

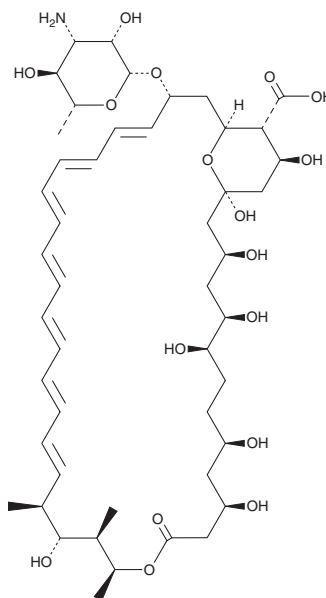
# PRODUCT INFORMATION



## Amphotericin B

Item No. 11636

**CAS Registry No.:** 1397-89-3  
**Formal Name:** (1R,3S,5R,6R,9R,11R,15S,16R,17R,18S,19E,21E,23E,25E,27E,29E,31E,33R,35S,36R,37S)-33-[(3-amino-3,6-dideoxy-β-D-mannopyranosyl)oxy]-1,3,5,6,9,11,17,37-octahydroxy-15,16,18-trimethyl-13-oxo-14,39-dioxabicyclo[33.3.1]nonatriacont-19,21,23,25,27,29,31-heptaene-36-carboxylic acid  
**Synonyms:** LNS-AmB, NSC 527017  
**MF:** C<sub>47</sub>H<sub>73</sub>NO<sub>17</sub>  
**FW:** 924.1  
**Purity:** ≥90%  
**UV/Vis.:** λ<sub>max</sub>: 227, 283, 346, 364, 383, 407 nm  
**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

Amphotericin B is supplied as a crystalline solid. A stock solution may be made by dissolving the amphotericin B in the solvent of choice, which should be purged with an inert gas. Amphotericin B is soluble in the organic solvent DMSO at a concentration of approximately 2 mg/ml.

Amphotericin B is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, amphotericin B should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Amphotericin B has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Amphotericin B is a classic antifungal polyene macrolide that has been used in the treatment of systemic fungal infections, primarily caused by *C. albicans*, *A. fumigatus*, and parasitic *L. protozoans*, as well as in tissue culture to prevent fungi from contaminating cell cultures.<sup>1-3</sup> Amphotericin B binds with ergosterol, the main component of fungal cell membranes, forming a transmembrane channel that results in altered plasma membrane permeability and leakage of vital cytoplasmic components, such as K<sup>+</sup>, ultimately inducing cell death.<sup>4</sup> Because prolonged use of amphotericin B is associated with infusion-related events and nephrotoxicity, lipid-based formulations have been devised for more favorable clinical relevance.<sup>1,2</sup>

### References

1. Miceli, M.H. and Chandrasekar, P. *Infect. Drug. Resist.* **5**, 9-16 (2012).
2. Wasan, K.M., Wasan, E.K., Gershkovich, P., et al. *J. Infect. Dis.* **200**, 357-360 (2009).
3. Radomski, N., Cambau, E., Moulin, L., et al. *Appl. Environ. Microbiol.* **76(11)**, 3514-3520 (2010).
4. Ogita, A., Fujita, K., and Tanaka, T. *Front. Microbiol.* **3(100)**, 1-6 (2012).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM