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VDR Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM2082B

Product Information

Application	WB, E
Primary Accession	P11473
Other Accession	NP_000367.1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgA
Clone Names	517CT23.5.1
Calculated MW	48289

Additional Information

Gene ID	7421
Other Names	Vitamin D3 receptor, VDR, 25-dihydroxyvitamin D3 receptor, Nuclear receptor subfamily 1 group I member 1, VDR, NR1I1
Target/Specificity	Purified His-tagged VDR protein(Fragment) was used to produced this monoclonal antibody.
Dilution	WB~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	VDR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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)

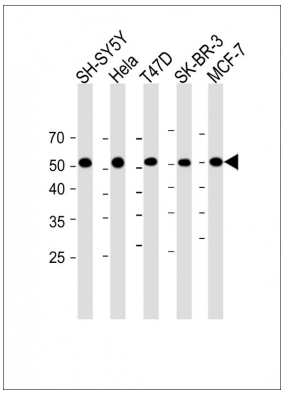
Background

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.

References

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)

Images



All lanes: Anti-VDR at 1:1000 dilution Lane 1: SH-SY5Y whole cell lysate Lane 2: Hela whole cell lysate Lane 3: T47D whole cell lysate Lane 4: SK-BR-3 whole cell lysate Lane 5: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 54 KDa Blocking/Dilution buffer: 5% NFDM/TBST.