

产品名称：**GSK2879552**

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生物活性：

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Description	GSK2879552 is an orally available, irreversible inhibitor of lysine specific demethylase 1 (LSD1) , with potential antineoplastic activity.				
In Vitro	GSK2879552 inhibits KDM1A histone demethylase activity, inducing differentiation of sorafenib-resistant cells and attenuates stemness properties. GSK2879552 derepresses the transcription of Wnt antagonists and downregulates β -catenin signaling activity in sorafenib-resistant cells[1]. GSK2879552 is 280-fold selective over D-amino acid oxidase, allowing for direct comparison of inactivation efficiency ($K_{lapp}=520 \pm 170 \mu\text{M}$, $k_{inact}=0.12 \pm 0.01 \text{ min}^{-1}$, $k_{inact}/K_{lapp}=2.3\times 10^{-4} \pm 1.31\times 10^{-5} \text{ min}^{-1} \mu\text{M}^{-1}$). GSK2879552 inhibits the growth of 9/28 small cell lung carcinoma (SCLC) lines and 20/29 AML lines, with EC_{50} of 2-240 nM[2].				
In Vivo	GSK2879552 (1.5 mg/kg, p.o.) treatment exhibits tumor growth inhibition in SCLC xenograft bearing mice. There is 57% and 83% tumor growth inhibition (TGI) in NCI-H526 and NCI-H1417 tumor bearing mice respectively. NCI-H510 and NCI-H69 tumor bearing mice also demonstrate partial TGI (38% and 49% respectively) in response to GSK2879552, while no significant TGI is observed for SHP77 bearing mice[2].				
Solvent&Solubility	<i>In Vitro:</i> DMSO : 50 mg/mL (137.18 mM; Need ultrasonic)				
	<div>Preparing Stock Solutions</div>	<div><div>Solvent Concentration</div><div>Mass</div></div>	1 mg	5 mg	10 mg
		1 mM	2.7436 mL	13.7182 mL	27.4363 mL
		5 mM	0.5487 mL	2.7436 mL	5.4873 mL
		10 mM	0.2744 mL	1.3718 mL	2.7436 mL
	<p>*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。</p> <p>储备液的保存方式和期限：-80℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。</p> <p><i>In Vivo:</i></p> <p>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：</p> <p>——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</p>				
	1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: $\geq 2.75 \text{ mg/mL}$ (7.54 mM); Clear solution				
	此方案可获得 $\geq 2.75 \text{ mg/mL}$ (7.54 mM, 饱和度未知) 的澄清溶液。				
	以 1 mL 工作液为例，取 100 μL 27.5 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。				
	2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE- β -CD in saline) Solubility: $\geq 2.75 \text{ mg/mL}$ (7.54 mM); Clear solution				
	此方案可获得 $\geq 2.75 \text{ mg/mL}$ (7.54 mM, 饱和度未知) 的澄清溶液。				
	以 1 mL 工作液为例，取 100 μL 27.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE- β -CD 生理盐水水溶液中，混合均匀。				

	<p>3.请依序添加每种溶剂： 10% DMSO →90% corn oil</p> <p>Solubility: ≥ 2.75 mg/mL (7.54 mM); Clear solution</p> <p>此方案可获得 ≥ 2.75 mg/mL (7.54 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。</p> <p>以 1 mL 工作液为例，取 100 μL 27.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。</p>
References	<p>[1]. Huang M, et al. Targeting KDM1A attenuates Wnt/β-catenin signaling pathway to eliminate sorafenib-resistant stem-like cells in hepatocellular carcinoma. Cancer Lett. 2017 Apr 2;398:12-21</p> <p>[2]. Mohammad HP, et al. A DNA Hypomethylation Signature Predicts Antitumor Activity of LSD1 Inhibitors in SCLC. Cancer Cell. 2015 Jul 13;28(1):57-69.</p>
实验参考：	
Cell Assay	<p>Viable cells are measured in Cell Counting Kit-8 (CCK8) assay. Briefly, cells are cultured in a 96-well plate overnight at a density of 5×10^3 cells per well and treated with the indicated concentrations of sorafenib (0 μM, 40 μM or 80 μM) for 24 h. Subsequently, the cells are incubated with 10 μL CCK8 for 60 min at 37°C, 5% CO₂. The absorbance of optical density at 450 nm (A450) is determined with Varioskan Flash. [1]</p>
References	<p>[1]. Huang M, et al. Targeting KDM1A attenuates Wnt/β-catenin signaling pathway to eliminate sorafenib-resistant stem-like cells in hepatocellular carcinoma. Cancer Lett. 2017 Apr 2;398:12-21</p> <p>[2]. Mohammad HP, et al. A DNA Hypomethylation Signature Predicts Antitumor Activity of LSD1 Inhibitors in SCLC. Cancer Cell. 2015 Jul 13;28(1):57-69.</p>

源叶生物