Product Name: Erythromycin Estolate
Product Number: E003
CAS Number: 3521-62-8
Molecular Formula: \( \text{C}_{40}\text{H}_{71}\text{NO}_{14} \cdot \text{C}_{12}\text{H}_{26}\text{SO}_{4} \)
Molecular Weight: 1056.39 g/mol
Form: Powder
Appearance: White crystalline powder
Source: Actinomycete saccha
Water Content (Karl Fisher): <4.0%
Melting Point: 132-138 °C

Description:
Erythromycin estolate is a macrolide antibiotic with a target spectrum similar to penicillin. TOKU-E offers three forms of erythromycin: erythromycin (E002), erythromycin estolate (E003), and erythromycin ethylsuccinate (E004). Erythromycin is sparingly soluble in aqueous solution (2 mg/mL). Erythromycin estolate and erythromycin ethylsuccinate are both freely soluble in organic solvents.

Mechanism of Action:
Macrolide antibiotics inhibit bacterial growth by targeting the 50S ribosomal subunit preventing peptide bond formation and translocation 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.

Spectrum:
Erythromycin is a broad spectrum antibiotic commonly targeting bacteria responsible for respiratory tract infections including Mycoplasma pneumoniae and Legionella pneumophila

Microbiology Applications
Erythromycin estolate is commonly used in clinical in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive, gram negative, and Mycoplasma species. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Mycoplasma pneumoniae* 0.0019 µg/mL – 0.0078 µg/mL
- *Legionella pneumophila* 0.008 µg/mL – 1 µg/mL
- For a complete list of erythromycin MIC values, click here.

If you need any help, contact us: info@toku-e.com. Find more information on: www.toku-e.com/