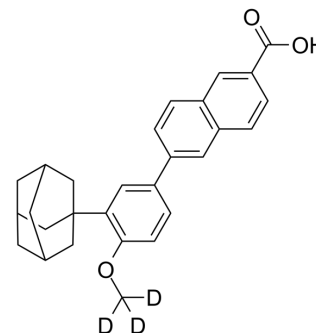


Adapalene-d3

Cat. No.:	HY-B0091S
CAS No.:	1276433-89-6
Molecular Formula:	C ₂₈ H ₂₅ D ₃ O ₃
Molecular Weight:	415.54
Target:	RAR/RXR; Autophagy; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Autophagy; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Adapalene-d3 is the deuterium labeled Adapalene. Adapalene (CD271), a third-generation synthetic retinoid, is widely used for the research of acne. Adapalene is a potent RAR agonist, with AC ₅₀ s of 2.3 nM, 9.3 nM, and 22 nM for RAR β , RAR γ , RAR α , respectively. Adapalene also inhibits the enzymatic activity of GOT1 in a non-competitive manner. Adapalene exhibits anti-tumor activity ^{[1][2][3]} .
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]. Shroot B, et, al. Pharmacology and chemistry of adapalene. *J Am Acad Dermatol.* 1997 Jun;36(6 Pt 2):S96-103.
- [3]. Wang Q, et, al. Adapalene inhibits ovarian cancer ES-2 cells growth by targeting glutamic-oxaloacetic transaminase 1. *Bioorg Chem.* 2019 Dec;93:103315.
- [4]. Shi XN, et, al. Adapalene inhibits the activity of cyclin-dependent kinase 2 in colorectal carcinoma. *Mol Med Rep.* 2015 Nov;12(5):6501-8.

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

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