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产品名称：(3Β,5Α,7Α)-3-[[3-((4-氨基丁基)氨基)丙基]氨基]胆甾烷-7,24-二醇 24-氢硫酸酯
产品别名：角鲨胺 ；Squalamine；MSI-1256

生物活性：

Description

Squalamine(MSI-1256) is an aminosterol compound with potent broad spectrum antiviral activity. IC50 value: Target: in vitro: squalamine can strongly displace membrane-bound cationic proteins such as Rac1, a ρ-GTPase recruited to the inner leaflet of the eukaryotic cytoplasmic membrane for the actin remodeling necessary for endocytosis. At concentrations between 20 and 60 μg/mL, squalamine has been shown to inhibit a broad array of growth factor-induced, actin-dependent responses in endothelial cells, including cell migration, cell division, and vascular tube formation in a 3D matrix [1]. Squalamine effectively inhibited HBV replication in human primary hepatocytes when added either during the initial exposure of virus to the cells or at 24 h after infection. A similar study was performed to evaluate the effect of squalamine on the replication of HDV. Squalamine was introduced at 20 μg/mL during HDV exposure, and the effects were measured at day 7 when total RNA was extracted and assayed for HDV RNA sequences [1]. in vivo: one time daily treatment with squalamine (15 or 30 mg/kg per d s.c.) was started beginning on day 1 or 2 after viral administration and continuing until day 8 or 9, respectively. Survival was monitored, and animals that remained alive by day 21 were considered cured [1].

Solvent&Solubility

In Vitro:

DMSO : 100 mg/mL (**159.25 mM;** Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5925 mL	7.9623 mL	15.9246 mL
	5 mM	0.3185 mL	1.5925 mL	3.1849 mL
	10 mM	0.1592 mL	0.7962 mL	1.5925 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: ≥ 2.75 mg/mL (4.38 mM); Clear solution

此方案可获得 ≥ 2.75 mg/mL (4.38 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 27.5 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。

	2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.75 mg/mL (4.38 mM); Clear solution 此方案可获得 ≥ 2.75 mg/mL (4.38 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 27.5 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。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.75 mg/mL (4.38 mM); Clear solution 此方案可获得 ≥ 2.75 mg/mL (4.38 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 27.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Zasloff M, et al. Squalamine as a broad-spectrum systemic antiviral agent with therapeutic potential. Proc Natl Acad Sci U S A. 2011 Sep 20;108(38):15978-83. [2]. Hraiech S, et al. Antibacterial efficacy of inhaled squalamine in a rat model of chronic Pseudomonas aeruginosa pneumonia. J Antimicrob Chemother. 2012 Oct;67(10):2452-8. [3]. Djouhri-Bouktab L, et al. Squalamine ointment for Staphylococcus aureus skin decolonization in a mouse model. J Antimicrob Chemother. 2011 Jun;66(6):1306-10.