

GluR-6 (C-18): sc-7618

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: ϵ 1, 2, 3, 4 and one ζ subunit. The ζ subunit is expressed throughout the brainstem, whereas the four ϵ subunits display limited distribution.

CHROMOSOMAL LOCATION

Genetic locus: GRIK2 (human) mapping to 6q21.3, GRIK3 (human) mapping to 1p34.3; Grik2 (mouse) mapping to 10 B3, Grik3 (mouse) mapping to 4 D2.2.

SOURCE

GluR-6 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GluR-6 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.

Blocking peptide available for competition studies, sc-7618 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GluR-6 (C-18) is recommended for detection of GluR-6 and GluR-7 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GluR-6 (C-18) is also recommended for detection of GluR-6 and GluR-7 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of GluR-6: 118/103 kDa.

Positive Controls: mouse brain extract : sc-2253 or IMR-32 Cell Lysate : sc-2409.

STORAGE

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

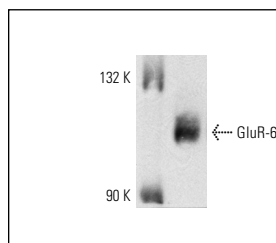
PROTOCOLS

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

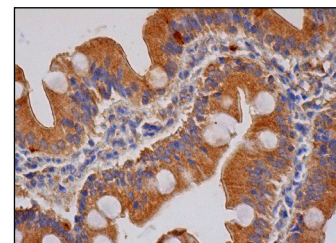
RESEARCH USE

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

DATA



GluR-6 (C-18): sc-7618. Western blot analysis of GluR-6 expression in mouse brain tissue extract.



GluR-6 (C-18): sc-7618. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Chan, S.H., et al. 2002. Up-regulation of glutamate receptors in nucleus tractus solitarius underlies potentiation of baroreceptor reflex by heat shock protein 70. *Mol. Pharmacol.* 61: 1097-1104.
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- Pei, D.S., et al. 2006. Neuroprotection against ischaemic brain injury by a GluR6-9c peptide containing the TAT protein transduction sequence. *Brain* 129: 465-479.
- Zhang, Q.G., et al. 2006. Antioxidant N-acetylcysteine inhibits the activation of JNK3 mediated by the GluR6-PSD95-MLK3 signaling module during cerebral ischemia in rat hippocampus. *Neurosci. Lett.* 408: 159-164.
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- Yu, H.M., et al. 2008. Coupling between neuronal nitric oxide synthase and glutamate receptor 6-mediated c-Jun N-terminal kinase signaling pathway via S-nitrosylation contributes to ischemia neuronal death. *Neuroscience* 155: 1120-1132.
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- Li, T., et al. 2009. Inhibition of cerebral ischemia/reperfusion-induced injury by adenovirus expressed C-terminal amino acids of GluR6. *Brain Res.* 1300: 169-176.
- Li, C., et al. 2010. Coactivation of GABA receptors inhibits the JNK3 apoptotic pathway via disassembly of GluR6-PSD-95-MLK3 signaling module in KA-induced seizure. *Epilepsia* 51: 391-403.