Product Name: Mupirocin

Product Number: M022

CAS Number: 12650-69-0

Molecular Formula: C_{26}H_{44}O_{9}

Molecular Weight: 500.62

Form: Powder

Appearance: Almost white or off-white powder

Source: *Pseudomonas Fluorescens.*

Water Content (Karl Fisher): ≤ 1.0%

pH: 3.5-4.5

Optical Rotation: -17° to -21°

Storage Conditions: 2-8 °C

Description: Mupirocin is a carboxylic acid bacteriostatic/bactericidal antibiotic.

TOKU-E offers three forms of mupirocin: mupirocin (M022), mupirocin lithium salt (M023), and mupirocin calcium. Mupirocin is sparingly soluble in aqueous solution at 26.5 µg/mL. Mupirocin lithium is freely soluble at 10 mg/mL.

Mechanism of Action: Mupirocin inhibits protein synthesis by binding to isoleucyl-tRNA synthetase, an enzyme which conjugates the amino acid isoleucine to its corresponding tRNA.

Spectrum: Mupirocin is commonly used to target gram positive bacteria especially *Methicillin resistant Staphylococcus aureus* (MRSA).

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

- Methicillin resistant *Staphylococcus aureus* 0.25 µg/mL – 0.39 µg/mL
- For a complete list of mupirocin MIC values, [click here](http://www.ncbi.nlm.nih.gov).

