

Product Data Sheet

Product Name: SW044248

Cat. No.: GC19342

Chemical Properties

Cas. No. 522650-83-5

SMILES CCC(SC1=NN=C2C(N(CC)C3=C2C=CC=C3)=N1)C(=O)N4=CC=CC=C4OC

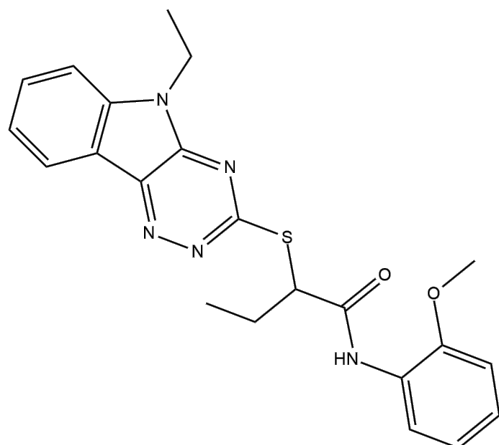
Formula $C_{22}H_{23}N_5O_2S$ M.Wt 421.52

Solubility DMSO : ≥ 30 mg/mL (71.17 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Cell experiment: 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 CellTiter-Glo. The luminescence is measured with a plate reader[1].

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

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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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.

Background

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

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 uM) 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 uM) 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 uM) shows no effect on HBEC30KT and HCC44 cell lines due to the up-regulation of p21CDKN1A[1]. SW044248 is selectively toxic in 18/74 NSCLC lines[2].

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.

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