

PRODUCT INFORMATION



Enrofloxacin-d₅

Item No. 33809

CAS Registry No.: 1173021-92-5
Formal Name: 1-cyclopropyl-7-[4-(ethyl-1,1,2,2,2-d₅)-1-piperazinyl]-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid

Synonyms: BAY-Vp 2674-d₅, ENR-d₅

MF: C₁₉H₁₇D₅FN₃O₃

FW: 364.4

Chemical Purity: ≥98% (Enrofloxacin)

Deuterium

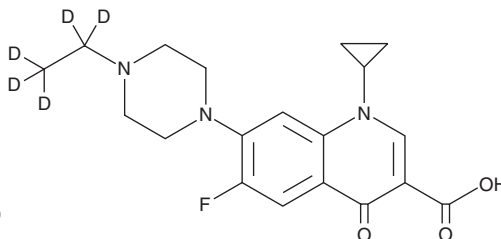
Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀

UV/Vis.: λ_{max}: 284 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Enrofloxacin-d₅ is intended for use as an internal standard for the quantification of enrofloxacin (Item No. 20301) 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).

Enrofloxacin-d₅ is supplied as a solid. A stock solution may be made by dissolving the enrofloxacin-d₅ in the solvent of choice, which should be purged with an inert gas. Enrofloxacin-d₅ is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of enrofloxacin-d₅ in these solvents is approximately 1 and 10 mg/ml, respectively.

Description

Enrofloxacin is a fluoroquinolone antibiotic.¹ It is active against panels of *Campylobacter*, *E. coli*, and *Salmonella* isolates (mean MIC₅₀s = 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).

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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