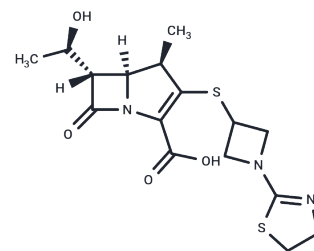


Tebipenem

Chemical Properties

CAS No. :	161715-21-5
Formula:	C ₁₆ H ₂₁ N ₃ O ₄ S ₂
Molecular Weight:	383.49
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Tebipenem is an orally available carbapenem antibiotic. It displays broad-spectrum activity against Gram-positive and -negative bacteria.
Targets(IC50)	Antibiotic
In vitro	Tebipenem shows potent activity against <i>B. pseudomallei</i> (MIC ₅₀ and MIC ₉₀ : both 2 mg/L). Tebipenem displays slow tight-binding inhibition at low micromolar concentrations versus the chromogenic substrate nitrocefin (apparent <i>K_m</i> and <i>k_{cat}</i> : 0.8 μM and 0.03 min ⁻¹ , respectively). Tebipenem shows good activity against <i>S. pneumoniae</i> , with the MIC range of ≤0.25 μg/mL in all of the <i>S. pneumoniae</i> isolates [1][2][3].

Solubility Information

Solubility	H ₂ O: 6 mg/mL (15.65 mM), Sonication is recommended. DMSO: 30 mg/mL (78.23 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6076 mL	13.0381 mL	26.0763 mL
5 mM	0.5215 mL	2.6076 mL	5.2153 mL
10 mM	0.2608 mL	1.3038 mL	2.6076 mL
50 mM	0.0522 mL	0.2608 mL	0.5215 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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.