

# DICE1 (E-18): sc-5876

## BACKGROUND

DICE1 (deleted in cancer 1) is a protein mapping to chromosome 13q14, 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

- 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.
- 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.
- Wieland, I., et al. 1999. Isolation of DICE1: A gene frequently affected by LOH and downregulated in lung carcinomas. *Oncogene* 18: 4530-4537.
- Kohno, T., et al. 1999. How many tumor suppressor genes are involved in human lung carcinogenesis? *Carcinogenesis* 20: 1403-1410.
- Irion, U., et al. 1999. Developmental and cell biological functions of the *Drosophila* DEAD-box protein abstract. *Curr. Biol.* 9: 1373-1381.
- Hagberg, H., et al. 2004. PARP-1 gene disruption in mice preferentially protects males from perinatal brain injury. *J. Neurochem.* 90: 1068-1075.
- 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, DDX26B (human) mapping to Xq26.3.

## SOURCE

DICE1 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DICE1 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-5876 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

DICE1 (E-18) is recommended for detection of DICE1 and DDX26B of 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).

DICE1 (E-18) is also recommended for detection of DICE1 and DDX26B in additional species, including equine, porcine and avian.

Molecular Weight of DICE1: 100 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.

## SELECT PRODUCT CITATIONS

- Evans, J.R., et al. 2008. RNA interference-mediated inhibition of hepatocyte nuclear factor 1α identifies target genes. *Biochim. Biophys. Acta* 1779: 341-346.

## 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 **DICE1 (H-6): sc-376524** or **DICE1 (LL7): sc-101232**, our highly recommended monoclonal alternatives to DICE1 (E-18).