10320 Camino Santa Fe, Suite G
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Anti-VDR Antibody
Catalog # ABO11291

Specification

Anti-VDR Antibody - Product Information

Application	**WB**
Primary Accession	P11473
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Vitamin D3 receptor(VDR) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-VDR Antibody - Additional Information

Gene ID 7421

Other Names
Vitamin D3 receptor, VDR, 1, 25-dihydroxyvitamin D3 receptor, Nuclear receptor subfamily 1 group I member 1, VDR, NR1I1

Calculated MW
48289 MW KDa

Application Details
Western blot, 0.1-0.5 μg/ml, Human, Mouse, Rat

Subcellular Localization
Nucleus.

Protein Name
Vitamin D3 receptor

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human VDR (389-404aa DLRSLNEEHSKQYRCL), different from the related rat and mouse sequences by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the nuclear hormone receptor family. NR1 subfamily.

Anti-VDR Antibody - Protein Information

Name VDR (HGNC:12679)

Synonyms NR1I1

Function
Nuclear receptor for calcitriol, the active form of vitamin D3 which mediates the action of this vitamin on cells (PubMed:10678179, PubMed:15728261, PubMed:16913708, PubMed:28698609, PubMed:37478846). Enters the nucleus upon vitamin D3 binding where it forms heterodimers with the retinoid X receptor/RXR (PubMed:28698609). The VDR-RXR heterodimers bind to specific response elements on DNA and activate the transcription of vitamin D3-responsive target genes (PubMed:28698609). Plays a central role in calcium homeostasis (By similarity). Also functions as a receptor for the secondary bile acid lithocholic acid (LCA) and its metabolites (PubMed:12016314, PubMed:32354638).

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00407, ECO:0000269|PubMed:12145331, ECO:0000269|PubMed:16207705, ECO:0000269|PubMed:28698609}. Cytoplasm Note=Localizes mainly to the nucleus (PubMed:12145331, PubMed:28698609). Translocated into the nucleus via both ligand- dependent and ligand-independent pathways; ligand-independent nuclear translocation is mediated by IPO4 (PubMed:16207705)

Anti-VDR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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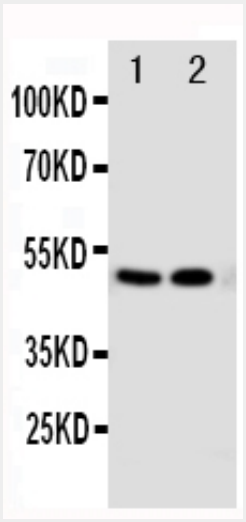
Anti-VDR Antibody - Images



Anti-VDR antibody, ABO11291, Western blottingLane 1: MCF-7 Cell LysateLane 2: HELA Cell Lysate

Anti-VDR Antibody - Background

VDR(Vitamin D Receptor), also known as Vitamin D Hormone Receptor, is a member of the nuclear receptor family of transcription factors. Labuda et al.(1991) assigned the VDR gene to 12q12-q14 by in situ hybridization. Using mutation analysis, Jurutka et al.(2000) characterized arg18/arg22, VDR residues immediately N-terminal of the first DNA-binding zinc finger, as vital for contact with the general transcription factor IIB(TFIIB). A natural polymorphic variant of VDR, termed F/M4(missing a FokI restriction site), which lacks only the first 3 amino acids(including glu2), interacted more efficiently with TFIIB and also possessed elevated transcriptional activity compared with the full-length(f/M1) receptor. Shah et al.(2006) stated that the signaling and oncogenic activity of beta-catenin(CTNNB1) can be repressed by activation of VDR. Conversely, high levels of beta-catenin can potentiate the transcriptional activity of 1,25-dihydroxyvitamin D3.