Web: www.taiclone.com
Tel: +886-2-2735-9682
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3-Deazaneplanocin A (hydrochloride)

Catalog No: tcsc0870

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Size: 25mg

Specifications

CAS No:
120964-45-6

Formula:
$C_{12}H_{15}ClN_4O_3$

Pathway:
Epigenetics;Epigenetics

Target:
Histone Methyltransferase;Epigenetic Reader Domain

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
DZNep hydrochloride;NSC 617989 hydrochloride;3-Deazaneplanocin hydrochloride

Observed Molecular Weight:
298.73

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Product Description

3-Deazaneplanocin A hydrochloride is a potent **histone methyltransferase EZH2** inhibitor.

IC50 & Target: EZH2[1]

In Vitro: 3-Deazaneplanocin A (DZNep) hydrochloride is a potent histone methyltransferase EZH2 inhibitor. Treatment of OCI-AML3 cells with 3-Deazaneplanocin A (1.0 μM) results in a significant increase in accumulation of cells in the G_0/G_1 phase (58.5%) with a concomitant decrease in the number of cells in S phase (35.2%) and G_2/M phases (6.3%) of the cell cycle (P[1]. 3-Deazaneplanocin A (DZNep) hydrochloride reduces the expression of EZH2, especially after 72 hours (e.g. 48%, 32% and 36% reduction of EZH2 in PANC-1, MIA-PaCa-2 and LPc006 cells, respectively)[2]. 3-Deazaneplanocin A (DZNep) hydrochloride shows minimal growth inhibition in PANC-1 cells. More than 50% of these cells are still growing after exposure at the highest concentration (20 μM). MIA-PaCa-2 and LPc006 cells are much more sensitive, with IC_0 values of 1.0±0.3 and 0.10±0.03 μM, respectively[2]. 3-Deazaneplanocin A (DZNep) hydrochloride causes dose-dependent inhibition of cell proliferation of NSCLC cell lines, and the IC_0 values range from 0.08 to 0.24 μM[3].

In Vivo: The survival of NOD/SCID mice with acute myeloid leukemia (AML) due to HL-60 cells is significantly higher, if treated with 3-Deazaneplanocin A (DZNep) and Panobinostat (PS) compare to treatment with PS, 3-Deazaneplanocin A, or vehicle alone (P[1]. There is a progressive increase in weight of rats treated with physiological saline in a time-dependent manner (the mean growth rate=3.19% per day). Administration of 20 mg/kg 3-Deazaneplanocin A (DZNep) not only markedly reduces the relative weight of the rats compare to the initial weight (−2.0%, −4.9% and −1.2%) in the first three days post-treatment, but also suppresses the weight growth rate to 2.6% per day from the fourth day onwards post-dose[4].