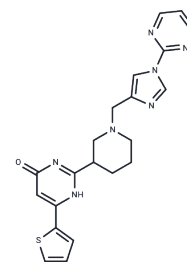


Ribocil-C Racemate

Chemical Properties

CAS No. :	2309762-18-1
Formula:	C ₂₁ H ₂₁ N ₇ O ₅
Molecular Weight:	419.5
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	Ribocil-C Racemate is the racemate of Ribocil-C, a highly selective inhibitor of bacterial riboflavin riboswitches that control the expression of de novo riboflavin (RF, vitamin B2) biosynthesis in Escherichia coli.
Targets(IC50)	Others,Antibacterial
In vitro	Ribocil-C, a highly selective inhibitor of the flavin mononucleotide (FMN) riboswitch, effectively regulates the expression of de novo riboflavin (RF, vitamin B2) biosynthesis in Escherichia coli. It specifically targets dual FMN riboswitches to control both RF biosynthesis and uptake processes, critical for the growth and pathogenesis of Staphylococcus aureus. Additionally, Ribocil-C, a small-molecule synthetic FMN analog, binds the FMN riboswitch in various Gram-negative bacteria, including Escherichia coli, Pseudomonas aeruginosa, and Acinetobacter baumannii. By inhibiting ribB expression and RF synthesis, it successfully halts bacterial proliferation [1] [2].
In vivo	Treatment with higher doses of Ribocil-C (60 and 120 mg/kg) demonstrated a dose-dependent decrease in bacterial load, with reductions of 1.87 and 3.29 log ₁₀ [CFU per g spleen], respectively, compared to the sham-treated mice. No mortality or significant toxicity effects were observed [2].

Solubility Information

Solubility	DMSO: 30 mg/mL (71.51 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 (4.77 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	2.3838 mL	11.919 mL	23.8379 mL
5 mM	0.4768 mL	2.3838 mL	4.7676 mL
10 mM	0.2384 mL	1.1919 mL	2.3838 mL
50 mM	0.0477 mL	0.2384 mL	0.4768 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

Wang H, et al. Dual-Targeting Small-Molecule Inhibitors of the Staphylococcus aureus FMN Riboswitch Disrupt Riboflavin Homeostasis in an Infectious Setting. Cell Chem Biol. 2017 May 18;24(5):576-588.

Howe JA, et al. Selective small-molecule inhibition of an RNA structural element. Nature. 2015 Oct 29;526(7575):672-7.

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