Penicillin G potassium

Cat. No.: HY-17591

CAS No.: 113-98-4

Molecular Formula: $C_{16}H_{17}KN_2O_4S$

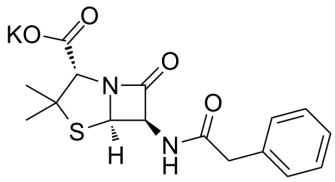
Molecular Weight: 372.48

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture

* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (268.47 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6847 mL	13.4235 mL	26.8471 mL
5 mM	0.5369 mL	2.6847 mL	5.3694 mL
10 mM	0.2685 mL	1.3424 mL	2.6847 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (268.47 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Penicillin G potassium is a fast-acting penicillin family antibiotic. Penicillin G potassium can be used for the research of bacterial infections that affect the blood, heart, lungs, joints, and genital areas[1][2].

IC_{50} & Target

β-lactam

In Vitro

Penicillin G (16-128 μg/mL, 0-20 h) is used in combination with promethazine (32 μg/mL) to inhibit the growth and viability of E. coli[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Theranostics. 2022 Jan 1;12(3):1187-1203.
- Cancer Res. 2023 Feb 6;CAN-22-3169.
- EBioMedicine. 2022 Apr;78:103943.
- Chemosphere. 2019 Jun;225:378-387.
- Int Immunopharmacol. 2024 Jan 16:128:111524.

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REFERENCES

[1]. Lehtinen J, et al. Promethazine renders Escherichia coli susceptible to penicillin G: real-time measurement of bacterial susceptibility by fluoro-luminometry. Int J Antimicrob Agents. 2007 Jul;30(1):44-51.

[2]. Roussel AJ, et al. Evaluation of the effects of penicillin G potassium and potassium chloride on the motility of the large intestine in horses. Am J Vet Res. 2003 Nov;64(11):1360-3.

[3]. Byra C, et al. Decreased mortality of weaned pigs with Streptococcus suis with the use of in-water potassium penicillin G. Can Vet J. 2011 Mar;52(3):272-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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