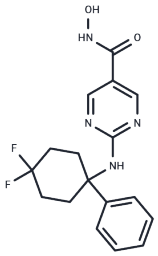
Data Sheet (Cat.No.T10244)

TargetMol

ACY-1083

Chemical Properties



CAS No. : 1708113-43-2

Formula: C17H18F2N4O2

Molecular Weight: 348.35

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	ACY-1083 is a selective, brain-penetrating HDAC6 inhibitor (IC50: 3 nM) that effectively reverses chemotherapy-induced peripheral neuropathy.
Targets(IC50)	HDAC
In vitro	ACY-1083 (30 and 300 nM) dose-dependently improves cell viability[2].
In vivo	In C57BL/6J mice, ACY-1083 (10 mg/kg; i.p.) effectively relieves Cisplatin-induced mechanical allodynia. In adult male SD rats, ACY-1083 (3 mg/kg; orally) reverses Paclitaxel-induced mechanical allodynia. ACY-1083(5 mg/kg; i.p.) shows a Cmax of 936 ng/mL, a half-life (T1/2) of 3.5h, and a biologically active plasma exposure of 8 hours [1].

Solubility Information

Solubility	DMSO: 237.5 mg/mL (681.79 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: 5 mg/mL (14.35 mM),Sonication is recommended. *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	2.8707 mL	14.3534 mL	28.7068 mL
5 mM	0.5741 mL	2.8707 mL	5.7414 mL
10 mM	0.2871 mL	1.4353 mL	2.8707 mL
50 mM	0.0574 mL	0.2871 mL	0.5741 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

Krukowski K, et al. HDAC6 inhibition effectively reverses chemotherapy-induced peripheral neuropathy. Pain. 2017 Jun;158(6):1126-1137.

Vahagn C Nikolian, et al. Isoform 6-selective histone deacetylase inhibition reduces lesion size and brain swelling following traumatic brain injury and hemorrhagic shock. J Trauma Acute Care Surg. 2019 Feb;86(2):232-239.