SANTA CRUZ BIOTECHNOLOGY, INC.

GluR-2 (7G6): sc-517265

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 neuro-degeneration. 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 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: GRIA2 (human) mapping to 4q32.1; Gria2 (mouse) mapping to 3 E3.

SOURCE

GluR-2 (7G6) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 652-807 of GluR-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GluR-2 (7G6) is available conjugated to agarose (sc-517265 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-517265 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517265 PE), fluorescein (sc-517265 FITC), Alexa Fluor® 488 (sc-517265 AF488), Alexa Fluor® 546 (sc-517265 AF546), Alexa Fluor® 594 (sc-517265 AF594) or Alexa Fluor® 647 (sc-517265 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-517265 AF680) or Alexa Fluor® 790 (sc-517265 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GluR-2 (7G6) is recommended for detection of GluR-2 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for GluR-2 siRNA (h): sc-35487, GluR-2 siRNA (m): sc-35488, GluR-2 shRNA Plasmid (h): sc-35487-SH, GluR-2 shRNA Plasmid (m): sc-35488-SH, GluR-2 shRNA (h) Lentiviral Particles: sc-35487-V and GluR-2 shRNA (m) Lentiviral Particles: sc-35488-V.

Molecular Weight of GluR-2: 100 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or mouse hypothalamus extract: sc-364242.

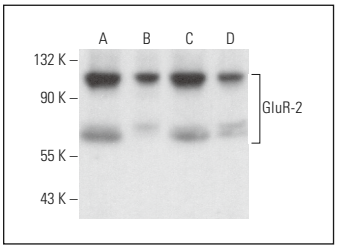
STORAGE

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

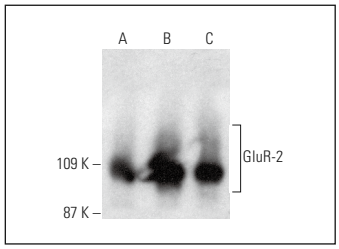
RESEARCH USE

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

DATA



GluR-2 (7G6): sc-517265. Western blot analysis of GluR-2 expression in mouse brain (**A**), rat brain (**B**), rat hippocampus (**C**) and mouse hypothalamus (**D**) tissue extracts.



GluR-2 (7G6): sc-517265. Western blot analysis of GluR-2 expression in human hippocampus (**A**), mouse brain (**B**) and rat brain (**C**) tissue extracts.

SELECT PRODUCT CITATIONS

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2. Scherma, M., et al. 2020. Cannabinoid exposure in rat adolescence reprograms the initial behavioral, molecular, and epigenetic response to cocaine. Proc. Natl. Acad. Sci. USA 117: 9991-10002.
3. Tsumagari, R., et al. 2020. Precise regulation of the basal PKCγ activity by DGKγ is crucial for motor coordination. Int. J. Mol. Sci. 21: 7866.
4. Li, X.R., et al. 2021. Acetylation-dependent glutamate receptor GluR signalosome formation for STAT3 activation in both transcriptional and metabolism regulation. Cell Death Discov. 7: 11.
5. Lira, M., et al. 2021. Exo70 intracellular redistribution after repeated mild traumatic brain injury. Biol. Res. 54: 5.
6. Li, W.H., et al. 2021. Deletion of Dcf1 reduces amyloid-β aggregation and mitigates memory deficits. J. Alzheimers Dis. 81: 1181-1194.
7. Bhardwaj, A., et al. 2021. AMPA induced cognitive impairment in rats: establishing the role of endoplasmic reticulum stress inhibitor, 4-PBA. J. Neurosci. Res. 99: 2573-2591.
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10. Zirotti Rosenberg, A., et al. 2022. Behavioral and molecular responses to exogenous cannabinoids during pentylenetetrazol-induced convulsions in male and female rats. Front. Mol. Neurosci. 15: 868583.

PROTOCOLS

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