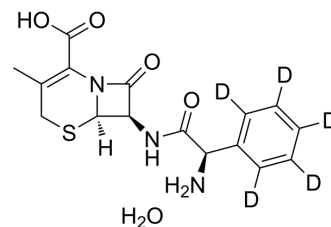


## Cephalexin-d<sub>5</sub> monohydrate

Cat. No.:	HY-B0200BS
Molecular Formula:	C <sub>16</sub> H <sub>14</sub> D <sub>5</sub> N <sub>3</sub> O <sub>5</sub> S
Molecular Weight:	370.43
Target:	Bacterial; Antibiotic; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Cephalexin-d <sub>5</sub> (monohydrate) is the deuterium labeled Cephalexin monohydrate. Cephalexin monohydrate is a potent, orally active and the first-generation cephalosporin antibiotic. Cephalexin monohydrate kills gram-positive and some gram-negative bacteria by disrupting the growth of the bacterial cell wall. Cephalexin monohydrate is used for the research of pneumonia, strep throat, and bacterial endocarditis, et al[1].
<b>IC<sub>50</sub> &amp; Target</b>	β-lactam
<b>In Vitro</b>	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 <sup>[1]</sup> . 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;53(2):211-216.
- [2]. Cefalexin
- [3]. Hongbaek Cho, et al. Beta-lactam antibiotics induce a lethal malfunctioning of the bacterial cell wall synthesis machinery. *Cell.* . 2014 Dec 4;159(6):1300-11.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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