产品名称：阿托伐醌
产品别名：Atovaquone；Atavaquone

生物活性：

Description

Atovaquone is a medication used to treat or prevent for pneumocystis pneumonia, toxoplasmosis, malaria, and babesia. Target: Antiparasitic Atovaquone (atavaquone) is a chemical compound that belongs to the class of naphthalenes. Atovaquone is a hydroxy-1,4-naphthoquinone, an analog of ubiquinone, with antipneumocystic activity [1]. Atovaquone is an anti-protozoal mitochondrial electron transport inhibitor; Antimalarial; Antipneumocystic, and has also been used to treat toxoplasmosis. It acts by inhibiting the cytochrome bc(1) complex via interactions with the Rieske iron-sulfur protein and cytochrome b in the ubiquinol oxidation pocket [2]. Atovaquone is a unique naphthoquinone with broad-spectrum antiprotozoal activity. It is effective for the treatment and prevention of Pneumocystis carinii pneumonia (PCP), it is effective in combination with proguanil for the treatment and prevention of malaria, and it is effective in combination with azithromycin for the treatment of babesiosis [3].

Solvent&Solubility

In Vitro:

DMSO : 8.33 mg/mL (**22.71 mM;** Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7260 mL	13.6299 mL	27.2598 mL
	5 mM	0.5452 mL	2.7260 mL	5.4520 mL
	10 mM	0.2726 mL	1.3630 mL	2.7260 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

Solubility: 0.83 mg/mL (2.26 mM); Suspended solution; Need ultrasonic

此方案可获得 0.83 mg/mL (2.26 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。

以 1 mL 工作液为例，取 100 μL 8.3 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。

2.请依序添加每种溶剂： 10% DMSO →90% corn oil

Solubility: ≥ 0.83 mg/mL (2.26 mM); Clear solution

此方案可获得 ≥ 0.83 mg/mL (2.26 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

以 1 mL 工作液为例，取 100 μL 8.3 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。

References	[1]. Looareesuwan, S., et al., Clinical studies of atovaquone, alone or in combination with other antimalarial drugs, for treatment of acute uncomplicated malaria in Thailand. Am J Trop Med Hyg, 1996. 54(1): p. 62-6. [2]. Kessl, J.J., et al., Molecular basis for atovaquone binding to the cytochrome bc1 complex. J Biol Chem, 2003. 278(33): p. 31312-8. [3]. Baggish, A.L. and D.R. Hill, Antiparasitic agent atovaquone. Antimicrobial agents and chemotherapy, 2002. 46(5): p. 1163-1173.