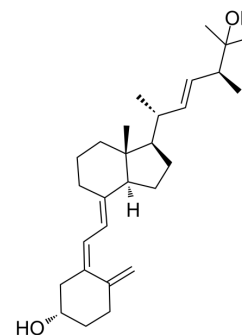


Ercalcidiol

Cat. No.:	HY-32349
CAS No.:	21343-40-8
Molecular Formula:	C ₂₈ H ₄₄ O ₂
Molecular Weight:	412.65
Target:	VD/VDR; Endogenous Metabolite
Pathway:	Vitamin D Related; Metabolic Enzyme/Protease
Storage:	-20°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 (242.34 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4234 mL	12.1168 mL	24.2336 mL
	5 mM	0.4847 mL	2.4234 mL	4.8467 mL
	10 mM	0.2423 mL	1.2117 mL	2.4234 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: ≥ 2.5 mg/mL (6.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ercalcidiol is a metabolite of vitamin D₂, is regarded as an indicator of vitamin D nutritional status.

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

Differentiation between Ercalcidiol (25(OH)D₂) and 25(OH)D₃ is important for monitoring vitamin D therapy, as vitamin D₂ is the predominant prescription form. The half-life of Ercalcidiol is shorter than that of 25(OH)D₃ and it binds less well to the vitamin D binding protein, making it less potent and, therefore, required to be administered at much higher doses than vitamin D₃. Some currently used assays have a diminished capacity to detect Ercalcidiol, which can lead to dangerous

overdosing when attempting to monitor therapy with vitamin D₂^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Li L, et al. Performance evaluation of two immunoassays for 25-hydroxyvitamin D. J Clin Biochem Nutr. 2016 May;58(3):186-92.

[2]. Newman MS, et al. A liquid chromatography/tandem mass spectrometry method for determination of 25-hydroxy vitamin D2 and 25-hydroxy vitamin D3 in dried blood spots: a potential adjunct to diabetes and cardiometabolic risk screening. J Diabetes Sci Technol

Caution: Product has not been fully validated for medical applications. For research use only.

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