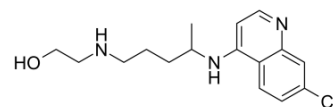


Cletoquine

Cat. No.:	HY-135810
CAS No.:	4298-15-1
Molecular Formula:	C ₁₆ H ₂₂ ClN ₃ O
Molecular Weight:	307.82
Target:	Influenza Virus; Parasite
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	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]} .
IC₅₀ & Target	Chikungunya virus (CHIKV) ^[2]
In Vivo	Hydroxychloroquine (5 mg/kg intravenously) is administered to BALB/c mice for blood and tissue to determine the content of Cletoquine (Desethylhydroxychloroquine). The tissue to blood concentration ratio (Kp) is ≥1, indicating accumulation of Cletoquine in tissues. The Cletoquine Kp ratio for the various tissues are observed in the descending order of liver (114.3)>kidney (24.4)>spleen (19.3)>lungs (16.5)>heart (5.5) ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. 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.
- [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.

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

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