

## 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.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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induces the accumulation of acetylated  $\alpha$ -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  $\mu$ M; 24-72 h) exhibits time-dependent cytotoxicity in glioma cell lines, with GI50 values ranging from 0.8  $\mu$ M to 5.3  $\mu$ M after 72 h of incubation, and induces total growth inhibition in HOG, T98G, and U251MG cells at 72 h<sup>[1]</sup>. HDAC6-IN-75 (compound 3a) (34.0  $\mu$ M HOG, 16.2  $\mu$ M T98G, 50  $\mu$ M U87MG, 28.9  $\mu$ M U251MG; 24 h) increases acetyl- $\alpha$ -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<sup>[1]</sup>. HDAC6-IN-75 (compound 3a) (34.0  $\mu$ M HOG, 16.2  $\mu$ M T98G, 50  $\mu$ M U87MG, 28.9  $\mu$ 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<sup>[1]</sup>. HDAC6-IN-75 (compound 3a) (34.0  $\mu$ M HOG, 16.2  $\mu$ M T98G, 50  $\mu$ M U87MG, 28.9  $\mu$ M U251MG; 24 h) reduces viability and induces late apoptosis and necrosis in HOG and U251MG glioma cells after 24 h of treatment<sup>[1]</sup>. HDAC6-IN-75 (compound 3a) (0.0032-50  $\mu$ M; 72 h) exhibits cytotoxicity against glioblastoma stem cells, with an IC<sub>50</sub> of 3.725  $\mu$ M in proneural GSC23 cells and 12.90  $\mu$ M in mesenchymal GG16 cells after 72 h of treatment<sup>[1]</sup>.

### 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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