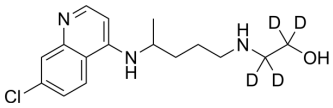
Cletoquine-d_4

Cat. No.:	HY-135810S
CAS No.:	1854126-47-8
Molecular Formula:	$C_{16}H_{18}D_4ClN_3O$
Molecular Weight:	311.84
Target:	Influenza Virus; Parasite; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cletoquine-d_4 is deuterium labeled Cletoquine. Cletoquine (Desethylhydroxychloroquine) is a major active metabolite of Hydroxychloroquine. Cletoquine is produced in the liver by CYP2D6, CYP3A4, CYP3A5, and CYP2C8 isoenzymes. Cletoquine is also a Chloroquine derivative and has the ability to against the chikungunya virus (CHIKV). Cletoquine has antimalarial effects and has the potential for autoimmune diseases treatment[1][2].
IC_{50} & Target	Plasmodium
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]. Charlier B, et al. Development of a novel ion-pairing HPLC-FL method for the separation and quantification of hydroxychloroquine and its metabolites in whole blood. Biomed Chromatogr. 2018 Aug;32(8):e4258.

[3]. Chhonker YS, et al. Simultaneous quantitation of hydroxychloroquine and its metabolites in mouse blood and tissues using LC-ESI-MS/MS: An application for pharmacokinetic studies. J Chromatogr B Analyt Technol Biomed Life Sci. 2018 Jan 1;1072:320-327.

[4]. Kumar M, et al. Molecular docking studies of chloroquine and its derivatives against P23pro-zbd domain of chikungunya virus: Implication in designing of novel therapeutic strategies. J Cell Biochem. 2019 Oct;120(10):18298-18308.

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