# VDR Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | VDR, Polyclonal Antibody |
| **Full Product Name** | VDR (VDR, NR1I1, Vitamin D3 receptor, 1,25-dihydroxyvitamin D3 receptor, Nuclear receptor subfamily 1 group I member 1) (MaxLight 490) |
| **Product Gene Name** | anti-VDR antibody |
| **Product Synonym Names** | VDR; NR1I1; Vitamin D3 receptor; 1,25-dihydroxyvitamin D3 receptor; Nuclear receptor subfamily 1 group I member 1 |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490. |
| **Purity/Purification** | Purified by Protein A Affinity Chromatography. |
| **Preparation and Storage** | Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap. |
| **Molecular Weight** | 48,289 Da |
| **Chromosome Location** | Chromosome: 12; NC_000012.11 (48235320..48298814, complement). Location: 12q13.11 |
| **OMIM** | 277440 |
| **3D Structure** | ModBase 3D Structure for P11473 |
| **Immunogen** | VDR antibody is generated from rabbits immunized with a recombinant protein of human VDR. |
| **Conjugate** | MaxLight490 |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-VDR antibody** | Antibodies; Receptors |
| **Applications Tested/Suitable for anti-VDR antibody** | Western Blot (WB), FLISA |
| **Application Notes for anti-VDR antibody** | WB: 1:100-500<br>FLISA: 1:1,000<br>Applications are based on unconjugated antibody. |
| **Related Product Information for anti-VDR antibody** | This gene encodes the nuclear hormone receptor for vitamin D3. This receptor also functions as a receptor for the secondary bile acid lithocholic acid. The receptor belongs to the family of trans-acting transcriptional regulatory factors and shows sequence similarity to the steroid and thyroid hormone receptors. Downstream targets of this nuclear hormone receptor are principally involved in mineral metabolism though the receptor regulates a variety of other metabolic pathways, such as those involved in the immune response and cancer. Mutations in this gene are associated with type II vitamin D-resistant rickets. A single nucleotide polymorphism in the initiation codon results in an alternate translation start site three codons downstream. Alternative splicing results in multiple transcript variants encoding the same protein. |

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| **Product References and Citations for anti-VDR antibody** | An, B.S., et al. Mol. Cell. Biol. 30(20):4890-4900(2010). Elnenaei, M.O., et al. Br. J. Nutr., 1-8 (2010). In press: Forghani, N., et al. J. Pediatr. Endocrinol. Metab. 23(8):843-850(2010). Alvarez-Nava, F., et al. J. Pediatr. Endocrinol. Metab. 23(8):773-782(2010). Jurutka, P.W., et al. Proc. Natl. Acad. Sci. U.S.A. 93(8):3519-3524(1996). |
| **Other Notes** | Small volumes of anti-VDR antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for VDR purchase** | MBS6362406 is an antibody targeting VDR. Also known as VDR (VDR, NR1I1, Vitamin D3 receptor, 1,25-dihydroxyvitamin D3 receptor, Nuclear receptor subfamily 1 group I member 1) (MaxLight 490). Reactive in Human. Host: Rabbit. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for VDR. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 4507883 |
| **NCBI GeneID** | 7421 |
| **NCBI Accession #** | NP_000367.1 |
| **UniProt Primary Accession #** | P11473 |
| **UniProt Secondary Accession #** | Q5PSV3; B2R5Q1 |
| **UniProt Related Accession #** | P11473 |
| **GenBank Nucleotide #** | NM_000376.2 |
| **NCBI Official Full Name** | vitamin D3 receptor isoform VDRA |
| **NCBI Official Synonym Full Names** | vitamin D (1,25- dihydroxyvitamin D3) receptor |
| **NCBI Official Symbol** | VDR |
| **NCBI Official Synonym Symbols** | NR1I1 |
| **UniProt Protein Name** | Vitamin D3 receptor |
| **UniProt Synonym Protein Names** | 1,25-dihydroxyvitamin D3 receptor; Nuclear receptor subfamily 1 group I member 1 |
| **Protein Family** | Vitamin D3 receptor |
| **UniProt Gene Name** | VDR |
| **UniProt Synonym Gene Names** | NR1I1; VDR |
| **UniProt Entry Name** | VDR_HUMAN |
| **NCBI Protein Information** | vitamin D3 receptor; 1,25-dihydroxyvitamin D3 receptor; vitamin D nuclear receptor variant 1; nuclear receptor subfamily 1 group I member 1 |
| **NCBI Summary for VDR** | This gene encodes the nuclear hormone receptor for vitamin D3. This receptor also functions as a receptor for the secondary bile acid lithocholic acid. The receptor belongs to the family of trans-acting transcriptional regulatory factors and shows sequence similarity to the steroid and thyroid hormone receptors. Downstream targets of this nuclear hormone receptor are principally involved in mineral metabolism though the receptor regulates a variety of other metabolic pathways, such as those involved in the immune response and cancer. Mutations in this gene are associated with type II vitamin D-resistant rickets. A single nucleotide polymorphism in the initiation codon results in an alternate translation start site three codons downstream. Alternative splicing results in multiple transcript variants encoding different proteins. [provided by RefSeq, Feb 2011] |

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| **UniProt Comments for VDR** | VDR: Nuclear hormone receptor. Transcription factor that mediates the action of vitamin D3 by controlling the expression of hormone sensitive genes. Regulates transcription of hormone sensitive genes via its association with the WINAC complex, a chromatin-remodeling complex. Recruited to promoters via its interaction with the WINAC complex subunit BAZ1B/WSTF, which mediates the interaction with acetylated histones, an essential step for VDR-promoter association. Plays a central role in calcium homeostasis. Defects in VDR are the cause of rickets vitamin D- dependent type 2A (VDDR2A). A disorder of vitamin D metabolism resulting in severe rickets, hypocalcemia and secondary hyperparathyroidism. Most patients have total alopecia in addition to rickets. Belongs to the nuclear hormone receptor family. NR1 subfamily.<br><br>Protein type: Nuclear receptor; DNA-binding; Transcription factor<br><br>Chromosomal Location of Human Ortholog: 12q13.11<br><br>Cellular Component: nucleoplasm; nucleus; receptor complex<br><br>Molecular Function: retinoid X receptor binding; protein binding; DNA binding; zinc ion binding; sequence-specific DNA binding; steroid hormone receptor activity; vitamin D3 receptor activity; transcription factor activity<br><br>Biological Process: lactation; transcription initiation from RNA polymerase II promoter; cell morphogenesis; positive regulation of apoptosis involved in mammary gland involution; negative regulation of transcription from RNA polymerase II promoter; decidualization; signal transduction; intestinal absorption; cellular calcium ion homeostasis; negative regulation of cell proliferation; calcium ion transport; positive regulation of transcription from RNA polymerase II promoter; steroid hormone mediated signaling; gene expression; negative regulation of transcription, DNA-dependent; skeletal development; positive regulation of keratinocyte differentiation<br><br>Disease: Vitamin D-dependent Rickets, Type 2a; Osteoporosis |
| **Research Articles on VDR** | **1.** Expression of TauT is differentially regulated by Vitamin D(3) and retinoic acid via formation of VDR and RXR complexes in the nuclei in a cell type-dependent manner. |
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