

<b>Product Name:</b>	Virginiamycin, >95%
<b>Product Number:</b>	V030
<b>CAS Number:</b>	11006-76-1
<b>Molecular Formula:</b>	C <sub>28</sub> H <sub>35</sub> N <sub>3</sub> O <sub>7</sub> (for M1), C <sub>43</sub> H <sub>49</sub> N <sub>7</sub> O <sub>10</sub> (for S1)
<b>Molecular Weight:</b>	525.6 (for M1); 823.9 (for S1)
<b>Form:</b>	Solid
<b>Appearance:</b>	White solid
<b>Solubility:</b>	Sparingly soluble in DMSO and DMF
<b>Source:</b>	Streptomyces virginiae
<b>Storage Conditions:</b>	-20C
<b>Description:</b>	Virginiamycin is a streptogramin, and a mixture of Virginiamycin M1 and Virginiamycin S1. The commercial mixture is 75 % Virginiamycin M1 and 25 % Virginiamycin S1, along with less abundant S analogs. The mixture can be used to reduce contaminating bacteria during yeast fermentation for bioethanol production. Virginiamycin is soluble in DMSO and DMF.
<b>Mechanism of Action:</b>	Virginiamycin inhibits protein synthesis, targeting the 50S ribosome and inducing a conformational change at the peptidyl transferase center. Protein synthesis is inhibited in both actively growing and static bacterial cells.
<b>Spectrum:</b>	Gram-positive bacteria, such as Lactobacillus spp.
<b>Microbiology Applications</b>	Virginiamycin is used in bioproduction, specifically to reduce contaminating bacteria when fermenting yeast for bioethanol production.
<b>References:</b>	Bischoff KM, Liu S, Leathers TD, Worthington RE and Rich JO (2008) Modeling bacterial contamination of fuel ethanol fermentation. Biotechnol. Bioeng. 103(1):117-122 Crooy P and De Neys RJ (1972) Virginiamycin: nomenclature. Antibiot. 25:371 Ogata K et al (1978) A new species of Streptomyces producing virginiamycin family antibiotics. J. Antibiot. 31: 1313 Parfait R and Cocito C (1980) Lasting damage to bacterial ribosomes by reversibly bound virginiamycin M. Proc. Natl. Acad. Sci. USA 77(9):5492-5496 Rich JO et al (2011) Rapid evaluation of the antibiotic susceptibility of fuel ethanol contaminant biofilms. Bioresour. Technol. 102 (2):1124-1130