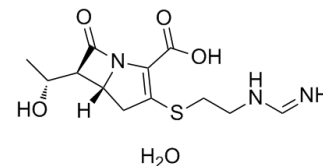


Imipenem monohydrate

Cat. No.:	HY-B1369		
CAS No.:	74431-23-5		
Molecular Formula:	C ₁₂ H ₁₉ N ₃ O ₅ S		
Molecular Weight:	317.36		
Target:	Bacterial		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



Solvent & Solubility

In Vitro

H₂O : < 0.1 mg/mL (insoluble)
 DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.1510 mL	15.7550 mL	31.5100 mL
	5 mM	0.6302 mL	3.1510 mL	6.3020 mL
	10 mM	0.3151 mL	1.5755 mL	3.1510 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Imipenem monohydrate, a member of the carbapenem class of antibiotics isolated from the soil organism *Streptomyces cattleya*^[1], is an intravenous β-lactam antibiotic effective against a wide range of Gram-positive and Gram-negative bacteria, including several multi-drug resistant bacterial species. Imipenem acts as cell wall-targeting antibiotic^{[2][3]}.

REFERENCES

- [1]. Zhanel GG, et al. Imipenem and meropenem: Comparison of in vitro activity, pharmacokinetics, clinical trials and adverse effects. *Can J Infect Dis.* 1998 Jul;9(4):215-28.
- [2]. Jacoby GA, et al. AmpC beta-lactamases. *Clin Microbiol Rev.* 2009 Jan;22(1):161-82.
- [3]. Balibar CJ, et al. *cwrA*, a gene that specifically responds to cell wall damage in *Staphylococcus aureus*. *Microbiology.* 2010 May;156(Pt 5):1372-83.

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

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