



# SZABO SCANDIC

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## Produktinformation



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# PRODUCT INFORMATION



## Marbofloxacin-d<sub>8</sub> (hydrochloride)

Item No. 33273

**Formal Name:** 9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl-d<sub>8</sub>)-7-oxo-7H-pyrido[3,2,1-ij][4,1,2]benzoxadiazine-6-carboxylic acid, monohydrochloride

**MF:** C<sub>17</sub>H<sub>11</sub>D<sub>8</sub>FN<sub>4</sub>O<sub>4</sub> • HCl

**FW:** 406.9

**Chemical Purity:** ≥95% (Marbofloxacin)

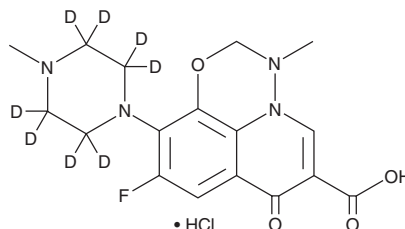
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>8</sub>); ≤1% d<sub>0</sub>

**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

Marbofloxacin-d<sub>8</sub> (hydrochloride) is intended for use as an internal standard for the quantification of marbofloxacin (Item No. 24174) 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).

Marbofloxacin-d<sub>8</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the marbofloxacin-d<sub>8</sub> (hydrochloride) in the solvent of choice. Marbofloxacin-d<sub>8</sub> (hydrochloride) is soluble in the organic solvent DMSO, which should be purged with an inert gas. It is also soluble in methanol:water (1:1). We do not recommend storing the aqueous solution for more than one day.

### Description

Marbofloxacin is a fluoroquinolone antibiotic that is active against *P. multocida* *in vitro* (MIC = 0.016 µg/ml).<sup>1</sup> It exhibits broad-spectrum antibacterial activity mediated by the inhibition of DNA gyrase, with MIC values ranging from 0.016 to 0.4 and 0.19 to 1.7 µg/ml against various Gram-negative and Gram-positive bacterial isolates, respectively.<sup>2</sup> Intramuscular administration of marbofloxacin (2 mg/kg) after infection prevents the formation of pulmonary lesions in a bovine calf model of *M. haemolytica* A1 pneumonia.<sup>3</sup> Oral administration of marbofloxacin (2 mg/kg per day) also exhibits antileishmanial activity in a canine model of leishmaniasis, decreasing parasitic load by 72%.<sup>4</sup> Formulations containing marbofloxacin have been used in the veterinary treatment of bacterial infections.

### References

1. Ferran, A.A., Toutain, P.L., and Bousquet-Mélou, A. Impact of early versus later fluoroquinolone treatment on the clinical; microbiological and resistance outcomes in a mouse-lung model of *Pasteurella multocida* infection. *Vet. Microbiol.* **148(2-4)**, 292-297 (2011).
2. Spreng, M., Deleforge, J., Thomas, V., *et al.* Antibacterial activity of marbofloxacin. A new fluoroquinolone for veterinary use against canine and feline isolates. *J. Vet. Pharmacol. Ther.* **18(4)**, 284-289 (1995).
3. Lhermie, G., Ferran, A.A., Assié, S., *et al.* Impact of timing and dosage of a fluoroquinolone treatment on the microbiological, pathological, and clinical outcomes of calves challenged with *Mannheimia haemolytica*. *Front. Microbiol.* **237(7)**, (2016).
4. Pineda, C., Aguilera-Tejero, E., Morales, M.C., *et al.* Treatment of canine leishmaniasis with marbofloxacin in dogs with renal disease. *PLoS One* **12(10)**, e0185981 (2017).

#### 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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