Piperaquine tetraphosphate tetrahydrate

Cat. No.: HY-B1896B

CAS No.: 915967-82-7

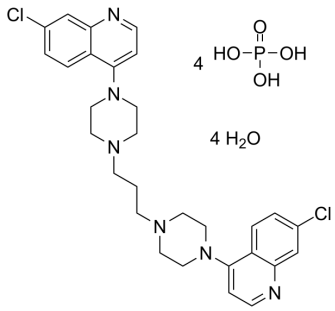
Molecular Formula: $C_{29}H_{32}Cl_2N_6 \cdot 4H_3O_4P \cdot 4H_2O$

Molecular Weight: 1000

Target: Parasite

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 6 mg/mL (6.00 mM; Need ultrasonic)
DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.0000 mL	5.0000 mL	10.0000 mL
5 mM	0.2000 mL	1.0000 mL	2.0000 mL
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Piperaquine tetraphosphate tetrahydrate is a bisquinoline antimalarial agent. Piperaquine tetraphosphate tetrahydrate can be used in antimalarial research in combination with Artemisinin[1][2].

In Vivo

Piperaquine (10-90 mg/kg; a single i.p.) decreases parasitemia at all of the doses tested in mice[1].
Piperaquine (90 mg/kg; a single i.p.) exhibits the $t_{1/2}$, apparent clearance, and apparent volume of distribution 17.8 days, 33.5 mg•h/L, 1.55 L/h/kg, and 956 L/kg, respectively, in healthy mice and 16.1 days, 27.3 mg•h/L, 1.9 L/h/kg, and 1,059 L/kg in malaria-infected mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male BALB/c mice (7 to 8 weeks) are inoculated with Plasmodium berghei parasites[1]
Dosage:	0, 10, 30, 90 mg/kg
Administration:	A single i.p. administration

Result:	The median survival time was 10 days at dose of 10 mg/kg. The median survival time was 54 days at dose of 30 mg/kg. All mice were active and alert and had stable body weights throughout the course of the study at dose of 90 mg/kg.

Animal Model:	Male Swiss mice (6 weeks old)[1]
Dosage:	90 mg/kg (Pharmacokinetic Analysis)
Administration:	A single i.p. administration
Result:	$t_{1/2}$=17.8 d; AUC=33.5 mg•h/L; apparent clearance=1.55 L/h/kg; apparent volume of distribution=956 L/kg.

CUSTOMER VALIDATION

- Cell Rep. 2021 Apr 6;35(1):108959.

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REFERENCES

[1]. Moore BR, et, al. Pharmacokinetics and pharmacodynamics of piperaquine in a murine malaria model. Antimicrob Agents Chemother. 2008 Jan; 52(1): 306-11.

[2]. Davis TME, et, al. Piperaquine: a resurgent antimalarial drug. Drugs. 2005; 65(1): 75-87.

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

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