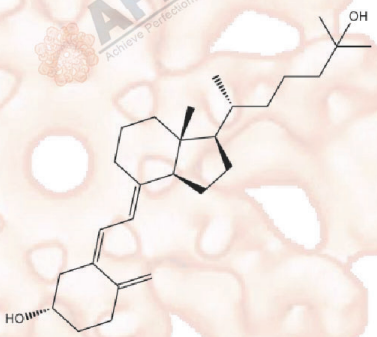
Product Data Sheet

Calcifediol

Cat. No.: B2140
CAS No.: 19356-17-3
Formula: C27H44O2
M.Wt: 400.64
Synonyms:
Target: Vitamin D Related
Pathway: VD/VDR
Storage: Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; ⩾13.65 mg/mL in DMSO; ⩾41.2 mg/mL in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.4960 mL	12.4800 mL	24.9601 mL
5 mM	0.4992 mL	2.4960 mL	4.9920 mL
10 mM	0.2496 mL	1.2480 mL	2.4960 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Major circulating form of vitamin D3
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Neonatal rat cardiomyocytes, plasmacyoid dendritic cells (pDCs) and conventional DCs
Preparation method:	The solubility of this compound in DMSO is >13.65mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

	Reacting conditions:	0.1-10 μM, 2 hours
	Applications:	Calcifediol induced CYP24A1 expression with EC50 of 70 nM. Calcifediol stimulated the expression of thrombomodulin with EC50 at 10-100 nM. Calcifediol (0.1-10 μM) dose-dependently induced VDR translocation into the nucleus. Calcifediol led to significant expression of Cyp24A1 in moDCs after 16 hours.
In Vivo	**Animal experiment**	
	Animal models:	Wistar-Kyoto rats
	Dosage form:	50 ng/d calcifediol for 3 days
	Applications:	In spontaneously hypertensive rats and normotensive Wistar-Kyoto (WKY) rats, calcifediol (50 ng/d for 3 days), calcifediol increased total cell and brush border calbindin-D9K.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Wu-Wong J R, Chen Y W, Nakane M, et al. Differential effects of vitamin d receptor agonists on gene expression in neonatal rat cardiomyocytes[J]. Cardiovascular drugs and therapy, 2011, 25(3): 215-222.

[2]. Karthaus N, Van Spriel A B, Looman M W G, et al. Vitamin D controls murine and human plasmacytoid dendritic cell function[J]. Journal of Investigative Dermatology, 2014, 134(5): 1255-1264.

[3]. Roullet C M, Roullet J B, Martin A S, et al. In vivo effect of calcitriol on calcium transport and calcium binding proteins in the spontaneously hypertensive rat[J]. Hypertension, 1994, 24(2): 176-182.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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