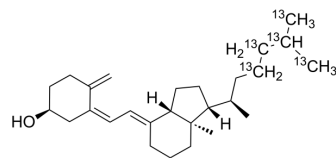


Vitamin D3-¹³C₅

Cat. No.:	HY-15398S4
Molecular Formula:	C ₂₂ ¹³ C ₅ H ₄₄ O
Molecular Weight:	389.6
Target:	Bacterial; VD/VDR
Pathway:	Anti-infection; Vitamin D Related/Nuclear Receptor
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Vitamin D3- ¹³ C ₅ is the deuterium labeled Vitamin D3 (HY-15398). Vitamin D3 (Cholecalciferol) is a naturally occurring form of vitamin D. Vitamin D3 induces cell differentiation and prevents proliferation of cancer cells[1][2].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Yoshioka H, et al. Vitamin D3-induced hypercalcemia increases carbon tetrachloride-induced hepatotoxicity through elevated oxidative stress in mice. *PLoS One*. 2017 Apr 27;12(4):e0176524.

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

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