

Product Name:	Tiamulin Fumarate
Product Number:	T029
CAS Number:	55297-96-6
Molecular Formula:	C ₃₂ H ₅₁ NO ₈ S
Molecular Weight:	609.81
Form:	Powder
Appearance:	White or almost White Crystalline Powder
Solubility:	Water: Soluble
Source:	Synthetic
pH:	3.1-4.1
Melting Point:	143-149°C
Optical Rotation:	+24.0 to +28.0°
Storage Conditions:	2-8°C
Description:	Tiamulin fumarate is a pleuromutilin antibiotic and is soluble in aqueous solution.
Mechanism of Action:	Pleuromutilin antibiotics inhibit protein synthesis by targeting the 50S bacterial ribosomal subunit and binding to peptidyl transferase, the enzyme responsible for forming peptide bonds between amino acids.
Spectrum:	Tiamulin targets primarily gram positive bacteria as well as a few <i>Mycoplasma</i> species.
Microbiology Applications	<p>Tiamulin fumarate is commonly used in clinical <i>in vitro</i> microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive and <i>Mycoplasma</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"> • <i>Mycoplasma hyorhinis</i> 0.024 µg/mL – 0.097 µg/mL • <i>Mycoplasma synoviae</i> 0.006 µg/mL - 1 µg/mL • For a complete list of tiamulin MIC values, click here.
References:	Bosling, Jacob, and et al. "Resistance to the Peptidyl Transferase Inhibitor Tiamulin Caused by Mutation of Ribosomal Protein L3." <i>Antimicrobial Agents and Chemotherapy</i> 47.9 (2003): 2892-896. www.ncbi.gov . Web. 10 Sept. 2012.

