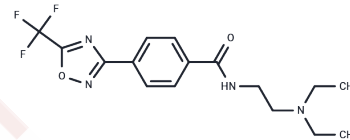


## HDAC4-IN-1

## Chemical Properties

CAS No. :	1418293-39-6
Formula:	C <sub>16</sub> H <sub>19</sub> F <sub>3</sub> N <sub>4</sub> O <sub>2</sub>
Molecular Weight:	356.34
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	HDAC4-IN-1 (compound 1a), a class IIa HDAC inhibitor with an IC <sub>50</sub> of 0.077 μM, exhibits anticancer activity by enhancing Caspase-induced apoptosis. It is also utilized in cancer drug combination research [1].
Targets(IC <sub>50</sub> )	Apoptosis,HDAC
In vitro	HDAC4-IN-1 effectively inhibits class IIa HDACs with an IC <sub>50</sub> of 0.077 μM. At a concentration of 100 μM over 72 hours, it shows low cytotoxicity in THP-1 cells (IC <sub>50</sub> = 9.2 μM) but exhibits strong synergy with BTZ, enhancing the cytotoxic effects of BTZ. When combined at 5 μM with BTZ (7.9 nM) for 48 hours, HDAC4-IN-1 induces caspase-mediated apoptosis. Additionally, co-treatment at the same concentrations for 24 hours increases p21 protein expression in THP-1 cells. In the Cal27_HDAC4 cancer cell line, HDAC4-IN-1 at 5 μM over 72 hours inhibits cell proliferation. Cell viability assays in THP-1 cells with 100 μM concentration and 7.9 nM for BTZ reveal lower cytotoxicity compared to pan and class I inhibitors, while the combination enhances BTZ's cytotoxicity. Apoptosis analysis under similar conditions shows a significant increase in caspase 3/7 activation. Western blot analysis indicates elevated p21 protein levels with BTZ.

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8063 mL	14.0315 mL	28.0631 mL
5 mM	0.5613 mL	2.8063 mL	5.6126 mL
10 mM	0.2806 mL	1.4032 mL	2.8063 mL
50 mM	0.0561 mL	0.2806 mL	0.5613 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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