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产品名称: **SW044248**  
产品别名: **SW044248**

生物活性:				
Description	SW044248 is a non-canonical topoisomerase I inhibitor, and selectively toxic for certain non-small cell lung cancer (NSCLC) cell lines.			
IC <sub>50</sub> & 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 <sup>CDKN1A</sup> [1]. SW044248 is selectively toxic in 18/74 NSCLC lines[2].			
Solvent&Solubility	<b>In Vitro:</b> DMSO : 12.5 mg/mL (29.65 mM; Need ultrasonic)			
		Solvent Mass Concentration	1 mg	5 mg
	Preparing	1 mM	2.3724 mL	11.8618 mL
	Stock Solutions	5 mM	0.4745 mL	2.3724 mL
		10 mM	0.2372 mL	1.1862 mL
	*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液; 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。 储备液的保存方式和期限 -80°C, 6 months; -20°C, 1 month。 -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。 <b>In Vivo:</b> 请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液, 再依次添加助溶剂: ——为保证实验结果的可靠性, 澄清的储备液可以根据储存条件, 适当保存; 体内实验的工作液, 建议您现用现配, 当天使用; 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比; 如在配制过程中出现沉淀、析出现象, 可以通过加热和/或超声的方式助溶  1.请依序添加每种溶剂: 10% DMSO →90% corn oil Solubility: ≥ 1.25 mg/mL (2.97 mM); Clear solution 此方案可获得 ≥ 1.25 mg/mL (2.97 mM, 饱和度未知) 的澄清溶液, 此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例, 取 100 µL 12.5 mg/mL 的澄清 DMSO 储备液加到 900 µL 玉米油中, 混合均匀。			
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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**实验参考:**

<b>Cell Assay</b>	100 $\mu$ L of 50,000 cells/mL cell suspensions of individual cell lines are added in wells in 96-well plates. The next day, 100 $\mu$ L 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].
<b>References</b>	[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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