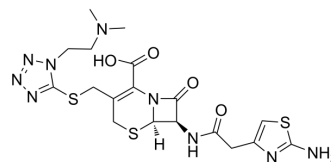


## Cefotiam

Cat. No.:	HY-B0734
CAS No.:	61622-34-2
Molecular Formula:	C <sub>18</sub> H <sub>23</sub> N <sub>9</sub> O <sub>4</sub> S <sub>3</sub>
Molecular Weight:	525.63
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Cefotiam (SCE-963) is a parenteral cephalosporin antibiotic. Cefotiam has broad-spectrum activity against Gram-positive and Gram-negative bacteria <sup>[1][2]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	β-lactam								
<b>In Vitro</b>	Cefotiam (SCE-963; 0-6.25 μg/mL; 8 h) has antibacterial activity with a MIC value of 1.56 μg/mL for <i>P. mirabilis</i> IFO 3849 <sup>[1]</sup> . Cefotiam (0-6.25 μg/mL; 8 h) 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 <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
<b>In Vivo</b>	Cefotiam (SCE-963; 12.5-800 mg/kg; i.h.; twice a day for 5 d) can cure urinary tract infection with <i>P. mirabilis</i> in mice to reduce or complete eradicate bacteria in the bladder walls and kidneys <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
	<table border="1"> <tr> <td>Animal Model:</td> <td>Female CF1/b mice with <i>P. mirabilis</i> xenograft<sup>[1]</sup></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 <sup>[1]</sup>	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.

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

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