

DLC-1 (H-260): sc-32931

BACKGROUND

Loss of expression of deleted in liver cancer 1 (DLC-1) protein correlates strongly with cancerous phenotype in a large number of human tissues, such as breast, liver, colon and prostate, and generally occurs due to genomic deletion or aberrant promoter methylation. The gene encoding DLC-1 maps to human chromosome 8p22, a region presumed to harbor tumor suppressor genes based on its frequent mutation in a large number of cancers. DLC-1 localizes to the cytoplasm and restored expression leads to caspase-3 mediated apoptosis, and inhibition of cell growth and invasiveness.

REFERENCES

1. Yuan, B.Z., et al. 1998. Cloning, characterization, and chromosomal localization of a gene frequently deleted in human liver cancer (DLC-1) homologous to rat RhoGAP. *Cancer Res.* 58: 2196-2199.
2. Park, S.W., et al. 2003. DNA variants of DLC-1, a candidate tumor suppressor gene in human hepatocellular carcinoma. *Int. J. Oncol.* 23: 133-137.
3. Yuan, B.Z., et al. 2003. DLC-1 gene inhibits human breast cancer cell growth and *in vivo* tumorigenicity. *Oncogene* 22: 445-450.
4. Zhou, X., et al. 2004. Restoration of DLC-1 gene expression induces apoptosis and inhibits both cell growth and tumorigenicity in human hepatocellular carcinoma cells. *Oncogene* 23: 1308-1313.
5. Yuan, B.Z., et al. 2004. DLC-1 operates as a tumor suppressor gene in human non-small-cell lung carcinomas. *Oncogene* 23: 1405-1411.
6. Syed, V., et al. 2005. Identification of ATF-3, caveolin-1, DLC-1, and NM23-H2 as putative antitumorigenic, progesterone-regulated genes for ovarian cancer cells by gene profiling. *Oncogene* 24: 1774-1787.

CHROMOSOMAL LOCATION

Genetic locus: DLC1 (human) mapping to 8p22; Dlc1 (mouse) mapping to 8 A4.

SOURCE

DLC-1 (H-260) is a rabbit polyclonal antibody raised against amino acids 111-370 mapping within an internal region of DLC-1 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

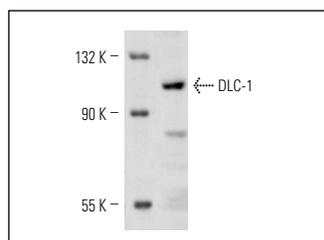
DLC-1 (H-260) is recommended for detection of DLC-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 DLC-1 siRNA (h): sc-43725, DLC-1 siRNA (m): sc-72134, DLC-1 shRNA Plasmid (h): sc-43725-SH, DLC-1 shRNA Plasmid (m): sc-72134-SH, DLC-1 shRNA (h) Lentiviral Particles: sc-43725-V and DLC-1 shRNA (m) Lentiviral Particles: sc-72134-V.

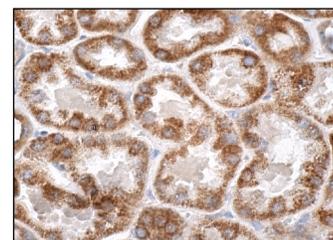
Molecular Weight of DLC-1: 123 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, MCF7 whole cell lysate: sc-2206 or KNRK whole cell lysate: sc-2214.

DATA



DLC-1 (H-260): sc-32931. Western blot analysis of DLC-1 expression in c4 whole cell lysate.



DLC-1 (H-260): sc-32931. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Yang, X.Y., et al. 2009. p120Ras-GAP binds the DLC1 Rho-GAP tumor suppressor protein and inhibits its RhoA GTPase and growth-suppressing activities. *Oncogene* 28: 1401-1409.
2. Sabbir, M.G., et al. 2010. Identification and characterization of Dlc1 isoforms in the mouse and study of the biological function of a single gene trapped isoform. *BMC Biol.* 8: 17.
3. Yang, X., et al. 2011. DLC1 interaction with S100A10 mediates inhibition of *in vitro* cell invasion and tumorigenicity of lung cancer cells through a RhoGAP-independent mechanism. *Cancer Res.* 71: 2916-2925.
4. Luo, H.W., et al. 2011. The intracellular stability of DLC1 is regulated by the 26S proteasome in human hepatocellular carcinoma cell line Hep3B. *Biochem. Biophys. Res. Commun.* 404: 279-283.

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Try **DLC-1 (C-12): sc-271915**, our highly recommended monoclonal alternative to DLC-1 (H-260).