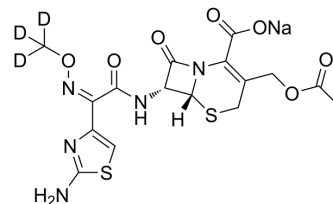


Cefotaxime-d₃ sodium

Cat. No.:	HY-A0088S
Molecular Formula:	C ₁₆ H ₁₃ D ₃ N ₅ NaO ₇ S ₂
Molecular Weight:	480.47
Target:	Bacterial; Antibiotic; Isotope-Labeled Compounds; Beta-lactamase
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cefotaxime-d ₃ (sodium) is the deuterium labeled Cefotaxime (sodium salt). Cefotaxime sodium salt, a β-lactamase stable cephalosporin and a third-generation cephalosporin antibiotic, possesses broad-spectrum antibiotic activity against numerous Gram-positive and Gram-negative bacteria[1][2][3][4][5].	
IC₅₀ & Target	β-lactam	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]. Gums JG, et al. Differences between ceftriaxone and cefotaxime: microbiological inconsistencies. *Ann Pharmacother.* 2008 Jan;42(1):71-9.
- [2]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [3]. Woodfield JC, et al. A comparison of the prophylactic efficacy of ceftriaxone and cefotaxime in abdominal surgery. *Am J Surg.* 2003 Jan;185(1):45-9.
- [4]. Scholz H, et al. Prospective comparison of ceftriaxone and cefotaxime for the short-term treatment of bacterial meningitis in children. *Chemotherapy.* 1998 Mar-Apr;44(2):142-7.
- [5]. E L Francke, et al. Use of cefotaxime, a beta-lactamase stable cephalosporin, in the therapy of serious infections, including those due to multiresistant organisms. *Am J Med.* 1981 Sep;71(3):435-42.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA