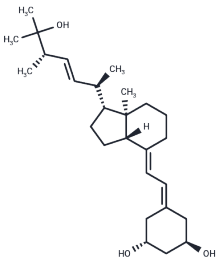
Data Sheet (Cat.No.TQ0200)

TargetMol

Paricalcitol

Chemical Properties



CAS No. : 131918-61-1

Formula: C27H44O3

Molecular Weight: 416.64

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Paricalcitol is a vitamin D receptor agonist. It is used for the prevention and treatment of secondary hyperparathyroidism associated with chronic renal failure.
Targets(IC50)	Others,Vitamin
In vitro	Paricalcitol (30 nM; HP + PC) produces a significant reduction in calcification relative to the observed in cells in HP medium. Paricalcitol causes a reduction in the levels of nuclear β-catenin to a level similar to that observed in control cells [1].
In vivo	Paricalcitol, administered at a dosage of 300 ng/kg/day, markedly reduces Tau levels and prevents left ventricular (LV) dysfunction in mice. Furthermore, this treatment significantly lowers the mRNA expression of atrial natriuretic peptide (ANP), fibronectin, and collagen III in mice subjected to transverse aortic constriction (TAC-pari) [2].
Animal Research	After TAC or sham surgery, a subset of the mice is treated with paricalcitol which activates the VDR, at a final dose of 300 ng/kg/day. Paricalcitol is dissolved in a 95% propylene glycol and 5% ethyl alcohol solution. Mice were intraperitoneally injected with paricalcitol (or vehicle only) three times per week on Monday, Wednesday, and Friday for five consecutive weeks. An established anti-hypertrophic and anti-fibrotic treatment, namely the angiotensin II receptor blocker (ARB) losartan is also included. Previous experiments have shown it is feasible and efficacious to dissolve losartan in the drinking water at a concentration of 30 mg/kg/day; mice are treated for five consecutive weeks. So, in total eight groups are studied. Sham (n=10), TAC (n=10), Sham + losartan (Sham-los, n=10), TAC + losartan (TAC-los, n=10), Sham + paricalcitol (Sham-pari, n=10), TAC + paricalcitol (TAC-pari, n=10), Sham + paricalcitol + losartan (Sham-combi, n=10) and TAC + paricalcitol + losartan (TAC-combi, n=10) [2].

Solubility Information

Solubility	H2O: Insoluble, Ethanol: 12 mg/mL (28.8 mM),Sonication is recommended. DMSO: 140 mg/mL (336.02 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.92 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4002 mL	12.0008 mL	24.0015 mL
5 mM	0.480 mL	2.4002 mL	4.8003 mL
10 mM	0.240 mL	1.2001 mL	2.4002 mL
50 mM	0.048 mL	0.240 mL	0.480 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

Martinez-Moreno JM, et al. In vascular smooth muscle cells paricalcitol prevents phosphate-induced Wnt/beta-catenin activation. Am J Physiol Renal Physiol. 2012 Aug 8.
Meems LM, et al. The vitamin D receptor activator paricalcitol prevents fibrosis and diastolic dysfunction in a murine model of pressure overload. J Steroid Biochem Mol Biol. 2012 Jul 16;132(3-5):282-289.