

Penicillin G sodium salt

Chemical Properties

CAS No. :	69-57-8
Formula:	C ₁₆ H ₁₇ N ₂ NaO ₄ S
Molecular Weight:	356.37
Storage:	Store under nitrogen Powder: -20°C for 3 years <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Penicillin G sodium(Benzylpenicillin sodium) salt is a penicillin derivative commonly used in the form of its sodium or potassium salts in the treatment of a variety of infections. It is effective against most gram-positive bacteria and against gram-negative cocci. It has also been used as an experimental convulsant because of its actions on GAMMA-AMINOBUTYRIC ACID mediated synaptic transmission.
Targets(IC50)	GABA Receptor,Antibacterial,Antibiotic
In vitro	Benzylpenicillin is also commonly known as penicillin G. Benzylpenicillin exhibits activity mainly against Gram-positive organisms. Some Gram-negative organisms such as Neisseria gonorrhoeae and Neisseria meningitidis are also reported to be susceptible to Penicillin G.

Solubility Information

Solubility	DMSO: 126.25 mg/mL (354.27 mM),Sonication is recommended. H ₂ O: 65 mg/mL (182.39 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (28.06 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.61 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	2.8061 mL	14.0304 mL	28.0607 mL
5 mM	0.5612 mL	2.8061 mL	5.6121 mL
10 mM	0.2806 mL	1.403 mL	2.8061 mL
50 mM	0.0561 mL	0.2806 mL	0.5612 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

Jiang X, et al. Spectrochim Acta A Mol Biomol Spectrosc. 2015 Apr 5;140:474-8.

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