

PRODUCT INFORMATION



Imipenem-d₄ Item No. 22612

Formal Name: (5R,6S)-6-[(1R)-1-hydroxyethyl]-3-[[2-[(iminomethyl)amino]ethyl-d₄]thio]-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid

Synonym: N-Formimidoyl Thienamycin-d₄

MF: C₁₂H₁₃D₄N₃O₄S

FW: 303.4

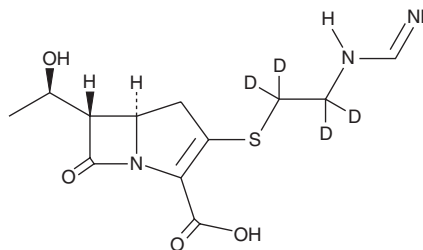
Chemical Purity: ≥98% (Imipenem)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

Supplied as: A solid

Storage: 2-8°C

Stability: ≥2 years



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

Laboratory Procedures

Imipenem-d₄ is intended for use as an internal standard for the quantification of imipenem (Item No. 16039) 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

Imipenem is an intravenous β-lactam antibiotic effective against a wide range of Gram-positive and Gram-negative bacteria (MICs range from 0.5-2 μg/ml for *E. cloacae* and *P. aeruginosa*), including several multi-drug resistant bacterial species.¹ Imipenem acts by interfering with bacterial cell wall synthesis.^{1,2}

References

1. Jacoby, G.A. AmpC β-lactamases. *Clin. Microbiol. Rev.* **22**(1), 161-182 (2009).
2. Balibar, C.J., Shen, X., McGuire, D., *et al.* *cwrA*, a gene that specifically responds to cell wall damage in *Staphylococcus aureus*. *Microbiology* **156**, 1372-1383 (2010).

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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