

PRODUCT INFORMATION



Ampicillin (sodium salt)

Item No. 14417

CAS Registry No.: 69-52-3
Formal Name: (2S,5R,6R)-6-[[[(2R)-2-amino-2-phenylacetyl]amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, monosodium salt

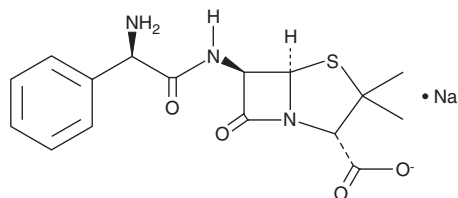
MF: C₁₆H₁₈N₃O₄S • Na
FW: 371.4

Purity: ≥95%

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

Ampicillin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the ampicillin (sodium salt) in the solvent of choice. Ampicillin (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of ampicillin (sodium salt) in these solvents is approximately 2, 16, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ampicillin (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ampicillin (sodium 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

Ampicillin is a broad-spectrum antibiotic with activity against Gram-positive and Gram-negative bacteria, including veterinary isolates of *S. pseudintermedius*, *S. aureus*, *E. coli*, *Pasteurella*, and *S. canis* (MIC₅₀s = 0.25, 0.5, 2, 0.12, and 0.25 µg/ml, respectively).¹ *In vivo*, ampicillin (80 mg/kg, i.v.) reduces cough frequency, tachypnea, dyspnea, and fever and increases survival in a baboon (*P. cynocephalus*) model of pneumococcal pneumonia.² Formulations containing ampicillin have been used to treat a variety of bacterial infections.

References

1. Awji, E.G., Damte, D., Lee, S.-J., *et al.* The *in vitro* activity of 15 antimicrobial agents against bacterial isolates from dogs. *J. Vet. Med. Sci.* **74**(8), 1091-1094 (2012).
2. Reyes, L.F., Restrepo, M.I., Hinojosa, C.A., *et al.* A non-human primate model of severe pneumococcal pneumonia. *PLoS One* **11**(11), e0166092 (2016).

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.

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