SANTA CRUZ BIOTECHNOLOGY, INC.

GRIP1 (T-20): sc-17641

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. The glutamate receptor interacting proteins, GRIP1 and GRIP2, are members of the PDZ domain-containing protein family, and they specifically bind to the carboxy-terminus of AMPA receptor subunits, GluR-2 and GluR-3. GRIP1 and GRIP2 are involved in the targeting of GluR-2 and GluR-3 to the synapse. GRIP1 and GRIP2 are widely expressed in brain, with the highest levels in the cerebral cortex, hippocampus and olfactory bulb. They are both enriched in synaptic plasma and postsynaptic density fractions. GRIP1 is expressed in early development before the expression of AMPA receptors, specifically postnatal days 8-10, while GRIP2 expression parallels that of AMPA receptors during later developmental stages. GRIP1 and GRIP2 may mediate the endocytotic rate of GluR-2 and GluR-3 in response to the phosphorylation of the receptors on Ser 880 by PKC, which is implicated in the induction of cerebellar long-term depression (LTD).

CHROMOSOMAL LOCATION

Genetic locus: GRIP1 (human) mapping to 12q14.3; Grip1 (mouse) mapping to 10 D2.

SOURCE

GRIP1 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GRIP1 of rat 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-17641 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GRIP1 (T-20) is recommended for detection of GRIP1 of mouse, rat and 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).

Suitable for use as control antibody for GRIP1 siRNA (h): sc-42160, GRIP1 siRNA (m): sc-42161, GRIP1 shRNA Plasmid (h): sc-42160-SH, GRIP1 shRNA Plasmid (m): sc-42161-SH, GRIP1 shRNA (h) Lentiviral Particles: sc-42160-V and GRIP1 shRNA (m) Lentiviral Particles: sc-42161-V.

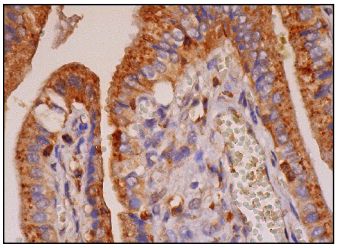
Molecular Weight of GRIP1: 130 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GRIP1 (T-20): sc-17641. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Bakshi, K., et al. 2009. Prenatal cocaine reduces AMPA receptor synaptic expression through hyperphosphorylation of the synaptic anchoring protein GRIP. J. Neurosci. 29: 6308-6319.
2. Pierre, K., et al. 2009. Linking supply to demand: the neuronal monocarboxylate transporter MCT2 and the α-amino-3-hydroxyl-5-methyl-4-isoxazole-propionic acid receptor GluR2/3 subunit are associated in a common trafficking process. Eur. J. Neurosci. 29: 1951-1963.

RESEARCH USE

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

PROTOCOLS

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