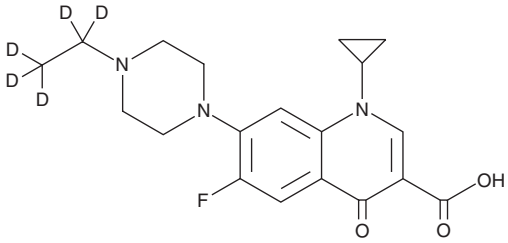
PRODUCT INFORMATION

Enrofloxacin-d_5

Item No. 33809

CAS Registry No.:	1173021-92-5
Formal Name:	1-cyclopropyl-7-[4-(ethyl-1,1,2,2,2-d_5)-1-piperazinyl]-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid
Synonyms:	BAY-Vp 2674-d_5, ENR-d_5
MF:	$C_{19}H_{17}D_5FN_3O_3$
FW:	364.4
Chemical Purity:	≥98% (Enrofloxacin)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_5); ≤1% d_0
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-d_5 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-d_5 is supplied as a solid. A stock solution may be made by dissolving the enrofloxacin-d_5 in the solvent of choice, which should be purged with an inert gas. Enrofloxacin-d_5 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of enrofloxacin-d_5 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 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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