



上海源叶生物科技有限公司
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产品名称: TPI-1
产品别名: TPI-1

生物活性:				
Description	TPI-1, also known as Tyrosine Phosphatase Inhibitor 1, is a SHP-1 inhibitor; inhibits recombinant SHP-1 with an IC ₅₀ of 40 nM.			
IC ₅₀ & Target	IC ₅₀ : 40 nM (recombinant SHP-1)[1]			
In Vitro	SHP-1 has been implicated as a potential cancer therapeutic target. TPI-1 is effective starting at 10 ng/mL in increasing SHP-1 phospho-substrates pLck-pY394. TPI-1 selectively increases SHP-1 phospho-substrates (pLck-pY394, pZap70 and pSlp76) in Jurkat T cells but has little effects on pERK1/2 or pLck-pY505. TPI-1 induces mouse splenic-IFN γ ⁺ cells and induces IFN γ ⁺ cells in human peripheral blood[1].			
In Vivo	TPI-1 inhibits the growth of B16 melanoma tumors in mice at a tolerated oral dose in a T cell-dependent manner but has little effects on B16 cell growth in culture. TPI-1 thus also increases pLck-pY394 and IFN γ ⁺ cells in mice. TPI-1 also inhibits B16 tumor growth and prolongs tumor mice survival as a tolerated s.c. agent[1].			
Solvent&Solubility	In Vitro: DMSO : 50 mg/mL (197.57 mM; Need ultrasonic)			
	Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg
		1 mM	3.9513 mL	19.7566 mL
		5 mM	0.7903 mL	3.9513 mL
		10 mM	0.3951 mL	1.9757 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 (9.88 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.88 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 (9.88 mM); Clear solution			



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	<p>此方案可获得 ≥ 2.5 mg/mL (9.88 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 生理盐水水溶液中, 混合均匀。</p> <p>3.请依序添加每种溶剂: 10% DMSO \rightarrow 90% corn oil</p> <p>Solubility: ≥ 2.5 mg/mL (9.88 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (9.88 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	[1]. Kundu S, et al. Novel SHP-1 inhibitors tyrosine phosphatase inhibitor-1 and analogs with preclinical anti-tumor activities as tolerated oral agents. J Immunol. 2010 Jun 1;184(11):6529-36.
实验参考:	
Animal Administration	Mice: For in vivo induction of pLck-pY394 and IFN γ + cells in mice, C57BL/6J mice are treated with PBS or TPI-1 (1 or 3 mg/kg, s.c.) for 4 days. Spleens are harvested one hour post-treatment on day 4 and processed into splenocytes, which are used for assessing pLck-pY394 levels by SDS-PAGE/Western blotting and for quantification of IFN γ + cells by ELISPOT assays. Mice are also treated with TPI-1 (10 mg/kg, daily, s.c.) to evaluate the toxicity of the compounds in vivo[1].
References	[1]. Kundu S, et al. Novel SHP-1 inhibitors tyrosine phosphatase inhibitor-1 and analogs with preclinical anti-tumor activities as tolerated oral agents. J Immunol. 2010 Jun 1;184(11):6529-36.

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