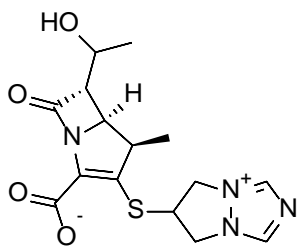


Product data sheet



MedKoo Cat#: 315145 Name: Biapenem CAS#: 120410-24-4 Chemical Formula: C ₁₅ H ₁₈ N ₄ O ₄ S Exact Mass: 350.1049 Molecular Weight: 350.39	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Biapenem (INN) is a carbapenem antibiotic. It has in vitro activity against anaerobes.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
Water	7.50	21.40
PBS (pH 7.2)	5.0	14.27

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.85 mL	14.27 mL	28.54 mL
5 mM	0.57 mL	2.85 mL	5.71 mL
10 mM	0.29 mL	1.43 mL	2.85 mL
50 mM	0.06 mL	0.29 mL	0.57 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Kaushik A, Ammerman NC, Tasneen R, Story-Roller E, Dooley KE, Dorman SE, Nuernberger EL, Lamichhane G. In vitro and in vivo activity of biapenem against drug-susceptible and rifampicin-resistant Mycobacterium tuberculosis. *J Antimicrob Chemother.* 2017 Aug 1;72(8):2320-2325. doi: 10.1093/jac/dkx152. PMID: 28575382; PMCID: PMC5890701.
2. Guo ZY, Zhao WJ, Zheng MQ, Liu S, Yan CX, Li P, Xu SF. Activities of Biapenem against Mycobacterium tuberculosis in Macrophages and Mice. *Biomed Environ Sci.* 2019 Apr;32(4):235-241. doi: 10.3967/bes2019.033. PMID: 31217059.

In vivo study

1. Kaushik A, Ammerman NC, Tasneen R, Story-Roller E, Dooley KE, Dorman SE, Nuernberger EL, Lamichhane G. In vitro and in vivo activity of biapenem against drug-susceptible and rifampicin-resistant Mycobacterium tuberculosis. *J Antimicrob Chemother.* 2017 Aug 1;72(8):2320-2325. doi: 10.1093/jac/dkx152. PMID: 28575382; PMCID: PMC5890701.
2. Guo ZY, Zhao WJ, Zheng MQ, Liu S, Yan CX, Li P, Xu SF. Activities of Biapenem against Mycobacterium tuberculosis in Macrophages and Mice. *Biomed Environ Sci.* 2019 Apr;32(4):235-241. doi: 10.3967/bes2019.033. PMID: 31217059.

7. Bioactivity

Biological target:

Biapenem is a carbapenem antibacterial agent.

Product data sheet



In vitro activity

Biapenem/rifampicin activity was evaluated using three strains of *M. tuberculosis* : strain 115R (low-level rifampicin resistance); strain 124R (high-level rifampicin resistance); and the drug-susceptible H37Rv parent strain. In vitro , synergy was observed between biapenem and rifampicin against H37Rv and strain 115R.

Reference: Biomed Environ Sci. 2019 Apr;32(4):235-241. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5890701/>

In vivo activity

In vivo , biapenem exhibited clear dose-dependent activity against H37Rv, with all biapenem doses as active or more active than rifampicin alone. Biapenem and rifampicin had synergistic bactericidal activity against H37Rv in the mouse model; no synergy was observed in mice infected with either of the rifampicin-resistant strains. Biapenem alone was active against all three strains.

Reference: Biomed Environ Sci. 2019 Apr;32(4):235-241. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5890701/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.