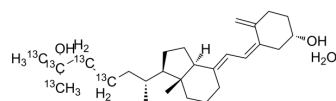


Calcifediol-¹³C₅ monohydrate

| | |
|---------------------------|---|
| Cat. No.: | HY-32351AS1 |
| Molecular Formula: | C ₂₂ ¹³ C ₅ H ₄₆ O ₃ |
| Molecular Weight: | 423.62 |
| Target: | Endogenous Metabolite; Isotope-Labeled Compounds; VD/VDR |
| Pathway: | Metabolic Enzyme/Protease; Others; Vitamin D Related/Nuclear Receptor |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



BIOLOGICAL ACTIVITY

| | |
|--------------------|--|
| Description | Calcifediol- ¹³ C ₅ (monohydrate) is the ¹³ C-labeled Calcifediol monohydrate. Calcifediol monohydrate (25-hydroxy Vitamin D3 monohydrate), a major circulating metabolite of vitamin D3, is a potent VDR ligand ^{[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;53(2):211-216.
- [2]. Castoldi A, et al. Calcifediol-loaded liposomes for local treatment of pulmonary bacterial infections. *Eur J Pharm Biopharm.* 2016 Nov 22.
- [3]. Wei Zheng, et al. Vitamin D-induced vitamin D receptor expression induces tamoxifen sensitivity in MCF-7 stem cells via suppression of Wnt/β-catenin signaling. *Biosci Rep.* 2018 Dec 7;38(6):BSR20180595.

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

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