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产品名称: 醋酸奥曲肽
 产品别名: Octreotide acetate

生物活性:					
Description	Octreotide acetate, a long-acting synthetic analog of native somatostatin, inhibits growth hormone, glucagon, and insulin more potently.				
In Vivo	Octreotide-treated groups show a significant reduction in the tumor volume when compared with saline group. Octreotide-PPSG (1.4 mg/kg, i.p.) shows greater antitumor effect than Octreotide-soln (100 µg/kg, i.p.). Octreotide-treatments results in significant inhibitory effect on the expression levels of SSTR2 and SSTR5 in primary HCC-bearing rats compared with the saline group. Octreotide-PPSG appears to inhibit the expression of SSTR2 and SSTR5 to a greater extent than that of Octreotide-soln treated group[1]. A test dose of octreotide acetate significantly decreases the serum gastrin level to approximately one third of the baseline in 2 hr and the effect lasted approximately for 6 hr. On day 21, treatment with sustained-release formulation of octreotide acetate (5 mg intramuscular, q 4 wk) is initiated[2].				
Solvent&Solubility	In Vitro: DMSO : 250 mg/mL (231.63 mM; Need ultrasonic)				
		Solvent \ Mass Concentration	1 mg	5 mg	10 mg
	Preparing	1 mM	0.9265 mL	4.6327 mL	9.2654 mL
	Stock Solutions	5 mM	0.1853 mL	0.9265 mL	1.8531 mL
		10 mM	0.0927 mL	0.4633 mL	0.9265 mL
<p>*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。</p> <p>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。</p> <p>In Vivo:</p> <p>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:</p> <p>——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</p> <p>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline</p> <p>Solubility: ≥ 2.25 mg/mL (2.08 mM); Clear solution</p> <p>此方案可获得 ≥ 2.25 mg/mL (2.08 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 µL 22.5 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。</p> <p>2.请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline)</p> <p>Solubility: ≥ 2.25 mg/mL (2.08 mM); Clear solution</p> <p>此方案可获得 ≥ 2.25 mg/mL (2.08 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 µL 22.5 mg/mL 的澄清 DMSO 储备液加到 900 µL 20% 的 SBE-β-CD 生理</p>					



	<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: ≥ 2.25 mg/mL (2.08 mM); Clear solution</p> <p>此方案可获得 ≥ 2.25 mg/mL (2.08 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 22.5 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]. Wang M, et al. Pharmacokinetic and pharmacodynamic study of a phospholipid-based phase separation gel for once a month administration of octreotide. J Control Release. 2016 May 28;230:45-56.</p> <p>[2]. Kim S, et al. Treatment of Gastrin-Secreting Tumor With Sustained-Release Octreotide Acetate in a Dog. J Am Anim Hosp Assoc. 2015 Nov-Dec;51(6):407-12.</p>
实验参考:	
Animal Administration	<p>Mice[1]</p> <p>Thirty mice with HCC xenografts are randomly divided into three groups: (A) Octreotide-soln group, (B) Octreotide-PPSG group, and (C) control group. Octreotide-soln group receives i.p. injection of 100 μg/kg octreotide-soln once a day and totally for consecutive 14 days. Octreotide-PPSG group receives a single subcutaneous injection of 1.4 mg/kg Octreotide-PPSG, and the injection volume is about 0.2 mL. Control group receives i.p. injection of saline once a day for consecutive 14 days. Treatment starts on the next day after injection of H22 hepatoma cell suspension and maintains for 14 days. Tumor growth is monitored by periodic caliper measurements on day 7 and day 14 post seeding. Tumor volumes (V) are calculated based on the length and width of tumor by Eq.</p> <p>Rats[1]</p> <p>Twelve male SD rats are divided into two groups, and housed in standard cages at 25°C, with free access to food and water for a week prior to the experiment. Rats are subcutaneously injected with Octreotidereotide solution (Octreotide-soln) or Octreotide-PPSG at an equivalent single dose of 20 mg/kg. The dose is determined based on the clinical dose of Octreotide-soln in human. Rats are fasted for 12 h before dosing and food is returned approximately 2 h post dosing. Blood samples are collected at predetermined time points using heparinized Eppendorf tubes. Immediately after collection, the blood samples are placed on ice until centrifuged at 3000 g for 10 min within 1 h. The plasma is collected and stored at -20°C until analysis.</p>
References	<p>[1]. Wang M, et al. Pharmacokinetic and pharmacodynamic study of a phospholipid-based phase separation gel for once a month administration of octreotide. J Control Release. 2016 May 28;230:45-56.</p> <p>[2]. Kim S, et al. Treatment of Gastrin-Secreting Tumor With Sustained-Release Octreotide Acetate in a Dog. J Am Anim Hosp Assoc. 2015 Nov-Dec;51(6):407-12.</p>