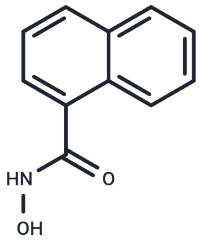
Data Sheet (Cat.No.T13996)

TargetMol

1-Naphthohydroxamic acid

Chemical Properties



CAS No. : 6953-61-3

Formula: C11H9NO2

Molecular Weight: 187.19

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	1-Naphthohydroxamic acid (Compound 2) is a potent and selective HDAC8 inhibitor with an IC50 of 14 μM, demonstrating greater selectivity for HDAC8 than class I HDAC1 and class II HDAC6 (IC50 >100 μM). It does not increase global histone H4 acetylation or reduce total intracellular HDAC activity but can induce tubulin acetylation[1][2].
Targets(IC50)	HDAC
In vitro	1-Naphthohydroxamic acid (compound 2; 20-40 μM; 0-144 hours; BE(2)-C, SK-N-BE(2), and SH-SY5Y cells) reduces cell numbers in a concentration-dependent manner [2]. It decreases clone formation in soft agar in a similar manner [2]. In HeLa and HEK293 cells treated with 1-Naphthohydroxamic acid (compound 2; 0.8 μM, 4 μM, 20 μM, or 100 μM), only tubulin becomes hyperacetylated [1]. At concentrations within its in vitro IC50 against HDAC8, 1-Naphthohydroxamic acid (compound 2) reduces cell density and induces outgrowth of neurofilament-positive neurite-like structures.
In vivo	1-Naphthohydroxamic acid has the maximum tolerable doses at 50?mg/kg per day. At these concentrations, neither body weight nor blood parameters are critically changed [3]. Dose-limiting toxicities (DLTs) of 1-Naphthohydroxamic acid (compound 2; 0-40 mg/kg; intraperitoneal injection; daily; for 10 day; NMRI Foxn1 nude mice) include weight loss and signs of liver toxicity, as evidenced by elevated plasma liver enzymes and detection of necrotic areas on histological liver examination. Pharmacokinetic studies after intraperitoneal administration of the inhibitors identified the half-life of 1-Naphthohydroxamic acid to be ~15?min, with a plasma peak concentration of ~30?μM [3].

Solubility Information

Solubility	DMSO: 125 mg/mL (667.77 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.3422 mL	26.7108 mL	53.4217 mL
5 mM	1.0684 mL	5.3422 mL	10.6843 mL
10 mM	0.5342 mL	2.6711 mL	5.3422 mL
50 mM	0.1068 mL	0.5342 mL	1.0684 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

Krennhrubec K, et al. Design and evaluation of 'Linkerless' hydroxamic acids as selective HDAC8 inhibitors. Bioorg Med Chem Lett. 2007 May 15;17(10):2874-8.
Oehme I, et al. Histone deacetylase 8 in neuroblastoma tumorigenesis. Clin Cancer Res. 2009 Jan 1;15(1):91-9.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481