

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:	<i>Pseudomonas Fluorescens</i> .
Water Content (Karl Fischer):	≤ 1.0%
pH:	3.5-4.5
Optical Rotation:	-17° to -21°
Storage Conditions:	2-8 °C
Description:	<p>Mupirocin is a carboxylic acid bacteriostatic/bactericidal antibiotic.</p> <p>TOKU-E offers three forms of mupirocin: mupirocin (M022), <u>mupirocin lithium salt (M023)</u>, and <u>mupirocin calcium</u> . Mupirocin is sparingly soluble in aqueous solution at 26.5 µg/mL. Mupirocin lithium is freely soluble at 10 mg/mL.</p>
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 <i>Staphylococcus aureus</i> (MRSA).
Microbiology Applications	<p>Mupirocin is commonly used in clinical <i>in vitro</i> microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive <i>Staphylococcus</i> microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:</p> <ul style="list-style-type: none"> • Methicillin resistant <i>Staphylococcus aureus</i> 0.25 µg/mL – 0.39 µg/mL • For a complete list of mupirocin MIC values, <u>click here</u>.
References:	<p>Hatfield, S. M., J. J. Leyden, and M. I. Parenti. "Mupirocin: A Topical Antibiotic with a Unique Structure and Mechanism of Action." <i>PubMed</i> (1987): 761-70. Http://www.ncbi.nlm.nih.gov. Web. 5 Aug. 2012.</p>

