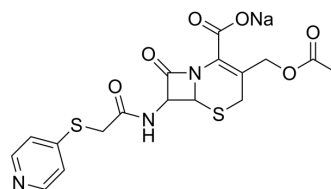


## Cephapirin sodium

<b>Cat. No.:</b>	HY-A0153A
<b>CAS No.:</b>	24356-60-3
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>16</sub> N <sub>3</sub> NaO <sub>6</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	445.45
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (224.49 mM)  
 DMSO : 33.33 mg/mL (74.82 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.2449 mL	11.2246 mL	22.4492 mL
	5 mM	0.4490 mL	2.2449 mL	4.4898 mL
	10 mM	0.2245 mL	1.1225 mL	2.2449 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: 2.5 mg/mL (5.61 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (5.61 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Cephapirin sodium (Cefapirin sodium) is an cephalosporin antibiotic with broad-spectrum antimicrobial activity<sup>[1][2][3]</sup>.

#### IC<sub>50</sub> & Target

β-lactam

#### In Vitro

Cephapirin sodium (Cefapirin sodium) inhibits *Staphylococcus aureus* by cephapirin concentrations of 0.09 to 12.5 μg/mL [2].  
 Cephapirin sodium (Cefapirin sodium) inhibits *S. epidermidis*, *S. viridans*, *S. pyogenes* and *Diplococcus pneumonia* isolates by less than 1 μg/mL [2].  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Cephapirin sodium (Cefapirin sodium) (200 mg; i.m.;cows) is effective for cows infected with *S. aureus*<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**

- [1]. Bran JL, et al. Clinical and in vitro evaluation of cephalosporin antibiotic. *Antimicrob Agents Chemother.* 1972 Jan;1(1):35-40.
- [2]. Axelrod J, et, al. Cephapirin: in vitro antibacterial spectrum. *Appl Microbiol.* 1971 Nov;22(5):904-8.
- [3]. Roy JP, et, al. Efficacy of a 5-day extended therapy program during lactation with cephalosporin sodium in dairy cows chronically infected with *Staphylococcus aureus*. *Can Vet J.* 2009 Dec;50(12):1257-62.

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

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