

Product Name:	Caspofungin Acetate
Product Number:	C103
CAS Number:	179463-17-3
Molecular Formula:	$C_{52}H_{88}N_{10}O_{15} \cdot 2C_2H_4O_2$
Molecular Weight:	1213.42
Form:	Powder
Appearance:	White to off-White powder
Solubility:	Sparingly soluble in water. Slightly soluble in ethanol.
Source:	Semi-synthetic; derived from a fermentation product of the fungus <i>Glarea lozoyensis</i> .
Water Content (Karl Fischer):	≤10.0%
pH:	5.9-6..7
Storage Conditions:	-20°C
Description:	<p>Caspofungin Acetate is the acetate salt of Caspofungin, a lipopeptide echinocandin antifungal which specifically targets the fungal cell membrane. It is semisynthetically derived from a fermentation product of the fungus <i>Glarea lozoyensis</i>. As a β-1,3-D-glucan synthesis antagonist, the compound is used to study the effect of environmental and chemical stress on fungal survival.</p> <p>Caspofungin is an analog of pneumocandin B0. Caspofungin Acetate is sparingly soluble in water and slightly soluble in ethanol.</p>
Mechanism of Action:	Caspofungin acts as an inhibitor of β(1,3)-D-Glucan synthase, an enzyme required for cell wall synthesis. Inhibition of this enzyme results in a disruption of the fungal cell wall integrity.
Spectrum:	Caspofungin Acetate is effective against yeasts and molds including <i>Candida</i> and <i>Aspergillus</i> spp.
Microbiology Applications	<p>Caspofungin MIC is ≤ 1 µg/ml for <i>Candida</i>.</p> <p>For additional MIC data on <i>Candida</i> or other fungi, please consult our Antimicrobial Index.</p>

References:

Ghannoum MA and Rice LB (1999) Antifungal agents: Mode of action, mechanisms of resistance, and correlation of these mechanisms with bacterial resistance. Clin. Microbiol. Rev. 501:17 PMID 10515900

Hao B, Cheng S, Clancy CJ and Nguyen MH (2013) Caspofungin kills *Candida albicans* by causing both cellular apoptosis and necrosis. Antimicrob. Agents Chemother. 57(1):326-332 PMID 23114781

Pacetti SA, Gelone SP (2003) Caspofungin acetate for treatment of invasive fungal infections. Ann Pharmacother. 37(1):90-98 PMID 12503942

Stone EA, Fung HB, Kirschenbaum HL (2002) Caspofungin: An echinocandin antifungal agent. Clin. Ther. 24(3):351-377 PMID 11952021

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