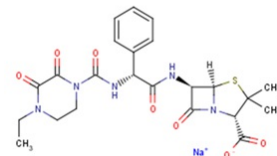


Piperacillin sodium salt

Chemical Properties

CAS No.:	59703-84-3
Formula:	C ₂₃ H ₂₆ N ₅ NaO ₇ S
Molecular Weight:	539.54
Appearance:	Solid
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Piperacillin binds to and inactivates penicillin-binding proteins (PBPs), enzymes located on the inner membrane of the bacterial cell wall, resulting in the weakening of the bacterial cell wall and cell lysis. Piperacillin Sodium is the sodium salt of piperacillin, a broad-spectrum semisynthetic, ampicillin-derived ureidopenicillin antibiotic with bactericidal activity. PBPs participate in the terminal stages of assembling the bacterial cell wall, and in reshaping the cell wall during cell division. Inactivation of PBPs interferes with the cross-linkage of peptidoglycan chains necessary for bacterial cell wall strength and rigidity.
Targets(IC ₅₀)	β-Lactamase: None

Solubility Information

Solubility	DMSO: 93 mg/mL (172.4 mM) Ethanol: 93 mg/mL (172.4 mM) Water: 92 mg/mL (170.5 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.853 mL	9.267 mL	18.534 mL
5 mM	0.371 mL	1.853 mL	3.707 mL
10 mM	0.185 mL	0.927 mL	1.853 mL
50 mM	0.037 mL	0.185 mL	0.371 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Williamson R, et al. Antimicrob Agents Chemother, 1980, 18(4), 629-637.

Inhibitors · Natural Compounds · Compound Libraries

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Tel:781-999-4286

E-mail:info@targetmol.com

Address:36 Washington Street,Wellesley Hills,MA 02481