Data Sheet (Cat.No.T6894)

TargetMol

ML264

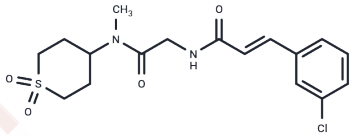
Chemical Properties

CAS No. : 1550008-55-3

Formula: C17H21ClN2O4S

Molecular Weight: 384.88

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	ML264 (CID-51003603) is a selective kruppel-like factor 5 (KLF5) inhibitor, which potently Inhibits growth of Colorectal Cancer.
Targets(IC50)	DNA/RNA Synthesis,KLF
In vitro	ML264 potently halts DLD-1 viability (IC50 = 29 nM) with high maximal effect (>90%). DLD-1 cells are human colorectal adenocarcinoma cells. ML264 has significant effects at submicromolar doses on other cell types as well, including HCT116 (human colorectal carcinoma), HT29 (human colorectal adenocarcinoma), and SW620 (human colorectal adenocarcinoma). The IEC-6 anti-target (a nontransformed rat intestinal epithelial cell line) is largely unaffected, with inhibition below 50% at the highest dose[1].This compound potently inhibits proliferation of CRC cells in vitro through modifications of the cell cycle profile[2].
In vivo	In an established xenograft mouse model of colon cancer, ML264 efficiently inhibits growth of the tumor within five days of treatment. this effect is caused by a significant reduction in proliferation and that ML264 potently inhibits the expression of KLF5 and EGR1, a transcriptional activator of KLF5[2].
Cell Research	For cell proliferation experiments, DLD-1 and HCT116 cells are treated with 10μM ML264 or with vehicle (DMSO). Live cells are collected at 24, 48 and 72 hours post treatment and their numbers are determined by counting using a Coulter counter; In MTS assay, DLD-1 and HCT116 cells are treated with 10μM ML264 or with vehicle (DMSO). After 24, 48, and 72 hours of incubations, 20 μL of MTS solution is added to each well and an analysis is performed according to the manufacturer's protocol. (Only for Reference)

Solubility Information

Solubility	DMSO: 100 mg/mL (259.82 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (25.98 mM),Solution. 10% DMSO+90% Corn Oil: 3.3 mg/mL (8.57 mM),Sonication is recommended. 10% DMSO+90% Saline: < 10 mg/mL (25.98 mM),Lower concentrations may be soluble,

In vivo Formulation	but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5982 mL	12.9911 mL	25.9821 mL
5 mM	0.5196 mL	2.5982 mL	5.1964 mL
10 mM	0.2598 mL	1.2991 mL	2.5982 mL
50 mM	0.052 mL	0.2598 mL	0.5196 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

Bialkowska A,et al. Probe Reports from the NIH Molecular Libraries Program. 2010-2011 Oct 31 [updated 2013 Mar 7].

Shen X, Zhang Y, Xu Z, et al. KLF5 inhibition overcomes oxaliplatin resistance in patient-derived colorectal cancer organoids by restoring apoptotic response. Cell Death & Disease. 2022, 13(4): 1-13

Ruiz de Sabando A, et al. Mol Cancer Ther. 2016, 15(1):72-83.