



GluR (H-301): sc-28799

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 neurotransmission by glutamate whereas the NMDA receptors are functionally characterized by a slow kinetic and a high permeability for Ca^{2+} ions. The NMDA receptors consist of five subunits: epsilon 1, 2, 3, 4 and one zeta subunit. The zeta subunit is expressed throughout the brainstem whereas the four epsilon subunits display limited distribution.

REFERENCES

1. Schiffer, H.H., et al. 1997. Rat GluR7 and a carboxy-terminal splice variant, GluR7 β , are functional kainate receptor subunits with a low sensitivity to glutamate. *Neuron* 19: 1141-1146.
2. Hollmann, M., et al. 1994. Cloned glutamate receptors. *Ann. Rev. Neurosci.* 17: 31-108.
3. Watanabe, M., et al. 1994. Distinct distributions of five NMDA receptor channel subunit mRNAs in the brainstem. *J. Comp. Neurol.* 343: 520-531.
4. Bliss, T.V., et al. 1993. A synaptic model of memory: long-term potentiation in the hippocampus. *Nature* 361: 31-39.
5. Nakanishi, S. 1992. Molecular diversity of glutamate receptors and implications for brain function. *Science* 258: 597-603.
6. Stern, P., et al. 1992. Fast and slow components of unitary EPSCs on stellate cells elicited by focal stimulation in slices of rat visual cortex. *J. Physiol.(Lond)* 449: 247-278.
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SOURCE

GluR (H-301) is a rabbit polyclonal antibody raised against amino acids 607-907 mapping at the C-terminus of GluR 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.

PROTOCOLS

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

APPLICATIONS

GluR (H-301) is recommended for detection of GluR-1, 2, 3 and 4 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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