

# PRODUCT INFORMATION

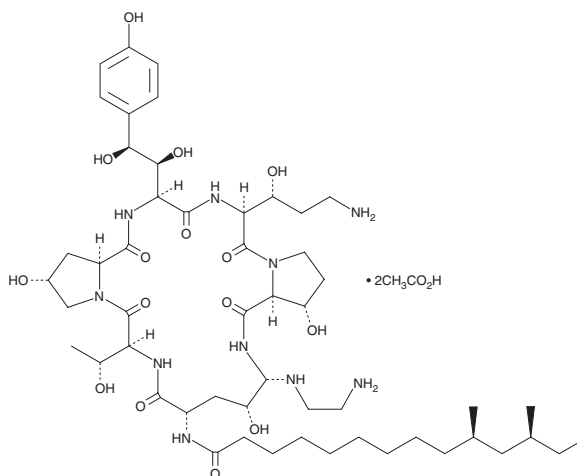


## Caspofungin (acetate)

Item No. 15923

**CAS Registry No.:** 179463-17-3  
**Formal Name:** 1-[(4R,5S)-5-[(2-aminoethyl)amino]-N<sup>2</sup>-[(10R,12S)-10,12-dimethyl-1-oxotetradecyl]-4-hydroxy-L-ornithine]-5-[(3R)-3-hydroxy-lornithine]-pneumocandin B<sub>0</sub> acetate (1:2)

**Synonyms:** L-743,872, MK-0991  
**MF:** C<sub>52</sub>H<sub>88</sub>N<sub>10</sub>O<sub>15</sub> • 2C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>  
**FW:** 1,213.4  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Caspofungin (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the caspofungin (acetate) in the solvent of choice, which should be purged with an inert gas. Caspofungin (acetate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of caspofungin (acetate) in ethanol and DMF is approximately 20 mg/ml and approximately 25 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of caspofungin (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of caspofungin (acetate) in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Caspofungin is an echinocandin antifungal originally isolated from *G. lozoyensis* and a derivative of pneumocandin B<sub>0</sub> (Item No. 21527).<sup>1</sup> It is active against 3,959 *Candida* clinical isolates (MIC<sub>90</sub> = 1 µg/ml), including isolates resistant to fluconazole (Item No. 11594) or itraconazole (Item No. 13288), as well as 38 *Aspergillus* clinical isolates, including *A. flavus*, *A. niger*, *A. terreus*, and *A. fumigatus* (MICs = <0.25-64 µg/ml).<sup>2,3</sup> Caspofungin inhibits the activity of 1,3-β-D-glucan synthase (IC<sub>50</sub> = 0.6 nM in *C. albicans* membrane preparations).<sup>4</sup> It increases survival in mouse models of disseminated candidiasis or aspergillosis.<sup>5</sup>

### References

1. Letscher-Bru, V. and Herbrecht, R. *J. Antimicrob. Chemother.* **51(3)**, 513-521 (2003).
2. Pfaller, M.A., Diekema, D.J., Messer, S.A., et al. *Antimicrob. Agents Chemother.* **47(3)**, 1068-1071 (2003).
3. Perea, S., Gonzalez, G., Fothergill, A.W., et al. *Antimicrob. Agents Chemother.* **46(9)**, 3039-3041 (2002).
4. Deresinski, S.C. and Stevens, D.A. *Clin. Infect. Dis.* **36(11)**, 1445-1457 (2003).
5. Abruzzo, G.K., Flattery, A.M., Gill, C.J., et al. *Antimicrob. Agents Chemother.* **41(11)**, 2333-2338 (1997).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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