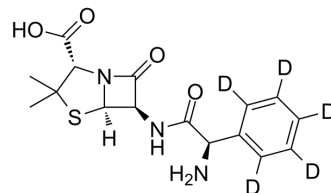


## Ampicillin-d5

Cat. No.:	HY-B0522S
CAS No.:	1426173-65-0
Molecular Formula:	C <sub>16</sub> H <sub>14</sub> D <sub>5</sub> N <sub>3</sub> O <sub>4</sub> S
Molecular Weight:	354.44
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Ampicillin-d5 (D-(-)-α-Aminobenzylpenicillin-d5) is the deuterium labeled Ampicillin. Ampicillin is a broad-spectrum beta-lactam antibiotic against a variety of gram-positive and gram-negative bacteria <sup>[1][2][3]</sup> .
<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]. Chopra SL, et al. Effect of Ampicillin on E. Coli of Swine Origin. *Can J Comp Med Vet Sci*. 1963 Sep;27(9):223-7.
- [3]. Lund B, et al. Ampicillin in portal and peripheral blood and bile after oral administration of ampicillin and pivampicillin. *Eur J Clin Pharmacol*. 1974;7(2):133-5.
- [4]. Lee KE, et al. The neuroprotective mechanism of ampicillin in a mouse model of transient forebrain ischemia. *Korean J Physiol Pharmacol*. 2016 Mar;20(2):185-92.

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

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