



# Enrofloxacin/Ciprofloxacin (72FIG1F7#1): sc-57726

## BACKGROUND

The quinolones are a family of broad-spectrum bactericidal antibiotics that inhibit the bacterial DNA gyrase or the topoisomerase II enzyme, thereby inhibiting DNA replication and transcription. The majority of quinolones in clinical use belong to the subset of fluoroquinolones, which have a fluoro group bound to the central ring system. Ciprofloxacin is a second generation fluoroquinolone that functions by binding to and inhibiting DNA gyrase, thereby causing double-stranded breaks in the bacterial chromosome. Ciprofloxacin is a broad-spectrum antibiotic that is active against both Gram-positive and Gram-negative bacteria and is used to treat infections in humans. Enrofloxacin is a fluoroquinolone with a similar mode of action and structure to Ciprofloxacin, though it is used to treat infections in animals rather than humans. Enrofloxacin is usually used in domestic dogs and cats to combat different types of infections, especially those involving *Pseudomonas* and/or *Staphylococci*.

## REFERENCES

1. Boothe, D.M., Boeckh, A., Boothe, H.W., Wilkie, S. and Jones, S. 2003. Plasma concentrations of Enrofloxacin and its active metabolite Ciprofloxacin in dogs following single oral administration of Enrofloxacin at 7.5, 10, or 20 mg/kg. *Vet. Ther.* 3: 409-419.
2. Cinquina, A.L., Roberti, P., Giannetti, L., Longo, F., Draisci, R., Fagiolo, A. and Brizioli, N.R. 2003. Determination of Enrofloxacin and its metabolite Ciprofloxacin in goat milk by high-performance liquid chromatography with diode-array detection. Optimization and validation. *J. Chromatogr. A* 987: 221-226.
3. Varma, R., Ahmad, A.H., Sharma, L.D., Aggarwal, P. and Ahuja, V. 2003. Pharmacokinetics of Enrofloxacin and its active metabolite Ciprofloxacin in cows following single dose intravenous administration. *J. Vet. Pharmacol. Ther.* 26: 303-305.
4. Cox, S.K., Cottrell, M.B., Smith, L., Papich, M.G., Frazier, D.L. and Bartges, J. 2004. Allometric analysis of Ciprofloxacin and Enrofloxacin pharmacokinetics across species. *J. Vet. Pharmacol. Ther.* 27: 139-146.
5. Idowu, O.R. and Peggins, J.O. 2004. Simple, rapid determination of Enrofloxacin and Ciprofloxacin in bovine milk and plasma by high-performance liquid chromatography with fluorescence detection. *J. Pharm. Biomed. Anal.* 35: 143-153.
6. Bidgood, T.L. and Papich, M.G. 2005. Plasma and interstitial fluid pharmacokinetics of Enrofloxacin, its metabolite Ciprofloxacin, and marbofloxacin after oral administration and a constant rate intravenous infusion in dogs. *J. Vet. Pharmacol. Ther.* 28: 329-341.
7. Tewson, T.J. 2005. Re: synthesis and comparison of <sup>99m</sup>Tc-Enrofloxacin and <sup>99m</sup>Tc-Ciprofloxacin. *J. Nucl. Med.* 46: 1077.

## SOURCE

Enrofloxacin/Ciprofloxacin (72FIG1F7#1) is a mouse monoclonal antibody raised against Enrofloxacin conjugated to KLH.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Enrofloxacin/Ciprofloxacin (72FIG1F7#1) is recommended for detection of Enrofloxacin and Ciprofloxacin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.