# Artelinic acid

**Cat. No.:** HY-135578

**CAS No.:** 120020-26-0

**Molecular Formula:** $C_{23}H_{30}O_7$

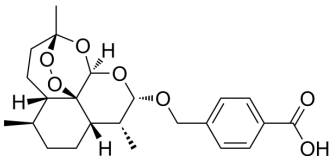
**Molecular Weight:** 418.48

**Target:** Parasite

**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 : 100 mg/mL (238.96 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.3896 mL | 11.9480 mL | 23.8960 mL |
| 5 mM | 0.4779 mL | 2.3896 mL | 4.7792 mL |
| 10 mM | 0.2390 mL | 1.1948 mL | 2.3896 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: 10 mg/mL (23.90 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 10 mg/mL (23.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 10 mg/mL (23.90 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Artelinic acid, a derivative of Artemisinin, is an antimalarial agent for the treatment of multidrug resistant strains of Plasmodium falciparum. Artelinic acid can be administered by various routes of administration, including intravenous, intramuscular and oral routes[1][2].

**$IC_{50}$ & Target**

Plasmodium

**In Vivo**

Artelinic acid (10 mg/kg; i.v.) has an elimination time $t_{1/2}$ of 0.37 hours, a CL of 14.99 mL/min/kg, a $V_{ss}$ of 9.52 L and a $AUC_{0-}$

$_{12h}$ of 11219 ng h/mL for dogs[1].

Artelinic acid (10 mg/kg; intramuscular) has an elimination time $t_{1/2}$ of 6.14 hours, a CL of 14.58 mL/min/kg, a $V_{ss}$ of 36.1 L and a $AUC_{0-12h}$ of 96372 ng h/mL for dogs[1].

Artelinic acid (10 mg/kg; oral) has an elimination time $t_{1/2}$ of 2.21 hours, a CL of 14.6 mL/min/kg, a $V_{ss}$ of 16.2 L and a $AUC_{0-12h}$ of 8839 ng h/mL for dogs[1].

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

| | |
|---|---|
| Animal Model: | Adult male beagle dogs 3-5 years old[1] |
| Dosage: | 10 mg/kg |
| Administration: | i.v. (Pharmacokinetic Analysis) |
| Result: | Had an elimination time $t_{1/2}$ of 0.37 hours, a CL of 14.99 mL/min/kg, a $V_{ss}$ of 9.52 L and a $AUC_{0-12h}$ of 11219 ng h/mL for dogs. |

## REFERENCES


[1]. Li QG, et al. Pharmacology and toxicology of artelinic acid: preclinical investigations on pharmacokinetics, metabolism, protein and red blood cell binding, and acute and anorectic toxicities. Trans R Soc Trop Med Hyg. 1998 May-Jun;92(3):332-40.

[2]. Hartell MG, et al. Nuclear magnetic resonance and molecular modeling analysis of the interaction of the antimalarial drugs artelinic acid and artesunic acid with beta-cyclodextrin. J Pharm Sci. 2004 Aug;93(8):2076-89.





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