
Product Data Sheet

Product Name: HPOB
Cat. No.: GC11574

Chemical Properties

Cas. No. 1429651-50-2

Chemical Name N-hydroxy-4-(2-((2-hydroxyethyl)(phenyl)amino)-2-oxoethyl)benzamide

SMILES OCCN(C(CC1=CC=C(C(NO)=O)C=C1)=O)C2=CC=CC=C2

Formula $C_{17}H_{18}N_2O_4$ M.Wt 314.34

Solubility $\geq 31.4\text{mg/mL}$ in DMSO 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

HPOB is a highly potent and selective inhibitor of histone deacetylase 6 (HDAC6) with IC_{50} of 56nM , >30 fold less potent against other HDACs. [1]

HDAC6 is one of the eleven human zinc-dependent HDACs with two catalytic domains and one ubiquitin-binding domain at the C-terminal. It exhibits various biological functions including regulation of microtubule dynamics and degradation of misfolded proteins. It involves in many cellular pathways related to normal and tumor cell growth, migration and death. [1]

In normal HFS and transformed LNCaP cells, HPOB inhibited cell growth but not viability, induced acetylation of α -Tubulin, but not histones. HPOB enhanced etoposide-, doxorubicin-, and SAHA-induced cell death in transformed cell but not in normal cell. HPOB enhanced the effectiveness of anticancer drugs via apoptotic pathway and activated DNA damage response in transformed cell. [1]

HPOB is well-tolerated in mice carrying human prostate cancer CWR22 xenograft and enhances cytotoxicity effects of anticancer drug SAHA in these animals. [1]

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

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References:

1. Lee JH, Mahendran A, Yao Y, Ngo L, Venta-Perez G, Choy ML, Kim N, Ham WS, Breslow R, Marks PA. Development of a histone deacetylase 6 inhibitor and its biological effects. *Proc Natl Acad Sci U S A.* 2013 Sep 24;110(39):15704-9.

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