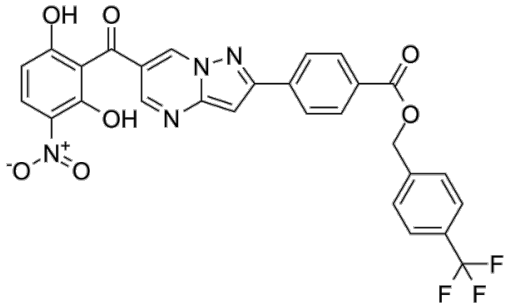
Product Data Sheet

Product Name: DDO-2728
Cat. No.: GC73579

Chemical Properties

Cas. No.	3029515-97-4		
Formula	$C_{28}H_{17}F_3N_4O_7$	M.Wt	578.45
Solubility	DMSO : 125 mg/mL (216.09 mM; Need ultrasonic)	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Background

DDO-2728 (compound 19) is a selective AlkB homologue 5 (ALKBH5) inhibitor with an IC50 of 2.97 μM. DDO-2728 increases the abundance of N6 metladenosine (m6A) modifications, inducing cell apoptosis and cycle arrest. DDO-2728 suppresses tumor growth in the MV4–11 xenograft model with favorable safety profile, shows the potential of targeting ALKBH5 in cancer research.

Caution: Product has not been fully validated for medical applications. For research use only.
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DDO-2728 (0-40 μM, 48 h) increases m6A metlation levels in the MOLM-13, HEK293and MV4–11 cells over a concentration gradient[1].DDO-2728 (0.01-100 μM, 72 h) inhibits the proliferation of MOLM-13 and MV4–11 cells with IC50s of 0.45 and 1.2 μM respectively, and showes a relatively weak toxicity in HEK293 and HUVECs[1].DDO-2728 (20 μM, 48 h) significantly arrests the cell cycle of MOLM-13 and MV4–11 cells at the G1/M phase[1].DDO-2728 (5, 10 μM, 48 h) concentration-dependently induces cell apoptosis of MV4–11 and MOLM-13 cells[1].DDO-2728 (20 μM, 24 h) decreases the half-lives of TACC3 mRNA in MOLM-13 and MV4–11 cells[1].DDO-2728 (0-10 μM, 48 h) significantly reduces the abundance of TACC3 and c-Myc in MOLM-13 and MV4–11 cells at both mRNA and protein levels[1].1.19Metabolic Stability in Rat and Human Plasma and Liver Microsomes[1]

DDO-2728 (10-40 mg/kg, i.p., daily for 14 d) effectively inhibits tumor growth in MV4–11 xenograft nude mice.[1].1.19Pharmacokinetic Parameters of DDO-2728 in Rats[1]

References:
[1]. Zheng-Yu Jiang, et al. Discovery of Pyrazolo[1,5-a]pyrimidine Derivative as a Novel and Selective ALKBH5 Inhibitor for the Treatment of AML. Journal of Medicinal Chemistry. 2023，Article ASAP.

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