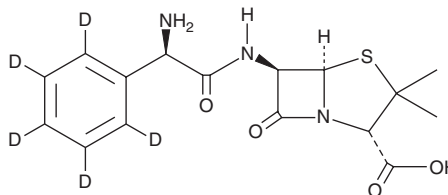


# PRODUCT INFORMATION



## Ampicillin-d<sub>5</sub> Item No. 25356

**CAS Registry No.:** 1426173-65-0  
**Formal Name:** (2S,5R,6R)-6-[[[(2R)-2-amino-2-(phenyl-2,3,4,5,6-d<sub>5</sub>) acetyl]amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid  
**MF:** C<sub>16</sub>H<sub>14</sub>D<sub>5</sub>N<sub>3</sub>O<sub>4</sub>S  
**FW:** 354.4  
**Chemical Purity:** ≥95% (Ampicillin; mixture of diastereomers)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**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-d<sub>5</sub> is intended for use as an internal standard for the quantification of ampicillin (Item No. 14417) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

### 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* (MIC<sub>50</sub>S = 0.25, 0.5, 2, 0.12, and 0.25 µg/ml, respectively).<sup>1</sup> *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.<sup>2</sup> 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.

#### WARRANTY AND LIMITATION OF REMEDY

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