

Mouse VDR / NR1H1 Protein (His Tag)

Catalog Number: 51106-M08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Nr1h1

Protein Construction:

A DNA sequence encoding the mouse VDR (P48281) (Met1-Ser422) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 86 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse VDR consists of 432 amino acids and has a calculated molecular mass of 49.2 kDa. The recombinant protein migrates as an approximately 55 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

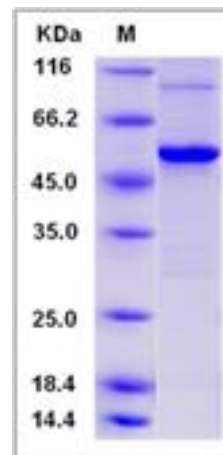
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

VDR (vitamin D(1,25- dihydroxyvitamin D3)receptor), also known as NR1H1, belongs to the NR1H family, NR1 subfamily. It is composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain. Vitamin D receptors (VDRs) are members of the NR1H family, which also includes pregnane X (PXR) and constitutive androstane (CAR) receptors, that form heterodimers with members of the retinoid X receptor family. VDRs repress expression of 1 α -hydroxylase (the proximal activator of 1,25(OH)2D3) and induce expression of the 1,25(OH)2D3 inactivating enzyme CYP24. Also, it has recently been identified as an additional bile acid receptor alongside FXR and may function to protect gut against the toxic and carcinogenic effects of these endobiotics. VDR is expressed in the intestine, thyroid and kidney and has a vital role in calcium homeostasis. It is the nuclear hormone receptor, also called transcription factor that mediates the action of vitamin D3. Inherited mutations in the VDR gene leads to rickets.

References

1. Moore DD, *et al.* (2006) The NR1H and NR1H receptors: constitutive androstane receptor, pregnane X receptor, farnesoid X receptor alpha, farnesoid X receptor beta, liver X receptor alpha, liver X receptor beta, and vitamin D receptor. *Pharmacol Rev.* 58(4):742-59.
2. Szpirer J, *et al.* (1991) The Sp1 transcription factor gene (SP1) and the 1,25-dihydroxyvitamin D3 receptor gene (VDR) are colocalized on human chromosome arm 12q and rat chromosome 7. *Genomics.* 11(1):168-73.
3. Germain P, *et al.* (2006) Overview of nomenclature of nuclear receptors. *Pharmacol Rev.* 58(4): 685-704.

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For US Customer: Fax: 267-657-0217

• Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288

• Tel:+86-400-890-9989

• <http://www.sinobiological.com>