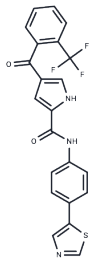
Data Sheet (Cat.No.T200229)

TargetMol

YL-5092

Chemical Properties



CAS No. : 3056857-07-6

Formula: C22H14F3N3O2S

Molecular Weight: 441.43

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	YL-5092 is a YTHDC1 inhibitor (IC50=7.4 nM, KD=29.6 nM) that suppresses cancer cell proliferation, induces G0/G1 phase arrest and apoptosis, and can be used in studies of acute myeloid leukemia (AML).
Targets(IC50)	Apoptosis,Cell Cycle Arrest
In vitro	YL-5092 inhibits acute myeloid leukemia cells with an IC50 of 0.28-2.87 μM [1]. YL-5092 (1 μM) blocks YTHDC1 binding to its substrates (m6A-mRNAs) in HEK293T cells and reduces MYC mRNA levels in MOLM-13 cells [1]. YL-5092 (0.25-2 μM, 48-120 h) induces G0/G1 phase arrest and increases apoptotic cell numbers in MOLM-13 cells[1]. YL-5092 (1-3 μM, 14-16 days) inhibits colony-forming capacity of CD34+ cells[1]. GW2974 (0.5-50 μM, 3 h) exhibits significant cytotoxicity at ≥10 μM. At 0.5-5 μM, it inhibits proliferation of U87MG and U251MG cells after 24 h and impairs GBM cell invasion and migration [1].
In vivo	**Methods**: YL-5092 was administered at 70 mg/kg via intraperitoneal injection twice daily for 18 days in a mouse MOLM-13/U937 tumor xenograft model. **Results**: YL-5092 inhibited leukemia development and improved survival in the MOLM-13/U937 tumor xenograft model in mice [1].

Solubility Information

Solubility	DMSO: 80 mg/mL (181.23 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2654 mL	11.3268 mL	22.6536 mL
5 mM	0.4531 mL	2.2654 mL	4.5307 mL
10 mM	0.2265 mL	1.1327 mL	2.2654 mL
50 mM	0.0453 mL	0.2265 mL	0.4531 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

Yang S, et al. Discovery of a selective YTHDC1 inhibitor that targets acute myeloid leukemia[J]. Research Square. 2023.