SZABO SCANDIC

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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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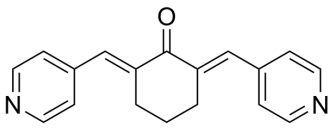
SC66

Cat. No.:	HY-19832
CAS No.:	871361-88-5
Molecular Formula:	$C_{18}H_{16}N_2O$
Molecular Weight:	276.33
Target:	Akt; Apoptosis
Pathway:	PI3K/Akt/mTOR; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (90.47 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6189 mL	18.0943 mL	36.1886 mL
5 mM	0.7238 mL	3.6189 mL	7.2377 mL
10 mM	0.3619 mL	1.8094 mL	3.6189 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.05 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.05 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SC66 is an Akt inhibitor, reduces cell viability in a dose- and time-dependent manner, inhibits colony formation and induces apoptosis in hepatocellular carcinoma (HCC) cells.

IC_{50} & Target

Akt[1]

In Vitro

SC66 inhibits cell viability and colony forming capacity of HCC cells with IC_{50}s of 0.77□0.47□0.92□0.75 and 2.85 μg/mL at 72 hours for HepG2, Hep3B, PLC/PRF/5□HA22T/VGH and Huh7 cells. HepG2, HA22T/VGH and PLC/PRF/5 cells have similar IC_{50}s

	of approximately 0.85 and 0.75 μg/mL at 48 and 72 hours, respectively. To determine whether the decrease in cell viability is related to apoptosis induction, TUNEL assays are performed in Hep3B and Huh7 cells treated with 1, 2 and 4 μg/mL of SC66 for 24 hours. In Hep3B cells the number of TUNEL-positive cells increased with increasing concentrations of SC66, whereas in Huh7 cells very few light brown-colored cells are observed only after treatment with 4 μg/mL SC66[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	To demonstrate the effectiveness in vivo of SC66 on HCC, a mouse xenograft tumor model of Hep3B cells is used. When tumors became palpable, at a size of about 150 mm^3, mice are randomized into three groups of 6 animals each. The treated group receive SC66 at 15 and 25 mg/kg twice a week via i.p. injection, while the untreated group receive the vehicle alone. Treatment with 25 mg/Kg SC66 significantly reduces tumor volume to 37% on day 17 when compared with tumors of the untreated group[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Cells (5 ×10^3/well) are distributed into each well of 96-well microtiter plates and then incubated overnight. At time 0, the medium is replaced with fresh complete medium and different doses of SC66 are added. Cells are cultured for 24, 48 and 72 hours. At the end of treatment, MTS assays are performed using the CellTiter Aqueous OneSolution kit. Cell viability is expressed as a percentage of the absorbance measured in the control cells. Values are expressed as means±SD of three separate experiments, each performed in triplicate[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Mice[1] Male nude athymic mice (Fox1 nu/nu) aged 4 weeks are used. Suspensions of 1×10^7 Hep3B cells in 0.2 mL of PBS are inoculated into the right flank of the animal. When tumors became palpable (around 150 mm^3), the mice are randomly divided into three groups of 6 animals each, with the various tumor volumes equally distributed among the three groups. Two groups of mice are treated twice a week with 15 and 25 mg/kg SC66 suspended in DMSO, further diluted in a solution of 25% ethanol and administered via i.p. injection. The control group receive the vehicle alone. Tumor volumes are determined twice a week using calipers. Primary tumor volumes are calculated. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2020 May 11;11(5):353.
- Front Pharmacol. 2020 Jul 31;11:1102.
- Molecules. 2022 Dec 5;27(23):8568.
- Toxicology. 2022 Feb 5;469:153119.
- Cancer Biol Ther. 2024 Dec 31;25(1):2321770.

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REFERENCES

[1]. Cusimano A, et al. Cytotoxic activity of the novel small molecule AKT inhibitor SC66 in hepatocellular carcinoma cells. Oncotarget. 2015 Jan 30;6(3):1707-22.

Caution: Product has not been fully validated for medical applications. For research use only.

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