

Dacinostat

Catalog No: tcsc1974



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

404951-53-7

Formula:

$C_{22}H_{25}N_3O_3$

Pathway:

Autophagy;Epigenetics;Cell Cycle/DNA Damage

Target:

Autophagy;HDAC;HDAC

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 43 mg/mL (113.32 mM)

Alternative Names:

NVP-LAQ824;LAQ824

Observed Molecular Weight:

379.45

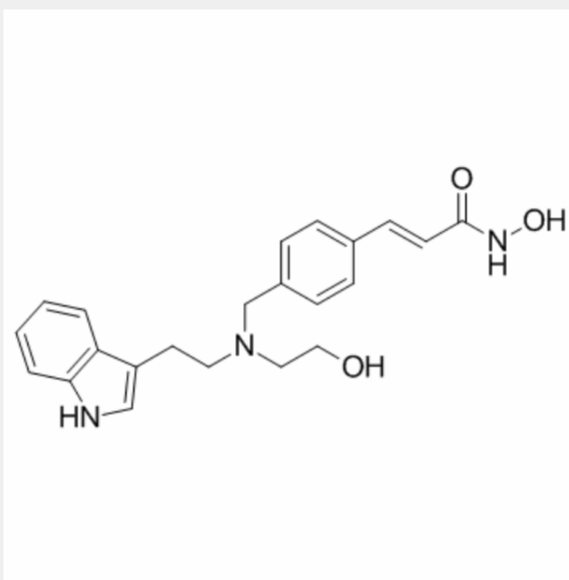
Product Description

Dacinostat is a potent **HDAC** inhibitor, with an **IC₅₀** of 32 nM; Dacinostat also inhibits **HDAC1** with an **IC₅₀** of 9 nM, and used in cancer research.

IC50 & Target: IC50: 32 nM (HDAC)^[1], 9 nM (HDAC1)^[2]

In Vitro: Dacinostat (NVP-LAQ824) activates p21 promoter, with AC₅₀ of 0.30 μM. NVP-LAQ824 inhibits tumor cell (H1299, HCT116) growth, with IC₅₀s of 150 and 10 nM, respectively. NVP-LAQ824 also shows inhibitory activities against two prostate cancer cell lines (DU145 and PC3) and a breast cancer line (MDA435), with IC₅₀s of 18, 23, 39 nM, respectively. Continuous exposure of NVP-LAQ824 for 72 h produces LD90s of 0.09 M in HCT116 cells and 0.47 M in A549 cells. NVP-LAQ824 treatment of NDHF cells causes the expected G1-S growth arrest in addition to a significant reduction of cells in S-phase and accumulation of cells at the G2-M checkpoint. NVP-LAQ824 induces apoptotic death in human tumor cells. NPV-LAQ824 increases acetylation of histones H3 and H4^[1]. Dacinostat inhibits HDAC1 with an IC₅₀ of 9 nM^[2]. Dacinostat (10 and 20 nM) suppresses proliferation of AML fusion protein-expressing 32D cells. Dacinostat impairs short-term engraftment potential of leukemic stem cells. Dacinostat exhausts in vitro self-renewal potential of murine AML1/ETO- and PLZF/RARα-positive HSC^[3].

In Vivo: NVP-LAQ824 produces a dose-dependent inhibition of tumor growth, and at 100 mg/kg, its antitumor effect is similar to that of 5-Fluorouracil^[1].



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