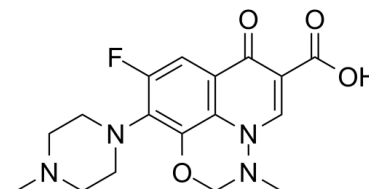


Data Sheet

Product Name:	Marbofloxacin
Cat. No.:	CS-1892
CAS No.:	115550-35-1
Molecular Formula:	C ₁₇ H ₁₉ FN ₄ O ₄
Molecular Weight:	362.36
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	DMSO : ≥ 3.8 mg/mL (10.49 mM)



BIOLOGICAL ACTIVITY:

Marbofloxacin is a potent antibiotic of which depends upon its inhibition of DNA-gyrase. Marbofloxacin is a synthetic, broad spectrum bactericidal agent. Target: DNA-gyrase Marbofloxacin is a third-generation fluoroquinolone for veterinary use, the antimicrobial of which depends upon its inhibition of DNA-gyrase and topoisomerase IV. With a broad spectrum bactericidal activity and good efficacy, marbofloxacin is indicated for dermatological, respiratory and urinary tract infections due to both Gram-positive and Gram-negative bacteria and Mycoplasma [1]. Administration of Marbofloxacin at 6 mg/kg once daily for 7 days in a Staphylococcus aureus infection in tissue cages in ponies is not effective for the elimination of S. aureus infections from secluded sites [2]. The pharmacokinetic properties of marbofloxacin were investigated in 6 horses after i.v., subcutaneous and oral administration of a single dose of 2 mg/kg bwt and the minimal inhibitory concentrations (MIC) assessed for bacteria isolated from equine infectious pathologies. The clearance of marbofloxacin was mean +/- s.d. 0.25 +/- 0.05 l/kg/h and the terminal half-life 756 +/- 1.99 h. The marbofloxacin absolute bioavailabilities after subcutaneous and oral administration were 98 +/- 11% and 62 +/- 8%, respectively. Considering the breakpoint values of efficacy indices for fluoroquinolones, a marbofloxacin dosage regimen of 2 mg/kg bwt/24 h by i.v., subcutaneous or oral routes was more appropriate for enterobacteriaceae than for S. aureus [3]. Toxicity: cramps; vomiting; anorexia; soft stools; diarrhoea

References:

- [1]. Shen J, et al. Marbofloxacin. Acta Crystallogr Sect E Struct Rep Online. 2012 Apr 1;68(Pt 4):o998-9.
- [2]. Voermans M, et al. Clinical efficacy of intravenous administration of marbofloxacin in a Staphylococcus aureus infection in tissue cages in ponies. J Vet Pharmacol Ther. 2006 Dec;29(6):555-60.
- [3]. Bousquet-Melou A, et al. Pharmacokinetics of marbofloxacin in horses. Equine Vet J. 2002 Jul;34(4):366-72.

CAIndexNames:

7H-Pyrido[3,2,1-ij][4,1,2]benzoxadiazine-6-carboxylic acid, 9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-

SMILES:

O=C(C(C1=O)=CN2N(C)COC3=C(N4CCN(C)CC4)C(F)=CC1=C3)O

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

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