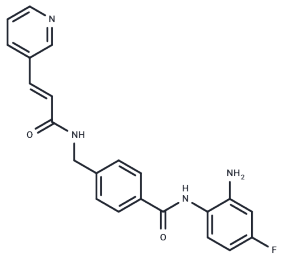
Data Sheet (Cat.No.T4481)

TargetMol

Tucidinostat

Chemical Properties



CAS No. : 1616493-44-7

Formula: C22H19FN4O2

Molecular Weight: 390.41

Storage: Store at low temperature
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	Tucidinostat (Chidamide) is an effective and orally bioavailable HDAC enzymes class I (HDAC1/2/3) and class IIb (HDAC10) inhibitor, with IC50s of 95, 160, 67 and 78 nM, less active on HDAC8/11 (IC50: 733/432 nM), and shows no effect on HDAC4/5/6/7/9.
Targets(IC50)	HDAC
In vitro	Tucidinostat shows potent antitumor activity and inhibits several human-derived tumour cell lines, such as HL-60, U2OS, LNCaP with GI50s of 0.4 ± 0.1, 2.0 ± 0.6, and 4.0 ± 1.2 μM, respectively. In addition, Tucidinostat shows less toxic to normal cells from human fetal kidney (CCC-HEK) and liver (CCCHEL)[1].
In vivo	Tucidinostat, administered orally at doses ranging from 12.5 to 50 mg/kg, effectively and dose-dependently decreases tumor size and weight in mice afflicted with various carcinomas including HCT-8 colorectal, A549 lung, BEL-7402 liver, and MCF-7 breast, without any significant loss in body weight[1].

Solubility Information

Solubility	H2O: Insoluble, DMSO: 257.5 mg/mL (659.56 mM),Sonication is recommended. Ethanol: 1 mg/mL (2.56 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 6 mg/mL (15.37 mM),Suspension. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5614 mL	12.807 mL	25.6141 mL
5 mM	0.5123 mL	2.5614 mL	5.1228 mL
10 mM	0.2561 mL	1.2807 mL	2.5614 mL
50 mM	0.0512 mL	0.2561 mL	0.5123 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

Zhong M, et al. Preclinical Evaluation of the HDAC Inhibitor Chidamide in Transformed Follicular Lymphoma. Front Oncol. 2021 Dec 3;11:780118.

Zha J, Zhong M, Pan G, et al.Stratification and therapeutic potential of ELL in cytogenetic normal acute myeloid leukemia.Gene.2022: 147110.

Shao J, Ye Z, Shen Z, et al.Chidamide improves gefitinib treatment outcomes in NSCLC by attenuating recruitment and immunosuppressive function of myeloid-derived suppressor cells.Biomedicine & Pharmacotherapy.2024, 173: 116306.

Ning ZQ, et al. Chidamide (CS055/HBI-8000): a new histone deacetylase inhibitor of the benzamide class with antitumor activity and the ability to enhance immune cell-mediated tumor cell cytotoxicity. Cancer Chemother Pharmacol. 2012 Apr;69(4):901-9.