



上海源叶生物科技有限公司
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产品名称: **Ribocil-C**
产品别名: **Ribocil-C**

生物活性:					
Description	Ribocil-C is a highly selective inhibitor of bacterial riboflavin riboswitches.				
IC ₅₀ & Target	Bacterial riboflavin riboswitches ^[1]				
In Vitro	Ribocil-C is a highly selective inhibitor of the flavin mononucleotide (FMN) riboswitch that controls expression of <i>de novo</i> riboflavin (RF, vitamin B2) biosynthesis in <i>Escherichia coli</i> . Ribocil-C specifically inhibits dual FMN riboswitches, separately controlling RF biosynthesis and uptake processes essential for <i>Staphylococcus aureus</i> growth and pathogenesis ^[1] . Ribocil-C is a small-molecule synthetic mimic of FMN that binds the FMN riboswitch of multiple GN bacteria, including <i>Escherichia coli</i> , <i>Pseudomonas aeruginosa</i> , and <i>Acinetobacter baumannii</i> , to inhibit <i>ribB</i> expression, RF synthesis, and consequently arrest bacterial growth ^{[1][2]} .				
In Vivo	Higher dose Ribocil-C treatment groups (60 and 120 mg kg ⁻¹ ribocil-C) demonstrate a dose-dependent reduction in bacterial burden of 1.87 and 3.29 log ₁₀ [CFU per g spleen] reduction respectively versus sham-treated mice, without mortality or gross effects of toxicity observed ^[2] .				
Solvent&Solubility	In Vitro: DMSO : ≥ 24.6 mg/mL (58.64 mM) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	Solvent	Mass		
		Concentration			
		1 mM	2.3838 mL	11.9190 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	
*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液; 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。 储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month。 -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。					
References	[1]. 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. [2]. Howe JA, et al. Selective small-molecule inhibition of an RNA structural element. Nature. 2015 Oct 29;526(7575):672-7.				
实验参考:					
Animal Administration	DBA/2J mice are infected by intraperitoneal injection with <i>Escherichia coli</i> strain MB5746 (5×10 ⁴ CFU per mouse) and treated by subcutaneous injection with Ribocil-C (30, 60, 120 mg/kg) or ciprofloxacin (0.5mg/kg) three times over a 24 h infection period. Spleens are aseptically collected from five mice per group and the reduction of log[CFU per g spleen tissue] is calculated on the basis of bacterial burden in spleens of the vehicle-treated (10% DMSO) control group ^[2] .				
	[1]. Wang H, et al. Dual-Targeting Small-Molecule Inhibitors of the Staphylococcus aureus FMN				



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