

# Drebrin (N-12): sc-30394

## BACKGROUND

Drebrins (developmentally regulated brain proteins) are cytoplasmic proteins that bind F-actin in the brain and are involved in cell migration, extension of neuronal processes and plasticity of dendrites. There are three isoforms: two embryonic types (E1 and E2); and an adult type (A), generated by alternative RNA splicing from a single Drebrin gene. Drebrins are expressed mainly in brain neurons but are also found in skeletal muscle, heart, placenta, pancreas and kidney. Drebrin has been designated as a marker of the dendritic spine. Decreases in Drebrin levels in the brain have been associated with Alzheimer's disease and Down syndrome. The gene encoding the human Drebrin protein is located on human chromosome 5.

## REFERENCES

1. Shirao, T. 1995. The roles of microfilament-associated proteins, drebrins, in brain morphogenesis: a review. *J. Biochem.* 117: 231-236.
2. Hayashi, K., et al. 1996. Modulatory role of drebrin on the cytoskeleton within dendritic spines in the rat cerebral cortex. *J. Neurosci.* 16: 7161-7170.
3. Hayashi, K., et al. 1999. Change in the shape of dendritic spines caused by overexpression of drebrin in cultured cortical neurons. *J. Neurosci.* 19: 3918-3925.
4. Peitsch, W.K., et al. 1999. Drebrin is a widespread actin-associating protein enriched at junctional plaques, defining a specific microfilament anchorage system in polar epithelial cells. *Eur. J. Cell Biol.* 78: 767-778.
5. Shim, K.S., et al. 2002. Drebrin, a dendritic spine protein, is manifold decreased in brains of patients with Alzheimer's disease and Down syndrome. *Neurosci. Lett.* 324: 209-212.
6. SWISS-PROT/TrEMBL (Q16643). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: DBN1 (human) mapping to 5q35.3; Dbn1 (mouse) mapping to 13 B1.

## SOURCE

Drebrin (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Drebrin of human 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-30394 P, (100 µg 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

Drebrin (N-12) is recommended for detection of Drebrin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Drebrin (N-12) is also recommended for detection of Drebrin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Drebrin siRNA (h): sc-43731, Drebrin siRNA (m): sc-63303, Drebrin shRNA Plasmid (h): sc-43731-SH, Drebrin shRNA Plasmid (m): sc-63303-SH, Drebrin shRNA (h) Lentiviral Particles: sc-43731-V and Drebrin shRNA (m) Lentiviral Particles: sc-63303-V.

Molecular Weight of Drebrin: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Drebrin (C-8): sc-374269** or **Drebrin (B-6): sc-393097**, our highly recommended monoclonal alternatives to Drebrin (N-12).