

DBC-1 (h2): 293T Lysate: sc-116793

BACKGROUND

DBC-1 (deleted in breast cancer gene 1 protein), also known as p30 DBC protein, is one of the genes located within the region of chromosome 8 (8p21.3) that is homozygously deleted in some breast cancers. DBC-1 contains a nuclear localization signal, an N-terminal leucine zipper, an EF hand and a C-terminal coiled-coil region. DBC-1 is closely related to DIS but lacks the SAP domain. During death signaling mediated by TNF α , endogenous DBC-1 undergoes caspase-dependent processing to generate DBC-1 p120 and p66, both of which include the C-terminus of the protein. Both DBC-1 p120 and p66 relocate to the cytoplasm. Overexpression of the DBC-1 p120 form results in mitochondrial clustering and matrix condensation and increases the sensitivity of cells to TNF α -mediated apoptosis. In addition, DBC-1 directly interacts with unliganded ER α , stabilizing its expression and therefore collaborating to suppress apoptosis and promote hormone-independent cell growth.

REFERENCES

1. Hamaguchi, M., et al. 2002. DBC-2, a candidate for a tumor suppressor gene involved in breast cancer. *Proc. Natl. Acad. Sci. USA* 99: 13647-13652.
2. de Leeuw, R.J., et al. 2004. Comprehensive whole genome array CGH profiling of mantle cell lymphoma model genomes. *Hum. Mol. Genet.* 13: 1827-1837.
3. Rubio-Moscardo, F., et al. 2005. Characterization of 8p21.3 chromosomal deletions in B cell lymphoma: TRAIL-R1 and TRAIL-R2 as candidate dosage-dependent tumor suppressor genes. *Blood* 106: 3214-3222.
4. Sundararajan, R., et al. 2005. Caspase-dependent processing activates the proapoptotic activity of deleted in breast cancer-1 during tumor necrosis factor α -mediated death signaling. *Oncogene* 24: 4908-4920.
5. Downey, C., et al. 2006. Pressure stimulates breast cancer cell adhesion independently of cell cycle and apoptosis regulatory protein (CARP)-1 regulation of focal adhesion kinase. *Am. J. Surg.* 192: 631-635.
6. Ye, H., et al. 2007. Genomic assessments of the frequent loss of heterozygosity region on 8p21.3 approximately p22 in head and neck squamous cell carcinoma. *Cancer Genet. Cytogenet.* 176: 100-106.
7. Trauernicht, A.M., et al. 2007. Modulation of estrogen receptor α protein level and survival function by DBC-1. *Mol. Endocrinol.* 21: 1526-1536.
8. Koch, H.B., et al. 2007. Large-scale identification of c-Myc-associated proteins using a combined TAP/MudPIT approach. *Cell Cycle* 6: 205-217.

CHROMOSOMAL LOCATION

Genetic locus: CCAR2 (human) mapping to 8p21.3

PRODUCT

DBC-1 (h2): 293T Lysate represents a lysate of human DBC-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DBC-1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive DBC-1 antibodies. Recommended use: 10-20 μ l per lane.

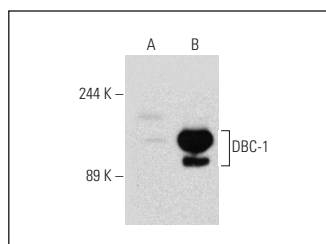
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DBC-1 (H-2): sc-166733 is recommended as a positive control antibody for Western Blot analysis of enhanced human DBC-1 expression in DBC-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



DBC-1 (H-2): sc-166733. Western blot analysis of DBC-1 expression in non-transfected: sc-117752 (A) and human DBC-1 transfected: sc-116793 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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