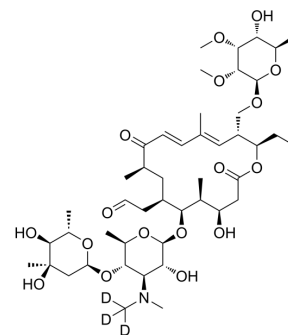


Tylosin-d3

Cat. No.:	HY-B0519AS
Molecular Formula:	C ₄₆ H ₇₄ D ₃ NO ₁₇
Molecular Weight:	919.12
Target:	Bacterial; Antibiotic; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tylosin-d ₃ is the deuterium labeled Tylosin. Tylosin (Tylosin A) is a macrolide antibiotic found naturally as a fermentation product of <i>Streptomyces fradiae</i> . Tylosin exerts potent antimicrobial activity against Gram-positive bacteria. Tylosin is widely used as a feed additive for promoting animal growth. Tylosin is used for veterinary purposes against bacterial dysentery and respiratory diseases in poultry, pigs and cattle[1][2][3].
IC₅₀ & Target	Macrolide
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [2]. Mingfu Liu, et al. Resistance to the macrolide antibiotic tylosin is conferred by single methylations at 23S rRNA nucleotides G748 and A2058 acting in synergy. *Proc Natl Acad Sci U S A*. 2002 Nov 12; 99(23): 14658-14663.
- [3]. Carlo Pinna, et al. In Vitro Evaluation of the Effects of Tylosin on the Composition and Metabolism of Canine Fecal Microbiota. *Animals (Basel)*. 2020 Jan; 10(1): 98.
- [4]. Niels Møller Andersen, et al. Inhibition of Protein Synthesis on the Ribosome by Tildipirosin Compared with Other Veterinary Macrolides. *Antimicrob Agents Chemother*. 2012 Nov; 56(11): 6033-6036.
- [5]. Ayse Er, et al. Effects of tylosin on serum cytokine levels in healthy and lipopolysaccharide-treated mice. *Acta Vet Hung*. 2010 Mar;58(1):75-81.

Caution: Product has not been fully validated for medical applications. For research use only.

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