

产品名称：**SH-4-54**
产品别名：**SH-4-54**

生物活性:					
Description	SH-4-54 is a most potent, small molecule, nonphosphorylated STAT inhibitor, with K_Ds of 300, 464 nM for STAT3 and STAT5, respectively.				
IC ₅₀ & Target	STAT3	STAT5			
	300 nM (Kd)	464 nM (Kd)			
In Vitro	SH-4-54 potently kills glioblastoma brain cancer stem cells (BTSCs) and effectively suppresses STAT3 phosphorylation and its downstream transcriptional targets at low nM concentrations.SH-4-54 shows unprecedented cytotoxicity in human BTSCs, displays no toxicity in human fetal astrocytes, potently suppresses pSTAT3 with nanomolar IC50s, inhibiting STAT3's downstream targets, and shows no discernible off-target effects at therapeutic doses[1].				
In Vivo	SH-4-54 exhibits blood-brain barrier permeability potently controls glioma tumor growth, and inhibits pSTAT3 in vivo. SH-4-54 demonstrates the power of STAT3 inhibitors for the treatment of BTSCs and validates the therapeutic efficacy of a STAT3 inhibitor for GBM clinical application.SH-4-54 decreases pSTAT3 expression in tumor cells of treated mice. SH-4-54 appears to decrease proliferation and increase apoptosis of treated tumors[1].				
Solvent&Solubility	In Vitro: DMSO : 100 mg/mL (163.78 mM; Need ultrasonic) H2O : < 0.1 mg/mL (insoluble)				
	Preparing Stock Solutions	<div>Solvent / Mass / Concentration</div>	1 mg	5 mg	10 mg
		1 mM	1.6378 mL	8.1888 mL	16.3776 mL
		5 mM	0.3276 mL	1.6378 mL	3.2755 mL
		10 mM	0.1638 mL	0.8189 mL	1.6378 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				
	1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (4.09 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (4.09 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 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。				
	2.请依序添加每种溶剂： 10% DMSO →90% corn oil				

	<p>Solubility: ≥ 2.5 mg/mL (4.09 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (4.09 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]. Haftchenary S, et al. Potent Targeting of the STAT3 Protein in Brain Cancer Stem Cells: A Promising Route for Treating Glioblastoma. ACS Med Chem Lett. 2013 Sep 8;4(11):1102-1107.</p>



源叶生物