

# Certificate of Analysis

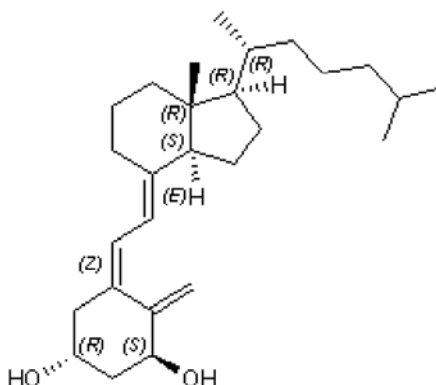
[www.tocris.com](http://www.tocris.com)

**Product Name:** Alfalcaldol  
**CAS Number:** 41294-56-8  
**IUPAC Name:** (1 $\alpha$ ,3 $\beta$ ,5Z,7E)-9,10-Secocholesta-5,7,10(19)-triene-1,3-diol

**Catalog No.:** 4159  
**Batch No.:** 1  
**EC Number:** 255-297-1

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>27</sub>H<sub>44</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 400.64  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	80.94	11.07	
Found	80.88	11.18	

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

## Product Information

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**Product Name:** Alfacalcidol

**Catalog No.:** 4159

**Batch No.:** 1

CAS Number: 41294-56-8

EC Number: 255-297-1

IUPAC Name: (1 $\alpha$ ,3 $\beta$ ,5Z,7E)-9,10-Secocholesta-5,7,10(19)-triene-1,3-diol

### Description:

Metabolite and prodrug of vitamin D<sub>3</sub> (Cat. No. 4156). Improves mechanical bone strength and bone mass; suppresses osteoclastic bone resorption in vivo.

### Physical and Chemical Properties:

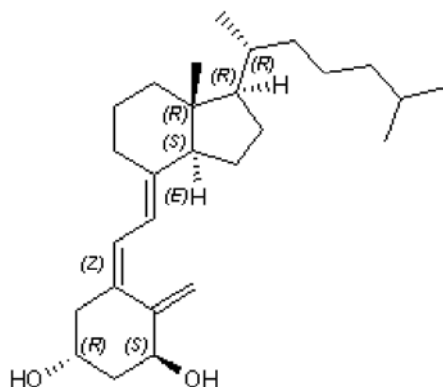
Batch Molecular Formula: C<sub>27</sub>H<sub>44</sub>O<sub>2</sub>

Batch Molecular Weight: 400.64

Physical Appearance: White solid

**Minimum Purity:** >97%

### Batch Molecular Structure:



**Storage:** Store 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:

DMSO to 100 mM

ethanol to 100 mM

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.

### 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:

**Shiraishi et al** (2000) Alfacalcidol inhibits bone resorption and stimulates formation in an ovariectomized rat model of osteoporosis: Distinct actions from estrogen. *Journal of Bone and Mineral Research*. **15** 770.

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