SANTA CRUZ BIOTECHNOLOGY, INC.

GluR-5 (C-18): sc-7616

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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: GRIK1 (human) mapping to 21q21.3.

SOURCE

GluR-5 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GluR-5 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-7616 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GluR-5 (C-18) is recommended for detection of GluR-5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-5 (C-18) is also recommended for detection of GluR-5 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GluR-5 siRNA (h): sc-42487, GluR-5 shRNA Plasmid (h): sc-42487-SH and GluR-5 shRNA (h) Lentiviral Particles: sc-42487-V.

Molecular Weight of GluR-5: 105-110 kDa.

STORAGE

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

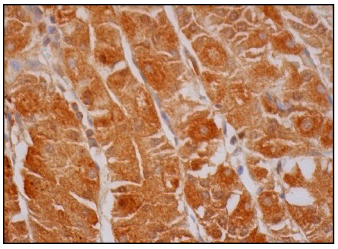
PROTOCOLS

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-5 (C-18): sc-7616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Haverkamp, S., et al. 2003. Immunocytochemical description of five bipolar cell types of the mouse retina. J. Comp. Neurol. 455: 463-476.
2. Pan, F. and Massey, S.C. 2007. Rod and cone input to horizontal cells in the rabbit retina. J. Comp. Neurol. 500: 815-831.
3. Puller, C., et al. 2007. Off midget bipolar cells in the retina of the marmoset, callithrix jacchus, express AMPA receptors. J. Comp. Neurol. 502: 442-454.
4. Puller, C., et al. 2011. Bipolar cells of the ground squirrel retina. J. Comp. Neurol. 519: 759-774.
5. Peppi, M., et al. 2012. Cochlear kainate receptors. J. Assoc. Res. Otolaryngol. 13: 199-208.
6. Puthussery, T., et al. 2014. Kainate receptors mediate synaptic input to transient and sustained OFF visual pathways in primate retina. J. Neurosci. 34: 7611-7621.
7. Gayet-Primo, J. and Puthussery, T. 2015. Alterations in kainate receptor and TRPM1 localization in bipolar cells after retinal photoreceptor degeneration. Front. Cell. Neurosci. 9: 486.