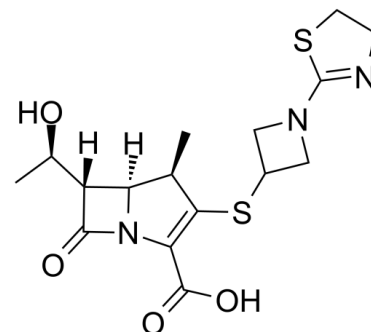


Data Sheet

Product Name:	Tebipenem
Cat. No.:	CS-3444
CAS No.:	161715-21-5
Molecular Formula:	C ₁₆ H ₂₁ N ₃ O ₄ S ₂
Molecular Weight:	383.49
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	DMSO : ≥ 45 mg/mL (117.34 mM); H ₂ O : 6.2 mg/mL (16.17 mM); Need ultrasonic and warming)



BIOLOGICAL ACTIVITY:

Tebipenem is an orally available carbapenem antibiotic, shows broad-spectrum activity against Gram-positive and -negative bacteria, except for *Pseudomonas aeruginosa*. **In Vitro:** Tebipenem exhibits slow tight-binding inhibition at low micromolar concentrations versus the chromogenic substrate nitrocefin, and apparent K_m and k_{cat} values of 0.8 μ M and 0.03 min^{-1} , respectively^[1]. Tebipenem shows potent activity against *B. pseudomallei*, with MIC₅₀ and MIC₉₀ values of both 2 mg/L^[2]. Tebipenem shows good activity against *S. pneumoniae*, with the MIC range of ≤ 0.25 μ g/mL in all of the *S. pneumoniae* isolates^[3].

References:

- [1]. Hazra S, et al. Tebipenem, a new carbapenem antibiotic, is a slow substrate that inhibits the β -lactamase from *Mycobacterium tuberculosis*. *Biochemistry*. 2014 Jun 10;53(22):3671-8
- [2]. Seenama C, et al. In vitro activity of tebipenem against *Burkholderia pseudomallei*. *Int J Antimicrob Agents*. 2013 Oct;42(4):375.
- [3]. Li H, et al. In vitro antibacterial activities of two novel oral antibiotics, tebipenem and cefditoren, and other comparators against community-acquired respiratory tract infection-associated bacterial pathogens: A multicentre study in China. *Int J Antimicrob Agents*. 2014 Jan;43(1):92-3.

CAIndexNames:

1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[[1-(4,5-dihydro-2-thiazolyl)-3-azetidiny]thio]-6-[[1-(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, (4R,5S,6S)-

SMILES:

O=C(C(N1C2=O)=C(SC3CN(C4=NCCS4)C3)[C@H](C)[C@]1([H])[C@@]2([H]))[C@H](O)C)O

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

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