

Product Data Sheet

Product Name: HDAC1/3-IN-1

Cat. No.: GC79048

Chemical Properties

Cas. No. 244289-53-0

Formula $C_{19}H_{17}N_3O_3S$ M.Wt 367.42

Solubility DMSO: 50 mg/mL (136.08 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Caution: Product has not been fully validated for medical applications. For research use only.

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HDAC1/3-IN-1 is a selective HDAC1/3 inhibitor, with IC₅₀ values of 256 nM and 340.3 nM against HDAC1 and HDAC3, respectively. HDAC1/3-IN-1 increases the SubG1 cell population and promotes apoptosis of glioma cells and glioblastoma stem cells. HDAC1/3-IN-1 can be used in studies related to glioblastoma [1].

In Vitro, HDAC1/3-IN-1 (Compound 6a) (0.6-50 µM; 24-72 h) inhibits the proliferation of HOG, T98G, U87MG and U251MG glioma cell lines in a time-dependent manner, with the lowest GI50 of 0.6 µM measured in U251MG cells after 72 h of incubation^[1]. HDAC1/3-IN-1 (10.8-50 µM; 24 h) inhibits histone H3 deacetylation in HOG, T98G and U251MG glioma cell lines when applied at the relevant concentrations for 24 h^[1]. HDAC1/3-IN-1 (10.8-50 µM; 24 h) induces SubG1 phase cell accumulation in aggressive glioma cell lines T98G and U251MG, suggesting the presence of DNA fragmentation and apoptosis, while also modulating the cell cycle phase distribution of the tested glioma cell lines^[1]. HDAC1/3-IN-1 (10.8-50 µM; 24 h) induces early apoptosis in glioma cell lines HOG, T98G, U87MG and U251MG^[1]. HDAC1/3-IN-1 (72 h) inhibits the viability of mesenchymal (GG16) and proneural (GSC23) glioblastoma stem cell lines, with IC₅₀ values of 2.079 µM and 1.851 µM respectively after 72 h of incubation^[1].

References:

[1]. 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.

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