

DISC-1 (C-20): sc-47985

BACKGROUND

The "disrupted in schizophrenia" gene locus DISC is associated with patients afflicted with schizophrenia as a result of chromosomal translocations. DISC-1 encodes a large protein predicted to contain a globular N-terminal domain and a helical C-terminal domain, both of which have the potential to form interactions with other proteins. DISC-1 interacts with proteins involved in the centrosome and cytoskeletal system, including MIP-T3, MAP-1A and nudel; proteins which localize receptors to membranes, including α -actinin-2 and spectrin β IV; and proteins which transduce signals from membrane receptors, including ATF-4 and ATF-5. Therefore, DISC-1 is thought to be involved in intracellular transport, neurite architecture and/or neuronal migration, all of which are thought to be pathogenic in the schizophrenic brain. DISC-1 localizes to the nucleus, whereas mutant DISC-1 localization occurs mainly in the cytoplasm.

REFERENCES

- Ozeki, Y., et al. 2003. Disrupted in schizophrenia-1 (DISC-1): mutant truncation prevents binding to NudE-like (NUDEL) and inhibits neurite outgrowth. *Proc. Natl. Acad. Sci. USA* 100: 289-294.
- Morris, J.A., et al. 2003. DISC1 (Disrupted In Schizophrenia-1) is a centrosome-associated protein that interacts with MAP1A, MIPT3, ATF4/5 and NUDEL: regulation and loss of interaction with mutation. *Hum. Mol. Genet.* 12: 1591-1608.
- Miyoshi, K., et al. 2003. Disrupted in schizophrenia-1, a candidate gene for schizophrenia, participates in neurite outgrowth. *Mol. Psychiatry* 8: 685-694.
- Brandon, N.J., et al. 2004. Disrupted in schizophrenia-1 and NUDEL form a neurodevelopmentally regulated protein complex: implications for schizophrenia and other major neurological disorders. *Mol. Cell. Neurosci.* 25: 42-55.
- Schurov, I.L., et al. 2004. Expression of developing mouse brain indicates its role in neurodevelopment. *Mol. Psychiatry* 9: 1100-1110.

CHROMOSOMAL LOCATION

Genetic locus: Disc1 (mouse) mapping to 8 E2.

SOURCE

DISC-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DISC-1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47985 P, (100 μ g 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

DISC-1 (C-20) is recommended for detection of DISC-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 DISC-1 siRNA (m): sc-60540, DISC-1 shRNA Plasmid (m): sc-60540-SH and DISC-1 shRNA (m) Lentiviral Particles: sc-60540-V.

Molecular Weight of DISC-1 L isoform: 100 kDa.

Molecular Weight of DISC-1 LV isoform: 98 kDa.

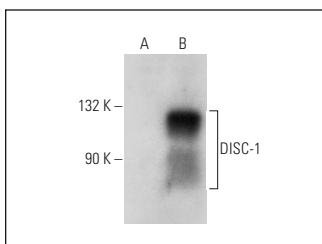
Molecular Weight of DISC-1 S isoform: 71 kDa.

Positive Controls: DISC-1 (m): 293T Lysate: sc-178524.

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



DISC-1 (C-20): sc-47985. Western blot analysis of DISC-1 expression in non-transfected: sc-117752 (A) and mouse DISC-1 transfected: sc-178524 (B) 293T whole cell lysates.

RESEARCH USE

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

MONOS
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Try **DISC-1 (B-2): sc-365591**, our highly recommended monoclonal alternative to DISC-1 (C-20).