SANTA CRUZ BIOTECHNOLOGY, INC.

VDUP1 (C-18): sc-33099

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The gene encoding vitamin D_3 upregulated protein 1 (VDUP1) is upregulated by 1,25(OH)2D3 in response to various stresses, including ROS, UV and heat shock. The transcription factor HSF may be involved in this regulation. VDUP1 also functions as a natural antagonist of TRX, and displays tumor-suppressive activity by inducing cell cycle arrest at the G_0/G_1 phase. The presence of VDUP1 is required for CD122 expression and natural killer (NK) cell maturation, but its effect is minimal during the development of T and B cells. The gene encoding human VDUP1 maps to chromosome 1q21, and its protein product shows ubiquitous expression in various tissues and localizes to the cytoplasm. VDUP1 may also be a useful therapeutic target for melanoma.

CHROMOSOMAL LOCATION

Genetic locus: TXNIP (human) mapping to 1q21.1; Txnip (mouse) mapping to 3 F2.1.

SOURCE

VDUP1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of VDUP1 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-33099 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VDUP1 (C-18) is recommended for detection of VDUP1 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).

VDUP1 (C-18) is also recommended for detection of VDUP1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for VDUP1 siRNA (h): sc-44943, VDUP1 siRNA (m): sc-44944, VDUP1 shRNA Plasmid (h): sc-44943-SH, VDUP1 shRNA Plasmid (m): sc-44944-SH, VDUP1 shRNA (h) Lentiviral Particles: sc-44943-V and VDUP1 shRNA (m) Lentiviral Particles: sc-44944-V.

Molecular Weight of VDUP1: 46 kDa.

Positive Controls: VDUP1 (m2): 293T Lysate: sc-124550 or HL-60 whole cell lysate: sc-2209.

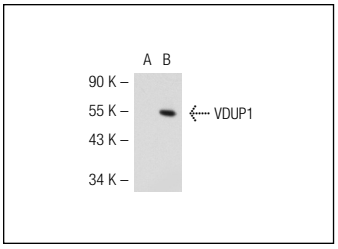
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

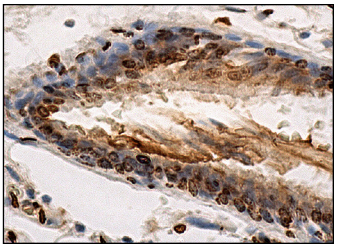
RESEARCH USE

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

DATA



VDUP1 (C-18): sc-33099. Western blot analysis of VDUP1 expression in non-transfected: sc-117752 (**A**) and mouse VDUP1 transfected: sc-124550 (**B**) 293T whole cell lysates.



VDUP1 (C-18): sc-33099. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Levendusky, M.C., et al. 2009. Expression and regulation of vitamin D3 upregulated protein 1 (VDUP1) is conserved in mammalian and insect brain. J. Comp. Neurol. 517: 581-600.
2. Dedes, K.J., et al. 2009. Acquired vorinostat resistance shows partial cross-resistance to 'second-generation' HDAC inhibitors and correlates with loss of histone acetylation and apoptosis but not with altered HDAC and HAT activities. Anticancer Drugs 20: 321-333.
3. de Zhuo, X., et al. 2010. Vitamin D3 up-regulated protein 1(VDUP1) is regulated by FOXO3A and miR-17-5p at the transcriptional and post-transcriptional levels, respectively, in senescent fibroblasts. J. Biol. Chem. 285: 31491-31501.
4. Myers, J.M., et al. 2011. The intracellular redox stress caused by hexavalent chromium is selective for proteins that have key roles in cell survival and thiol redox control. Toxicology 281: 37-47.

PROTOCOLS

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