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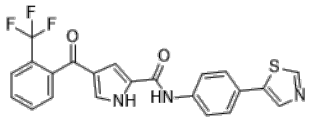
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	YL-5092
Cat. No.	:	PC-26021
CAS No.	:	3056857-07-6
Molecular Formula	:	$C_{22}H_{14}F_3N_3O_2S$
Molecular Weight	:	441.43
Target	:	Histone Methyltransferase (HMTase)
Solubility	:	10 mM in DMSO



CAS: 3056857-07-6

Biological Activity

YL-5092 is a highly potent and selective, first-in-class inhibitor of RNA m6A reader **YTHDC1** with IC50 of 7.4 nM and SPR Kd of 29.6 nM.
YL-5092 dose-dependently blocked the binding of substrate mimic, indicating a competitive inhibitor of substrate.
YL-5092 shows no activity against other RNA m6A readers, including YTHDC2, YTHDF1-3, IGF2BP1-3, and HNRNPA2B1.
YL-5092 treatment could dose-dependently stabilize YTHDC1 in MOLM-13 and U937 cells in cellular thermal shift assay (CETSA).
YL-5092 treatment substantially suppressed the proliferation and induced the differentiation and apoptosis of AML cells. also efficiently inhibited the colony-forming ability of CD34+ AML stem cells, but had no effect on normal hematopoietic stem cells and early progenitors (Lin− Sca1+ Kit+).
YL-5092 treatment impaired leukemogenesis and improved the animal survival rate in mouse AML xenograft models.

References

Zhang H, et al. ***Sci Transl Med.*** 2026 Feb 4;18(835):eadu3137.

Shengyong Yang, et al. Discovery of a selective YTHDC1 inhibitor that targets acute myeloid leukemia.

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