

DISC-1 (H-210): sc-134505

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. DISC-1 (disrupted in schizophrenia-1) is a centrosome-associated protein that interacts with MAP-1A, MIP-T3, ATF-4/5 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 neuro-developmentally 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.
- Brandon, N.J., et al. 2005. Subcellular targeting of DISC1 is dependent on a domain independent from the Nudel binding site. *Mol. Cell. Neurosci.* 28: 613-624.

CHROMOSOMAL LOCATION

Genetic locus: DISC1 (human) mapping to 1q42.2.

SOURCE

DISC-1 (H-210) is a rabbit polyclonal antibody raised against amino acids 601-810 mapping near the C-terminus of DISC-1 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

DISC-1 (H-210) is recommended for detection of DISC-1 of human 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 (h): sc-60539, DISC-1 shRNA Plasmid (h): sc-60539-SH and DISC-1 shRNA (h) Lentiviral Particles: sc-60539-V.

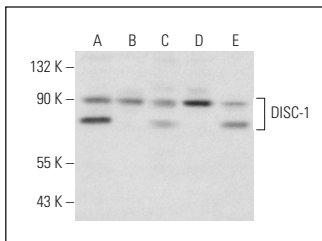
Molecular Weight of DISC-1 L isoform: 100 kDa.

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

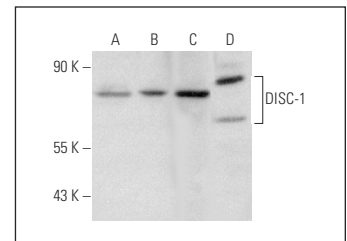
Molecular Weight of DISC-1 S isoform: 71 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-N-SH cell lysate: sc-2410 or MOLT-4 cell lysate: sc-2233.

DATA



DISC-1 (H-210): sc-134505. Western blot analysis of DISC-1 expression in HeLa (A), H19-7/IGF-IR (B), SK-N-SH (C), MOLT-4 (D) and A549 (E) whole cell lysates.



DISC-1 (H-210): sc-134505. Western blot analysis of DISC-1 expression in NIH/3T3 (A) and RAW 264.7 (B) whole cell lysates and rat spleen (C) and mouse brain (D) tissue extracts.

STORAGE

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

PROTOCOLS

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



Try **DISC-1 (B-2): sc-365591**, our highly recommended monoclonal alternative to DISC-1 (H-210).