

GRIP2 (N-18): sc-102578

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).

REFERENCES

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- Osten, P., et al. 2000. Mutagenesis reveals a role for ABP/GRIP binding to GluR2 in synaptic surface accumulation of the AMPA receptor. *Neuron* 27: 313-325.
- Matsuda, S., et al. 2000. Disruption of AMPA receptor GluR2 clusters following long-term depression induction in cerebellar Purkinje neurons. *EMBO J.* 19: 2765-2774.
- Yamazaki, M., et al. 2001. Differential palmitoylation of two mouse glutamate receptor interacting protein 1 forms with different N-terminal sequences. *Neurosci. Lett.* 304: 81-84.

CHROMOSOMAL LOCATION

Genetic locus: GRIP2 (human) mapping to 3p25.1.

SOURCE

GRIP2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GRIP2 of human origin.

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.

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-102578 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GRIP2 (N-18) is recommended for detection of GRIP2 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member GRIP1.

GRIP2 (N-18) is also recommended for detection of GRIP2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GRIP2 siRNA (h): sc-42162, GRIP2 shRNA Plasmid (h): sc-42162-SH and GRIP2 shRNA (h) Lentiviral Particles: sc-42162-V.

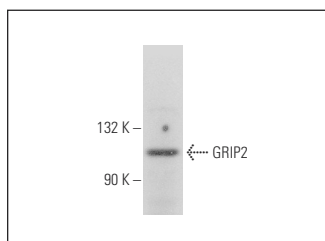
Molecular Weight of GRIP2: 113 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GRIP2 (N-18): sc-102578. Western blot analysis of GRIP2 expression in Jurkat whole cell lysate.

PROTOCOLS

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