

# Pifithrin- $\mu$

**Catalog No: tcsc0002901**



## Available Sizes

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**Size:** 10mg



## Specifications

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**CAS No:**

64984-31-2

**Formula:**

$C_8H_7NO_2S$

**Pathway:**

Metabolic Enzyme/Protease;Cell Cycle/DNA Damage;Apoptosis

**Target:**

HSP;HSP;MDM-2/p53

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 108$  mg/mL (595.99 mM)

**Alternative Names:**

PFT $\mu$ ;2-Phenylethanesulfonamide

**Observed Molecular Weight:**

181.21

## Product Description

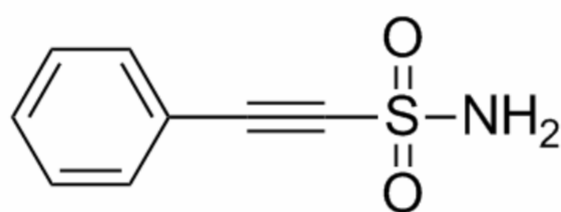
Pifithrin- $\mu$  is an inhibitor of **p53** and **HSP70**, with antitumor and neuroprotective activity.

IC50 & Target: p53<sup>[1]</sup>, HSP70<sup>[2]</sup>

**In Vitro:** Pifithrin- $\mu$  (10  $\mu$ M) is a p53 inhibitor, which inhibits p53 binding to mitochondria by reducing its affinity to antiapoptotic

proteins Bcl-xL and Bcl-2 but has no effect on p53-dependent transactivation, activity of caspases 2, 8, 9 and 10 in a cell-free system, or NF- $\kappa$ B-dependent transcription<sup>[1]</sup>. Pifithrin- $\mu$  (PES) time- and dose-dependently reduces viability in A549 cells, with IC<sub>50</sub>s of 44.9 and 25.7  $\mu$ M at 24 h and 48 h. Pifithrin- $\mu$  (20  $\mu$ M) suppresses the cell migration, induces cell cycle arrest and cell apoptosis in A549 and H460 cells. Pifithrin- $\mu$  (10 or 20  $\mu$ M) inhibits activities of AKT, ERK, and Hsp70 in A549 and H460 cells. Pifithrin- $\mu$  (20  $\mu$ M) sensitizes A549 and H460 cell lines to TRAIL-induced cell proliferation inhibition and apoptosis<sup>[2]</sup>.

**In Vivo:** Pifithrin- $\mu$  (40 mg/kg, i.p.) shows no protective effect against doses of radiation that cause gastrointestinal syndrome in mice<sup>[1]</sup>. Pifithrin- $\mu$  (PES, 10 mg/kg) shows antitumor effect in mice bearing A549 cells<sup>[2]</sup>. Pifithrin- $\mu$  exhibits neuroprotective effect with the P53-inhibitor pifithrin- $\mu$  after cardiac arrest in a rodent model<sup>[3]</sup>.



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