

产品名称：**Wnt-C59 (C59)**
产品别名：**C59**

生物活性：				
Description	Wnt-C59 (C59) is a highly potent and oral porcupine (PORCN) inhibitor with an IC50 of 74 pM.			
IC ₅₀ & Target	IC50: 74 pM (PORCN)[1]			
In Vitro	Wnt-C59 (C59) inhibits PORCN activity in vitro at nanomolar concentrations, as assessed by inhibition of Wnt palmitoylation, Wnt interaction with the carrier protein Wntless/WLS, Wnt secretion, and Wnt activation of β -catenin reporter activity. Wnt-C59 inhibits WNT3A-mediated activation of a multimerized TCF-binding site driving luciferase with an IC50 of 74 pM[1].			
In Vivo	Wnt-C59 displays good bioavailability in mice. Wnt-C59 blocks progression of mammary tumors in MMTV-WNT1 transgenic mice while downregulating Wnt/ β -catenin target genes[1]. Wnt-C59 has the potential to eradicate cancer stem cells in human tumors. Wnt-C59 inhibits stemness properties of NPC cells in a dosage-dependent manner by arresting sphere formation in both HNE1 and SUNE1 cells[2].			
Solvent&Solubility	In Vitro: DMSO : ≥ 73.3 mg/mL (193.17 mM) * "≥" means soluble, but saturation unknown.			
	<div>Preparing Stock Solutions</div>	<div>Solvent Mass Concentration</div>	1 mg	5 mg
		1 mM	2.6354 mL	13.1770 mL
		5 mM	0.5271 mL	2.6354 mL
		10 mM	0.2635 mL	1.3177 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 (6.59 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.59 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 (6.59 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.59 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 900 μ L 20% 的 SBE- β -CD 生理盐水水溶液中，混合均匀。			

	<p>3.请依序添加每种溶剂： 10% DMSO →90% corn oil</p> <p>Solubility: ≥ 2.5 mg/mL (6.59 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (6.59 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]. Proffitt KD, et al. Pharmacological inhibition of the Wnt acyltransferase PORCN prevents growth of WNT-driven mammary cancer. <i>Cancer Res.</i> 2013 Jan 15;73(2):502-7.</p> <p>[2]. Cheng Y, et al. Wnt-C59 arrests stemness and suppresses growth of nasopharyngeal carcinoma in mice by inhibiting the Wnt pathway in the tumor microenvironment. <i>Oncotarget.</i> 2015 Jun 10;6(16):14428-39.</p>
实验参考：	
Cell Assay	<p>1\times10⁴ HK1, CNE1, HNE1 and SUNE1 cells are seeded in 24-well plates, and Wnt-C59 (5 μM, 10 μM, and 20 μM) is added the next day. Cell confluence is determined by microscopy at 24, 48, 72, and 96 hours after seeding of cells. The IC₅₀ is determined by MTT assay[2].</p>
Animal Administration	<p>Mice[1]</p> <p>Female nude mice orthotopically transplanted with independent MMTV-WNT1 tumors are treated with vehicle or Wnt-C59 10 mg/kg once daily for 17 days. Tumor volumes are measured on alternate days[1].</p>
References	<p>[1]. Proffitt KD, et al. Pharmacological inhibition of the Wnt acyltransferase PORCN prevents growth of WNT-driven mammary cancer. <i>Cancer Res.</i> 2013 Jan 15;73(2):502-7.</p> <p>[2]. Cheng Y, et al. Wnt-C59 arrests stemness and suppresses growth of nasopharyngeal carcinoma in mice by inhibiting the Wnt pathway in the tumor microenvironment. <i>Oncotarget.</i> 2015 Jun 10;6(16):14428-39.</p>

源叶生物