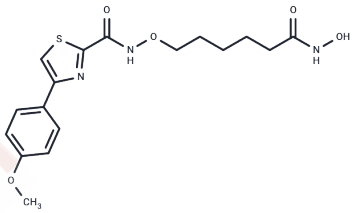
Data Sheet (Cat.No.T204799)

TargetMol

HDAC-IN-84

Chemical Properties



CAS No. :

Formula: C17H21N3O5S

Molecular Weight: 379.431

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	HDAC-IN-84 (compound 4a) is a potent HDAC inhibitor with IC50 values of 0.0045, 0.015, 0.013, 0.038, 5.8, and 26 μM for HDAC1, HDAC2, HDAC3, HDAC6, HDAC8, and HDAC11, respectively. It effectively inhibits the proliferation of leukemia cells without causing toxicity.
Targets(IC50)	Apoptosis,HDAC
In vitro	HDAC-IN-84 (95min) inhibits HDAC1, HDAC2, HDAC3, HDAC4, HDAC6, HDAC8, and HDAC11 with IC50 values of 0.0045, 0.015, 0.013, >100, 0.038, 5.8, and 26 μM, respectively [1]. HDAC-IN-84 (0.005-25 μM, 72 h) suppresses HL60, HPBALL, and K562 cells with IC50 values of 76.8, 110.6, and 180.8 nM, respectively [1]. Treatment with HDAC-IN-84 (0.25 μM, 48 h) significantly acetylates α-tubulin and enhances PARP protein cleavage by HDAC6 [1]. This compound (0.25 μM, 48 h) promotes apoptosis in HL60 cells [1]. It also induces cell cycle arrest in HL60 cells at doses of 0.15-0.2 μM over 24 hours [1]. Furthermore, HDAC-IN-84 shows excellent stability in human plasma at 37° C following 24-hour incubation at concentrations of 2.5, 50 nM, and 1 μM [1]. In plasma protein binding studies, HDAC-IN-84 (2.5, 50 nM, 1 μM, 48 h) averages a binding rate of 99.0% across observed concentrations, with no concentration dependence [1]. Additionally, HDAC-IN-84 (0-1 μM) inhibits MV4-11 cell growth with an IC50 of 0.036 μM, demonstrating over seven times the potency of Vorinostat [1]. HDAC-IN-84 (0-10 μM, 72 h) and Vorinostat also affect C1498 cell growth in a concentration-dependent manner, with IC50 values of 0.425 and 1.06 μM, respectively.
In vivo	HDAC-IN-84 administered at a dosage of 10 mg/kg via intraperitoneal injection (i.p.) once daily for 14 days suppresses the growth of MV4-11 and C1498 cells in a preclinical NSG mouse model of leukemia [1]. The compound has a half-life of 0.35 hours in three C57BL/6 mice [1]. Additionally, HDAC-IN-84 at 20 mg/kg i.p., administered daily for 21 days, results in a significantly lower leukemia burden in an allograft leukemia model, without notable differences in body weight [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6355 mL	13.1777 mL	26.3553 mL
5 mM	0.5271 mL	2.6355 mL	5.2711 mL
10 mM	0.2636 mL	1.3178 mL	2.6355 mL
50 mM	0.0527 mL	0.2636 mL	0.5271 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.

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