

PRODUCT INFORMATION



Meropenem-d₆ Item No. 28616

CAS Registry No.: 1217976-95-8
Formal Name: (4R,5S,6S)-rel-3-[[[(3S,5S)-5-[[di(methyl-d₃) amino]carbonyl]-3-pyrrolidinyl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid

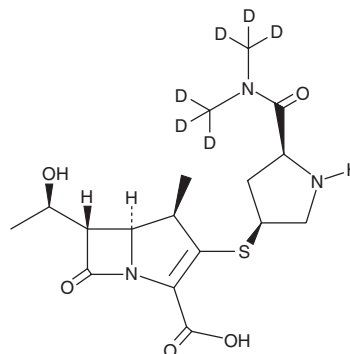
MF: C₁₇H₁₉D₆N₃O₅S
FW: 389.5
Chemical Purity: ≥95% (Meropenem)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀

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

Meropenem-d₆ is intended for use as an internal standard for the quantification of meropenem (Item No. 16068) 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).

Meropenem-d₆ is supplied as a solid. A stock solution may be made by dissolving the meropenem-d₆ in the solvent of choice, which should be purged with an inert gas. Meropenem-d₆ is slightly soluble in methanol.

Description

Meropenem is a carbapenem antibiotic.¹ It is active against clinical isolates of Gram-positive and Gram-negative bacteria *in vitro*, including *S. pneumoniae*, *H. influenzae*, *N. gonorrhoeae*, *E. coli*, *P. aeruginosa*, *C. difficile*, and methicillin-susceptible and -resistant *S. aureus* (MICs = ≤0.008-8 µg/ml). It is protective against *S. aureus*, *S. pneumoniae*, *E. coli*, *S. marcescens*, *P. mirabilis*, and *P. aeruginosa* infections in mice with 50% protective dose (PD₅₀) values of 0.13, 0.01, 0.04, 0.07, 0.84, and 0.46 mg/kg, respectively.² Formulations containing meropenem have been used in the treatment of a variety of bacterial infections.

References

1. Edwards, J.R., Turner, P.J., Wannop, C., *et al.* In vitro antibacterial activity of SM-7338, a carbapenem antibiotic with stability to dehydropeptidase I. *Antimicrob. Agents Chemother.* **33**(2), 215-222 (1989).
2. Edwards, J.R., Williams, S., and Nairn, K. Therapeutic activity of meropenem in experimental infections. *J. Antimicrob. Chemother.* **24**(Suppl. A), 279-285 (1989).

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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