



上海源叶生物科技有限公司
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产品名称: **LCS3**
CAS 号: **109844-92-0**
产品货号: **S89617**

生物活性:

Description	LCS3 是可逆性和非竞争性的谷胱甘肽二硫化物还原酶 (GSR) 和硫氧还蛋白还原酶 1 (TXNRD1) 抑制剂 (IC50 分别为 3.3 μM 和 3.8 μM)。LCS3 表现出抗肿瘤活性，并诱导细胞凋亡，可用于肺腺癌 (LUAD) 的研究。			
Cellular Effect	Cell Line	Type	Value	Description
	HCC1806	IC50	5.1 μM	Cytotoxicity against human HCC1806 cells assessed as reduction in cell viability incubated for 3 days by cell-titer-Glo reagent based assay
	HeLa	EC50	>20 μM	Cytotoxicity against human HeLa cells after 65 hrs by Alamar blue assay
	Vero	CC50	1.5 μM	Cytotoxicity against African green monkey Vero cells after 48 hrs by MTT assay
In Vitro	LCS3 (5 nM-10 μM; 96 h) inhibits lung cancer cell lines, but not non-transformed lung cells[1].			
	LCS3 (3 μM; 3, 6, and 12 h) induces ROS and NRF2 pathway activation in sensitive lung adenocarcinoma (LUAD) cells[1].			
	LCS3 (3 μM; 96 h) selectively kills lung adenocarcinoma (LUAD) cell lines, in part through the induction of apoptosis[1]。			
	Cell Viability Assay[1]			
	Cell Line:		Non-small cell lung cancer (NSCLC) cells and non-transformed lung cells	
	Concentration:		5 nM-10 μM	
	Incubation Time:		96 hours	
	Result:		Inhibited the growth of 24/25 NSCLC cell lines at low micromolar concentrations (IC50<5 μM), both of the non-transformed lung cell lines were relatively insensitive (IC50>10 μM).	
	Cell Viability Assay[1]			
	Cell Line:		H23 and H1650 cells	
	Concentration:		3 μM	
	Incubation Time:		3, 6, and 12 hours	
	Result:		Responded to LCS3 by accumulating ROS and activating the NRF2 transcription program.	
	Apoptosis Analysis[1]			
	Cell Line:		lung adenocarcinoma (LUAD) cells	
	Concentration:		3 μM	
	Incubation Time:		96 hours	
	Result:		Increased cleavage of caspase 3, caspase 7 and/or PARP1 in all LCS3-sensitive LUAD cell lines.	
	Western Blot Analysis[1]			
	Cell Line:		H23 and H1650 cells	



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	<table><tr><td>Concentration:</td><td>3 μM</td></tr><tr><td>Incubation Time:</td><td>24 hours</td></tr><tr><td>Result:</td><td>Increased the protein levels of NRF2 and of the products of selected downstream targets of NRF2 in both cell lines.</td></tr></table>	Concentration:	3 μM	Incubation Time:	24 hours	Result:	Increased the protein levels of NRF2 and of the products of selected downstream targets of NRF2 in both cell lines.
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Solvent&Solubility	细胞实验: DMSO 中的溶解度 : 125 mg/mL (468.80 mM; 超声助溶 (<60°C); 吸湿的 DMSO 对产品的溶解度有显著影响, 请使用新开封的 DMSO)						
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg		
		1 mM	3.7504 mL	18.7519 mL	37.5037 mL		
		5 mM	0.7501 mL	3.7504 mL	7.5007 mL		
		10 mM	0.3750 mL	1.8752 mL	3.7504 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。 动物实验: 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 方案 一 请依序添加每种溶剂: 10% DMSO → 40% PEG300 → 5% Tween-80 → 45% Saline Solubility: ≥ 2.5 mg/mL (9.38 mM); 澄清溶液 此方案可获得 ≥ 2.5 mg/mL (饱和度未知) 的澄清溶液。 以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中, 混合均匀; 再向上述体系中加入 50 μL Tween-80, 混合均匀; 然后再继续加入 450 μL 生理盐水 定容至 1 mL。 生理盐水的配制: 将 0.9 g 氯化钠, 溶解于 ddH₂O 并定容至 100 mL, 可以得到澄清透明的生理盐水溶液。							
参考文献	[1]. Fraser D Johnson, et al. Characterization of a small molecule inhibitor of disulfide reductases that induces oxidative stress and lethality in lung cancer cells. Cell Rep. 2022 Feb 8;38(6):110343.						
完整储备液配制表: 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。							
可选溶剂	质量 / 溶剂体积 / 浓度	1 mg	5 mg	10 mg	25 mg		



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DMSO	1 mM	3.7504 mL	18.7519 mL	37.5037 mL	93.7594 mL
	5 mM	0.7501 mL	3.7504 mL	7.5007 mL	18.7519 mL
	10 mM	0.3750 mL	1.8752 mL	3.7504 mL	9.3759 mL
	15 mM	0.2500 mL	1.2501 mL	2.5002 mL	6.2506 mL
	20 mM	0.1875 mL	0.9376 mL	1.8752 mL	4.6880 mL
	25 mM	0.1500 mL	0.7501 mL	1.5001 mL	3.7504 mL
	30 mM	0.1250 mL	0.6251 mL	1.2501 mL	3.1253 mL
	40 mM	0.0938 mL	0.4688 mL	0.9376 mL	2.3440 mL
	50 mM	0.0750 mL	0.3750 mL	0.7501 mL	1.8752 mL
	60 mM	0.0625 mL	0.3125 mL	0.6251 mL	1.5627 mL
	80 mM	0.0469 mL	0.2344 mL	0.4688 mL	1.1720 mL
	100 mM	0.0375 mL	0.1875 mL	0.3750 mL	0.9376 mL

源叶