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产品名称: **H-Leu-Ser-Lys-Leu-NH**

产品别名: **LSKL, Inhibitor of Thrombospondin (TSP-1)**

生物活性:

Description	LSKL, Inhibitor of Thrombospondin (TSP-1) is a latency-associated protein (LAP)-TGFβ derived tetrapeptide and a competitive TGF-β1 antagonist. LSKL, Inhibitor of Thrombospondin (TSP-1) inhibits the binding of TSP-1 to LAP and alleviates renal interstitial fibrosis and hepatic fibrosis. LSKL, Inhibitor of Thrombospondin (TSP-1) suppresses subarachnoid fibrosis via inhibition of TSP-1-mediated TGF-β1 activity, prevents the development of chronic hydrocephalus and improves long-term neurocognitive defects following subarachnoid hemorrhage (SAH). LSKL, Inhibitor of Thrombospondin (TSP-1) can readily cross the blood-brain barrier[1][2].			
IC50 & Target	TGF-β1[1]			
In Vitro	The KTRF sequence from ADAMTS1 is responsible for the interaction with the LSKL, Inhibitor of Thrombospondin (TSP-1) (LSKL peptide) from the latent form of TGF-β, leading to its activation. There is a stable binding mode between LSKL, Inhibitor of Thrombospondin (TSP-1) and ADAMTS1 KTRF sequence, characterized by 3 salt bridges and 2 hydrogen bonds[2].			
In Vivo	LSKL, Inhibitor of Thrombospondin (TSP-1) (1 mg/kg; intraperitoneal injection; male Sprague-Dawley rats) is protective against subarachnoid fibrosis, attenuates ventriculomegaly and effectively suppresses hydrocephalus. LSKL, Inhibitor of Thrombospondin (TSP-1) treatment inhibits TGF-β1 activity and subsequent Smad2/3 signaling[1].			
	LSKL, Inhibitor of Thrombospondin (TSP-1) (30 mg/kg, i.p.) successfully inhibits transforming growth factor (TGF) β-Smad signal activation induced by partial hepatectomy. LSKL, Inhibitor of Thrombospondin (TSP-1) successfully attenuates TGF-β-Smad signal activation by antagonizing TSP-1, but not by reducing TSP-1 protein expression. LSKL, Inhibitor of Thrombospondin (TSP-1) accelerates hepatocyte proliferation after hepatectomy[3].			
	Animal Model:	103 male Sprague-Dawley rats (6 weeks of age; 160-180 g) with subarachnoid hemorrhage (SAH)[1]		
	Dosage:	1 mg/kg		
	Administration:	Intraperitoneal injection		
Result:	Was protective against subarachnoid fibrosis, attenuated ventriculomegaly and effectively suppressed hydrocephalus.			
	In Vitro:			
	DMSO : ≥ 100 mg/mL (218.05 mM)			
	H2O : 50 mg/mL (109.03 mM; Need ultrasonic)			
	* "≥" means soluble, but saturation unknown.			
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg
	1 mM	2.1805 mL	10.9027 mL	21.8055 mL
	5 mM	0.4361 mL	2.1805 mL	4.3611 mL
	10 mM	0.2181 mL	1.0903 mL	2.1805 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				



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Solvent&Solubility	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。 <i>In Vivo:</i> 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 <i>In Vitro</i> 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 (5.45 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.45 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 (5.45 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.45 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。
References	[1]. Liao F, et al. LSKL peptide alleviates subarachnoid fibrosis and hydrocephalus by inhibiting TSP1-mediated TGF-β1 signaling activity following subarachnoid hemorrhage in rats. <i>Exp Ther Med</i>. 2016 Oct;12(4):2537-2543. Epub 2016 Aug 31. [2]. Laurent MA, et al. In silico characterization of the interaction between LSKL peptide, a LAP-TGF-beta derived peptide, and ADAMTS1. <i>Comput Biol Chem</i>. 2016 Apr;61:155-61. [3]. Kuroki H, et al. Effect of LSKL peptide on thrombospondin 1-mediated transforming growth factor β signal activation and liver regeneration after hepatectomy in an experimental model. <i>Br J Surg</i>. 2015 Jun;102(7):813-25.