



上海源叶生物科技有限公司
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产品名称: **8-Hydroxyquinoline-5-carboxylic Acid**
产品别名: **IOX1**

生物活性:				
Description	IOX1, 5-Carboxy-8-hydroxyquinoline, is a potent broad - spectrum inhibitor of 2OG oxygenases, including the JmjC demethylases. IOX1 inhibits KDM4C, KDM4E, KDM2A, KDM3A and KDM6B with IC50 values of 0.6 μM, 2.3 μM, 1.8 μM, 0.1 μM and 1.4 μM, respectively[1][2]. IOX1 also inhibits ALKBH5[3].			
	IOX1 (0-200 μM; 2 hours) inhibits the proliferation and migration of vascular smooth muscle cells (VSMCs) stimulated with angiotensin II (Ang II) in a concentration-dependent manner[2]. IOX1 (200 μM; 24 hours) blocks the cell cycle progression of angiotensin II (Ang II)-VSMCs by increasing the percentage of cells in the G0/G1 phase[2]. IOX1 (50-200 μM; 2 hours) attenuates cyclin D1 and upregulates p21 mRNA levels in a concentration-dependent[2]. IOX1 (50-200 μM; 2 hours) mediates cyclin D1 and p21 expression by regaining H3K9me3[2].			
In Vitro	Cell Proliferation Assay[2]			
	Cell Line:	Vascular smooth muscle cells (VSMCs)		
	Concentration:	50 μM, 100 μM, 200 μM		
	Incubation Time:	Pretreated 2 hours		
	Result:	Exhibited a decrease in proliferation and migration.		
	Cell Cycle Analysis[2]			
	Cell Line:	Vascular smooth muscle cells (VSMCs)		
	Concentration:	200 μM		
	Incubation Time:	24 hours		
	Result:	Slowed down the progression of the cell cycle from the G0/G1 to the S phase.		
	RT-PCR[2]			
	Cell Line:	Vascular smooth muscle cells (VSMCs)		
	Concentration:	50 μM, 100 μM, 200 μM		
	Incubation Time:	2 hours		
	Result:	Decreased cyclin D1 mRNA expression and increased p21 mRNA expression.		
	RT-PCR[2]			
	Cell Line:	Vascular smooth muscle cells (VSMCs)		
	Concentration:	50 μM, 100 μM, 200 μM		
	Incubation Time:	2 hours		
	Result:	Enhanced the total protein levels of H3K9me3.		
In Vitro:				
DMSO : 13.33 mg/mL (70.47 mM; Need ultrasonic and warming)				
Preparing Stock Solutions	<div>Solvent / Mass / Concentration</div>	1 mg	5 mg	10 mg
	1 mM	5.2863 mL	26.4313 mL	52.8625 mL
	5 mM	1.0573 mL	5.2863 mL	10.5725 mL
	10 mM	0.5286 mL	2.6431 mL	5.2863 mL



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Solvent&Solubility	<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°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。</p> <p>In Vivo:</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> <p>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline</p> <p>Solubility: ≥ 2.5 mg/mL (13.22 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (13.22 mM, 饱和度未知) 的澄清溶液。</p> <p>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; 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。</p> <p>2.请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline)</p> <p>Solubility: ≥ 2.5 mg/mL (13.22 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (13.22 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水溶液中, 混合均匀。</p>
References	<p>[1]. Schiller R, et al. A cell-permeable ester derivative of the JmjC histone demethylase inhibitor IOX1. ChemMedChem. 2014 Mar;9(3):566-71.</p> <p>[2]. Hu Q, et al. IOX1, a JMJD2A inhibitor, suppresses the proliferation and migration of vascular smooth muscle cells induced by angiotensin II by regulating the expression of cell cycle-related proteins. Int J Mol Med. 2016 Jan;37(1):189-96.</p> <p>[3]. Li F, et al. A Radioactivity-Based Assay for Screening Human m6A-RNA Methyltransferase, METTL3-METTL14 Complex, and Demethylase ALKBH5. Biomol Screen. 2016 Mar;21(3):290-7.</p>