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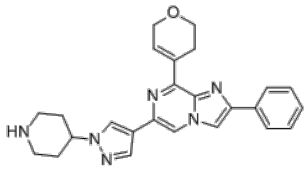
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	YL-939
Cat. No.	:	PC-49555
CAS No.	:	3023925-68-7
Molecular Formula	:	$C_{25}H_{26}N_6O$
Molecular Weight	:	426.524
Target	:	Ferroptosis
Solubility	:	10 mM in DMSO



Biological Activity

YL-939 is a novel non-classical and specific **ferroptosis** inhibitor, targets and binds directly to the **prohibitin 2** (PHB2) protein with Kd of 3.43 uM in SPR assays.
YL-939 is not an inhibitor of apoptosis, necroptosis, pyroptosis, and cuprotosis. did not show impact on the currently known signal pathways regulating ferroptosis.
YL-939 specifically protected cells from ferroptosis in erastin-induced ferroptosis models (HT1080 and ES-2) with EC50 of 0.14 and 0.09 uM, repectively.
YL-939 protected PHB2 from the degradation by pronase, but had no effect on the PHB2 isoform PHB1, as well as VDAC1 and VDAC2.
YL-939 treatment dose-dependently up-regulated ferritin protein and the mRNA expression of FTH1 and FTL, similar to the effect of PHB2 knockdown, also dose-dependently reduced the intracellular iron level elevated by erastin treatment, blocked autophagosomes/lysosomes, and hence inhibited ferritinophagy.
YL-939 (3 mg/kg) ameliorated liver damage in an acetaminophen (APAP)-induced acute liver injury model.

References

Wei Yang, et al. ***Nat Commun.*** 2022 Dec 3;13(1):7473.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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