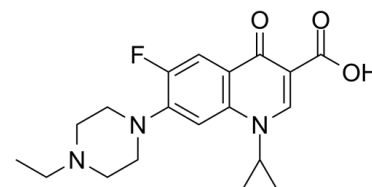


Data Sheet

Product Name:	Enrofloxacin
Cat. No.:	CS-2699
CAS No.:	93106-60-6
Molecular Formula:	C ₁₉ H ₂₂ FN ₃ O ₃
Molecular Weight:	359.39
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	DMSO : 9.5 mg/mL (26.43 mM; Need ultrasonic and warming)



BIOLOGICAL ACTIVITY:

Enrofloxacin (BAY Vp 2674) is an effective antibiotic with an MIC₉₀ of 0.312 µg/mL for *Mycoplasma bovis*. IC₅₀ & Target: MIC₉₀: 0.312 µg/mL (*Mycoplasma bovis*)^[1] **In Vitro:** *Mycoplasma bovis* is a worldwide pathogen, causative agent of pneumonia, mastitis, arthritis, and a variety of other symptoms in cattle. The antibiotic susceptibility profiles of the Hungarian strains are consistent within the tested group of fluoroquinolones. Three isolates (MYC44, MYC45 and MYC46) have high MIC values (≥10 µg/mL) to Enrofloxacin, while the rest of the strains are inhibited by Enrofloxacin with MICs ≤0.312 or 0.625 µg/mL^[1]. **In Vivo:** Mice (n=80) undergo transient middle cerebral artery occlusion (MCAo) with reperfusion after 60 minutes. After MCAo, animals are randomly assigned to receive either a daily preventive medication (n=26, Enrofloxacin) starting at the day of MCAo or a therapeutic medication (n=25; Enrofloxacin) after diagnosis of lung infection. Standard treatment started immediately after the appearance of clinical signs (general health score>6) usually between day 4 and 6 after stroke. Both, preventive and standard antibiotic treatment using Enrofloxacin improve survival in a similar way compared with placebo treatment^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: ^[2]Mice^[2]

11- to 14-week-old C57Bl6/J male mice are used. Enrofloxacin (2.5% oral solution) is dispensed in saline (2 mg/mL), antibiotic-treated animals receive a daily **orally** dispensed dose of **10 mg/kg** body weight via feeding needle every 12 hours over a period of 7 days, while placebo animals receive the same amount of saline via feeding needle. Animals of preventive antibiotic group obtained Enrofloxacin after waking from reperfusion anesthesia (ca. 1 hour after operation). Therapeutic antibiotic treatment is given immediately after appearance of clinical signs (general health score>5) and confirmation of lung infection by MRI (signal rate≥5%). The group allocation is randomized^[2].

References:

[1]. Sulyok KM, et al. Antibiotic susceptibility profiles of *Mycoplasma bovis* strains isolated from cattle in Hungary, Central Europe. BMC Vet Res. 2014 Oct 25;10:256.

[2]. Hetze S, et al. Superiority of preventive antibiotic treatment compared with standard treatment of poststroke pneumonia in experimental stroke: a bed to bench approach. J Cereb Blood Flow Metab. 2013 Jun;33(6):846-54.

CAIndexNames:

3-Quinolincarboxylic acid, 1-cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-

SMILES:

O=C(C1=CN(C2CC2)C3=C(C=C(F)C(N4CCN(CC)CC4)=C3)C1=O)O

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

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