Active Recombinant Human Vitamin D (1,25- dihydroxyvitamin D3) Receptor

Cat. No. VDR-2516H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human VDR was expressed in*baculovirus*system and purified by an affinity column in combination with FPLC chromatography. 48 kDa.
Species	Human
Source	Insect Cells
ProteinLength	1-427 aa
Description	The vitamin D endocrine system is critical for the proper development and maintenance of mineral ion homeostasis and skeletal integrity. Beyond these classical roles, recent evidence suggests that the bioactive metabolite of vitamin D, 1,25-dihydroxyvitamin D3, functions in diverse physiological processes, such as hair follicle cycling, blood pressure regulation, and mammary gland development. The biological effects of 1,25-(OH)2D3 are mediated through the vitamin D receptor (VDR), a member of the nuclear receptor superfamily of ligand-activated transcription factors. The cellular effects of VDR signaling include growth arrest, differentiation and/or induction of apoptosis. VDR heterodimerizes with RXR and the liganded VDR-RXR heterodimer binds with high affinity to vitamin D response elements (VDREs) in the promoters of target genes. In addition, several nuclear receptor coactivators (SRC-1, DRIP) have been shown to interact with VDR and potentiate its transcriptional activity. In addition to treating disorders of mineral metabolism and diseases of the skeleton, such as rickets, osteoporosis, and renal osteodystrophy,

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	VDR and 1,25-(OH)2D3 have significant therapeutic potential for pathologies such as cancer, autoimmune syndromes, and psoriasis.
Applications	Recombinant VDR can be used 1) for protein-protein interaction assay; 2) for in vitro transcription assay; 3) for in vitro acetylation assay; and 4) for cell growth assay.
Transcript Variant	This variant lacks an alternate exon in the 5" UTR compared to variant 2. Variants 1 and 2 encode the same protein.
Activity	1 unit equals 1 nanogram of purified protein. 1-5 units are sufficient for a gel mobility shift assay in a 20µreaction; 50-100 units are sufficient for reconstituted transcription assay and 100-200 units are sufficient for a protein-protein interaction assay or an acetylation assay.
Quality Control	The purified protein is greater than 95% homogeneous based on SDS-PAGE gel analysis and contains no detectable proteases, DNase or RNase activity.
Reagents Supplied	1x dilution buffer A: 20 mM Tris-Cl (pH 8.0), 20% Glycerol, 100 mM KCl, 0.2 mM EDTA and 1mM DTT.
Storage Conditions	Store at -80°C.
Pathways	Gene Expression

GENE INFORMATION

Gene Name	VDR vitamin D (1,25-dihydroxyvitamin D3) receptor [Homo sapiens]
Synonyms	VDR; vitamin D (1,25-dihydroxyvitamin D3) receptor; NR1I1; 1,25-dihydroxyvitamin D3 receptor; Nuclear receptor subfamily 1 group I member 1

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Gene ID	7421
mRNA Refseq	NM_000376
Protein Refseq	NP_000367
MIM	601769
UniProt ID	P11473
Chromosome Location	12q12-q14
Function	metal ion binding; protein binding; retinoid X receptor binding; sequence-specific DNA binding; steroid hormone receptor activity; transcription factor activity; vitamin D response element binding; vitamin D3 receptor activity; zinc ion binding

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA