

Vitamin D3

Chemical Properties

CAS No. : 67-97-0

Formula: C₂₇H₄₄O

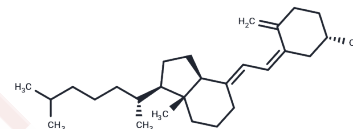
Molecular Weight: 384.64

Storage:

Keep away from direct sunlight, The compound is unstable in solution. Please use soon

Powder: -20°C for 3 years

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Vitamin D3 (Cholecalciferol) is a naturally occurring form of vitamin D that, after metabolic activation, can induce cell differentiation and cancer cell proliferation. It can also be used to establish kidney stone models.
Targets(IC50)	Endogenous Metabolite, Antibacterial, Vitamin

Solubility Information

Solubility	DMSO: 252.5 mg/mL (656.46 mM), Sonication is recommended. (The compound is unstable in solution, please use soon.) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.6 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5998 mL	12.9992 mL	25.9983 mL
5 mM	0.520 mL	2.5998 mL	5.1997 mL
10 mM	0.260 mL	1.2999 mL	2.5998 mL
50 mM	0.052 mL	0.260 mL	0.520 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Di Rosa M, Malaguarnera M, Nicoletti F, Malaguarnera L. Vitamin D3: a helpful immuno-modulator. *Immunology*. 2011 Oct;134(2):123-39. doi: 10.1111/j.1365-2567.2011.03482.x.
- Krishnan AV, Feldman D. Mechanisms of the anti-cancer and anti-inflammatory actions of vitamin D. *Annu Rev Pharmacol Toxicol*. 2011;51:311-36. doi: 10.1146/annurev-pharmtox-2010510-1200611.
- Leibowitz SB, Kantoff PW. Differentiating agents and the treatment of prostate cancer: Vitamin D3 and peroxisome proliferator-activated receptor gamma ligands. *Semin Oncol*. 2003 Oct;30(5):698-708.
- Nigwekar SU, Bhan I, Thadhani R. Ergocalciferol and cholecalciferol in CKD. *Am J Kidney Dis*. 2012 Jul;60(1):139-56. doi: 10.1053/j.ajkd.2011.12.035.

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