**BACKGROUND**

Grid2ip (glutamate receptor, ionotropic, δ2 [Grid2 or GluR-δ2] interacting protein 1), also known as delphilin, is a postsynaptic scaffolding protein that contains one form inhomology 2 (FH2) domain and two PDZ (postsynaptic density-95/discs-large/ZO-1) domains. Expressed in Purkinje cells of the cerebellum and localizing specifically to parallel fiber synapses, Grid2ip interacts with the C-terminus of GluR-δ2 and, via this interaction, links GluR-δ2 with various signaling molecules and the actin cytoskeleton. GluR-δ2 is a glutamate receptor with an important role in motor learning, cerebellar wiring and synaptic plasticity. Due to alternative splicing events, three Grid2ip isoforms exist, namely L-delphilin, S-delphilin (or delphilin-α) and delphilin-β. Each isoform exhibits individual expression patterns and protein interactions. Isoform 2, delphilin-α, is palmitoylated, a modification that is essential for the enhanced expression of GluR-δ2 on the cell surface. This modification of delphilin-α also mediates the accumulation of delphilin-α in dendritic spines.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: GRID2IP (human) mapping to 7p22.1; Grid2ip (mouse) mapping to 5 G2.

**SOURCE**

Grid2ip (A-4) is a mouse monoclonal antibody raised against amino acids 91-280 mapping near the N-terminus of Grid2ip of mouse origin.

**PRODUCT**

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

Grid2ip (A-4) is available conjugated to agarose (sc-390952 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390952 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390952 PE), fluorescein (sc-390952 FITC), Alexa Fluor® 488 (sc-390952 AF488), Alexa Fluor® 546 (sc-390952 AF546), Alexa Fluor® 594 (sc-390952 AF594) or Alexa Fluor® 647 (sc-390952 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390952 AF680) or Alexa Fluor® 790 (sc-390952 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Grid2ip (A-4) is recommended for detection of Grid2ip of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Grid2ip siRNA (m): sc-75199, Grid2ip shRNA Plasmid (m): sc-75199-SH and Grid2ip shRNA (m) Lentiviral Particles: sc-75199-V.

Molecular Weight (predicted) of Grid2ip: 132 kDa.

Molecular Weight (observed) of Grid2ip: 118 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or IMR-32 cell lysate: sc-2409.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz© Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

Grid2ip (A-4): sc-390952. Western blot analysis of Grid2ip expression in U-87 MG (A) and IMR-32 (B) whole cell lysates.

**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.

**PROTOCOLS**

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