH, NMDAε1 shRNA (m) Lentiviral Particles: sc-36084-V and NMDAε1 shRNA (r) Lentiviral Particles: sc-270157-V.

Molecular Weight of NMDAε1: 177 kDa.

Positive Controls: NMDAε1 (m): 293 Lysate: sc-179014, mouse brain extract: sc-2253 or mouse cerebellum extract: sc-2403.

DATA

NMDAε1 (5): sc-136004. Western blot analysis of NMDAε1 expression in non-transfected: sc-110760(A) and mouse NMDAε1 transfected: sc-178014 (B) whole cell lysates and mouse brain (C) and mouse cerebellum (D) tissue extracts.

SELECT PRODUCT CITATIONS


PROTOCOLS

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