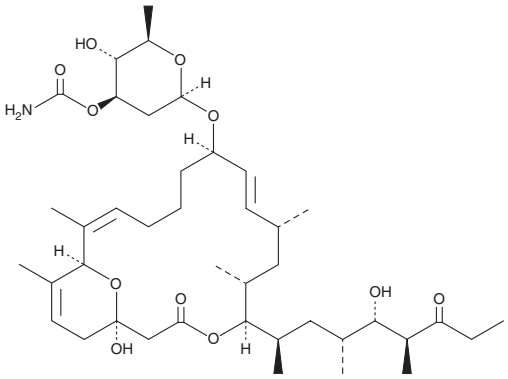
PRODUCT INFORMATION

Venturicidin A

Item No. 15377

CAS Registry No.:	33538-71-5
Formal Name:	(1R,5S,6R,8R,9E,11R,15E,17R)-11-[[3-O-(aminocarbonyl)-2,6-dideoxy-β-D-arabino-hexopyranosyl]oxy]-1-hydroxy-5-[(1R,3R,4S,5S)-4-hydroxy-1,3,5-trimethyl-6-oxooctyl]-6,8,16,18-tetramethyl-4,21-dioxabicyclo[15.3.1]heneicosa-9,15,18-trien-3-one
Synonym:	Aabomycin A_1
MF:	$C_{41}H_{67}NO_{11}$
FW:	750.0
Purity:	≥95%
Supplied as:	A lyophilisate
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Bacterium/*Streptomyces* sp.



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

Laboratory Procedures

Venturicidin A is supplied as a lyophilisate. A stock solution may be made by dissolving the venturicidin A in the solvent of choice, which should be purged with an inert gas. Venturicidin A is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

Description

Venturicidin A is a macrolide antibiotic isolated from strains of *Streptomyces*.[1] It is active against fungi in the genus *Venturia* which cause apple scab, as well as other fungi, but not against higher plants.[1] Venturicidin A is also cytotoxic against trypanosomes (IC_{50} = 120-540 ng/ml) while being more than 25,000 times less effective against mammalian cells.[2] It inhibits bacterial and mitochondrial ATP synthases.[3,4]

References

1. Rhodes, A., Fantes, K.H., Boothroyd, B., *et al*. Venturicidin: A new antifungal antibiotic of potential use in agriculture. *Nature* **192**, 952-954 (1961).
2. Otoguro, K., Ishiyama, A., Namatame, M., *et al*. Selective and potent *in vitro* antitrypanosomal activities of ten microbial metabolites. *J. Antibiot. (Tokyo)* **61(6)**, 372-378 (2008).
3. Perlin, D.S., Latchney, L.R., and Senior, A.E. Inhibition of *Escherichia coli* H^+-ATPase by venturicidin, oligomycin and ossamycin. *Biochim. Biophys. Acta* **807(3)**, 238-244 (1985).
4. Matsuno-Yagi, A. and Hatefi, Y. Studies on the mechanism of oxidative phosphorylation. ATP synthesis by submitochondrial particles inhibited at F_0 by venturicidin and organotin compounds. *J. Biol. Chem.* **268(9)**, 6168-6173 (1993).

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