Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Tenovin-6

Catalog No: tcsc1976

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1011557-82-6

Formula:
$C_{25}H_{34}N_4O_2S$

Pathway:
Autophagy;Epigenetics;Cell Cycle/DNA Damage;Apoptosis;Epigenetics;Cell Cycle/DNA Damage

Target:
Autophagy;Sirtuin;Sirtuin;MDM-2/p53;HDAC;HDAC

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 31 mg/mL (68.19 mM)

Observed Molecular Weight:
454.63

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Product Description

Tenovin-6 is a water soluble inhibitor of **SIRT1** and **SIRT2**, slightly inhibits **HDAC8**, and is also a potent activator of **p53**, with **IC_{50}s** of 21 μM, 10 μM, and 67 μM for SirT1, SirT2, and SirT3, respectively.

IC50 & Target: IC50: 21 μM (SirT1), 10 μM (SirT2), 67 μM (SirT3)[1]

In Vitro: Tenovin-6 inhibits the growth of *S. cerevisiae* cultures with an IC_{50} of 30 μM and is more toxic to yeast than the less water-soluble tenovin-1. Tenovin-6 rapidly increases the levels of endogenous K382-Ac p53 in MCF-7 cells[1]. Tenovin-6 (0 to 15 μM) dose dependently increases the level of LC3-II in diverse cell types, and the increase is ATG5/7 dependent. Tenovin-6 treatment also increases the number and intensity of autophagic vesicles with or without the presence of Torin 1, and prevents Torin 1-induced SQSTM1/p62 degradation. Tenovin-6 affects the acidification of autolysosomes and impairs the hydrolytic activity of lysosomes but does not affect the fusion between autophagosomes and lysosomes. That tenovin-6 inhibits autophagy does not correlate with p53 activation and SIRT1/2 inhibition by knockdown or knockout cannot mimic the effect of tenovin-6 on LC3B accumulation[2]. Tenovin-6 (0, 1, 2.5, 5 or 10 μM) potently inhibits cell proliferation in a dose- and time-dependent manner in all OCI-Ly1, DHL-10, U2932, RIVA, HBL1 and OCI-Ly10 cell lines. Tenovin-6 consistently increases LC3B-II level in DLBCL cell lines by inhibiting the classical autophagy pathway, without activating p53, and the increase is independent of SIRT1/2/3 and p53. Tenovin-6 induces apoptosis through the extrinsic cell-death pathway[3]. Tenovin-6 suppresses the growth of UM cells with IC_{50} of 12.8 μM, 11.0 μM, 14.58 μM and 9.62 μM for 92.1, Mel 270, Omm 1 and Omm 2.3 cells, respectively[4].

In Vivo: Tenovin-6 (50 mg/kg, i.p.) inhibits the growth of tumor in mice[1].