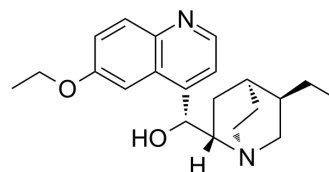


Ethylhydrocupreine

Cat. No.:	HY-136429
CAS No.:	522-60-1
Molecular Formula:	C ₂₁ H ₂₈ N ₂ O ₂
Molecular Weight:	340.46
Target:	Bacterial; Parasite
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ethylhydrocupreine (Optochin) is a quinine derivate with antimicrobial activity against <i>S. pneumoniae</i> . Ethylhydrocupreine also possesses antimalarial activity against <i>Plasmodium falciparum</i> , with an IC ₅₀ of 25.75 nM. Ethylhydrocupreine is a <i>Gallus gallus</i> taste 2 receptors (ggTas2r1, ggTas2r2 and ggTas2r7) agonist ^{[1][2][3][4]} .
IC₅₀ & Target	<i>S. pneumoniae</i> ^[1] IC ₅₀ : 25.75 nM (<i>Plasmodium falciparum</i>) ^[3] ggTas2r1, ggTas2r2 and ggTas2r7 ^[4]
In Vitro	The mutation rate to Ethylhydrocupreine (Optochin) resistance is estimated using fluctuation analysis in three capsulated <i>S. pneumoniae</i> strains (<i>S. pneumoniae</i> D39 NCTC 7466, <i>S. pneumoniae</i> R6 ATCC BAA-255 and <i>S. pneumoniae</i> ATCC 49619). The exposure to subinhibitory concentrations of penicillin increased the mutation rate (expressed as mutation per cell division) to Ethylhydrocupreine (Optochin) resistance between 2.1- and 3.1-fold for all three strains studied ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The injection of 1 cc. of a 24 hour dextrose blood broth culture of virulent Type I pneumococci into the right pleural cavity of guinea pigs produces acute suppurative pleuritis on both sides associated with suppurative pericarditis. The injection of 1 cc. of 1:500 solutions of Ethylhydrocupreine hydrochloride into each pleural cavity of guinea pigs at varying intervals up to 24 hours after pleural infection has usually shown a marked curative influence. Similar results are observed with dogs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. J A Kolmer, et al. CHEMOTHERAPEUTIC STUDIES WITH ETHYLHYDROCUPREINE HYDROCHLORIDE IN EXPERIMENTAL PNEUMOCOCCUS PLEURITIS. J Exp Med. 1921 May 31;33(6):693-711.
- [2]. Paulo R Cortes, et al. Subinhibitory Concentrations of Penicillin Increase the Mutation Rate to Optochin Resistance in Streptococcus Pneumoniae. J Antimicrob Chemother. 2008 Nov;62(5):973-7.
- [3]. Nassira Mahmoudi, et al. Identification of New Antimalarial Drugs by Linear Discriminant Analysis and Topological Virtual Screening. J Antimicrob Chemother. 2006 Mar;57(3):489-97.
- [4]. Antonella Di Pizio, et al. Molecular Features Underlying Selectivity in Chicken Bitter Taste Receptors. Front Mol Biosci. 2018 Jan 31;5:6.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA