

VDUP1 (H-115): sc-67134

BACKGROUND

The gene encoding vitamin D3 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 G₀/G₁ 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.

REFERENCES

- Chen, K.S., et al. 1994. Isolation and characterization of a novel cDNA from HL-60 cells treated with 1,25-dihydroxyvitamin D-3. *Biochim. Biophys. Acta* 1219: 26-32.
- Nishiyama, A., et al. 1999. Identification of thioredoxin-binding protein-2/vitamin D3 upregulated protein 1 as a negative regulator of thioredoxin function and expression. *J. Biol. Chem.* 274: 21645-21650.

CHROMOSOMAL LOCATION

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

SOURCE

VDUP1 (H-115) is a rabbit polyclonal antibody raised against amino acids 1-115 mapping at the N-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.

APPLICATIONS

VDUP1 (H-115) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VDUP1 (H-115) 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.

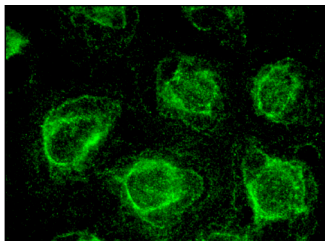
Molecular Weight of VDUP1: 46 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, M1 whole cell lysate: sc-364782 or NK-92 whole cell lysate: sc-364788.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



VDUP1 (H-115): sc-67134. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and membrane localization.

SELECT PRODUCT CITATIONS

- Lee, J.H., et al. 2010. Inhibition of histone deacetylase 10 induces thioredoxin-interacting protein and causes accumulation of reactive oxygen species in SNU-620 human gastric cancer cells. *Mol. Cells* 30: 107-112.
- Wang, W., et al. 2013. Quercetin and allopurinol reduce liver thioredoxin-interacting protein to alleviate inflammation and lipid accumulation in diabetic rats. *Br. J. Pharmacol.* 169: 1352-1371.

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.


 MONOS
Satisfaction
Guaranteed

Try **VDUP1 (D-2): sc-271237** or **VDUP1 (H-12): sc-271238**, our highly recommended monoclonal alternatives to VDUP1 (H-115). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **VDUP1 (D-2): sc-271237**.