



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



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- Expressversand

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# PRODUCT INFORMATION



## Tilmicosin-d<sub>3</sub> Item No. 33545

**Formal Name:** (4R,5S,6S,7R,9R,11E,13E,15R,16R)-6-(((2R,3R,4S,5S,6R)-3,5-dihydroxy-6-methyl-4-(methyl(methyl-d<sub>3</sub>)amino)tetrahydro-2H-pyran-2-yl)oxy)-7-(2-((3S,5R)-3,5-dimethylpiperidin-1-yl)ethyl)-16-ethyl-4-hydroxy-15-(((2R,3R,4R,5R,6R)-5-hydroxy-3,4-dimethoxy-6-methyltetrahydro-2H-pyran-2-yl)oxy)methyl)-5,9,13-trimethoxycyclohexadeca-11,13-diene-2,10-dione

**MF:** C<sub>46</sub>H<sub>77</sub>D<sub>3</sub>N<sub>2</sub>O<sub>13</sub>

**FW:** 872.2

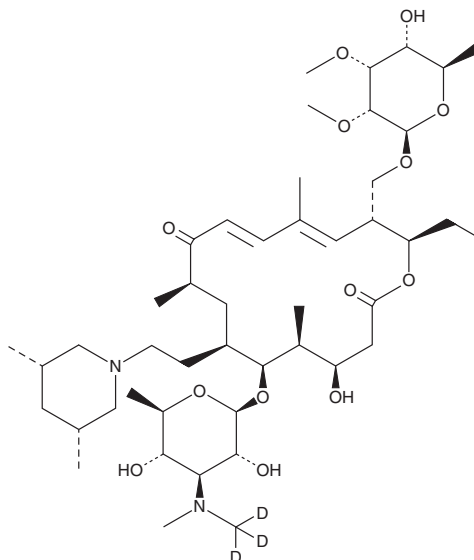
**Chemical Purity:** ≥98% (Tilmicosin)

**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥2 years



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

### Laboratory Procedures

Tilmicosin-d<sub>3</sub> is intended for use as an internal standard for the quantification of tilmicosin (Item No. 18190) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Tilmicosin-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the tilmicosin-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Tilmicosin-d<sub>3</sub> is slightly soluble in methanol and chloroform.

### Description

Tilmicosin is a macrolide antibiotic.<sup>1</sup> 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<sub>50</sub> = 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.<sup>2</sup> Formulations containing tilmicosin have been used in the treatment of respiratory diseases in sheep and cattle.

### References

- 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).
- 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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