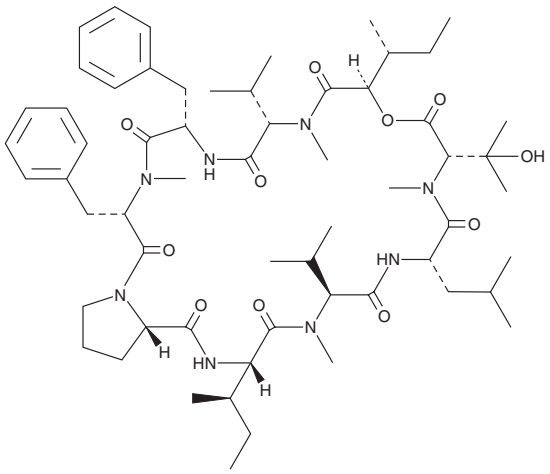
PRODUCT INFORMATION

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:	$C_{60}H_{92}N_8O_{11}$
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_is = 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 µM).[2] It is active against various mammalian pathogenic fungi, including *Candida* and *Cryptococcus* (MICs = <0.04-0.16 and 0.31-0.63 µg/ml, respectively), and the plant pathogenic fungus *S. cerevisiae* (MIC = 0.4 µg/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).

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