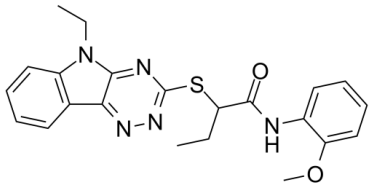
Data Sheet

Product Name:	SW044248
Cat. No.:	CS-5386
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
Solubility:	DMSO : 12.5 mg/mL (29.65 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

SW044248 is a non-canonical **topoisomerase I** inhibitor, and selectively toxic for certain non-small cell lung cancer (NSCLC) cell lines. IC50 & Target: Topoisomerase I[1] **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].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: SW044248 is dissolved in DMSO.[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].

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.

CAIndexNames:

Butanamide, 2-[(5-ethyl-5H-1,2,4-triazino[5,6-b]indol-3-yl)thio]-N-(2-methoxyphenyl)-

SMILES:

CCC(SC1=NN=C2C(N(CC)C3=C2C=CC=C3)=N1)C(NC4=CC=CC=C4OC)=O

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

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