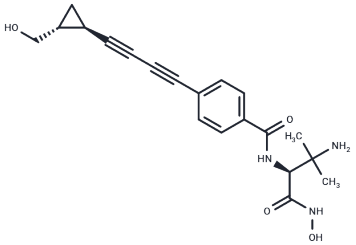
Data Sheet (Cat.No.T10236L)

TargetMol
YOUR TARGET MOLECULES

ACHN-975

Chemical Properties



CAS No. : 1410809-36-7

Formula: C20H23N3O4

Molecular Weight: 369.41

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	ACHN-975 is a highly potent and selective LpxC inhibitor, demonstrating subnanomolar inhibitory activity. It effectively targets a broad spectrum of gram-negative bacteria, with low minimum inhibitory concentration (MIC) values (≤1 μg/mL)[1].
Targets(IC50)	Others
In vitro	ACHN-975 is against Enterobacteriaceae spp with an IC50 of 0.02 nM[1] and is against Enterobacteriaceae spp, Pa, and Ab with MIC90 values of 1, 0.5, and >64 μg/mL, respectively[1]. ACHN-975 is against six P. aeruginosa isolates, it against P. aeruginosa APAE1064, APAE1232, and APAE1064 isolates with MIC values of 0.12, 0.06 and 0.06 ?μg/ml, respectively[2], it against Pseudomonas aeruginosa with an MIC50 and MIC90 of 0.06 and 0.25?μg/ml, respectively[2]. ACHN-975 is potently against the P. aeruginosa isolates tested, inhibiting 100% of the isolates at an MIC of ≤2?μg/ml. LpxC is highly conserved in gram-negative bacteria and catalyzes the first committed step of lipid A biosynthesis and is the bacterial enzyme Zinc-dependent metalloamidase UDP-3-O-[(R)-3-hydroxymyristoyl]-N-acetylglucosamine deacetylase[1].
In vivo	ACHN-975 (intraperitoneal administration; 5-30?mg/kg; single dose) leads to a steady reduction in bacterial titers in the first 4?h following treatment for all dosing groups, which shows that the level of free drug in this model drops below the ACHN-975 MIC for this isolate (0.25?μg/ml) by 2?h after treatment with the 10 mg/kg dose and by 4?h after treatment with the 30 mg/kg dose[2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.707 mL	13.5351 mL	27.0702 mL
5 mM	0.5414 mL	2.707 mL	5.414 mL
10 mM	0.2707 mL	1.3535 mL	2.707 mL
50 mM	0.0541 mL	0.2707 mL	0.5414 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.

Reference

Kalinin DV, et al. Insights into the Zinc-Dependent Deacetylase LpxC: Biochemical Properties and Inhibitor Design. Curr Top Med Chem. 2016;16(21):2379-430.