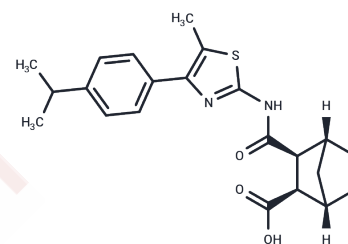


PKZ18

## Chemical Properties

CAS No. : 849658-87-3  
 Formula: C<sub>22</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub>S  
 Molecular Weight: 398.52  
 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	PKZ18 is an antibiotic that inhibits bacterial growth with minimum inhibitory concentrations of 32–64 µg/mL against most Gram-positive bacteria, acting by suppressing in vivo transcription and translation of glycyl-tRNA synthetase mRNA, selectively targeting stem I specifier loops in Gram-positive organisms, reducing T-box transcriptional read-through, disrupting codon-anticodon recognition required for tRNA binding, and demonstrating a mechanism that is refractory to conventional resistance development.
Targets(IC50)	Antibiotic
In vitro	By stabilizing a specific terminator conformation in the T-box riboswitch, PKZ18 halted the transcription of essential genes such as glyQS and tyrS. PKZ18 demonstrated bacteriostatic activity against MRSA with an MIC of 32-64 µg/mL [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5093 mL	12.5464 mL	25.0928 mL
5 mM	0.5019 mL	2.5093 mL	5.0186 mL
10 mM	0.2509 mL	1.2546 mL	2.5093 mL
50 mM	0.0502 mL	0.2509 mL	0.5019 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

Frohlich K M, et al. Discovery of small-molecule antibiotics against a unique tRNA-mediated regulation of transcription in gram-positive bacteria[J]. ChemMedChem, 2019, 14(7): 758-769.

Väre V Y P, et al. Small-molecule antibiotics inhibiting tRNA-regulated gene expression is a viable strategy for targeting Gram-positive bacteria[J]. Antimicrobial Agents and Chemotherapy, 2020, 65(1): 10. 1128/aac. 01247-20.

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