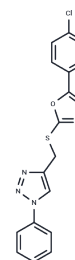


ML338

## Chemical Properties

CAS No. : 1630160-25-6  
 Formula: C<sub>17</sub>H<sub>12</sub>ClN<sub>5</sub>O<sub>5</sub>  
 Molecular Weight: 369.83  
 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	ML338 is a selective small molecule inhibitor probe specifically targeting non-replicating Mycobacterium tuberculosis bacilli. It exhibits potent activity against non-replicating M. tuberculosis, with IC <sub>90</sub> and IC <sub>99</sub> values of 1 μM and 4 μM, respectively, as determined by CFU. This compound, ML338, is an invaluable tool for identifying essential functions and vulnerabilities of M. tuberculosis bacilli under nutrient deprivation conditions. Additionally, ML338 is highly useful for studying M. tuberculosis chemotherapy.
Targets(IC <sub>50</sub> )	Others, Antibacterial
In vitro	ML338, within a concentration range of 0-50 μM, demonstrates potency and selectivity towards non-replicating Mycobacterium tuberculosis, achieving an IC <sub>90</sub> of 1 μM and exhibiting remarkable efficacy with an IC <sub>99</sub> of 4 μM, which is superior in comparison to existing tuberculosis (TB) therapies[1]. Moreover, at concentrations up to 50 μM over 48 hours, ML338 shows no toxicity towards J774 macrophage cells, indicating a high safety profile at the maximal tested concentration[1]. Additionally, ML338 exhibits effective antibacterial activity against both non-replicating and replicating Mycobacterium tuberculosis, with IC <sub>90</sub> and IC <sub>99</sub> values of 1 μM and 4 μM for the former, and 62 μM for both values in the latter case, as determined by colony-forming unit (CFU) assays[1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7039 mL	13.5197 mL	27.0395 mL
5 mM	0.5408 mL	2.7039 mL	5.4079 mL
10 mM	0.2704 mL	1.352 mL	2.7039 mL
50 mM	0.0541 mL	0.2704 mL	0.5408 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

Partha P. Nag, et al. Elucidation of the Physiology of Non-Replicating, Drug Tolerant Mycobacterium tuberculosis With the Aid of the Small Molecule Probe ML338. Review

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Tel: 781-999-4286 E\_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481