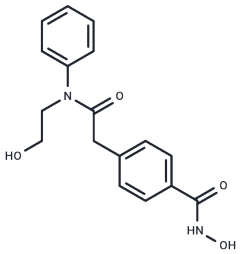
Data Sheet (Cat.No.T2430)

TargetMol

HPOB

Chemical Properties



CAS No. : 1429651-50-2

Formula: C17H18N2O4

Molecular Weight: 314.34

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	HPOB is an effective and specific HDAC6 inhibitor (IC50: 56 nM), >30-fold selectivity over other HDACs.
Targets(IC50)	Apoptosis,HDAC
In vitro	In mice bearing CWR22 human prostate cancer xenografts, the combination of HPOB (300 mg/kg/day) with SAHA significantly inhibits the growth of pre-existing tumors, whereas the use of either compound alone does not exhibit a noticeable inhibitory effect.
In vivo	In HFS cells, HPOB enhances transformation cell death induced by Etoposide, Doxorubicin, or SAHA. HPOB also augments Etoposide-induced transformation cell death in transformed cells via the apoptosis pathway. In both normal (HFS) and transformed (LNCaP, A549, and U87) cells, HPOB induces α-tubulin proteins without affecting histones, inhibiting cell growth without impacting cell viability.
Kinase Assay	In Vitro Enzymatic Assay for Histone Deacetylases: In vitro activities of the 11 recombinant human zinc-dependent HDAC enzymes are detected by ?uorigenic release of 7-amino-4-methylcoumarin from substrate upon deacetylase enzymatic activity. A series of dilutions of the unique HDAC6 compound, tubacin, and SAHA are prepared with 10% DMSO in HDAC assay buffer, and 5 μL of the dilution was added to a 50-μL reaction so that the ?nal concentration of DMSO is 1% in all of the reactions. The enzymatic reactions are conducted in duplicate at 37 °C for 30 min in a 50-μL mixture containing HDAC assay buffer, 5 μg BSA, an HDAC substrate, an HDAC enzyme, and a test compound. After enzymatic reactions, 50 μL of 2× HDAC developer is added to each well, and the plate is incubated at room temperature for an additional 15 min. Fluorescence intensity is measured at an excitation of 360 nm and an emission of 460 nm using a Synergy microplate reader. Negative (no enzyme, no inhibitor, a drug with no HDAC inhibition activity) and positive controls (known HDAC inhibitor SAHA) are included in the assays. IC50 is determined at the drug concentration that results in 50% reduction of HDAC activity compared with the control.
Cell Research	Normal (HFS) and transformed (LNCaP, A549, and U87) cells are cultured with indicated doses of HPOB for 72 h. Five micromolars SAHA is a positive control.Graphs were constructed using Prism 5. (Only for Reference)

Solubility Information

Solubility	Ethanol: 36 mg/mL (114.53 mM),Sonication is recommended. DMSO: 58 mg/mL (184.51 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.36 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	3.1813 mL	15.9063 mL	31.8127 mL
5 mM	0.6363 mL	3.1813 mL	6.3625 mL
10 mM	0.3181 mL	1.5906 mL	3.1813 mL
50 mM	0.0636 mL	0.3181 mL	0.6363 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

Lee JH, et al. Proc Natl Acad Sci U S A. 2013, 110(39), 15704-157099.