

# Tenovin 6 (Hydrochloride)

Catalog No: tcsc2321



## Available Sizes

**Size:** 2mg

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

1011301-29-3

**Formula:**

$C_{25}H_{35}ClN_4O_2S$

**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 :  $\geq 49$  mg/mL (99.78 mM)

**Alternative Names:**

Tenovin 2

### Observed Molecular Weight:

491.09

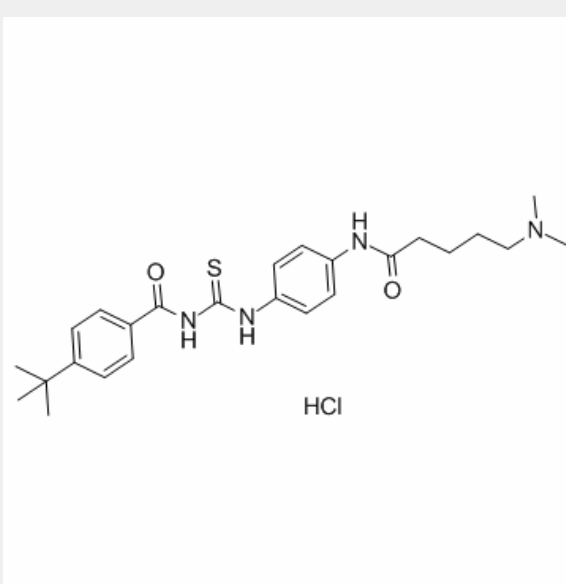
## Product Description

Tenovin-6 Hydrochloride is a water soluble inhibitor of **SIRT1** and **SIRT2**, slightly inhibits **HDAC8**, and is also a potent activator of **p53**, with **IC<sub>50</sub>**s of 21  $\mu$ M, 10  $\mu$ M, 67  $\mu$ M for SirT1, SirT2, and SirT3, respectively.

IC50 & Target: IC50: 21  $\mu$ M (SirT1), 10  $\mu$ M (SirT2), 67  $\mu$ M (SirT3)<sup>[1]</sup>

**In Vitro:** Tenovin-6 inhibits the growth of *S. cerevisiae* cultures with an **IC<sub>50</sub>** of 30  $\mu$ M 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<sup>[1]</sup>. Tenovin-6 (0 to 15  $\mu$ M) 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<sup>[2]</sup>. Tenovin-6 (0, 1, 2.5, 5 or 10  $\mu$ M) 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<sup>[3]</sup>. Tenovin-6 suppresses the growth of UM cells with **IC<sub>50</sub>** of 12.8  $\mu$ M, 11.0  $\mu$ M, 14.58  $\mu$ M and 9.62  $\mu$ M for 92.1, Mel 270, Omm 1 and Omm 2.3 cells, respectively<sup>[4]</sup>.

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



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