

# Certificate of Analysis

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**Product Name:** Calcipotriol

**Catalog No.:** 2700

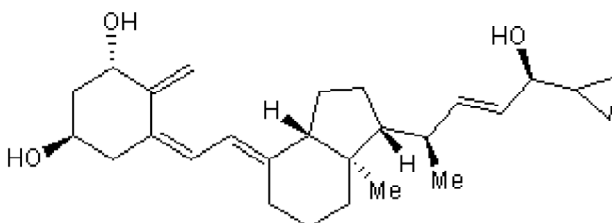
**Batch No.:** 9

CAS Number: 112965-21-6

IUPAC Name: (1 $\alpha$ ,3 $\beta$ ,5Z,7E,22E,24S)-24-Cyclopropyl-9,10-secochola-5,7,10(19),22-tetraene-1,3,24-triol

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>27</sub>H<sub>40</sub>O<sub>3</sub>  
**Batch Molecular Weight:** 412.6  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

### Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	78.6	9.77	0
Found	78.3	9.73	0

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

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**Description:**

Calcipotriol is a vitamin D<sub>3</sub> analog that displays minimal effects on calcium homeostasis. Regulates cell differentiation and proliferation; exhibits antiproliferative activity against human HL-60, HL60/MX2, keratinocytes, MCF-7, T47D, SCC-25, and mouse WEHI-3 cancer cell lines. Calcipotriol suppresses skin cancer development in mice in a thymic stromal lymphopoietin (TSLP)-dependent manner. Calcipotriol promotes the differentiation of keratinocytes. In human T cells and in psoriatic skin, Calcipotriol increases IL-10 secretion, induces secretion of type 2 cytokines by T cells and modulates the differentiation of dendritic cells and T cells. Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

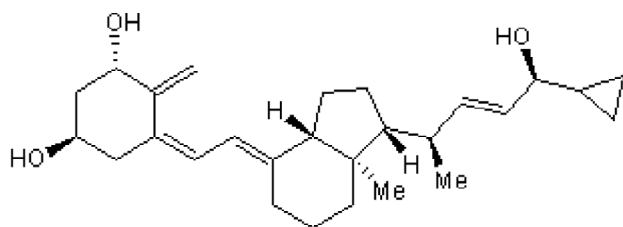
Batch Molecular Formula: C<sub>27</sub>H<sub>40</sub>O<sub>3</sub>

Batch Molecular Weight: 412.6

Physical Appearance: Off-white solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**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:**

DMSO to 100 mM

ethanol to 100 mM

**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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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:**

**Cunningham et al** (2017) Randomized trial of calcipotriol combined with 5-fluorouracil for skin cancer precursor immunotherapy. *J.Clin.Invest.* **127** 106. PMID: 27869649.

**Lovato et al** (2016) Calcipotriol and betamethasone dipropionate exert additive inhibitory effects on the cytokine expression of inflammatory dendritic cell-Th17 cell axis in psoriasis. *J.Dermatol.Sci.* **81** 153. PMID: 26794805.

**Wietrzyk et al** (2007) Antitumor properties of diastereomeric and geometric analogs of vitamin D<sub>3</sub>. *Anticancer Drugs* **18** 447. PMID: 17351397.

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