SANTA CRUZ BIOTECHNOLOGY, INC.

Enrofloxacin/Ciprofloxacin (1.BB.892): sc-71048

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 fluroquinolone 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 fluroquinolone 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 canines and felines to combat different types of infections, especially those involving *Pseudomonas* and/or *Staphylococci*.

REFERENCES

1. Boothe, D.M., et al. 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., et al. 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., et al. 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., et al. 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 99mTc-Enrofloxacin and 99mTc-Ciprofloxacin. J. Nucl. Med. 46: 1077.
8. Cole, L.K., et al. 2006. Ciprofloxacin as a representative of disk diffusion *in vitro* susceptibility of Enrofloxacin for bacterial organisms from the middle-ear tissue of dogs with end-stage otitis externa. Vet. Dermatol. 17: 128-133.
9. Wu, G., et al. 2006. Pharmacokinetics and tissue distribution of Enrofloxacin and its metabolite Ciprofloxacin in the Chinese mitten-handed crab, *Eriocheir sinensis*. Anal. Biochem. 358: 25-30.

RESEARCH USE

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

SOURCE

Enrofloxacin/Ciprofloxacin (1.BB.892) is a mouse monoclonal antibody raised against Enrofloxacin conjugated to KLH.

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 (1.BB.892) 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 for detailed protocols and support products.