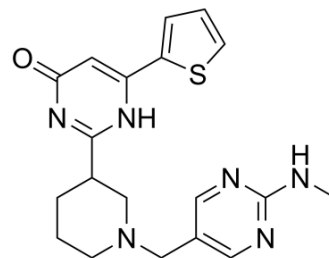


Ribocil

Cat. No.:	HY-19487		
CAS No.:	1381289-58-2		
Molecular Formula:	C ₁₉ H ₂₂ N ₆ OS		
Molecular Weight:	382.48		
Target:	Bacterial		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 15.71 mg/mL (41.07 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.6145 mL	13.0726 mL	26.1452 mL
	5 mM	0.5229 mL	2.6145 mL	5.2290 mL
	10 mM	0.2615 mL	1.3073 mL	2.6145 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 1.57 mg/mL (4.10 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 1.57 mg/mL (4.10 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 1.57 mg/mL (4.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ribocil is a highly selective chemical modulator of bacterial riboflavin riboswitches. Ribocil strongly inhibits GFP expression, achieving a 50% effective concentration (EC₅₀) of 0.3 μM. Target: in vitro: Ribocil is a highly specific bioactive synthetic mimic of FMN, which competes with the natural ligand to inhibit FMN riboswitch-mediated expression of ribB and inhibits bacterial growth. Ribocil-B demonstrates superior microbiological activity as compared to Ribocil-A (minimum inhibitory concentration (MIC) = 1 μg/ml versus MIC ≥ 64 μg/ml), inhibition of riboflavin synthesis (IC₅₀ = 0.13 μM versus IC₅₀ > 26 μM), and binding affinity to the E. coli FMN aptamer (K_d = 6.6 nM versus K_d ≥ 10,000 nM).[1]

REFERENCES

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

Caution: Product has not been fully validated for medical applications. For research use only.

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