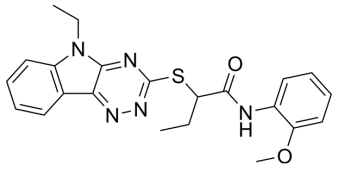
SW044248

Cat. No.:	HY-19637
CAS No.:	522650-83-5
Molecular Formula:	$C_{22}H_{23}N_5O_2S$
Molecular Weight:	421.52
Target:	Topoisomerase
Pathway:	Cell Cycle/DNA Damage
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 : 12.5 mg/mL (29.65 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3724 mL	11.8618 mL	23.7237 mL
	5 mM	0.4745 mL	2.3724 mL	4.7447 mL
	10 mM	0.2372 mL	1.1862 mL	2.3724 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (2.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SW044248 is a non-canonical topoisomerase I inhibitor, and selectively toxic for certain non-small cell lung cancer (NSCLC) cell lines.

IC_{50} & Target

Topoisomerase I

In Vitro

SW044248 is a non-canonical Top1 inhibitor, and is selectively toxic for certain NSCLC cell lines. SW044248 shows no effect on Top2. SW044248 (2, 5, 10 μM) rapidly inhibits transcription, translation and DNA synthesis in sensitive cells (HCC4017 and H292 cells) but not insensitive cells (HBEC30KT cells and HCC44 cells). SW044248 (10 μM) rapidly activates the integrated stress response through kinases GCN2 and PKR. The inhibition of Top1 in HCC4017 cells is helpful to the toxicity of SW044248. SW044248 (5, 10 μM) shows no effect on HBEC30KT and HCC44 cell lines due to the up-regulation of $p21^{CDKN1A}$[1]. SW044248 is selectively toxic in 18/74 NSCLC lines[2].

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

PROTOCOL

Cell Assay [1]

100 μL of 50,000 cells/mL cell suspensions of individual cell lines are added in wells in 96-well plates. The next day, 100 μL of cell medium substituted with 2X concentration of SW044248 or camptothecin or DMSO in triplicates is added to each well. After 96 and 120 hours the ATP concentration in the wells is measured with CelTiter-Glo. The luminescence is measured with an plate reader[1].

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

REFERENCES

[1]. Zubovych IO, et al. A Novel Inhibitor of Topoisomerase I Is Selectively Toxic for a Subset of Non-Small Cell Lung Cancer Cell Lines. Mol Cancer Ther. 2016 Jan;15(1):23-36.

[2]. Kim HS, et al. Systematic identification of molecular subtype-selective vulnerabilities in non-small-cell lung cancer. Cell. 2013 Oct 24;155(3):552-66.

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