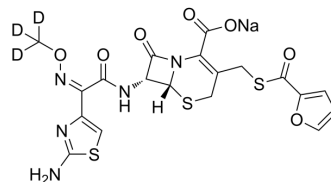


Ceftiofur-d₃ sodium

Cat. No.:	HY-B0898S
Molecular Formula:	C ₁₉ H ₁₃ D ₃ N ₅ NaO ₇ S ₃
Molecular Weight:	548.56
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

Description	Ceftiofur-d ₃ (sodium) is deuterium labeled Ceftiofur (sodium).
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]. Dutil L, et al. Ceftiofur resistance in *Salmonella enterica* serovar Heidelberg from chicken meat and humans, Canada. *Emerg Infect Dis.* 2010 Jan;16(1):48-54.
- [3]. Salmon SA, et al. In vitro activity of ceftiofur and its primary metabolite, desfuroylceftiofur, against organisms of veterinary importance. *J Vet Diagn Invest.* 1996 Jul;8(3):332-6.
- [4]. Yancey RJ Jr, et al. Ceftiofur sodium, a broad-spectrum cephalosporin: evaluation in vitro and in vivo in mice. *Am J Vet Res.* 1987 Jul;48(7):1050-3.

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

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