Data Sheet (Cat.No.T205009)

TargetMol

DDO-2728

Chemical Properties

CAS No. :	3029515-97-4
Formula:	C28H17F3N4O7
Molecular Weight:	578.45
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	DDO-2728 is a selective pyrazolo[1,5-a]pyrimidine-based ALKBH5 inhibitor with an IC50 of 2.97 μM. It increases the levels of N6-methyladenosine (m6A) modifications in acute myeloid leukemia (AML) cells and exhibits antiproliferative activity in these cells. DDO-2728 also demonstrates anti-tumor efficacy in the MV4-11 xenograft model.
In vitro	DDO-2728 (0-40 μM, 48 h) increased m6A methylation levels in MOLM-13, HEK293, and MV4-11 cells across a concentration gradient [1]. DDO-2728 (0.01-100 μM, 72 h) inhibits the proliferation of MOLM-13 and MV4-11 cells, with IC_{50} values of 0.45 and 1.2 μM, respectively, and exhibits relatively low toxicity toward HEK293 and HUVEC cells [1]. DDO-2728 (20 μM, 48 h) significantly arrested the cell cycle of MOLM-13 and MV4-11 cells at the G1/M phase [1]. DDO-2728 (5, 10 μM, 48 h) induced apoptosis in MV4-11 and MOLM-13 cells in a concentration-dependent manner [1]. DDO-2728 (20 μM, 24 h) reduced the half-life of TACC3 mRNA in MOLM-13 and MV4-11 cells [1]. DDO-2728 (0-10 μM, 48 h) significantly reduced the abundance of TACC3 and c-Myc in MOLM-13 and MV4-11 cells at both the mRNA and protein levels [1].
In vivo	DDO-2728 (10-40 mg/kg, intraperitoneal injection, once daily, for 14 days) effectively inhibited tumor growth in nude mice with MV4-11 xenografts [1].

Solubility Information

Solubility	DMSO: 100.00 mg/mL (172.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7288 mL	8.6438 mL	17.2876 mL
5 mM	0.3458 mL	1.7288 mL	3.4575 mL
10 mM	0.1729 mL	0.8644 mL	1.7288 mL
50 mM	0.0346 mL	0.1729 mL	0.3458 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

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.