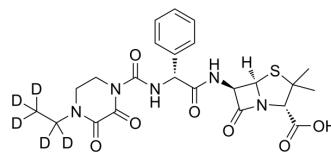


Piperacillin-d₅

Cat. No.:	HY-B1923S
Molecular Formula:	C ₂₃ H ₂₂ D ₅ N ₅ O ₇ S
Molecular Weight:	522.59
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	Piperacillin-d ₅ is deuterium labeled Piperacillin. Piperacillin is kind of semisynthetic penicillins. Piperacillin has a broad spectrum of activity against Gram-positive and Gram-negative aerobic and anaerobic bacteria. Piperacillin has shown greater activity against β-lactamase-producing organisms than the other penicillins[1].
IC₅₀ & Target	β-lactam
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;53(2):211-216.
- [2]. B. Holmes, et al. A Review of its Antibacterial Activity, Pharmacokinetic Properties and Therapeutic Use.

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

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