## Caspofungin diacetate

Cat. No.:	HY-17006	
CAS No.:	179463-17-3	OH O HO NH2
Molecular Formula:	C <sub>56</sub> H <sub>96</sub> N <sub>10</sub> O <sub>19</sub>	HO HOH NH O NOH
Molecular Weight:	1213.42	
Target:	Fungal; Antibiotic; Bacterial	
Pathway:	Anti-infection	° ~ ~ ( )
Storage:	-20°C, sealed storage, away from moisture and light	4
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture	
	and light)	

## SOLVENT & SOLUBILITY

In Vitro	H <sub>2</sub> O : ≥ 100 mg/mL (82.41 mM) DMSO : 100 mg/mL (82.41 mM; Need ultrasonic) * "≥" means soluble, but saturation unknown.					
	Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg	
		1 mM	0.8241 mL	4.1206 mL	8.2412 mL	
		5 mM	0.1648 mL	0.8241 mL	1.6482 mL	
		10 mM	0.0824 mL	0.4121 mL	0.8241 mL	
	Please refer to the so	lubility information to select the app	propriate solvent.			
In Vivo	<ol> <li>Add each solvent one by one: PBS Solubility: 100 mg/mL (82.41 mM); Clear solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.06 mM); Clear solution</li> </ol>					
	3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (1.71 mM); Clear solution					
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (1.71 mM); Clear solution					

DIOLOGICAL ACTIV	
Description	Caspofungin (MK-0991) diacetate is a potent antifungal agent. Caspofungin diacetate inhibits the synthesis of the fungal converse wall component $\beta$ -(l,3)-D-glucan <sup>[1][2]</sup> .
In Vivo	Caspofungin diacetate (1-8 mg/kg; i.p.; daily, for 7 days) is able to penetrate the CNS in mice and achieve concentrations the concentrations the concentration of the concentrat

# Product Data Sheet



result in the reduction of Candida burden in the  ${\sf brain}^{[1]}.$ 

Caspofungin diacetate (0.41-41  $\mu$ M; i.p.; for 5 weeks; male C57BL/6 mice) is a safe antifungal agent at vitreal concentrations of 0.41 to 4.1  $\mu$ M in mice<sup>[2]</sup>.

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

Animal Model:	Complement component 5-deficient DBA/2N mice <sup>[1]</sup>	
Dosage:	1, 2, 4 and 8 mg/kg	
Administration:	Intraperitoneal injection; daily, for 7 days	
Result:	Reduced the concentration of Candida load in the brain.	
Animal Model:	Male C57BL/6 mice <sup>[2]</sup>	
Dosage:	0.41, 1.2, 2.5, 4.1, and 41 μM	
Administration:	Intraperitoneal injection; for 5 weeks	
Result:	Had nonsignificant alterations in their ERG waveforms from 0.41 to 4.1 $\mu\text{M}.$	

### **CUSTOMER VALIDATION**

- Cell Mol Immunol. 2023 Mar 2;1-14.
- EMBO Rep. 2022 Apr 11;e53932.
- Cell Physiol Biochem. 2016 Aug 12;39(3):939-949.

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### REFERENCES

[1]. Flattery AM, et, al. Efficacy of caspofungin in a juvenile mouse model of central nervous system candidiasis. Antimicrob Agents Chemother. 2011 Jul;55(7):3491-7.

[2]. Mojumder DK, et, al. Evaluating retinal toxicity of intravitreal caspofungin in the mouse eye. Invest Ophthalmol Vis Sci. 2010 Nov;51(11):5796-803.

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

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