

产品名称：SF1670
产品别名：SF1670

生物活性：				
Description	SF1670 is a potent and specific phosphatase and tensin homolog deleted on chromosome 10 (PTEN) inhibitor.			
IC ₅₀ & Target	PTEN[1]			
In Vitro	SF1670 is a specific PTEN inhibitor with prolonged intracellular retention in neutrophils. SF1670 enhances PtdIns(3,4,5)P3 signaling in transplanted neutrophils. SF1670 also elevates Akt phosphorylation in murine cells. Consistent with the enhanced Akt phosphorylation, pretreatment with SF1670 also significantly augments PtdIns(3,4,5)P3 level in mouse neutrophils. SF1670-induced Akt hyperactivation is abolished in PTEN-null neutrophils, further demonstrating that this effect is mediated by specific inhibition of PTEN activity. At 500 nM fMLP stimulation, SF1670 (500 nM)-pretreated neutrophils show nearly 70% higher (maximal) superoxide production than untreated neutrophils[1]. HCT116 cells are pre-treated with the PTEN inhibitor SF1670 (2 μM) for 24 h (untreated HCT116 cells served as control); treated cells are subsequently plated under non-adherent conditions with added MET (60 μM), Lun (2 μM), or Gen (2 μM). SF1670 binds to the PTEN active site, resulting in elevated phosphatidylinositol (3,4,5) triphosphate signaling[2].			
Solvent&Solubility	In Vitro: DMSO : ≥ 50 mg/mL (162.69 mM) H₂O : < 0.1 mg/mL (insoluble) * "≥" means soluble, but saturation unknown.			
	<div>Preparing Stock Solutions</div>	<div>Solvent Mass Concentration</div>	1 mg	5 mg
		1 mM	3.2537 mL	16.2686 mL
		5 mM	0.6507 mL	3.2537 mL
		10 mM	0.3254 mL	1.6269 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。 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 <div>1.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (8.13 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.13 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。</div>			

References	<p>[1]. <u>Li Y, et al. Pretreatment with phosphatase and tensin homolog deleted on chromosome 10 (PTEN) inhibitor SF1670 augments the efficacy of granulocyte transfusion in a clinically relevant mouse model. Blood. 2011 Jun 16;117(24):6702-13.</u></p> <p>[2]. <u>Montales MT, et al. Metformin and soybean-derived bioactive molecules attenuate the expansion of stem cell-like epithelial subpopulation and confer apoptotic sensitivity in human colon cancer cells. Genes Nutr. 2015 Nov;10(6):49.</u></p>
实验参考:	
Cell Assay	<p>The human colon cancer cell lines HT29 and HCT116 are propagated in McCoy's medium (ATCC) supplemented with 10 % fetal bovine serum (FBS) and 5 % antibiotic-antimycotic solution (ABAM) in a humidified incubator (5 % CO₂:95 % air) at 37°C. Cells are seeded in six-well plates at an initial density of 2×10⁵ per well, and treated (in culture medium) with Metformin (MET 60 μM), Lunasin (Lun 2 μM), β-conglycinin (β-con 3 μM), Glycinin (Gly 3 μM), and Genistein (Gen 2 μM), alone or in combination. β-con and Gly are isolated and purified as described below. Metformin, Lun, β-con, and Gly are dissolved in phosphate-buffered saline (PBS), whereas Gen is dissolved in DMSO. In other experiments, cells are treated with insulin (2 μM), PTEN inhibitor SF1670 (2 μM), and 5-Fluorouracil (5-FU 50 μM). Treated cells are collected at select time points for subsequent analyses [2].</p>
References	<p>[1]. <u>Li Y, et al. Pretreatment with phosphatase and tensin homolog deleted on chromosome 10 (PTEN) inhibitor SF1670 augments the efficacy of granulocyte transfusion in a clinically relevant mouse model. Blood. 2011 Jun 16;117(24):6702-13.</u></p> <p>[2]. <u>Montales MT, et al. Metformin and soybean-derived bioactive molecules attenuate the expansion of stem cell-like epithelial subpopulation and confer apoptotic sensitivity in human colon cancer cells. Genes Nutr. 2015 Nov;10(6):49.</u></p>

源叶生物