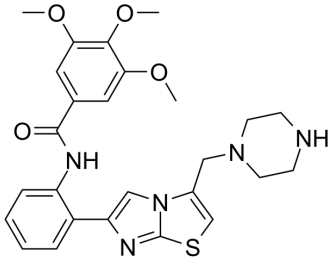
SRT 1460

Cat. No.:	HY-124037
CAS No.:	925432-73-1
Molecular Formula:	$C_{26}H_{29}N_5O_4S$
Molecular Weight:	507.6
Target:	Sirtuin
Pathway:	Cell Cycle/DNA Damage; Epigenetics
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 : 10 mg/mL (19.70 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9701 mL	9.8503 mL	19.7006 mL
	5 mM	0.3940 mL	1.9701 mL	3.9401 mL
	10 mM	0.1970 mL	0.9850 mL	1.9701 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: ≥ 1.25 mg/mL (2.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (2.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SRT 1460, a potent Sirtuin-1 (SIRT1) activator with an $EC_{1.5}$ value of 2.9 μM, shows good selectivity for activation of SIRT1 versus SIRT2 and SIRT3 (EC1.5>300 μM), and is more potent than Resveratrol and the closest sirtuin homologues[1].

IC_{50} & Target

SIRT1
2.9 μM (EC1.5)

In Vitro

SRT 1460 (2-6 μM; 72 hours) inhibits cell viability in a dose-dependent manner, with all pancreatic cancer cells being more sensitive than the control HPDE cell. The IC_{50}s of those cells are: Patu8988t, 1.62±0.13 μM; SU86.86, 2.31±0.23 μM; Panc-1, 0.66 ±0.02 μM; HPDE, 2.39±0.29 μM[2].
SRT 1460 (5 μM; 16 hours) increases expression of the autophagy marker LC3-II[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	Patu8988t (pancreatic cancer cells), Panc-1 (pancreatic cancer cells), SU86.86 (pancreatic cancer cells), HPDE cells
Concentration:	2 μM, 4 μM, 6 μM
Incubation Time:	72 hours
Result:	Inhibited cell viability in a dose-dependent manner, with all pancreatic cancer cells being more sensitive than the control HPDE cell. The IC_{50}s of those cells were: Patu8988t, 1.62±0.13 μM; SU86.86, 2.31±0.23 μM; Panc-1, 0.66 ±0.02 μM; HPDE, 2.39±0.29 μM.

Western Blot Analysis[2]

Cell Line:	Patu8988t cells
Concentration:	5 μM
Incubation Time:	16 hours
Result:	SRT1460 increased expression of the autophagy marker LC3-II.

CUSTOMER VALIDATION

- Cell Signal. 2021 Apr 21;110016.

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REFERENCES

[1]. Milne JC, et al. Small molecule activators of SIRT1 as therapeutics for the treatment of type 2 diabetes. Nature. 2007 Nov 29; 450(7170): 712–716.

[2]. Chini CC, et al. SIRT1-Activating Compounds (STAC) Negatively Regulate Pancreatic Cancer Cell Growth and Viability Through a SIRT1 Lysosomal-Dependent Pathway. Clin Cancer Res. 2016 May 15;22(10):2496-507.

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