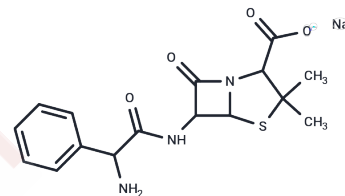


## Ampicillin sodium

## Chemical Properties

CAS No. :	69-52-3
Formula:	C <sub>16</sub> H <sub>18</sub> N <sub>3</sub> NaO <sub>4</sub> S
Molecular Weight:	371.39
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Ampicillin sodium (Domicillin) is a broad-spectrum $\beta$ -lactam antibiotic. Ampicillin sodium combats a variety of Gram-positive and Gram-negative bacteria.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	<b>METHODS:</b> After treating porcine Escherichia coli with Ampicillin sodium (0.1, 1, 2.5, 5, 10 $\mu$ g/mL), E.M.B was observed. The number of viable Escherichia coli on the culture medium. <b>RESULTS:</b> Ampicillin inhibited the growth of porcine Escherichia coli in a dose-dependent manner. The effective inhibitory concentration of Ampicillin is 2.5 $\mu$ g/mL. [1]
In vivo	<b>METHODS:</b> To study the antibacterial effect of Ampicillin sodium, Ampicillin (0.2 mL/20 g) was orally or subcutaneously injected into mice. <b>RESULTS:</b> The efficacy of Ampicillin in treating most infections is significantly better than that of Epicillin and Amoxycillin. [2] <b>METHODS:</b> To study the neuroprotective effect of Ampicillin sodium, Ampicillin sodium (200 mg/kg) was intraperitoneally injected into a mouse model of transient anterior cerebral ischemia. <b>RESULTS:</b> Ampicillin sodium can significantly reduce hippocampal cell death, lower the activity of matrix metalloproteinases (MMP), and increase the expression of glutamate transporter-1 (GLT-1). [3]

## Solubility Information

Solubility	H <sub>2</sub> O: 68 mg/mL (183.1 mM), Sonication is recommended. Ethanol: 69 mg/mL (185.79 mM), Sonication is recommended. DMSO: 270 mg/mL (727 mM), Sonication is recommended. ( < 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (13.46 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### 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.

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

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