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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Ampicillin sodium

Chemical Properties

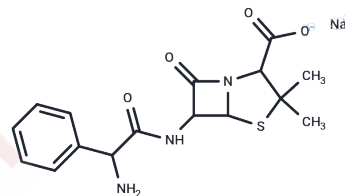
CAS No. : 69-52-3

Formula: C₁₆H₁₈N₃NaO₄S

Molecular Weight: 371.39

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Ampicillin Sodium is the sodium salt form of ampicillin, a broad-spectrum semisynthetic derivative of aminopenicillin. Ampicillin sodium (Domicillin) inhibits bacterial cell wall synthesis by binding to penicillin binding proteins, thereby inhibiting peptidoglycan synthesis, a critical component of the bacterial cell wall.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Belonging to the penicillin group of beta-lactam antibiotics, ampicillin is able to penetrate Gram-positive and some Gram-negative bacteria. Ampicillin acts as a competitive inhibitor of the enzyme transpeptidase, which is needed by bacteria to make their cell walls. Ampicillin inhibits the third and final stage of bacterial cell wall synthesis in binary fission, which ultimately leads to cell lysis.
In vivo	Ampicillin has been shown to effectively alleviate symptoms of hemorrhagic enteritis in 11-week-old pigs [3] and achieves peak bile concentrations twice that of serum levels. Following oral administration, its concentration in portal blood is double that found in peripheral blood [4]. Furthermore, ampicillin offers neuroprotective benefits against ischemia-reperfusion brain injury by diminishing MMP activities and elevating GLT-1 expression levels. Pretreatment with ampicillin also significantly mitigates medial hippocampal cell death after global forebrain ischemia [5].

Solubility Information

Solubility	H ₂ O: 68 mg/mL (183.1 mM), Ethanol: 69 mg/mL (185.8 mM), DMSO: 45 mg/mL (121.17 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6926 mL	13.4629 mL	26.9259 mL
5 mM	0.5385 mL	2.6926 mL	5.3852 mL
10 mM	0.2693 mL	1.3463 mL	2.6926 mL
50 mM	0.0539 mL	0.2693 mL	0.5385 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

Zhang Z, Ye J, Liu X, et al. Huangqi Guizhi Wuwu decoction alleviates oxaliplatin-induced peripheral neuropathy via the gut-peripheral nerve axis. Chinese Medicine. 2023, 18(1): 1-15.

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Tel: 781-999-4286 E_mail: info@targetmol.com Address: 36 Washington Street, Wellesley Hills, MA 02481