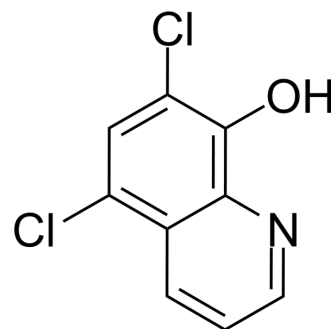


Chloroxine

Cat. No.:	HY-B0295		
CAS No.:	773-76-2		
Molecular Formula:	C ₉ H ₅ Cl ₂ NO		
Molecular Weight:	214.05		
Target:	Bacterial; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (155.71 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.6718 mL	23.3590 mL	46.7181 mL
	5 mM	0.9344 mL	4.6718 mL	9.3436 mL
	10 mM	0.4672 mL	2.3359 mL	4.6718 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: 2.5 mg/mL (11.68 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.5 mg/mL (11.68 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Chloroxine is one of the important 8-hydroxyquinoline derivative. Chloroxine has effective antibacterial, antifungal, antiprotozoal and antiamebic activities, especially used in treating the intestinal amebiasis. Chloroxine is also used in the treatment of dandruff and seborrheic dermatitis of the scalp^{[1][2]}.

IC₅₀ & Target

Bacterial^[1]

In Vitro

By using the Jouyban-Acree model, the Chloroxine solubility is well correlated obtaining RAD values lower than 3.64% and RMSD values lower than 8.82×10^{-6} . Chloroxine is preferentially solvated by water for the studied mixtures in water-rich compositions; while within intermediate and co-solvent-rich compositions, Chloroxine is preferentially solvated by DMSO

(DMF, NMP or 1,4-dioxane) in DMSO (DMF, NMP or 1,4-dioxane) + water mixtures. It is shown that the change in solvent-solvent interaction energy accounted by cavity term governed the solubility variation of Chloroxine in all aqueous mixtures [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Renjie X, et al. Solubility modelling, solvent effect and preferential solvation of carbendazim in aqueous co-solvent mixtures of, N,N -dimethylformamide, methanol, ethanol and, n -propanol. J. Chem. Thermodynamics 138 (2019) 288–296.

[2]. Chloroxine (Topical). Dec 27, 2018

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

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