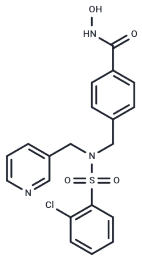
Data Sheet (Cat.No.T212609)

TargetMol

HDAC6-IN-65

Chemical Properties



CAS No. : 3028442-70-5

Formula: C20H18ClN3O4S

Molecular Weight: 431.89

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	HDAC6-IN-65 is a highly selective histone deacetylase 6 inhibitor with a half-maximal inhibitory concentration (IC50) of 0.9 nM against HDAC6, and also exhibits a certain inhibitory activity against HDAC3 with a corresponding IC50 value of 39.4 nM. HDAC6-IN-65 can induce the accumulation of acetylated α-tubulin (ac-tubulin) and acetylated histone H3 (ac-histone H3, a specific marker for class I HDAC inhibition) in Neuro-2a cells, and is currently available as a research tool for mechanism and experimental studies related to melanoma .
Targets(IC50)	HDAC
In vitro	HDAC6-IN-65 (Compound 14) exhibits significant antiproliferative activity against leukemia cell lines and a variety of tumor cells, with a half-maximal inhibitory concentration (IC50) of 0.57 μM against MV4-11 leukemia cells, and IC50 values of 2.45 μM, 6.24 μM and 3.75 μM against MM.1S, Neuro-2a and SH-SY5Y tumor cells, respectively. In contrast, HDAC6-IN-65 shows relatively low toxicity to normal cells, with IC50 values of 6.09 μM, 16.24 μM and 19.08 μM against HEK-293, pNHF and MRC9 normal cells in sequence [1]. Within the effective concentration range of 0.05~5 μM, HDAC6-IN-65 can significantly induce the accumulation of acetylated α-tubulin (ac-tubulin, a specific marker for HDAC6 inhibition) in Neuro-2a cells at a low concentration of 50 nM, and the expression level of acetylated histone H3 (ac-histone H3, a marker for class I HDAC inhibition) in cells also increases significantly when the concentration reaches 1 μM [1]. After treating RDES cells with 0.5 μM HDAC6-IN-65 for 6~72 hours, it is found that HDAC6-IN-65 has a weak and short-lasting inhibitory effect on class I HDACs, while its pharmacological activity may remain persistent under the condition of systemic exposure in the organism [1].
In vivo	HDAC6-IN-65 (Compound 14) was administered to mice via intraperitoneal injection at a dose of 25 mg/kg once daily for 5 consecutive days per week (Monday to Friday) for a total of 14 days. This administration regimen effectively inhibited tumor growth in the mouse SM1 melanoma model, simultaneously activated immunomodulation, and no obvious toxicity to mice was observed at this dosage [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3154 mL	11.577 mL	23.154 mL
5 mM	0.4631 mL	2.3154 mL	4.6308 mL
10 mM	0.2315 mL	1.1577 mL	2.3154 mL
50 mM	0.0463 mL	0.2315 mL	0.4631 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

Olaoye OO, et al. Improved Pharmacokinetic Profiles of HDAC6 Inhibitors via Cap Group Modifications. J Med Chem. 2025 Sep 11;68(17):18216-18229.