

PRODUCT INFORMATION



Aureobasidin A

Item No. 39722

CAS Registry No.: 127785-64-2
Formal Name: cyclo[L-alloisoleucyl-N-methyl-L-valyl-L-leucyl-N,3-dimethyl-L-threonyl-(2R,3R)-2-hydroxy-3-methylpentanoyl-N-methyl-L-valyl-L-phenylalanyl-N-methyl-L-phenylalanyl-L-prolyl]

Synonyms: Antibiotic R 106I, Basifungin, LY295337, NK 204, R 106-1

MF: C₆₀H₉₂N₈O₁₁

FW: 1,101.4

Purity: ≥95%

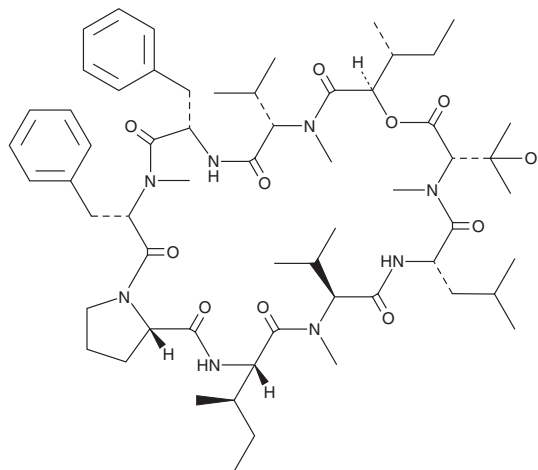
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Synthetic; originally from *Aureobasidium pullulans*

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



Laboratory Procedures

Aureobasidin A is supplied as a solid. A stock solution may be made by dissolving the aureobasidin A in the solvent of choice, which should be purged with an inert gas. Aureobasidin A is soluble in methanol.

Description

Aureobasidin A is a cyclic depsipeptide that has been found in *A. pullulans* and has diverse biological activities.¹⁻³ It inhibits inositol phosphorylceramide synthase, an enzyme involved in sphingolipid biosynthesis (K_i s = 0.18 and 0.23 for the *C. albicans* and *S. cerevisiae* enzymes, respectively).¹ Aureobasidin A also inhibits P-glycoprotein (P-gp), also known as multidrug resistance protein 1 (MDR1; IC_{50} = 2.27 μ M).² It is active against various mammalian pathogenic fungi, including *Candida* and *Cryptococcus* (MICs = <0.04-0.16 and 0.31-0.63 μ g/ml, respectively), and the plant pathogenic fungus *S. cerevisiae* (MIC = 0.4 μ g/ml).^{2,3} Aureobasidin A (80 mg/kg, p.o.) increases survival in a mouse model of candidiasis induced by *C. albicans*.³

References

1. Aeed, P.A., Young, C.L., Nagiec, M.M., *et al.* Inhibition of inositol phosphorylceramide synthase by the cyclic peptide aureobasidin A. *Antimicrob. Agents Chemother.* **53(2)**, 496-504 (2009).
2. Tiberghien, F., Kurome, T., Takesako, K., *et al.* Aureobasidins: Structure-activity relationships for the inhibition of the human MDR1 P-glycoprotein ABC-transporter. *J. Med. Chem* **43(13)**, 2547-2556 (2000).
3. Takesako, K., Kuroda, H., Inoue, T., *et al.* Biological properties of aureobasidin A, a cyclic depsipeptide antifungal antibiotic. *J. Antibiot. (Tokyo)* **46(9)**, 1414-1420 (1993).

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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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