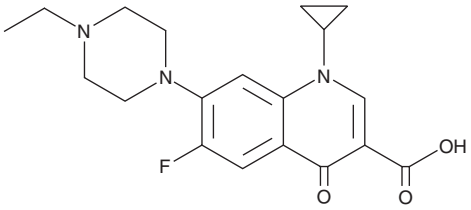
PRODUCT INFORMATION

Enrofloxacin

Item No. 20301

CAS Registry No.:	93106-60-6
Formal Name:	1-cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid
Synonyms:	BAY-Vp 2674, ENR, PD 160788
MF:	$C_{19}H_{22}FN_3O_3$
FW:	359.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 280, 318 nm
Supplied as:	A crystalline solid
Storage:	Room temperature
Stability:	≥4 years



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

Laboratory Procedures

Enrofloxacin is supplied as a crystalline solid. A stock solution may be made by dissolving the enrofloxacin in the solvent of choice, which should be purged with an inert gas. Enrofloxacin is soluble in organic solvents such as DMSO (warmed) and dimethyl formamide (DMF). The solubility of enrofloxacin in these solvents is approximately 1 and 10 mg/ml, respectively.

Enrofloxacin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, enrofloxacin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Enrofloxacin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Enrofloxacin is a fluoroquinolone antibiotic.[1] It is active against panels of *Campylobacter*, *E. coli*, and *Salmonella* isolates (mean MIC_{50}s = 0.06, 0.5, and 0.03 µg/ml, respectively). It is also active against equine isolates of *L. intracellularis* (MICs = 0.125-0.5 µg/ml).[2] Enrofloxacin inhibits bacterial DNA gyrase.[3] *In vivo*, enrofloxacin (10 mg/kg) increases survival in a mouse model of enteropathogenic *E. coli*-induced sepsis. Formulations containing enrofloxacin have been used in the treatment of veterinary bacterial infections.

References

1. Randall, L., Ridley, A., Lemma, F., *et al. In vitro* investigations into the use of antimicrobials in combination to maintain efficacy of fluoroquinolones in poultry. *Res. Vet. Sci.* **108**, 47-53 (2016).
2. Pereira, C.E.R., Resende, T.P., Vasquez, E., *et al.* In vitro antimicrobial activity against equine *Lawsonia intracellularis* strains. *Equine Vet. J.* **51(5)**, 665-668 (2019).
3. Slate, A.R., Bandyopadhyay, S., Francis, K.P., *et al.* Efficacy of enrofloxacin in a mouse model of sepsis. *J. Am. Assoc. Lab. Anim. Sci.* **53(4)**, 381-386 (2014).

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