Norfloxacin-d_5

Cat. No.: HY-B0132S

CAS No.: 1015856-57-1

Molecular Formula: $C_{16}H_{13}D_5FN_3O_3$

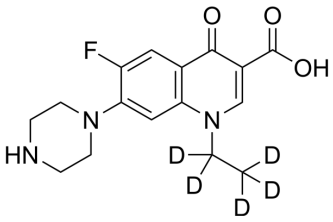
Molecular Weight: 324.36

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (15.41 mM; Need ultrasonic)

H2O : 1 mg/mL (3.08 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.0830 mL	15.4150 mL	30.8299 mL
5 mM	0.6166 mL	3.0830 mL	6.1660 mL
10 mM	0.3083 mL	1.5415 mL	3.0830 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Norfloxacin-d_5 is the deuterium labeled Norfloxacin. Norfloxacin is a broad-spectrum antibiotic that is active against both Gram-positive and Gram-negative bacteria, which functions by inhibiting DNA gyrase[1][2].

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].

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]. Pohlhaus JR, et, al. Norfloxacin-induced DNA gyrase cleavage complexes block Escherichia coli replication forks, causing double-stranded breaks in vivo. Mol Microbiol. 2005 Jun;56(6):1416-29.

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