

Tenovin-1

Catalog No: tcsc1512



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

380315-80-0

Formula:

$C_{20}H_{23}N_3O_2S$

Pathway:

Autophagy;Epigenetics;Cell Cycle/DNA Damage;Apoptosis

Target:

Autophagy;Sirtuin;Sirtuin;MDM-2/p53

Purity / Grade:

>98%

Solubility:

DMSO : 33.33 mg/mL (90.21 mM; Need ultrasonic)

Observed Molecular Weight:

369.48

Product Description

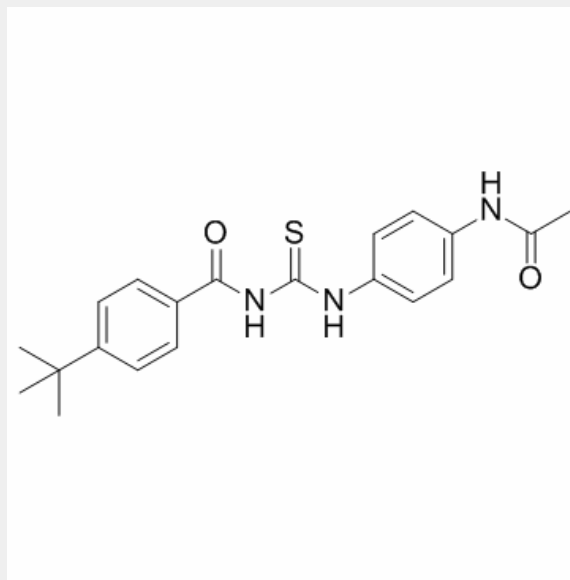
Tenovin-1 is an inhibitor of **sirtuin 1** and **sirtuin 2**, an activator of **p53** and may have potential in the management of cancer.

IC50 & Target: Sirtuin, MDM-2/p53^[1]

In Vitro:

Tenovin-1 (1-10 μ M) induces a bell-shaped concentration-dependent cell death in SK-N-MC cells. Tenovin-1 alters the gene and protein expression of Bcl-2 family members. However, Tenovin-1 has a more powerful effect both on mRNA and protein expression levels at a lower concentration than does the higher concentration. Furthermore, Tenovin-1-induced cytotoxic effects depend on caspases in p53 wild-type WE-68 cells, but not in p53 null SK-N-MC cells. AIF plays a major role in tenovin-1-induced cell death in p53 null SK-N-MC cells, but not in p53 wild-type WE-68 cells. Reactive oxygen species are also involved in tenovin-1-mediated cell death in SK-N-MC cells. In addition, Tenovin-1 causes DNA damage in SK-N-MC cells^[1]. Tenovin-1 (5 μ M) increases the nuclear size in glioblastoma cells and rat primary astrocytes. Tenovin-1 induces cellular senescence, which does not appear to be related to cell death^[2]. Tenovin-1 protects p53 from mdm2-mediated degradation with little effect on p53 synthesis. Tenovin-1 targets a factor(s) upstream of p53 that not only modulates p53 function but also other cellular pathways. Tenovin-1 (10 μ M) inhibits Sirt2 deacetylase activity^[3]. Tenovin-1 (10 μ M) reduces proliferation and anchorage independent growth of NSCLC cells. Tenovin-1 also inhibits cell growth of H358 lung cancer cells^[4].

In Vivo: Tenovin-1 (92 mg/kg, i.p.) reduces growth of tumors in SCID mice derived from BL2 cells or ARN8 cells^[5].



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