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Pifithrin-μ

Catalog No: tcsc0002901

Available Sizes

Size: 10mg

Specifications

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 : ≥ 108 mg/mL (595.99 mM)

Alternative Names:
PFTμ;2-Phenylethynesulfonamide

Observed Molecular Weight:
181.21

Product Description

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

IC50 & Target: p53[1], HSP70[2]

In Vitro: Pifithrin-μ (10 μM) is a p53 inhibitor, which inhibits p53 binding to mitochondria by reducing its affinity to antiapoptotic

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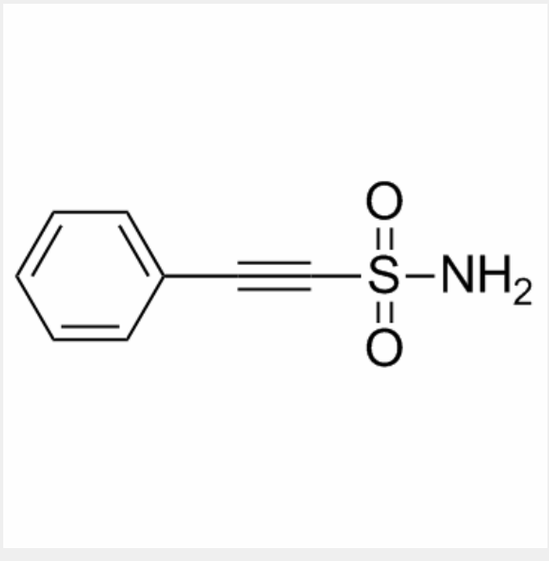
proteins Bcl-xL and Bcl-2 but has no effect on p53-dependent transactivation, activity of caspases 2, 8, 9 and 10 in a cell-free system, or NF-κB-dependent transcription[1]. Pifithrin-μ (PES) time- and dose-dependently reduces viability in A549 cells, with IC_{50}s of 44.9 and 25.7 μM at 24 h and 48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

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



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