

# DENND1B (E-16): sc-240303

## BACKGROUND

DENND1B (DENN/MADD domain containing 1B), also known as C1orf218 or FAM31B, is a 426 amino acid protein that contains a dDENN domain, DENN domain and uDENN domain and exists as 5 isoforms as a result of alternative splicing. The DENND1B protein contains phosphorylation sites on Tyr 475, Tyr 484, Ser 514 and Ser 652 and is thought to activate Rab35 in an endocytic pathway trafficking Shiga toxin to the *trans*-Golgi network. The gene encoding DENND1B maps to human chromosome 1, the largest human chromosome which spans about 260 million base pairs and makes up 8% of the human genome, where it may be involved in asthma susceptibility. Other notable genes located on chromosome 1 include LMNA, which is associated with the rare aging disease Hutchinson-Gilford progeria, and the MUTYH gene, which is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome.

## REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
6. Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC-1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
7. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
8. McClintock, D., et al. 2006. Hutchinson-Gilford progeria mutant Lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody. *Proc. Natl. Acad. Sci. USA* 103: 2154-2159.
9. Yoshimura, S., et al. 2010. Family-wide characterization of the DENN domain Rab GDP-GTP exchange factors. *J. Cell Biol.* 191: 367-381.

## CHROMOSOMAL LOCATION

Genetic locus: DENND1B (human) mapping to 1q31.3; Dennd1b (mouse) mapping to 1 F.

## SOURCE

DENND1B (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DENND1B 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-240303 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DENND1B (E-16) is recommended for detection of DENND1B 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); non cross-reactive with DENND1A and DENND1C.

DENND1B (E-16) is also recommended for detection of DENND1B in additional species, including equine and bovine.

Suitable for use as control antibody for DENND1B siRNA (h): sc-88450, DENND1B siRNA (m): sc-142996, DENND1B shRNA Plasmid (h): sc-88450-SH, DENND1B shRNA Plasmid (m): sc-142996-SH, DENND1B shRNA (h) Lentiviral Particles: sc-88450-V and DENND1B shRNA (m) Lentiviral Particles: sc-142996-V.

Molecular Weight of DENND1B isoforms 1-5: 48/46/34/45/87 kDa.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.