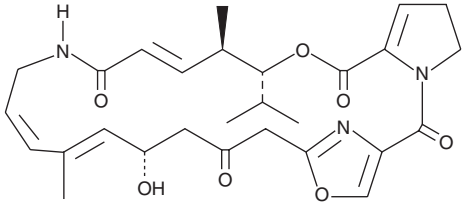
PRODUCT INFORMATION

Virginiamycin M1

Item No. 9002172

CAS Registry No.:	21411-53-0
Formal Name:	(3R,4R,5E,10E,12E,14S)-8,9,14,15,24,25-hexahydro-14-hydroxy-4,12-3H-21,18-nitrilo-1H,22H-pyrrolo[2,1-c][1,8,4,19]dioxadiazacyclotetracosine-1,7,16,22(4H,17H)-tetrone
Synonyms:	Mikamycin A, NSC 244426, NSC 87432, Ostreogrycin A, Pristinamycin IIA, RP 12536, Streptogramin A
MF:	$C_{28}H_{35}N_3O_7$
FW:	525.6
Purity:	≥95%
Supplied as:	A 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

Virginiamycin M1 is supplied as a solid. A stock solution may be made by dissolving the virginiamycin M1 in the solvent of choice, which should be purged with an inert gas. Virginiamycin M1 is soluble in DMSO and dimethyl formamide. Virginiamycin M1 is also slightly soluble in ethanol and methanol

Description

Virginiamycin M1 is a macrolide antibiotic. It is a member of the streptogramin A group of antibiotics, which bind the 50S ribosomal subunit at the peptidyl transferase center to inhibit initiation and translocation.[1] They show good bactericidal activity against methicillin-resistant *S. aureus* (MRSA), although resistance in MRSA is conferred by the *cfr* gene.[1,2] Virginiamycin M1 acts synergistically with virginiamycin S1 to irreversibly inhibit protein synthesis in bacteria.[3]

References

1. Fair, R.J. and Tor, Y. Antibiotics and bacterial resistance in the 21st century. *Perspect. Medicin. Chem.* **6**, 25-64 (2014).
2. Kehrenberg, C., Cuny, C., Strommenger, B., *et al.* Methicillin-resistant and -susceptible *Staphylococcus aureus* strains of clonal lineages ST398 and ST9 from swine carry the multidrug resistance gene *cfr*. *Antimicrob. Agents Chemother.* **53(2)**, 779-781 (2009).
3. Parfait, R. and Cocito, C. Lasting damage to bacterial ribosomes by reversibly bound virginiamycin M. *Proc. Natl. Acad. Sci. USA* **77(9)**, 5492-5496 (1980).

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