

VDR (N-20): sc-1009

BACKGROUND

The active metabolite of vitamin D modulates the expression of a wide variety of genes in a developmentally specific manner. This secosteroid hormone can up- or downregulate the expression of genes involved in a diverse array of responses such as proliferation, differentiation and calcium homeostasis. 1,25-(OH)₂-vitamin D₃ exerts its effects through interaction with the vitamin D receptor (VDR), a member of the superfamily of hormone-activated nuclear receptors. In its ligand-bound state, the VDR forms heterodimers with the 9-*cis* retinoic acid receptor, RXR, and affects gene expression by binding specific DNA sequences known as hormone response elements, or HREs. In addition to regulating the above mentioned cellular responses, 1,25-(OH)₂-vitamin D₃ exhibits antiproliferative properties in osteosarcoma, melanoma, colon carcinoma and breast carcinoma cells.

CHROMOSOMAL LOCATION

Genetic locus: VDR (human) mapping to 12q13.11; Vdr (mouse) mapping to 15 F1.

SOURCE

VDR (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of VDR of rat origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1009 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1009 X, 200 µg/0.1 ml.

APPLICATIONS

VDR (N-20) is recommended for detection of VDR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

VDR (N-20) is also recommended for detection of VDR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VDR siRNA (h): sc-106692, VDR siRNA (m): sc-36811, VDR shRNA Plasmid (h): sc-106692-SH, VDR shRNA Plasmid (m): sc-36811-SH, VDR shRNA (h) Lentiviral Particles: sc-106692-V and VDR shRNA (m) Lentiviral Particles: sc-36811-V.

VDR (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of VDR isoforms: 48/53 kDa.

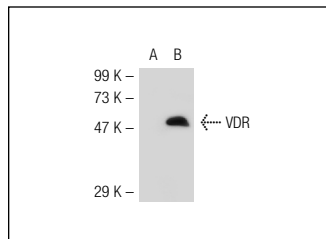
Molecular Weight (observed) of VDR isoforms: 48/60 kDa.

Positive Controls: VDR (m): 293T Lysate: sc-124548.

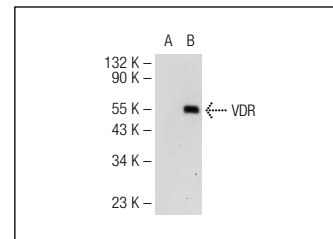
STORAGE

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

DATA



VDR (N-20): sc-1009. Western blot analysis of VDR expression in non-transfected: sc-117752 (A) and mouse VDR transfected: sc-124548 (B) 293T whole cell lysates.



VDR (N-20): sc-1009. Western blot analysis of VDR expression in non-transfected: sc-117752 (A) and human VDR transfected: sc-178119 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Duque, G., et al. 2002. Estrogens (E2) regulate expression and response of 1,25-dihydroxyvitamin D₃ receptors in bone cells: changes with aging and hormone deprivation. *Biochem. Biophys. Res. Commun.* 299: 446-454.
- Canaff, L. and Hendy, G.N. 2002. Human calcium-sensing receptor gene. vitamin D response elements in promoters P1 and P2 confer transcriptional responsiveness to 1,25-dihydroxyvitamin D. *J. Biol. Chem.* 277: 30337-30350.
- Meir, T., et al. 2009. Deletion of the vitamin D receptor specifically in the parathyroid demonstrates a limited role for the receptor in parathyroid physiology. *Am. J. Physiol. Renal Physiol.* 297: F1192-F1198.
- Galitzer, H., et al. 2010. Parathyroid cell resistance to fibroblast growth factor 23 in secondary hyperparathyroidism of chronic kidney disease. *Kidney Int.* 77: 211-218.
- Han, S., et al. 2010. A novel bile acid-activated vitamin D receptor signaling in human hepatocytes. *Mol. Endocrinol.* 24: 1151-1164.
- Luderer, H.F., et al. 2011. Lymphoid enhancer-binding factor-1 (LEF1) interacts with the DNA-binding domain of the vitamin D receptor. *J. Biol. Chem.* 286: 18444-18451.

RESEARCH USE

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



Try **VDR (D-6): sc-13133**, our highly recommended monoclonal alternative to VDR (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **VDR (D-6): sc-13133**.