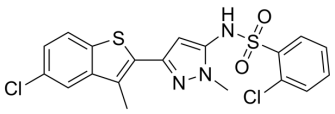
ML-60218

Cat. No.:	HY-122122
CAS No.:	577784-91-9
Molecular Formula:	$C_{19}H_{15}Cl_2N_3O_2S_2$
Molecular Weight:	452.38
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (221.05 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2105 mL	11.0527 mL	22.1053 mL
	5 mM	0.4421 mL	2.2105 mL	4.4211 mL
	10 mM	0.2211 mL	1.1053 mL	2.2105 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.53 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ML-60218 is a broad-spectrum RNA pol III inhibitor, with IC_{50}s of 32 and 27 μM for Saccharomyces cerevisiae and human. ML-60218 disrupts already assembled viroplasms and to hamper the formation of new ones without the need for de novo transcription of cellular RNAs[1][2].

In Vitro

Combination of SAHA and ML-60218 produces enhanced suppression of proliferation in human pancreatic adenocarcinoma by impairing cell cycle progression and inducing apoptosis. ML-60218 reverses SAHA-stimulated tRNA expression in PANC-1 and BxPC-3 cells. ML-60218 enhances the ability of HDAC inhibitors to induce apoptosis and cell cycle arrest[2].
?In in vitro transcription assays with purified double-layered particles (DLPs), ML-60218 shows dose-dependent inhibitory activity, indicating the viral nature of its target. ML-60218 is found to interfere with the formation of higher-order structures of VP6, the protein forming the DLP outer layer, without compromising its ability to trimerize. Electron microscopy of ML-

60218-treated DLPs shows dose-dependent structural damage. ML-60218-mediated (10 μM) viroplasm disruption causes NSP5 dephosphorylation[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Rep. 2023 Aug 8;42(8):112941.
- Cell Commun Signal. 2022 Sep 5;20(1):96.
- PLoS Pathog. 2022 Jan 28;18(1):e1010270.

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REFERENCES

[1]. Wu L, et al. Novel small-molecule inhibitors of RNA polymerase III. Eukaryot Cell. 2003;2(2):256-264.

[2]. Yee NS, et al. Targeting developmental regulators of zebrafish exocrine pancreas as a therapeutic approach in human pancreatic cancer. Biol Open. 2012;1(4):295-307.

[3]. Eichwald C, et al. Identification of a Small Molecule That Compromises the Structural Integrity of Viroplasms and Rotavirus Double-Layered Particles. J Virol. 2018;92(3):e01943-17. Published 2018 Jan 17.

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