

Product Name: Tylosin A, EvoPure[®]

Product Number: T058

CAS Number: 8026-48-0

Molecular Formula: C₄₆H₇₇NO₁₇

Molecular Weight: 916.10

Form: Powder

Appearance: Yellowish powder

Solubility: Water: Slightly Soluble

Description: Tylosin A, EvoPure[®] is a highly purified (>99.00% pure) form of tylosin A. Tylosin is a macrolide antibiotic that was originally isolated from *Streptomyces fradiae* by the Lilly Research Laboratories in 1961 from a soil sample collected in Thailand. Tylosin is a mixture of four macrolide antibiotics, the main component of the mixture (> 80%) is tylosin A; tylosin B (desmycosin), tylosin C (macrocin), and tylosin D (relomycin) may also be present. Tylosin has broad spectrum bacteriostatic activity against gram-positive bacteria and mycoplasma, but much less activity against most gram-negative bacteria and fungi.

Tylosin A contains a polyketide lactone (tylactone) substituted with three 6-deoxyhexose sugars. The addition of D-mycaminose to the aglycone is followed by concurrent ring oxidation at C-20 and C-23 (to generate the tylonolide moiety) and substitution with L-mycarose and 6-deoxy-Dallose.

Tylosin, like other Macrolide antibiotics, is a bacteriostatic compound that reversibly bind to the 23S rRNA in the 50S (L27 protein) ribosome subunit and inhibit mRNA-directed protein synthesis.

Tylosin has been used to study protein synthesis, abscess prevention in cattle, and *Mycoplasma* infections.

For more Tylosin products [click here](#).

Mechanism of Action: Tylosin A binds to the 50S ribosomal subunit interfering with the binding of aminoacyl-tRNA to 50S and block peptide bond formation. This inhibits the translocation of a newly synthesized peptidyl tRNA molecule from the acceptor site to the peptidyl site.

References:

Loke, M. L., and F. Ingerslev. "Stability of Tylosin A in Manure Containing Test Systems Determined by High Performance Liquid Chromatography." *Chemosphere* 40.7 (2000): n. pag. Nih.gov. Web. 27 Dec. 2013.

Thompson, T. S., S. F. Pernal, and D. K. Noot. "Degradation of Incurred Tylosin to Desmycosin--implications for Residue Analysis of Honey." *Analytica Chimica* 586 (2007): 304-11. Nih.gov. Web. 27 Dec. 2013.

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