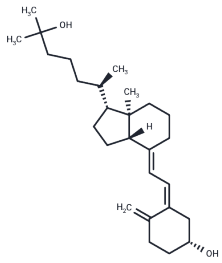
Data Sheet (Cat.No.T6430)

TargetMol

Calcifediol

Chemical Properties



CAS No. : 19356-17-3

Formula: C27H44O2

Molecular Weight: 400.64

Appearance: no data available

Storage: keep away from moisture,store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Calcifediol (U 32070E) is a naturally occurring product that is metabolized in the liver from vitamin D3, a VDR ligand. Calcifediol is indicated for use as a vitamin supplement for all patients with vitamin D deficiency.
Targets(IC50)	Endogenous Metabolite
In vitro	Calcifediol, whether in liposomes or ethanolic solution, does not affect the release of the proinflammatory cytokine KC from Pseudomonas-infected murine epithelial cells. However, treating infected human bronchial 16-HBE cells with Calcifediol liposomes significantly reduces bacterial survival [1].
In vivo	**METHODS**: Calcifediol (25 μg/kg) was administered dietary to rats for four weeks to study its role in pregnancy. **RESULTS**: Calcifediol provided better vitamin D availability to the mother and fetus when administered during pregnancy compared to vitamin D3. No adverse effects on pregnancy outcome were observed, and further studies are needed to investigate the effects of Calcifediol on fetal brain VDR and GAD67 expression. [3]

Solubility Information

Solubility	DMSO: 18.33 mg/mL (45.75 mM),Sonication is recommended. Ethanol: 16 mg/mL (39.94 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.496 mL	12.480 mL	24.9601 mL
5 mM	0.4992 mL	2.496 mL	4.992 mL
10 mM	0.2496 mL	1.248 mL	2.496 mL
50 mM	0.0499 mL	0.2496 mL	0.4992 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.

Reference

Donati S, et al. In Vitro Non-Genomic Effects of Calcifediol on Human Preosteoblastic Cells. Nutrients. 2021 Nov 25; 13(12):4227.

Abramczyk O, Stawieraj S, Mlicka A, et al.Effect of combined action of doxorubicin and calcifediol on MCF-7 breast cancer cells.Medical Research Journal.2023

Merrigan SL, et al. Calcitriol and non-calcemic vitamin D analogue, 22-oxacalcitriol, attenuate developmental and pathological choroidal vasculature angiogenesis ex vivo and in vivo. Oncotarget. 2020 Feb 4;11(5):493-509.

Gázquez A, et al. Calcifediol During Pregnancy Improves Maternal and Fetal Availability of Vitamin D Compared to Vitamin D3 in Rats and Modifies Fetal Metabolism. Front Nutr. 2022 Apr 12;9:871632.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481