

PRODUCT INFORMATION



Ampicillin (hydrate)

Item No. 35740

CAS Registry No.: 7177-48-2
Formal Name: 6-[[[(2R)-2-amino-2-phenylacetyl]amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, trihydrate

Synonyms: Aminobenzylpenicillin trihydrate

MF: C₁₆H₁₉N₃O₄S • 3H₂O

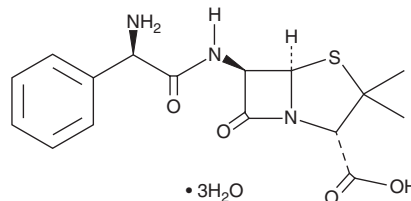
FW: 403.5

Purity: ≥95%

Supplied as: A 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 (hydrate) is supplied as a solid. A stock solution may be made by dissolving the ampicillin (hydrate) in the solvent of choice, which should be purged with an inert gas. Ampicillin (hydrate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ampicillin (hydrate) in these solvents is approximately 1 mg/ml.

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 (hydrate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ampicillin (hydrate) in PBS (pH 7.2) is approximately 1 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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM