



LKT Laboratories, Inc.

## Calcitriol

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### Product Information

**Product ID** C0145

**CAS No.** 32222-06-3

**Chemical Name** (1 $\alpha$ ,3 $\beta$ ,5 $\alpha$ ,7 $\beta$ E)-9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol

**Synonym** 1 $\alpha$ ,25-Dihydroxyvitamin D<sub>3</sub>

**Formula** C<sub>27</sub>H<sub>44</sub>O<sub>3</sub>

**Formula Wt.** 416.64

**Melting Point** 111-115°C

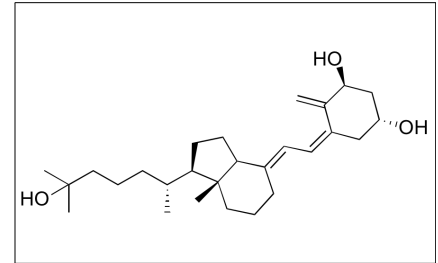
**Purity** ≥97%

**Solubility** Slightly soluble in ethanol, ethyl acetate. Soluble in DMSO.

**Store Temp** -80°C

**Ship Temp** Dry Ice

**Description** Calcitriol is the active form of vitamin D that binds to the vitamin D receptors (VDR), increasing absorption of dietary Ca<sup>2+</sup>. Calcitriol is produced in the kidney from prodrug forms of vitamin D such as cholecalciferol. Calcitriol is commercially used in dietary supplements to prevent osteoporosis; it exhibits anti-osteoporotic, immunomodulatory, anti-inflammatory, anti-diabetic, anticancer, and chemopreventive activities. In basal cell carcinoma cells, calcitriol decreases hedgehog (Hh) signaling, suppressing cancer progression. In other models, calcitriol stimulates differentiation of skin cells and inhibits skin cancer cell proliferation and tumor formation. Additionally, this compound decreases activation of toll-like receptors (TLRs), protecting against the development of type I diabetes.



**Bulk quantities available upon request**

Product ID	Size
C0145	50 $\mu$ g
C0145	5 x 50 $\mu$ g
C0145	1 mg

**References** Albert B, Hahn H. Interaction of hedgehog and vitamin D signaling pathways in basal cell carcinomas. *Adv Exp Med Biol.* 2014;810:329-41. PMID: 25207374.

Bikle DD. The vitamin D receptor: a tumor suppressor in skin. *Adv Exp Med Biol.* 2014;810:282-302. PMID: 25207372.

Adamczak DM, Nowak JK, Frydrychowicz M, et al. The role of Toll-like receptors and vitamin D in diabetes mellitus type 1--a review. *Scand J Immunol.* 2014 Aug;80(2):75-84. PMID: 24845558.

Vojinovic J. Vitamin D receptor agonists' anti-inflammatory properties. *Ann N Y Acad Sci.* 2014 May;1317:47-56. PMID: 24754474.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.