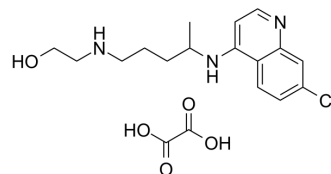


Cletoquine oxalate

Cat. No.:	HY-135810A
CAS No.:	14142-64-4
Molecular Formula:	C ₁₈ H ₂₄ ClN ₃ O ₅
Molecular Weight:	397.85
Target:	Influenza Virus; Parasite
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 5 mg/mL (12.57 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.5135 mL	12.5676 mL	25.1351 mL
		5 mM		0.5027 mL	2.5135 mL	5.0270 mL
10 mM		0.2514 mL	1.2568 mL	2.5135 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.67 mg/mL (4.20 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.67 mg/mL (4.20 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Cletoquine oxalate (Desethylhydroxychloroquine oxalate) is a major active metabolite of Hydroxychloroquine. Cletoquine oxalate is produced in the liver by CYP2D6, CYP3A4, CYP3A5, and CYP2C8 isoenzymes. Cletoquine oxalate is also a Chloroquine derivative and has the ability to against the chikungunya virus (CHIKV). Cletoquine oxalate 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.
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Caution: Product has not been fully validated for medical applications. For research use only.

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