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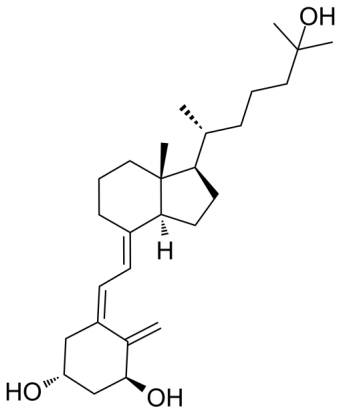
Certificate of Analysis

Catalog Number	BP22529
Product Name	Calcitriol

Physical and Chemical Properties

CAS No.	32222-06-3
Chemical Formula	C27H44O3
Molecular Weight	416.64
Solubility	DMSO: 110 mg/mL (264.02 mM, Need ultrasonic) Ethanol: 100 mg/mL (240.02 mM, Need ultrasonic)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	Calcitriol is the most active metabolite of vitamin D and also a vitamin D receptor (VDR) agonist.
Targets&IC50	Human Endogenous Metabolite:

In vitro	Calcitriol exerts antiproliferative effects on cervical cancer cells in vitro. Cells decrease by 12.8% when treated with 100 nM Calcitriol for 6 days, compare with control. Inhibition of cell proliferation becomes more pronounced with the increase in Calcitriol concentration. The decrease is 26.1% and 31.6% for 200 and 500 nM Calcitriol, respectively. Treatment with Calcitriol for 72 h induces an evident accumulation of cells in the G1 phase, with approximately 66.18% in 200 nM and 78.10% in 500 nM, compare with the control (24.36%).Calcitriol treatment significantly decreases HCCR-1 protein expression compare with the control in a time- and dose-dependent manner. Calcitriol significantly increases ERα mRNA in a dose dependent manner with an EC50 of 9.8×10-9 M.
In vivo	Chronic treatment with Calcitriol (150 ng/kg per day for 4.5 months) improves the relaxations (pD2: 6.30±0.09, Emax: 68.6±3.9% in Calcitriol-treated OVX, n=8). Renal blood flow in OVX rats is reduced in both kidneys, and the flow is restored by Calcitriol treatment. The increased expression of COX-2 and Thromboxane-prostanoid (TP) receptor in OVX rat renal arteries is reduced by chronic calcitriol administration. High- and low-dose Calcitriol treatment significantly decreases the systolic blood pressure (SBP) in the fructose-fed rats by 14±4 and 9±4 mmHg, respectively, at Day 56. High-dose Calcitriol treatment (20 ng/kg per day) significantly increases serum ionized calcium level (1.44±0.05 mmol/L) compare with the other groups.

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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