



# SZABO SCANDIC

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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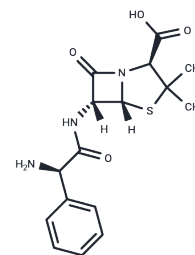
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## Ampicillin

## Chemical Properties

CAS No. :	69-53-4
Formula:	C <sub>16</sub> H <sub>19</sub> N <sub>3</sub> O <sub>4</sub> S
Molecular Weight:	349.4
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Ampicillin (Aminobenzylpenicillin) is a semi-synthetic penicillin belonging to the $\beta$ -lactam group of antibiotics. Ampicillin has bactericidal activity against a wide range of Gram-positive and Gram-negative bacteria.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	<p><b>METHODS:</b> E. coli was treated with Ampicillin (0.1-10 <math>\mu</math>G/mL) for 6 h. Growth was measured using a Fisher Electrophotometer.</p> <p><b>RESULTS:</b> No differences in E. coli growth were observed at concentrations of 0, 0.1, and 1.0 <math>\mu</math>G. 2.5, 5, and 10 <math>\mu</math>G concentrations of Ampicillin inhibited E. coli growth. [1]</p> <p><b>METHODS:</b> Pharyngeal cancer cells Detroit-562 were treated with Ampicillin (10-100 <math>\mu</math>M) for 72 h. Cell viability was measured by MTT.</p> <p><b>RESULTS:</b> The Ampicillin-treated groups at concentrations of 10, 25 and 50 <math>\mu</math>M showed higher cell viability than the control cells, with values of 112%, 107% and 106%, respectively. At concentrations of 75 and 100 <math>\mu</math>M, there was a slight but not significant decrease in cell viability with values of approximately 95% and 94%, respectively. [2]</p>
In vivo	<p><b>METHODS:</b> To test the neuroprotective mechanism in a mouse model of transient total forebrain ischemia, Ampicillin (200 mg/kg) was injected intraperitoneally into C57BL/6 mice once a day for five days, and forebrain ischemia was induced 24 h after the last injection.</p> <p><b>RESULTS:</b> Pretreatment with Ampicillin significantly attenuated neuronal damage in the CA1 subregion of the hippocampus, and Ampicillin may provide neuroprotection against cerebral ischemia/reperfusion injury by inducing GLT-1 protein and inhibiting MMP activity in the hippocampus of mice. [3]</p> <p><b>METHODS:</b> To study the in vivo activity, Ampicillin (10-100 mg/kg) was administered by gavage to C57BL/6 mice once daily for two days.</p> <p><b>RESULTS:</b> Exposure of mice to Ampicillin induced anxiety and colitis, and increased Aspergillus flora in the gut microbiota. [4]</p>

## Solubility Information

Solubility	DMSO: 22.5 mg/mL (64.39 mM), ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.862 mL	14.3102 mL	28.6205 mL
5 mM	0.5724 mL	2.862 mL	5.7241 mL
10 mM	0.2862 mL	1.431 mL	2.862 mL
50 mM	0.0572 mL	0.2862 mL	0.5724 mL

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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

Chopra SL, et al. Effect of Ampicillin on E. Coli of Swine Origin. Can J Comp Med Vet Sci. 1963 Sep;27(9):223-7.

Yue Y, Xu J, Li Y, et al. Antigen-bearing outer membrane vesicles as tumour vaccines produced in situ by ingested

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