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: 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: GRIN2D (human) mapping to 19q13; Grin2d (mouse) mapping to 7 B3.

SOURCE

NMDAε4 (H-119) is a rabbit polyclonal antibody raised against amino acids 268-386 of NMDAε4 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

NMDAε4 (H-119) is recommended for detection of the glutamate (NMDA) receptor epsilon 4 subtype of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg 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).

NMDAε4 (H-119) is also recommended for detection of the glutamate (NMDA) receptor epsilon 4 subtype in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NMDAε4 siRNA (h): sc-36087, NMDAε4 siRNA (m): sc-36088, NMDAε4 shRNA Plasmid (h): sc-36087-SH, NMDAε4 shRNA Plasmid (m): sc-36088-SH, NMDAε4 shRNA (h) Lentiviral Particles: sc-36087-V and NMDAε4 shRNA (m) Lentiviral Particles: sc-36088-V.

Molecular Weight of NMDAε4: 165 kDa.

Positive Controls: MEG-01 cell lysate: sc-2283, Hel 92.1.7 cell lysate: sc-2270 or IMR-32 cell lysate: sc-2409.

DATA

SELECT PRODUCT CITATIONS


PROTOCOLS

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

RESEARCH USE

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