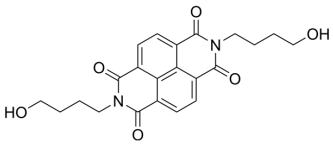
MMV009085

Cat. No.:	HY-153612
CAS No.:	298217-59-1
Molecular Formula:	$C_{22}H_{22}N_2O_6$
Molecular Weight:	410.42
Target:	GLUT; Parasite
Pathway:	Membrane Transporter/Ion Channel; 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 (243.65 mM)

H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4365 mL	12.1826 mL	24.3653 mL
	5 mM	0.4873 mL	2.4365 mL	4.8731 mL
	10 mM	0.2437 mL	1.2183 mL	2.4365 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 (24.37 mM); Suspended solution

BIOLOGICAL ACTIVITY

Description

MMV009085 is a potent ***Pf***HT1 (***Plasmodium falciparum hexose*** transporter)-specific inhibitor and a potential anti-malarial agent . MMV009085 is also a human glucose transporter inhibitor, it has high potency in inhibiting both glucose uptake (IC_{50}: 2.6 μM in glucose uptake assay) and growth of the parasites (EC_{50}: 1.23±0.04 μM against 3D7)[1].

In Vitro

MMV009085 inhibits the transport activity of PfHT-1 with an IC_{50} of 212 ± 39 μM, the EC_{50} values of MMV009085 in the parasite growth inhibition assay are 1.23 ± 0.04 μM against 3D7 and 0.720 ± 0.05 μM against Dd2. MMV009085 displays significant cytotoxicity with CC_{50} values of 2.46 ± 0.03 μM and 1.92 ± 0.85 μM for HEK293T and HepG2 cells, respectively[1]. MMV009085 shows IC_{50} of 2.6 μM in glucose uptake assay in freed parasites, MMV009085 shows an EC50 of 0.987 μM for inhibition of growth of P. falciparum strain 3D7 in in vitro growth inhibition assay, this compound acts through PfHT blockage to inhibit parasite growth (EC_{50}=0.795 μM).[2].

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

REFERENCES

[1]. Xin Jiang, et al. Structural Basis for Blocking Sugar Uptake into the Malaria Parasite Plasmodium falciparum.Cell. 2020 Oct 1;183(1):258-268.e12.

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