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

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 μM; 24-72 h) exhibits time-dependent cytotoxicity in glioma cell lines, with GI50 values ranging from 0.8 μM to 5.3 μM 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 μM HOG, 16.2 μM T98G, 50 μM U87MG, 28.9 μM 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 μM HOG, 16.2 μM T98G, 50 μM U87MG, 28.9 μM 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 μM HOG, 16.2 μM T98G, 50 μM U87MG, 28.9 μM 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 μM; 72 h) exhibits cytotoxicity against glioblastoma stem cells, with an IC_{50} of 3.725 μM in proneural GSC23 cells and 12.90 μM 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.