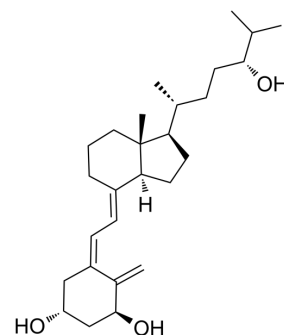


Tacalcitol

Cat. No.:	HY-32337
CAS No.:	57333-96-7
Molecular Formula:	C ₂₇ H ₄₄ O ₃
Molecular Weight:	416.64
Target:	VD/VDR
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	4°C, protect from light, stored under nitrogen * The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (240.02 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4002 mL	12.0008 mL	24.0015 mL
	5 mM	0.4800 mL	2.4002 mL	4.8003 mL
	10 mM	0.2400 mL	1.2001 mL	2.4002 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.75 mg/mL (6.60 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.75 mg/mL (6.60 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.75 mg/mL (6.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tacalcitol (1,24(R)-Dihydroxyvitamin D₃; 1.alpha.,24R-Dihydroxyvitamin D₃) promotes normal bone development by regulating calcium. IC₅₀ value: Target: Tacalcitol modulates immunological and inflammatory processes. Tacalcitol induces nerve growth factor production in epidermal keratinocytes.

CUSTOMER VALIDATION

- FEBS Open Bio. 2023 Jul 25.
- China Tropical Medicine. 2013,13(8):944-946.

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REFERENCES

- [1]. Masuo Morisaki , aoyuki Koizumi , Nobuo Ikekawa et al. Synthesis of active forms of vitamin D. Part IX. Synthesis of 1 α ,24-dihydroxycholecalciferol. J. Chem. Soc., Perkin Trans. 1, 1975, 1421-1424
- [2]. Kiyoshige Ochi , Isao Matsunaga , Hiroyuki Nagano et al. Synthetic studies of vitamin D3 analogues from bile acids. Part 3. Syntheses of 1 α ,25-, 1 α ,24R-, and 1 α ,24S-dihydroxycholecalciferols from lithocholic acid and their biological activities. J. Chem.
- [3]. Rostowska-Nadolska et al Vitamin D derivatives: calcitriol and tacalcitol inhibits interleukin-6 and interleukin-8 expression in human nasal polyp fibroblasts. Adv.Med.Sci. (2010) 55 86.
- [4]. Oiso N, Kawada A.Freckling Promoted by Topical Tacalcitol in a Japanese Boy with Left Eyelid Vitiligo.Pediatr Dermatol. 2011 Oct 20.
- [5]. Kobayashi T, Okumura H, Azuma Y, Kiyoki M, Matsumoto K, Hashimoto K, Yoshikawa K.1 alpha,24R-dihydroxyvitamin D3 has an ability comparable to that of 1 alpha,25-dihydroxyvitamin D3 to induce keratinocyte differentiation.J Dermatol. 1990 Nov;17(11):707-9.
- [6]. Matsumoto K, Hashimoto K, Kiyoki M, Yamamoto M, Yoshikawa K.Effect of 1,24R-dihydroxyvitamin D3 on the growth of human keratinocytes.J Dermatol. 1990 Feb;17(2):97-103.
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Caution: Product has not been fully validated for medical applications. For research use only.

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