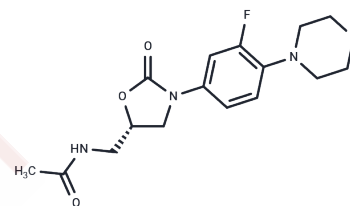


Linezolid

Chemical Properties

CAS No. :	165800-03-3
Formula:	C ₁₆ H ₂₀ FN ₃ O ₄
Molecular Weight:	337.35
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Linezolid (PNU-100766), the first of the oxazolidinone class, is a synthetic antibiotic used for the therapy of infections resulted from multi-resistant bacteria including methicillin-resistant Staphylococcus aureus (MRSA) and streptococcus. The drug takes effect as the inhibitor of the initiation of bacterial protein synthesis.
Targets(IC50)	MAO,Antibacterial,Antibiotic
In vivo	Linezolid effectively inhibits Escherichia coli lacking cellular transcription-translation mechanisms, with an IC50 value of 1.8 mM. Its mode of action primarily involves suppressing the synthesis of early-stage proteins, representing a novel antimicrobial agent that enhances anti-pathogenic activity. Linezolid inhibits the formation of the initiation complex by the E. coli 70S or 30S ribosomal subunit. Due to variations in testing methods and laboratory conditions, discrepancies in Linezolid's MIC (Minimum Inhibitory Concentration) have been noted, yet it consistently displays a narrow sensitivity range, with MIC values for streptococci, staphylococci, and enterococci between 0.5 mg/L and 4 mg/L. Linezolid induces mutations at the 23S rRNA gene binding site. When added to 7H10 agar medium [oleic acid, albumin, dextrose, and catalase], and diluted to final concentrations ranging from 0.125 µg/mL to 4 µg/mL at 50°C-56°C, Linezolid exhibits excellent in vitro activity (MIC values ≤1 µg/mL) against tested strains, including those resistant to SIRE.

Solubility Information

Solubility	Ethanol: 8.4 mg/mL (24.9 mM),Sonication is recommended. DMSO: 99 mg/mL (293.46 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.93 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9643 mL	14.8214 mL	29.6428 mL
5 mM	0.5929 mL	2.9643 mL	5.9286 mL
10 mM	0.2964 mL	1.4821 mL	2.9643 mL
50 mM	0.0593 mL	0.2964 mL	0.5929 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Swaney SM, et al. Antimicrob Agents Chemother, 1998, 42(12), 3251-3255.
- Shinabarger DL, et al. Antimicrob Agents Chemother, 1997, 41(10), 2132-2136.
- Noskin GA, et al. Antimicrob Agents Chemother, 1999, 43(8), 2059-2062.
- Livermore DM, et al. J Antimicrob Chemother, 2003, 51 Suppl 2, ii9-16.
- Alcalá L, et al. Antimicrob Agents Chemother, 2003, 47(1), 416-417.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481