# Moxifloxacin-$d_3$ hydrochloride

**Cat. No.:** HY-66011AS2

**CAS No.:** 2734919-98-1

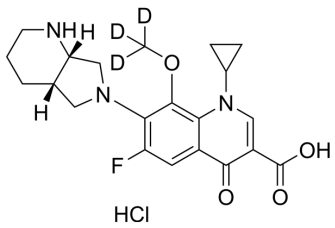
**Molecular Formula:** $C_{21}H_{22}D_3ClFN_3O_4$

**Molecular Weight:** 440.91

**Target:** Bacterial; Antibiotic

**Pathway:** Anti-infection

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.




## BIOLOGICAL ACTIVITY

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|---|---|
| **Description** | Moxifloxacin-$d_3$ (hydrochloride) is the deuterium labeled Moxifloxacin hydrochloride. Moxifloxacin hydrochloride is an orally active 8-methoxyquinolone antimicrobial for use in the treatment of acute bacterial sinusitis, acute bacterial exacerbations of chronic bronchitis, and community-acquired pneumonia[1][2][3]. |
| **$IC_{50}$ & Target** | Quinolone |
| **In Vitro** | Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. Culley, C.M., et al., Moxifloxacin: clinical efficacy and safety. Am J Health Syst Pharm, 2001. 58(5): p. 379-88.

[3]. Grayo S, et al. Comparison of the in vitro efficacies of moxifloxacin and amoxicillin against Listeria monocytogenes. Antimicrob Agents Chemother. 2008 May;52(5):1697-702.



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