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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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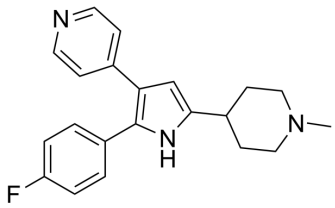
MBP146-78

Cat. No.:	HY-101525
CAS No.:	188343-77-3
Molecular Formula:	$C_{21}H_{22}FN_3$
Molecular Weight:	335.42
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 : 7.69 mg/mL (22.93 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9813 mL	14.9067 mL	29.8134 mL
	5 mM	0.5963 mL	2.9813 mL	5.9627 mL
	10 mM	0.2981 mL	1.4907 mL	2.9813 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: ≥ 0.77 mg/mL (2.30 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.77 mg/mL (2.30 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.77 mg/mL (2.30 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	MBP146-78 is a potent and selective inhibitor of cGMP dependent protein kinases.
IC_{50} & Target	Toxoplasma — Toxoplasma
In Vitro	MBP146-78 displays a dose-dependent inhibition of T. gondii tachyzoites replicating inside HFFs, with an IC_{50} of 210 nM. The suppression of lytic parasite growth by MBP146-78 is reversible. Replacement of the medium with medium lacking MBP146-78, after treatment for up to 7 days at 2 μM, results in complete lysis of HFF cell monolayers. MBP146-78 is neither toxic nor

	inhibitory to proliferating or confluent monolayers of HFFs at concentrations of up to 10 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In infected mice that are treated with MBP146-78 at 50 mg/kg twice daily, parasites are undetectable throughout the 10-day treatment period in each of the tissues examined. However, samples from brain, spleen, and lung taken from infected treated mice reveal the presence of parasites after cessation of administration of MBP146-78, indicating that a transient asymptomatic parasite recrudescence occurs in all survivors. The ability of mice to control Toxoplasma infection after MBP146-78 treatment has been terminated suggests that the mouse immune system plays a synergistic role with chemotherapy in controlling the infection[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	To assess the toxicity of MBP146-78 to HFFs, cells are plated in 96-well plates at 1000/well and allowed to adhere overnight prior to addition of compound. Cultures are incubated for 5 days at 37°C in the presence of 5% CO_2. Viability is assessed using the Cell-Titer 96 Aqueous One solution cell-proliferating assay[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Mice: MBP146-78 is dissolved in water. MBP146-78 is administered in 100 μL doses by intraperitoneal injections starting 24 h after parasite inoculation. Mice are monitored twice daily for clinical evidence of toxoplasmosis and mortality throughout the experimental period[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Front Microbiol. 2018 Jun 12;9:1266.
- J Biol Chem. 2021 Dec 29;101550.

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REFERENCES

[1]. Nare B, et al. Evaluation of a cyclic GMP-dependent protein kinase inhibitor in treatment of murine toxoplasmosis: gamma interferon is required for efficacy. Antimicrob Agents Chemother. 2002 Feb;46(2):300-7.

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