Artemotil

Cat. No.: HY-B0770

CAS No.: 75887-54-6

Molecular Formula: $C_{17}H_{28}O_5$

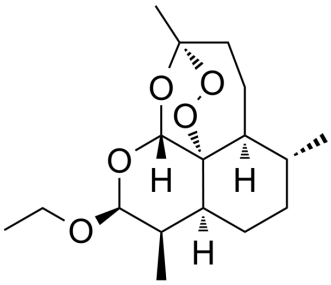
Molecular Weight: 312.4

Target: Parasite

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (160.05 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2010 mL	16.0051 mL	32.0102 mL
	5 mM	0.6402 mL	3.2010 mL	6.4020 mL
	10 mM	0.3201 mL	1.6005 mL	3.2010 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (6.66 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Artemotil (β-Arteether) has antimalarial activity for the treatment of chloroquine-resistant ***Plasmodium falciparum*** malaria with an IC_{50} of 1.61 nM. Artemotil also has central nervous system (CNS) neurotoxicity and anorectic toxicity in rats, dogs and monkeys[1][2].

IC_{50} & Target

IC50: 1.61 nM (***Plasmodium falciparum*** malaria)[1]

In Vitro

The antimalarial activity of Artemotil is test in vitro against chloroquine-resistant and chloroquine-sensitive Plasmodium

falciparum parasites. The mean 50% inhibitory concentration (IC_{50}) for Artemotil is 1.61 nM (range 1.57-1.92 nM). Artemotil is approximately 2.5-fold more potent than artemisinin[1].

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

In Vivo

Artemotil treatment (25 mg/kg; intravenous injection; daily; for 7 days; Sprague-Dawley male rats) shows anorectic toxicity and causes significant reductions in food consumption and body weight after day 2. AUC on day 7 is 5-fold higher than AUC on day 1. The elimination $t_{1/2}$ of Artemotil is also prolonged from 13.7 hours (day 1) to 31.2 hours (day 7)[2].

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

Animal Model:	Sprague-Dawley male rats (220-280 g)[2]
Dosage:	25 mg/kg; 1 mL/kg body weight
Administration:	Intravenous injection; daily; for 7 days
Result:	Anorectic toxicity was observed, and that caused significant reductions in food consumption and body weight after day 2.

REFERENCES

[1]. Shmuklarsky MJ, et al. Comparison of beta-artemether and beta-arteether against malaria parasites in vitro and in vivo. Am J Trop Med Hyg. 1993 Mar;48(3):377-84.

[2]. Li QG, et al. Arteether toxicokinetics and pharmacokinetics in rats after 25 mg/kg/day single and multiple doses. Eur J Drug Metab Pharmacokinet. 1999 Jul-Sep;24(3):213-23.

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