SANTA CRUZ BIOTECHNOLOGY, INC.

DICE1 (LL7): sc-101232

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DICE1 (deleted in cancer 1) is a protein mapping to chromosome 13q14.3, which appears to be a tumor suppressor gene in non-small cell lung carcinoma. Expression of DICE1 is lost or downregulated in most non-small lung carcinomas compared to normal lung tissue. This is most likely due to a loss of heterozygosity (LOH) of chromosome 13, which is prone to deletions and rearrangements in human lung cancers. The DICE1 gene is extremely homologous to the mouse protein, DBI-1, at the carboxy-terminus. DBI-1, when expressed at high levels, interferes with the mitogenic response to IGF-1. Both DICE1 and DBI-1 contain the highly conserved DEAD-box motif, which suggests that these proteins are involved in critical aspects of cellular function and regulation.

REFERENCES

1. Hensel, C.H., et al. 1990. Altered structure and expression of the human retinoblastoma susceptibility gene in small cell lung cancer. Cancer Res. 50: 3067-3072.
2. Hoff, H.B., 3rd., et al. 1998. DBI-1, a novel gene related to the notch family, modulates mitogenic responses to Insulin-like growth factor 1. Exp. Cell Res. 238: 359-370.
3. Wieland, I., et al. 1999. Isolation of DICE1: a gene frequently affected by LOH and downregulated in lung carcinomas. Oncogene 18: 4530-4537.
4. Kohno, T., et al. 1999. How many tumor suppressor genes are involved in human lung carcinogenesis? Carcinogenesis 20: 1403-1410.
5. Irion, U., et al. 1999. Developmental and cell biological functions of the *Drosophila* DEAD-box protein abstrakt. Curr. Biol. 9: 1373-1381.
6. Hagberg, H., et al. 2004. PARP-1 gene disruption in mice preferentially protects males from perinatal brain injury. J. Neurochem. 90: 1068-1075.
7. Martin-Oliva, D., et al. 2004. Crosstalk between PARP-1 and NFκB modulates the promotion of skin neoplasia. Oncogene 23: 5275-5283.

CHROMOSOMAL LOCATION

Genetic locus: INTS6 (human) mapping to 13q14.3; Ints6 (mouse) mapping to 14 D1.

SOURCE

DICE1 (LL7) is a mouse monoclonal antibody raised against recombinant DICE1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

DICE1 (LL7) is recommended for detection of DICE1 of mouse, rat and human origin by 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).

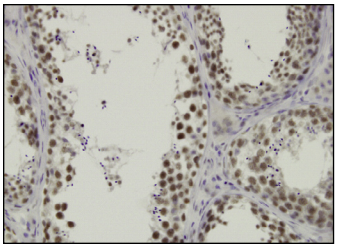
Suitable for use as control antibody for DICE1 siRNA (h): sc-45802, DICE1 siRNA (m): sc-45803, DICE1 shRNA Plasmid (h): sc-45802-SH, DICE1 shRNA Plasmid (m): sc-45803-SH, DICE1 shRNA (h) Lentiviral Particles: sc-45802-V and DICE1 shRNA (m) Lentiviral Particles: sc-45803-V.

Molecular Weight of DICE1: 100 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DICE1 (LL7): sc-101232. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear localization.

PROTOCOLS

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