

Certificate of Analysis

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Product Name: Calcitriol

Catalog No.: 2551

Batch No.: 2

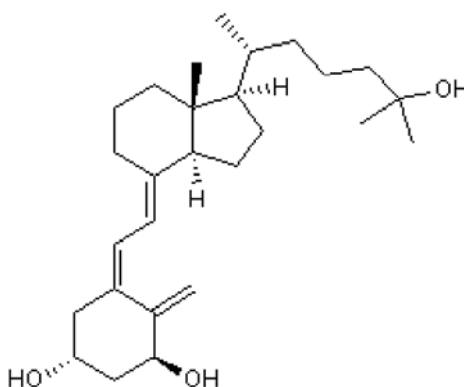
CAS Number: 32222-06-3

EC Number: 250-963-8

IUPAC Name: (1 α ,3 β ,5Z,7E)-9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₇ H ₄₄ O ₃
Batch Molecular Weight:	416.64
Physical Appearance:	White lyophilised solid
Solubility:	Soluble in DMSO Soluble in ethanol
Storage:	Desiccate at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99.6% purity
Mass Spectrum:	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Active metabolite of vitamin D₃ that activates the vitamin D receptor (VDR). Displays calcemic actions; stimulates intestinal and renal Ca²⁺ absorption and regulates bone Ca²⁺ turnover. Exhibits antitumor activity; inhibits in vivo and in vitro cell proliferation in a wide range of cells including breast, prostate, colon, skin and brain carcinomas and myeloid leukemia cells.

Physical and Chemical Properties:

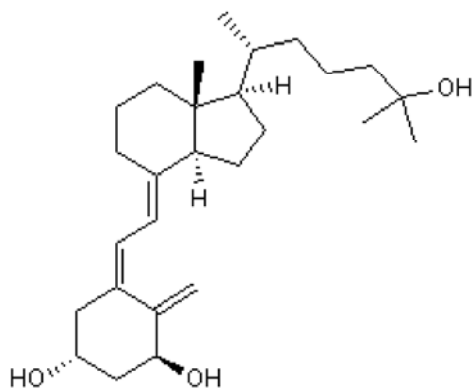
Batch Molecular Formula: C₂₇H₄₄O₃

Batch Molecular Weight: 416.64

Physical Appearance: White lyophilised solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble in DMSO

Soluble in ethanol

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved. This product is air sensitive and was packaged under inert gas. We recommend that any stock solutions should be stored under inert atmosphere.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Nijenhuis et al (2006) The novel vitamin D analog ZK191784 as an intestine-specific vitamin D antagonist. *FASEB J.* **20** 1589. PMID: 16873882.

Beer and Myrthue (2004) Calcitriol in cancer treatment: from the lab to the clinic. *Mol.Cancer Ther.* **3** 373. PMID: 15026558.

Canalejo et al (2000) The *in vitro* effect of calcitriol on parathyroid cell proliferation and apoptosis. *J.Am.Soc.Nephrol.* **11** 1865. PMID: 11004217.

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