

产品名称：**Ferrostatin-1 (Fer-1)**  
产品别名：**Ferrostatin-1**

生物活性：				
Description	Ferrostatin-1 is a potent inhibitor of ferroptosis with an EC50 of 60 nM.			
IC <sub>50</sub> & Target	EC50: 60 nM (Ferroptosis)[1]			
In Vitro	Ferrostatin-1 is the most potent inhibitor of erastin-induced ferroptosis in HT-1080 cells (EC50=60 nM). Ferrostatin-1 does not inhibit ERK phosphorylation or arrest the proliferation of HT-1080 cells. Ferrostatin-1 does, however, prevent erastin-induced accumulation of cytosolic and lipid ROS[1]. Cells pretreated with 0.4 μM Ferrostatin-1 displays significantly reduce intracellular reactive oxygen species (ROS) and nitrogen species (RNS) below basal levels. Additionally, increased intracellular ROS levels are also significantly lowered below basal levels by a 0.4 μM Ferrostatin-1 pretreatment. Ferrostatin-1 treatment for 24 h does not change the expression level of i-NOS in SHSY-5Y cell when compare with vehicle (0.02 % DMSO) treated cells[2].			
Solvent&Solubility	<b>In Vitro:</b> <b>DMSO : ≥ 150 mg/mL (571.76 mM)</b>  * "≥" means soluble, but saturation unknown.			
	<div>Preparing Stock Solutions</div>	<div>Solvent Mass Concentration</div>	1 mg	5 mg
		1 mM	3.8117 mL	19.0585 mL
		5 mM	0.7623 mL	3.8117 mL
		10 mM	0.3812 mL	1.9059 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℃, 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。  <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 <b>In Vitro</b> 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% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.53 mM); Clear solution  此方案可获得 ≥ 2.5 mg/mL (9.53 mM，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 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。			
	2.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (9.53 mM); Clear solution  此方案可获得 ≥ 2.5 mg/mL (9.53 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 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。			

<b>References</b>	<p>[1]. Dixon SJ, et al. Ferroptosis: an iron-dependent form of nonapoptotic cell death. Cell. 2012 May 25;149(5):1060-72.</p> <p>[2]. Kabiraj P, et al. The neuroprotective role of ferrostatin-1 under rotenone-induced oxidative stress in dopaminergic neuroblastoma cells. Protein J. 2015 Oct;34(5):349-58.</p>
<b>实验参考:</b>	
<b>Cell Assay</b>	SH-S5Y cells are seeded in 24-well plates. After overnight incubation, the cells are exposed for 24 h to 1 $\mu$ M of Ferrostatin-1, under standard growth conditions. Bright field photomicrographs are captured using an inverted microscope equipped with 10 $\times$ objective in a live-cell modality[2].
<b>Kinase Assay</b>	The cells treated for 24 h with Ferrostatin-1 are washed three times with phosphate-buffered saline (PBS) and pelleted by centrifugation. The supernatant is removed and 80 $\mu$ L of lysis buffer is added to the cells and then stored overnight at -20°C. Subsequently, the cells are centrifuged at 10,000 RPM for 12 min and both the pellet and supernatant are stored for future use[2].
<b>References</b>	<p>[1]. Dixon SJ, et al. Ferroptosis: an iron-dependent form of nonapoptotic cell death. Cell. 2012 May 25;149(5):1060-72.</p> <p>[2]. Kabiraj P, et al. The neuroprotective role of ferrostatin-1 under rotenone-induced oxidative stress in dopaminergic neuroblastoma cells. Protein J. 2015 Oct;34(5):349-58.</p>



源叶生物