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产品名称：Cardiogenol C, Hydrochloride
产品别名：Cardiogenol C hydrochloride

生物活性：

Description

Cardiogenol C hydrochloride is a cell-permeable pyrimidine compound which potently induces the differentiation of ESCs into cardiomyocytes (EC50= 100 nM). IC50 value: 100 nM (EC50) Target: in vitro: Cardiogenol C hydrochloride is a cardiomyogenesis inducer in embryonic stem cells. Cardiogenol C induces the differentiation of myosin heavy chain-positive cardiomyocytes from embryonic stem cells with an EC50 value of 0.1 μM; about 90% of embryonic stem cells treated with 0.25 μM of Cardiogenol C express the cardiac muscle cell specific transcription factors GATA-4, MEF2, and Nkx2.5 and display the characteristic beating behavior of differentiated cardiomyocytes. Cardiogenol C (a diaminopyrimidine) induces cardiac differentiation in P19 and in P19Cl6 cells. [1] Cardiogenol C could activate Wnt/β-catenin signaling to induce cardiogenesis. Cardiogenol C-treatment significantly decreased HBPCs proliferation. Cardiogenol C was able to induce HBPCs to transdifferentiate into cardiomyocyte-like cells.[2]

Solvent&Solubility

In Vitro:

DMSO : ≥ 59 mg/mL (198.82 mM)

H_2O : 2 mg/mL (6.74 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3698 mL	16.8492 mL	33.6984 mL
	5 mM	0.6740 mL	3.3698 mL	6.7397 mL
	10 mM	0.3370 mL	1.6849 mL	3.3698 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 (8.42 mM); Clear solution; Need ultrasonic

此方案可获得 2.5 mg/mL (8.42 mM)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 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: ≥ 2.5 mg/mL (8.42 mM); Clear solution

	此方案可获得 ≥ 2.5 mg/mL (8.42 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: ≥ 2.5 mg/mL (8.42 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.42 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]. Jasmin, et al. Chemical induction of cardiac differentiation in p19 embryonal carcinoma stem cells. Stem Cells Dev. 2010 Mar;19(3):403-412. [2]. Yau WW, et al. Cardiogenol C can induce Mouse Hair Bulge Progenitor Cells to Transdifferentiate into Cardiomyocyte-like Cells. Proteome Sci. 2011 Jan 19;9(1):3.