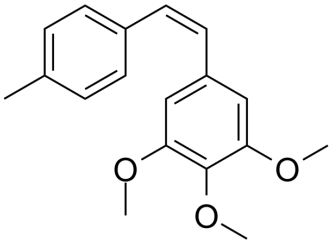
SS28

Cat. No.:	HY-100761
CAS No.:	141172-08-9
Molecular Formula:	$C_{18}H_{20}O_3$
Molecular Weight:	284.35
Target:	Microtubule/Tubulin; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

SS28, a SRT501 analog with oral bioavailability, inhibits tubulin polymerization to cause cell cycle arrest at G2/M phase. SS28 results in apoptosis rather than necrosis tubulin[1].

IC_{50} & Target

Tubulin[1].

In Vitro

SS28 (0-20 μM) induces cytotoxicity in different cancer cell lines[1].
SS28 treatment (5 μM for A549 and 2 μM for CEM) results in cell cycle arrest at G2/M phase leading to apoptosis upon further incubation[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	CEM, Reh, Nalm6, SUDHL8, Molt4, A549, HeLa 293T cells.
Concentration:	1, 5, 10 and 20 μM.
Incubation Time:	48 and 72 h.
Result:	CEM and A549 exhibited maximum sensitivity to SS28 followed by SUDHL8, Molt4 and Reh, whereas Nalm6 showed moderate sensitivity after 48 h of the treatment. IC_{50} values of SS28 in CEM and A549 cell line were 2.6 and 5.2 μM, respectively, whereas in SUDHL8, Molt4, Reh and Nalm6 were 2.7, 5.1, 7.9 and 21 μ M, respectively after 48 h of treatment.

Cell Cycle Analysis[1]

Cell Line:	CEM and A549 cells.
Concentration:	2 μM (CEM) and 5 μM (A549).
Incubation Time:	6, 12, 18, 24 and 30 h.
Result:	Showed significant accumulation of cells at G2/M phase in a time-dependent manner (6 to 24 h) and a subsequent increase in the sub-G1 population, indicative of apoptosis at 30 h in case of A549. Similarly, studies in CEM also showed a distinct G2/M arrest after 12 h of treatment, as compared to vehicle control.

In Vivo

SS28 (15 mg/kg. b.wt.) treatment results in inhibition of tumor cell proliferation[1].

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Animal Model:	BALB/c mice using EAC cells[1].
Dosage:	15 mg/kg.
Administration:	Orally on every alternate day for 9 doses.
Result:	There was no further tumor progression in the mice when SS28 was administered, unlike the untreated tumor control mice.

REFERENCES

[1]. Thomas E, et al. A Novel Resveratrol Based Tubulin Inhibitor Induces Mitotic Arrest and Activates Apoptosis in Cancer Cells. Sci Rep. 2016 Oct 17;6:34653.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA