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产品名称: **PLURIPOTIN**
产品别名: **SC1**

生物活性:						
Description	Pluripotin is a dual inhibitor of ERK1 and RasGAP with K_D s of 98 nM and 212 nM, respectively. Pluripotin also inhibits RSK1, RSK2, RSK3, and RSK4 with IC_{50} s of 0.5, 2.5, 3.3, and 10.0 μ M, respectively.					
IC ₅₀ & Target	ERK1	RasGAP	RSK1	RSK2	RSK3	RSK4
	98 nM (Kd)	212 nM (Kd)	0.5 μ M (IC_{50})	2.5 μ M (IC_{50})	3.3 μ M (IC_{50})	10 μ M (IC_{50})
In Vitro	Pluripotin (SC-1) inhibits Abl1, p70S6K, PLK2, RSK1, RSK2, RSK3, RSK4 with IC_{50} s of 0.005, 1.4, 2.2, 0.5, 2.5, 3.3, 10.0 μ M, respectively. Pluripotin (SC-1) decreases cell growth for 7 colon tumor cell lines. After a five day exposure to 0.1 μ M SC-1, the seven colon tumor lines are evaluated for changes in cell number and viability. There is a statistically significant decrease in cell number but >95% viability[2].					
Solvent&Solubility	In Vitro: DMSO : ≥ 33 mg/mL (59.94 mM) H₂O : < 0.1 mg/mL (insoluble) <small>* "≥" means soluble, but saturation unknown.</small>					
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg	
		1 mM	1.8164 mL	9.0820 mL	18.1640 mL	
		5 mM	0.3633 mL	1.8164 mL	3.6328 mL	
		10 mM	0.1816 mL	0.9082 mL	1.8164 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。					
	In Vivo: 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→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (4.54 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (4.54 mM, 饱和度未知) 的澄清溶液。 以 1 mL 工作液为例, 取 100 μ L 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μ L PEG300 中, 混合均匀, 向上述体系中加入 50 μ L Tween-80, 混合均匀; 然后继续加入 450 μ L 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: 2.5 mg/mL (4.54 mM); Suspended solution; Need ultrasonic 此方案可获得 2.5 mg/mL (4.54 mM)的均匀悬浊液, 悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例, 取 100 μ L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μ L 20% 的 SBE- β -CD 生理					



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	<p>盐水水溶液中, 混合均匀。</p> <p>3.请依序添加每种溶剂: 10% DMSO →90% corn oil</p> <p>Solubility: ≥ 2.5 mg/mL (4.54 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (4.54 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 25.0 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]. Chen S, et al. Self-renewal of embryonic stem cells by a small molecule. Proc Natl Acad Sci U S A. 2006 Nov 14;103(46):17266-71.</p> <p>[2]. Mertins SD, et al. A small molecule (pluripotin) as a tool for studying cancer stem cell biology: proof of concept. PLoS One. 2013;8(2):e57099.</p>
实验参考:	
Cell Assay	<p>The seven colon cancer lines (COLO 205, HCC-2998, HCT-15, HCT-116, HT29, KM12, SW-620) are used. In all experiments, each tumor line is cultured in 60 mm² tissue culture treated dishes at an initial concentration of 62,500/mL (total 4 mL) before addition of 0.1 μM Pluripotin (SC-1) or an equivalent amount of diluent (DMSO) the next day. Five day exposures are conducted. The final concentration utilized for treatment for all tumor lines is determined by evaluating a range of SC-1 concentrations (0.01 to 10 μM) for sphere formation and any cytotoxic effects in the HCT-116 tumor line. Cell viability is routinely evaluated with the trypan blue exclusion test and is always >95% for concentrations at or below 0.1 μM^[2].</p>
References	<p>[1]. Chen S, et al. Self-renewal of embryonic stem cells by a small molecule. Proc Natl Acad Sci U S A. 2006 Nov 14;103(46):17266-71.</p> <p>[2]. Mertins SD, et al. A small molecule (pluripotin) as a tool for studying cancer stem cell biology: proof of concept. PLoS One. 2013;8(2):e57099.</p>

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