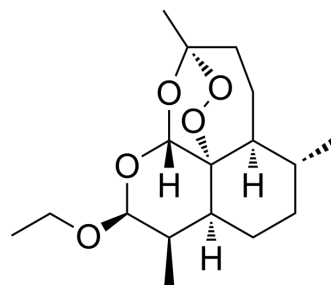


Artemotil

Cat. No.:	HY-B0770		
CAS No.:	75887-54-6		
Molecular Formula:	C ₁₇ H ₂₈ O ₅		
Molecular Weight:	312.4		
Target:	Parasite; CXCR		
Pathway:	Anti-infection; GPCR/G Protein; Immunology/Inflammation		
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)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	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	<ol style="list-style-type: none"> 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 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 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 <i>Plasmodium falciparum</i> 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]} .
IC₅₀ & Target	Plasmodium
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 (IC₅₀) 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-artether 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.

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

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