SANTA CRUZ BIOTECHNOLOGY, INC.

# DISC-1 (N-16): sc-47990

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 βIV, 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

DISC-1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DISC-1 of mouse 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-47990 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DISC-1 (N-16) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 DISC-1 siRNA (m): sc-60540, DISC-1 siRNA (r): sc-106989, DISC-1 shRNA Plasmid (m): sc-60540-SH, DISC-1 shRNA Plasmid (r): sc-106989-SH, DISC-1 shRNA (m) Lentiviral Particles: sc-60540-V and DISC-1 shRNA (r) Lentiviral Particles: sc-106989-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.

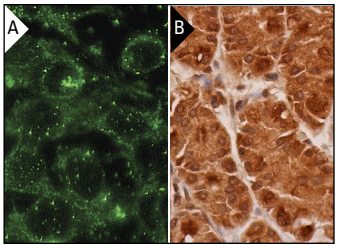
## STORAGE

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.

## DATA




DISC-1 (N-16): sc-47990. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing punctate cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and nuclear staining of glandular cells (**B**).

## SELECT PRODUCT CITATIONS


1. Faulkner, R.L., et al. 2008. Development of hippocampal mossy fiber synaptic outputs by new neurons in the adult brain. Proc. Natl. Acad. Sci. USA 105: 14157-14162.
2. Fournier, N.M., et al. 2009. Decreased levels of disrupted-in-schizophrenia 1 (DISC1) are associated with expansion of the dentate granule cell layer in normal and kindled rats. Neurosci. Lett. 455: 134-139.
3. Fournier, N.M., et al. 2010. The effect of amygdala kindling on hippocampal neurogenesis coincides with decreased reelin and DISC1 expression in the adult dentate gyrus. Hippocampus 20: 659-671.
4. Park, Y.U., et al. 2010. Disrupted-in-schizophrenia 1 (DISC1) plays essential roles in mitochondria in collaboration with Mitofilin. Proc. Natl. Acad. Sci. USA 107: 17785-17790.
5. Steinecke, A., et al. 2012. Disrupted-in-schizophrenia 1 (DISC1) is necessary for the correct migration of cortical interneurons. J. Neurosci. 32: 738-745.
6. Forrest, C.M., et al. 2013. Prenatal inhibition of the tryptophan-kynurenine pathway alters synaptic plasticity and protein expression in the rat hippocampus. Brain Res. 1504: 1-15.


## PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **DISC-1 (B-2): sc-365591**, our highly recommended monoclonal alternative to DISC-1 (N-16).