

Product Name: Erythromycin A, EvoPure®

Product Number: E027

CAS Number: 59319-72-1

Molecular Formula: $C_{37}H_{67}NO_{13} \cdot 2H_2O$

Molecular Weight: 769.96

Form: Powder

Source: Saccharopolyspora erythraea

Storage Conditions: -20°C

Description: Erythromycin A, EvoPure® is a highly purified form of the macrolide antibiotic Erythromycin A and is a natural product. Erythromycin is composed of Erythromycin A, B, C, D, and additional impurities. Erythromycin A is the most active component.

For other Erythromycin products, [click here](#).

Mechanism of Action: Macrolide antibiotics inhibit bacterial growth by targeting the 50S ribosomal subunit of the 70S ribosome preventing aminoacyl translocation of the A-site to P-side and peptide bond formation during protein synthesis. Resistance to Erythromycin is commonly attributed to mutations in 50S rRNA preventing erythromycin binding allowing the cell to synthesize proteins free of error. In acidic aqueous media, Erythromycin A is degraded via intramolecular dehydration to form erythromycin-6,9-hemiketal and then anhydroerythromycin, both of which possess little antimicrobial activity. (Fiese and Staffen, 1990).

Spectrum: Effective against Gram-positive and Gram-negative bacteria.

References: Fiese EF and Staffen SH (1990) Comparison of the acid stability of azithromycin and erythromycin A. J. Antimicrob. Chemother. 25(A):39-47

Kibwage IO et al (1985) Antibacterial activities of Erythromycins A, B, C, and D and some of their derivatives. Antimicrob. Agents Chemother. 28(5):630-33

Weber T et al (2010) Making *E. coli* an erythromycin production plant. Chem. & Biol. 17(11):1168-1169

Zhang H et al (2010) Complete biosynthesis of erythromycin A and designed analogs using *E. coli* as a heterologous host. Chem. & Biol. 17(11):1232-1240