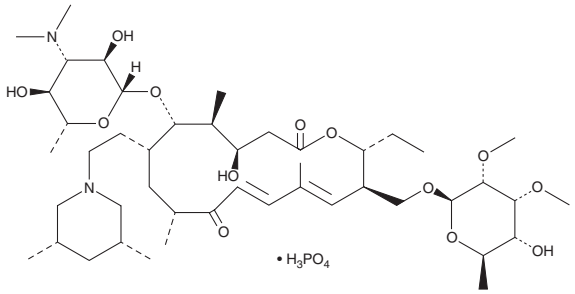
PRODUCT INFORMATION

Tilmicosin (phosphate)

Item No. 18190

CAS Registry No.:	137330-13-3
Formal Name:	4A-O-de(2,6-dideoxy-3-C-methyl-α-L-ribo-hexopyranosyl)-20-deoxo-20-[(3R,5S)-3,5-dimethyl-1-piperidinyl]-tylosin, monophosphate
Synonyms:	EL-870, LY-177370
MF:	$C_{46}H_{80}N_2O_{13} \bullet H_3PO_4$
FW:	967.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 290 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tilmicosin (phosphate) is supplied as a crystalline solid. A stock solution may be made by dissolving the tilmicosin (phosphate) in the solvent of choice, which should be purged with an inert gas. Tilmicosin (phosphate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tilmicosin (phosphate) in ethanol and DMF is approximately 25 mg/ml and approximately 30 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of tilmicosin (phosphate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of tilmicosin (phosphate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Tilmicosin is a macrolide antibiotic.[1] It is active against macrolide-susceptible strains of *M. haemolytica*, *P. multocida*, and *E. coli* (MICs = 4, 4, and 128 µM, respectively), as well as a hyperpermeable strain of *E. coli* (MIC = 2 µM), and inhibits bacterial protein synthesis (IC_{50} = 0.36 µM). Tilmicosin (75 mg/kg) increases serum creatine kinase (CK), the MB isoform of CK (CK-MB), and malondialdehyde (MDA) levels in mice, indicating cardiotoxicity.[2] Formulations containing tilmicosin have been used in the treatment of respiratory diseases in sheep and cattle.

References

1. Andersen, N.M., Poehlsgaard, J., Warrass, R., *et al.* Inhibition of protein synthesis on the ribosome by tildipirosin compared with other veterinary macrolides. *Antimicrob. Agents Chemother.* **56(11)**, 6033-6036 (2012).
2. Kart, A., Yapar, K., Karapehlivan, M., *et al.* The possible protective effect of L-carnitine on tilmicosin-induced cardiotoxicity in mice. *J. Vet. Med. A Physiol. Pathol. Clin. Med.* **54(3)**, 144-146 (2007).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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