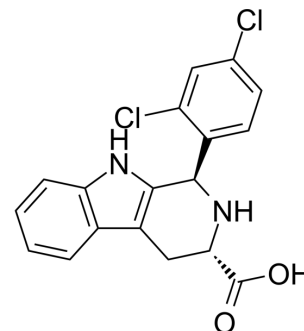


MMV008138

Cat. No.:	HY-123561		
CAS No.:	1679333-73-3		
Molecular Formula:	C ₁₈ H ₁₄ Cl ₂ N ₂ O ₂		
Molecular Weight:	361.22		
Target:	Parasite		
Pathway:	Anti-infection		
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 : 125 mg/mL (346.05 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.7684 mL	13.8420 mL	27.6840 mL
		5 mM	0.5537 mL	2.7684 mL	5.5368 mL
		10 mM	0.2768 mL	1.3842 mL	2.7684 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: ≥ 2.08 mg/mL (5.76 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.76 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	MMV008138 is a species-selective IspD (enzyme 2-C-methyl-d-erythritol 4-phosphate cytidyltransferase)-targeting antimalarial agent, with an IC ₅₀ of 44 nM for PfIspD (P. falciparum IspD). MMV008138 inhibits the growth of P. falciparum Dd2 strain with an IC ₅₀ of 250 nM ^{[1][2]} .
IC ₅₀ & Target	IC50: 44 nM (PfIspD) ^[1]
In Vitro	MMV008138 targets the enzyme IspD in the MEP pathway of P. falciparum ^[1] . MMV008138 does not target human IspD ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Ghavami M, et al. Biological Studies and Target Engagement of the 2- C-Methyl-d-Erythritol 4-Phosphate Cytidylyltransferase (IspD)-Targeting Antimalarial Agent (1 R,3 S)-MMV008138 and Analogs. ACS Infect Dis. 2018 Apr 13;4(4):549-559.
- [2]. Yao ZK, et al. Determination of the active stereoisomer of the MEP pathway-targeting antimalarial agent MMV008138, and initial structure-activity studies. Bioorg Med Chem Lett. 2015 Apr 1;25(7):1515-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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