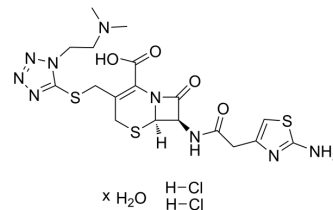


Cefotiam dihydrochloride hydrate

Cat. No.:	HY-B0734B
Molecular Formula:	$C_{18}H_{25}Cl_2N_9O_4S_3 \cdot xH_2O$
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cefotiam (SCE-963) dihydrochloride hydrate is a parenteral cephalosporin antibiotic. Cefotiam dihydrochloride hydrate has broad-spectrum activity against Gram-positive and Gram-negative bacteria ^{[1][2]} .								
IC₅₀ & Target	β-lactam								
In Vitro	<p>Cefotiam (SCE-963; 0-6.25 μg/mL; 8 h) dihydrochloride hydrate has antibacterial activity with a MIC value of 1.56 μg/mL for <i>P. mirabilis</i> IFO 3849^[1].</p> <p>Cefotiam (0-6.25 μg/mL; 8 h) dihydrochloride hydrate has highly active against both <i>Staph. aureus</i> (27 strains, MIC values of 0.5-1 μg/mL) and <i>Staph. albus</i> (8 strains, MICs 0.25-0.5 μg/mL). All 29 strains of haemolytic streptococci, 9 strains of pneumococci and 6 strains of <i>Streptococcus viridans</i> with the MIC values of in the range 0.06-4 μg/mL^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>Cefotiam (SCE-963; 12.5-800 mg/kg; i.h.; twice a day for 5 d) dihydrochloride hydrate can cure urinary tract infection with <i>P. mirabilis</i> in mice to reduce or complete eradicate bacteria in the bladder walls and kidneys^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Female CF1/b mice with <i>P. mirabilis</i> xenograft^[1]</td> </tr> <tr> <td>Dosage:</td> <td>12.5, 25, 50, 100, 200, 400 and 800 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Subcutaneous injection; twice a day, for 5 days</td> </tr> <tr> <td>Result:</td> <td>Reduced or complete eradicated bacteria in the bladder walls and kidneys of mice sacrificed the day after treatment was terminated.</td> </tr> </table>	Animal Model:	Female CF1/b mice with <i>P. mirabilis</i> xenograft ^[1]	Dosage:	12.5, 25, 50, 100, 200, 400 and 800 mg/kg	Administration:	Subcutaneous injection; twice a day, for 5 days	Result:	Reduced or complete eradicated bacteria in the bladder walls and kidneys of mice sacrificed the day after treatment was terminated.
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REFERENCES

[1]. Iwahi T, et, al. Comparative activities of cefotiam and ceftazolin against urinary tract infections with *Proteus mirabilis* in mice. *Antimicrob Agents Chemother.* 1980 Aug;18(2):257-63.

[2]. Watt B, et, al. In-vitro activity of cefotiam against bacteria of clinical interest. *J Antimicrob Chemother.* 1982 Nov;10(5):391-5.

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

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