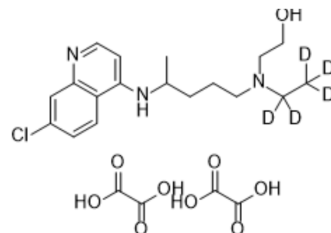


Hydroxychloroquine-d₅

Cat. No.:	HY-W031727S1
Molecular Formula:	C ₂₂ H ₂₅ D ₅ ClN ₃ O ₉
Molecular Weight:	520.97
Target:	Autophagy; SARS-CoV; Toll-like Receptor (TLR); Parasite
Pathway:	Autophagy; Anti-infection; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Hydroxychloroquine-d ₅ is the deuterium labeled Hydroxychloroquine[1]. Hydroxychloroquine is a synthetic antimalarial agent which can also inhibit Toll-like receptor 7/9 (TLR7/9) signaling. Hydroxychloroquine efficiently inhibits SARS-CoV-2 infection in vitro[2][3][4].
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]. Manzo C, et al. Psychomotor Agitation Following Treatment with Hydroxychloroquine. *Drug Saf Case Rep*. 2017 Dec;4(1):6.
- [3]. Lamphier M, et al. Novel small molecule inhibitors of TLR7 and TLR9: mechanism of action and efficacy in vivo. *Mol Pharmacol*. 2014 Mar85(3):429-40.
- [4]. Yao X, et al. In Vitro Antiviral Activity and Projection of Optimized Dosing Design of Hydroxychloroquine for the Treatment of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). *Clin Infect Dis*. 2020 Mar 9. pii: ciaa237.

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

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