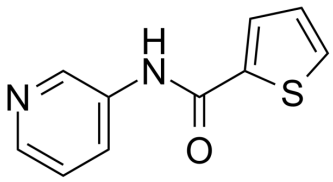
SW106065

Cat. No.:	HY-124778
CAS No.:	62289-81-0
Molecular Formula:	$C_{10}H_8N_2OS$
Molecular Weight:	204.25
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (489.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.8960 mL	24.4798 mL	48.9596 mL
	5 mM	0.9792 mL	4.8960 mL	9.7919 mL
	10 mM	0.4896 mL	2.4480 mL	4.8960 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 (12.24 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.24 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SW106065 is an apoptosis inducer in malignant peripheral nerve sheath tumors (MPNST). SW106065 inhibits ATP consumption of sMPNST and other models of MPNST with an EC_{50} of 1 μM. SW106065 can be used for MPNST research[1].

In Vitro

SW106065 (Compound 21, Cpd21) inhibits the human MPNST cell lines growth in a dose-dependent manner, and EC_{50} concentrations of 439 nM and 753.6 nM for S462 and SNF96.2 cells, respectively. SW106065 remains nontoxic to normally dividing Schwann cells or mouse embryonic fibroblasts[1].

SW106065 (Cpd21; 0.25-5 μM; 24 hours; sMPNST cells) treatment shows a decreased percentage of cells in S phase, and a

corresponding increased percentage in G1/G0 and G2/M[1].
SW106065 (Cpd21; 0.25-5 μM; 24 hours; sMPNST cells) treatment decreases the levels of cyclin A2, cyclin B1, cyclin D1, cyclin E, cdk4, and cdk6. And increases levels of cdkn1a and cdkn2a mRNA were observed in a dose-dependent manner.SW106065 (Cpd21; 0.25-5 μM; 24 hours; sMPNST cells) treatment decreases the levels of Cyclin D1 protein[1].
SW106065 (Cpd21) treatment significant increase in the percentage of apoptotic cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cycle Analysis[1]

Cell Line:	sMPNST cells
Concentration:	0.25 μM, 0.5 μM, 1 μM, 2.5 μM, and 5 μM
Incubation Time:	24 hours
Result:	Showed a decreased percentage of cells in S phase, and a corresponding increased percentage in G1/G0 and G2/M.

RT-PCR[1]

Cell Line:	sMPNST cells
Concentration:	0.25 μM, 0.5 μM, 1 μM, 2.5 μM, and 5 μM
Incubation Time:	24 hours
Result:	Decreased levels of cyclin A2, cyclin B1, cyclin D1, cyclin E, cdk4, and cdk6. Increased levels of cdkn1a and cdkn2a mRNA were observed in a dose-dependent manner.

Western Blot Analysis[1]

Cell Line:	sMPNST cells
Concentration:	0.25 μM, 0.5 μM, 1 μM, 2.5 μM, and 5 μM
Incubation Time:	24 hours
Result:	Decreased levels of Cyclin D1 protein.

In Vivo

SW106065 (Cpd21; 40 mg/kg; intraperitoneal injection; twice per day for 4 weeks) treatment can be delivered to mice in concentrations to sufficiently penetrate sMPNST tissue, and inhibit tumor development[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NCR-nu/nu female mice (6-7 week old) injected with MPNST cells[1]
Dosage:	40 mg/kg
Administration:	Intraperitoneal injection; twice per day for 4 weeks
Result:	Reduced MPNST burden in a mouse allograft model.

REFERENCES

[1]. Vincent Chau, et al. Preclinical therapeutic efficacy of a novel pharmacologic inducer of apoptosis in malignant peripheral nerve sheath tumors. Cancer Res. 2014 Jan 15;74(2):586-97.

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

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