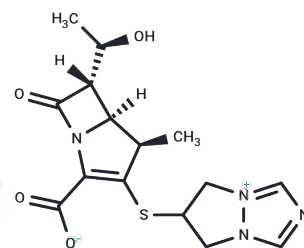


## Biapenem

## Chemical Properties

CAS No. :	120410-24-4
Formula:	C <sub>15</sub> H <sub>18</sub> N <sub>4</sub> O <sub>4</sub> S
Molecular Weight:	350.39
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Biapenem (CLI 86815) is a 1-beta-methylcarbapenem antibiotic with a wide range of antibacterial activity. Biapenem has similar antibacterial activity to that of imipenem, but is more stable against human renal dehydropeptidase-I and with less neurotoxicity.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	Biapenem has activity comparable to those of Imipenem and Meropenem against all groups of anaerobes with MICs for 90% of the strains tested of 0.06 to 2 mg/mL. Biapenem is more active than ampicillin-sulbactam, ticarcillin-clavulanate, piperacillin, cefoxitin, cefotaxime, and ceftriaxone. Biapenem is also active against all of the <i>B. capillosus</i> , <i>Prevotella</i> , <i>Clostridium</i> , and <i>Eubacterium</i> strains and anaerobic cocci tested. [1] Biapenem shows broad antibacterial activity against both Gram-positive and Gram-negative clinical isolates. [2] Biapenem is found to be approximately as active as imipenem, inhibiting 90% of isolates of most species at concentrations within one dilution of the MIC of imipenem for 90% of the isolates. [3]
In vivo	Biapenem results in significantly fewer viable bacteria than in the lungs of control mice. Biapenem prevents the progression of lung inflammation, including alveolar neutrophil infiltration and hemorrhage. Biapenem significantly prolongs survival and reduces the number of viable bacteria in a murine model of VAP caused by <i>P. aeruginosa</i> . [4]

## Solubility Information

Solubility	DMSO: Insoluble, H <sub>2</sub> O: 10 mM, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.854 mL	14.2698 mL	28.5396 mL
5 mM	0.5708 mL	2.854 mL	5.7079 mL
10 mM	0.2854 mL	1.427 mL	2.854 mL
50 mM	0.0571 mL	0.2854 mL	0.5708 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Aldridge KE, et al. *Antimicrob Agents Chemother*, 1994, 38(4), 889-893.

Hara T, et al. *Jpn J Antibiot*, 2003, 56(2), 138-141.

Malanoski GJ, et al. *Antimicrob Agents Chemother*, 1993, 37(9), 22009-22016.

Yamada K, et al. *J Infect Chemother*, 2012, 18(4), 472-478.

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