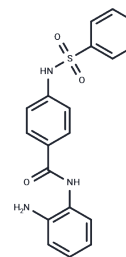


HDAC1/3-IN-1

Chemical Properties

CAS No. : 244289-53-0
 Formula: C19H17N3O3S
 Molecular Weight: 367.42
 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	HDAC1/3-IN-1 is a selective HDAC1/3 inhibitor with IC ₅₀ values of 256 nM and 340.3 nM for HDAC1 and HDAC3, respectively. It increases the proportion of SubG1 cells and induces apoptosis in glioma cells and glioblastoma stem cells, and is used in glioblastoma research.
Targets(IC50)	Apoptosis,HDAC
In vitro	<p>Methods: HOG, T98G, U87MG, and U251MG glioma cells were treated with HDAC1/3-IN-1 at concentrations ranging from 0.6 to 50 μM for 24–72 hours. Cell proliferation, histone H3 deacetylation, cell cycle, and apoptosis were detected; GG16 and GSC23 glioblastoma stem cells were treated with HDAC1/3-IN-1 for 72 hours, and cell viability was detected.</p> <p>Results:</p> <ol style="list-style-type: none"> HDAC1/3-IN-1 inhibited the proliferation of HOG, T98G, U87MG, and U251MG glioma cells in a time-dependent manner. After 72 hours of action in U251MG cells, the GI₅₀ was the lowest, at 0.6 μM. At effective concentrations, HDAC1/3-IN-1 (10.8–50 μM, 24 hours) could inhibit the deacetylation of histone H3 in HOG, T98G, and U251MG cells. HDAC1/3-IN-1 (10.8–50 μM, 24 hours) could induce the accumulation of T98G and U251MG cells in the SubG1 phase, suggesting the occurrence of DNA fragmentation and apoptosis, and could regulate the cell cycle distribution of glioma cells. HDAC1/3-IN-1 (10.8–50 μM, 24 hours) could induce early apoptosis in HOG, T98G, U87MG, and U251MG cells. After 72 hours of treatment with HDAC1/3-IN-1, the viability of mesenchymal GG16 and pre-neuronal GSC23 glioblastoma stem cells was inhibited, with IC₅₀ values of 2.079 μM and 1.851 μM, respectively [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7217 mL	13.6084 mL	27.2168 mL
5 mM	0.5443 mL	2.7217 mL	5.4434 mL
10 mM	0.2722 mL	1.3608 mL	2.7217 mL
50 mM	0.0544 mL	0.2722 mL	0.5443 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

Furtado LC, et al. Repositioning HDAC Inhibitors for Glioma Treatment: Synthesis and Biological Evaluation. ACS Omega. 2026;11(6):10104-10120. Published 2026 Feb 3.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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