# Ostreogrycin A
# PRODUCT DATA SHEET

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| **Product Name:** | Ostreogrycin A |
| **Product Number:** | O027 |
| **CAS Number:** | 21411-53-0 |
| **Molecular Formula:** | $C_{28}H_{35}N_3O_7$ |
| **Molecular Weight:** | 525.6 |
| **Appearance:** | White solid |
| **Storage Conditions:** | -20°C |
| **Description:** | Ostreogrycin A (virginiamycin M1, streptogramin A) is the major component of the virginiamycin complex. In the 1950s this complex was independently discovered so many times that the literature became highly confusing. Ostreogrycin A is a macrocyclic lactone antibiotic that acts synergistically with the structurally unrelated cyclic depsipeptides, virginiamycin B (ostreogrycin B, streptogramin B) and virginiamycin S, to inhibit peptide elongation. Ostreogrycin A is highly active against Gram positive bacteria, particularly MRSA.<br><br>Ostreogrycin A is soluble in DMF or DMSO. Moderately soluble in methanol or ethanol. Poor water solubility. |
| **Mechanism of Action:** | Ostreogrycin A functions by blocking formation of a peptide bond between the growing peptide chain (peptidyl-tRNA) linked to the 50S ribosome and aminoacyl-tRNA. |
| **References:** | Preparation and properties of an antibiotic complex E129. Ball S. 1958, 68, 24P.<br><br>Virginiamycin: nomenclature. Crooy P. and De Neys R. J. Antibiot. 1972, 25, 371.<br><br>Sites of interaction of streptogramin A and B antibiotics in the peptidyl transferase loop of 23 S rRNA and the synergism of their inhibitory mechanisms. Porse B.T. and Garrett R.A.J. Mol. Biol. 1999, 286, 375.<br><br>Chemistry and Biology of the Streptogramin A Antibiotics. Ahmed F. and Donaldson, W.A. Mini-Reviews in Org. Chemistry. 2007, 4, 159. |