

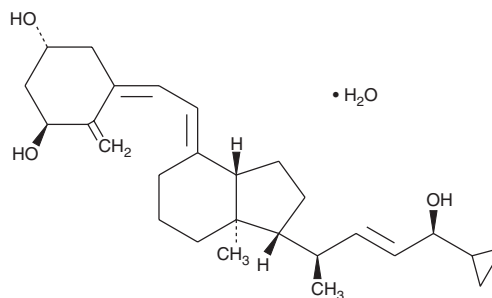
PRODUCT INFORMATION



Calcipotriol (hydrate)

Item No. 10009599

CAS Registry No.: 147657-22-5
Formal Name: 24-cyclopropyl-(1a,3b,5Z,7E,22E,24S)-9,10-secochola-5,7,10(19),22-tetraene-1,3,24-triol, monohydrate
Synonym: Calcipotriene
MF: C₂₇H₄₀O₃ • H₂O
FW: 430.6
Purity: ≥98%
UV/Vis.: λ_{max}: 264 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Calcipotriol (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the calcipotriol (hydrate) in an organic solvent purged with an inert gas. Calcipotriol (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of calcipotriol (hydrate) in these solvents is approximately 50 mg/ml.

Calcipotriol (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Calcipotriol (hydrate) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Calcipotriol (hydrate) has a solubility of approximately 0.15 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Calcipotriol (hydrate) is a low-calcemic vitamin D receptor (VDR) agonist. Calcipotriol (hydrate) is about 200 times less potent in its effects on calcium metabolism than vitamin D (1,25[OH]D₃).¹ Binding of calcipotriol (hydrate) to the VDR increases AP-1, a transcription factor important for keratinocyte differentiation, and reduces expression of JunB protein, a transcriptional activator in the inflammatory response.² Calcipotriol (hydrate) also induces expression of thymic stromal lymphopoietin, which triggers T cell differentiation in keratinocytes.³

References

1. Kragballe, K. Vitamin D analogues in the treatment of psoriasis. *J. Cell. Biochem.* **49**, 46-52 (1992).
2. Johansen, C., Kragballe, K., Rasmussen, M., *et al.* Activator protein 1 DNA binding activity is decreased in lesional psoriatic skin compared with nonlesional psoriatic skin. *Br. J. Dermatol.* **151**, 600-607 (2004).
3. Li, M., Hener, P., Zhang, Z., *et al.* Topical vitamin D₃ and low-calcemic analogs induce thymic stromal lymphopoietin in mouse keratinocytes and trigger an atopic dermatitis. *Proc. Natl. Acad. Sci. USA* **103**(31), 11736-11741 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM