

Product Data Sheet

Product Name: HDAC6-IN-75

Cat. No.: GC79047

Chemical Properties

Cas. No. 400078-78-6

Formula $C_{13}H_{12}N_2O_4S$ M.Wt 292.31

Solubility DMSO: 100 mg/mL (342.10 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

HDAC6-IN-75 is a selective HDAC6 inhibitor with an IC_{50} of 0.17 nM against HDAC6. HDAC6-IN-75

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

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induces the accumulation of acetylated α -tubulin in glioma cells. HDAC6-IN-75 triggers cell cycle changes, increases the SubG1 cell population, and promotes apoptosis in glioma cells and glioblastoma stem cells. HDAC6-IN-75 is applicable for glioma-related research [1].

In Vitro, HDAC6-IN-75 (compound 3a) (0.0032-50 μ M; 24-72 h) exhibits time-dependent cytotoxicity in glioma cell lines, with GI50 values ranging from 0.8 μ M to 5.3 μ M after 72 h of incubation, and induces total growth inhibition in HOG, T98G, and U251MG cells at 72 h^[1]. HDAC6-IN-75 (compound 3a) (34.0 μ M HOG, 16.2 μ M T98G, 50 μ M U87MG, 28.9 μ M U251MG; 24 h) increases acetyl- α -tubulin levels in all four tested glioma cell lines and acetyl-histone H3 levels in HOG, T98G, and U251MG cells after 24 h of treatment, consistent with its HDAC6 inhibitory activity and concurrent class I HDAC inhibition at cellular concentrations^[1]. HDAC6-IN-75 (compound 3a) (34.0 μ M HOG, 16.2 μ M T98G, 50 μ M U87MG, 28.9 μ M U251MG; 24 h) induces DNA fragmentation (SubG1 accumulation) in T98G and U251MG cells, and modulates cell cycle progression by shifting populations from G0/G1 to G2/M in U87MG, U251MG, and HOG cells after 24 h of treatment^[1]. HDAC6-IN-75 (compound 3a) (34.0 μ M HOG, 16.2 μ M T98G, 50 μ M U87MG, 28.9 μ M U251MG; 24 h) reduces viability and induces late apoptosis and necrosis in HOG and U251MG glioma cells after 24 h of treatment^[1]. HDAC6-IN-75 (compound 3a) (0.0032-50 μ M; 72 h) exhibits cytotoxicity against glioblastoma stem cells, with an IC₅₀ of 3.725 μ M in proneural GSC23 cells and 12.90 μ M in mesenchymal GG16 cells after 72 h of treatment^[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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