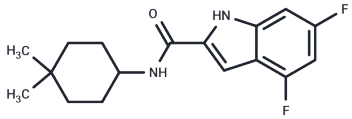
Data Sheet (Cat.No.T12231)

TargetMol
YOUR TARGET MOLECULES

NITD-349

Chemical Properties



CAS No. : 1473450-62-2

Formula: C17H20F2N2O

Molecular Weight: 306.35

Appearance: no data available

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

Biological Description

Description	NITD-349 is an inhibitor of MmpL3. It shows highly potent anti-mycobacterial activity with MIC50 of 23 nM against virulent Mycobacterium tuberculosis H37Rv.
Targets(IC50)	Others,Antibacterial
In vitro	NITD-304 and NITD-349, showed potent activity against both drug-sensitive and multidrug-resistant clinical isolates of Mtb. Promising pharmacokinetic profiles of both compounds after oral dosing in several species enabled further evaluation for efficacy and safety. NITD-304 and NITD-349 were efficacious in treating both acute and chronic Mtb infections in mouse efficacy models. Furthermore, dosing of NITD-304 and NITD-349 for 2 weeks in exploratory rat toxicology studies revealed a promising safety margin. Finally, neither compound inhibited the activity of major cytochrome P-450 enzymes or the hERG (human ether-a-go-go related gene) channel[1].
In vivo	In the acute murine efficacy model, treatment of mice with NITD-349 at doses of 12.5 and 50 mg/kg resulted in 0.9- and 3.4-log CFU reduction in lung tissue.In an established infection mouse model, after 2 weeks of treatment, the efficacy of NITD-349 is comparable to the first-line TB drug rifampicin and is better than ethambutol.Four weeks of treatment at 100 mg/kg with NITD-349 results in 2.38-log CFU reductions[1].

Solubility Information

Solubility	DMSO: 310 mg/mL (1011.91 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2642 mL	16.3212 mL	32.6424 mL
5 mM	0.6528 mL	3.2642 mL	6.5285 mL
10 mM	0.3264 mL	1.6321 mL	3.2642 mL
50 mM	0.0653 mL	0.3264 mL	0.6528 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

Rao SP, et al. Indolcarboxamide is a preclinical candidate for treating multidrug-resistant tuberculosis. Sci Transl Med. 2013 Dec 4;5(214):214ra168.