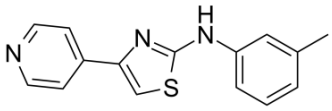
STF-62247

Cat. No.:	HY-100746
CAS No.:	315702-99-9
Molecular Formula:	$C_{15}H_{13}N_3S$
Molecular Weight:	267.35
Target:	Autophagy
Pathway:	Autophagy

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 : 50 mg/mL (187.02 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7404 mL	18.7021 mL	37.4041 mL
	5 mM	0.7481 mL	3.7404 mL	7.4808 mL
	10 mM	0.3740 mL	1.8702 mL	3.7404 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 (9.35 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.5 mg/mL (9.35 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

STF-62247 is TGN inhibitor with IC50 of 0.625μM and 16μM in RCC4 and RCC4/VHL cells,respectively.It specifically induces autophagic cell death in cells that have lost VHL, an essential mutation in the development of RCC.IC50: 0.625/16μM in RCC4 and RCC4/VHL cells,respectively.[1]In vitro: STF-62247 induces cytotoxicity in VHL-deficient cells in a HIF-independent manner, STF-62247 increases acidification in VHL-deficient cells ,TGN is a target of STF-62247 and a drug-selective pathway synthetically lethal in VHL-deficient cells.[1] Golgi trafficking are required as initial signals in STF-62247-induced autophagy.[2]STF-62247 increases radiosensitivity in a VHL-dependent manner.[3]In vivo: SN12C, SN12C-VHL shRNA, or 786-O cells were implanted subcutaneously into the flanks of immunodeficient mice. The selective cytotoxicity of STF-62247 for the VHL-deficient cells was also demonstrated in 786-O cells compared to their wild-type VHL counterparts by clonogenic assay in vitro. Daily treatment with STF-62247

significantly reduced tumor growth of VHL-deficient cells. This decrease in tumor growth was concentration dependent. Importantly, drug treatment did not have any effect on the growth of SN12C tumor cells that have wild-type VHL. Together,STF-62247 reduces tumor growth in VHL-deficient cells in mice.[1]

REFERENCES

[1]. Turcotte, S. et al. A molecule targeting VHL-deficient renal cell carcinoma that induces autophagy. Cancer cell 14, 90-102, doi:10.1016/j.ccr.2008.06.004 (2008)

[2]. Chan, D. A. & Giaccia, A. J. Targeting cancer cells by synthetic lethality: autophagy and VHL in cancer therapeutics. Cell cycle 7, 2987-2990, doi:10.4161/cc.7.19.6776 (2008)

[3]. Anbalagan, S. et al. Radiosensitization of renal cell carcinoma in vitro through the induction of autophagy. Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology 103, 388-393, doi:10.1016/j.radonc.2012.04.001 (2012

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