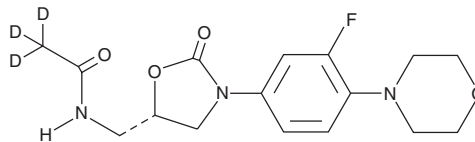


PRODUCT INFORMATION



Linezolid-d₃ Item No. 25038

CAS Registry No.: 1127120-38-0
Formal Name: N-[[[(5S)-3-[3-fluoro-4-(4-morpholinyl)phenyl]-2-oxo-5-oxazolidinyl]methyl]-acetamide-d₃
MF: C₁₆H₁₇D₃FN₃O₄
FW: 340.4
Chemical Purity: ≥98% (Linezolid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤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

Linezolid-d₃ is intended for use as an internal standard for the quantification of linezolid (Item No. 15012) 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).

Linezolid-d₃ is supplied as a solid. A stock solution may be made by dissolving the linezolid-d₃ in the solvent of choice, which should be purged with an inert gas. Linezolid-d₃ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of linezolid-d₃ in these solvents is approximately 1, 20, and 30 mg/ml, respectively.

Description

Linezolid is a synthetic oxazolidinone antibiotic with activity against a wide range of Gram-positive bacteria, including resistant strains of several species, such as methicillin-resistant *S. aureus* (MRSA), penicillin-resistant pneumococci, vancomycin-resistant enterococci, various anaerobic bacteria, and several mycobacteria and streptococci (MICs = 2-4 mg/ml).¹ Linezolid inhibits protein synthesis by binding to domain V of the 23S ribosomal RNA of the 50S subunit of bacterial ribosomes. *In vivo*, linezolid (50 mg/kg) reduces pulmonary MRSA load in spontaneously breathing and mechanically ventilated rabbits.² Formulations containing linezolid have been used to treat MRSA infections.

Reference

1. Ager, S. and Gould, K. Clinical update on linezolid in the treatment of gram-positive bacterial infections. *Infect. Drug Resist.* **2012(5)**, 87-102 (2012).
2. Pauchard, L.A., Blot, M., Bruyere, T., *et al.* Linezolid and atorvastatin impact on pneumonia caused by *Staphylococcus aureus* in rabbits with or without mechanical ventilation. *PLoS One* **12(11)**, e0187187 (2017).

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/14/2022

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