

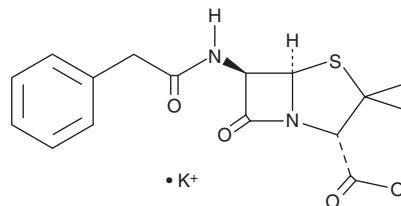
# PRODUCT INFORMATION



## Penicillin G (potassium salt)

Item No. 21615

**CAS Registry No.:** 113-98-4  
**Formal Name:** (2S,5R,6R)-3,3-dimethyl-7-oxo-6-[(2-phenylacetyl)amino]-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, monopotassium salt  
**Synonyms:** Benzylpenicillin, NSC 131815  
**MF:** C<sub>16</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>S • K  
**FW:** 372.5  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Penicillin G (potassium salt) is supplied as a crystalline solid. Aqueous solutions of penicillin G (potassium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of penicillin G (potassium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Penicillin G is a  $\beta$ -lactam antibiotic that is effective mainly for Gram-positive bacteria.<sup>1</sup> It has MIC<sub>90</sub> values of 0.03, 1, and 4  $\mu$ g/ml for penicillin-susceptible, -intermediate, and -resistant strains of *S. pneumoniae*, respectively, and 16-128  $\mu$ g/ml for various *Bacteroides* isolates in a broth dilution assay.<sup>2,3</sup> Formulations containing penicillin G have been used for the treatment of bacterial infections and in livestock production.

### References

1. Demain, A.L. Production of beta-lactam antibiotics and its regulation. *Proc. Natl. Sci. Counc. Repub. China B.* **15(4)**, 251-265 (1991).
2. Pankuch, G.A., Lichtenberger, C., Jacobs, M.R., et al. Antipneumococcal activities of RP 59500 (quinupristin-dalfopristin), penicillin G, erythromycin, and sparfloxacin determined by MIC and rapid time-kill methodologies. *Antimicrob. Agents Chemother.* **40(7)**, 1653-1656 (1996).
3. Aldridge, K.E., Sanders, C.V., Janney, A., et al. Comparison of the activities of penicillin G and new beta-lactam antibiotics against clinical isolates of *Bacteroides* species. *Antimicrob. Agents Chemother.* **26(3)**, 410-413 (1984).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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