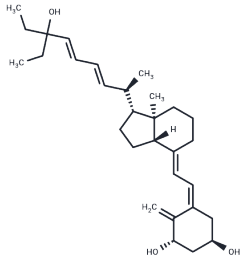
Data Sheet (Cat.No.T19559)

TargetMol

Seocalcitol

Chemical Properties



CAS No. : 134404-52-7

Formula: C30H46O3

Molecular Weight: 454.68

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Seocalcitol is an analog of vitamin D, binds vitamin D receptor protein from human osteosarcoma MG-63 cells(Kd : 0.27 nM).
Targets(IC50)	Others,Vitamin
In vitro	Seocalcitol is a stimulators of osteoclast recruitment in murine bone marrow cultures (EC50 at 0.1 nM). Seocalcitol stimulates bone resorption(EC50 of 0.03 nM)[1]. Seocalcitol elicites a dose-dependent induction of 24-hydroxylase mRNA in the kidney (EC50=0.4±0.13). In the kidney, Kd values for Seocalcitol is 0.48±0.04 nM. However, in the intestine, the Kd for Seocalcitol is 1.43±0.19 nM)[2]. Seocalcitol (0.1-10 nM) induces cell differentiation in a dosedependent manner. A higher differentiating activity is observed for 1 nM Seocalcitol than for 1 nM VD3.
In vivo	Seocalcitol, a synthetic vitamin D analog, demonstrates lower hypercalcemic activity compared to 1,25(OH)2VD3. Its long-term intraperitoneal (IP) administration at 0.5 μg/kg body weight bi-daily significantly inhibits hepatocellular carcinoma (HCC) development in C3H/Sy mice[4]. Furthermore, when administered intraperitoneally to postnatal rats from days 4 to 12 at dosages of 0.38 or 1.25 μg/kg body weight per day, only the higher dosage (1.25 μg/kg) significantly attenuates weight gain, either as a standalone treatment or when combined with Dexamethasone, all-trans retinoic acid (RA), or retinoic acid[5].

Solubility Information

Solubility	DMSO: 50 mg/mL (109.97 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1993 mL	10.9967 mL	21.9935 mL
5 mM	0.4399 mL	2.1993 mL	4.3987 mL
10 mM	0.2199 mL	1.0997 mL	2.1993 mL
50 mM	0.044 mL	0.2199 mL	0.4399 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wiberg K, et al. Studies on two new vitamin D analogs, EB 1089 and KH 1060: effects on bone resorption and osteoclast recruitment in vitro. Bone. 1995 Oct;17(4):391-5.
Roy S, et al. Comparative effects of 1,25-dihydroxyvitamin D3 and EB 1089 on mouse renal and intestinal 25-hydroxyvitamin D3-24-hydroxylase. J Bone Miner Res. 1995 Dec;10(12):1951-9.
Bondza-Kibangou P, et al. Antioxidants and doxorubicin supplementation to modulate CD14 expression and oxidative stress induced by vitamin D3 and seocalcitol in HL60 cells. Oncol Rep. 2007 Dec;18(6):1513-9.
Ghous Z, et al. Inhibition of hepatocellular cancer by EB1089: in vitro and in vivo study. Anticancer Res. 2008 Nov-Dec;28(6A):3757-61.
Ormerod AK, et al. The calcitriol analogue EB1089 impairs alveolarization and induces localized regions of increased fibroblast density in neonatal rat lung. Exp Lung Res. 2008 May;34(4):155-82.