Tilmicosin
PRODUCT DATA SHEET

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Product Name:	Tilmicosin
Product Number:	T008
CAS Number:	108050-54-0
Molecular Formula:	$C_{46}H_{80}N_2O_{13}$
Molecular Weight:	869.13
Form:	Powder
Appearance:	White or off white powder
Source:	Synthetic
Water Content (Karl Fischer):	≤ 5.0%
Storage Conditions:	2-8°C
Description:	Tilmicosin is a slighlty soluble semisynthetic macrolide antibiotic.
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 tilmicosin is commonly attributed to mutations in 50S rRNA preventing tilmicosin binding allowing the cell to synthesize proteins free of error.
Spectrum:	Tilmicosin primarily targets gram negative bacteria especially those which cause bovine respiratory disease.
Microbiology Applications	Tilmicosin is commonly used in clinical *in vitro* microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include: • *Pasteurella haemolytica* 4 µg/mL • *Pasteurella multocida* 2 µg/mL – 32 µg/mL • For a complete list of tilmicosin MIC values, click here.
References:	Lovmar, Martin, and Tanel Tenson. "The Mechanism of Action of Macrolides, Lincosamides and Streptogramin B Reveals the Nascent Peptide Exit Path in the Ribosome."*Journal of Molecular Microbiology* 330.5 (2003): 1005-014.