SANTA CRUZ BIOTECHNOLOGY, INC.

VDUP1 (H-12): sc-271238

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The gene encoding vitamin D_3 upregulated protein 1 (VDUP1) is upregulated by $1,25(OH)_2D_3$ 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 1q21.1, 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 (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 323-356 near the C-terminus of VDUP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VDUP1 (H-12) is available conjugated to agarose (sc-271238 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271238 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271238 PE), fluorescein (sc-271238 FITC), Alexa Fluor® 488 (sc-271238 AF488), Alexa Fluor® 546 (sc-271238 AF546), Alexa Fluor® 594 (sc-271238 AF594) or Alexa Fluor® 647 (sc-271238 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271238 AF680) or Alexa Fluor® 790 (sc-271238 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271238 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

VDUP1 (H-12) is recommended for detection of VDUP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

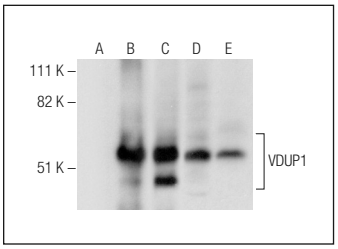
Suitable for use as control antibody for VDUP1 siRNA (h): sc-44943, VDUP1 siRNA (m): sc-44944, VDUP1 siRNA (r): sc-270490, VDUP1 shRNA Plasmid (h): sc-44943-SH, VDUP1 shRNA Plasmid (m): sc-44944-SH, VDUP1 shRNA Plasmid (r): sc-270490-SH, VDUP1 shRNA (h) Lentiviral Particles: sc-44943-V, VDUP1 shRNA (m) Lentiviral Particles: sc-44944-V and VDUP1 shRNA (r) Lentiviral Particles: sc-270490-V.

Molecular Weight of VDUP1: 46 kDa.

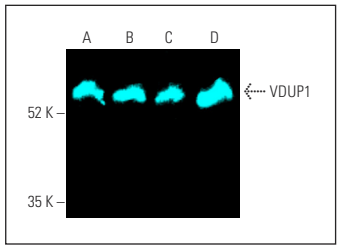
STORAGE

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

DATA



VDUP1 (H-12): sc-271238. Western blot analysis of VDUP1 expression in non-transfected 293T: sc-117752 (**A**), mouse VDUP1 transfected 293T: sc-124549 (**B**), HL-60 (**C**) and M1 (**D**) whole cell lysates and human kidney tissue extract (**E**).



VDUP1 (H-12): sc-271238. Fluorescent western blot analysis of VDUP1 expression in NIH/3T3 (**A**), RAW 264.7 (**B**), HL-60 (**C**) and K-562 (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 647: sc-533664.

SELECT PRODUCT CITATIONS

1. Pan, Z., et al. 2018. miRNA-23a/CXCR4 regulates neuropathic pain via directly targeting TXNIP/NLRP3 inflammasome axis. J. Neuroinflammation 15: 29.
2. Zhao, X.J., et al. 2018. Polydatin prevents fructose-induced liver inflammation and lipid deposition through increasing miR-200a to regulate Keap1/ Nrf2 pathway. Redox Biol. 18: 124-137.
3. Pecorelli, A., et al. 2020. Alterations of mitochondrial bioenergetics, dynamics, and morphology support the theory of oxidative damage involvement in autism spectrum disorder. FASEB J. 34: 6521-6538.
4. Miao, J., et al. 2020. NFκB p65-dependent transcriptional regulation of histone deacetylase 2 contributes to the chronic constriction injury-induced neuropathic pain via the microRNA-183/TXNIP/NLRP3 axis. J. Neuroinflammation 17: 225.
5. Subramani, A., et al. 2020. Intracellular *Cryptococcus neoformans* disrupts the transcriptome profile of M1- and M2-polarized host macrophages. PLoS ONE 15: e0233818.
6. Wang, M., et al. 2020. Taohong siwu decoction ameliorates ischemic stroke injury via suppressing pyroptosis. Front. Pharmacol. 11: 590453.
7. Santos, P.P.D., et al. 2021. Vitamin D supplementation induces cardiac remodeling in rats: association with thioredoxin-interacting protein and thioredoxin. Arq. Bras. Cardiol. 116: 970-978.
8. Pan, S.M., et al. 2022. Fluoxetine increases astrocytic glucose uptake and glycolysis in corticosterone-induced depression through restricting GR-TXNIP-GLUT1 pathway. Front. Pharmacol. 13: 872375.

RESEARCH USE

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