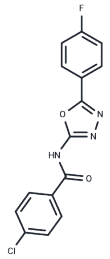
Data Sheet (Cat.No.T5331)

TargetMol

KKL-35

Chemical Properties



CAS No. : 865285-29-6

Formula: C15H9ClFN3O2

Molecular Weight: 317.7

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	KKL-35 is an inhibitor of trans-translation (IC50: 0.9 μM) with broad-spectrum antibiotic activity.
Targets(IC50)	Antibacterial
In vitro	KKL-35 inhibited tagging of DHFR-ns. Dose-response experiments showed that KKL-35 inhibited tagging with an IC50 = 0.9 μM. KKL-35 prevented the growth of WT S. flexneri with a minimum inhibitory concentration (MIC) of 6 μM, and the addition of KKL-35 to a growing culture of S. flexneri stops growth [1]. Consistent with the essential nature of trans-translation in L. pneumophila, KKL-35 inhibited the growth of all tested strains at submicromolar concentrations. KKL-35 remained equally active against L. pneumophila mutants that have evolved resistance to macrolides. KKL-35 inhibited the multiplication of L. pneumophila in human macrophages at several stages of infection [2].
Cell Research	Overnight cultures of S. flexneri 2a 2457T, B. anthracis, M. smegmatis, JW5503, and NSR253 were grown in lysogeny broth (LB). Cultures were diluted to a final inoculum of ~ 5 × 10^5 cfu/mL in 96-well microtiter plates, compounds were added at appropriate concentrations, and growth was observed after 24-h incubation at 37 °C. The MIC was determined by the concentration of the compound in the last well that showed no bacterial growth. For MBC assays, 10 μL from wells containing the MIC, 2× MIC, and 4× MIC of each compound was diluted 10-fold, spotted on LB plates, and grown overnight at 37 °C. An inhibitor was scored as bactericidal if it resulted in 1,000-fold reduction in colony-forming units per milliliter from the original inoculum [1].

Solubility Information

Solubility	DMSO: 8.33 mg/mL (26.22 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1476 mL	15.7381 mL	31.4762 mL
5 mM	0.6295 mL	3.1476 mL	6.2952 mL
10 mM	0.3148 mL	1.5738 mL	3.1476 mL
50 mM	0.063 mL	0.3148 mL	0.6295 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

1. Ramadoss NS, et al. Small molecule inhibitors of trans-translation have broad-spectrum antibiotic activity. Proc Natl Acad Sci U S A. 2013 Jun 18;110(25):10282-7.
Brunel R, et al. KKL-35 Exhibits Potent Antibiotic Activity against Legionella Species Independently of trans-Translation Inhibition. Antimicrob Agents Chemother. 2018 Jan 25;62(2). pii: e01459-17.