
CHIR-090

产品编号: D51163

CAS: 728865-23-4

分子式: C₂₄H₂₇N₃O₅

纯度: ≥98%

InChi: InChi=1S/C₂₄H₂₇N₃O₅/c1-17(28)22(24(30)26-31)25-23(29)21-10-8-19(9-11-21)3-2-18-4-6-20(7-5-18)16-27-12-14-32-15-13-27/h4-11,17,22,28,31H,12-16H₂,1H₃, (H,25,29)(H,26,30)/t17-,22+/m1/s1

InChi Key: FQYBTYFKOHPWQT-VGSWGCISA-N

Smiles: C[C@@H](O)[C@H](NC(=O)C1=CC=C(C=C1)C#CC1=CC=C(CN2CCOCC2)C=C1)C(=O)NO

外观: 固体粉末

作用通路: Bacterial

溶解性: Soluble in DMSO, not in water.

保存条件: Store in dry, dark place for one year.

产品介绍: CHIR-090 is a very potent and selective LpxC inhibitor. CHIR-090 has excellent antibiotic activity against *Pseudomonas aeruginosa* and *Escherichia coli*. CHIR-090 is also a two-step slow, tight-binding inhibitor of *E. coli* LpxC with $K_i = 4.0$ nM, $K_i^* = 0.5$ nM, $k_5 = 1.9$ min⁻¹, and $k_6 = 0.18$ min⁻¹. CHIR-090 at low nanomolar levels inhibits LpxC orthologues from diverse Gram-negative pathogens, including *P. aeruginosa*, *Neisseria meningitidis*, and *Helicobacter pylori*. In contrast, CHIR-090 is a relatively weak competitive and conventional inhibitor (lacking slow, tight-binding kinetics) of LpxC from *Rhizobium leguminosarum* ($K_i = 340$ nM), a Gram-negative plant endosymbiont that is resistant to this compound. CHIR-090 is an excellent lead for the further development of new antibiotics targeting the lipid A pathway.