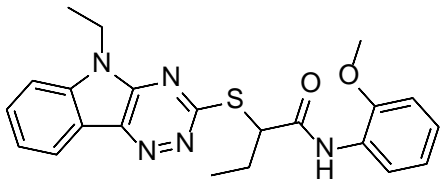


# Product data sheet



MedKoo Cat#: 407296 Name: SW044248 CAS#: 522650-83-5 Chemical Formula: C <sub>22</sub> H <sub>23</sub> N <sub>5</sub> O <sub>2</sub> S Exact Mass: 421.1572 Molecular Weight: 421.52		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

## 1. Product description:

SW044248 is a potent and selective Topoisomerase I inhibitor. SW044248 killed approximately 15% of a panel of 74 NSCLC cell lines and was nontoxic to immortalized human bronchial cell lines. The acute transcriptional response to SW044248 in sensitive HCC4017 cells correlated significantly with inhibitors of topoisomerases and SW044248 inhibited topoisomerase 1 (Top1) but not topoisomerase 2. SW044248 inhibited Top1 differently from camptothecin and camptothecin did not show the same selective toxicity as SW044248. Elimination of Top1 by siRNA partially protected cells from SW044248, although removing Top1 was itself eventually toxic.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	10.5	24.91
DMF	5.0	11.86
Ethanol	1.0	2.37

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.37 mL	11.86 mL	23.72 mL
5 mM	0.47 mL	2.37 mL	4.74 mL
10 mM	0.24 mL	1.19 mL	2.37 mL
50 mM	0.05 mL	0.24 mL	0.47 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

1. Zubovych IO, Sethi A, Kulkarni A, Tagal V, Roth MG. 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. doi: 10.1158/1535-7163.MCT-15-0458. Epub 2015 Dec 14. PMID: 26668189; PMCID: PMC4707128.

### In vivo study

TBD

## 7. Bioactivity

Biological target: SW044248 is a topoisomerase I inhibitor.

# Product data sheet



## In vitro activity

---

To investigate the mechanism of action of SW044248, the effect of the compound on DNA replication, global RNA synthesis and protein synthesis was determined. HCC4017 and HBEC30KT cells were treated with increasing concentrations of SW044248 for 5 hours followed by labeling for an additional 45 minutes with alkyne-modified nucleotide analogs, 5-ethynyl-2'-deoxyuridine (EdU) for studying DNA replication, 5-ethynyl-2'-uridine (EU) for RNA transcription or amino acid homopropargylglycine (HPG) for studying protein translation. SW044248 rapidly blocked DNA replication, transcription of RNA and protein translation in HCC4017 cells (Figure 2A) and H292 cells (Figure S2A) but not in resistant HBEC30KT cells (Figure 2B) or HCC44 cells (Figure S2A).

Reference: Mol Cancer Ther. 2016 Jan;15(1):23-36. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4707128/>

## In vivo activity

---

TBD

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*