

# DND1 (X22): sc-130493

## BACKGROUND

Primordial germ cells (PGCs) are precursor germ cells that divide rapidly and migrate toward the developing gonads. DND1 (dead end protein homolog 1), also known as RBMS4 (RNA-binding motif, single-stranded-interacting protein 4), is a 353 amino acid protein that contains 2 RRM (RNA recognition motif) domains and localizes to perinuclear germ granules within PGCs. Expressed specifically in PGCs throughout embryogenesis, DND1 is thought to play a role in PGC development, but is not necessary for PGC migration to gonadal regions. Mutations in the gene encoding DND1 may result in germ cell loss and the subsequent development of testicular germ cell tumors, suggesting that DND1 may play a role in tumorigenesis.

## REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609385. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Weidinger, G., et al. 2003. Dead end, a novel vertebrate germ plasm component, is required for zebrafish primordial germ cell migration and survival. *Curr. Biol.* 13: 1429-1434.
4. Youngren, K.K., et al. 2005. The Ter mutation in the dead end gene causes germ cell loss and testicular germ cell tumours. *Nature* 435: 360-364.
5. Zhu, R., et al. 2007. The role of dead-end in germ-cell tumor development. *Ann. N.Y. Acad. Sci.* 1120: 181-186.
6. Kedde, M., et al. 2007. RNA-binding protein DND1 inhibits microRNA access to target mRNA. *Cell* 131: 1273-1286.
7. Kedde, M., et al. 2008. Interplay between microRNAs and RNA-binding proteins determines developmental processes. *Cell Cycle* 7: 899-903.
8. Linger, R., et al. 2008. Analysis of the DND1 gene in men with sporadic and familial testicular germ cell tumors. *Genes Chromosomes Cancer* 47: 247-252.

## CHROMOSOMAL LOCATION

Genetic locus: DND1 (human) mapping to 5q31.3; Dnd1 (mouse) mapping to 18 B2.

## SOURCE

DND1 (X22) is a mouse monoclonal antibody raised against recombinant DND1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain 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

DND1 (X22) is recommended for detection of DND1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for DND1 siRNA (h): sc-91708, DND1 siRNA (m): sc-143122, DND1 shRNA Plasmid (h): sc-91708-SH, DND1 shRNA Plasmid (m): sc-143122-SH, DND1 shRNA (h) Lentiviral Particles: sc-91708-V and DND1 shRNA (m) Lentiviral Particles: sc-143122-V.

Molecular Weight (predicted) of DND1: 39 kDa.

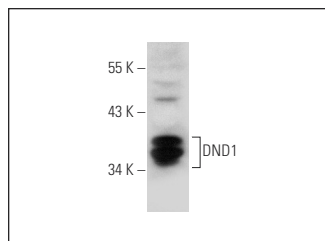
Molecular Weight (observed) of DND1: 35 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa nuclear extract: sc-2120.

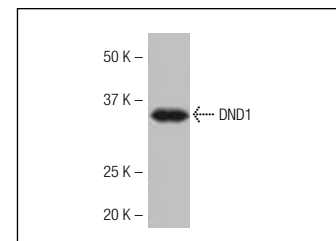
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



DND1 (X22): sc-130493. Western blot analysis of DND1 expression in Jurkat whole cell lysate.



DND1 (X22): sc-130493. Western blot analysis of DND1 expression in HeLa nuclear extract.

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