
Product Data Sheet

Product Name: HNHA
Cat. No.: GC12334

Chemical Properties

Cas. No. 926908-04-5

Chemical Name N-hydroxy-7-(2-naphthalenylthio)-heptanamide

SMILES c1ccc2c(c1)cc(cc2)SCCCCCC(=O)N

Formula $C_{17}H_{21}NO_2S$ M.Wt 303.4

Solubility ≤ 20 mg/ml in ethanol; 20mg/ml in DMSO; 20mg/ml in dimethyl formamide 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

IC50: 100 nM

HNHA is an HDAC inhibitor.

Histone acetylation is regulated by two covalent modifying enzymes, acetylases and deacetylases, and plays a key role in gene expression of eukaryotes. It has been revealed that histone deacetylase (HDAC), which is overexpressed in several tumor cells, plays a critical role in carcinogenesis. Moreover, plenty of studies have showed that the expression of tumor suppressors including p53, p21, and gelsolin, are repressed, whereas, tumor activators including hypoxia-induced factor-1 and vascular endothelial growth factor, are up-regulated in HDAC-overexpressed cells.

In vitro: Previous study found that HNHA was able to inhibit in-vitro HDAC enzyme activity as well as proliferation of human fibrosarcoma cells (HT1080). In addition,

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treatment of cells with HNHA could elicit histone hyperacetylation resulting in an up-regulation of cell cycle arrest, p21 transcription, and an inhibition of HT1080 cell invasion [1].

In vivo: The effects of HNHA on human cancer cells bearing xenograph mice was examined. Results showed that as expected, HNHA could dramatically reduce tumor volume as to (vehicle) control. In addition, HNHA had a stronger potency than that of SAHA, which implied that the pharmacological potency of HNHA was better than SAHA in vivo [1].

Clinical trial: So far, no clinical study has been conducted.

Reference:

1. Kim, D.H., Lee, J., Kim, K.N., et al. Anti-tumor activity of N-hydroxy-7-(2-naphthylthio) heptanamide, a novel histone deacetylase inhibitor. *Biochemical and Biophysical Research Communications* 356, 233-238 (2007).

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