

UNC1999

Catalog No: tcsc1658



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

1431612-23-5

Formula:

$C_{33}H_{43}N_7O_2$

Pathway:

Epigenetics;Epigenetics;Autophagy

Target:

Histone Methyltransferase;Epigenetic Reader Domain;Autophagy

Purity / Grade:

>98%

Solubility:

DMSO : 135 mg/mL (236.95 mM; Need ultrasonic); H2O :

Observed Molecular Weight:

569.74

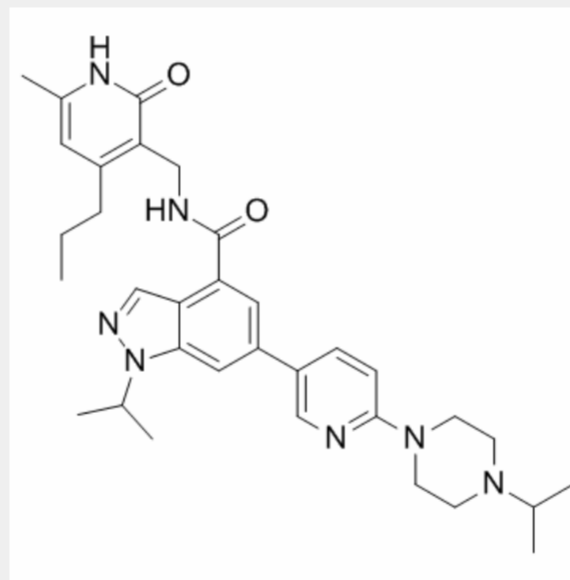
Product Description

UNC1999 is a SAM-competitive, potent and selective inhibitor of **EZH2** (IC_{50} **EZH1** (IC_{50} = 45 ± 3 nM).

IC50 & Target: IC50: [1]

In Vitro: UNC1999, the first orally bioavailable inhibitor that has high in vitro potency for wild-type and mutant EZH2 as well as EZH1, a closely related H3K27 methyltransferase that shares 96% sequence identity with EZH2 in their respective catalytic domains. UNC1999 is highly selective for EZH2 and EZH1 over a broad range of epigenetic and non-epigenetic targets, competitive with the cofactor SAM, and non-competitive with the peptide substrate. UNC1999 has K_i values of 4,700 nM, 65 nM, 300 nM, and 1,500 nM for sigma1, sigma2, histamine H₃, and NET (norepinephrine transporter), respectively. UNC1999 selectively kills DB cells, a DLBCL cell line with the EZH2 Y641N mutation. UNC1999 displays a concentration- and time-dependent inhibition of DB cell proliferation ($EC_{50} = 633 \pm 101$ nM (n=3))^[1].

In Vivo: A single intraperitoneal (IP) injection of UNC1999 at 15, 50, or 150 mg/kg achieved high C_{max} (9,700-11,800 nM) and exhibited dose linearity in male Swiss albino mice. Both the 150 and 50 mg/kg IP doses resulted in the plasma concentrations of UNC1999 above its cellular IC_{50} over the entire 24 h period while the 15 mg/kg IP dose led to the plasma concentrations of UNC1999 above its cellular IC_{50} for approximately 12 h. We next examined whether UNC1999 is orally bioavailable and are pleased to find that a single 50 mg/kg oral dose of UNC1999 achieved high C_{max} (4,700 nM) and good exposure levels in male Swiss albino mice. The plasma concentrations of UNC1999 are maintained above its cellular IC_{50} for approximately 20 h following this single oral dose. It is worth noting that all doses including the 150 mg/kg IP dose are well tolerated by all test mice, and no adverse effects are observed^[1].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!